

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



STATE PROJECT REFERENCE NO.	SHEET NO.
R-0609 IB	TCP-1

**PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
GUILFORD-RANDOLPH COUNTY**

R-0609 IB

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-
ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C.,
DATED JANUARY 2002 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE
CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1135.01	CONES
1150.01	FLAGGERS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, INDEX OF SHEETS AND FINAL PAVEMENT MARKING SCHEDULE
TCP-2	GENERAL NOTES
TCP-3	PHASING
TCP-4 & 5	PHASE I
TCP-6	PHASE II
TCP-7	-Y9- DETOUR ROUTE
TCP-8	STREET SIGN DESIGN
TCP-9	WORK ZONE ADVANCE WARNING SIGNS
TCP-10	DRUM DETAIL
TCP-11	TYPE III BARRICADES

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - CONE
 - DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - TYPE 'B' WARNING LIGHT
 - STATIONARY SIGN
 - PORTABLE SIGN
 - STATIONARY OR PORTABLE SIGN
 - WARNING FLAGS
 - CRASH CUSHION
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
 - POLICE
 - FLAGGER

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY BREAKDOWN	TOTAL QUANTITY
PAVEMENT MARKINGS			
PAINT (100mm)			
PA	WHITE EDGELINE	2880m	
PI	DBL YEL CENTER LINE	2880m	
			TOTAL 5760m
THERMOPLASTIC (100mm, 90 MILS)			
TA	WHITE EDGELINE	1595m	
TI	DBL YEL EDGELINE	1596m	
			TOTAL 3181m
POLYUREA (150mm, 120 MILS)			
VJ	3m WHITE SKIP	1554m	
VK	0.5m WHITE MINISKIP LINE	21m	
V6	WHITE EDGE LINE	5940m	
V7	YELLOW EDGE LINE	5940m	
			TOTAL 13,455m
PERMANENT RAISED MARKERS			
MA	YELLOW - YELLOW	127 EA	
MB	CRYSTAL & RED	248 EA	
			TOTAL 375 EA

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY BREAKDOWN	TOTAL QUANTITY
PAVEMENT MARKINGS			
PAINT (100mm)			
PA	WHITE EDGELINE	3702m	
PI	DBL YEL CENTER LINE	3192m	
			TOTAL 2880m
PERMANENT RAISED MARKERS			
MK	YELLOW - YELLOW	133 EA	

APPROVED: _____ DATE: _____	PLAN PREPARED BY: N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION SECTION
	J. S. Bourne, PE TRAFFIC CONTROL ENGINEER
	G. L. Gettier, PE TRAFFIC CONTROL PROJECT ENGINEER
	J. W. Woolard, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	C. S. Mozingo TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

TIP PROJECT:

GENERAL NOTES



PROJ. REFERENCE NO. R-0609 IB	SHEET NO. TCP-2
----------------------------------	--------------------

GENERAL NOTES

ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY & TIME RESTRICTIONS
1) NC 62	7:00 AM TO 9:00 AM MONDAY-FRIDAY AND 4:00 PM TO 6:00 PM MONDAY-FRIDAY

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME	DAY & TIME RESTRICTIONS
1) NC 62	

HOLIDAY

- 1) FOR ANY EVENT THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 4 P.M. DECEMBER 31ST TO 9 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A SATURDAY OR A SUNDAY, THEN UNTIL 9 A.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 4 P.M. THURSDAY AND 9 A.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 4 P.M. FRIDAY TO 9 A.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 4 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 4 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 4 P.M. FRIDAY TO 9 A.M. TUESDAY.
- 7) FOR THANKSGIVING, BETWEEN THE HOURS OF 4 P.M. TUESDAY TO 9 A.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 4 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9 A.M. THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY & TIME RESTRICTIONS
1) NC 62	7:00 AM TO 9:00 AM MONDAY-FRIDAY AND 4:00 PM TO 6:00 PM MONDAY-FRIDAY

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT (12m) OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT (1.5m) OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- F) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT (5m) OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES (50mm) ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES (75mm) ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- I) DO NOT EXCEED A DIFFERENCE OF 1.5 inches (40mm) IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT (150m) IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT (31m) FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.
- L) PROVIDE PERMANENT SIGNING.
- M) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- N) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) 500 FT (150m) IN ADVANCE OF THE UNEVEN AREA.
- Q) INSTALL BLACK ON ORANGE "BUMP" SIGNS (W8-1) 500 FT (150m) IN ADVANCE OF THE UNEVEN AREA.

TRAFFIC BARRIER

- R) INSTALL MOVABLE/PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

- S) ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE MOVABLE/PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET MOVABLE/PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

OFFSET THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER A MINIMUM OF 40 FT (12m) FROM ONCOMING TRAFFIC OR PROTECT AT ALL TIMES BY A TEMPORARY CRASH CUSHION.

INSTALL MOVABLE/PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE MOVABLE/PORTABLE CONCRETE BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

TRAFFIC CONTROL DEVICES

- T) WHEN USING ROADWAY STANDARD NO. 1101.02, (CONES OR DRUMS) MAY BE USED IN LIEU OF (DRUMS OR CONES) ON (ROAD NAME).
- U) SPACE CHANNELIZING DEVICES IN WORK AREAS EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3m ON-CENTER IN RADIUS, AND 1m OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.
- W) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT (150m) CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

PAVEMENT MARKINGS AND MARKERS

X) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1) NC 62	THERMOPLASTIC	PERMANENT RAISED
2) TUTTLE RD	PAINT	PERMANENT RAISED
3) -L-	POLYUREA	SNOWFLOWABLE

Y) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1) NC 62	PAINT	TEMPORARY RAISED
2) TUTTLE RD	PAINT	PERMANENT RAISED

Z) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

BB) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

APPROVED: _____	DATE: _____	PROJECT NOTES AND PHASING		
	SCALE: NONE			
	DATE: 2005 JAN 10			REVISIONS
	DWG. BY: CSM			
	DESIGN BY: CSM			
REVIEWED BY: JWW			<small>CADD FILE</small>	

27-JAN-2005 10:30
 C:\CPT\60609IB\1101.02-03.mnotes.dgn
 CSMZJNGO ATT 11/10/05/05

PHASING



PROJ. REFERENCE NO. R-0609 IB	SHEET NO. TCP-3
----------------------------------	--------------------

PHASE I

NOTE: MAINTAIN ACCESS TO ALL DRIVEWAYS THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT.

STEP 1: INSTALL ALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO TCP-8.

NOTE: STEPS 2 AND 3 MAY BE PERFORMED CONCURRENTLY.

STEP 2: USING LANE CLOSURES AND FLAGGERS AS DESCRIBED IN ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7, TO PERFORM THE FOLLOWING:

INSTALL SHORING ON -Y8- (NC 62) FROM STA. 12+10+/- TO STA. 12+60+/- (SEE SHEET TCP-4 FOR SHORING).

STEP 3: AWAY FROM TRAFFIC PERFORM THE FOLLOWING: (SEE SHEET TCP-4 & TCP-5)

CONTRACTOR MAY BEGIN CONSTRUCTION ON -L- FROM: STA. 60+60+/- TO STA. 64+20+/-
STA. 64+80+/- TO STA. 82+20+/-
STA. 82+60+/- TO STA. 90+29+/-
UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE.

CONSTRUCT -Y8- (NC 62) FROM STA. 12+20+/- TO STA. 17+00+/-, INCLUDING PROPOSED BRIDGE AND SOIL FABRIC WALL, UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE. PLACE PORTABLE CONCRETE BARRIER AS SHOWN ON TCP-4.

