THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

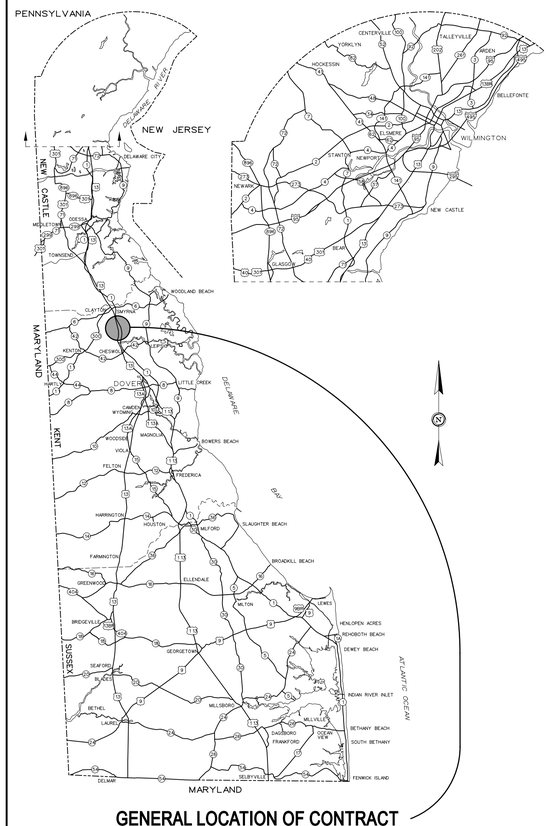
CONSTRUCTION PLANS FOR:

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

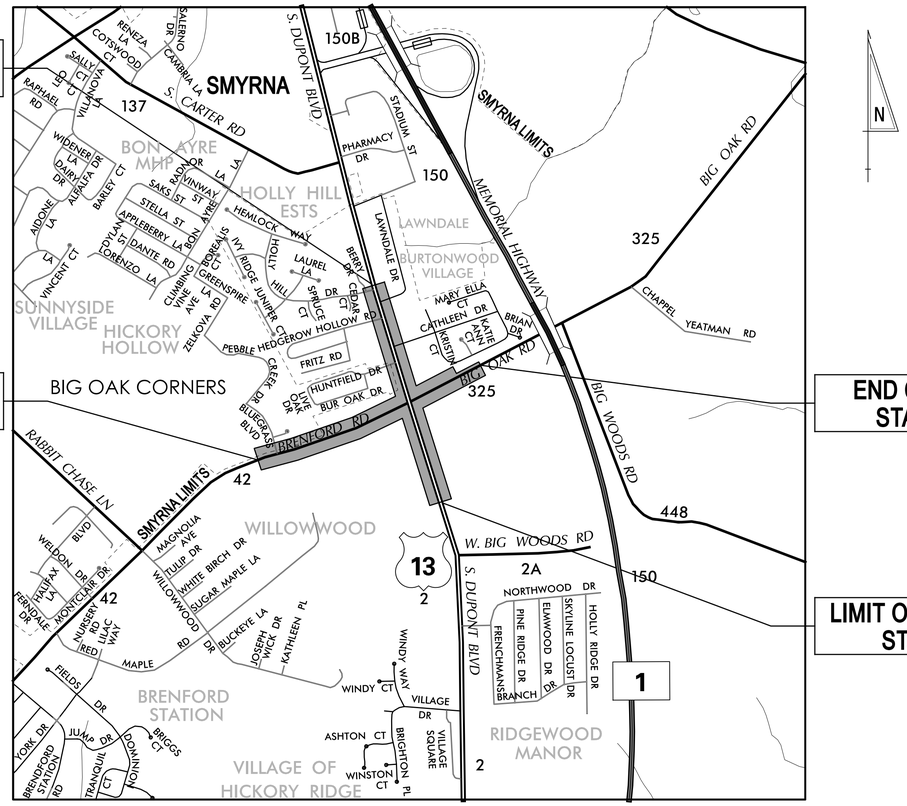
CONTRACT NUMBER: T202104203

FEDERAL AID PROJECT NUMBER: N/A

COUNTY: KENT **M.R. #:** K042, K002, K325



GENERAL LOCATION OF CONTRACT



LOCATION MAP
NOT TO SCALE

DESIGN DESIGNATION

MRD #: K042	ROAD NAME: BRENFORD ROAD		
FUNCTIONAL CLASS: MAJOR COLLECTOR		D.H.V. PROJECTED: 1132	YEAR: 2050
TYPE OF CONSTRUCTION: INTERSECTION IMPROVEMENTS		DESIGN SPEED: 40 M.P.H.	
A.A.D.T. CURRENT: 5970	YEAR: 2021	TRUCKS: 3%	
A.A.D.T. PROJECTED: 8250	YEAR: 2050	DIRECTION OF DISTRIBUTION: 62%	

DESIGN DESIGNATION

MRD #: K002	ROAD NAME: SOUTH DUPONT BOULEVARD		
FUNCTIONAL CLASS: MINOR ARTERIAL		D.H.V. PROJECTED: 3550	YEAR: 2050
TYPE OF CONSTRUCTION: INTERSECTION IMPROVEMENTS		DESIGN SPEED: 60 M.P.H.	
A.A.D.T. CURRENT: 28600	YEAR: 2021	TRUCKS: 6%	
A.A.D.T. PROJECTED: 38750	YEAR: 2050	DIRECTION OF DISTRIBUTION: 50%	

DESIGN DESIGNATION

MRD #: K325	ROAD NAME: BIG OAK ROAD		
FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 200	YEAR: 2050
TYPE OF CONSTRUCTION: INTERSECTION IMPROVEMENTS		DESIGN SPEED: 50 M.P.H.	
A.A.D.T. CURRENT: 1290	YEAR: 2021	TRUCKS: 3%	
A.A.D.T. PROJECTED: 1800	YEAR: 2050	DIRECTION OF DISTRIBUTION: 53%	

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA / REVISIONS

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
2	US 13, BISHOPS CORNER TO SMYRNA
71	US 13 BISHOPS CORNER TO SMYRNA (WIDENING)
80	BRENFORD ROAD, BRENFORD TO US 13
287	US 13 BISHOPS CORNER TO SMYRNA (DUAL ROAD)
325	BIG OAK ROAD, BRENFORD (US 13) TO SEVERSON CHURCH (SR 6)
772	US 13, NORTH STATE STREET DOVER TO SMYRNA
1480	BIG OAK ROAD PAVEMENT REHAB.
1810	US 13 NB, SR 42 (BISHOPS CORNER) TO SMYRNA K 012 (WIDENING)
82-012-01	US 13 3R, CHESWOLD TO SMYRNA
RM 5	US 13, DOVER TO SMYRNA (COLEMAN DU PONT ROAD)

PREPARED BY

CONSULTANT FIRM OF AECOM

11/14/2025
DATE

THIS SEAL APPLIES TO ALL SHEETS BEARING THE "AEC" SECTION DESIGNATION.

JOSEPH A. HOFSTEE — No. 14581 — REGISTERED PROFESSIONAL ENGINEER — DELAWARE

SEAL

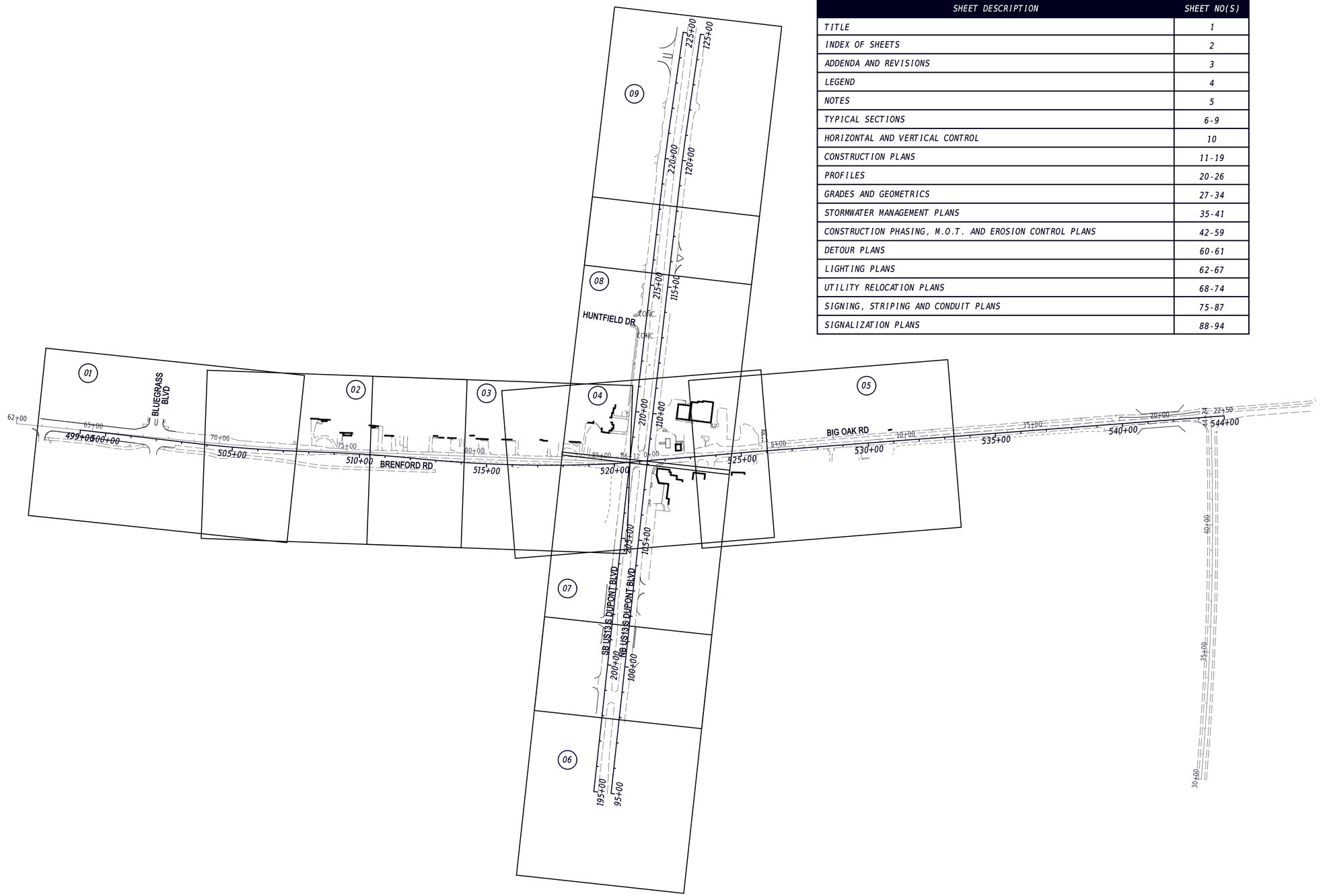
APPROVED FOR ADVERTISEMENT

For Mark Luszcz
DIRECTOR OF TRANSPORTATION SOLUTIONS

17 November 2025
DATE

LAST REVISED: 03/03/2011
C:\PW\WORKING\USDE\DMS0928\1TC00.DGN

INDEX OF SHEETS	
SHEET DESCRIPTION	SHEET NO(S)
TITLE	1
INDEX OF SHEETS	2
ADDENDA AND REVISIONS	3
LEGEND	4
NOTES	5
TYPICAL SECTIONS	6-9
HORIZONTAL AND VERTICAL CONTROL	10
CONSTRUCTION PLANS	11-19
PROFILES	20-26
GRADES AND GEOMETRICS	27-34
STORMWATER MANAGEMENT PLANS	35-41
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	42-59
DETOUR PLANS	60-61
LIGHTING PLANS	62-67
UTILITY RELOCATION PLANS	68-74
SIGNING, STRIPING AND CONDUIT PLANS	75-87
SIGNALIZATION PLANS	88-94



pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/IS00.dgn

AECOM

ADDENDA / REVISIONS	

SCALE
0 200 400 600
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

INDEX OF SHEETS

SECTION
AEC
SHEET NO.
2

ADDENDUM PREPARED BY

AECOM, TECHNICAL SERVICE, INC.

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM #X:
XX, XX-XX, XX

DATE

SEAL

REVISION PREPARED BY

AECOM, TECHNICAL SERVICE, INC.

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER REVISION #X:
XX, XX-XX, XX

DATE

SEAL

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/AR.dgn

AECOM

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	BRIDGE NO.	N/A	ADDENDA AND REVISIONS	SECTION
				T202104203	DESIGNED BY:	A. Malkin		AEC
				COUNTY				SHEET NO.
				KENT	CHECKED BY:	J. Hofstee		3

MANMADE ROADSIDE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BARRIER - DOUBLE-FACED, PERMANENT			
BARRIER - SINGLE-FACED, PERMANENT, TEST LEVEL 4 / TEST LEVEL 5	BARRIER, TYPE "X"		B XXX
BARRIER - HIGH TENSION CABLE (HTCB)			
BARRIER - HTCB END TERMINAL			
BOLLARD - STEEL POLE			
BOLLARD - WOOD POST			
CURB, TYPE 1 AND TYPE 3			
CURB, TYPE 2	CURB, TYPE "X"		
CURB & GUTTER, TYPE 1			C XXX
CURB & GUTTER, TYPE 2	C&G, TYPE "X"		
CURB & GUTTER, TYPE 3			
CURB OPENING - SUMP / ON GRADE			C O
CURB/SW OPENING - ADJACENT CURB			CO SW
CURB/SW OPENING - NON-ADJACENT CURB			
FENCE - CHAINLINK OR STRANDED			F XXX
FENCE - STOCKADE OR SPLIT RAIL			
FLAG POLE	F.P.		
GUARDRAIL - STEEL BEAM, TYPE 1			
GUARDRAIL - STEEL BEAM, TYPE 2			
GUARDRAIL - STEEL BEAM, TYPE 3			
GUARDRAIL - WIRE ROPE			
GUARDRAIL - END ANCHORAGE			GR XXX
GUARDRAIL - END TREATMENT, TYPE 1			
GUARDRAIL - END TREATMENT, TYPE 2			
GUARDRAIL - END TREATMENT, TYPE 3			
IMPACT ATTENUATOR			
LAMP AND POST - RESIDENTIAL	LAMP		
MAILBOX	MB	MB	
PARKING METER AND POST	P.M.		
PAVEMENT - FLEXIBLE			
PAVEMENT - RIGID			
PILE - BRIDGE			
PILLAR OR MISCELLANEOUS POST			
TRAFFIC SIGN AND POST			
WALL - BRICK OR BLOCK			
WALL - STONE			

DRAINAGE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BIOFILTRATION SWALE		BFS	
DITCH OR STREAM (V-SHAPE / TRAPEZOIDAL)			
DIRECTIONAL STREAM FLOW ARROW			
DRAINAGE INLET	C.B. / D.I.		DI XXX
DRAINAGE JUNCTION BOX	J.B.		JB XXX
DRAINAGE MANHOLE	Ⓓ		MH XXX
DRAINAGE PIPE AND FLOW ARROW	SIZE/TYPE LABEL		P XXX
FLARED END SECTION			FES XXX
RIPRAP - AREA FEATURE			RR XXX
RIPRAP - LINEAR FEATURE			
SAFETY END STRUCTURE			SES XXX
UNDERDRAIN			UD XXX
UNDERDRAIN OUTLET			UDO XXX

UTILITY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
COMMUNICATIONS DISTRIBUTION BOX	CD / TV	
COMMUNICATIONS MANHOLE	Ⓒ / Ⓣ	Ⓒ
COMMUNICATIONS TEST POINT	CT / T	
COMMUNICATIONS - UNDERGROUND	COMM(A)	COMM
ELECTRIC - UNDERGROUND	E(A)	E
ELECTRIC MANHOLE	Ⓔ	Ⓔ
ELECTRIC METER	EM	
ELECTRIC TRANSFORMER	E	
GAS - UNDERGROUND	G(A)	G
GAS MANHOLE	Ⓖ	Ⓖ
GAS METER	G.M.	
GAS VALVE	G.V.	
GAS PUMP - SERVICE STATION	G.P.	
IRRIGATION - UNDERGROUND	IR(A)	IR
ITMS - UNDERGROUND	ITMS(A)	ITMS
LIGHTING - UNDERGROUND	LI(A)	LI
LUMINAIRE - POLE MOUNTED		
MANHOLE - UNDETERMINED OWNER	?	
RAILROAD TRACKS		
SANITARY - UNDERGROUND	S(A)	S
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
SANITARY SEWER VALVE	S.V.	
SANITARY SEWER CLEANOUT OR VENT	S.C.O.	
SEPTIC DRAIN FIELD	S.D.F.	
SIGNALIZATION - UNDERGROUND	SIG(A)	SIG
SOIL BORING LOCATION		
TELEPHONE BOOTH	B	
TRAFFIC - CONDUIT JUNCTION WELL	J.W.	
TRAFFIC - LIGHT POLE AND BASE		
TRAFFIC - PEDESTRIAN POLE & BASE		
TRAFFIC - SIGNAL CABINET & BASE		
TRAFFIC - SIGNAL POLE AND BASE		
UTILITY BOX	U	
UTILITY MARKER	UM	
UTILITY POLE GUY WIRE ANCHOR		
UTILITY POLE		
UTILITY TEST HOLE LOCATION		
WATER - UNDERGROUND	W(A)	W
WATER - FIRE HYDRANT	F.H.	F.H.
WATER METER	W.M.	
WATER VALVE	W.V.	W.V.
WELL HEAD	WELL	

(A) REPRESENTS ASCE DEFINED SUE QUALITY LEVEL

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 NOTES FOR MATERIALS AND DEPTHS	

NATURAL ROADSIDE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET		
MARSH BOUNDARY LINE		
TREE - CONIFEROUS		
TREE - DECIDUOUS		
TREE STUMP		
SHRUBBERY		
WETLAND BOUNDARY - DELINEATED	WL	
WOODS LINE BOUNDARY		

RIGHT-OF-WAY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
DENIAL OF ACCESS	DA	DA
EASEMENT - OTHERS	EASEMENT TYPE	
PERMANENT EASEMENT	PE	PE
AERIAL PERMANENT EASEMENT	APE	APE
PROPERTY LINE		
PROPERTY MARKER - CONCRETE	C.M.	
PROPERTY MARKER - IRON PIPE	I.P.	
RIGHT-OF-WAY BASELINE	100+00	100+00
RIGHT-OF-WAY LINE	R/W	R/W
RIGHT-OF-WAY BY PE	R/W-PE	
RIGHT-OF-WAY & DENIAL OF ACCESS	R/W-DA	R/W-DA
RIGHT-TO-ENTER		RTE
TEMPORARY CONSTRUCTION EASEMENT		TCE

SURVEY CONTROL & MONUMENTATION

FEATURE DESCRIPTION	EXISTING
POINT OF CURVATURE OR TANGENCY	
POINT OF INTERSECTING TANGENTS	
SURVEY BENCHMARK LOCATION	B.M.
SURVEY NGS POINT LOCATION	
SURVEY TIE POINT LOCATION	T.P.
SURVEY TRAVERSE POINT	

MISCELLANEOUS FEATURES

FEATURE DESCRIPTION	PROPOSED	ID
BRICK PATTERNED SURFACE		
BUTT JOINT		
CLEAR ZONE	CZ	
CONSTRUCTION BASELINE	100+00	
LATERAL OFFSET	LO	
LIMIT OF CONSTRUCTION	LOC	
PAVEMENT PATCH		
PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH		
P.C.C. SIDEWALK - 4"		
P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)		
TURF REINFORCEMENT MAT		
STONE INFILTRATION BMP		BMP XXX
EXISTING GRASS		

IDENTIFIERS

FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	AB C
ABANDON BY OTHERS	AB O
ADJUST BY CONTRACTOR	A C
ADJUST BY OTHERS	A O
BEST MANAGEMENT PRACTICE	BMP XXX
BUS STOP PAD / TYPE	BSP Y
BUS STOP WITH SHELTER PAD / TYPE	BSSP Y
CONCRETE SAFETY BARRIER	B XXX
CONVERT TO JUNCTION BOX	CJB XXX
CONVERT TO DRAINAGE MANHOLE	CMH XXX
DO NOT DISTURB	DND
ENERGY DISSIPATOR	ED XXX
FILL WITH FLOWABLE FILL	FF C
LANDSCAPE PLANTINGS	LS XXX
PEDESTRIAN CONNECTION / TYPE	PC XX
PEDESTRIAN CONNECTION / TYPE WITHOUT DETECTABLE WARNING SYSTEM	PC-N XXX
RELOCATE BY CONTRACTOR	RL C
RELOCATE BY OTHERS	RL O
RELOCATE BY PROPERTY OWNER	RL PO
REMOVE BY CONTRACTOR	RM C
REMOVE BY OTHERS	RM O
REMOVE BY TRAFFIC CONTRACTOR	RM TC
RIGHT-OF-WAY MONUMENT	M XXX

EXISTING UTILITIES

UTILITY COMPANY	EXISTING
ARTESIAN WATER COMPANY	AW-W(X)
CHESAPEAKE UTILITIES	CU-G(X)
COMCAST	COM-C(X)
DELAWARE ELECTRIC COOPERATIVE	DEC-E(X)
DELDOT	DOT-ITMS(X)
KENT COUNTY	KC-S(X)
VERIZON	VER-C(X)

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/LG00.dgn

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	LEGEND	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 4
					CHECKED BY: J. Hofstee		

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED JANUARY 2025 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2025.

2. ELECTRONIC DESIGN DATA FILES THAT WILL BE MADE AVAILABLE TO THE BIDDERS INCLUDE:

( )	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D TRIANGLES REPRESENTING THE EXISTING SURFACE.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D FEATURE LINES FOR THE PROPOSED DESIGN. 3D FEATURE LINES ARE FOR THE PROPOSED TOP SURFACE ELEVATION ONLY.

NOTE: THE DOCUMENT ENTITLED "ELECTRONIC FILE SHARING RELEASE" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

NOTE: THERE MAY BE SOME AREAS OF THE PROJECT NOT INCLUDED IN THE ELECTRONIC DESIGN DATA FILE(S). IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE DESIGN DATA FILE AND DETERMINE THE LIMITS OF THE PROJECT INCLUDED.

3. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS
(X)	RIGHT-OF-WAY PLANS

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

2. THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659-4600 PRIOR TO ANY UNMANNED AERIAL VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

3. A NIGHT WORK SURVEY OF ADJACENT PROPERTY OWNERS WAS CONDUCTED AND LOCAL NOISE ORDINANCES HAVE BEEN VERIFIED. NIGHT WORK IS PERMITTED ON THIS CONTRACT.

SECTION 200

4. THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE POSITIONED IN ACCORDANCE WITH LATEST VERSION OF THE UNITED STATES POSTAL SERVICE GUIDELINES. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. ACCEPTABLE POST SHALL BE 4 INCH X 4 INCH WOOD POST OR 4 INCH DIAMETER WOOD POST. FOR RELOCATING MULTIPLE MAILBOXES TOGETHER ALL POST SHALL BE SEPARATED BY A DISTANCE OF NO LESS THAN ¾ OF THEIR FULL HEIGHT ABOVE THE GROUND. MULTIPLE MAILBOXES ATTACHED TO A SINGLE HORIZONTAL BOARD SHALL NOT BE LOCATED INSIDE THE CLEARZONE. EACH MAILBOX SHALL BE PLACED ON AN INDIVIDUAL POST MEETING THE CRITERIA ABOVE. ALL MAILBOXES SHALL BE SET NOT TO IMPEDE THE MINIMUM PAR (PEDESTRIAN ACCESS ROUTE) WIDTH AS DETERMINED BY THE CURRENT EDITION OF THE PEDESTRIAN ACCESSIBILITY STANDARDS FOR FACILITIES IN THE PUBLIC RIGHT OF WAY. IF MAILBOXES ARE NOT SET IN ACCORDANCE WITH THE ABOVE DIRECTIONS, RESETTING OF THE MAILBOXES WILL BE AT THE COST OF THE CONTRACTOR. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 – CLEARING AND GRUBBING.

5. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   a. POLES AND BASES.
   b. RETAINING WALLS.
   c. DRAINAGE STRUCTURES.
   d. ABANDONED WELL ON PARCEL 128

6. UNLESS OTHERWISE NOTED AS DO NOT DISTURB OR ADJUST BY CONTRACTOR/OTHERS, ALL EXISTING FEATURES, INCLUDING TREES, WITHIN THE PROPOSED LOC SHALL BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER THE RESPECTIVE BID ITEM. REMOVAL OF EXISTING STORM DRAIN PIPE SHALL BE PAID UNDER ITEM 202000 UNLESS NOTED WITH A FLOWABLE FILL IDENTIFIER, REMOVAL OF TREES AND SHRUBS SHALL BE PAID FOR UNDER 201000, AND REMOVAL OF ADDITIONAL EXISTING FEATURES SHALL BE PAID FOR UNDER ITEM 211000 AS NOTED IN SECTION 200 OF THE PROJECT NOTES.

SECTION 400

7. THE PAVEMENT SECTION FOR FLEXIBLE PAVEMENT RESIDENTIAL DRIVEWAYS SHALL BE 2" BITUMINOUS CONCRETE, TYPE 'C' OVER 8" GABC, UNLESS OTHERWISE NOTED ON THE PLANS.

SECTION 600

8. STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

9. DRAINAGE INLET GRATES ADJACENT TO THE CURB OR EDGE PAVING, WITHIN THE PROJECT LIMITS, WHICH ARE NOT TYPE 1 OR TYPE 4, SHALL BE REPLACED WITH TYPE 1. INLET GRATES WITHIN THE PAVING, NOT ADJACENT TO THE CURB OR EDGE OF PAVING SHALL BE REPLACED WITH TYPE 3. THE ACTUAL LOCATIONS, THE NEED FOR ANY GRATE MODIFICATIONS OR FOR NEW FRAMES SHALL BE DETERMINED BY THE ENGINEER. ALL REPLACED GRATES/FRAMES SHALL BE DELIVERED TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S CHESWOLD MAINTENANCE YARD WITH THE COST OF DELIVERY INCIDENTAL TO ITEM 602100 - DRAINAGE INLET GRATE(S) & ITEM 602101 - DRAINAGE INLET FRAME(S). FINAL PAYMENT FOR DRAINAGE INLET GRATES/FRAMES SHALL NOT BE MADE UNTIL RECEIPT OF DELIVERED MATERIALS IS PRODUCED, SIGNED BY A DELDOT MAINTENANCE YARD SUPERVISOR.

SECTION 700

10. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

11. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762001 - SAWCUTTING, CONCRETE, FULL DEPTH.

12. PORTLAND CEMENT CONCRETE CHANNELIZING ISLANDS THAT ARE LESS THAN 75 SQ FT MAY BE POURED MONOLITHICALLY, OR AS DIRECTED BY THE ENGINEER.

13. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

SECTION 900

14. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

15. PROVIDE ALL DNREC REQUIRED POST CONSTRUCTION VERIFICATION DOCUMENTATION FOR STORMWATER BEST MANAGEMENT PRACTICES (BMP) TO THE ENGINEER AT THE TIME OF SUBSTANTIAL COMPLETION.

MISCELLANEOUS

16. THE CONTRACTOR SHALL NOTIFY DART FIRST STATE AT DOT_DETOURS@DELAWARE.GOV AT LEAST 14 DAYS PRIOR TO THE START OF ANY DETOURS OR CONSTRUCTION, AND DOT_DTC_PROJECTDEVELOPMENT@DELAWARE.GOV AT SUCH TIME THE FACILITY IS COMPLETED AND OPERABLE FOR TRANSIT OPERATIONS. FOR EMERGENCY DETOUR INFORMATION ONLY, PLEASE CONTACT DTC'S CHIEF SCHEDULER AT 302-576-6019.

17. ALL DART SIGNS HAVE BEEN UPDATED TO A NEW DESIGN. THE DELDOT SIGN SHOP DOES NOT FABRICATE THE UPDATED SIGN OR ANY SUPPLEMENTAL PLAQUES TO ALLOW FOR ADDITIONAL ROUTE NUMBERS. ALL REQUESTS FOR FABRICATION OF THESE SIGNS MUST BE MADE THROUGH DART TRANSIT AT 302-576-6132.

18. ANY STAGING AND/OR STOCKPILE AREA(S) OUTSIDE THE PROJECT'S LIMIT OF CONSTRUCTION (LOC) THAT INDIVIDUALLY OR CUMULATIVELY ARE LARGER THAN 10,000 SQUARE FEET, MUST BE APPROVED BY DELDOT'S ARCHAEOLOGIST. CONTACT THE CONSTRUCTION AREA ENGINEER WHO WILL COORDINATE WITH DELDOT'S ARCHAEOLOGIST.

    WITHIN 30 DAYS, DELDOT WILL;
    1) APPROVE THE USE OF THE PROPOSED STAGING AND STOCKPILE AREA(S);
    2) REJECT THE REQUEST; OR
    3) PERFORM AN ARCHAEOLOGICAL SURVEY TO DETERMINE WHETHER TO APPROVE OR REJECT THE REQUEST, WHICH MAY TAKE UP TO 3 MONTHS. IF AN ARCHAEOLOGICAL SURVEY IS NECESSARY, DELDOT OR A CONSULTANT ON ITS BEHALF WILL UNDERTAKE THE SURVEY.

19. MILLINGS ARE NOT AN ACCEPTABLE SUBSTITUTION FOR GABC OR CC. IF MILLINGS ARE DESIRED FOR USE THEN A SEPARATE PAVEMENT SECTION WILL HAVE TO BE DESIGNED.

EARTHWORK SUMMARY

EXCAVATION	
EXCAVATION FROM CROSS SECTIONS	16488 C.Y.
ROCK EXCAVATION FOR ROADWAY AND TRENCHES	0 C.Y.
TOPSOIL STRIPPING	1670 C.Y.
TOTAL EXCAVATION	18158 C.Y.
EXCAVATION AVAILABLE FOR EMBANKMENT	
EXCAVATION MEETING BORROW TYPE 'A'	1649 C.Y.
EXCAVATION MEETING BORROW TYPE 'F'	4122 C.Y.
EXCAVATION MEETING TOPSOIL	1253 C.Y.
EMBANKMENT REQUIREMENTS	
BORROW TYPE 'A' REQUIRED (INCLUDING UNDERCUT)	230 C.Y.
BORROW TYPE 'F' REQUIRED	181 C.Y.
TOPSOIL REQUIRED	3032 C.Y.
MATERIAL BALANCE ("+"= EXCESS, "-"= NEED)	
BORROW TYPE 'A'	+1419 C.Y.
BORROW TYPE 'F'	+3941 C.Y.
TOPSOIL	-1968 C.Y.
UNSUITABLE MATERIAL	+11135 C.Y.

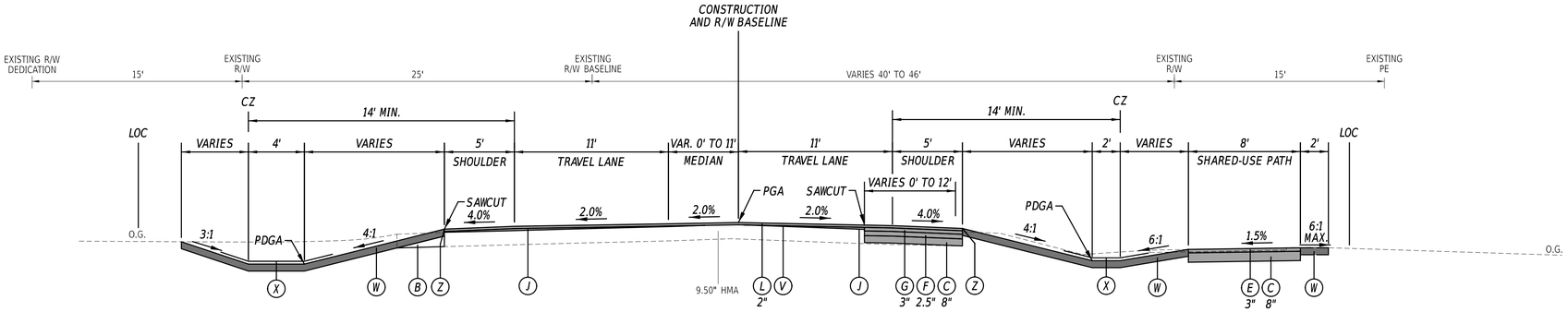
NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.

2) OTHER SOURCES OF EXCAVATION MAY INCLUDE PIPE TRENCH EXCAVATION, STRUCTURE EXCAVATION, UNDERCUT EXCAVATION, STORMWATER MANAGEMENT POND EXCAVATION, ENVIRONMENTAL SITE EXCAVATION, MAINTENANCE OF TRAFFIC EXCAVATION, ETC.

3) UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.

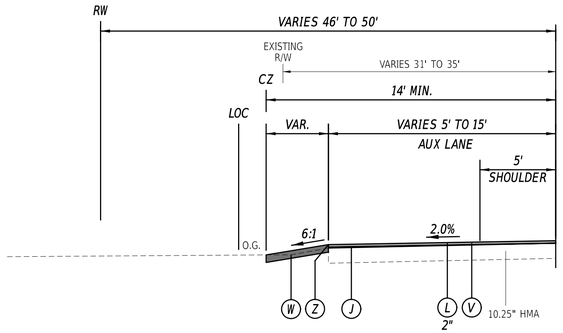
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PN00.dgn

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	T202104203	BRIDGE NO.	N/A	NOTES	SECTION	AEC
				COUNTY	KENT	DESIGNED BY:	A. Malkin		SHEET NO.	5
						CHECKED BY:	J. Hofstee			



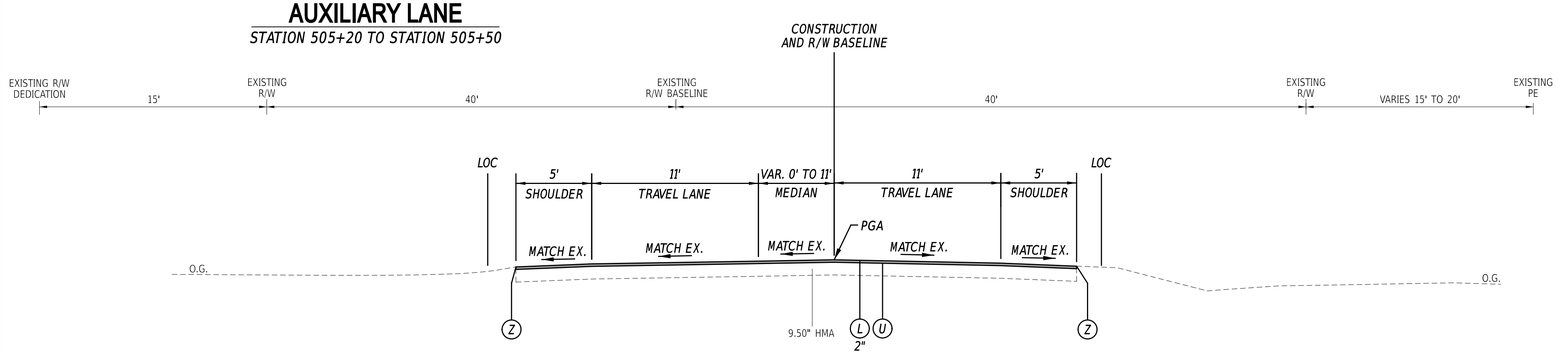
BRENFORD RD - VARIABLE MILL & OVERLAY

STATION 505+00 TO STATION 507+20



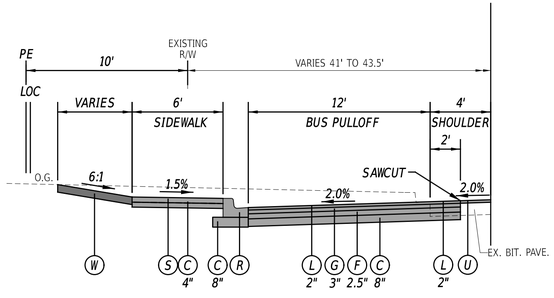
AUXILIARY LANE

STATION 505+20 TO STATION 505+50



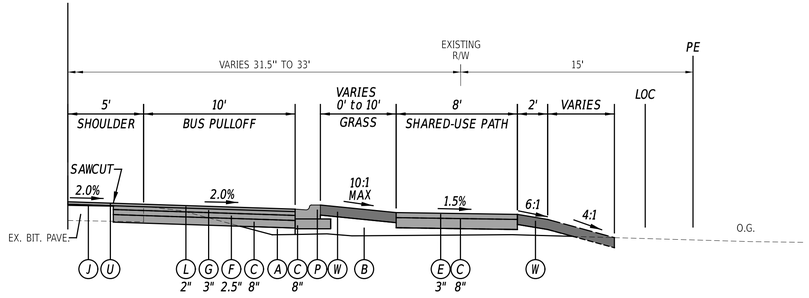
BRENFORD RD - MILL & OVERLAY

STATION 499+00 TO STATION 505+00



BUS PULLOFF

STATION 499+50 TO STATION 501+00



BUS PULLOFF

STATION 502+60 TO STATION 504+45

LEGEND

- (A) ITEM 209001 - BORROW, TYPE A
- (B) ITEM 209006 - BORROW, TYPE F
- (C) ITEM 301001 - GABC
- (D) ITEM 301002 - GABC, PATCHING
- (E) ITEM 401005 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22 (CARBONATE STONE)
- (F) ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
- (G) ITEM 401016 - SUPERPAVE TYPE B, PG 76-22
- (H) ITEM 401029 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, PATCHING
- (I) ITEM 401030 - SUPERPAVE TYPE B, PG 64-22, PATCHING
- (J) ITEM 401036 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, WEDGE
- (K) ITEM 401037 - SUPERPAVE TYPE B, PG 64-22, WEDGE
- (L) ITEM 401046 - SUPERPAVE TYPE C, 9.5 mm, PG 76-22 (NON-CARBONATE STONE)
- (M) ITEM 701507 - CURB RETAINING WALL
- (N) ITEM 701011 - PCC CURB, TYPE 1-4
- (O) ITEM 701016 - I.PCC CURB AND GUTTER, TYPE 1-4
- (P) ITEM 701021 - I.PCC CURB AND GUTTER, TYPE 3-4
- (R) ITEM 701023 - I.PCC CURB AND GUTTER, TYPE 3-8
- (S) ITEM 705001 - PCC SIDEWALK, 4"
- (T) ITEM 709001 - PERFORATED PIPE UNDERDRAINS, 6"
- (U) ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT
- (V) ITEM 760012 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH
- (W) ITEM 908004 - TOPSOIL, 6" DEPTH
ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
ITEM 908026 - EROSION CONTROL MULCH (SEE NOTE 2)
- (X) ITEM 908020 - EROSION CONTROL BLANKET MULCH (SEE NOTE 1)
- (Z) SAFETY EDGE FOR ROADWAY PAVEMENT

NOTES:

1. ITEM 908020 - EROSION CONTROL BLANKET MULCH SHALL BE PLACED ALONG BOTTOM OF SWALE AND UP TO 2 FEET ON THE ADJACENT SIDE SLOPES.

2. ITEM 908026 - EROSION CONTROL MULCH SHALL BE PLACED IN ALL PERMANENT GRASS SEEDING AREAS OUTSIDE OF EROSION CONTROL BLANKET MULCH FOOTPRINT.

MATERIAL	BINDER GRADE	LIFT THICKNESS	
		MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE C (4.75 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (9.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (12.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	76-22, 70-22	2.25"	4"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	64-22	2.25"	6"
BITUMINOUS CONCRETE BASE COURSE	64-22	3"	6"
GRADED AGGREGATE BASE COURSE		4"	8"

ADDENDA / REVISIONS

NOT TO SCALE

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT T202104203

COUNTY KENT

BRIDGE NO. N/A

DESIGNED BY: A. Malkin

CHECKED BY: J. Hofstee

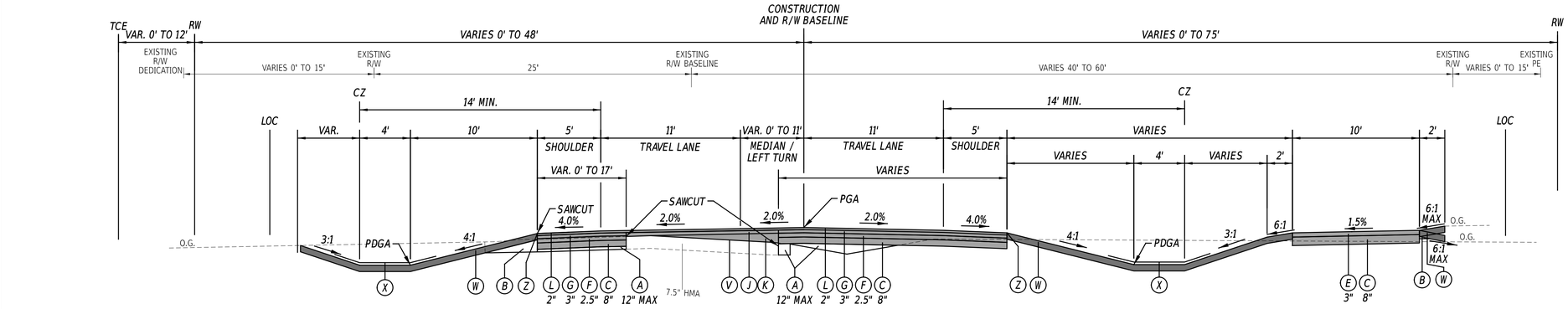
TYPICAL SECTIONS

SECTION AEC

SHEET NO. 6

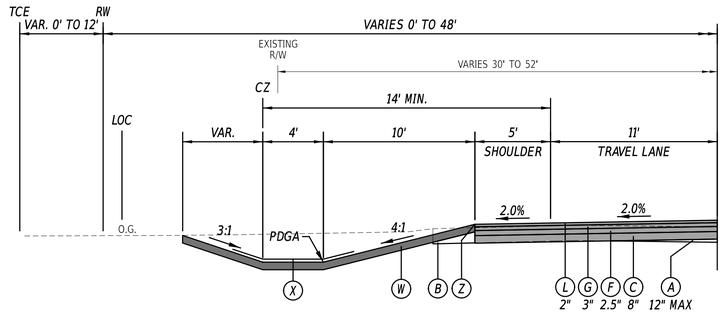
AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/TS00.dgn



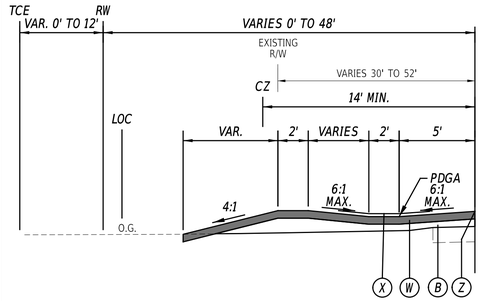
BRENFORD RD - NORMAL SECTION

STATION 507+20 TO STATION 519+50



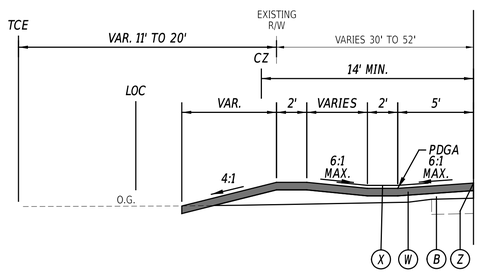
ADDITIONAL TRAVEL LANE

STATION 510+54 TO STATION 519+50



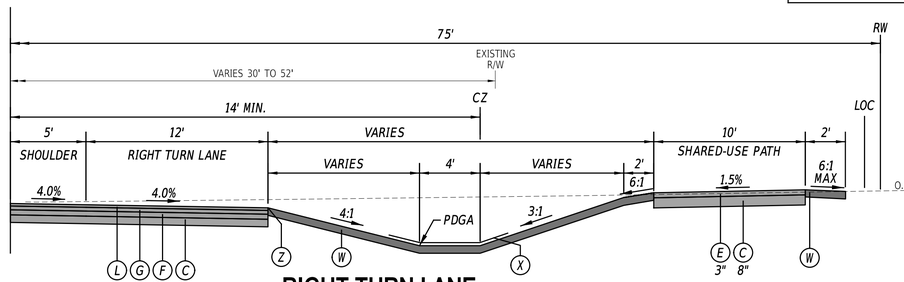
SHALLOW SWALE & ADDITIONAL TRAVEL LANE

STATION 510+54 TO STATION 511+60
STATION 516+20 TO STATION 518+50



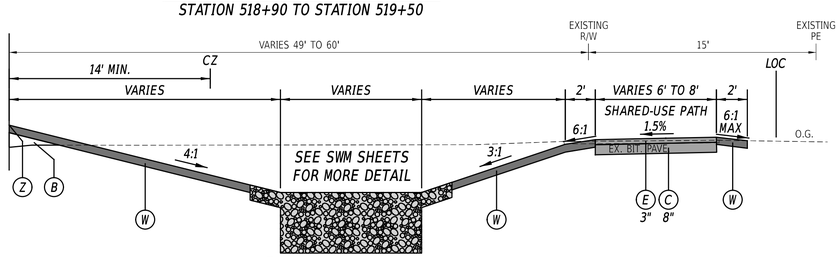
SHALLOW SWALE

STATION 508+30 TO STATION 510+54



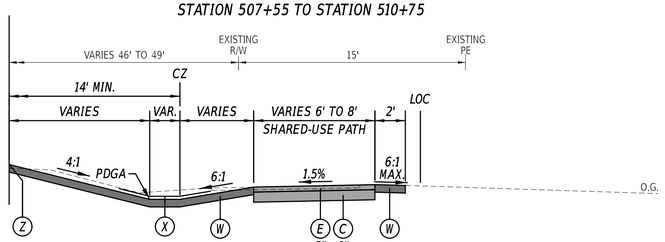
RIGHT TURN LANE

STATION 518+90 TO STATION 519+50



BMP-01

STATION 507+55 TO STATION 510+75



SHARED-USE PATH RECONSTRUCTION

STATION 507+20 TO STATION 507+55

LEGEND

- (A) ITEM 209001 - BORROW, TYPE A
- (B) ITEM 209006 - BORROW, TYPE F
- (C) ITEM 301001 - GABC
- (D) ITEM 301002 - GABC, PATCHING
- (E) ITEM 401005 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22 (CARBONATE STONE)
- (F) ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
- (G) ITEM 401016 - SUPERPAVE TYPE B, PG 76-22
- (H) ITEM 401029 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, PATCHING
- (I) ITEM 401030 - SUPERPAVE TYPE B, PG 64-22, PATCHING
- (J) ITEM 401036 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, WEDGE
- (K) ITEM 401037 - SUPERPAVE TYPE B, PG 64-22, WEDGE
- (L) ITEM 401046 - SUPERPAVE TYPE C, 9.5 mm, PG 76-22 (NON-CARBONATE STONE)
- (M) ITEM 701507 - CURB RETAINING WALL
- (N) ITEM 701011 - PCC CURB, TYPE 1-4
- (O) ITEM 701016 - I.PCC CURB AND GUTTER, TYPE 1-4
- (P) ITEM 701021 - I.PCC CURB AND GUTTER, TYPE 3-4
- (R) ITEM 701023 - I.PCC CURB AND GUTTER, TYPE 3-8
- (S) ITEM 705001 - PCC SIDEWALK, 4"
- (T) ITEM 709001 - PERFORATED PIPE UNDERDRAINS, 6"
- (U) ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT
- (V) ITEM 760012 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH
- (W) ITEM 908004 - TOPSOIL, 6" DEPTH
ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
ITEM 908026 - EROSION CONTROL MULCH (SEE NOTE 2)
- (X) ITEM 908020 - EROSION CONTROL BLANKET MULCH (SEE NOTE 1)
- (Z) SAFETY EDGE FOR ROADWAY PAVEMENT

NOTES:

1. ITEM 908020 - EROSION CONTROL BLANKET MULCH SHALL BE PLACED ALONG BOTTOM OF SWALE AND UP TO 2 FEET ON THE ADJACENT SIDE SLOPES.

2. ITEM 908026 - EROSION CONTROL MULCH SHALL BE PLACED IN ALL PERMANENT GRASS SEEDING AREAS OUTSIDE OF EROSION CONTROL BLANKET MULCH FOOTPRINT.

MATERIAL	BINDER GRADE	LIFT THICKNESS	
		MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE C (4.75 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (9.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (12.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	76-22, 70-22	2.25"	4"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	64-22	2.25"	6"
BITUMINOUS CONCRETE BASE COURSE	64-22	3"	6"
GRADED AGGREGATE BASE COURSE		4"	8"

ADDENDA / REVISIONS

NOT TO SCALE

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

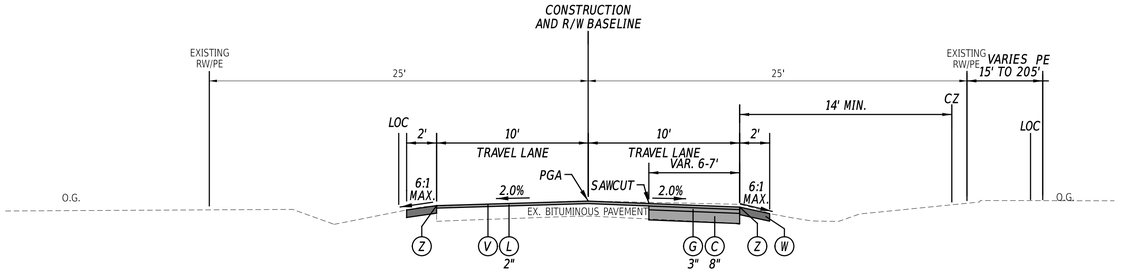
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

TYPICAL SECTIONS

SECTION
AEC
SHEET NO.
7

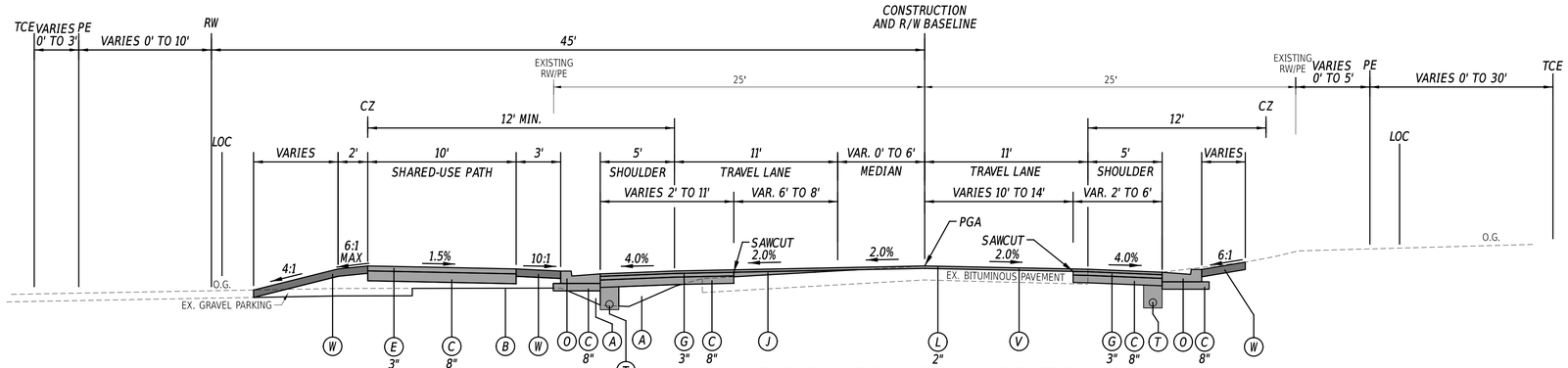
AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/TS00.dgn



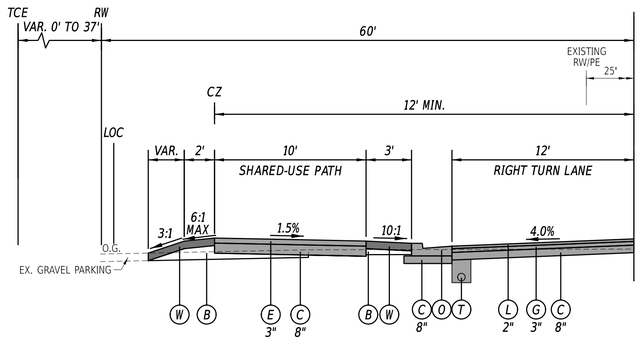
BIG OAK RD - MILL & OVERLAY

STATION 526+88 TO STATION 528+50



BIG OAK RD - NORMAL SECTION

STATION 522+00 TO STATION 526+88



RIGHT TURN LANE

STATION 522+00 TO STATION 523+75

LEGEND

- (A) ITEM 209001 - BORROW, TYPE A
- (B) ITEM 209006 - BORROW, TYPE F
- (C) ITEM 301001 - GABC
- (D) ITEM 301002 - GABC, PATCHING
- (E) ITEM 401005 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22 (CARBONATE STONE)
- (F) ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
- (G) ITEM 401016 - SUPERPAVE TYPE B, PG 76-22
- (H) ITEM 401029 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, PATCHING
- (I) ITEM 401030 - SUPERPAVE TYPE B, PG 64-22, PATCHING
- (J) ITEM 401036 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, WEDGE
- (K) ITEM 401037 - SUPERPAVE TYPE B, PG 64-22, WEDGE
- (L) ITEM 401046 - SUPERPAVE TYPE C, 9.5 mm, PG 76-22 (NON-CARBONATE STONE)
- (M) ITEM 701507 - CURB RETAINING WALL
- (N) ITEM 701011 - PCC CURB, TYPE 1-4
- (O) ITEM 701016 - I.PCC CURB AND GUTTER, TYPE 1-4
- (P) ITEM 701021 - I.PCC CURB AND GUTTER, TYPE 3-4
- (R) ITEM 701023 - I.PCC CURB AND GUTTER, TYPE 3-8
- (S) ITEM 705001 - PCC SIDEWALK, 4"
- (T) ITEM 709001 - PERFORATED PIPE UNDERDRAINS, 6"
- (U) ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT
- (V) ITEM 760012 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH
- (W) ITEM 908004 - TOPSOIL, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 908026 - EROSION CONTROL MULCH (SEE NOTE 2)
- (X) ITEM 908020 - EROSION CONTROL BLANKET MULCH (SEE NOTE 1)
- (Z) SAFETY EDGE FOR ROADWAY PAVEMENT

NOTES:

1. ITEM 908020 - EROSION CONTROL BLANKET MULCH SHALL BE PLACED ALONG BOTTOM OF SWALE AND UP TO 2 FEET ON THE ADJACENT SIDE SLOPES.

2. ITEM 908026 - EROSION CONTROL MULCH SHALL BE PLACED IN ALL PERMANENT GRASS SEEDING AREAS OUTSIDE OF EROSION CONTROL BLANKET MULCH FOOTPRINT.

MATERIAL	BINDER GRADE	LIFT THICKNESS	
		MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE C (4.75 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (9.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (12.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	76-22, 70-22	2.25"	4"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	64-22	2.25"	6"
BITUMINOUS CONCRETE BASE COURSE	64-22	3"	6"
GRADED AGGREGATE BASE COURSE		4"	8"

ADDENDA / REVISIONS

NOT TO SCALE

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

TYPICAL SECTIONS

SECTION
AEC
SHEET NO.
8

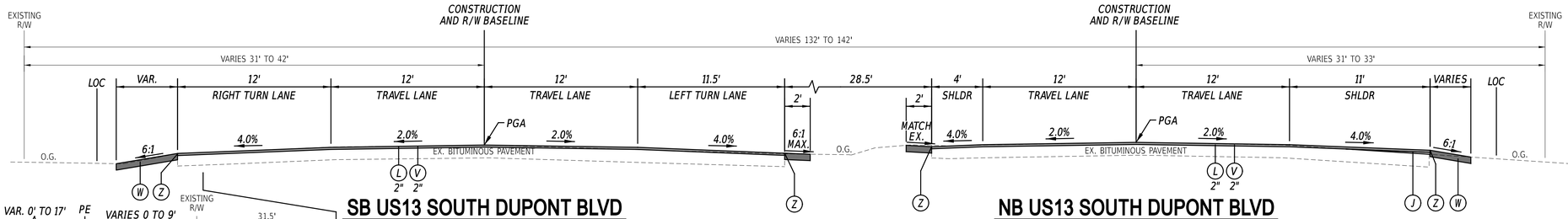
AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/TS00.dgn

MATERIAL	BINDER GRADE	LIFT THICKNESS	
		MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE C (4.75 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (9.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE C (12.5 mm mix)	ALL	1.25"	2"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	76-22, 70-22	2.25"	4"
BITUMINOUS CONCRETE, TYPE B (19 mm mix)	64-22	2.25"	6"
BITUMINOUS CONCRETE BASE COURSE	64-22	3"	6"
GRADED AGGREGATE BASE COURSE		4"	8"

LEGEND

- (A) ITEM 209001 - BORROW, TYPE A
- (B) ITEM 209006 - BORROW, TYPE F
- (C) ITEM 301001 - GABC
- (D) ITEM 301002 - GABC, PATCHING
- (E) ITEM 401005 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22 (CARBONATE STONE)
- (F) ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
- (G) ITEM 401016 - SUPERPAVE TYPE B, PG 76-22
- (H) ITEM 401029 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, PATCHING
- (I) ITEM 401030 - SUPERPAVE TYPE B, PG 64-22, PATCHING
- (J) ITEM 401036 - SUPERPAVE TYPE C, 9.5 mm, PG 64-22, WEDGE
- (K) ITEM 401037 - SUPERPAVE TYPE B, PG 64-22, WEDGE
- (L) ITEM 401046 - SUPERPAVE TYPE C, 9.5 mm, PG 76-22 (NON-CARBONATE STONE)
- (M) ITEM 701507 - CURB RETAINING WALL
- (N) ITEM 701011 - PCC CURB, TYPE 1-4
- (O) ITEM 701016 - I.PCC CURB AND GUTTER, TYPE 1-4
- (P) ITEM 701021 - I.PCC CURB AND GUTTER, TYPE 3-4
- (R) ITEM 701023 - I.PCC CURB AND GUTTER, TYPE 3-8
- (S) ITEM 705001 - PCC SIDEWALK, 4"
- (T) ITEM 709001 - PERFORATED PIPE UNDERDRAINS, 6"
- (U) ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT
- (V) ITEM 760012 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH
- (W) ITEM 908004 - TOPSOIL, 6" DEPTH
ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
ITEM 908026 - EROSION CONTROL MULCH (SEE NOTE 2)
- (X) ITEM 908020 - EROSION CONTROL BLANKET MULCH (SEE NOTE 1)
- (Z) SAFETY EDGE FOR ROADWAY PAVEMENT

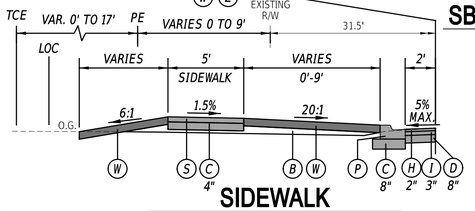


SB US13 SOUTH DUPONT BLVD

STATION 209+00 TO STATION 212+00

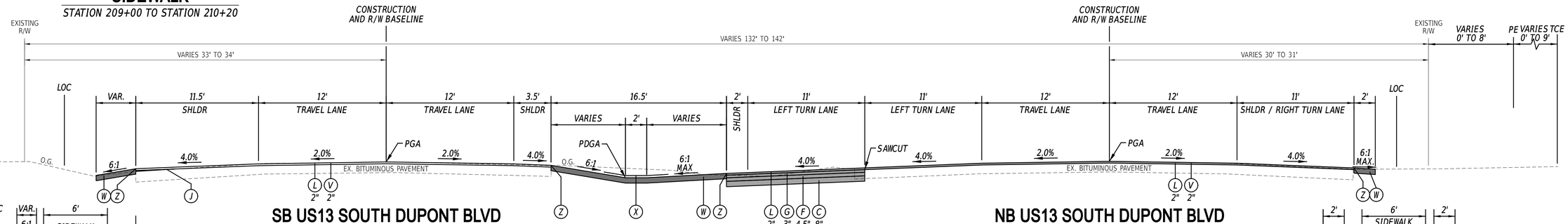
NB US13 SOUTH DUPONT BLVD

STATION 109+00 TO STATION 110+95



SIDEWALK

STATION 209+00 TO STATION 210+20

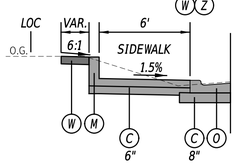


SB US13 SOUTH DUPONT BLVD

STATION 205+00 TO STATION 207+00

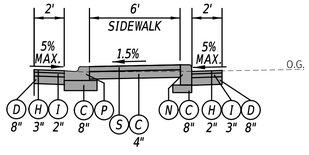
NB US13 SOUTH DUPONT BLVD

STATION 102+50 TO STATION 107+50



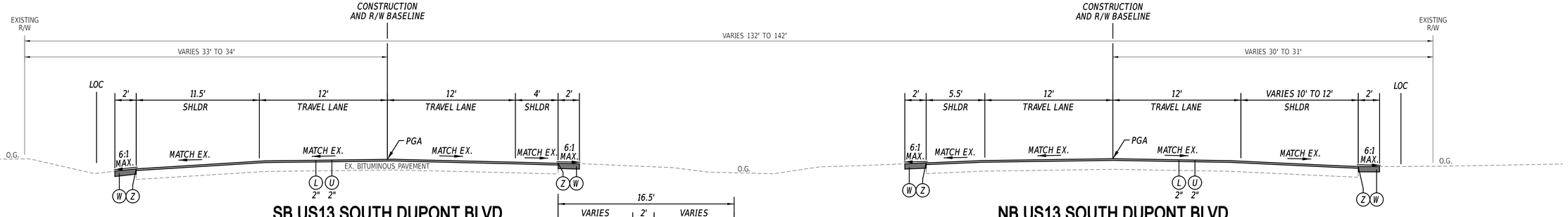
SIDEWALK

STATION 205+55 TO STATION 207+00



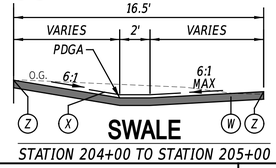
SIDEWALK

STATION 106+40 TO STATION 107+50



SB US13 SOUTH DUPONT BLVD

STATION 198+50 TO STATION 205+00



SWALE

STATION 204+00 TO STATION 205+00

NB US13 SOUTH DUPONT BLVD

STATION 98+50 TO STATION 102+50
STATION 110+95 TO STATION 112+00

NOTES:

1. ITEM 908020 - EROSION CONTROL BLANKET MULCH SHALL BE PLACED ALONG BOTTOM OF SWALE AND UP TO 2 FEET ON THE ADJACENT SIDE SLOPES.

2. ITEM 908026 - EROSION CONTROL MULCH SHALL BE PLACED IN ALL PERMANENT GRASS SEEDING AREAS OUTSIDE OF EROSION CONTROL BLANKET MULCH FOOTPRINT.

ADDENDA / REVISIONS

NOT TO SCALE

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

TYPICAL SECTIONS

SECTION AEC

SHEET NO. 9

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/TS00.dgn

CIRCULAR CURVE NO. (1)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(31013)	68+45.30	461827.7628	605748.3372
PI	(31014)	72+02.12	461939.0884	606087.3370
CC	(31015)		472714.9006	602173.0639
PT	(31016)	75+58.70	462071.2892	606418.7541

Radius:	11459.1600
Delta:	3°34'01.05" Left
Degree of Curvature:	0°30'00.00"
Length:	713.39
Tangent:	356.81
Chord:	713.28
Middle Ordinate:	5.55
External:	5.55
Tangent Direction:	N 71°49'12.42" E
Radial Direction:	S 18°10'47.58" E
Chord Direction:	N 70°02'11.90" E
Radial Direction:	S 21°44'48.63" E
Tangent Direction:	N 68°15'11.37" E

CIRCULAR CURVE NO. (2)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(30102)	503+50.41	461838.4928	605805.3205
PI	(30103)	505+48.06	461897.0922	605994.0831
CC	(30104)		466833.3441	604254.7205
PT	(30105)	507+45.52	461969.7713	606177.8845

Radius:	5230.0000
Delta:	4°19'42.67" Left
Degree of Curvature:	1°05'43.88"
Length:	395.11
Tangent:	197.65
Chord:	395.02
Middle Ordinate:	3.73
External:	3.73
Tangent Direction:	N 72°45'12.90" E
Radial Direction:	S 17°14'47.10" E
Chord Direction:	N 70°35'21.57" E
Radial Direction:	S 21°34'29.77" E
Tangent Direction:	N 68°25'30.23" E

CIRCULAR CURVE NO. (3)

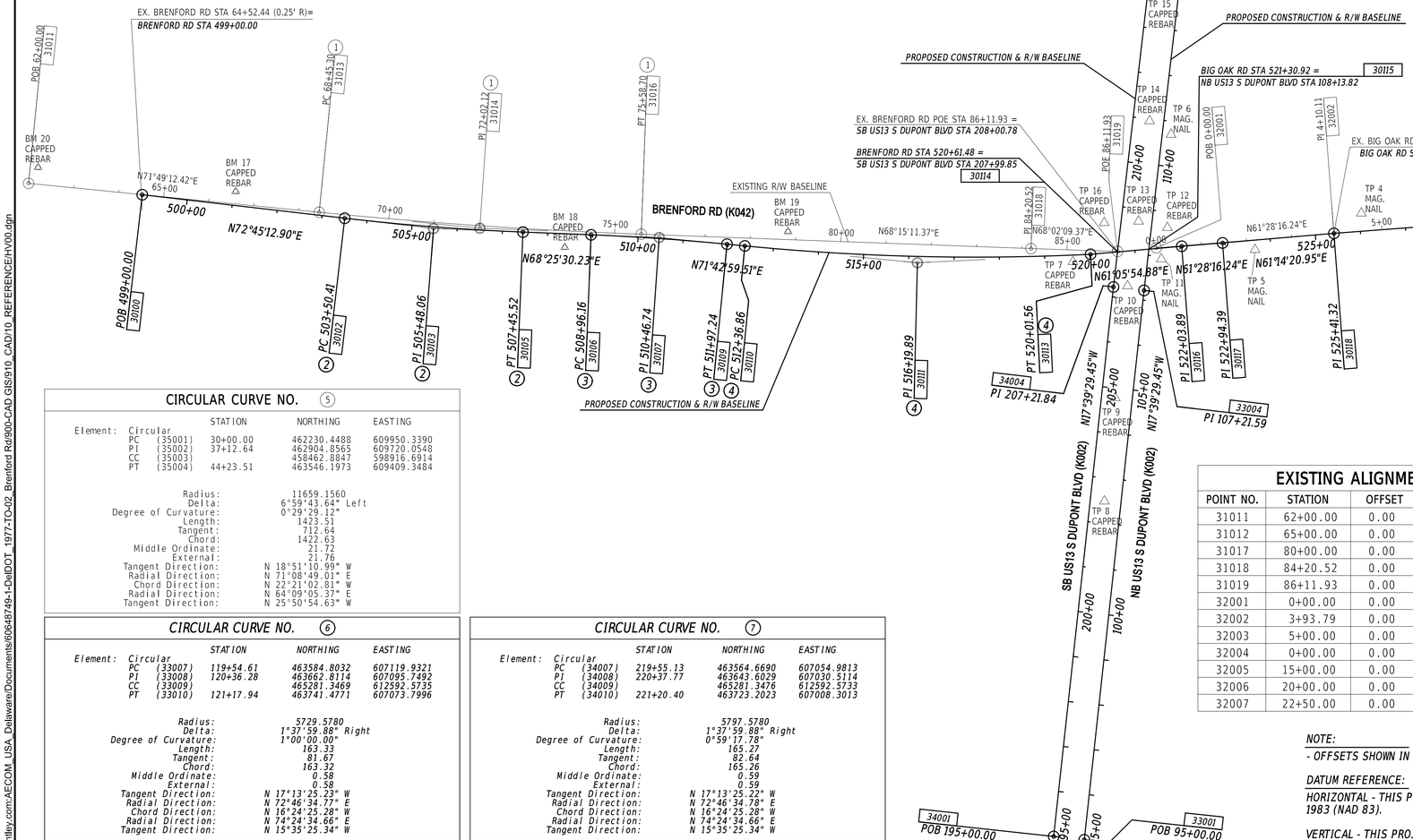
Element:		STATION	NORTHING	EASTING
Circular				
PC	(30106)	508+96.16	462025.1647	606317.9712
PI	(30107)	510+46.74	462080.5360	606458.0021
CC	(30108)		457151.3626	608245.1801
PT	(30109)	511+97.24	462127.7761	606600.9813

Radius:	5241.0000
Delta:	3°17'29.28" Right
Degree of Curvature:	1°05'35.60"
Length:	301.08
Tangent:	150.58
Chord:	301.04
Middle Ordinate:	2.16
External:	2.16
Tangent Direction:	N 68°25'30.23" E
Radial Direction:	S 21°34'29.77" E
Chord Direction:	N 70°04'14.87" E
Radial Direction:	S 18°17'00.49" E
Tangent Direction:	N 71°42'59.51" E

CIRCULAR CURVE NO. (4)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(30110)	512+36.86	462140.2072	606638.6058
PI	(30111)	516+19.89	462260.3707	607002.2985
CC	(30112)		467106.1760	604997.8579
PT	(30113)	520+01.56	462432.2393	607344.6037

Radius:	5230.0000
Delta:	8°22'38.59" Left
Degree of Curvature:	1°05'43.88"
Length:	764.69
Tangent:	383.03
Chord:	764.01
Middle Ordinate:	13.97
External:	14.01
Tangent Direction:	N 71°42'59.51" E
Radial Direction:	S 18°17'00.49" E
Chord Direction:	N 67°31'40.21" E
Radial Direction:	S 26°39'39.08" E
Tangent Direction:	N 63°20'20.92" E



CIRCULAR CURVE NO. (5)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(35001)	30+00.00	462230.4488	609950.3390
PI	(35002)	37+12.64	462904.8565	609720.0548
CC	(35003)		458462.8847	598916.6914
PT	(35004)	44+23.51	463546.1973	609409.3484

Radius:	11659.1560
Delta:	6°59'43.64" Left
Degree of Curvature:	0°29'29.12"
Length:	1423.51
Tangent:	712.64
Chord:	1422.63
Middle Ordinate:	21.72
External:	21.76
Tangent Direction:	N 18°51'10.99" W
Radial Direction:	N 71°08'49.01" E
Chord Direction:	N 22°21'02.81" W
Radial Direction:	N 64°09'05.37" E
Tangent Direction:	N 25°50'54.63" W

CIRCULAR CURVE NO. (6)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(33007)	119+54.61	463584.8032	607119.9321
PI	(33008)	120+36.28	463662.8114	607095.7492
CC	(33009)		465281.3469	612592.5735
PT	(33010)	121+17.94	463741.4771	607073.7996

Radius:	5729.5780
Delta:	1°37'59.88" Right
Degree of Curvature:	1°00'00.00"
Length:	163.33
Tangent:	81.67
Chord:	163.32
Middle Ordinate:	0.58
External:	0.58
Tangent Direction:	N 17°13'25.23" W
Radial Direction:	N 72°46'34.77" E
Chord Direction:	N 16°24'25.28" W
Radial Direction:	N 74°24'34.66" E
Tangent Direction:	N 15°35'25.34" W

CIRCULAR CURVE NO. (7)

Element:		STATION	NORTHING	EASTING
Circular				
PC	(34007)	219+55.13	463564.6690	607054.9813
PI	(34008)	220+37.77	463643.6029	607030.5114
CC	(34009)		465281.3476	612592.5733
PT	(34010)	221+20.40	463723.2023	607008.3013

Radius:	5797.5780
Delta:	1°37'59.88" Right
Degree of Curvature:	0°59'17.78"
Length:	165.27
Tangent:	82.64
Chord:	165.26
Middle Ordinate:	0.59
External:	0.59
Tangent Direction:	N 17°13'25.22" W
Radial Direction:	N 72°46'34.78" E
Chord Direction:	N 16°24'25.28" W
Radial Direction:	N 74°24'34.66" E
Tangent Direction:	N 15°35'25.34" W

HORIZONTAL / VERTICAL CONTROL DATA

POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
TP 1	15+59.88	15.02	463230.2255	608852.3122	31.35
TP 2	11+25.92	23.43	463017.6128	608473.9078	33.84
TP 3	6+36.48	21.35	462788.0088	608041.6584	38.34
TP 4	4+57.64	-39.87	462757.3888	607855.1271	39.84
TP 5	2+17.22	21.66	462588.7051	607672.9346	43.60
TP 6	110+70.77	19.41	462746.3392	607400.1777	43.40
TP 7	319+39.51	25.79	462401.4782	607315.8124	45.08
TP 8	202+48.82	31.30	461945.4503	607593.4702	44.48
TP 9	204+78.47	30.56	462164.0530	607523.1044	45.27
TP 10	207+27.47	30.84	462401.1920	607447.9575	44.52
TP 11	0+09.04	25.29	462486.0889	607491.7666	44.14
TP 12	108+65.35	35.15	462554.7978	607476.0347	43.57
TP 13	108+71.98	-29.52	462541.9753	607412.3055	43.40
TP 14	110+95.06	-31.06	462754.5957	607344.7785	42.43
TP 15	113+73.58	-31.66	463020.4478	607261.7397	43.62
TP 16	208+60.52	-36.63	462508.2993	607344.1149	43.82
TP 23	18+36.01	-22.89	463580.4000	609424.6700	26.78
TP 24	39+93.62	17.90	463163.1570	609605.9870	28.28
TP 25	35+20.87	18.53	462726.2200	609788.3250	29.97
TP 26	30+16.81	19.28	462252.6080	609963.1360	30.31
TP 27	120+24.38	-30.75	463642.3320	607069.9010	45.30
BM 17	501+04.27	-31.14	462208.0720	606712.9900	45.14
BM 18	508+39.17	29.93	461976.3770	606275.9820	43.86
BM 19	513+29.50	-40.29	461795.2520	605561.0139	50.72
BM 20			461667.0753	605140.2134	56.74
DelDot Disk BRE1	13+87.36	14.94	463140.9930	608685.8758	31.49
DelDot Disk BREA HOLD V	18+12.62	-30.36	463382.0030	609039.1691	30.68

CONSTRUCTION ALIGNMENT CONTROL

POINT NO.	STATION	OFFSET	NORTHING	EASTING
30100	499+00.00	0.00	461704.9548	605375.1628
30101	500+00.00	0.00	461734.6030	605470.6667
30114	520+61.48	0.00	462461.1995	607397.0618
30115	521+30.92	0.00	462494.7588	607457.8509
30116	522+03.89	0.00	462530.0283	607521.7378
30117	522+94.39	0.00	462573.2478	607601.2427
30118	525+41.32	0.00	462692.0627	607817.7165
30119	530+00.00	0.00	462908.9510	608221.8756
30120	535+00.00	0.00	463145.3788	608662.4456
30121	540+00.00	0.00	463381.8066	609103.0155
30122	544+00.00	0.00	463570.9488	609455.4715
33001	95+00.00	0.00	461243.0411	607855.5878
33002	100+00.00	0.00	461719.4827	607703.9190
33003	105+00.00	0.00	462195.9243	607552.2502
33004	107+21.59	0.00	462407.0701	607485.0347
33005	110+00.00	0.00	462672.9987	607402.5957
33006	115+00.00	0.00	463150.5767	607254.5443
33011	125+00.00	0.00	464105.7328	606958.4416
34001	195+00.00	0.00	461222.4142	607790.7918
34002	200+00.00	0.00	461698.8557	607639.1230
34003	205+00.00	0.00	462175.2973	607487.4541
34004	207+21.84	0.00	462386.6888	607420.1605
34005	210+00.00	0.00	462652.3711	607337.7978
34006	215+00.00	0.00	463129.9492	607189.7464
34011	225+00.00	0.00	464085.1053	606893.6437

EXISTING ALIGNMENT CONTROL

POINT NO.	STATION	OFFSET	NORTHING	EASTING
31011	62+00.00	0.00	461626.4270	605135.2455
31012	65+00.00	0.00	461720.0274	605420.2700
31017	80+00.00	0.00	462234.7950	606828.6502
31018	84+20.52	0.00	462390.6011	607219.2439
31019	86+11.93	0.00	462462.1906	607396.7546
32001	0+00.00	0.00	462503.9879	607471.7410
32002	3+93.79	0.00	462692.0627	607817.7165
32003	5+00.00	0.00	462742.2843	607911.3017
32004	0+00.00	0.00	462978.7121	608351.8716
32005	15+00.00	0.00	463215.1399	608792.4416
32006	20+00.00	0.00	463451.5677	609233.0116
32007	22+50.00	0.00	463569.7816	609453.2965

NOTE:

- OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE BASELINE.

DATUM REFERENCE:

HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83).

