COUNTY OF ITEM NO. SHEET NO.

Campbell 6-2021.00 T01

SIGNING

		E	ES	TIMA	ΓΕ	OF	QUANTITIES					
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ITEM	CODE		T-4			TOT	ITEM	CODE		7-1		TOT
		UNIT		QUANT	ITY				UNIT		QUANTITY	
GROUND MOUNTED SIGN SUPPORTS							OVERHEAD SIGN SUPPORTS (2)					
TYPE A	6400	LBS.					OSS ALUMINUM 60 FT TRUSS	6422	EACH			
TYPE C	6441	LBS.	577			577	OSS ALUMINUM 65 FT TRUSS	6424	EACH			
							OSS ALUMINUM 70 FT TRUSS	6426	EACH			
FOOTINGS FOR SIGNS							OSS ALUMINUM 75 FT TRUSS	6436	EACH			
CONCRETE - CLASS "A" FOR SIGNS	6490	CU.YD.	1.3			1.3	OSS ALUMINUM 80 FT TRUSS	6438	EACH			
REINFORCEMENT STEEL	6491	LBS.	88			88	OSS ALUMINUM 85 FT TRUSS	6443	EACH			
							OSS ALUMINUM 90 FT TRUSS	6445	EACH			
SIGN BASE MATERIAL							OSS ALUMINUM 95 FT TRUSS	6453	EACH			
ALUMINUM							OSS ALUMINUM 100 FT TRUSS	6455	EACH			
② PANEL SIGNS	6405	SQ.FT.	3771.5			3771.5	OSS ALUMINUM 105 FT TRUSS	6457	EACH			
3 SHEETING SIGNS							OSS ALUMINUM 110 FT TRUSS	6459	EACH			
O.080 GAUGE	6406	SQ.FT.	9			9	OSS ALUMINUM 115 FT TRUSS	6461	EACH			
O.125 GAUGE	6407	SQ.FT.	64			64	OSS ALUMINUM 120 FT TRUSS	6463	EACH			
							OSS ALUMINUM 125 FT TRUSS	6465	EACH			
steel post 45							OSS ALUMINUM 130 FT TRUSS	6467	EACH			
TYPE 1	6410	LN.FT.					OSS ALUMINUM 135 FT TRUSS	6469	EACH			
TYPE 2	6411	LN.FT.	90			90	OSS ALUMINUM 140 FT TRUSS	6471	EACH			
6 TYPE D	21596ND	EACH					OSS GALV STEEL CANTILEVER MOD	6201	EACH			
7 MILE MARKERS	6412	EACH					OSS GALV STEEL CANTILEVER	6415	EACH			
REFERENCE MARKERS	4903	EACH										
							SIGN BRIDGE ATTACHMENT BRACKET	6448	EACH			
DELINEATORS												
WHITE	6413	EACH										
AMBER	6414	EACH										
							MISCELLANEOUS					
REMOVAL ITEMS 89							BARRIER MOUNTING BRACKET	4904	EACH	2		2
REMOVE OVERHEAD SIGN SUPPORT							BARRIER WALL POST	20912ND	EACH	2		2
STRUCTURE	6449	EACH	1			1	ROADWAY CROSS SECTION	20419NE		1		1
(O) REMOVE OVERHEAD SIGN SUPPORT							FLEXIBLE DELINEATOR POSTS					
STRUCTURE CONCRETE BASE	6450	EACH	1			1	WHITE	6417	EACH			
① REMOVE SIGN SUPPORT BEAMS	6451	EACH					YELLOW	6418	EACH			
REMOVE SIGN (PANEL)	21373ND	EACH	16			16	STAKING	2726	L.S.			
	20995ND						FLASHING ARROW	2775	EACH			
	20418ED		1			1	DEMOBILIZATION	2569	L.S.			
REMOVE AND RELOCATE SHEETING SIGN			<u>'</u>			·	MAINTAIN & CONTROL TRAFFIC	2650	L.S.			
STEEL "W" BEAM GUARDRAIL												
SINGLE FACE	2351	LN.FT.										
DOUBLE FACE		LN.FT.										
END TREATMENT TYPE 1		EACH										
END TREATMENT TYPE 2A	2369	EACH										
LIND TINLATIVILINT TITL ZA	2003	LACH										
	1		1	1	1				1	1		

NOTES

- PAYMENT FOR GROUND MOUNTED SIGN SUPPORTS TYPE A AND TYPE C SHALL BE BASED ON THE NOMINAL WEIGHT OF THE BEAMS. THE NECESSARY GALVANIZING, HARDWARE, ETC. IS TO BE CONSIDERED INCIDENTAL. QUANTITIEIS FOR TYPE C SUPPORTS SHALL INCLUDE ALL NECESSARY HARDWARE TO FORM COMPLETE BREAK-AWAY BEAMS. SEE PANEL SIGN DETAIL SHEET.
- QUANTITY SHALL INCLUDE ALL COPY AND HARDWARE NECESSARY
 TO FORM COMPLETE SIGNS. NO DEDUCTION IN AREA IS TO BE MADE
 FOR ROUNDING OF CORNERS.
- (3) WITH PERMISSION OF THE ENGINEER, SHEETING SIGNS ON THE RAMPS AND SIDE ROADS MAY BE MOVED TO BE COMPATIBLE WITH THE EXISTING SIGNS.
- (4) QUANTITY IS ESTIMATED. THE EXACT LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- WHERE REQUIRED, BRACING FOR SHEETING SIGNS SHALL BE INCIDENTAL TO STEEL POST. SEE SHEETING SIGN DETAIL SHEET.
- QUANTITY SHALL INCLUDE ALL MATERIAL NECESSARY TO FORM A COMPLETE BREAK-AWAY ASSEMBLY. TYPE I POSTS AND CONCRETE SHALL BE PAID SEPARATELY. SEE SHEETING SIGN DETAIL SHEET.
- 7) QUANTITY SHALL INCLUDE SIGN AND POST.
- (8) ALL MATERIALS REMOVED AND NOT REUSED, SUCH AS SIGNS, SIGN LIGHTS, SIGN SUPPORTS, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
-) THE REMOVAL OF ALL TYPE I OR II POSTS AND ALL SHEETING SIGNS SHALL BE INCIDENTAL TO THE PROJECT WITH NO ADDITIONAL PAYMENT BEING ALLOWED. ALL MATERIAL SHALL BE STORED IN ACCORDANCE WITH NOTE (8) ABOVE.
- 10) WHERE THE REMOVAL OF OVERHEAD STRUCTURE CONCRETE BASE IS CALLED FOR, THE BASE IS TO BE REMOVED TO A MINIMUM OF ONE FOOT (1') BELOW THE GROUND LINE, BACKFILLED TO EXISTING GROUND LINE, AND THE DISTURBED AREAS RESEEDED.
- (11) WHERE THE REMOVAL OF BEAM SIGN SUPPORTS IS CALLED FOR, THE BEAM AND ANY CONCRETE PROJECTING ABOVE THE GROUND LINE ARE TO BE CUT OFF A MINIMUM OF ONE FOOT (1') BELOW EXISTING GROUND LINE OR THE ENTIRE BEAM AND CONCRETE BASE ARE TO BE REMOVED COMPLETELY AND BACKFILLED TO EXISTING GROUND LINE.
- 2) QUANTITY SHALL INCLUDE W-BARS AND ALL HARDWARE NECESSARY FOR ATTACHING SIGNS TO SUPPORTS.
- 3) QUANTITY IS ESTIMATED. THE EXACT NUMBER SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. SEE SIGNING POSITIONING DETAIL SHEET FOR DELINEATOR PLACEMENT.

THE FOLLOWING PUBLICATIONS ARE APPLICABLE TO THE WORK DESCRIBED HEREIN:

KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2004)
STANDARD HIGHWAY SIGNS -- FEDERAL HIGHWAY ADMINISTRATION
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2003 EDITION) -- FEDERAL HIGHWAY
ADMINISTRATION

SCOPE OF WORK

TO FURNISH, FABRICATE AND ERECT IN PLACE ALL MATERIALS NECESSARY TO FORM COMPLETED SIGNS AS INDICATED AT LOCATIONS DESCRIBED ELSEWHERE IN THESE PLANS.

SIGN BASE MATERIAL

PANEL SIGNS:

PANEL SIGNS ARE TO BE FABRICATED FROM TWELVE INCH (12") WIDE ALUMINUM EXTRUSIONS AND, WHERE NOTED, COMPATIBLE SIX INCH (6") WIDE ALUMINUM EXTRUSIONS. WHEN A SIX INCH (6") EXTRUSION IS SPECIFIED, IT SHALL BE USED AS THE BOTTOM PANEL OF THE SIGN. TYPICAL CROSS-SECTIONS AND MINIMUM WEIGHTS PER FOOT ARE SHOWN ON THE MISCELLANEOUS DETAIL SHEET, COMPATIBLE SIDE EXTRUSIONS SHALL BE USED ON ALL SIGN EDGES. ALUMINUM MATERIAL FOR ALL EXTRUSIONS SHALL BE ALLOY 6063-T6 ASTM B221. ALL PORTIONS OF EXTRUSIONS WHICH ARE TO COMPOSE THE SIGN FACE SHALL BE PREPARED TO RECEIVE RETROREFLECTIVE BACKGROUND MATERIAL ACCORDING TO THE EXTRUSION AND RETROREFLECTIVE MATERIAL MANUFACTURER'S RECOMMENDATIONS. ALL REMAINING PORTIONS OF EXTRUSIONS (FRONT AND BACK) AND SIDE EXTRUSIONS ARE TO HAVE A SOFT MATTE FINISH. PANEL SIGNS SHALL BE LABELED AS P-#.

SHEET SIGNS:

SHEET SIGNS SHALL BE FABRICATED FROM EITHER 0.080 GAUGE OR 0.125 GAUGE ALUMINUM ALLOY 5052-H38 OR 6061-T6 SHEETS IN ACCORDANCE WITH ASTM B209 AND SHALL BE OF THE SIZE AND SHAPE SPECIFIED. THE SIDE OF THE SHEET TO BE USED AS THE SIGN FACE SHALL BE PREPARED TO RECEIVE RETROFLECTIVE BACKGROUND MATERIAL ACCORDING TO THE ALUMINUM SHHET AND RETRFLECTIVE MATERIAL MANUFACTURER'S RECOMMENDATIONS. SHEETING SIGNS SHALL BE LABELED AS S-#.

SIGN MATERIALS

BACKGROUND MATERIAL:

SIGN SHEETING USED AS BACKGROUND MATERIAL FOR SIGN FACES IS TO BE THE COLOR SPECIFIED AND VISUALLY IN ACCORDANCE WITH STANDARD INTERSTATE COLORS. THIS MATERIAL (EXCEPT BLACK PORTIONS) SHALL BE RETROREFLECTORIZED AND MUST CONFORM TO THE REQUIREMENTS OF ASTM D 4956 FOR TYPE III SHEETING, AND SHALL MEET THE REQUIREMENTS OF SECTION 830 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

IN THE EVENT THAT GLASS BEAD ENCAPSULATED TYPE III SHEETING IS UTILIZED IT SHALL CONSIST OF:

RETROREFLECTIVE SHEETING HAVING AN INTEGRAL OR AIR CAVITY BETWEEN THE FRONT SURFACE AND THE OPTICAL ELEMENTS, MOUNTED ON AND FULLY COVERING ALUMINUM BASE COPY STOCK NOT OTHERWISE EMBOSSED OR CRIMPED BUT HAVING SUFFICIENT THICKNESS AND RIGIDITY TO PREVENT WARPING WHEN MOUNTED OR FASTENED TO THE SIGN PANEL.

ALL RETROREFLECTIVE MATERIALS SHALL BE FABRICATED AND ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

LETTERS SYMBOLS. AND BORDERS:

LETTER, SYMBOLS, AND BORDERS FOR PANEL SIGNS SHALL MEET REQUIREMENTS OF SECTION 830 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THIS MATERIAL SHALL BE RETROREFLECTORIZED AND MUST CONFORM TO ALL THE REQUIREMENTS OF ASTM D 4956 FOR TYPE VIII, OR IX SHEETING.

ALL ATTACHMENTS OF REMOVABLE COPY TO SIGN FACES SHALL BE MADE WITH "POP FASTENERS ("POP" RIVETS). "POP" RIVETS SHALL BE OF THE PROTRUDING HEAD TYPE. BOTH THE RIVET AND MANDREL SHALL BE CORROSION RESISTANT TO THE MATERIAL IN WHICH IT IS INSERTED. COPY SHALL BE AFFIXED WITH A MINIMUM SIZE OF 1/8 INCH DIAMETER "POP" RIVETS, AND THE LENGTH SHALL BE AS NECESSARY TO PROPERLY APPLY COPY IN A WORKMANLIKE MANNER. PANEL OVERLAY SECTIONS SHALL BE AFFIXED WITH A "POP" RIVET WITH A MINIMUM DIAMETER OF 3/16 INCH. AND THE

LENGTH SHALL BE AS NECESSARY TO PROPERLYAPPLY COPY IN A WORKMANLIKE MANNER. ALL RIVETS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK ON THE PROJECT.

ROUTE MARKERS:

ROUTE MARKERS FOR PANEL SIGN MOUNTING ONLY, ARE TO BE A RETROREFLECTORIZED WHITE CUT-OUT OF THE U.S. ROUTE SHIELD OR KENTUCKY ROUTE SHIELD, OMITTING THE BLACK BACKGROUND ON THE STANDARD RECTANGULAR SHAPES. BORDERS ARE NOT TO BE USED ON THE CUT-OUT SHAPES AND THEIR DIMENSIONS ARE TO BE AS SHOWN IN THE STANDARD HIGHWAY SIGNS MANUAL. ROUTE MARKERS ARE TO BE SPACED EVENLY ACROSS THE PANEL SIGN FACE.

ROUTE MARKERS FOR PANEL SIGNS SHALL MEET THE REQUIREMENTS OF SECTION 830 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THIS MATERIAL SHALL BE RETROREFLECTORIZED AND MUST CONFORM TO THE REQUIREMENTS OF ASTM D 4956 FOR TYPE III SHEETING. THE SHEETING SHALL BE MOUNTED ON ALUMINUM BASE COPY STOCK WITH A MINIMUM THICKNESS OF 0.080 INCHES.

