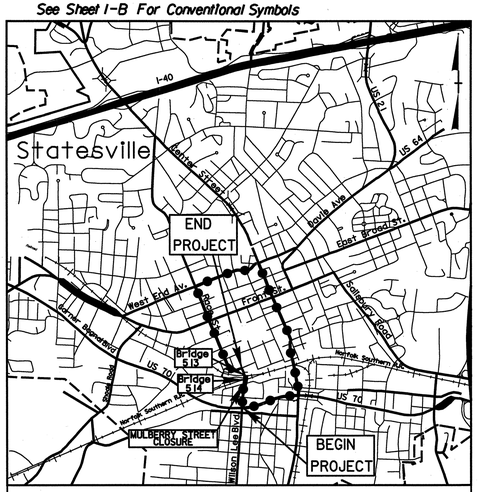
09/08/09

TIP PROJECT: B-2576

CONTRACT: C202158

See Sheet 1-A For Index
See Sheet 1-B For Conventional Symbols



VICINITY MAP
STATESVILLE, NC

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

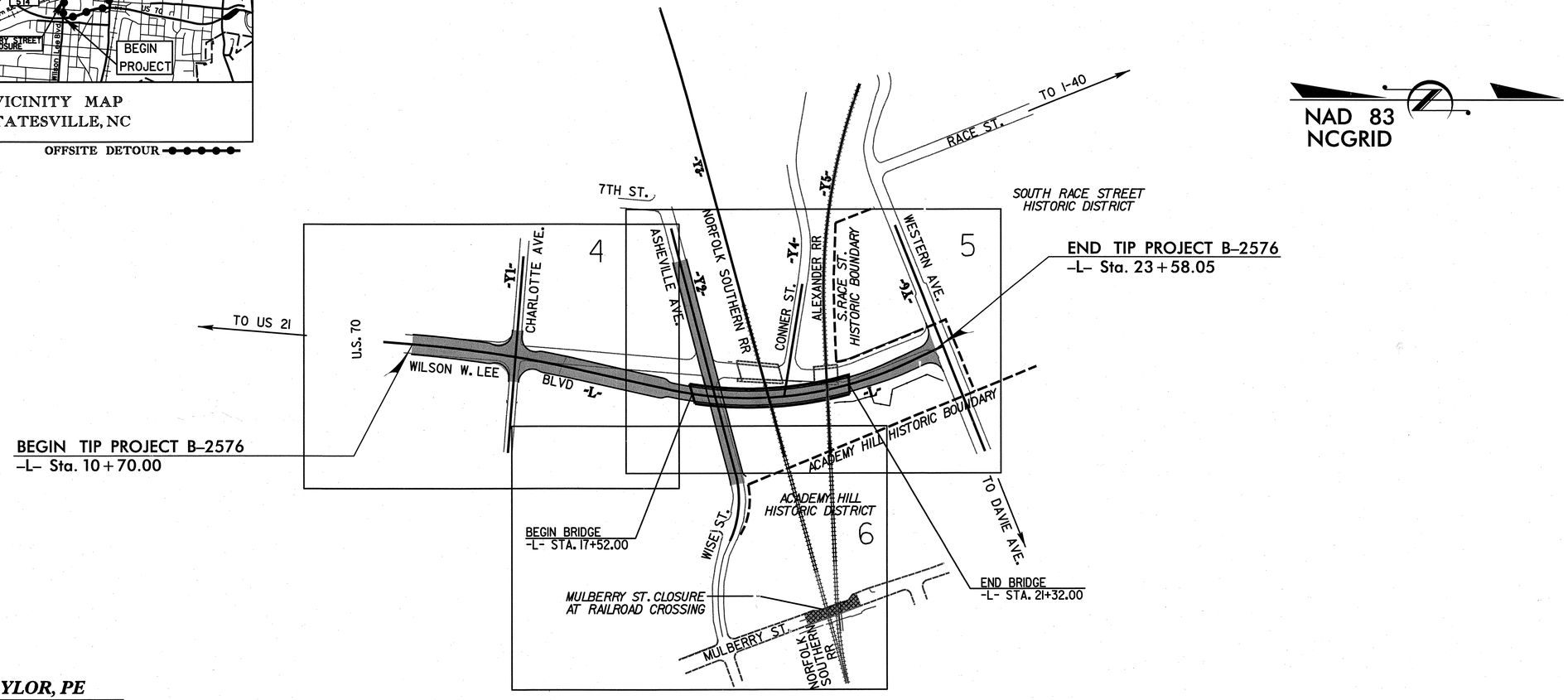
IREDELL COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-2576	1	

WBS NO.	F.A. PROJ. NO.	DESCRIPTION
32669.1.1	BRSTP-1421(3)	P.E.
32669.2.1	BRSTP-1421(3)	ROW, UTIL.
32669.3.3	BRSTP-1421(3)	CONSTR.

LOCATION: BRIDGES 513 AND 514 OVER THE NORFOLK SOUTHERN RAILROAD, ON WILSON W. LEE BLVD., IN STATESVILLE

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE, AND RETAINING WALL



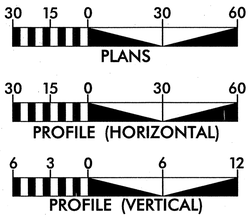
NAD 83
NCGRID

NCDOT CONTACT:

B. DOUG TAYLOR, PE

ROADWAY DESIGN-ENGINEERING COORDINATION

GRAPHIC SCALES



DESIGN DATA

ADT 2009 = 6,133
ADT 2029 = 10,467
DHV = 11 %
D = 60 %
T = 4 % *
V = 30 MPH
* (TTST 2% + DUAL 3%)
Urban Minor Art.

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-2576 = 0.172 miles

LENGTH OF STRUCTURE TIP PROJECT B-2576 = 0.072 miles

TOTAL LENGTH TIP PROJECT B-2576 = 0.244 miles

ARCADIS
G & M of North Carolina, Inc.
801 Corporate Center Drive, Suite 300
Raleigh, NC 27607-5073
Tel: 919/854-0282 Fax: 919/854-5448
WWW.ARCADIS-US.COM
for the North Carolina Department of Transportation

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPT 21, 2007

LETTING DATE:
FEB 16, 2010

ARCADIS CONTACT:
STEVE SMALLWOOD, P.E.
PROJECT ENGINEER

HYDRAULICS ENGINEER
SEAL 19732 ENGINEER SHIHCHEN FUH NORTH CAROLINA PROFESSIONAL
11-18-09
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER
SEAL 022037 ENGINEER STEPHEN T. SMALLWOOD NORTH CAROLINA PROFESSIONAL
P.E. SEAL NOT VALID UNLESS SIGNED AND DATED
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY DESIGN ENGINEER

ARCADIS G&M
Date=$DATE$ Time: $TIME$
Filename=$FILE$

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 17922 ENGINEER STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-A	PAVEMENT SCHEDULE & TYPICAL SECTIONS
2-B	GRADING PLAN AT RAILROAD
2-C	ALUMINUM ORNAMENTAL SECURITY FENCE DETAIL
2-D	CHAIN LINK FENCE WITH BARBED WIRE DETAIL
2-E	ANCHORAGE FOR FRAMES DETAIL
2-F THRU 2-H	RAILROAD CROSSING CLOSURE DETAILS
2-I THRU 2-J	PIPE INSTALLATION DETAILS
3	SUMMARY OF QUANTITIES
3A-3B	SUMMARY OF DRAINAGE QUANTITIES EARTHWORK SUMMARY, SUMMARY OF PAVEMENT REMOVAL,SUMMARY OF PAVEMENT BREAKUP, PARCEL INDEX
4 THRU 6	PLAN SHEETS
7 THRU 9	PROFILE SHEETS
TCP-1 THRU TCP-11	TRAFFIC CONTROL PLANS
SD-1	SPECIAL SIGN DESIGN
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-8	EROSION CONTROL PLANS
UC-1 THRU UC-6	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-4	UTILITIES BY OTHERS PLANS
X-1 THRU X-11	CROSS-SECTIONS
S-1 THRU S-59	STRUCTURE PLANS
W-1 THRU W-	RETAINING WALL PLANS

GENERAL NOTES:

2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 07-30-08

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE CITY OF STATESVILLE - WATER, SANITARY SEWER, POWER; PSNC ENERGY - GAS; AT&T - TELEPHONE; TIME WARNER CABLE - CATV; WINDSTREAM - TELEPHONE.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

WHEELCHAIR RAMPS:

WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH STD. NO. 848.05

EFF. 07-18-06
REV. 01-02-07

2006 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
816.01	Concrete Pads - for Shoulder Drain Installation
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.05	Wheelchair Ramp - Curb Cut
862.01	Guardrail Placement
862.02	Guardrail Installation
866.01	Chain Link Fence - 4', 5' and 6' High Fence

$$$$SYSTIME$$$$
$$$$USERNAME$$$$

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
B-2576	1B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

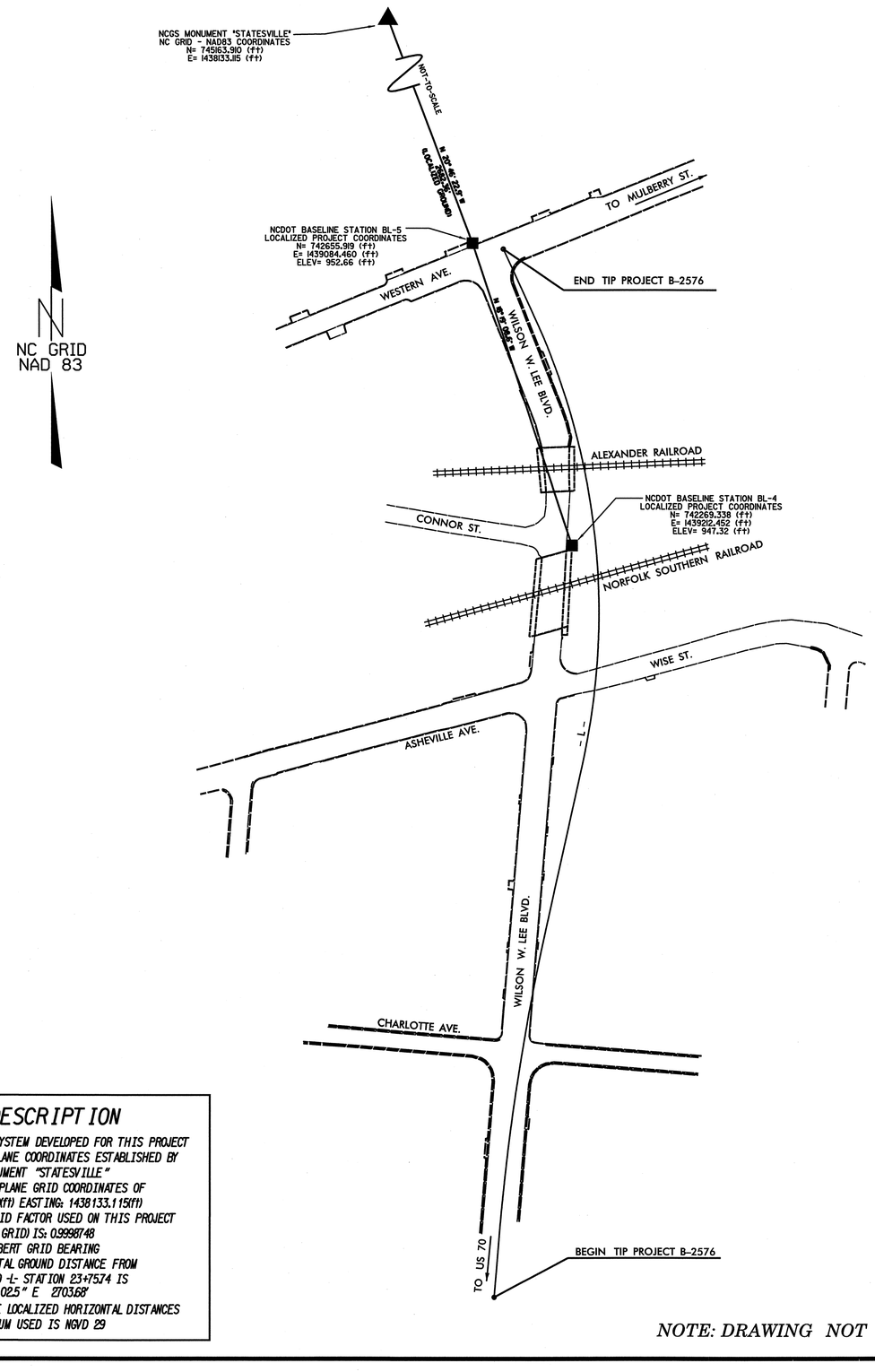
MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

12/09/05

SURVEY CONTROL SHEET B-2576

PROJECT REFERENCE NO.	SHEET NO.
B-2576	1C
Location and Surveys	



-BL-

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	741,376.7110	1,439,148.1540	956.04	10+74.21	29.63 RT
2	BL-2	741,640.4040	1,439,115.0060	950.67	13+31.43	36.45 LT
3	BL-3	742,068.7580	1,439,196.1970	945.32	17+69.17	43.20 LT
4	BL-4	742,269.3380	1,439,212.4520	947.32	19+79.05	30.42 LT
5	BL-5	742,655.9190	1,439,084.4600	952.66	23+99.11	32.83 LT

-BY1-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y1- STATION	OFFSET
6	BY1-6	741,663.2890	1,438,855.7190	946.91	9+44.80	17.61 LT
EQ2	BL-2	741,640.4040	1,439,115.0060	950.67	12+05.09	15.47 LT
7	BY1-7	741,588.1700	1,439,373.4910	948.21	14+66.92	15.99 RT

-BY2-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y2- STATION	OFFSET
8	BY2-8	742,031.5960	1,438,902.2590	934.38	10+66.04	19.66 LT
EQ3	BL-3	742,068.7580	1,439,196.1970	945.32	13+59.74	19.35 RT
9	BY2-9	742,116.4250	1,439,373.0770	937.93	15+42.93	18.36 RT

-BY3-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y3- STATION	OFFSET
10	BY3-10	742,180.9960	1,439,020.8110	912.89	10+00.25	12.83 LT
11	BY3-11	742,233.5190	1,439,312.4140	914.60	12+95.36	13.56 RT

-BY4-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y4- STATION	OFFSET
12	BY4-12	742,327.8310	1,438,999.9780	945.29	10+20.69	20.90 LT
EQ4	BL-4	742,269.3380	1,439,212.4520	947.32	12+39.84	2.32 RT

-BY5-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y5- STATION	OFFSET
13	BY5-13	742,371.8250	1,439,108.7450	930.98	11+36.75	7.36 LT
14	BY5-14	742,364.3440	1,439,361.6140	926.54	13+89.03	11.90 RT

-BY6-

POINT	DESC.	NORTH	EAST	ELEVATION	-Y6- STATION	OFFSET
15	BY6-15	742,464.8590	1,438,705.8760	949.68	8+53.56	14.26 RT
EQ5	BL-5	742,655.9190	1,439,084.4600	952.66	12+76.09	21.77 LT
16	BY6-16	742,724.8180	1,439,380.8080	947.40	15+76.74	24.86 RT

****
BM1 ELEVATION - 957.19'
N 741417 E 1439151
BL STATION 5+40 8' RIGHT
CHISELED SQUARE IN TOP OF THE SOUTH END
OF CONCRETE STAIRS
****
BM2 ELEVATION - 919.54'
N 742277 E 1439380
BL STATION 14+03 168' RIGHT
CHISELED SQUARE IN BASE OF CONCRETE
FOOTING FOR RAILROAD SIGNAL #260
****
BM3 ELEVATION - 951.35'
N 742477 E 1438756
BY6 STATION 5+50 12' RIGHT
RR SPIKE SET IN BASE OF 30" OAK TREE
****

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "STATESVILLE" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 745163.910(ft) EASTING: 1438133.115(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998748
THE N.C. LAMBERT GRID BEARING LOCALIZED HORIZONTAL GROUND DISTANCE FROM "STATESVILLE" TO -L- STATION 23+75.74 IS S 21° 30' 02.5" E 2703.68'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

NOTE: DRAWING NOT TO SCALE

NOTES:

1. GPS SITE CALIBRATION NOT AVAILABLE FOR THIS PROJECT. CONTROL TIES WERE DONE WITH CONVENTIONAL TYPE TRAVERSE SURVEY METHODS.