VERTICAL - THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ADDENDA / REVISIONS

SCALE 0 150 300 450 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

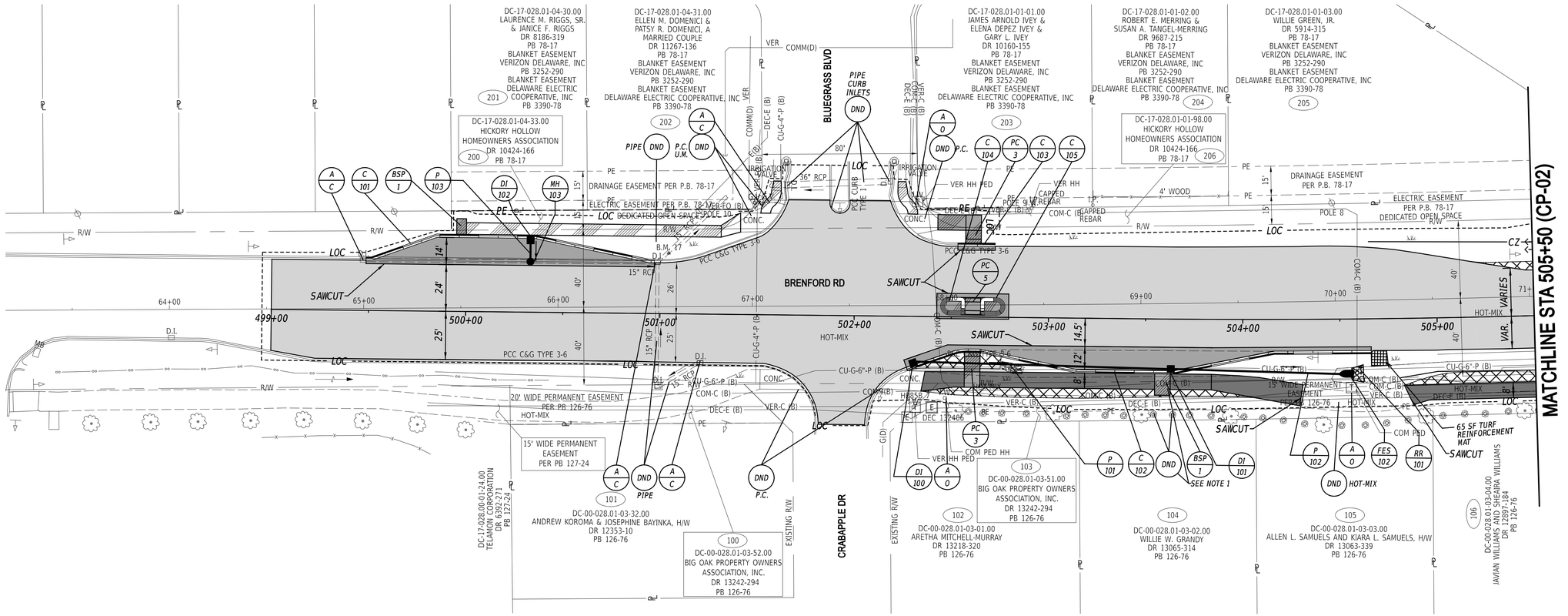
CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

HORIZONTAL AND VERTICAL CONTROL

SECTION: AEC
SHEET NO.: 10

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\HV00.dgn



NOTE:

1. *GRADE 2' OF 6:1 THEN USE 3:1 SLOPE OFF THE BACK OF THE BUS STOP PAD.*

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
101	R-4	5.00

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
101	I.P.C.C. CURB AND GUTTER, TYPE 3-8	152.00
102	I.P.C.C. CURB AND GUTTER, TYPE 3-4	243.00
103	I.P.C.C. CURB AND GUTTER, TYPE 3-4	19.00
104	P.C.C. CURB, TYPE 2	37.00
105	P.C.C. CURB, TYPE 2	37.00

MANHOLE SCHEDULE

NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
103***	500+33.10	-26.00	48" x 30"	51.22	****

*** DOGHOUSE MANHOLE
**** MATCH EXISTING INVERTS

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
101	14" X 23" RCP	IV	131.00	0.0045	45.50	44.92
102	14" X 23" RCP	IV	85.00	0.0049	44.92	44.50
103	15" RCP	IV	9.00	0.0278	48.00	47.75

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
102	14" X 23" RCP	0.0049	NO

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
100	502+30.56	*	48" x 48"	4	**	45.50
101	503+63.13	*	48" x 48"	4	**	44.92
102	500+33.10	*	34" x 24"	4	**	48.00

* MATCH CURB FLOWLINE OFFSET
** MATCH CURB FLOWLINE ELEVATION

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

CP-01	
SECTION	AEC
SHEET NO.	11

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
206	511+04.21	-24.24	34" x 24"	2	45.74	43.46
207	511+54.48	-26.47	34" x 24"	2	45.99	43.60
208	509+50.02	-22.00	34" x 24"	2	45.77	43.04
212	508+53.13	-22.08	34" x 24"	2	45.68	42.77

DRAINAGE PIPE SCHEDULE

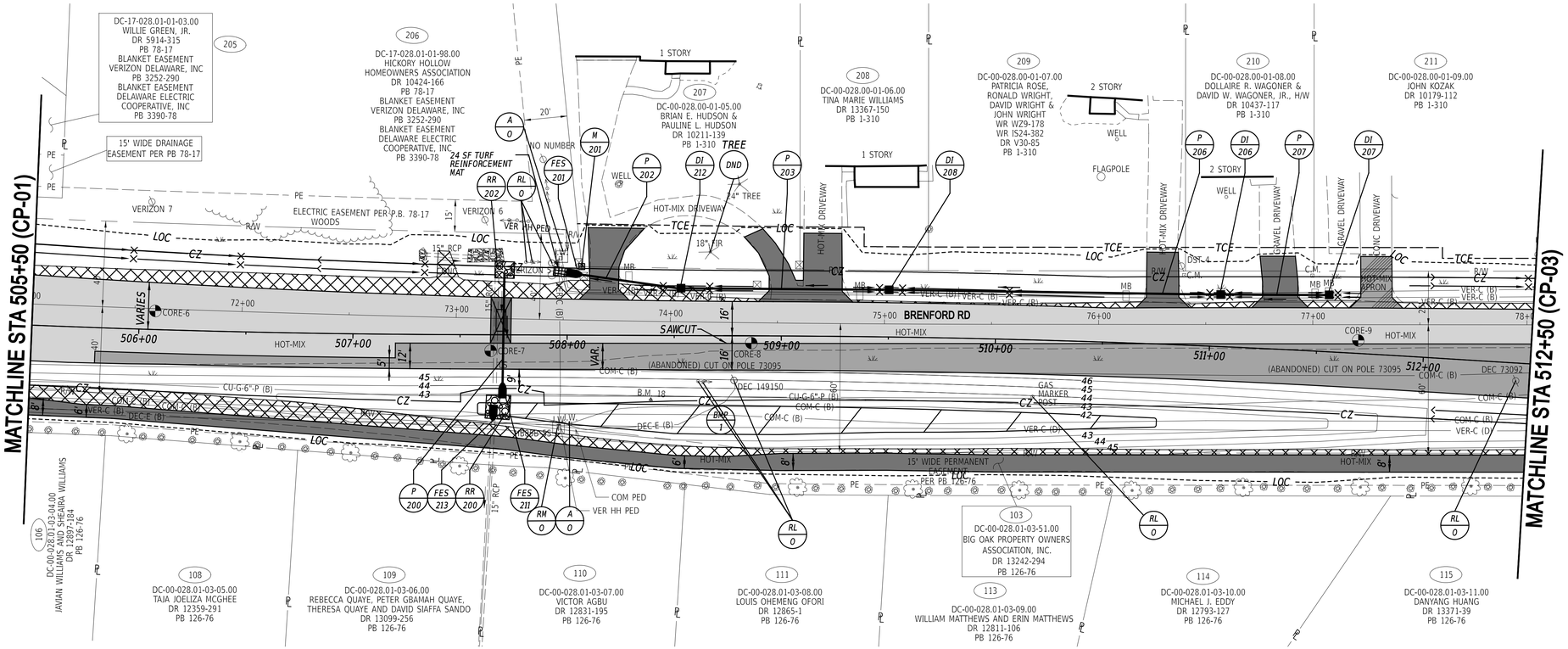
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
200	19" X 30" RCP	IV	58.00	0.0023	42.63	42.50
202	14" X 23" RCP	IV	52.00	0.0023	42.77	42.65
203	14" x 23" RCP	IV	94.00	0.0028	43.04	42.77
206	14" X 23" RCP	IV	152.00	0.0028	43.46	43.04
207	14" X 23" RCP	IV	49.00	0.0028	43.60	43.46

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
201	14" X 23" RCP	0.0023	NO
211	19" X 30" RCP	0.0023	NO
213	15" RCP	0.0059	YES

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
200	R-4	14.00
202	R-4	9.00



RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING	DELINEATOR
201	CAPPED REBAR	508+06.68	-31.98	462022.0051	606223.0022	WOOD

ROADWAY CORE SCHEDULE

CORE #	STATION	OFFSET	DESCRIPTION
6	506+07.11	-8.7	10.25" HMA / 1" ST / 4+ SELECT
7	507+66.69	7.5	8.75" HMA / 4+ CR
8	508+86.05	3.4	11.5" HMA / 4+ CR
9	511+69.42	-6.1	5.75" HMA / 1" ST / 4+ SELECT

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

CP-02

SECTION AEC

SHEET NO. 12

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware\Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\CP00.dgn

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
308	517+64.67	-44.05	34" x 24"	2	42.81	40.40
309	518+27.21	-44.30	34" x 24"	2	42.52	40.10
311	516+81.27	-43.26	34" x 24"	2	43.28	40.81
401	517+92.08	35.03	34" x 24"	2	42.12	38.50

DRAINAGE PIPE SCHEDULE

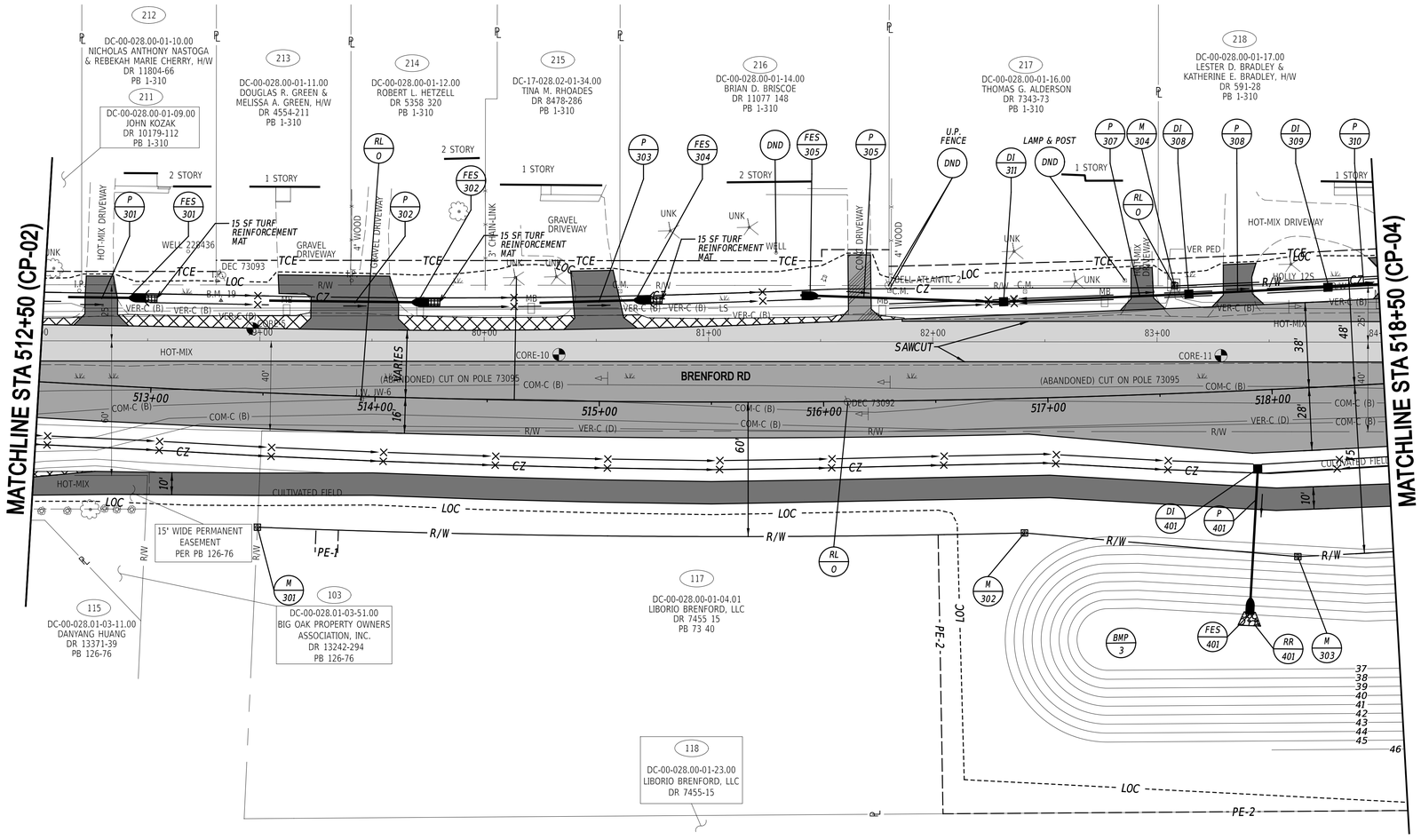
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
301	18" RCP	IV	28.00	0.0040	43.55	43.44
302	18" RCP	IV	63.00	0.0046	43.19	42.90
303	18" RCP	IV	42.00	0.0047	42.65	42.45
305	18" RCP	IV	83.00	0.0150	42.05	40.81
307	18" RCP	IV	81.00	0.0050	40.81	40.40
308	18" RCP	IV	60.00	0.0050	40.40	40.10
310	18" RCP	IV	75.00	0.0078	40.10	39.50
401	18" RCP	IV	66.00	0.0152	38.50	37.50

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
301	18" RCP	0.0040	NO
302	18" RCP	0.0046	NO
304	18" RCP	0.0047	NO
305	18" RCP	0.0150	YES
401	18" RCP	0.0152	NO

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
401	R-04	5.00



RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING	DELINEATOR
301	CAPPED REBAR	513+49.90	60.00	462120.2732	606765.5889	WOOD
302	CAPPED REBAR	516+88.09	60.00	462244.9250	607084.0839	WOOD
303	CAPPED REBAR	518+07.95	75.00	462280.3610	607201.1587	WOOD
304	CAPPED REBAR	517+58.39	-48.00	462372.0692	607105.3105	WOOD

ROADWAY CORE SCHEDULE

CORE #	STATION	OFFSET	DESCRIPTION
5	513+44.29	-28.4	4" HMA / 5.5" PCC / 5+ SELECT
10	514+81.70	-20.6	6.75"HMA / 0.75" ST / 5+ SELECT
11	517+77.92	-16.1	7" HMA / 1 ST / 4+ SELECT

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

CP-03
SECTION
AEC
SHEET NO.
13

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
403	519+33.10	*	48" x 30"	4	**	40.43
405	523+35.98	*	72" x 48"	4	**	36.55
406	522+58.98	*	72" x 48"	4	**	40.36
407	521+99.00	*	72" x 48"	4	**	40.68
408	107+62.00	*	72" x 48"	4	**	41.21
409	523+22.92	*	48" x 48"	4	**	36.67
411	522+10.00	*	48" x 30"	4	**	36.95
413	208+93.59	*	34" X 24"	4	**	41.20
414	521+61.71	*	48" x 48"	4	**	40.96
415	520+77.32	48.36	34" x 24"	2	44.35	41.35
416	209+37.77	*	34" x 24"	4	**	39.87
419	209+37.77	*	34" x 24"	2	43.38	39.90

* MATCH CURB FLOWLINE OFFSET
** MATCH CURB FLOWLINE ELEVATION

MANHOLE SCHEDULE

NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
402	519+02.41	42.52	48" x 30"	42.54	39.47

OUTLET STRUCTURE SCHEDULE

NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
400	519+56.12	-64.59	N/A	41.00	38.00

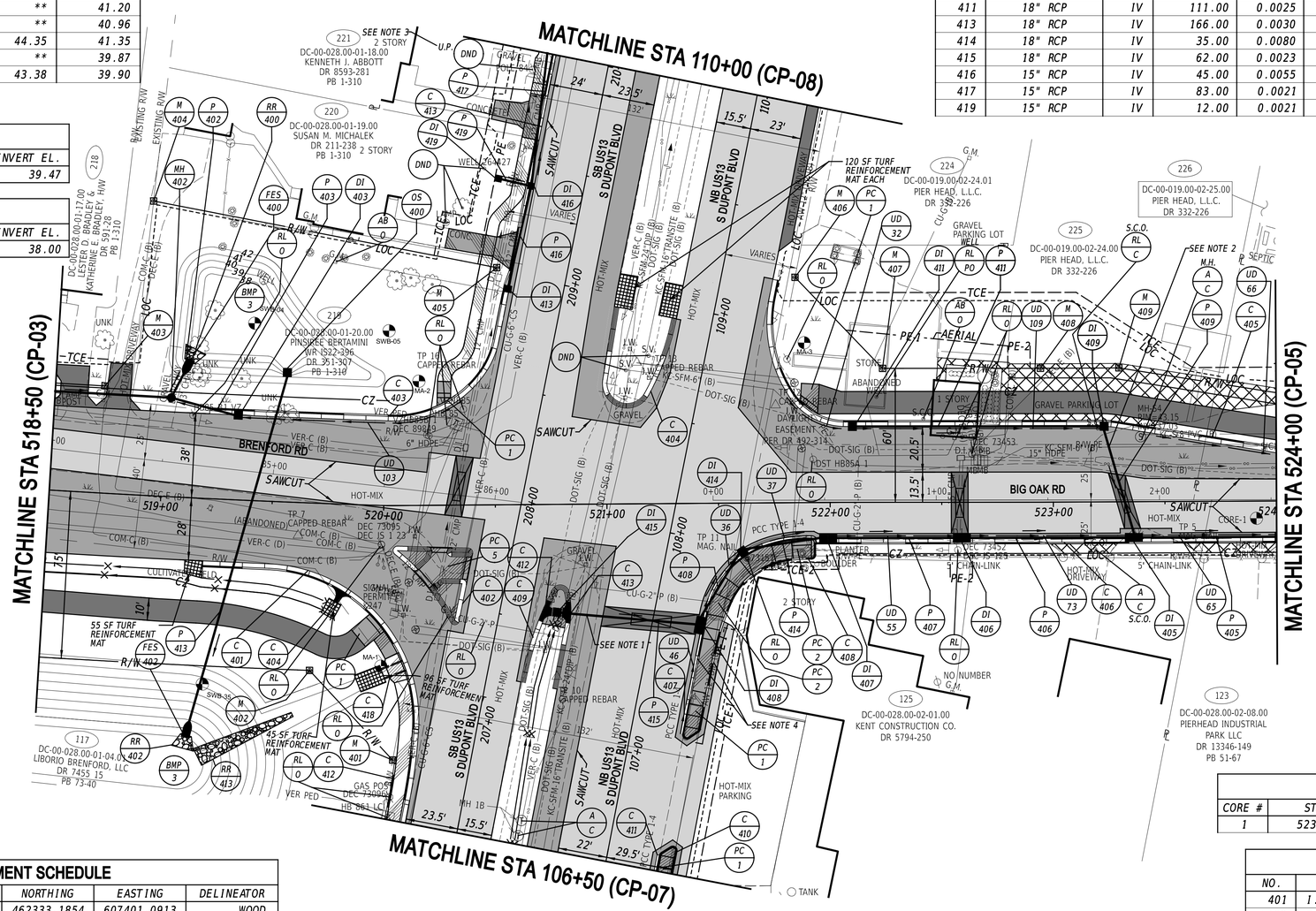
* REFER TO STORMWATER PLANS FOR OUTLET STRUCTURE DETAIL

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
400	R-4	5.00
402	R-4	5.00
413	R-4	27.00

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
402	18" RCP	IV	18.00	0.0261	39.47	39.00
403	18" RCP	IV	31.00	0.0300	40.43	39.50
405	24" RCP	IV	65.00	0.0033	36.55	36.33
406	18" RCP	IV	75.00	0.0051	40.36	39.98
407	18" RCP	IV	54.00	0.0059	40.68	40.36
408	18" RCP	IV	35.00	0.0071	41.21	40.96
409	18" RCP	IV	50.00	0.0025	36.67	36.55
411	18" RCP	IV	111.00	0.0025	36.95	36.67
413	18" RCP	IV	166.00	0.0030	38.00	37.50
414	18" RCP	IV	35.00	0.0080	40.96	40.68
415	18" RCP	IV	62.00	0.0023	41.35	41.21
416	15" RCP	IV	45.00	0.0055	41.20	40.95
417	15" RCP	IV	83.00	0.0021	39.87	39.70
419	15" RCP	IV	12.00	0.0021	39.90	39.87



FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
400	18" RCP	0.0261	NO
402	18" RCP	0.0028	NO

ROADWAY CORE SCHEDULE

CORE #	STATION	OFFSET	DESCRIPTION
1	523+90.95	7.7	4.25" HMA/.75" ST/5+ MILLINGS/HMA-ST

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING	DELINEATOR
401	CAPPED REBAR	206+76.65	-34.40	462333.1854	607401.0913	WOOD
402	CAPPED REBAR	519.69.58	75.00	462350.7479	607349.2252	WOOD
403	CAPPED REBAR	518+72.22	-48.00	462419.0560	607207.8420	WOOD
404	CAPPED REBAR	518+89.83	-131.95	462502.3339	607187.5503	WOOD
405	CAPPED REBAR	209+01.90	-31.36	462549.3886	607336.8929	WOOD
406	CAPPED REBAR	109+23.22	32.54	462609.2976	607456.4142	WOOD
407	CAPPED REBAR	522+23.52	-60.00	462592.1180	607510.3277	WOOD
408	CAPPED REBAR	522+94.51	-60.00	462625.9044	607572.4799	WOOD
409	CAPPED REBAR	523+29.65	-60.00	462642.8152	607603.2905	WOOD

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
401	I.P.C.C. CURB AND GUTTER, TYPE 1-4	184.00
*402	P.C.C. CURB, TYPE 2	131.00
403	I.P.C.C. CURB AND GUTTER, TYPE 1-4	172.00
404	P.C.C. CURB, TYPE 2	100.00
405	I.P.C.C. CURB AND GUTTER, TYPE 1-4	278.00
406	I.P.C.C. CURB AND GUTTER, TYPE 1-4	206.00
407	I.P.C.C. CURB AND GUTTER, TYPE 3-4	120.00
408	P.C.C. CURB, TYPE 1-4	125.00
409	P.C.C. CURB, TYPE 2	98.00
410	P.C.C. CURB, TYPE 1-4	22.00
411	I.P.C.C. CURB, TYPE 3-4	7.00
412	MODULAR BLOCK RETAINING WALL	28.00
413	I.P.C.C. CURB, TYPE 3-4	99.00

\+ RUN OF CURB EXCLUDES CURB PAID FOR UNDER SECTION 705
* THE COST FOR CONSTRUCTING THIS CURB IS INCIDENTAL TO ITEM 702000 - TRIANGULAR CHANNELIZING ISLANDS.

NOTE:

1. THE CONTRACTOR SHALL AVOID VIBRATORY COMPACTION IN THE VICINITY OF 16" TRANSITE SEWER PIPE. THE CONTRACTOR SHALL CONTACT ANDREW RIGGI AT KENT COUNTY (302)-744-2430, FIVE (5) CALENDAR DAYS PRIOR TO STARTING ANY WORK IN THE MEDIAN OF US 13.
2. THE CONTRACTOR SHALL INSTALL STONE BEDDING FROM THE TOP OF P409 UP TO HALF THE HEIGHT OF 6" SANITARY FORCE MAIN FOR 2' ON BOTH SIDES.
3. UTILITY POLE TO BE SUPPORTED AS NECESSARY FOR THE INSTALLATION OF PIPE 418.
4. DEPRESS CURB BETWEEN PEDESTRIAN CONNECTIONS STATION 107+50 RIGHT.

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

CP-04
SECTION AEC
SHEET NO. 14

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
410	524+14.21	*	48" x 30"	4	**	39.09
500	526+25.00	*	48" x 48"	4	**	35.61
501	525+11.73	*	48" x 48"	4	**	36.09
502	524+01.09	*	48" x 48"	4	**	36.33
503	525+12.00	*	48" x 30"	4	**	37.92
504	526+24.95	*	34" X 24"	4	**	36.32
506	527+26.22	*	48" x 48"	4	**	34.30

* MATCH CURB FLOWLINE OFFSET
** MATCH CURB FLOWLINE ELEVATION

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
500	18" RCP	IV	97.00	0.0100	39.09	38.12
501	24" RCP	IV	143.00	0.0033	36.09	35.61
502	24" RCP	IV	75.00	0.0033	36.33	36.09
503	18" RCP	IV	30.00	0.0467	37.92	36.52
504	18" RCP	IV	30.00	0.0030	36.32	36.23
505	24" RCP	IV	100.00	0.0111	35.61	34.50
506	24" RCP	IV	46.00	0.0066	34.30	34.00

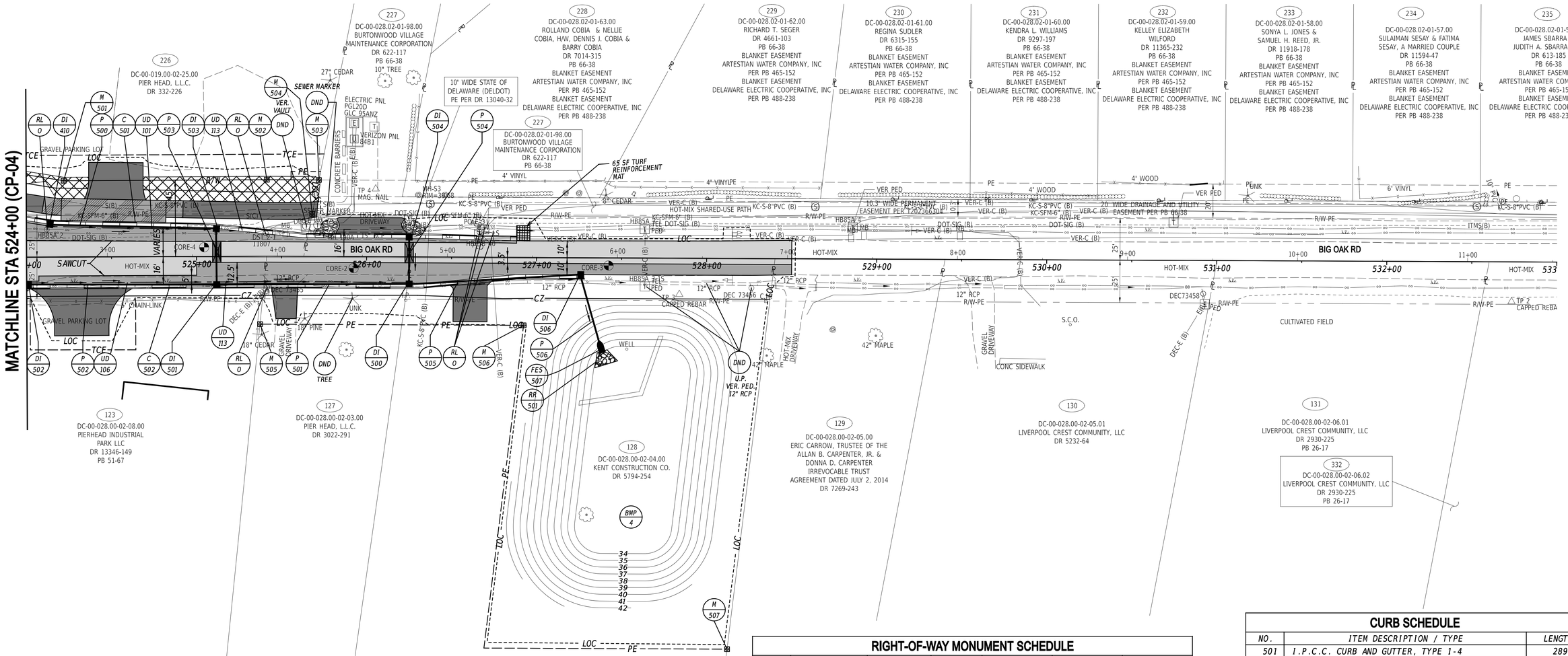
OPEN PIPE ENDS TO BE INSTALLED TO MATCH GRADE.

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
501	R-4	5.00

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
507	24" RCP	0.0075	NO



RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING	DELINEATOR
501	CAPPED REBAR	524+22.07	-45.00	462674.1304	607691.5199	WOOD
502	CAPPED REBAR	524+41.53	-45.00	462731.6136	607796.2508	WOOD
503	CAPPED REBAR	525+71.76	-45.00	462746.1080	607823.2605	WOOD
504	CAPPED REBAR	525+67.88	-25.00	462726.6470	607829.2920	WOOD
505	CAPPED REBAR	525+37.11	39.96	462655.0050	607833.2539	WOOD
506	CAPPED REBAR	526+92.50	40.00	462728.3040	607969.8425	WOOD
507	CAPPED REBAR	528+13.03	230.00	426617.8805	608165.8875	WOOD

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
501	I.P.C.C. CURB AND GUTTER, TYPE 1-4	289.00
502	I.P.C.C. CURB AND GUTTER, TYPE 1-4	328.00

ROADWAY CORE SCHEDULE

CORE #	STATION	OFFSET	DESCRIPTION
2	525+92.38	6.8	4.5" HMA / ORIGINAL
3	527+41.98	4.6	4.5" HMA / ORIGINAL
4	525+4.29	-5.4	3.75" HMA / 0.5 ST

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

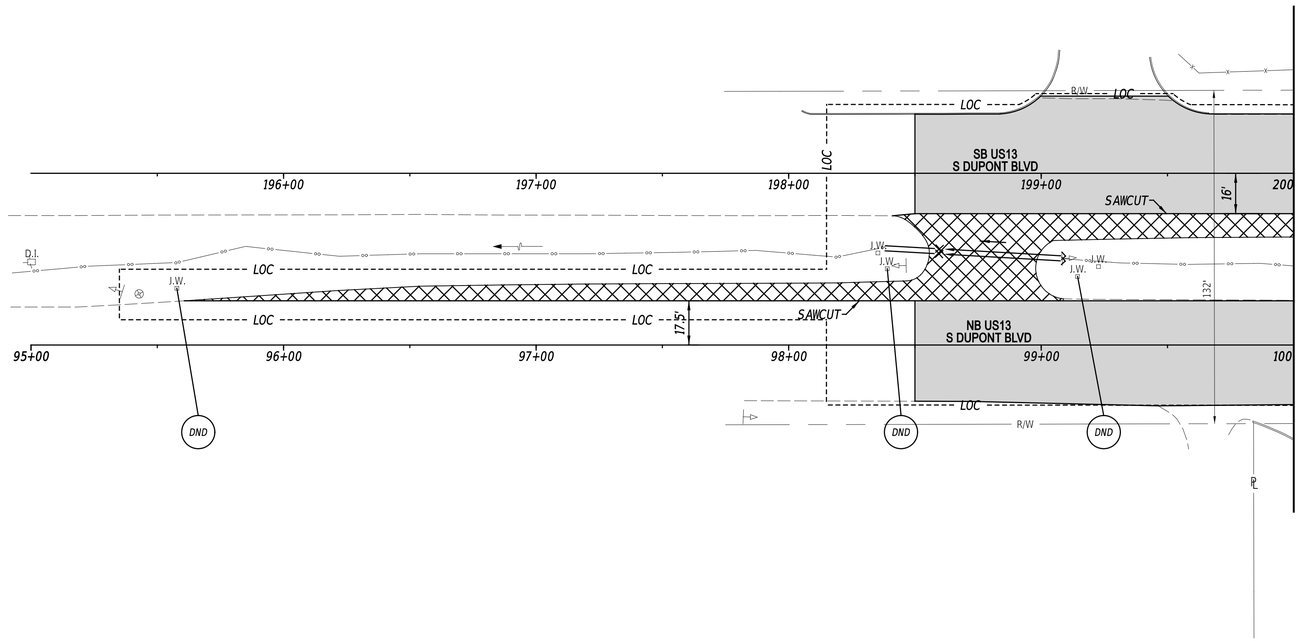
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

	CP-05
SECTION	AEC
SHEET NO.	15

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn



pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn

AECOM

ADDENDA / REVISIONS	

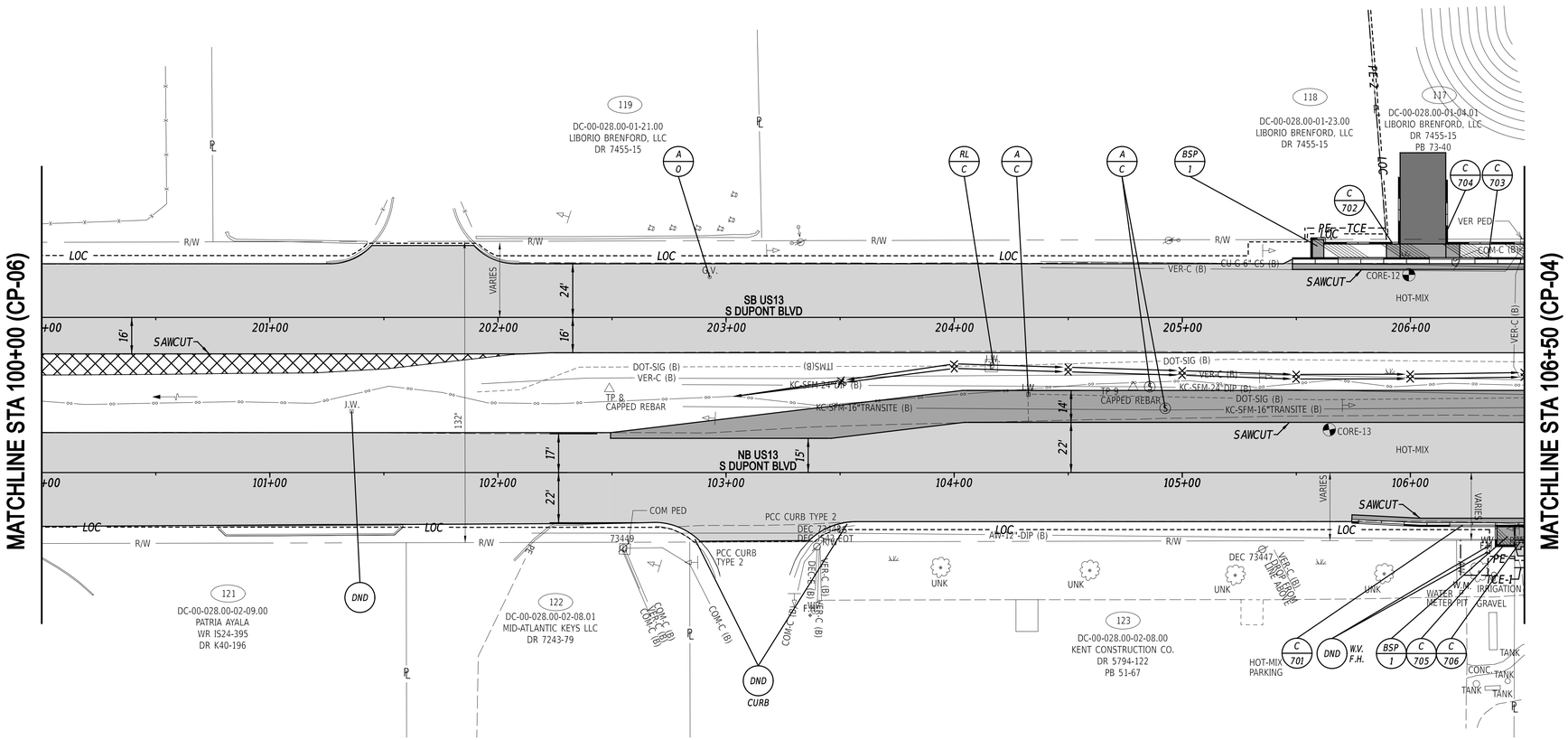
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

	CP-06
SECTION	AEC
SHEET NO.	16



CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
701	I.P.C.C. CURB AND GUTTER, TYPE 3-4	76.00
702	CURB RETAINING WALL	78.00
703	I.P.C.C. CURB AND GUTTER, TYPE 1-4	102.00
704	CURB RETAINING WALL	63.00
705	CURB RETAINING WALL	16.00
706	P.C.C. CURB, TYPE 1-4	6.00

ROADWAY CORE SCHEDULE

CORE #	STATION	OFFSET	DESCRIPTION
12	205+99.32	-18.7	9" HMA / 5+ SELECT
13	205+64.43	-18.8	9.5" HMA / 5+ CR

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

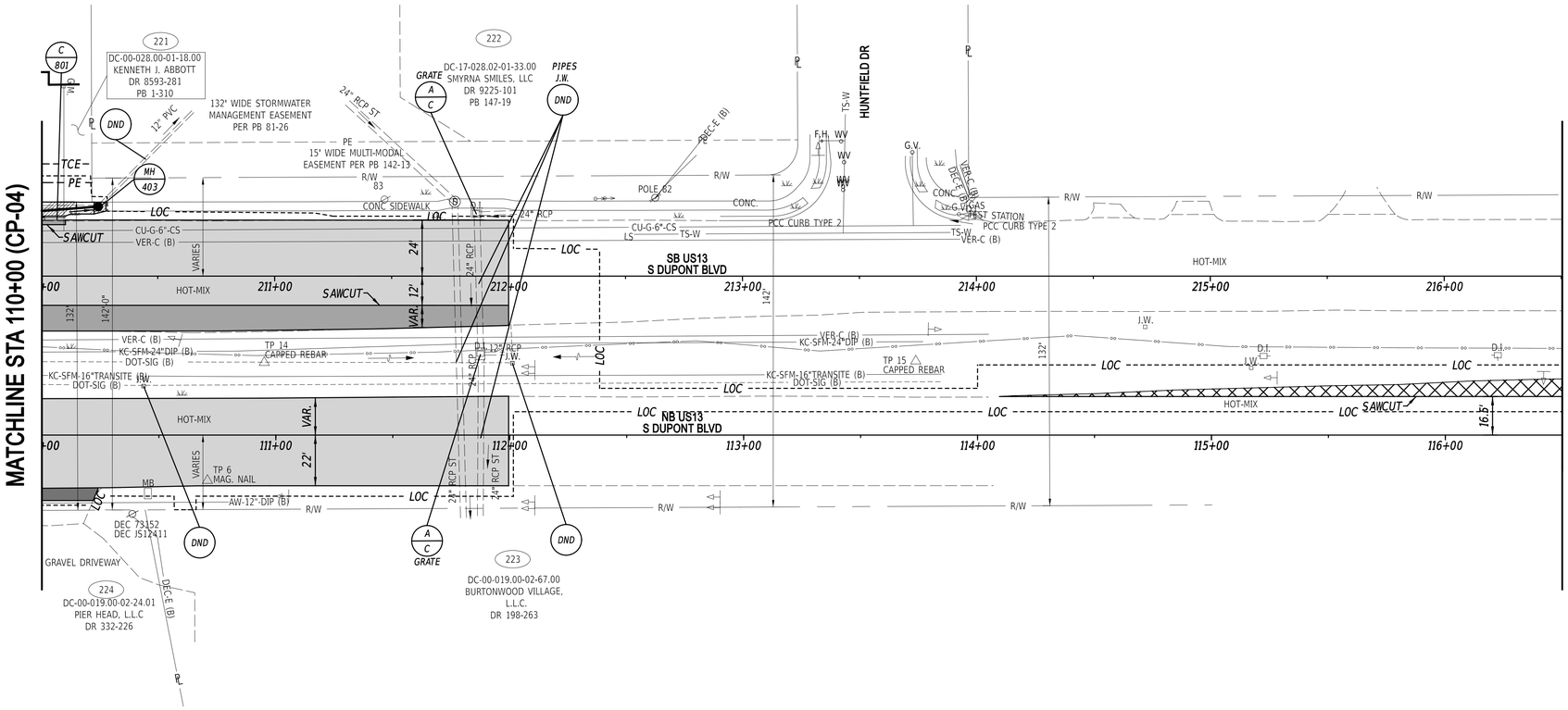
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PLAN

CP-07
SECTION AEC
SHEET NO. 17

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn



MANHEAD SCHEDULE

NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
403	210+24.58	29.74	48" x 30"	42.98	39.70

*CONTRACTOR TO VERIFY EXISTING INVERTS

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
801	P.C.C. CURB, TYPE 1-4	10.00

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CP00.dgn

AECOM

ADDENDA / REVISIONS

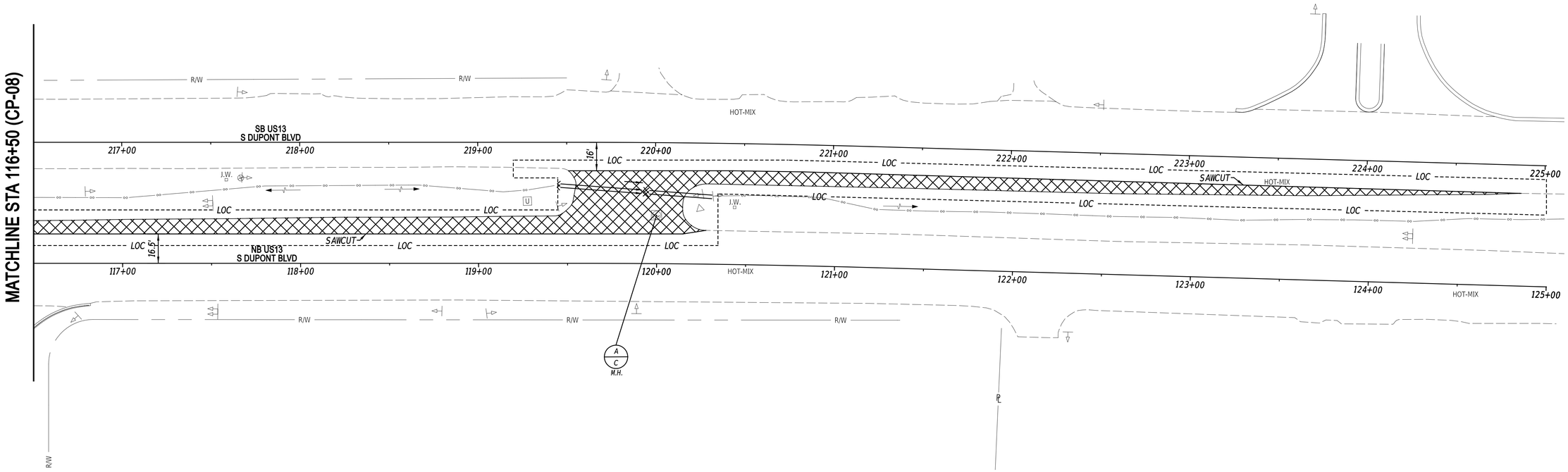
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT T202104203
COUNTY KENT
BRIDGE NO. N/A
DESIGNED BY: A. Malkin
CHECKED BY: J. Hofstee

CONSTRUCTION PLAN

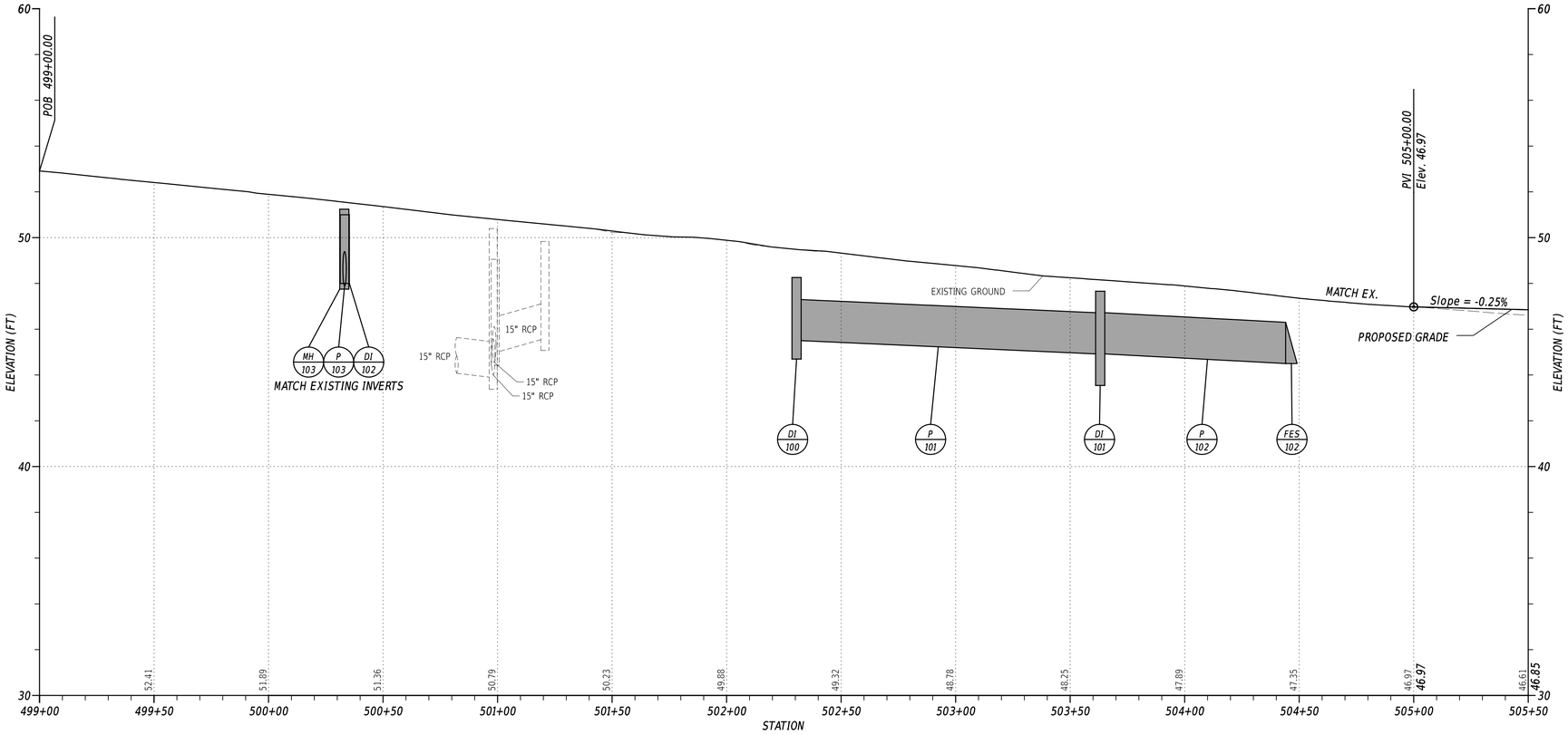
CP-08
SECTION AEC
SHEET NO. 18



pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware\Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\CP00.dgn

AECOM

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	CONSTRUCTION PLAN	CP-09
				COUNTY KENT	DESIGNED BY: A. Malkin		SECTION AEC
					CHECKED BY: J. Hofstee		SHEET NO. 19



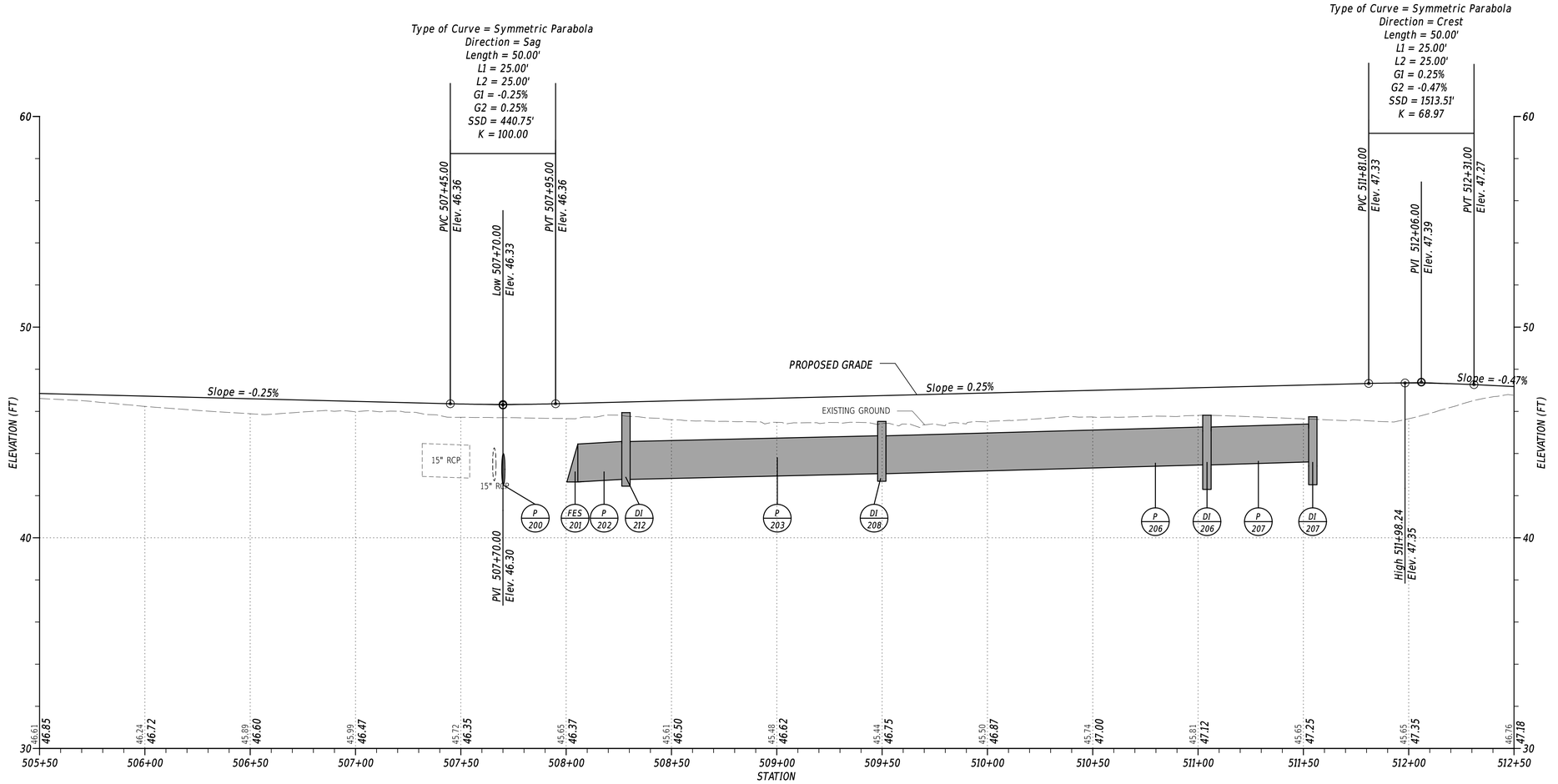
BRENFORD RD

VERTICAL SCALE FEET
9
6
3
0

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PROFILES	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 20
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



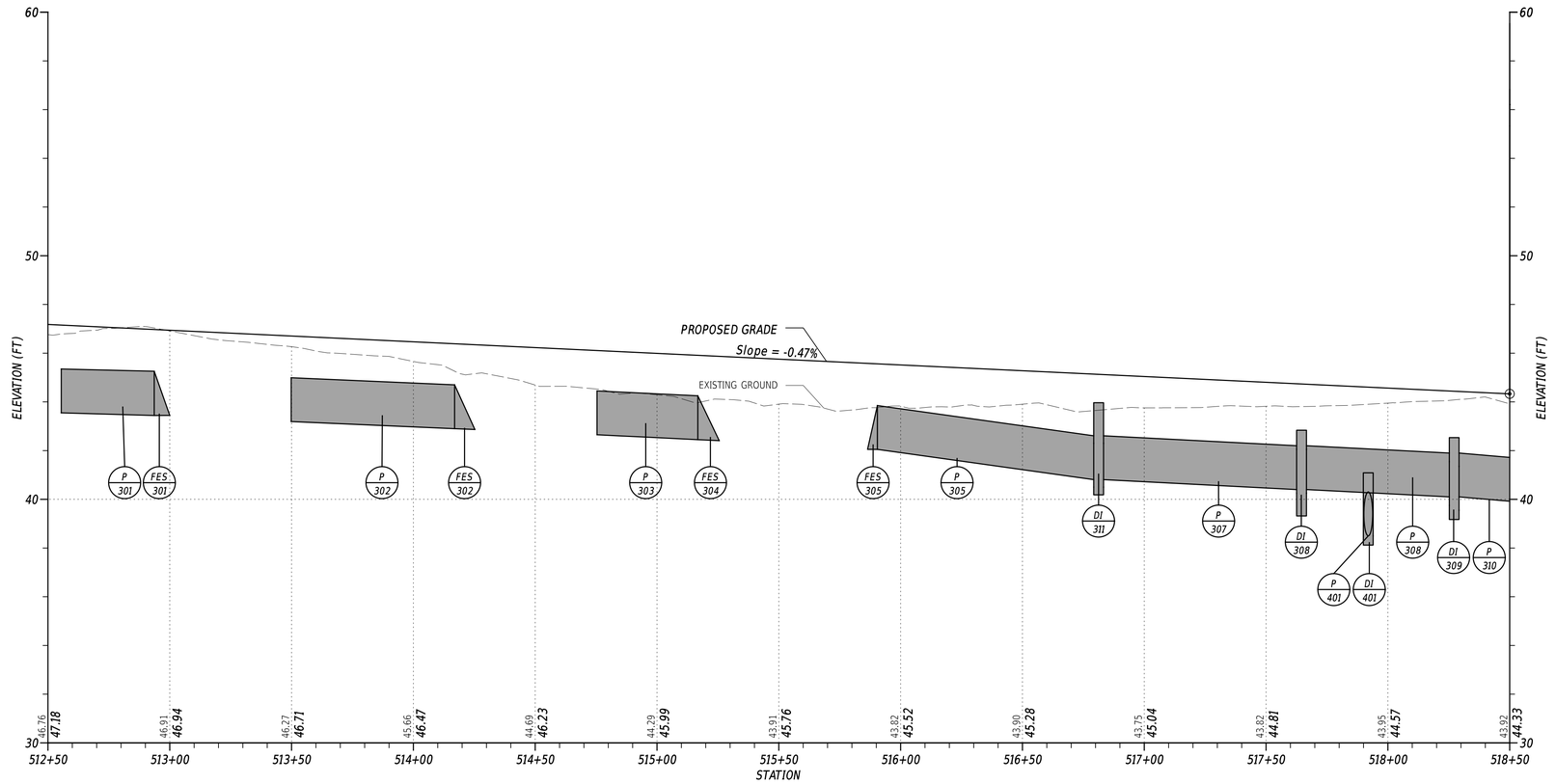
BRENFORD RD

VERTICAL SCALE FEET 0 3 6 9

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PROFILES	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 21
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



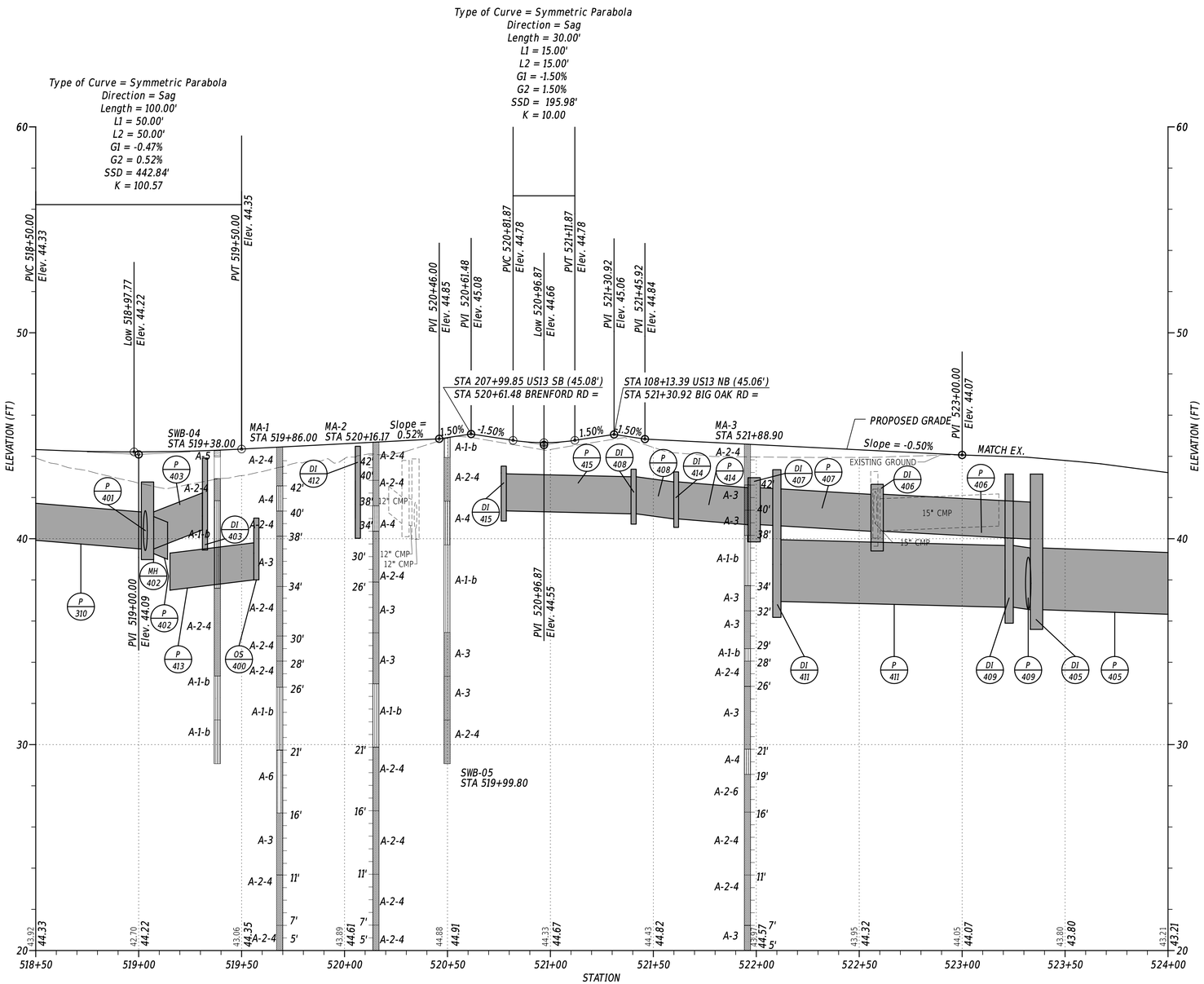
BRENFORD RD

VERTICAL SCALE FEET
9
6
3
0

ADDENDA / REVISIONS		SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	BRIDGE NO.	N/A	PROFILES	SECTION
		0 30 60 90 FEET		T202104203	DESIGNED BY:	A. Malkin		AEC
				COUNTY	CHECKED BY:	J. Hofstee		SHEET NO.
				KENT				22

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



BRENFORD RD / BIG OAK RD

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

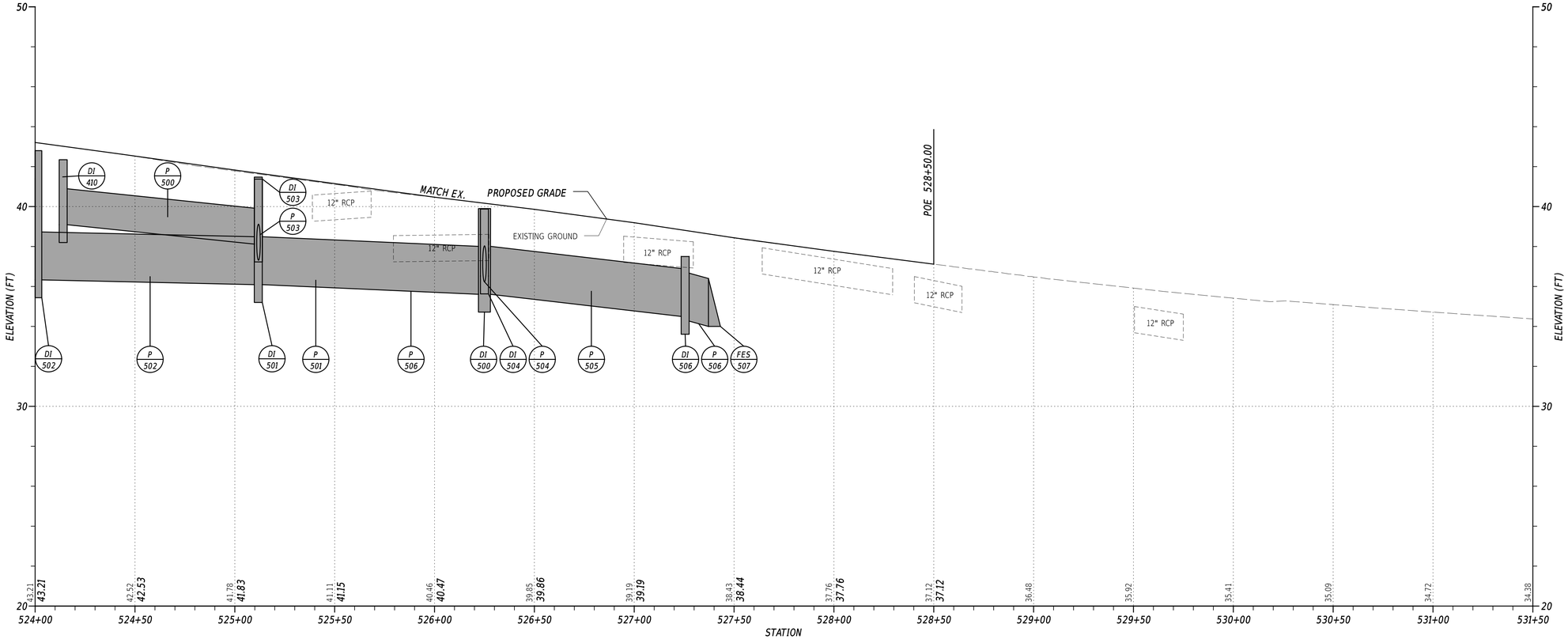
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

PROFILES

SECTION
AEC
SHEET NO.
23

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



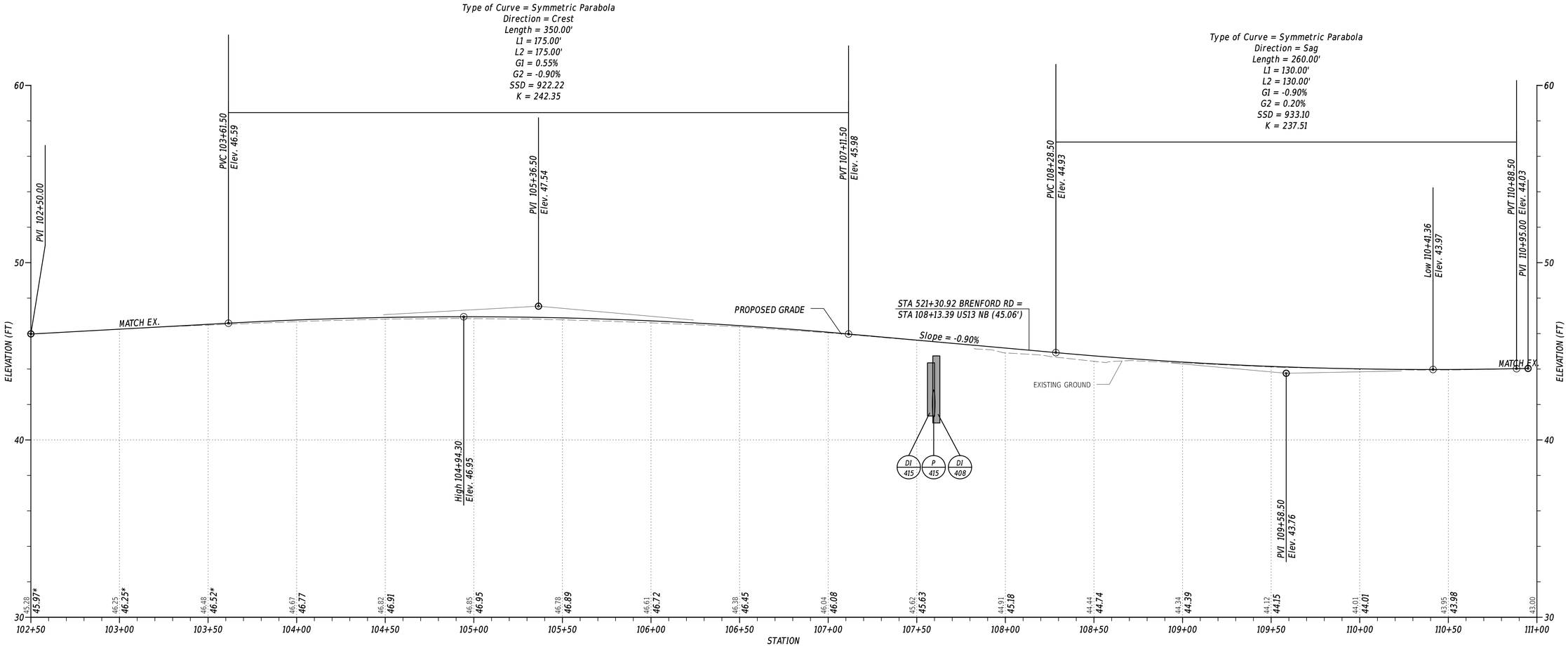
BIG OAK RD

VERTICAL SCALE FEET 0 3 6 9

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PROFILES	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 24
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



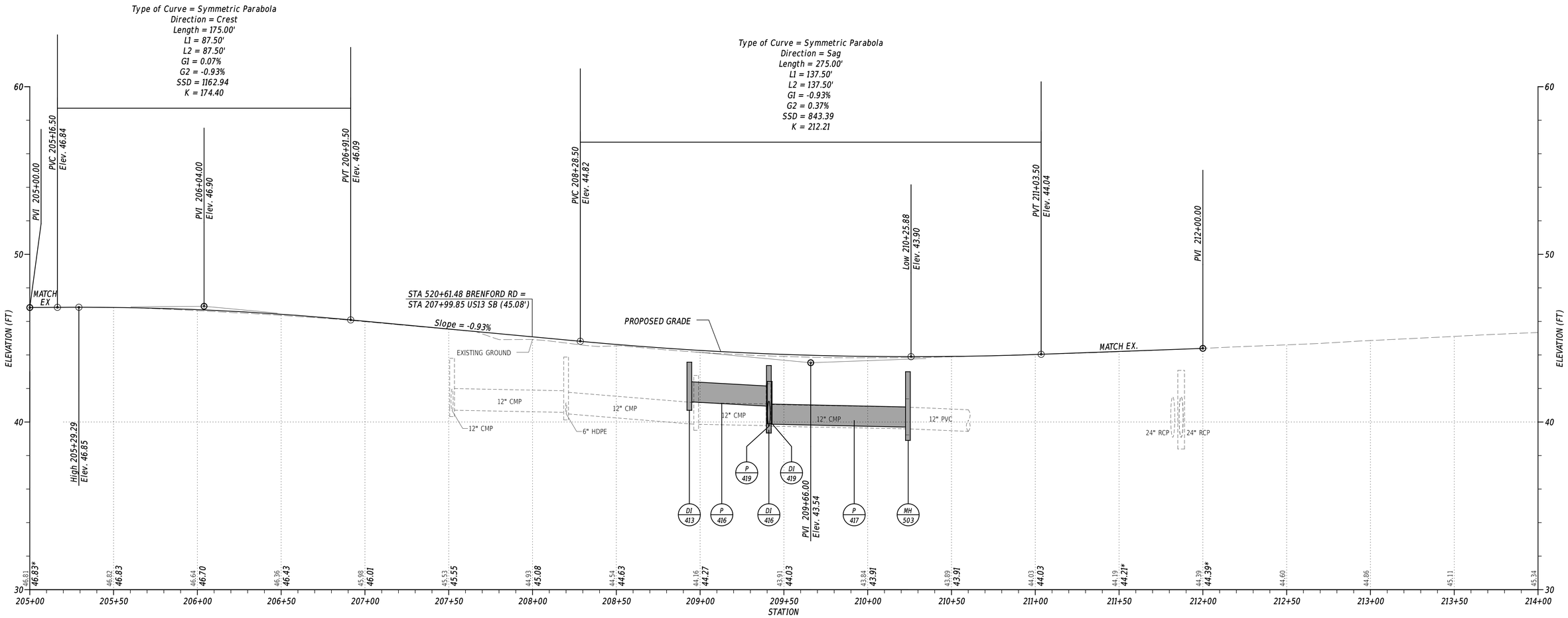
NB US13 S DUPONT BLVD

VERTICAL SCALE FEET 0 3 6 9

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PROFILES	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 25
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/PF00.dgn



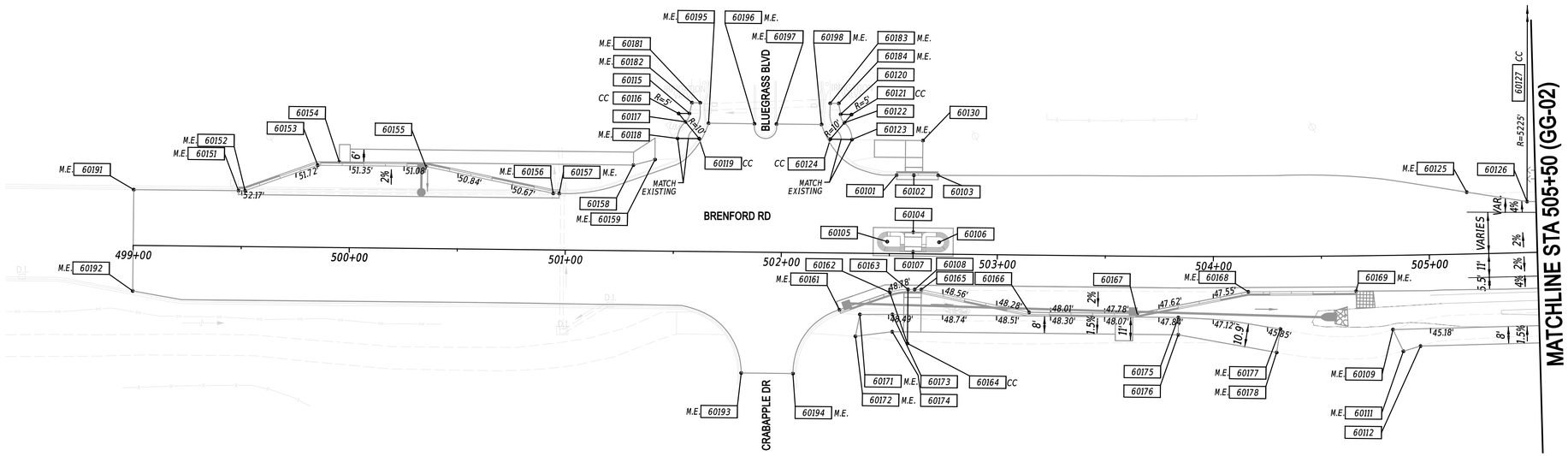
SB US13 S DUPONT BLVD

VERTICAL SCALE FEET
9
6
3
0

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PROFILES	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 26
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware\Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\PF00.dgn



COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60101	502+53.00	-36.30	461844.2842	605701.5281
60102	502+61.00	-36.35	461846.7014	605709.1558
60103	502+72.24	-36.42	461850.0970	605719.8710
60104	502+61.00	-10.00	461821.5351	605716.9669
60105	502+49.00	-5.50	461813.6797	605706.8406
60106	502+73.00	-5.50	461820.7952	605729.7615
60107	502+61.00	-1.00	461812.9398	605719.6352
60108	502+61.92	16.50	461796.4998	605725.7038
60109	504+82.67	34.34	461846.7741	605942.1314
60111	504+87.31	44.43	461838.7100	605949.7987
60112	504+95.22	42.19	461843.4017	605956.6325
60115	501+56.82	-63.85	461842.0780	605601.5066
60116	501+51.82	-63.75	461840.4999	605596.7621
60117	501+55.03	-59.92	461837.7890	605600.9634
60118	501+51.45	-52.23	461829.3867	605599.8205
60119	501+61.45	-52.25	461832.3672	605609.3660
60120	502+26.82	-64.22	461863.1843	605668.2457
60121	502+31.82	-64.12	461864.5705	605673.0497
60122	502+28.59	-60.30	461859.9672	605671.0978
60123	502+32.13	-52.56	461853.6179	605676.7772
60124	502+22.13	-52.67	461850.7606	605667.1941
60125	505+17.91	-28.63	461917.7610	605955.1060
60126	505+45.87	-23.60	461922.1795	605983.0324
60127	508+91.68	-5241.00	466897.3188	604386.5945
60130	502+65.00	-52.44	461863.2510	605708.2050
60151	499+48.48	-25.89	461744.0496	605413.7875
60152	499+51.51	-25.90	461744.9588	605416.6839
60153	499+85.00	-38.00	461766.4472	605445.0748
60154	499+95.00	-39.67	461771.0038	605454.1310
60155	500+35.00	-38.00	461781.2713	605492.8267
60156	500+94.14	-26.17	461787.5091	605552.8119
60157	500+96.92	-26.16	461788.3184	605555.4705
60158	501+31.12	-39.67	461811.3611	605584.1317
60159	501+41.12	-42.35	461816.8840	605592.8880
60161	502+27.15	26.25	461776.8802	605695.3874
60162	502+50.46	17.95	461791.7162	605715.1825
60163	502+58.84	16.50	461795.5871	605722.7638
60164	502+58.84	41.50	461771.7112	605730.1759
60165	502+65.00	16.50	461797.4125	605728.6438
60166	503+15.00	26.50	461802.6862	605779.3606
60167	503+64.93	26.52	461817.5103	605827.1125
60168	504+16.13	16.32	461842.8458	605872.9931
60169	504+65.94	16.35	461858.4543	605920.4617
60171	502+36.71	28.32	461777.7334	605705.1263
60172	502+34.74	38.43	461767.4978	605706.2505
60173	502+51.74	28.17	461782.3377	605719.4346
60174	502+51.74	36.17	461774.6974	605721.8065
60175	503+83.91	28.27	461821.5787	605845.8391
60176	503+83.93	36.27	461813.9584	605848.2756
60177	504+30.91	33.63	461830.9906	605892.4802
60178	504+29.10	44.43	461820.1634	605894.1070
60181	501+61.72	-68.85	461848.3061	605604.7043
60182	501+57.91	-68.85	461847.1772	605601.0681
60183	502+21.92	-69.22	461866.5066	605662.0830
60184	502+25.87	-69.22	461867.6789	605665.8595
60191	499+00.00	-25.79	461729.5848	605367.5167
60192	499+00.00	21.06	461684.8371	605381.4082
60193	501+82.05	56.00	461735.0961	605661.1367
60194	502+06.00	56.00	461742.1955	605684.0058
60195	501+65.71	-59.40	461840.4590	605611.3120
60196	501+86.93	-59.40	461846.7518	605631.5825
60197	501+97.15	-59.40	461849.7829	605641.3464
60198	502+18.00	-59.40	461855.9621	605661.2511

NOTES:

1. *OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.*
2. *UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.*
3. *UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.*
4. *RADII ARE GIVEN TO THE EDGE OF PAVEMENT.*
5. *PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.*
6. *ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.*
7. *PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.*

