

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



|   |                    |
|---|--------------------|
| STATE PROJECT REFERENCE NO.<br>X-0002BU-2519E | SHEET NO.<br>TCP-1 |
|---|--------------------|

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
CUMBERLAND COUNTY**

X-0002BU-2519E

TIP PROJECT:

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "METRIC ROADWAY STANDARD DRAWINGS" - ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JULY 2006 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                        |
| 1115.01  | FLASHING ARROW PANELS                           |
| 1130.01  | DRUMS   |
| 1135.01  | CONES   |
| 1145.01  | BARRICADES                                      |
| 1150.01  | FLAGGING DEVICES                                |
| 1160.01  | TEMPORARY CRASH CUSHION                         |
| 1165.01  | TRUCK MOUNTED IMPACT ATTENUATOR                 |
| 1170.01  | PORTABLE CONCRETE BARRIER                       |
| 1180.01  | SKINNY DRUM                                     |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES & OFFSETS        |
| 1205.02  | PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS |
| 1205.03  | PAVEMENT MARKINGS - INTERCHANGES                |
| 1205.04  | PAVEMENT MARKINGS - INTERSECTIONS               |
| 1205.05  | PAVEMENT MARKINGS - TURN LANES                  |
| 1205.06  | PAVEMENT MARKINGS - THRU LANE DROPS             |
| 1205.08  | PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES     |
| 1205.09  | PAVEMENT MARKINGS - PAINTED ISLANDS             |
| 1205.12  | PAVEMENT MARKINGS - BRIDGES                     |
| 1250.01  | PAVEMENT MARKER SPACING                         |
| 1251.01  | RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT) |
| 1253.01  | SNOWPLOWABLE RAISED PAVEMENT MARKERS            |
| 1261.01  | GUARDRAIL & BARRIER DELINEATOR SPACING          |
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| 1267.02  | FLEXIBLE DELINEATOR SPACING                     |
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**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT. EXIST. PVMT.
  - WORK AREA
  - ONGOING CONSTRUCTION
  - REMOVAL OF EXISTING PAVEMENT
  - GRADING ONLY

- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
  - TYPE II BARRICADE
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  - CHANGEABLE MESSAGE SIGN
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  - POLICE
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- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
  - YELLOW/YELLOW PAVEMENT MARKER
  - CRYSTAL/RED PAVEMENT MARKER
  - PAVEMENT MARKING SYMBOLS

|   |   |
|---|---|
| N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION SECTION<br>REVIEW AND CONTACT PERSONNEL |   |
| J. STUART BOURNE, P.E.  | TRAFFIC CONTROL ENGINEER                |
| J. STEVE KITE, P.E.   | TRAFFIC CONTROL PROJECT ENGINEER        |
| DON A. PARKER   | TRAFFIC CONTROL PROJECT DESIGN ENGINEER |
|   | TRAFFIC CONTROL DESIGN ENGINEER         |
|   | TRAFFIC CONTROL DESIGN TECHNICIAN       |



|                |  |
|----------------|--|
| APPROVED:      | PLAN PREPARED BY: PROGRESSIVE DESIGN GROUP, INC.       |
| DATE: 07/16/08 |  |
| SEAL<br>       | TIM AREY, P.E. TRAFFIC CONTROL ENGINEER                |
|                | TRAFFIC CONTROL PROJECT ENGINEER                       |
|                | TRAFFIC CONTROL PROJECT DESIGN ENGINEER                |
|                | L. ASHLEY TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN |

# GENERAL NOTES

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

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 AND TIME RESTRICTIONS   |
|----------------------------------|-----------------------------|
| -Y1- MURCHISON ROAD (NORTHBOUND) | 7:00am-9:00am MONDAY-FRIDAY |
| -Y1- MURCHISON ROAD (SOUTHBOUND) | 3:00pm-6:00pm MONDAY-FRIDAY |
| -Y2- BRAGG BLVD.                 | 6:00am-8:00pm MONDAY-SUNDAY |

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

### ROAD NAME

-Y1- MURCHISON ROAD AND -Y2- BRAGG BLVD.

### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR SPRING FEST AND OCTOBER FEST ON FORT BRAGG, BETWEEN THE HOURS OF 6:00 A.M. TWO DAYS PRIOR TO THE BEGINNING OF THE EVENT AND 8:00 P.M. THE FOLLOWING DAY AFTER THE END OF THE EVENT.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

## LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 M 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 OR A LANE CLOSURE IS INSTALLED.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 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.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 3m 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.

# PROJECT NOTES

G) 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.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

## PAVEMENT EDGE DROP OFF REQUIREMENTS

I) 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 AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

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

BACKFILL DROP-OFFS THAT EXCEED 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.

J) DO NOT EXCEED A DIFFERENCE OF 50mm IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 40mm. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 150 m IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

## TRAFFIC PATTERN ALTERATIONS

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

## SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 12m FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) PROVIDE PERMANENT SIGNING.

N) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.

O) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.

P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

## TRAFFIC BARRIER

Q) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY 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.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

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

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

R) 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.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

| POSTED SPEED LIMIT | MINIMUM OFFSET |
|--------------------|----------------|
| 40 OR LESS         | 4.6m           |
| 45 - 50            | 6m             |
| 55                 | 7.6m           |
| 60 MPH or HIGHER   | 9m             |

## TRAFFIC CONTROL DEVICES

S) SPACE CHANNELIZING DEVICES IN WORK AREAS EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3m ON-CENTER IN RADII, AND 1m OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

T) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

U) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES SKINNY DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 150m CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

## PAVEMENT MARKINGS AND MARKERS

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

| ROAD NAME           | MARKING       | MARKER              |
|---------------------|---------------|---------------------|
| -Y1- MURCHISON ROAD | THERMOPLASTIC | SNOWPLOWABLE RAISED |
| -Y2- BRAGG BLVD.    | THERMOPLASTIC | PERMANENT RAISED    |
| ALL OTHER ROADS     | PAINT         | NONE                |
| ALL BRIDGE DECKS    | POLYUREA      | SNOWPLOWABLE RAISED |

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

| ROAD NAME   | MARKING        | MARKER           |
|-------------|----------------|------------------|
| ALL         | PAINT          | TEMPORARY RAISED |
| ALL BRIDGES | TEMPORARY TAPE | TEMPORARY RAISED |

X) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.

Y) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

AA) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

BB) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

## MISCELLANEOUS

CC) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.



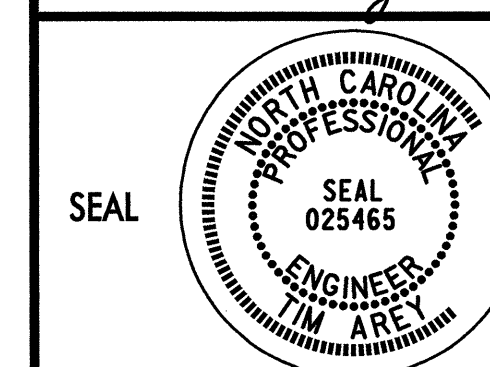
| PROJ. REFERENCE NO. | SHEET NO. |
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| X-0002B/U-2519E     | TCP-2     |

PROGRESSIVE  
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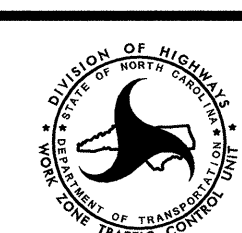
ENGINEERS • CONSULTANTS

APPROVED: *Jan Gray* DATE: 03/04/09



## PROJECT NOTES

SCALE:  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



### REVISIONS

| NO. | DESCRIPTION |
|-----|-------------|
|     |             |
|     |             |
|     |             |

CADD FILE



## TEMPORARY SHORING NOTES

### TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD SHORING FROM STATION 13+75 -Y2- TO STATION 14+45 -Y2-, 20 METERS LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 13+75 -Y2- TO STATION 14+45 -Y2-, 20 METERS LEFT, USE THE FOLLOWING SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF

UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF

FRICTION ANGLE,  $\phi = 30$  DEGREES

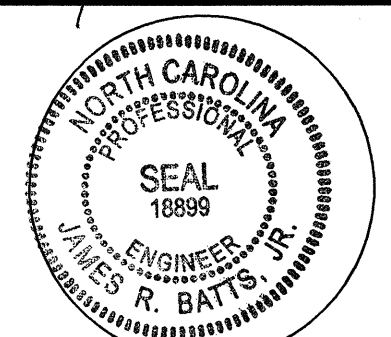



COHESION,  $c = 0$  PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 14+10 -Y2- TO STATION 14+30 -Y2-, 20 METERS LEFT. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING SPECIAL PROVISION.

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| APPROVED: <i>James R. Batts</i> DATE: 2/27/09<br><div style="text-align: center;">  <p>SEAL</p> </div> | <h3>TEMPORARY SHORING NOTES</h3> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SCALE: NONE</td> <td rowspan="4" style="width: 30%; text-align: center;">  </td> <td style="width: 40%;">REVISIONS</td> </tr> <tr> <td>DATE:</td> <td></td> </tr> <tr> <td>DWG. BY:</td> <td></td> </tr> <tr> <td>DESIGN BY:</td> <td></td> </tr> <tr> <td>REVIEWED BY:</td> <td></td> <td></td> </tr> </table> | SCALE: NONE |  | REVISIONS | DATE: |  | DWG. BY: |  | DESIGN BY: |  | REVIEWED BY: |  |  |
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| PROJ. REFERENCE NO. | SHEET NO. |
| X-0002B/U-2519E     | TCP-3     |

# PHASING

AREA 1: INCLUDES THE BRAGG BLVD. VICINITY: -Y2- (BRAGG BLVD.), -Y3-, -Y4-, -Y5-, -TT7-, -COL1-, -COL2-, -RP2B-, -LP2B-, -RP2D-, -LP2D-, -L- (FROM STA. 39+40+/- TO STA. 83+40+/-)

AREA 2: INCLUDES THE MURCHISON ROAD VICINITY: -Y1-, -Y2- (SMITH LAKE ROAD), -RPCDR-, -CDR-, FLYOVER, -SPURB-, -RPB-, -RPC-, -LPB-, AND -LPC-.

## PHASE I

### AREA 1: NC 24 (BRAGG BLVD.), -L-, AND VARIOUS -Y- LINES

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN AREA 1 AS SHOWN ON SHEETS TCP-34 THRU TCP-37 ACCORDING TO THE GUIDELINES SET FORTH IN GENERAL NOTE L.

INTERMEDIATE CONTRACT TIME  
 THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION WORK REQUIRED FOR -Y2- (BRAGG BLVD.) AS DESCRIBED IN PHASE I, AREA 1; PHASE II, AREA 1; AND PHASE III, AREA 1. THE DATE OF AVAILABILITY FOR THIS INTERMEDIATE CONTRACT TIME WILL BE THE DATE THE CONTRACTOR ELECTS TO BEGIN THE WORK REQUIRED FOR -Y2- (BRAGG BLVD.) AS DESCRIBED IN PHASE I, AREA 1. THE COMPLETION DATE FOR THIS INTERMEDIATE CONTRACT TIME WILL BE DATE WHICH IS 365 CONSECUTIVE CALENDAR DAYS AFTER AND INCLUDING THE DATE THE CONTRACTOR BEGINS THIS WORK.

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9 INSTALL PORTABLE CONCRETE BARRIER ALONG THE NORTHBOUND OUTSIDE SHOULDER OF -Y2- FROM STA. 12+00+/- TO STA. 15+00+/- AND FROM STA. 16+28+/- TO STA. 18+70+/- AS SHOWN ON SHEETS TCP-10 AND TCP-11. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9 INSTALL PORTABLE CONCRETE BARRIER ALONG THE SOUTHBOUND OUTSIDE SHOULDER OF -Y2- FROM STA. 15+00+/- TO STA. 16+82+/- AS SHOWN ON SHEETS TCP-10 AND TCP-11. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

STEP 3: BEGIN CONSTRUCTION ON THE FOLLOWING AWAY FROM TRAFFIC AS SHOWN ON SHEETS TCP-4 THRU TCP-11:

- L-: FROM STA. 39+40+/- TO STA. 83+40+/- . NOTE THE ROADWAYS AND LOCATIONS WHERE GRADING ONLY IS REQUIRED AS SHOWN IN THE ROADWAY DESIGN PLANS AND ON SHEETS TCP-4, TCP-5, AND TCP-7.
- L-: BOTH BRIDGES AT STA. 58+00+/- .
- L-: FUTURE BRIDGE END BENTS ON BOTH SIDES OF -Y2- .
- L-: BOTH BRIDGES AT STA. 77+50+/- .
- Y3-: FROM STA. 10+00+/- TO THE -Y2- INTERSECTION.
- Y4-: FROM STA. 10+00+/- TO THE -Y2- INTERSECTION.
- RP1BD-: FROM STA. 39+40+/- TO -CDR- INCLUDING THE PROPOSED BRIDGE OVER -Y2- .
- COL2-: FROM STA. 39+40+/- TO -L- INCLUDING THE PROPOSED BRIDGE OVER -Y2- .
- TT7-: IN THE LOCATIONS SHOWN ON SHEETS TCP-4 THRU TCP-7 INCLUDING THE PROPOSED BRIDGE AT STA. 22+00+/- .
- COL1-: GRADING ONLY AS SHOWN ON SHEET TCP-4.
- RP2B-, -LP2B-, -RP2D-, AND -LP2D-: IN THE LOCATIONS SHOWN ON SHEET TCP-4.

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, BEGIN CONSTRUCTION ON THE PROPOSED -Y2- OUTSIDE WIDENING FROM STA. 6+70+/- -Y2- TO STA. 24+60+/- AS SHOWN ON SHEETS TCP-4, TCP-10, AND TCP-11. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

INSTALL THE TRAFFIC CONTROL DEVICES FOR THE OFFSITE DETOUR ROUTE SHOWN ON SHEET TCP-34 AND UTILIZE THE DETOUR ROUTE FOR -Y2- (BRAGG BLVD) TRAFFIC DURING BRIDGE GIRDER HANGING OPERATIONS OVER -Y2- (BRAGG BLVD).

### AREA 2: NC 210 (MURCHISON ROAD) AND VARIOUS -Y- LINES

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN AREA 2 AS SHOWN ON SHEETS TCP-34 THRU TCP-37 ACCORDING TO THE GUIDELINES SET FORTH IN GENERAL NOTE L.

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9 INSTALL PORTABLE CONCRETE BARRIER ALONG THE NORTHBOUND OUTSIDE SHOULDER OF -Y1- FROM STA. 29+00+/- TO STA. 31+50+/- AND ALONG THE SOUTHBOUND OUTSIDE SHOULDER FROM STA. 28+80+/- TO STA. 31+45+/- AS SHOWN ON SHEET TCP-12. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

STEP 3: BEGIN CONSTRUCTION ON THE FOLLOWING AWAY FROM TRAFFIC AS SHOWN ON SHEETS TCP-5 THRU TCP-7:

- RPCDR-: FROM -CDR- TO -FLYOVER- .
- CDR-: FROM -RP1BD- TO STA. 71+85+/- INCLUDING THE PROPOSED -CDR- BRIDGE AT STA. 56+00+/-, STA. 58+00+/-, AND STA. 66+00+/- .
- FLYOVER-: FROM STA. 10+00+/- TO STA. 24+80+/- AND FROM STA. 29+28+/- TO STA. 31+83+/- INCLUDING THE PROPOSED -FLYOVER- BRIDGE AT STA. 23+50+/- .
- SPURB-: FROM STA. 11+93+/- TO STA. 18+10+/- .
- RPB-: FROM -Y1- TO -L- .
- RPC-: FROM -Y1- TO -L- .
- LPB-: FROM -Y1- TO -L- .
- LPC-: FROM -Y1- TO -L- .
- Y1-: FROM STA. 20+00+/- NORTHBOUND TO STA. 30+00+/- NORTHBOUND AND FROM STA. 15+87+/- SOUTHBOUND TO STA. 35+09+/- SOUTHBOUND. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9 AS REQUIRED BY THE 'LANE AND SHOULDER CLOSURE REQUIREMENTS' SECTION OF THE GENERAL NOTES LISTED ON SHEET TCP-2. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.
- Y2-: FROM STA. 10+09+/- TO STA. 34+98+/- . MAINTAIN TRAFFIC TO THE RECREATIONAL FACILITY BY PLACING INCIDENTAL STONE BY THE END OF EACH DAY'S CONSTRUCTION.

## PHASE II

### AREA 1: NC 24 (BRAGG BLVD.), -L-, AND VARIOUS -Y- LINES

STEP 1: COMPLETE CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- Y2-: OUTSIDE WIDENING FROM STA. 6+70+/- TO STA. 24+60+/- .
- Y3-: FROM STA. 10+00+/- TO THE -Y2- INTERSECTION.
- Y4-: FROM STA. 10+00+/- TO THE -Y2- INTERSECTION.

COMPLETE THE WORK REQUIRED IN PHASE II, AREA 1, STEP 2 BY WORKING IN A CONTINUOUS MANNER:

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 3 OF 9, INSTALL TEMPORARY PAINT PAVEMENT MARKINGS AND MARKERS ON PROPOSED -Y2-, -Y3-, AND -Y4- TO THE PATTERN SHOWN ON SHEETS TCP-13 THRU TCP-18 AND SHIFT -Y2-, -Y3- AND -Y4- TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-13 THRU TCP-18.

STEP 3: BEGIN CONSTRUCTION ON THE PROPOSED -Y2- MEDIAN UP THROUGH ONE LAYER OF SURFACE COURSE FROM STA. 7+70+/- -Y2- TO STA. 24+60+/- -Y2- AS SHOWN ON SHEETS TCP-13 THRU TCP-19.

CONTINUE CONSTRUCTION ON ALL REMAINING ITEMS STARTED IN PHASE I.

### AREA 2: NC 210 (MURCHISON ROAD) AND VARIOUS -Y- LINES

STEP 1: COMPLETE CONSTRUCTION ON -Y1- FROM STA. 20+00+/- NORTHBOUND TO STA. 30+00+/- NORTHBOUND AND FROM STA. 15+87+/- SOUTHBOUND TO STA. 35+09+/- SOUTHBOUND UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

COMPLETE THE WORK REQUIRED IN PHASE II, AREA 2, STEP 2 BY WORKING IN A CONTINUOUS MANNER:

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 3 OF 9, INSTALL TEMPORARY PAINT PAVEMENT MARKINGS AND MARKERS ON PROPOSED -Y1- SOUTHBOUND LANES FROM STA. 15+87+/- TO STA. 27+80+/- AS SHOWN ON SHEETS TCP-19 THRU TCP-24 AND SHIFT -Y1- SOUTHBOUND TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-19 THRU TCP-24.

STEP 3: CONSTRUCT PROPOSED -Y1- NORTHBOUND LANES FROM STA. 15+87+/- TO STA. 21+00+/- AS SHOWN ON SHEETS TCP-19 AND TCP-20. (SEE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9)

COMPLETE THE WORK REQUIRED IN PHASE II, AREA 2, STEP 4 BY WORKING IN A CONTINUOUS MANNER:

STEP 4: USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 3 OF 9, INSTALL TEMPORARY PAINT PAVEMENT MARKINGS AND MARKERS ON PROPOSED -Y1- NORTHBOUND LANES FROM STA. 15+87+/- TO STA. 35+10+/- AS SHOWN ON SHEETS TCP-25 THRU TCP-30 AND SHIFT -Y1- NORTHBOUND TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-25 THRU TCP-30.

STEP 5: BEGIN CONSTRUCTION ON -FLYOVER- FROM STA. 24+80+/- TO STA. 29+28+/- AS SHOWN ON SHEETS TCP-27 AND TCP-28.

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9 INSTALL PORTABLE CONCRETE BARRIER ALONG THE NORTHBOUND OUTSIDE SHOULDER OF -Y1- FROM STA. 29+20+/- TO STA. 30+60+/- AS SHOWN ON SHEET TCP-29. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, CONSTRUCT PROPOSED -Y1- MEDIAN FROM STA. 31+55+/- TO STA. 35+10+/- AS SHOWN ON SHEETS TCP-29 AND TCP-30. PLACE TRAFFIC BACK INTO THE ORIGINAL PATTERN BY THE END OF EACH CONSTRUCTION DAY.

INSTALL THE TRAFFIC CONTROL DEVICES FOR THE OFFSITE DETOUR ROUTE SHOWN ON SHEET TCP-35 AND UTILIZE THE DETOUR ROUTE FOR -Y1- TRAFFIC DURING BRIDGE GIRDER HANGING OPERATIONS OVER -Y1- .

## PHASE III

### AREA 1: NC 24 (BRAGG BLVD.), -L-, AND VARIOUS -Y- LINES

STEP 1: COMPLETE CONSTRUCTION ON THE PROPOSED -Y2- MEDIAN UP THROUGH ONE LAYER OF SURFACE COURSE FROM STA. 7+70+/- -Y2- TO STA. 24+60+/- -Y2- .

COMPLETE THE WORK REQUIRED IN PHASE III, AREA 1, STEP 2 BY WORKING IN A CONTINUOUS MANNER:

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 3 OF 9, INSTALL TEMPORARY PAINT PAVEMENT MARKINGS AND MARKERS ON PROPOSED -Y2- NORTHBOUND LANES FROM STA. 20+12+/- TO STA. 24+60+/- AS SHOWN ON SHEETS TCP-31 AND TCP-32 AND SHIFT -Y2- NORTHBOUND TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-31 AND TCP-32.

STEP 3: CONSTRUCT THE REMAINING SECTION OF NORTHBOUND -Y2- OUTSIDE WIDENING FROM STA. 24+60+/- TO THE -Y4- INTERSECTION AS SHOWN ON SHEET TCP-32.

CONSTRUCT PROPOSED -Y5- UP THROUGH ONE LAYER OF SURFACE COURSE AS SHOWN ON SHEET TCP-33.

## PHASE IV

### AREA 1 AND AREA 2

STEP 1: COMPLETE CONSTRUCTION ON ALL BRIDGES AND ROADWAYS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

INSTALL THE PROPOSED TRAFFIC SIGNALS AT THE -Y2-/-RP1BD- INTERSECTION, THE -Y2-/-RP2D- INTERSECTION, AND THE -Y1-/-RPB- INTERSECTION.