DESTINATION-DIRECTION SIGNS:

DESTINATION-DIRECTION SIGNS ARE TO BE OF THE SIZE INDICATED, AND SHALL HAVE SILVER/WHITE LETTERS, SYMBOLS, AND BORDERS. THIS MATERIAL SHALL BE RETROREFLECTORIZED AND MUST CONFORM TO THE REQUIREMENTS OF ASTM D 4956 FOR TYPE III SHEETING, AND SHALL MEET THE CONDITIONS OF SECTION 830 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. (SHEETING SIGNS ONLY)

SIGN MESSAGES:

SIGN MESSAGES SHOWN ARE ULTIMATE MESSAGES. DUE TO PARTIAL CONSTRUCTION, IT MAY BE NECESSARY TO MAKE CHANGES IN SOME OF THESE MESSAGES. THESE CHANGES WILL BE DETERMINED BY THE ENGINEER. SHOULD A SIGN CHANGE BE DETERMINED BEFORE THE SIGN IS INSTALLED, THE ULTIMATE MESSAGE COPY WILL BE STORED ON THE PROJECT BY THE CONTRACTOR. SHOULD A SIGN CHANGE BE DETERMINED AFTER INSTALLATION, STATE FORCES WILL REMOVE THE ULTIMATE MESSAGE. COPY WILL BE STORED BY THE STATE UNTIL APPLICABLE, AT WHICH TIME IT WILL BE INSTALLED BY STATE FORCES. ANY COPY NEEDED FOR A TEMPORARY MESSAGE WILL BE SUPPLIED AND INSTALLED BY THE STATE.

HARDWARE:

ALL HARDWARE FOR THE ASSEMBLY OF PANEL SIGNS AND THE ATTACHMENT OF THESE SIGNS TO THEIR SUPPORTS SHALL BE AS RECOMMENDED BY THE PANEL MANUFACTURER. PLACEMENT OF POST CLIP SHALL BE AS SHOWN ON THE SIGNING MISCELLANEOUS DETAIL SHEET.

ALL HARDWARE FOR THE ERECTION OF SHEETING SIGNS SHALL BE CADMIUM PLATED STEEL IN ACCORDANCE WITH ASTM B-776 AND ASTM A-307.

GROUND-MOUNTED SIGN SUPPORTS

GENERAL:

ALL SIGNS SHALL BE POSITIONED AS SHOWN ON THE POSITIONING DETAIL SHEET. ALL BEAMS AND POSTS SHALL BE OF SUFFICIENT LENGTHS TO EXTEND FROM THE TOP OF THE SIGN TO THE REQUIRED BASE EMBEDMENT.

BEAMS:

ALL BEAMS SHALL BE EITHER TYPE "A" (STANDARD BEAM INSTALLATION), OR TYPE "C" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION). TYPE "A" BEAMS ARE SHOWN ON THE PANEL SIGN DETAIL SHEET, AND THE TYPE "C" BEAMS ARE SHOWN ON THE BREAKAWAY SIGN SUPPORT SYSTEM FOR "C" BEAM SHEET. APPROVED MANUFACTURERS FOR BREAKAWY (TYPE "C") BEAM SUPPORT SYSTEMS HAVE BEEN PLACED ON THE LIST OF APPROVED MATERIALS. THE TYPE AND SIZE OF BEAM TO BE USED SHALL BE INDICATED FOR EACH PANEL SIGN ON THE SIGN DETAIL SHEETS. BEAM LENGTHS INCLUDED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AT EACH SIGN LOCATION AND CROSS SECTIONS SHALL BE DEVELOPED TO VERIFY BEAM LENGTHS, WITH ANY DISCREPANCIES BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

BEAMS SHALL BE A-36 STEEL GALVANIZED IN ACCORDANCE WITH ASTM A-123, CURRENT EDITION.

STEEL POSTS:

TYPE I STEEL POSTS SHALL BE EITHER STANDARD INSTALLATION IN SOIL, WITH SOIL STABILIZER, OR TYPE "D" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION).

APPROVED MANUFACTURERS FOR BREAKAWAY (TYPE "D") POST SYSTEMS HAVE BEEN PLACED ON THE LIST OF APPROVED MATERIALS. BRACING, IF REQUIRED, SHALL BE INCIDENTAL TO TYPE I POST.

TYPE II POST SHALL BE STANDARD INSTALLATION IN SOIL, WITH A SOIL STABILIZER. INSTALLATION PROCEDURES AND BRACING REQUIREMENTS ARE DETAILED ON THE SHEETING SIGN DETAIL SHEET.

ALL STEEL POST SHALL MEET THE REQUIREMENTS OF SECTION 832 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH THE EXCEPTION THAT TYPE I POST SHALL BE PROVIDED IN THE FOLLOWING SIZES:

Outside Dimensions	Corner Radii	Wall Thickness Gauge	Weight
(in.)	(in.)	(in.)	(lb/ft)
2 by 2	5/32	(.105) 12	2.42
2 1/2 by 2 1/2	5/32	(.105) 12	3.14
2 1/2 by 2 1/2	5/32	(.135) 10	4.01

SHEET 1 OF 2

SIGNING SPECIFICATION NOTES

MILEPOST MARKERS

MILEPOST MARKERS SHALL CONFORM TO THE GENERAL REQUIREMENTS SET FORTH IN SECTION 2D-45 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. ADDITIONAL REQUIREMENTS ARE GIVEN ON THE SIGNING POSITIONING DETAIL SHEET.

SIGN PANELS ARE TO BE FABRICATED FROM 0.080 GAUGE ALUMINUM ALLOY 5052-H38 SHEET IN ACCORDANCE WITH ASTM B209, AND SECTION 833 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE SIGN PANELS SHALL BE PROPERLY PREPARED TO RECEIVE THE RETROREFLECTIVE BACKGROUND MATERIAL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. DIMENSIONS FOR ONE, TWO, AND THREE DIGIT SIGNS ARE SHOWN ON THE SIGNING POSITIONING DETAIL SHEET.

BACKGROUND MATERIAL SHALL BE STANDARD INTERSTATE GREEN IN COLOR AND SHALL BE RETROREFLECTORIZED. COPY IS TO BE SILVER/WHITE RETROREFLECTIZED, TEN INCH (10") SERIES "C" NUMERALS OF THE CUT-OUT, NONREMOVABLE TYPE. BOTH BACKGROUND AND COPY MATERIAL MUST MEET TYPE III, CLASS "I" REQUIEMENTS OF SECTION 830 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MINIMUM LENGTHS OF POST SHALL BE TEN FEET (10') WHEN USED WITH ONE DIGIT MARKER, ELEVEN FEET (11') WITH TWO DIGIT MARKER, AND TWELVE FEET (12') WITH THREE DIGIT MARKER. POSTS SHALL BE DRIVEN AND SIGN PANELS MOUNTED TO MAINTAIN FOUR FEET (4') VERTICAL CLEARANCE FROM THE ELEVATION OF THE NEAREST EDGE OF ROADWAY PAVEMENT TO THE BOTTOM OF THE SIGN FACE.

FINAL LOCATION OF MILEPOST MARKERS SHALL BE VERIFIED BY TRIMARC. NOTIFY THE FOLLOWING REPRESENTATIVE OF TRIMARC, AT LEAST TWO WEEKS IN ADVANCE OF BEGINNING WORK ON THIS ITEM:

TODD HOOD 901 WEST MAIN STREET LOUISVILLE, KY 40202 502-587-6624 270-307-7456

FLEXIBLE DELINEATORS

THE FLEXIBLE DELINEATOR POST SHALL BE AS DESCRIBED IN SECTION 838 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND INSTALLED AS DIRECTED BY THE MANUFACTURER'S RECOMMENDATIONS. THE RETROREFLECTIVE MATERIAL SHALL MEET THE REQUIREMNTS OF TYPE C, CLASS "I" AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THEY SHALL BE ERECTED IN SUCH A MANNER THAT THE TOP OF THE REFLECTIVE UNIT SHALL BE FOUR FEET (4') ABOVE THE GRADE OF THE PAVEMENT EDGE. THE COLOR OF THE DELINEATORS SHALL IN ALL CASES CONFORM TO THE COLOR OF EDGELINES STIPULATED. DELINEATORS SHALL ONLY BE ERECTED ON THE HORIZONTAL CURVES ON THE RIGHT SIDE OF THE MAINLINE OF EXPRESSWAY AND FREEWAY ROADWAYS AND ON AT LEAST ONE SIDE OF INTERCHANGE RAMPS WHETHER OR NOT A FIXED SOURCE LIGHTING IS INSTALLED. NO DELINEATORS SHALL BE ERECTED ON MAINLINE TANGENT SECTIONS OF EXPRESSWAYS AND FREEWAYS. DELINEATORS SHOULD BE ERECTED AT 100 FOOT (100') INTERVALS ALONG ACCELERATION AND DECELERATION LANES. THE SPACING OF THE DELINEATORS ON HORIZONTAL CURVES SHALL BE BASED ON THE TABLE AND FORMULA SHOWN ON THE POSITIONING DETAIL SHEET. DELINEATORS AT INTERCHANGE RAMPS SHALL BE SPACED AT A MAXIMUM OF 100 FEET (100')

INTERCHANGE RAMP DESIGN IS SUFFICIENTLY VARIED THAT NO SINGLE DELINEATOR SPACING CAN FIT EVERY SITUATION; THEREFORE, THE TYPICAL DELINEATION AND SPACING VALUE TABLE SHOWN ON THE POSITIONING DETAIL SHEET AND SECTION 3D-04 OF THE 2003 MUTCD SHOULD BE EMPLOYED AS A GUIDE TO DELINEATOR PLACEMENT ON INTERCHANGE RAMPS.

LATERAL AND VERTICAL CLEARANCES ARE SHOWN ON THE POSITIONING DETAIL SHEET. INSTALLATION OF DELINEATORS ON CROSSROADS SHALL BE LIMITED TO DECELERATION AND ACCELERATION LANES SERVING MAIN LINE RAMPS.

MEDIAN CROSSOVER SIGN

THE CONTRACTOR SHALL INSTALL 48" X 48", "NO U TURN" SIGNS (R3-4) AT EACH MEDIAN CROSSOVER. THIS IS TO BE DONE WHETHER ALL NEEDED INSTALLATIONS ARE MENTIONED IN THE FOLLOWING SHEETS OR NOT. AT CROSSOVERS ON MEDIANS SIXTY FEET (60') WIDE AND UNDER, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON THE SAME POSTS IN THE CENTER OF THE MEDIAN, ONE FACING TRAFFIC IN EACH DIRECTION. AT CROSSOVERS ON MEDIANS OVER SIXTY FEET (60') WIDE, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON SEPARATE POSTS AT THE MEDIAN SHOULDER ON THE FAR SIDE OF THE CROSSOVER, ONE FACING TRAFFIC IN EACH DIRECTION.

CONCRETE BASES

ALL CONCRETE BASES SHALL BE OF CLASS "A" CONCRETE FOR SIGNS AND SHALL BE AS SHOWN ELSEWHERE IN THESE PLANS.

EXCAVATION NECESSARY TO CONSTRUCT BASES AND FOOTINGS IS INCIDENTAL TO THE COST OF CLASS "A" CONCRETE FOR SIGNS.

SAMPLES, TESTING, ETC.

BEFORE BEGINNING INSTALLATION, THE CONTRACTOR SHALL FURNISH TO THE RESIDENT OR PROJECT ENGINEER FOR WRITTEN APPROVAL DRAWINGS, DESCRIPTIONS, MANUFACTURER'S CUTS ETC. COVERING ALL MATERIALS TO BE USED. MILL TEST REPORTS FOR BEAMS, STEEL PANELS, AND EACH DIFFERENT GAUGE OF ALUMINUM OR STEEL SHEETING USED MUST BE SUBMITTED TO THE DIVISION OF CONSTRUCTION AND APPROVED PRIOR TO ERECTION.

MISCELLANOUS

RIGHT IS RESERVED TO INSPECT FABRICATION AND ERECTION WORK, AN INSPECTION (DAY AND NIGHT) WILL BE MADE AFTER COMPLETION OF INSTALLATION TO DETERMINE IF THE INTENT OF THE SPECIFICATIONS IS SATISIFIED.

NEW CONCRETE BASES, SUPPORT BEAMS, ETC. ARE TO BE INSTALLED PRIOR TO DISMANTLING ANY EXISTING SIGN. IF ANY EXISTING SIGNS ARE TO BE OUT OF SERVICE FOR MORE THAN ONE WORK SHIFT, TEMPORARY SIGNING OF THE PROPER SHAPE, AND WITH COPY OF SIMILAR CONFIGURATION TO THE EXISTING SIGNING SHALL BE INSTALLED AT THE SAME APPROXIMATE STATION AS THE OUT-OF-SERVICE SIGN. THE COST OF ANY TEMPORARY SIGNING SO USED SHALL BE INCIDENTAL TO THE COST OF REMOVAL OF EXISTING SIGN SUPPORT BEAMS.

THE REMOVAL OF BEAM SIGN SUPPORTS IS TO BE DONE CONCURRENTLY WITH THE RELOCATION OF AFFECTED SIGNS TO NEW SUPPORTS.

IF A MANUFACTURER'S WARRANTY IS FURNISHED TO THE CONTRACTOR ON ANY MATERIALS COVERED UNDER THESE SPECIFICATIONS, THE SAME WARRANTY SHALL BE FURNISHED TO THE STATE BY THE CONTRACTOR.

ALL SIGNS ARE TO BE LOCATED AT THE APPROXIMATE STATIONS LISTED AND THE EXACT LOCATION FOR EACH SIGN SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER; HOWEVER, IF AN SIGN IS RELOCATED MORE THAN TWENTY-FIVE FEET (25') FROM THE STATION LISTED, THE NEW LOCATION MUST BE APPROVED BY THE DIVISION OF HIGHWAY DESIGN AT (502) 564-3280.