■ INDICATES BASELINE CONTROL MONUMENTS USED OR SET FOR HORIZONTAL AND VERTICAL PROJECT CONTROL

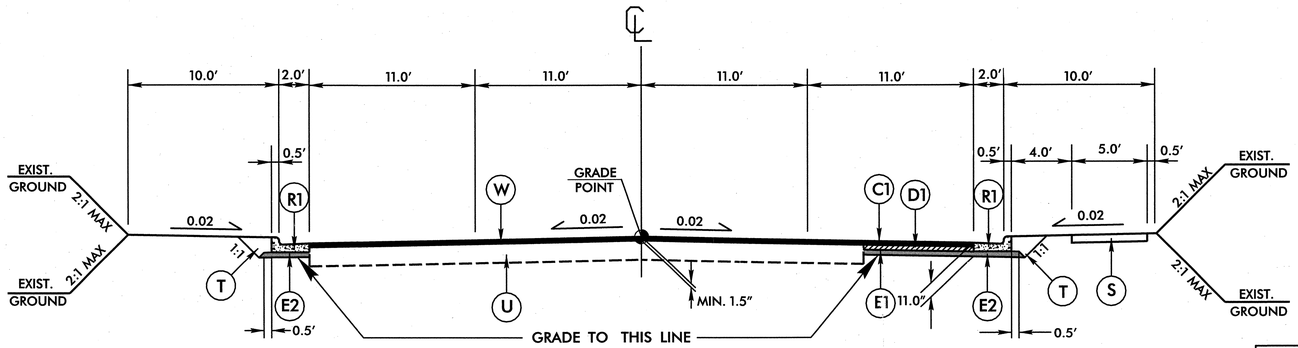
▲ INDICATES NCGS CONTROL MONUMENT USED FOR HORIZONTAL PROJECT CONTROL

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER STEPHEN T. SMALL

PAVEMENT ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 22896 ENGINEER CLARK S. MORRISON 11/23/09

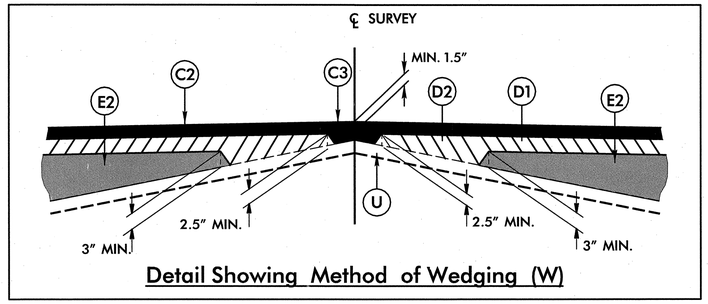
SEAL NOT VALID UNLESS SIGNED AND DATED



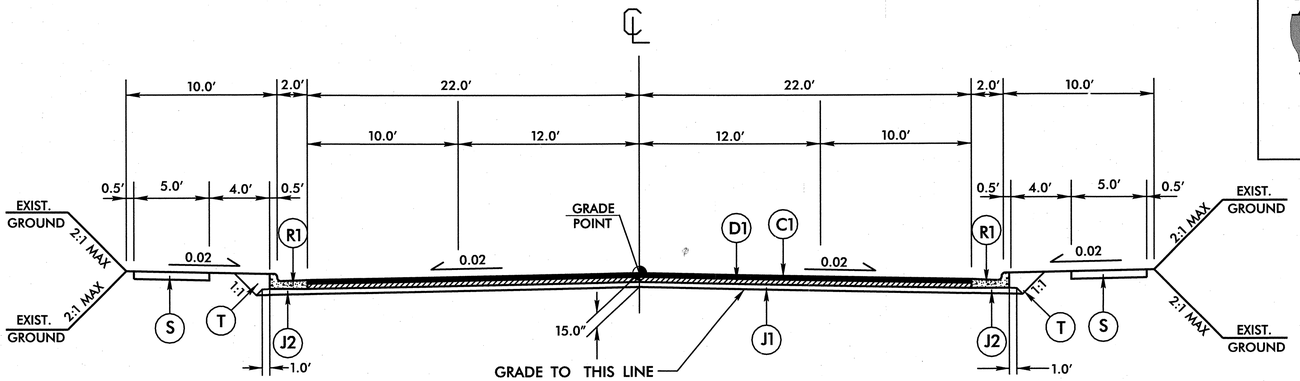
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1:
STA. 10+70.00 TO STA. 13+19.15 –L–

NOTE: SEE PLANS FOR BUMP OUT AT INTERSECTION.



Detail Showing Method of Wedging (W)



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2:
STA. 13+19.15 TO STA. 17+28.09 (APPROACH SLAB) –L–

CODE	PAVEMENT SCHEDULE
C1	PROP. APPROX. 3.0″ ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 1.5″ ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2″ IN DEPTH.
D1	PROP. APPROX. 4.0″ ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONC. INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5″ OR GREATER THAN 4″ IN DEPTH.
E1	PROP. APPROX. 4.0″ ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5.5″
J1	8″ PROPOSED AGGREGATE BASE COURSE
J2	PROPOSED VAR. DEPTH AGGREGATE BASE COURSE
R1	2′ – 6″ CONCRETE CURB AND GUTTER
S	4″ CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL ON THIS SHEET)

Note: Pavement Edge Slopes are 1:1 Unless Shown Otherwise

REVISIONS 8/17/99

ARCADIS G&M
Date:$DATE$ Time: $TIME$
Filename:$FILE$

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022003 ENGINEER STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

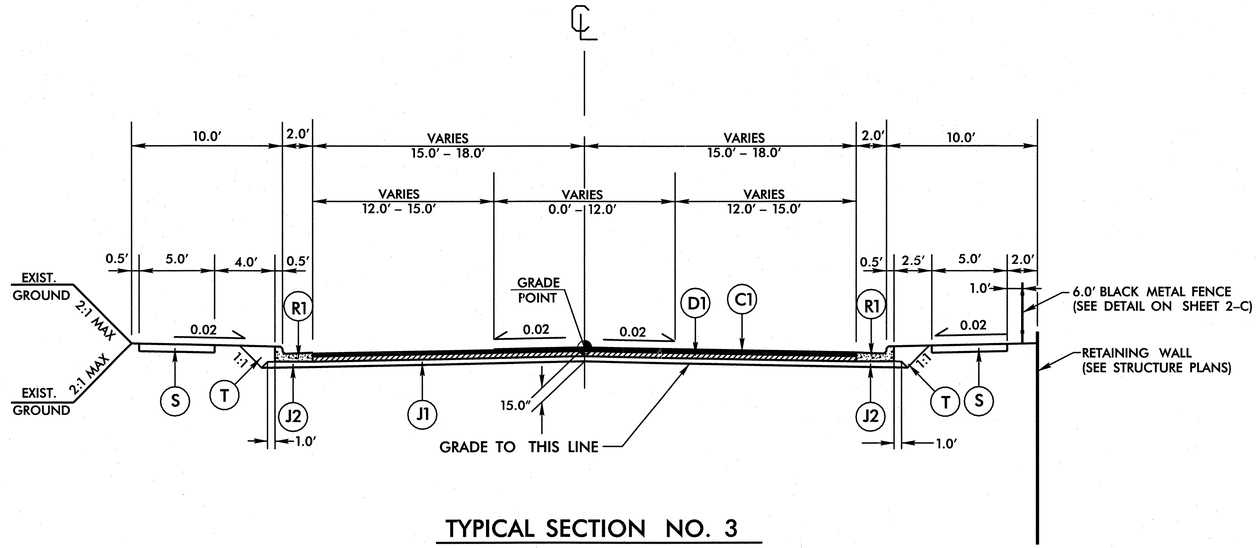
PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 22896 ENGINEER CLARK S. MORRISON

11/23/09

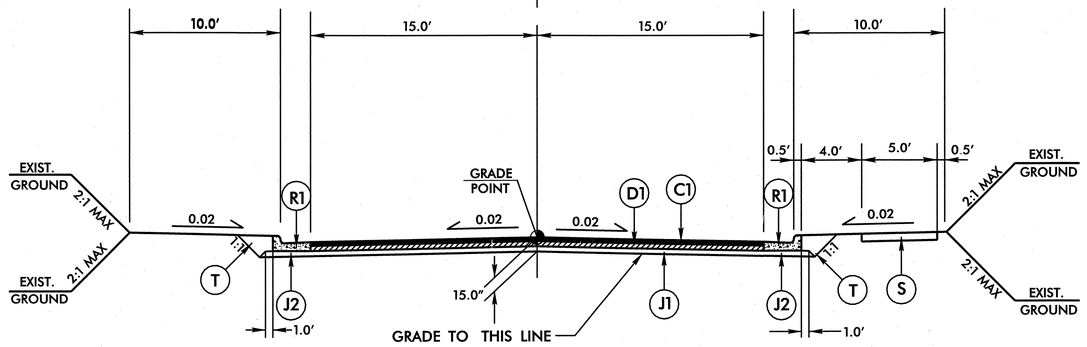
8/17/99

REVISIONS



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3:
STA. 21+55.98 (APPROACH SLAB) TO STA. 23+58.05 –L–



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4:
STA. 10+80 TO STA. 16+30 –Y2–

CODE	PAVEMENT SCHEDULE
C1	3.0″ ASPHALT, TYPE S9.5B
C2	1.5″ ASPHALT, TYPE S9.5B
C3	VAR. DEPTH ASPHALT, TYPE S9.5B
D1	4.0″ ASPHALT, TYPE I19.0B
D2	VAR. DEPTH ASPHALT, TYPE I19.0B
E1	4.0″ ASPHALT, TYPE B25.0B
E2	VAR. DEPTH ASPHALT, TYPE B25.0B
J1	8″ AGGREGATE BASE COURSE
J2	VAR. AGGREGATE BASE COURSE
R1	2′ – 6″ CONCRETE CURB AND GUTTER
S	4″ CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE SHEET 2 FOR WEDGING DETAIL)

Note: Pavement Edge Slopes are 1:1 Unless Shown Otherwise

ARCADIS G&M
Date:$DATE$ Time: $TIME$
Filename:$FILE$

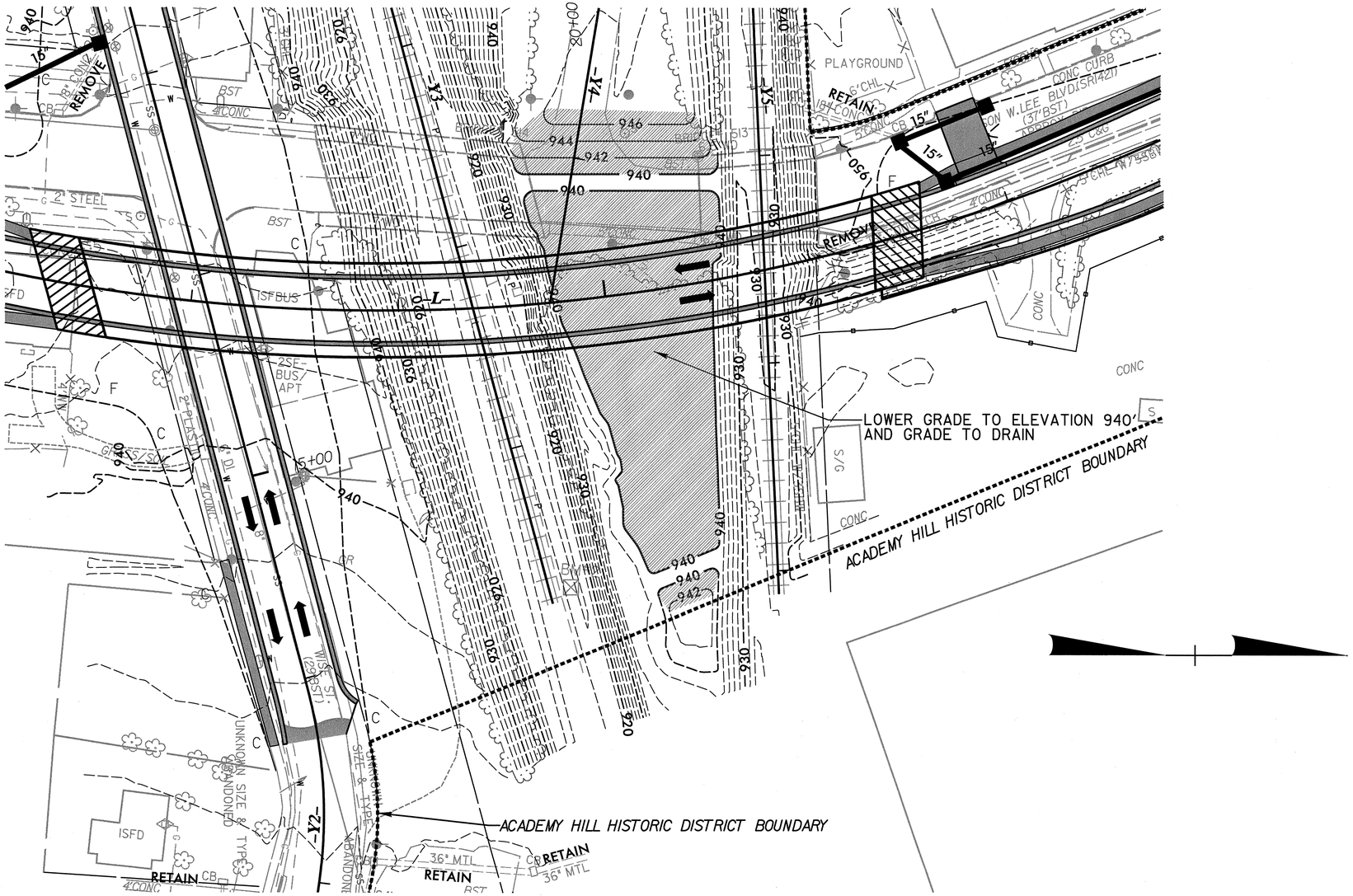
PROJECT REFERENCE NO.	SHEET NO.
B-2576	2B