AECOM

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

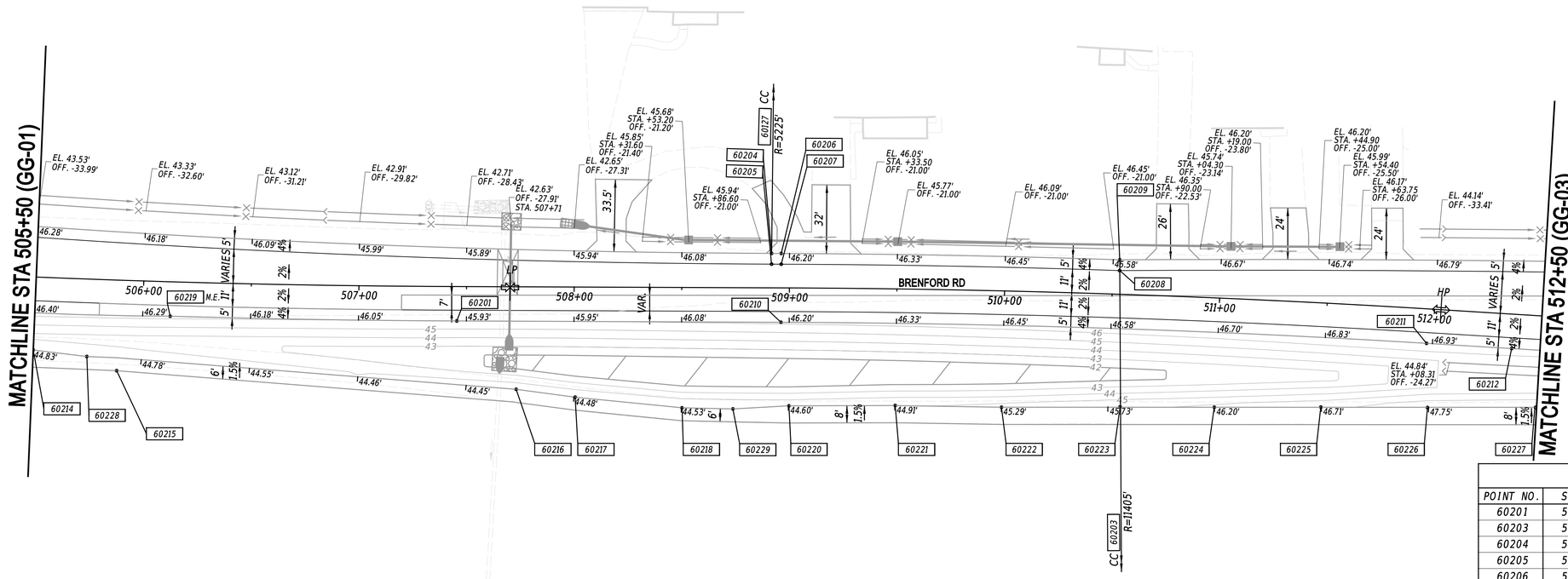
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

GRADES AND GEOMETRICS

GG-01
SECTION
AEC
SHEET NO.
27

ptw://aecom-na-ptw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60201	507+45.52	16.00	461954.8923	606183.7680
60203	514+18.27	11375.62	451529.0126	610750.9931
60204	508+91.68	-16.00	462038.3957	606307.9199
60205	508+91.68	-11.00	462033.7460	606309.7585
60206	508+96.16	-16.00	462040.0437	606312.0877
60207	508+96.16	-11.00	462035.3940	606313.9263
60208	510+53.10	-11.00	462091.0267	606461.0214
60209	510+53.00	-16.00	462095.6961	606459.2306
60210	508+96.16	16.00	462010.2857	606323.8546
60211	511+97.24	16.00	462112.5838	606606.0007
60212	512+36.86	16.00	462125.0149	606643.6253
60213	512+36.86	-5230.00	467106.1760	604997.8579
60214	505+50.00	33.93	461869.2972	606006.0499
60215	505+88.80	42.09	461874.7522	606045.6023
60216	507+73.22	47.67	461935.6274	606221.1683
60217	508+00.67	51.22	461942.4194	606248.0069
60218	508+50.34	55.97	461956.2673	606295.9418
60219	506+12.74	16.00	461907.4955	606059.3067
60220	509+00.04	54.85	461975.5660	606341.7094
60221	509+49.94	54.23	461994.0502	606387.5044
60222	509+99.86	54.09	462011.6558	606433.6664
60223	510+55.50	52.30	462032.3014	606484.7569
60224	510+99.67	50.79	462048.3802	606525.4557
60225	511+49.59	48.40	462066.8096	606571.4060
60226	511+99.52	45.77	462085.0282	606617.5066
60227	512+49.52	42.63	462103.7437	606664.0915
60228	505+74.82	35.99	461875.7151	606030.2812
60229	508+73.98	56.39	461964.5691	606318.0800

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

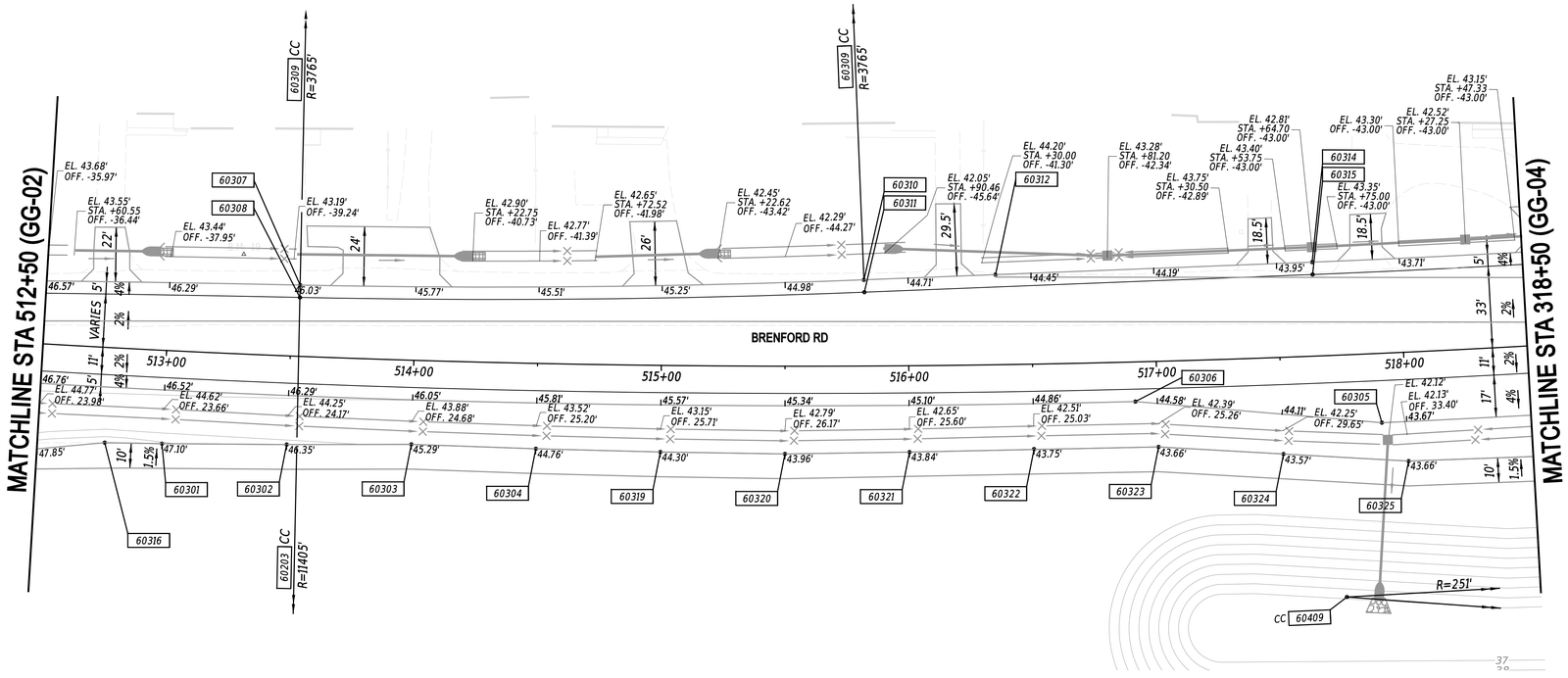
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

GRADES AND GEOMETRICS

GG-02
SECTION AEC
SHEET NO. 28

AECOM
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60301	513+00.00	37.69	462124.7290	606710.6898
60302	513+50.00	35.83	462143.0931	606757.6100
60303	514+00.00	33.97	462161.8836	606804.3412
60304	514+50.00	34.49	462178.8992	606851.7073
60305	517+89.98	28.00	462315.6427	607165.1960
60306	516+91.14	16.00	462286.5640	607069.5375
60307	513+52.90	-28.79	462204.9596	606738.7392
60308	513+53.00	-23.79	462200.2792	606740.4982
60309	512+00.25	-3792.00	465729.2858	605414.2205
60310	515+82.01	-34.84	462291.5012	606949.4281
60311	515+82.18	-29.84	462286.9358	606951.4669
60312	516+35.55	-36.42	462313.1966	606998.0106
60314	517+64.52	-38.00	462365.4117	607114.9356
60315	517+64.52	-33.00	462360.8463	607116.9744
60316	512+77.04	38.50	462116.4945	606689.0620
60319	515+00.00	35.00	462196.3687	606898.9131
60320	515+50.00	35.46	462214.3422	606945.9337
60321	516+00.00	34.89	462233.7159	606992.3955
60322	516+50.00	34.32	462253.5311	607038.6649
60323	517+00.00	34.57	462273.0283	607085.0647
60324	517+50.00	39.04	462289.1178	607132.9854
60325	518+00.00	44.00	462305.2344	607180.9926

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn

AECOM

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

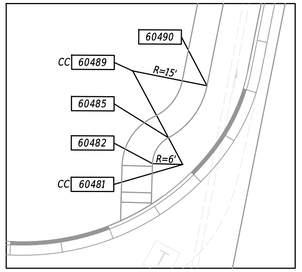
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

GRADES AND GEOMETRICS

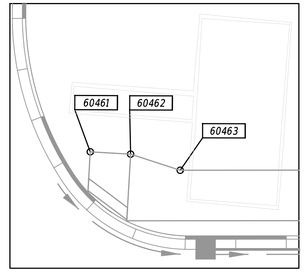
GG-03

SECTION AEC

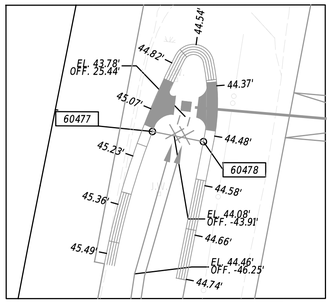
SHEET NO. 29



NORTHWEST PEDESTRIAN CONNECTION
SCALE = 15':1"

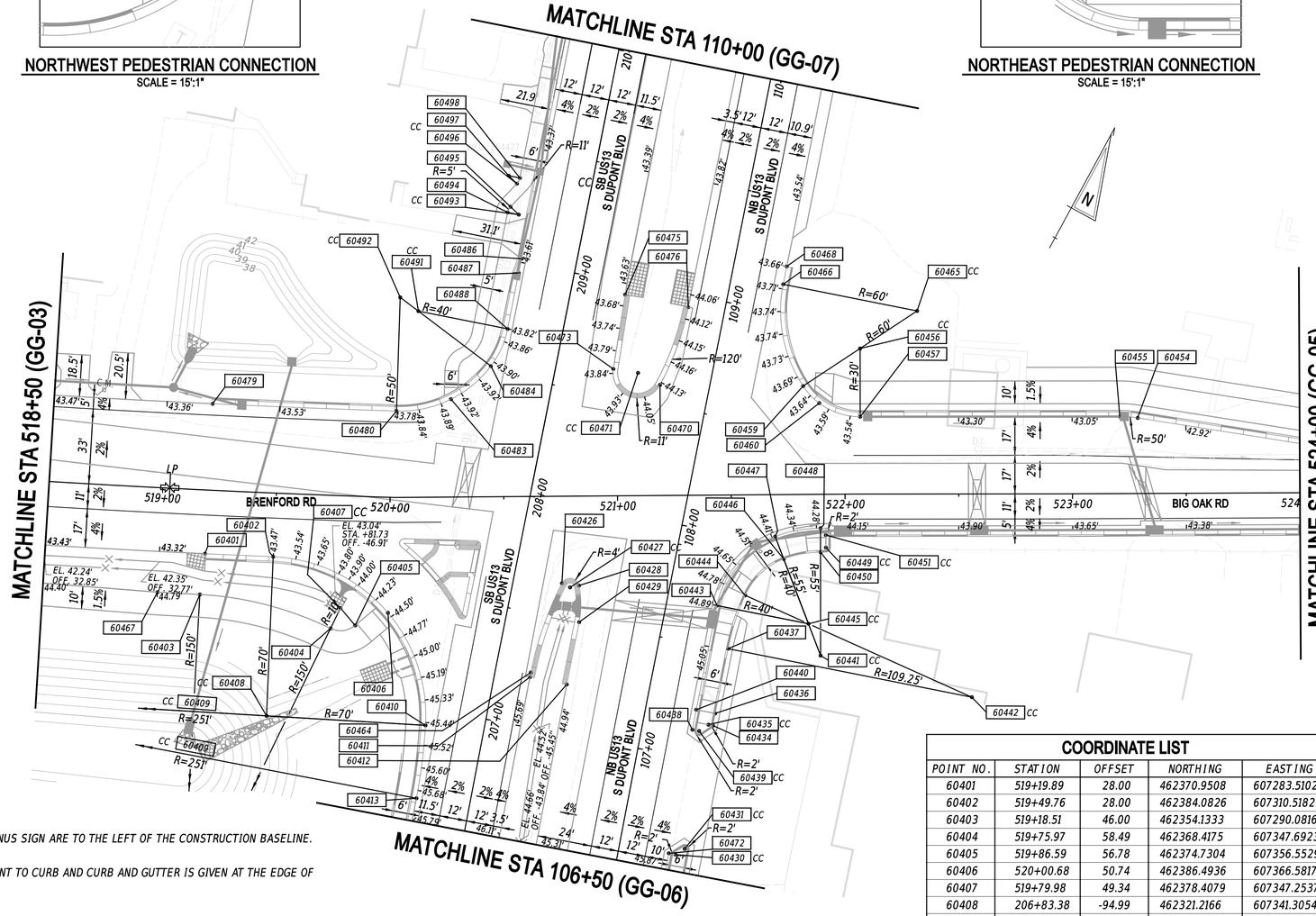


NORTHEAST PEDESTRIAN CONNECTION
SCALE = 15':1"



SOUTHBOUND MEDIAN
SCALE = 15':1"

SOUTHWEST CHANNELIZING ISLAND
SCALE = 15':1"



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60401	519+19.89	28.00	462370.9508	607283.5102
60402	519+49.76	28.00	462384.0826	607310.5182
60403	519+18.51	46.00	462354.1333	607290.0816
60404	519+75.97	58.49	462368.4175	607347.6923
60405	519+86.59	56.78	462374.7304	607356.5529
60406	520+00.68	50.74	462386.4936	607366.5817
60407	519+79.98	49.34	462378.4079	607347.2537
60408	206+83.38	-94.99	462321.2166	607341.3054
60409	206+60.19	-273.50	462244.9738	607178.2499
60410	206+92.39	-25.58	462350.8663	607404.7158
60411	207+21.96	15.50	462391.3906	607434.9302
60412	107+21.59	-36.00	462396.2800	607450.6895
60413	206+60.19	-23.50	462320.8082	607416.4707
60414	520+06.10	18.19	462418.5087	607357.3661
60415	520+06.02	20.19	462416.7222	607358.2653
60416	520+04.76	21.74	462414.7530	607357.9156
60417	520+13.79	27.20	462414.3399	607368.4535
60418	520+22.82	37.68	462409.5291	607381.4283
60419	207+43.30	-19.00	462401.5573	607395.6591
60420	207+42.05	-20.56	462399.9008	607394.5384

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60421	207+43.30	-17.00	462402.1495	607397.5694
60422	520+30.29	21.06	462427.6931	607379.9363
60423	520+19.30	20.68	462422.7123	607370.1286
60424	520+37.74	19.30	462432.8303	607385.6065
60425	207+74.18	-17.00	462431.6415	607388.4268
60426	520+75.27	38.26	462434.3708	607427.6225
60427	520+78.81	40.11	462434.4606	607431.6231
60428	520+82.73	39.31	462437.0554	607434.6673
60429	107+49.39	-36.00	462422.9708	607442.4153
60430	106+57.24	25.00	462353.3367	607528.3762
60431	106+60.46	28.50	462357.4721	607530.7328
60432	207+58.52	-27.42	462413.5971	607383.1122
60433	207+59.97	-19.00	462417.4791	607390.7233
60434	107+16.05	30.50	462411.0469	607515.7769
60435	107+16.05	28.50	462410.4402	607513.8711
60436	107+21.47	30.50	462416.2108	607514.1330
60437	107+50.73	30.50	462443.9353	607505.5383
60438	107+12.55	22.00	462405.1291	607508.7405
60439	107+12.55	25.00	462406.0391	607511.5991
60440	107+21.67	22.00	462413.6677	607506.0224
60441	107+55.66	70.98	462460.6336	607542.7415
60442	107+50.73	139.75	462476.2845	607609.8891
60443	107+68.36	22.00	462458.2628	607492.1977
60444	107+75.19	33.27	462468.1250	607500.9443
60445	107+68.36	63.00	462470.4030	607531.3591
60446	521+72.84	28.27	462490.2674	607508.2149
60447	108+03.08	41.19	462497.1060	607500.2472
60448	108+10.57	60.00	462509.8339	607515.9958
60449	521+91.41	23.42	462503.4945	607522.1314
60450	521+89.04	25.40	462500.6088	607521.0106
60451	521+91.45	17.92	462508.3267	607519.5046
60452	207+74.18	-19.00	462431.0493	607386.5165
60454	523+28.81	-33.24	462618.9542	607615.4263
60455	523+20.92	-33.89	462615.7271	607608.1970
60456	522+06.69	-64.00	462587.5927	607493.6281
60457	522+06.69	-34.00	462561.2354	607507.9561
60459	521+81.94	-47.65	462561.1330	607479.4900
60460	521+88.95	-40.10	462557.9102	607489.2751
60461	521+87.52	-53.44	462568.9021	607481.5798
60462	521+95.51	-52.92	462572.3059	607488.8195
60463	522+04.98	-49.67	462574.1818	607498.9689
60464	207+24.06	15.50	462393.3936	607434.3097
60465	522+31.75	-80.49	462614.0525	607507.7661
60466	109+12.56	23.00	462596.2863	607450.4567
60467	519+00.00	45.90	462346.1412	607273.2020
60468	109+20.56	23.00	462603.9275	607448.0879
60470	108+58.60	-21.50	462531.5687	607423.9254
60471	108+61.89	-32.00	462531.6067	607412.9255
60472	106+57.24	22.00	462352.4267	607525.5176
60473	208+61.99	25.01	462527.9523	607402.5502
60475	208+95.04	23.75	462559.1507	607391.5630
60476	108+94.52	-16.00	462567.5152	607418.5448
60477	207+49.50	19.71	462418.9405	607430.7935
60478	207+49.50	-30.00	462421.9885	607440.6259
60479	519+20.15	-38.00	462430.4979	607255.0460
60480	520+03.09	-37.96	462466.2171	607327.5983
60481	208+49.31	-35.67	462497.8801	607348.3417
60482	208+48.31	-41.59	462495.1710	607342.9882
60483	520+27.09	-43.02	462482.2394	607346.1698
60484	520+44.72	-57.41	462503.3586	607354.6437
60485	208+53.95	-39.48	462501.1819	607343.3320
60486	209+01.60	-24.00	462551.2739	607344.0116
60487	208+95.20	-24.00	462545.1609	607345.9066
60488	208+70.18	-24.00	462521.2704	607353.3128
60489	208+65.55	-49.00	462509.4366	607330.8076
60490	208+65.55	-34.00	462513.8781	607345.1349
60491	520+13.04	-81.83	462509.4263	607315.1066
60492	520+05.11	-87.92	462510.9298	607305.2202
60493	209+20.40	-29.00	462567.7547	607333.6677
60494	209+20.40	-34.00	462566.2742	607328.8919
60495	209+23.09	-33.22	462569.0705	607328.8439
60496	209+33.60	-32.45	462579.3450	607326.4639
60497	209+36.29	-36.67	462580.6608	607321.6401
60498	209+36.29	-31.67	462582.1414	607326.4159
60499	209+99.10	-29.75	462642.7038	607309.6479

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60848748-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn

AECOM

ADDENDA / REVISIONS

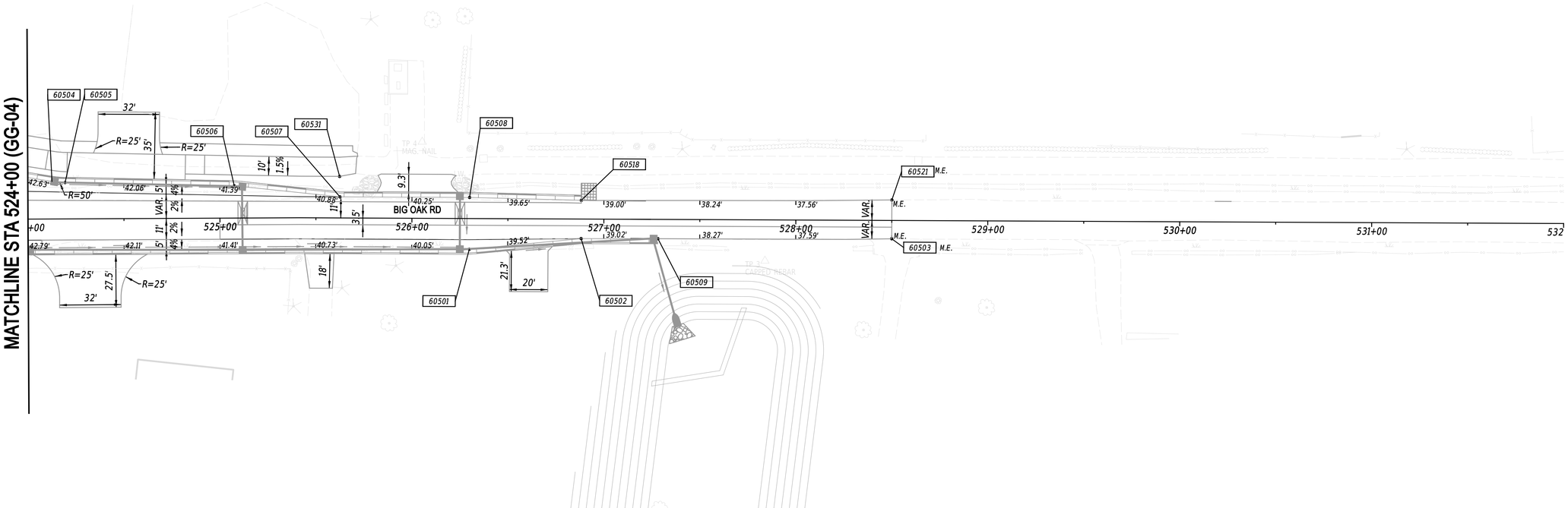
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

GRADES AND GEOMETRICS

GG-04
SECTION
AEC
SHEET NO.
30



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60501	526+30.00	16.00	462719.8938	607903.4152
60502	526+88.20	10.18	462752.5443	607951.9485
60503	528+50.00	9.53	462829.6283	608094.2093
60504	524+12.61	-19.60	462647.3158	607695.4518
60505	524+19.43	-18.97	462650.0404	607701.7351
60506	525+07.54	-16.83	462690.5579	607780.0056
60507	525+62.44	-11.00	462711.7418	607831.1246
60508	526+30.00	-11.00	462743.6842	607890.6483
60509	527+28.20	10.04	462771.5842	607987.1264
60518	526+88.20	-9.79	462770.1394	607942.5062
60521	528+50.00	-10.70	462847.4466	608084.6473
60531	525+62.23	-21.67	462721.0391	607825.8916

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/606487491-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/GG00.dgn

AECOM

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

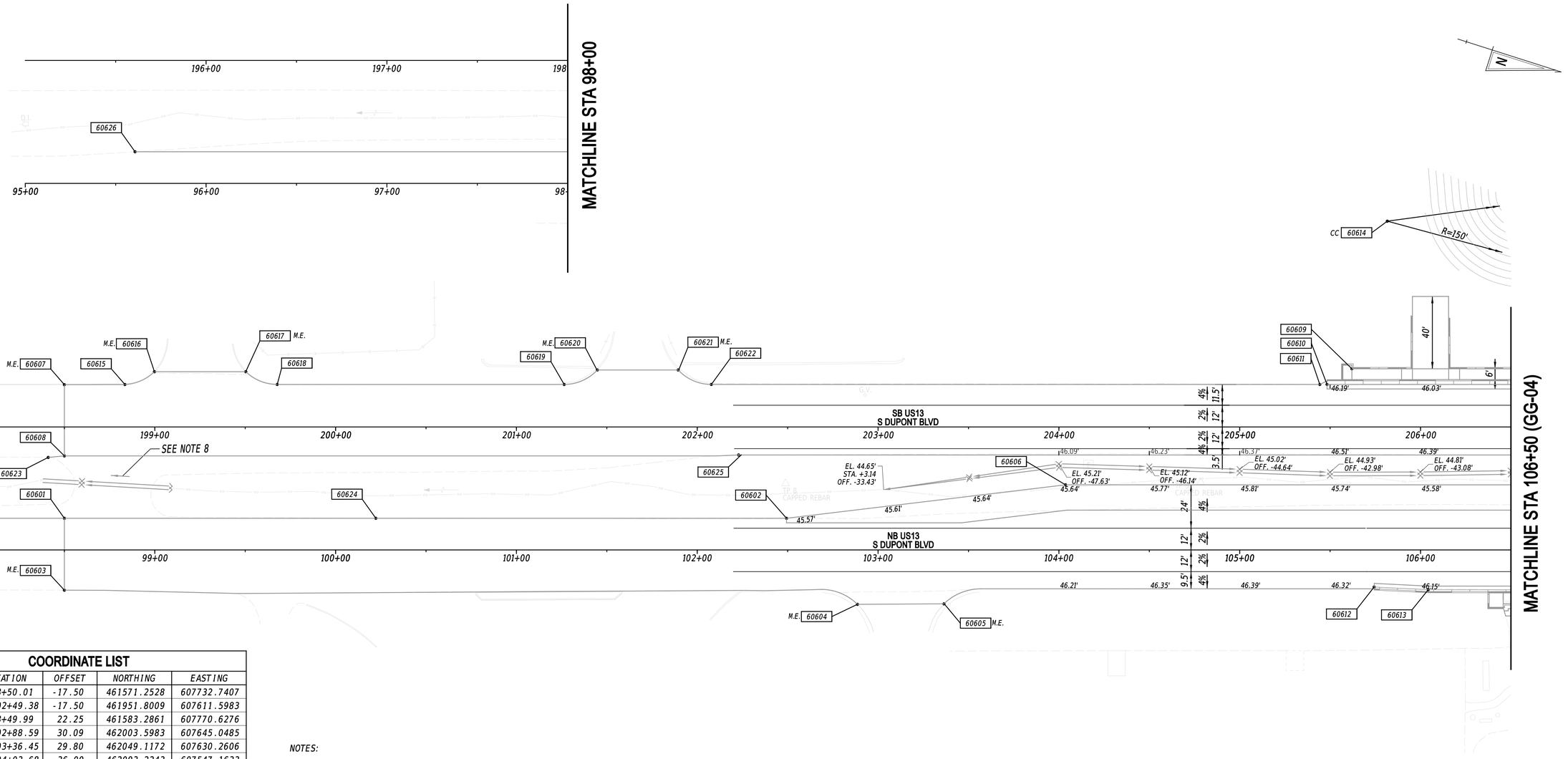
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

GRADES AND GEOMETRICS

GG-05

SECTION	SHEET NO.
AEC	31



COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60601	98+50.01	-17.50	461571.2528	607732.7407
60602	102+49.38	-17.50	461951.8009	607611.5983
60603	98+49.99	22.25	461583.2861	607770.6276
60604	102+88.59	30.09	462003.5983	607645.0485
60605	103+36.45	29.80	462049.1172	607630.2606
60606	104+03.68	-36.00	462093.2243	607547.1633
60607	198+50.00	-23.36	461548.8362	607662.3609
60608	198+50.00	16.00	461560.7767	607699.8697
60609	205+62.04	-32.17	462224.6536	607437.9850
60610	205+48.29	-23.50	462214.1804	607450.4142
60611	205+44.29	-23.50	462210.3689	607451.6276
60612	105+74.32	20.50	462272.9648	607549.2403
60613	106+04.26	22.00	462301.9464	607541.5873
60614	205+81.63	-113.78	462218.5619	607354.2719
60615	198+83.48	-23.48	461580.7069	607652.0936
60616	198+99.81	-30.54	461594.1185	607640.4145
60617	199+50.32	-30.54	461642.2518	607625.0919
60618	199+67.71	-23.50	461660.9588	607626.5250
60619	201+26.43	-23.50	461812.1988	607578.3797
60620	201+44.76	-31.50	461827.2387	607565.1964
60621	201+89.47	-31.50	461869.8399	607551.6349
60622	202+07.80	-23.50	461889.7332	607553.6977
60623	198+41.08	16.82	461552.5262	607703.3581
60624	100+22.26	-17.50	461735.3836	607680.4919
60625	202+22.86	15.50	461915.9129	607586.2921
60626	95+60.72	-17.50	461295.5889	607820.4947

NOTES:

1. *OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.*
2. *UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.*
3. *UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.*
4. *RADII ARE GIVEN TO THE EDGE OF PAVEMENT.*
5. *PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.*
6. *ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.*
7. *PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.*
8. *GRADE FOR POSITIVE DRAINAGE WHERE MEDIAN CROSSOVER IS BEING REMOVED. ELEVATIONS ARE TO BE SET BY THE FIELD ENGINEER.*

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60848748-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

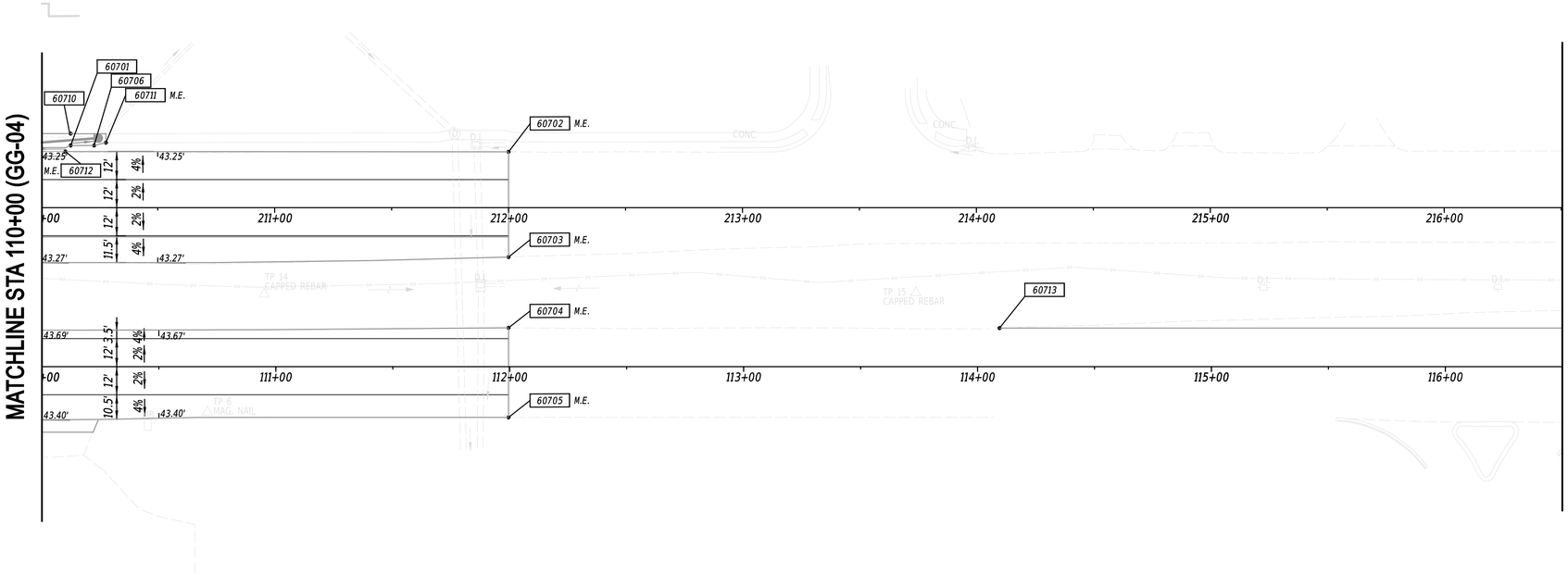
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

GRADES AND GEOMETRICS

GG-06

SECTION	SHEET NO.
AEC	32



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60701	210+12.82	-26.60	462656.7411	607308.5895
60702	212+00.00	-23.89	462836.3273	607255.7550
60703	212+00.00	21.11	462849.6535	607298.7419
60704	111+99.48	-16.63	462858.6132	607327.6437
60705	111+99.48	21.65	462869.9467	607364.2030
60706	210+22.82	-26.60	462666.2926	607305.6285
60711	210+27.85	-27.80	462670.7416	607302.9989
60712	210+10.55	-24.00	462655.3393	607311.7508

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/GG00.dgn

AECOM

ADDENDA / REVISIONS

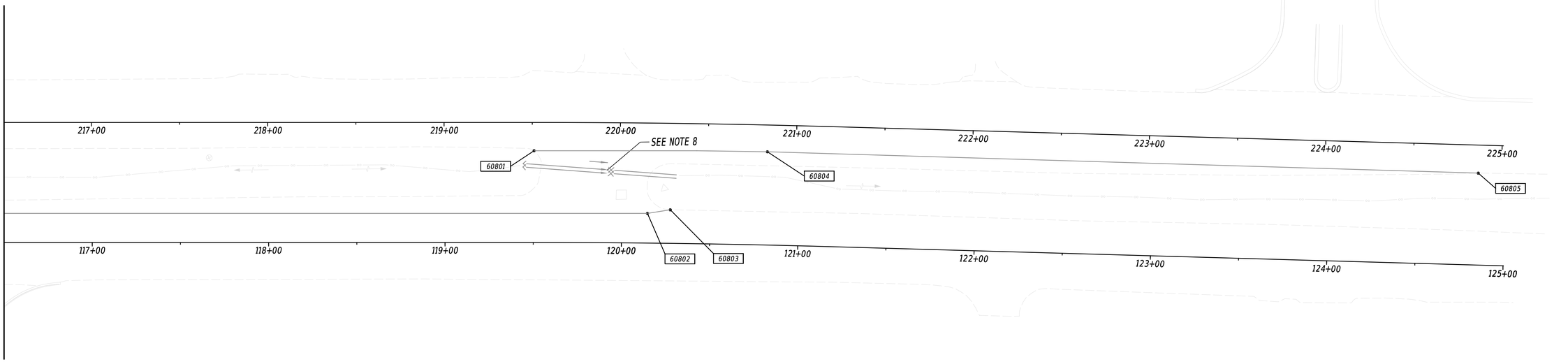
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

GRADES AND GEOMETRICS

GG-07
SECTION AEC
SHEET NO. 33



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB AND GUTTER IS GIVEN AT THE EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS ALONG INTERSECTION CURVES ARE GIVEN AT 10 FOOT INTERVALS.
4. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
5. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
6. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
7. PROPOSED CURB RADII ARE 2 FEET UNLESS OTHERWISE NOTED.
8. GRADE FOR POSITIVE DRAINAGE WHERE MEDIAN CROSSOVER IS BEING REMOVED. ELEVATIONS ARE TO BE SET BY THE FIELD ENGINEER.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
60801	219+51.01	16.00	463565.4743	607071.4828
60802	120+14.77	-16.50	463637.3728	607086.3607
60803	120+27.70	-18.52	463649.1322	607080.5965
60804	220+83.28	15.89	463691.9830	607032.8922
60805	224+86.28	15.89	464080.4948	606925.1038

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\GG00.dgn

ADDENDA / REVISIONS	
18	

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

GRADES AND GEOMETRICS

	GG-08
SECTION	AEC
SHEET NO.	34

SEQUENCE OF CONSTRUCTION

SEQUENCE OF CONSTRUCTION FOR INFILTRATION TRENCH BMP 1:

BEFORE CONSTRUCTION OF THE INFILTRATION TRENCH, ALL AREAS DRAINING TO THE TRENCH MUST BE AT FINAL GRADE AND STABILIZED. ABSOLUTELY NO EQUIPMENT SHALL BE IN THE ACTUAL TRENCH AREA ONCE CONSTRUCTION ON THE TRENCH HAS STARTED. ALL EXCAVATION WITH HEAVY EQUIPMENT SHALL BE DONE FROM THE SIDE. ALL STONE USED IN THE TRENCH SHALL CONFORM TO THE INFILTRATION STONE SPECIFICATION.

NOTIFY THE CCR A MINIMUM OF 2 WORKING DAYS IN ADVANCE OF ANY CONSTRUCTION SO THAT THE REQUIRED FACILITY CONSTRUCTION CHECKLIST CAN BE COMPLETED. NO WHEELED OR TRACKED EQUIPMENT SHALL BE ALLOWED WITHIN 2 FEET OF THE PERMANENT BOTTOM ELEVATION. ALL #3 STONE USED IN THE TRENCH SHALL CONFORM TO THE INFILTRATION STONE REQUIREMENTS OF SECTION 910 OF THE STANDARD SPECIFICATIONS.

A. INITIAL CONSTRUCTION:

1. SHOULD TRENCH CONSTRUCTION BE NECESSARY PRIOR TO VEGETATIVE STABILIZATION OF THE CONTRIBUTING DRAINAGE AREAS AS APPROVED BY THE ENGINEER, THE MINIMUM SHALL BE REQUIRED.
   - A. INFLOW SWALES WILL HAVE AN 18" COMPOST FILTER LOG PLACED 25 FEET BEFORE THE EDGE OF THE PROPOSED TRENCH OR CLOSER IF DIRECTED BY THE ENGINEER.
   - B. OTHER INFLOW AREAS, INCLUDING SIDE SLOPES, WILL HAVE SILT FENCE OR 18" COMPOST FILTER LOG INSTALLED SO THAT RUNOFF IS INTERCEPTED BEFORE ENTERING THE TRENCH AREA.
   - C. THESE ITEMS WILL REMAIN UNTIL SURROUNDING VEGETATION IS ESTABLISHED.
2. EXCAVATE THE TRENCH TO THE DIMENSIONS SHOWN ON THE PLANS AND SCARIFY THE BOTTOM A MINIMUM OF 6 INCHES. DURING EXCAVATION, THE CCR SHALL OBSERVE THE SOIL TYPE. IF STANDING WATER OR EXCESSIVE CLAY/SILT MATERIAL IS DISCOVERED AT THE PROPOSED BOTTOM ELEVATION, THE CCR SHALL NOTIFY THE ENGINEER AND STORMWATER ENGINEER IMMEDIATELY.
3. INSTALL GEOTEXTILE ON ALL TRENCH SIDES MAKING SURE TO HAVE ENOUGH EXTRA TO COVER THE TOP OF THE TRENCH COMPLETELY AFTER STONE IS PLACED AND HAVING AT LEAST 1 FOOT OF OVERLAP OF THE GEOTEXTILE. THE ONLY AREA THAT IS NOT COVERED WITH GEOTEXTILE IS THE BOTTOM.
4. PLACE THE INSPECTION PORT AS SHOWN IN THE PLANS.
5. PLACE #3 INFILTRATION STONE.
6. AFTER STONE PLACEMENT, IMMEDIATELY COVER THE ENTIRE TOP OF THE TRENCH WITH THE EXCESS GEOTEXTILE AND SECURE WITH #3 STONE, SO GEOTEXTILE DOES NOT MOVE. BRUSH CLEAN GEOTEXTILE COVER AS NEEDED TO PREVENT SEDIMENT ACCUMULATION.
7. THE SAME DAY THAT THE TRENCH IS COMPLETED, PERMANENTLY STABILIZE THE DISTURBED AREA AROUND THE TRENCH WITH PERMANENT SEED – DRY GROUND AND EROSION CONTROL BLANKET.
8. INSPECT THE TRENCH AND REMOVE LOOSE SEDIMENT AFTER EVERY RAIN EVENT. ENSURE E&S CONTROLS ARE PROPERLY FUNCTIONING.
9. AFTER ALL SURROUNDING AREAS DRAINING TO THE TRENCH ARE PERMANENTLY STABILIZED AND HAVE SUFFICIENT VEGETATION, AS DETERMINED BY THE STORMWATER ENGINEER, E&S DEVICES SHALL BE REMOVED AND THE EXCESS GEOTEXTILE REMOVED FROM THE TOP.
10. AS-BUILT DRAWINGS SHALL BE COMPLETED BY THE CONTRACTOR AND CERTIFIED BY DELAWARE PLS BEFORE THE DELDOT INITIAL INSPECTION DATE. THESE DRAWINGS SHALL BE SENT TO THE STORMWATER ENGINEER FOR VERIFICATION. AS-BUILT DRAWINGS WILL INCLUDE, BUT NOT BE LIMITED TO:
    - GENERAL TOPOGRAPHY OF THE WHOLE FACILITY AT 1-FOOT CONTOURS.
    - INVERTS OF ALL PIPES AND SWALES THAT INFLOW TO THE TRENCH.
    - OUTLET STRUCTURE (OR WEIR WALL) INVERTS OF ANY AND ALL ORIFICES/WEIRS, TOP OF STRUCTURE, OUTLET PIPE, ETC.
    - PRIMARY OUTFLOW PIPE OR CHANNEL. FOR A PIPE OUTFALL, INVERTS AT THE ENTRANCE AND EXIT. FOR A PRIMARY OUTFLOW CHANNEL/SWALE, SHOW AT MINIMUM THREE (3) CROSS SECTIONS EQUAL DISTANCE APART AT 50' DOWNSTREAM ALONG WITH THE SLOPE.
11. ENGINEER WILL COORDINATE A SOILS PROFESSIONAL TO PERFORM CONFIRMATORY INFILTRATION TESTING USING OBSERVATION WELLS. CONFIRMATORY TESTING RATES SHALL BE NO LESS THAN 150% OF THE APPROVED DESIN RATE. IF TEST RESULTS ARE LESS THAN 150% OF DESIGN RATE, THE DESIGN ENGINEER SHALL VERIFY THAT THE FACILITY WILL FUNCTION AS ORIGINALLY DESIGNED OR SUBMIT ALTERNATE COMPLIANCE PLAN AND REVISE STORMWATER MANAGEMENT REPORT ACCORDINGLY.

B. MAINTENANCE OF INFILTRATION TRENCH:

1. THE CONTRACTOR SHALL INSPECT THE TRENCH THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.
2. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED WITHIN TWO WORKING DAYS AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

SEQUENCE OF CONSTRUCTION FOR BMP 3 FOREBAY:

NOTIFY THE CCR A MINIMUM OF 2 WORKING DAYS IN ADVANCE OF ANY CONSTRUCTION SO THAT THE REQUIRED FACILITY CONSTRUCTION CHECKLIST CAN BE COMPLETED. ABSOLUTELY NO WHEELED OR TRACKED EQUIPMENT SHALL BE ALLOWED WITHIN 2 FEET OF THE PERMANENT BOTTOM ELEVATION.

A. INITIAL CONSTRUCTION:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AS NEEDED AND APPROVED BY ENGINEER.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.
4. CLEAR AND GRUB REMAINING AREA FOR FOREBAY CONSTRUCTION MAKING SURE NOT TO IMPEDE WITHIN 1-FOOT OF THE PERMANENT BOTTOM ELEVATION.
5. CONSTRUCT FOREBAY OUTLET AND OUTFALL AS SHOWN ON THE PLANS. COVER OUTLET ORIFICE. DEWATER FOUNDATION AS NEEDED IN ACCORDANCE WITH DEWATERING PRACTICES AS DESCRIBED IN DIVISION 900 OF THE STANDARD SPECIFICATIONS. INSTALL SKIMMER DEWATERING DEVICE AND/OR OTHER TEMPORARY MODIFICATIONS AS SHOWN IN THE PLANS.
6. COMPLETE FOREBAY EXCAVATION TO MAINTAIN A MINIMUM OF 1-FOOT COVER ABOVE THE PERMANENT BOTTOM ELEVATION. NO EQUIPMENT SHALL BE USED WITHIN 1-FOOT OF THE PERMANENT BOTTOM ELEVATION. SIDE SLOPES, MAINTENANCE ACCESS ROAD, AND FOREBAYS SHALL BE CONSTRUCTED AS PER FINAL DESIGN ELEVATION AND CONFIGURATION.
7. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH (TO BE DISCUSSED DURING PLAN REVIEW(S)).

B. CONVERSION TO PERMANENT FOREBAY:

1. CONVERT THE SEDIMENT TRAP AFTER ALL AREAS DRAINING TO IT HAVE ATTAINED FINAL STABILIZATION AS APPROVED BY THE ENGINEER WITH CONCURRENCE FROM THE STORMWATER ENGINEER PRIOR TO ANY FACILITY CONSTRUCTION.
2. DURING EXCAVATION, THE CCR SHALL OBSERVE THE SOIL TYPE. IF STANDING WATER OR EXCESSIVE CLAY/SILT MATERIAL IS DISCOVERED AT THE PROPOSED BOTTOM ELEVATION, THE CCR SHALL NOTIFY THE ENGINEER AND STORMWATER ENGINEER IMMEDIATELY.
3. REMOVE ANY EXCESS SEDIMENT FROM THE FOREBAY(S). NO EQUIPMENT SHALL BE USED WITHIN 1-FOOT OF THE PERMANENT BOTTOM ELEVATION. THE FINAL 1 FOOT OF MATERIAL TO BE EXCAVATED SHALL BE STARTED AT ONE SIDE OF THE FOREBAY AND REMOVED GOING ACROSS OR STARTED IN THE MIDDLE AND WORKED TOWARDS THE OUTSIDES. A MINIMUM OF INGRESS AND EGRESS POINTS SHALL BE UTILIZED AS WELL AS THESE AREAS WILL BE STABILIZED WITHIN ONE WORKING DAY WHEN NO LONGER NEEDED. OTHER THAN WHAT IS NECESSARY TO COMPLETE THE BOTTOM EXCAVATION, NO DISTURBANCE OF THE SIDE SLOPES SHALL BE CONDUCTED AT THIS TIME. THE COMPLETION OF THE SIDE SLOPES TO THE DESIGN BOTTOM ELEVATION SHALL BE COMPLETED TO THE BEST OF THE CONTRACTOR'S ABILITY TO LIMIT DISTURBANCE TO THE ADJACENT AREAS. OUTLET STRUCTURE ORIFICE SHALL BE UNCOVERED.
4. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED.
5. FOREBAY BOTTOM ELEVATION SHALL BE SEEDED, AND MULCHED WITH HYDRAULIC MULCH.
6. AFTER ALL SURROUNDING AREAS DRAINING TO THE FOREBAY HAVE SUFFICIENT VEGETATION AS APPROVED BY THE ENGINEER, E&S DEVICES SHALL BE REMOVED.
7. AS-BUILT DRAWINGS SHALL BE COMPLETED BY THE CONTRACTOR AND CERTIFIED BY DELAWARE PLS BEFORE THE DELDOT INITIAL INSPECTION DATE. THESE DRAWINGS SHALL BE SENT TO THE STORMWATER ENGINEER FOR VERIFICATION. AS-BUILT DRAWINGS WILL INCLUDE, BUT NOT BE LIMITED TO:
    - GENERAL TOPOGRAPHY OF THE WHOLE FACILITY AT 1-FOOT CONTOURS INCLUDING FOREBAYS AND TOP/TOE OF ANY EMBANKMENT.
    - INVERTS OF ALL PIPES AND SWALES THAT INFLOW TO THE BASIN.
    - OUTLINE OF ALL RIPRAP AND OBTAIN SPOT ELEVATIONS ON TOP OF THE RIPRAP.
    - OUTLET STRUCTURE (OR WEIR WALL) INVERTS OF ANY AND ALL ORIFICES/WEIRS, TOP OF STRUCTURE, OUTLET PIPE, ETC.
    - PRIMARY OUTFLOW PIPE OR CHANNEL. FOR A PIPE OUTFALL, INVERTS AT THE ENTRANCE AND EXIT. FOR A PRIMARY OUTFLOW CHANNEL/SWALE, SHOW AT MINIMUM THREE (3) CROSS SECTIONS EQUAL DISTANCE APART AT 50' DOWNSTREAM ALONG WITH THE SLOPE.

B. MAINTENANCE OF FOREBAY:

1. THE CONTRACTOR SHALL INSPECT THE FOREBAY THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.
2. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED WITHIN TWO WORKING DAYS AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

SEQUENCE OF CONSTRUCTION FOR INFILTRATION BASIN BMP 3 AND BMP 4:

NOTIFY THE CCR A MINIMUM OF 2 WORKING DAYS IN ADVANCE OF ANY CONSTRUCTION SO THAT THE REQUIRED FACILITY CONSTRUCTION CHECKLIST CAN BE COMPLETED. ABSOLUTELY NO WHEELED OR TRACKED EQUIPMENT SHALL BE ALLOWED WITHIN 2 FEET OF THE PERMANENT BOTTOM ELEVATION.

A. INITIAL CONSTRUCTION:

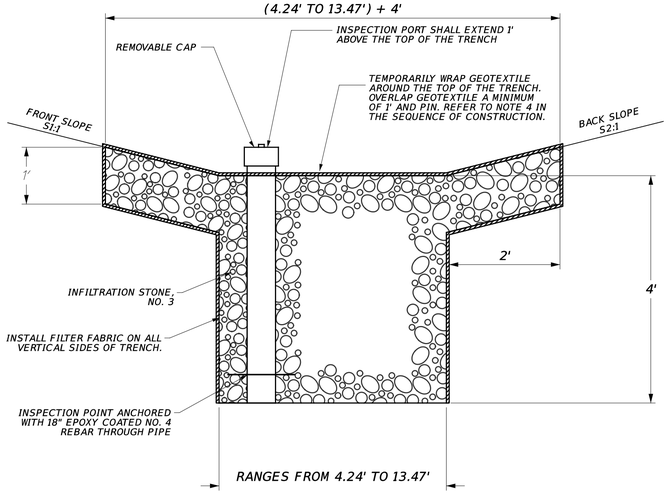
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AS NEEDED AND APPROVED BY ENGINEER.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.
4. CLEAR AND GRUB REMAINING AREA FOR INFILTRATION BASIN CONSTRUCTION MAKING SURE NOT TO IMPEDE WITHIN 2-FOOT OF THE PERMANENT BOTTOM ELEVATION.
5. CONSTRUCT BASIN OUTLET AND OUTFALL AS SHOWN ON THE PLANS. DEWATER FOUNDATION AS NEEDED IN ACCORDANCE WITH DEWATERING PRACTICES AS DESCRIBED IN DIVISION 900 OF THE STANDARD SPECIFICATIONS. INSTALL SKIMMER DEWATERING DEVICE AND/OR OTHER TEMPORARY MODIFICATIONS AS SHOWN IN THE PLANS.
6. DURING BASIN EXCAVATION, NO EQUIPMENT SHALL BE USED WITHIN 1-FOOT OF THE PERMANENT BOTTOM ELEVATION. SIDE SLOPES, MAINTENANCE ACCESS ROAD, AND FOREBAYS SHALL BE CONSTRUCTED AS PER FINAL DESIGN ELEVATION AND CONFIGURATION.
7. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE SEEDED WITH (TO BE DISCUSSED DURING PLAN REVIEW(S)).
8. AS-BUILT DRAWINGS SHALL BE COMPLETED BY THE CONTRACTOR AND CERTIFIED BY DELAWARE PLS BEFORE THE DELDOT INITIAL INSPECTION DATE. THESE DRAWINGS SHALL BE SENT TO THE STORMWATER ENGINEER FOR VERIFICATION. AS-BUILT DRAWINGS WILL INCLUDE, BUT NOT BE LIMITED TO:
    - GENERAL TOPOGRAPHY OF THE WHOLE FACILITY AT 1-FOOT CONTOURS INCLUDING FOREBAYS AND TOP/TOE OF ANY EMBANKMENT.
    - INVERTS OF ALL PIPES AND SWALES THAT INFLOW TO THE BASIN.
    - OUTLINE OF ALL RIPRAP AND OBTAIN SPOT ELEVATIONS ON TOP OF THE RIPRAP.
    - OUTLET STRUCTURE (OR WEIR WALL) INVERTS OF ANY AND ALL ORIFICES/WEIRS, TOP OF STRUCTURE, OUTLET PIPE, ETC.
    - PRIMARY OUTFLOW PIPE OR CHANNEL. FOR A PIPE OUTFALL, INVERTS AT THE ENTRANCE AND EXIT. FOR A PRIMARY OUTFLOW CHANNEL/SWALE, SHOW AT MINIMUM THREE (3) CROSS SECTIONS EQUAL DISTANCE APART AT 50' DOWNSTREAM ALONG WITH THE SLOPE.
9. INFILTRATION BASINS (BMP 3 AND BMP 4) ARE NOT TO BE USED AS SEDIMENT TRAPS OR BASINS.

B. MAINTENANCE OF INFILTRATION BASIN:

1. THE CONTRACTOR SHALL INSPECT THE BASIN THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.
2. ANY EXCESS SEDIMENT AROUND THE OUTFALL AREA WILL BE REMOVED WITHIN TWO WORKING DAYS AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN DETAILS & NOTES	SWM-01
				COUNTY KENT	DESIGNED BY: M. Molina		SECTION AEC
					CHECKED BY: I. Barbu		SHEET NO. 35



INFILTRATION TRENCH DETAIL - BMP 1

NOT TO SCALE

INFILTRATION TRENCH NOTES:

1. AT NO TIME DURING CONSTRUCTION SHOULD EXCAVATION OCCUR WITHIN 1-FOOT OF THE PROPOSED TRENCH AREA BOTTOM UNTIL ACTUAL TRENCH CONSTRUCTION COMMENCES.
2. INFILTRATION TRENCH WILL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 910 OF THE STANDARD SPECIFICATIONS.

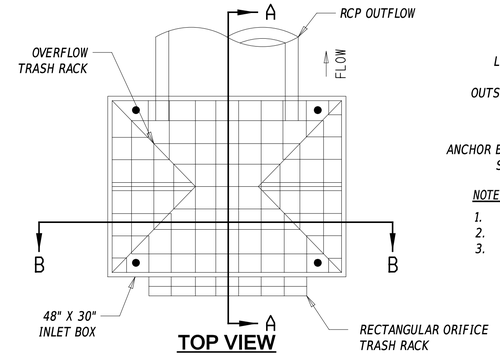
FRONT VIEW SIDE VIEW

INSPECTION PORT DETAIL - BMP 1

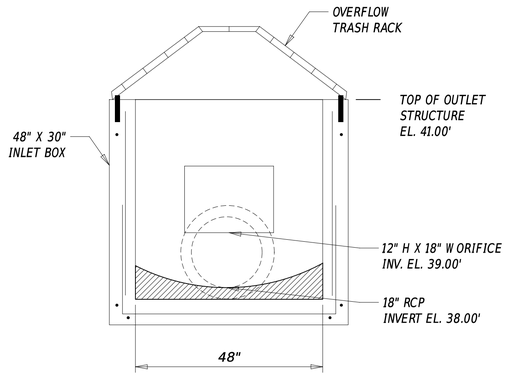
NOT TO SCALE

NOTES:

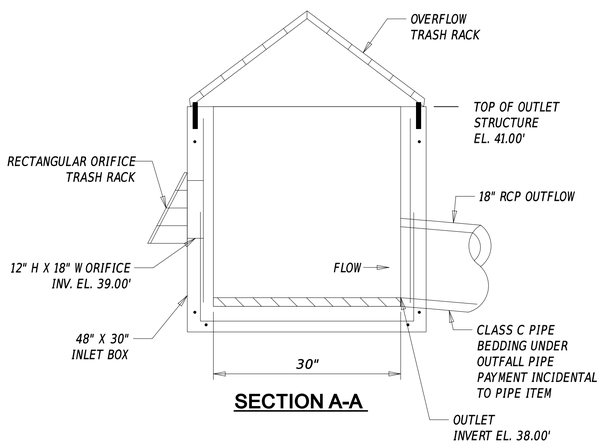
CONSTRUCT AN INSPECTION PORT CONSISTING OF A SOLID 4-INCH DIAMETER SCHEDULE 40 PVC PIPE EXTENDING 6" BELOW THE FACILITY BOTTOM ELEVATION. EXCAVATION BELOW THE FACILITIES BOTTOM ELEVATION SHALL BE COMPLETED WITH HAND TOOLS TO INSTALL THE 4-INCH PIPE. AREA OUTSIDE OF THE PIPE SHALL BE BACKFILLED TO BOTTOM OF FACILITY ELEVATION. A 6-INCH DIAMETER SCHEDULE 40 PVC PIPE WITH 4 ROWS OF 3/8-INCH DIAMETER HOLES EVENLY SPACED AROUND THE PIPE AND 6 INCHES ON CENTER VERTICALLY SHALL BE PLACED OVER THE 4 INCH PVC. PLACE A REMOVABLE CAP ON THE TOP AND PALCE AN 18-INCH LENGTH OF REBAR THROUGH THE TEE SECTION INSTALLED AT THE BOTTOM FO THE PERFORATED PIPE FROM SIDE TO SIDE AND SECURE ON THE BOTTOM TO SERVE AS AN ANCHORING SYSTEM WHILE ALLOWING UNOBSTRUCTED ACCESS TO THE FACILITY BOTTOM THROUGH THE INSPECTION PORT. INSTALL THE TEE SECTION FLUSH WITH THE FACILITY BOTTOM AND EXTEND BOTH INSPECTION PORT PIPES TO 1-FOOT ABOVE THE TOP STONE ELEVAITON.



TOP VIEW



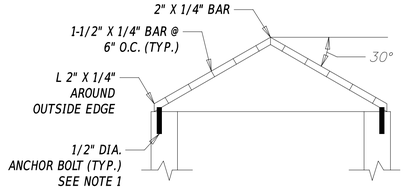
SECTION B-B



SECTION A-A

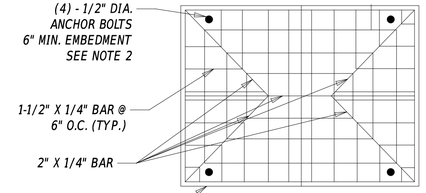
BMP OUTLET STRUCTURE DETAIL - BMP 3 FOREBAY (OS-400)

NOT TO SCALE



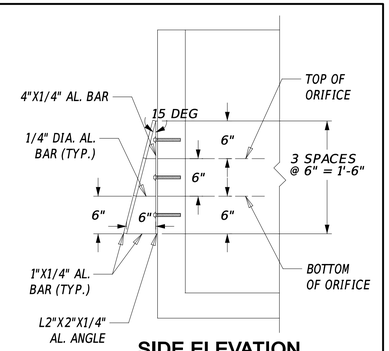
NOTES:

1. ANCHOR BOLTS TO BE STAINLESS STEEL ONLY.
2. TRASH RACK BARS TO BE ALUMINUM ONLY.
3. PAYMENT FOR TRASH RACK IS INCIDENTAL TO ITEM 910006

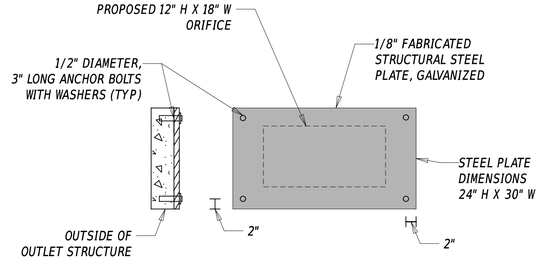


TRASH RACK DETAIL - BMP 3 FOREBAY

NOT TO SCALE

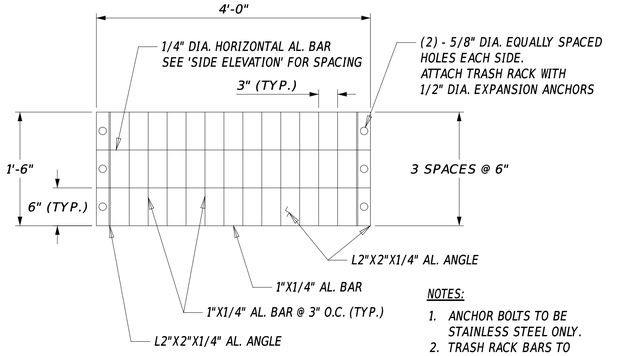


SIDE ELEVATION



STEEL PLATE COVERING FOR ORIFICE - BMP 3 FOREBAY

NOT TO SCALE



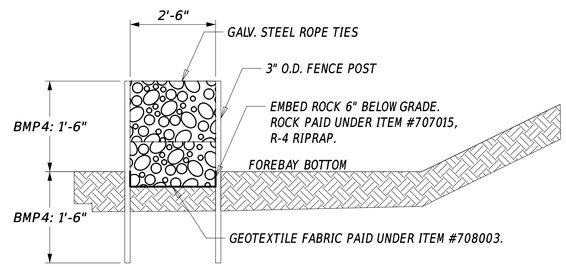
NOTES:

1. ANCHOR BOLTS TO BE STAINLESS STEEL ONLY.
2. TRASH RACK BARS TO BE ALUMINUM ONLY.

FRONT ELEVATION

RECTANGULAR ORIFICE TRASH RACK - BMP 3 FOREBAY

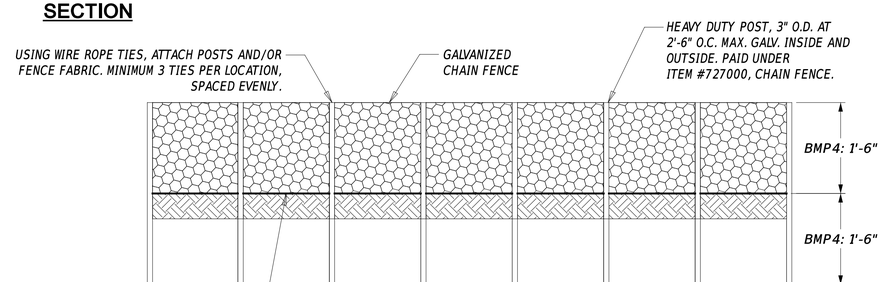
NOT TO SCALE



SECTION

NOTES:

1. FENCE POST SHALL BE TIED TOGETHER USING 1/4" GALVANIZED STEEL ROPE. THREE TIES PER FENCE POST PAIR. FENCE POST AND TIES SHALL BE PAID UNDER ITEM #727000. CHAIN LINK FENCE.
2. GALVANIZED CHAIN LINK FENCE SHALL BE TIED TOGETHER USING 1/4" GALVANIZED STEEL ROPE. TIES SHALL BE SPACED 1'-6" O.C. ALONG LENGTH. TIES SHALL BE PLACED AT TOP, MIDDLE, AND BOTTOM OF EACH SECTION. WHERE TIES FALL ON A FENCE POST THE SAME TIE MAY BE USED TO TIE THE FENCE POSTS AS IS USED TO TIE THE FENCE. CHAIN LINK FENCE AND TIES SHALL BE PAID UNDER ITEM #727000, CHAIN LINK FENCE.
3. THE STONE PLACED INSIDE MODIFIED GABION SHALL BE R-4 RIPRAP. SPECIAL CARE SHALL BE TAKEN WHEN PLACING THE ROCK TO ENSURE THAT THE COATING ON THE FENCE IS NOT DAMAGED. RIPRAP SHALL BE PAID UNDER ITEM #707015, R-4 RIPRAP.
4. GEOTEXTILE BENEATH THE MODIFIED GABION CHECKDAM SHALL BE PAID UNDER ITEM #708003.
5. EXCAVATION REQUIRE TO INSTALL THE MODIFIED GABION CHECK DAM SHALL BE PAID UNDER THE ITEM #910008 - STORMWATER MANAGEMENT POND.
6. EXTEND MODIFIED GABION CHECKDAM ENDS 5' INTO EMBANKMENT.



ELEVATION

MODIFIED GABION CHECK DAM - BMP 4

NOT TO SCALE

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn

ADDENDA / REVISIONS	NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN DETAILS & NOTES	SWM-02
			COUNTY KENT	DESIGNED BY: M. Molina		SECTION AEC
				CHECKED BY: I. Barbu		SHEET NO. 36

XX	BMP 1 - TOP OF BMP BASELINE		
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	462016.0591	606352.4479
2 PI	0+81.75	462044.3333	606429.1470
3 PI	1+49.11	462066.7282	606492.6793
4 PI	2+30.28	462092.6202	606569.6075
5 PI	2+77.15	462107.1898	606614.1520
6 PI	2+89.72	462095.2488	606618.0973
7 PI	3+39.54	462068.1912	606572.9911
8 PI	4+17.84	462042.8893	606501.1787
9 PI	4+87.14	462015.3887	606437.5743
10 PI	5+27.27	461999.1504	606400.8773
11 PI	5+41.58	461994.0502	606387.5044
12 PI	5+90.97	461975.5660	606341.7094
13 PI	6+40.52	461958.1672	606295.3122
14 PI	6+90.31	461944.3501	606247.4838
15 PI	7+18.01	461937.5531	606220.6257
16 PI	9+03.94	461882.3466	606043.0831
17 PI	9+65.89	461861.7561	605984.6490
18 PI	10+02.69	461852.4536	605949.0728
19 PI	10+17.02	461846.2872	605936.1831
20 PI	10+49.87	461838.3795	605905.4616
21 PI	10+55.93	461844.3453	605906.4973
22 PI	11+13.15	461865.1207	605959.8079
23 PI	11+83.05	461889.0600	606025.4834
24 PI	12+55.21	461914.8529	606092.8770
25 PI	13+28.12	461941.5371	606160.7304
26 PI	15+05.11	462005.8422	606325.6117
1 POE	15+33.82	462016.0591	606352.4479

NOTE: LOCATION OF SOME POINTS IN THIS TABLE IS SHOWN IN THE PLAN VIEW ON SHEET SWM-04.

XX	BMP 1 PROFILE BASELINE - SECTION A-A		
POINT NO.	STATION	NORTHING	EASTING
27 POB	0+00.00	461832.7738	605876.9074
28 PI	0+32.42	461841.8021	605908.0497
29 PI	1+15.58	461869.4057	605986.4916
30 PI	2+49.00	461912.9310	606112.6077
31 PI	3+40.86	461941.8273	606199.8036
32 PI	4+36.27	461972.7559	606290.0613
33 PI	6+62.66	462054.7528	606501.0890
34 PI	7+42.82	462084.0248	606575.7101
35 PI	7+67.89	462093.6240	606598.8627
36 PI	7+86.74	462101.2193	606616.1247
37 POE	8+00.00	462106.1776	606628.0356

NOTE: LOCATION OF SOME POINTS IN THIS TABLE IS SHOWN IN THE PLAN VIEW ON SHEET SWM-04.

XX	BMP 1 CROSS SECTION - SECTION B-B		
POINT NO.	STATION	NORTHING	EASTING
38 POB	0+00.00	461972.2832	606199.4033
39 POE	0+50.00	461925.7881	606217.7936

NOTE: LOCATION OF ALL POINTS IN THIS TABLE IS SHOWN IN THE PLAN VIEW ON SHEET SWM-04.

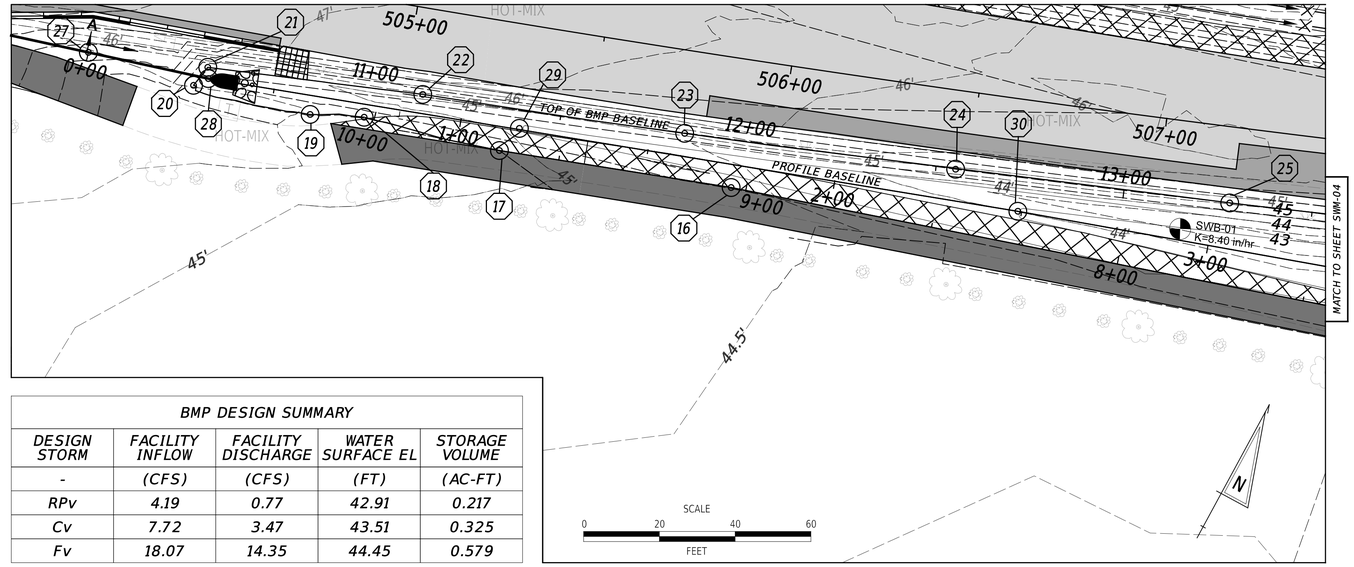
XX	BMP 1 CROSS SECTION - SECTION C-C		
POINT NO.	STATION	NORTHING	EASTING
40 POB	0+00.00	462001.2059	606296.0726
41 POE	0+50.00	461954.5275	606313.9926

NOTE: LOCATION OF ALL POINTS IN THIS TABLE IS SHOWN IN THE PLAN VIEW ON SHEET SWM-04.

BMP DESIGN DATA		
SWM FACILITY NO.	DRAINAGE AREA AC.	CN
1	6.15	64

NOTES

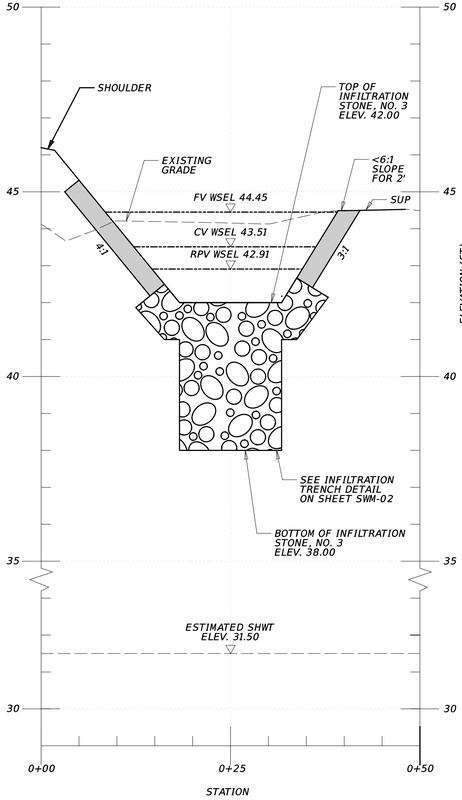
1. DESIGN INFILTRATION IS 1.72 IN/HR.



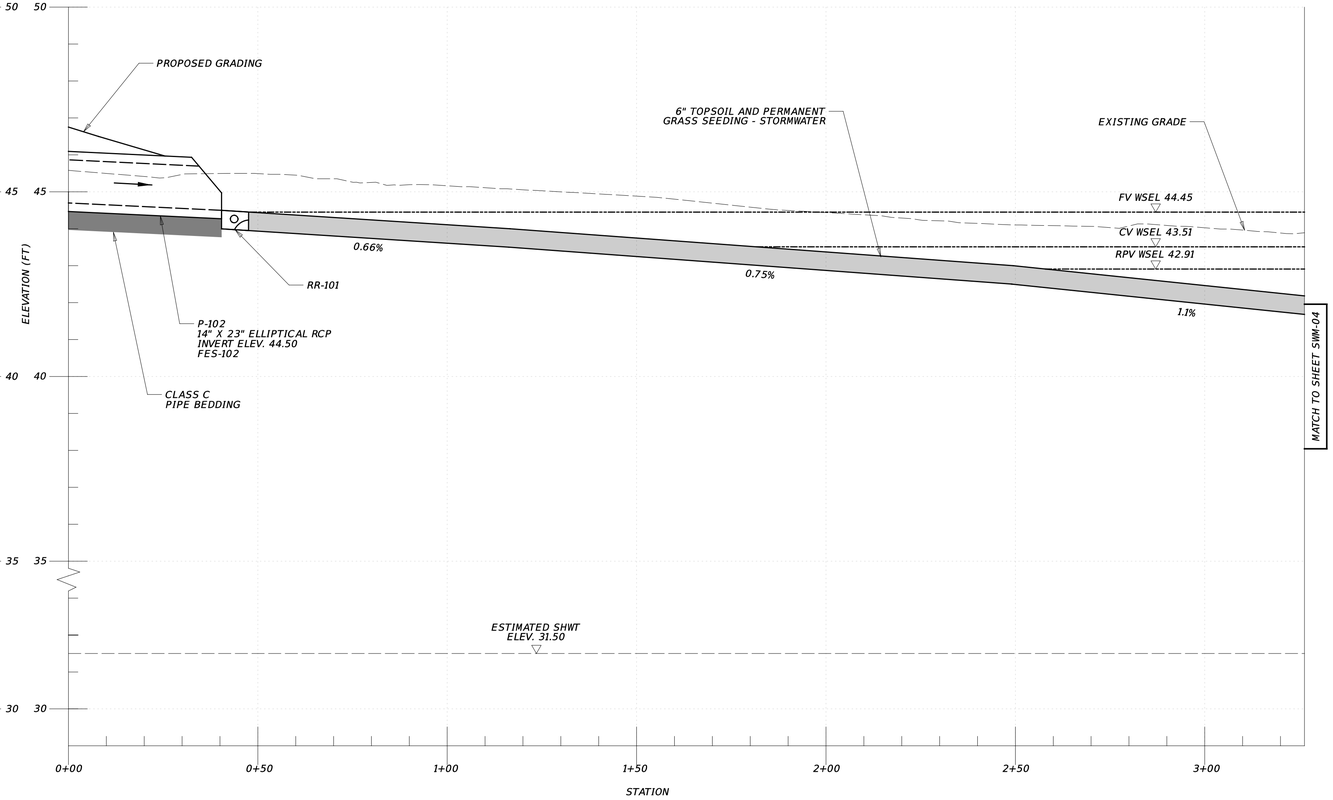
BMP DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL	STORAGE VOLUME
-	(CFS)	(CFS)	(FT)	(AC-FT)
RPv	4.19	0.77	42.91	0.217
Cv	7.72	3.47	43.51	0.325
Fv	18.07	14.35	44.45	0.579

PLAN - INFILTRATION TRENCH - SWM BMP NO. 1 - PART 1

LOCATION AND BASELINE OF CROSS SECTION C-C (BELOW) AND CAN BE FOUND IN THE PLAN VIEW ON SHEET SWM-04.



