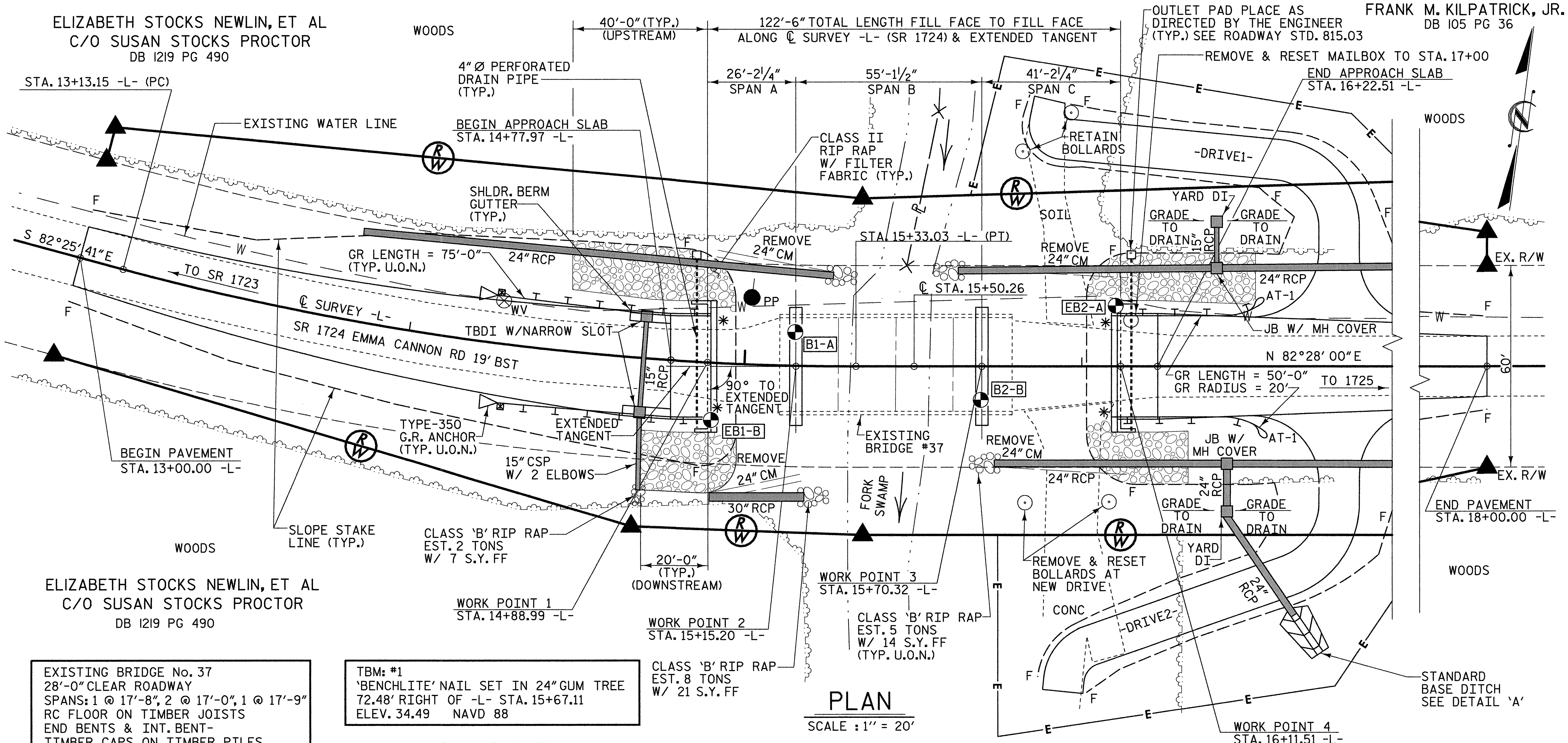


PLAN

SCALE : 1" = 20'

EXISTING BRIDGE No. 37
28'-0" CLEAR ROADWAY
SPANS: 1 @ 17'-8", 2 @ 17'-0", 1 @ 17'-9"
RC FLOOR ON TIMBER JOISTS
END BENTS & INT. BENT-
TIMBER CAPS ON TIMBER PILES

TBM: #1
'BENCHLITE' NAIL SET IN 24" GUM TREE
72.48' RIGHT OF -L- STA. 15+67.11
ELEV. 34.49 NAVD 88

EXISTING UTILITIES TO BE RELOCATED BY OTHERS PER UTILITY BY OTHERS PLAN.