ROADWAY DESIGN ENGINEER

NORTH CAROLINA
PROFESSIONAL
SEAL
022037
ENGINEER
STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

GRADING PLAN @ RAILROAD



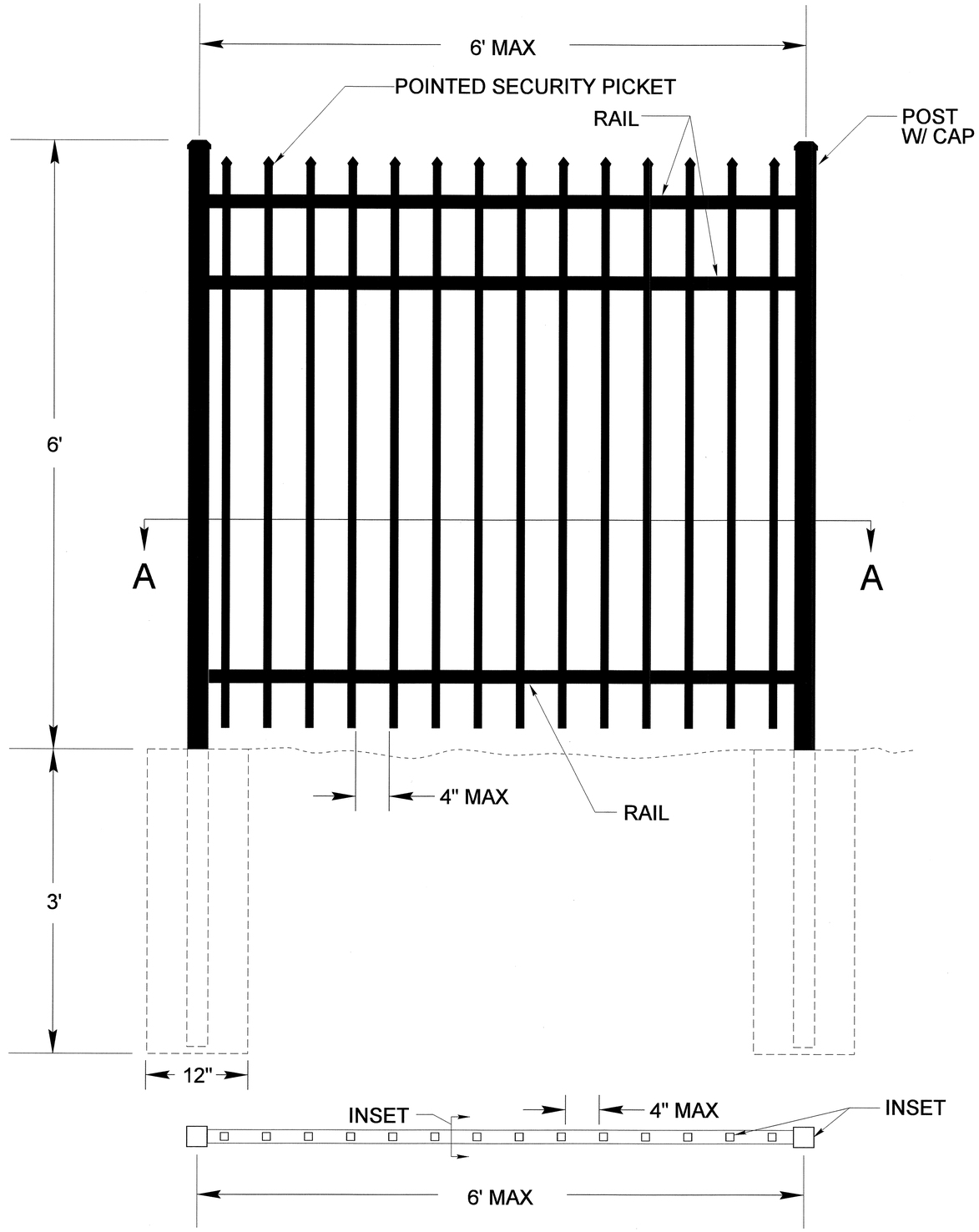
REVISIONS

8/17/99

ARCADIS G&M
Date:#DATE#
Filename:#FILE#

Time: #TIME#

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-C

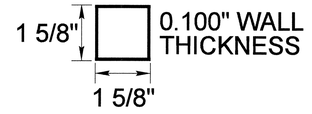


SECTION A-A

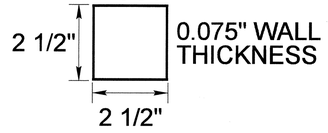
INSET

PICKET

RAIL



POST



NOTES:

1) SUBMIT ALTERNATE FENCE MATERIAL TO ENGINEER FOR APPROVAL.

2) SUBMIT ANY VARIATIONS IN FENCE DIMENSIONS TO ENGINEER FOR APPROVAL.

3) POST MAY BE DRIVEN IF IT CAUSES NO STRUCTURAL DAMAGE. (SEE MANUFACTURERS RECOMMENDATIONS)

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL B. HOWERTON
11/24/09

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

ALUMINUM ORNAMENTAL SECURITY FENCE

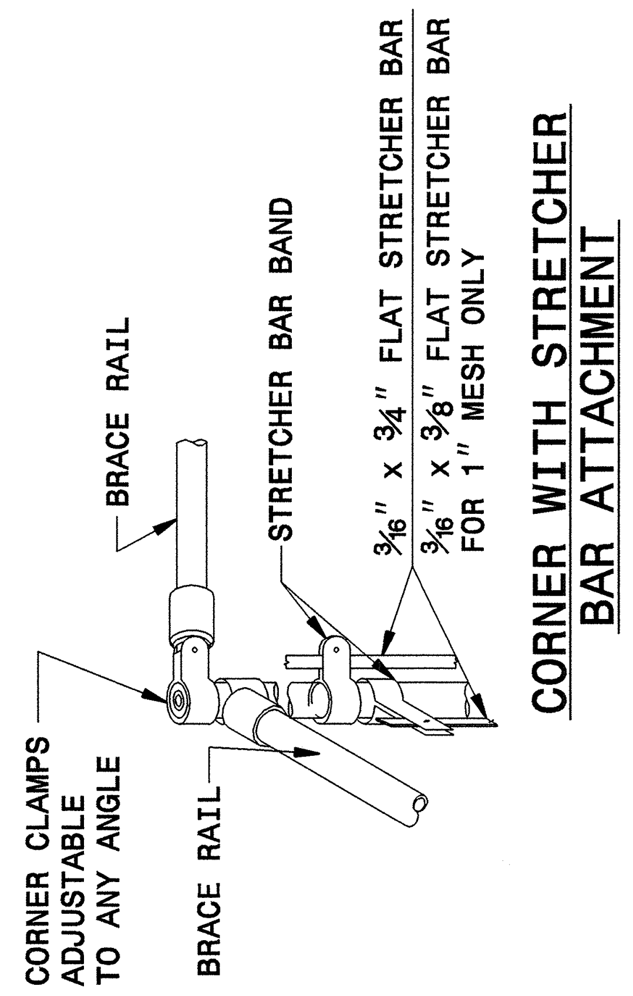
ORIGINAL BY: K KEMPF DATE: 4-2009
MODIFIED BY: DATE:
CHECKED BY: DATE: 4/16/09
FILE SPEC.:

16-APR-2009 09:30
s:\contracts\b2576\special details\kkempf\english\ornamental fence.dgn
kkempf at ps257483

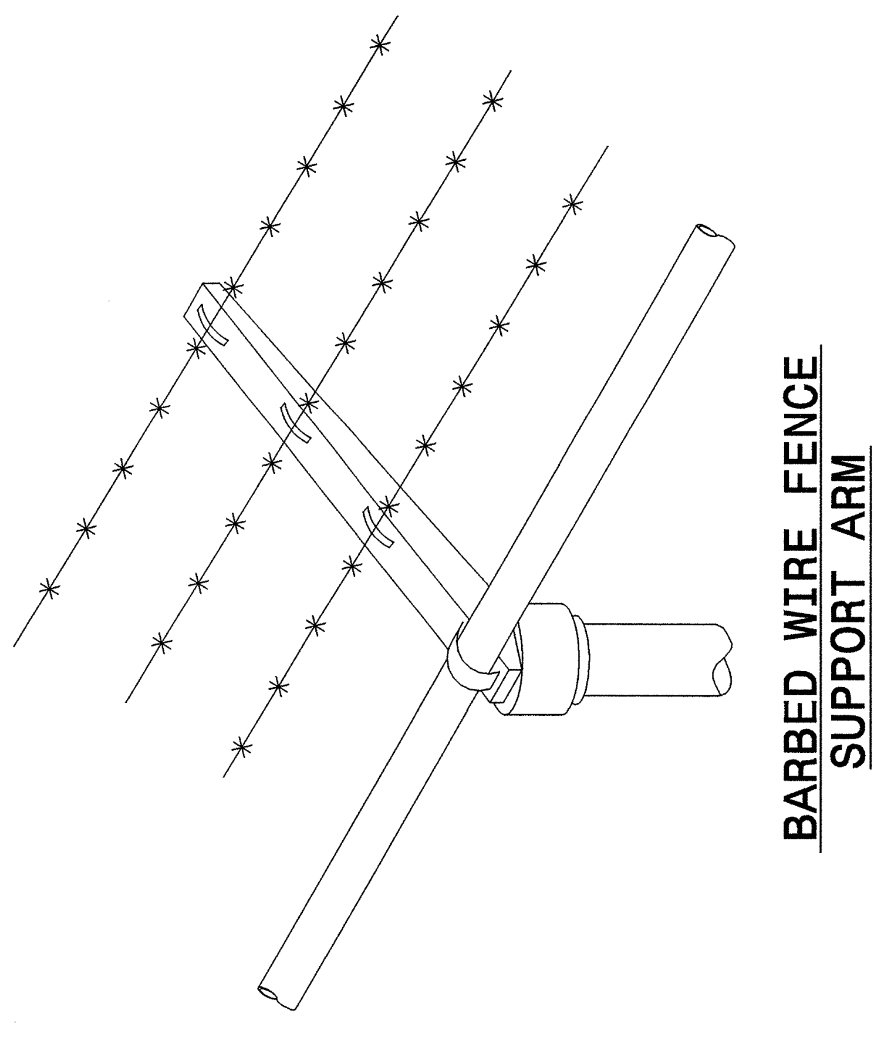
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-D

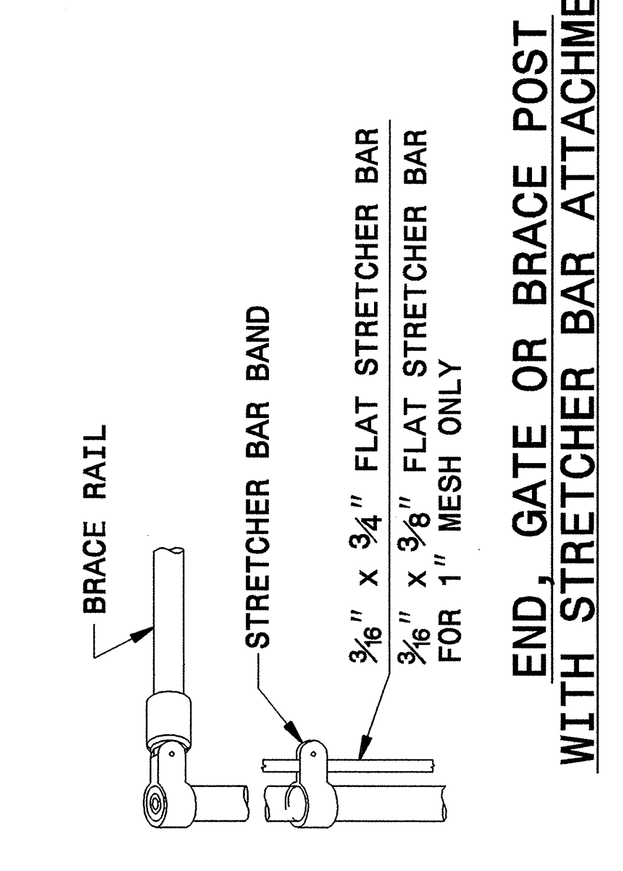
SHEET 1 OF 2 866D01
ENGLISH DETAIL DRAWING FOR
CHAIN LINK FENCE WITH BARBED WIRE
6', 7' AND 8' HEIGHT
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.