CONSTRUCT -Y9- (TUTTLE RD) FROM STA. 12+70+/- TO STA. 15+70+/-, INCLUDING PROPOSED BRIDGE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE. (SEE SHEET TCP-5)

CONSTRUCT THE ACCESS ROAD -DR7- FROM STA. 10+04+/- TO STA. 15+23+/- UP THROUGH THE FINAL SURFACE COURSE. (SEE SHEET TCP-5)

PHASE II

STEP 1: USING LANE CLOSURES AND FLAGGERS AS DESCRIBED IN ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7, PERFORM THE FOLLOWING:

CONSTRUCT -Y8- (NC 62) FROM STA. 10+85+/- TO STA. 12+20+/- AND STA. 17+00+/- TO STA. 18+82+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE. MAINTAIN TRAFFIC ON -Y8- (NC 62) WITH WEDGING AND TEMPORARY SHORING. PLACE INTERIM PAVEMENT MARKINGS (PAINT) AND MARKERS (TEMPORARY RAISED) ON -Y8- FROM STA. 10+85+/- TO STA. 18+82+/- (SEE SHEET TCP-4).

STEP 2: USING LANE CLOSURES AND FLAGGERS AS DESCRIBED IN ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7 TO PERFORM THE FOLLOWING (SEE SHEET TCP-6):

SHIFT TRAFFIC ONTO NEW -Y8- ALIGNMENT. CONSTRUCT TURN-AROUNDS ON OLD NC 62 AND REMOVE PAVEMENT AS SHOWN IN THE CONSTRUCTION PLANS.

PLACE TYPE III BARRICADES WITH "ROAD CLOSED" (R11-2) SIGNS TO CLOSE OFF ACCESS OF -Y8B- (PENMAN RD.) TO -Y8-.

STEP 3: AWAY FROM TRAFFIC, CONTRACTOR MAY BEGIN CONSTRUCTION OF -L- FROM STA. 64+20+/- TO STA. 64+80+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE.

NOTE: COMPLETE WORK OF PHASE III, STEPS 1-3, IN 180 CONSECUTIVE CALENDAR DAYS. (SEE SPECIAL PROVISIONS)

PHASE III

STEP 1: INSTALL OFF-SITE DETOUR SIGNING AS SHOWN ON TCP-8. USING ROADWAY STANDARD DRAWING 1001.03, CLOSE -Y9- (TUTTLE RD.) AND SHIFT TRAFFIC ONTO OFF-SITE DETOUR.

STEP 2: USING ROAD CLOSURES AND FLAGGERS AS DESCRIBED IN ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, CONSTRUCT -Y9- (TUTTLE RD.) FROM STA. 10+00+/- TO STA. 12+70+/- AND STA. 15+70+/- TO STA. 17+20+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE AND INSTALL TEMPORARY PAVEMENT MARKINGS (PAINT) AND MARKERS (TEMPORARY RAISED) (SEE SHEET TCP-6).

INSTALL TEMPORARY PAVEMENT MARKINGS (PAINT) AND MARKERS (TEMPORARY RAISED) ON -Y9- FROM STA. 12+70+/- TO STA. 15+70+/-.

STEP 3: SHIFT TRAFFIC ONTO NEW -Y9- ALIGNMENT (TUTTLE RD.). CONSTRUCT TURN-AROUNDS ON OLD -Y9- AND REMOVE PAVEMENT AS SHOWN IN THE CONSTRUCTION PLANS. REMOVE DETOUR SIGNING.

STEP 4: CONTRACTOR MAY BEGIN CONSTRUCTION OF -L- FROM STA 82+20+/- TO STA 82+60+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF THE SURFACE COURSE.

PHASE IV

STEP 1: COMPLETE CONSTRUCTION OF -L- INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA 60+59+/- TO STA 90+29+/- . INSTALL FINAL PAVEMENT MARKINGS (POLYUREA) AND MARKERS (PERMANENT RAISED). MATCH MARKINGS TO ANY EXISTING MARKINGS AT EITHER END OF -L- .

USING FLAGGERS & ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 7, PLACE FINAL LAYER OF SURFACE COURSE AND INSTALL FINAL PAVEMENT MARKINGS (THERMOPLASTIC) AND MARKERS (PERMANENT RAISED) ON -Y8- .

USING FLAGGERS & ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 7, PLACE FINAL LAYER OF SURFACE COURSE AND INSTALL FINAL PAVEMENT MARKINGS (PAINT) AND MARKERS (PERMANENT RAISED) ON -Y9- .

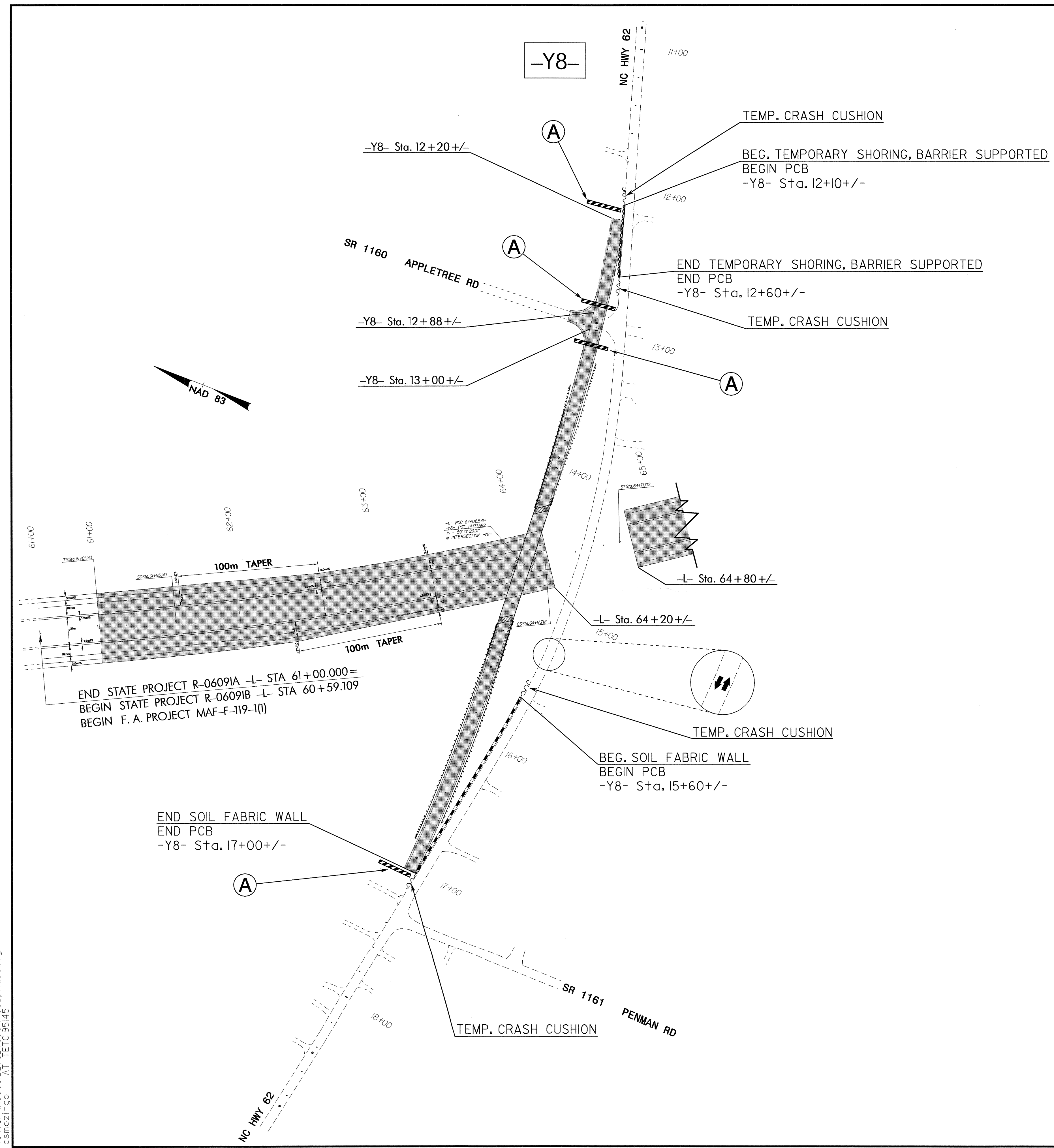
STEP 2: REMOVE ALL TRAFFIC CONTROL DEVICES FROM PROJECT.