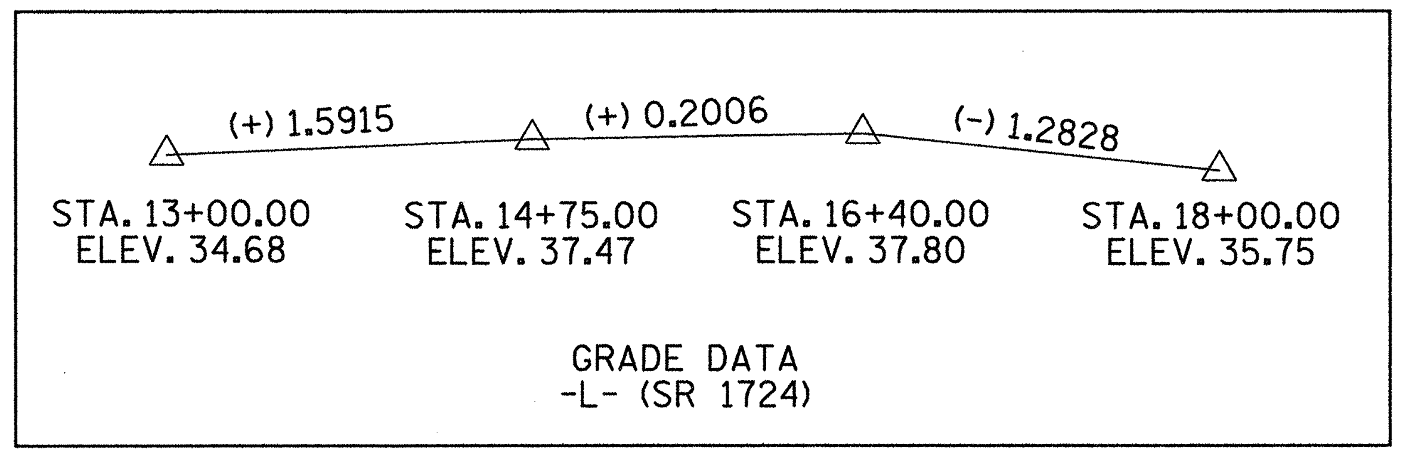
● DENOTES GEO-TECH BORE HOLE LOCATIONS.

* DENOTES B-77 GUARDRAIL CONNECTION REQ'D., SEE GUARDRAIL ANCHORAGE FOR BARRIER RAIL" SHEET.

NOTE: GUARDRAIL LENGTHS AS SHOWN INCLUDE ANCHOR UNITS.