CROSS SECTION - INFILTRATION TRENCH - SWM BMP NO. 1
SECTION C-C - PLAN VIEW ON SHEET SWM-04



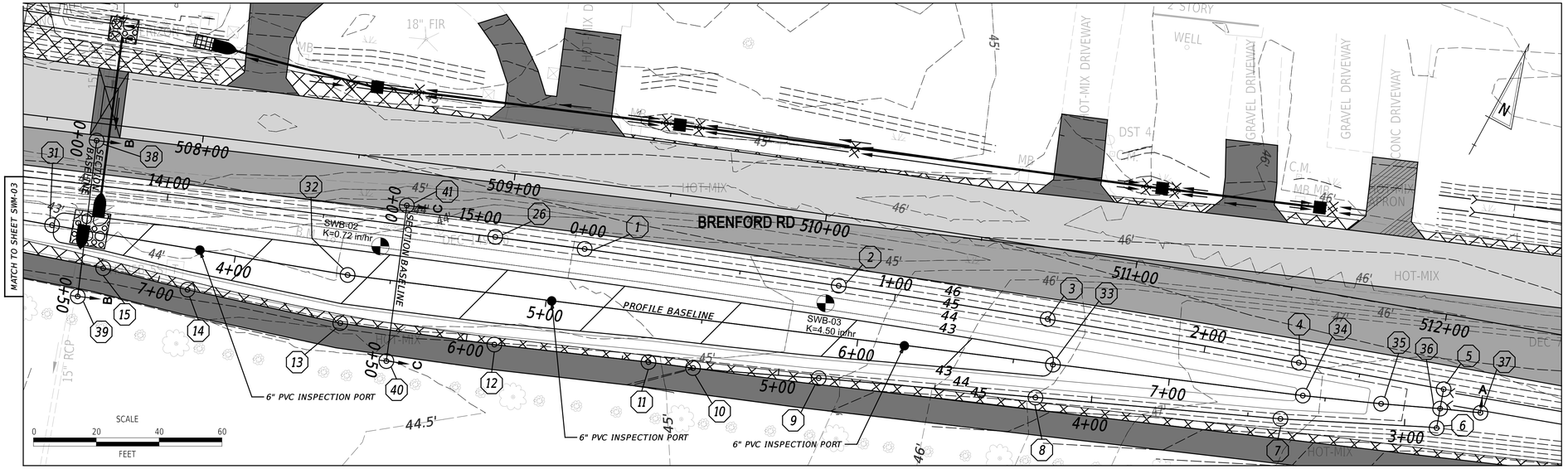
PROFILE - INFILTRATION TRENCH - SWM BMP NO. 1
SECTION A-A - PART 1

VERTICAL SCALE FEET 0 2 4 6

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/SWM.dgn

ADDENDA / REVISIONS		SCALE 0 20 40 60 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN	SWM-03
				COUNTY KENT	DESIGNED BY: M. Molina		SECTION AEC
					CHECKED BY: I. Barbu		SHEET NO. 37



PLAN - INFILTRATION TRENCH - SWM BMP NO. 1 - PART 2

PLAN VIEW LEGEND	
	DE #3 INFILTRATION STONE

BMP DATA		
SWM FACILITY NO.	DRAINAGE AREA AC.	CN
1	6.15	64

NOTES

1. DESIGN INFILTRATION IS 1.72 IN/HR.

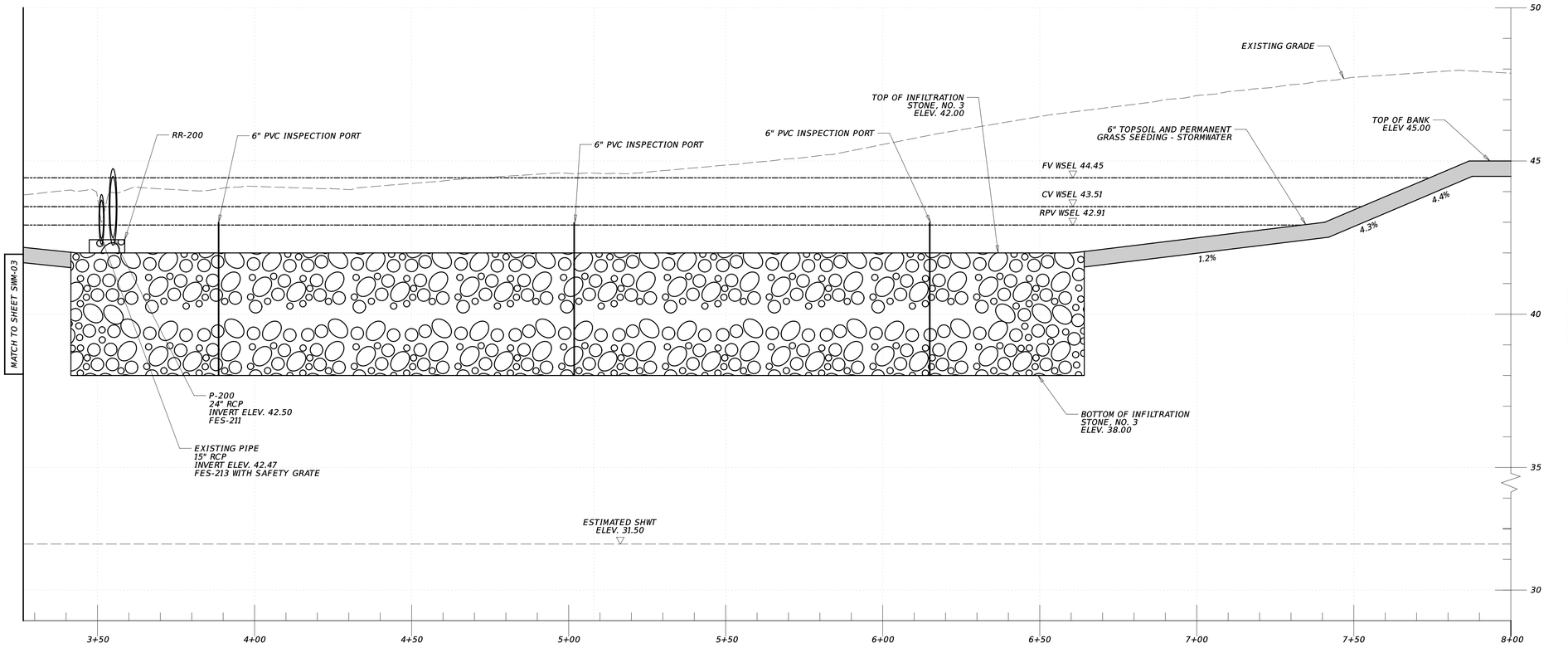
VERTICAL SCALE FEET 0 2 4 6

BMP DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL	STORAGE VOLUME
-	(CFS)	(CFS)	(FT)	(AC-FT)
RPv	4.19	0.77	42.91	0.217
Cv	7.72	3.47	43.51	0.325
Fv	18.07	14.35	44.45	0.579

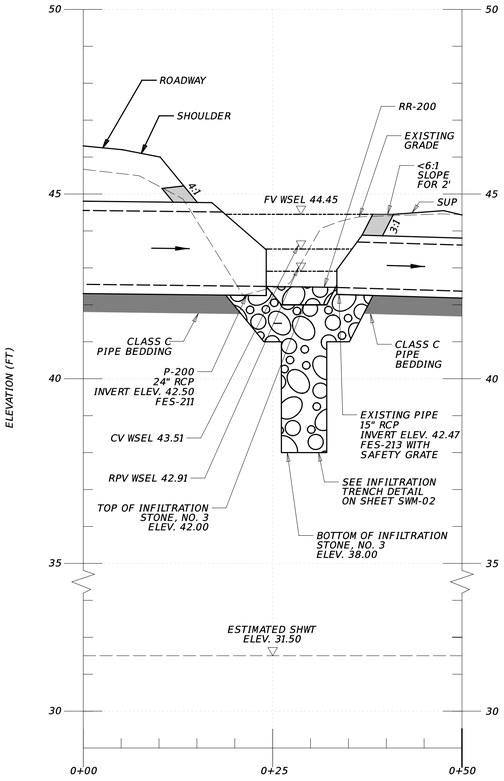
XX	BMP 1 - TOP OF BMP BASELINE
XX	BMP 1 PROFILE BASELINE - SECTION A-A
XX	BMP 1 CROSS SECTION BASELINES - SECT. B-B AND C-C

POINT NO.	STATION	NORTHING	EASTING

SEE SHEET SWM-03 FOR INFORMATION



PROFILE - INFILTRATION TRENCH - SWM BMP NO. 1
SECTION A-A - PART 2



CROSS SECTION - INFILTRATION TRENCH - SWM BMP NO. 1
SECTION B-B

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn

AECOM

ADDENDA / REVISIONS	

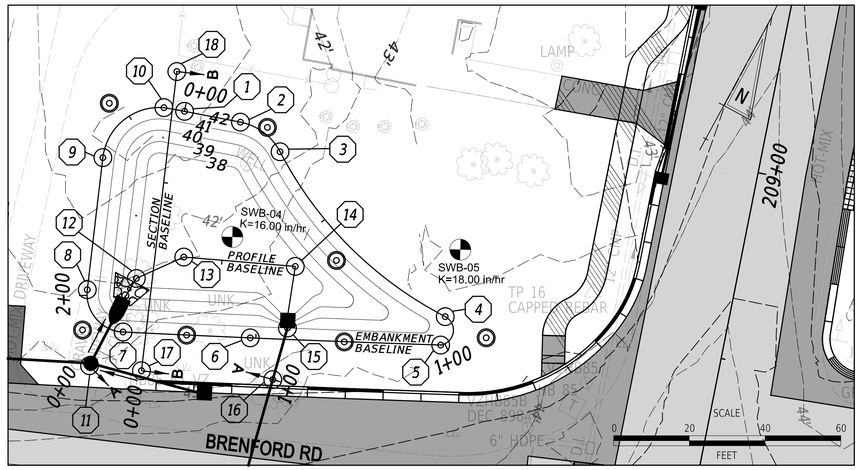
SCALE 0 20 40 60 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	M. Molina
		CHECKED BY:	I. Barbu

STORMWATER MANAGEMENT PLAN

SWM-04	
SECTION	AEC
SHEET NO.	38



PLAN - FOREBAY - SWM BMP NO. 3

BMP FOREBAY DATA		
SWM FACILITY NO.	DRAINAGE AREA AC.	CN
3	2.24	73

NOTES

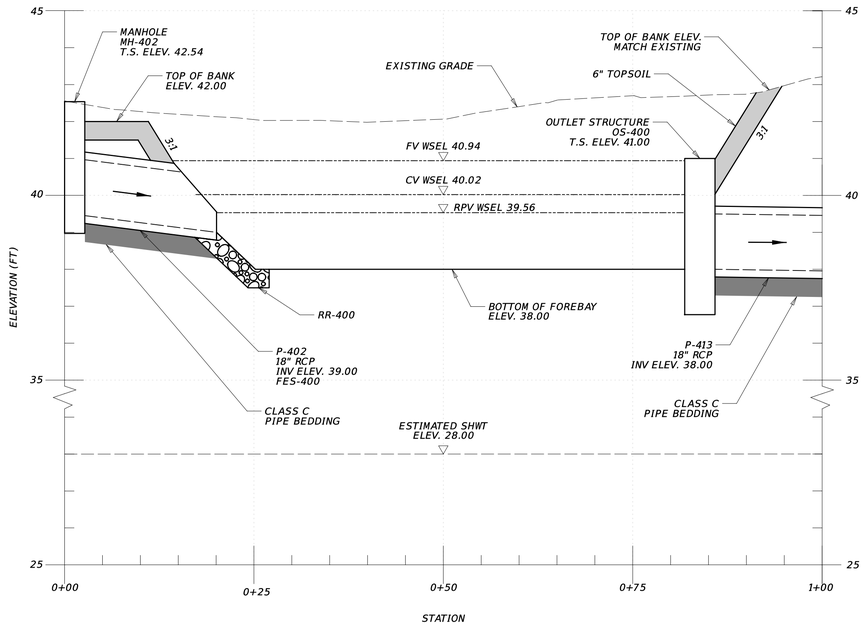
1. THE BMP 3 FOREBAY AND BMP 3 ARE IN SERIES. THE BMP 3 FOREBAY DISCHARGES INTO BMP 3.
2. DESIGN INFILTRATION IS 6.4 IN/HR.

BMP FOREBAY DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL	STORAGE VOLUME
-	(CFS)	(CFS)	(FT)	(AC-FT)
RPv	3.62	2.02	39.56	0.059
Cv	6.72	4.93	40.02	0.082
Fv	13.65	8.39	40.94	0.139

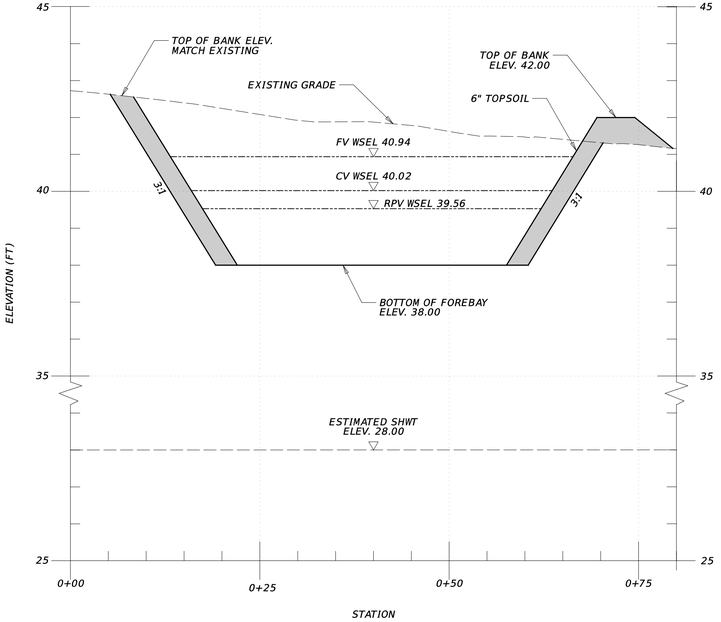
XX BMP 3 FOREBAY EMBANKMENT BASELINE			
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	462498.9009	607226.5690
2 PC	0+15.03	462503.4185	607240.9069
PI	0+22.28	462505.5968	607247.8203
RADIUS = 15.00'			
3 PRC	0+28.54	462501.5336	607253.8229
PI	0+60.87	462483.4120	607280.5946
RADIUS = 101.71'			
4 PRC	0+91.14	462484.0738	607312.9161
PI	1+03.31	462484.3229	607325.0800
RADIUS = 4.00'			
5 PC	1+01.79	462476.6263	607314.8816
PI	1+26.63	462465.5058	607292.6621
RADIUS = 5177.00'			
6 PC	1+51.48	462454.5991	607270.3370
PI	1+68.29	462447.2313	607255.2290
RADIUS = 6186.20'			
7 PC	1+85.10	462439.9458	607240.0812
PI	1+95.81	462435.3030	607230.4283
RADIUS = 10.00'			
8 PT	2+01.49	462445.2518	607226.4588
9 PC	2+36.61	462477.8762	607213.4506
PI	2+51.07	462491.3041	607208.0976
RADIUS = 15.00'			
10 PT	2+59.62	462497.1497	607221.3185
1 POE	2+65.16	462498.9009	607226.5690

XX BMP 3 FOREBAY PROFILE BASELINE - SECTION A-A			
POINT NO.	STATION	NORTHING	EASTING
11 POB	0+00.00	462427.9105	607236.5388
12 PI	0+26.13	462454.0356	607236.4186
13 PI	0+39.88	462464.9794	607244.7403
14 PI	0+69.43	462476.8558	607271.7930
15 PI	0+85.86	462461.5567	607277.7324
16 POE	1+00.00	462447.7549	607280.8176

XX BMP 3 FOREBAY PROFILE BASELINE - SECTION B-B			
POINT NO.	STATION	NORTHING	EASTING
17 POB	0+00.00	462433.2786	607249.2290
18 POE	0+79.54	462507.1578	607219.7713



PROFILE- FOREBAY - SWM BMP NO. 3
SECTION A-A



CROSS SECTION - FOREBAY - SWM BMP NO. 3
SECTION B-B

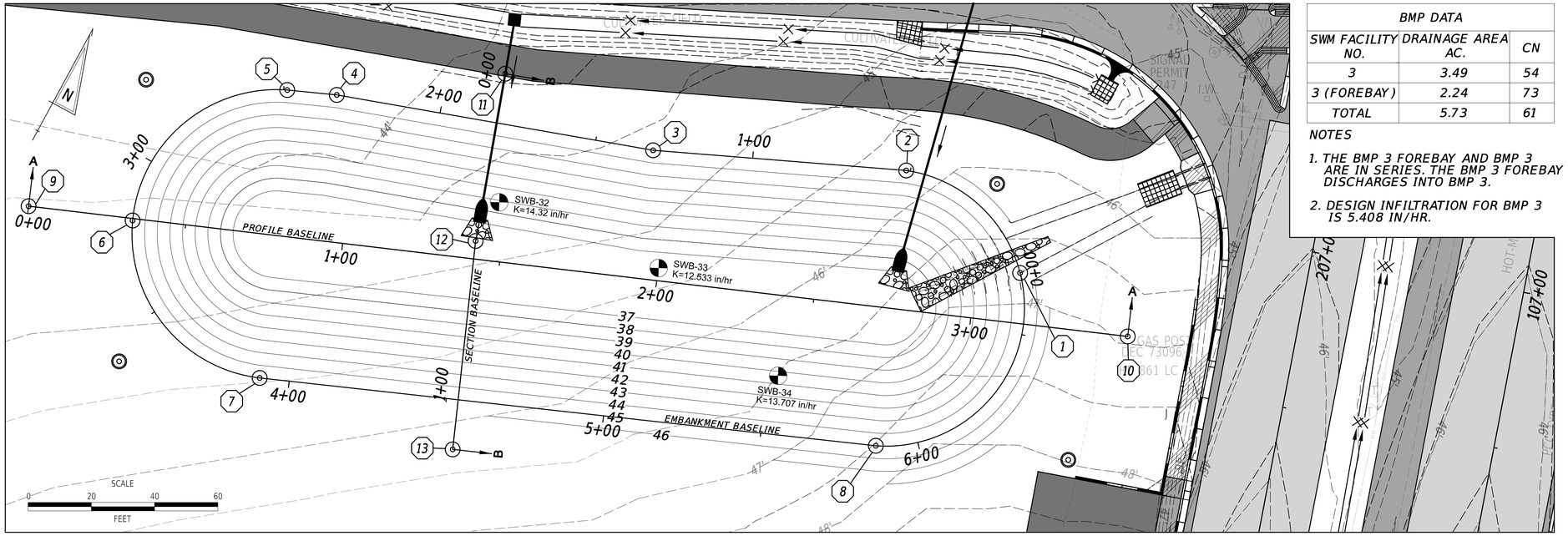
VERTICAL SCALE FEET
6
4
2
0

SWM-05

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn

ADDENDA / REVISIONS	SCALE 0 20 40 60 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN	SECTION AEC
			COUNTY KENT	DESIGNED BY: M. Molina		SHEET NO. 39
				CHECKED BY: I. Barbu		



PLAN - INFILTRATION BASIN - SWM BMP NO. 3

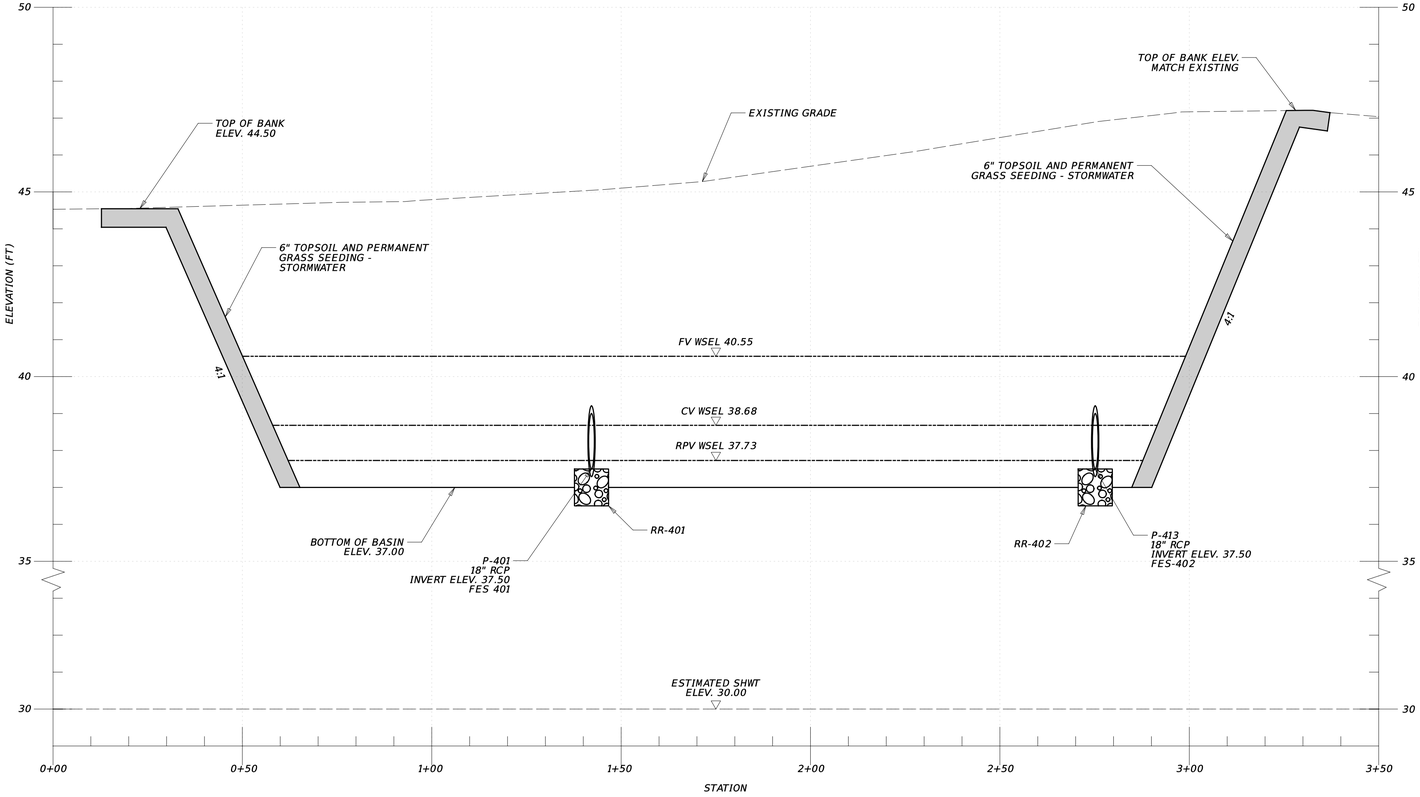
BMP DATA		
SWM FACILITY NO.	DRAINAGE AREA AC.	CN
3	3.49	54
3 (FOREBAY)	2.24	73
TOTAL	5.73	61

NOTES

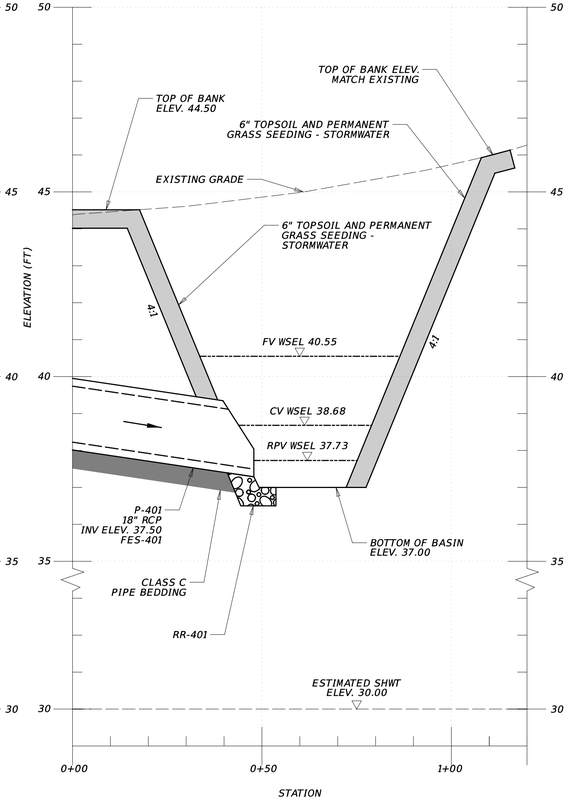
1. THE BMP 3 FOREBAY AND BMP 3 ARE IN SERIES. THE BMP 3 FOREBAY DISCHARGES INTO BMP 3.
2. DESIGN INFILTRATION FOR BMP 3 IS 5.408 IN/HR.

BMP DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL	STORAGE VOLUME
-	(CFS)	(CFS)	(FT)	(AC-FT)
RPv	4.44	0.00	37.73	0.097
Cv	8.67	0.00	38.68	0.260
Fv	17.79	0.00	40.55	0.706

XX BMP 3 EMBANKMENT BASELINE			
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	462315.9647	607348.7091
PI	0+29.06	462337.2351	607328.9131
RADIUS = 43.82'			
2 PT	0+51.32	462327.2772	607301.6156
3 PI	1+31.61	462294.7189	607228.2202
4 PI	2+33.15	462262.3999	607131.9561
5 PC	2+48.91	462256.2945	607117.4264
PI	2+93.65	462237.8910	607076.6452
RADIUS = 45.75'			
6 PC	3+19.76	462196.7112	607094.1385
PI	3+64.50	462155.5313	607111.6317
RADIUS = 45.75'			
7 PT	3+90.60	462172.1056	607153.1899
8 PC	5+86.61	462246.1757	607334.6669
PI	6+47.63	462271.2920	607390.2852
RADIUS = 43.82'			
1 POE	6+69.70	462315.9647	607348.7091



PROFILE- INFILTRATION BASIN - SWM BMP NO. 3 - SECTION A-A



CROSS SECTION - INFILTRATION BASIN - SWM BMP NO. 3 - SECTION B-B

XX BMP 3 PROFILE BASELINE - SECTION A-A			
POINT NO.	STATION	NORTHING	EASTING
9 POB	0+00.00	462184.9966	607063.0654
10 POE	3+50.00	462314.5452	607388.2071

XX BMP 3 CROSS SECTION BASELINE - SECT. B-B			
POINT NO.	STATION	NORTHING	EASTING
11 POB	0+00.00	462293.6898	607175.5867
12 PI	0+53.70	462242.7386	607192.5555
13 POE	1+20.00	462181.3582	607217.6080

VERTICAL SCALE FEET
0 2 4 6

SWM-06

ADDENDA / REVISIONS

SCALE
0 20 40 60
FEET

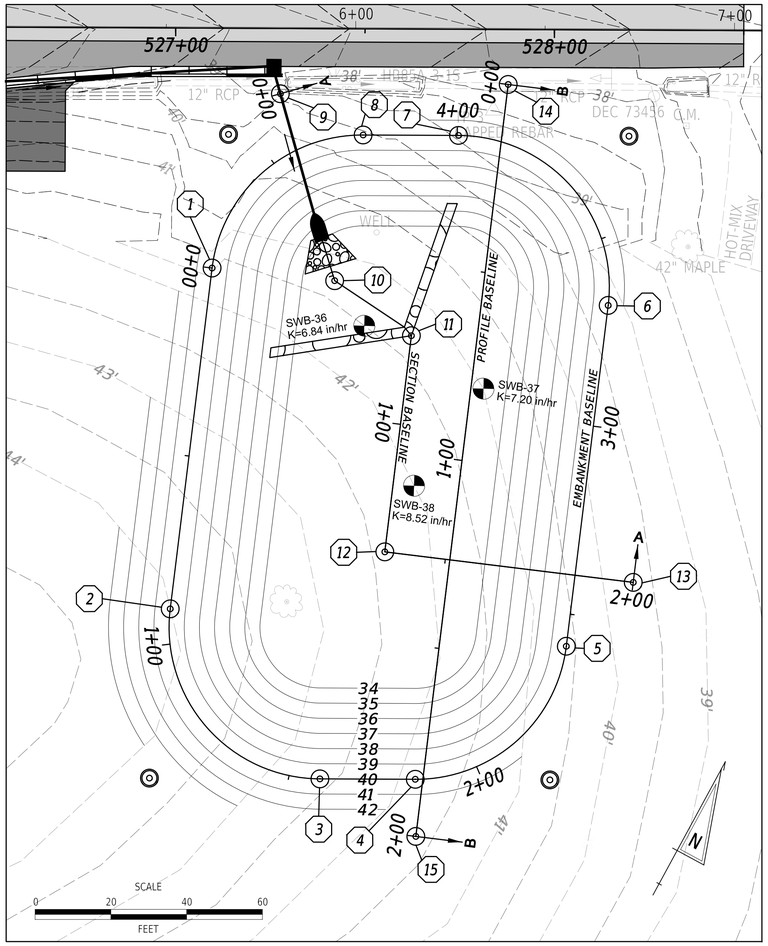
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	M. Molina
COUNTY	CHECKED BY:	I. Barbu
KENT		

STORMWATER MANAGEMENT PLAN

SECTION AEC
SHEET NO. 40

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn



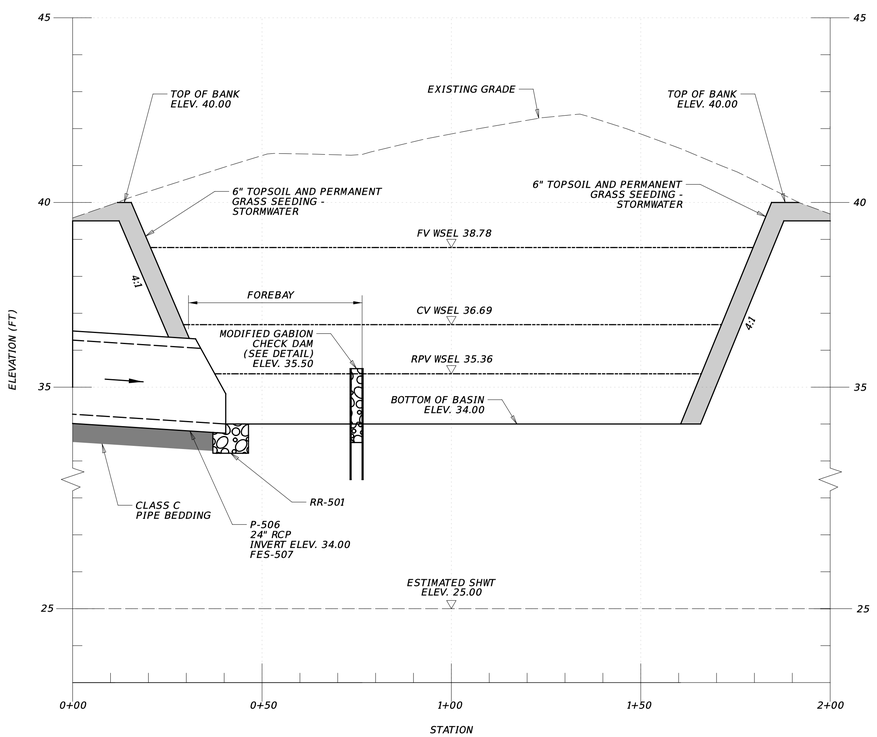
PLAN - INFILTRATION BASIN - SWM BMP NO. 4

BMP DATA		
SWM FACILITY NO.	DRAINAGE AREA AC.	CN
4	3.91	80

NOTES

1. DESIGN INFILTRATION IS 3.008 IN/HR.

BMP DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL	STORAGE VOL. (AC-FT)
RPv	6.81	0.00	35.36	0.236
Cv	12.47	0.00	36.69	0.531
Fv	22.92	0.00	38.78	1.129

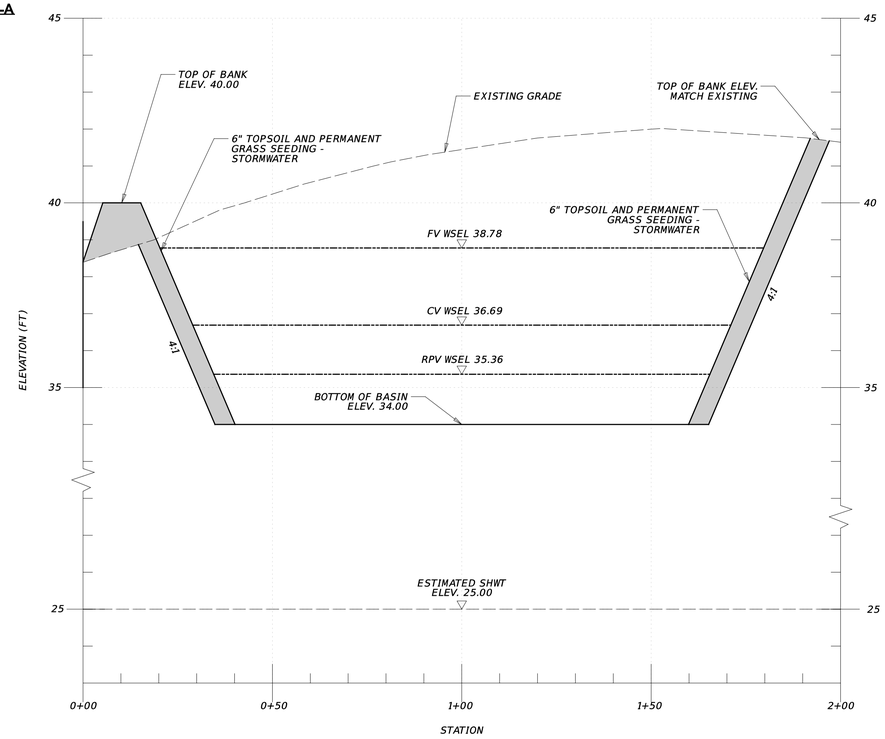


CROSS SECTION INFILTRATION BASIN - SWM BMP NO. 4 - SECTION A-A

XX BMP 4 CROSS SECTION BASELINE - SECTION A-A			
POINT NO.	STATION	NORTHING	EASTING
9 POB	0+00.00	462765.0341	607990.0943
10 PI	0+51.39	462728.4894	608026.2283
11 PI	0+76.43	462725.3828	608050.9605
12 PI	1+33.92	462671.8829	608072.0111
13 POE	2+00.00	462696.0781	608133.5030

XX BMP 4 PROFILE BASELINE - SECTION B-B			
POINT NO.	STATION	NORTHING	EASTING
14 POB	0+00.00	462795.8699	608041.7962
15 POE	2+00.00	462609.7584	608115.0255

XX BMP 4 EMBANKMENT BASELINE			
POINT NO.	STATION	NORTHING	EASTING
1 POB	0+00.00	462715.9949	607996.1923
2 PC	0+90.65	462631.6367	608029.3847
PI	1+35.66	462589.7518	608045.8652
RADIUS = 40.00'			
3 PT	1+58.20	462611.0384	608085.5241
4 PC	1+83.37	462622.9440	608107.7052
PI	2+18.92	462639.7552	608139.0260
RADIUS = 40.00'			
5 PT	2+41.49	462672.8339	608126.0105
6 PC	3+32.14	462757.1922	608092.8181
PI	3+77.16	462799.0771	608076.3376
RADIUS = 40.00'			
7 PT	3+99.69	462777.7904	608036.6787
8 PC	4+24.86	462765.8849	608014.4976
PI	4+60.41	462749.0737	607983.1769
RADIUS = 40.00'			
1 POE/PT	4+82.98	462715.9949	607996.1923



PROFILE - INFILTRATION BASIN - SWM BMP NO. 4 - SECTION B-B

VERTICAL SCALE FEET
0
2
4
6

SWM-07

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SWM.dgn

ADDENDA / REVISIONS		SCALE 0 20 40 60 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	STORMWATER MANAGEMENT PLAN	SECTION AEC
				COUNTY KENT	DESIGNED BY: M. Molina		SHEET NO. 41
					CHECKED BY: I. Barbu		

GENERAL MOT NOTES

1. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

( )	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
(X)	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT AND THAT PERSON'S SOLE RESPONSIBILITY SHALL BE THE MANAGEMENT AND SUPERVISION OF THE PROJECT'S TEMPORARY TRAFFIC CONTROL ACTIVITIES. THIS PERSON SHALL NOT HAVE ANY OTHER ROLE ON THE PROJECT. RESPONSIBILITIES AND REQUIREMENTS OF ATSSA SUPERVISOR ARE DEFINED IN SECTION 812 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.

2. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER. PAYMENT FOR COLD PATCH, BITUMINOUS CONCRETE OR BITUMINOUS CONCRETE WEDGE SHALL BE PAID AS NOTED IN THE CONTRACT DOCUMENTS. TAPER MILL BITUMINOUS CONCRETE SHALL BE PAID UNDER THE BITUMINOUS CONCRETE MILLING ITEM.

   MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE, OR EDGE DROP OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:
   - A. DRIVEWAYS
   - B. ENTRANCES
   - C. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
   - D. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY(LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION
   - E. EDGE OF ROADWAY DROP-OFF

   GRADING AND MAINTAINING BASE COURSE THAT IS BEING USED FOR ROADWAY WEDGE/FILLET BETWEEN TRAVEL LANES AND PAVEMENT BOX, EDGE OF TRAVELWAY, DRIVEWAY OR ENTRANCE ACCESS SHALL BE INCIDENTAL TO ITEM NO. 801000 - MAINTENANCE OF TRAFFIC. THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN TABLE 6G-1 AND SHALL BE COMPACTED. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR MILLINGS OR GABC TEMPORARY ROADWAY MATERIAL (TRM) USED TO PROTECT EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY UTILIZED AS PART OF A PERMANENT ROADWAY AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT MATERIAL ITEM.

   VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.

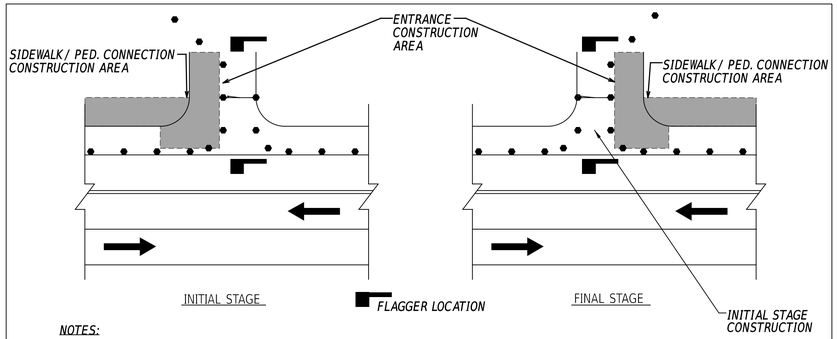
3. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX, COMPACTED MILLINGS OR PLYWOOD WALKWAY STRUCTURE. PLYWOOD WALKWAY STRUCTURES SHALL ALSO INCLUDE DETECTABLE EDGING AND RAILINGS IN ACCORDANCE WITH ADA GUIDELINES AND THE DELAWARE MUTCD. TEMPORARY PEDESTRIAN PATHS SHALL BE INCIDENTAL TO ITEM 813503 UNLESS OTHERWISE SPECIFIED IN THE PLANS. SEE STANDARD CONSTRUCTION DETAIL M-13.

4. MAINTENANCE OF TRAFFIC DURING LANE CLOSURES AND LANE SHIFTS SHALL CONFORM TO THE FOLLOWING TYPICAL APPLICATIONS OF THE DELAWARE MUTCD:
   - TA-3: SHOULDER CLOSURE ON BRENFORD ROAD
   - TA-3A: SHOULDER CLOSURE ON US 13
   - TA-10: LANE CLOSURE ON BIG OAK ROAD USING FLAGGERS
   - TA-11B: LANE DIVERSION ON BIG OAK ROAD
   - TA-17A: MOBILE STRIPING OPERATIONS ON BRENFORD ROAD WITH A SINGLE CONVOY
   - TA-17B: MOBILE STRIPING OPERATIONS ON BRENFORD ROAD WITH A SEPARATE CONE RECOVERY CONVOY
   - TA-21A: TURN LANE CLOSURE ON NEAR SIDE OF AN INTERSECTION AT BIG OAK ROAD AND NB US 13
   - TA-33: LANE CLOSURE ON MULTI-LANE DIVIDED NB US 13
   - TA-35B: MOBILE STRIPING OPERATIONS ON NB AND SB US 13 WITH A SINGLE CONVOY
   - TA-35C: MOBILE STRIPING OPERATIONS ON NB AND SB US 13 WITH A SEPARATE CONE RECOVERY CONVOY

5. ALL NECESSARY SIGNS, PAVEMENT MARKINGS AND ROADSIDE APPURTENANCES SHALL BE INSTALLED PRIOR TO THE OPENING/REOPENING OF A ROADWAY OR RAMP. A WALKTHROUGH WITH THE ENGINEER, TRAFFIC SAFETY, TRAFFIC CONSTRUCTION AND OTHER PERSONNEL SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE OPENING/REOPENING OF ANY ROAD OR RAMP.

6. THE CONTRACTOR SHALL PROVIDE ONE TRAFFIC OFFICER FOR ANY OPERATION WHERE AN EXISTING SIGNALIZED INTERSECTION IS PLACED IN FLASH MODE. THE TRAFFIC OFFICER IS THE ONLY INDIVIDUAL THAT CAN PLACE A TRAFFIC SIGNAL IN FLASH MODE, AND THE TRAFFIC OFFICER SHALL STAY ON LOCATION UNTIL THE SIGNAL IS PLACED BACK IN STOP-AND-GO OPERATION IN ACCORDANCE WITH DELDOT'S TEMPORARY TRAFFIC CONTROL WITHIN INTERSECTIONS MEMORANDUM (WWW.MUTCD.DELDOT.GOV).

7. PHASE-SPECIFIC CLOSURES ARE AS FOLLOWS INLCUDING WEATHER DAYS:
   - PHASE 1B: 42 CALENDAR DAYS
   - PHASE 2: 79 CALENDAR DAYS



NOTES:

1. THIS DETAIL PROVIDES THE PROPER TRAFFIC CONTROL DEVICES AT DRIVEWAYS AND ENTRANCES THAT ARE TO BE BUILT IN HALF-SECTION UNDER FLAGGER CONTROL. APPLICATION OF THIS DETAIL SHALL BE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TRAFFIC CONTROL EVICES AT ENTRANCES SHALL BE RESET TO MAIN PHASE AT END OF EACH WORKING DAY.
2. CHANNELIZATION THROUGH ENTRANCE AREA SHALL BE ACCOMPLISHED WITH DRUMS PLACED AT 10 FEET BETWEEN THE EDGES OF THE DRUMS IMMEDIATELY ADJACENT TO THE TRAVELED WAY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DRUM LAYOUT SHALL ACCOMMODATE LARGEST DESIGN VEHICLE EXPECTED TO USE THE ENTRANCE.
3. TRAFFIC CONTROL DEVICES ALONG MAINLINE ROADWAY SHALL BE PLACED AS OUTINED IN PHASE SPECIFIC MOT NOTES.
4. DEPENDING ON TRAFFIC VOLUME UTILIZING ENTRANCE AND OTHER SITE-SPECIFIC CONDITIONS, THE NUMBER OF FLAGGERS USED DURING ENTRANCE CONSTRUCTION MAY BE REDUCED FROM 2 TO 1, SUBJECT TO APPROVAL OF ENGINEER.

TYPICAL DRIVEWAY / ENTRANCE RECONSTRUCTION

NOT TO SCALE

CONSTRUCTION PHASING & M.O.T

	BARRICADE, TYPE 3
	CONCRETE SAFETY BARRIER - PORTABLE
CSF XXX	CONSTRUCTION SAFETY FENCE / LENGTH
CSF	CONSTRUCTION SAFETY FENCE
	CONSTRUCTION WARNING SIGN LOCATION
END ROAD WORK	CONSTRUCTION WARNING SIGN
	CRASH CUSHION ARRAY
	DRUM - TRAFFIC CONTROL
	FLAGGER LOCATION
PHASE	PHASING TRAFFIC FLOW ARROW
	TEMPORARY CONSTRUCTION
	TEMPORARY PAVEMENT MARKING ARROW
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA - ACTIVE PHASE

TABLE 4.1 NON SUMMER (OCTOBER 1 - APRIL 30) ALLOWABLE LANE CLOSURE HOURS - NB US13 AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																				■	■	■	■	■
MONDAY																				■	■	■	■	■
TUESDAY																				■	■	■	■	■
WEDNESDAY																				■	■	■	■	■
THURSDAY																				■	■	■	■	■
FRIDAY																				■	■	■	■	■
SATURDAY																				■	■	■	■	■

■ LANE CLOSED
□ LANE OPEN

TABLE 4.2 SUMMER (MAY 1 - SEPTEMBER 30) ALLOWABLE LANE CLOSURE HOURS - NB US13 AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																								
MONDAY																								
TUESDAY																								
WEDNESDAY																								
THURSDAY																								
FRIDAY																								
SATURDAY																								

TABLE 4.3 NON SUMMER (OCTOBER 1 - APRIL 30) ALLOWABLE LANE CLOSURE HOURS - SB US13 AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																				■	■	■	■	■
MONDAY																				■	■	■	■	■
TUESDAY																				■	■	■	■	■
WEDNESDAY																				■	■	■	■	■
THURSDAY																				■	■	■	■	■
FRIDAY																				■	■	■	■	■
SATURDAY																				■	■	■	■	■

■ LANE CLOSED
□ LANE OPEN

TABLE 4.4 SUMMER (MAY 1 - SEPTEMBER 30) ALLOWABLE LANE CLOSURE HOURS - SB US13 AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																								
MONDAY																								
TUESDAY																								
WEDNESDAY																								
THURSDAY																								
FRIDAY																								
SATURDAY																								

TABLE 4.5 ALLOWABLE LANE CLOSURE HOURS - BRENFORD RD AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																								
MONDAY																								
TUESDAY																								
WEDNESDAY																								
THURSDAY																								
FRIDAY																								
SATURDAY																								

■ LANE CLOSED
□ LANE OPEN

TABLE 4.3 ALLOWABLE LANE CLOSURE HOURS - BIG OAK RD AND TURN LANES

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																								
MONDAY																								
TUESDAY																								
WEDNESDAY																								
THURSDAY																								
FRIDAY																								
SATURDAY																								

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 42
					CHECKED BY: J. Hofstee		

GENERAL EROSION AND SEDIMENT CONTROL (E&S) NOTES

1. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. PLAN APPROVAL IS VALID FOR A FIVE-YEAR PERIOD BEGINNING ON THE DATE OF THE STORMWATER ENGINEER'S SIGNATURE. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, NOTIFY THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION. ANY DEVIATIONS TO THE SWPPP NEED APPROVAL FROM THE ENGINEER.

REVIEWED FOR GENERAL CONFORMITY WITH CURRENT DELAWARE SEDIMENT AND STORMWATER REGULATIONS.

02/20/2026

STORMWATER ENGINEER
DELAWARE DEPARTMENT OF TRANSPORTATION
EXPIRES: 2/20/2031

AMOUNT OF DISTURBED AREA FOR THIS PROJECT	5.74 AC
ADDED IMPERVIOUS FOR THE PROJECT	1.56 AC
HUC-10 WATERSHED	SMYRNA RIVER (DE BAY) LEIPSIC RIVER (DE BAY)

2. ASSIGN A RESPONSIBLE PERSON TO BE ON SITE DURING ALL EARTH DISTURBING ACTIVITIES AND BE AN ACTIVE DNREC BLUE CARD HOLDER AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS (DSSR). BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.

3. FILE AS A CO-PERMITTEE IN ACCORDANCE WITH SECTION 901 OF THE STANDARD SPECIFICATIONS. POSTING AND MAINTENANCE OF THE NOI PERMIT COVERAGE IS INCIDENTAL TO THE CONTRACT.

4. REVISIONS TO THE SWPPP OR ENVIRONMENTAL COMPLIANCE PLAN SHEET(S) SHALL BE APPROVED PRIOR TO INITIATION IN THE FIELD. THE ENGINEER IS RESPONSIBLE FOR APPROVING ALL REDLINES AND REVISIONS TO THE SWPPP.

5. IMPLEMENTING AND MAINTAINING POLLUTION PRVENTION DEVICES AND PRACTICES IS REQUIRED UNDER THE DELAWARE CONSTRUCTION GENERAL PERMIT AND THE DSRR AND ARE INCIDENTAL TO THE CONTRACT.

6. A SOIL STOCKPILE, AS DESCRIBED IN DELDOT STANDARD SPECIFICATIONS AND DEFINED IN THE DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK, IS ANY LOCATION WITHIN THE LIMITS OF CONSTRUCTION WHERE A TEMPORARY DEPOSIT OF EXCAVATED SOIL IS BEING RESERVED FOR FUTURE USE. A SOIL STOCKPILE SHALL BE LOCATED A MINIMUM OF 50 FEET FROM A STORM DRAIN INLET, OPEN CHANNEL, WETLAND, OR WATERBODY. A REQUEST MAY BE MADE TO THE ENGINEER TO PERMIT LOCATING A STOCKPILE LESS THAN 50 FEET FROM A STORM DRAIN INLET OR OPEN CHANNEL. UPON APPROVAL, IF ANY PART OF A SOIL STOCKPILE IS LESS THAN 50 FEET FROM A STORM DRAIN INLET OR OPEN CHANNEL, INSTALL A SUPER SILT FENCE PERIMETER TO PROTECT THE SOIL STOCKPILE. THE SUPER SILT FENCE MUST BE CONSTRUCTED IN ACCORDANCE WITH 905.3.B.3 OF THE STANDARD SPECIFICATIONS. THE COST FOR INSTALLATION AND MAINTENANCE OF THE STOCKPILE SUPER SILT FENCE IS INCIDENTAL TO THE CONTRACT.

7. PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF FROM LEAVING THE SITE. CHECK PERIMETER CONTROLS DAILY AND ADJUST OR REPAIR TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. REMOVE ACCUMULATED SEDIMENT BEFORE IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE ENGINEER.

8. ANY SEDIMENT LADEN DISCHARGE LEAVING THE LIMIT OF CONSTRUCTION SHALL IMMEDIATELY BE ADDRESSED THROUH BEST AVAILABLE TECHNOLOGIES TO CONTROL ANY FURTHER SEDIMENT LADEN DISCHARGE. REMEDIATION MAY INCLUDE STANDARD E&S PRACTICES OR OTHER METHODS AS APPROVED BY THE ENGINEER.

9. ALL TEMPORARY CONCENTRATED FLOW AREAS INCLUDING CHANNEL SIDE SLOPES SHALL HAVE EROSION CONTROL BLANKET MULCH AS DIRECTED BY THE ENGINEER. INSTALL WITHIN SEVEN CALENDAR DAYS UPON CONSTRUCTION INITIATION. A TEMPORARY CONCENTRATED FLOW AREA MAY INCLUDE DITCHES, SWALES, BERMS, CONCENTRATED RUNOFF AREAS, ETC.

10. FOR ANY PERMANENT STORMWATER MANAGEMENT FACILITY, FOLLOW THAT FACILITY'S SEQUENCE OF CONSTRUCTION AS NOTED ON THE STORMWATER MANAGEMENT SHEETS.

11. NO MORE THAN 20 ACRES MAY BE DISTURBED AT ANY TIME. DISTURBANCE OF A SECOND 20 ACRE SECTION MAY NOT PROCEED UNTIL TEMPORARY OR PERMANENT STABILIZATION OF THE FIRST 20 ACRE SECTION IS ACCOMPLISHED AS APPROVED BY THE ENGINEER.

12. MAINTAIN POSITIVE DRAINAGE IN EXISTING AND PROPOSED DRAINAGE SYSTEMS BY EXECUTING CONSTRUCTION, CLEAN EXISTING DRAINAGE SYSTEMS, AND PROPERLY DISPOSING OF SEDIMENT THROUGHOUT THE DURATION OF THE PROJECT.

GENERAL E&S SEQUENCE NOTES (FOR ALL PHASES)

1. POST NOI PERMIT COVERAGE SO THAT IT IS VISIBLE IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE AS DIRECTED BY THE ENGINEER. THE NOTICE MUST BE IN ACCORDANCE WITH DELDOT GUIDANCE.

2. INSTALL ALL PERIMETER E&S ITEMS AND SENSITIVE AREA PROTECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITIES. THE ONLY LAND DISTURBANCE ALLOWABLE IS WHAT IS NECESSARY TO INSTALL THE PERIMETER E&S ITEMS.

3. ESTABLISH CONSTRUCTION STAGING AREAS AND INSTALL E&S CONTROLS.

4. ONCE PERIMETER E&S CONTROLS ARE INSTALLED, THEY SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE ANY OTHER LAND DISTURBING ACTIVITIES CAN BEGIN.

5. INTERIOR EROSION AND SEDIMENT CONTROL ITEMS SHALL BE PLACED AS PER PLAN.

6. NOTIFY THE ENGINEER 48 HOURS BEFORE CONSTRUCTION OF ALL STORMWATER MANAGEMENT FACILITY COMPONENTS IN ACCORDANCE WITH THE STORMWATER MANAGEMENT SHEET FACILITY CONSTRUCTION SEQUENCE.

7. PRIOR TO COMMENCING A NEW PHASE OF CONSTRUCTION, APPROVAL IS REQUIRED FROM THE ENGINEER THAT THE AREAS WITHIN THE PREVIOUS PHASE HAVE BEEN SUFFICIENTLY STABILIZED.

8. COMPLETE PERMANENT STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS UPON REACHING FINAL GRADE.

9. DO NOT REMOVE E&S DEVICES UNLESS DIRECTED BY THE ENGINEER.

EROSION & SEDIMENT CONTROL	
CFL	COMPOST FILTER LOG
CFL	COMPOST FILTER LOG / LENGTH
DWBAG	DEWATERING BAG
DWB	DEWATERING BASIN
ED	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
PST	PORTABLE SEDIMENT TANK
SBD	SANDBAG DIKE
SB	SANDBAG DIVERSION
	STONE CHECK DAM
SCE	STABILIZED CONSTRUCTION ENTRANCE
SF	SILT FENCE / LENGTH
SF	SILT FENCE
RSF	REINFORCED SILT FENCE / LENGTH
RSF	REINFORCED SILT FENCE
SSF	SUPER SILT FENCE / LENGTH
SSF	SUPER SILT FENCE
SP	SUMP PIT
ST	SEDIMENT TRAP / NUMBER
ST	SEDIMENT TRAP
ST	SEDIMENT TRAP WITH INLET AS OUTLET
ST	SEDIMENT TRAP PIPE OUTLET
SW	STILLING WELL
	TEMPORARY SWALE
TSD	TEMPORARY SLOPE DRAIN
T	TURBIDITY CURTAIN / LENGTH
T	TURBIDITY CURTAIN

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

AECOM

ADDENDA / REVISIONS	

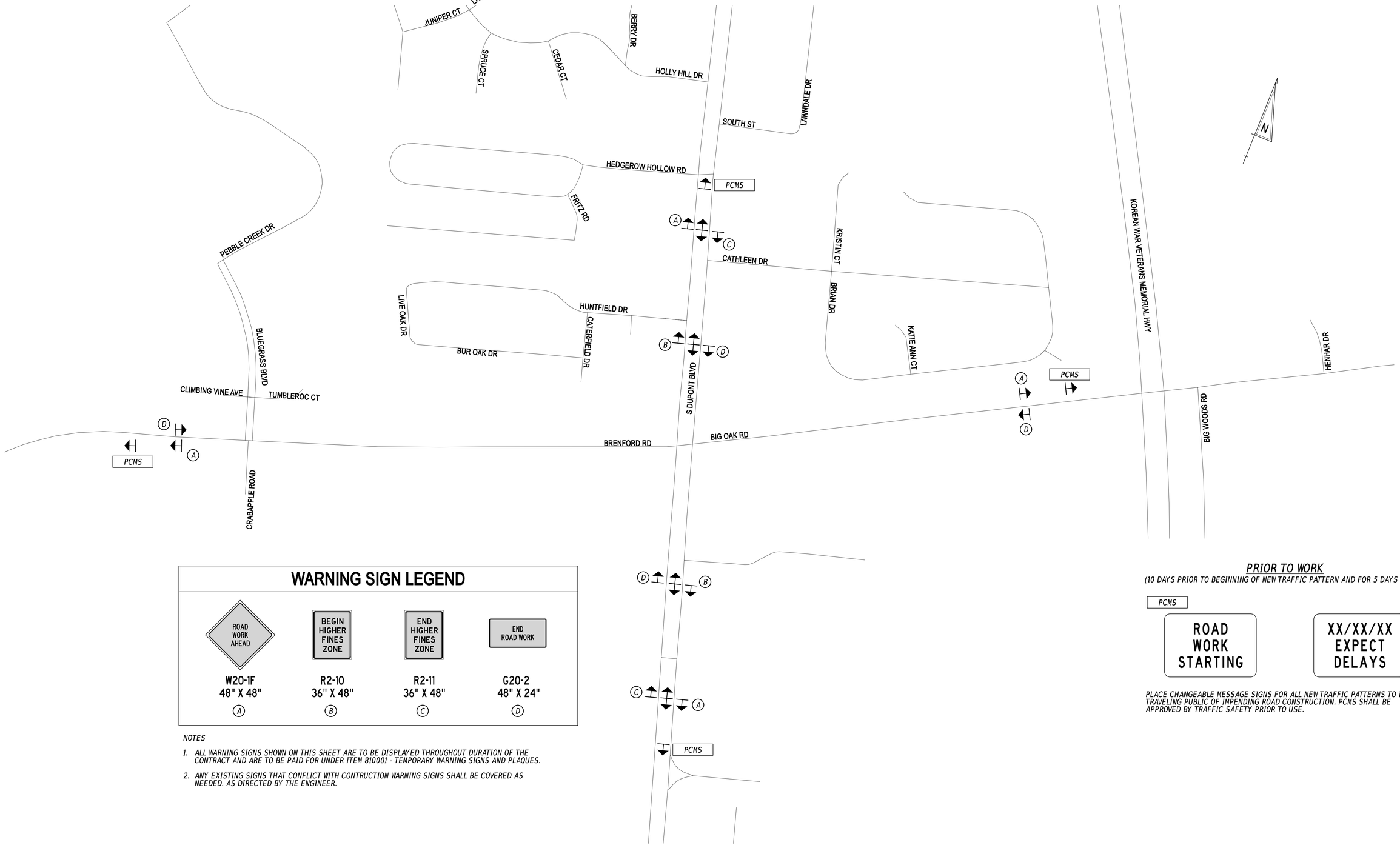
NOT TO SCALE

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN

SECTION	AEC
SHEET NO.	43



WARNING SIGN LEGEND

ROAD WORK AHEAD	BEGIN HIGHER FINES ZONE	END HIGHER FINES ZONE	END ROAD WORK
W20-1F 48" X 48" (A)	R2-10 36" X 48" (B)	R2-11 36" X 48" (C)	G20-2 48" X 24" (D)

NOTES

1. *ALL WARNING SIGNS SHOWN ON THIS SHEET ARE TO BE DISPLAYED THROUGHOUT DURATION OF THE CONTRACT AND ARE TO BE PAID FOR UNDER ITEM 810001 - TEMPORARY WARNING SIGNS AND PLAQUES.*
2. *ANY EXISTING SIGNS THAT CONFLICT WITH CONTRUCTION WARNING SIGNS SHALL BE COVERED AS NEEDED. AS DIRECTED BY THE ENGINEER.*

PRIOR TO WORK

(10 DAYS PRIOR TO BEGINNING OF NEW TRAFFIC PATTERN AND FOR 5 DAYS AFTER)

PCMS

ROAD WORK STARTING

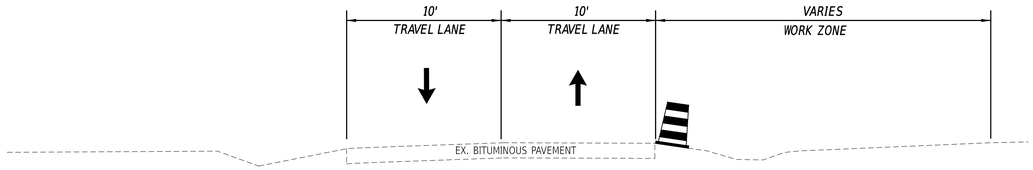
XX/XX/XX EXPECT DELAYS

PLACE CHANGEABLE MESSAGE SIGNS FOR ALL NEW TRAFFIC PATTERNS TO INFORM TRAVELING PUBLIC OF IMPENDING ROAD CONSTRUCTION. PCMS SHALL BE APPROVED BY TRAFFIC SAFETY PRIOR TO USE.

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

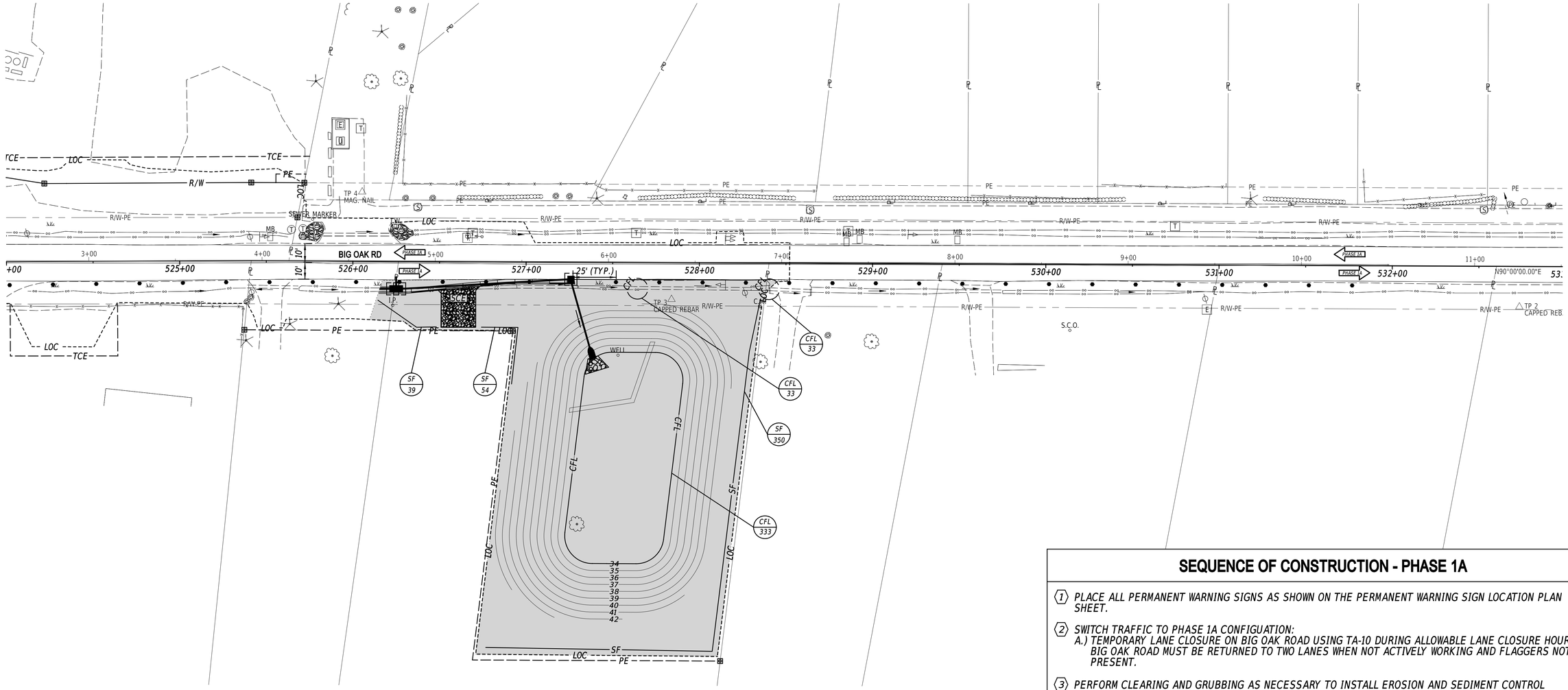
AECOM

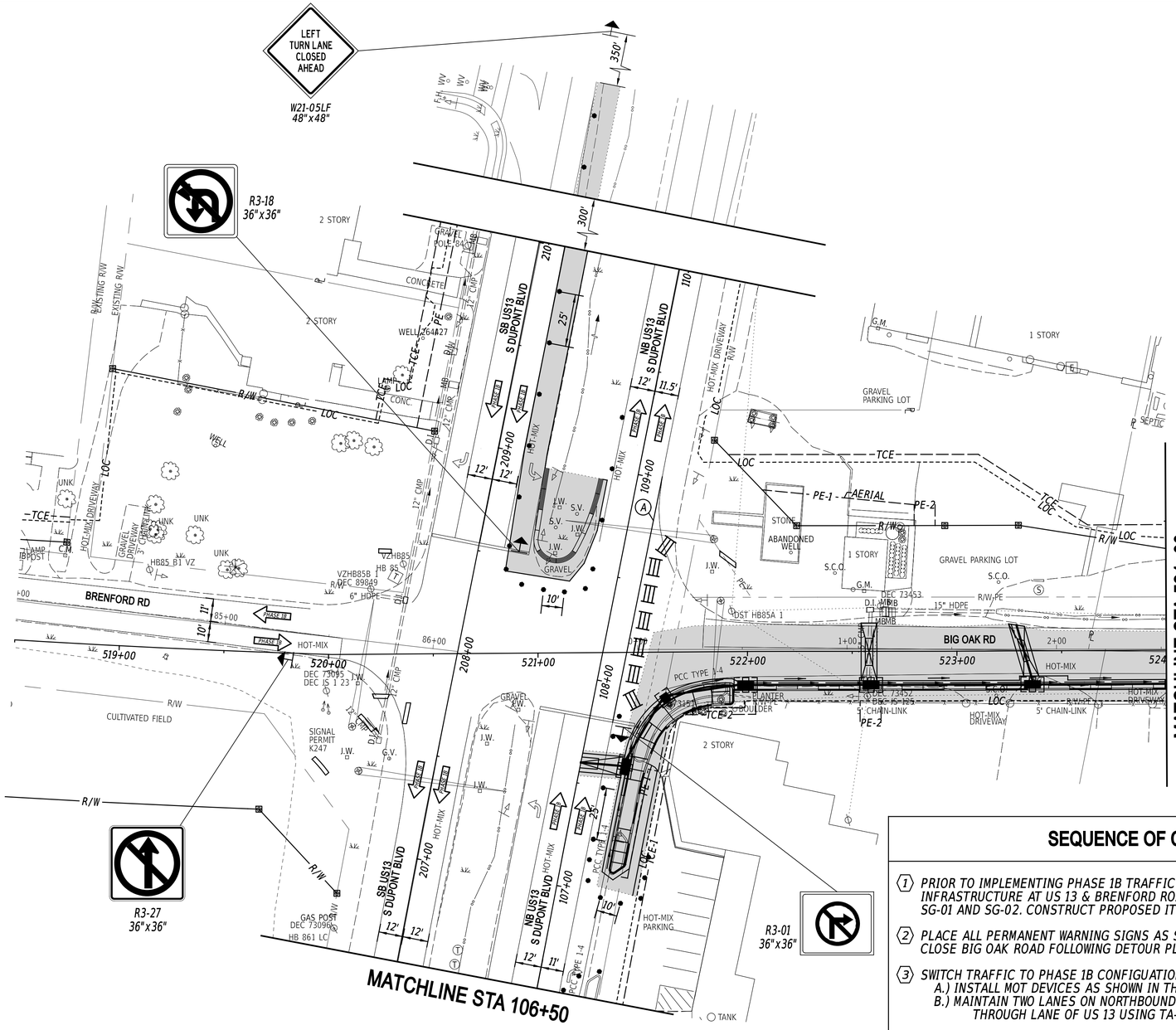
ADDENDA / REVISIONS	NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	PERMANENT WARNING SIGN PLAN	SECTION AEC
			COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 44
				CHECKED BY: J. Hofstee		



PHASE 1A - BIG OAK RD

STATION 526+55 TO STATION 532+00


TCE
LOC
TCE
R/W
PE
TP 4
MAG. NAIL
SPEED MARKER
R/W-PE
MB
LOC
R/W-PE
R/W-PE
R/W-PE
R/W-PE
LOC
PE
PE
PE



SEQUENCE OF CONSTRUCTION - PHASE 1B

1. PRIOR TO IMPLEMENTING PHASE 1B TRAFFIC CONTROL, INSTALL AND ACTIVATE TEMPORARY SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD ROAD/BIG OAK ROAD, AS SHOWN ON TRAFFIC SIGNAL PLAN SHEETS SG-01 AND SG-02. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE.
2. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. CLOSE BIG OAK ROAD FOLLOWING DETOUR PLAN PHASE 1B BIG OAK RD CLOSURE DETOUR PLAN-VEHICULAR.
3. SWITCH TRAFFIC TO PHASE 1B CONFIGUATION:
   A.) INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BIG OAK ROAD TO THROUGH TRAFFIC.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1B.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. CONSTRUCT SWM FACILITIES AND DRAINAGE SYSTEM AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL CROSS-PIPE TEMPORARY PIPE PLUGS AT STATION 523+30, 526+25, 208+55, 107+60, AND 108+55.
7. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO FINISHED GRADE. TEMPORARILY PAVE THE TOP 2" TYPE C LIFT AS TYPE B BITUMINOUS CONCRETE PAVEMENT FOR THE CLOSED DRAINAGE NETWORK. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE AND SWITCH TO PHASE 1C TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

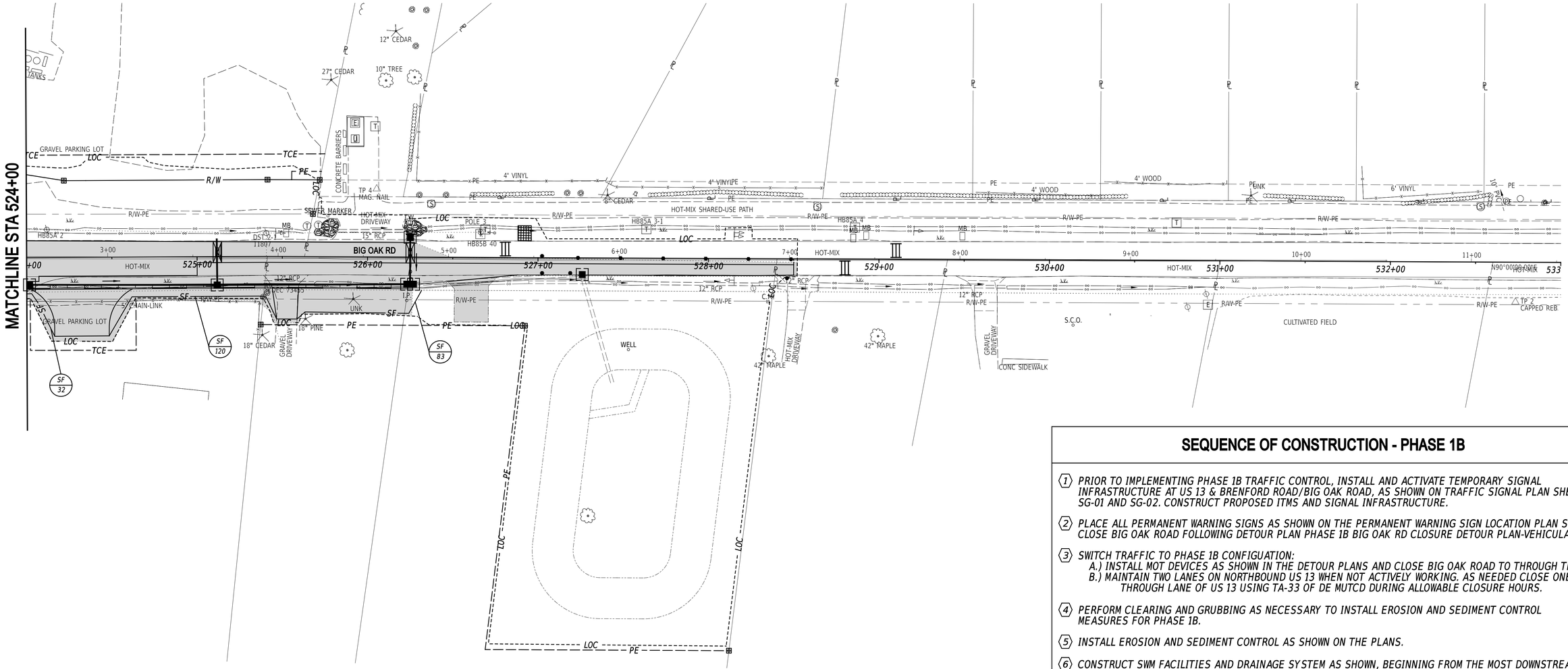
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1B

SECTION: AEC
SHEET NO.: 46

AECOM

pw://aecom-nta-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



SEQUENCE OF CONSTRUCTION - PHASE 1B

1. PRIOR TO IMPLEMENTING PHASE 1B TRAFFIC CONTROL, INSTALL AND ACTIVATE TEMPORARY SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD ROAD/BIG OAK ROAD, AS SHOWN ON TRAFFIC SIGNAL PLAN SHEETS SG-01 AND SG-02. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE.
2. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. CLOSE BIG OAK ROAD FOLLOWING DETOUR PLAN PHASE 1B BIG OAK RD CLOSURE DETOUR PLAN-VEHICULAR.
3. SWITCH TRAFFIC TO PHASE 1B CONFIGUATION:
   A.) INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BIG OAK ROAD TO THROUGH TRAFFIC.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1B.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. CONSTRUCT SWM FACILITIES AND DRAINAGE SYSTEM AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL CROSS-PIPE TEMPORARY PIPE PLUGS AT STATION 523+30, 526+25, 208+55, 107+60, AND 108+55.
7. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO FINISHED GRADE. TEMPORARILY PAVE THE TOP 2" TYPE C LIFT AS TYPE B BITUMINOUS CONCRETE PAVEMENT FOR THE CLOSED DRAINAGE NETWORK. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE AND SWITCH TO PHASE IC TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

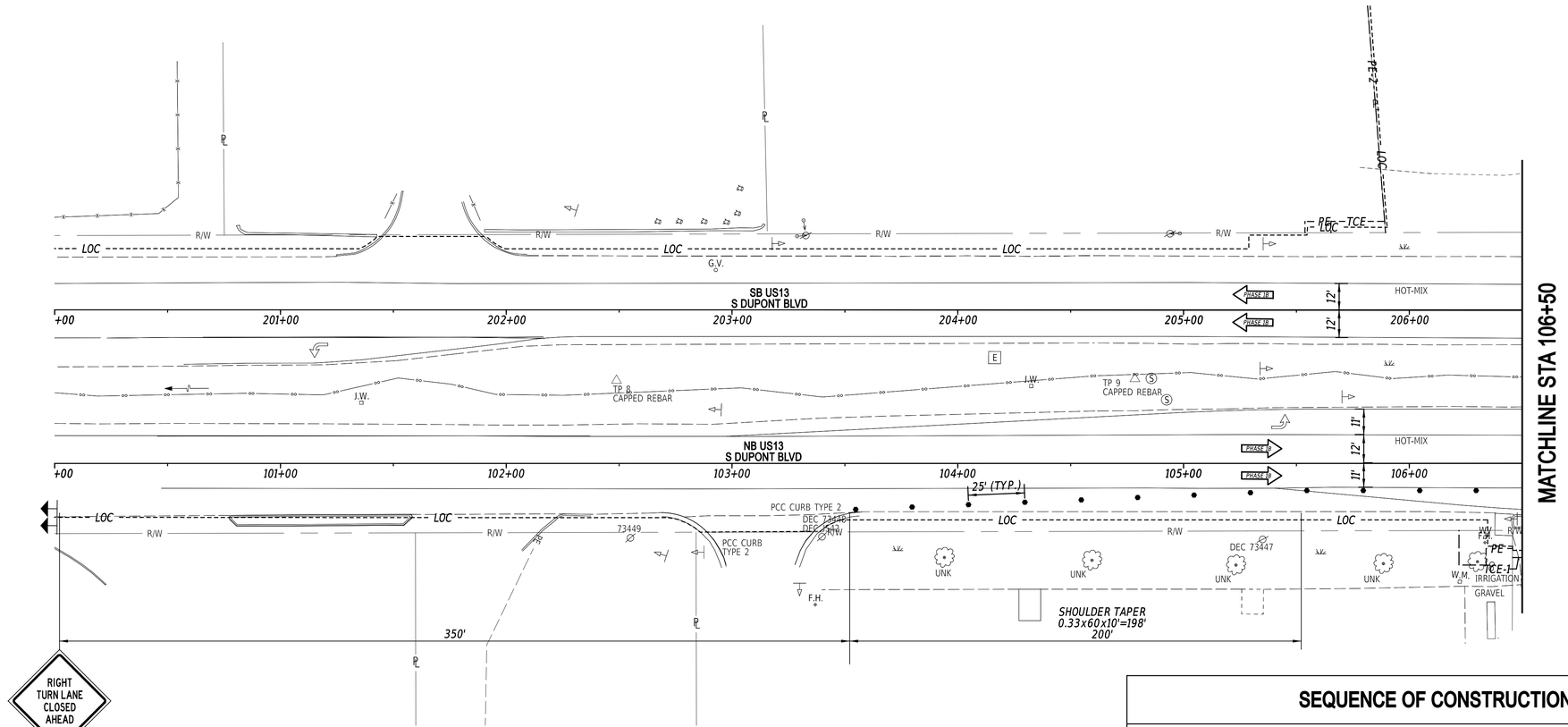
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1B

SECTION
AEC
SHEET NO.
47

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



SEQUENCE OF CONSTRUCTION - PHASE 1B

1. PRIOR TO IMPLEMENTING PHASE 1B TRAFFIC CONTROL, INSTALL AND ACTIVATE TEMPORARY SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD ROAD/BIG OAK ROAD, AS SHOWN ON TRAFFIC SIGNAL PLAN SHEETS SG-01 AND SG-02. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE.
2. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. CLOSE BIG OAK ROAD FOLLOWING DETOUR PLAN PHASE 1B BIG OAK RD CLOSURE DETOUR PLAN-VEHICULAR.
3. SWITCH TRAFFIC TO PHASE 1B CONFIGUATION:
   A.) INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BIG OAK ROAD TO THROUGH TRAFFIC.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1B.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. CONSTRUCT SWM FACILITIES AND DRAINAGE SYSTEM AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL CROSS-PIPE TEMPORARY PIPE PLUGS AT STATION 523+30, 526+25, 208+55, 107+60, AND 108+55.
7. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO FINISHED GRADE. TEMPORARILY PAVE THE TOP 2" TYPE C LIFT AS TYPE B BITUMINOUS CONCRETE PAVEMENT FOR THE CLOSED DRAINAGE NETWORK. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE AND SWITCH TO PHASE 1C TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