STEP 2: COORDINATE PROPOSED ROADWAY OPENINGS WITH THE CONTRACTORS OF BOTH ADJACENT PROJECTS. USING ROADWAY STANDARD DRAWING NO. 1101.02, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND MARKERS ON ALL ROADWAYS AS SHOWN ON SHEETS PM-1 THRU PM-30. ACTIVATE THE PROPOSED TRAFFIC SIGNALS AT THE -Y2-/-RP1BD- INTERSECTION, THE -Y2-/-RP2D- INTERSECTION, AND THE -Y1-/-RPB- INTERSECTION AND OPEN ALL ROADWAYS TO THE FINAL TRAFFIC PATTERN.



| APPROVED: <i>Jim Gray</i> | DATE: 03/04/09 | PHASING  |           |  |  |  |  |  |  |  |
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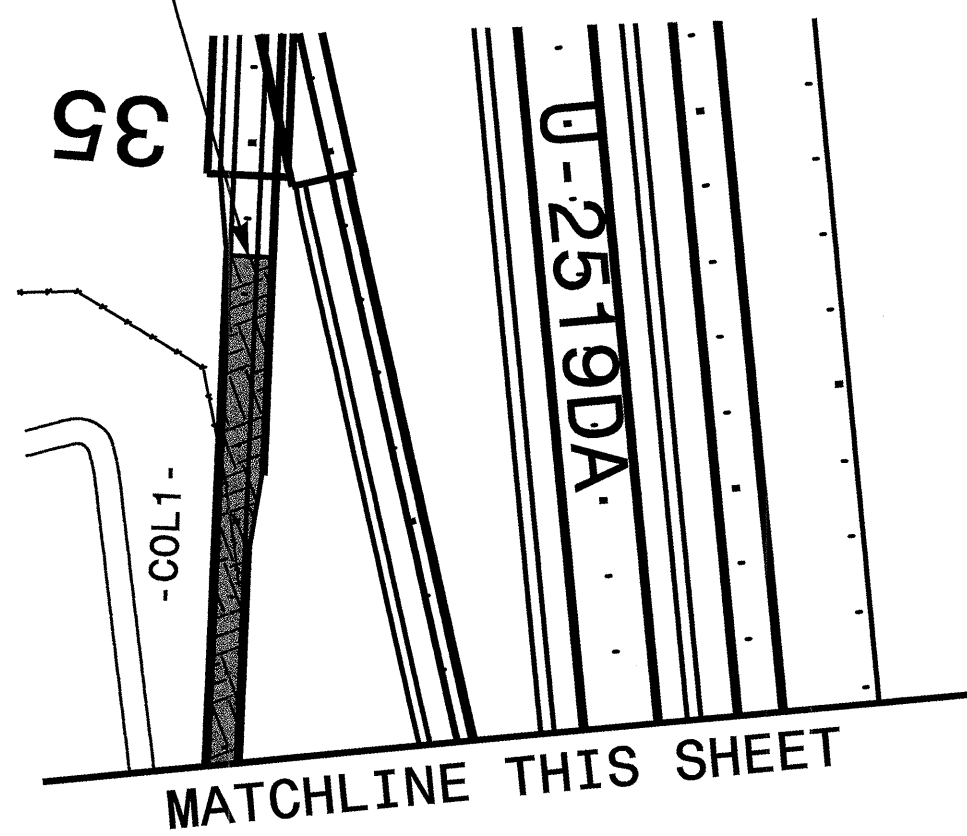


STA. 35+30+/- -COL1-

MATCHLINE THIS SHEET



|  |                    |
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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-4 |
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STA. 16+82+/- -Y2-

STA. 39+40+/- -RP1BD-

STA. 39+40+/- -L-

STA. 39+40+/- -COL2-

GRADING ONLY

STA. 12+40+/- -RP2B-

PORTABLE CONCRETE BARRIER

STA. 15+00+/- -Y2-  
TEMPORARY CRASH CUSHION

STA. 10+00+/- -Y3-

-Y3- (SATURN DR)

R11-2  
1219 X 762

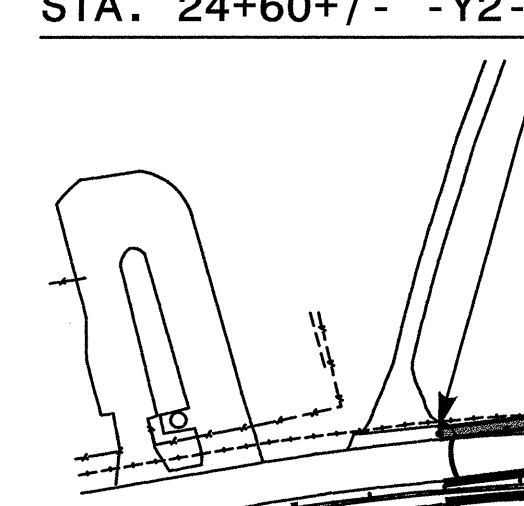
ROAD  
CLOSED



TYPE III BARRICADE

-Y2- (BRAGG BLVD)

STA. 24+60+/- -Y2-



STA. 40+75+/- -COL1-

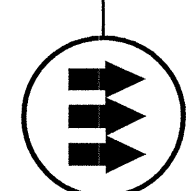
40

-LP2B-

15

-Y2-

25



R11-2  
1219 X 762

ROAD  
CLOSED



TYPE III BARRICADE

STA. 19+60+/- -Y2-

STA. 19+40+/- -Y2-

STA. 18+70+/- -Y2-  
TEMPORARY CRASH CUSHION

STA. 14+07+/- -RP2D-

PORTABLE CONCRETE BARRIER

STA. 14+60+/- -RP2B-

STA. 13+75+/- -Y2-

UNDERCUT EXCAVATION

15

TEMPORARY SHORING

STA. 14+45+/- -Y2-

STA. 12+00+/- -Y2-

GRADING ONLY

MATCHLINE THIS SHEET

STA. 19+60+/- -Y2-

STA. 19+40+/- -Y2-

STA. 18+70+/- -Y2-  
TEMPORARY CRASH CUSHION

STA. 14+07+/- -RP2D-

PORTABLE CONCRETE BARRIER

STA. 14+60+/- -RP2B-

STA. 13+75+/- -Y2-

UNDERCUT EXCAVATION

15

TEMPORARY SHORING

STA. 14+45+/- -Y2-

STA. 12+00+/- -Y2-

GRADING ONLY

MATCHLINE THIS SHEET

STA. 19+60+/- -Y2-

STA. 19+40+/- -Y2-

STA. 18+70+/- -Y2-  
TEMPORARY CRASH CUSHION

STA. 14+07+/- -RP2D-

PORTABLE CONCRETE BARRIER

STA. 14+60+/- -RP2B-

STA. 13+75+/- -Y2-

UNDERCUT EXCAVATION

15

TEMPORARY SHORING

STA. 14+45+/- -Y2-

STA. 12+00+/- -Y2-

GRADING ONLY

MATCHLINE THIS SHEET

STA. 19+60+/- -Y2-

STA. 19+40+/- -Y2-

STA. 18+70+/- -Y2-  
TEMPORARY CRASH CUSHION

STA. 14+07+/- -RP2D-

PORTABLE CONCRETE BARRIER

STA. 14+60+/- -RP2B-

STA. 13+75+/- -Y2-

UNDERCUT EXCAVATION

15

TEMPORARY SHORING

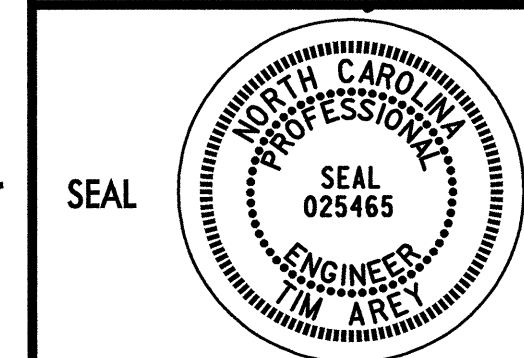
STA. 14+45+/- -Y2-

STA. 12+00+/- -Y2-

GRADING ONLY

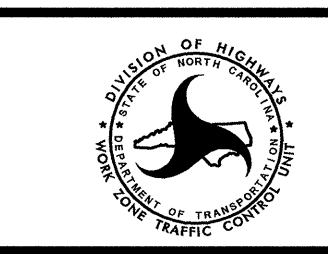
STA. 6+70+/- -Y2-

APPROVED: *Jim Gray* DATE: 03/04/09



### PHASE I AREA-1 OVERVIEW

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| DESIGN BY:   | TMA    |
| REVIEWED BY: | TMA    |

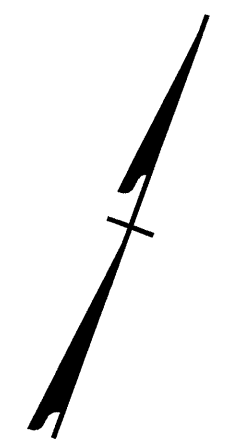
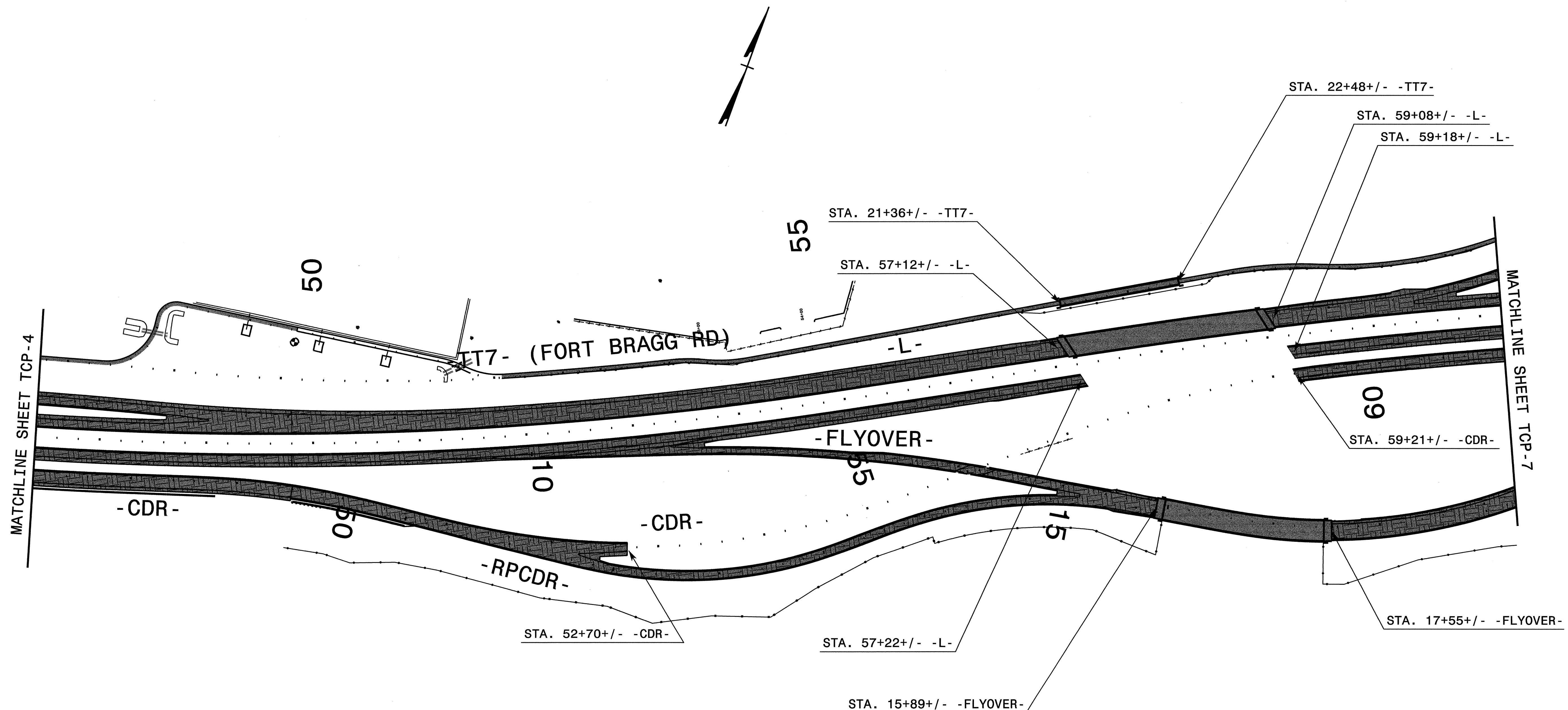


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MATCHLINE SHEET TCP-5



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| PROJ. REFERENCE NO. | SHEET NO. |
| X-0002B/U-2519E     | TCP-5     |



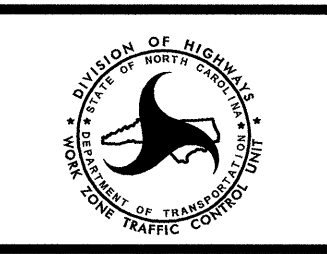
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ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey* DATE: 03/04/09

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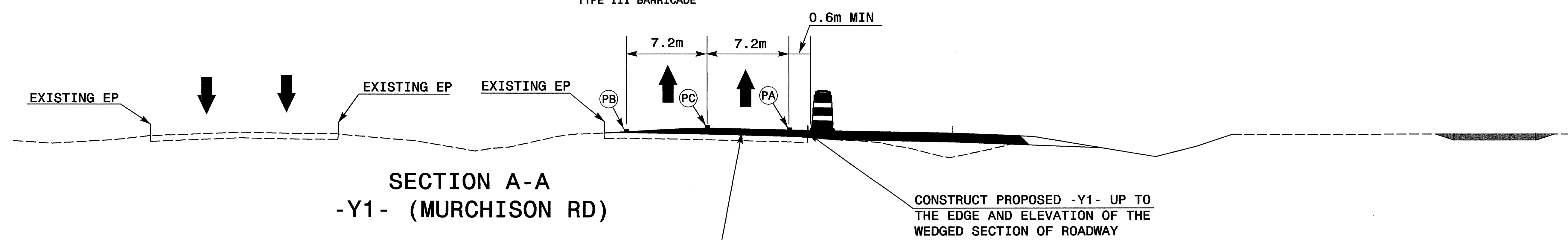
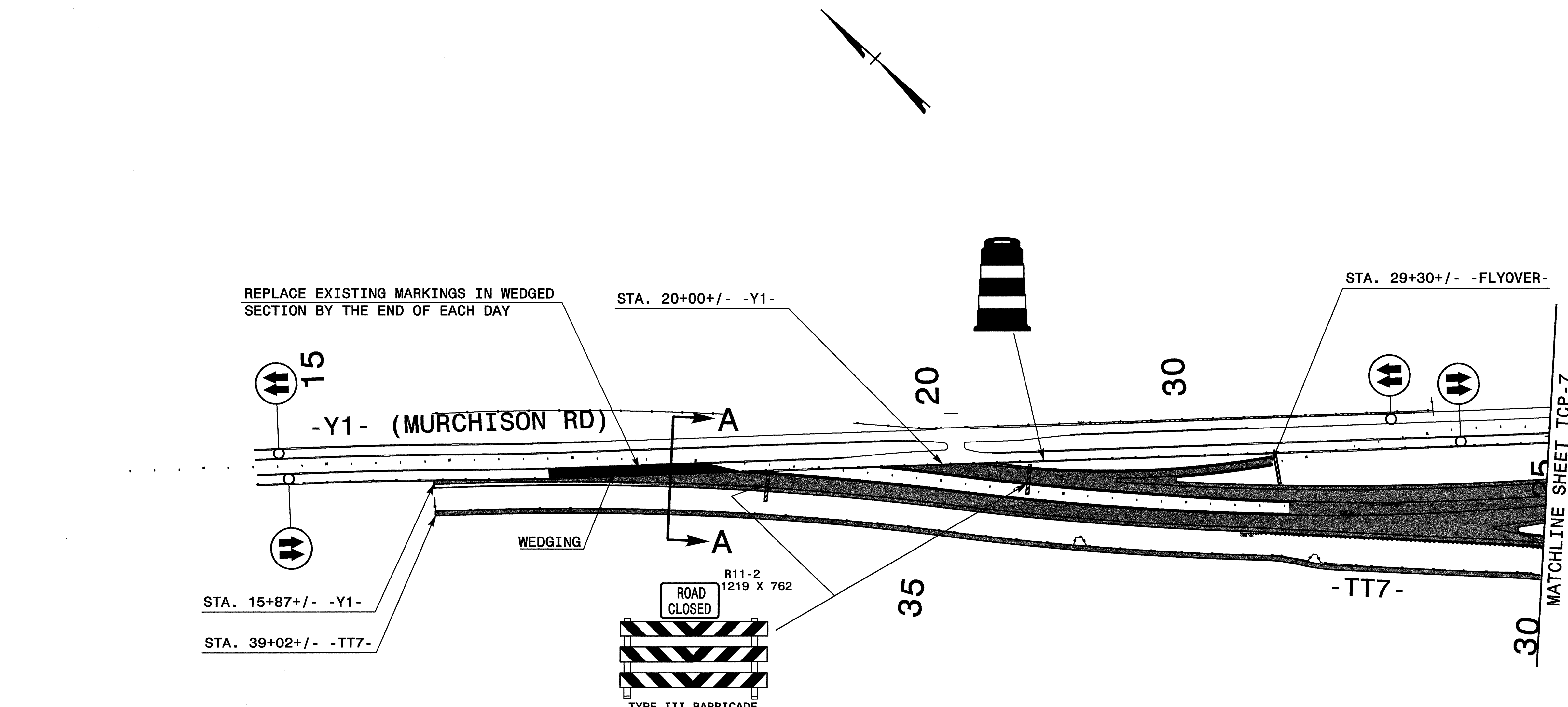
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**AREA-1 OVERVIEW**

SCALE: 1:2000  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



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WEDGE EXISTING ROADWAY UP TO THE PROPOSED ELEVATION PRIOR TO BEGINNING WIDENING CONSTRUCTION. REPLACE EXISTING MARKINGS BY THE END OF EACH DAY.

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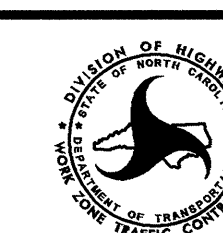
APPROVED: *[Signature]* DATE: 03/04/09

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025465  
ENGINEER  
TMA ARE

**PHASE I  
AREA-2 OVERVIEW**

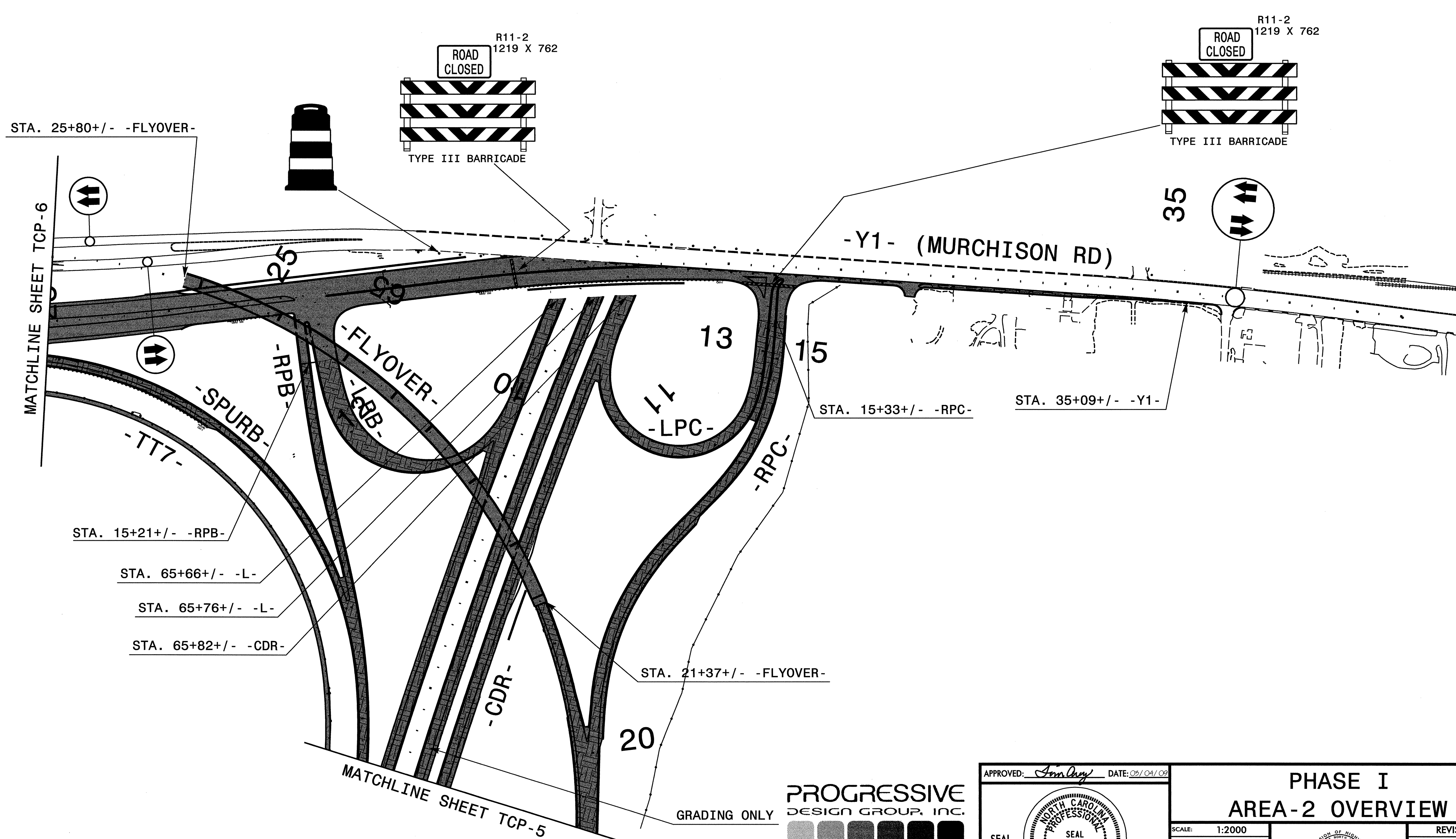
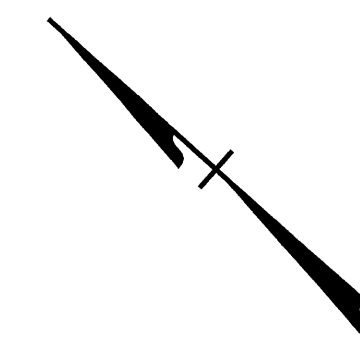
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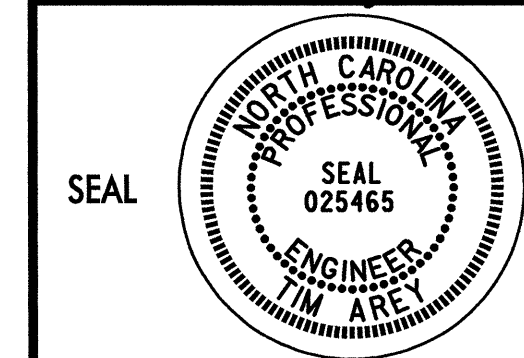


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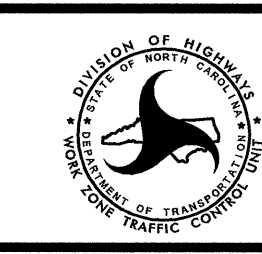
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**PHASE I  
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SCALE: 1:2000  
 DATE: 03/09  
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 DESIGN BY: TMA  
 REVIEWED BY: TMA



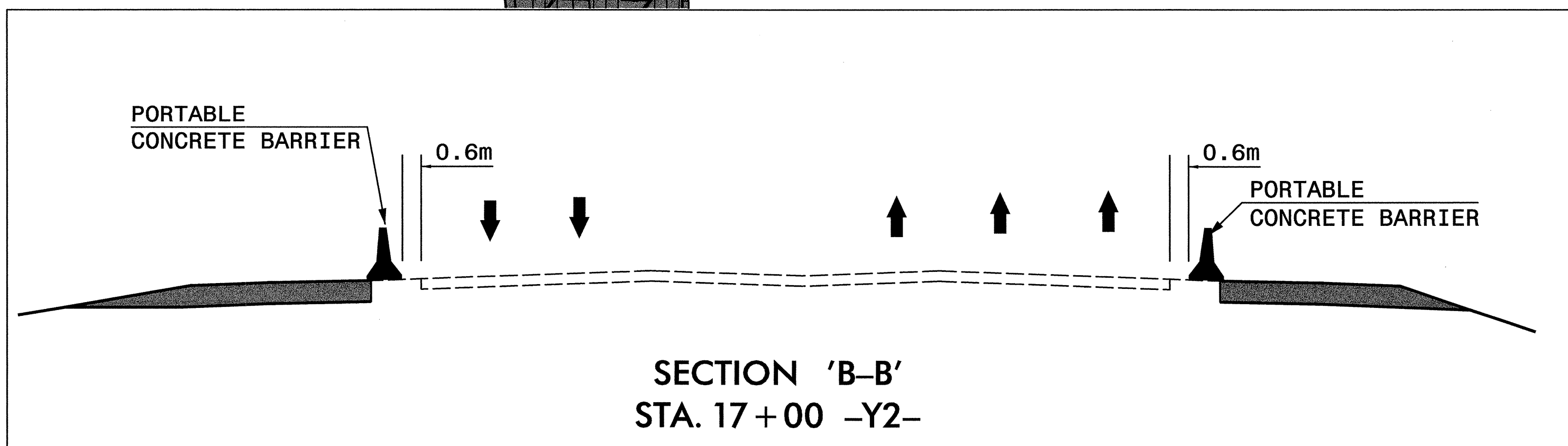
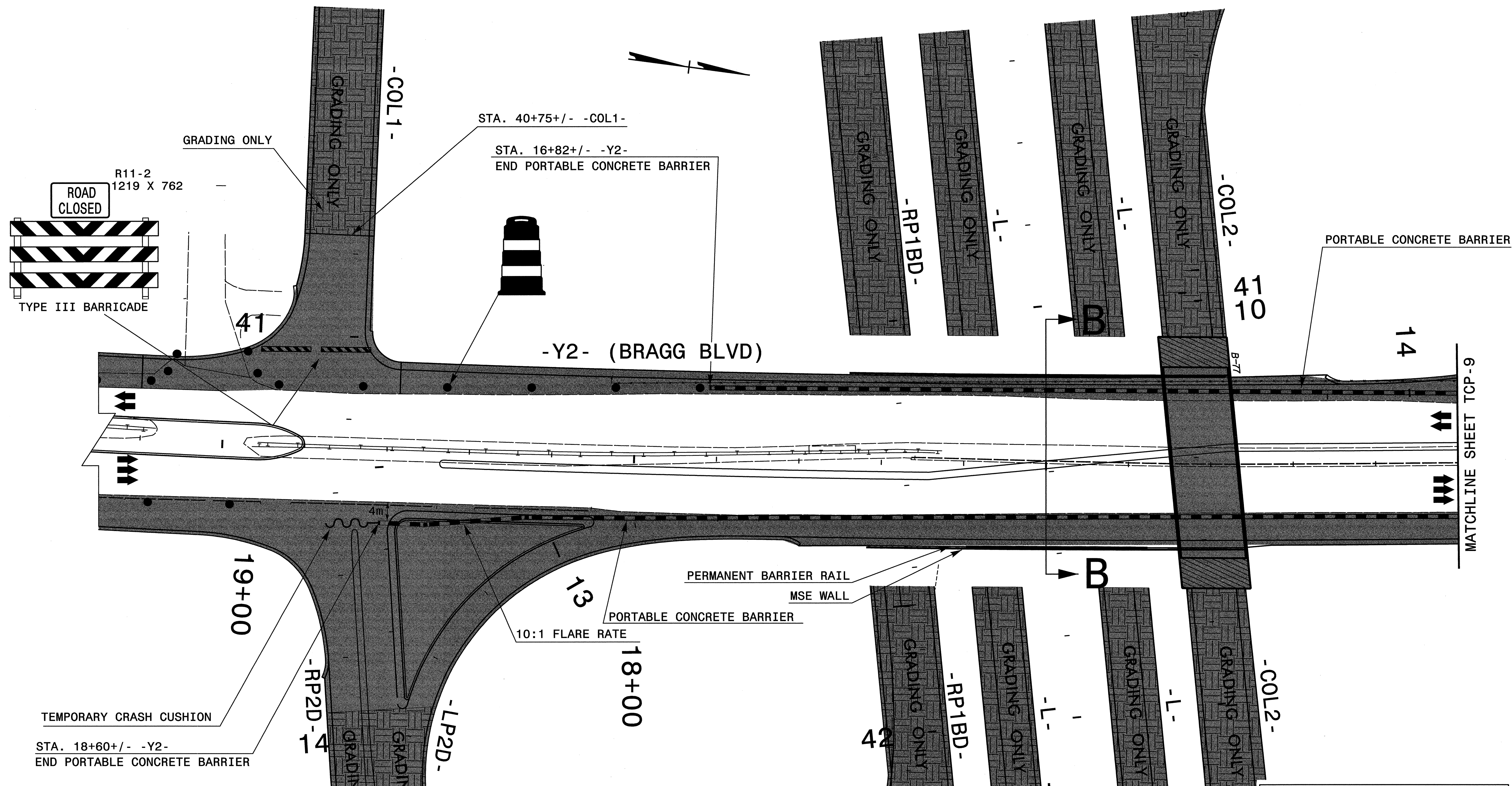
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| LEGEND |                           |
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|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