U.O.N. - UNLESS OTHERWISE NOTED

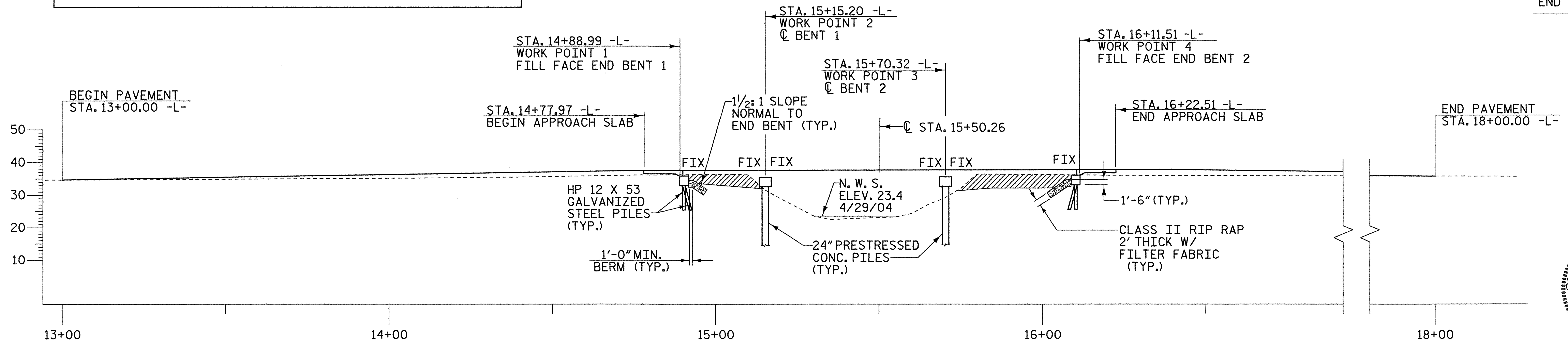
FOR PAVEMENT LAYOUT, R/W & TCE AND DRIVE DETAILS SEE "ROADWAY DETAILS" SHEET 1 OF 2 & 2 OF 2.



GRADE DATA
-L- (SR 1724)

HYDROGRAPHIC DATA:

DESIGN DISCHARGE -	2000 CFS
FREQUENCY OF DESIGN FLOOD -	25 YEAR
DESIGN HIGH WATER ELEVATION -	34.6
DRAINAGE AREA -	28.5 SQ. MI.
BASIC DISCHARGE (Q 100) -	3230 CFS
BASIC HIGH WATER ELEVATION -	35.2



▨ DENOTES ROADWAY FILL TO BE REMOVED

PROFILE ALONG ℄ SURVEY

SCALE : 1" = 20'

DRAWN BY :	W. B. ALLEN	DATE :	5/10
CHECKED BY :	L. K. AUSTIN	DATE :	6/10

NOTES

SPAN 'A' & SPAN 'C' HAVE BEEN DESIGNED FOR TOP DOWN CONSTRUCTION.

FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR THE DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", MAY 2001.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC CATEGORY A.

DRIVE PILES AT END BENTS NO. 1 AND 2 TO A REQUIRED BEARING CAPACITY OF 90 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO.

THE ALLOWABLE BEARING CAPACITY FOR PILES AT END BENTS NO. 1 AND 2 IS 45 TONS PER PILE.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

PILES FOR BENT NO. 1 AND 2 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THAN -18 FT., AND SATISFY THE BEARING CAPACITY OF 60 TONS EACH.

GALVANIZED STEEL PILES ARE REQUIRED FOR H-PILES AT END BENTS NO. 1 AND 2 IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 45,000 FT-POUNDS PER BLOW TO 85,000 FT-POUNDS PER BLOW WILL BE REQUIRED TO DRIVE THE 24 INCH SQUARE PRESTRESSED CONCRETE PILES. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM THE PROVISIONS OUTLINED IN ARTICLE 450-6 OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR INTERIOR BENTS NO. 1 AND 2 IS +1 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

ADT = 360 FOR YEAR 2005

ROADWAY APPROACH EMBANKMENT SHALL BE WIDENED AS NECESSARY FOR GUARDRAIL INSTALLATION.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE QUANTITY OF RIP RAP TO BE PAID FOR WILL BE THE ACTUAL NUMBER OF TONS OF EACH CLASS OF RIP RAP WHICH HAS BEEN INCORPORATED INTO THE COMPLETED AND ACCEPTED WORK. THE RIP RAP WILL BE MEASURED BY BEING WEIGHED IN TRUCKS ON CERTIFIED PLATFORM SCALES OR OTHER CERTIFIED WEIGHING DEVICES. THE QUANTITY OF RIP RAP WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON:

PLAIN RIP RAP CLASS II (2'-0" THICK)