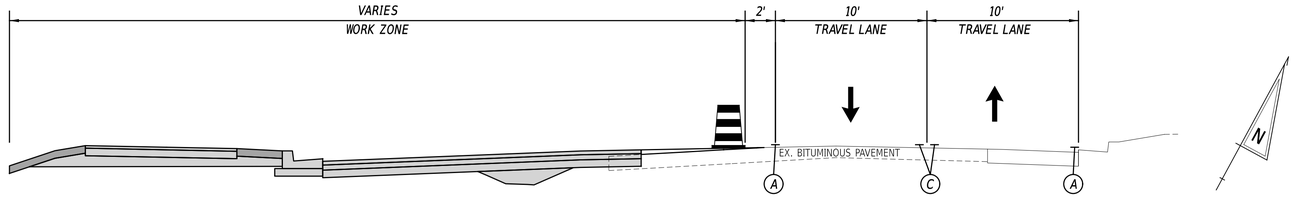
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1B

SECTION
AEC
SHEET NO.
48

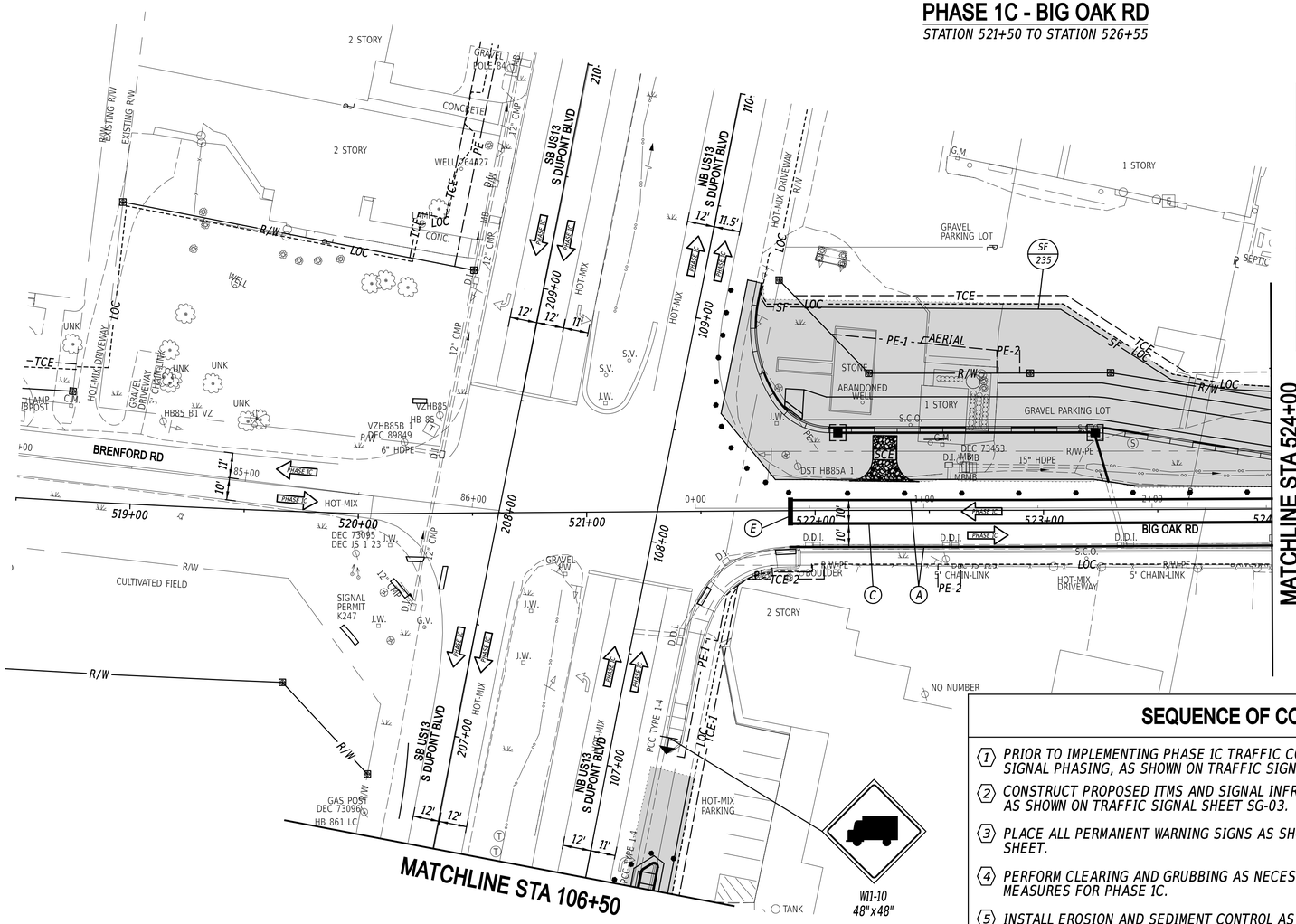
AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/CS00.dgn



PHASE 1C - BIG OAK RD

STATION 521+50 TO STATION 526+55



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	422 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	211 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	20 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	0 LF

SEQUENCE OF CONSTRUCTION - PHASE 1C

1. PRIOR TO IMPLEMENTING PHASE 1C TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1C.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. SWITCH TRAFFIC TO PHASE 1C CONFIGUATION:
   A.) MAINTAIN ONE LANE ON BIG OAK ROAD WITH TEMPORARY LANE CLOSURE USING TA-10 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
7. REMOVE TEMPORARY PIPE PLUGS AND CONSTRUCT DRAINAGE SYSTEM AND SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE. INSTALL TEMPORARY TRAFFIC SIGNAL AND SWITCH TO PHASE 2 TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

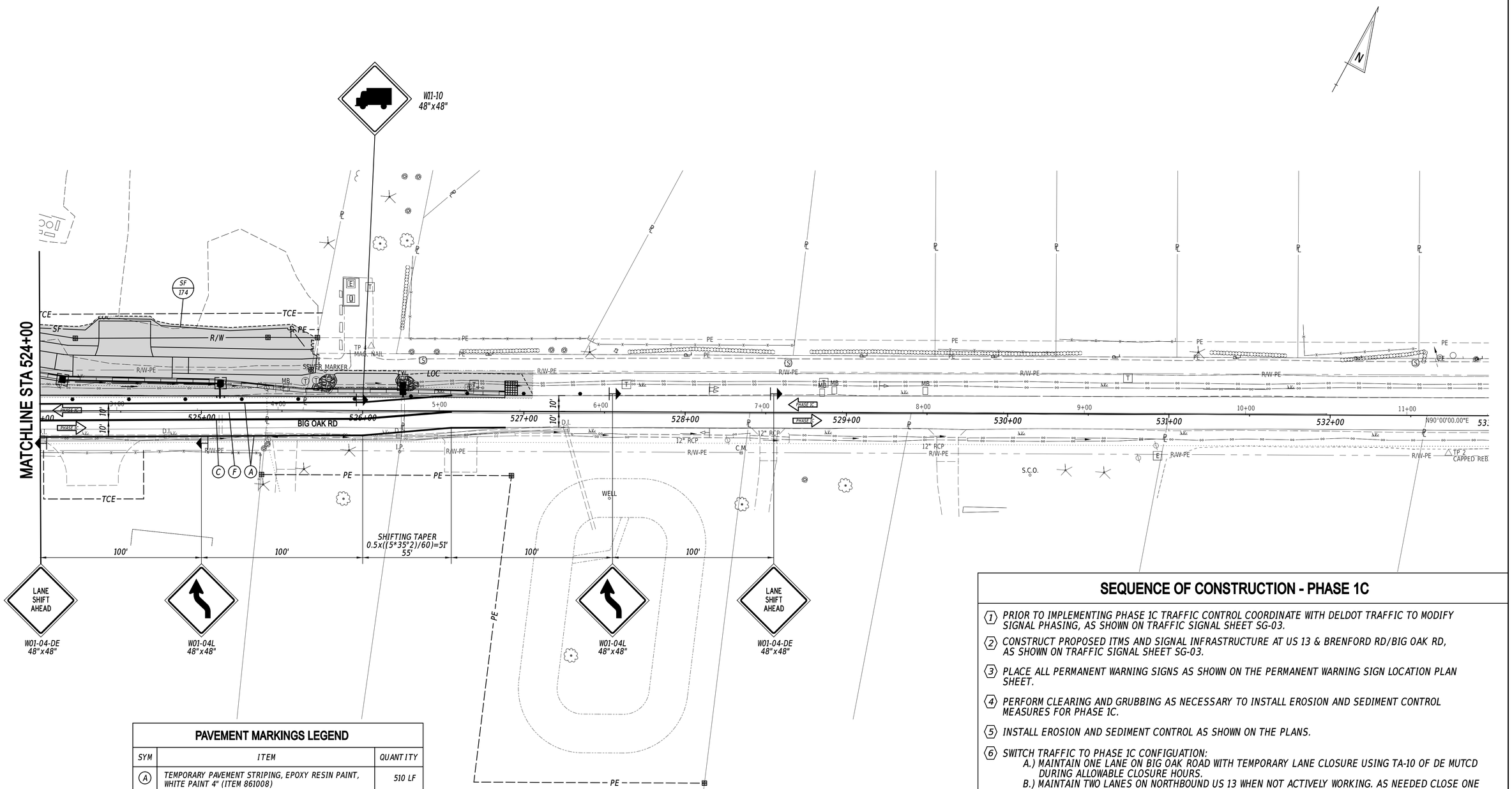
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1C

SECTION: AEC
SHEET NO.: 49

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
(A)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	510 LF
(B)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
(C)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	255 LF
(D)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
(E)	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
(F)	PAVEMENT MARKING, REMOVAL (ITEM 868001)	510 LF

SEQUENCE OF CONSTRUCTION - PHASE 1C

1. PRIOR TO IMPLEMENTING PHASE 1C TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1C.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. SWITCH TRAFFIC TO PHASE 1C CONFIGUATION:
   A.) MAINTAIN ONE LANE ON BIG OAK ROAD WITH TEMPORARY LANE CLOSURE USING TA-10 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
7. REMOVE TEMPORARY PIPE PLUGS AND CONSTRUCT DRAINAGE SYSTEM AND SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE. INSTALL TEMPORARY TRAFFIC SIGNAL AND SWITCH TO PHASE 2 TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

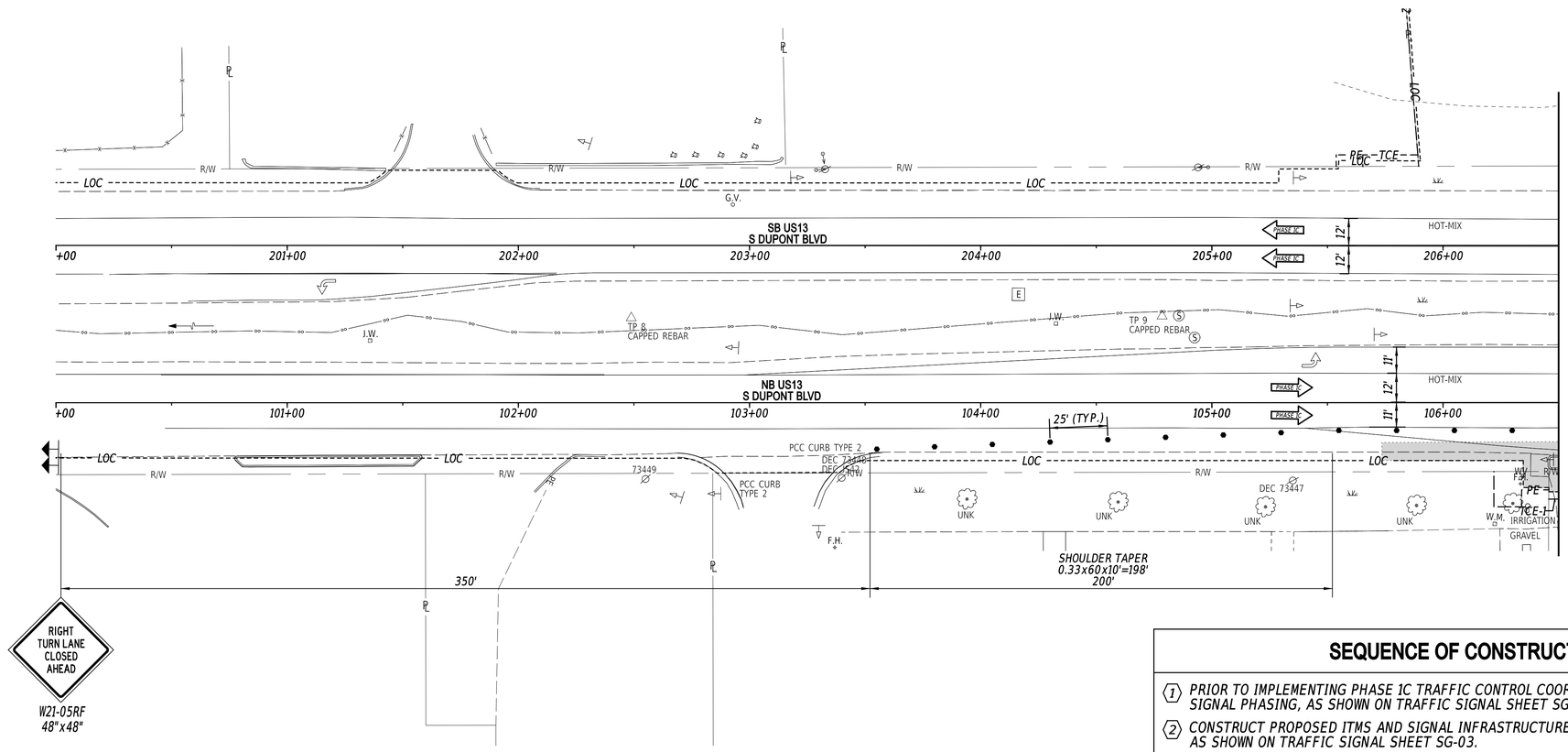
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1C

SECTION: AEC
SHEET NO.: 50

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



SEQUENCE OF CONSTRUCTION - PHASE 1C

1. PRIOR TO IMPLEMENTING PHASE 1C TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-03.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET.
4. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 1C.
5. INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE PLANS.
6. SWITCH TRAFFIC TO PHASE 1C CONFIGUATION:
   A.) MAINTAIN ONE LANE ON BIG OAK ROAD WITH TEMPORARY LANE CLOSURE USING TA-10 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
   B.) MAINTAIN TWO LANES ON NORTHBOUND US 13 WHEN NOT ACTIVELY WORKING. AS NEEDED CLOSE ONE THROUGH LANE OF US 13 USING TA-33 OF DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
7. REMOVE TEMPORARY PIPE PLUGS AND CONSTRUCT DRAINAGE SYSTEM AND SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. CONSTRUCT PEDESTRIAN CONNECTIONS WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH BEFORE PROCEEDING TO THE NEXT PHASE. INSTALL TEMPORARY TRAFFIC SIGNAL AND SWITCH TO PHASE 2 TRAFFIC CONTROL. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

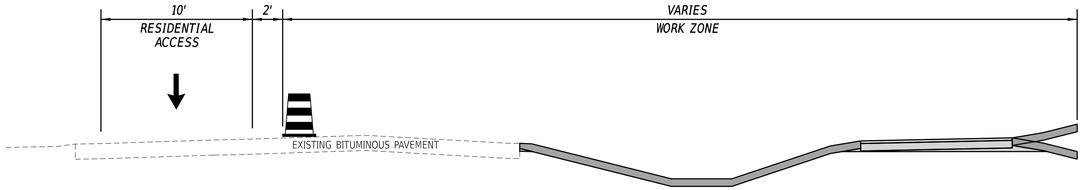
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1C

SECTION
AEC
SHEET NO.
51

AECOM

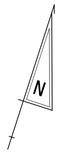
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

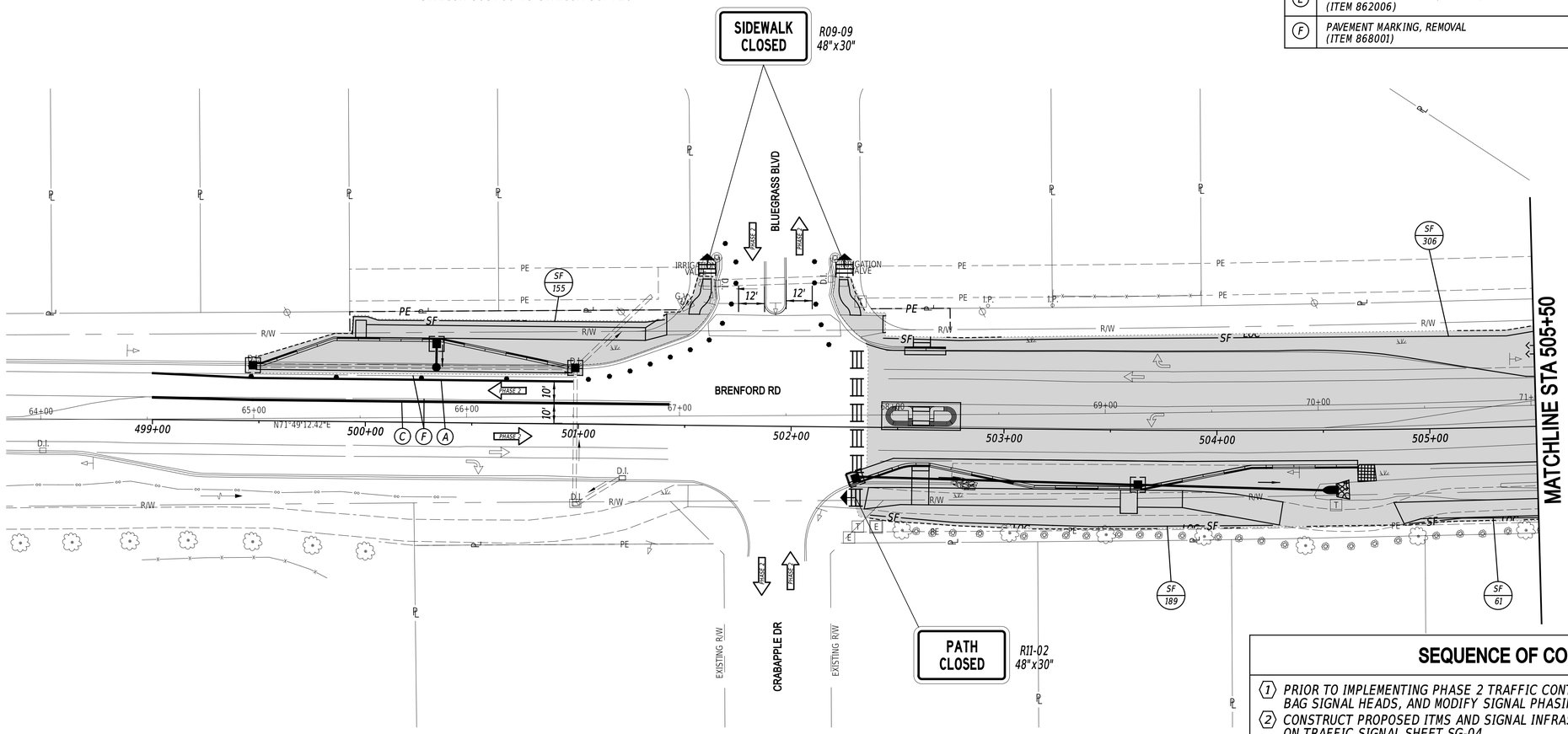


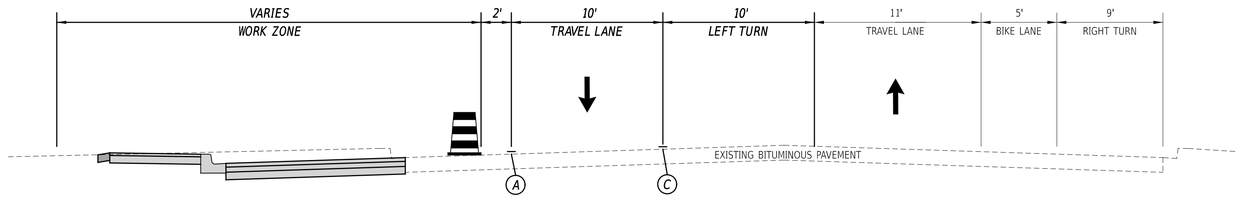
PHASE 2 - BRENFORD RD

STATION 503+00 TO STATION 507+20

PAVEMENT MARKINGS LEGEND		
SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	198 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	242 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	445 LF







PHASE 2 - BRENFORD RD

STATION 499+50 TO STATION 501+00

SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

ADDENDA / REVISIONS			

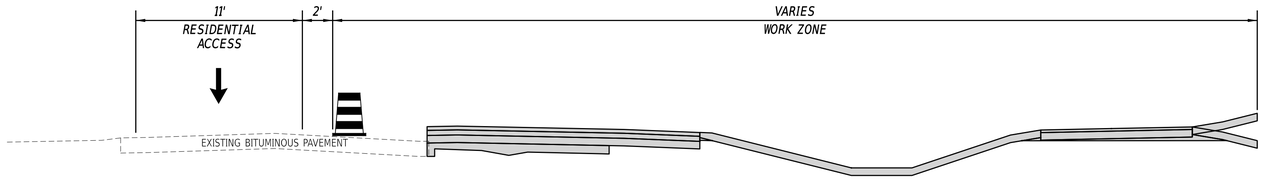
SCALE
0 30 60 90
FEET

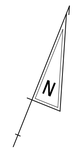
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

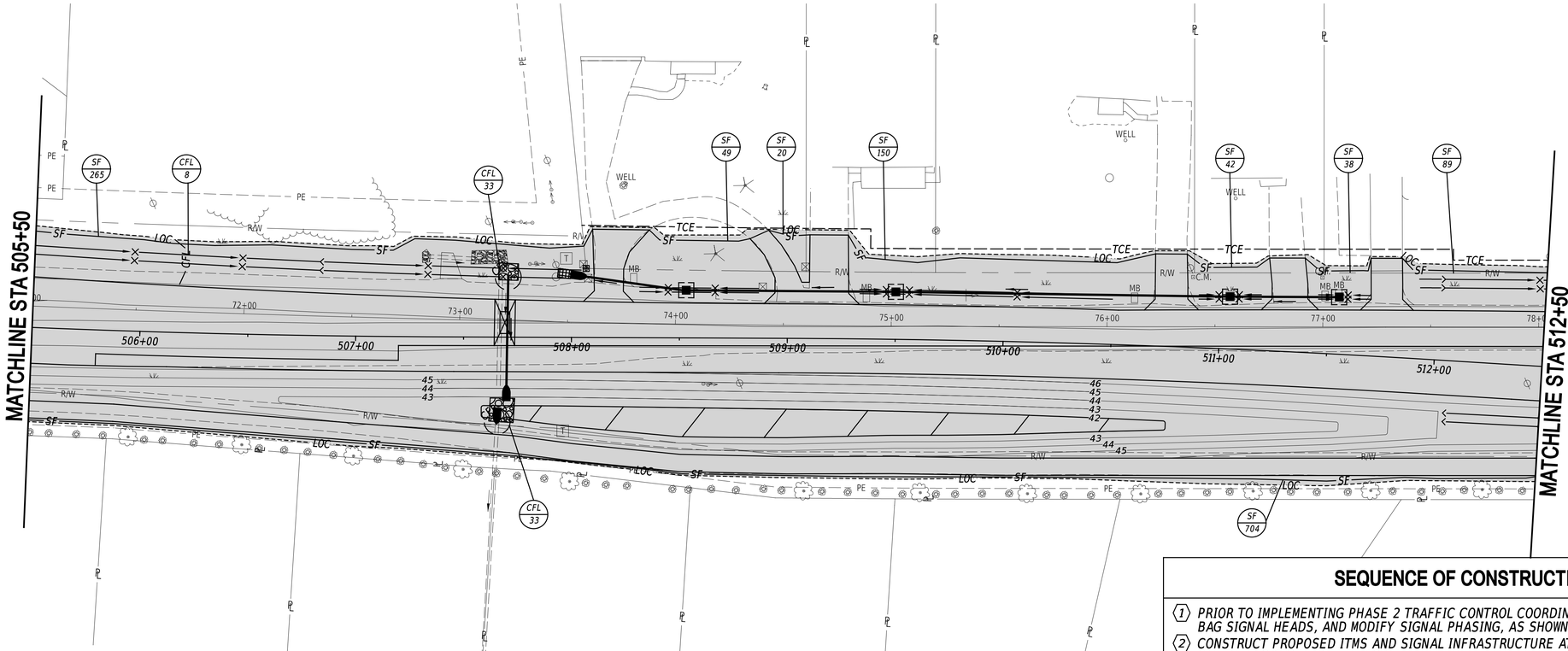
SECTION
AEC
SHEET NO.
52





PHASE 2 - BRENFORD RD

STATION 507+20 TO STATION 520+00



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
(A)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	0 LF
(B)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
(C)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	0 LF
(D)	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
(E)	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
(F)	PAVEMENT MARKING, REMOVAL (ITEM 868001)	0 LF

SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

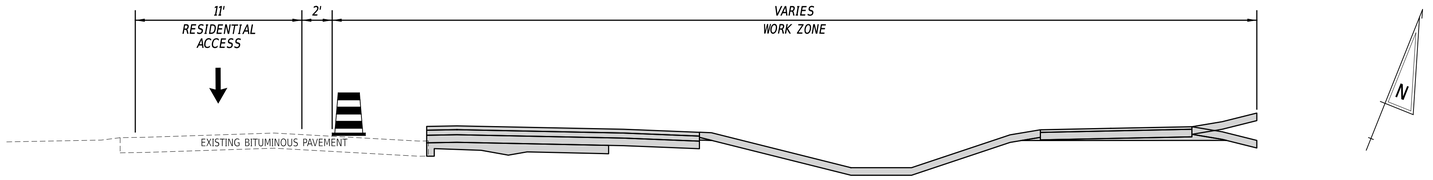
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

SECTION
AEC
SHEET NO.
53

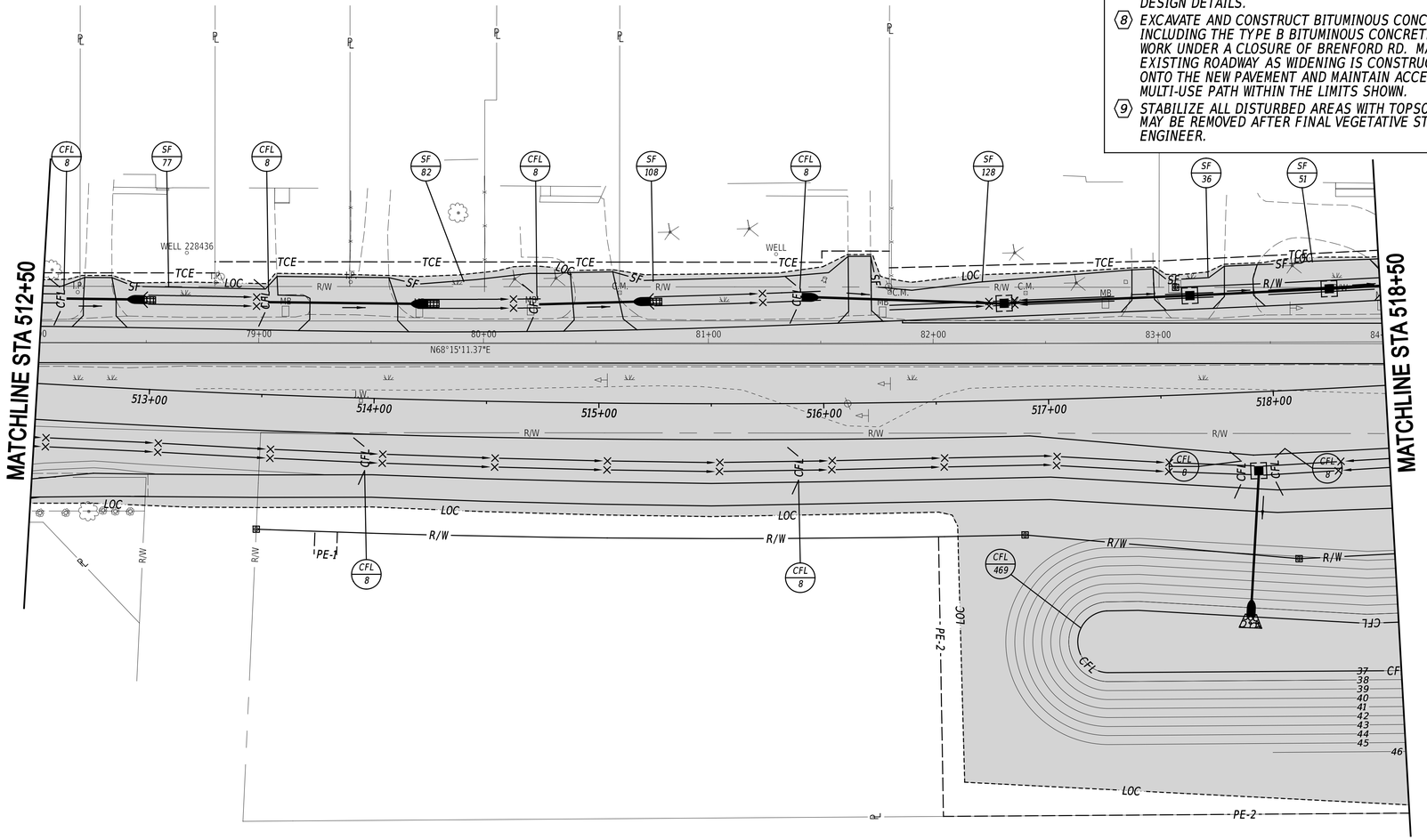
AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/CS00.dgn



PHASE 2 - BRENFORD RD

STATION 507+20 TO STATION 520+00



SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

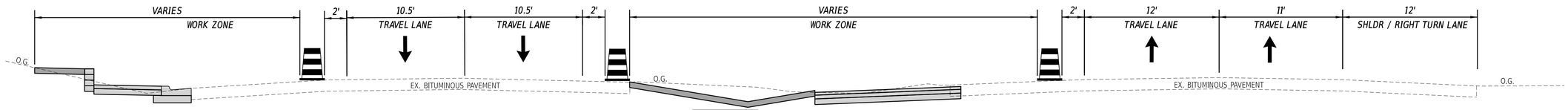
PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	0 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	0 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	0 LF

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 54
					CHECKED BY: J. Hofstee		

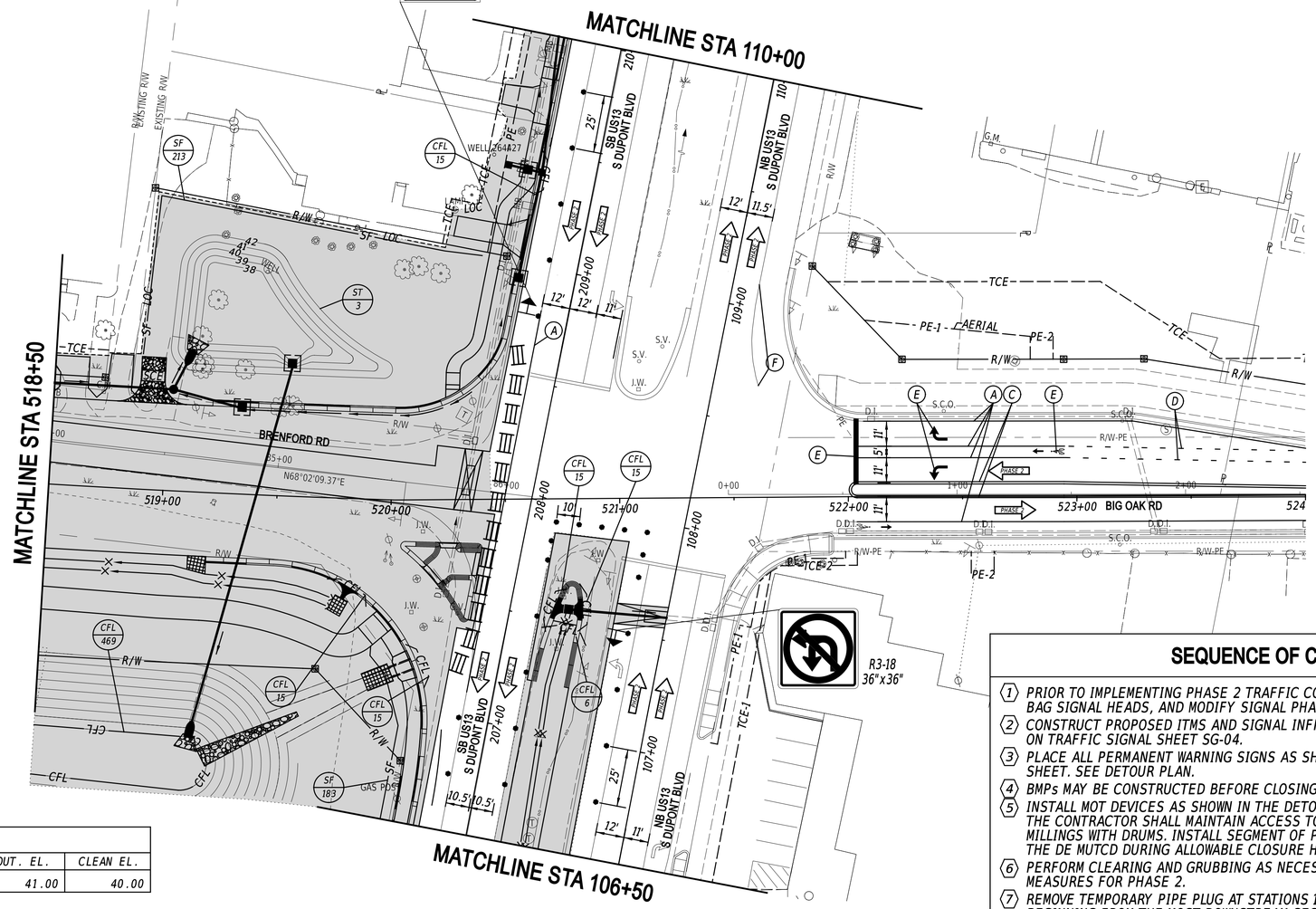


SB US13 SOUTH DUPONT BLVD

STATION 202+20 TO STATION 208+00

NB US13 SOUTH DUPONT BLVD

STATION 102+20 TO STATION 107+50

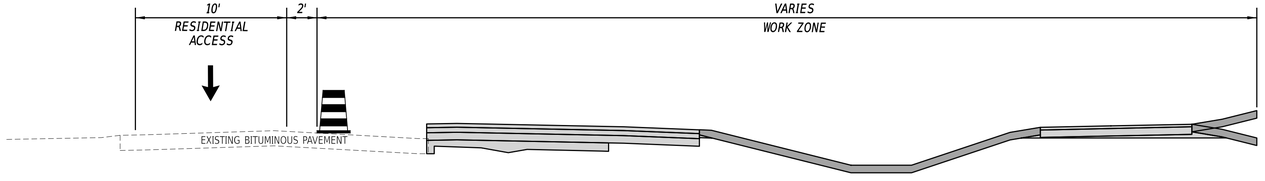


PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	991 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	0 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	979 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	421 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	144 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	50 LF

SEDIMENT TRAP SCHEDULE

NO.	D.AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
ST3	2.24	55'	52'	3'	OUTLET STRUCTURE	41.00	40.00



PHASE 2 - BRENFORD RD

STATION 507+20 TO STATION 520+00

SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

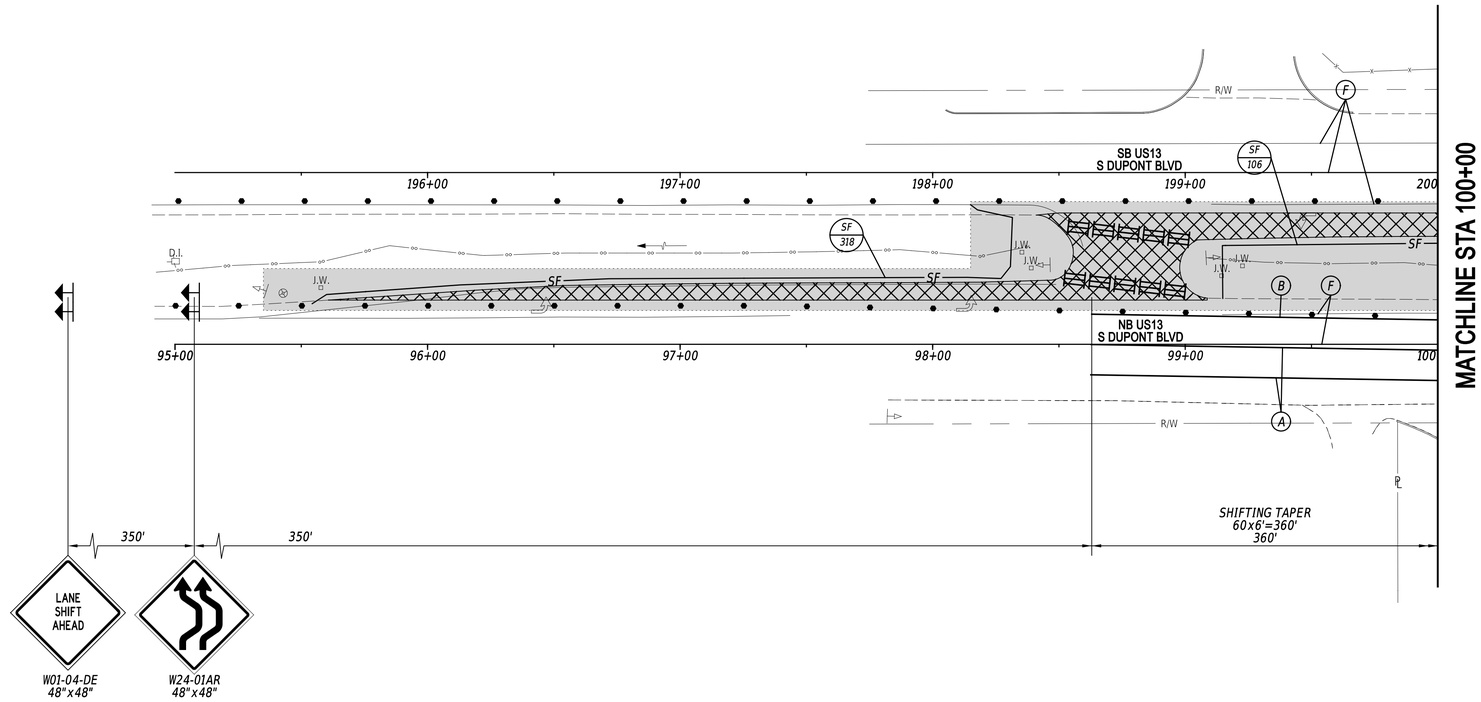
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

SECTION: AEC
SHEET NO.: 55

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware\Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\CS00.dgn



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	275 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	137 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	0 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	701 LF

SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

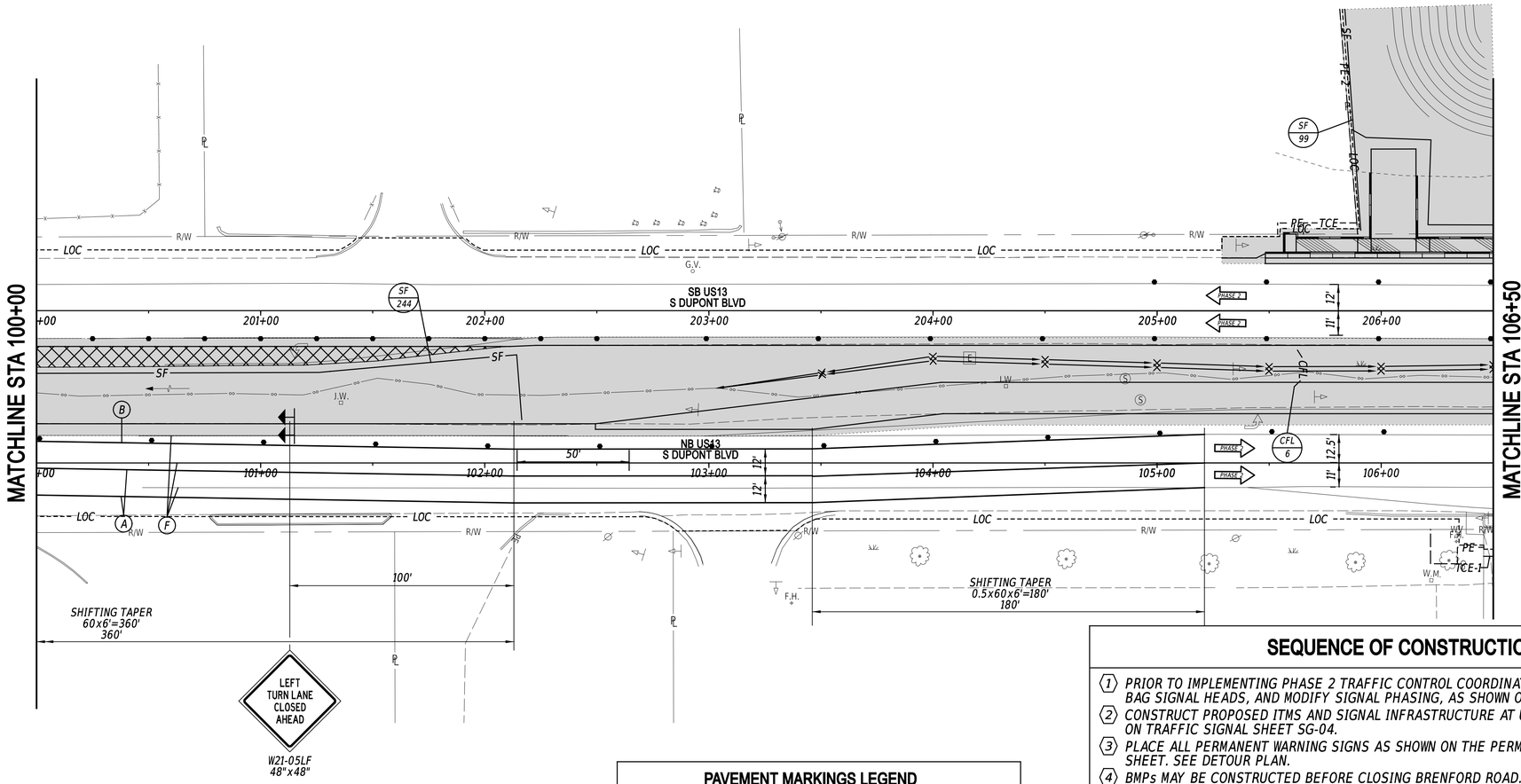
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

SECTION
AEC
SHEET NO.
56

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" (ITEM 861008)	1044 LF
B	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" (ITEM 861008)	522 LF
C	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW PAINT 4" DOUBLE LINE (ITEM 861008)	0 LF
D	TEMPORARY PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE PAINT 4" DOTTED - 2' LINE & 6' GAP (ITEM 861008)	0 LF
E	ALKYD-THERMOPLASTIC, SYMBOL/LEGEND (ITEM 862006)	0 SF
F	PAVEMENT MARKING, REMOVAL (ITEM 868001)	1566 LF

SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

AECOM

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

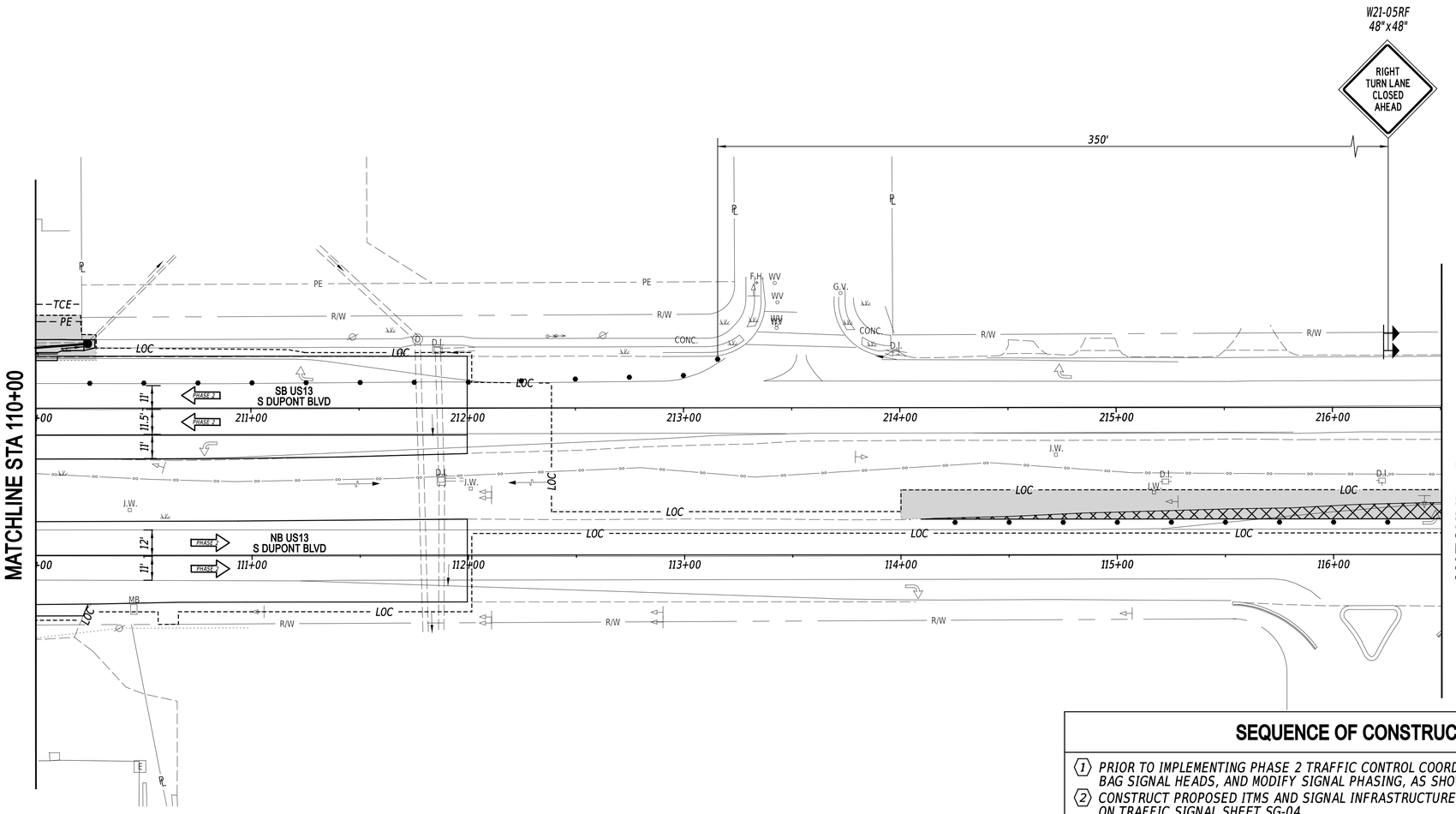
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

SECTION
AEC
SHEET NO.
57

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

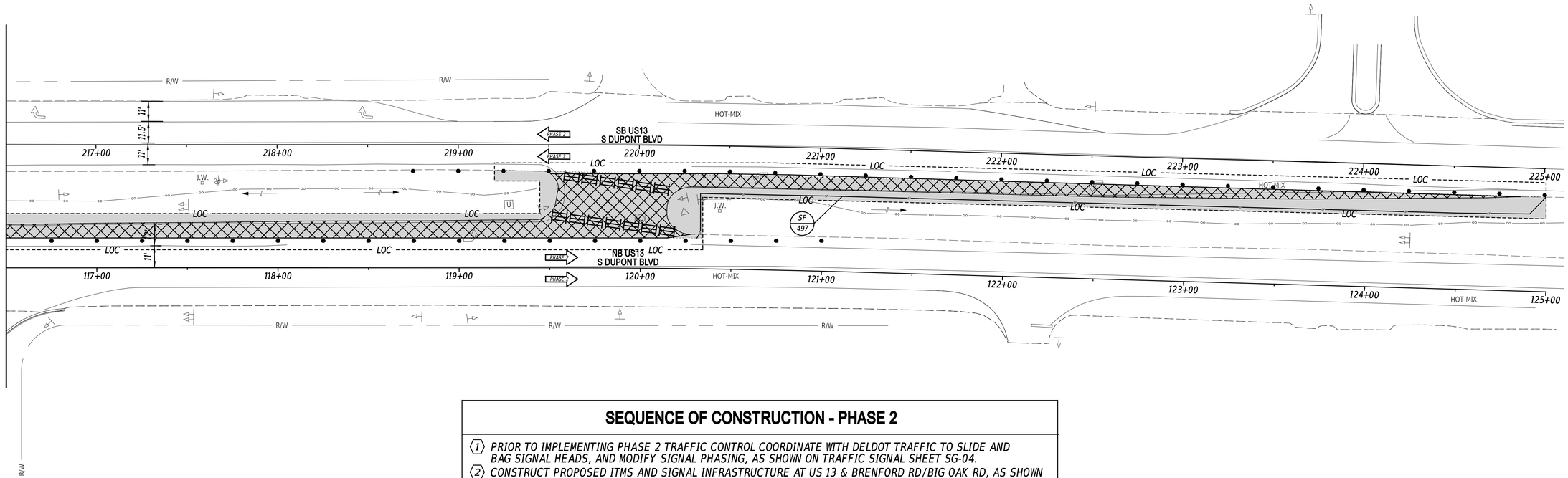
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

SECTION	
AEC	
SHEET NO.	
58	

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn



SEQUENCE OF CONSTRUCTION - PHASE 2

1. PRIOR TO IMPLEMENTING PHASE 2 TRAFFIC CONTROL COORDINATE WITH DELDOT TRAFFIC TO SLIDE AND BAG SIGNAL HEADS, AND MODIFY SIGNAL PHASING, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
2. CONSTRUCT PROPOSED ITMS AND SIGNAL INFRASTRUCTURE AT US 13 & BRENFORD RD/BIG OAK RD, AS SHOWN ON TRAFFIC SIGNAL SHEET SG-04.
3. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN LOCATION PLAN SHEET. SEE DETOUR PLAN.
4. BMPs MAY BE CONSTRUCTED BEFORE CLOSING BRENFORD ROAD.
5. INSTALL MOT DEVICES AS SHOWN IN THE DETOUR PLANS AND CLOSE BRENFORD ROAD TO THROUGH TRAFFIC. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE RESIDENCES WITH A 10' PATHWAY ON COMPACTED MILLINGS WITH DRUMS. INSTALL SEGMENT OF PIPE CROSSING UNDER US13 WITH LANE CLOSURE USING TA-33 OF THE DE MUTCD DURING ALLOWABLE CLOSURE HOURS.
6. PERFORM CLEARING AND GRUBBING AS NECESSARY TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE 2.
7. REMOVE TEMPORARY PIPE PLUG AT STATIONS 107+60 AND 208+55. CONSTRUCT SWM FACILITIES AS SHOWN, BEGINNING FROM THE MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL OUTLET PROTECTION AND INLET PROTECTION ON CONSTRUCTED INLETS AS SHOWN. CONSTRUCT SEDIMENT TRAP FROM STATION 519+00 TO STATION 520+00 AND CONVERT TO FOREBAY BASIN ONCE GROUND COVER IS STABILIZED. SEE SWM PLANS FOR DESIGN DETAILS.
8. EXCAVATE AND CONSTRUCT BITUMINOUS CONCRETE PAVEMENT SECTION WITHIN THE LIMITS SHOWN UP TO AND INCLUDING THE TYPE B BITUMINOUS CONCRETE PAVEMENT. PERFORM ROADWAY WIDENING AND ASSOCIATED WORK UNDER A CLOSURE OF BRENFORD RD. MAINTAIN RESIDENTIAL ACCESS WITH A 10' PATHWAY ON THE EXISTING ROADWAY AS WIDENING IS CONSTRUCTED. ONCE WIDENING IS BUILT, MOVE RESIDENTIAL ACCESS ONTO THE NEW PAVEMENT AND MAINTAIN ACCESS ACROSS THE WEDGE ON THE EXISTING PAVEMENT. CONSTRUCT MULTI-USE PATH WITHIN THE LIMITS SHOWN.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH. EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AFTER FINAL VEGETATIVE STABILIZATION AND WITH APPROVAL FROM THE STORMWATER ENGINEER.

SEQUENCE OF CONSTRUCTION - PHASE 3

1. USE TA-10, TA-17, TA-21, TA-23, TA-33, AND TA-35 TO MAINTAIN TRAFFIC AND MILL AND OVERLAY ENTIRE LENGTH OF PROJECT AREA.
2. INSTALL FINAL SIGNING AND PAVEMENT MARKINGS THROUGH THE LENGTH OF THE PROJECT AREA.

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2 & 3	SECTION AEC
				COUNTY KENT	DESIGNED BY: A. Malkin		SHEET NO. 59
					CHECKED BY: J. Hofstee		

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/CS00.dgn

PORTABLE CHANGEABLE MESSAGE SIGNS

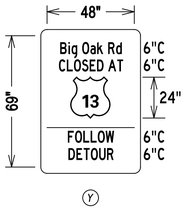
PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

BIG OAK ROAD TO CLOSE

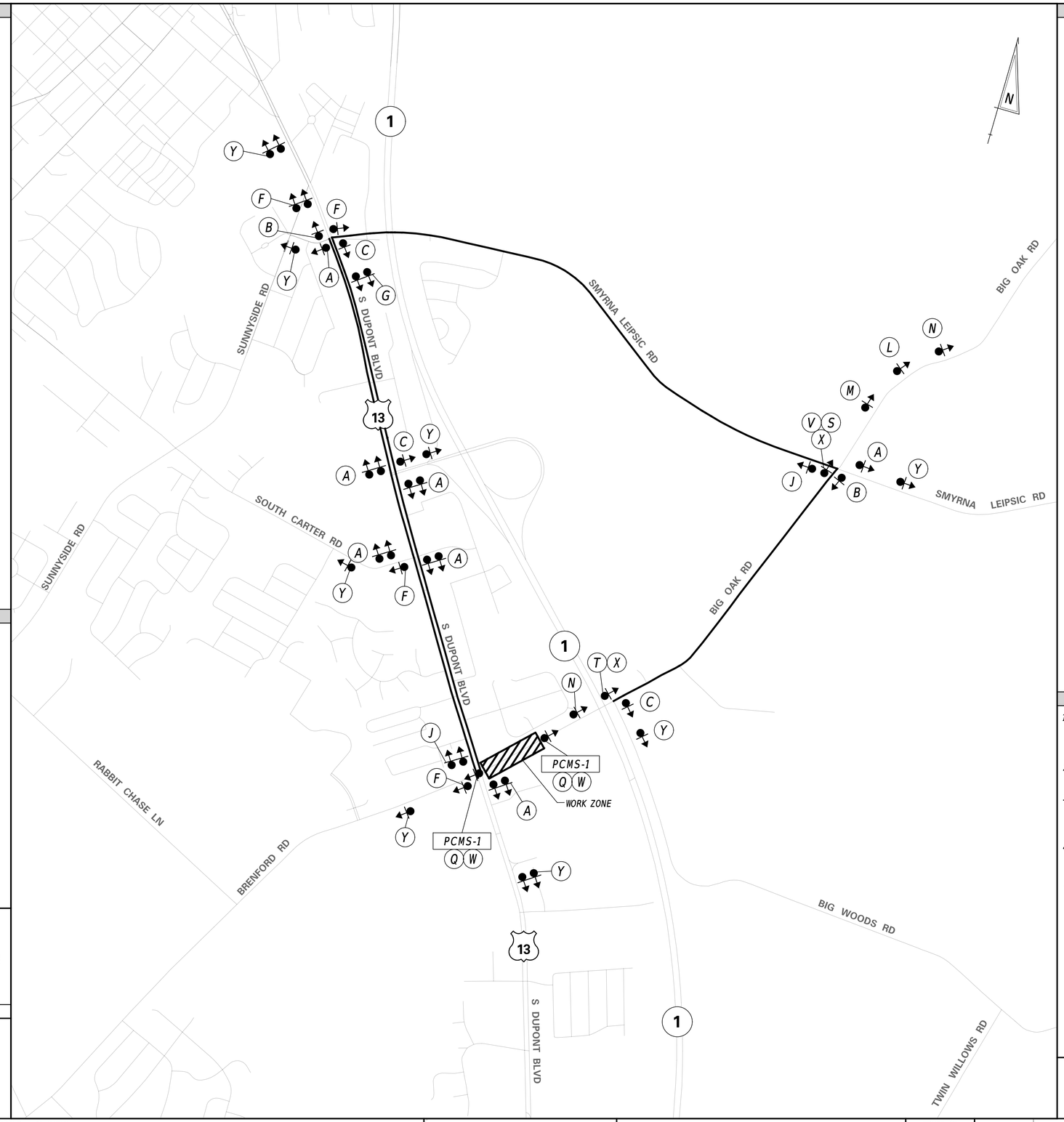
STARTING XX/XX/XX

SPECIAL SIGNS



UNLESS OTHERWISE SPECIFIED ALL SIGNS SHOWN SHALL HAVE RETROREFLECTIVE PRISMATIC FLUORESCENT ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.

ROUTE SHIELD SHALL BE BLACK LEGEND ON WHITE BACKGROUND



LEGEND

A DETOUR ↑ M4-9-DE	B DETOUR ← M4-9	C DETOUR → M4-9	D DETOUR ↖ M4-9	E DETOUR ↗ M4-9
F DETOUR ↰ M4-9	G DETOUR ↱ M4-9	H DETOUR ↖ M4-9	I DETOUR ↗ M4-9	J END DETOUR M4-8a
K DETOUR AHEAD W20-2	L DETOUR 1000 FT W20-2	M DETOUR 500 FT W20-2		
N ROAD CLOSED AHEAD W20-3	O ROAD CLOSED 1000 FT W20-3	P ROAD CLOSED 500 FT W20-3		
Q ROAD CLOSED R11-2	R DETOUR ← M4-10(L)	S DETOUR → M4-10(R)		
T ROAD CLOSED 1/4 MILE AHEAD LOCAL TRAFFIC ONLY R11-3a	U ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	V ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY R11-3a		

W

X

GENERAL NOTES

1. *ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.*
2. *SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHALL BE CHANGED TO "RAMP", "RR XING" OR "BRIDGE" WHERE APPLICABLE.*
3. *"W" TYPE 3 BARRICADES AT A ROAD CLOSURE SHALL BE PLACED COMPLETELY ACROSS THE ROADWAY, FROM CURB TO CURB, OR FROM EDGE OF ROAD TO EDGE OF ROAD, WITH THE STRIPES POSITIONED DOWNWARD TOWARD THE CENTER OF THE ROADWAY.*
4. *BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.*

DETOUR DESCRIPTION
(TO BE USED ON ROAD CLOSURE NOTIFICATION AND TRAFFIC ALERT BY ENGINEER)

MOTORISTS ON BIG OAK ROAD WANTING TO TRAVEL WEST ON BIG OAK ROAD WILL TURN RIGHT ONTO SMYRNA LEIPSIC ROAD, TURN LEFT ONTO US 13 (S. DUPONT HIGHWAY), CONTINUING SOUTH UNTIL RETURNING TO BIG OAK ROAD.

MOTORISTS ON SMYRNA LEIPSIC ROAD WANTING TO TRAVEL WEST ON BIG OAK ROAD WILL CONTINUE STRAIGHT ON SMYRNA LEIPSIC ROAD, TURN LEFT ONTO US 13 (S. DUPONT HIGHWAY), CONTINUING SOUTH UNTIL RETURNING TO BIG OAK ROAD.

MORTORISTS ON NORTHBOUND US 13 (S. DUPONT HIGHWAY) WANTING TO TRAVEL EAST ON BIG OAK ROAD WILL CONTINUE NORTH ON NORTHBOUND US 13, TURN RIGHT ONTO SMYRNA LEIPSIC ROAD, RETURNING TO BIG OAK ROAD.

MOTORISTS ON SOUTHBOUND US 13 (S. DUPONT HIGHWAY) WANTING TO TRAVEL EAST ON BIG OAK ROAD WILL TURN LEFT ONTO SMYRNA LEIPSIC ROAD, RETURNING TO BIG OAK ROAD.

PREPARED BY

AECOM TECHNICAL SERVICES INC.

Joseph A. Hopstee — 5/7/2025

THIS SEAL ONLY APPLIES TO THIS DETOUR SHEET — DATE

JOSEPH A. HOPSTEE REGISTERED No. 14581 PROFESSIONAL ENGINEER DELAWARE — SEAL

F. Zancolli — 5-27-2025

QA/QC — DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

CONCURRENCE FOR IMPLEMENTATION

Justin Dion — 05/28/2025

TRAFFIC SAFETY — DATE

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	PERMIT NO.	N/A	PHASE 1B BIG OAK RD CLOSURE DETOUR PLAN -VEHICULAR	SECTION
				T202104203	DESIGNED BY:	A. LEPERA		AEC
				COUNTY	CHECKED BY:	F. ZANCOLLI		SHEET NO.
				KENT				60

LAST REVISED: 9/11/2018
27-MAY-2025
10:35
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/DP.dgn

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR

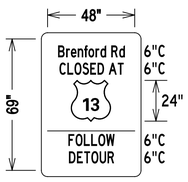
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

BRENFORD ROAD TO CLOSE

STARTING XX/XX/XX

SPECIAL SIGNS



UNLESS OTHERWISE SPECIFIED ALL SIGNS SHOWN SHALL HAVE RETROREFLECTIVE PRISMATIC FLUORESCENT ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.

ROUTE SHIELD SHALL BE BLACK LEGEND ON WHITE BACKGROUND.

PREPARED BY

AECOM TECHNICAL SERVICES INC.

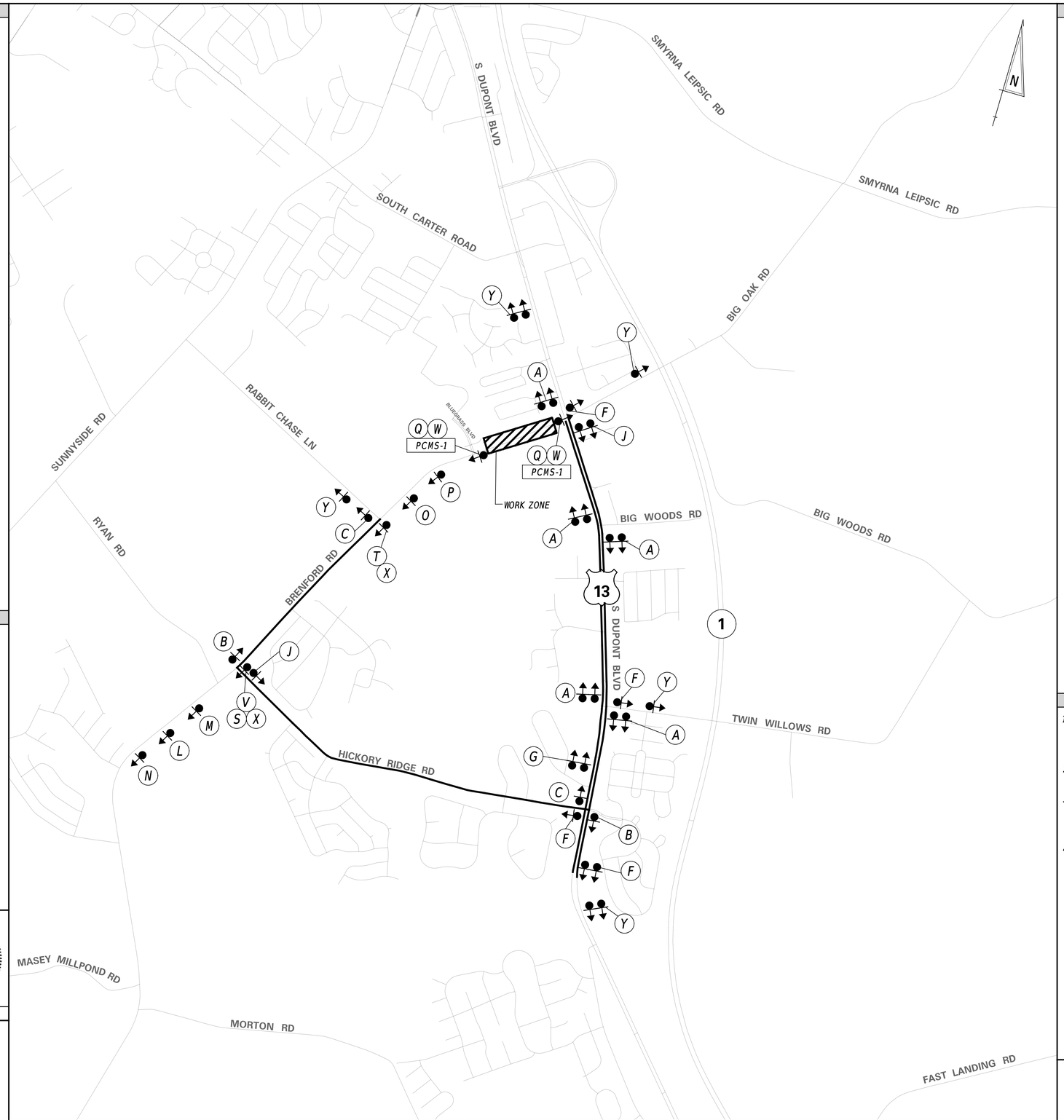
THIS SEAL ONLY APPLIES TO THIS DETOUR SHEET — 5/7/2025 DATE

JOSEPH A. HOFSTEE — REGISTERED — No. 14581 — DELAWARE — PROFESSIONAL ENGINEER

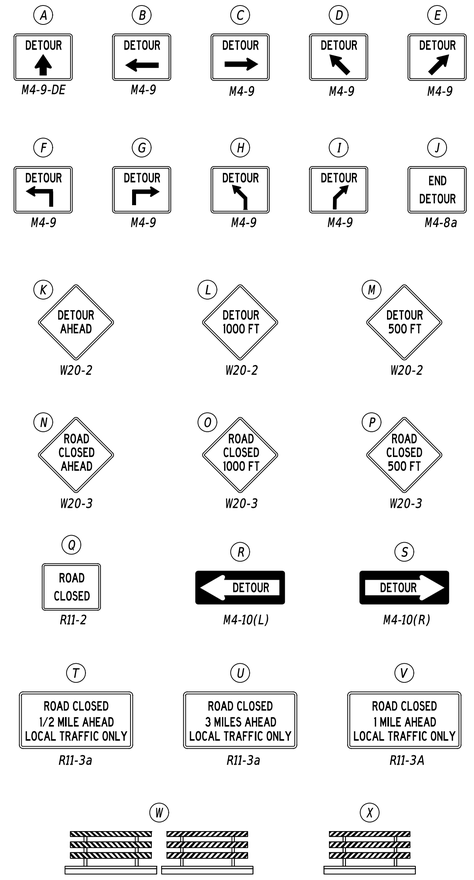
SEAL

QA/QC — 5-27-2025 DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."



LEGEND



GENERAL NOTES

1. *ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.*
2. *SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHALL BE CHANGED TO "RAMP", "RR XING" OR "BRIDGE" WHERE APPLICABLE.*
3. *"W" TYPE 3 BARRICADES AT A ROAD CLOSURE SHALL BE PLACED COMPLETELY ACROSS THE ROADWAY, FROM CURB TO CURB, OR FROM EDGE OF ROAD TO EDGE OF ROAD, WITH THE STRIPES POSITIONED DOWNWARD TOWARD THE CENTER OF THE ROADWAY.*
4. *BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.*

DETOUR DESCRIPTION

(TO BE USED ON ROAD CLOSURE NOTIFICATION AND TRAFFIC ALERT BY ENGINEER)

MOTORISTS WANTING TO TRAVEL EAST ON BRENFORD ROAD WILL TURN RIGHT ONTO HICKORY RIDGE ROAD, LEFT ONTO US 13 (S. DUPONT HIGHWAY), AND CONTINUE NORTH UNTIL RETURNING TO BRENFORD ROAD.

MOTORISTS ON NORTHBOUND US 13 (S. DUPONT HIGHWAY) WANTING TO TRAVEL WEST ON BRENFORD ROAD WILL TURN LEFT ONTO HICKORY RIDGE ROAD, RETURNING TO BRENFORD ROAD.

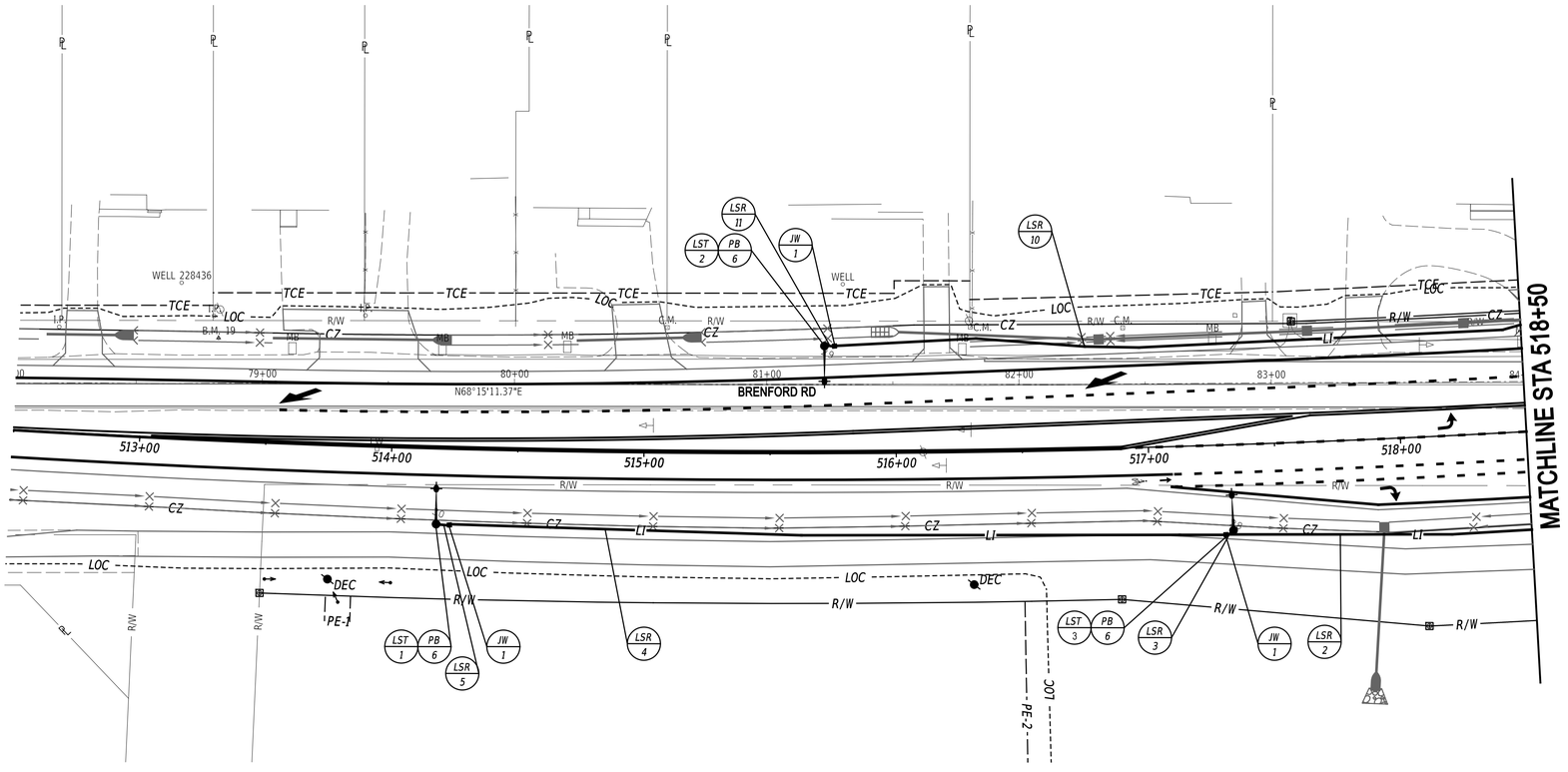
MOTORISTS ON SOUTHBOUND US 13 (S. DUPONT HIGHWAY) WANTING TO TRAVEL WEST ON BRENFORD ROAD WILL CONTINUE SOUTH ON SOUTHBOUND US 13, TURN RIGHT ONTO HICKORY RIDGE ROAD, RETURNING TO BRENFORD ROAD.