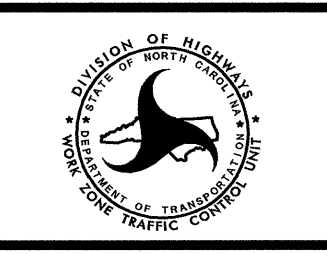
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APPROVED: *Jim Gray* DATE: 03/04/09

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**PHASE I  
AREA-1 DETAIL**

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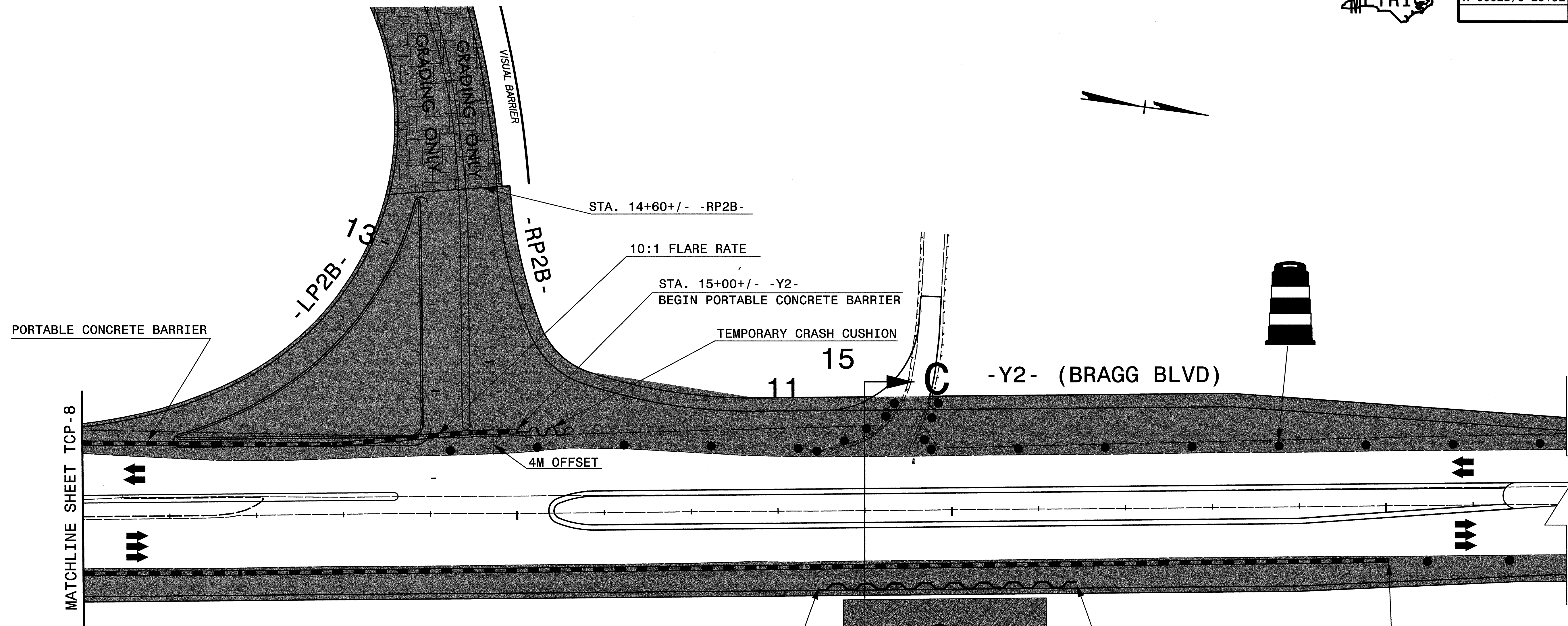


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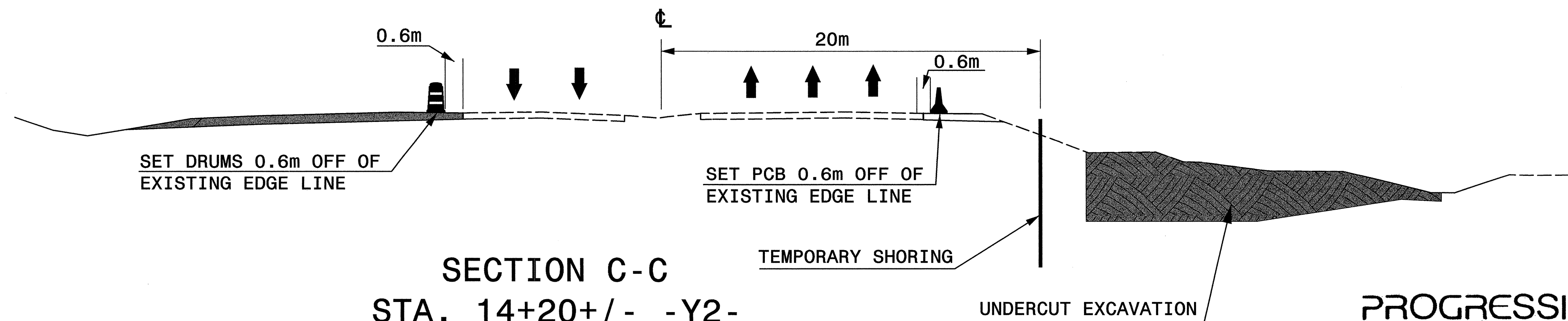




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NOTE  
SEE TCP-2A FOR TEMPORARY SHORING NOTES. THESE NOTES WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL UNIT. THE DOCUMENT WAS SUBMITTED TO THE WORK ZONE TRAFFIC CONTROL UNIT ON MAY 28, 2008 AND SEALED BY A PROFESSIONAL ENGINEER, JAMES R. BATTS, JR, P.E. LICENSE # 18899



| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

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APPROVED: *Jim Gray* DATE: 03/04/09

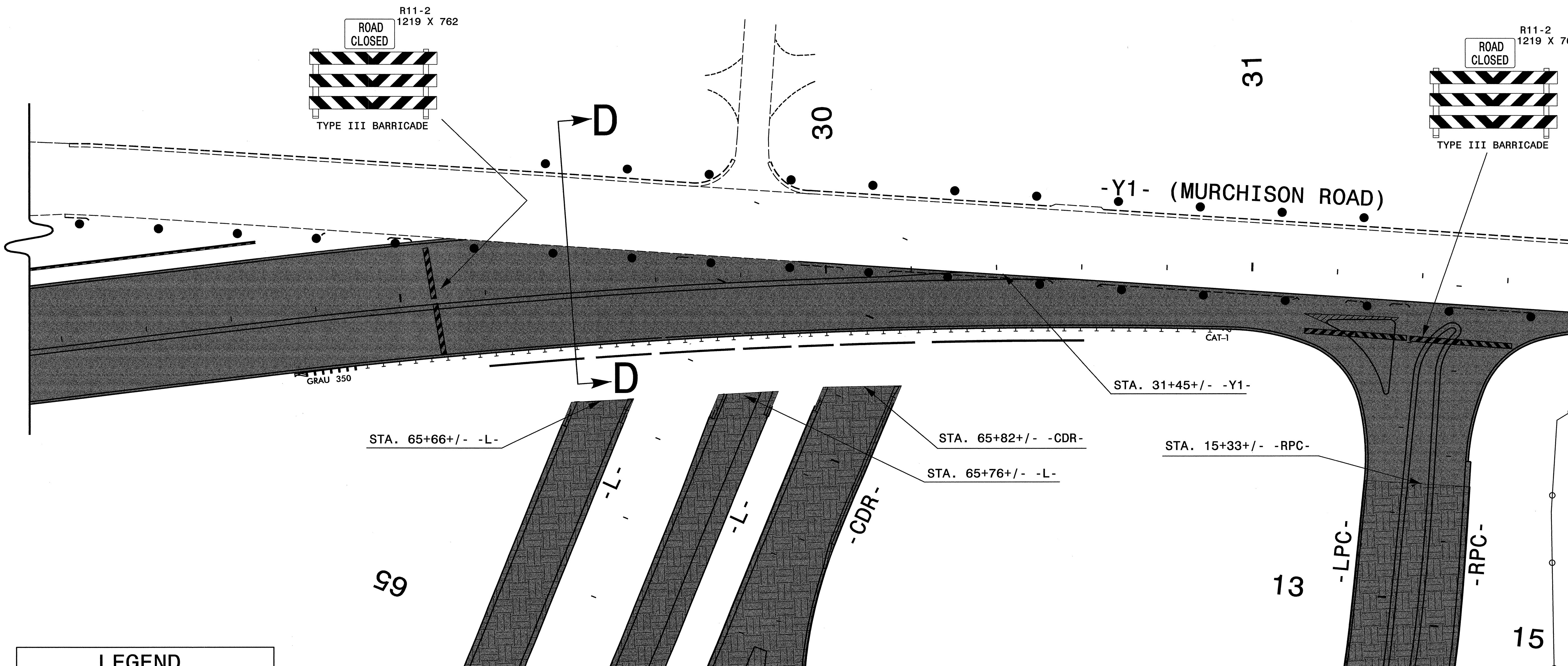
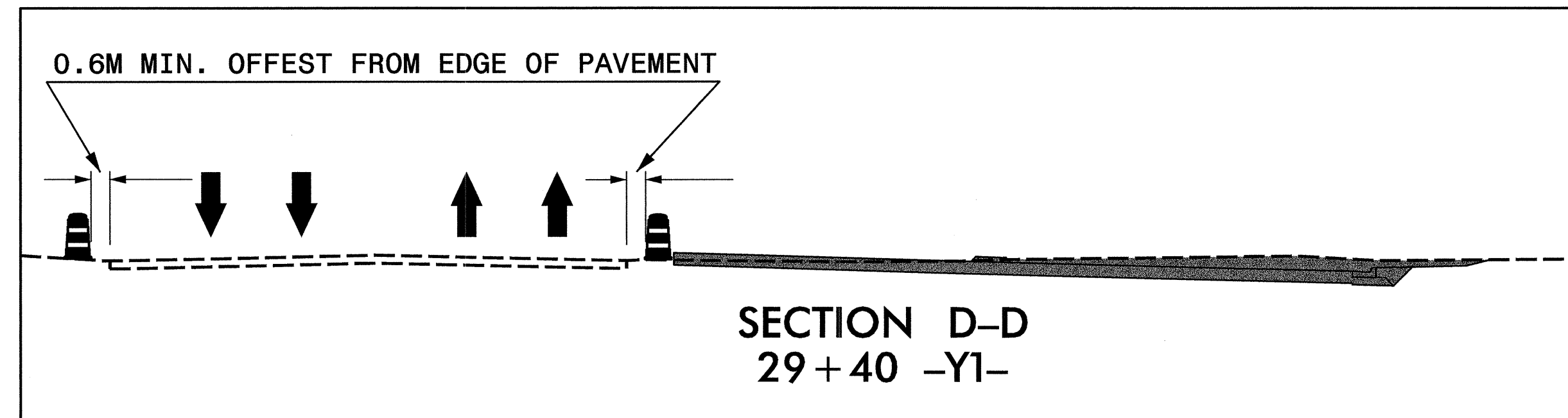
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NORTH CAROLINA PROFESSIONAL ENGINEER  
JIM AREY  
025465

**PHASE I**  
**AREA-1 DETAIL**

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| DESIGN BY: TMA   |           |
| REVIEWED BY: TMA |           |

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| LEGEND |                           |
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|        | GRADING ONLY CONSTRUCTION |

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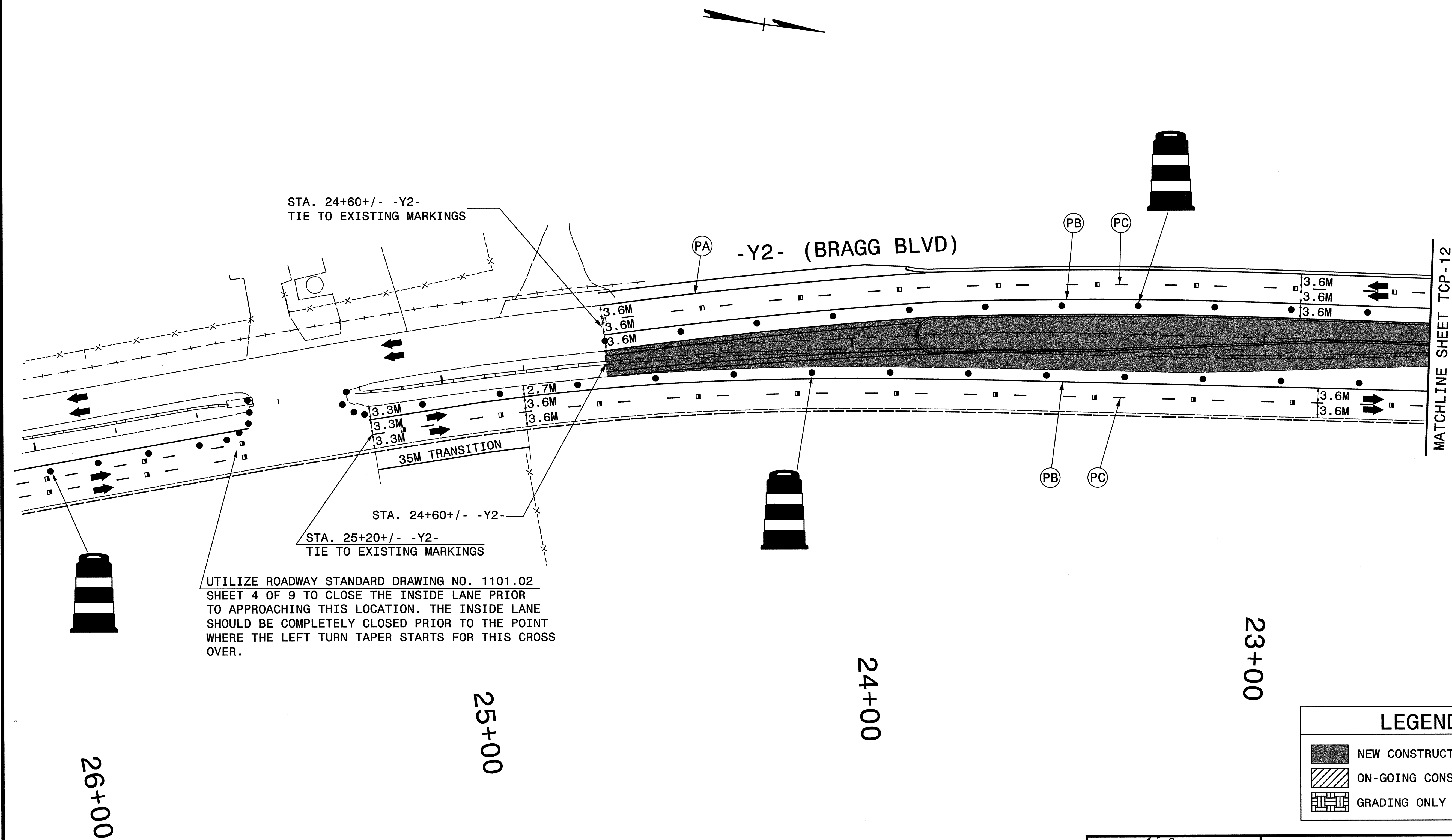
APPROVED: *Jim Gray* DATE: 03/04/09

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PHASE I  
AREA-2 DETAIL

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| DATE: 03/09      |           |
| DWG. BY: LDA     |           |
| DESIGN BY: TMA   |           |
| REVIEWED BY: TMA |           |





STA. 24+60+/- -Y2-  
TIE TO EXISTING MARKINGS

PA -Y2- (BRAGG BLVD)

STA. 24+60+/- -Y2-  
TIE TO EXISTING MARKINGS

STA. 25+20+/- -Y2-  
TIE TO EXISTING MARKINGS

UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02  
SHEET 4 OF 9 TO CLOSE THE INSIDE LANE PRIOR  
TO APPROACHING THIS LOCATION. THE INSIDE LANE  
SHOULD BE COMPLETELY CLOSED PRIOR TO THE POINT  
WHERE THE LEFT TURN TAPER STARTS FOR THIS CROSS  
OVER.

MATCHLINE SHEET TCP-12

| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

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DESIGN GROUP, INC.  
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APPROVED: *Tommy* DATE: 02/04/09

SEAL

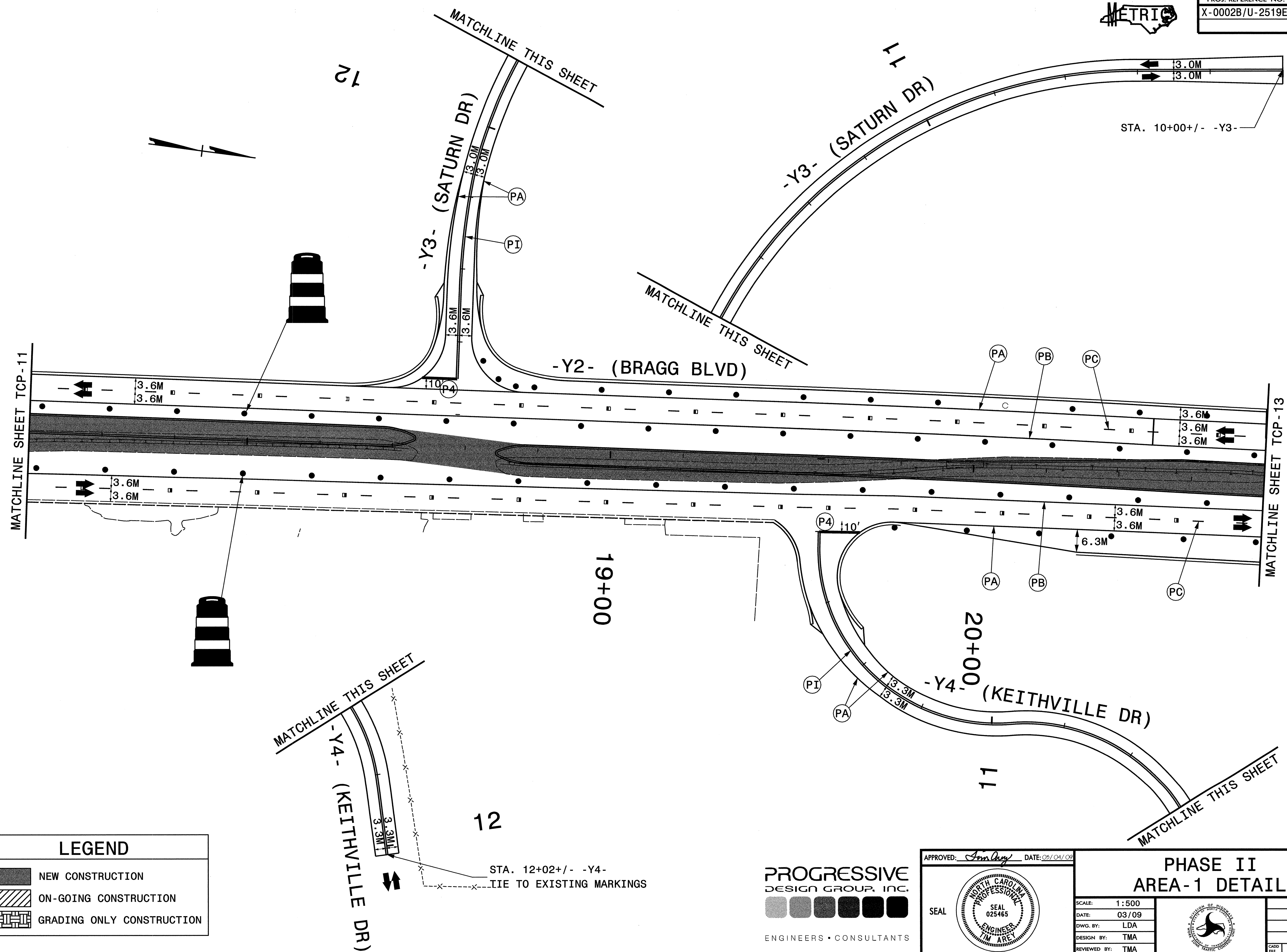
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**AREA-1 DETAIL**

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| SCALE: 1:500     |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |





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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-12 |
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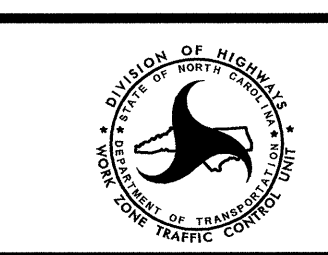
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|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

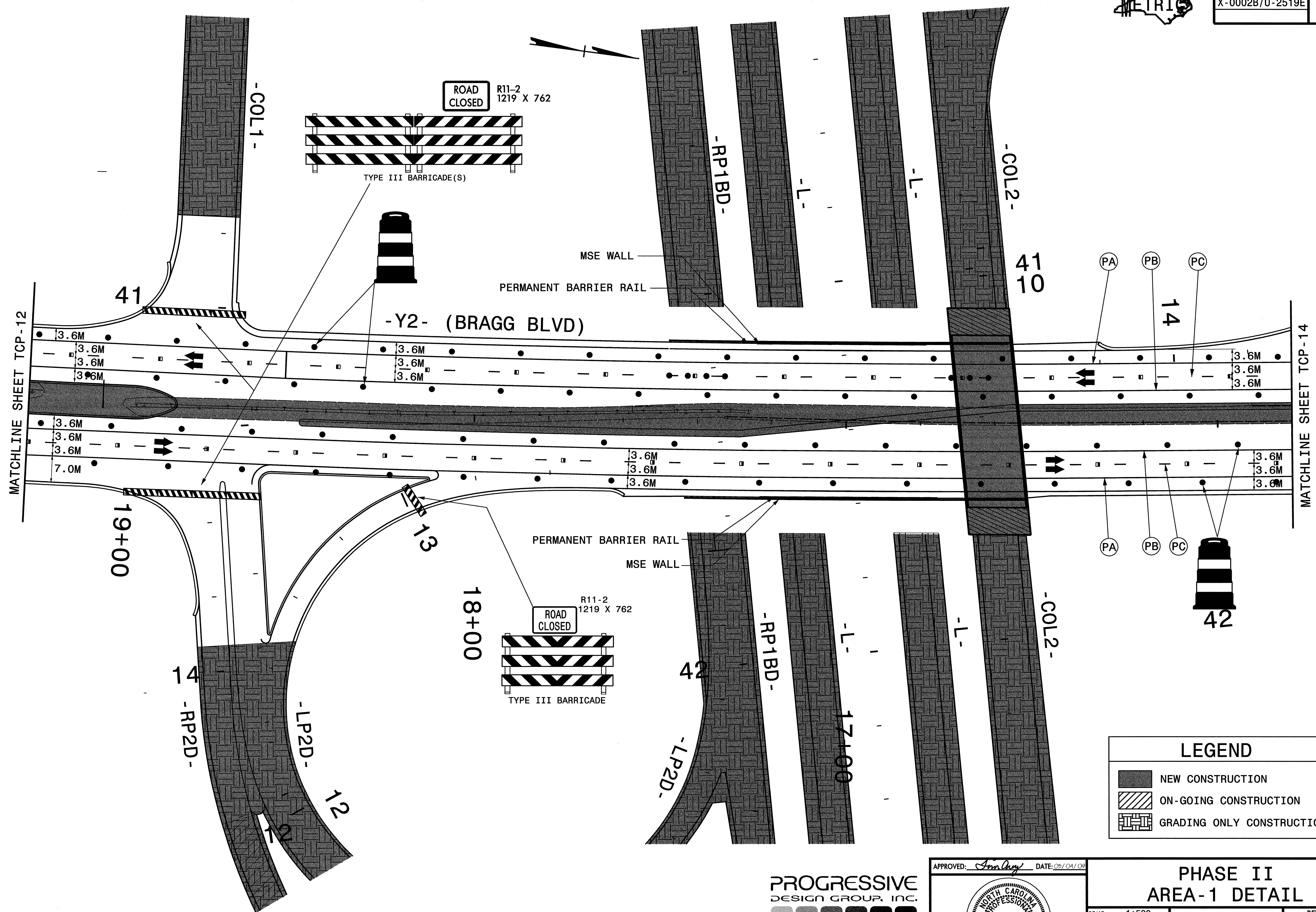
APPROVED: *[Signature]* DATE: 03/09/09

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
T.M. AREY  
025465

|                                   |           |
|-----------------------------------|-----------|
| <b>PHASE II<br/>AREA-1 DETAIL</b> |           |
| SCALE: 1:500                      | REVISIONS |
| DATE: 03/09                       |           |
| DWG. BY: LDA                      |           |
| DESIGN BY: TMA                    |           |
| REVIEWED BY: TMA                  |           |







| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

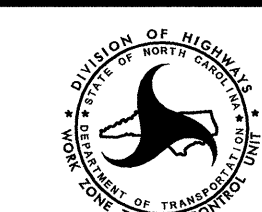
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *[Signature]* DATE: 03/04/09