END BENT No. 1	180 TONS
END BENT No. 2	215 TONS
TOTAL	395 TONS

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

SEAL 19661
L. KEVIN AUSTIN
L. Kevin Austin
7/7/10

PLANS PREPARED BY:
MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
Raleigh, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE ON SR 1724
OVER FORK SWAMP
BETWEEN SR 1723 & SR 1725

30' CLEAR ROADWAY - 90°SKEW

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 1
TOTAL SHEETS 33

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
B-5214	1-A

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	ψ
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	━━ R/W ━━
Proposed Right of Way Line with Iron Pin and Cap Marker	━ R/W ━━ ▲ ━
Proposed Right of Way Line with Concrete or Granite Marker	━ ◬ ━━ R/W ━
Existing Control of Access	— — C/A — —
Proposed Control of Access	━━ C/A ━━
Existing Easement Line	— — E — —
Proposed Temporary Construction Easement	——E——
Proposed Temporary Drainage Easement	——TDE——
Proposed Permanent Drainage Easement	——PDE——
Proposed Permanent Utility Easement	——PUE——

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	—T—T—T—T—
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	Ⓢ
Storm Sewer	——S——

UTILITIES:

POWER:

Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	-●-
Proposed Joint Use Pole	-○-
Power Manhole	Ⓟ
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	Ⓣ
Telephone Booth	☎
Telephone Pedestal	T
Telephone Cell Tower	Ψ
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	Ⓦ
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.

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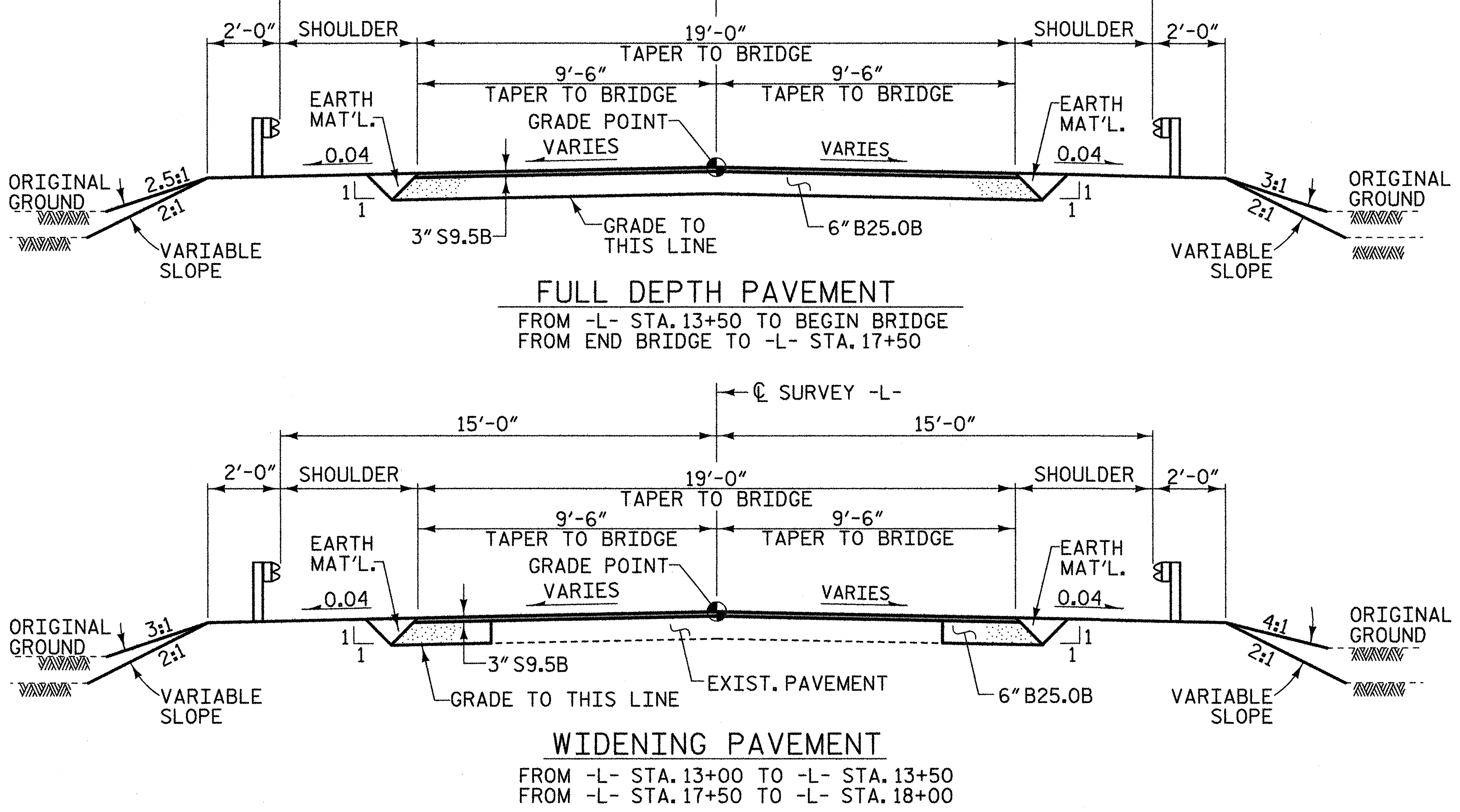
HORIZONTAL CURVE DATA