08-AUG-2006 13:49 \\jcw\cfe\proj\0609IB\TrafficControl\top\0609IB-1c_tcp02-03_notes.dgn

APPROVED: DATE: 7/8/06	<h2 style="margin: 0;">PROJECT NOTES AND PHASING</h2>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">REVISIONS</th> </tr> <tr> <td style="width: 50%;"> </td> <td style="width: 50%;"> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS					
REVISIONS								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SCALE: NONE</td> </tr> <tr> <td>DATE: 2006 AUG 9</td> </tr> <tr> <td>DWG. BY: CSM</td> </tr> <tr> <td>DESIGN BY: CSM</td> </tr> <tr> <td>REVIEWED BY: JWW</td> </tr> </table>	SCALE: NONE	DATE: 2006 AUG 9	DWG. BY: CSM	DESIGN BY: CSM	REVIEWED BY: JWW	
SCALE: NONE								
DATE: 2006 AUG 9								
DWG. BY: CSM								
DESIGN BY: CSM								
REVIEWED BY: JWW								



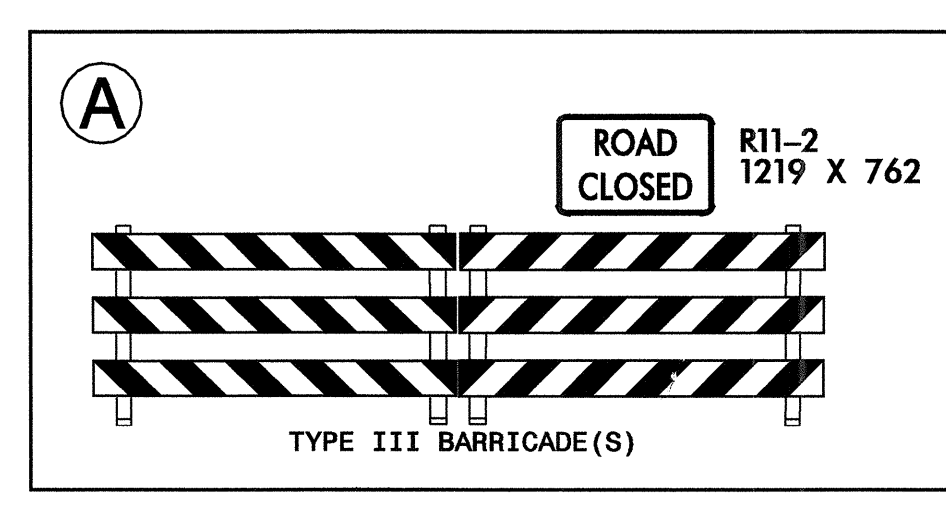
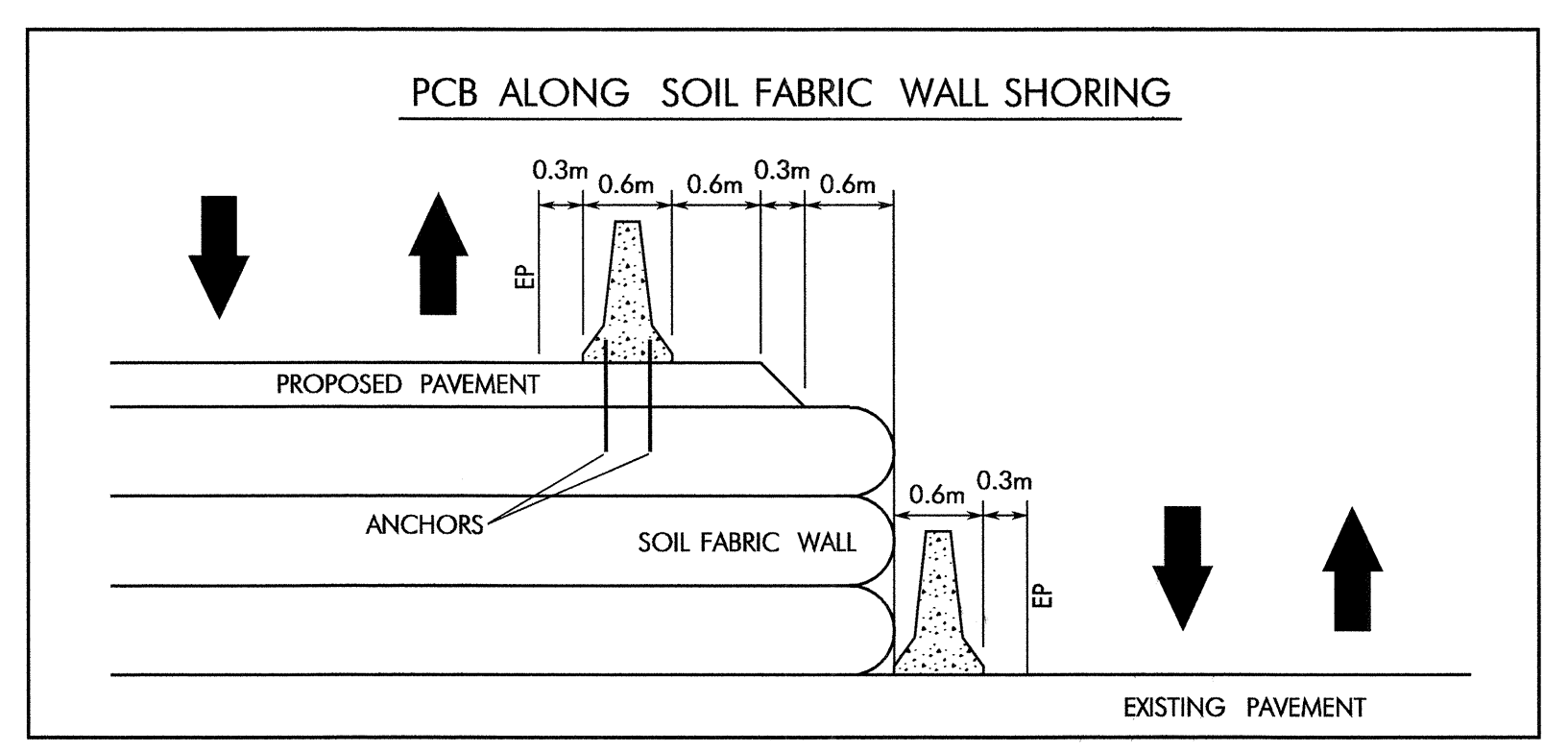
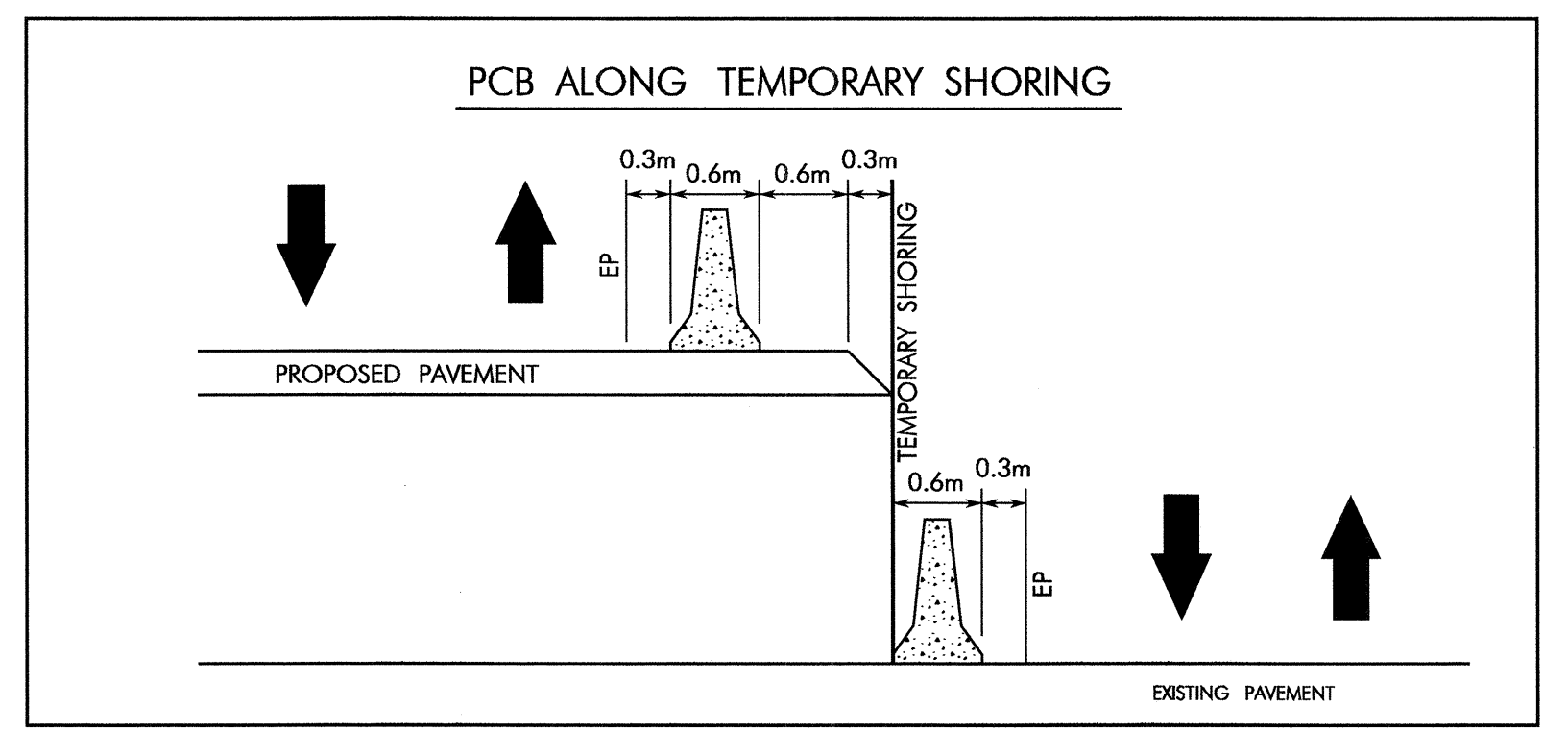
PROJ. REFERENCE NO.	SHEET NO.
R-06091B	TCP-4