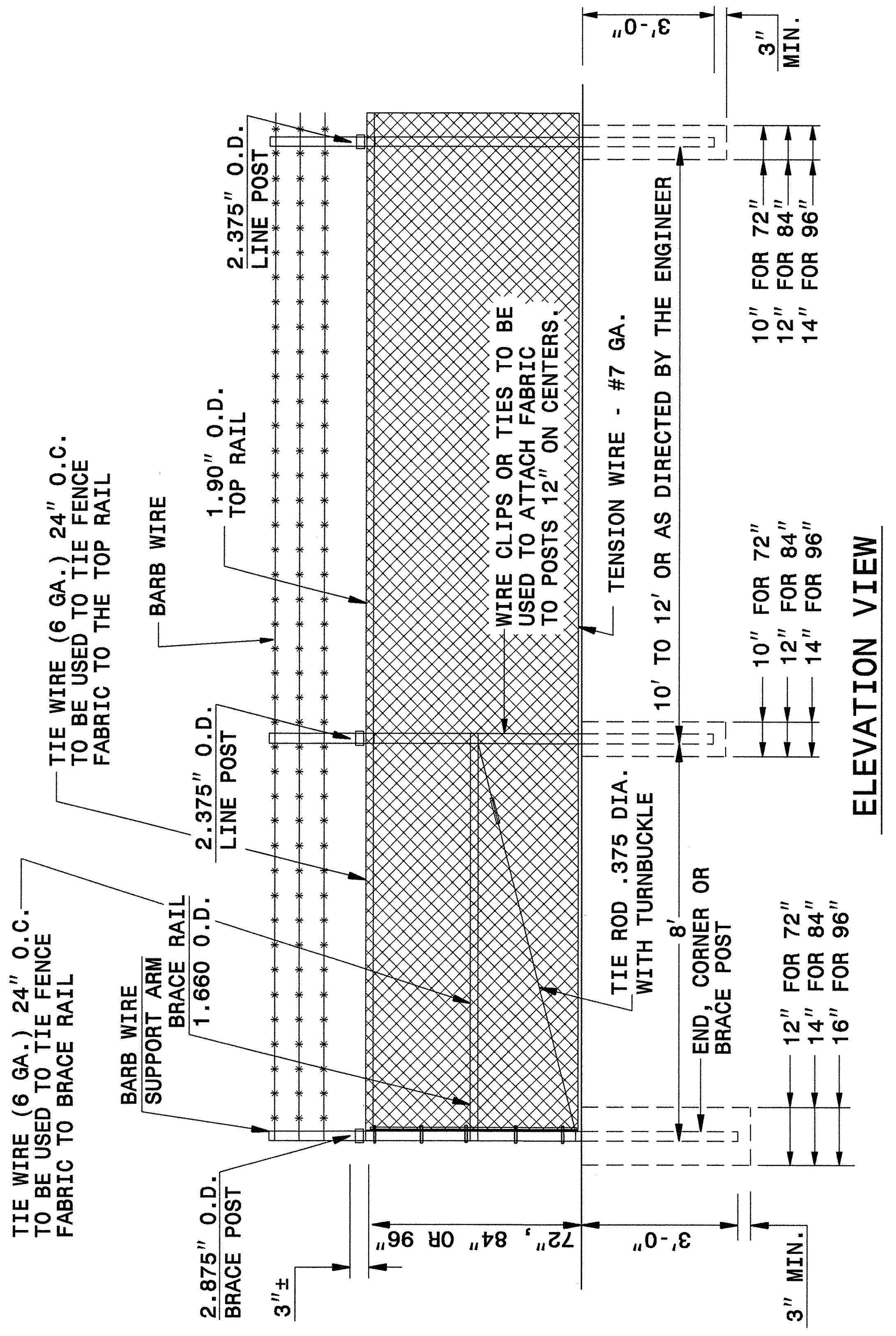
CORNER WITH STRETCHER BAR ATTACHMENT



BARBED WIRE FENCE SUPPORT ARM



END, GATE OR BRACE POST WITH STRETCHER BAR ATTACHMENT



ELEVATION VIEW

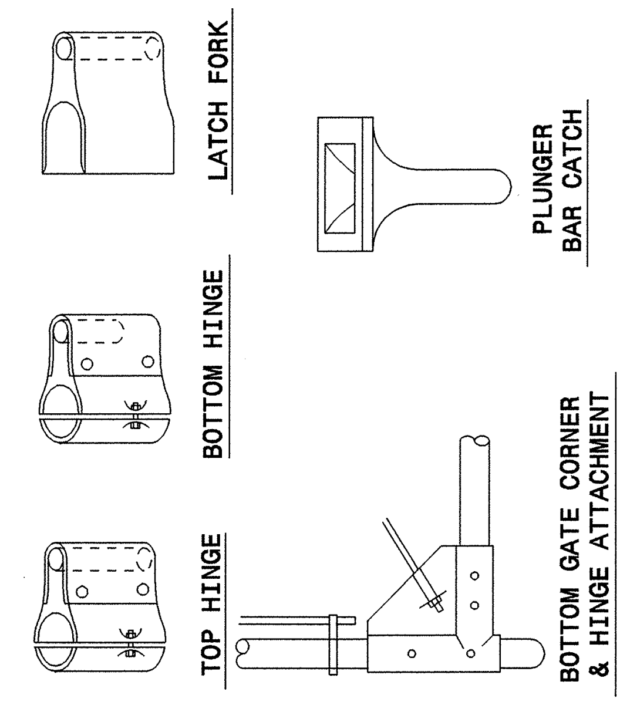
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

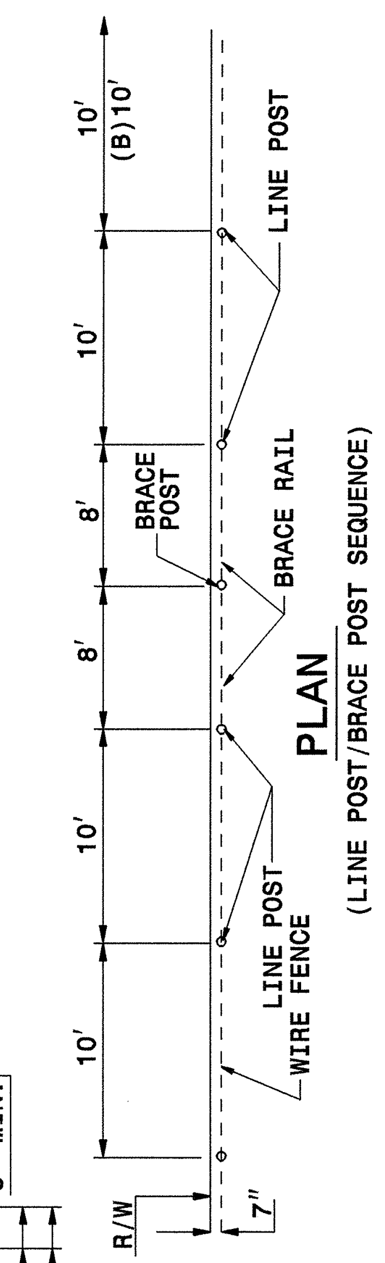
ENGLISH DETAIL DRAWING FOR
CHAIN LINK FENCE WITH BARBED WIRE
6', 7' AND 8' HEIGHT

SHEET 1 OF 2
866D01

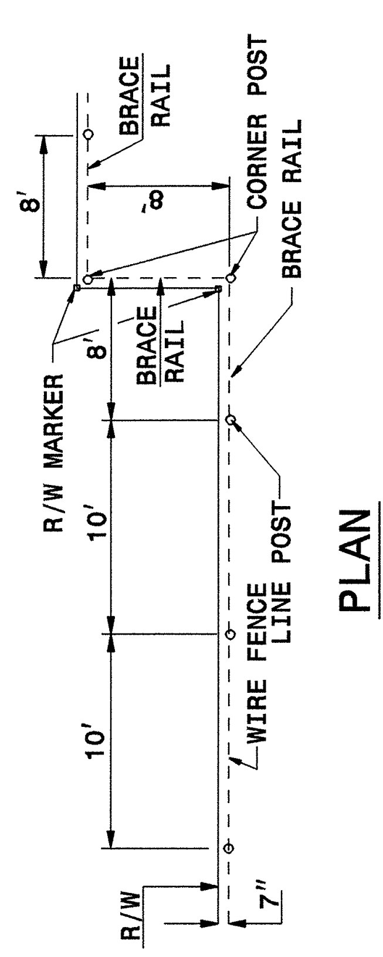
SHEET 2 OF 2 866D01
ENGLISH DETAIL DRAWING FOR
CHAIN LINK FENCE WITH BARBED WIRE
6', 7' AND 8' HEIGHT
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

NOTE: FENCE HARDWARE VARIES DUE TO DIFFERING MANUFACTURES SUPPLIES.

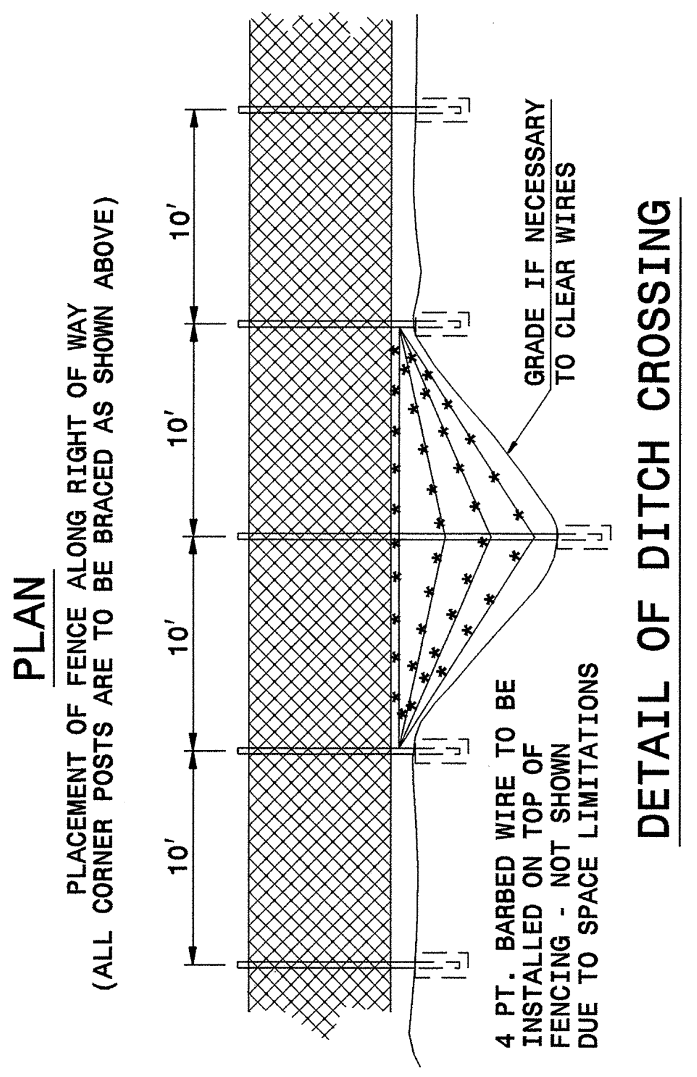




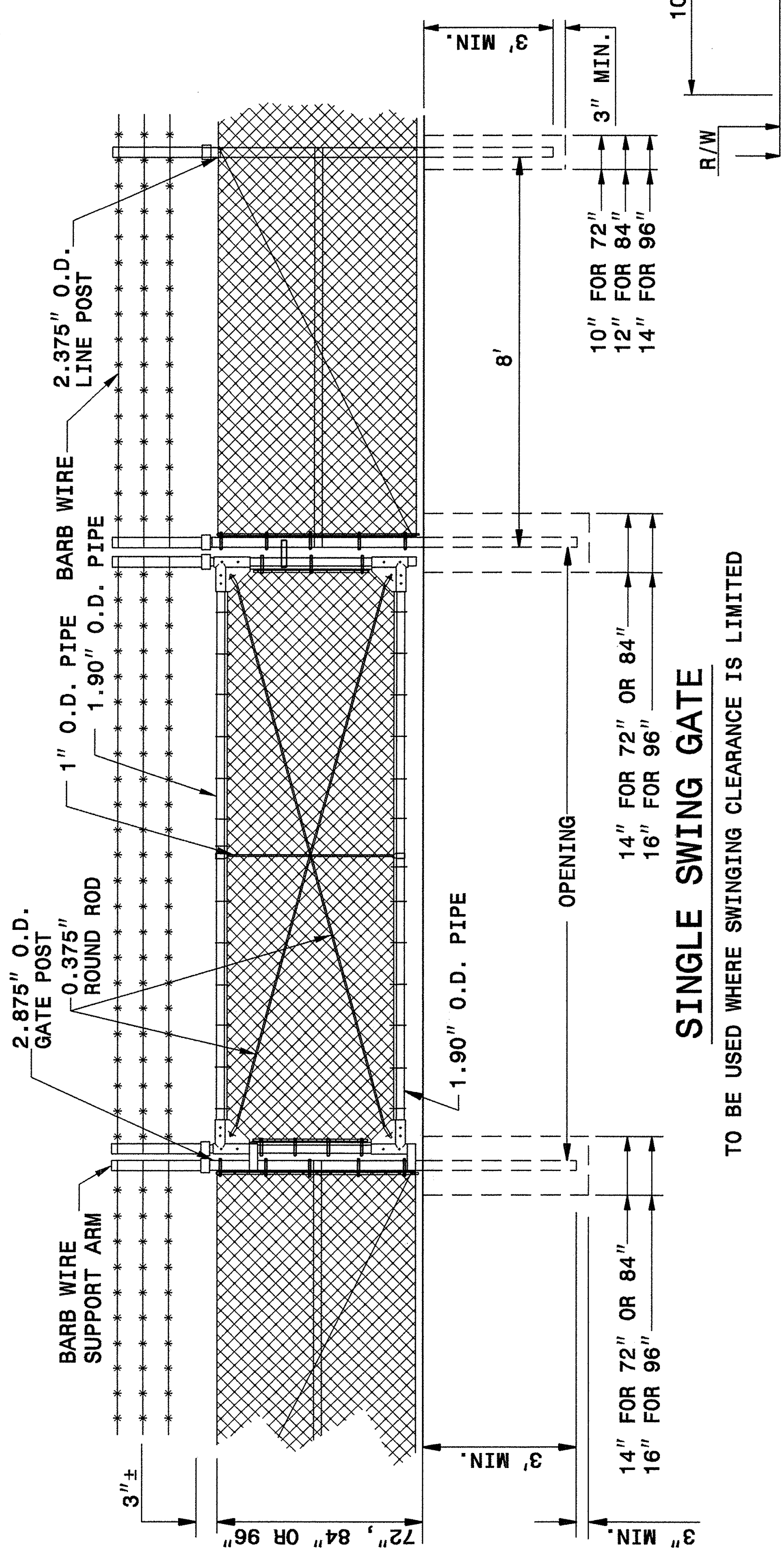
PLAN
(LINE POST/BRACE POST SEQUENCE)



PLAN
PLACEMENT OF FENCE ALONG RIGHT OF WAY
(ALL CORNER POSTS ARE TO BE BRACED AS SHOWN ABOVE)