PI STA. 14+23.73
△ = 15° 06′ 19″ (LT)
D = 6° 52′ 11″
L = 219.89′
T = 110.58′
R = 834.04′

PAVEMENT LAYOUT DETAIL

SCALE : 1″ = 20′

FOR DETAILS AND LAYOUT OF DRIVES SEE "ROADWAY DETAILS", SHEET 2 OF 2.

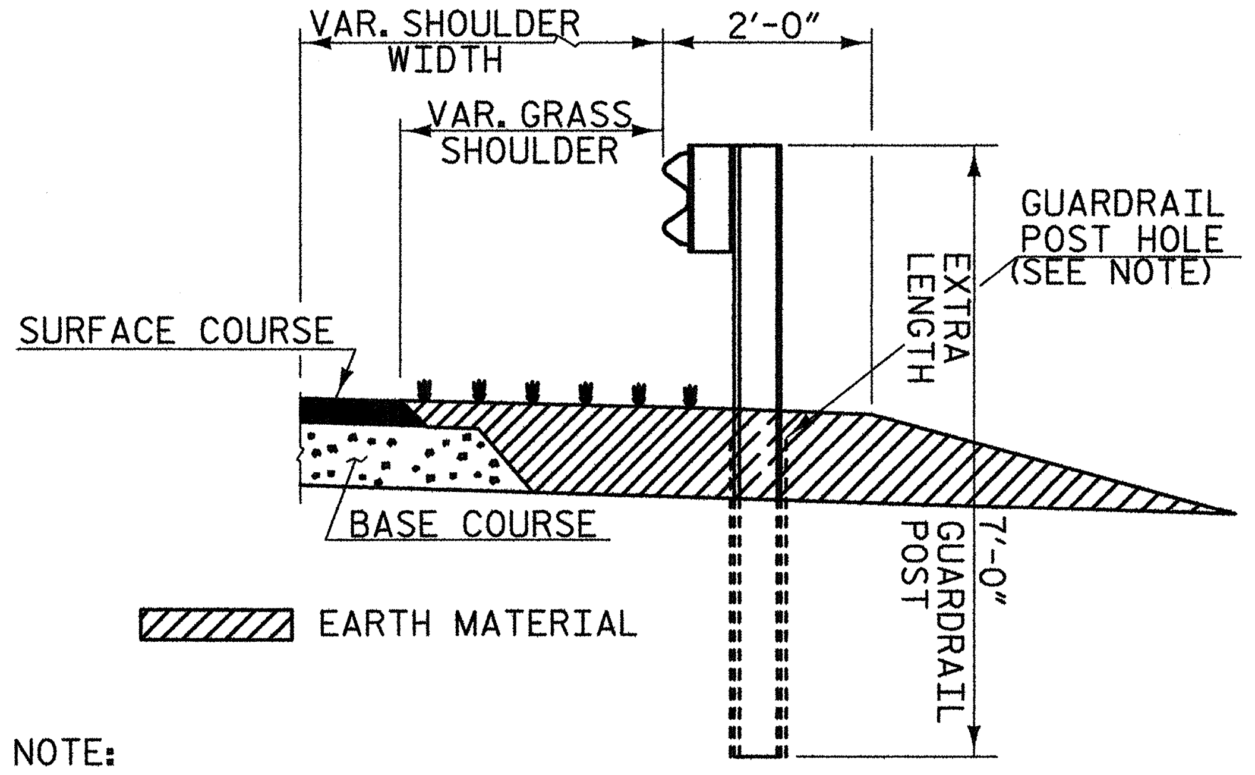


FULL DEPTH PAVEMENT
FROM -L- STA. 13+50 TO BEGIN BRIDGE
FROM END BRIDGE TO -L- STA. 17+50

WIDENING PAVEMENT
FROM -L- STA. 13+00 TO -L- STA. 13+50
FROM -L- STA. 17+50 TO -L- STA. 18+00

TYPICAL ROADWAY SECTION

WITHIN CONSTRUCTION LIMITS



NOTE:

WHEN WOODEN GUARDRAIL POSTS ARE USED, DRILL HOLESTHROUGH EARTH MATERIAL AND BASE COURSE.THE POST MAY THEN BE DRIVEN TO THE PROPER DEPTH. DRILL HOLE TO ACCOMMODATE THE PARTICULAR POST BEING USED. BACKFILL & TAMP HOLES USING THE EXCAVATED MATERAIL.