CONCURRENCE FOR IMPLEMENTATION

TRAFFIC SAFETY — 05/28/2025 DATE

ADDENDA / REVISIONS	NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	PERMIT NO. N/A	PHASE 2 BRENFORD RD CLOSURE DETOUR PLAN -VEHICULAR	SECTION AEC
			COUNTY KENT	DESIGNED BY: A. LEPERA		SHEET NO. 61
				CHECKED BY: F. ZANCOLLI		

LAST REVISED: 9/11/2018
27-MAY-2025
10:57
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/DP.dgn



LEGEND

- LST X — LIGHTING STANDARD IDENTIFIER
- LSR X — LIGHTING SERVICE RUN IDENTIFIER
- JW X — JUNCTION WELL & TYPE
- JUNCTION WELL
- PROPOSED COBRA HEAD LUMINAIRE, SINGLE DAVIT ARM
- PROPOSED LIGHT POLE
- PB X — PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- PROPOSED LIGHTING CONTROL CABINET

LIGHTING SERVICE SCHEDULE

SERVICE RUN	LENGTH	INSTALL METHOD	DESCRIPTION
2	257'	TRENCH	2-#6 AWG & 1-#6 GND IN 4" PVC CONDUIT
3	6'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT
4	315'	TRENCH	2-#6 AWG & 1-#6 GND IN 4" PVC CONDUIT
5	6'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT
10	300'	TRENCH	2-#6 AWG & 1-#6 GND IN 4" PVC CONDUIT
11	6'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT

LIGHTING STANDARD SCHEDULE

NO.	BASELINE	STATION	OFFSET	ARM	HEIGHT	LIGHT STANDARD
1	Brenford Rd	514+17	31' RT	15'	40'	M-TYPE IV, 160W LED COBRA HEAD
2	Brenford Rd	515+71	58' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD
3	Brenford Rd	517+32	34' RT	15'	40'	M-TYPE IV, 160W LED COBRA HEAD

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

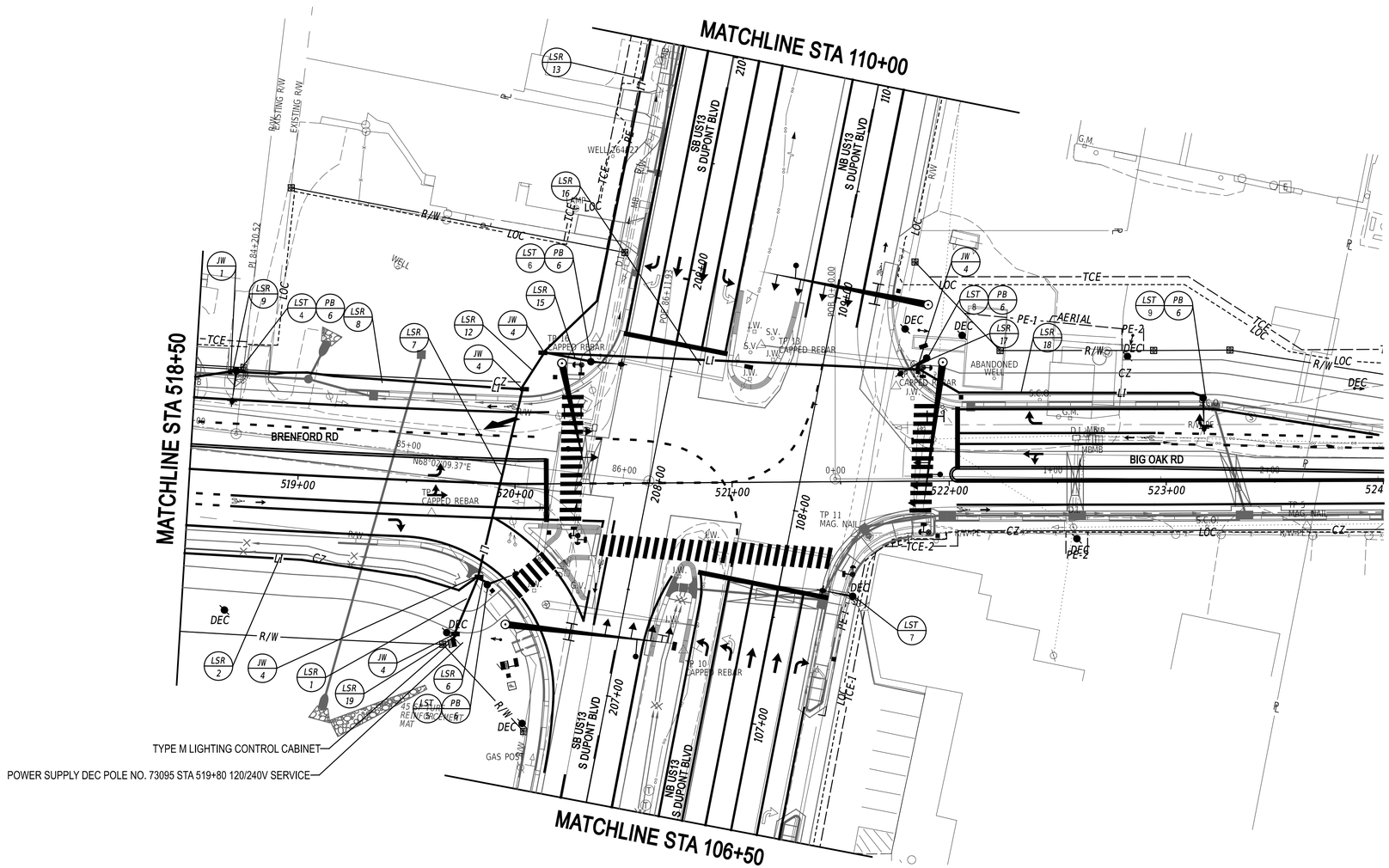
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	M. Patil
COUNTY	CHECKED BY:	A. Hlaing
KENT		

LIGHTING PLAN

SECTION: AEC
SHEET NO.: 62

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/LI00.dgn



LIGHTING STANDARD SCHEDULE

NO.	BASELINE	STATION	OFFSET	ARM	HEIGHT	LIGHT STANDARD
4	Brenford Rd	518+70	45' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD
5	Brenford Rd	519+88	46' RT	12'	40'	M-TYPE IV, 160W LED COBRA HEAD
6	Brenford Rd	520+40	61' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD
8	Brenford Rd	521+86	52' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD
9	Brenford Rd	523+17	38' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD

DEC LIGHTING STANDARD SCHEDULE

NO.	UTILITY POLE #	STATUS	HEIGHT	ARM	ARM ORIENTATION	LIGHT STANDARD
7	73151	NEW POLE	30' MH	8'	0°	TYPE III, 122W LED COBRA HEAD

LIGHTING SERVICE SCHEDULE

SERVICE RUN	LENGTH	INSTALL METHOD	DESCRIPTION
1	29'	TRENCH	6-#6 AWG, 2-#8 AWG, 3-#6 GND & 1-#8 GND IN 4" PVC CONDUIT
2	257'	TRENCH	2-#6 AWG & 1-#6 GND IN 4" PVC CONDUIT
6	5'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT
7	90'	BORE	4-#6 AWG, 2-#8 AWG, 2-#6 GND & 1-#8 GND IN 4" HDPE CONDUIT
8	133'	TRENCH	2-#6 AWG & 1-#6 GND IN 4" PVC CONDUIT
9	5'	TRENCH	2-#8 AWG & 1-#8 GND IN 3" PVC CONDUIT
12	20'	TRENCH	2-#6 AWG , 2-#8 AWG, 1-#6 GND & 1-#8 GND IN 4" PVC CONDUIT
13	213'	TRENCH	2-#8 AWG & 1-#8 GND IN 4" PVC CONDUIT
15	25'	TRENCH	2-#8 AWG & 1-#8 GND IN 3" PVC CONDUIT
16	178'	BORE	2-#6 AWG & 1-#6 GND IN 4" HDPE CONDUIT
17	6'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT
18	128'	TRENCH	2-#6 AWG & 1-#6 GND IN 3" PVC CONDUIT
19	5'	TRENCH	6-#6 AWG, 2-#8 AWG, 3-#6 GND & 1-#8 GND IN (4) 2.5" PVC CONDUIT

LEGEND

- LST X — LIGHTING STANDARD IDENTIFIER
- LSR X — LIGHTING SERVICE RUN IDENTIFIER
- JW X — JUNCTION WELL & TYPE
- ■ — JUNCTION WELL
- PROPOSED COBRA HEAD LUMINAIRE, SINGLE DAVIT ARM
- ● — PROPOSED LIGHT POLE
- PB X — PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- PROPOSED LIGHTING CONTROL CABINET

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

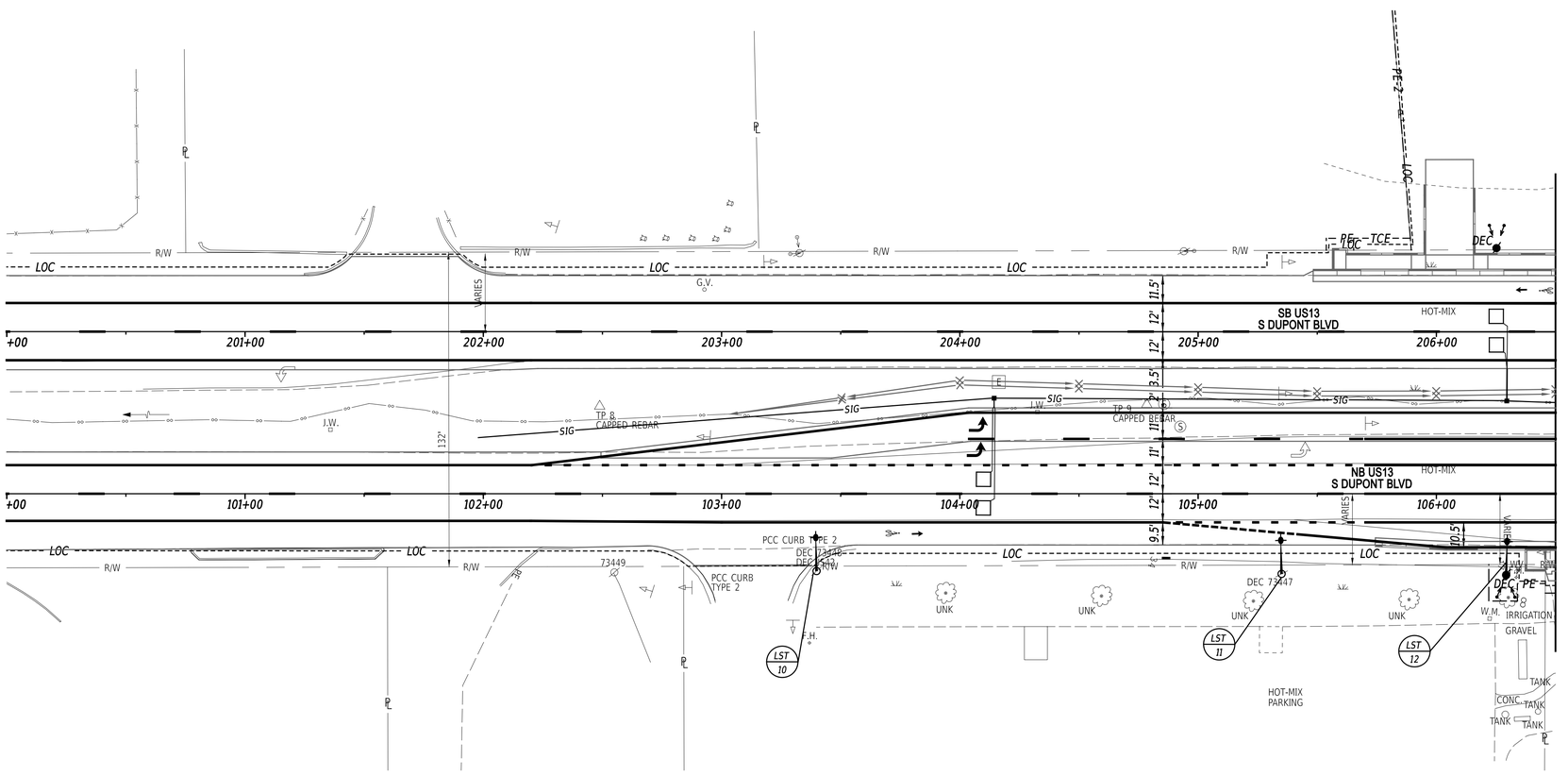
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	M. Patil
COUNTY	CHECKED BY:	A. Hlaing
KENT		

LIGHTING PLAN

SECTION: AEC
SHEET NO.: 63

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/LI00.dgn



DEC LIGHTING STANDARD SCHEDULE

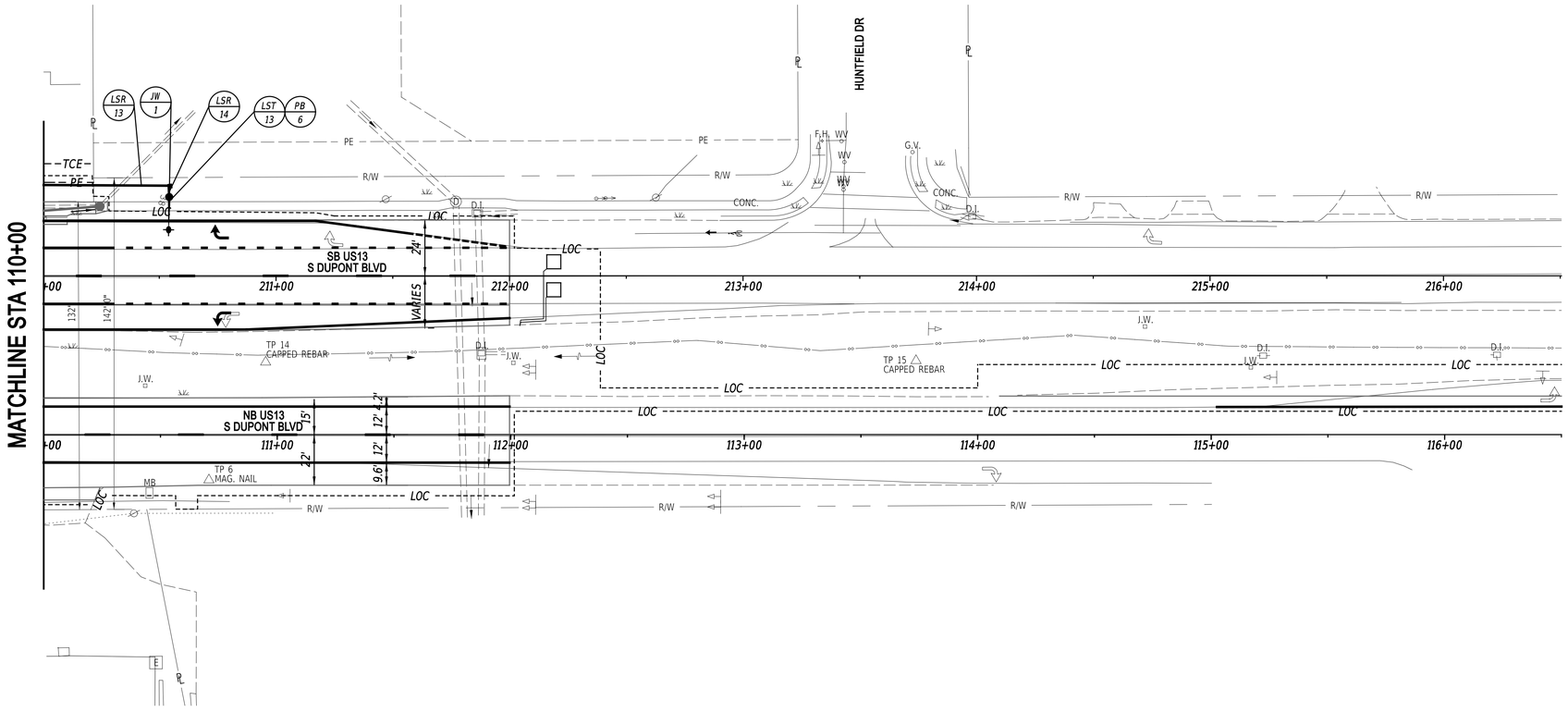
NO.	UTILITY POLE #	STATUS	HEIGHT	ARM	ARM ORIENTATION	LIGHT STANDARD
10	73448	EXISTING POLE	30' MH	8'	0°	TYPE III, 122W LED COBRA HEAD
11	73447	EXISTING POLE	30' MH	8'	0°	TYPE III, 122W LED COBRA HEAD
12	N/A	NEW POLE	30' MH	8'	0°	TYPE III, 122W LED COBRA HEAD

LEGEND

- LST X — LIGHTING STANDARD IDENTIFIER
- LSR X — LIGHTING SERVICE RUN IDENTIFIER
- JW X — JUNCTION WELL & TYPE
- JUNCTION WELL
- PROPOSED COBRA HEAD LUMINAIRE, SINGLE DAVIT ARM
- PROPOSED LIGHT POLE
- PB X — PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- PROPOSED LIGHTING CONTROL CABINET

AECOM

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	LIGHTING PLAN	SECTION AEC
				COUNTY KENT	DESIGNED BY: M. Patil		SHEET NO. 64
					CHECKED BY: A. Hlaing		



LEGEND

- LST X — LIGHTING STANDARD IDENTIFIER
- LSR X — LIGHTING SERVICE RUN IDENTIFIER
- JW X — JUNCTION WELL & TYPE
- JUNCTION WELL
- PROPOSED COBRA HEAD LUMINAIRE, SINGLE DAVIT ARM
- PROPOSED LIGHT POLE
- PB X — PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- PROPOSED LIGHTING CONTROL CABINET

LIGHTING STANDARD SCHEDULE

NO.	BASELINE	STATION	OFFSET	ARM	HEIGHT	LIGHT STANDARD
13	NB US13	110+53	101' LT	8'	40'	M-TYPE IV, 160W LED COBRA HEAD

LIGHTING SERVICE SCHEDULE

SERVICE RUN	LENGTH	INSTALL METHOD	DESCRIPTION
13	213'	TRENCH	2-#8 AWG & 1-#8 GND IN 4" PVC CONDUIT
14	5'	TRENCH	2-#8 AWG & 1-#8 GND IN 3" PVC CONDUIT

AECOM

ADDENDA / REVISIONS

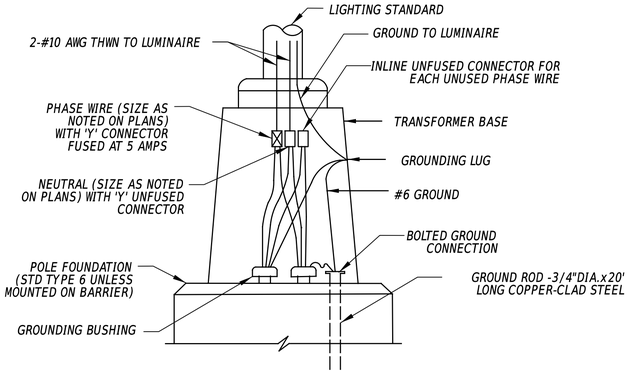
SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

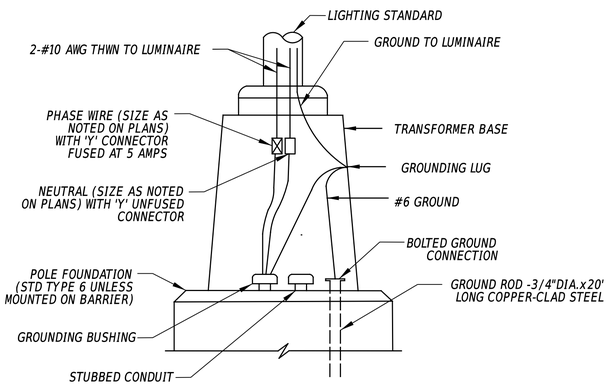
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	M. Patil
COUNTY	CHECKED BY:	A. Hlaing
KENT		

LIGHTING PLAN

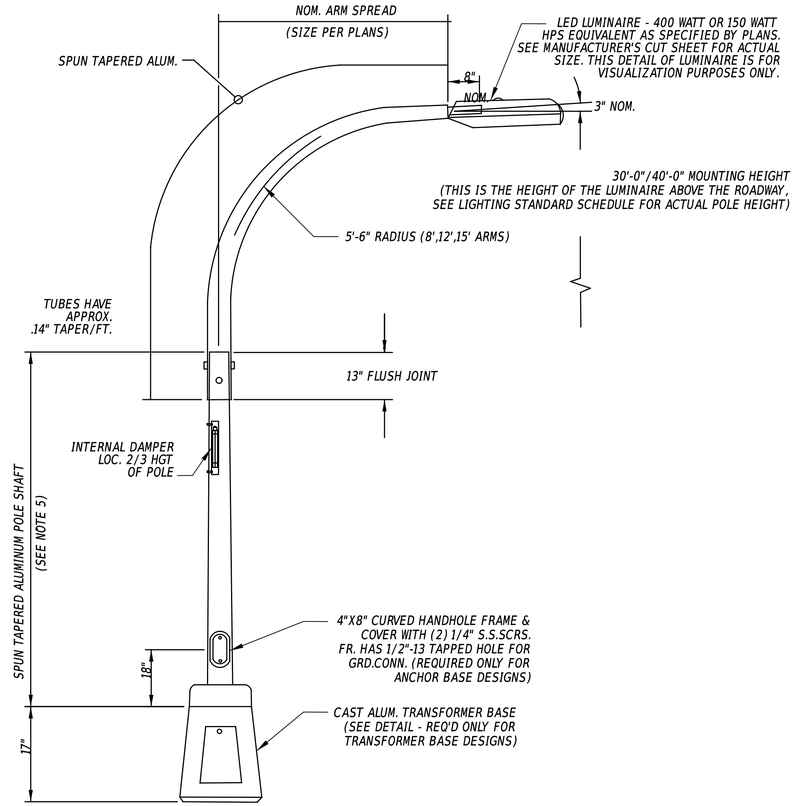
SECTION
AEC
SHEET NO.
65



TYPICAL LUMINAIRE CONNECTION - 120/240V SERVICE CONTINUOUS RUN



TYPICAL LUMINAIRE CONNECTION - 120/240V SERVICE END OF RUN

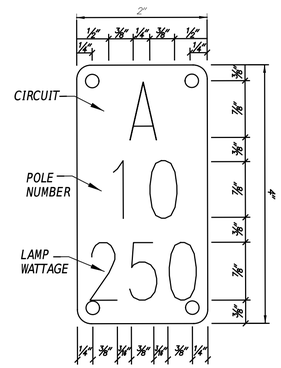


DAVIT ARM LIGHT POLE DETAIL

N.T.S.

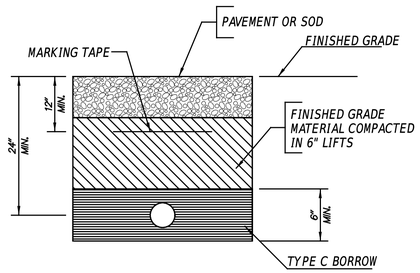
NOTES:
1. HEAT TREAT POLE & DAVIT TO -T6, TEMPER AFTER WELDING.
2. FINISH - POLE & DAVIT SHALL BE SATIN FINISHED POLISHED AND WRAPPED.
3. DESIGNED IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THE LATEST EDITION OF AASHTO REQUIREMENTS.
4. TRANSFORMER SHALL MEET THE STANDARDS ESTABLISHED BY THE LATEST EDITION OF AASHTO BREAKAWAY REQUIREMENTS.
5. DUE TO VARYING ELEVATIONS OF ROADWAY, IT MAY BE NECESSARY TO MAINTAIN A NOMINAL FIXTURE MOUNTING HEIGHT (OF 30' OR 40', AS SPECIFIED ON PLANS) ABOVE THE ROADWAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THESE MEASUREMENTS. BETWEEN TWO ADJACENT LUMINAIRES, THE DIFFERENCE IN HEIGHT SHALL NOT EXCEED 12".

MATERIAL SPECIFICATION	
POLE & DAVIT TUBES	6063-T6
ANCHOR BASE	AA356-T6
BOLT COVERS	AA356
ANCHOR BOLT NUTS	ASTM-A563 GR.A
ANCHOR BOLTS	ASTM-F1554 GR55
STN.STL.HARDWARE	AISI-300 SERIES STN.STL.
TRANSFORMER BASE	AA356-T6
T-BASE HARDWARE	ASTM-A325 GALV.



TYPICAL POLE IDENTIFICATION TAG

N.T.S.



DIRECT BURIED CONDUIT DETAIL

N.T.S.

NOTES:

1. ELECTRICAL WORK SHALL BE PERFORMED AND ALL MATERIAL PROVIDED SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL FIRE PROTECTION PUBLICATION, TO ALL LOCAL AND SPECIAL LAWS, AND/OR TO ORDINANCES GOVERNING SUCH ELECTRICAL CODE SHALL BE CONSIDERED THE MINIMUM REQUIREMENTS FOR THE ELECTRICAL WORK AND IF THERE IS A CONFLICT BETWEEN THE REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS AND THE CODE, THE MORE STRINGENT REQUIREMENTS WILL APPLY AS DETERMINED AND APPROVED BY THE ENGINEER. WHEN THESE REQUIREMENTS DO NOT GOVERN, AND WHERE NOT OTHERWISE SPECIFIED, ELECTRICAL MATERIALS SHALL CONFORM TO THE STANDARDIZATION RULES OF THE INSTITUTE OF ELECTRICAL ENGINEERS.
2. CONDUIT RUNS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL LOCATE THE CONDUIT RUNS IN A MANNER THAT AVOIDS CONFLICTS WITH ALL EXISTING AND PROPOSED FEATURES APPROVED BY THE ENGINEER. ALL CONDUITS AND POLES SHALL BE LOCATED WITHIN EXISTING AND PROPOSED RIGHT-OF-WAY OR PERMANENT EASEMENT.
3. THE CONTRACTOR SHALL PROVIDE AND SECURE ALL ELECTRICAL INSPECTIONS AS REQUIRED.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO WORK.
5. ALL ELECTRICAL WORK INCLUDES FURNISHING LABOR, MATERIAL, EQUIPMENT AND SERVICE NECESSARY AND INCIDENTAL TO PROPER COMPLETION OF THE ELECTRICAL WORK AS SHOWN. MINOR ITEMS, ACCESSORIES OR DEVICES NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY SPECIFICATIONS OR DRAWINGS.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE CONTRACTORS INVOLVED ON THIS PROJECT. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE GENERAL SUPERINTENDENT THE LOCATIONS OF ALL CONDUIT AND POLE BASES TO ELIMINATE CONSTRUCTION CONFLICTS.
7. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY PERMITS AND CERTIFICATES AS REQUIRED.
8. EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATIONS PRIOR TO COMMENCING WORK.
9. TERMINATE ALL CONDUITS WHEN ENTERING ENCLOSURES WITH LOCKNUT AND BONDING BUSHINGS. ALL OTHER CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS. ALL CONDUITS SHALL BE BONDED WITH THE GROUND WIRE.
10. COLOR CODING SHALL BE PROVIDED THROUGHOUT THE ENTIRE NETWORK FOR SERVICE, FEEDER, BRANCH AND CONTROL CONDUCTORS. EACH PHASE SHALL BE AN INDEPENDENT COLOR. CONDUCTORS SHALL HAVE FACTORY IMPREGNATED COLOR THROUGHOUT THEIR ENTIRE LENGTH. PHASE TAPING IS NOT PERMITTED.
11. THE CONTRACTOR SHALL NOTIFY DELAWARE ELECTRIC COOP (DEC) TWO WEEKS IN ADVANCE TO ARRANGE FINAL POWER CONNECTIONS.
12. ALL FUSED CONNECTIONS SHALL BE MADE IN THE POLE BASE. SPLICES IN JUNCTION WELLS SHALL NOT BE FUSED.
13. USE CAUTION WHEN INSTALLING CONDUITS UNDER EXISTING CULVERTS. WHEN COMPLETE, ENSURE ALL STORM WATER MANAGEMENT FACILITIES ARE RESTORED TO EXISTING CONDITIONS.
14. DO NOT SHARE HIGHWAY LIGHTING EQUIPMENT WITH SIGNAL OR ITMS EQUIPMENT.
15. KEEP EXISTING LIGHTING ENERGIZED TO SERVE AS TEMPORARY LIGHTING UNTIL THE NEW LUMINAIRES ARE ENERGIZED.
16. CONDUIT RUNS AND JUNCTION WELLS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL LOCATE THE CONDUIT RUNS AND INSTALL JUNCTIONS WELLS IN A MANNER TO AVOID CONFLICTS WITH ALL EXISTING AND PROPOSED FEATURES AS DICTATED BY FIELD CONDITIONS.
17. FOR DELDOT CONVENTIONAL LIGHTING PROVIDE PHILIPS ROADFOCUS LED CORBRA HEAD LIGHTING FIXTURES 160 WATT, 3000K, AND TYPE IV DISTRIBUTION WITH 8' & 12' BRACKET ARMS. FOR DEC OWNED LIGHTING, PROVIDE EATON STREETWORKS 160 WATT, TYPE IV DISTRIBUTION WITH 8' BRACKET ARM.
18. ALL LIGHTING CONTROL INFRASTRUCTURE COMPONENTS WILL BE OF THE SQUARE D BRAND PROVIDED BY SCHNEIDER ELECTRIC.

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/606487491-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/LI00.dgn

AECOM

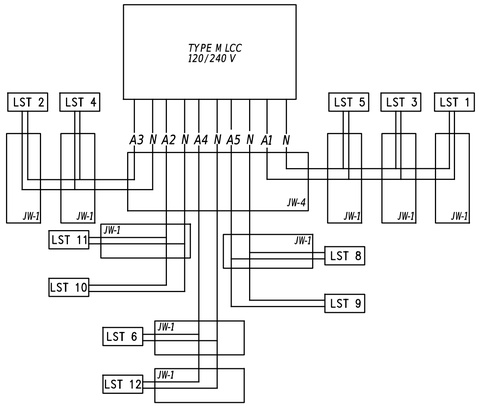
ADDENDA / REVISIONS	

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	M. PATIL
COUNTY	CHECKED BY:	A. HLAING
KENT		

LIGHTING DETAILS

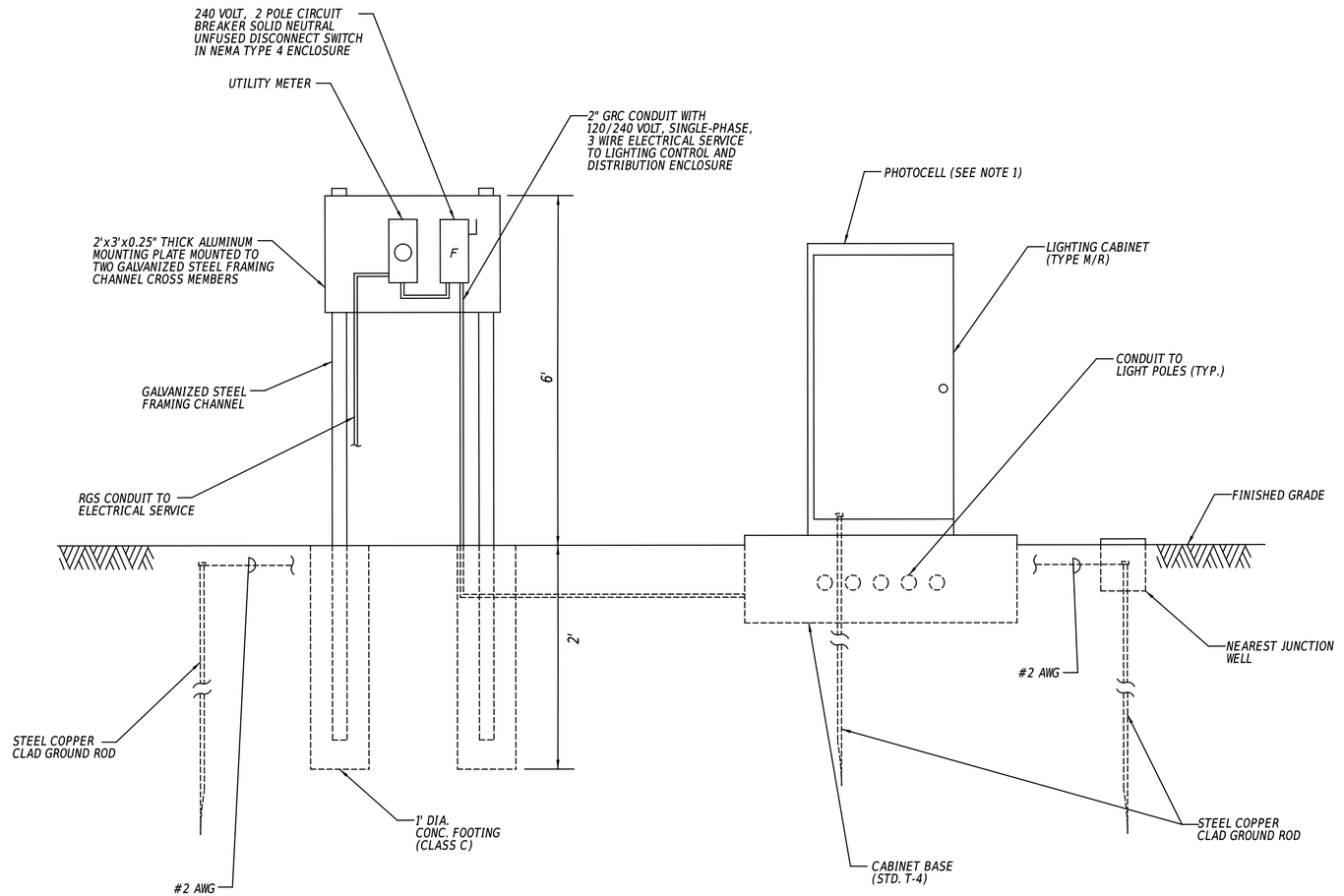
SECTION
AEC
SHEET NO.
66



CIRCUIT DIAGRAM

NOTE:

1. PHOTOCELL SHALL BE INSTALLED INSIDE THE LIGHTING CABINET TO PREVENT UNAUTHORIZED ACCESS OR TAMPERING.

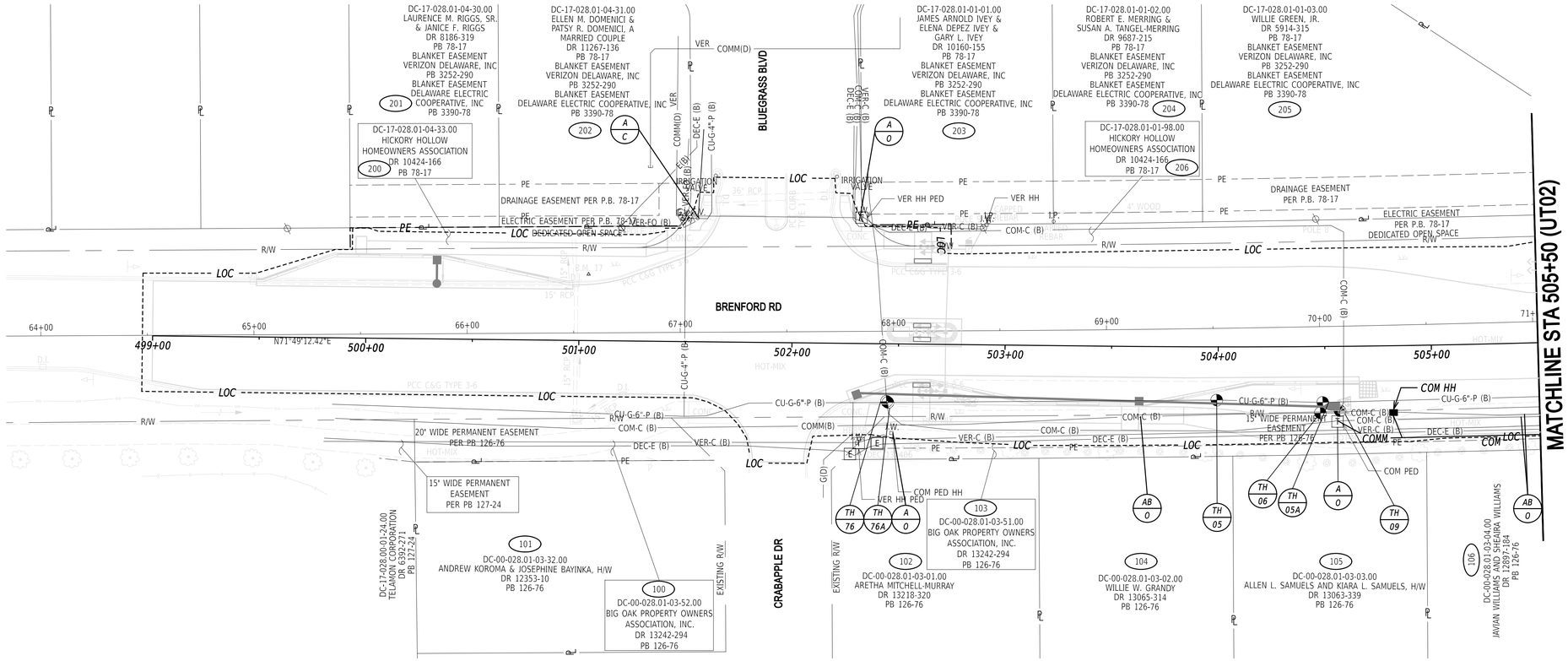


ELECTRICAL UTILITY SERVICE EQUIPMENT AND LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE DETAIL (120/240V)

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/LI00.dgn

AECOM

ADDENDA / REVISIONS						
		HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	LIGHTING DETAILS	SECTION AEC
			COUNTY KENT	DESIGNED BY: M. PATIL		SHEET NO. 67
				CHECKED BY: A. HLAING		



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-05	CU-G	503+99.32	24.98	45.63	3.92	6" O.D. YELLOW PLASTIC PIPE - GAS
TH-05A	CU-G	504+48.86	26.22	45.22	3.56	6" O.D. YELLOW PLASTIC PIPE - GAS
TH-06	COM-C	504+47.65	31.17	45.50	4.92	2" O.D.ORANGE PLASTIC CONDUIT COMMUNICATION
TH-09	COM-C	504+56.84	30.21	45.47	2.40	2" O.D.ORANGE PLASTIC CONDUIT COMMUNICATION
TH-76	VER-C	502+44.70	27.00	43.50	3.92	2" O.D.ORANGE PLASTIC CONDUIT COMMUNICATION
TH-76A	CU-G	502+45.30	27.50	43.51	5.94	6" O.D. YELLOW PLASTIC PIPE - GAS

AECOM

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn

ADDENDA / REVISIONS	

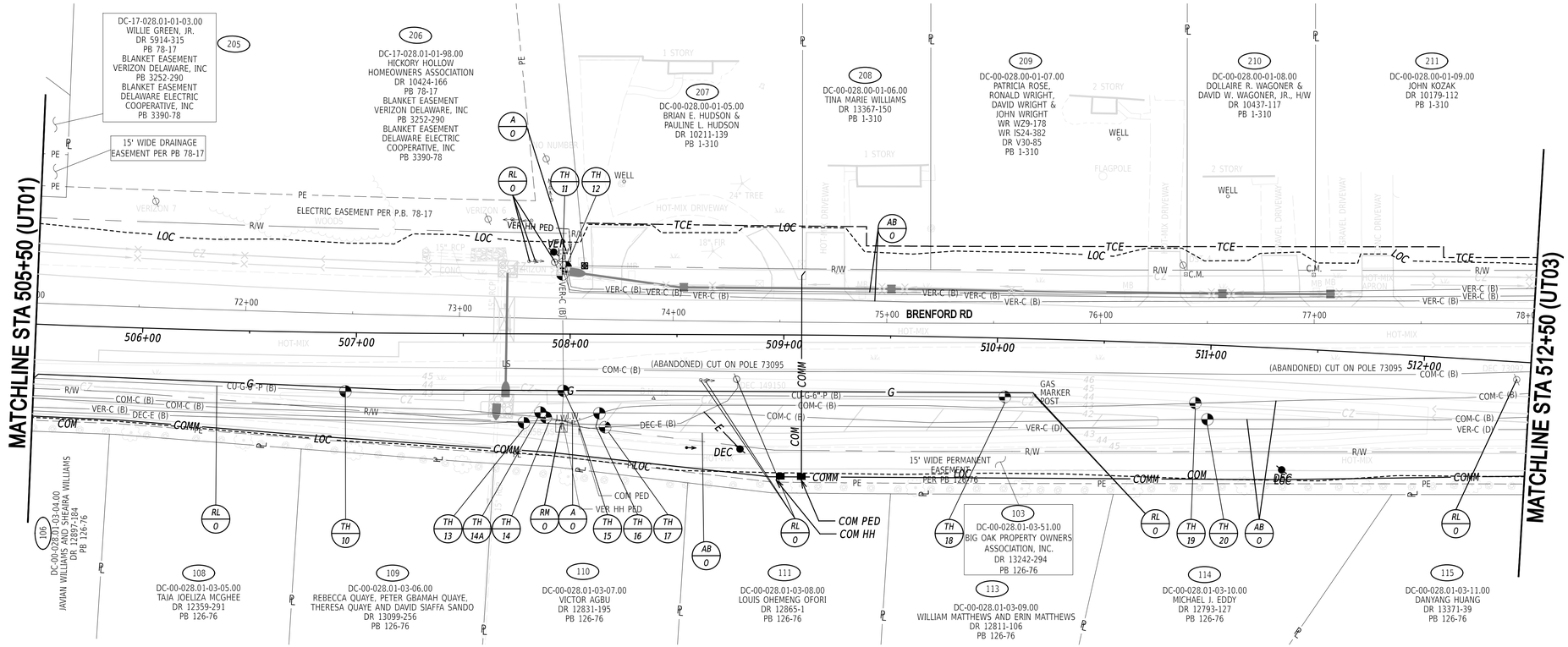
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

UTILITY RELOCATION PLAN

UT01
SECTION
AEC
SHEET NO.
68



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-10	CU-G	506+95.22	27.48	43.44	3.54	6" O.D. YELLOW PLASTIC PIPE - GAS
TH-11	VER-C	506+96.21	27.93	44.72	6.08	(3)2"O.D.ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-12	VER-C	507+97.85	31.32	44.09	2.80	(2) 1.5" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATION
TH-13	VER-C	507+78.48	41.53	44.23	3.58	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-14	COM-C	507+88.80	39.00	43.99	3.27	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-14A	COM-C	507+86.24	36.75	43.96	3.04	2" O.D. ORANGE PLASTIC CONDUIT CABLE TV COMMUNICATION
TH-15	VER-C	507+96.67	26.56	43.01	2.72	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-16	COM-C	508+13.85	37.05	44.05	4.73	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-17	DEC-E	508+16.52	43.57	44.22	4.07	(3) 2" BLACK DIRECT BURY CABLE ELECTRIC
TH-18	CU-G	509+04.13	27.49	45.14	3.71	6" O.D. YELLOW PLASTIC PIPE - GAS
TH-19	COM-C	510+93.75	27.44	46.59	2.63	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-20	COM-C	510+99.78	38.84	46.70	2.87	2" O.D. ORANGE PLASTIC CONDUIT CABLE TV COMMUNICATION

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn

ADDENDA / REVISIONS

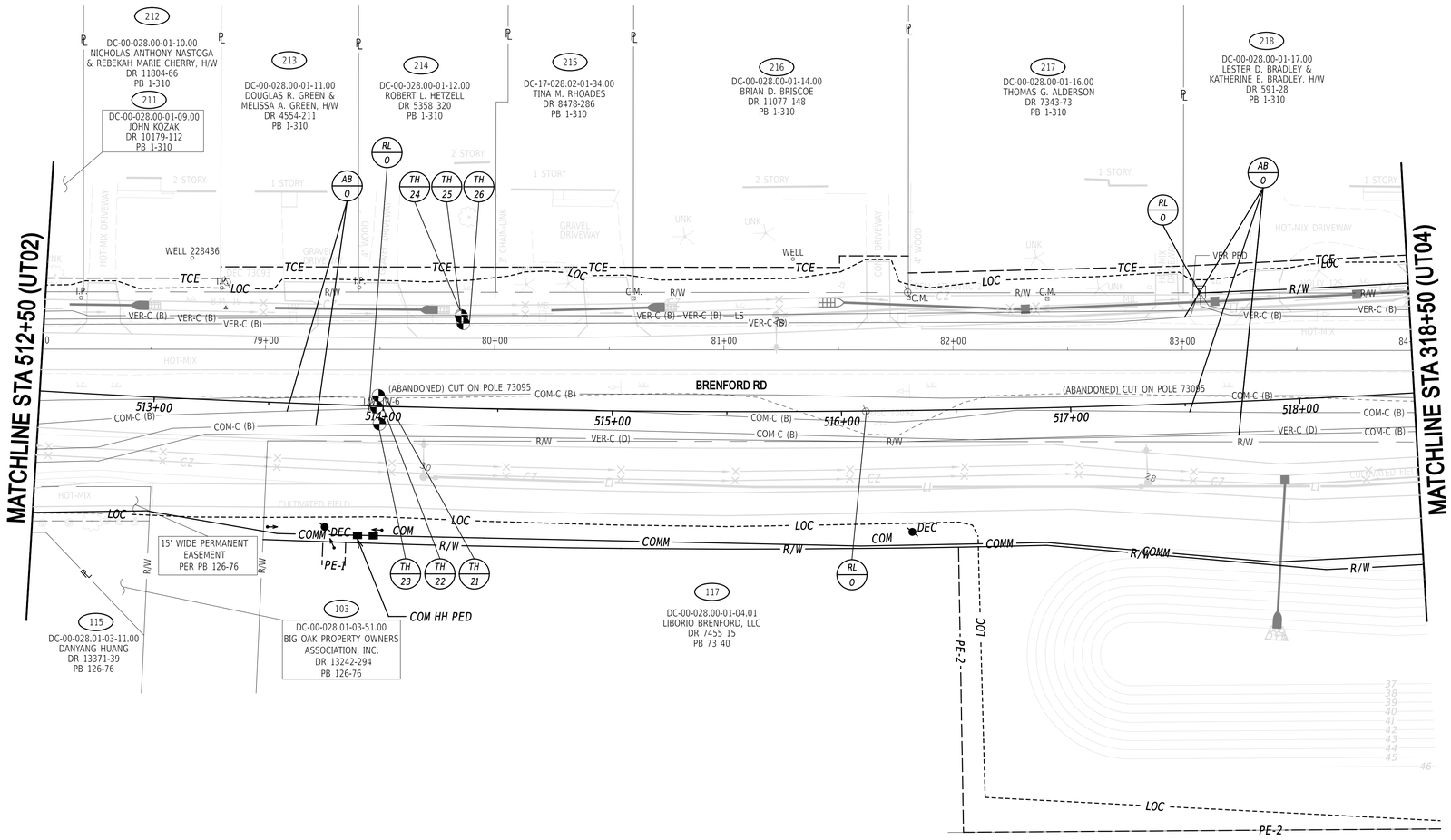
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

UTILITY RELOCATION PLAN

	UT02
SECTION	AEC
SHEET NO.	69



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-21	COM-C	513+97.82	04.53	45.78	1.79	1" BLACK DIRECT BURY CABLE ABAND. COMMUNICATION
TH-22	COM-C	513+97.05	00.46	45.67	2.02	2" O.D. ORANGE PLASTIC CONDUIT FIBER OPTIC COMMUNICATION
TH-23	COM-C	513+98.59	07.80	45.58	2.66	2" O.D. ORANGE PLASTIC CONDUIT CABLE TV COMMUNICATION
TH-24	VER-C	514+33.09	40.40	45.02	2.54	1" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATION
TH-25	VER-C	514+33.23	39.83	45.04	2.00	0.50" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATION
TH-26	VER-C	514+34.03	37.05	45.13	2.13	1" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATION

AECOM

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

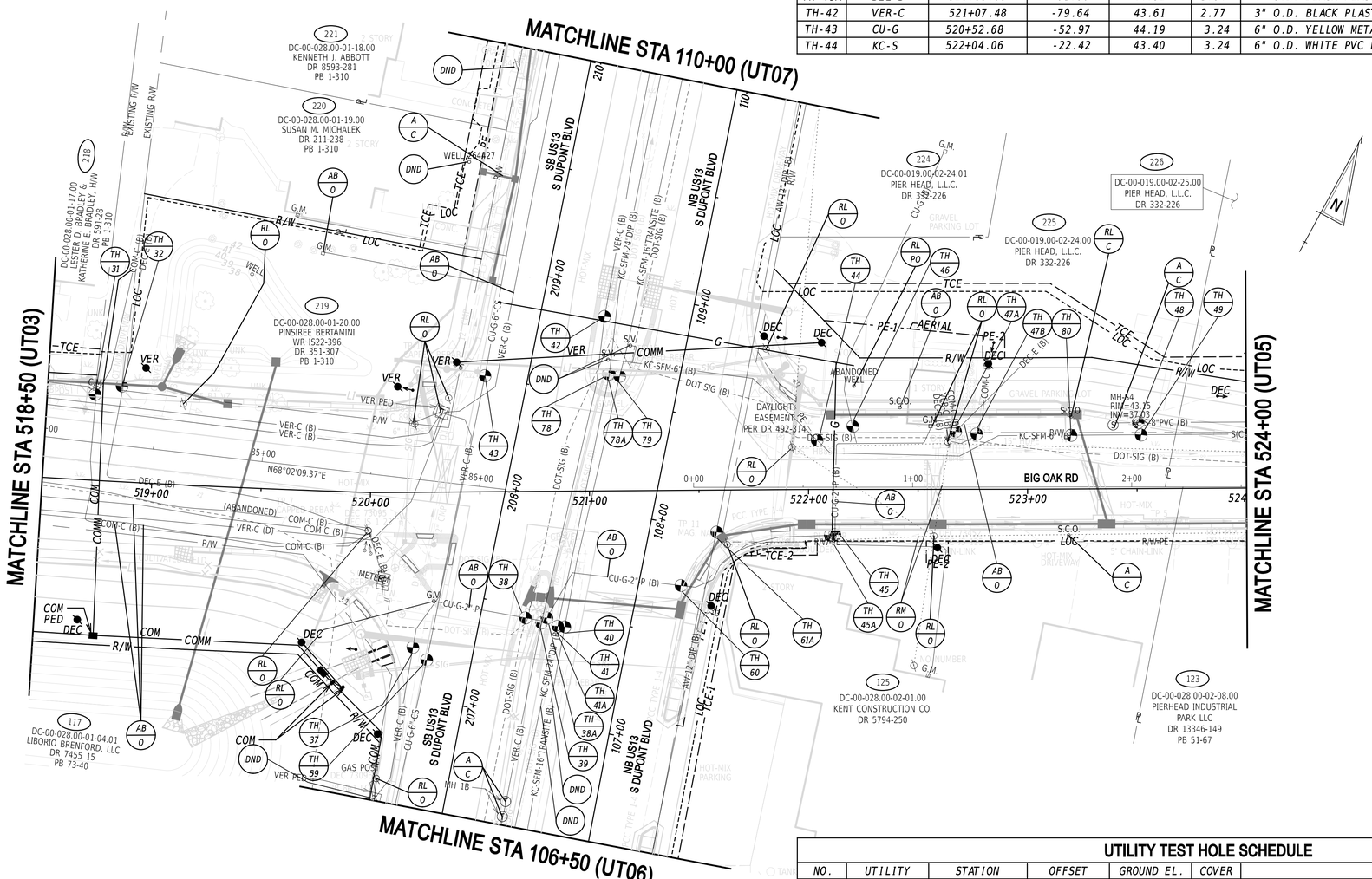
UTILITY RELOCATION PLAN

UT03
SECTION
AEC
SHEET NO.
70

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn

UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-31	COM-C	518+71.91	-39.18	43.01	0.99	1" BLACK DIRECT BURY CABLE TV COMMUNICATION
TH-32	DEC-E	518+84.08	-43.61	42.53	C-6'P-9	NUF-LOOKING FOR ELEC,DUG TRENCH,CLR TO 6'&PRO TO 9'COLLASPINGSAND
TH-37	VER-C	520+18.87	70.83	44.54	2.57	0.5" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATION
TH-38	CU-G	520+70.34	57.72	45.27	2.66	2" O.D. ORANGE PLASTIC PIPE - GAS
TH-38A	CU-G	520+80.14	57.83	44.40	3.76	2" O.D. ORANGE PLASTIC PIPE - GAS
TH-39	VER-C	520+77.59	60.10	44.46	2.75	2" O.D. BLACK PLASTIC CONDUIT COMMUNICATIONS
TH-40	KC-S	520+88.30	62.00	44.77	4.23	16" O.D. BLACK TRANSITE PIPE-SANTARY FORCE MAIN
TH-41	KC-S	520+85.05	61.66	44.32	4.02	24" O.D. BLACK DUCTILE IRON PIPE-SANITARY FORCE MAN
TH-41A	DEL-D	520+85.05	61.66	44.32	1.84	4" O.D. BLACK PLASTIC CONDUIT FIBER COMMUNICATION
TH-42	VER-C	521+07.48	-79.64	43.61	2.77	3" O.D. BLACK PLASTIC CONDUIT COMMUNICATIONS
TH-43	CU-G	520+52.68	-52.97	44.19	3.24	6" O.D. YELLOW METAL PIPE - GAS
TH-44	KC-S	522+04.06	-22.42	43.40	3.24	6" O.D. WHITE PVC PIPE - SANITARY FORCE MAIN



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-45	CU-G	522+12.03	20.58	44.30	2.34	2" O.D. YELLOW PLASTIC PIPE - GAS
TH-45A	CU-G	522+09.92	21.01	44.28	2.30	2" O.D. YELLOW PLASTIC PIPE - GAS
TH-46	CU-G	522+20.25	-28.79	42.21	1.74	1" O.D. YELLOW PLASTIC PIPE - GAS
TH-47A	DEC	522+67.19	-26.42	43.06	1.53	2" O.D. BLACK METAL CONDUIT - ELECTRIC
TH-47B	COM-C	522+76.78	-25.23	43.04	0.90	0.50" BLACK DIRECT BURY CABLE COMMUNICATIONS
TH-48	KC-S	523+50.68	-30.15	42.50	5.61	8" O.D. GREEN PVC PIPE - SANITARY SEWER
TH-49	KC-S	523+51.97	-24.49	42.51	2.83	6" O.D. WHITE PLASTIC PIPE - SANITARY FORCE MAIN
TH-59	VER-C	520+25.15	76.60	45.15	3.75	6" O.D. YELLOW METAL PIPE - GAS
TH-60	CU-G	521+41.47	43.36	44.84	4.67	2" O.D. ORANGE PLASTIC PIPE - GAS
TH-61A	AW-W	521+57.93	19.20	44.13	6.41	12" O.D. BLACK DUCTILE IRON PIPE - WATER
TH-78	KC-S	521+09.00	-53.36	43.77	4.33	24" BLACK DUCTILE IRON PIPE SANITARY FORCE MAIN
TH-78A	DEL-D	521+09.00	-53.36	43.77	2.62	4" BLACK PLASTIC CONDUIT COMMUNICATIONS FIBER
TH-79	KC-S	521+14.20	-52.35	43.76	4.94	16" GRAY TRANSITE (A/C) PIPE SANITARY FORCE MAIN
TH-80	KC-S	523+20.00	-24.50	42.72	3.13	6" WHITE PLASTIC PIPE SANITARY FORCE MAIN

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

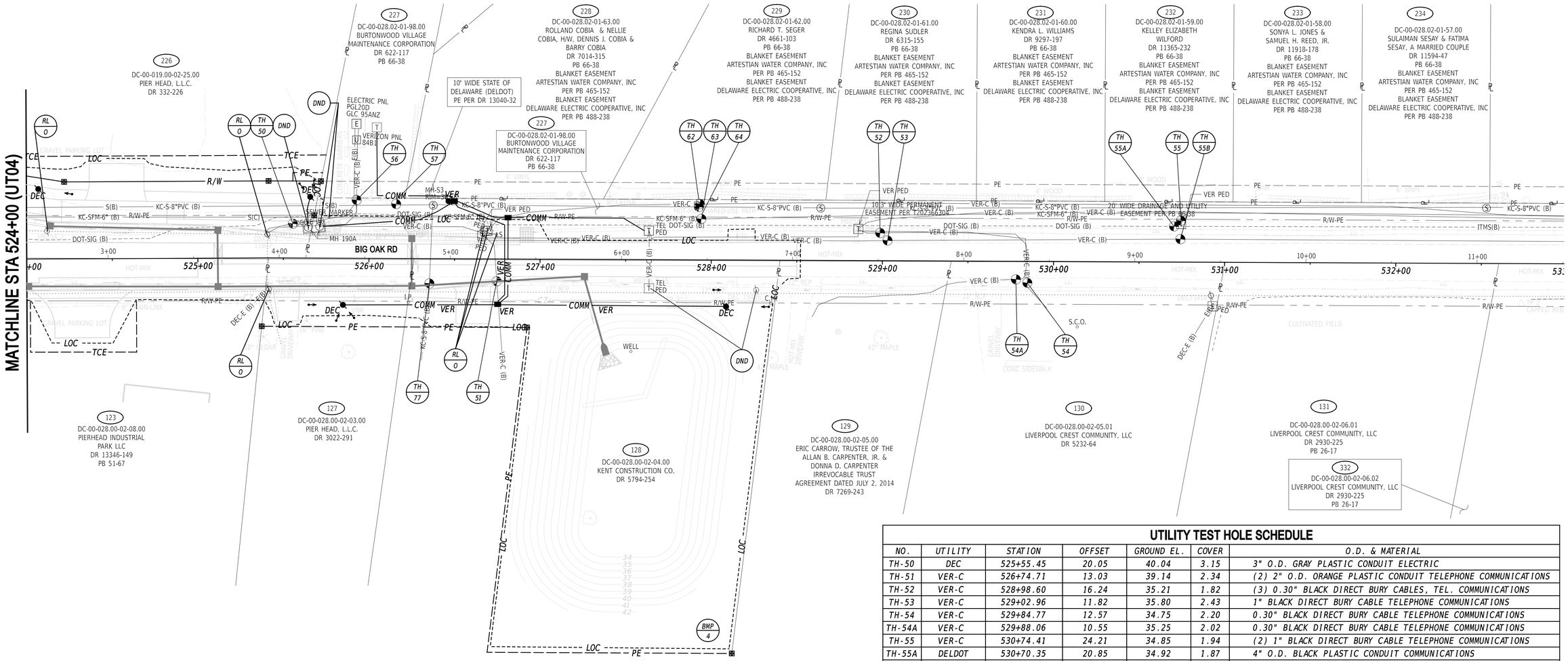
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

UTILITY RELOCATION PLAN

UT04
SECTION
AEC
SHEET NO.
71

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-50	DEC	525+55.45	20.05	40.04	3.15	3" O.D. GRAY PLASTIC CONDUIT ELECTRIC
TH-51	VER-C	526+74.71	13.03	39.14	2.34	(2) 2" O.D. ORANGE PLASTIC CONDUIT TELEPHONE COMMUNICATIONS
TH-52	VER-C	528+98.60	16.24	35.21	1.82	(3) 0.30" BLACK DIRECT BURY CABLES, TEL. COMMUNICATIONS
TH-53	VER-C	529+02.96	11.82	35.80	2.43	1" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS
TH-54	VER-C	529+84.77	12.57	34.75	2.20	0.30" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS
TH-54A	VER-C	529+88.06	10.55	35.25	2.02	0.30" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS
TH-55	VER-C	530+74.41	24.21	34.85	1.94	(2) 1" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS
TH-55A	DELDOT	530+70.35	20.85	34.92	1.87	4" O.D. BLACK PLASTIC CONDUIT COMMUNICATIONS
TH-55B	VER-C	530+74.10	13.39	34.01	2.40	0.50" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS
TH-56	VER-C	525+92.64	34.07	39.91	2.60	(7) 3" O.D. WHITE PLASTIC CONDUIT TELEPHONE COMMUNICATIONS
TH-57	VER-C	526+15.70	31.80	39.55	1.92	2" O.D. ORANGE PLASTIC CONDUIT COMMUNICATIONS
TH-62	VER-C	527+93.20	32.68	37.12	2.14	2" O.D. ORANGE PLASTIC CONDUIT COMMUNICATIONS
TH-63	KC-S	527+92.66	30.93	37.10	7.29	8" O.D. WHITE PVC PIPE - SANITARY SEWER
TH-64	KC-S	527+94.10	23.95	36.99	3.01	6" O.D. WHITE PLASTIC PIPE - SANITARY FORCE MAIN
TH-77	KC-S	526+35.40	14.50	39.55	8.76	8" GREEN PLASTIC PIPE - SANITARY SEWER

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

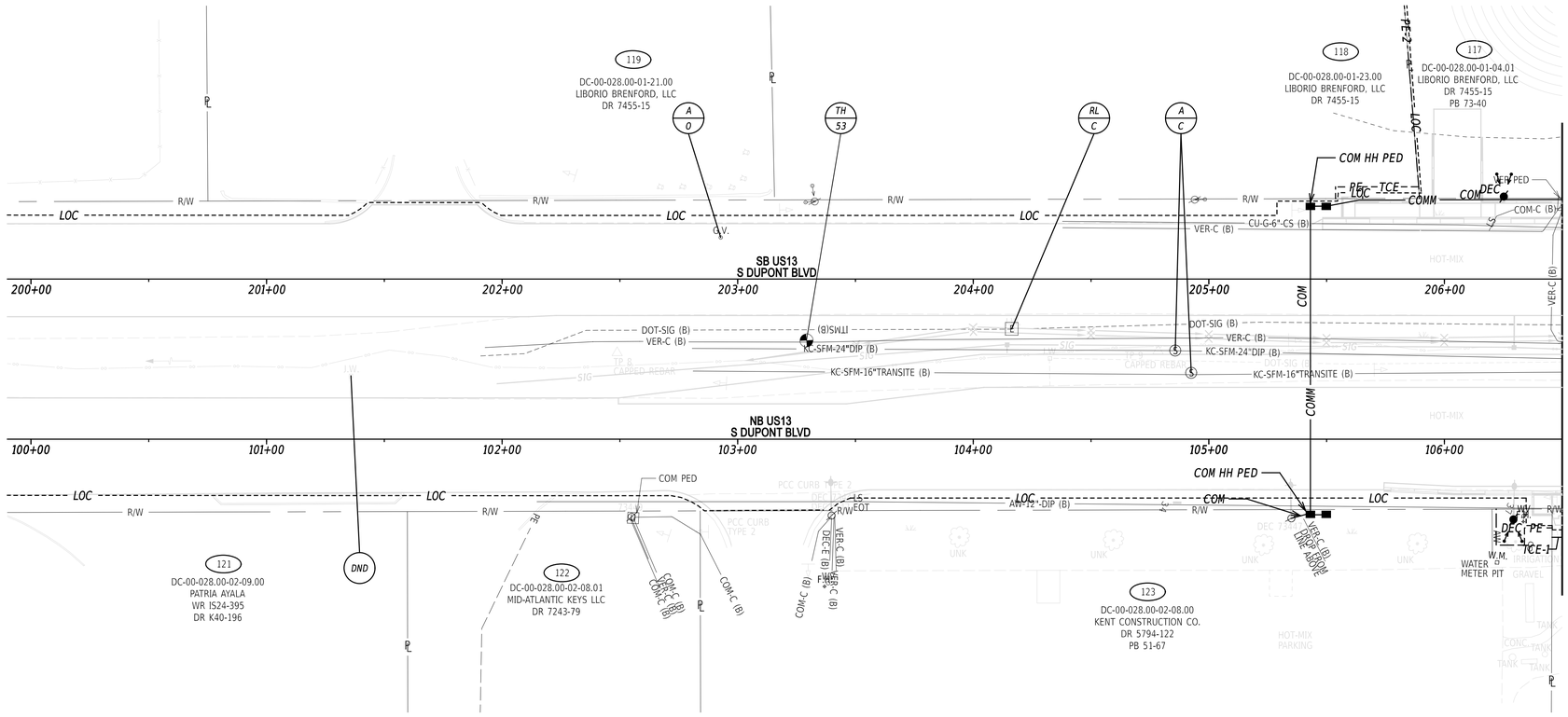
CONTRACT T202104203
COUNTY KENT
BRIDGE NO. N/A
DESIGNED BY: A. Malkin
CHECKED BY: J. Hofstee

UTILITY RELOCATION PLAN

UT05
SECTION AEC
SHEET NO. 72

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn



UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-53	VER-C	103+29.21	41.92	45.13	2.43	1" BLACK DIRECT BURY CABLE TELEPHONE COMMUNICATIONS

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60649749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn

AECOM

ADDENDA / REVISIONS

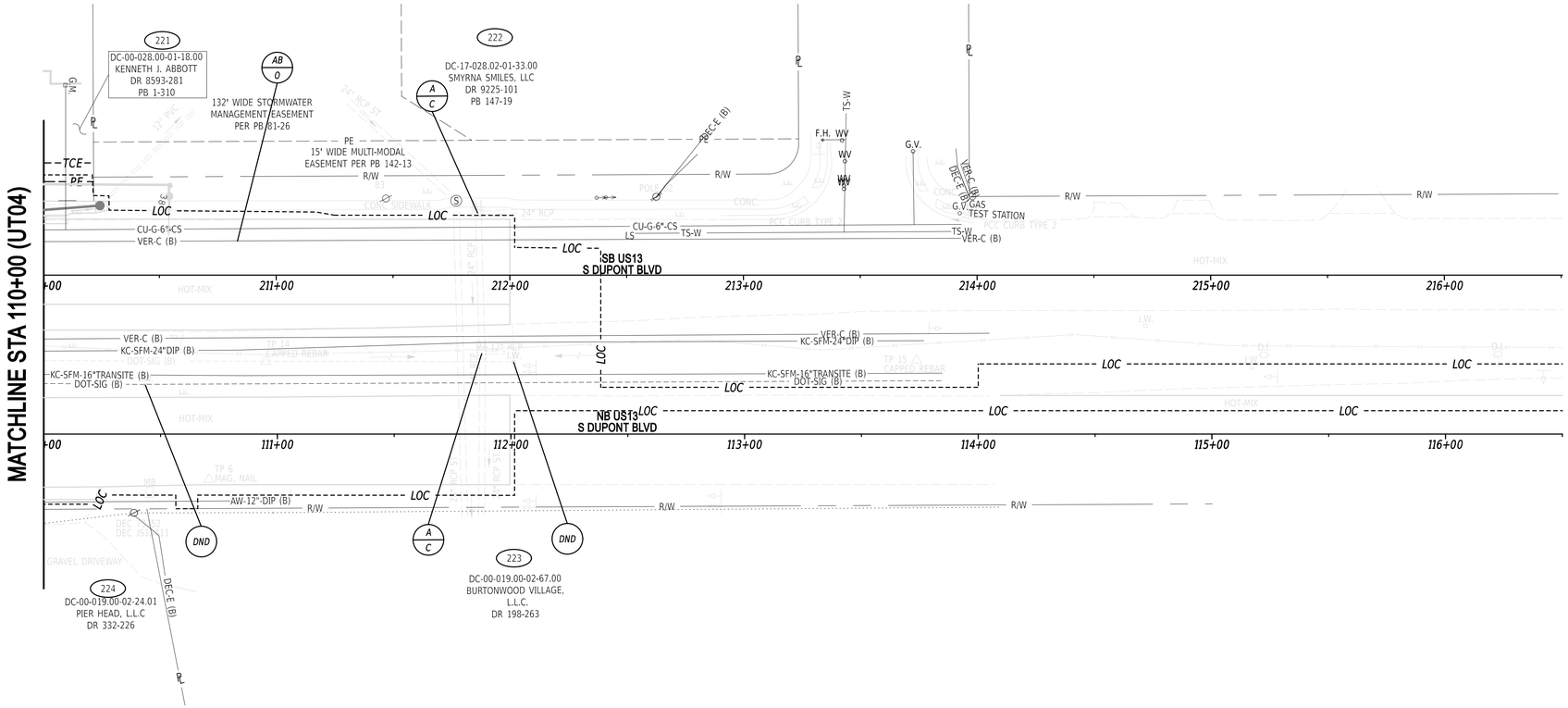
SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

UTILITY RELOCATION PLAN

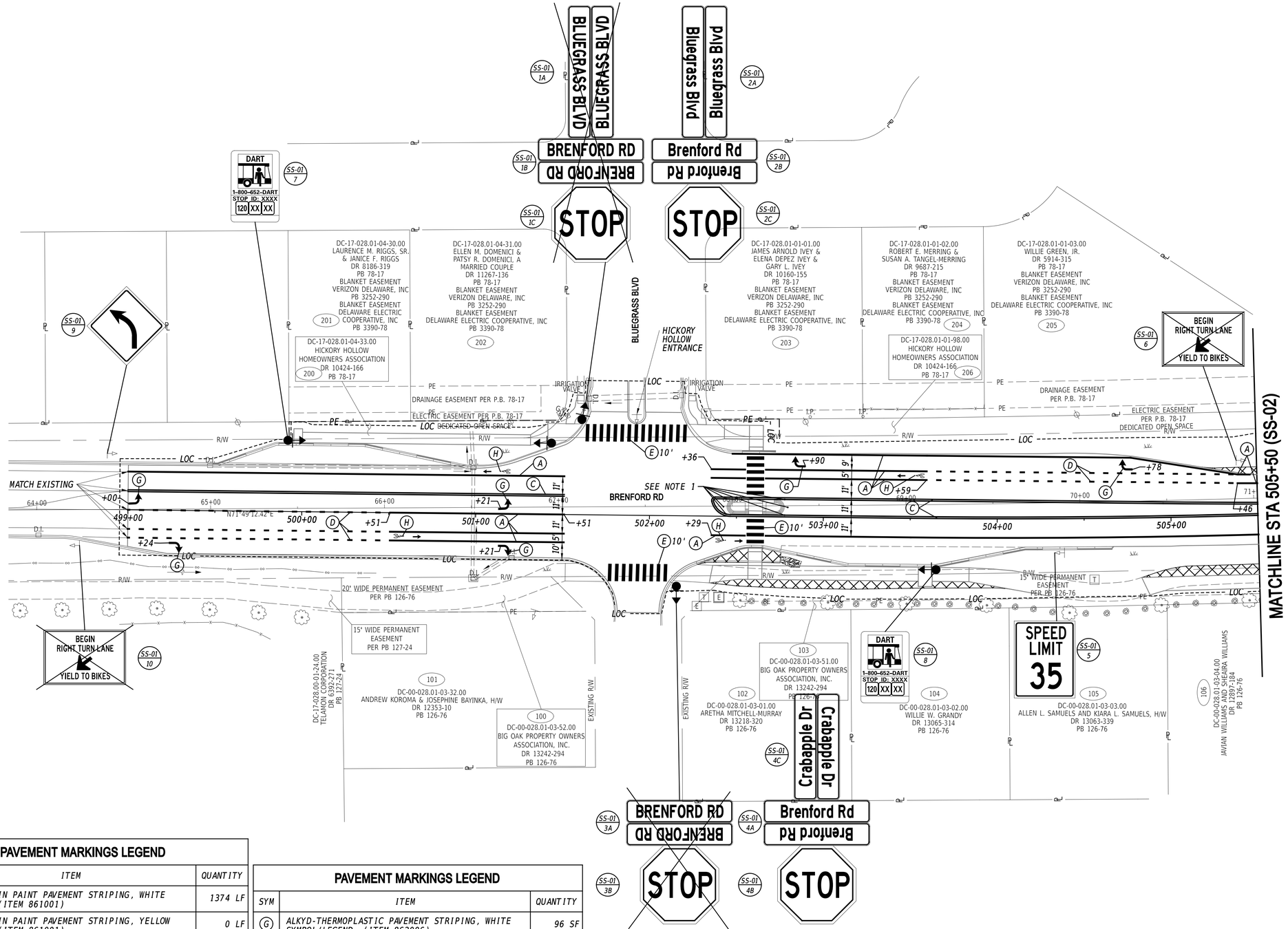
	UT06
SECTION	AEC
SHEET NO.	73



pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/UT.dgn

AECOM

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	BRIDGE NO. N/A	UTILITY RELOCATION PLAN	UT07 SECTION
				COUNTY KENT	DESIGNED BY: A. Malkin		AEC
					CHECKED BY: J. Hofstee		SHEET NO. 74



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	1374 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	0 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	884 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	810 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10' (862006)	680 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	96 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	4 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

NOTE

1. INSTALL SIX (6) ITEM 824003 FLEXIBLE DELINEATOR, PERMANENT AS SHOWN.

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

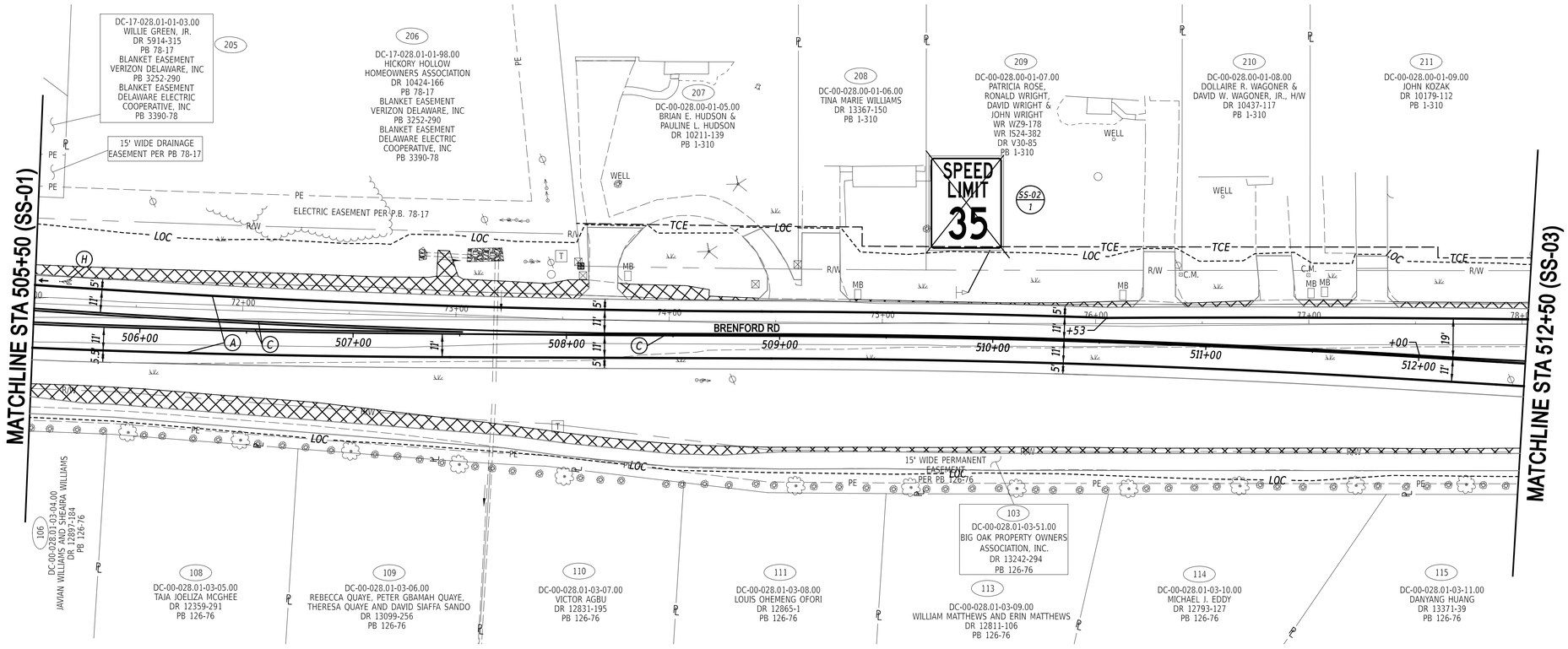
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

SIGNING, STRIPING AND CONDUIT PLAN

SS-01	
SECTION	AEC
SHEET NO.	75

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn



PAVEMENT MARKINGS LEGEND		
SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	1,401 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	0 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	902 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	0 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND		
SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	0 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	1 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

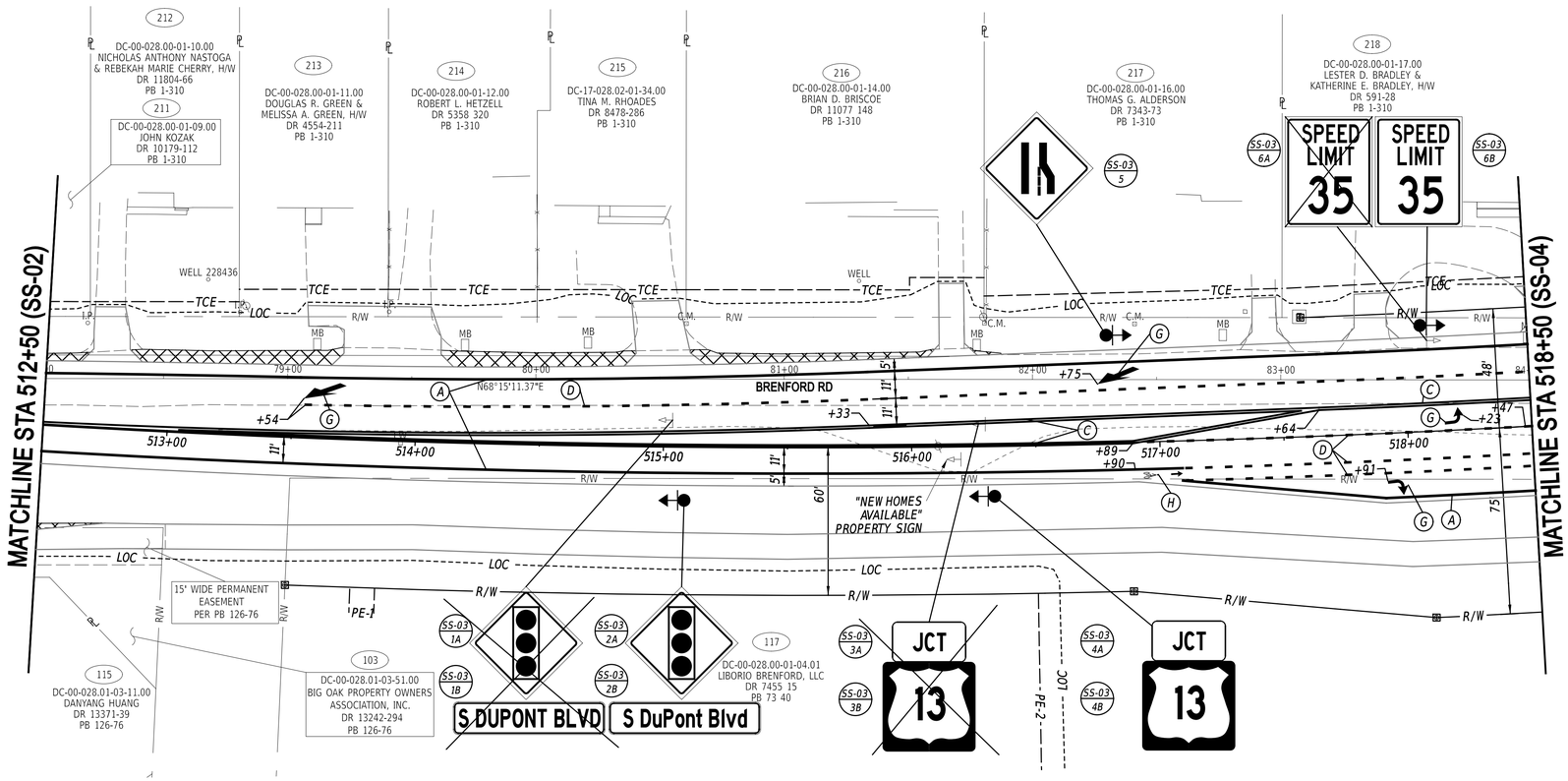
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

SIGNING, STRIPING AND CONDUIT PLAN

	SS-02
SECTION	AEC
SHEET NO.	76

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware\Documents\60648749-1-DelDOT_1977-TO-02_Brenford Rd\900-CAD GIS\910_CAD\10_REFERENCE\SS00.dgn



PAVEMENT MARKINGS LEGEND		
SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	1,200 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	0 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	1,055 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	938 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND		
SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	106 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	1 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