ON SHEETING SIGNS WHERE THERE ARE MORE THAN ONE SIGN ASSEMBLY MOUNTED BEDSIDE EACH OTHER, THE POST SHALL BE SPACED TO PROVIDE APPROXIMATELY SIX INCHES (6") OF SPACING BETWEEN SIGNS.

CLEARING AND GRUBBING, AND TREE TRIMMING, WHEN REQUIRED FOR CONSTRUCTION OF THE SIGN PANELS, WILL BE INCIDENTAL TO THE CONTRACT AND NO DIRECT PAYMENT WILL BE ALLOWED.

SIGN COVERING IS NOT RECOMMENDED. HOWEVER, IF IT IS ABSOLUTELY NECESSARY TO COVER THE SIGN FACE TEMPORARILY FOLLOWING ERECTION, USE CAUTION SINCE SOME COVERINGS MAY CAUSE PERMANENT DAMAGE TO THE SIGN FACE FOLLOWING EXPOSURE TO MOISTURE, SUNLIGHT, ETC. POROUS CLOTH OR GEOTEXTILE FABRIC COVERS WHICH ARE FOLDED OVER THE SIGN EDGES AND SECURED AT THE BACK OF THE SIGN HAVE BEEN USED SUCCESSFULLY FOR LIMITED PERIODS. DO NOT USE TAPE, PAPER, PLASTIC, OR SHEET METAL COVERS. ANY SIGNS THAT ARE DAMAGED AS A RESULT OF COVERING SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

TYPE I AND II STEEL POST IN SOIL SHALL BE DRIVEN FOUR FEET (4') BELOW THE GROUND LINE AS SHOWN. HOWEVER, IF SOILD ROCK IS ENCOUNTERED THE CONTRACTOR SHALL DRILL HOLES OF THE REQUIRED DEPTH INTO THE ROCK, AND BACKFILL WITH CONCRETE. THE COST SHALL BE INCIDENTAL TO STEEL POST, AND SOIL STABILIZERS WILL NOT BE REQUIRED.

ANY AREA DISTURBED SHALL BE SIDE GRADED TO THE EXISTING SLOPES AND RESEEDED AS DIRECTED BY THE ENGINEER, AND AT NO ADDITIONAL COST TO THE DEPARTMENT.

SHEET 2 OF 2

: NAME: P:\CIVIL\1471\SIGNS\SIGNING PLANS\TOO300SN.DGN

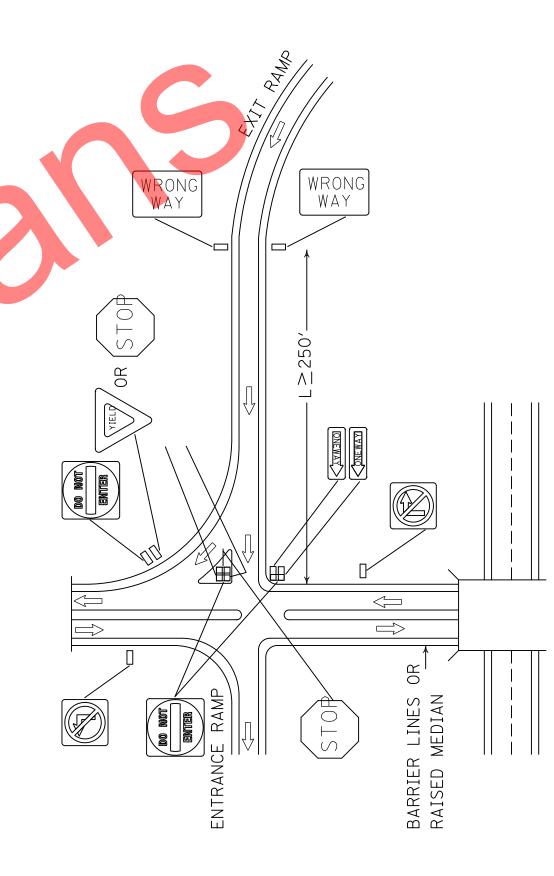
USER: bteague DATE PLOTTED: December 31, 2

E-SHEET NAME:

Campbell	6-2021.00	T04
COUNTY OF	ITEM NO.	SHEET NO.

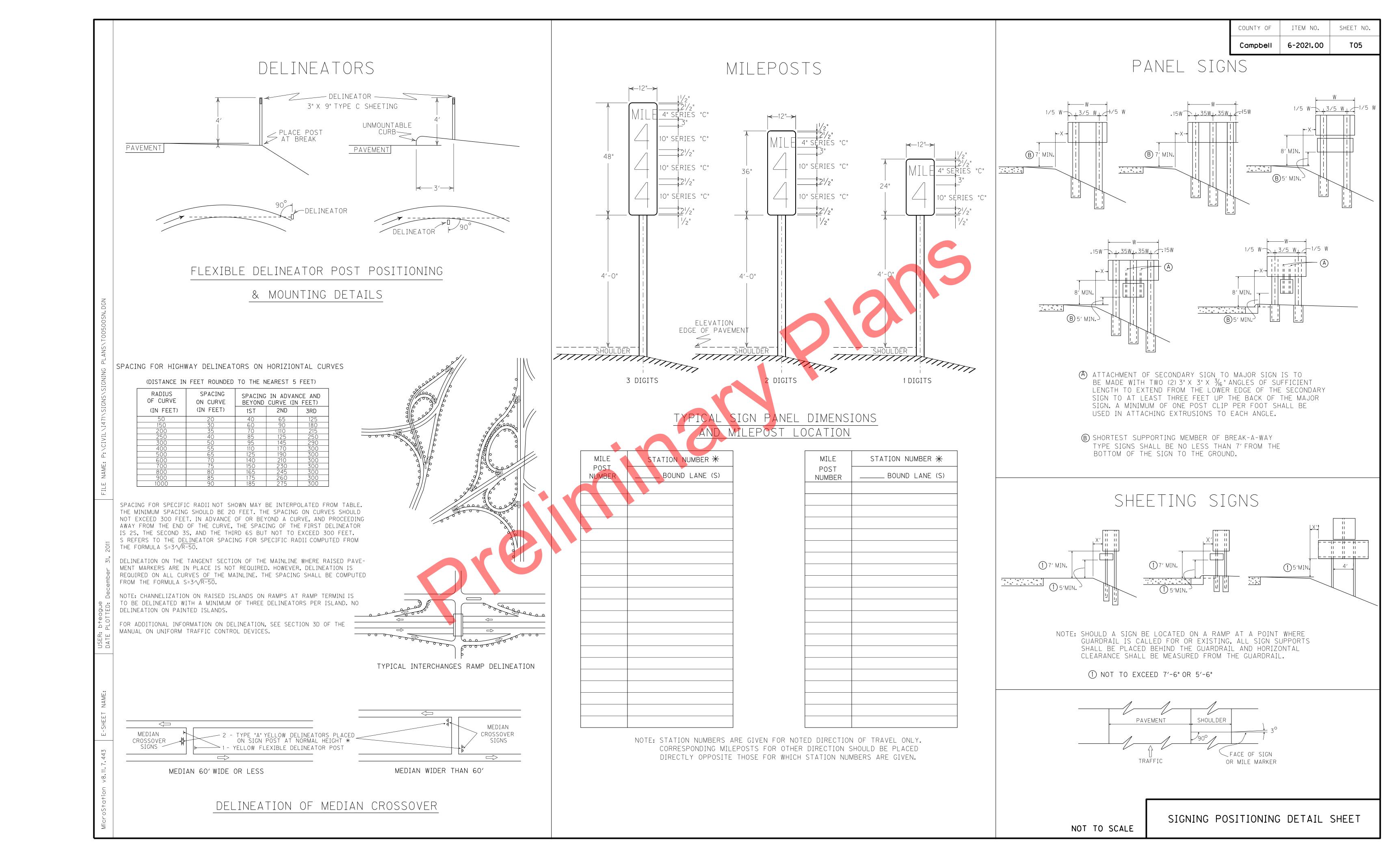
SPECIAL NOTES AND DETAIL

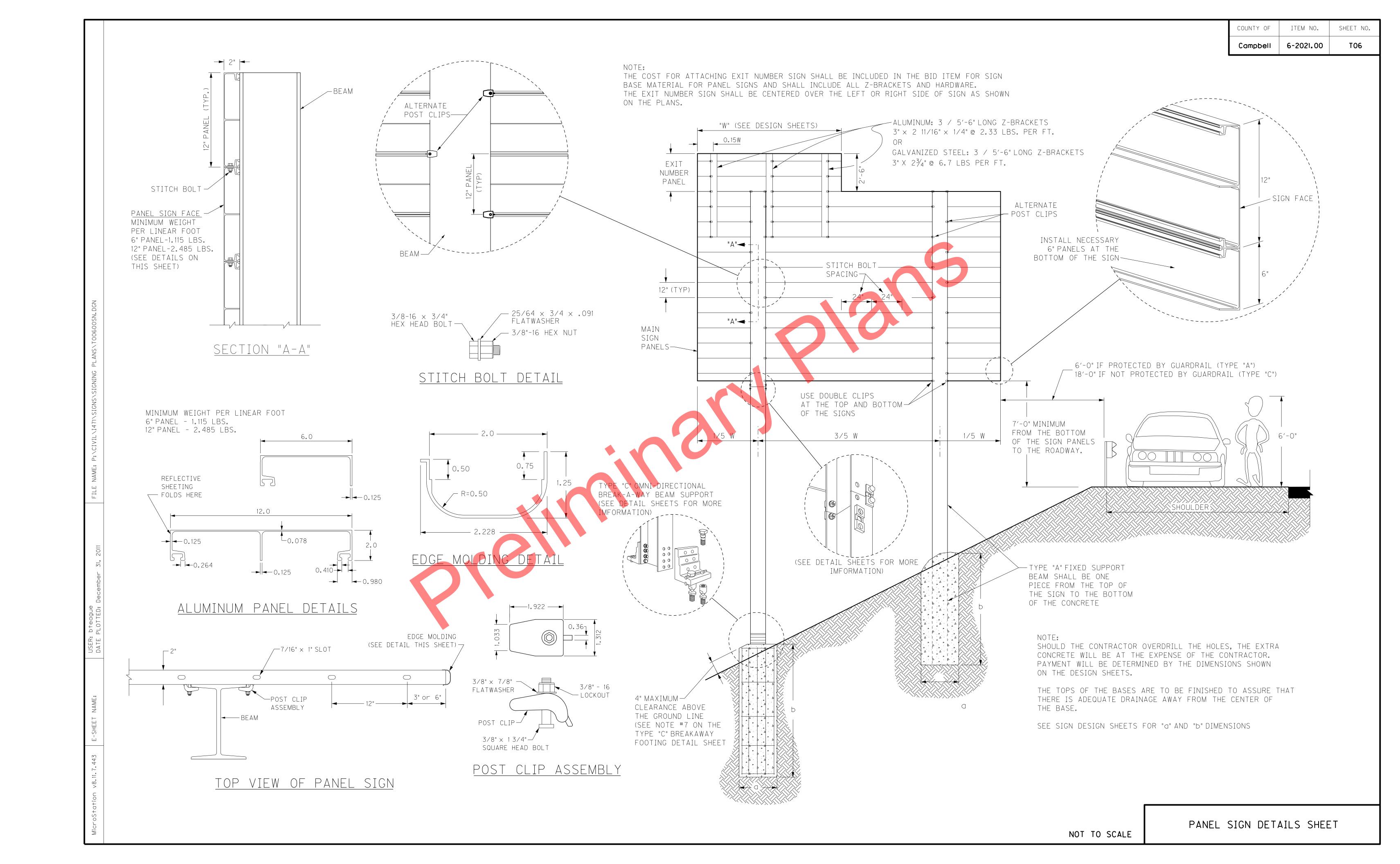
- 1. NEW SIGNS ARE TO BE INSTALLED AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 2. EXISTING I-BEAMS ON WHICH SHEETING SIGNS ARE ATTACHED SHALL BE REMOVED AND REPLACED WITH TYPE II POSTS, UNLESS THEY ARE LOCATED BEHIND GUARDRAIL.
- 3. DO NOT REMOVE OR DISTURB SUCH SIGNS AS "KEEP/RIGHT/EXCEPT/TO PASS", "\$500/ FINE/FOR/LITTERING" OR "EXTENDED WEIGHT LIMIT" SIGNS.
- 4. REMOVE AND DO NOT REPLACE THE WHITE ON BLUE GENERAL SERVICES SIGNS AT THE EXIT RAMP TERMINALS, "EMERGENCY STOPPING ONLY" SIGNS, AND THE ROUTE MARKER THAT IS LOCATED INSIDE THE INTERCHANGE PAST THE EXIT GORE AREA.
- 5. ADVISORY EXIT SPEED SIGNS (W13-2) SHOULD BE POSTED ALONG THE DECELERATION LANE SO THEY WILL BE VISABLE FROM A SUFFICIENT DISTANCE.
- 6. ALL EXISTING SHEETING SIGNS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REMOVED FROM THE POSTS AND REPLACED WITH NEW IDENTICAL SIGNS, AS SHOWN ON THE SIGNING PLANS, UNLESS OTHERWISE SPECIFIED. HOWEVER, ANY POSTS THAT ARE DAMAGED, SPLICED, OR DO NOT CONFORM TO THE MOUNTING SPECIFICATIONS SHOWN ON THE "POSITIONING DETAIL SHEET" MUST BE REPLACED WITH NEW POSTS OF THE SAME TYPE AND SIZE AS DIRECTED AND APPROVED BY THE ENGINEER. THE REMOVED SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE COST FOR REMOVING EXISTING SHEETING SIGNS AND POSTS, RESETTING EXISTING POSTS, RELOCATING EXISTING POSTS AND SIGNS TO CONFORM TO THE SIGNING PLANS AND SPECIFICATIONS, AND ALL HARDWARE REQUIRED TO ATTACH THE NEW SIGNS TO THE EXISTING SUPPORTS SHALL BE INCIDENTAL TO THE PROJECT. IN ADDITION TO REPLACING ALL EXISTING SIGNS, ALL SIGNS SHOWN ON THE SIGNING PLANS MUST BE INSTALLED. FOR SIGN SIZES AND SPECIFICATIONS, SEE THE CURRENT PROJECT SIGNING PLANS DETAIL SHEETS.
- 7. IN THE GORE AREAS WHERE NEW EXIT GORE SIGNS AND BEAMS ARE TO BE CONSTRUCTED, ANY EXISTING CONCRETE AND STUB PROJECTIONS SHALL BE REMOVED OR CUT OFF ONE FOOT BELOW THE GROUND LINE. THE COST SHALL BE INCIDENTAL TO THE PROJECT.
- 8. THE COST FOR ANY SIGN BRACKETS AND ANY OTHER HARDWARE REQUIRED TO ATTACH NEW SIGNS ON EXISTING TRUSSES AND CANTILEVERS SHALL BE INCLUDED IN THE UNIT PRICE OF SIGN BASE MATERIAL FOR PANEL SIGNS.
- 9. DUPLICATE SIGNS SHALL NOT BE DISPLAYED DURING THE CONSTRUCTION OF THIS PROJECT.
- 10. SHEETING SIGNS (D1-1, D1-2, D1-3) EQUAL OR LESS THAN 72" X 42" REQUIRE TWO TYPE I
- 11. REPLACE ALL SIGNS SUCH AS "NO U TURN" (R3-4), 48" X 48", S.B.M. (.125 OR 12), "DEER/CROSSING" (W11-3), 48" X 48", S.B.M. (.125 OR 12), "BRIDGES/FREEZE/BEFORE/ROADWAY" BLACK ON YELLOW, 48" X 48", (.125 OR 12), AND "MILE POST MARKERS". SEE SIGN SPECIFICATION SHEET FOR DETAILS.
- 12. THE COST FOR REMOVING EXISTING PANEL SIGNS SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.
- 13. THE COST FOR REMOVING LIGHT FIXTURES FROM EXISTING SIGNS SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY TREES THAT OBSCURE THE SIGNS, AS DIRECTED BY THE ENGINEER. THE COST SHALL BE INCIDENTAL TO THE PROJECT.
- 15. THE EXIT NUMBER SIGN ON ALL EXISTING SIGNS SHOWN ON THESE PLANS SHALL BE REPOSITIONED TO THE RIGHT OF THE SIGN AS SHOWN ON THE MISCELLANEOUS DETAIL SHEET, WITH THE EXCEPTION OF EXIT NUMBER SIGNS NOTED.
- 16. THE HORIZONTAL CLEARANCE "X" ON ALL THE SHEETING SIGNS SHOULD BE A MINIMUM OF 6 FT. WHERE POSSIBLE, AS SHOWN ON THE SIGNING POSITIONING DETAIL SHEET.
- 17. IF ANY SIGN IS LOCATED NEAR A LUMINAIRE OR ANOTHER POLE, IT SHALL BE INSTALLED IN ADVANCE OF THE POLE SO THAT THE MOTORISTS VIEW OF THE SIGN WILL NOT BE OBSTRUCTED.
- 18. THE SIGNS THAT DO NOT COMPLY WITH THE "MUTCD" SHALL BE REMOVED BY THE CONTRACTOR AS APPROVED AND DIRECTED BY THE ENGINEER.