USE EXTRA LENGTH GUARDRAIL POST - 7′- 0″ TYPICAL

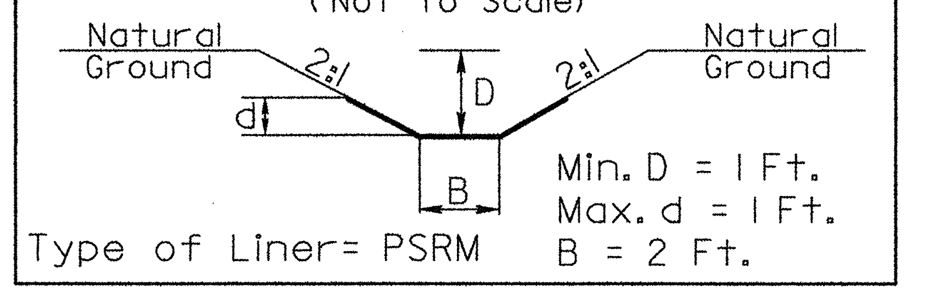
GUARDRAIL PLACEMENT FOR 2′ SHOULDER BREAK POINT BEHIND FACE OF GUARDRAIL

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "MA2008B-1"
WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 619227.509(ft) EASTING: 2488374.879(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988195
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "MA2008B-1" TO -L- STATION 13+00.00
S 84°50′33″ E 1298.92′
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

DETAIL 'A'

STANDARD BASE DITCH
(Not to Scale)