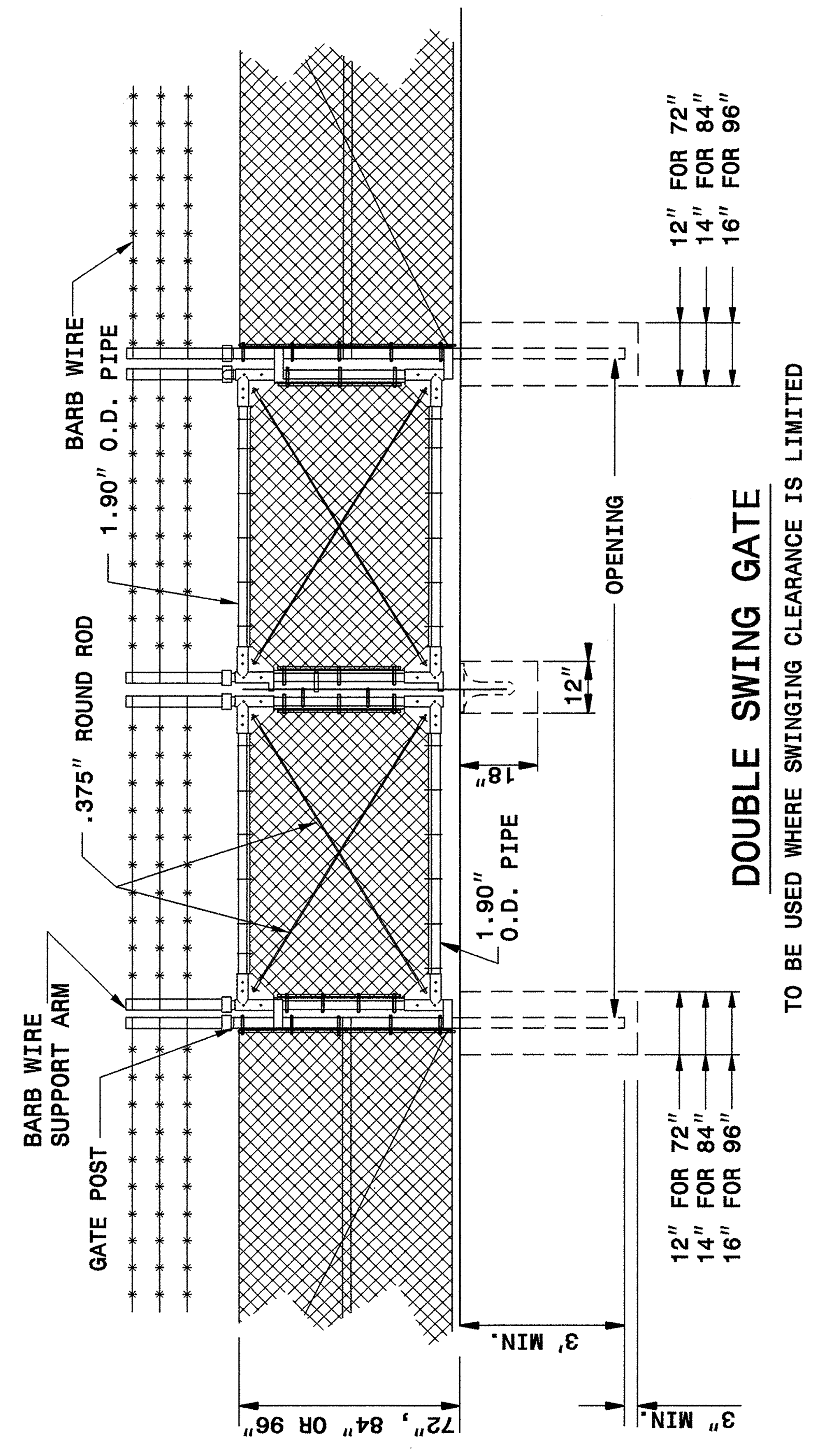


DETAIL OF DITCH CROSSING



SINGLE SWING GATE

TO BE USED WHERE SWINGING CLEARANCE IS LIMITED



DOUBLE SWING GATE

TO BE USED WHERE SWINGING CLEARANCE IS LIMITED

MAXIMUM WIRE SPACING TO BE 6".
MAXIMUM CLEARANCE BETWEEN LOWEST STRAND AND GROUND TO BE 6".
BRACE POSTS SHALL BE ERECTED BETWEEN END, CORNER OR GATE POSTS AT INTERVALS NOT EXCEEDING 700' ON TANGENTS OR 350' ON SHORT RADIUS CURVES.
ADDTIONAL BRACE POSTS SHALL BE ERECTED IF SO DIRECTED BY THE ENGINEER.
BRACE POSTS SHALL BE BRACED FROM BOTH SIDES OF POST.

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

ENGLISH DETAIL DRAWING FOR
CHAIN LINK FENCE WITH BARBED WIRE
6', 7' AND 8' HEIGHT

SHEET 2 OF 2
866D01

SEAL 022966
JOEL S. HOWERTON
11/24/09

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: N.T. KEGLERS DATE: MAR.11, 1996
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

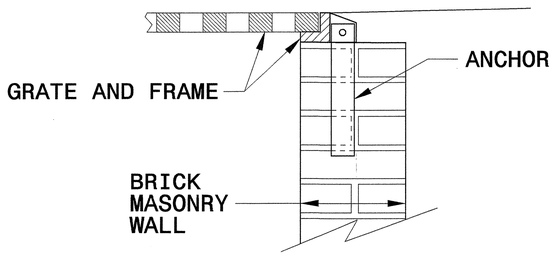
$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-E

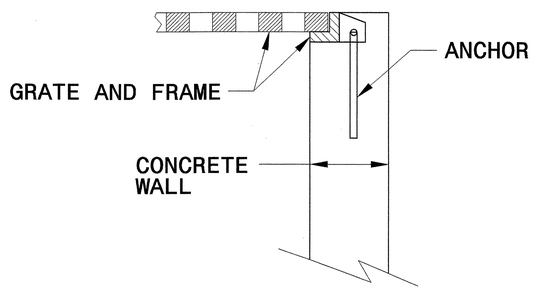
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

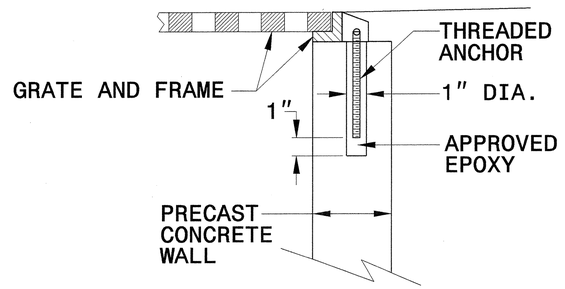
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



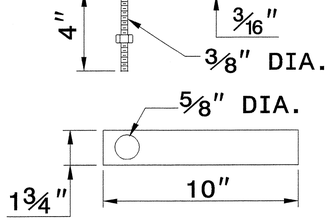
CONCRETE CONSTRUCTION



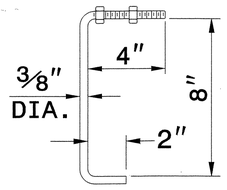
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

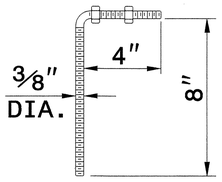
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



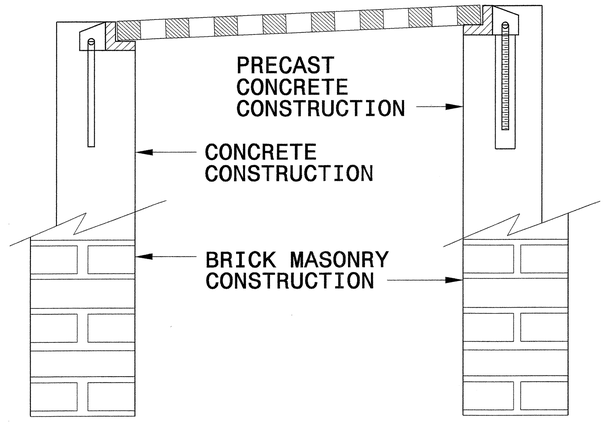
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

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

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOEL S. HOWERTON
11/24/09

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY:	2006 STD 840.25	DATE: 07/18/06
MODIFIED BY:	E.E. WARD	DATE: 9/25/06
CHECKED BY:		DATE: 11/24/08
FILE SPEC.:		

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$
$$$$$$DGN$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

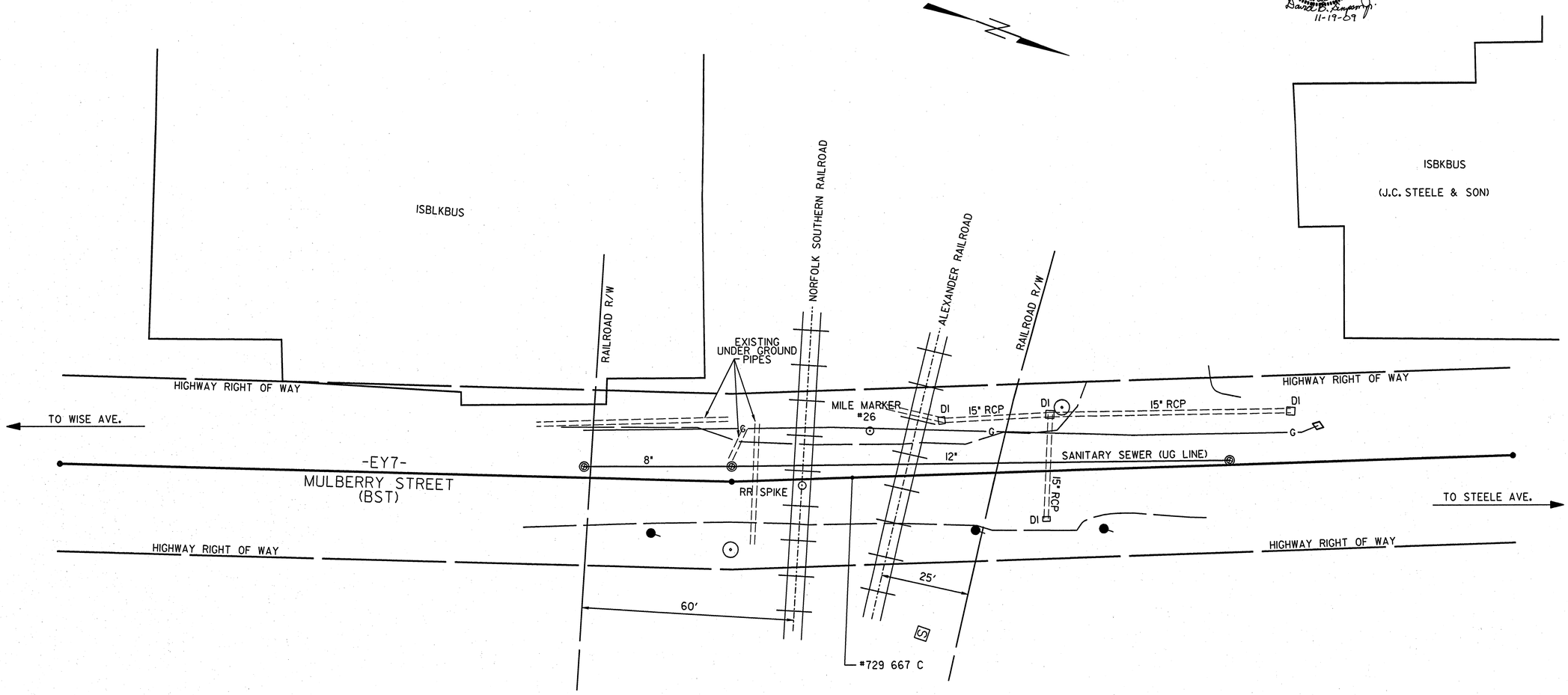
PLANS PREPARED BY:

SIMPSON ENGINEERS & ASSOCIATES

5520 Dillard Drive
Suite 120
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com

NORTH CAROLINA PROFESSIONAL SEAL 19831 ENGINEER DAVID B. SIMPSON, PE

David B. Simpson 11-19-09



RAILROAD CROSSING CLOSURE
PHASE I

(EXISTING INTERSECTION)

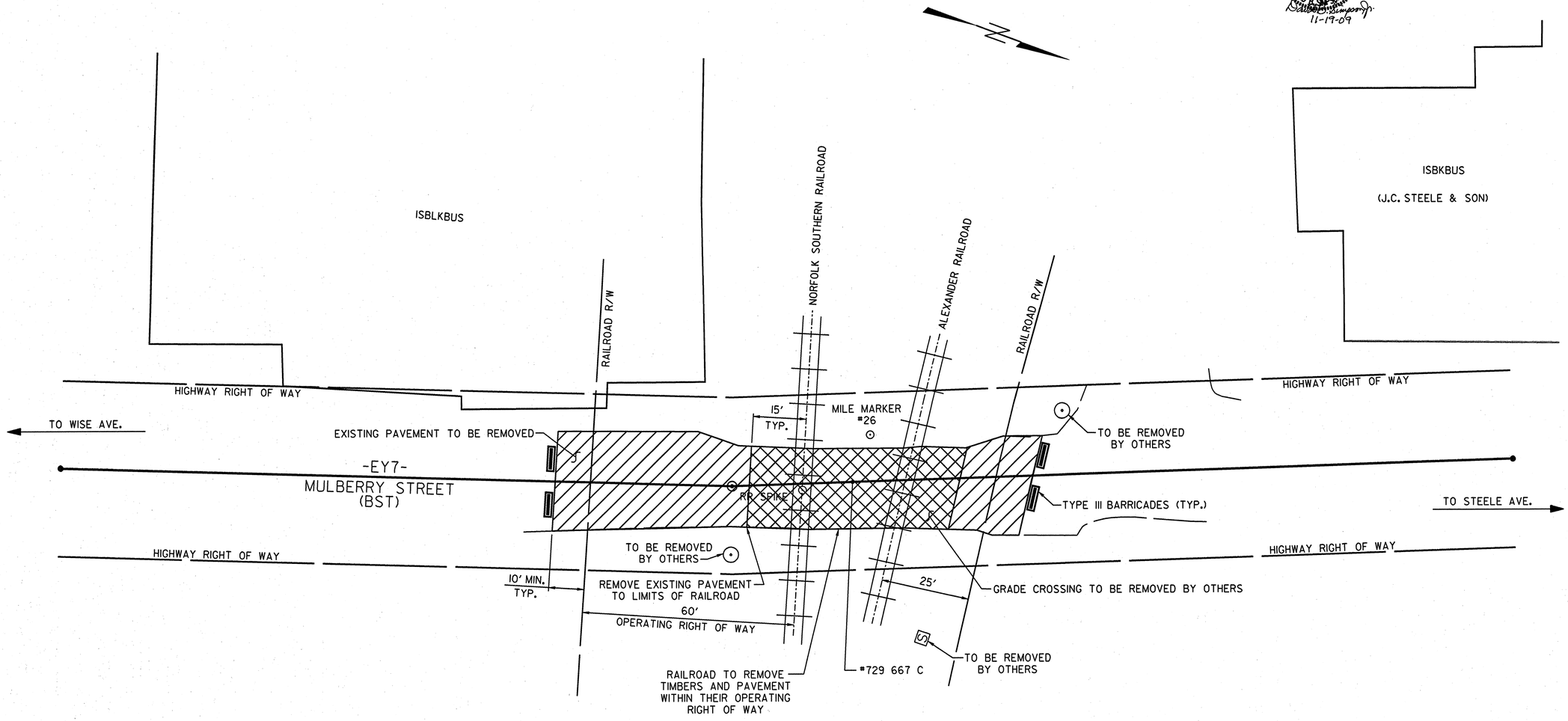
DRAWN BY :	D.G. VESTER	DATE :	5-09
CHECKED BY :	D.B. SIMPSON	DATE :	5-09

1/9/2009 4:59:05 PM g:\projects\NCDOT-RailDivision\Mulberry Street\Drawings\B-2576_rd_rc_01.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-G
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
5520 Dillard Drive
Suite 120
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com

NORTH CAROLINA PROFESSIONAL SEAL 19831 ENGINEER DAVID B. SIMPSON
11-19-09



RAILROAD CROSSING CLOSURE
PHASE II

(REMOVAL OF PAVEMENT AND SIGNAGE)