TYPICAL REGULATORY SIGNING AT RAMP TERMINALS

NOT TO SCALE

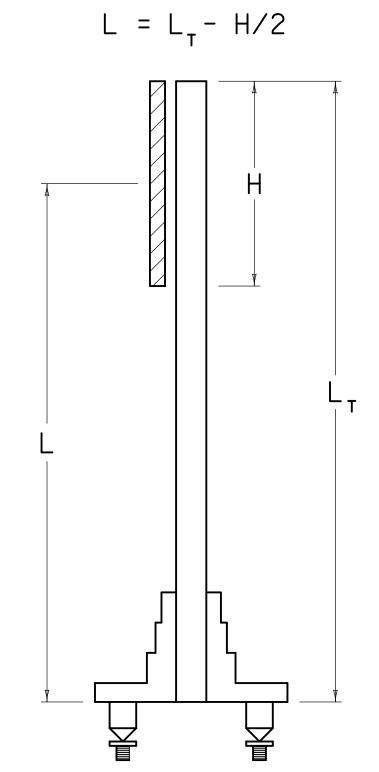




COUNTY OF

~NOTES~

- 1. BREAKAWAY SIGN SUPPORT SYSTEM FOR TYPE C BEAM SHALL BE SELECTED FROM THE KENTUCKY DEPARTMENT OF HIGHWAYS APPROVED LIST FOR BREAKAWAY SIGN SUPPORT SYSTEMS OR AN APPROVED EQUAL. ACCEPTABLE ALTERNATE BREAKAWAY SIGN SUPPORT SYSTEMS SHALL BE APPROVED BY THE DIVISION OF HIGHWAY DESIGN AND FHWA PRIOR TO INSTALLATION.
- 2. SELECTION OF THE PROPER BRACKET NUMBER SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 3. ALL HARDWARE ITEMS SUPPLIED ARE AMERICAN STANDARD SIZES AND SHALL BE GALVANIZED AND CONFORM TO ASTM A153 OR ASTM B695.
- 4. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLINGS, ARE INSTALLED WITH LOCKWASHERS, AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTENERS SHALL BE SECURED AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES, UNLESS NOTED OTHERWISE.
- 5. SQUARE UP AND LEVEL INDIVIDUAL COMPONENTS, PARTICULARLY ANCHORS TO MINIMIZE THE NEED FOR SHIMMING BETWEEN THE COUPLINGS AND ANCHORS.
- 6. NO MORE THAN TWO SHIMS SHALL BE PLACED UNDER ANY ONE COUPLING. NO MORE THAN THREE SHIMS UNDERNEATH ANY PAIR OF COUPLINGS.
- 7. THE CONTRACTOR SHALL FURNISH TWO (2) COMPLETE SETS OF SHOP PLANS FOR APPROVAL BY THE ENGINEER A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.
- (8) THE HINGE SHOULD BE AT LEAST 7'-0" ABOVE THE GROUND.
- 9. A SINGLE POST IF 7'-0' OR MORE FROM ANOTHER POST, SHALL HAVE A WEIGHT LESS THAN 45 LB./FT. TOTAL WEIGHT BELOW THE HINGE, BUT ABOVE THE SHEAR PLATE OF THE BREAKAWAY BASE, SHOULD NOT EXCEED 600 LB.
- 10. FOR TWO POSTS SPACED LESS THAN 7'-O'' APART, EACH POST SHOULD HAVE A WEIGHT LESS THAN 18 LB./FT.
- 11. COUPLINGS SHALL NOT BE USED IN SIGN STRUCTURES WITH THREE SUPPORTS OR MORE IF POSTS ARE CLOSER THAN 7'-0" APART.
- 12. REFER TO DETAIL SHEET "FOOTING DETAILS FOR TYPE C BEAM" FOR FOOTER DETAILS.

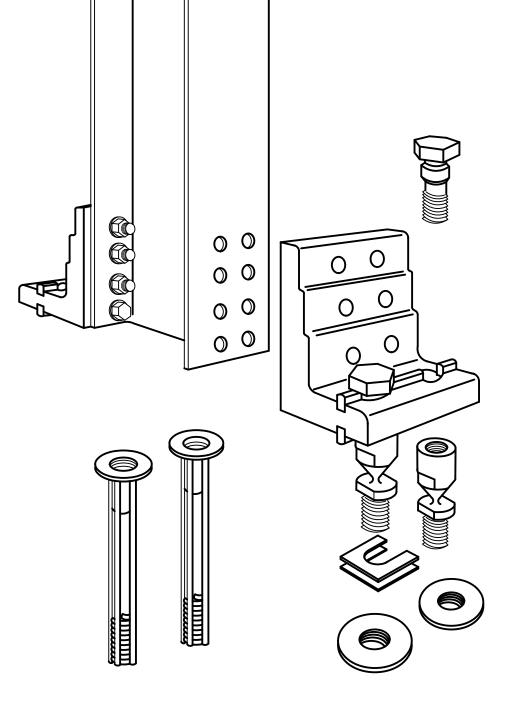


~ ELEVATION VIEW ~

BRACKET SELECTION TABLE

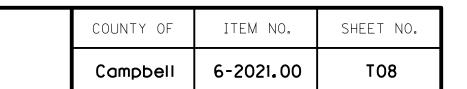
I-BEAM	BRACKE	T NO. 1	BRACKET NO. 2		BRACKE'	T NO. 3	
POST SIZE	MIN. "L"	MAX. "L"	MIN. "L"	MAX. "L"	MIN. "L"	MAX. "L"	
6′′	12'-0''	29'-0''	9'-0''	12'-0''	0	9'-0''	
8′′	14'-0''	29'-0''	10'-0''	14'-0''	0	10'-0''	
10′′	16'-0''	29'-0''	11'-0''	16'-0''	0	11'-0''	
12''	18'-0''	29'-0''	13′-0′′	18'-0''	0	13′-0′′	
14''	19'-0''	29'-0''	14'-0''	19'-0''	0	14'-0''	
16′′	21'-0''	29'-0''	15′-0′′	21'-0''	0	15′-0′′	
18′′	23′-0′′	29'-0''	16'-0''	23′-0′′	0	16'-0''	
21''	25′-0′′	29'-0''	18'-0''	25′-0′′	0	18'-0''	

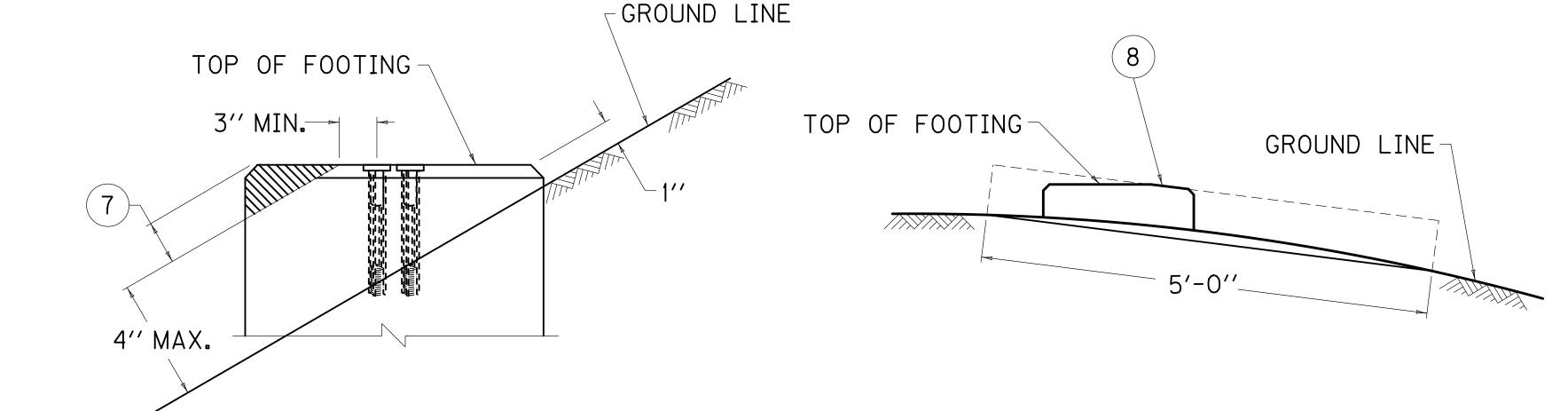
BOTTOM OF SIGN-



~ PICTORIAL VIEW ~

RGX 060



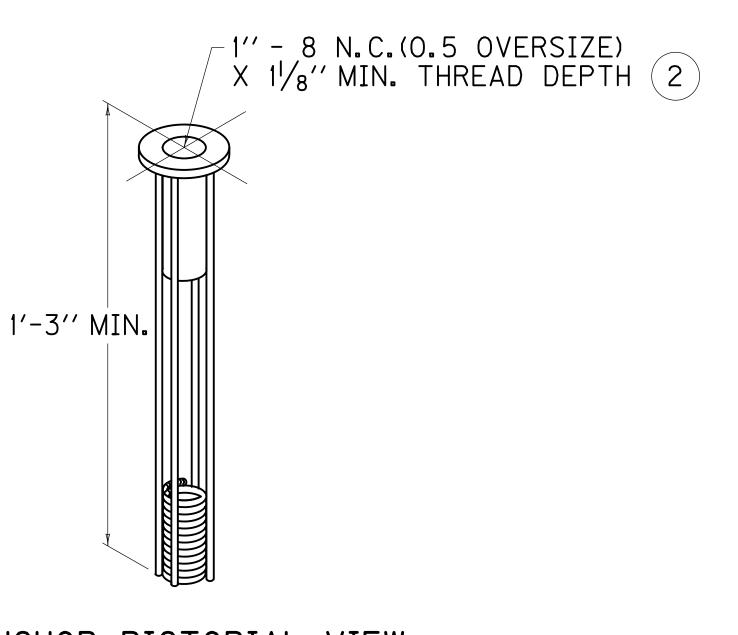


FOOTING SELECTION TABLE

POST	L ₁			EEL BARS	REINF.	CONC.
SIZE	DIA.	DEPTH	QTY	SIZE	LBS.	CU. YD.
W6	2'-0''	5′-0′′	5	#4	57	0.58
W8	2'-6''	7′-0′′	7	#4	88	1.27
W10	3'-0''	8'-0''	8	#4	110	2.09
W12	3'-0''	8'-0''	8	#4	110	2.09
W14	3'-0''	9'-0''	9	#4	124	2.36
W16	3'-6''	9'-0''	9	#4	133	3.21
W18	3′-6′′	9'-0''	9	#4	133	3.21
W21	4'-0''	9'-0''	9	#4	143	4.19