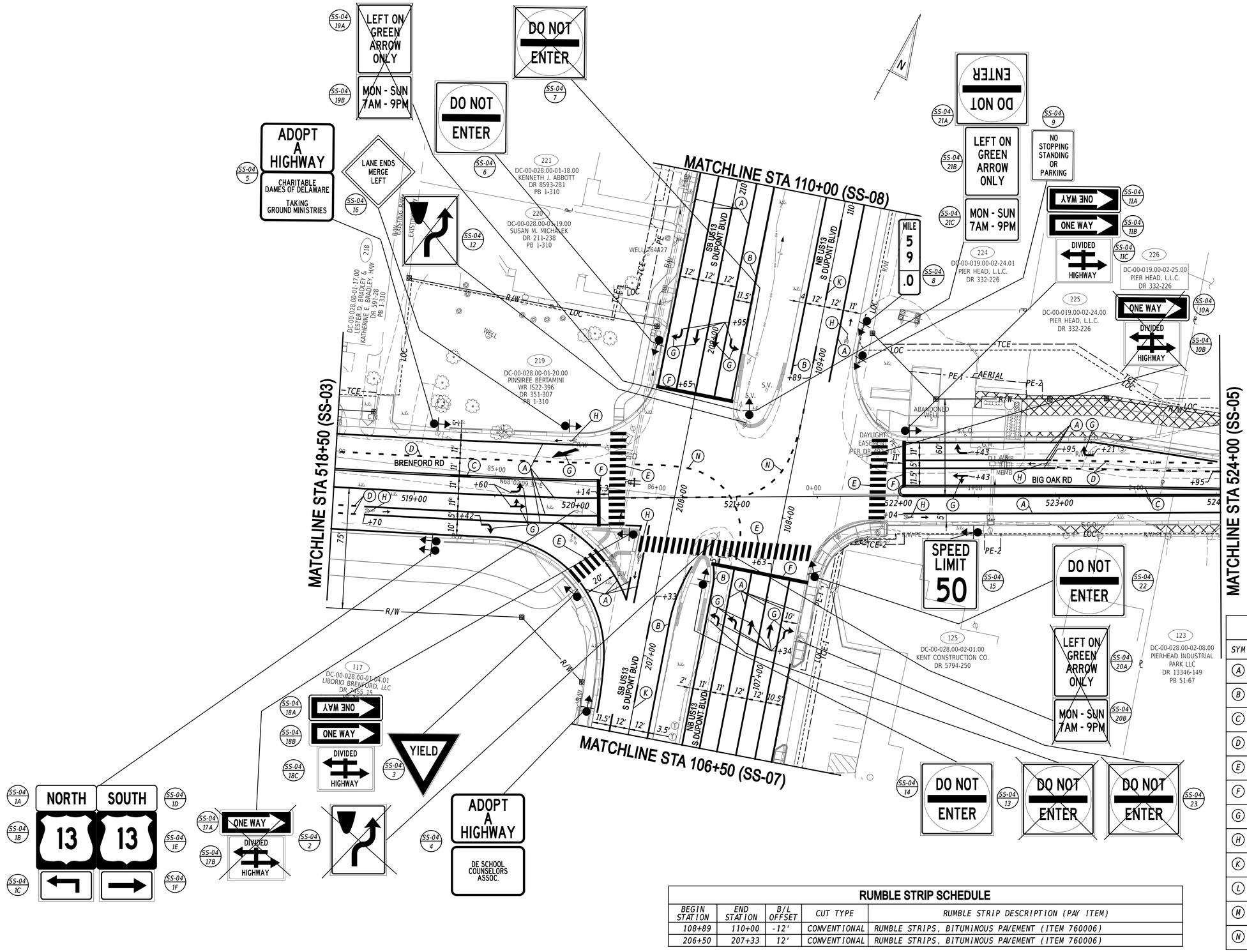
CONTRACT	T202104203
COUNTY	KENT
BRIDGE NO.	N/A
DESIGNED BY:	A. Malkin
CHECKED BY:	J. Hofstee

SIGNING, STRIPING AND CONDUIT PLAN

SS-03	
SECTION	AEC
SHEET NO.	77

AECOM

pw://aecom-nia-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn



RUMBLE STRIP SCHEDULE

BEGIN STATION	END STATION	B/L OFFSET	CUT TYPE	RUMBLE STRIP DESCRIPTION (PAY ITEM)
108+89	110+00	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
206+50	207+33	12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
(A)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	2,718 LF
(B)	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	475 LF
(C)	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	565 LF
(D)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	400 LF
(E)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	1240 SF
(F)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	163 SF
(G)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	293 SF
(H)	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	4 EACH
(K)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	112 LF
(L)	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
(M)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
(N)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	229 LF

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

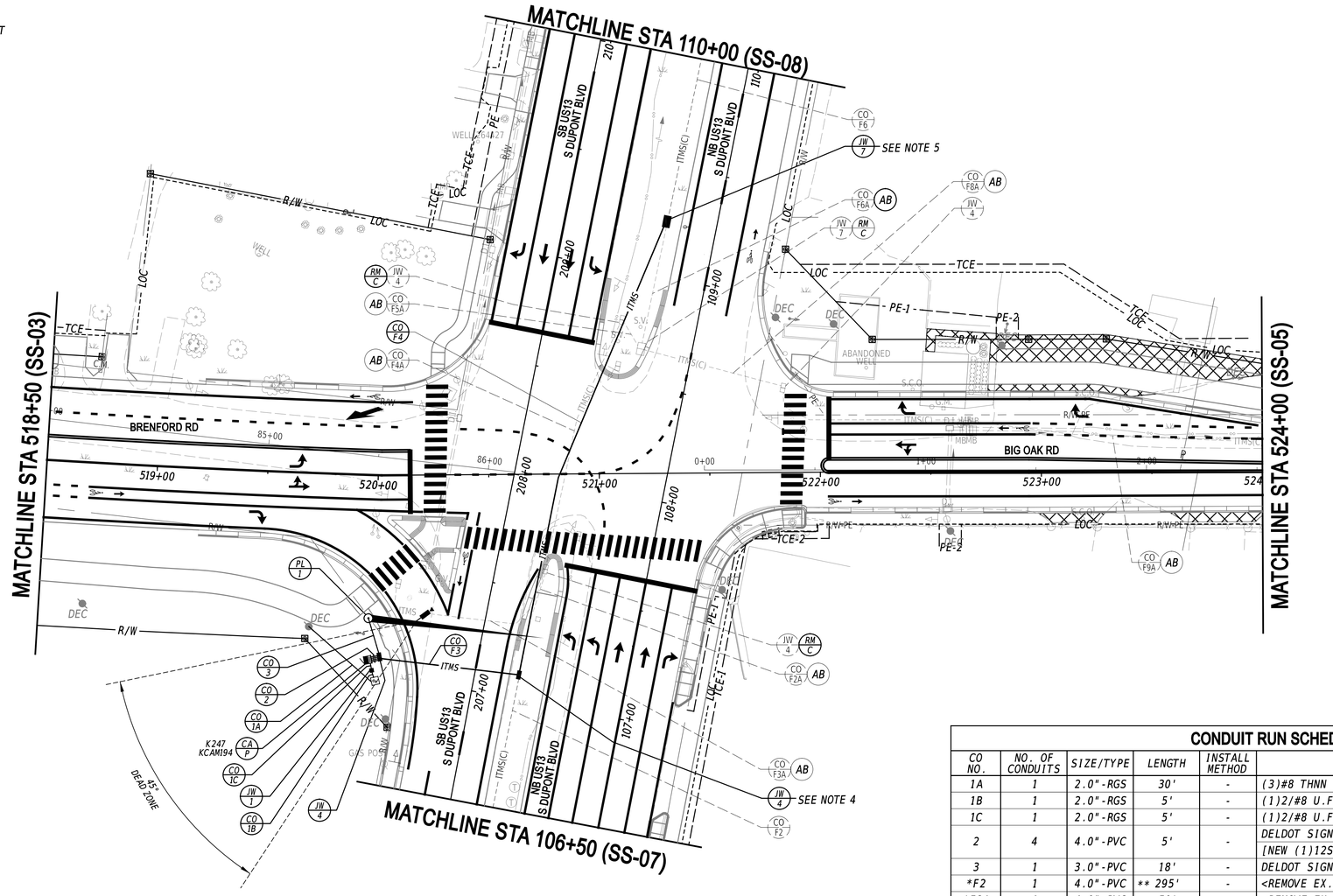
SS-04
SECTION AEC
SHEET NO. 78

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

NOTES:

1. *THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER WITH DELDOT OIT. CONTACT DENISE KSIAZEK (DELDOT) AT (302)-981-6464 A MINIMUM OF 10 BUSINESS DAYS PRIOR TO REQUIRED WORK.*
2. *DELDOT OIT CONTRACTOR SHALL PULL BACK AND COIL EXISTING FIBER PRIOR TO REMOVING THE EXISTING INFRASTRUCTURE OUT. CONTACT THE SIGNAL CONSTRUCTION MANAGER 10 BUSINESS DAYS PRIOR TO NEED OF ITS REMOVAL.*
3. *SIGNAL AND ITMS CONDUIT MAY RUN IN SAME TRENCH BUT SHOULD NOT RUN WITHIN THE SAME JUNCTION WELLS WITH THE EXCEPTION OF THE SIGNAL CABINET LOCATION.*
4. *THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 4 SO THAT IT INTERCEPTS EX. CONDUIT F2 AND PROPOSED CONDUITS F3 AND F4. THE REMAINING PORTION OF EX. CONDUIT F2A SHALL BE ABANDONED.*
5. *THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 7 SO THAT IT INTERCEPTS EX. CONDUIT F6 AND PROPOSED CONDUIT F4. THE REMAINING PORTION OF EX. CONDUIT F6A SHALL BE ABANDONED.*



ITMS LEGEND

PL X	EXISTING POLE IDENTIFIER (X = # OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)
CO X	*PROPOSED CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)*
JW X	*PROPOSED JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)*
CA X	*PROPOSED CABINET BASE IDENTIFIER (X = TYPE OF CABINET BASE)*
AB	*ABANDON*

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
1A	1	2.0"-RGS	30'	-	(3)#8 THNN - LINE SIDE
1B	1	2.0"-RGS	5'	-	(1)2/#8 U.F. W/GND - LOAD SIDE
1C	1	2.0"-RGS	5'	-	(1)2/#8 U.F. W/GND - LOAD SIDE
2	4	4.0"-PVC	5'	-	DELDOT SIGNAL CABLE, CAT5e COMM CABLE [NEW (1)12SM]
3	1	3.0"-PVC	18'	-	DELDOT SIGNAL CABLE, CAT5e COMM CABLE
*F2	1	4.0"-PVC	** 295'	-	<REMOVE EX. (1)48SM, (1)96SM> [NEW (1)48SM, (1)96SM]
*F2A	1	4.0"-PVC	50'	-	<REMOVE EX. (1)48SM, (1)96SM> AB
F3	1	4.0"-HDPE	62'	B	[NEW (1)12SM]
*F3A	1	4.0"-PVC	90'	-	<REMOVE EX. (1)12SM> AB
F4	1	4.0"-HDPE	215'	B	[NEW (1)12SM, (1)48SM, (1)96SM]
*F4A	1	4.0"-PVC	115'	-	<REMOVE EX. (1)12SM, (1)48SM, (1)96SM> AB
*F5A	1	4.0"-PVC	15'	-	<REMOVE EX. (1)12SM, (1)48SM, (1)96SM> AB
*F6	1	4.0"-PVC	** 120'	-	<REMOVE EX. (1)48SM, (1)144SM> [NEW (1)48SM, (1)144SM]
*F6A	1	4.0"-PVC	60'	-	<REMOVE EX. (1)48SM, (1)144SM> AB
*F8A	1	4.0"-PVC	65'	-	<REMOVE EX. (1)12SM> AB
*F9A	1	4.0"-PVC	** 920'	-	<REMOVE EX. (1)12SM> AB

** DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET*
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

SS-04A

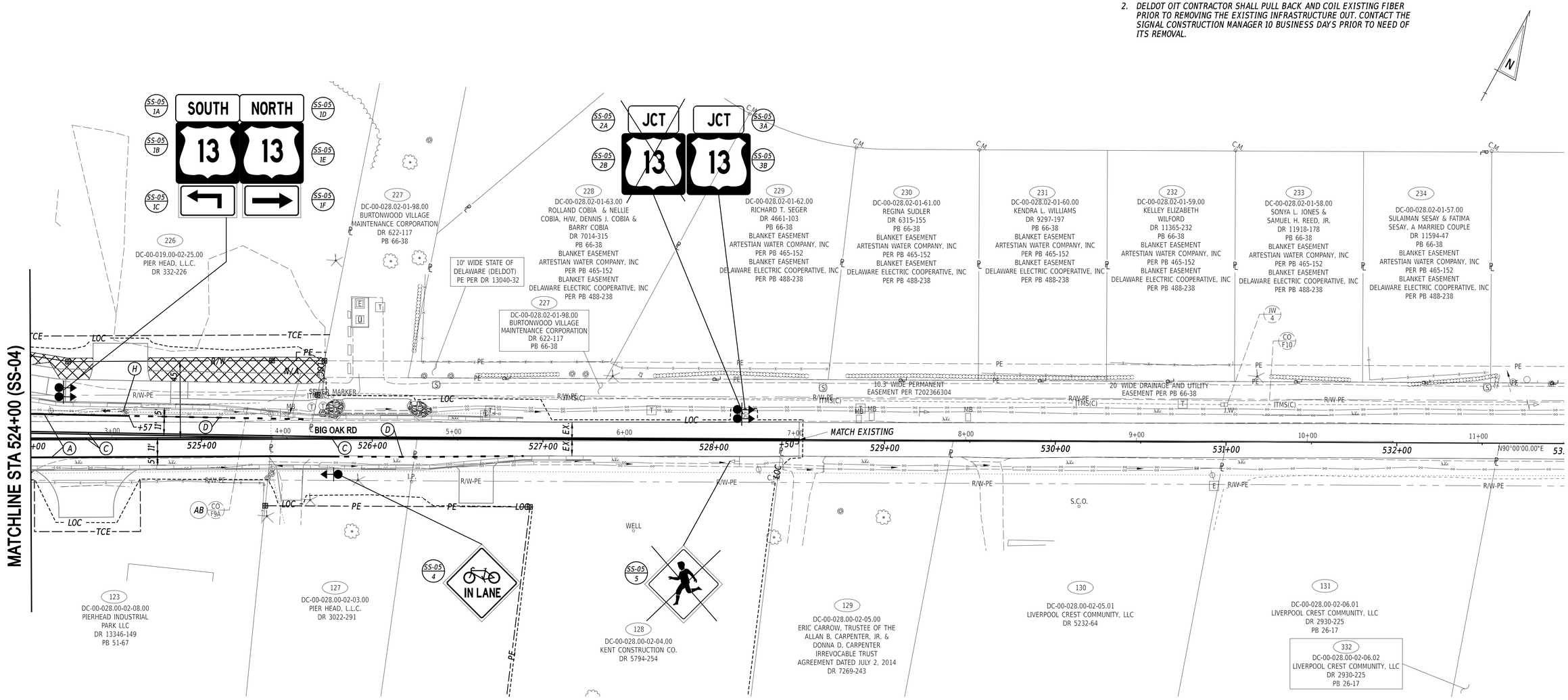
SECTION	SHEET NO.
AEC	79

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

NOTES:

1. *THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER WITH DELDOT OIT. CONTACT DENISE KSIAZEK (DELDOT) AT (302)-981-6464 A MINIMUM OF 10 BUSINESS DAYS PRIOR TO REQUIRED WORK.*
2. *DELDOT OIT CONTRACTOR SHALL PULL BACK AND COIL EXISTING FIBER PRIOR TO REMOVING THE EXISTING INFRASTRUCTURE OUT. CONTACT THE SIGNAL CONSTRUCTION MANAGER 10 BUSINESS DAYS PRIOR TO NEED OF ITS REMOVAL.*



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	237 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	0 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	591 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	210 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	0 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	1 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F9A	1	4.0"-PVC	** 920'	-	<REMOVE EX. (1)12SM> AB
*F10	1	4.0"-PVC	900'	-	EX. (1)12SM

** DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET*
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

ITMS LEGEND

JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)
CO X	*PROPOSED CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)*
JW X	*PROPOSED JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)*
AB	*ABANDON*

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

SS-05
SECTION
AEC
SHEET NO.
80

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFFERENCE/SS00.dgn

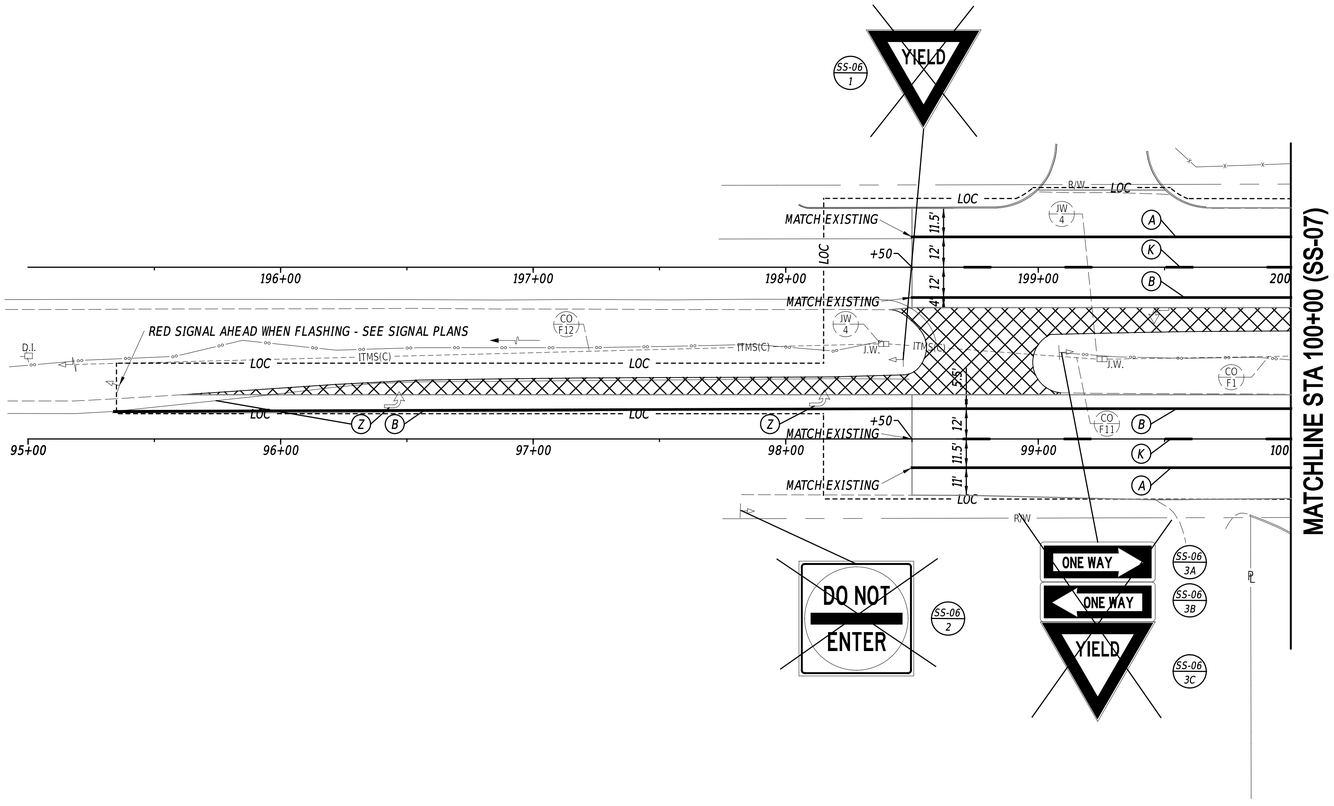
CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F1	1	4.0"-PVC	** 490'	-	EX. (1)48SM, (1)96SM
*F11	1	4.0"-PVC	84'	-	EX. (1)48SM, (1)96SM
*F12	1	4.0"-PVC	545'	-	EX. (1)48SM, (1)96SM

* DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

RUMBLE STRIP SCHEDULE

BEGIN STATION	END STATION	B/L OFFSET	CUT TYPE	RUMBLE STRIP DESCRIPTION (PAY ITEM)
98+50	99+30	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
103+60	104+80	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
98+50	102+20	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
198+50	206+50	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
199+85	201+05	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
202+50	206+50	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	300 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	616 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	0 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	0 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	0 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	0 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	300 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

ITMS LEGEND

JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
Z	PAVEMENT MARKING, REMOVAL, (ITEM 868001)	60 SF

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

SS-06
SECTION
AEC
SHEET NO.
81

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F1	1	4.0"-PVC	490'	-	EX. (1)48SM, (1)96SM
*F2	1	4.0"-PVC	** 295'	-	<REMOVE EX. (1)48SM, (1)96SM> [NEW (1)48SM, (1)96SM]

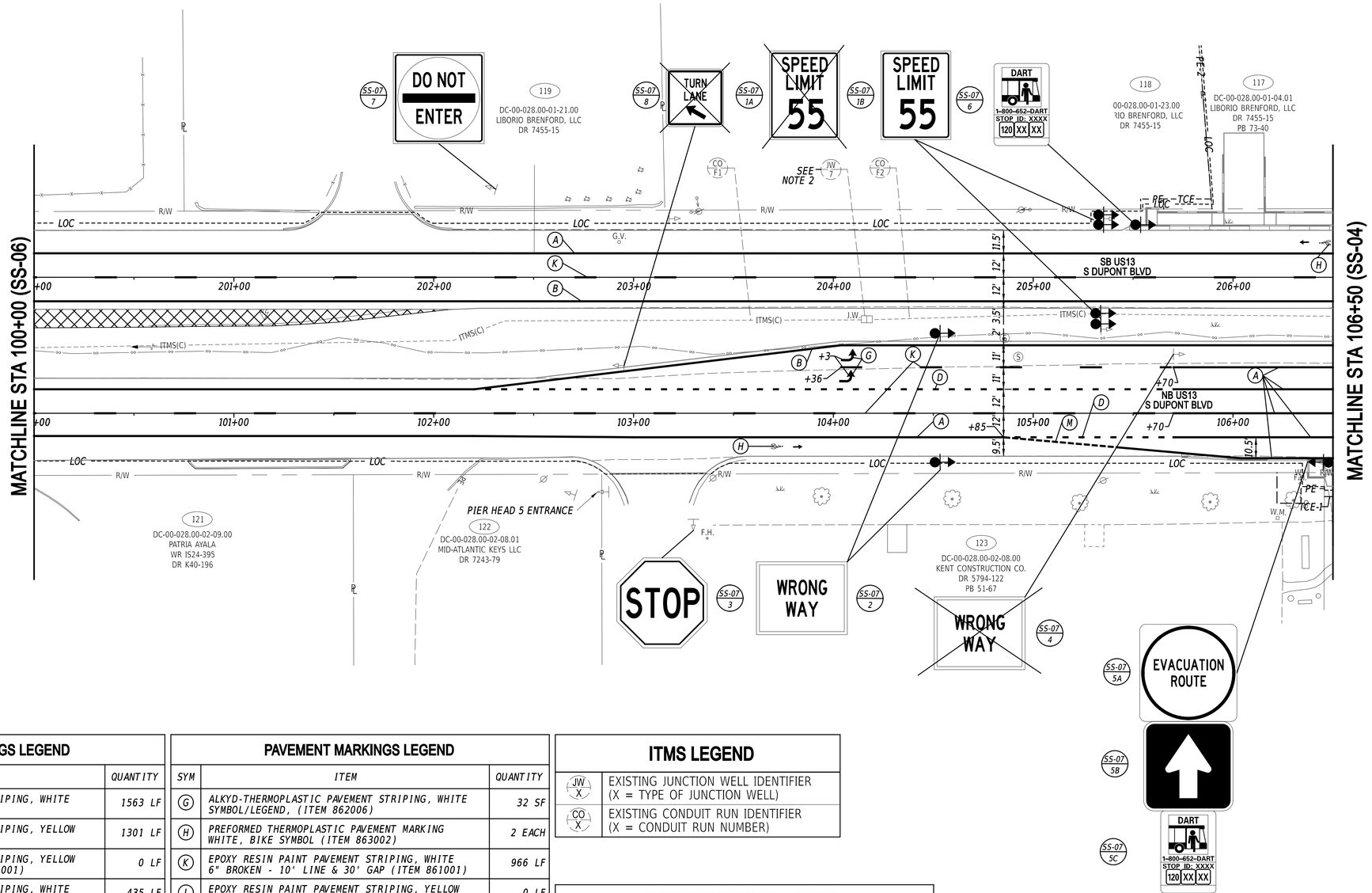
* DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER WITH DELDOT OIT. CONTACT DENISE KSIAZEK (DELDOT) AT (302)-981-6464 A MINIMUM OF 10 BUSINESS DAYS PRIOR TO REQUIRED WORK.
2. DELDOT OIT CONTRACTOR SHALL PULL BACK AND COIL EXISTING FIBER PRIOR TO REMOVING THE EXISTING INFRASTRUCTURE OUT. CONTACT THE SIGNAL CONSTRUCTION MANAGER 10 BUSINESS DAYS PRIOR TO NEED OF ITS REMOVAL.
3. SIGNAL AND ITMS CONDUIT MAY RUN IN SAME TRENCH BUT SHOULD NOT RUN WITHIN THE SAME JUNCTION WELLS WITH THE EXCEPTION OF THE SIGNAL CABINET LOCATION.

RUMBLE STRIP SCHEDULE

BEGIN STATION	END STATION	B/L OFFSET	CUT TYPE	RUMBLE STRIP DESCRIPTION (PAY ITEM)
98+50	99+30	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
103+60	104+80	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
98+50	102+20	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
198+50	206+50	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
199+85	201+05	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)
202+50	206+50	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	1563 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	1301 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	0 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	435 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	32 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	2 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	966 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	57 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

ITMS LEGEND

JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
Z	PAVEMENT MARKING, REMOVAL, (ITEM 868001)	0 SF

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

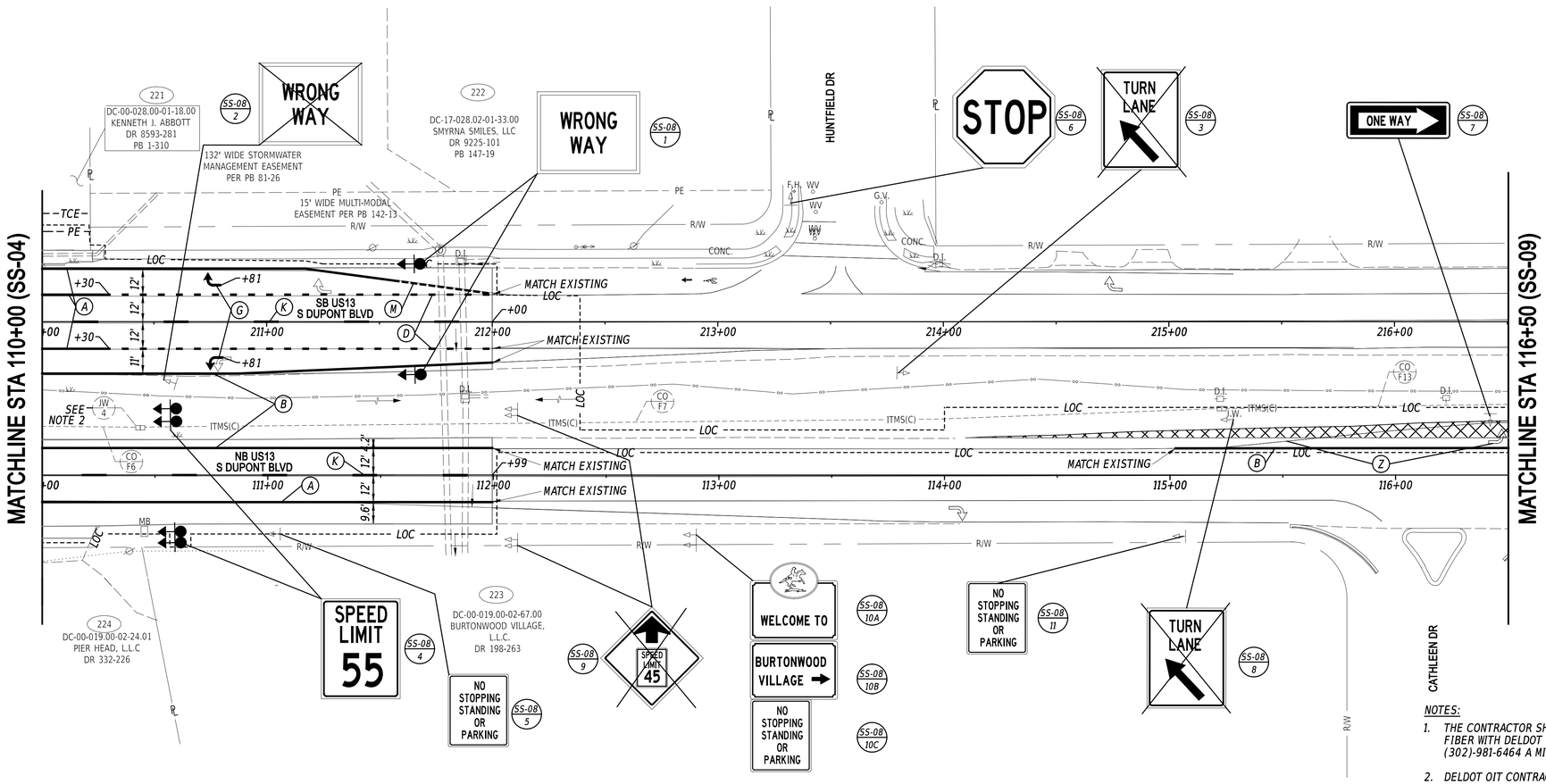
CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

SS-07 | SECTION | AEC | SHEET NO. | 82

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn



NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER WITH DELDOT OIT. CONTACT DENISE KSIAZEK (DELDOT) AT (302)-981-6464 A MINIMUM OF 10 BUSINESS DAYS PRIOR TO REQUIRED WORK.
2. DELDOT OIT CONTRACTOR SHALL PULL BACK AND COIL EXISTING FIBER PRIOR TO REMOVING THE EXISTING INFRASTRUCTURE OUT. CONTACT THE SIGNAL CONSTRUCTION MANAGER 10 BUSINESS DAYS PRIOR TO NEED OF ITS REMOVAL.
3. SIGNAL AND ITMS CONDUIT MAY RUN IN SAME TRENCH BUT SHOULD NOT RUN WITHIN THE SAME JUNCTION WELLS WITH THE EXCEPTION OF THE SIGNAL CABINET LOCATION.

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	419 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	547 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	0 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	382 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	31 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	0 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	400 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

ITMS LEGEND

JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
Z	PAVEMENT MARKING, REMOVAL, (ITEM 868001)	32 SF

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F6	1	4.0"-PVC	** 120'	-	<REMOVE EX. (1)48SM, (1)144SM> [NEW (1)48SM, (1)144SM]
*F7	1	4.0"-PVC	480'	-	EX. (1)48SM, (1)144SM
*F13	1	4.0"-PVC	** 408'	-	EX. (1)48SM, (1)144SM

* DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

RUMBLE STRIP SCHEDULE

BEGIN STATION	END STATION	B/L OFFSET	CUT TYPE	RUMBLE STRIP DESCRIPTION (PAY ITEM)
110+00	111+99	-12'	CONVENTIONAL	RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760006)
110+39	111+99	12'	SHALLOW	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT (ITEM 760002)

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	BRIDGE NO.	N/A
COUNTY	KENT	DESIGNED BY:	A. Malkin
		CHECKED BY:	J. Hofstee

SIGNING, STRIPING AND CONDUIT PLAN

	SS-08
SECTION	AEC
SHEET NO.	83

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

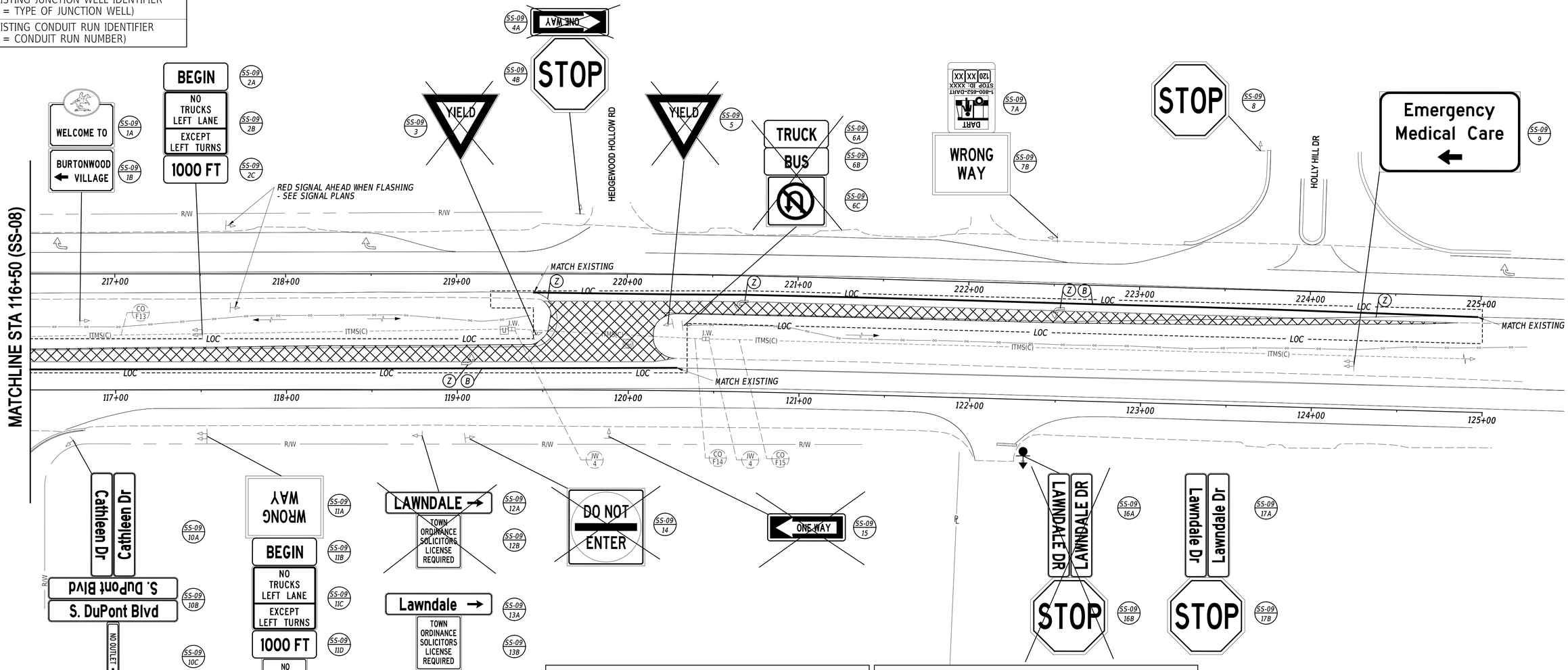
CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F13	1	4.0"-PVC	** 408'	-	EX. (1)48SM, (1)144SM
*F14	1	4.0"-PVC	112'	-	EX. (1)48SM, (1)144SM
*F15	1	4.0"-PVC	1500'	-	EX. (1)48SM, (1)144SM

* DENOTES EXISTING CONDUIT RUN, ** CONDUIT CONTINUES ON ADJACENT SHEET
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON, SM=SINGLE-MODE

ITMS LEGEND

JW X	EXISTING JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
CO X	EXISTING CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)



PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" SOLID (ITEM 861001)	0 LF
B	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID (ITEM 861001)	930 LF
C	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" SOLID DOUBLE LINE (ITEM 861001)	0 LF
D	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 861001)	0 LF
E	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID - 10'(ITEM 862006)	0 SF
F	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 16" SOLID (ITEM 862006)	0 SF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
G	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 862006)	0 SF
H	PREFORMED THERMOPLASTIC PAVEMENT MARKING WHITE, BIKE SYMBOL (ITEM 863002)	0 EACH
K	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
L	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 6" BROKEN - 10' LINE & 30' GAP (ITEM 861001)	0 LF
M	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 2' GAP (ITEM 861001)	0 LF
N	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 6" DOTTED - 2' LINE & 6' GAP (ITEM 862002)	0 LF

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
Z	PAVEMENT MARKING, REMOVAL, (ITEM 868001)	73 SF

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	BRIDGE NO.	N/A
T202104203	DESIGNED BY:	A. Malkin
COUNTY	CHECKED BY:	J. Hofstee
KENT		

SIGNING, STRIPING AND CONDUIT PLAN

SS-09 | SECTION AEC | SHEET NO. 84

AECOM

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

PERMANENT SIGN SCHEDULE - ROADWAY

SHEET NO.	PLAN IDENTIFIER	SIGN DESIGNATION	QTY.	DESCRIPTION	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	X13 / ITEM 818001 SUPPLY OF ROADSIDE FLAT SHEET ALUMINUM, TYPE IV, RETROREFLECTIVE SHEETING (SF)	X14 / ITEM 818003 SUPPLY OF ROADSIDE FLAT SHEET ALUMINUM, TYPE XI, RETROREFLECTIVE SHEETING (SF)	X15 / ITEM 819512 SIGN POST REFLECTIVE PANEL (EA)	ITEM 819003 INSTALL OR REMOVE TRAFFIC SIGNS (EACH)			ITEM 819001 PROVIDE GALVANIZED TELESCOPING SIGN POST (EACH) TO BE USED FOR NEW SIGN POSTS, CONTRACTOR TO DETERMINE LENGTH	ITEM 819002 INSTALL OR REMOVE GALVANIZED TELESCOPING SIGN POST (EACH)			POST INSTALLATION TYPE	ITEM 819010 4" HOLE, 0-6" (EACH)	ITEM 819011 4" HOLE, >6" (EACH)	SIGN DISPOSITION	X14A FLAT SHEET ALUMINUM SIGN PANELS (TYPE XI SHEETING) - SIGNS ON POLES, SPAN WIRES, MAST ARMS (TRAFFIC SUPPLY)	ITEM 823003 REMOVAL OF SIGN ON SPAN WIRE OR MAST ARM (EA) TRAFFIC CONTRACTOR ITEM EXCEPT FOR PILOT PROJECTS	ITEM 823001 INSTALLATION OF SIGN ON SPAN WIRE OR MAST ARM (SF) TRAFFIC CONTRACTOR ITEM EXCEPT FOR PILOT PROJECTS	REMARKS
										SIGN DISPOSITION	REMOVE	INSTALL		SIGN POST DISPOSITION	REMOVE	INSTALL								
SS-01	1A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMOVE	1			REMOVE	1		SOIL							"BLUEGRASS BLVD"
SS-01	1B	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	37	8				REMOVE	1			REMOVE			SOIL							"BRENFORD RD"
SS-01	1C	R1-1(36)	1	STOP	36	36				REMOVE	1			REMOVE			SOIL							
SS-01	2A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			NEW W/ POST		1	1	NEW		1	SOIL							"Bluegrass Blvd" Highway Gothic C 4" Street Name, Highway Gothic C 3" Street Type, Normal Kerning
SS-01	2B	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			ADD TO ASSEMBLY		1					SOIL							"Brenford Rd" Highway Gothic C 4" Street Name, Highway Gothic C 3" Street Type, Normal Kerning
SS-01	2C	R1-1(36)	1	STOP	36	36		7.5		ADD TO ASSEMBLY		1					SOIL							
SS-01	3A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMOVE	1			REMOVE			SOIL							"BRENFORD RD"
SS-01	3B	R1-1(36)	1	STOP	36	36				REMOVE	1			REMOVE			SOIL							
SS-01	4A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			NEW W/ POST		1	1	NEW		1	SOIL							"Brenford Rd" Highway Gothic C 4" Street Name, Highway Gothic C 3" Street Type, Normal Kerning
SS-01	4B	R1-1(36)	1	STOP	36	36		7.5		ADD TO ASSEMBLY		1					SOIL							
SS-01	4C	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			ADD TO ASSEMBLY		1												"Crabapple Dr" Highway Gothic C 4" Street Name, Highway Gothic C 3" Street Type, Normal Kerning
SS-01	5	R2-1-35(30)	1	SPEED LIMIT (35 MPH - 30x36)	30	36				REMAIN														
SS-01	6	R4-4	1	BEGIN RIGHT TURN LANE YIELD TO BIKES	36	30				REMOVE	1			REMOVE	1									
SS-01	7	D4-3-DE	1	BUS STOP (REQUESTS FOR FABRICATION THRU DART TRANSIT AT 302-576-6132)	12	18				NEW W/ POST		1	1	NEW		1	SOIL							
SS-01	8	D4-3-DE	1	BUS STOP (REQUESTS FOR FABRICATION THRU DART TRANSIT AT 302-576-6132)	12	18				NEW W/ POST		1	1	NEW		1	SOIL							
SS-01	9	W1-2 L_FY(36)	1	CURVE (Left) - 36x36 (Fluorescent Yellow)	36	36				REMAIN														
SS-01	10	R4-4	1	BEGIN RIGHT TURN LANE YIELD TO BIKES	36	30				REMOVE	1													
SS-02	1	R2-1-35(30)	1	SPEED LIMIT (35 MPH - 30x36)	30	36				REMOVE	1			REMOVE	1									
SS-03	1A	W3-3(30)	1	SIGNAL AHEAD (Symbol) - 30x30	30	30				REMOVE	1			REMOVE	1									
SS-03	1B	W16-8P	1	ADVANCE STREET NAME (1 - line plaque)	36	9				REMOVE	1			REMOVE										"S. DUPONT BLVD"
SS-03	2A	W3-3(36)	1	SIGNAL AHEAD (Symbol) - 36x36	36	36	9.0			NEW W/ POST		1	1	NEW		1	SOIL							
SS-03	2B	W16-8P	1	ADVANCE STREET NAME (1 - line plaque)	36	9	2.3			ADD TO ASSEMBLY		1												"S. DuPont Blvd" Highway Gothic C 4" Street Name and Street Type, Normal Kerning
SS-03	3A	M2-1(21)	1	JUNCTION - 21x15	21	15				REMOVE	1			REMOVE	1									
SS-03	3B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24				REMOVE	1			REMOVE										US 13
SS-03	4A	M2-1(21)	1	JUNCTION - 21x15	21	15	2.2			NEW W/ POST		1	1	NEW		1	SOIL							
SS-03	4B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1												US 13
SS-03	5	W4-2 R(36)	1	LANE ENDS (Right) - 36x36	36	36	9.0			NEW W/ POST		1	1	NEW		1	SOIL							
SS-03	6A	R2-1-35(30)	1	SPEED LIMIT (35 MPH - 30x36)	30	36				REMOVE	1			REMOVE	1									
SS-03	6B		1		30	36				NEW W/ POST		1	1	NEW		1	SOIL							
SS-04	1A	M3-1(36)	1	CARDINAL DIRECTION - NORTH - 36x18	36	18	4.5			NEW W/ POST W/ POST		1	2	NEW		2	SOIL				4.5			
SS-04	1B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1												US 13
SS-04	1C	M5-1 L	1	ADVANCE TURN ARROW (Left - 90)	21	15	2.2			ADD TO ASSEMBLY		1												
SS-04	1D	M3-3(36)	1	CARDINAL DIRECTION - SOUTH - 36x18	36	18	4.5			ADD TO ASSEMBLY		1												
SS-04	1E	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1												US 13
SS-04	1F	M5-1 R(21)	1	DIRECTIONAL ARROW (Right) - 21x15	21	15	2.2			ADD TO ASSEMBLY		1												
SS-04	2	R4-7(36)	1	KEEP RIGHT (Symbol) - 36x48	36	48				REMOVE	1			REMOVE	2									
SS-04	3	R1-2(36)	1	YIELD	36	36		3.9		NEW W/ POST		1	1	NEW		1	SOIL							
SS-04	4	D14-3-DE	1	ADOPT A HIGHWAY	24	N/A				RENEW W/ POST	2	2	1	NEW		1	SOIL							DE SCHOOL COUNCELORS ASSOC
SS-04	5	D14-3-DE	1	ADOPT A HIGHWAY	24	N/A				RENEW W/ POST	2	2	1	NEW		1	SOIL							ON NEW POST "CHARITABLE DAMES OF DELAWARE"
SS-04	6	R5-1(36)	1	DO NOT ENTER - 36x36	36	36		9.0		RENEW W/ POST	1	1	1	NEW		1	SOIL				9.0			ON NEW POST
SS-04	7	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMOVE	1			REMOVE	1									
SS-04	8	D10-2a(10)	1	INTERMEDIATE REFERENCE LOCATION (2- Digit) - 10x36	10	36	2.5			RENEW W/ POST	1	1	1	NEW		1	SOIL				2.5			59.0 MILES
SS-04	9	R7-4-DE(18)	1	NO STOPPING, STANDING, OR PARKING - 18x24	18	24	3.0			RENEW W/ POST	1	1	1	NEW		1	SOIL				3.0			
SS-04	10A	R6-1 L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12				REMOVE	1			REMOVE	1									
SS-04	10B	R6-3(30)	1	DIVIDED HIGHWAY CROSSING (4 - Legged Intersection) - 30x24	30	24				REMOVE	1			REMOVE	1									
SS-04	11A	R6-1 L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12	3.0			NEW W/ POST		1	1	NEW		1	SOIL							
SS-04	11B	R6-1 R(36)	1	ONE WAY (ENCLOSED IN RIGHT ARROW) - 36x12	36	12	3.0			ADD TO ASSEMBLY		1												
SS-04	11C	R6-3(30)	1	DIVIDED HIGHWAY CROSSING (4 - Legged Intersection) - 30x24	30	24	5.0			ADD TO ASSEMBLY		1												
SS-04	12	R4-7(36)	1	KEEP RIGHT (Symbol) - 36x48	36	48				REMOVE	1			REMOVE	2									
SS-04	13	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMOVE	1			REMOVE	1									
SS-04	14	R5-1(36)	1	DO NOT ENTER - 36x36	36	36		9.0		NEW W/ POST W/ POST		1	2	NEW		2	NEW CONCRETE				9.0			
SS-04	15	R2-1-50(30)	1	SPEED LIMIT (50 MPH - 30x36)	30	36	7.5			RENEW W/ POST	1	1	1	NEW		1	SOIL				7.5			
SS-04	16	W9-2 L(36)	1	LANE ENDS MERGE LEFT - 36x36	36	36	9.0			NEW W/ POST		1	1	NEW		1	SOIL							
SS-04	17A	R6-1 R(36)	1	ONE WAY (ENCLOSED IN RIGHT ARROW) - 36x12	36	12				REMOVE	1			REMOVE	1									
SS-04	17B	R6-3(30)	1	DIVIDED HIGHWAY CROSSING (4 - Legged Intersection) - 30x24	30	24				REMOVE	1			REMOVE	1									
SS-04	18A	R6-1 L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12	3.0			NEW W/ POST		1	1	NEW		1	NEW CONCRETE							
SS-04	18B	R6-1 R(36)	1	ONE WAY (ENCLOSED IN RIGHT ARROW) - 36x12	36	12	3.0			ADD TO ASSEMBLY		1												
SS-04	18C	R6-3(30)	1	DIVIDED HIGHWAY CROSSING (4 - Legged Intersection) - 30x24	30	24	5.0			ADD TO ASSEMBLY		1												
SS-04	19A	R10-5(30)	1	LEFT ON GREEN ARROW ONLY - 30x36	30	36				REMOVE	1			REMOVE	1									
SS-04	19B	R10-20aP	1	MON - FRI, XAM-XAM, XPM-XPM (plaque)	24	24				REMOVE	1			REMOVE										
SS-04	20A	R10-5(30)	1	LEFT ON GREEN ARROW ONLY - 30x36	30	36				REMOVE	1			REMOVE	1									
				PAGE TOTALS			100	37	0		32	37	22		19	22		0	0		36	0	0	

PERMANENT SIGN SCHEDULE - ROADWAY

SHEET NO.	PLAN IDENTIFIER	SIGN DESIGNATION	QTY.	DESCRIPTION	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	X13 / ITEM 818001 FLAT SHEET ALUMINUM, TYPE IV, RETROREFLECTIVE SHEETING (SF)	X14 / ITEM 818003 FLAT SHEET ALUMINUM, TYPE XI, RETROREFLECTIVE SHEETING (SF)	X15 / ITEM 819512 SIGN POST REFLECTIVE PANEL (EA)	ITEM 819003 INSTALL OR REMOVE TRAFFIC SIGNS (EACH)			ITEM 819001 PROVIDE GALVANIZED TELESCOPING SIGN POST (EACH) TO BE USED FOR NEW SIGN POSTS. CONTRACTOR TO DETERMINE LENGTH	ITEM 819002 INSTALL OR REMOVE GALVANIZED TELESCOPING SIGN POST (EACH)			POST INSTALLATION TYPE	ITEM 819010 4" HOLE, 0-6" (EACH)	ITEM 819011 4" HOLE, >6" (EACH)	SIGN DISPOSITION	X14A FLAT SHEET ALUMINUM SIGN PANELS (TYPE XI SHEETING) - SIGNS ON POLES, SPAN WIRES, MAST ARMS (TRAFFIC SUPPLY)	ITEM 823003 REMOVAL OF SIGN ON SPAN WIRE OR MAST ARM (EA) TRAFFIC CONTRACTOR ITEM, EXCEPT FOR PILOT PROJECTS	ITEM 823001 INSTALLATION OF SIGN ON SPAN WIRE OR MAST ARM (SF) TRAFFIC CONTRACTOR ITEM, EXCEPT FOR PILOT PROJECTS	REMARKS
										SIGN DISPOSITION	REMOVE	INSTALL		SIGN DISPOSITION	REMOVE	INSTALL									
SS-04	20B	R10-20aP	1	MON - FRI, XAM-XAM, XPM-XPM (plaque)	24	24				REMOVE	1			REMOVE											
SS-04	21A	R5-1(36)	1	DO NOT ENTER - 36x36	36	36		9.0		NEW W/ POST		1	1	NEW		1	NEW CONCRETE								
SS-04	21B	R10-5(30)	1	LEFT ON GREEN ARROW ONLY - 30x36	30	36	7.5			ADD TO ASSEMBLY		1													
SS-04	21C	R10-20aP	1	MON - FRI, XAM-XAM, XPM-XPM (plaque)	24	24	4.0			ADD TO ASSEMBLY		1													MON-SUN, 7AM-9PM
SS-04	22	R5-1(36)	1	DO NOT ENTER - 36x36	36	36		9.0		NEW W/ POST		1	1	NEW		1	NEW CONCRETE								
SS-04	23	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMOVE	1			REMOVE	1										
SS-05	1A	M3-3(36)	1	CARDINAL DIRECTION - SOUTH - 36x18	36	18	4.5			NEW W/ POST W/ POST		1	2	NEW		2	SOIL				4.5				
SS-05	1B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1													US 13
SS-05	1C	M5-1_L	1	ADVANCE TURN ARROW (Left - 90)	21	15	2.2			ADD TO ASSEMBLY		1													
SS-05	1D	M3-1(36)	1	CARDINAL DIRECTION - NORTH - 36x18	36	18	4.5			ADD TO ASSEMBLY		1													
SS-05	1E	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1													US 13
SS-05	1F	M6-1_R(21)	1	DIRECTIONAL ARROW (Right) - 21x15	21	15	2.2			ADD TO ASSEMBLY		1													
SS-05	2A	M2-1(12)(B)	1	JUNCTION - 12x6	12	6				REMOVE	1			REMOVE	2										
SS-05	2B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24				REMOVE	1			REMOVE	2										US 13
SS-05	3A	M2-1(12)(B)	1	JUNCTION - 12x6	12	6	0.5			NEW W/ POST W/ POST		1	1	NEW		1	SOIL				0.5				
SS-05	3B	M1-4(24)	1	US ROUTE (2 - Digit Sign) - 24x24	24	24	4.0			ADD TO ASSEMBLY		1													"US 13" Highway Gothic C 4" Street Name and Street Type, Normal Kerning
SS-05	4	W11-1-DE(36)	1	BICYCLE (Symbol) IN LANE - 36x36	36	36	9.0			NEW W/ POST		1	1	NEW		1	SOIL								
SS-05	5	W21-11-DE	1	WATCH CHILDREN (Symbol)	30	30				REMOVE	1			REMOVE	1										
SS-06	1	R1-2(36)	1	YIELD	36	36				REMOVE	1			REMOVE	1										
SS-06	2	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMOVE	1			REMOVE	1										
SS-06	3A	R6-1_R(36)	1	ONE WAY (ENCLOSED IN RIGHT ARROW) - 36x12	36	12				REMOVE	1			REMOVE	1										
SS-06	3B	R6-1_L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12				REMOVE	1			REMOVE	1										
SS-06	3C	R1-2(36)	1	YIELD	36	36				REMOVE	1			REMOVE	1										
SS-07	1A	R2-1-55(30)	2	SPEED LIMIT (55 MPH - 30x36)	30	36				REMOVE	2			REMOVE	4										
SS-07	1B	R2-1-55(30)	2	SPEED LIMIT (55 MPH - 30x36)	30	36	15.0			NEW W/ POST W/ POST		1	4	NEW		4	SOIL				15.0				
SS-07	2	R5-1a(36)	2	WRONG WAY - 36x24	36	24		12.0		NEW W/ POST		2	2	NEW		2	SOIL								
SS-07	3	R1-1(36)	1	STOP	36	36				REMAIN															
SS-07	4	R5-1a(36)	1	WRONG WAY - 36x24	36	24				REMOVE	1			REMOVE	1										
SS-07	5A	EM-1-DE	1	EVACUATION ROUTE	24	24	4.0			RENEW W/ POST	1	1		NEW			SOIL				4.0				ON NEW POST
SS-07	5B	EM-1	1	HURRICANE EVACUATION ROUTE (up arrow)	24	24	4.0			ADD TO ASSEMBLY		1	1			1									
SS-07	5C	D4-3-DE	1	BUS STOP (REQUESTS FOR FABRICATION THRU DART TRANSIT AT 302-576-6132)	12	18				ADD TO ASSEMBLY		1													
SS-07	6	D4-3-DE	1	BUS STOP (REQUESTS FOR FABRICATION THRU DART TRANSIT AT 302-576-6132)	12	18				NEW W/ POST		1	1	NEW		1	SOIL								
SS-07	7	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMAIN															
SS-07	8	R3-20-DE	1	TURN LANE	18	18				REMOVE	1														
SS-08	1	R5-1a(36)	2	WRONG WAY - 36x24	36	24		12.0		NEW W/ POST		2	2	NEW		2	SOIL								US 13
SS-08	2	R5-1a(36)	1	WRONG WAY - 36x24	36	24				REMOVE	1			REMOVE	1										
SS-08	3	R3-20-DE	1	TURN LANE	18	18				REMOVE	1			REMOVE	1										
SS-08	4	R2-1-55(30)	2	SPEED LIMIT (55 MPH - 30x36)	30	36	15.0			NEW W/ POST W/ POST		1	4	NEW		4	SOIL				15.0				
SS-08	5	R7-4-DE(18)	1	NO STOPPING, STANDING, OR PARKING - 18x24	18	24				REMAIN															
SS-08	6	R1-1(36)	1	STOP	36	36				REMAIN															
SS-08	7	R6-1_R(36)	1	ONE WAY (ENCLOSED IN RIGHT ARROW) - 36x12	36	12				REMAIN															
SS-08	8	R3-20-DE	1	TURN LANE	18	18				REMOVE	1			REMOVE	1										
SS-08	9	W3-5(36)	2	SPEED REDUCTION (Symbol) - 36x36	36	36				REMOVE	2			REMOVE	4										
SS-08	10A	D3-2-DE1	1	WELCOME TO	36	32				REMAIN															
SS-08	10B	D3-2-DE2	1	DEVELOPMENT NAME	36	32				REMAIN															
SS-08	10C	R7-4-DE(18)	1	NO STOPPING, STANDING, OR PARKING - 18x24	18	24				REMAIN															
SS-08	11	R7-4-DE(18)	1	NO STOPPING, STANDING, OR PARKING - 18x24	18	24				REMAIN															
SS-09	1A	D3-2-DE1	1	WELCOME TO	36	32				REMAIN															
SS-09	1B	D3-2-DE2	1	DEVELOPMENT NAME	36	32				REMAIN															
SS-09	2A	M4-14(36)	1	BEGIN - 36x18	36	18				REMAIN															
SS-09	2B	R4-3-DE1	1	NO TRUCK LEFT LANE EXCEPT LEFT TURNS	36	36				REMAIN															
SS-09	2C	W16-2P(30)	1	XX FEET (plaque) - 30x24	30	24				REMAIN															"1000 FT"
SS-09	3	R1-2(36)	1	YIELD	36	36				REMOVE	1														
SS-09	4A	R6-1_L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12				REMOVE	1														
SS-09	4B	R1-1(36)	1	STOP	36	36				REMAIN															
SS-09	5	R1-2(36)	1	YIELD	36	36				REMOVE	1			REMOVE	1										
SS-09	6A	M4-4(24)	1	TRUCK - 24x12	24	12				REMOVE	1			REMOVE	1										
SS-09	6B	CUSTOM	1	BUS	N/A	N/A				REMOVE	1			REMOVE	1										
SS-09	6C	R3-4(24)	1	U - TURN PROHIBITION (Symbol) - 24x24	24	24				REMOVE	1			REMOVE	1										
SS-09	7A	D4-3-DE	1	BUS STOP (REQUESTS FOR FABRICATION THRU DART TRANSIT AT 302-576-6132)	12	18				REMAIN															
		PAGE TOTALS					84	42	0		26	23	20		27	20		0	0		35	0	0		

pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-1-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

AECOM

ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	T202104203	BRIDGE NO.	N/A	SIGNING, STRIPING, AND CONDUIT PLAN	SECTION	AEC
				COUNTY	KENT	DESIGNED BY:	A. Malkin		SHEET NO.	86
						CHECKED BY:	J. Hofstee			

PERMANENT SIGN SCHEDULE - ROADWAY

SHEET NO.	PLAN IDENTIFIER	SIGN DESIGNATION	QTY.	DESCRIPTION	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	X13 / ITEM 818001 FLAT SHEET ALUMINUM, TYPE IV, RETROREFLECTIVE SHEETING (SF)	X14 / ITEM 818003 FLAT SHEET ALUMINUM, TYPE XI, RETROREFLECTIVE SHEETING (SF)	X15 / ITEM 810512 SIGN POST REFLECTIVE PANEL (EA)	ITEM 819003 INSTALL OR REMOVE TRAFFIC SIGNS (EACH)			ITEM 819001 PROVIDE GALVANIZED TELESCOPING SIGN POST (EACH) TO BE USED FOR NEW SIGN POSTS, CONTRACTOR TO DETERMINE LENGTH	ITEM 819002 INSTALL OR REMOVE GALVANIZED TELESCOPING SIGN POST (EACH)			POST INSTALLATION TYPE	ITEM 819010 4" HOLE, 0-6" (EACH)	ITEM 819011 4" HOLE, >6" (EACH)	SIGN DISPOSITION	X14A FLAT SHEET ALUMINUM SIGN PANELS (TYPE XI SHEETING) - SIGNS ON POLES, SPAN WIRES, MAST ARMS (TRAFFIC SUPPLY)	ITEM 823003 REMOVAL OF SIGN ON SPAN WIRE OR MAST ARM (EA) TRAFFIC CONTRACTOR ITEM, EXCEPT FOR PILOT PROJECTS	ITEM 823001 INSTALLATION OF SIGN ON SPAN WIRE OR MAST ARM (SF) TRAFFIC CONTRACTOR ITEM, EXCEPT FOR PILOT PROJECTS	REMARKS
										SIGN DISPOSITION	REMOVE	INSTALL		SIGN DISPOSITION	REMOVE	INSTALL								
SS-09	7B	R5-1a(36)	1	WRONG WAY - 36x24	36	24				REMAIN														
SS-09	8	R1-1(36)	1	STOP	36	36				REMAIN														
SS-09	9	CUSTOM	1	EMERGENCY MEDICAL CARE (LEFT ARROW)	N/A	N/A				REMAIN														
SS-09	10A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMAIN														"Cathleen Dr"
SS-09	10B	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMAIN														"S. Dupont Blvd"
SS-09	10C	W14-2(36)	1	NO OUTLET - 36x36	36	36				REMAIN														
SS-09	10D	R1-1(36)	1	STOP	36	36				REMAIN														
SS-09	11A	R5-1a(36)	1	WRONG WAY - 36x24	36	24				REMAIN														
SS-09	11B	M4-14(36)	1	BEGIN - 36x18	36	18				REMAIN														
SS-09	11C	R4-3-DE1	1	NO TRUCK LEFT LANE EXCEPT LEFT TURNS	36	36				REMAIN														
SS-09	11D	W16-2P(30)	1	XX FEET (plaque) - 30x24	30	24				REMAIN														"1000 FT"
SS-09	11E	R7-4-DE(18)	1	NO STOPPING, STANDING, OR PARKING - 18x24	18	24				REMAIN														
SS-09	12A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMOVE	1				REMOVE	1								"LAWNDALE" RIGHT TURN ARROW
SS-09	12B	CUSTOM	1	TOWN ORDINANCE SOLICITORS LICENSE REQUIRED	18	24				REMOVE	1				REMOVE	1								
SS-09	13A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			NEW W/ POST		1	1	NEW		1								"Lawndale" Highway Gothic C 4" Street Name and Street Type. Normal Kerning. Right arrow
SS-09	13B	CUSTOM	1	TOWN ORDINANCE SOLICITORS LICENSE REQUIRED	18	24				ADD TO ASSEMBLY		1												
SS-09	14	R5-1(36)	1	DO NOT ENTER - 36x36	36	36				REMOVE	1			REMOVE	1									
SS-09	15	R6-1 L(36)	1	ONE WAY (ENCLOSED IN LEFT ARROW) - 36x12	36	12				REMAIN														
SS-09	16A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8				REMOVE	1			REMOVE	1									"LAWNDALE DR"
SS-09	16B	R1-1(36)	1	STOP	36	36				REMOVE	1			REMOVE	1									
SS-09	17A	D3-1(8)	1	STREET NAME (1 Line) Intersection of two subdivision streets	36	8	2.0			NEW W/ POST		1	1	NEW		1								"Lawndale Dr" Highway Gothic C 4" Street Name and Street Type. Normal Kerning
SS-09	17B	R1-1(36)	1	STOP	36	36		7.5		ADD TO ASSEMBLY		1												
SG-01	S1	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	84	18														REMOVE (OVERHEAD)		1.0		"Big Oak Rd"
SG-01	S2	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	84	18														REMOVE (OVERHEAD)		1.0		"Brenford Rd
SG-01	S3	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	96	18														REMOVE (OVERHEAD)		1.0		"S Dupont Blvd"
SG-01	S4	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	96	18														REMOVE (OVERHEAD)		1.0		"S Dupont Blvd"
SG-01	S5	R10-27	1	LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP (OVERHEAD)	30	36														REMOVE (OVERHEAD)		1.0		
SG-01	S6	R10-27	1	LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP (OVERHEAD)	30	36														REMOVE (OVERHEAD)		1.0		
SG-03	S1	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	84	18														NEW (OVERHEAD)	10.5		10.5	"Big Oak Rd" (8'/6" Highway D)
SG-03	S4	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	96	18														NEW (OVERHEAD)	12.0		12.0	"S Dupont Blvd" (8'/6" Highway D)
SG-04	S2	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	84	18														NEW (OVERHEAD)	10.5		10.5	"Brenbrd Rd" (8'/6" Highway D)
SG-04	S3	D3-1(18)	1	STREET NAME (OVERHEAD) - 1 LINE	96	18														NEW (OVERHEAD)	12.0		12.0	"S Dupont Blvd" (8'/6" Highway D)
SG-05	S5	R10-27	1	LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP (OVERHEAD)	30	36														NEW (OVERHEAD)	7.5		7.5	
SG-07		W11-2(36)	6	PEDESTRIAN (Symbol) - 36x36	36	36	54.0														54.0			RRFB Assembly
SG-07		W16-7P R(24)	4	RIGHT DOWNWARD DIAGONAL ARROW (plaque) - 24x12	24	12	8.0														8.0			RRFB Assembly
SG-07		W16-7P L(24)	2	LEFT DOWNWARD DIAGONAL ARROW (plaque) - 24x12	24	12	4.0														4.0			RRFB Assembly
				PAGE TOTALS			70	7	0		5	4	2		5	2		0	0		119	6	53	
				JOB TOTALS			254	86	0		63	64	44		51	44		0	0		193	6	53	

AECOM
pw://aecom-na-pw.bentley.com:AECOM_USA_Delaware/Documents/60648749-I-DelDOT_1977-TO-02_Brenford Rd/900-CAD GIS/910_CAD/10_REFERENCE/SS00.dgn

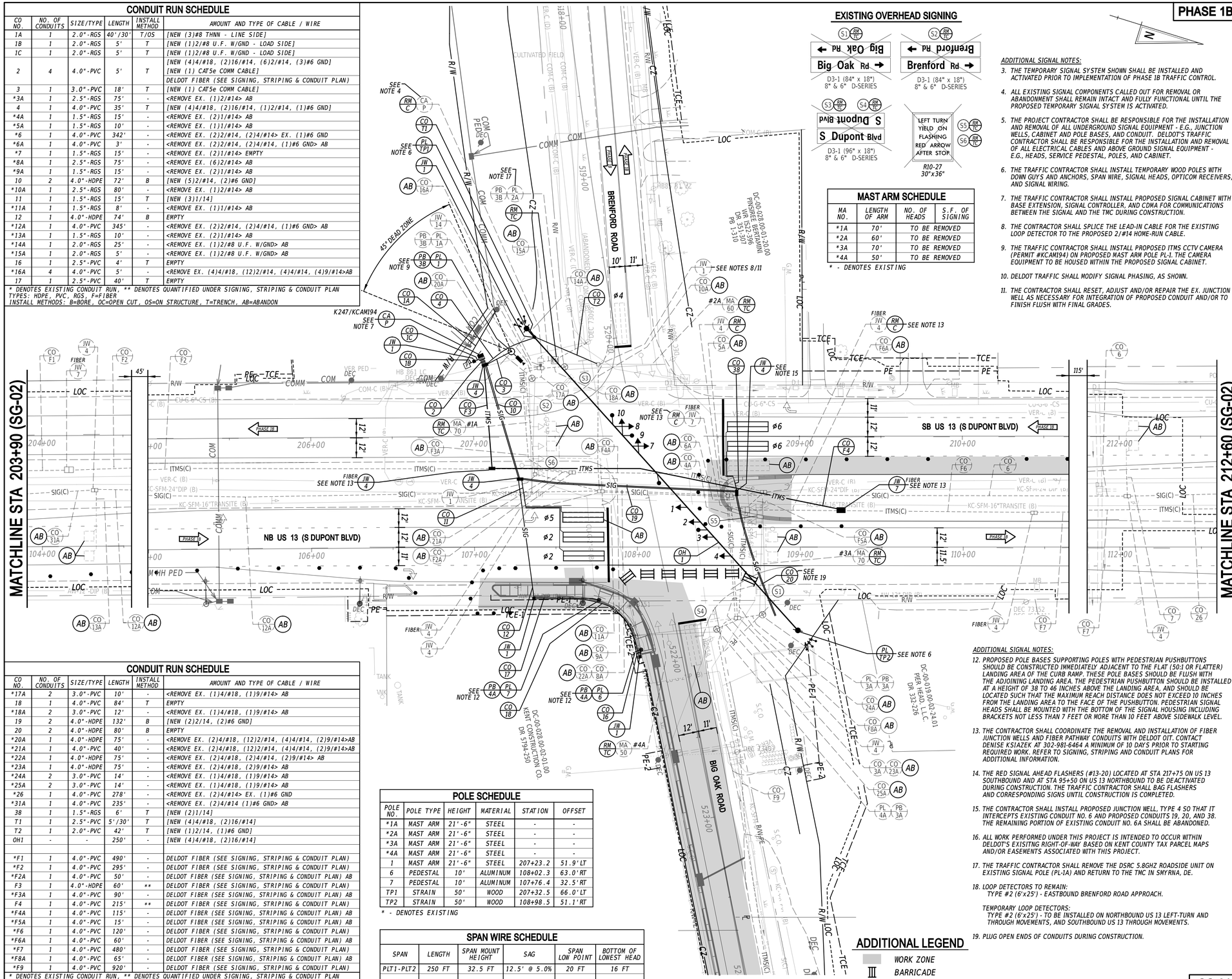
ADDENDA / REVISIONS		NOT TO SCALE	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT	T202104203	BRIDGE NO.	N/A	SIGNING, STRIPING, AND CONDUIT PLAN	SECTION	AEC
				COUNTY	KENT	DESIGNED BY:	A. Malkin		SHEET NO.	87
						CHECKED BY:	J. Hofstee			

PHASE 1B

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
1A	1	2.0"-RGS	40'/30'	T/OS	[NEW (3)#8 THNN - LINE SIDE]
1B	1	2.0"-RGS	5'	T	[NEW (1)2/#8 U.F. W/GND - LOAD SIDE]
1C	1	2.0"-RGS	5'	T	[NEW (1)2/#8 U.F. W/GND - LOAD SIDE]
2	4	4.0"-PVC	5'	T	[NEW (4)4/#18, (2)16/#14, (6)2/#14, (3)#6 GND] [NEW (1) CAT5e COMM CABLE] DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
3	1	3.0"-PVC	18'	T	[NEW (1) CAT5e COMM CABLE]
*3A	1	2.5"-RGS	75'	-	<REMOVE EX. (1)2/#14> AB
4	1	4.0"-PVC	35'	T	[NEW (4)4/#18, (2)16/#14, (1)2/#14, (1)#6 GND]
*4A	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> AB
*5A	1	1.5"-RGS	10'	-	<REMOVE EX. (1)1/#14> AB
*6	1	4.0"-PVC	342'	-	<REMOVE EX. (2)2/#14, (2)4/#14> EX. (1)#6 GND
*6A	1	4.0"-PVC	3'	-	<REMOVE EX. (2)2/#14, (2)4/#14, (1)#6 GND> AB
*7	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> EMPTY
*8A	1	2.5"-RGS	75'	-	<REMOVE EX. (6)2/#14> AB
*9A	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> AB
10	2	4.0"-HDPE	72'	B	[NEW (5)2/#14, (2)#6 GND]
*10A	1	2.5"-RGS	80'	-	<REMOVE EX. (1)2/#14> AB
11	1	1.5"-RGS	15'	T	[NEW (3)1/14]
*11A	1	1.5"-RGS	8'	-	<REMOVE EX. (1)1/#14> AB
12	1	4.0"-HDPE	74'	B	EMPTY
*12A	1	4.0"-PVC	345'	-	<REMOVE EX. (2)2/#14, (2)4/#14, (1)#6 GND> AB
*13A	1	1.5"-RGS	10'	-	<REMOVE EX. (2)1/#14> AB
*14A	1	2.0"-RGS	25'	-	<REMOVE EX. (1)2/#8 U.F. W/GND> AB
*15A	1	2.0"-RGS	5'	-	<REMOVE EX. (1)2/#8 U.F. W/GND> AB
16	1	2.5"-PVC	4'	T	EMPTY
*16A	4	4.0"-PVC	5'	-	<REMOVE EX. (4)4/#18, (12)2/#14, (4)4/#14, (4)9/#14>AB
17	1	2.5"-PVC	40'	T	EMPTY

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON



EXISTING OVERHEAD SIGNING

MAST ARM SCHEDULE

MA NO.	LENGTH OF ARM	NO. OF HEADS	S.F. OF SIGNING
*1A	70'	TO BE REMOVED	
*2A	60'	TO BE REMOVED	
*3A	70'	TO BE REMOVED	
*4A	50'	TO BE REMOVED	

* - DENOTES EXISTING

POLE SCHEDULE

POLE NO.	POLE TYPE	HEIGHT	MATERIAL	STATION	OFFSET
*1A	MAST ARM	21'-6"	STEEL	-	-
*2A	MAST ARM	21'-6"	STEEL	-	-
*3A	MAST ARM	21'-6"	STEEL	-	-
*4A	MAST ARM	21'-6"	STEEL	-	-
1	MAST ARM	21'-6"	STEEL	207+23.2	51.9'LT
6	PEDESTAL	10'	ALUMINUM	108+02.3	63.0'RT
7	PEDESTAL	10'	ALUMINUM	107+76.4	32.5'RT
TP1	STRAIN	50'	WOOD	207+32.5	66.0'LT
TP2	STRAIN	50'	WOOD	108+98.5	51.1'RT

* - DENOTES EXISTING

SPAN WIRE SCHEDULE

SPAN	LENGTH	SPAN MOUNT HEIGHT	SAG	SPAN LOW POINT	BOTTOM OF LOWEST HEAD
PLT1-PLT2	250 FT	32.5 FT	12.5' @ 5.0%	20 FT	16 FT

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*17A	2	3.0"-PVC	10'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
18	1	4.0"-PVC	84'	T	EMPTY
*18A	2	3.0"-PVC	12'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
19	2	4.0"-HDPE	132'	B	[NEW (2)2/14, (2)#6 GND]
20	2	4.0"-HDPE	80'	B	EMPTY
*20A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (12)2/#14, (4)4/#14, (2)9/#14>AB
*21A	1	4.0"-PVC	40'	-	<REMOVE EX. (2)4/#18, (12)2/#14, (4)4/#14, (2)9/#14>AB
*22A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (2)4/#14, (2)9/#14> AB
*23A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (2)9/#14> AB
*24A	2	3.0"-PVC	14'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
*25A	2	3.0"-PVC	14'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
*26	1	4.0"-PVC	278'	-	<REMOVE EX. (2)4/#14> EX. (1)#6 GND
*31A	1	4.0"-PVC	235'	-	<REMOVE EX. (2)4/#14 (1)#6 GND> AB
38	1	1.5"-RGS	6'	T	[NEW (2)1/14]
T1	1	2.5"-PVC	5'/30'	T	[NEW (4)4/#18, (2)16/#14]
T2	1	2.0"-PVC	42'	T	[NEW (1)2/14, (1)#6 GND]
OH1	-	-	250'	-	[NEW (4)4/#18, (2)16/#14]
*F1	1	4.0"-PVC	490'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F2	1	4.0"-PVC	295'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F2A	1	4.0"-PVC	50'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
F3	1	4.0"-HDPE	60'	**	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F3A	1	4.0"-PVC	90'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
F4	1	4.0"-PVC	215'	**	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F4A	1	4.0"-PVC	115'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
*F5A	1	4.0"-PVC	15'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
*F6	1	4.0"-PVC	120'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F6A	1	4.0"-PVC	60'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
*F7	1	4.0"-PVC	480'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F8A	1	4.0"-PVC	65'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN) AB
*F9	1	4.0"-PVC	920'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

ADDITIONAL LEGEND

- WORK ZONE
- BARRICADE
- DRUM - TRAFFIC CONTROL

ADDITIONAL SIGNAL NOTES:

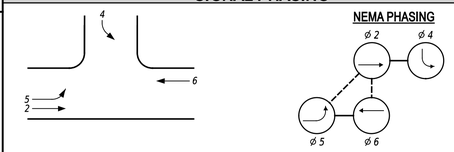
3. *THE TEMPORARY SIGNAL SYSTEM SHOWN SHALL BE INSTALLED AND ACTIVATED PRIOR TO IMPLEMENTATION OF PHASE 1B TRAFFIC CONTROL.*
4. *ALL EXISTING SIGNAL COMPONENTS CALLED OUT FOR REMOVAL OR ABANDONMENT SHALL REMAIN INTACT AND FULLY FUNCTIONAL UNTIL THE PROPOSED TEMPORARY SIGNAL SYSTEM IS ACTIVATED.*
5. *THE PROJECT CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL UNDERGROUND SIGNAL EQUIPMENT - E.G., JUNCTION WELLS, CABINET AND POLE BASES, AND CONDUIT. DELDOT'S TRAFFIC CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL ELECTRICAL CABLES AND ABOVE GROUND SIGNAL EQUIPMENT - E.G., HEADS, SERVICE PEDESTAL, POLES, AND CABINET.*
6. *THE TRAFFIC CONTRACTOR SHALL INSTALL TEMPORARY WOOD POLES WITH DOWN GUYS AND ANCHORS, SPAN WIRE, SIGNAL HEADS, OPTICOM RECEIVERS, AND SIGNAL WIRING.*
7. *THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED SIGNAL CABINET WITH BASE EXTENSION, SIGNAL CONTROLLER, AND CDMA FOR COMMUNICATIONS BETWEEN THE SIGNAL AND THE TMC DURING CONSTRUCTION.*
8. *THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLE FOR THE EXISTING LOOP DETECTOR TO THE PROPOSED 2/#14 HOME-RUN CABLE.*
9. *THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED ITMS CCTV CAMERA (PERMIT #KCAM194) ON PROPOSED MAST ARM POLE PL-1. THE CAMERA EQUIPMENT TO BE HOUSED WITHIN THE PROPOSED SIGNAL CABINET.*
10. *DELDOT TRAFFIC SHALL MODIFY SIGNAL PHASING, AS SHOWN.*
11. *THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EX. JUNCTION WELL AS NECESSARY FOR INTEGRATION OF PROPOSED CONDUIT AND/OR TO FINISH FLUSH WITH FINAL GRADES.*

ADDITIONAL SIGNAL NOTES:

12. *PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (5:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.*
13. *THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER JUNCTION WELLS AND FIBER PATHWAY CONDUITS WITH DELDOT OIT. CONTACT DENISE KSIAZEK AT 302-981-6464 A MINIMUM OF 10 DAYS PRIOR TO STARTING REQUIRED WORK. REFER TO SIGNING, STRIPING AND CONDUIT PLANS FOR ADDITIONAL INFORMATION.*
14. *THE RED SIGNAL AHEAD FLASHERS (#13-20) LOCATED AT STA 217+75 ON US 13 SOUTHBOUND AND AT STA 95+50 ON US 13 NORTHBOUND TO BE DEACTIVATED DURING CONSTRUCTION. THE TRAFFIC CONTRACTOR SHALL BAG FLASHERS AND CORRESPONDING SIGNS UNTIL CONSTRUCTION IS COMPLETED.*
15. *THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 4 SO THAT IT INTERCEPTS EXISTING CONDUIT NO. 6 AND PROPOSED CONDUITS 19, 20, AND 38. THE REMAINING PORTION OF EXISTING CONDUIT NO. 6A SHALL BE ABANDONED.*
16. *ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISITNG RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.*
17. *THE TRAFFIC CONTRACTOR SHALL REMOVE THE DSRC 5.8GHZ ROADSIDE UNIT ON EXISTING SIGNAL POLE (PL-1A) AND RETURN TO THE TMC IN SMYRNA, DE.*
18. *LOOP DETECTORS TO REMAIN:*
    TYPE #2 (6'x25') - EASTBOUND BRENFORD ROAD APPROACH.