FOR DESIGN OF TEMPORARY SHORING, USE THE FOLLOWING SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8 \text{ kN/m}^3$
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4 \text{ kN/m}^3$
 FRICTION ANGLE, $\phi = 30^\circ$
 COHESION, $c = 0 \text{ kPa}$

STANDARD SHORING IS ALLOWED.



SEE SHEET TCP-3 FOR PHASING

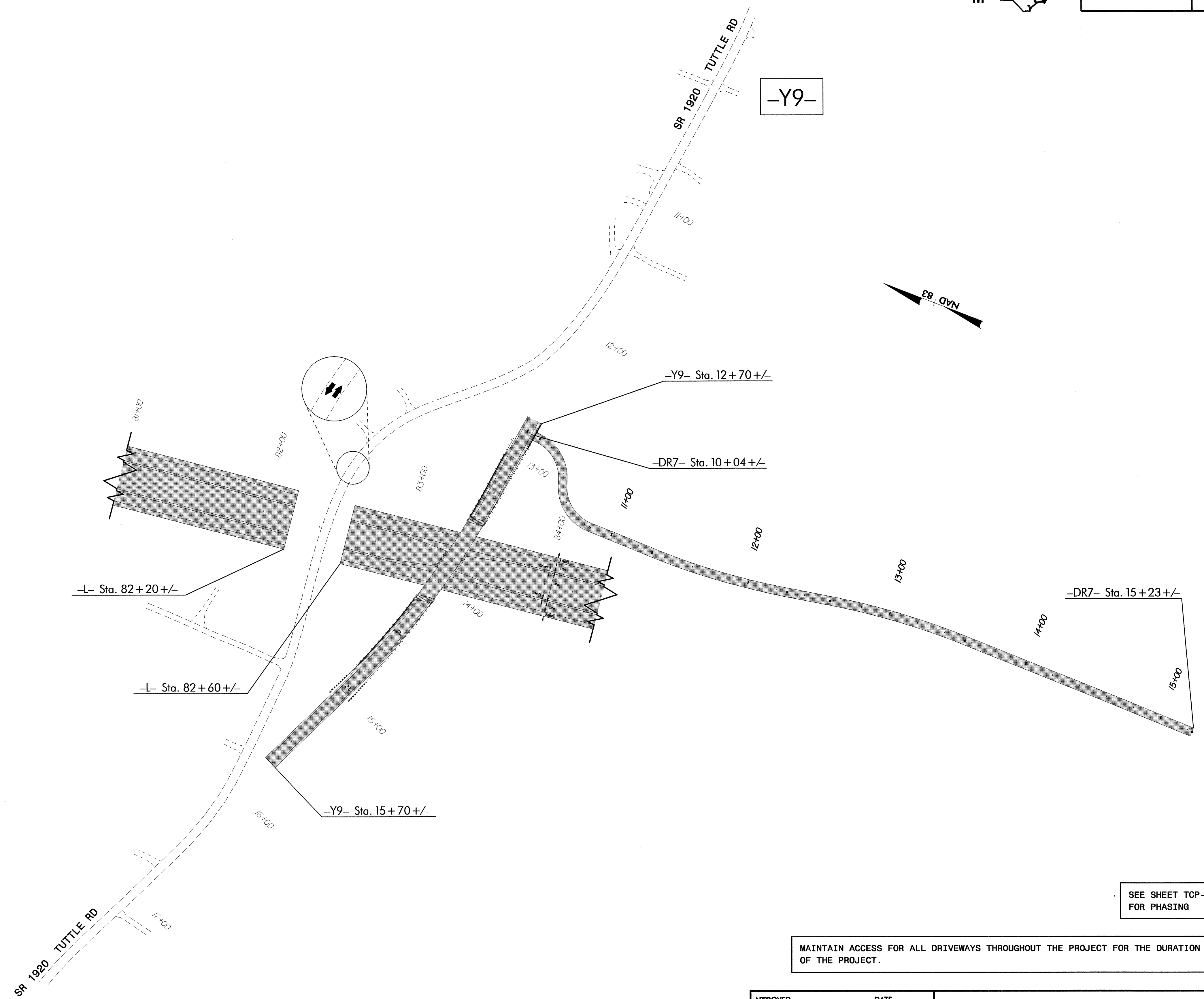
MAINTAIN ACCESS FOR ALL DRIVEWAYS THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT.

APPROVED: _____ DATE: _____	<h1>PHASE I</h1>		REVISIONS	
			SCALE: NONE	
	DATE: 2005 JAN 11			
	DWG. BY: CSM			
	DESIGN BY: CSM			
	REVIEWED BY: JWW			