~NOTES~

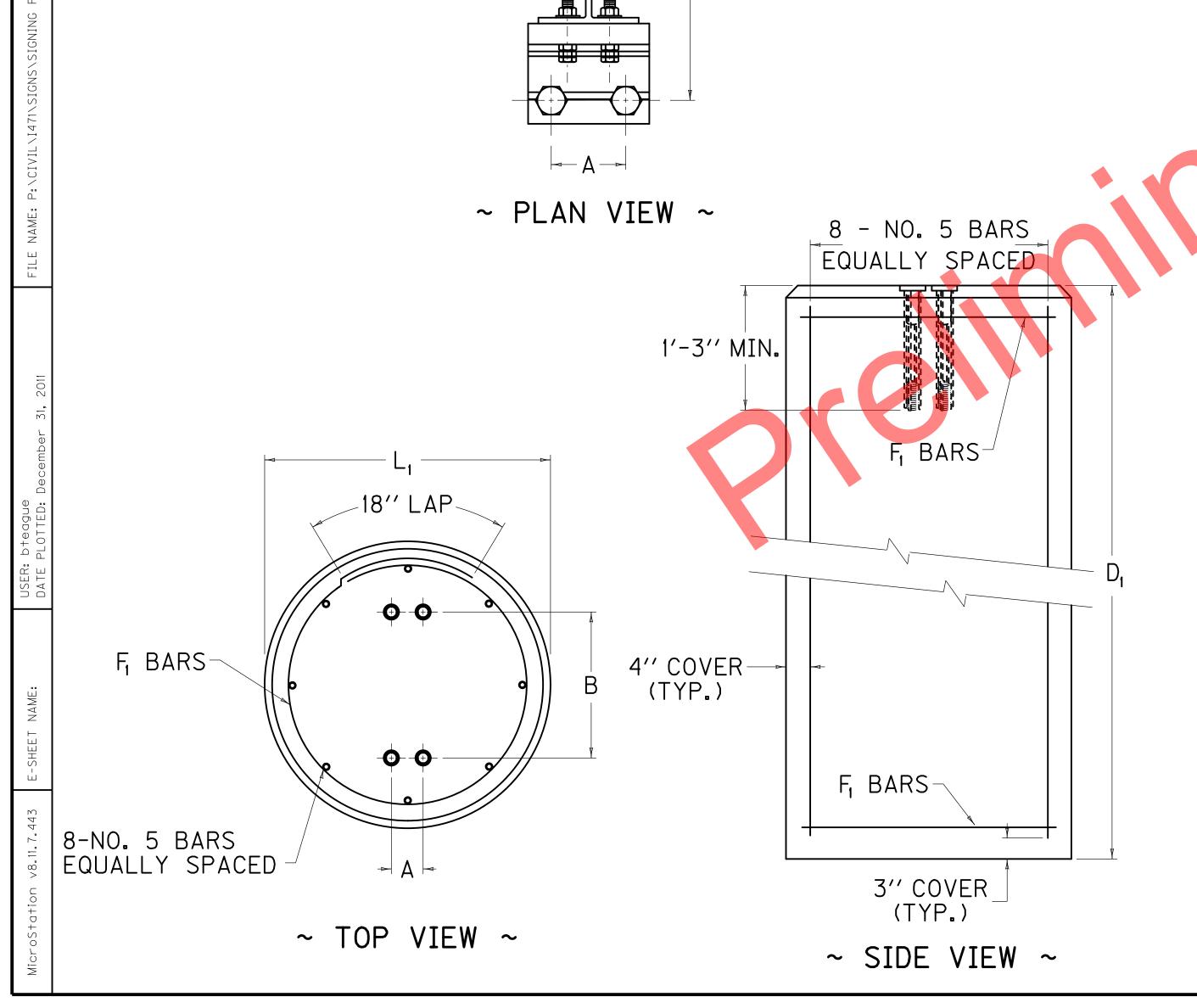
- 1. ENTER FOOTING SELECTION TABLE WITH REQUIRED POST SIZE AND FIND REQUIRED FOOTING VALUES AS SHOWN IN DETAILS.
- 2) THE ANCHOR SHALL BE 304 STAINLESS STEEL WITH 1053 STEEL ROD AND COIL.
- 3. FORM TOP 1'-O" OF THE FOOTING.
- 4. USE CLASS "A" CONCRETE IN ALL FOOTINGS.
- 5. ACTUAL DIMENSIONS "A" & "B" SHOULD BE OBTAINED FROM THE MANUFACTURER OR MEASURED FROM THE ASSEMBLED BRACKETS PRIOR TO PLACEMENT OF ANCHORS.
- 6. TO INSURE PROPER SPACING AND ALIGNMENT OF ANCHORS, IT IS RECOMMENDED THAT ALL ANCHORS BE HELD IN PLACE BY A RIGID TEMPLATE WHILE THE CONCRETE IS PLACED AND CURED.
- FOOTING PROJECTIONS ABOVE GROUND LINE SHALL BE MINIMIZED. THE MAXIMUM PERMISSIBLE FOOTING PROJECTION SHALL BE 4" ON THE LOWER SLOPE SIDE. WHERE NECESSARY, THE SHADED AREA OF THE FOOTING SHALL BE REMOVED AND REINFORCEMENT SHALL BE BENT TO FIT.
- THE TOP OF THE FOOTING SHALL NOT PROJECT MORE THAN 4" ABOVE ANY 5'-0" CHORD ALIGNED PERPENDICULARY TO THE EDGE OF THE ROADWAY BETWEEN A POINT ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE OF THE SUPPORT.