Min. D = 1 Ft.
Max. d = 1 Ft.
B = 2 Ft.
Type of Liner= PSRM

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ROADWAY DETAILS

30′ CLEAR ROADWAY - 90°SKEW

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 2
TOTAL SHEETS 33

19661
L. KEVIN AUSTIN
7/7/10

PLANS PREPARED BY:
MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
RALEIGH, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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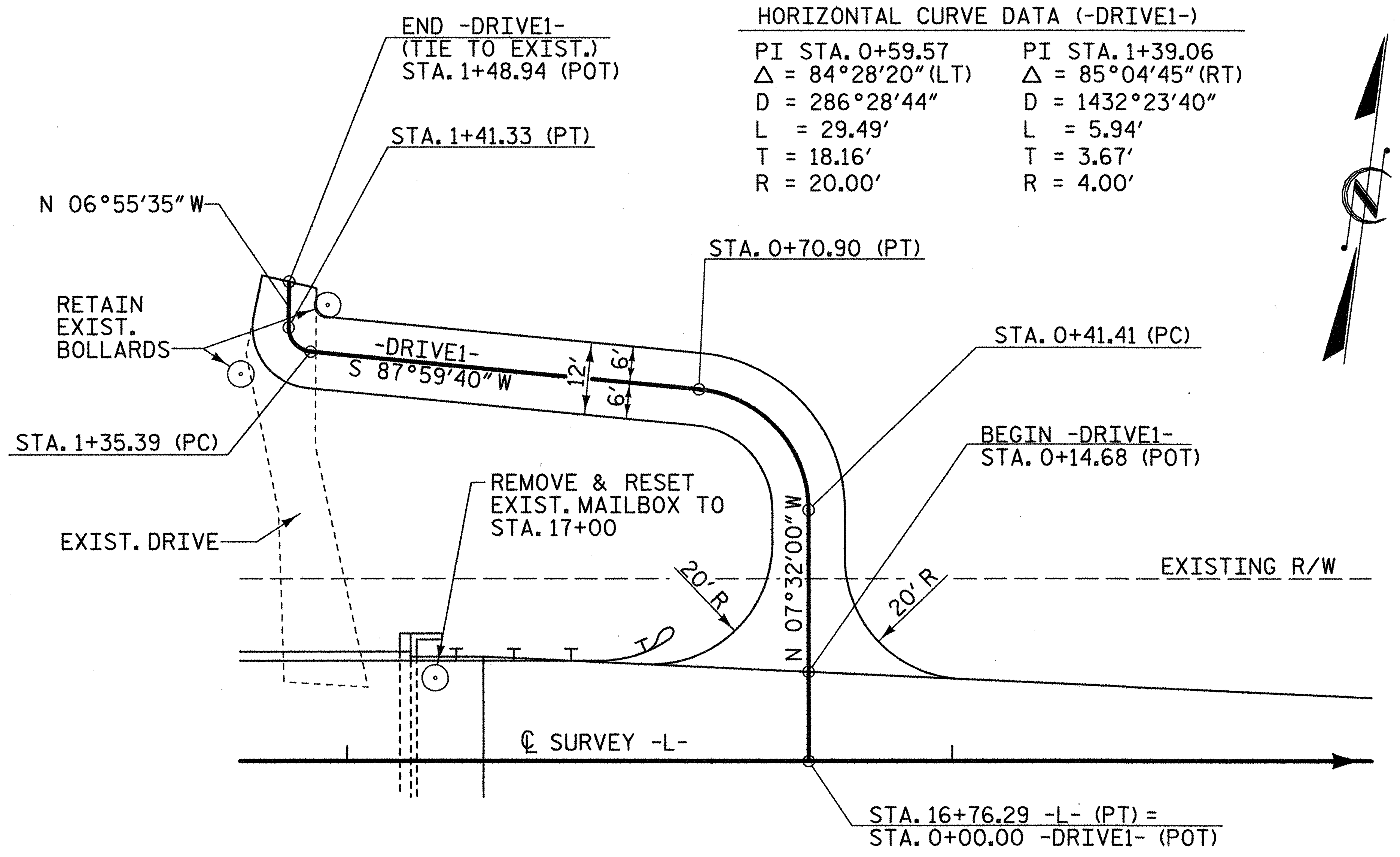


HORIZONTAL CURVE DATA (-DRIVE1-)