27-JAN-2005 12:30
 I:\CF\06091B\1\CP04_05.phasel.dgn
 csmozingo AT TELIC05145



PROJ. REFERENCE NO.	SHEET NO.
R-06091B	TCP-5



SEE SHEET TCP-3
FOR PHASING

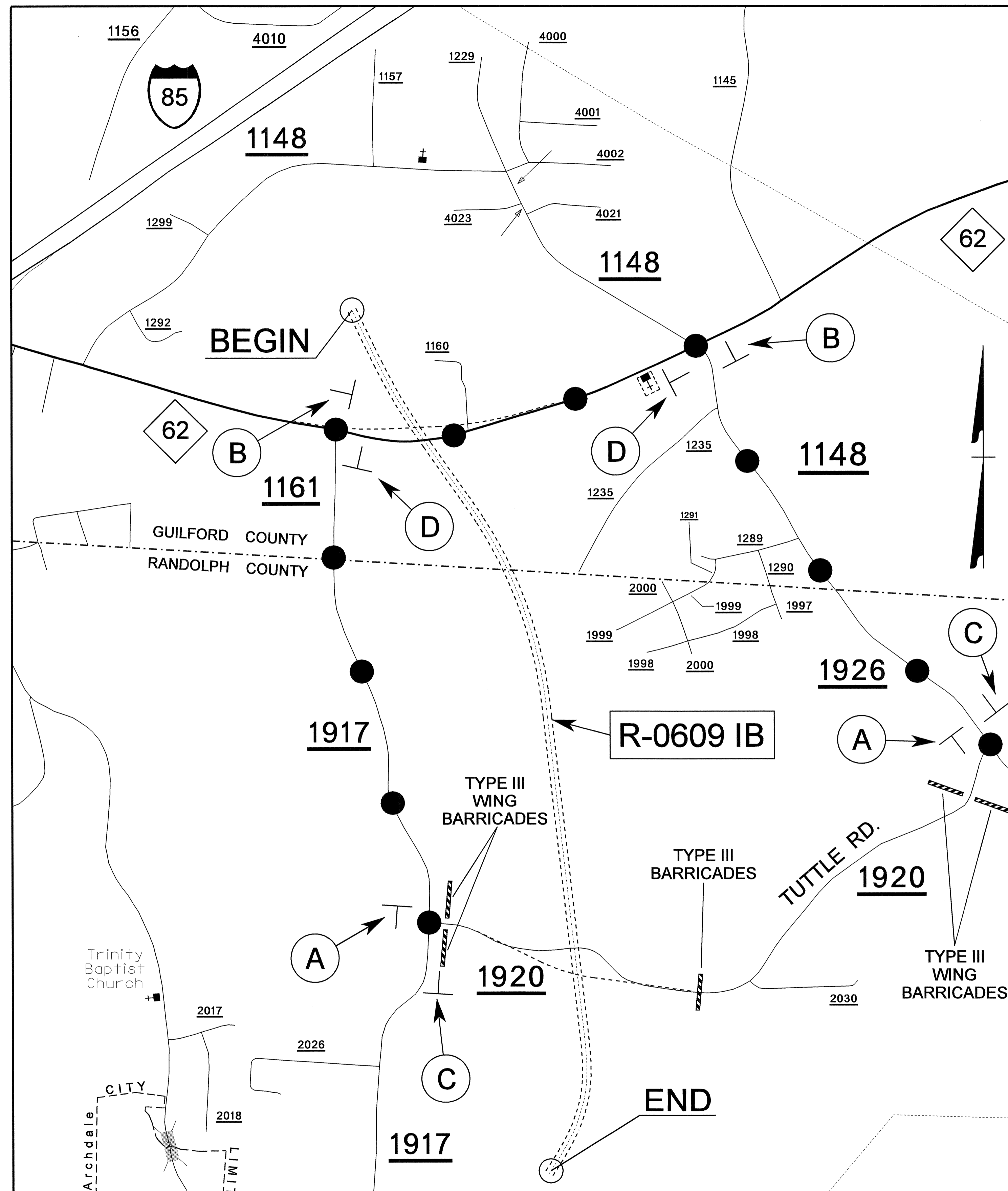
MAINTAIN ACCESS FOR ALL DRIVEWAYS THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT.

APPROVED: _____	DATE: _____	PHASE I	
SCALE: NONE	REVISIONS		
DATE: 2005 JAN 11			
DWG. BY: CSM			
DESIGN BY: CSM			
REVIEWED BY: JWW		<small>CADD FILE</small>	

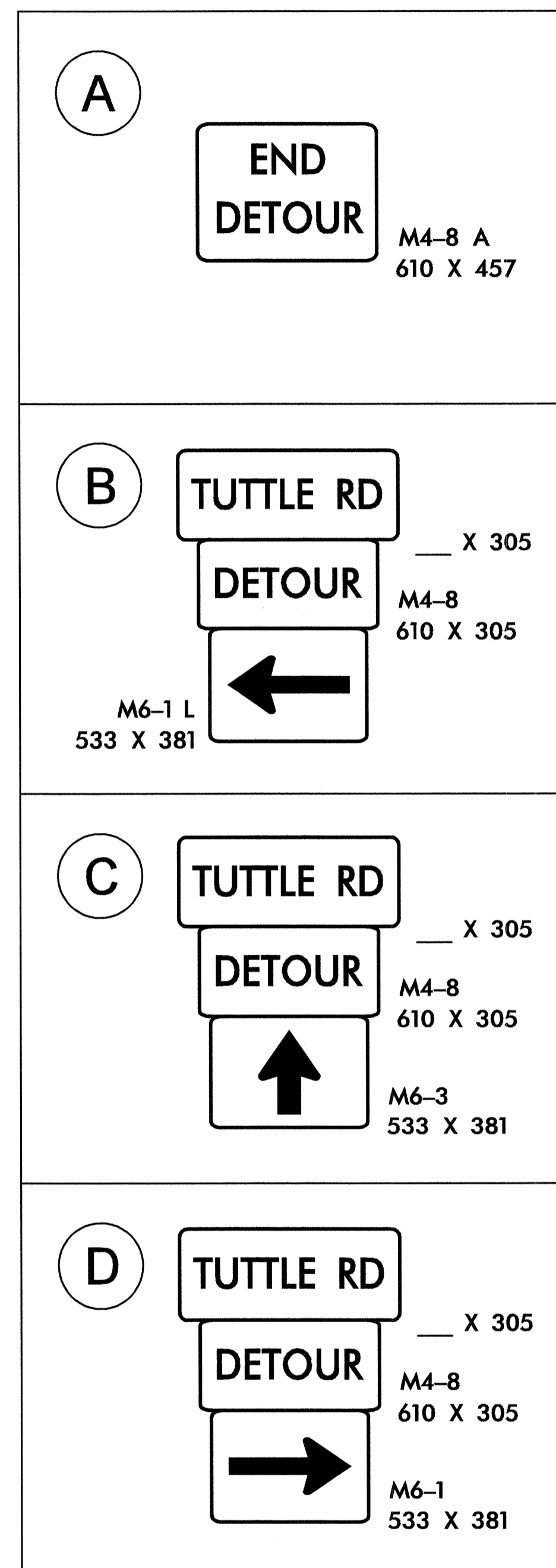
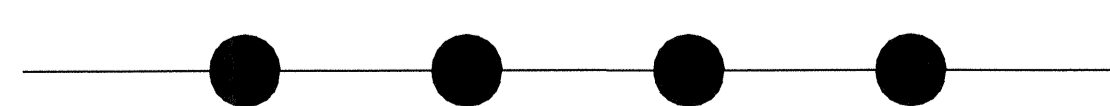
27-JAN-2005 12:31
 I:\TCP\R06091B\1_C\cp04_05-phasel.dgn
 csmoz\ingo AT TELC09145