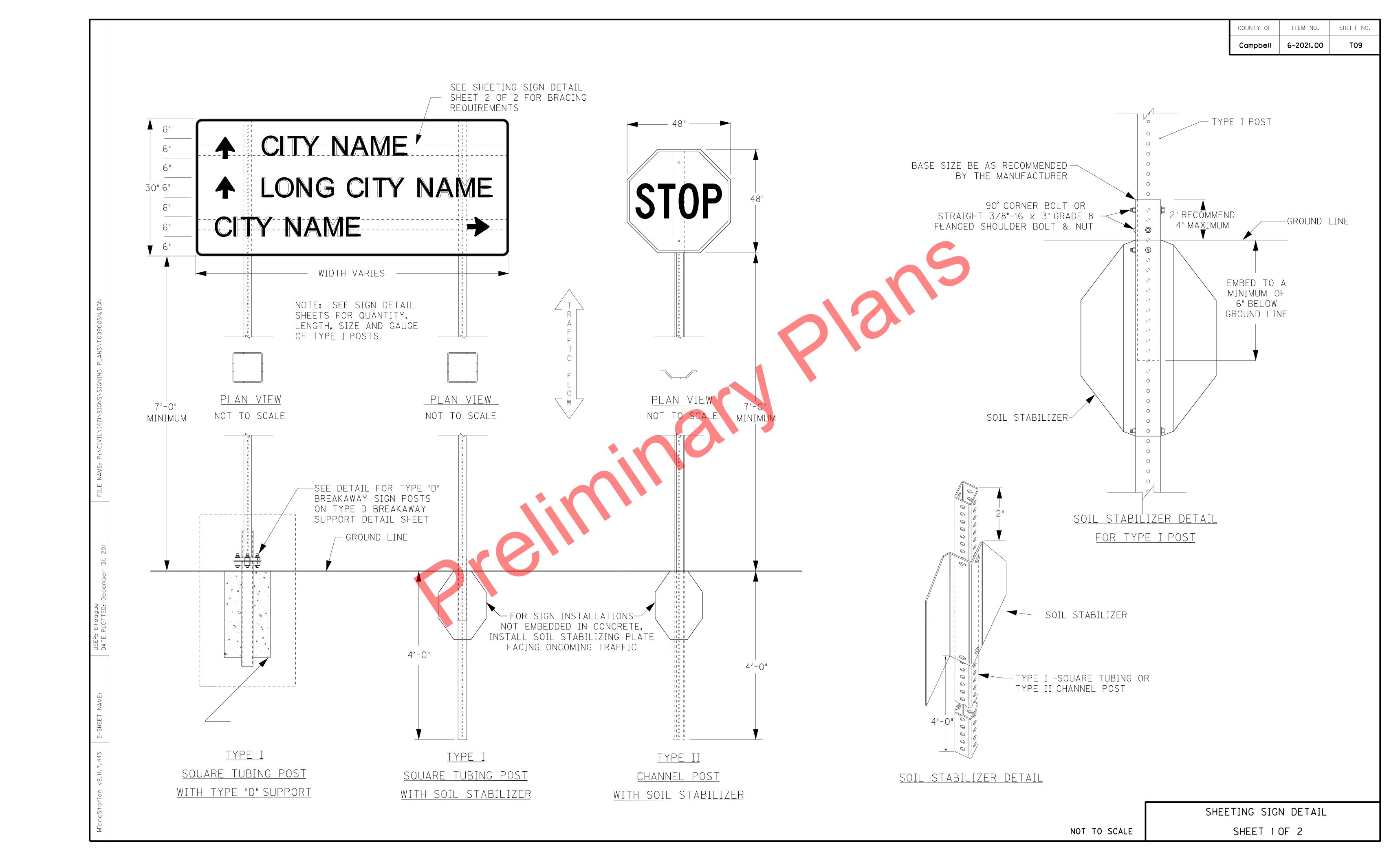


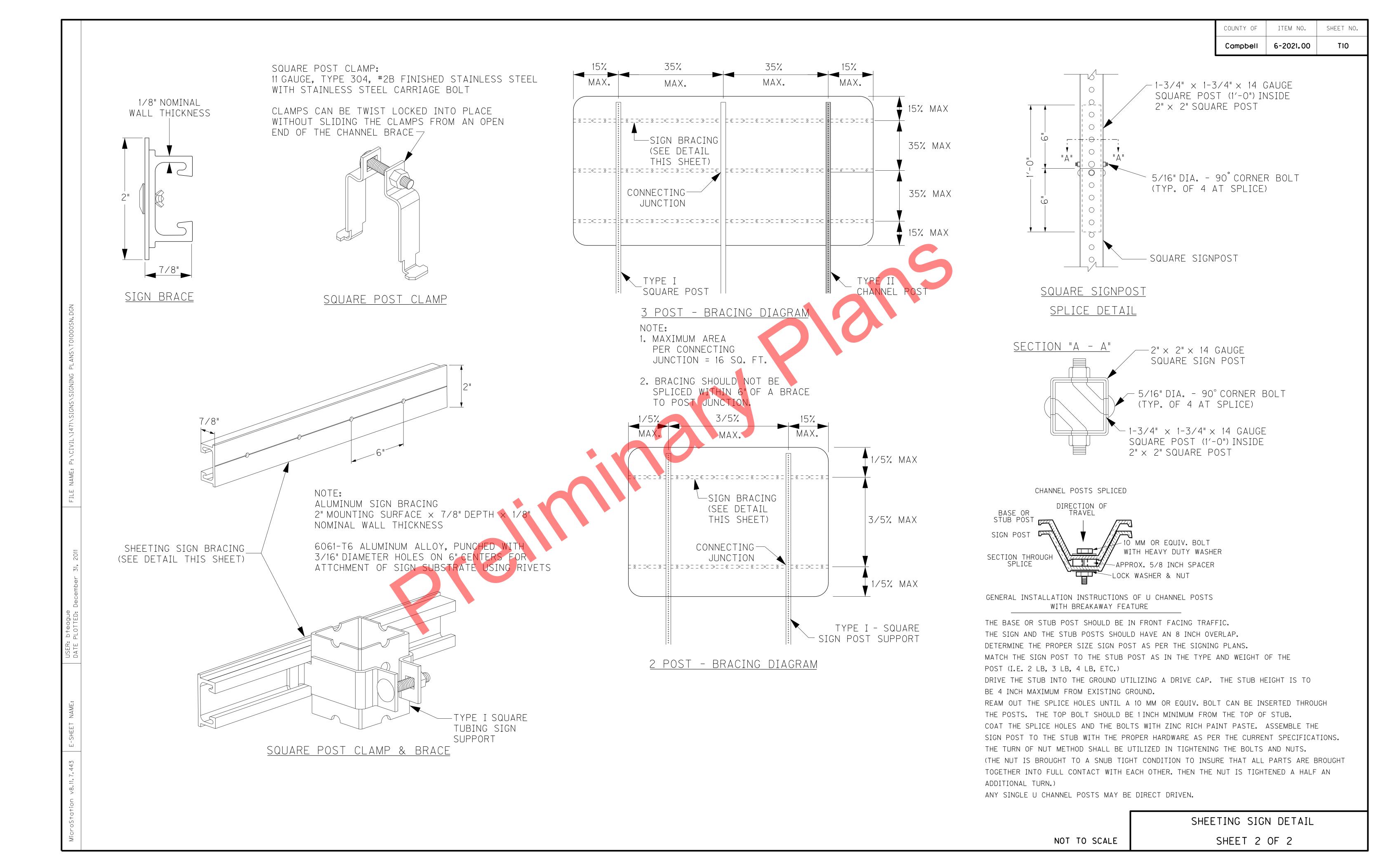
RGX 061

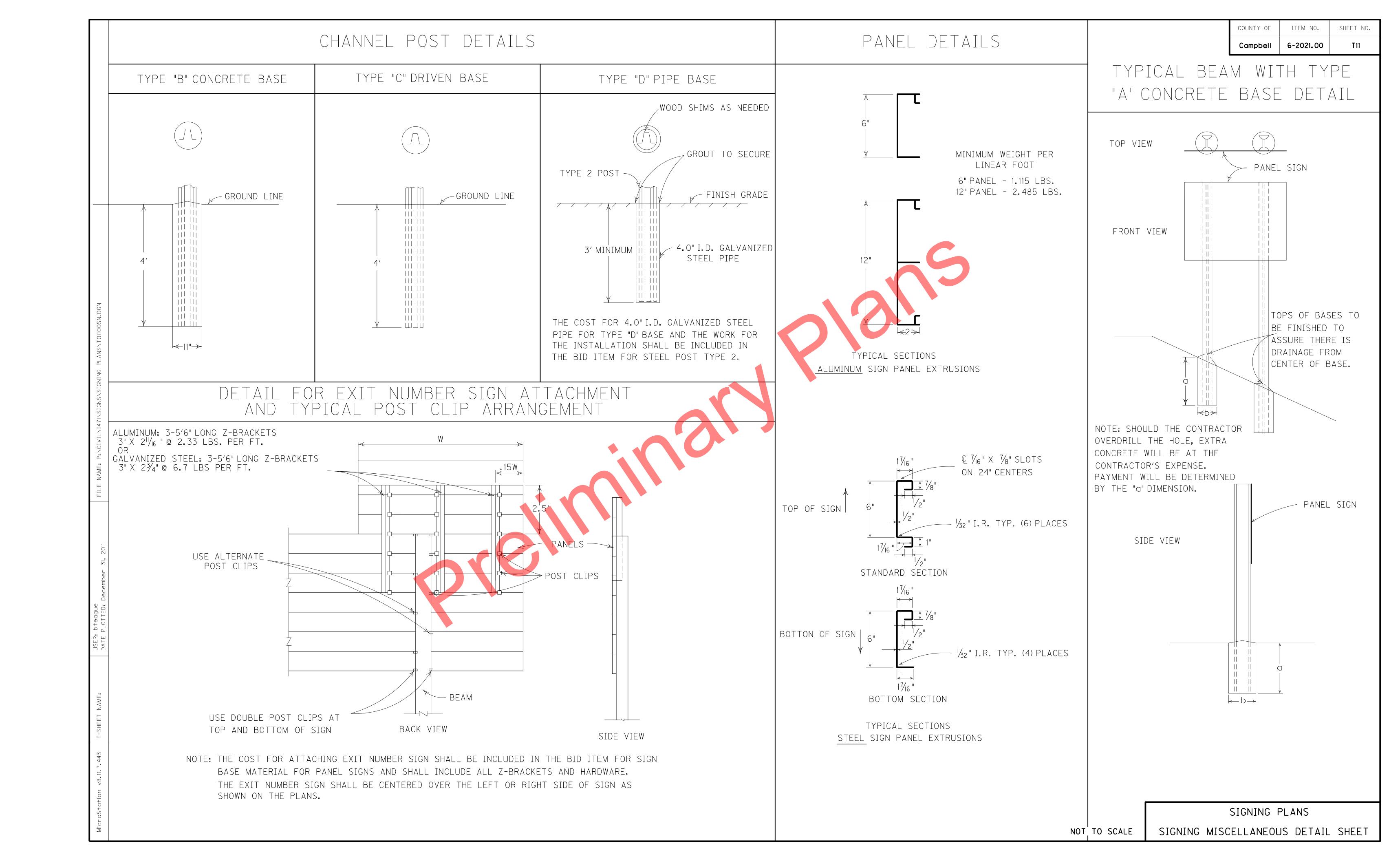
~ ANCHOR PICTORIAL VIEW ~

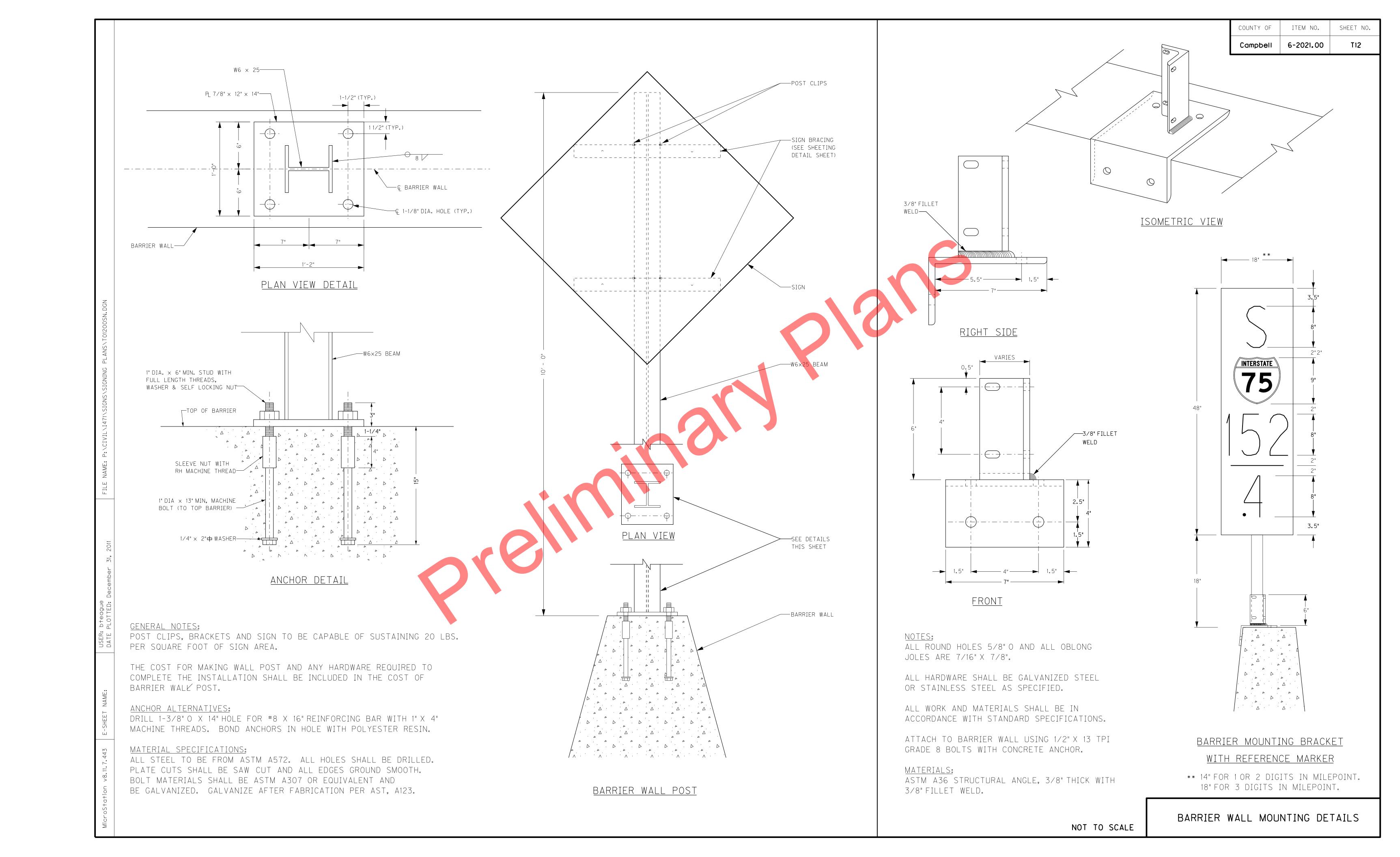
Footing Details for Type C Beam

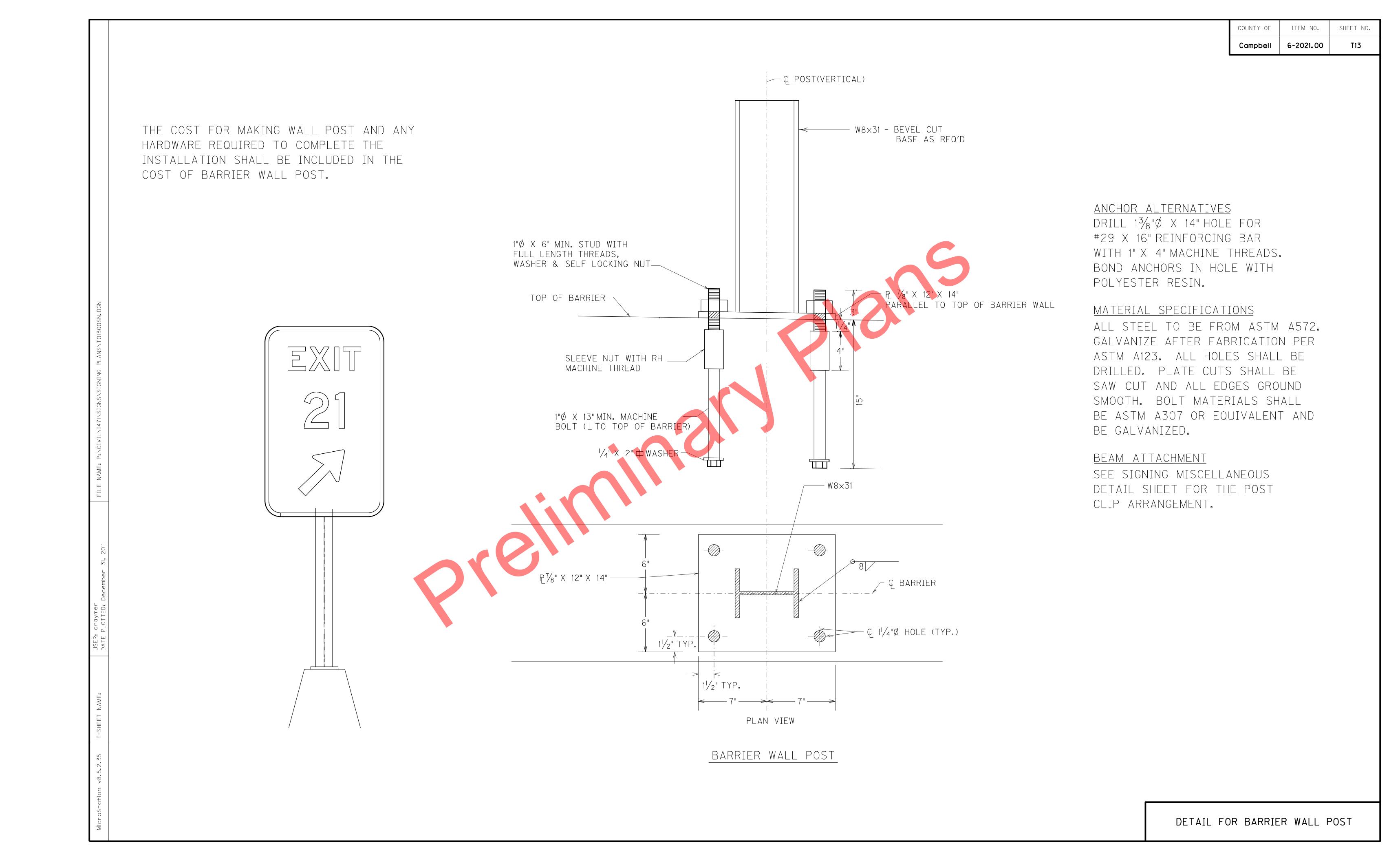


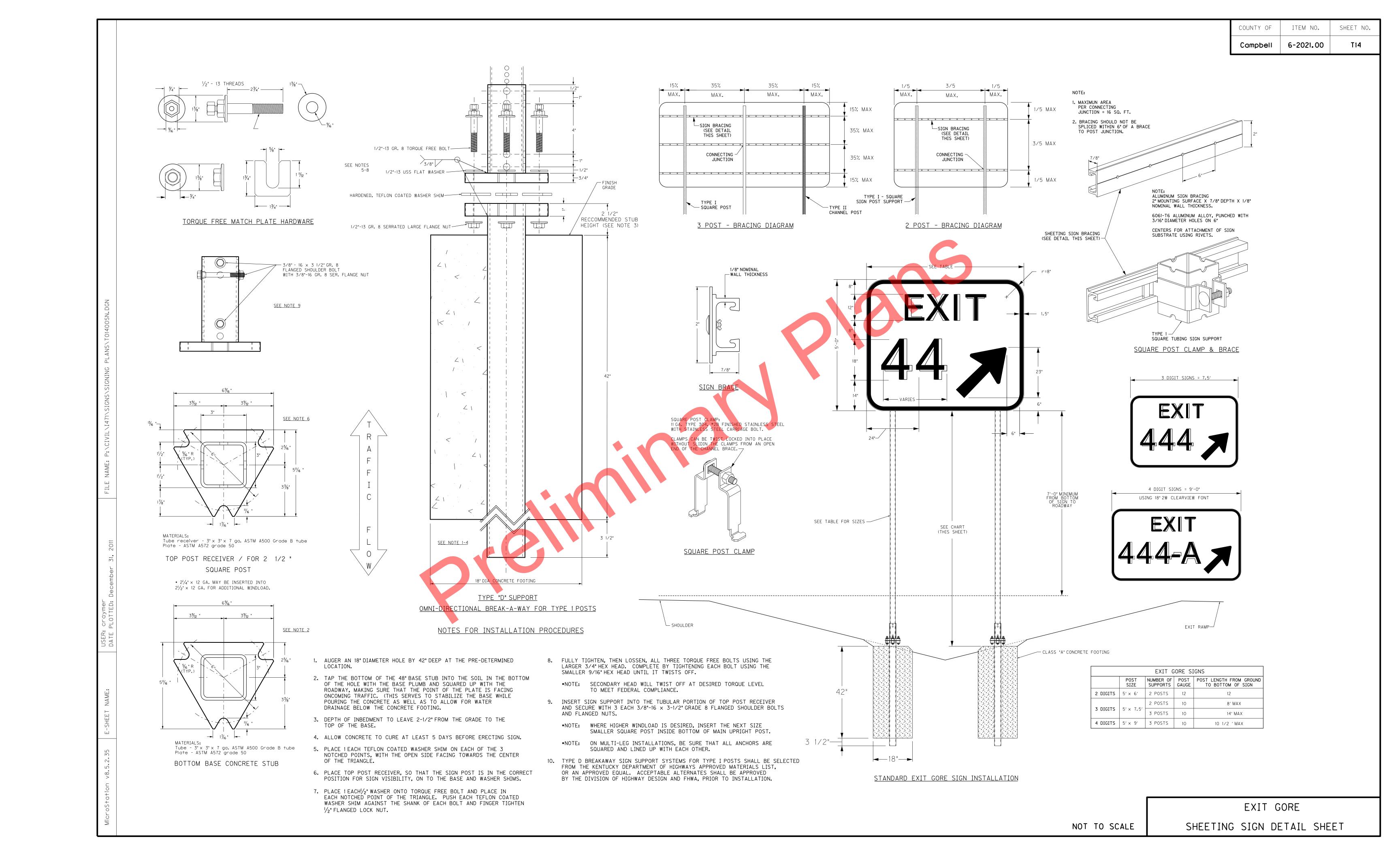


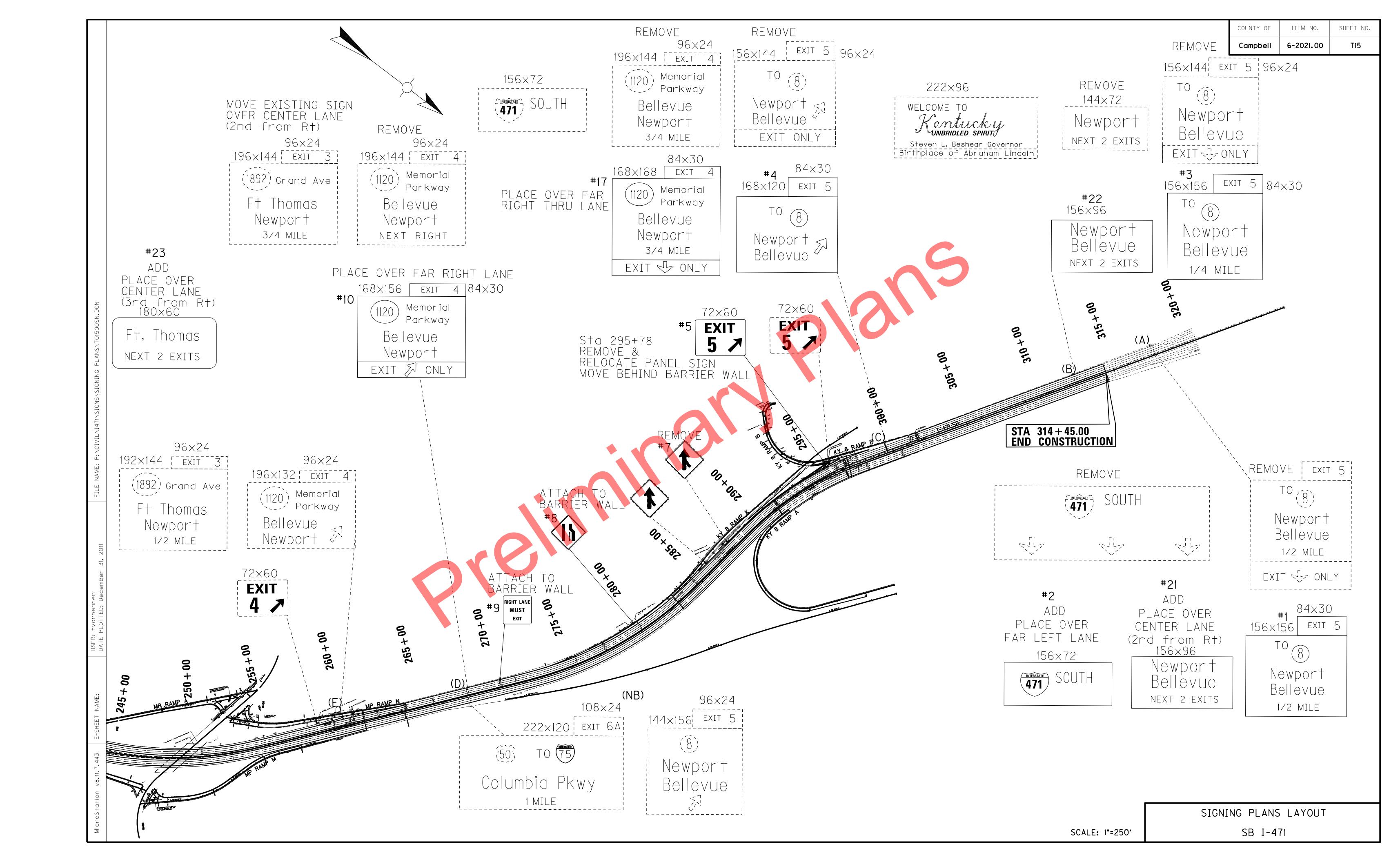


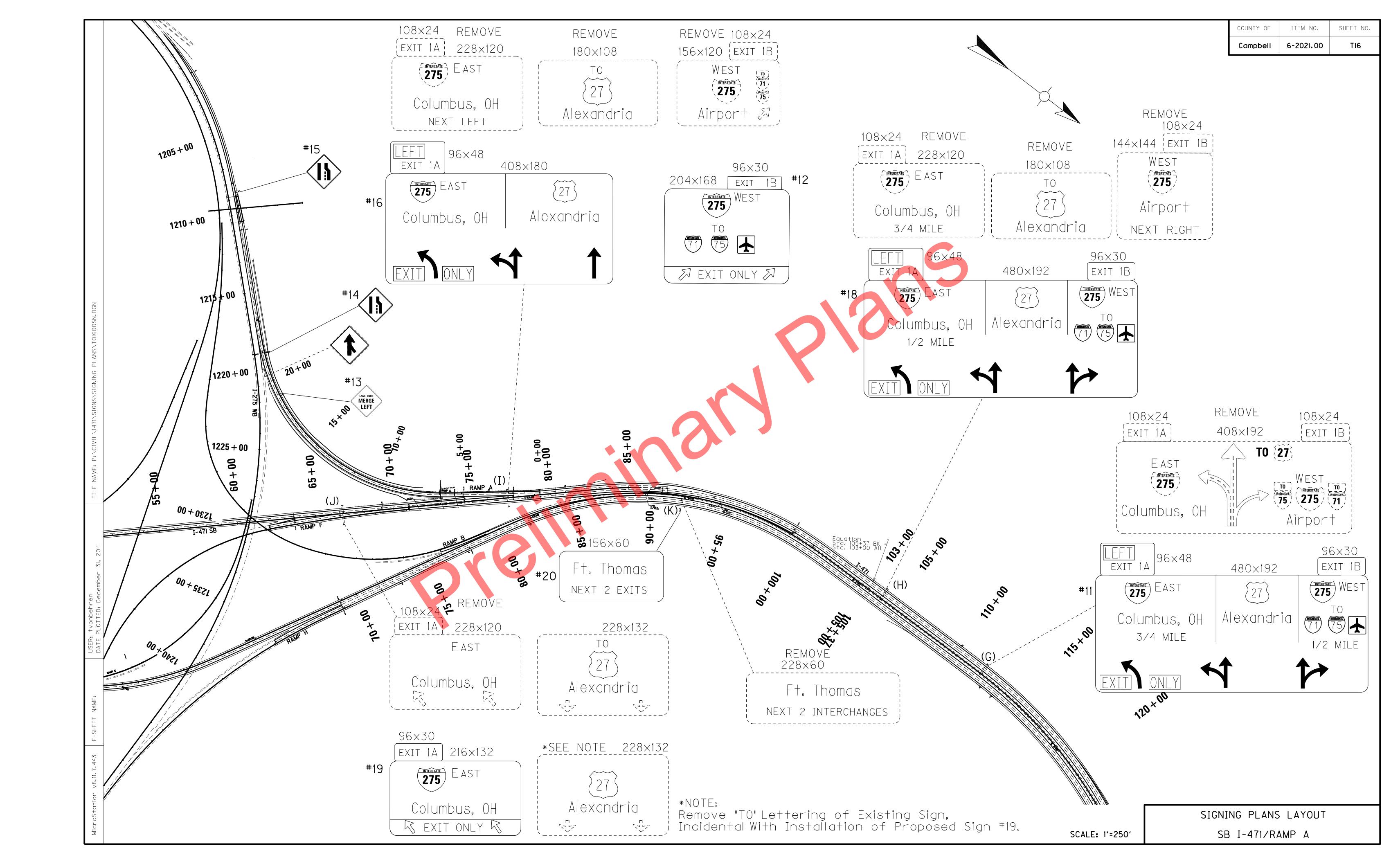


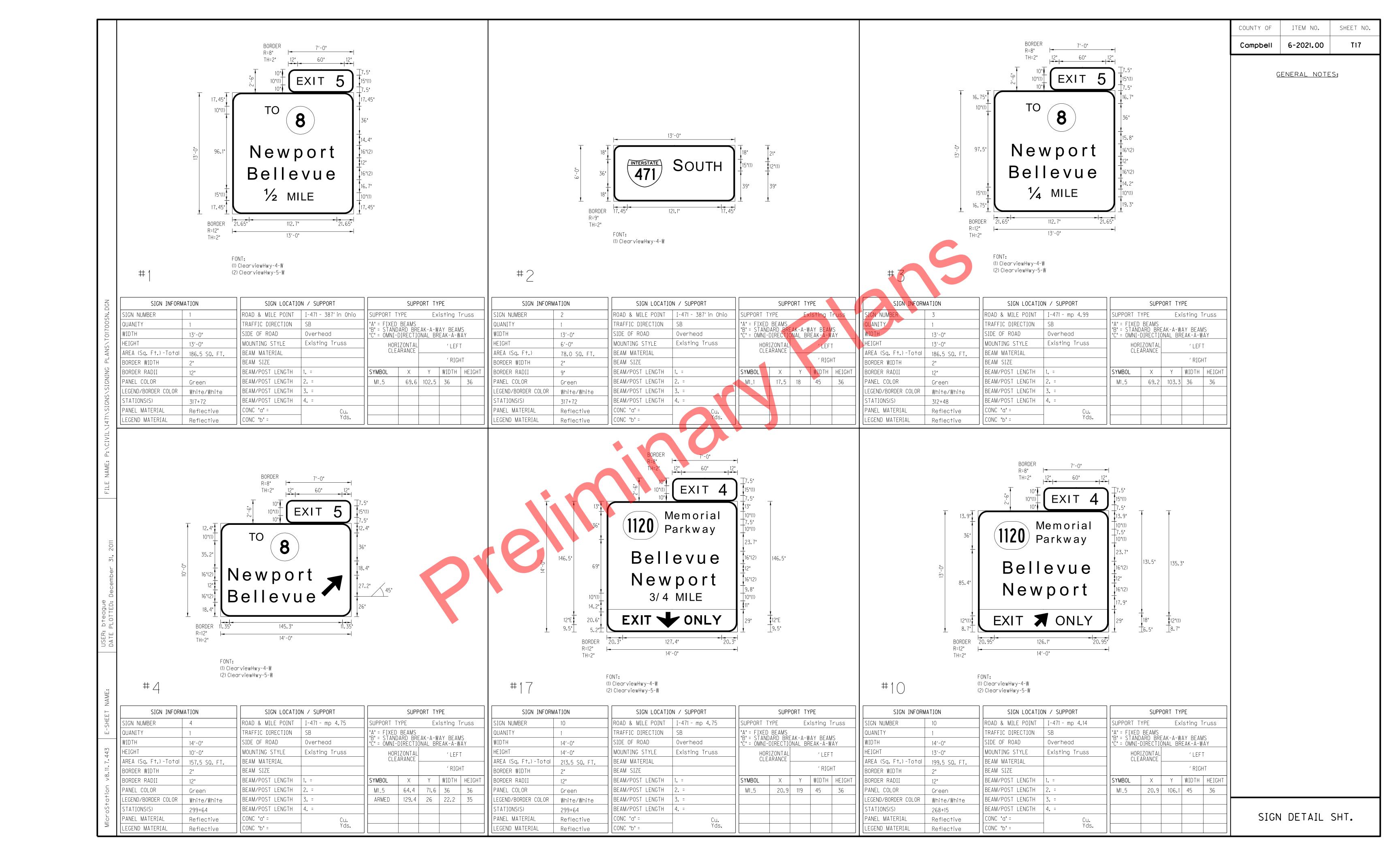


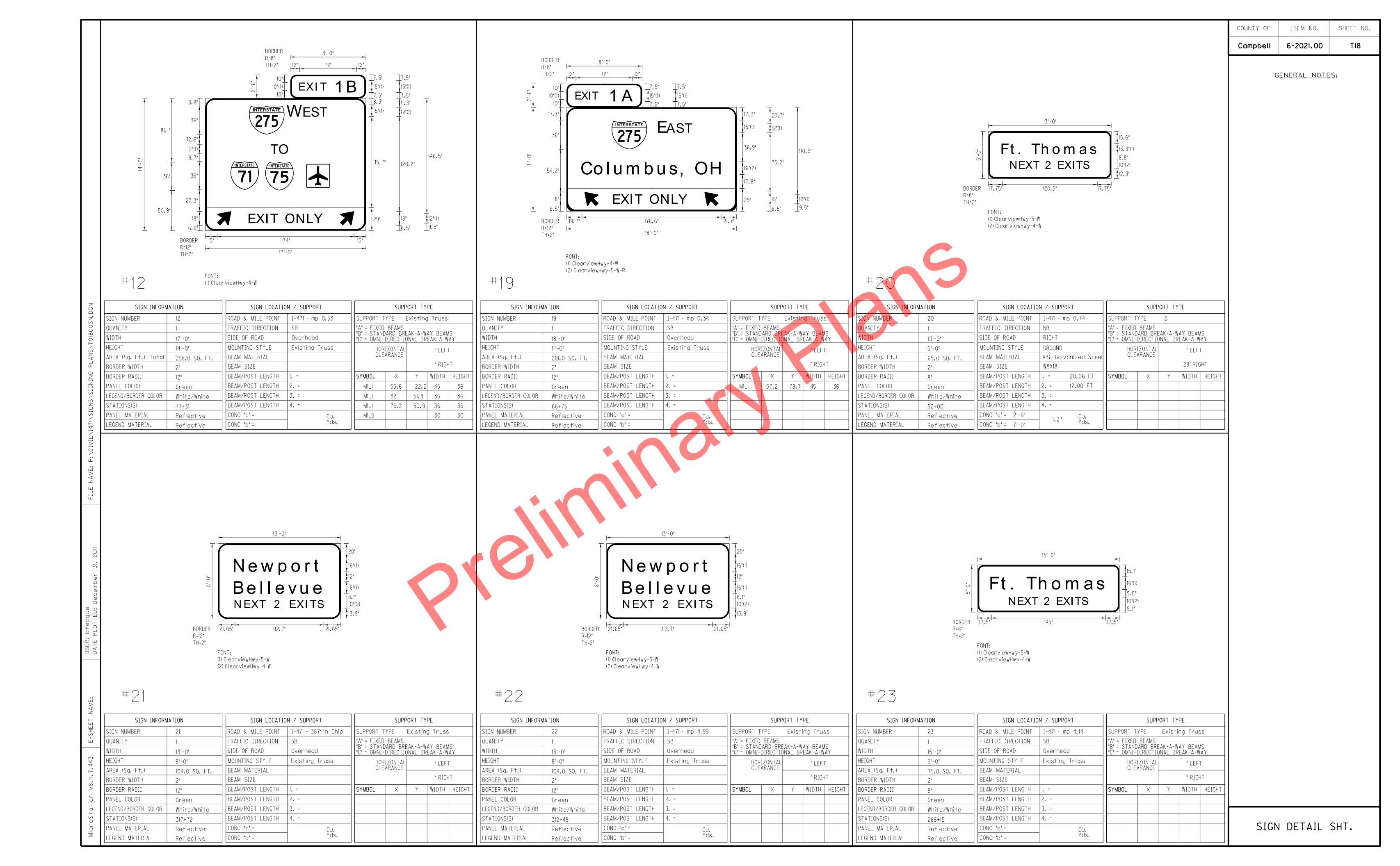


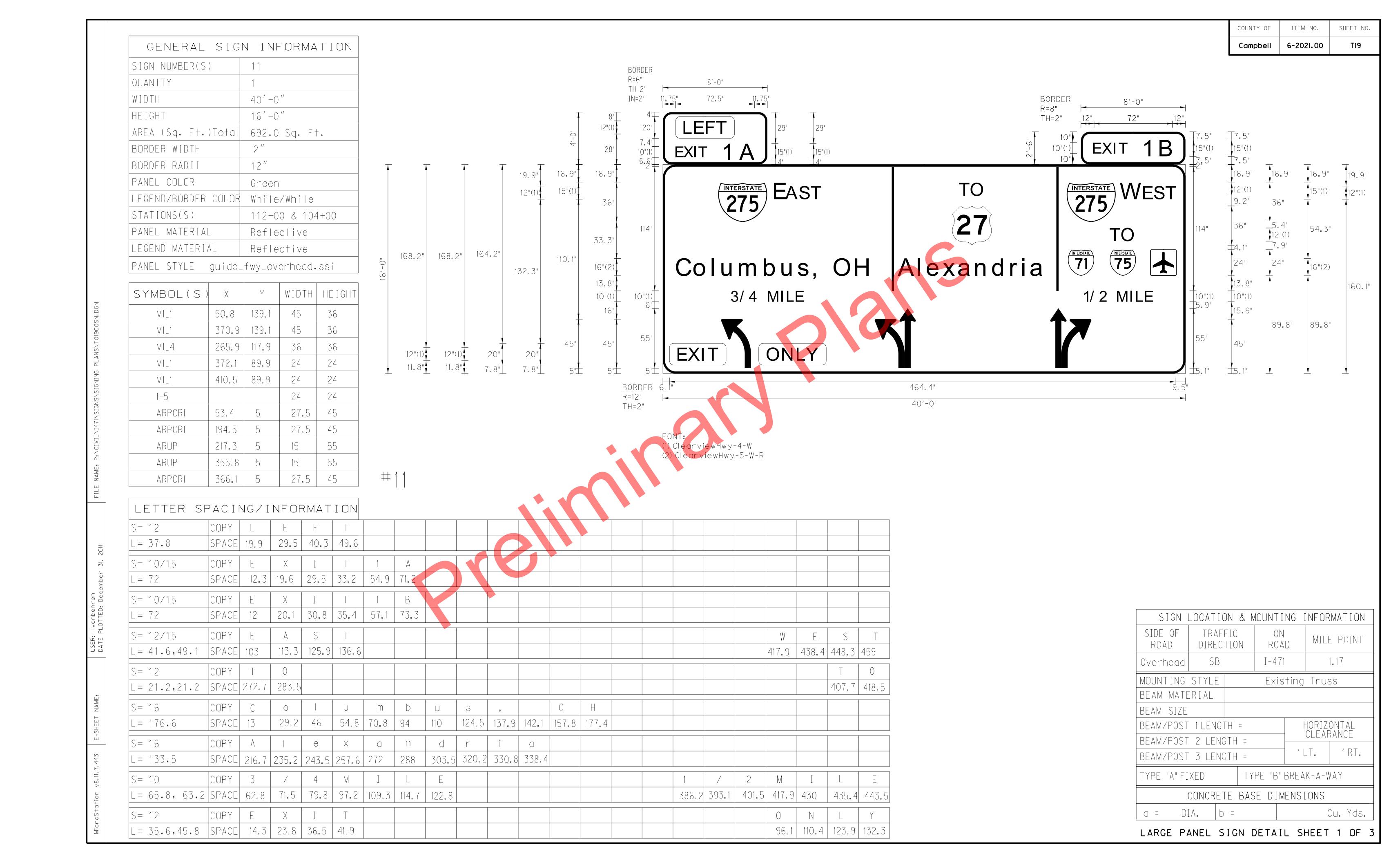


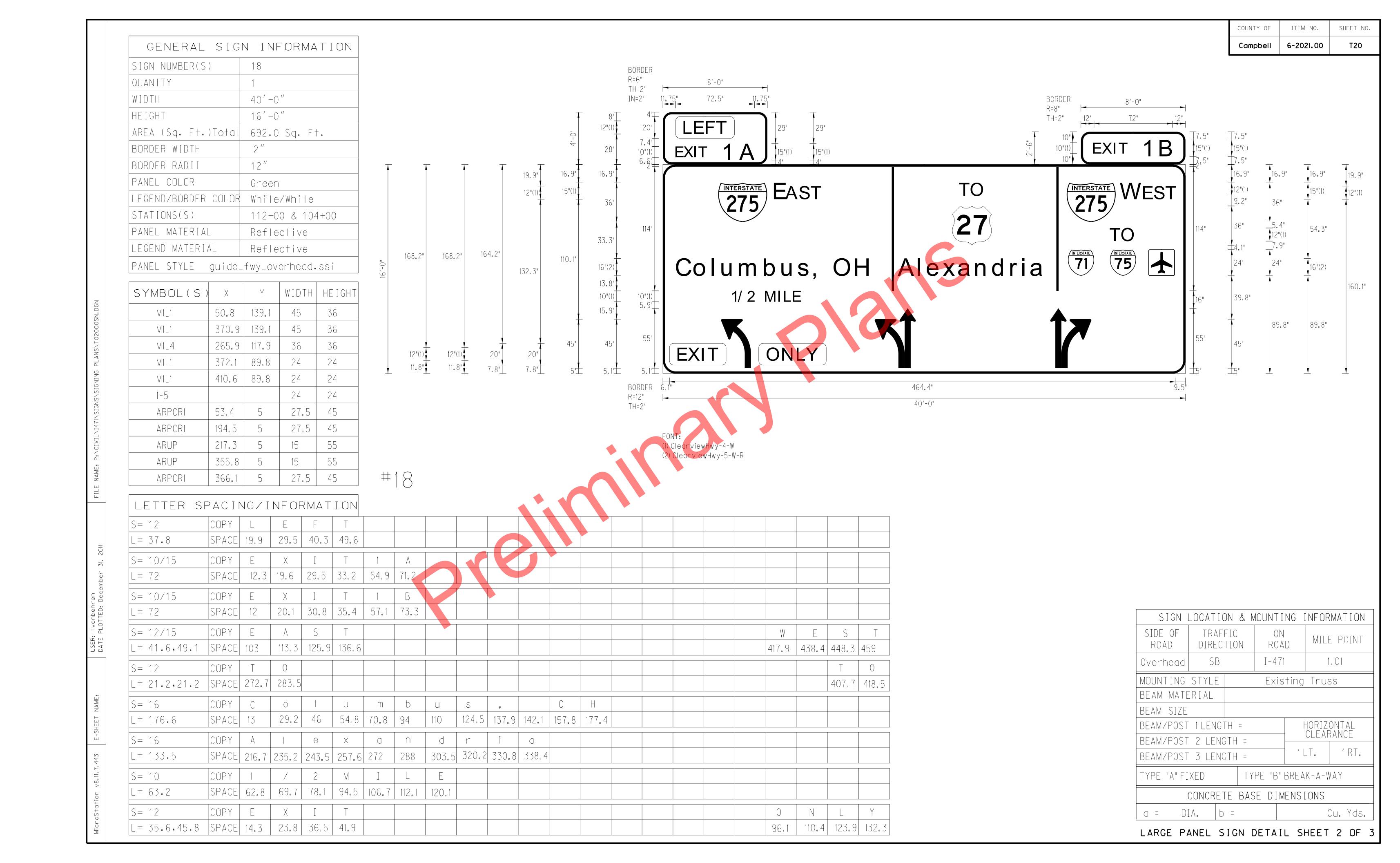


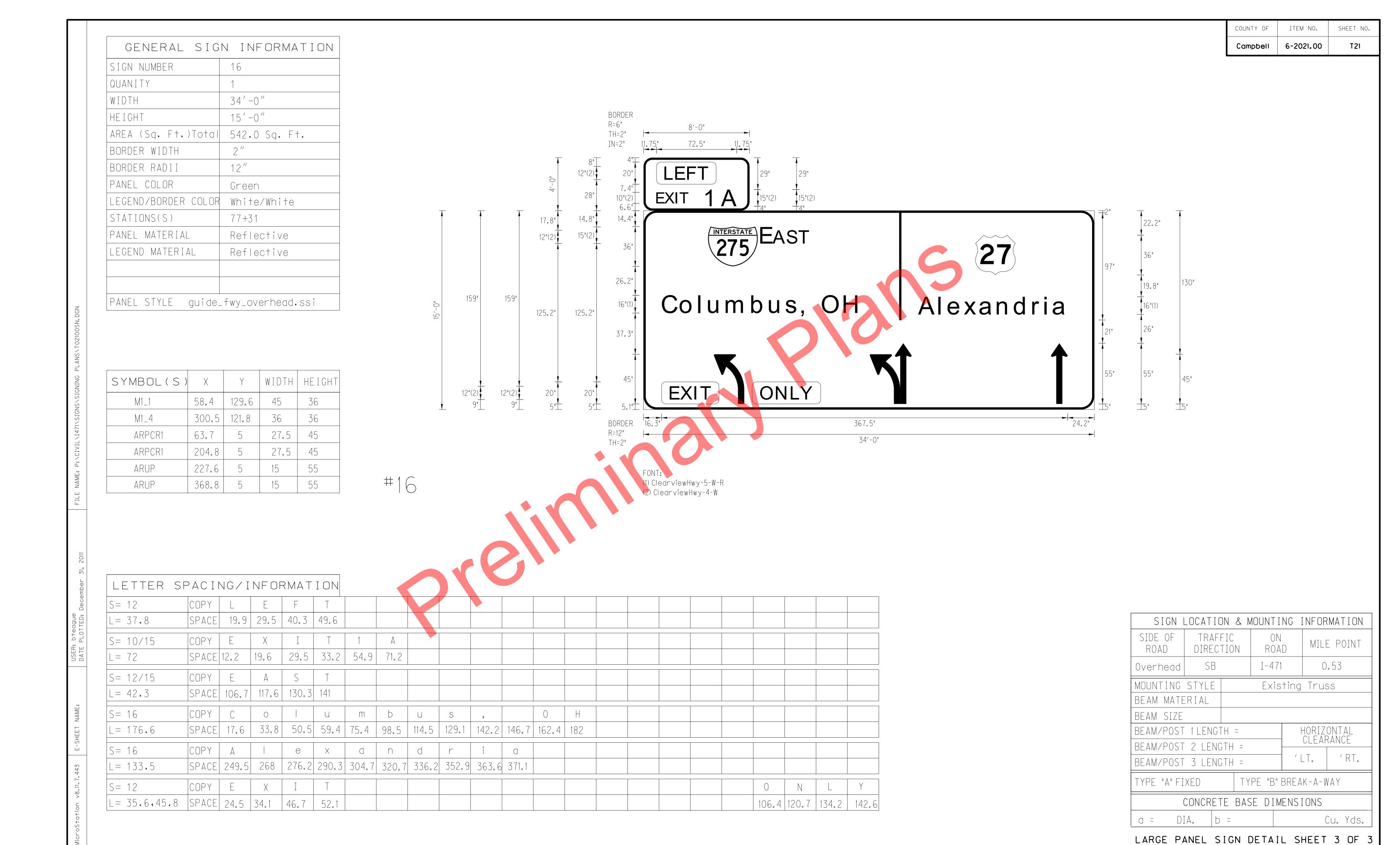