    TEMPORARY LOOP DETECTORS:
    TYPE #2 (6'x25') - TO BE INSTALLED ON NORTHBOUND US 13 LEFT-TURN AND THROUGH MOVEMENTS, AND SOUTHBOUND US 13 THROUGH MOVEMENTS.
19. *PLUG OPEN ENDS OF CONDUITS DURING CONSTRUCTION.*

SIGNAL PHASING

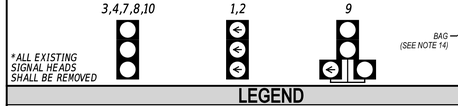


PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

*SEE NOTE 10

SIGNAL HEAD DIAGRAM



*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED

LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	*PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)*
CA X	*PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)*	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	*PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)*
CO #	*PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)*	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	*PROPOSED POLE IDENTIFIER (# OF POLE)*
JW X	*PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)*	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	*PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)*	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
CCTV CAMERA	CCTV	
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE PROFESSIONAL ENGINEER

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION.

11/20/2025
DATE

SEAL

CONCURRENCE FOR INSTALLATION

CHIEF OF TRAFFIC ENGINEERING

12/1/2025
DATE

AECOM

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

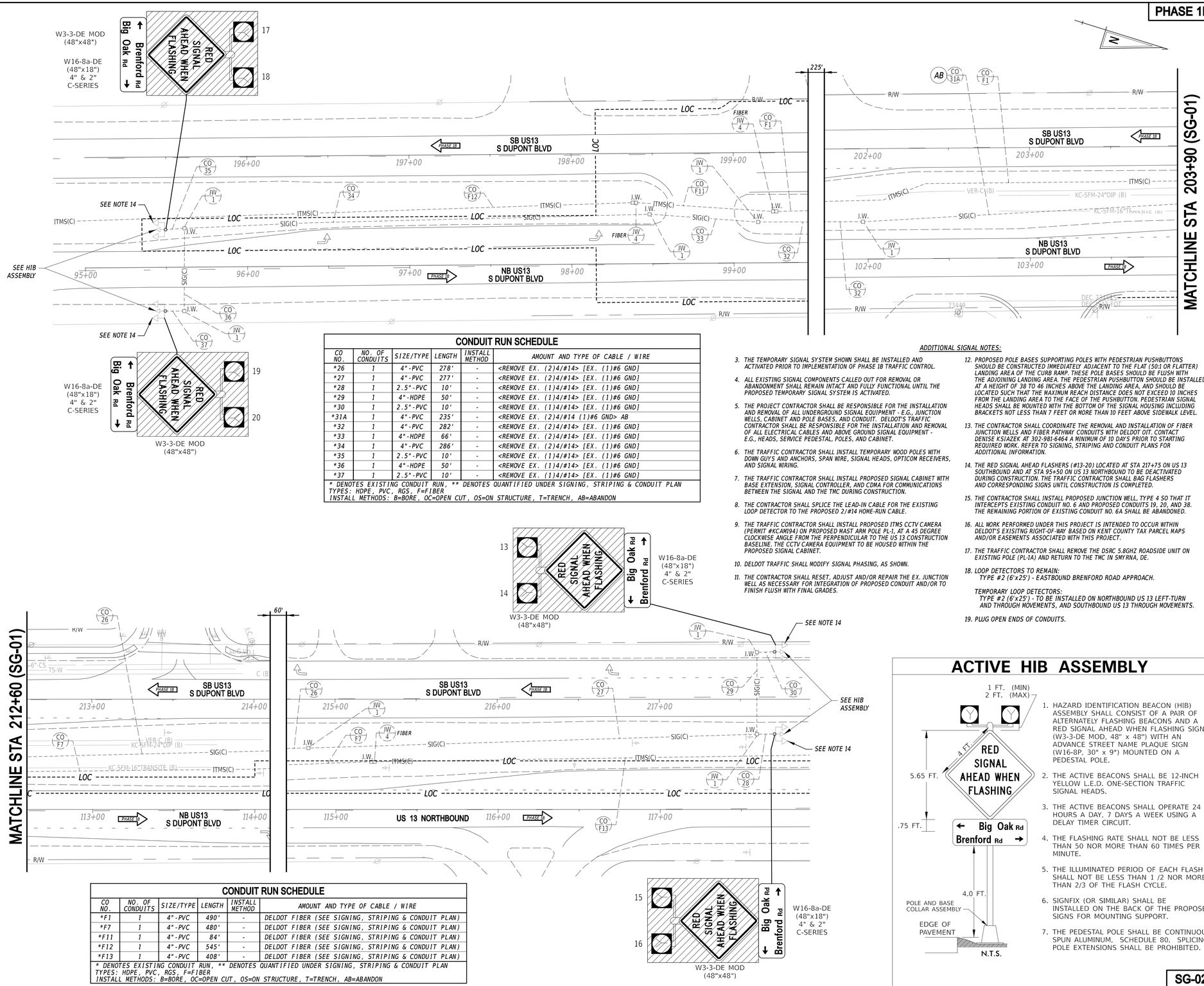
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	PERMIT NO.	K247 & KCAM194
COUNTY	KENT	DESIGNED BY:	F. ZANCOLLI
		CHECKED BY:	J. MACIOS

TEMPORARY SIGNAL PLAN PHASE 1B US 13 @ BIG OAK ROAD

SECTION: AEC
SHEET NO.: 88

SG-01



CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*26	1	4"-PVC	278'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND]
*27	1	4"-PVC	277'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND]
*28	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]
*29	1	4"-HDPE	50'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]
*30	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]
*31A	1	4"-PVC	235'	-	<REMOVE EX. (2)4/#14 (1)#6 GND> AB
*32	1	4"-PVC	282'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND]
*33	1	4"-HDPE	66'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND]
*34	1	4"-PVC	286'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND]
*35	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]
*36	1	4"-HDPE	50'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]
*37	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND]

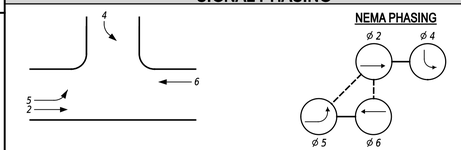
* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

ADDITIONAL SIGNAL NOTES:

3. THE TEMPORARY SIGNAL SYSTEM SHOWN SHALL BE INSTALLED AND ACTIVATED PRIOR TO IMPLEMENTATION OF PHASE 1B TRAFFIC CONTROL.
4. ALL EXISTING SIGNAL COMPONENTS CALLED OUT FOR REMOVAL OR ABANDONMENT SHALL REMAIN INTACT AND FULLY FUNCTIONAL UNTIL THE PROPOSED TEMPORARY SIGNAL SYSTEM IS ACTIVATED.
5. THE PROJECT CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL UNDERGROUND SIGNAL EQUIPMENT - E.G., JUNCTION WELLS, CABINET AND POLE BASES, AND CONDUIT. DELDOT'S TRAFFIC CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL ELECTRICAL CABLES AND ABOVE GROUND SIGNAL EQUIPMENT - E.G., HEADS, SERVICE PEDESTAL, POLES, AND CABINET.
6. THE TRAFFIC CONTRACTOR SHALL INSTALL TEMPORARY WOOD POLES WITH DOWN GUYS AND ANCHORS, SPAN WIRE, SIGNAL HEADS, OPTICOM RECEIVERS, AND SIGNAL WIRING.
7. THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED SIGNAL CABINET WITH BASE EXTENSION, SIGNAL CONTROLLER, AND CDMA FOR COMMUNICATIONS BETWEEN THE SIGNAL AND THE TMC DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLE FOR THE EXISTING LOOP DETECTOR TO THE PROPOSED 2/#14 HOME-RUN CABLE.
9. THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED ITMS CCTV CAMERA (PERMIT #KCAM194) ON PROPOSED MAST ARM POLE PL-1, AT A 45 DEGREE CLOCKWISE ANGLE FROM THE PERPENDICULAR TO THE US 13 CONSTRUCTION BASELINE. THE CCTV CAMERA EQUIPMENT TO BE HOUSED WITHIN THE PROPOSED SIGNAL CABINET.
10. DELDOT TRAFFIC SHALL MODIFY SIGNAL PHASING, AS SHOWN.
11. THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EX. JUNCTION WELL AS NECESSARY FOR INTEGRATION OF PROPOSED CONDUIT AND/OR TO FINISH FLUSH WITH FINAL GRADES.
12. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
13. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER JUNCTION WELLS AND FIBER PATHWAY CONDUITS WITH DELDOT OIT. CONTACT DENISE KSIAZEK AT 302-981-6464 A MINIMUM OF 10 DAYS PRIOR TO STARTING REQUIRED WORK. REFER TO SIGNING, STRIPING AND CONDUIT PLANS FOR ADDITIONAL INFORMATION.
14. THE RED SIGNAL AHEAD FLASHERS (#13-20) LOCATED AT STA 217+75 ON US 13 SOUTHBOUND AND AT STA 95+50 ON US 13 NORTHBOUND TO BE DEACTIVATED DURING CONSTRUCTION. THE TRAFFIC CONTRACTOR SHALL BAG FLASHERS AND CORRESPONDING SIGNS UNTIL CONSTRUCTION IS COMPLETED.
15. THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 4 SO THAT IT INTERCEPTS EXISTING CONDUIT NO. 6 AND PROPOSED CONDUITS 19, 20, AND 38. THE REMAINING PORTION OF EXISTING CONDUIT NO. 6A SHALL BE ABANDONED.
16. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISITNG RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.
17. THE TRAFFIC CONTRACTOR SHALL REMOVE THE DSRC 5.8GHZ ROADSIDE UNIT ON EXISTING POLE (PL-1A) AND RETURN TO THE TMC IN SMYRNA, DE.
18. LOOP DETECTORS TO REMAIN:
    TYPE #2 (6'x25') - EASTBOUND BRENFORD ROAD APPROACH.

    TEMPORARY LOOP DETECTORS:
    TYPE #2 (6'x25') - TO BE INSTALLED ON NORTHBOUND US 13 LEFT-TURN AND THROUGH MOVEMENTS, AND SOUTHBOUND US 13 THROUGH MOVEMENTS.
19. PLUG OPEN ENDS OF CONDUITS.

SIGNAL PHASING

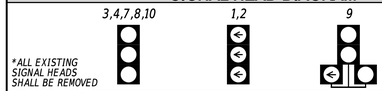


PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

*SEE NOTE 10

SIGNAL HEAD DIAGRAM



*ALL EXISTING SIGNAL HEADS SHALL BE REMOVED

LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	PROPOSED POLE IDENTIFIER (# OF POLE)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
CCTV CAMERA	CCTV	
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

ACTIVE HIB ASSEMBLY

1. HAZARD IDENTIFICATION BEACON (HIB) ASSEMBLY SHALL CONSIST OF A PAIR OF ALTERNATELY FLASHING BEACONS AND A RED SIGNAL AHEAD WHEN FLASHING SIGN (W23-3-DE MOD, 48" x 48") WITH AN ADVANCE STREET NAME PLAQUE SIGN (W16-8P, 30" x 9") MOUNTED ON A PEDESTAL POLE.
2. THE ACTIVE BEACONS SHALL BE 12-INCH YELLOW L.E.D. ONE-SECTION TRAFFIC SIGNAL HEADS.
3. THE ACTIVE BEACONS SHALL OPERATE 24 HOURS A DAY, 7 DAYS A WEEK USING A DELAY TIMER CIRCUIT.
4. THE FLASHING RATE SHALL NOT BE LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. THE ILLUMINATED PERIOD OF EACH FLASH SHALL NOT BE LESS THAN 1 /2 NOR MORE THAN 2/3 OF THE FLASH CYCLE.
6. SIGNFIX (OR SIMILAR) SHALL BE INSTALLED ON THE BACK OF THE PROPOSED SIGNS FOR MOUNTING SUPPORT.
7. THE PEDESTAL POLE SHALL BE CONTINUOUS SPUN ALUMINUM, SCHEDULE 80. SPLICING POLE EXTENSIONS SHALL BE PROHIBITED.

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE PROFESSIONAL ENGINEER

11/20/2025
DATE

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION.

SEAL

CONCURRENCE FOR INSTALLATION

12/1/2025
DATE

CHIEF OF TRAFFIC ENGINEERING

SG-02

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	PERMIT NO.	K247 & KCAM194	SECTION
T202104203	DESIGNED BY:	F. ZANCOLLI	AEC
COUNTY	CHECKED BY:	J. MACIOS	SHEET NO.
KENT			89

TEMPORARY SIGNAL PLAN PHASE 1B US 13 @ BIG OAK ROAD

AECOM

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*1A	1	2.0"-RGS	40'/30'	-	[EX. (3)#8 THNN - LINE SIDE]
*1B	1	2.0"-RGS	5'	-	[EX. (1)2/#8 U.F. W/GND - LOAD SIDE]
*1C	1	2.0"-RGS	5'	-	[EX. (1)2/#8 U.F. W/GND - LOAD SIDE]
*2	4	4.0"-PVC	5'	-	[EX. (4)4/#18, (2)16/#14, (6)2/#14, (3)#6 GND] [EX. (1) CAT5e COMM CABLE] [NEW (2)2/#14] DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*3	1	3.0"-PVC	18'	-	[EX. (1) CAT5e COMM CABLE]
*4	1	4.0"-PVC	35'	-	[EX. (4)4/#18, (2)16/#14, (1)2/#14, (1)#6 GND]
*6	1	4.0"-PVC	342'	-	[EX. (1)#6 GND]
*7	1	1.5"-RGS	15'	-	EMPTY
*10	2	4.0"-HDPE	72'	-	[EX. (5)2/#14, (2)#6 GND] [NEW (2)2/#14]
*11	1	1.5"-RGS	15'	-	[EX. (3)1/#14]
*12	1	4.0"-HDPE	74'	-	[NEW (1)2/#14, (1)#6 GND]
*16	1	2.5"-PVC	4'	-	EMPTY
*17	1	2.5"-PVC	40'	-	EMPTY
*18	1	4.0"-PVC	84'	-	[NEW (1)2/#14, (1)#6 GND]
*19	2	4.0"-HDPE	132'	-	[EX. (2)2/#14, (2)#6 GND] [NEW (1)2/#14]
*20	2	4.0"-HDPE	80'	-	EMPTY
21	1	2.5"-PVC	9'	T	EMPTY
22	1	4.0"-PVC	28'	T	EMPTY
23	1	3.0"-PVC	19'	T	EMPTY
24	1	3.0"-PVC	11'	T	EMPTY
25	1	4.0"-PVC	29'	T	EMPTY
*26	1	4.0"-PVC	278'	-	[EX. (1)#6 GND]
*38	1	1.5"-RGS	6'	-	[EX. (2)1/14] [NEW (1)1/#14]
*T1	1	2.5"-PVC	5'/30'	-	[EX. (4)4/#18, (2)16/#14]
*T2	1	2.0"-PVC	42'	-	[EX. (1)2/14, (1)#6 GND]
*OH1	-	-	250'	-	[EX. (4)4/#18, (2)16/#14]

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

PROPOSED OVERHEAD SIGNING

(I5) Big Oak Rd → Big Oak Rd
D3-1 (84" x 18") 8" & 6" D-SERIES

(S4) (13) S Dupont Blvd (13) S Dupont Blvd
D3-1 (96" x 18") 8" & 6" D-SERIES

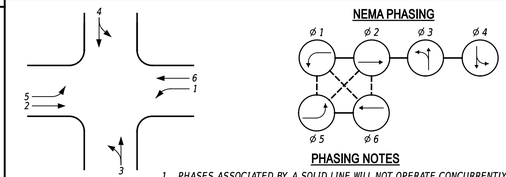
PHASE 1C

POLE SCHEDULE

POLE NO.	POLE TYPE	HEIGHT	MATERIAL	STATION	OFFSET
*1A	MAST ARM	21'-6"	STEEL	-	-
*2A	MAST ARM	21'-6"	STEEL	-	-
*3A	MAST ARM	TO BE REMOVED			
*4A	MAST ARM	TO BE REMOVED			
*1	MAST ARM	21'-6"	STEEL	207+23.2	51.9'LT
3	MAST ARM	21'-6"	STEEL	109+05.1	42.3'RT
4	MAST ARM	21'-6"	STEEL	108+80.4	54.1'RT
5	PEDESTAL	10'	ALUMINUM	108+76.3	45.8'RT
*6	PEDESTAL	10'	ALUMINUM	108+02.3	63.0'RT
*7	PEDESTAL	10'	ALUMINUM	107+76.4	32.5'RT
*TP1	STRAIN	50'	WOOD	207+32.5	66.0'LT
*TP2	STRAIN	50'	WOOD	108+98.5	51.1'RT

* - DENOTES EXISTING

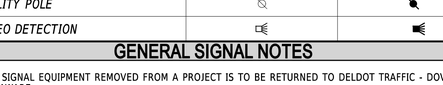
SIGNAL PHASING



*SEE NOTE 3

PHASING NOTES
1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM



LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	PROPOSED POLE IDENTIFIER (# OF POLE)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
CCTV CAMERA	CCTV	
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

MAST ARM SCHEDULE

MA NO.	LENGTH OF ARM	NO. OF HEADS	S.F. OF SIGNING
3	80'	-	10.5
4	70'	-	12.0

SPAN WIRE SCHEDULE

SPAN	LENGTH	SPAN MOUNT HEIGHT	SAG	SPAN LOW POINT	BOTTOM OF LOWEST HEAD
PLT1-PLT2	250 FT	32.5 FT	12.5' @ 5.0%	20 FT	16 FT

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*F1	1	4.0"-PVC	490'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F2	1	4.0"-PVC	295'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F3	1	4.0"-HDPE	60'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F4	1	4.0"-PVC	215'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F6	1	4.0"-PVC	120'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F7	1	4.0"-PVC	480'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F9A	1	4.0"-PVC	920'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)AB

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

ADDITIONAL LEGEND

- WORK ZONE
- III BARRICADE
- • • • DRUM - TRAFFIC CONTROL

ADDITIONAL SIGNAL NOTES:

3. *DELDOT TRAFFIC SHALL MODIFY SIGNAL PHASING, AS SHOWN.*
4. *THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EXISTING JUNCTION WELL AS NECESSARY FOR INSTALLATION OF PROPOSED CONDUITS AND/OR FINISH FLUSH WITH FINAL GRADE. CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING CONDUITS OR CABLES.*
5. *PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.*
6. *THE TRAFFIC CONTRACTOR SHALL REMOVE ALL CABLES FROM CONDUITS THAT ARE TO BE ABANDONED PER CONDUIT SCHEDULE.*
7. *ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.*
8. *LOOP DETECTORS TO REMAIN:*
   TYPE #2 (6'x25') - EASTBOUND BRENFORD ROAD APPROACH, NORTHBOUND US 13 LEFT-TURN AND THROUGH MOVEMENTS, AND SOUTHBOUND US 13 THROUGH MOVEMENTS.

   TEMPORARY LOOP DETECTORS:
   TYPE #2 (6'x25') - TO BE INSTALLED ON THE SOUTHBOUND US 13 LEFT-TURN MOVEMENT AND WESTBOUND BIG OAK ROAD APPROACH.

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE — PROFESSIONAL ENGINEER

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION. — 11/20/2025 DATE

SEAL

CONCURRENCE FOR INSTALLATION

CHIEF OF TRAFFIC ENGINEERING — 12/1/2025 DATE

AECOM

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS	CONTRACT T202104203	PERMIT NO. K247 & KCAM194	TEMPORARY SIGNAL PLAN PHASE 1C US 13 @ BIG OAK ROAD	SECTION AEC
				COUNTY KENT	DESIGNED BY: F. ZANCOLLI		SHEET NO. 90
					CHECKED BY: J. MACIOS		

SG-03

PHASE 2

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*1A	1	2.0"-RGS	40'/30'	-	[EX. (3)#8 THNN - LINE SIDE]
*1B	1	2.0"-RGS	5'	-	[EX. (11)2/#8 U.F. W/GND - LOAD SIDE]
*1C	1	2.0"-RGS	5'	-	[EX. (11)2/#8 U.F. W/GND - LOAD SIDE]
*2	4	4.0"-PVC	5'	-	<REMOVE EX. (3)2/#14> [NEW (2)2/#14] [EX. (4)4/#18, (2)16/#14, (5)2/#14, (3)#6 GND] [EX. (1) CATSe COMM CABLE] *SEE NOTE 11 DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*3	1	3.0"-PVC	18'	-	[EX. (1) CATSe COMM CABLE]
*4	1	4.0"-PVC	35'	-	[EX. (4)4/#18, (2)16/#14, (1)#6 GND] <REMOVE (1)2/#14> *SEE NOTE 11
5	1	4.0"-HDPE	37'	B	EMPTY
*6	1	4.0"-PVC	342'	-	[EX. (1)#6 GND]
*7	1	1.5"-RGS	15'	-	EMPTY
8	1	3.0"-PVC	7'	T	EMPTY
9	1	2.5"-PVC	14'	T	EMPTY
*10	2	4.0"-HDPE	72'	-	<REMOVE EX. (2)2/#14> [NEW (2)2/#14] [EX. (5)2/#14, (2)#6 GND]
*11	1	1.5"-RGS	3'	-	<REMOVE EX. (1)1/#14> [EX. (2)1/#14]
*12	1	4.0"-HDPE	74'	-	<REMOVE EX. (1)2/#14> [EX. (1)#6 GND]
13	1	4.0"-PVC	97'	T	EMPTY
14	1	1.5"-RGS	13'	T	EMPTY
15	1	4.0"-PVC	215'	T	EMPTY
*16	1	2.5"-PVC	4'	-	EMPTY
*17	1	2.5"-PVC	40'	-	EMPTY
*18	1	4.0"-PVC	84'	-	<REMOVE EX. (1)2/#14> [EX. (1)#6 GND]
*19	2	4.0"-HDPE	132'	-	[EX. (3)2/#14, (2)#6 GND] [NEW (2)2/#14]
*20	2	4.0"-HDPE	80'	-	[NEW (2)2/#14, (2)#6 GND]

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

EXISTING OVERHEAD SIGNING

S1: Big Oak Rd ⇦ / Big Oak Rd ⇨ — D3-1 (84" x 18") 8" & 6" D-SERIES

S4: 13 S Dupont Blvd / 13 S Dupont Blvd — D3-1 (96" x 18") 8" & 6" D-SERIES

PROPOSED OVERHEAD SIGNING

S2: ⇦ Brenford Rd / Brenford Rd ⇨ — D3-1 (84" x 18") 8" & 6" D-SERIES

S4: 13 S Dupont Blvd — D3-1 (96" x 18") 8" & 6" D-SERIES

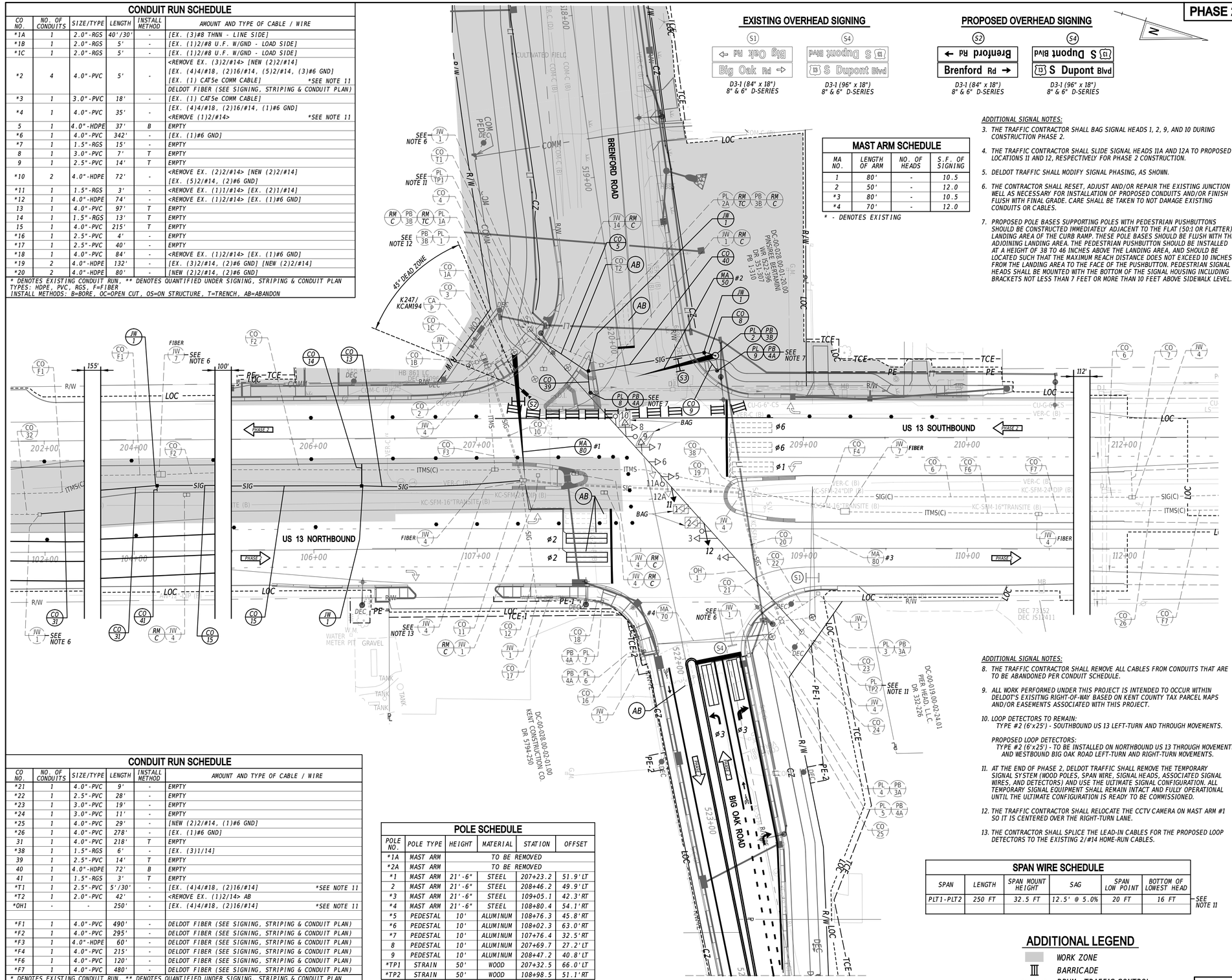
MAST ARM SCHEDULE

MA NO.	LENGTH OF ARM	NO. OF HEADS	S.F. OF SIGNING
1	80'	-	10.5
2	50'	-	12.0
*3	80'	-	10.5
*4	70'	-	12.0

* - DENOTES EXISTING

ADDITIONAL SIGNAL NOTES:

3. *THE TRAFFIC CONTRACTOR SHALL BAG SIGNAL HEADS 1, 2, 9, AND 10 DURING CONSTRUCTION PHASE 2.*
4. *THE TRAFFIC CONTRACTOR SHALL SLIDE SIGNAL HEADS 11A AND 12A TO PROPOSED LOCATIONS 11 AND 12, RESPECTIVELY FOR PHASE 2 CONSTRUCTION.*
5. *DELDOT TRAFFIC SHALL MODIFY SIGNAL PHASING, AS SHOWN.*
6. *THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EXISTING JUNCTION WELL AS NECESSARY FOR INSTALLATION OF PROPOSED CONDUITS AND/OR FINISH FLUSH WITH FINAL GRADE. CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING CONDUITS OR CABLES.*
7. *PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 3B TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.*



CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*21	1	4.0"-PVC	9'	-	EMPTY
*22	1	2.5"-PVC	28'	-	EMPTY
*23	1	3.0"-PVC	19'	-	EMPTY
*24	1	3.0"-PVC	11'	-	EMPTY
*25	1	4.0"-PVC	29'	-	[NEW (2)2/#14, (1)#6 GND]
*26	1	4.0"-PVC	278'	-	[EX. (1)#6 GND]
31	1	4.0"-PVC	218'	T	EMPTY
*38	1	1.5"-RGS	6'	-	[EX. (3)1/14]
39	1	2.5"-PVC	14'	T	EMPTY
40	1	4.0"-HDPE	72'	B	EMPTY
41	1	1.5"-RGS	3'	T	EMPTY
*T1	1	2.5"-PVC	5'/30'	-	[EX. (4)4/#18, (2)16/#14] *SEE NOTE 11
*T2	1	2.0"-PVC	42'	-	<REMOVE EX. (1)2/14> AB
*OH1	-	-	250'	-	[EX. (4)4/#18, (2)16/#14] *SEE NOTE 11
*F1	1	4.0"-PVC	490'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F2	1	4.0"-PVC	295'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F3	1	4.0"-HDPE	60'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F4	1	4.0"-PVC	215'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F6	1	4.0"-PVC	120'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)
*F7	1	4.0"-PVC	480'	-	DELDOT FIBER (SEE SIGNING, STRIPING & CONDUIT PLAN)

* DENOTES EXISTING CONDUIT RUN, ** DENOTES QUANTIFIED UNDER SIGNING, STRIPING & CONDUIT PLAN
TYPES: HDPE, PVC, RGS, F=FIBER
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

POLE SCHEDULE

POLE NO.	POLE TYPE	HEIGHT	MATERIAL	STATION	OFFSET
*1A	MAST ARM	TO BE REMOVED			
*2A	MAST ARM	TO BE REMOVED			
*1	MAST ARM	21'-6"	STEEL	207+23.2	51.9'LT
2	MAST ARM	21'-6"	STEEL	208+46.2	49.9'LT
*3	MAST ARM	21'-6"	STEEL	109+05.1	42.3'RT
*4	MAST ARM	21'-6"	STEEL	108+80.4	54.1'RT
*5	PEDESTAL	10'	ALUMINUM	108+76.3	45.8'RT
*6	PEDESTAL	10'	ALUMINUM	108+02.3	63.0'RT
*7	PEDESTAL	10'	ALUMINUM	107+76.4	32.5'RT
8	PEDESTAL	10'	ALUMINUM	207+69.7	27.2'LT
9	PEDESTAL	10'	ALUMINUM	208+47.2	40.8'LT
*TP1	STRAIN	50'	WOOD	207+32.5	66.0'LT
*TP2	STRAIN	50'	WOOD	108+98.5	51.1'RT

* - DENOTES EXISTING

ADDITIONAL SIGNAL NOTES:

8. *THE TRAFFIC CONTRACTOR SHALL REMOVE ALL CABLES FROM CONDUITS THAT ARE TO BE ABANDONED PER CONDUIT SCHEDULE.*
9. *ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.*
10. *LOOP DETECTORS TO REMAIN:*
    TYPE #2 (6'x25') - SOUTHBOUND US 13 LEFT-TURN AND THROUGH MOVEMENTS.
    PROPOSED LOOP DETECTORS:
    TYPE #2 (6'x25') - TO BE INSTALLED ON NORTHBOUND US 13 THROUGH MOVEMENTS AND WESTBOUND BIG OAK ROAD LEFT-TURN AND RIGHT-TURN MOVEMENTS.
11. *AT THE END OF PHASE 2, DELDOT TRAFFIC SHALL REMOVE THE TEMPORARY SIGNAL SYSTEM (WOOD POLES, SPAN WIRE, SIGNAL HEADS, ASSOCIATED SIGNAL WIRES, AND DETECTORS) AND USE THE ULTIMATE SIGNAL CONFIGURATION. ALL TEMPORARY SIGNAL EQUIPMENT SHALL REMAIN INTACT AND FULLY OPERATIONAL UNTIL THE ULTIMATE CONFIGURATION IS READY TO BE COMMISSIONED.*
12. *THE TRAFFIC CONTRACTOR SHALL RELOCATE THE CCTV CAMERA ON MAST ARM #1 SO IT IS CENTERED OVER THE RIGHT-TURN LANE.*
13. *THE CONTRACTOR SHALL SPLICE THE LEAD-IN CABLES FOR THE PROPOSED LOOP DETECTORS TO THE EXISTING 2/#14 HOME-RUN CABLES.*

SPAN WIRE SCHEDULE

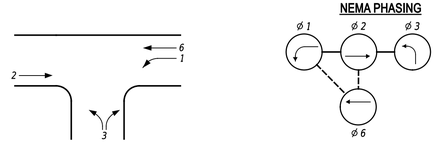
SPAN	LENGTH	SPAN MOUNT HEIGHT	SAG	SPAN LOW POINT	BOTTOM OF LOWEST HEAD
PLT1-PLT2	250 FT	32.5 FT	12.5' @ 5.0%	20 FT	16 FT

SEE NOTE 11

ADDITIONAL LEGEND

- WORK ZONE
- III BARRICADE
- • • • DRUM - TRAFFIC CONTROL

SIGNAL PHASING



PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

*SEE NOTE 5

SIGNAL HEAD DIAGRAM

LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	*PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)*
CA X	*PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)*	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	*PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)*
CO #	*PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)*	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	*PROPOSED POLE IDENTIFIER (# OF POLE)*
JW X	*PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)*	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	*PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)*	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	⬚	▭
LOOP DETECTOR, TYPE 2	⬚	▭
LUMINAIRE	—○	—●
MAST ARM	➢	➤
MICROWAVE DETECTION	◀	◀
OPTICOM RECEIVER	—○	—●
OVERHEAD SIGNING	⊣	⊣
PEDESTRIAN POLE/BASE	◎	◉
PEDESTRIAN PUSHBUTTON	—▷	—▶
PEDESTRIAN SIGNAL HEAD	⊐	⊐
RIGHT-OF-WAY	———	—R/W—
SERVICE PEDESTAL		P
SIGNAL CABINET	▯	▮
SIGNAL HEAD	—▷	—▶
SIGNAL POLE/BASE	⊗	⊙
CCTV CAMERA	CCTV	■
SPAN WIRE	—XX—	——◇——
UTILITY POLE	⊘	●
VIDEO DETECTION	◀	◀

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE PROFESSIONAL ENGINEER

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE *AECOM* SECTION DESIGNATION. — 11/20/2025 DATE — SEAL

CONCURRENCE FOR INSTALLATION

CHIEF OF TRAFFIC ENGINEERING — 12/1/2025 DATE

SG-04

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	PERMIT NO.	K247 & KCAM194
COUNTY	KENT	DESIGNED BY:	F. ZANCOLLI
		CHECKED BY:	J. MACIOS

TEMPORARY SIGNAL PLAN PHASE 2 US 13 @ BIG OAK ROAD

SECTION AEC — SHEET NO. 91

AECOM

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUIT	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
1A	1	2.0"-RGS	40'/30'	T/OS	[NEW (3)#8 THNN - LINE SIDE]
1B	1	2.0"-RGS	5'	T	[NEW (1)2/#8 U.F. W/GND - LOAD SIDE]
1C	1	2.0"-RGS	5'	T	[NEW (1)2/#8 U.F. W/GND - LOAD SIDE]
2	4	4.0"-PVC	5'	T	[NEW (15)2/#14, (4)4/#18, (4)4/#14, (6)5/#14, (2)9/#14, (2)16/#14, (1) CAT5e COMM CABLE, (3)#6 GND] [DELDOT FIBER]
3	1	3.0"-PVC	18'	T	[NEW (1)4/#18, (1)16/#14, (1)#6 GND, (1) CAT5e COMM CABLE]
*3A	1	2.5"-RGS	75'	-	<REMOVE EX. (1)2/#14> AB
4	1	4.0"-PVC	35'	T	[NEW (2)2/#14, (1)4/#18, (3)5/#14, (1)9/#14, (1)#6 GND]
*4A	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> AB
5	1	4.0"-HDPE	37'	B	[NEW (2)2/#14, (1)4/#18, (3)5/#14, (1)9/#14, (1)#6 GND]
*5A	1	1.5"-RGS	10'	-	<REMOVE EX. (1)1/#14> AB
*6	1	4.0"-PVC	342'	-	<REMOVE EX. (2)2/#14 (2)4/#14> (EX.(1)#6 GND) [NEW (2)2/#14, (2)4/#14]
*6A	1	4.0"-PVC	3'	-	<REMOVE EX. (2)2/#14 (2)4/#14, (1)#6 GND> AB
*7	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> [NEW (2)1/#14]
8	1	3.0"-PVC	7'	T	[NEW (1)4/#18, (1)9/#14, (1)#6 GND]
*8A	1	2.5"-RGS	75'	-	<REMOVE EX. (6)2/#14> AB
9	1	2.5"-PVC	14'	T	[NEW (1)5/#14, (1)#6 GND]
*9A	1	1.5"-RGS	15'	-	<REMOVE EX. (2)1/#14> AB
10	2	4.0"-HDPE	72'	B	[NEW (13)2/#14, (2)4/#18, (4)4/#14, (3)5/#14, (1)9/#14, (1)16/#14, (2)#6 GND]
*10A	1	2.5"-RGS	80'	-	<REMOVE EX. (1)2/#14> AB
11	1	1.5"-RGS	3'	T	[NEW (2)1/#14]
*11A	1	1.5"-RGS	8'	-	<REMOVE EX. (1)1/#14> AB
12	1	4.0"-HDPE	74'	B	[NEW (2)5/#14, (1)#6 GND]
*12A	1	4.0"-PVC	345'	-	<REMOVE EX. (2)2/#14, (2)4/#14, (1)#6 GND> AB
13	1	4.0"-PVC	98'	T	[NEW (4)2/#14, (2)4/#14, (1)#6 GND]
*13A	1	1.5"-RGS	10'	-	<REMOVE EX. (2)1/#14> AB

* DENOTES EXISTING CONDUIT RUN
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUIT	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
14	1	1.5"-RGS	13'	T	[NEW (2)1/#14]
*14A	1	2.0"-RGS	25'	-	<REMOVE EX. (1)2/#8 U.F. W/GND> AB
15	1	4.0"-PVC	215'	T	[NEW (2)2/#14, (2)4/#14, (1)#6 GND]
*15A	1	2.0"-RGS	5'	-	<REMOVE EX. (1)2/#8 U.F. W/GND> AB
16	1	2.5"-PVC	4'	T	[NEW (1)5/#14, (1)#6 GND]
*16A	1	4.0"-PVC	5'	-	<REMOVE EX. (4)4/#18, (12)2/#14, (4)4/#14, (4)9/#14>AB
17	1	2.5"-PVC	40'	T	[NEW (1)5/#14, (1)#6 GND]
*17A	2	3.0"-PVC	10'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
18	1	4.0"-PVC	84'	T	[NEW (1)5/#14, (1)#6 GND]
*18A	2	3.0"-PVC	12'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
19	2	4.0"-PVC	132'	T	[NEW (7)2/#14, (2)4/#18, (2)4/#14, (1)5/#14, (1)9/#14, (1)16/#14, (2)#6 GND]
20	2	4.0"-HDPE	80'	B	[NEW (4)2/#14, (2)4/#18, (1)5/#14, (1)9/#14, (1)16/#14, (2)#6 GND]
*20A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (12)2/#14, (4)4/#14, (2)9/#14>AB
21	1	2.5"-PVC	9'	T	[NEW (1)5/#14, (1)#6 GND]
*21A	1	4.0"-PVC	40'	-	<REMOVE EX. (2)4/#18, (12)2/#14, (4)4/#14, (2)9/#14>AB
22	1	4.0"-PVC	28'	T	[NEW (2)2/#14, (1)#6 GND]
*22A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (2)4/#14, (2)9/#14> AB
23	1	3.0"-PVC	19'	T	[NEW (1)4/#18, (1)16/#14, (1)#6 GND]
*23A	1	4.0"-HDPE	75'	-	<REMOVE EX. (2)4/#18, (2)9/#14> AB
24	1	3.0"-PVC	11'	T	[NEW (1)4/#18, (1)9/#14, (1)#6 GND]
*24A	2	3.0"-PVC	14'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
25	1	4.0"-PVC	29'	T	[NEW (2)2/#14, (1)#6 GND]
*25A	2	3.0"-PVC	14'	-	<REMOVE EX. (1)4/#18, (1)9/#14> AB
*26	1	4.0"-PVC	278'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND] [NEW (2)4/#14]
31	1	4.0"-PVC	218'	T	[NEW (2)4/#14, (1)#6 GND]
*31A	1	4.0"-PVC	235'	-	<REMOVE EX. (2)4/#14 (1)#6 GND> AB
38	1	1.5"-RGS	6'	T	[NEW (1)1/#14]
39	1	2.5"-PVC	14'	T	[NEW (2)5/#14, (1)#6 GND]
40	1	4.0"-HDPE	72'	B	[NEW (1)4/#18, (1)5/#14, (1)9/#14, (1)#6 GND]
41	1	1.5"-RGS	3'	T	[NEW (2)1/#14]

* DENOTES EXISTING CONDUIT RUN
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON

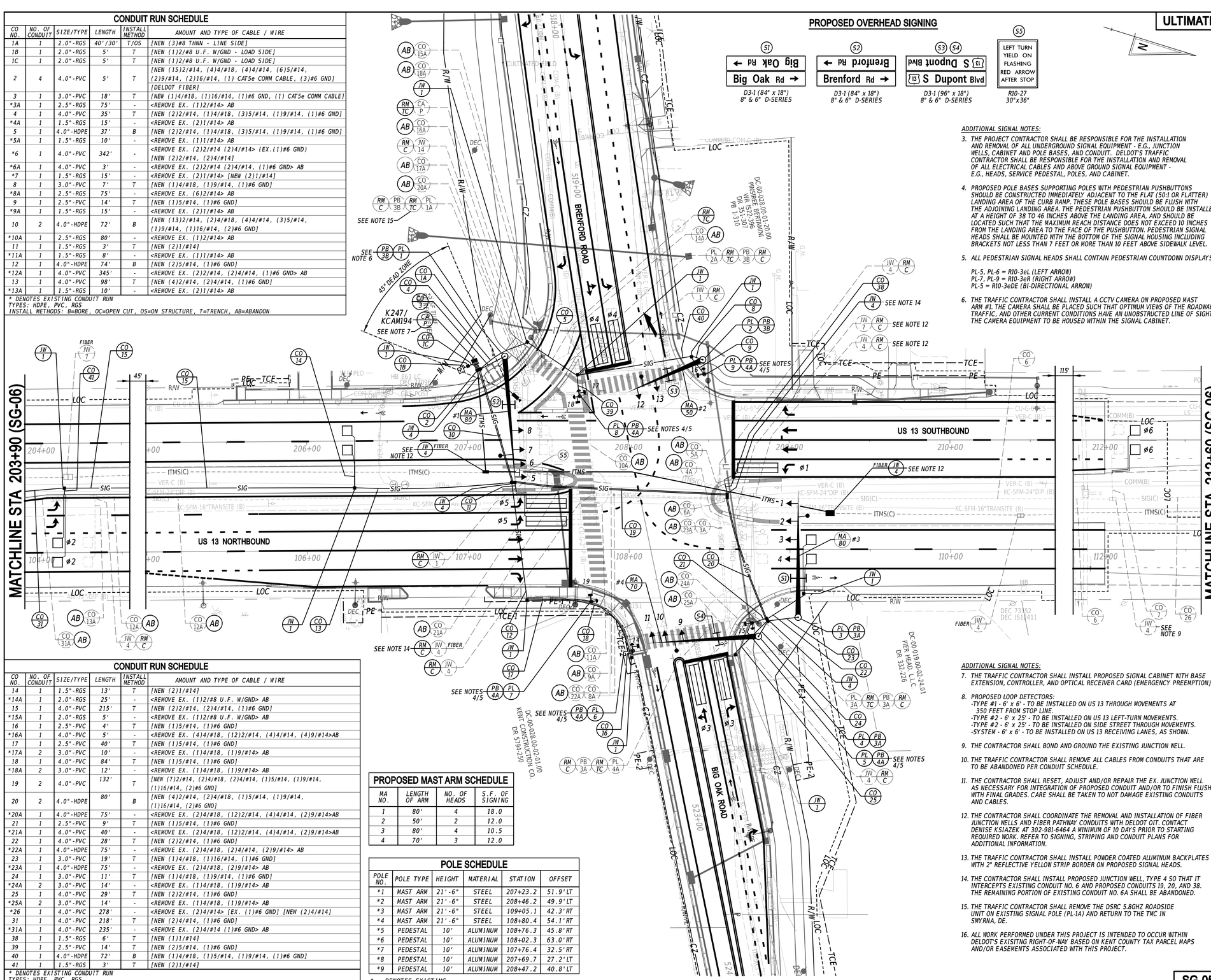
PROPOSED MAST ARM SCHEDULE

MA NO.	LENGTH OF ARM	NO. OF HEADS	S.F. OF SIGNING
1	80'	4	18.0
2	50'	2	12.0
3	80'	4	10.5
4	70'	3	12.0

POLE SCHEDULE

POLE NO.	POLE TYPE	HEIGHT	MATERIAL	STATION	OFFSET
*1	MAST ARM	21'-6"	STEEL	207+23.2	51.9'LT
*2	MAST ARM	21'-6"	STEEL	208+46.2	49.9'LT
*3	MAST ARM	21'-6"	STEEL	109+05.1	42.3'RT
*4	MAST ARM	21'-6"	STEEL	108+80.4	54.1'RT
*5	PEDESTAL	10'	ALUMINUM	108+76.3	45.8'RT
*6	PEDESTAL	10'	ALUMINUM	108+02.3	63.0'RT
*7	PEDESTAL	10'	ALUMINUM	107+76.4	32.5'RT
*8	PEDESTAL	10'	ALUMINUM	207+69.7	27.2'LT
*9	PEDESTAL	10'	ALUMINUM	208+47.2	40.8'LT

* - DENOTES EXISTING



ADDITIONAL SIGNAL NOTES:

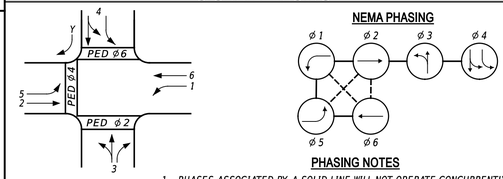
3. THE PROJECT CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL UNDERGROUND SIGNAL EQUIPMENT - E.G., JUNCTION WELLS, CABINET AND POLE BASES, AND CONDUIT. DELDOT'S TRAFFIC CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL ELECTRICAL CABLES AND ABOVE GROUND SIGNAL EQUIPMENT - E.G., HEADS, SERVICE PEDESTAL, POLES, AND CABINET.
4. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
5. ALL PEDESTRIAN SIGNAL HEADS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAYS.

   PL-5, PL-6 = R10-3eL (LEFT ARROW)
   PL-7, PL-9 = R10-3eR (RIGHT ARROW)
   PL-5 = R10-3eDE (BI-DIRECTIONAL ARROW)
6. THE TRAFFIC CONTRACTOR SHALL INSTALL A CCTV CAMERA ON PROPOSED MAST ARM #1. THE CAMERA SHALL BE PLACED SUCH THAT OPTIMUM VIEWS OF THE ROADWAY, TRAFFIC, AND OTHER CURRENT CONDITIONS HAVE AN UNOBSTRUCTED LINE OF SIGHT. THE CAMERA EQUIPMENT TO BE HOUSED WITHIN THE SIGNAL CABINET.

ADDITIONAL SIGNAL NOTES:

7. THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED SIGNAL CABINET WITH BASE EXTENSION, CONTROLLER, AND OPTICAL RECEIVER CARD (EMERGENCY PREEMPTION).
8. PROPOSED LOOP DETECTORS:
   -TYPE #1 - 6' x 6' - TO BE INSTALLED ON US 13 THROUGH MOVEMENTS AT 350 FEET FROM STOP LINE.
   -TYPE #2 - 6' x 25' - TO BE INSTALLED ON US 13 LEFT-TURN MOVEMENTS.
   -TYPE #2 - 6' x 25' - TO BE INSTALLED ON SIDE STREET THROUGH MOVEMENTS.
   -SYSTEM - 6' x 6' - TO BE INSTALLED ON US 13 RECEIVING LANES, AS SHOWN.
9. THE CONTRACTOR SHALL BOND AND GROUND THE EXISTING JUNCTION WELL.
10. THE TRAFFIC CONTRACTOR SHALL REMOVE ALL CABLES FROM CONDUITS THAT ARE TO BE ABANDONED PER CONDUIT SCHEDULE.
11. THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EX. JUNCTION WELL AS NECESSARY FOR INTEGRATION OF PROPOSED CONDUIT AND/OR TO FINISH FLUSH WITH FINAL GRADES. CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING CONDUITS AND CABLES.
12. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER JUNCTION WELLS AND FIBER PATHWAY CONDUITS WITH DELDOT OIT. CONTACT DENISE KSIAZEK AT 302-981-6464 A MINIMUM OF 10 DAYS PRIOR TO STARTING REQUIRED WORK. REFER TO SIGNING, STRIPING AND CONDUIT PLANS FOR ADDITIONAL INFORMATION.
13. THE TRAFFIC CONTRACTOR SHALL INSTALL POWDER COATED ALUMINUM BACKPLATES WITH 2" REFLECTIVE YELLOW STRIP BORDER ON PROPOSED SIGNAL HEADS.
14. THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 4 SO THAT IT INTERCEPTS EXISTING CONDUIT NO. 6 AND PROPOSED CONDUITS 19, 20, AND 38. THE REMAINING PORTION OF EXISTING CONDUIT NO. 6A SHALL BE ABANDONED.
15. THE TRAFFIC CONTRACTOR SHALL REMOVE THE DSRC 5.8GHZ ROADSIDE UNIT ON EXISTING SIGNAL POLE (PL-1A) AND RETURN TO THE TMC IN SMYRNA, DE.
16. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.

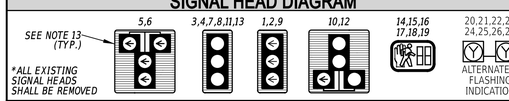
SIGNAL PHASING



PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM



LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	PROPOSED POLE IDENTIFIER (# OF POLE)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	⬚	▭
LOOP DETECTOR, TYPE 2	⬚	▭
LUMINAIRE	—◇	—●
MAST ARM	◁	◤
MICROWAVE DETECTION	◀	◀
OPTICOM RECEIVER	—○	—●
OVERHEAD SIGNING	⊣	⊣
PEDESTRIAN POLE/BASE	◎	◉
PEDESTRIAN PUSHBUTTON	—▷	—▶
PEDESTRIAN SIGNAL HEAD	⊐	⊐
RIGHT-OF-WAY	———	—R/W—
SERVICE PEDESTAL		P
SIGNAL CABINET	▯	▮
SIGNAL HEAD	▷	▶
SIGNAL POLE/BASE	⊗	⊙
CCTV CAMERA	CCTV◁	■◀
SPAN WIRE	—XX—	—◇—
UTILITY POLE	⊘	●
VIDEO DETECTION	◀	◀

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE PROFESSIONAL ENGINEER

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION. — 11/20/2025 DATE

SEAL

CONCURRENCE FOR INSTALLATION

CHIEF OF TRAFFIC ENGINEERING — 12/1/2025 DATE

AECOM

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

CONTRACT	T202104203	PERMIT NO.	K247 & KCAM194
COUNTY	KENT	DESIGNED BY:	F. ZANCOLLI
		CHECKED BY:	J. MACIOS

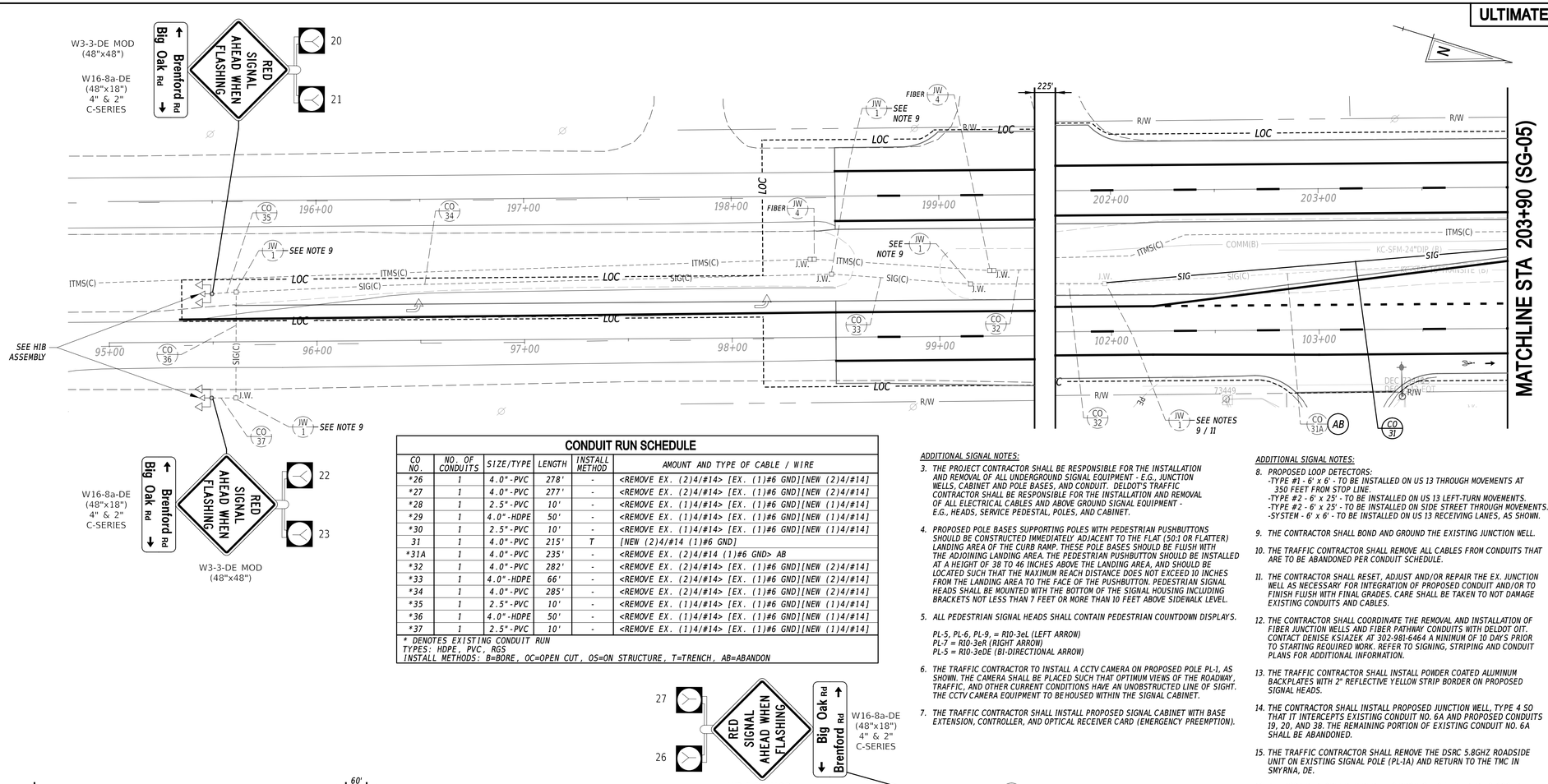
HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

SG-05

SIGNAL PLAN
US 13 @ BIG OAK ROAD

SECTION: AEC
SHEET NO.: 92

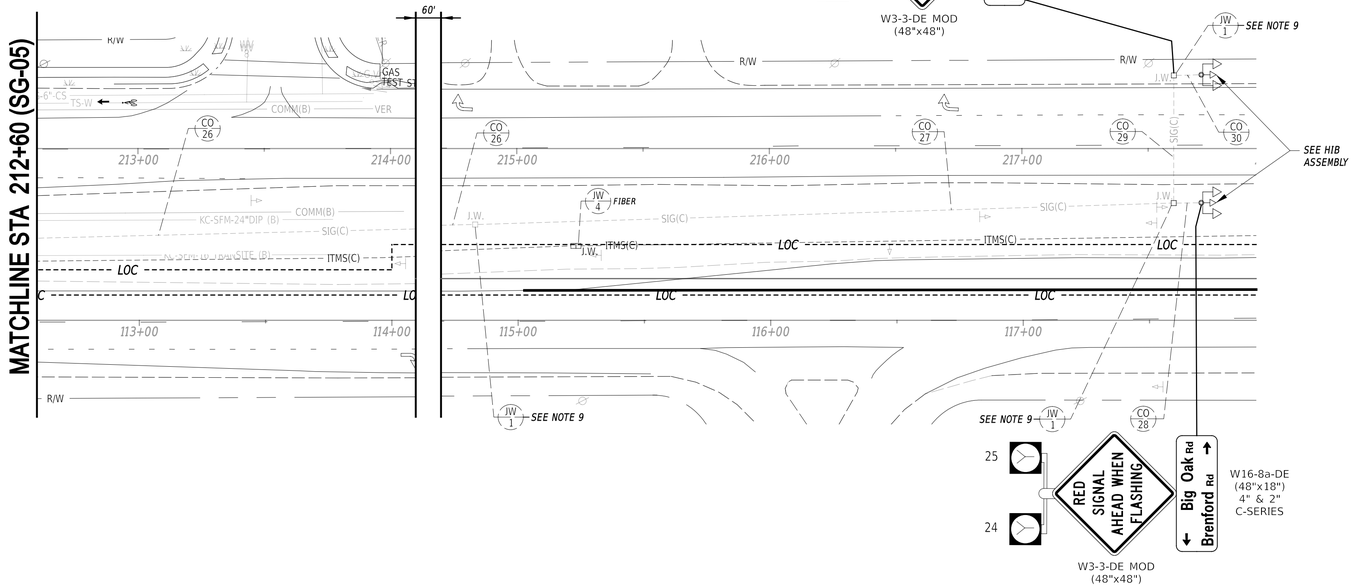
ULTIMATE



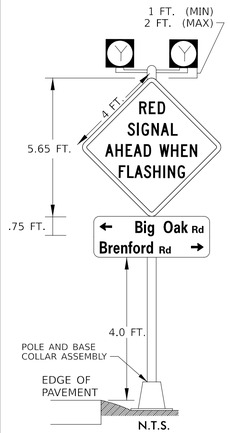
CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
*26	1	4.0"-PVC	278'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND][NEW (2)4/#14]
*27	1	4.0"-PVC	277'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND][NEW (2)4/#14]
*28	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]
*29	1	4.0"-HDPE	50'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]
*30	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]
31	1	4.0"-PVC	215'	T	[NEW (2)4/#14 (1)#6 GND]
*31A	1	4.0"-PVC	235'	-	<REMOVE EX. (2)4/#14 (1)#6 GND> AB
*32	1	4.0"-PVC	282'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND][NEW (2)4/#14]
*33	1	4.0"-HDPE	66'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND][NEW (2)4/#14]
*34	1	4.0"-PVC	285'	-	<REMOVE EX. (2)4/#14> [EX. (1)#6 GND][NEW (2)4/#14]
*35	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]
*36	1	4.0"-HDPE	50'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]
*37	1	2.5"-PVC	10'	-	<REMOVE EX. (1)4/#14> [EX. (1)#6 GND][NEW (1)4/#14]

* DENOTES EXISTING CONDUIT RUN
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH, AB=ABANDON



ACTIVE HIB ASSEMBLY



1. HAZARD IDENTIFICATION BEACON (HIB) ASSEMBLY SHALL CONSIST OF A PAIR OF ALTERNATELY FLASHING BEACONS AND A RED SIGNAL AHEAD WHEN FLASHING SIGN (W3-3-DE MOD, 48" x 48") WITH AN ADVANCE STREET NAME PLAQUE SIGN (W16-8P, 30" x 9") MOUNTED ON A PEDESTAL POLE.
2. THE ACTIVE BEACONS SHALL BE 12-INCH YELLOW L.E.D. ONE-SECTION TRAFFIC SIGNAL HEADS.
3. THE ACTIVE BEACONS SHALL OPERATE 24 HOURS A DAY, 7 DAYS A WEEK USING A DELAY TIMER CIRCUIT.
4. THE FLASHING RATE SHALL NOT BE LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE.
5. THE ILLUMINATED PERIOD OF EACH FLASH SHALL NOT BE LESS THAN 1 /2 NOR MORE THAN 2/3 OF THE FLASH CYCLE.
6. SIGNFIX (OR SIMILAR) SHALL BE INSTALLED ON THE BACK OF THE PROPOSED SIGNS FOR MOUNTING SUPPORT.
7. THE PEDESTAL POLE SHALL BE CONTINUOUS SPUN ALUMINUM, SCHEDULE 80. SPLICING POLE EXTENSIONS SHALL BE PROHIBITED.

ADDITIONAL SIGNAL NOTES:

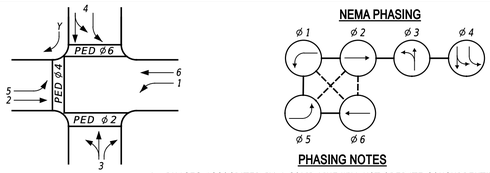
3. THE PROJECT CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL UNDERGROUND SIGNAL EQUIPMENT - E.G., JUNCTION WELLS, CABINET AND POLE BASES, AND CONDUIT. DELDOT'S TRAFFIC CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL ELECTRICAL CABLES AND ABOVE GROUND SIGNAL EQUIPMENT - E.G., HEADS, SERVICE PEDESTAL, POLES, AND CABINET.
4. PROPOSED POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHOULD BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHOULD BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE SIDEWALK LEVEL.
5. ALL PEDESTRIAN SIGNAL HEADS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAY'S.

   PL-5, PL-6, PL-9, = R10-3eL (LEFT ARROW)
   PL-7 = R10-3eR (RIGHT ARROW)
   PL-5 = R10-3eDE (BI-DIRECTIONAL ARROW)
6. THE TRAFFIC CONTRACTOR TO INSTALL A CCTV CAMERA ON PROPOSED POLE PL-1, AS SHOWN. THE CAMERA SHALL BE PLACED SUCH THAT OPTIMUM VIEWS OF THE ROADWAY, TRAFFIC, AND OTHER CURRENT CONDITIONS HAVE AN UNOBSTRUCTED LINE OF SIGHT. THE CCTV CAMERA EQUIPMENT TO BE HOUSED WITHIN THE SIGNAL CABINET.
7. THE TRAFFIC CONTRACTOR SHALL INSTALL PROPOSED SIGNAL CABINET WITH BASE EXTENSION, CONTROLLER, AND OPTICAL RECEIVER CARD (EMERGENCY PREEMPTION).

ADDITIONAL SIGNAL NOTES:

8. PROPOSED LOOP DETECTORS:
   -TYPE #1 - 6' x 6' - TO BE INSTALLED ON US 13 THROUGH MOVEMENTS AT 350 FEET FROM STOP LINE.
   -TYPE #2 - 6' x 25' - TO BE INSTALLED ON US 13 LEFT-TURN MOVEMENTS.
   -TYPE #2 - 6' x 25' - TO BE INSTALLED ON SIDE STREET THROUGH MOVEMENTS.
   -SYSTEM - 6' x 6' - TO BE INSTALLED ON US 13 RECEIVING LANES, AS SHOWN.
9. THE CONTRACTOR SHALL BOND AND GROUND THE EXISTING JUNCTION WELL.
10. THE TRAFFIC CONTRACTOR SHALL REMOVE ALL CABLES FROM CONDUITS THAT ARE TO BE ABANDONED PER CONDUIT SCHEDULE.
11. THE CONTRACTOR SHALL RESET, ADJUST AND/OR REPAIR THE EX. JUNCTION WELL AS NECESSARY FOR INTEGRATION OF PROPOSED CONDUIT AND/OR TO FINISH FLUSH WITH FINAL GRADES. CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING CONDUITS AND CABLES.
12. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF FIBER JUNCTION WELLS AND FIBER PATHWAY CONDUITS WITH DELDOT OIT. CONTACT DENISE KSIAZEK AT 302-981-6464 A MINIMUM OF 10 DAYS PRIOR TO STARTING REQUIRED WORK. REFER TO SIGNING, STRIPING AND CONDUIT PLANS FOR ADDITIONAL INFORMATION.
13. THE TRAFFIC CONTRACTOR SHALL INSTALL POWDER COATED ALUMINUM BACKPLATES WITH 2" REFLECTIVE YELLOW STRIP BORDER ON PROPOSED SIGNAL HEADS.
14. THE CONTRACTOR SHALL INSTALL PROPOSED JUNCTION WELL, TYPE 4 SO THAT IT INTERCEPTS EXISTING CONDUIT NO. 6A AND PROPOSED CONDUITS 19, 20, AND 38. THE REMAINING PORTION OF EXISTING CONDUIT NO. 6A SHALL BE ABANDONED.
15. THE TRAFFIC CONTRACTOR SHALL REMOVE THE DSRC 5.8GHZ ROADSIDE UNIT ON EXISTING SIGNAL POLE (PL-1A) AND RETURN TO THE TMC IN SMYRNA, DE.
16. ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISTING RIGHT-OF-WAY BASED ON KENT COUNTY TAX PARCEL MAPS AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.

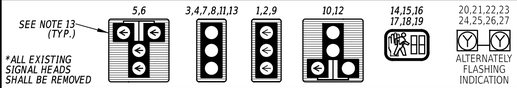
SIGNAL PHASING



PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM



LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	*PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)*
CA X	*PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)*	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	*PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)*
CO #	*PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)*	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	*PROPOSED POLE IDENTIFIER (# OF POLE)*
JW X	*PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)*	RM C	*REMOVE BY CONTRACTOR*
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	*REMOVE BY OTHERS*
MA XX	*PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)*	RM TC	*REMOVE BY TRAFFIC CONTRACTOR*

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
CCTV CAMERA	CCTV	
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION.

11/20/2025
DATE

JOSEPH AUGUSTIN MACIOS LICENSE No. 21069 DELAWARE PROFESSIONAL ENGINEER
SEAL

CONCURRENCE FOR INSTALLATION

CHIEF OF TRAFFIC ENGINEERING

12/1/2025
DATE

AECOM

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203	SG-06	
COUNTY	KENT	PERMIT NO.	K247 & KCAM194
		DESIGNED BY:	F. ZANCOLLI
		CHECKED BY:	J. MACIOS

SIGNAL PLAN
US 13 @ BIG OAK ROAD

SECTION	AEC
SHEET NO.	93

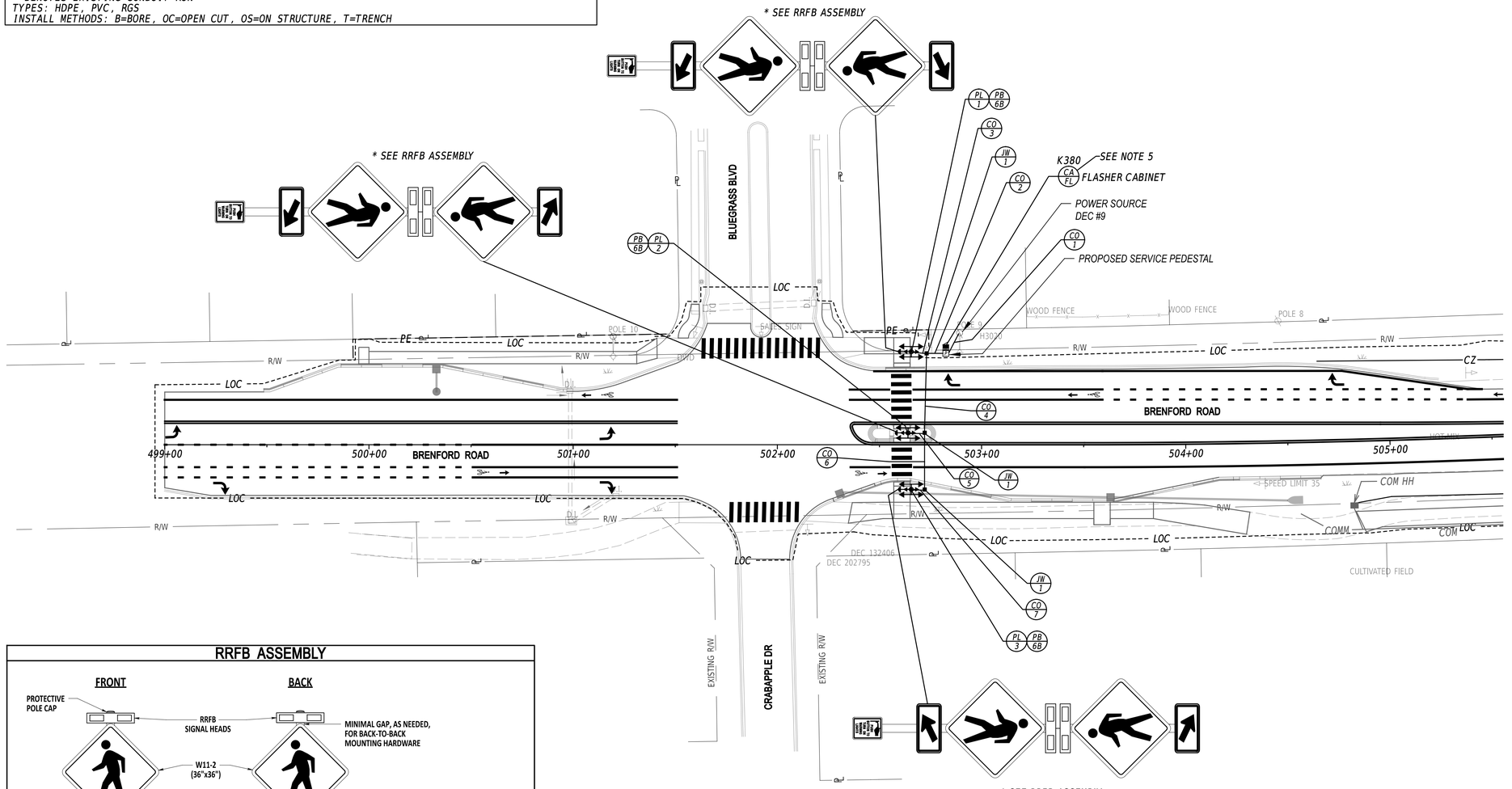
CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUIT	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
1	1	2.0"-RGS		T	[NEW (3)#8 THNN]
2	1	2.0"-RGS	10'	T	[NEW (3) 9/#14, (1) #6 GND]
3	1	3.0"-PVC	7'	T	[NEW (1) 9/#14, (1) #6 GND]
4	1	4.0"-HDPE	39'	B	[NEW (2) 9/#14, (1) #6 GND]
5	1	3.0"-PVC	8'	T	[NEW (1) 9/#14, (1) #6 GND]
6	1	4.0"-HDPE	27'	B	[NEW (1) 9/#14, (1) #6 GND]
7	1	3.0"-PVC	6'	T	[NEW (1) 9/#14, (1) #6 GND]

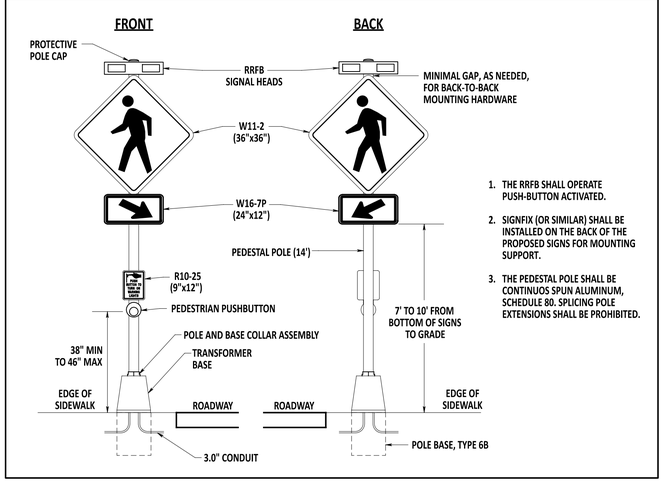
* DENOTES EXISTING CONDUIT RUN
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH

POLE SCHEDULE

POLE NO.	POLE TYPE	HEIGHT	MATERIAL	STATION	OFFSET
1	PEDESTAL	14'	ALUMINUM	502+65.6	45.6'LT
2	PEDESTAL	14'	ALUMINUM	502+64.0	5.8'LT
3	PEDESTAL	14'	ALUMINUM	502+65.6	21.9'RT



RRFB ASSEMBLY



1. THE RRFB SHALL OPERATE PUSH-BUTTON ACTIVATED.
2. SIGNFIX (OR SIMILAR) SHALL BE INSTALLED ON THE BACK OF THE PROPOSED SIGNS FOR MOUNTING SUPPORT.
3. THE PEDESTAL POLE SHALL BE CONTINUOS SPUN ALUMINUM, SCHEDULE 80. SPLICING POLE EXTENSIONS SHALL BE PROHIBITED.

ADDITIONAL SIGNAL NOTES:

3. *ALL WORK PERFORMED UNDER THIS PROJECT IS INTENDED TO OCCUR WITHIN DELDOT'S EXISITNG RIGHT-OF-WAY BASED ON THE KENT COUNTY TAX PARCEL MAP AND/OR EASEMENTS ASSOCIATED WITH THIS PROJECT.*
4. *THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 38 TO 46 INCHES ABOVE THE LANDING AREA, AND SHOULD BE LOCATED SUCH THAT THE MAXIMUM REACH DISTANCE DOES NOT EXCEED 10 INCHES FROM THE LANDING AREA TO THE FACE OF THE PUSHBUTTON.*
5. *THE PROPOSED FLASHER CABINET (K380) SHALL BE INSTALLED ON THE PROPOSED SERVICE PEDESTAL PER 2025 DELDOT STANDARD CONSTRUCTION DETAIL T-17-6 (CONDENSED TRAFFIC).*

RRFB TIMESHEET PARAMETERS

56 - FOOT PEDESTRIAN CEARANCE

23 - SECOND WARNING/FLASH TIME

SIGNAL HEAD DIAGRAM

1 - 6

ALTERNATIVELY FLASHING (WW+S PATTERN) YELLOW RRFB BEACONS

LEGEND

AB	ABANDON	OH #	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	OH #	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
CA X	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	PB X	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PB X	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
CO #	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	PL X	EXISTING POLE IDENTIFIER (# OF POLE)
JW X	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	PL X	PROPOSED POLE IDENTIFIER (# OF POLE)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	RM C	REMOVE BY CONTRACTOR
MA XX	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	RM O	REMOVE BY OTHERS
MA XX	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	RM TC	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1		
LOOP DETECTOR, TYPE 2		
LUMINAIRE		
MAST ARM		
MICROWAVE DETECTION		
OPTICOM RECEIVER		
OVERHEAD SIGNING		
PEDESTRIAN POLE/BASE		
PEDESTRIAN PUSHBUTTON		
PEDESTRIAN SIGNAL HEAD		
RIGHT-OF-WAY		R/W
SERVICE PEDESTAL		P
SIGNAL CABINET		
SIGNAL HEAD		
SIGNAL POLE/BASE		
CCTV CAMERA	CCTV	
SPAN WIRE	XX	
UTILITY POLE		
VIDEO DETECTION		

GENERAL SIGNAL NOTES

1. ALL SIGNAL EQUIPMENT REMOVED FROM A PROJECT IS TO BE RETURNED TO DELDOT TRAFFIC - DOVER, DELAWARE.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

PREPARED BY
CONSULTANT FIRM OF AECOM

JOSEPH AUGUSTYN MACIOS — LICENSE No. 21069 — DELAWARE PROFESSIONAL ENGINEER

11/20/2025
DATE

THIS SEAL APPLIES TO THIS SHEET ONLY BEARING THE "AECOM" SECTION DESIGNATION.

SEAL

CONCURRENCE FOR INSTALLATION

12/1/2025
DATE

CHIEF OF TRAFFIC ENGINEERING

SG-07

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

HEP KC, US13 & BRENFORD/BIG OAK RD INTERSECTION IMPROVEMENTS

CONTRACT	T202104203
COUNTY	KENT
PERMIT NO.	K380
DESIGNED BY:	F. ZANCOLLI
CHECKED BY:	J. MACIOS

RRFB SIGNAL PLAN BRENFORD RD @ BLUEGRASS BLVD / CRABAPPLE DR

SECTION	AEC
SHEET NO.	94

AECOM