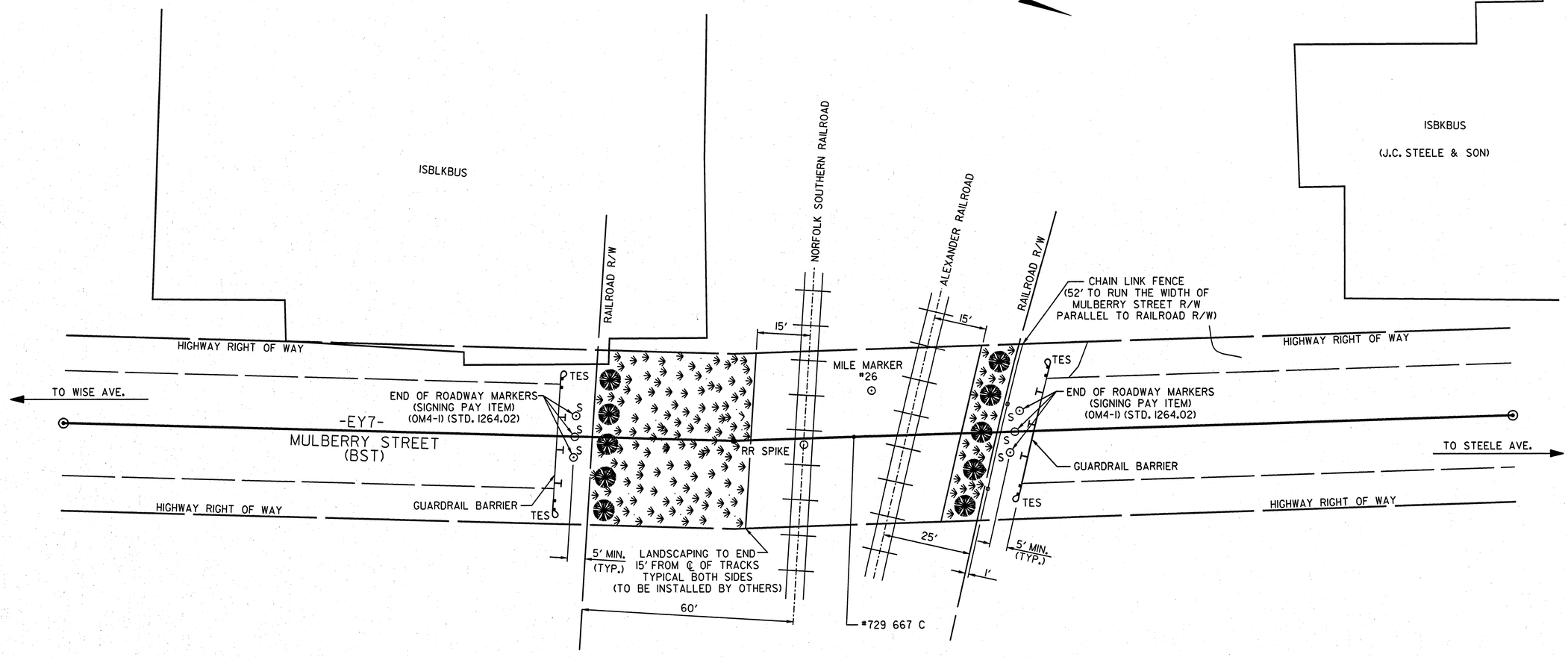
DRAWN BY :	D.G. VESTER	DATE :	5-09
CHECKED BY :	D.B. SIMPSON	DATE :	5-09

11/19/2009 4:59:06 PM G:\projects\NCDOT-RailDivision\Mulberry Street\Drawings\B-2576_rd_rc_02.dgn

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
5520 Dillard Drive
Suite 120
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com

NORTH CAROLINA PROFESSIONAL SEAL 19831 ENGINEER DAVID B. SIMPSON, JR.
11-19-09

PROJECT REFERENCE NO.	SHEET NO.
B-2576	2-H
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



RAILROAD CROSSING CLOSURE
PHASE III

(LANDSCAPING TO BE INSTALLED BY OTHERS)

OM4-1
(Std. 1264.01, Alt. 2)

Guardrail	
Steel Beam Guardrail	LENGTH
South Side	37.5'
North Side	37.5'
Total	75'
Terminal End Section Anchors	Quantity
South Side	2
North Side	2
Total	4
ADDITIONAL G/R POSTS	5

DRAWN BY : D.G. VESTER DATE : 5-09
CHECKED BY : D.B. SIMPSON DATE : 5-09

11/20/2009 9:59:30 AM G:\Projects\NC007-Rail Division\Mulberry Street\Drawings\B-2576_rd_rc_03.dgn

30-JUL-2009 08:48
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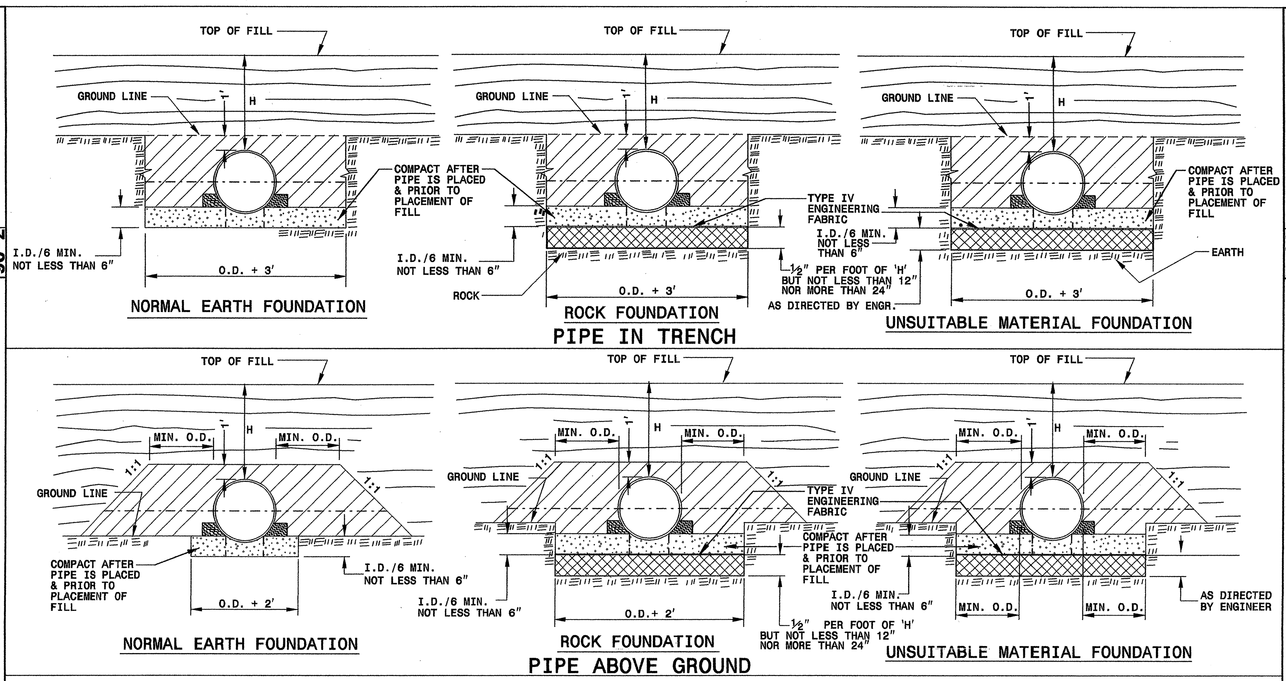
jhowerton AT PS237501

5/14/99

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL.

UNDISTURBED EARTH MATERIAL

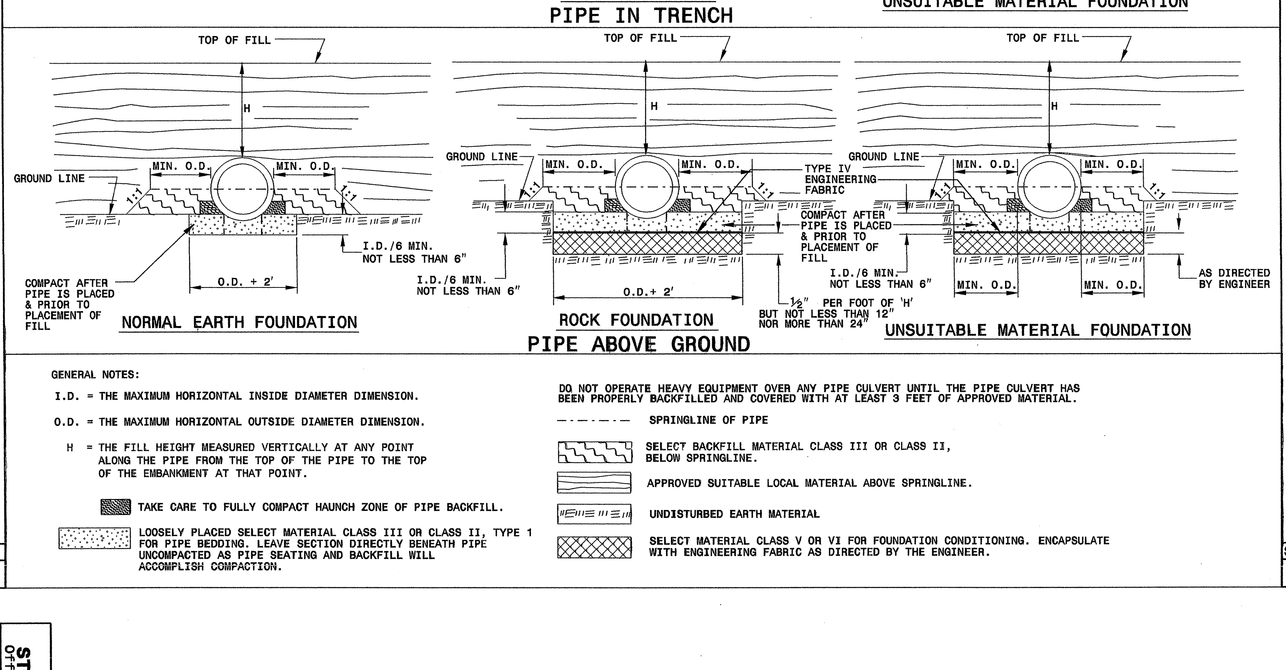
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

SHEET 1 OF 3
300D01

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

SHEET 2 OF 3
300D01

SEE PLATE FOR TITLE

ORIGINAL BY: KMcenpf DATE: 5-15-09
MODIFIED BY: DATE:
CHECKED BY: DATE: 7/9/09
FILE SPEC: s:\contracts\contracts\special details\ericward\stds\stdetodetails\30001\0300d01.dgn

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025166 ERIC WARD
11/24/09

PROJECT REFERENCE NO. B-2576
SHEET NO. 2-1

5/14/99

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

7-06

ENGLISH DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FILL HEIGHT TABLES

SHEET 3 OF 3

300D01

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	204	256			
15	12	162	204			
18	12	135	169	239		
21	12	115	145	204		
24	12	100	126	178		
30	12	79	100	142		
36	12	65	83	117	152	
42	12	55	70	100	130	160
48	12	48	61	87	113	139
54	12		54	77	100	123
60	12			69	90	111
66	12				81	100
72	12				74	91
78	12					81
84	12					69

Round Corrugated Aluminum Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	123	155	218	281	344
15	12	98	123	174	224	275
18	12	81	102	144	187	228
21	12	69	87	123	160	195
24	12	60	76	108	139	171
27	12		67	95	123	151
30	12		60	85	111	136
36	12		50	71	92	113
42	12			60	78	96
48	12			52	68	84
54	12			46	50	74
60	12				50	62
66	12					51
72	12					41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

HDPE - * (Minimum fill) 2′ for pipe diameters ≥ 12″ and ≤ 60″
* (Maximum fill) 20′ for pipe diameters ≤ 24″
17′ for pipe diameters ≥ 30″ and ≤ 60″

PVC - * (Minimum fill) 2′ for pipe diameters ≥ 12″ and ≤ 36″
* (Maximum fill) 30′ for pipe diameters ≥ 12″ and ≤ 36″

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

CSP - AASHTO M36
CAAP - AASHTO M196
HDPE - AASHTO M294
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1′ MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

RIGID PIPE

RCP - * (Minimum fill) 1′ for Class IV & CLASS V
2′ for Class III & Class II

* (Maximum fill) 10′ - Class II pipe
20′ - Class III pipe
30′ - Class IV pipe
40′ - Class V pipe

(For fills > 40′ & < 80′ use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1′ MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

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

7-06

ENGLISH DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FILL HEIGHT TABLES

SHEET 3 OF 3

300D01

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

ORIGINAL BY: KKempf DATE: 5-15-09
MODIFIED BY: DATE:
CHECKED BY: DATE: 7/5/11
FILE SPEC: e:\erickward\stds\stdstcodet\ta1a\30001\0300d01.dgn

SEE PLATE FOR TITLE

PROJECT REFERENCE NO. B-2576
SHEET NO. 2-J

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202158

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0022000000-E	225	10,000	CY	UNCLASSIFIED EXCAVATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ********** (19+42)
0036000000-E	225	1,175	CY	UNDERCUT EXCAVATION
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0063000000-N	SP	Lump Sum		GRADING
0080000000-E	SP	1,250	TON	CLASS IV SUBGRADE STABILIZATION
0195000000-E	265	500	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	1,250	SY	FABRIC FOR SOIL STABILIZATION
0255000000-E	SP	45	TON	GENERIC GRADING ITEM EXCAVATION, HAULING, & DISPOSAL OF CONTAMINATED SOIL
0320000000-E	SP	190	SY	FOUNDATION CONDITIONING FABRIC
0330000000-E	SP	155	TON	GENERIC DRAINAGE ITEM FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0335200000-E	SP	140	LF	15" DRAINAGE PIPE
0986000000-E	SP	376	LF	GENERIC PIPE ITEM 15" RC PIPE CULVERTS, CLASS IV
0986000000-E	SP	40	LF	GENERIC PIPE ITEM 15" SIDE DRAIN PIPE
0995000000-E	340	87	LF	PIPE REMOVAL
1121000000-E	520	2,380	TON	AGGREGATE BASE COURSE
1220000000-E	545	500	TON	INCIDENTAL STONE BASE
1489000000-E	610	50	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	975	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1519000000-E	610	870	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1560000000-E	620	105	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	135	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2022000000-E	815	112	CY	SUBDRAIN EXCAVATION
2033000000-E	815	84	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	500	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	15	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2286000000-N	840	9	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	3.8	LF	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.16
2374000000-N	840	2	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
2374000000-N	840	1	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
2374000000-N	840	3	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
2549000000-E	846	3,300	LF	2'-6" CONCRETE CURB & GUTTER
2591000000-E	848	970	SY	4" CONCRETE SIDEWALK
2605000000-N	848	6	EA	CONCRETE WHEELCHAIR RAMPS
2612000000-E	848	500	SY	6" CONCRETE DRIVEWAY
2830000000-N	858	2	EA	ADJUSTMENT OF MANHOLES
2845000000-N	858	6	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
3030000000-E	862	75	LF	STEEL BM GUARDRAIL
3105000000-N	862	4	EA	STEEL BM GUARDRAIL TERMINAL SECTIONS
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3533000000-E	866	52	LF	CHAIN LINK FENCE, **" FABRIC (72")