PROJ. REFERENCE NO. R-0609IB	SHEET NO. TCP-7
---------------------------------	--------------------

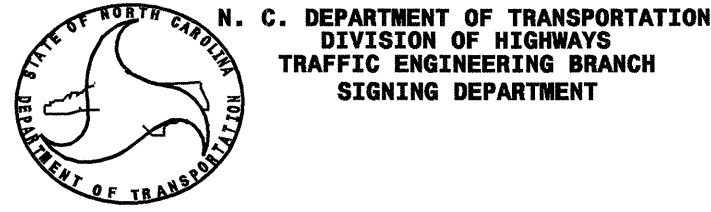


TUTTLE RD. DETOUR



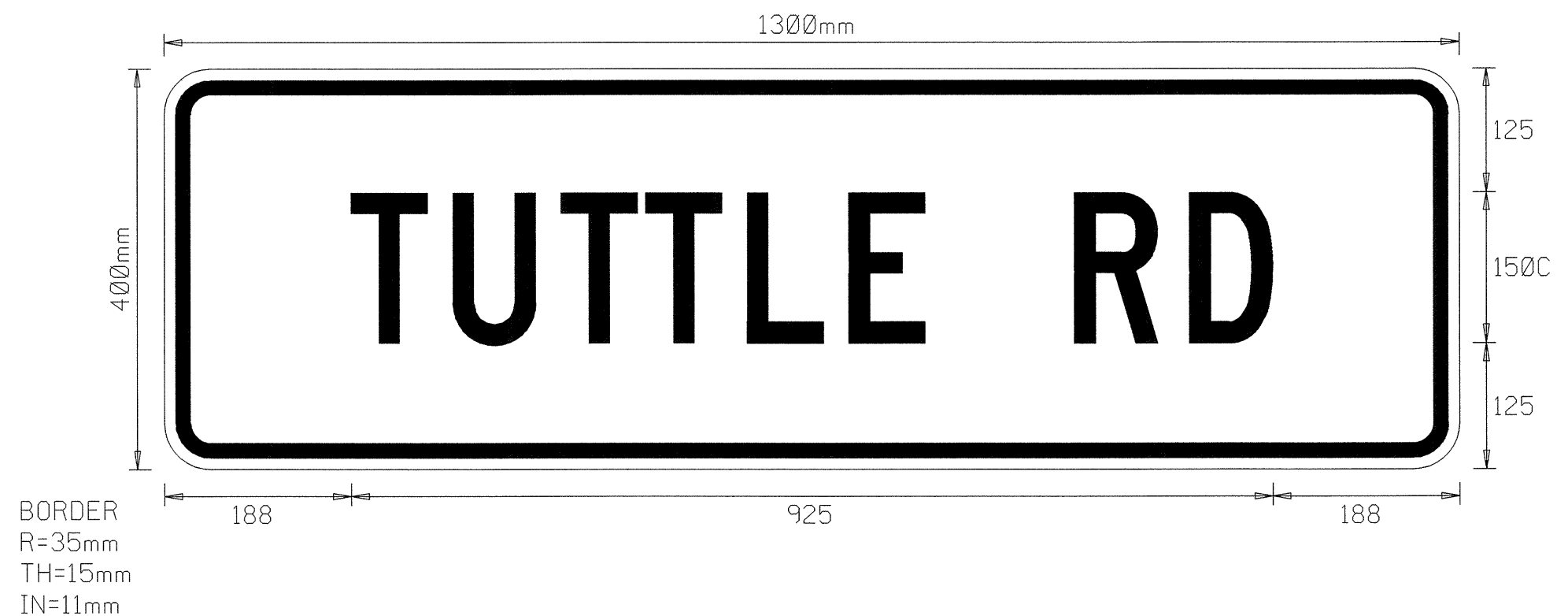
APPROVED: _____	DATE: _____	DETOUR ROUTE											
				SCALE: NONE	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS							
		REVISIONS											
		DATE: 2005 JAN 11											
		DWG. BY: CSM											
		DESIGN BY: CSM											
		REVIEWED BY: JWW											

27 JAN 2005 10:31
 C:\TCP\60609IB\TUTDET07.dwg
 C:\TCP\60609IB\TUTDET07.dwg
 C:\TCP\60609IB\TUTDET07.dwg



PROJ. REFERENCE NO. R-06091B	SHEET NO. TCP-8
---------------------------------	--------------------

SIGN NUMBER: T_RD TYPE: D QUANTITY: 1 SIGN WIDTH: 1300mm HEIGHT: 400mm TOTAL AREA: 0.5 Sq.m BORDER TYPE: FLUSH RECESS: 11mm WIDTH: 15mm RADII: 35mm NO. Z BARS: LENGTH:	BACKG COLOR: Orange COPY COLOR: Black <table border="1"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> MAT'L: 0.125" (3.2 mm) ALUMINUM	SYMBOL	X	Y	WID	HT																																														DESIGN BY: B. Hemphill PROJECT ID: R-06091B CHECKED BY: K. Jordan DIV: 7 STD #: DATE: Jan 12, 2005
SYMBOL	X	Y	WID	HT																																																



- USE NOTES:** 2, 4
- Legend and border shall be direct applied Type III reflective sheeting.
 - Legend and border shall be direct applied non-reflective sheeting.
 - Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 - Background shall be Type III reflective sheeting.
 - Background shall be Type I reflective sheeting.
 - Center arrow(s) vertically on sign.
 - Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS

Letter spacings are to start of next letter

	T	U	T	T	L	E	R	D														Series/Size Text Length
	188	102	109	85	102	102	77	150	115	83	188											C150 925

Spacing Factor is 1 unless specified otherwise

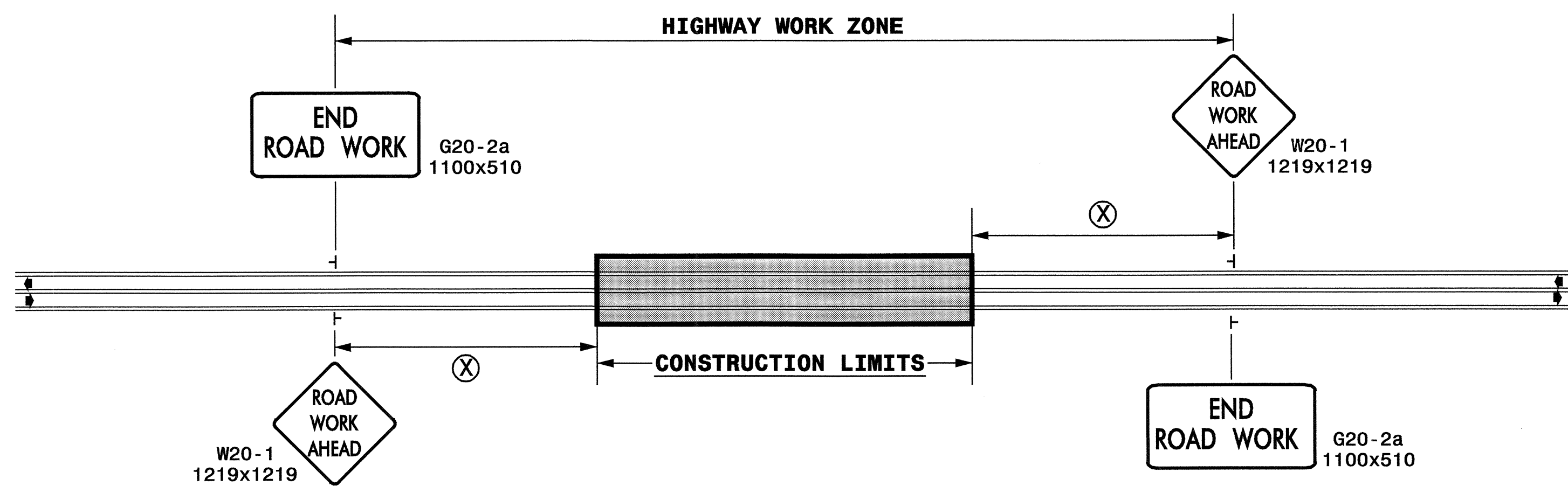
FILENAME: TrafCtr1Sign2

NORTH CAROLINA D.O.T. SIGN DETAIL

27-JAN-2005 12:31
 c:\p15\ccf\501\06091b\TCP\R06091B.LTC.tcp08.street_sign.dgn
 csm2z1ng AT 1E1C195145

APPROVED: _____ DATE: _____ 	STREET SIGN DETAIL	
SCALE: NONE		REVISIONS
DATE:		
DESIGN BY:		
REVIEWED BY:		