SEAL

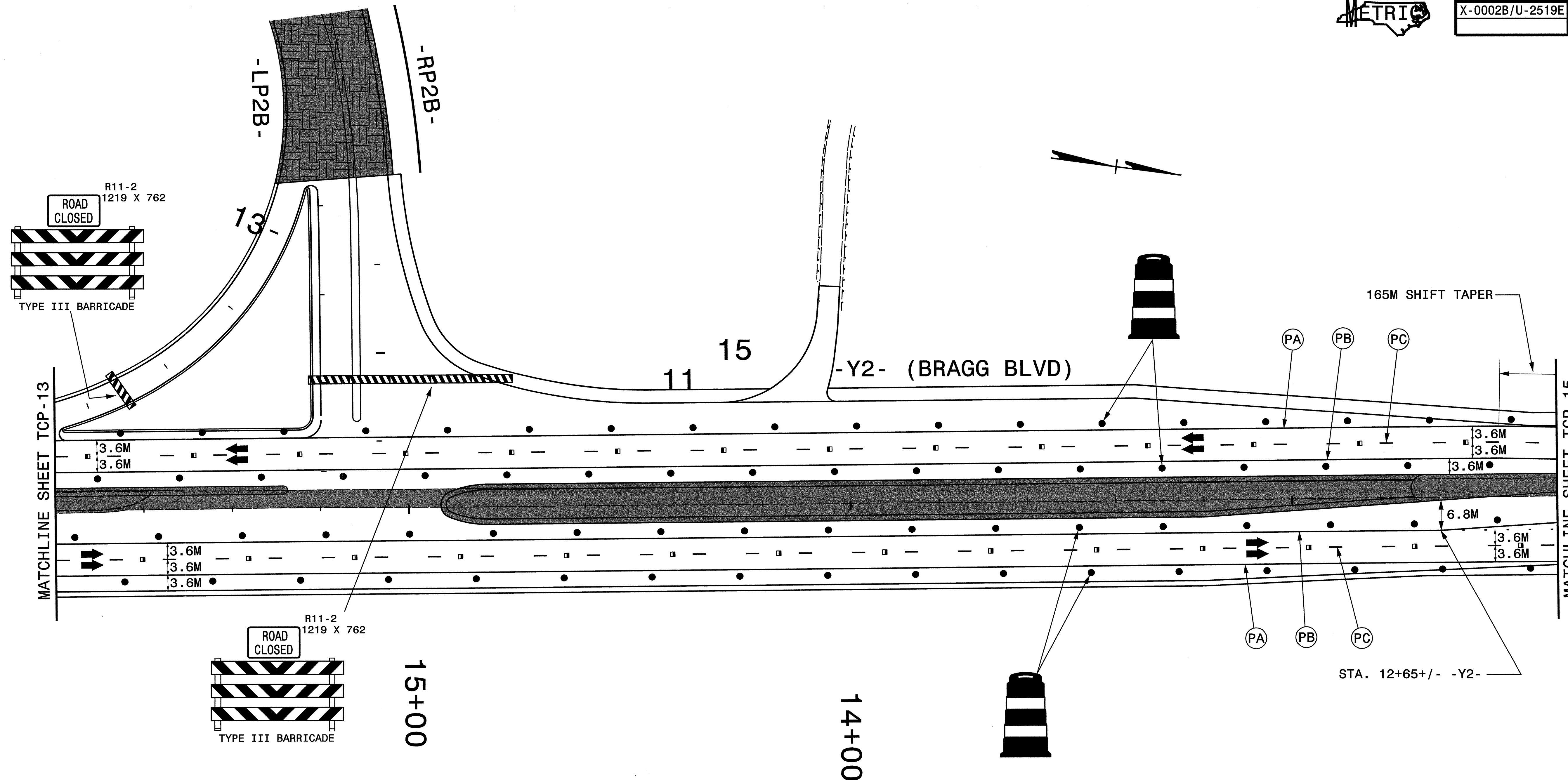
**PHASE II**  
**AREA-1 DETAIL**

SCALE: 1:500  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



| REVISIONS |  |
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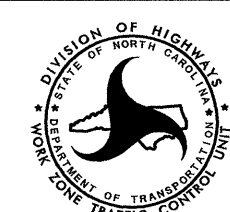


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|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

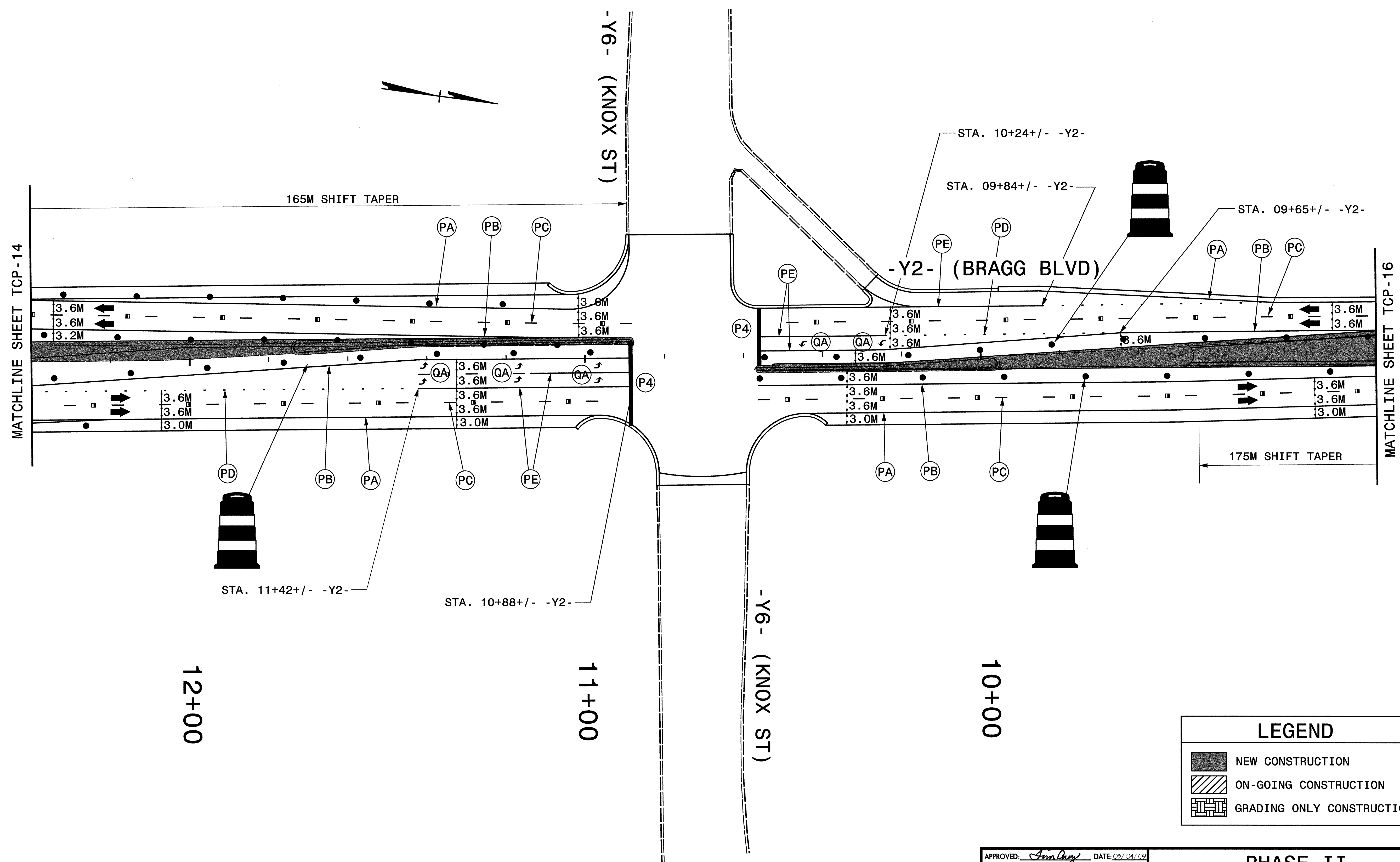
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tommy* DATE: 03/04/09

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|-----------------------------------|-----------|
| <b>PHASE II<br/>AREA-1 DETAIL</b> |           |
| SCALE: 1:500                      | REVISIONS |
| DATE: 03/09                       |           |
| DWG. BY: LDA                      |           |
| DESIGN BY: TMA                    |           |
| REVIEWED BY: TMA                  |           |



CADD FILE



| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-1 DETAIL**

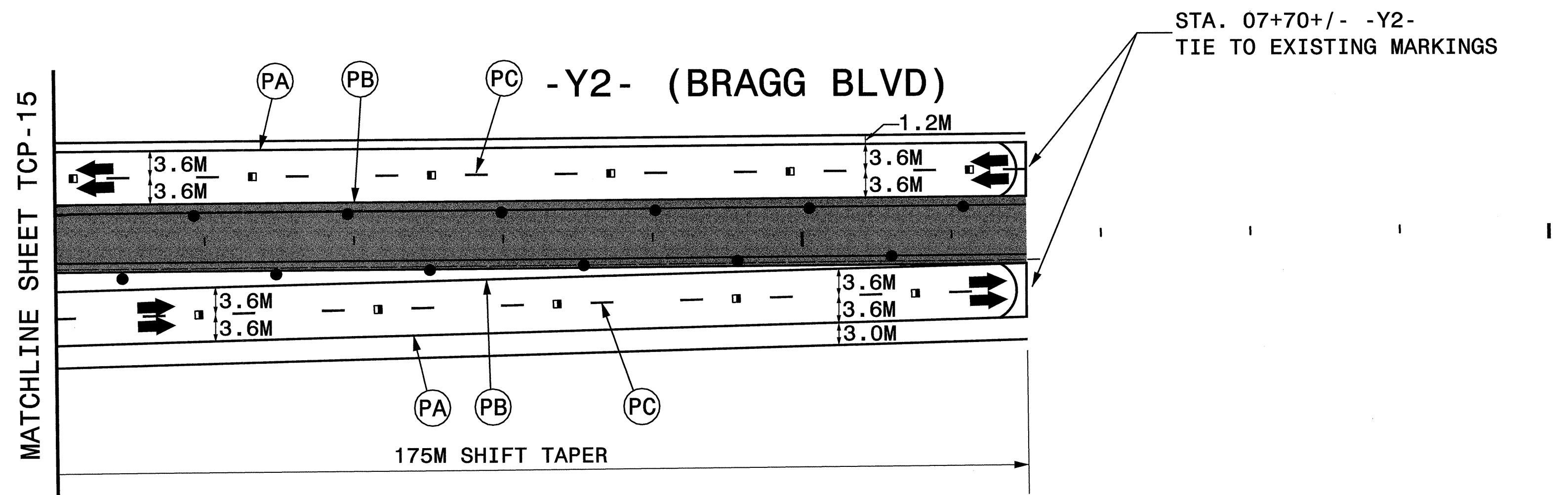
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| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |

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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-16 |
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| LEGEND |                           |
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|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

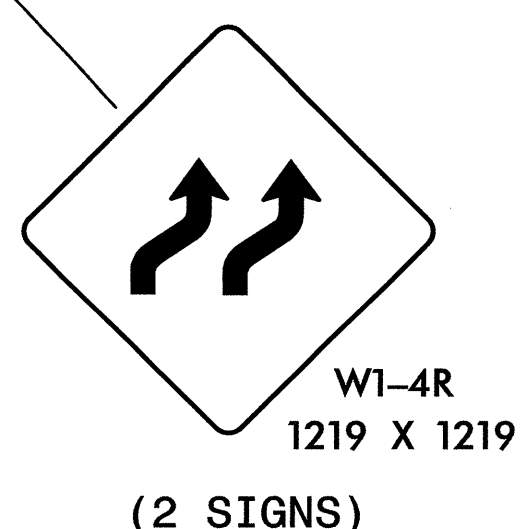
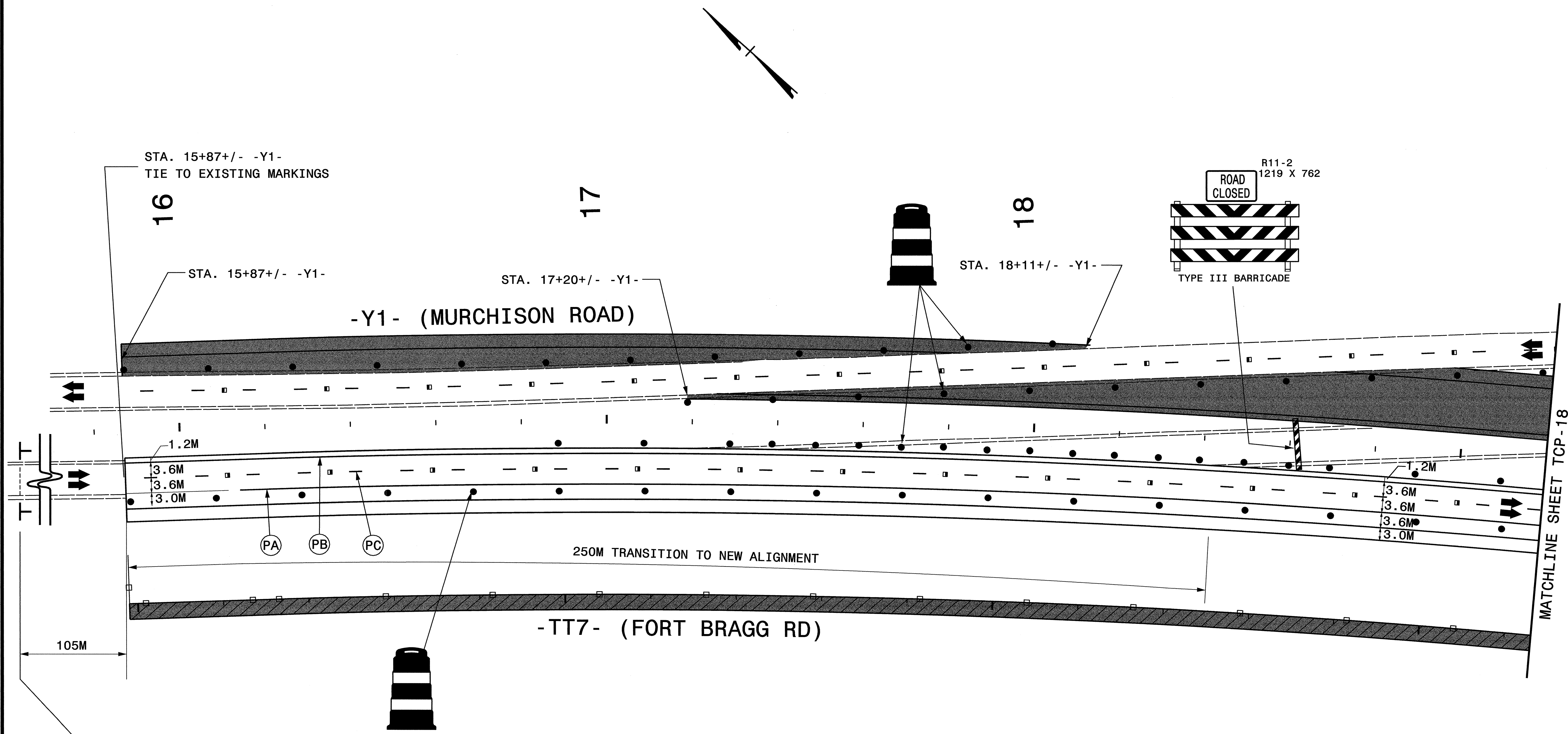
APPROVED: *Sanjay* DATE: 03/04/09

SEAL

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| <b>PHASE II</b>      |                |  | REVISIONS |
| <b>AREA-1 DETAIL</b> |                |  |           |
| SCALE: 1:500         | DATE: 03/09    |  |           |
| DWG. BY: LDA         | DESIGN BY: TMA |  |           |
| REVIEWED BY: TMA     |                |  |           |



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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-17 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tim Are* DATE: 03/04/09

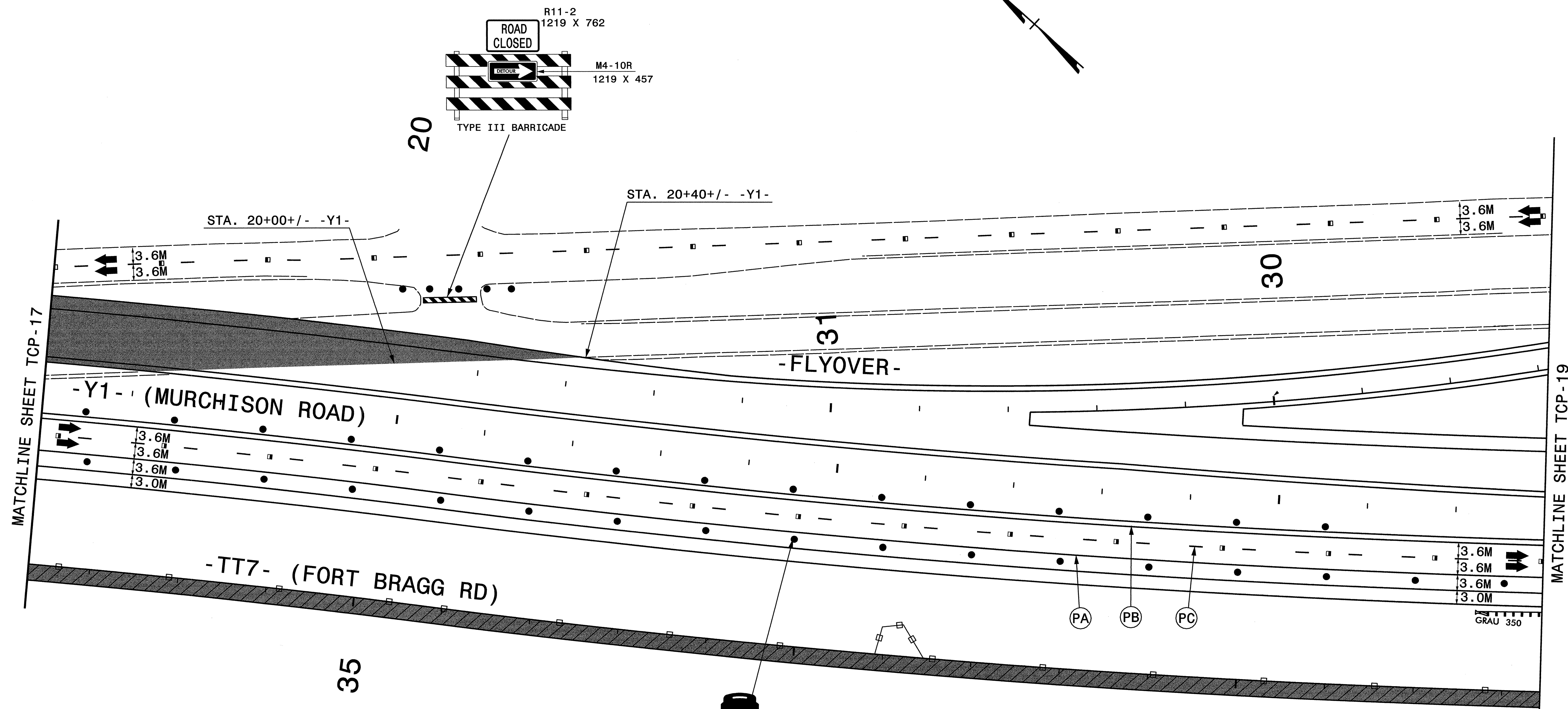
SEAL

**PHASE II**  
**AREA-2 DETAIL**

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| SCALE: 1:500     |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |

MATCHLINE SHEET TCP-18





| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

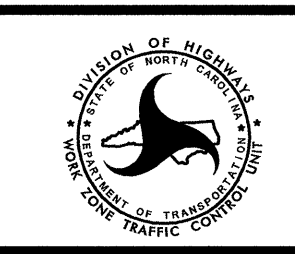
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Janney* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-2 DETAIL**

SCALE: 1:500  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA

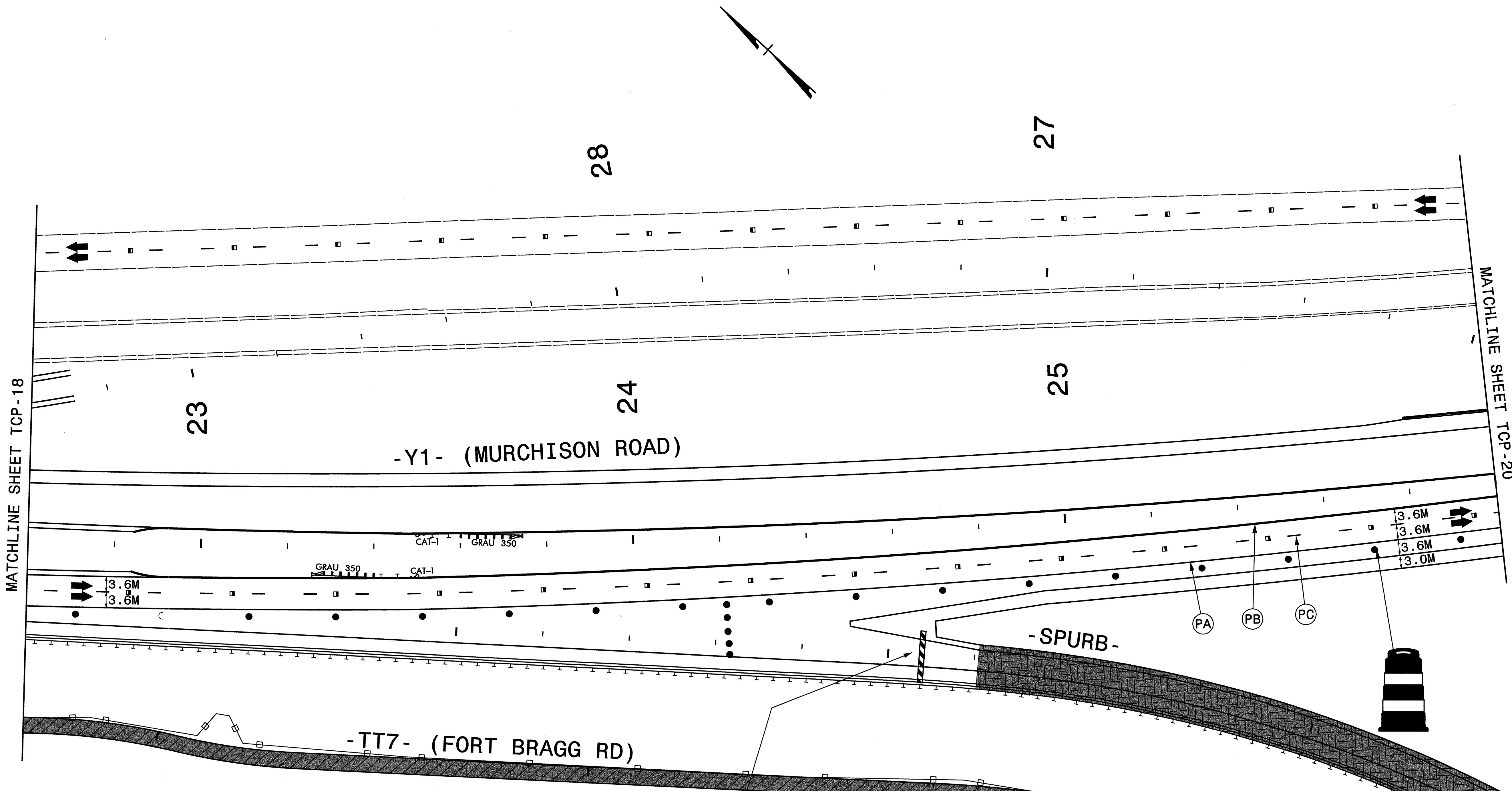


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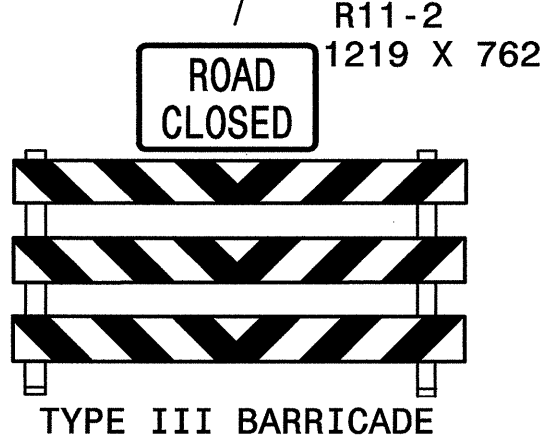
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MATCHLINE SHEET TCP-18