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ItemNumber	Sec #	Quantity	Unit	Description
3539000000-E	866	4	EA	METAL LINE POSTS FOR **" CHAIN LINK FENCE (72")
3545000000-E	866	2	EA	METAL TERMINAL POSTS FOR **" CHAIN LINK FENCE (72")
3575000000-E	SP	230	LF	GENERIC FENCING ITEM ALUMINUM ORNAMENTAL FENCE (BLACK)
3575000000-E	SP	320	LF	GENERIC FENCING ITEM TEMP CHAIN LINK FENCE, 72" FABRIC, 3 STRANDS BARB WIRE
3578000000-N	SP	27	EA	GENERIC FENCING ITEM TEMPORARY METAL LINE POSTS FOR 72" CHAIN LINK FENCE
3578000000-N	SP	3	EA	GENERIC FENCING ITEM TEMPORARY METAL TERMINAL POSTS FOR 72" CHAIN LINK FENCE
3656000000-E	876	725	SY	FILTER FABRIC FOR DRAINAGE
4025000000-E	901	13.5	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)
4072000000-E	903	72	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	6	EA	SIGN ERECTION, TYPE E
4400000000-E	1110	443	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	240	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	34	EA	DRUMS
4445000000-E	1145	320	LF	BARRICADES (TYPE III)
4450000000-N	1150	600	HR	FLAGGER
4507000000-E	SP	413	LF	WATER FILLED BARRIER
4520000000-N	1266	42	EA	TUBULAR MARKERS (FIXED)
4780000000-E	1205	100	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (8") (IV)
4805000000-N	1205	1	EA	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (IV)
4810000000-E	1205	13,397	LF	PAINT PAVEMENT MARKING LINES (4")
4820000000-E	1205	106	LF	PAINT PAVEMENT MARKING LINES (8")
4835000000-E	1205	112	LF	PAINT PAVEMENT MARKING LINES (24")
4840000000-N	1205	32	EA	PAINT PAVEMENT MARKING CHARACTER
4845000000-N	1205	34	EA	PAINT PAVEMENT MARKING SYMBOL
5325600000-E	1510	655	LF	6" WATER LINE
5325800000-E	1510	523	LF	8" WATER LINE
5326200000-E	1510	171	LF	12" WATER LINE
5540000000-E	1515	2	EA	6" VALVE
5546000000-E	1515	4	EA	8" VALVE
5558000000-E	1515	2	EA	12" VALVE
5648000000-N	1515	7	EA	RELOCATE WATER METER
5672000000-N	1515	2	EA	RELOCATE FIRE HYDRANT
5691300000-E	1520	411	LF	8" SANITARY GRAVITY SEWER
5768000000-N	1520	3	EA	SANITARY SEWER CLEAN-OUT
5775000000-E	1525	5	EA	4' DIA UTILITY MANHOLE
5800000000-E	1530	640	LF	ABANDON 6" UTILITY PIPE
5801000000-E	1530	576	LF	ABANDON 8" UTILITY PIPE
5804000000-E	1530	135	LF	ABANDON 12" UTILITY PIPE
5828000000-N	1530	1	EA	REMOVE UTILITY MANHOLE
5871500000-E	1550	18	LF	TRENCHLESS INSTALLATION OF 8" IN SOIL
5871510000-E	1550	18	LF	TRENCHLESS INSTALLATION OF 8" NOT IN SOIL
6000000000-E	1605	4,900	LF	TEMPORARY SILT FENCE
6006000000-E	1610	350	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	200	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	175	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	4	ACR	TEMPORARY MULCHING

ItemNumber	Sec #	Quantity	Unit	Description
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	1.5	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	30	LF	TEMPORARY SLOPE DRAINS
6030000000-E	1630	490	CY	SILT EXCAVATION
6036000000-E	1631	1,720	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	15	SY	COIR FIBER MAT
6042000000-E	1632	410	LF	1/4" HARDWARE CLOTH
6071010000-E	SP	40	LF	WATTLE
6071020000-E	SP	14	LB	POLYACRYLAMIDE (PAM)
6071030000-E	SP	140	LF	COIR FIBER BAFFLES
6071050000-E	SP	2	EA	**" SKIMMER (1-1/2")
6084000000-E	1660	5	ACR	SEEDING & MULCHING
6087000000-E	1660	1.5	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	75	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	2	TON	FERTILIZER TOPDRESSING
6114500000-N	SP	5	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL

$$$$SYSTIME$$$$ $$$$DGN$$$$ $$$$USERNAME$$$$

\\Pdn\B2576 RDY SUBLANK 03.dgn 4/16/2009 11:37:46 AM

NC1D-SSMALLWOOD

COMPUTED BY: S. Smallwood DATE: 4/8/2009

CHECKED BY: T. Archer DATE: 4/10/2009

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
B-2576	3-A

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	C.S. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"	CLASS IV R.C. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"
THICKNESS OR GAUGE																.064	.064	.064	.064	.079	.079	.109	.109								
14+74.55	RT	1		948.5																											
		1	2		945.5	945.28	X																		44						
14+73.47	LT	2		948.5																											
		2	3		945.28	944.28	X																		196						
16+71.50	LT	3		952.65																											
		3	4		944.28	943.35			48																						
16+75.00	LT	4		945.6																											
		4	5		943.35	932.05			64																						
12+80.00 -Y2-	RT	5		935	932.05																										
23+16.50	LT	6		951.96																											
		6	7		948.96	948.24	X																		136						
21+78.00	LT	7		953.66																											
		7	9		948.24	946.15			28																						
22+05.00	LT	8		949.3																											
		8	9		947.05	946.15																									
21+60.00	LT	9		948.55	946.15																										
SHEET TOTAL									140																376						
GRAND TOTAL									140																376						

STATION	STRUCTURE NO. FROM	STRUCTURE NO. TO	15" Side Drain Pipe	** " Contractor Design Pipe	** " Contractor Design Pipe	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME WITH TWO GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	MANHOLE STD. 840.51	M.H. STD. 840.51 OR 840.53	M.H. FRAME AND COVER STD. 840.54	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
14+74.55	1							1			1	1																										
	1	2																																				
14+73.47	2							1			1	1																										
	2	3																																				
16+71.50	3							1	3.37		1		1																									
	3	4																												X	X							
16+75.00	4							1									1	1																				
	4	5																											X	X	X						35	
12+80.00 -Y2-	5							1			1			1																								
23+16.50	6							1			1			1																								
	6	7																																				
21+78.00	7							1	0.42		1			1																								
	7	9																												X	X							
22+05.00	8							1									1	1																			52	
	8	9	40																																			
21+60.00	9							1									1	1																				
SHEET TOTAL								9	3.79		6	2	1	3			3	3																			87	
GRAND TOTAL			40					9	3.8		6	2	1	3			3	3																			87	

C.B.
N.D.I.
D.I.
G.D.I.
G.D.I.(N.S.)

J.B.
M.H.
T.B.D.I.

T.B.J.B.

ABBREVIATIONS CATCH
BASIN
NARROW DROP INLET
DROP INLET
GRATED DROP INLET
(NARROW SLOT)
JUNCTION BOX
MANHOLE
TRAFFIC BEARING DROP
INLET
TRAFFIC BEARING
JUNCTION BOX

COMPUTED BY: S. Smallwood DATE: 4/8/2009
CHECKED BY: _____ DATE: _____

PROJECT NO.	SHEET NO.
B-2576	3-B

RD238355

RD223236

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Undercut	Embank. +%	Borrow	Waste
-L-						
10+70	17+52	286		5304	5017	
-Y2-						
10+70	16+30	6777		1		6776
SUBTOTAL		7063		5304	5017	6776
-L-						
21+32	23+00	0		3429	3429	
SUBTOTAL		0		3429	3429	
-EARTHMOUND-		3031		0	0	3031
SUBTOTAL		3031		0	0	3031
TOTAL		10094		8733	8446	9807
LOSS DUE TO CLEAR. & GRUB.		-200				-200
SEL. GRAN. MAT IN LIEU OF BORROW					-500	-500
WASTE IN LIEU OF BORROW					-7946	-7946
PROJECT TOTALS:		9894		8733	0	1161
EST. FOR REPLACING TOP SOIL ON BORROW PITS					0	
GRAND TOTALS:		9894			0	1161
SAY:		10000				

EST. UNDERCUT =1175 CY
EST. CONTAMINATED SOIL = 45 TONS

Note: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD^2
-L-	11+30	13+04	LT	101
-L-	13+37	17+68	LT	573
-Y2-	10+80	16+30	CL	1772
-L-	17+91	18+69	LT	256
-Y4-	10+40	12+35	CL	759
-L-	21+15	23+65	LT	460
Mulberry Street RR x-over				375
			TOTAL:	4296
			SAY:	4300

Approximate quantities only. Fine grading, clearing & grubbing, breaking of existing asphalt pavement and removal of existing asphalt pavement will be paid for at the lump sum price for Grading.

SUMMARY OF BREAKING EXISTING ASPHALT PAVEMENT

LINE	Station	Station	LOC LT/RT/CL	YD^2
-L-	15+60	17+00	CL	405
-L-	21+40	23+53	CL	380
			TOTAL:	785
			SAY:	790

PARCEL INDEX

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	HAZEL WHITE
2	4	PENDLETON PARTNERS LLP
3	4	JOHN & MARY CAUTHEN
4	4	FRALEY'S INC.
5	4 & 5	STATESVILLE, INC.
6	5	THOMAS & DORIS JACKSON
7	5 & 6	WILLIE S. EVANS
8	5	LOIUS E. MARRETT
9	5	CITY OF STATESVILLE
10	5	RAPTURE PREPARATION CHURCH
11	5	ARNOLD & MAJORIE ROBBINS
12	5 & 6	YOKEFELLOW MINISTRY OF GREATER STATES
13	5	NORFOLK SOUTHERN
14	5	J. C. STEEL & SON, INC.

PROJECT REFERENCE NO.	SHEET NO.
B-2576	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 022031 ENGINEER STEPHEN T. SMALWOOD

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 19732 ENGINEER SHIHCHEN PUH 11-18-09

SEAL NOT VALID UNLESS SIGNED AND DATED

8/17/99

REVISIONS

-L-
PI Sta 12+74.87
Δ = 7° 48' 48.0" (RT)
D = 1° 54' 35.5"
L = 409.11'
T = 204.87'
R = 3,000.00'
SUPER = NC
DS = 30 MPH

BEGIN TIP PROJECT B-2576
-L- Sta. 10+70.00

BL-1=
-L- POC STA. 10+71.21
29.63' RT

-L- POC Sta.13+19.15 =
-Y1- POT Sta.12+40.33

-L- POT Sta. 10+00.00

10+00

N 4° 41' 00.2" E

-Y1- POT Sta. 10+00.00

10+00

BL-2=
-L- POC STA. 13+31.43
36.45' LT

-Y1- POT Sta. 14+69.56

BY1-6

BY1-7=
-Y1- POT- STA. 14+66.92 15.99 RT

2009 ADT
2029 ADT

	2,334 / 3,666	
1,067 / 1,733	CHARLOTTE AVE.	667 / 833
-L- WILSON LEE BLVD.		WILSON LEE BLVD. -L-
6933 / 12,017	633 / 967	233 / 317 — 6,133 / 10,467
	1,466 / 2,384	
-Y1-	CHARLOTTE AVE.	

JERRY L. TUCKER — 1.5SFD

PHP LEASING CO., LLC

JUBILEE HOUSE COMMUNITY, INC

JULIA CHARPENTIER

JAMES G. & MILDRED HUNTER

BETTY S. WILLIAMS

BARBARA J. BROOKS

BRIAN & ANNA CAINES

WILLIAM K. TAYLOR

FRALEYS INC.

JOHNNY & LAURA MYERS

1 HAZEL WHITE

2 PENDLETON PARTNERS LLP

3 JEANETE CAUTHEN

3A JOHN CAUTHEN JR.

4 FRALEY'S INC.

5 STATESVILLE INV. INC.

DIAKONOS INC. (5TH ST. SHELTER MINISTRIES)

PENDLETON PARTNERS LLP

WILSON W. LEE BLVD. (SR1421) (44' BST)

CHARLOTTE AVE. (120' BST)

MULBERRY ST.

16' ALLEY

PROP. 20' DRIVE

PROP. S.S.L.

PROP. 2'-6" C&G

90' UNIFORM TAPER

50' STORAGE

TIE TO EXIST. C & G

TIE TO EXIST. C & G & S/W

TIE TO EXIST. S/W -L- STA.11+94.00

GRADE TO DRAIN

REMOVE EXIST. SIDEWALK (TYP.)

PROP. 5' SIDEWALK

PROP. 20' DRIVE

PROP. 25' R

PROP. 35' R

15" RCP, CLASS IV

MATCHLINE Sta.16+50.00 -L- SEE SHEET 5

SIDEWALK REMOVAL

SEE SHEET 7 FOR -L- PROFILE

ARCADIS G&M
Date:$DATE$ Time: $TIME$
Filename:$FILE$

PROJECT REFERENCE NO.	SHEET NO.
B-2576	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 022033 ENGINEER STEPHEN T. SMALLWOOD

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 19732 ENGINEER SHIHCHEN FU

SEAL NOT VALID UNLESS SIGNED AND DATED

11-18-09

8/17/99

REVISIONS

END TIP PROJECT B-2576

-L- Sta. 23+58.05

-L- POT Sta.23+75.74 =
-Y6- POT Sta.13+10.00

2009 ADT 4,167
2029 ADT 7,083

WILSON LEE BLVD.
3,467 / 5,883
6,133 / 10,467
2,667 / 4,583
WESTERN AVE.
3,367 / 5,783

-L-
PI Sta 19+96.19
Δ = 37° 08' 39.2" (LT)
D = 6° 21' 58.3"
L = 583.46'
T = 302.40'
R = 900.00'
SUPER = SEE PLANS
DS = 35 MPH

-Y5-
PI Sta 10+84.65
Δ = 1° 41' 34.0" (LT)
D = 1° 00' 00.0"
L = 169.28'
T = 84.65'
SUPER = NC
R = 5,729.58'

CITY OF STATESVILLE
TIE TO EXIST. BST CURB
BEGIN CONSTRUCTION -Y2- POT Sta. 10+80.00
+80.00 60' & EXIST. R/W
POT Sta. 10+00.00 10+00
BY2-8 -Y2-POT STA. 10+66.04 19.66' LT
PENDLETON PARTNERS,LLP
EX. 15' EX. 15'
.02 -02
EXIST. P/L +25.78
WILLIAM K. TAYLOR
LOUISE E. MARRETT
PROP.S.S.L.
PROP. 2'-6" C&G
+65.00 -Y2- EXIST. R/W
+00.00 -L- EXIST. R/W
RETAIN
REMOVE EXIST. CB
REMOVE
+25.00 -Y2- 62.07'
+75.00 -L- 90'
10 RAPTURE PREPARATION CHURCH
ISF-CHURCH
BY3-10= -Y3-POT STA. 10+00.25 12.83' LT
BL-4 -L- POC STA. 19+79.05 30.42' LT
NORFOLK SOUTHERN RAILROAD
ALEXANDER RAILROAD
N 74° 40' 50.7" E
S 80° 39' 16.9" E
-Y5- PT Sta. 11+69.28
REMOVE BRIDGE #514
REMOVE BRIDGE #513
BRIDGE* 514
BL-3= -L-POT STA. 13+59.74 19.35' RT
MATCHLINE Sta.16+50.00 -L- SEE SHEET 5
MATCHLINE Sta.15+50.00 -Y2- SEE SHEET 6
N 75° 13' 43.3" E
-L- PC Sta. 16+93.80
STATESVILLE INV. INC.
THOMAS & DORIS JACKSON
WILLIE S. EVANS
+85.00 -L- 95'
BY2-9= -Y2- POT STA. 15+42.93 18.36' RT
+90.00 -Y2- 63.64'
ARNOLD & MARJORIE ROBBINS
YOKEFELLOW MINISTRY OF GREATER STATESVILLE
NORFOLK SOUTHERN
BEGIN TEMP. CHAIN LINK FENCE +88, 35' RT. SEE DETAIL SHEET 2-D
BY5-14=-Y5-POT STA. 13+89.03 11.90' RT
BY3-11=-Y3-POT STA. 12+95.36 13.56' RT
GRADE EARTHMOUND TO ELEV. 940' SEE DETAIL SHEET 2-B
+58 41.90
+78 34.62 27' RT EXIST R/W
+80 160.00
+40 145.00
BM#2