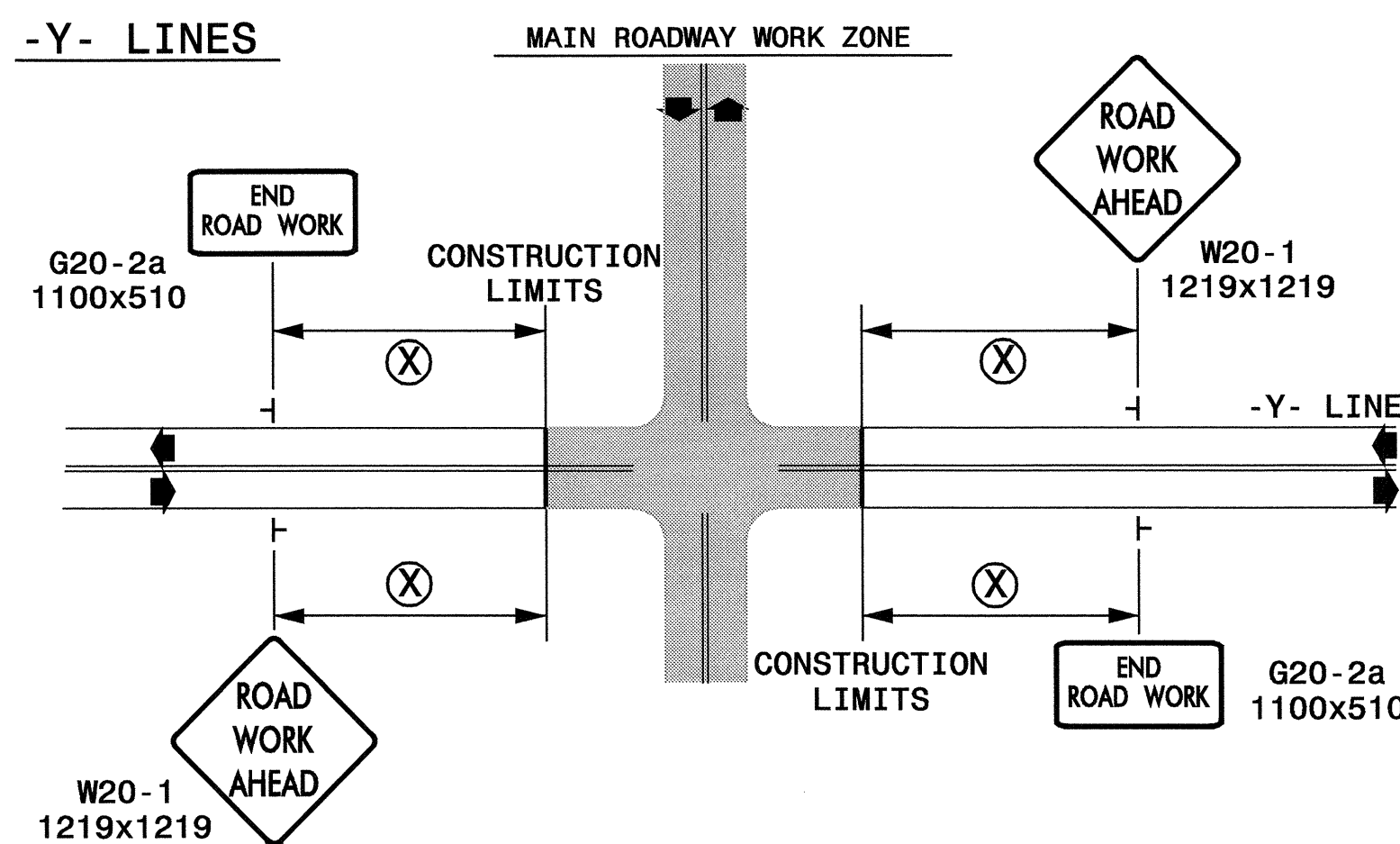
TWO-WAY UNDIVIDED & URBAN FREEWAYS (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	152m
≥ 55	305m

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR IX) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 1.4Kg STEEL U-CHANNEL POST OR 90mm X 90mm WOOD POST FOR ALL WORK ZONE SIGNS. 1.4Kg STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 1.4Kg STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 1.4Kg STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

LEGEND

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

**DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS**

SHEET 1 OF 1

APPROVED: _____ DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS									
	SCALE: NONE									
	DATE: _____	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>7-98</td> <td>10/01</td> </tr> <tr> <td>10-98</td> <td></td> </tr> <tr> <td>01/01</td> <td></td> </tr> </table>	REVISIONS		7-98	10/01	10-98		01/01	
	REVISIONS									
	7-98	10/01								
10-98										
01/01										
DESIGN BY: _____										
REVIEWED BY: _____										

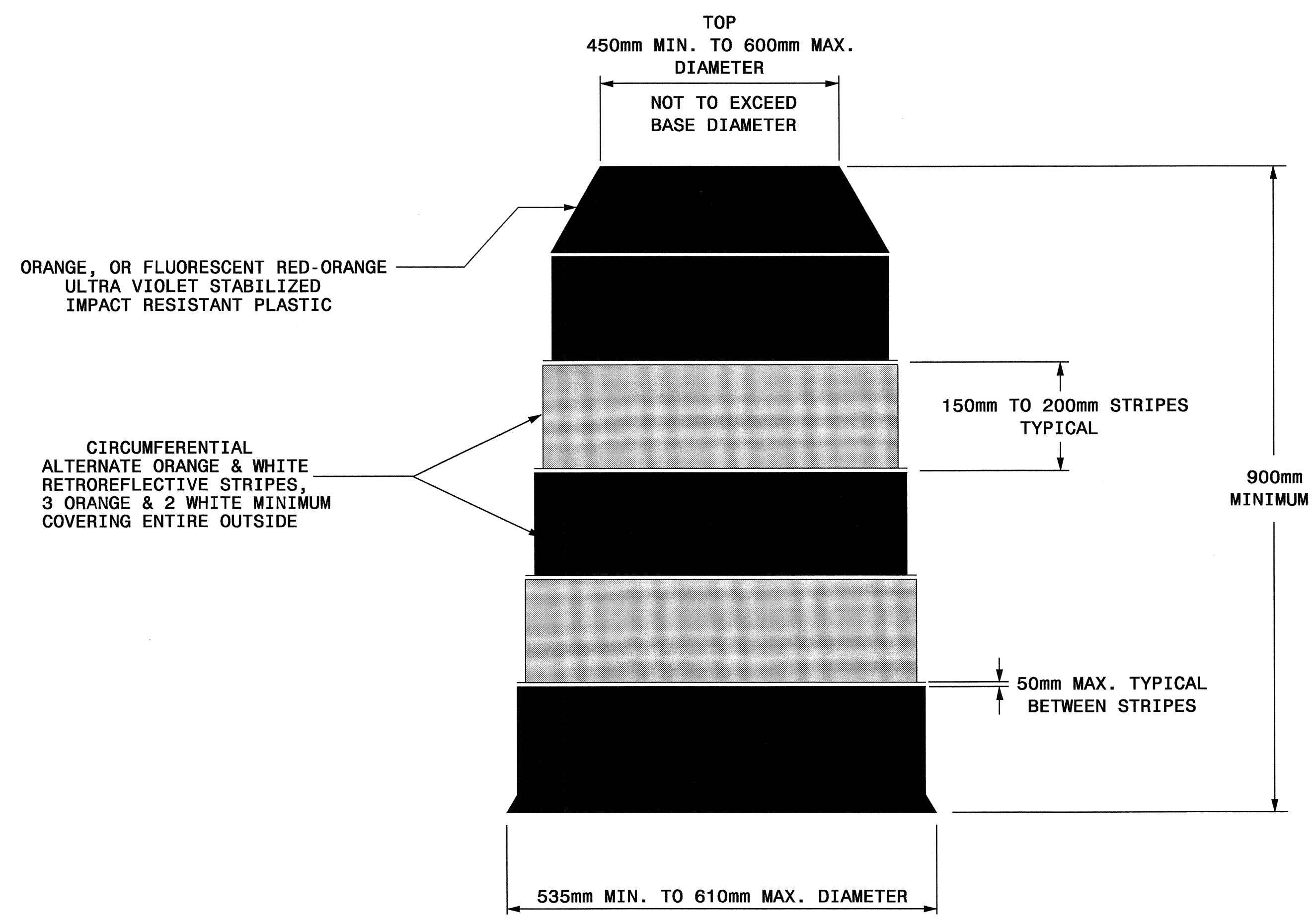


STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-02

METRIC STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01



GENERAL NOTES

- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM, NOR AS TO PRESENT A HAZARD WHEN STRUCK.
- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 50mm IN HEIGHT.