MATCHLINE SHEET TOP-20

| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |



**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Jan Day* DATE: 03/04/09

SEAL  
NORTH CAROLINA PROFESSIONAL ENGINEER  
TIM AREY  
SEAL 025465

**PHASE II**  
**AREA-2 DETAIL**

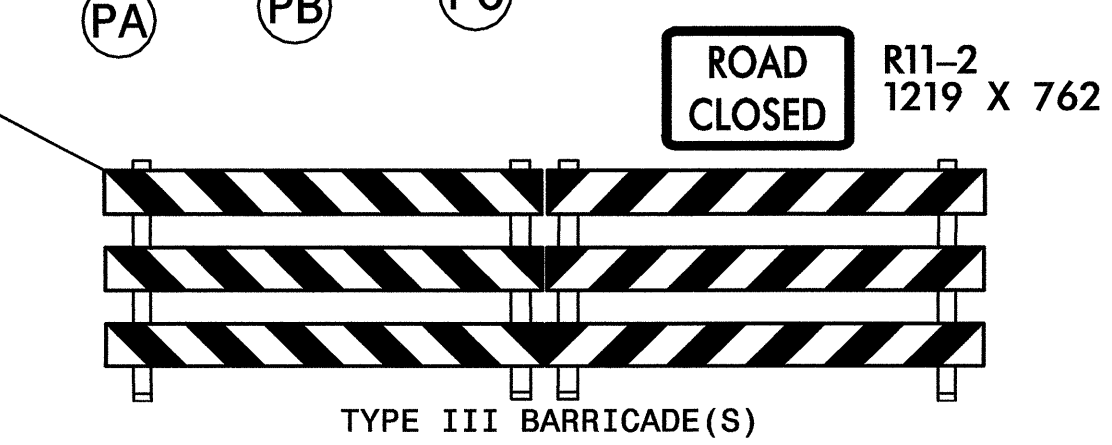
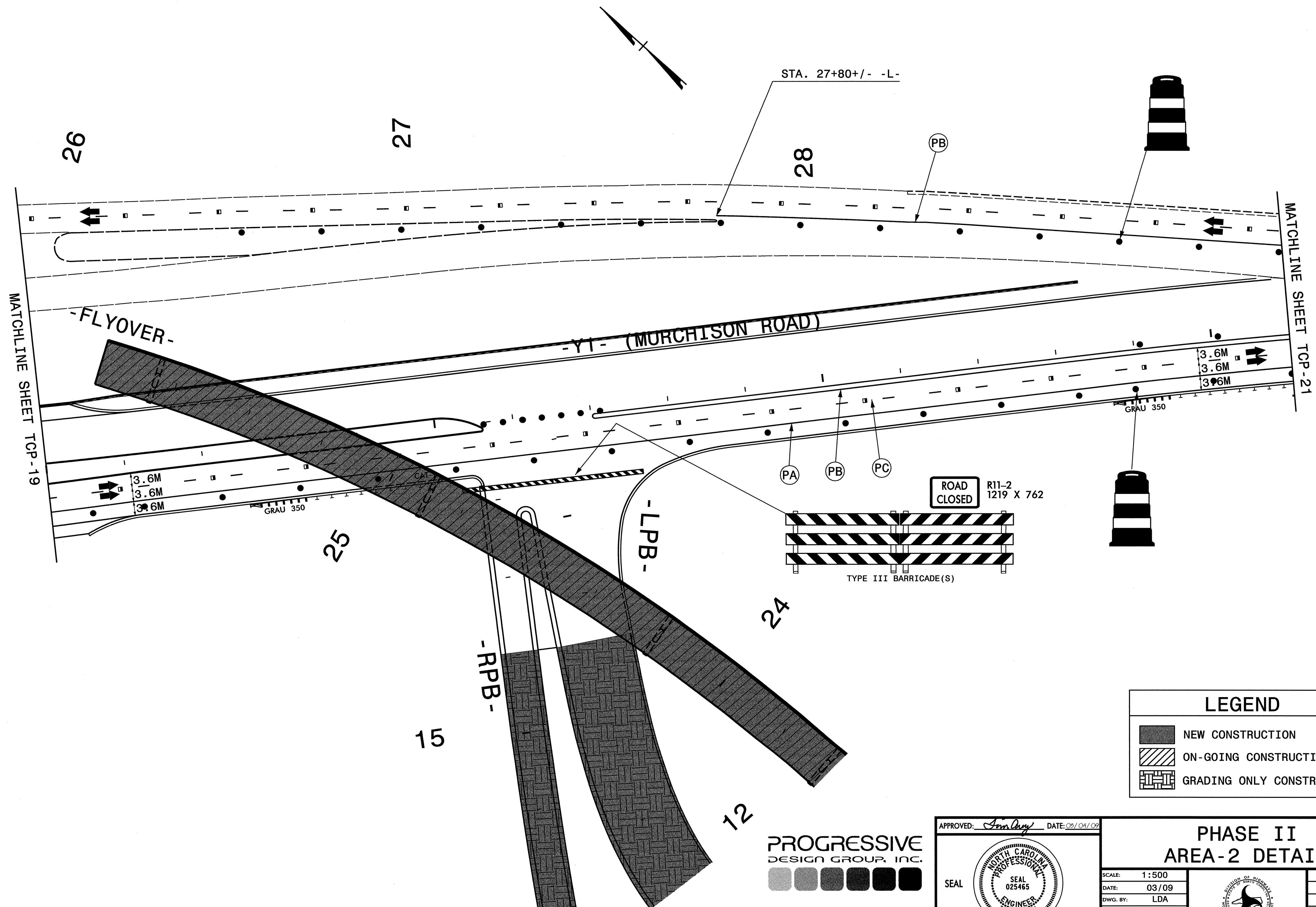
SCALE: 1:500  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA

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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-20 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
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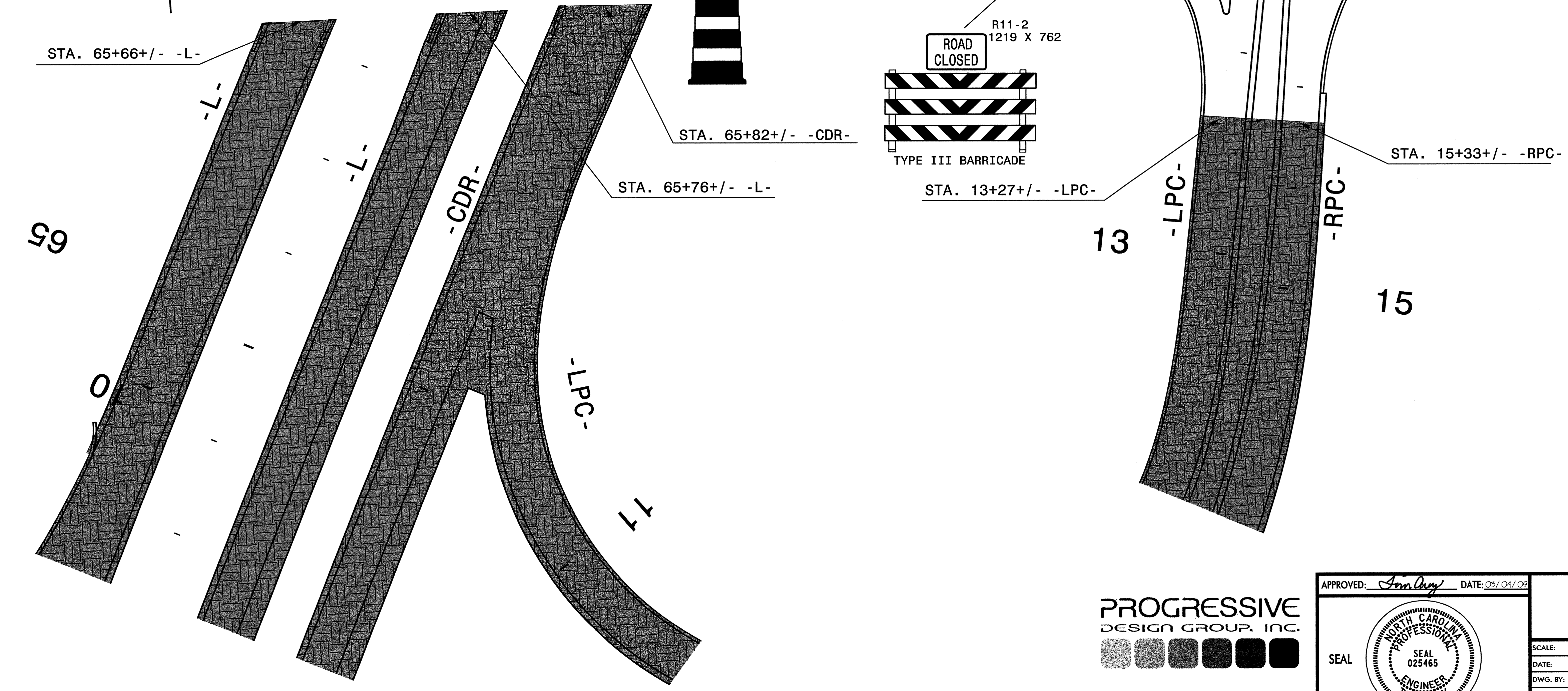
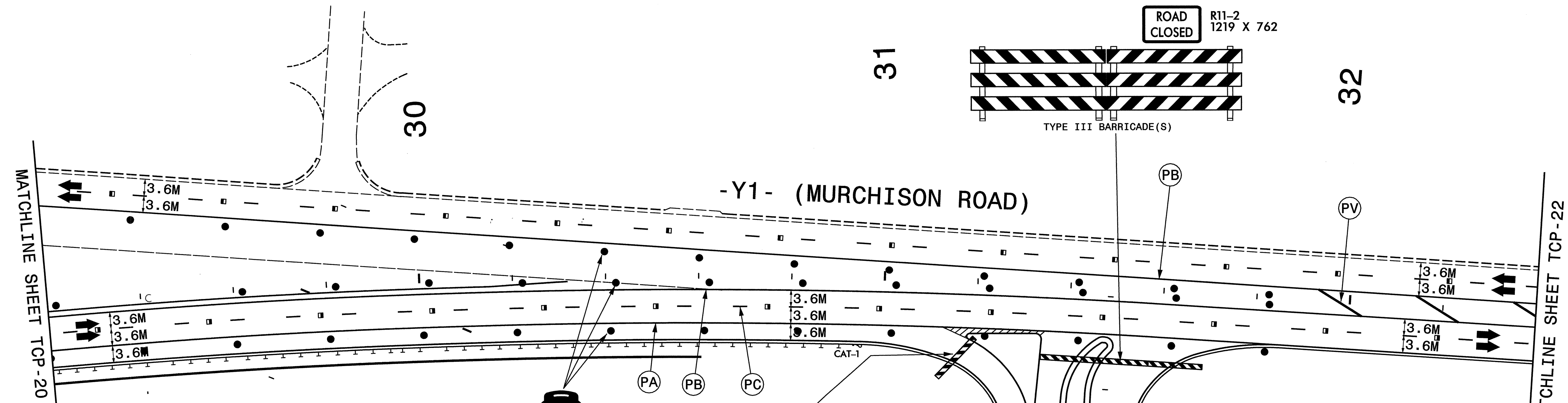
APPROVED: *[Signature]* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-2 DETAIL**

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| SCALE: 1:500     |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |





| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-2 DETAIL**

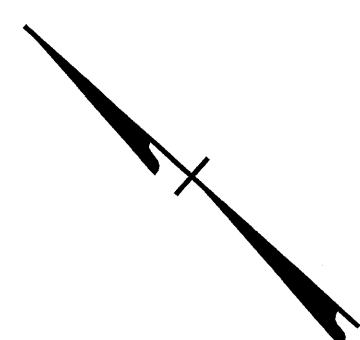
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DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA

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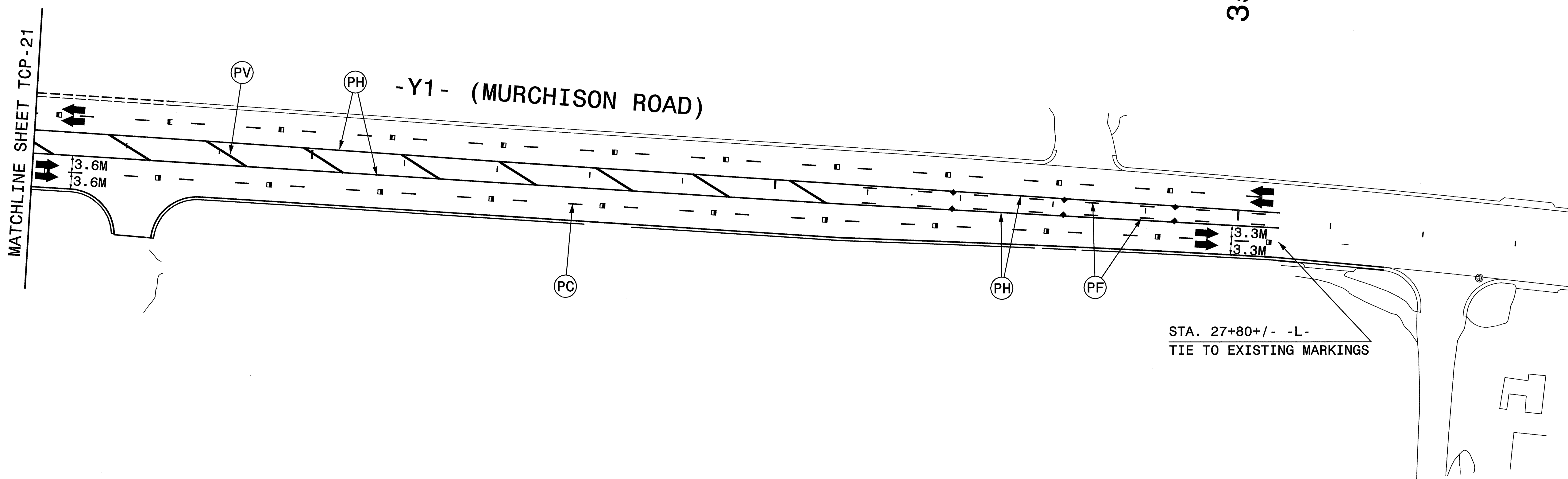
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| PROJ. REFERENCE NO. | SHEET NO. |
| X-0002B/U-2519E     | TCP-22    |



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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
  
ENGINEERS • CONSULTANTS

APPROVED: *Tommy* DATE: 03/04/09

SEAL

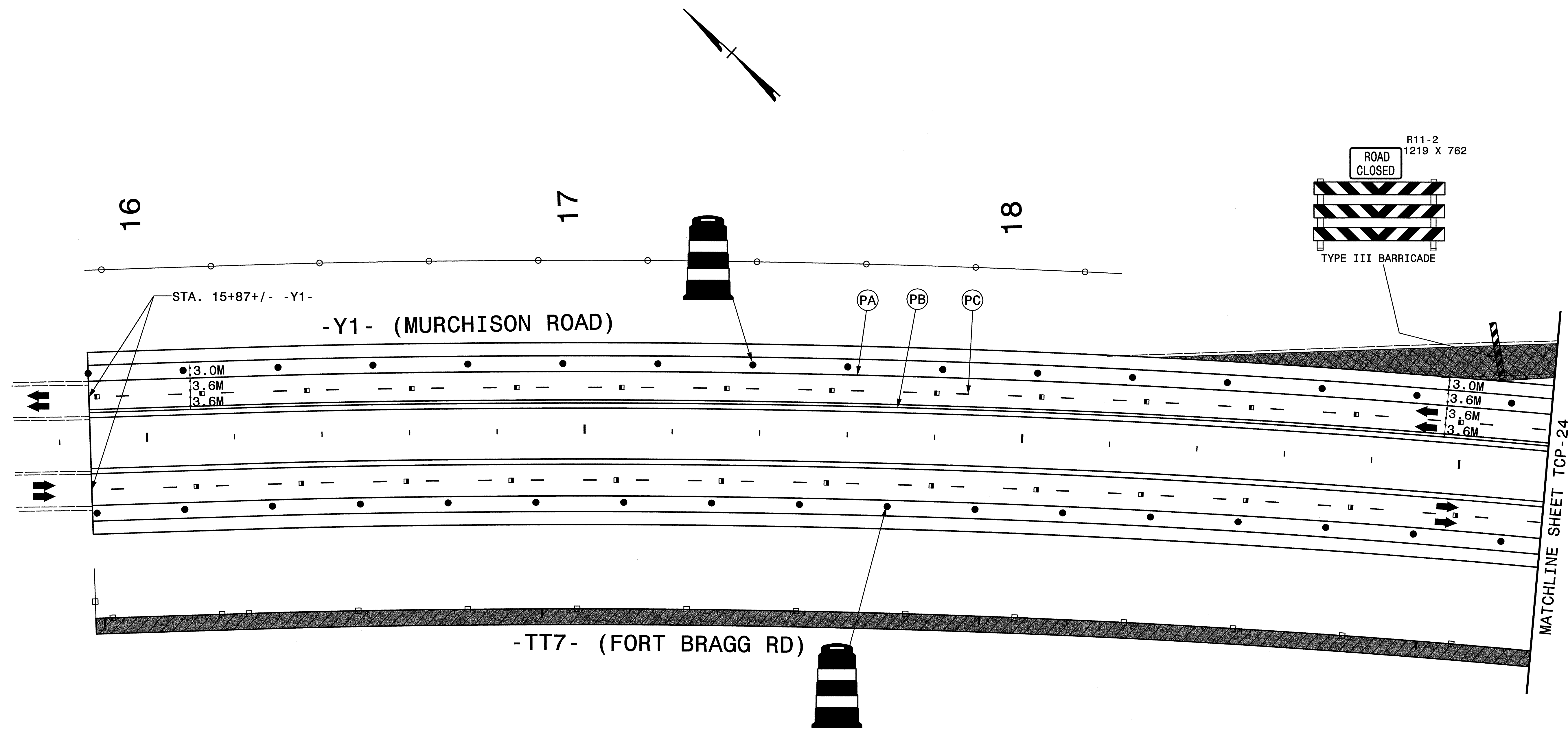
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| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |





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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-23 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

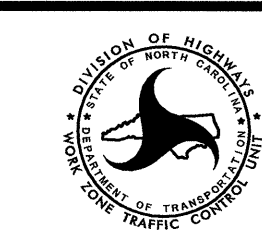
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Janney* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-2 DETAIL**

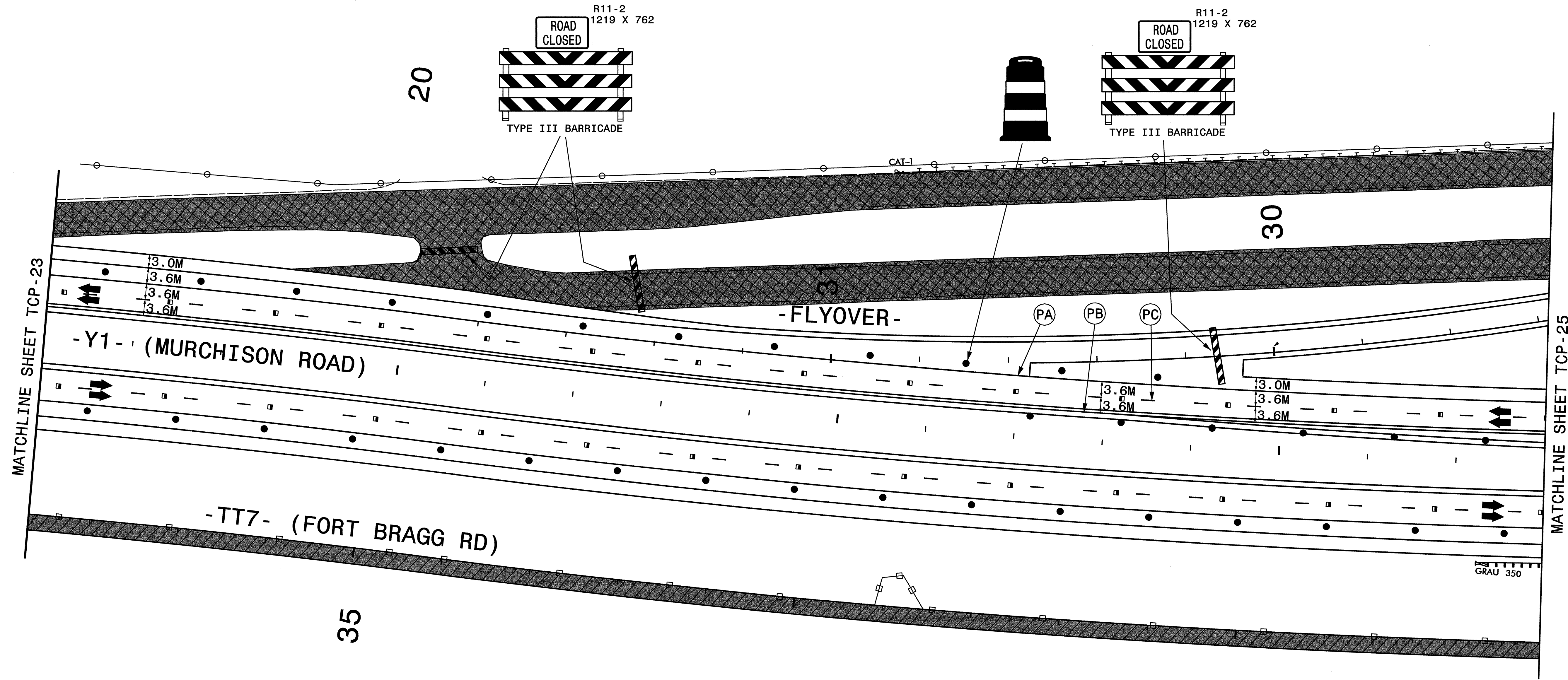
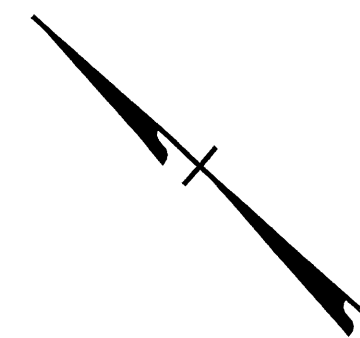
SCALE: 1:500  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



| REVISIONS |  |
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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-24 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
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APPROVED: *Janney* DATE: 03/04/09