BY4-12= -Y4- POT STA. 10+20.69 20.90' LT
10+00 -Y4- POT Sta. 10+00.00
EARTH BERM
CONNOR ST. TO WESTERN AVE.
-Y4-
-Y5-
-Y3- POT Sta. 10+00.00 10+00
+35.00 20'
+35.00 25'
20+00

-Y5- PC Sta. 10+00.00 10+00
END PAVEMENT REMOVAL -Y4- STA.10+40.00
INTERFAITH DELIVERANCE MINISTRIES,INC.
BY5-13= -Y5- POC STA. 11+36.75 7.36' LT
-L- PT Sta. 22+77.26
PLACE ORANGE SAFETY FENCE ALONG HISTORIC BOUNDARY
2SBK-CHURCH
CORELLA C. GOODIN
10+00 -Y6- POT Sta. 10+00.00
126.48' S22°01'48"E
S.RACE ST HISTORIC DISTRICT BOUNDARY
TO RACE ST. WESTERN AVE.
ALLEY 8'GR
ISBKD
ISFD
5'CONC
4'CHL
154.77' S21°33'05"E
99.66' S21°43'20"E
N 68° 05' 43.7" E
70' STORAGE
PROP. S.S.L.
EXIST. R/W
75'
90' UNIFORM TAPER
PROP. 2'-6" C&G
PROP. 20' DRIVE
REMOVE PLAYGROUND
RETAIN
W. LEE BLVD. (37'BST)
15" RCP CL. III
N 24° 38' 51.0" W
-Y6-
+19.37 30' RT +77.26
+13 45'
+25 44'
+88.50 28' RT
+31 42' +28.98 27' RT
+06 79'
+75 42' & 60'
+97 35'
25' TYP
PROP. 30' RT RETAINING WALL END RET. WALL STA. 23+41.00 53' RT
END FENCE STA. 23+41.96 52' RT
PROP. 6' BLACK METAL FENCE (SEE DETAIL ON SHEET 2-C)
STA. 21+28.98 BEGIN FENCE 26' RT BEGIN WALL 27' RT
END TEMP. CHAIN LINK FENCE W/ BARBED-WIRE +41.74' RT SEE DETAIL ON SHEET 2-D
ACADEMY HILL HISTORIC DISTRICT BOUNDARY
J.C. STEELE & SON INC.
23+43.11 -L- EXIST R/W
+87 -Y2- Exist. R/W
-Y6- POT Sta. 15+79.92
BY6-16
ROBERT & KATHLEEN PATTERSON
INTERFAITH DELIVERANCE MINISTRIES,INC.
BL-5= -Y6- POT STA. 12+76.09 21.77' LT
S.RACE ST HISTORIC DISTRICT BOUNDARY
J.L. HAGER
WILFRED & JUNE BUCKNER
DO NOT DISTURB EXISTING FENCE
EVERETT & GWENDOLYN LONG
WESTERN AVE. TO WILBERRY ST.
WATER VAULT
SOIL/GR
2.5'C&G
150.00'
70.00'
80.00'

SIDEWALK REMOVAL
PAVEMENT OBLITERATION

SEE SHEETS 7 & 8 FOR -L- PROFILE
SEE SHEET 9 FOR -Y2- PROFILE
SEE SHEET 6 FOR BRIDGE SKETCH
SEE SHEETS S1- S-59 FOR STRUCTURE DESIGN

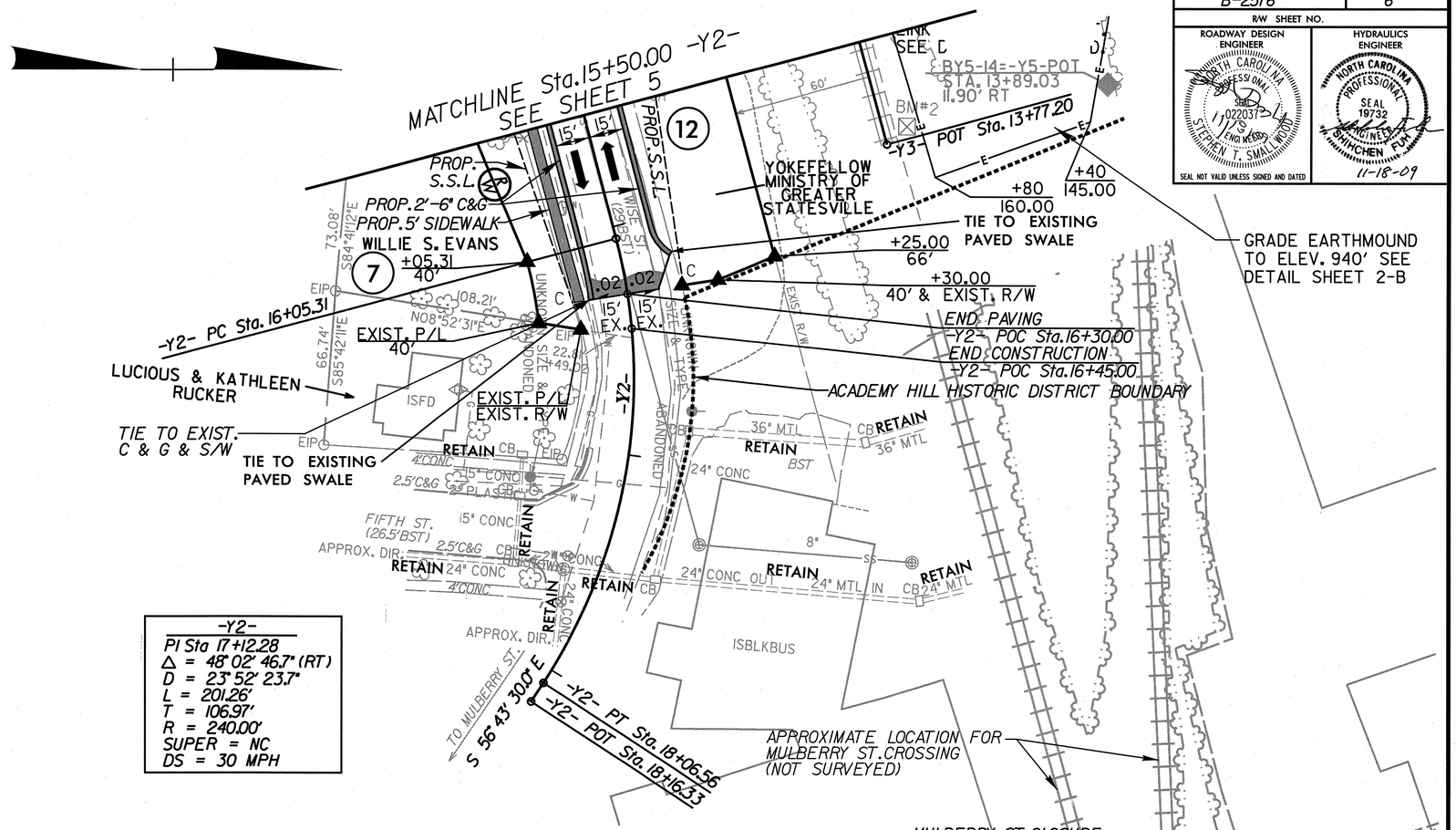
ARCADIS G&M
Date:=DATE$ Time: $TIME$
Filename:=$FILE$

PROJECT REFERENCE NO.	SHEET NO.
B-2576	6
R/W SHEET NO.	

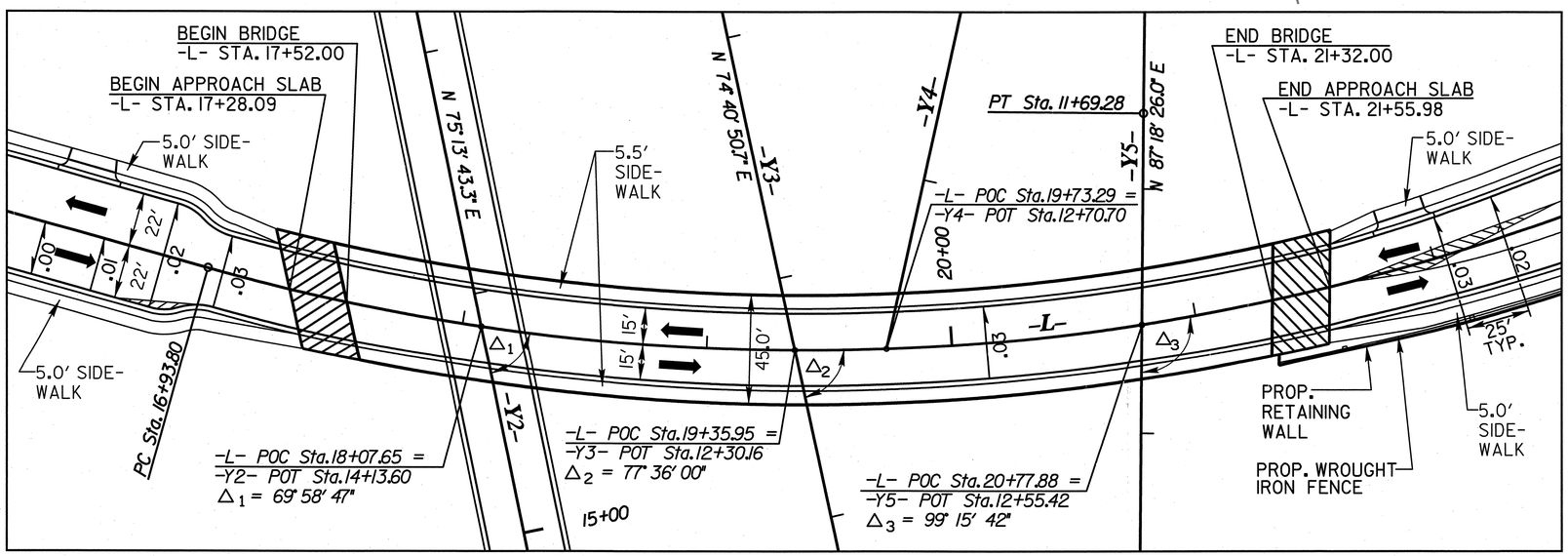
ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER STEPHEN T. SMALLWOOD — SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 19732 ENGINEER SHIHCHEN FUH — 11-18-09

REVISIONS 8/17/99



-Y2-
PI Sta 17+12.28
Δ = 48° 02' 46.7" (RT)
D = 23° 52' 23.7"
L = 201.26'
T = 106.97'
R = 240.00'
SUPER = NC
DS = 30 MPH



BRIDGE SKETCH

SEE SHEET 9 FOR -Y2- PROFILE

ARCADIS G&M
Date=$DATE$ Time: $TIME$
Filename=$FILE$

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	7

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER

BM*1 CHISELED SQUARE IN TOP OF THE SOUTH END OF CONCRETE STAIRS N 741417 E 1439151 EL=957.19'

BEGIN BRIDGE STA.17+52 -L-

BEGIN GRADE -L-
POT Sta.10+70.00
EL = 955.38
VPC = 11+00.00
EL = 955.25

PI = 11+85.00
EL = 954.89'
VC = 170'
K = 95
DS = 50 MPH

VPC = 13+00.00
EL = 952.35

PI = 13+30.00
EL = 951.68'
VC = 60'
K = 97
DS = 50 MPH

VPC = 13+60.00
EL = 950.83

PI = 14+75.00
EL = 947.58'
VC = 230'
K = 40
DS = 35 MPH

VPT = 15+90.00
EL = 950.91

VPC = 17+35.00
EL = 955.12

(-)0.4291% (EXIST)

(-)0.4291%

(-)12.2117%

(-)12.8297%

(+)2.8987%

-L- POC Sta.13+19.15 =
-Y1- POT Sta.12+40.33

-L-

SEE SHEETS 4 & 5 FOR -L- PLAN

978 972 966 960 954 948 942 936 930 924 918 912 906 900

10 11 12 13 14 15 16 17 18

ARCADIS G&M
Drawn By: JLK
Filenames: $FILE$

Time: $TIME$

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	8

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER

BM#2 CHISELED SQUARE IN BASE OF CONCRETE FOOTING FOR RAILROAD SIGNAL
N 742277 E 1439380 EL=919.54'

-L- POC Sta.18+07.65 =
-Y2- POT Sta.14+13.60

PI = 18+50.00
EL = 958.45'
VC = 230'
K = 56
DS = 40 MPH

-L- POC Sta.19+35.95 =
-Y3- POT Sta.12+30.16

VPT = 19+65.00
EL = 957.02

-L- POC Sta.20+77.88 =
-Y5- POT Sta.12+55.42

END BRIDGE STA. 21+32 -L-

(-)11.24/5%

+3.01%
(EXIST)

END GRADE
-L- POT Sta.23+58.05
EL = 952.17

-L- POT Sta.23+75.74 =
-Y6- POT Sta.13+10.00
EL = 952.77

-Y2-

-Y5-

-Y3-

-L-

SEE SHEET 5 FOR -L- PLAN

978 972 966 960 954 948 942 936 930 924 918 912 906 900

18 19 20 21 22 23 24

ARCADIS G&N
Design Data
Time: &TIME&
Filename: &FILE&

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-2576	9

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER STEPHEN T. SMALLWOOD

SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER

978 972 966 960 954 948 942 936 930 924 918 912 906 900

10 11 12 13 14 15 16 17 18

BEGIN GRADE -Y2-
POT Sta.10+80.00
EL = 934.23

VPC = 10+85.00
EL = 934.32

PI = 11+25.00
EL = 935.01'
VC = 80'
K = 60
DS = 40 MPH

VPT = 11+65.00
EL = 935.16

(+)1.7256%

(+)0.3834%

-L- POC Sta.18+07.65 =
-Y2- POT Sta.14+13.60

VPC = 15+25.00
EL = 936.54

PI = 15+75.00
EL = 936.74'
VC = 100'
K = 33
DS = 35 MPH

(-)2.6098%

VPT = 16+25.00
EL = 935.43

END GRADE -Y2-
POT Sta.16+30.00
EL = 935.30

-Y2-

SEE SHEETS 5 & 6 FOR -Y2- PLAN

ARCADIS G&M
Date:04/28/08
Filename:FILE

Times TIME