Note:
This drawing is dimensioned in
millimeters unless otherwise
depicted within the drawing.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-02

METRIC STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01

27-JAN-2005 12:31
C:\TCP\1130D01.dwg
C:\TCP\1130D01.dwg
C:\TCP\1130D01.dwg

APPROVED: _____	DATE: _____	REPLACEMENT DETAIL FOR RSD 1130.01	
		DATE: 8/02	
DWG. BY: MMM		DESIGN BY: MMM	
REVIEWED BY: MMM		CHD FILE	



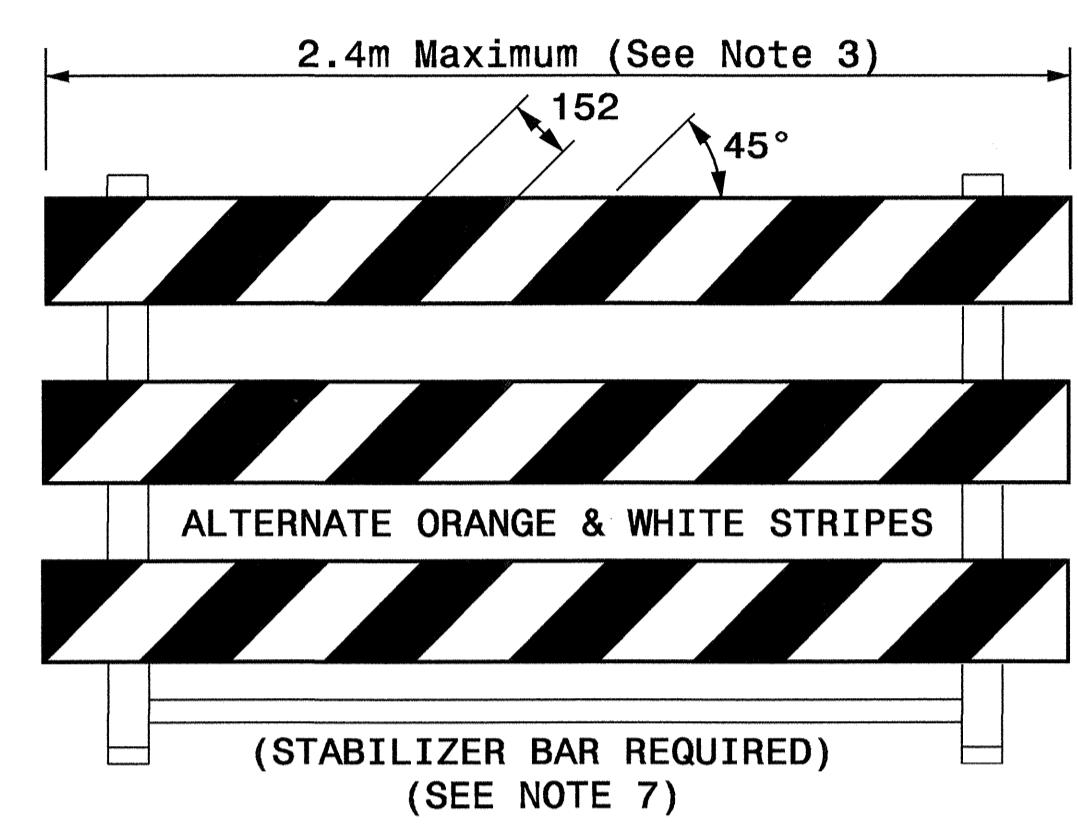
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-05

METRIC STANDARD DRAWING FOR
BARRICADES
TYPE-III

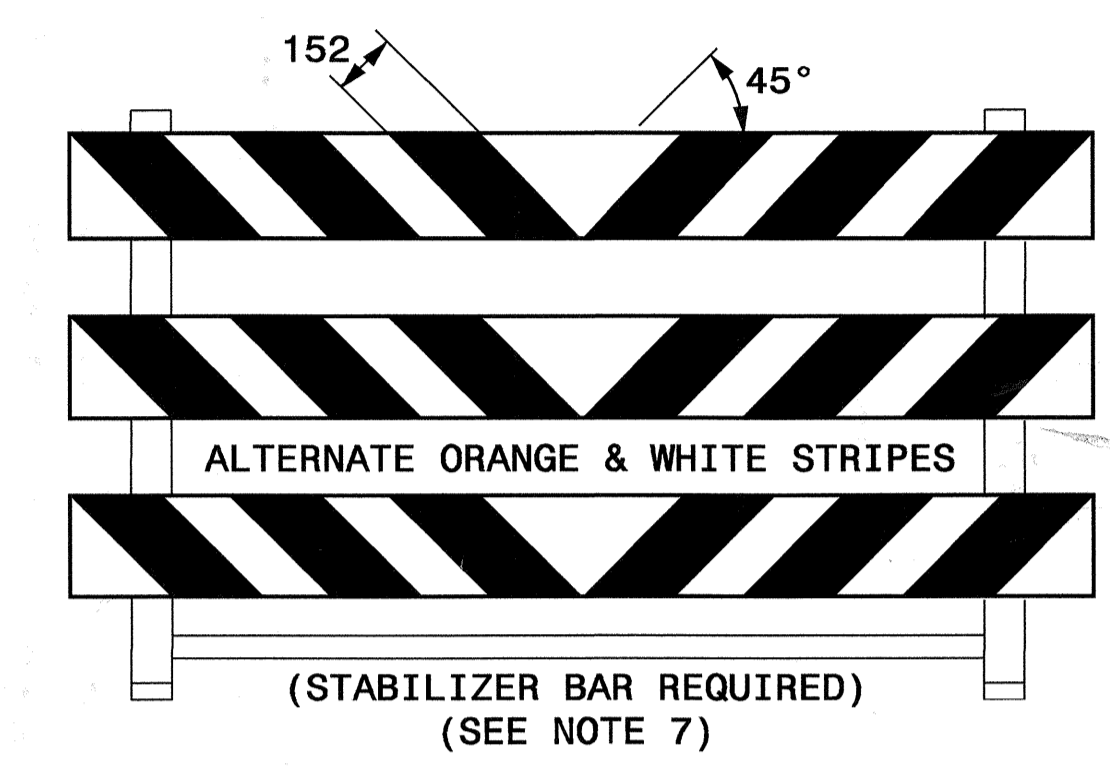
SHEET 1 OF 1
1145D01

TYPE III BARRICADE



TYPE III BARRICADE

END-OF-ROADWAY APPLICATIONS



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-05

METRIC STANDARD DRAWING FOR
BARRICADES
TYPE-III

SHEET 1 OF 1
1145D01

GENERAL NOTES

- 1) HORIZONTAL RAILS FOR TYPE-III BARRICADES MAY BE HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED RAILS. BARRICADE RAILS OF FRANGIBLE PLASTICS SUCH AS PVC MAY NOT BE USED. IF APPROVED PLASTIC TYPE RAILS ARE USED, THEY MUST BE FLAME TREATED BY THE MANUFACTURER SO THAT REFLECTIVE SHEETING MAY ADHERE PROPERLY.
- 2) BARRICADES AND BARRICADE RAILS ARE APPROVED AS A SINGLE UNIT.
- 3) BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 2.4m UNLESS NCHRP 350 CRASH TESTED AND NCDOT APPROVED.
- 4) ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE.
- 5) SIGNS MOUNTED ON BARRICADES SHOULD NOT COVER MORE THAN 50 PERCENT OF THE TOP TWO RAILS OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.
- 6) USE TYPE VII, VIII OR IX SHEETING ON BOTH SIDES OF THE RAILS.
- 7) BARRICADE MUST BE NCHRP 350 AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- 8) ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 9) BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
- 10) STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES. USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
- 11) SEE APPROVED PRODUCTS LIST FOR MANUFACTURERS OF APPROVED BARRICADES.
- 12) PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE.
- 13) USE SANDBAGS PLACED ON THE LOWER PART OF THE FRAME FOR BALLASTING. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

APPROVED: _____ DATE: _____

SEAL

TYPE III BARRICADES

SCALE: NONE		REVISIONS
DATE:		
DWG. BY:		
DESIGN BY:		
REVIEWED BY:		

CADD FILE