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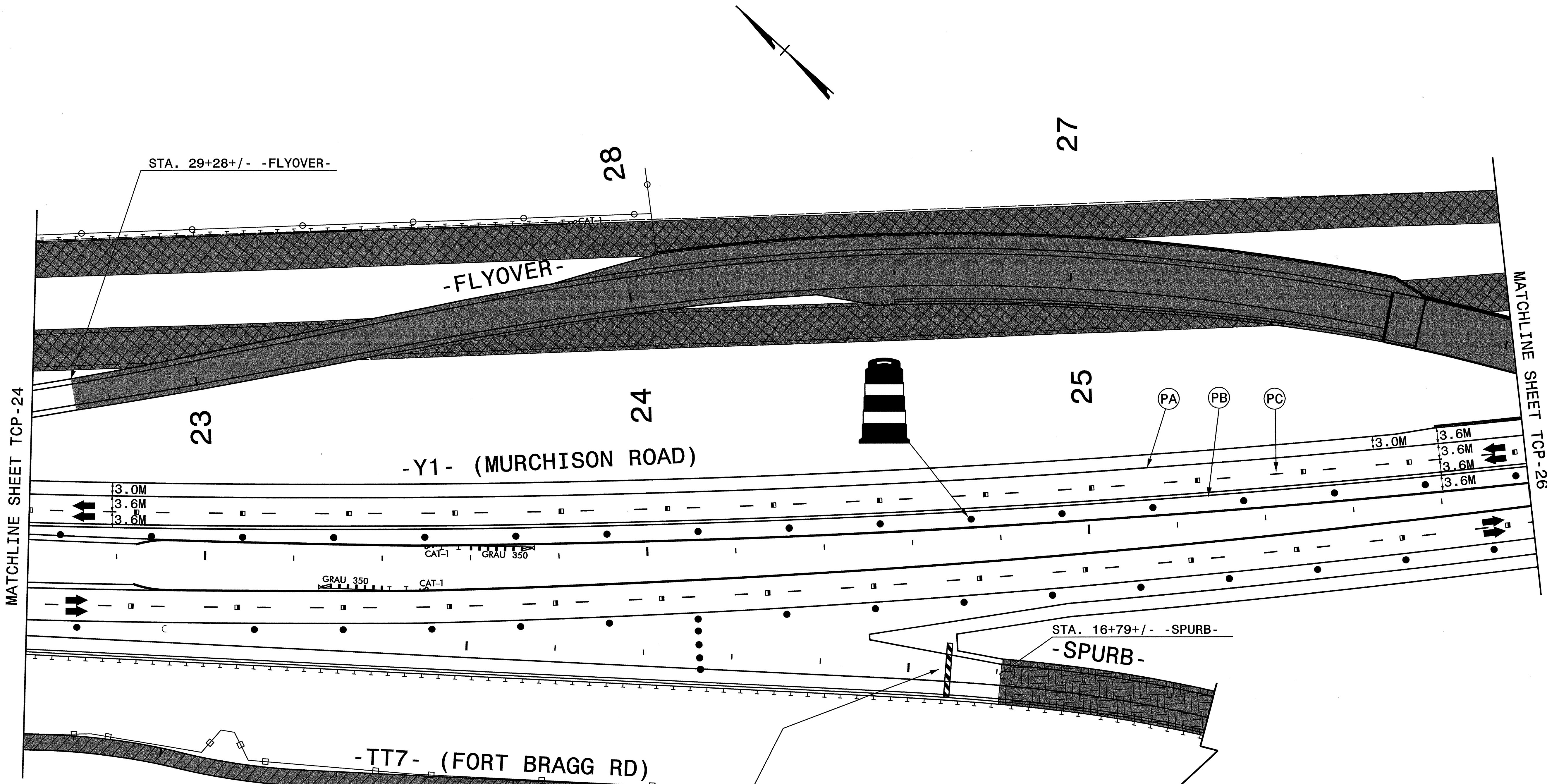
**PHASE II**  
**AREA-2 DETAIL**

SCALE: 1:500  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA

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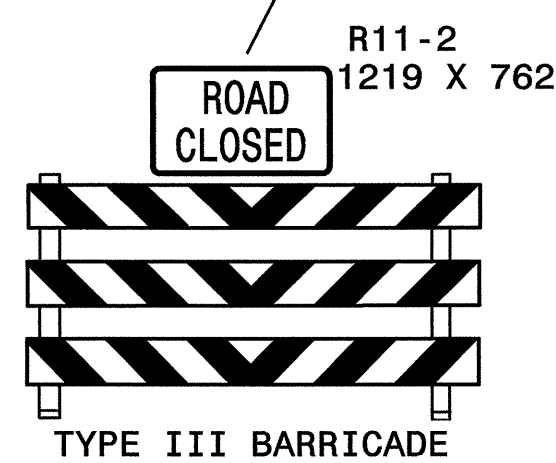




MATCHLINE SHEET TCP-24

MATCHLINE SHEET TCP-26

| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |



**PROGRESSIVE**  
DESIGN GROUP, INC.  
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APPROVED: *Tommy* DATE: 03/04/09

**PHASE II**  
**AREA-2 DETAIL**

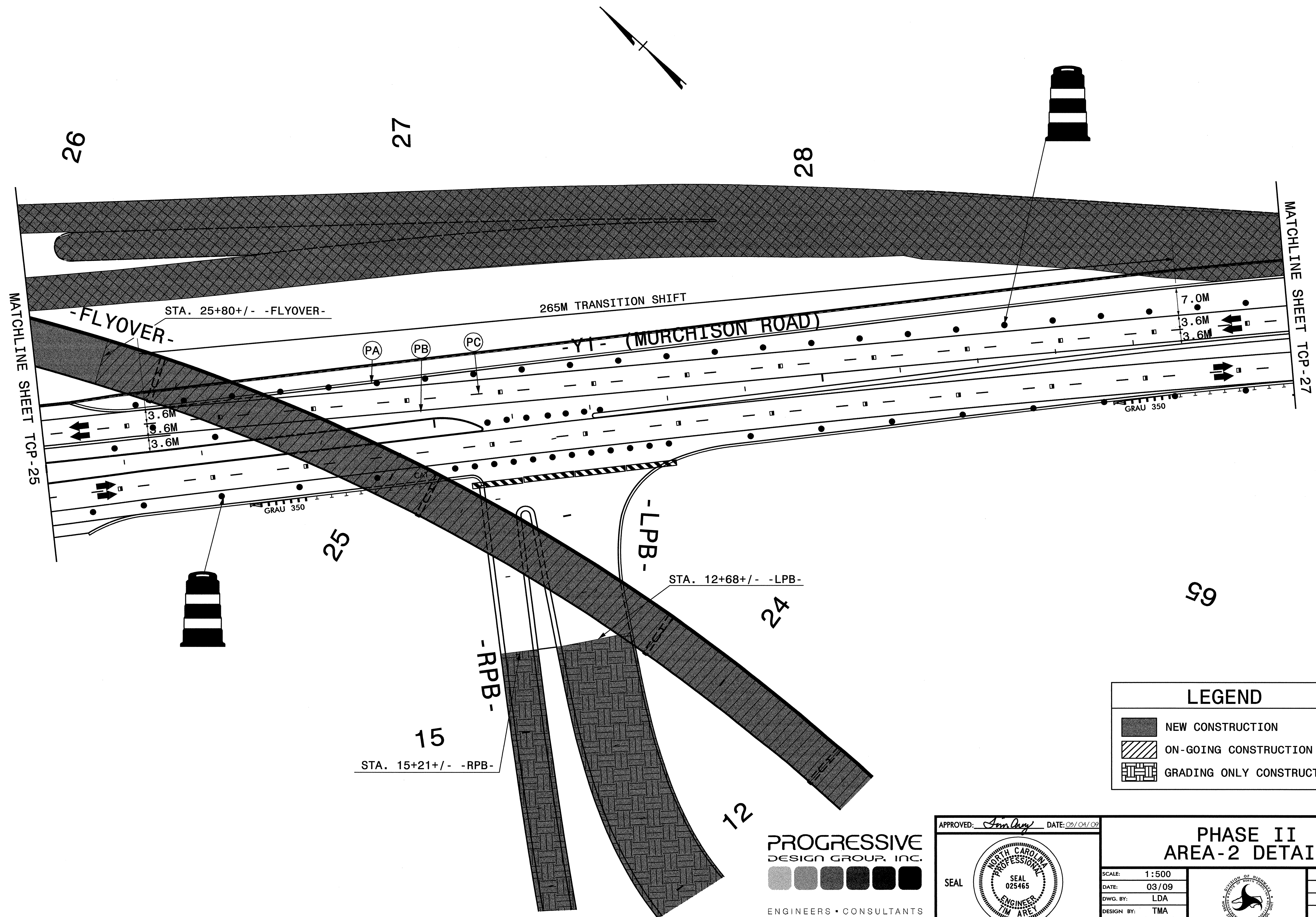
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| NO.            |  |   | DESCRIPTION |  |     |             |  |  |  |  |
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| DATE: 03/09    |  |   |             |  |     |             |  |  |  |  |
| DWG. BY: LDA   |  |   |             |  |     |             |  |  |  |  |
| DESIGN BY: TMA |  |   |             |  |     |             |  |  |  |  |

REVIEWED BY: TMA





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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-26 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tom Arey* DATE: 09/04/09

SEAL

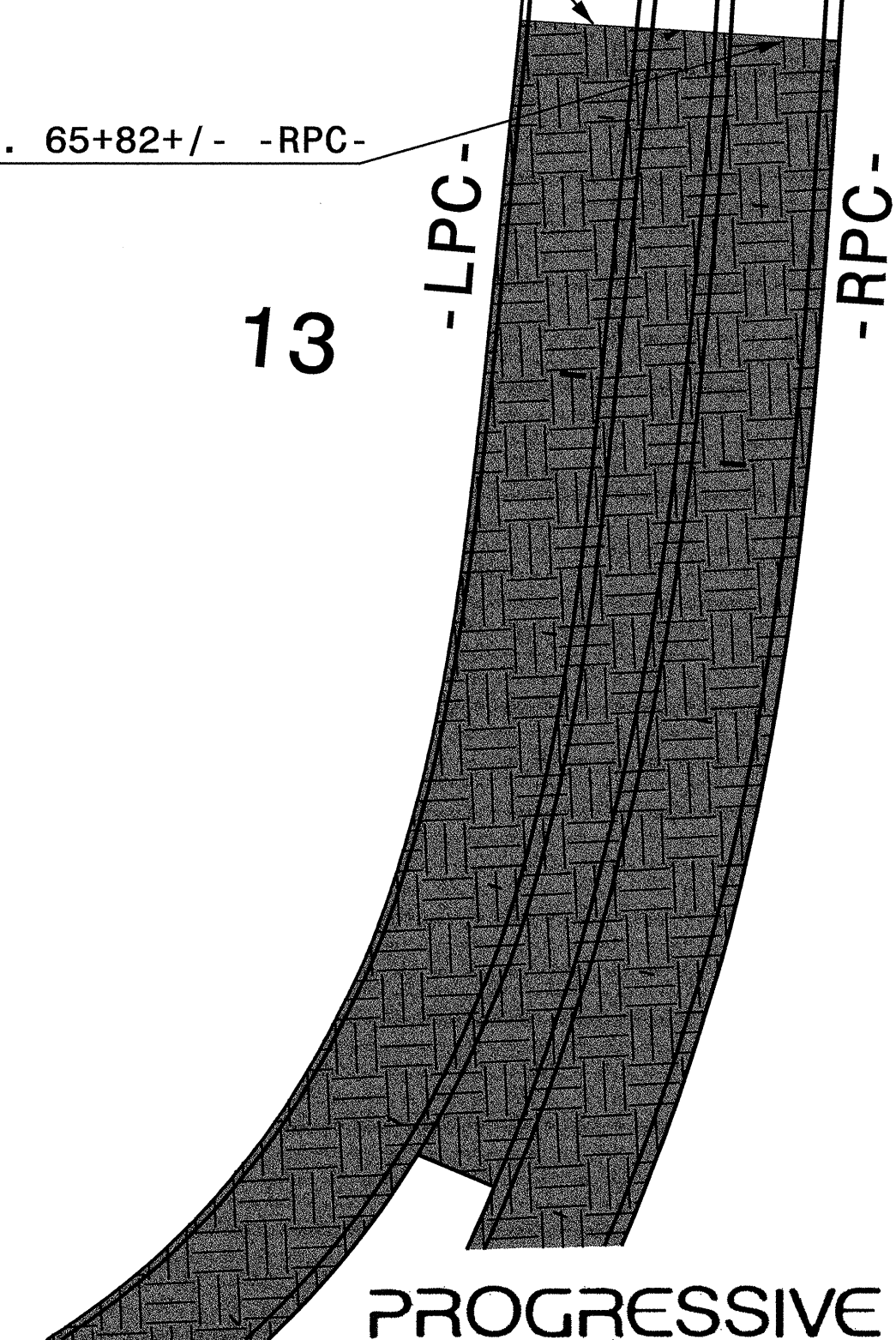
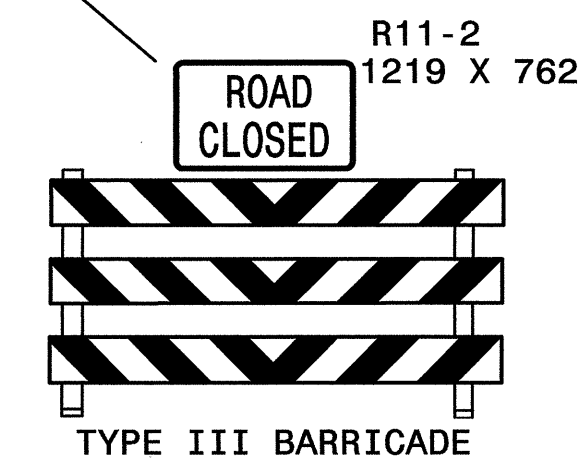
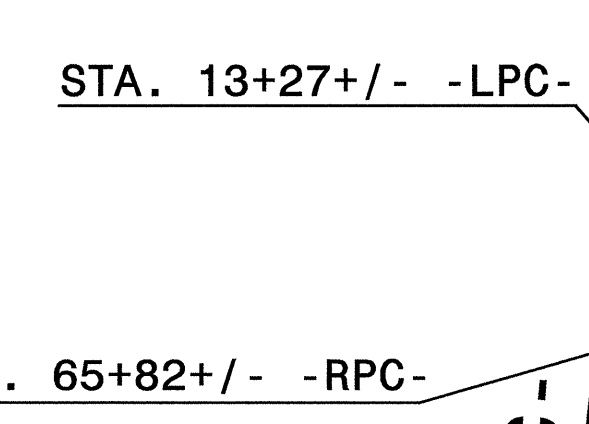
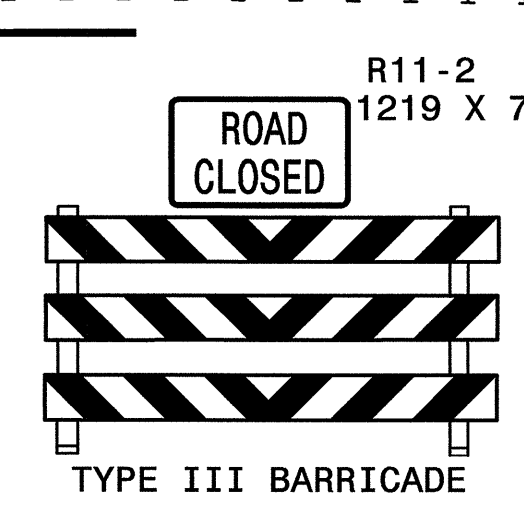
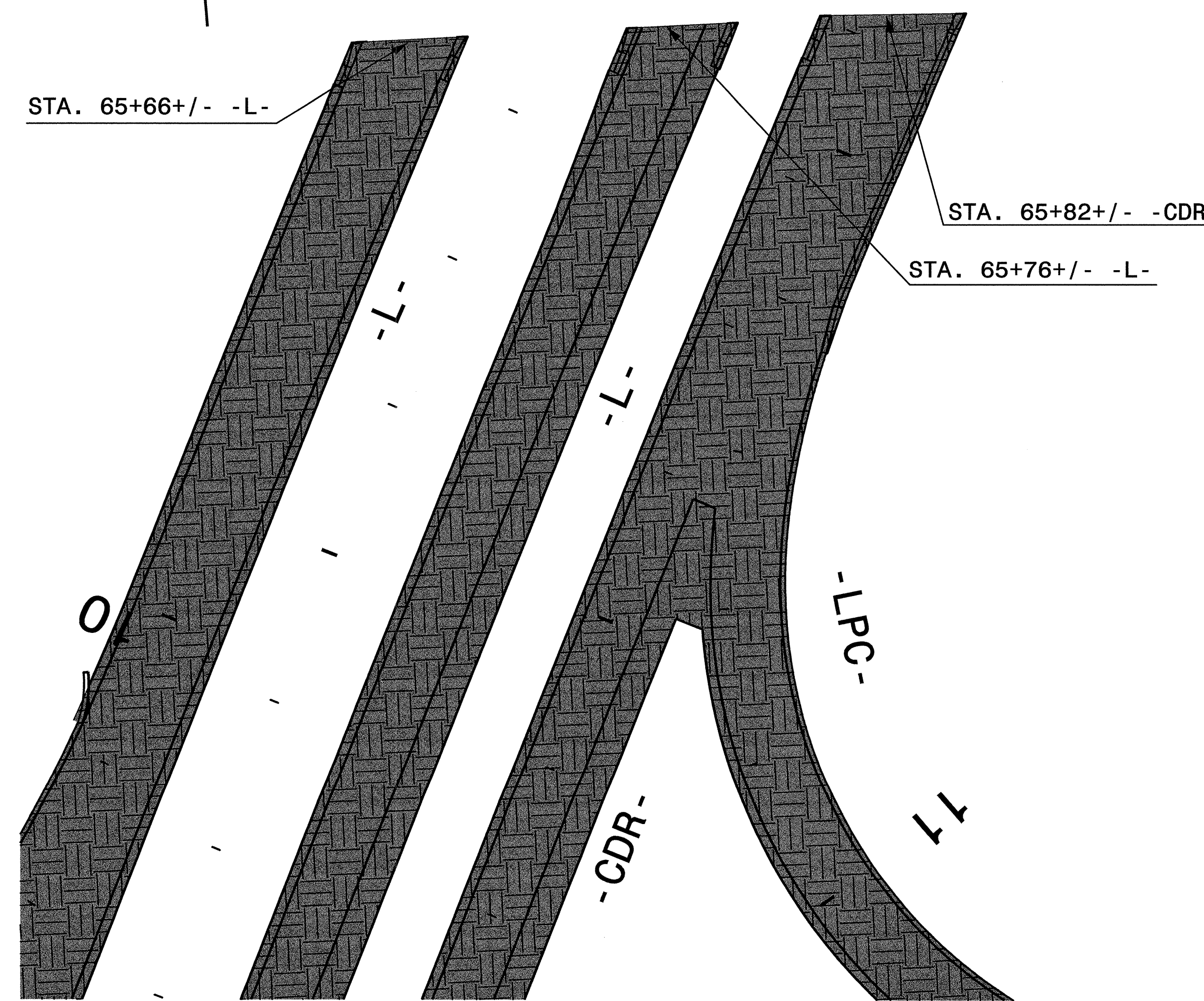
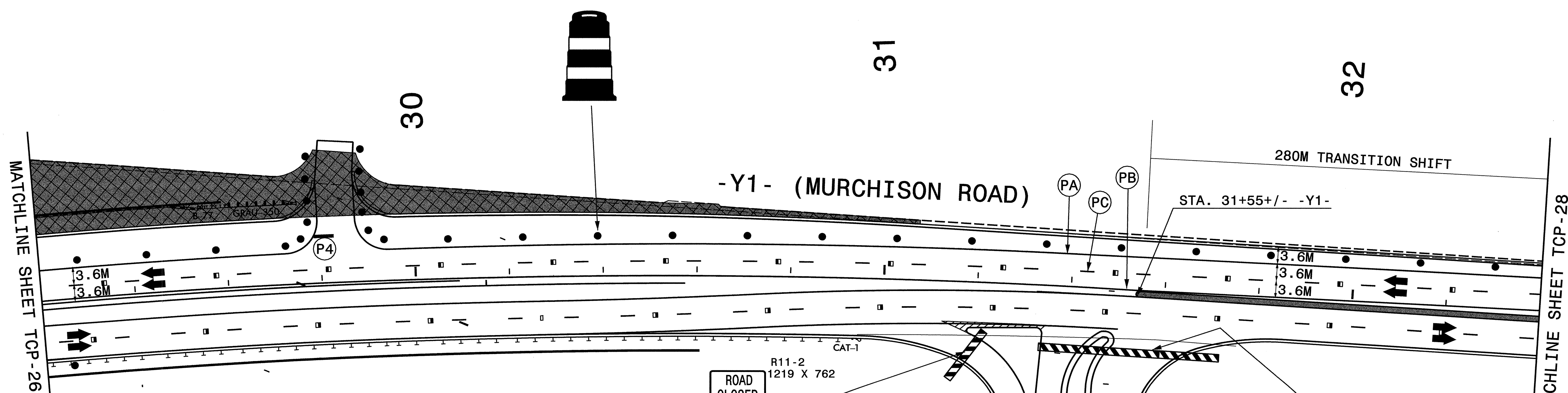
**PHASE II**  
**AREA-2 DETAIL**

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| SCALE: 1:500     |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |





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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-27 |
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| LEGEND |                           |
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|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

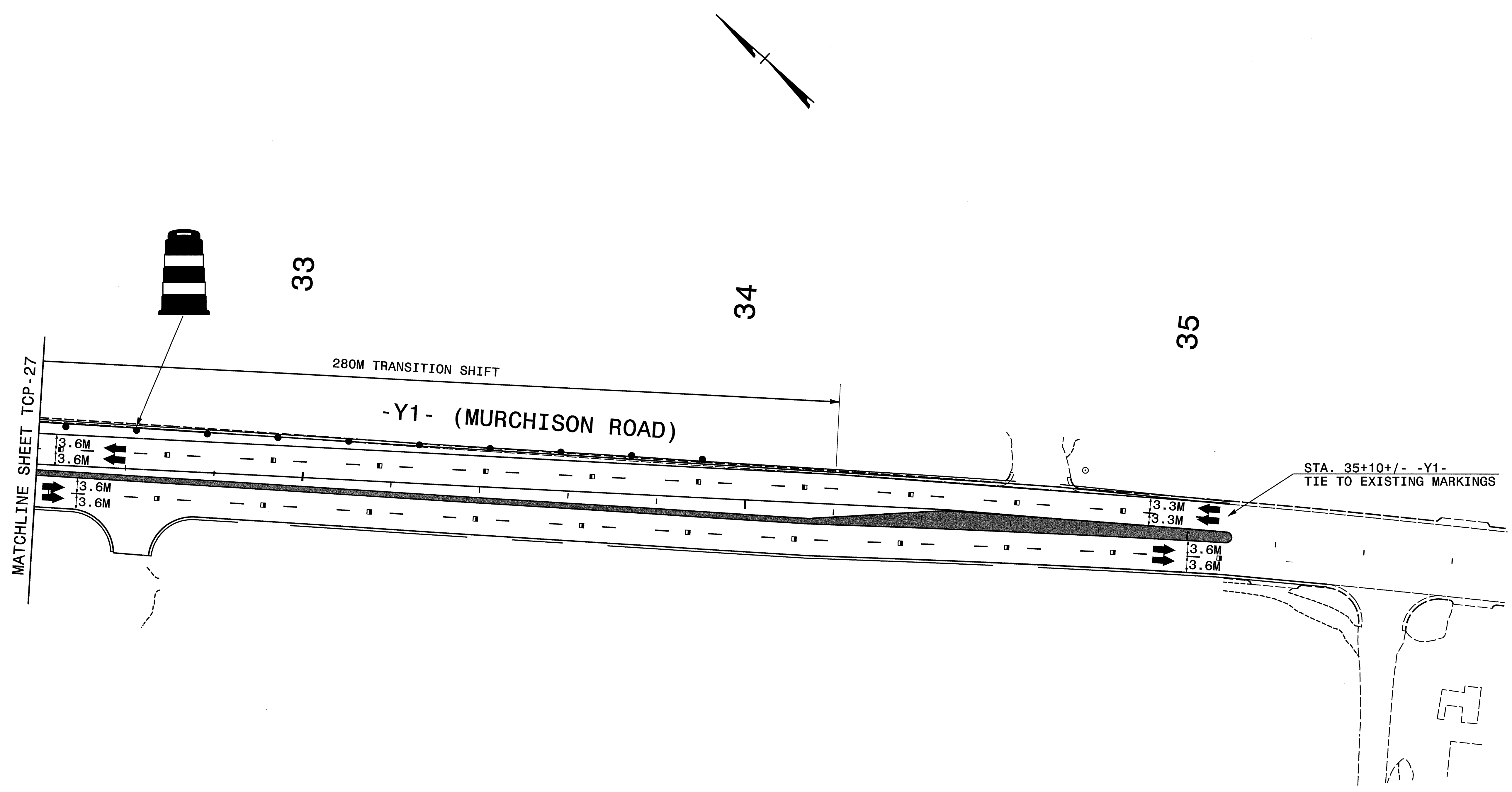
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Jim Gray* DATE: 03/04/09

| PHASE II<br>AREA-2 DETAIL |                | REVISIONS |
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| SCALE: 1:500              | DATE: 03/09    |           |
| DWG. BY: LDA              | DESIGN BY: TMA |           |
| REVIEWED BY: TMA          |                |           |