ITEM NO. SHEET NO. COUNTY OF SHEETING SIGNS DETAIL SHEET 6-2021.00 T22 SIGN/SIGN SIZES ASSEMBLY IN INCHES NUMBER HORIZ. VERT. SIGN/SIGN SIZES ASSEMBLY IN INCHES NUMBER HORIZ. VERT. SIGN LOCATION SIGN LOCATION MESSAGES ① MESSAGES ① SIDE OF FACING TRAFFIC SPECIFICATION SPECIFICATION SIDE OF | FACING TRAFFIC AT STATION (APPROXIMATE) AT STATION (APPROXIMAT TRAVELING TRAVELING 48 48 W4-2 21+80 SB Ramp A (800'back from last 5-lane S-___ S-14 Full Taper on I-275) 2 POSTS 48 48 W4 - 2I-275 1208+58 SB (800' back from last 4-lane S-___ S-15 Full Taper on I-275) 2 POSTS W4-5 SB I-471 287+94 REMOVE Existing 48x48 sign S-7 (Removal Incidental to Project) 48 48 SB (Attach to Barrier Wall) S-8 (500'in front of Ramp Nose) 36 36 SB I-471 270+38 RIGHT LANE (Attach to Barrier Wall) S-9 S-MUST (400' from last Full Taper) **EXIT** 48 | 48 W9-2 SB 18+89 Ramp A MERGE LEFT (1100'back from last 5-lane S-13 S-Full Taper on I-275) 2 POSTS

SPECIAL NOTES:

1. THE COLORS SHALL BE AS SHOWN IN THE "MANUAL ON UNIFORM TRAFFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS".

2. SHEETING SIGNS SHALL BE FABRICATED FROM 0.125 GAUGE MATERIAL IF ANY DIMENSION IS GREATER THAN 36" (THIRTY-SIX INCHES), OTHERWISE 0.080 GAUGE MATERIAL SHALL BE USED.

3. SHEETING SIGNS SHALL BE MOUNTED ON TYPE II POST USING STANDARD INSTALLATION IN SOIL, WITH SOIL STABLIZER. SEE THE SHEETING SIGN DETAIL SHEETS.