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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-28 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

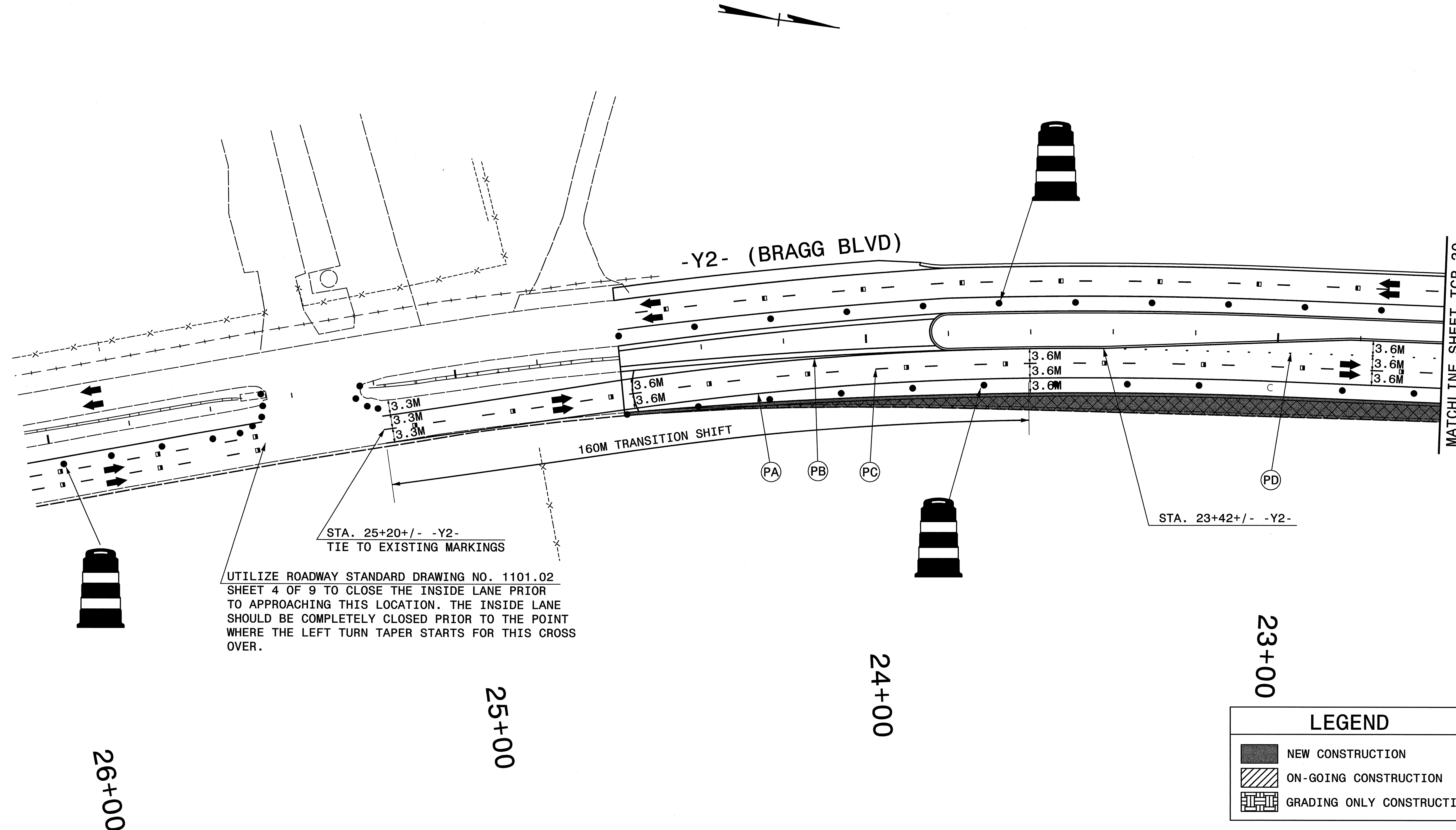
APPROVED: *Jan Day* DATE: 03/04/09

SEAL

**PHASE II**  
**AREA-2 DETAIL**

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| SCALE: 1:500     |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |





UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 4 OF 9 TO CLOSE THE INSIDE LANE PRIOR TO APPROACHING THIS LOCATION. THE INSIDE LANE SHOULD BE COMPLETELY CLOSED PRIOR TO THE POINT WHERE THE LEFT TURN TAPER STARTS FOR THIS CROSS OVER.

STA. 25+20+/- -Y2-  
TIE TO EXISTING MARKINGS

STA. 23+42+/- -Y2-

| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

26+00

25+00

24+00

23+00

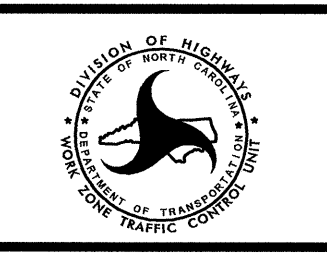
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Jim Gray* DATE: 03/04/09

SEAL

**PHASE III**  
**AREA-1 DETAIL**

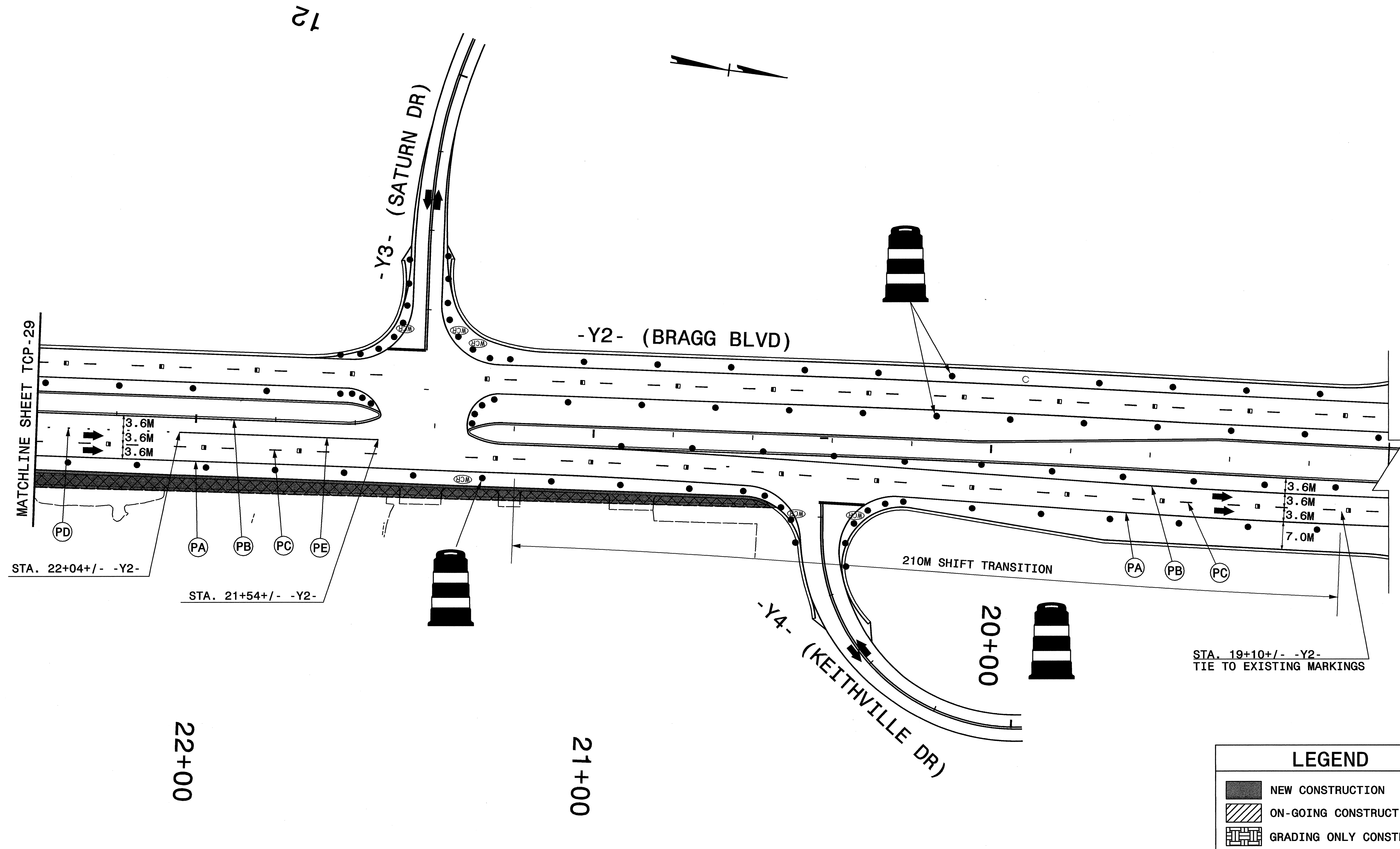
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DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



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| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-30 |
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| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey* DATE: 03/04/09

SEAL

**PHASE III**  
**AREA-1 DETAIL**

|                |  |           |
|----------------|--|-----------|
| SCALE: 1:500   |  | REVISIONS |
| DATE: 03/09    |  |           |
| DWG. BY: LDA   |  |           |
| DESIGN BY: TMA |  |           |

REVIEWED BY: TMA

12

22+00

21+00

20+00

MATCHLINE SHEET TCP-29

STA. 22+04+/- -Y2-

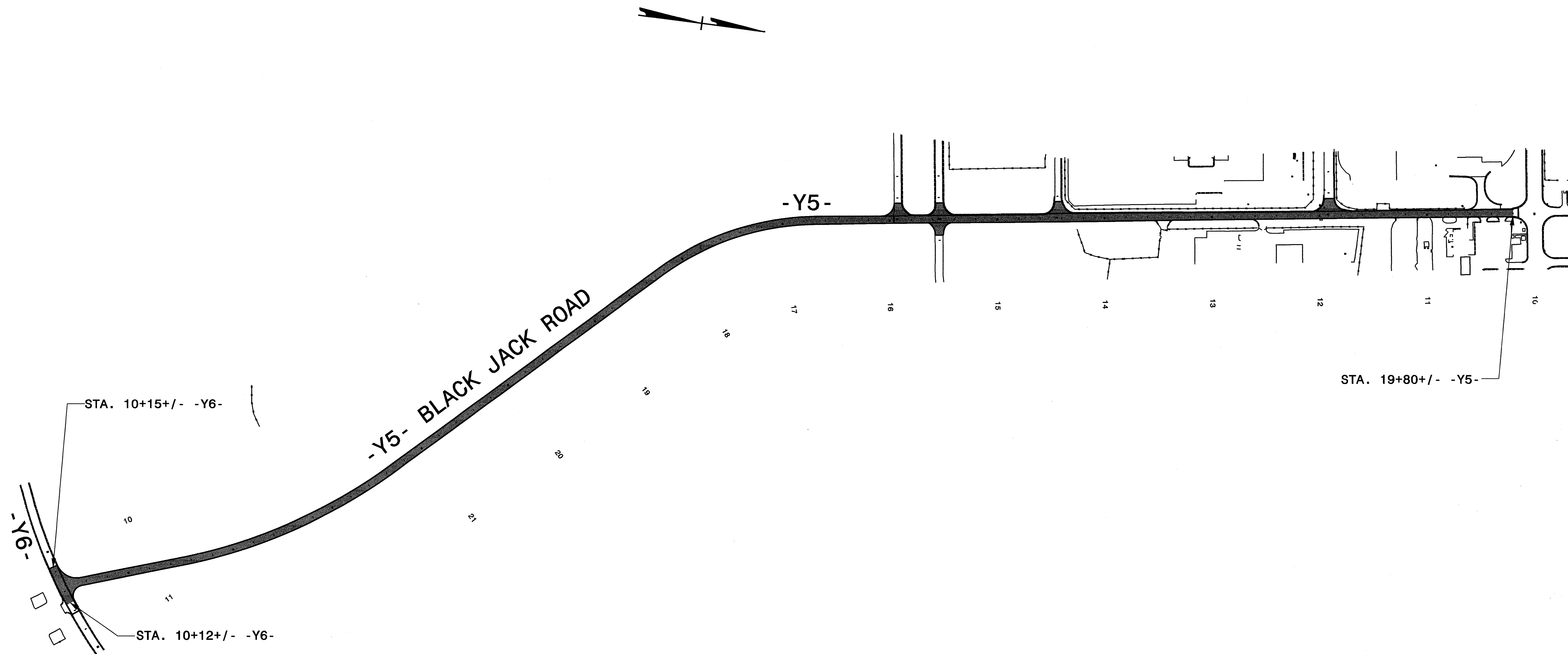
STA. 21+54+/- -Y2-

STA. 19+10+/- -Y2-  
TIE TO EXISTING MARKINGS





|  |                     |
|--|---------------------|
| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-31 |
|--|---------------------|



| LEGEND |                           |
|--------|---------------------------|
|        | NEW CONSTRUCTION          |
|        | ON-GOING CONSTRUCTION     |
|        | GRADING ONLY CONSTRUCTION |

**PROGRESSIVE**  
DESIGN GROUP, INC.  
  
ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey* DATE: 05/04/09

SEAL

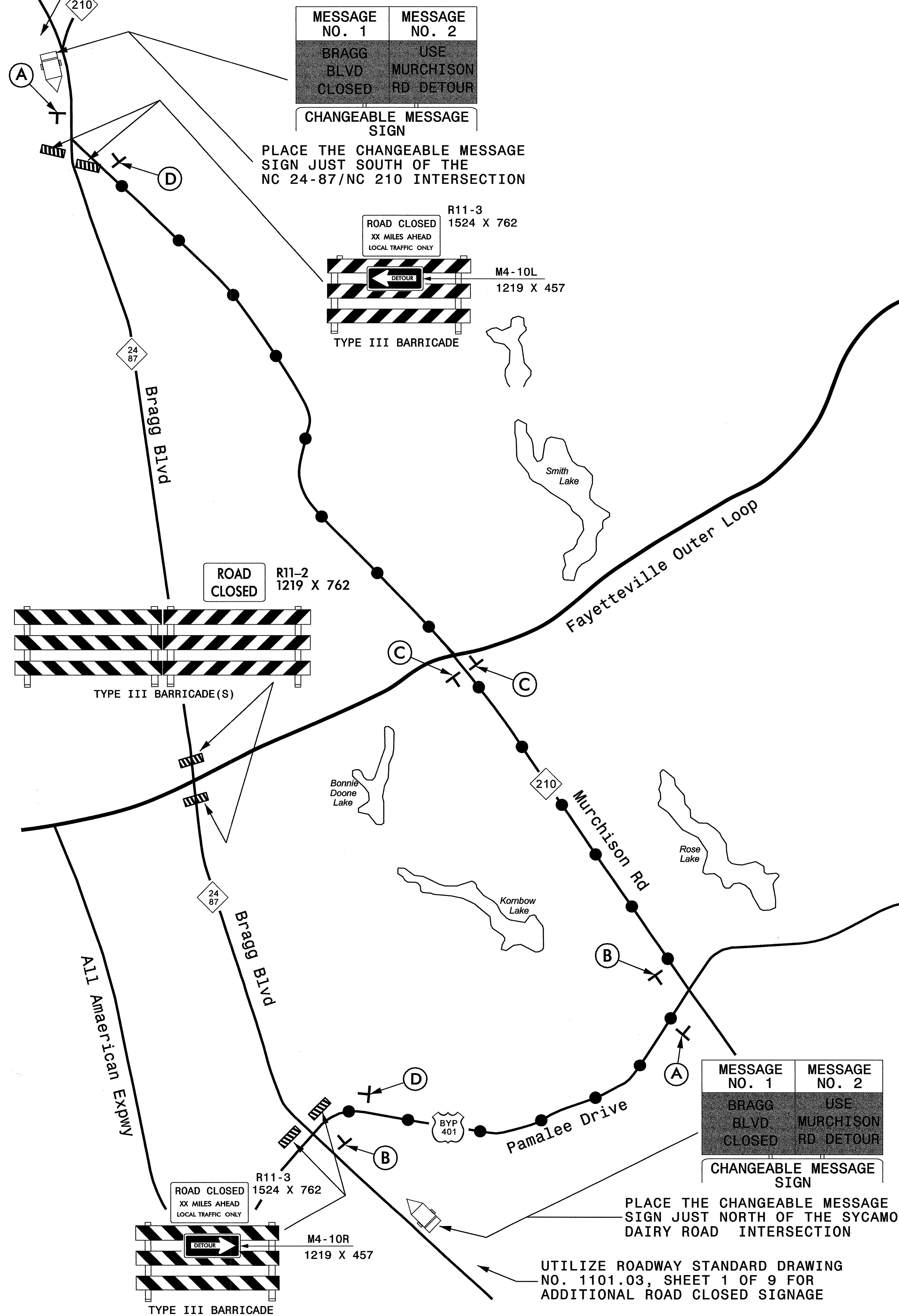
**PHASE III**

|                  |  |           |
|------------------|--|-----------|
| SCALE: 1:2000    |  | REVISIONS |
| DATE: 03/09      |  |           |
| DWG. BY: LDA     |  |           |
| DESIGN BY: TMA   |  |           |
| REVIEWED BY: TMA |  |           |

CADD FILE



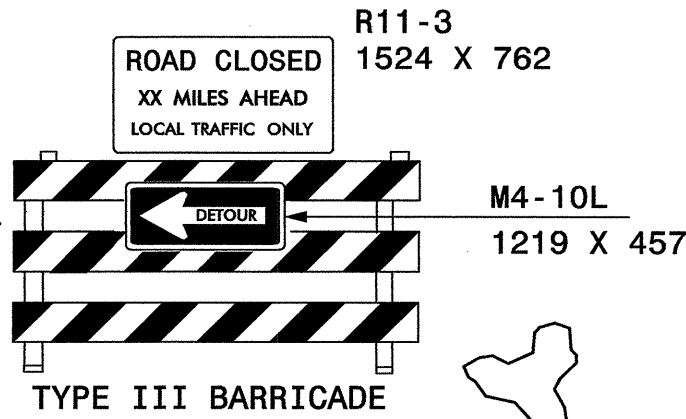
UTILIZE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9 FOR ADDITIONAL ROAD CLOSED SIGNAGE



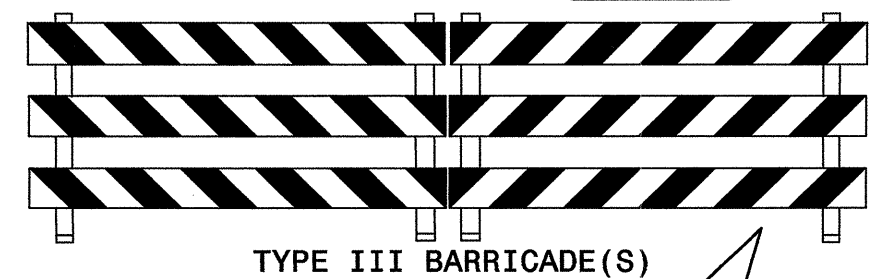
| MESSAGE NO. 1     | MESSAGE NO. 2           |
|-------------------|-------------------------|
| BRAGG BLVD CLOSED | USE MURCHISON RD DETOUR |

CHANGEABLE MESSAGE SIGN

PLACE THE CHANGEABLE MESSAGE SIGN JUST SOUTH OF THE NC 24-87/NC 210 INTERSECTION



ROAD CLOSED R11-2 1219 X 762



TYPE III BARRICADE(S)

| MESSAGE NO. 1     | MESSAGE NO. 2           |
|-------------------|-------------------------|
| BRAGG BLVD CLOSED | USE MURCHISON RD DETOUR |

CHANGEABLE MESSAGE SIGN

PLACE THE CHANGEABLE MESSAGE SIGN JUST NORTH OF THE SYCAMORE DAIRY ROAD INTERSECTION

UTILIZE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9 FOR ADDITIONAL ROAD CLOSED SIGNAGE

|   |  |   |                           |                     |
|---|--|---|---------------------------|---------------------|
| SIGN NUMBER: name<br>TYPE: D<br>QUANTITY: 8<br>SIGN WIDTH: 2'-0"<br>HEIGHT: 1'-8"<br>TOTAL AREA: 3.3 Sq.Ft. | BACKG COLOR: Orange<br>COPY COLOR: Black | DESIGN BY: TMA<br>PROJECT ID: X-0002B/U-2519E | CHECKED BY: PDG<br>DIV: 6 | DATE: July 16, 2008 |
|---|--|---|---------------------------|---------------------|

| SYMBOL | X | Y | WID | HT |
|--------|---|---|-----|----|
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |
|        |   |   |     |    |

NO. Z BARS: MAT'L: 0.063" (1.6 mm) ALUMINUM  
LENGTH: 0.080" (2.0 mm) ALUMINUM  
0.125" (3.2 mm) ALUMINUM

NOTES:  
1. Legend and border shall be direct applied Type VII, VIII or IX reflective sheeting.  
2. Background shall be Type VII, VIII OR IX reflective sheeting.

BORDER R=1.5" TH=0.63" IN=0.47"

Panel Style: construction\_guide.ssi  
M.U.T.C.D.: 2003 Edition

Spacing Factor is 1 unless specified otherwise

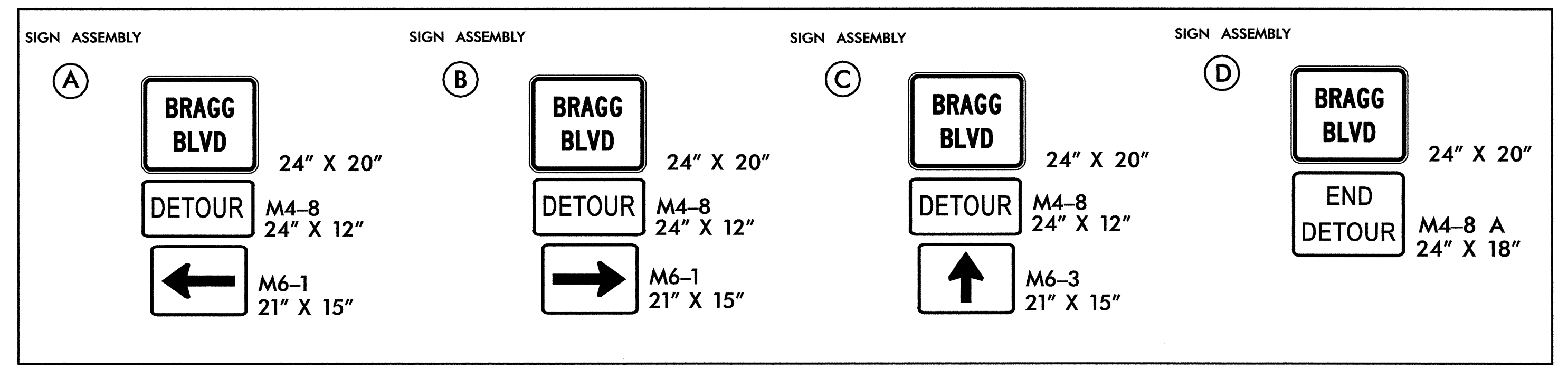
LETTER POSITIONS

Letter widths are shown

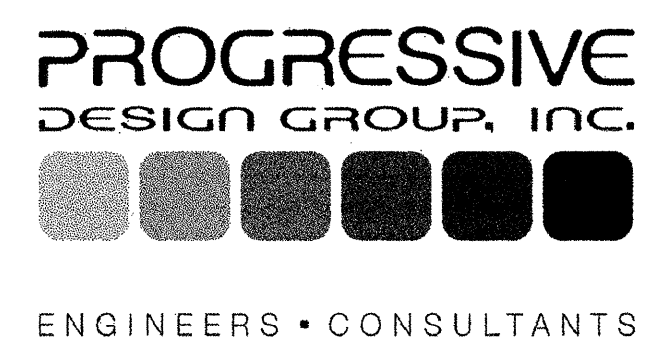
| Series/Size | Text Length |
|-------------|-------------|
| C 2000      | 13.8        |
| C 2000      | 10.5        |

FILENAME: Off-site Detour Sign Designs

NORTH CAROLINA D.O.T. SIGN DETAIL



NOTE:  
1. ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE. FINAL PLACEMENT AS DIRECTED BY ENGINEER.



APPROVED: *Jan Gray* DATE: 03/04/09

SEAL

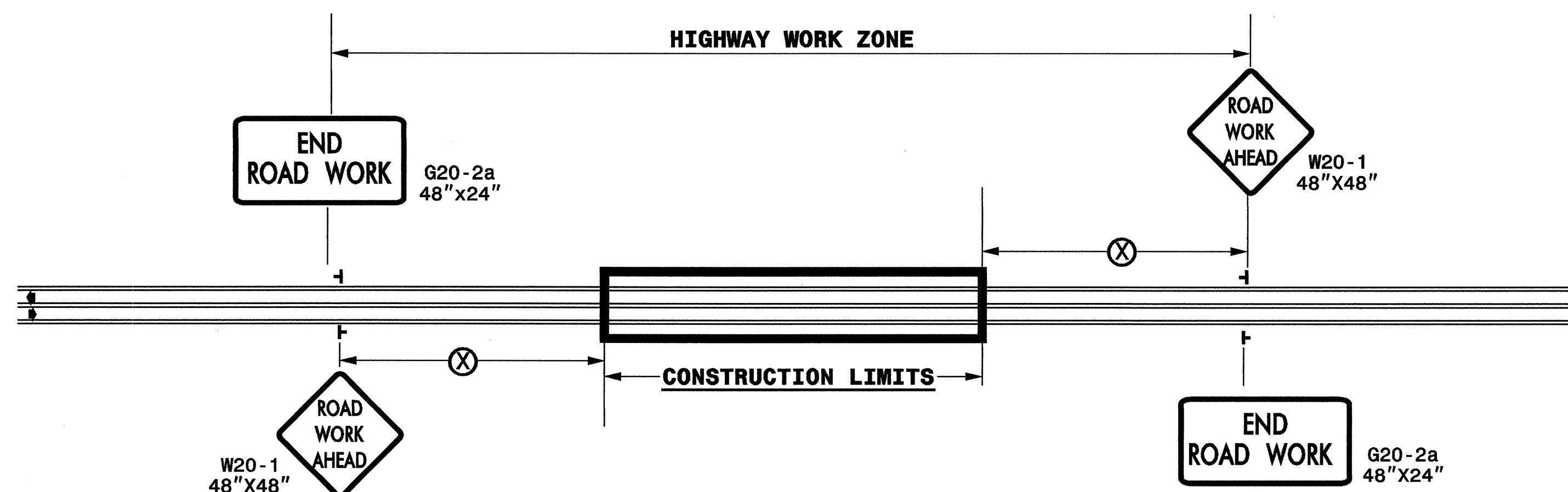
OFFSITE DETOUR SIGNING

|                  |           |
|------------------|-----------|
| SCALE:           | REVISIONS |
| DATE: 03/09      |           |
| DWG. BY: LDA     |           |
| DESIGN BY: TMA   |           |
| REVIEWED BY: TMA |           |





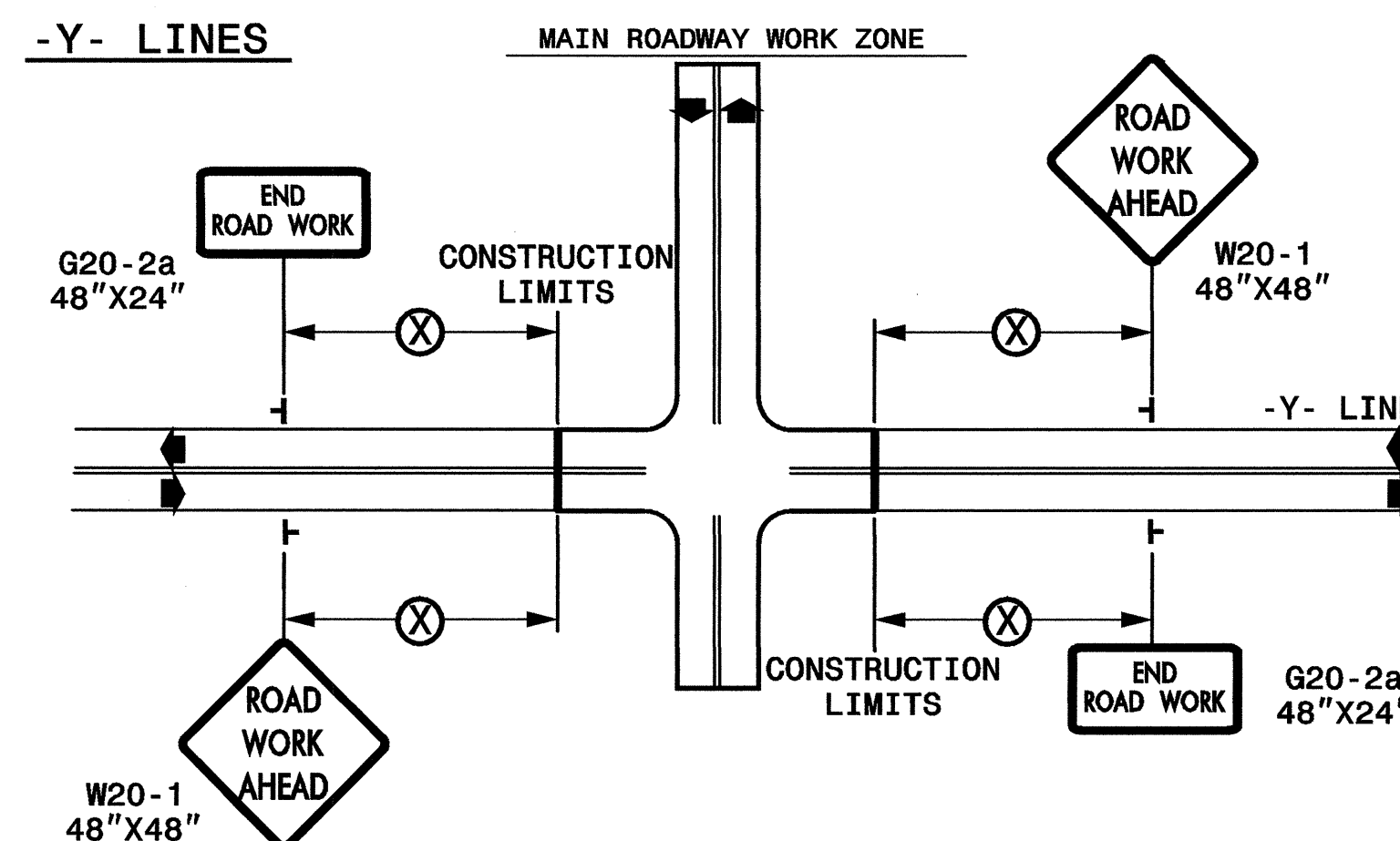
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



| POSTED SPEED LIMIT (M.P.H.) | RECOMMENDED MINIMUM SIGN SPACING |
|-----------------------------|----------------------------------|
| ≤ 50                        | 500'                             |
| ≥ 55                        | 1000'                            |

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

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



DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) 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 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB 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 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB 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.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

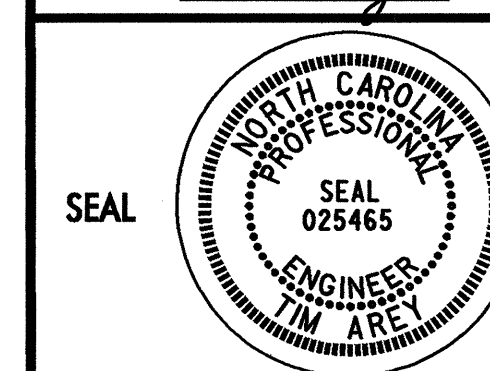
**LEGEND**

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

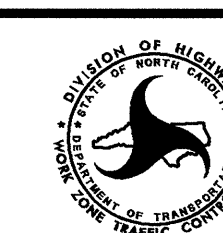
**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Jim Gray* DATE: 03/04/09



DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS

SCALE:  
DATE: 03/09  
DWG. BY: LDA  
DESIGN BY: TMA  
REVIEWED BY: TMA



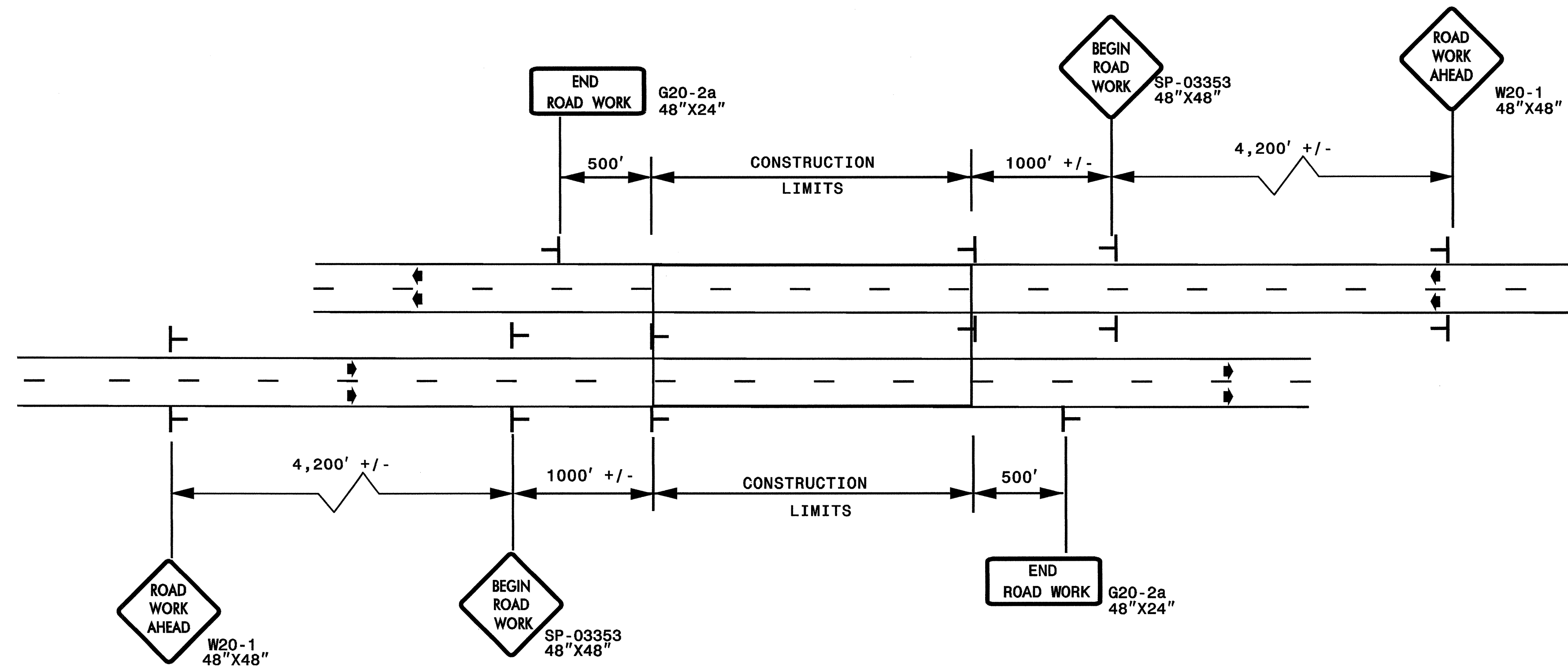
| REVISIONS |  |
|-----------|--|
|           |  |
|           |  |
|           |  |

# ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)



PROJ. REFERENCE NO. X-0002B/U-2519E SHEET NO. TCP-34

## DETAIL A



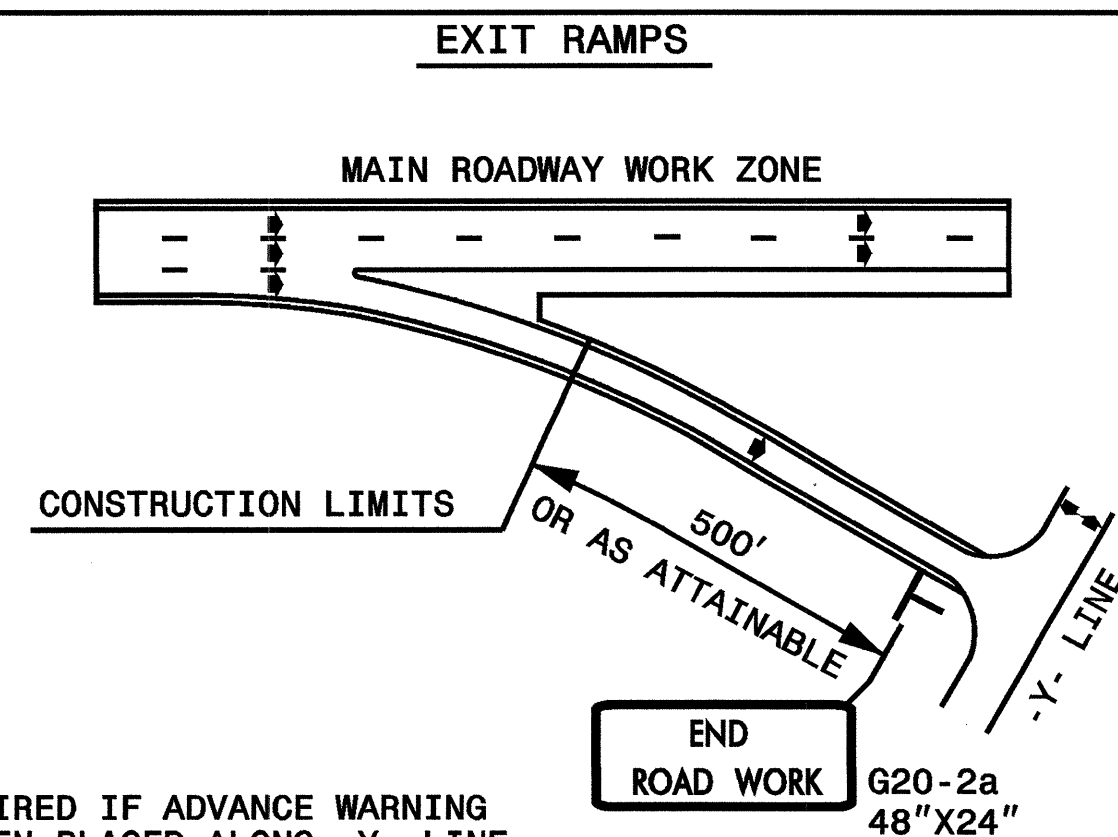
**LEGEND**

— STATIONARY SIGN

↔ DIRECTION OF TRAFFIC FLOW

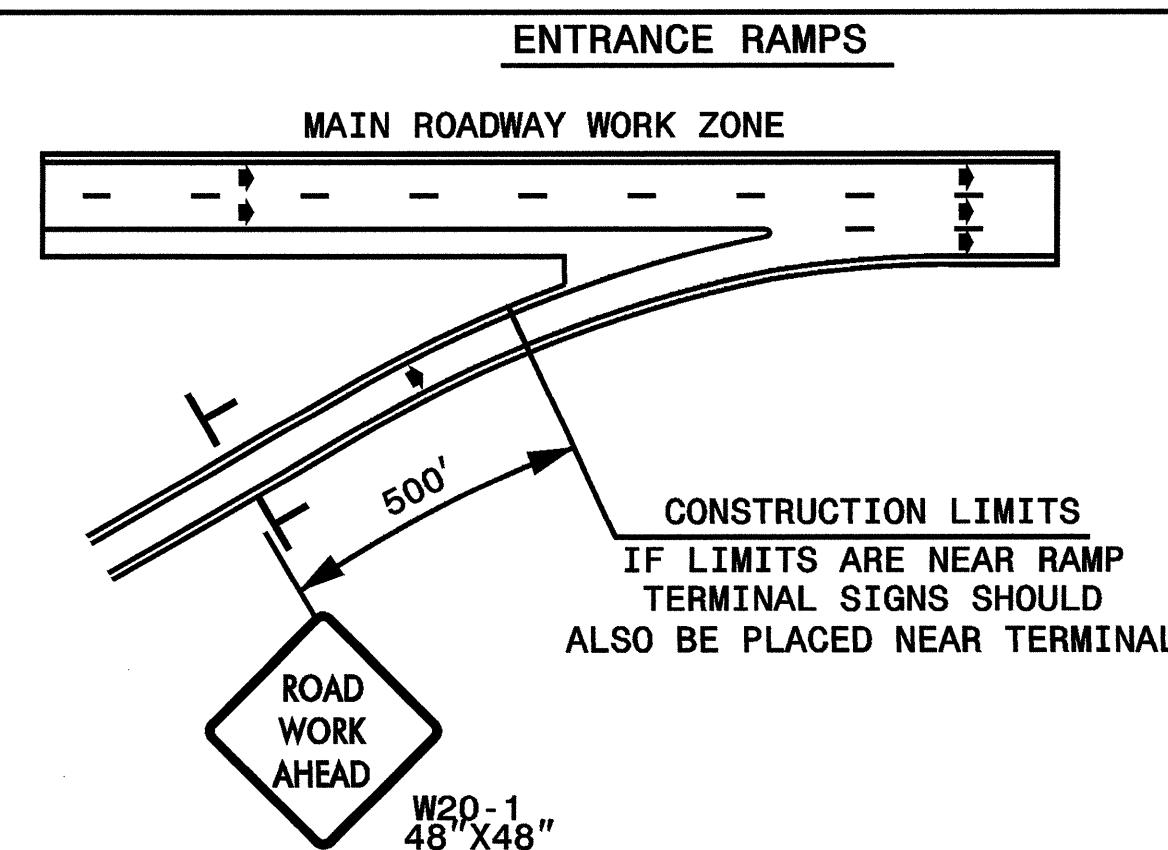
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

## DETAIL B



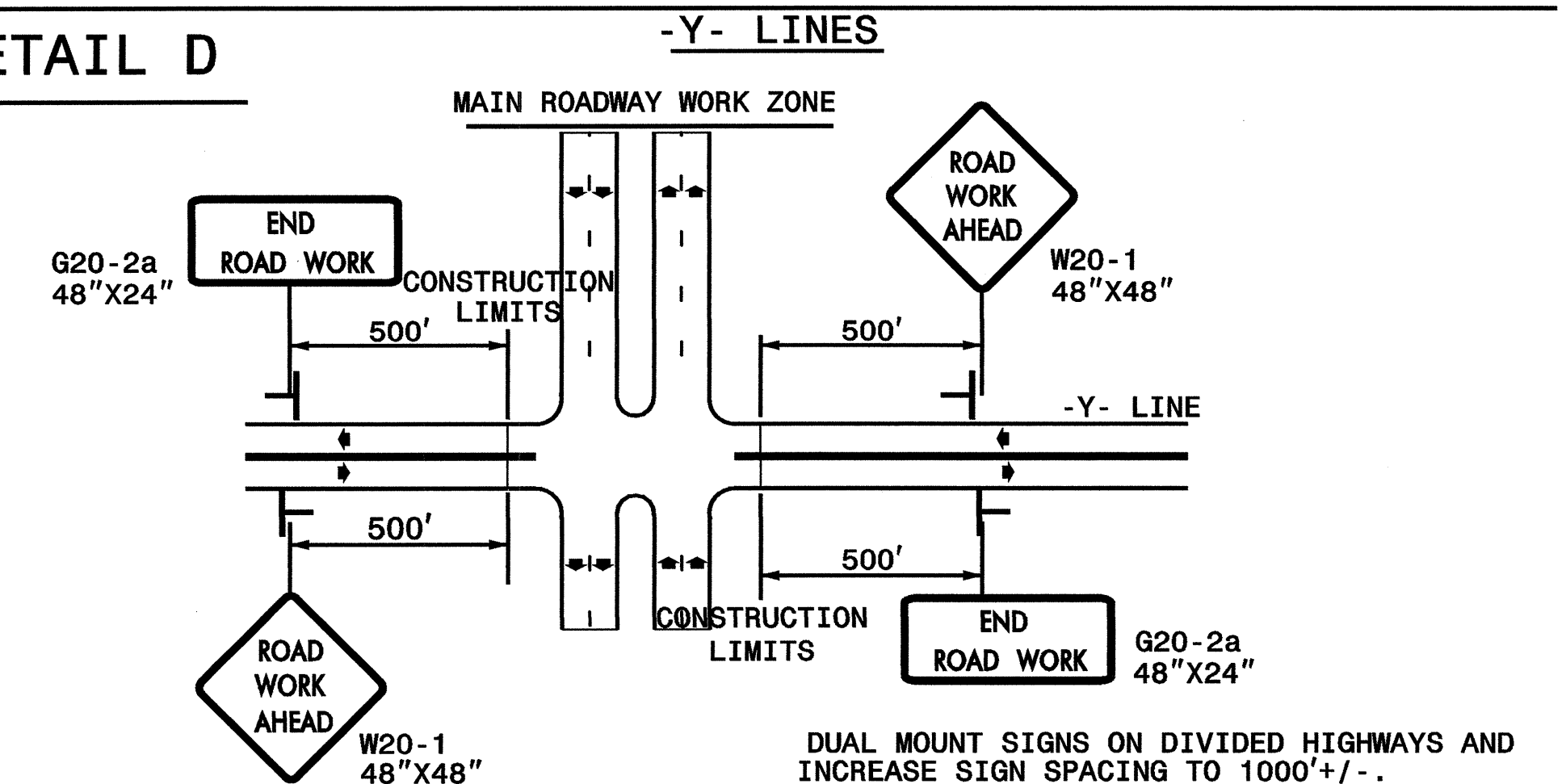
NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

## DETAIL C



CONSTRUCTION LIMITS IF LIMITS ARE NEAR RAMP TERMINAL SIGNS SHOULD ALSO BE PLACED NEAR TERMINAL

## DETAIL D



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

## GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) 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 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB 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 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB 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.

**PROGRESSIVE**  
DESIGN GROUP, INC.  
ENGINEERS • CONSULTANTS

APPROVED: *Jim Gray* DATE: 03/04/09

SEAL

## ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)

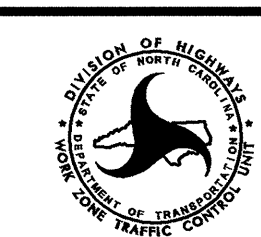
SCALE:

DATE: 03/09

DWG. BY: LDA

DESIGN BY: TMA

REVIEWED BY: TMA



| REVISIONS |  |
|-----------|--|
|           |  |
|           |  |
|           |  |



SP 03353



|  |                     |
|--|---------------------|
| PROJ. REFERENCE NO.<br>X-0002B/U-2519E | SHEET NO.<br>TCP-35 |
|--|---------------------|

| SIGN NUMBER: SP-03353<br>TYPE: A<br>QUANTITY: 1<br>SIGN WIDTH: 4'-0"<br>HEIGHT: 4'-0"<br>TOTAL AREA: 16.0 Sq.Ft.<br>BORDER TYPE: FLUSH<br>RECESS: 0.59"<br>WIDTH: 0.75"<br>RADII: 1.38"<br>NO. Z BARS: N/A<br>LENGTH: N/A | BACKG COLOR: Fluorescent Orange<br>COPY COLOR: Black<br><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: | SYMBOL | X   | Y  | WID | HT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | DESIGNER: DOWNEY<br>PROJECT ID: ALL PROJECTS<br>CHECKED BY: CHECKED<br>DIV: DIV<br>STD #: W20-1<br>DATE: Aug 20, 2003 |
|---|--|--------|-----|----|-----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| SYMBOL  | X  | Y      | WID | HT |     |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
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|   |  |        |     |    |     |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
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|   |  |        |     |    |     |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
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|   |  |        |     |    |     |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
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BORDER  
R=1.38"  
TH=0.75"  
IN=0.59"

USE NOTES: 2, 4  
 1. Legend and border shall be direct applied Type VII reflective sheeting.  
 2. Legend and border shall be direct applied non-reflective sheeting.  
 3. Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.  
 4. Background shall be Type VII reflective sheeting.  
 5. Background shall be Type I reflective sheeting.  
 6. Center arrow(s) vertically on sign.  
 7. 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 |      |     |     |     |     |      | Series/Size |      |
|---|------|-----|-----|-----|-----|------|-------------|------|
|   | B    | E   | G   | I   | N   |      | Text Length |      |
|   | 22.4 | 5.3 | 4.6 | 5.4 | 2.5 | 3.8  | 22.4        | C7   |
|   |      |     |     |     |     |      |             | 21.6 |
|   |      | R   | O   | A   | D   |      |             | C7   |
|   | 23.4 | 5   | 5.2 | 5.6 | 3.8 | 23.4 |             | 19.6 |
|   |      |     |     |     |     |      |             | C7   |
|   |      | W   | O   | R   | K   |      |             | 21.2 |
|   | 22.6 | 6.4 | 5.6 | 5.2 | 4   | 22.6 |             |      |

Spacing Factor is 1 unless specified otherwise

GENERAL NOTES FOR THE "BEGIN ROAD WORK" SIGN

-SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS

-WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL A ON SHEET TCP-36.



APPROVED: *Tommy* DATE: 03/04/09

DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING SIGN DESIGNS

|                  |                |  |           |
|------------------|----------------|--|-----------|
| SCALE:           | DATE: 03/09    |  | REVISIONS |
| DWG. BY: LDA     | DESIGN BY: TMA |  |           |
| REVIEWED BY: TMA |                |  |           |
|                  |                |  |           |