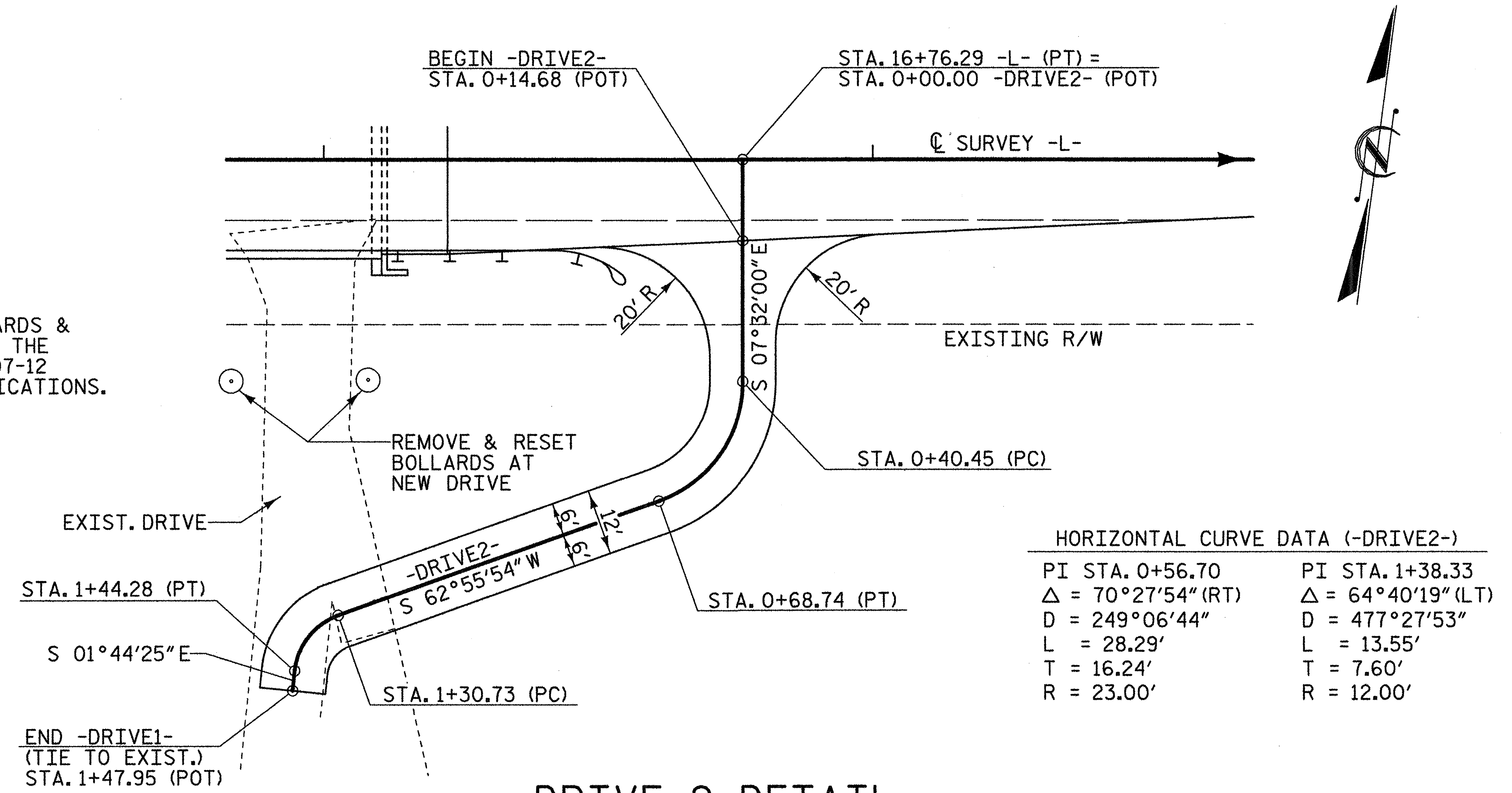
PI STA. 0+59.57	PI STA. 1+39.06
Δ = 84°28'20" (LT)	Δ = 85°04'45" (RT)
D = 286°28'44"	D = 1432°23'40"
L = 29.49'	L = 5.94'
T = 18.16'	T = 3.67'
R = 20.00'	R = 4.00'

DRIVE 1 DETAIL

SCALE : 1" = 20'

NOTE:

RELOCATE DRIVE 2 BOLLARDS & MAILBOX AS DIRECTED BY THE ENGINEER. SEE SECTION 107-12 OF THE STANDARD SPECIFICATIONS.

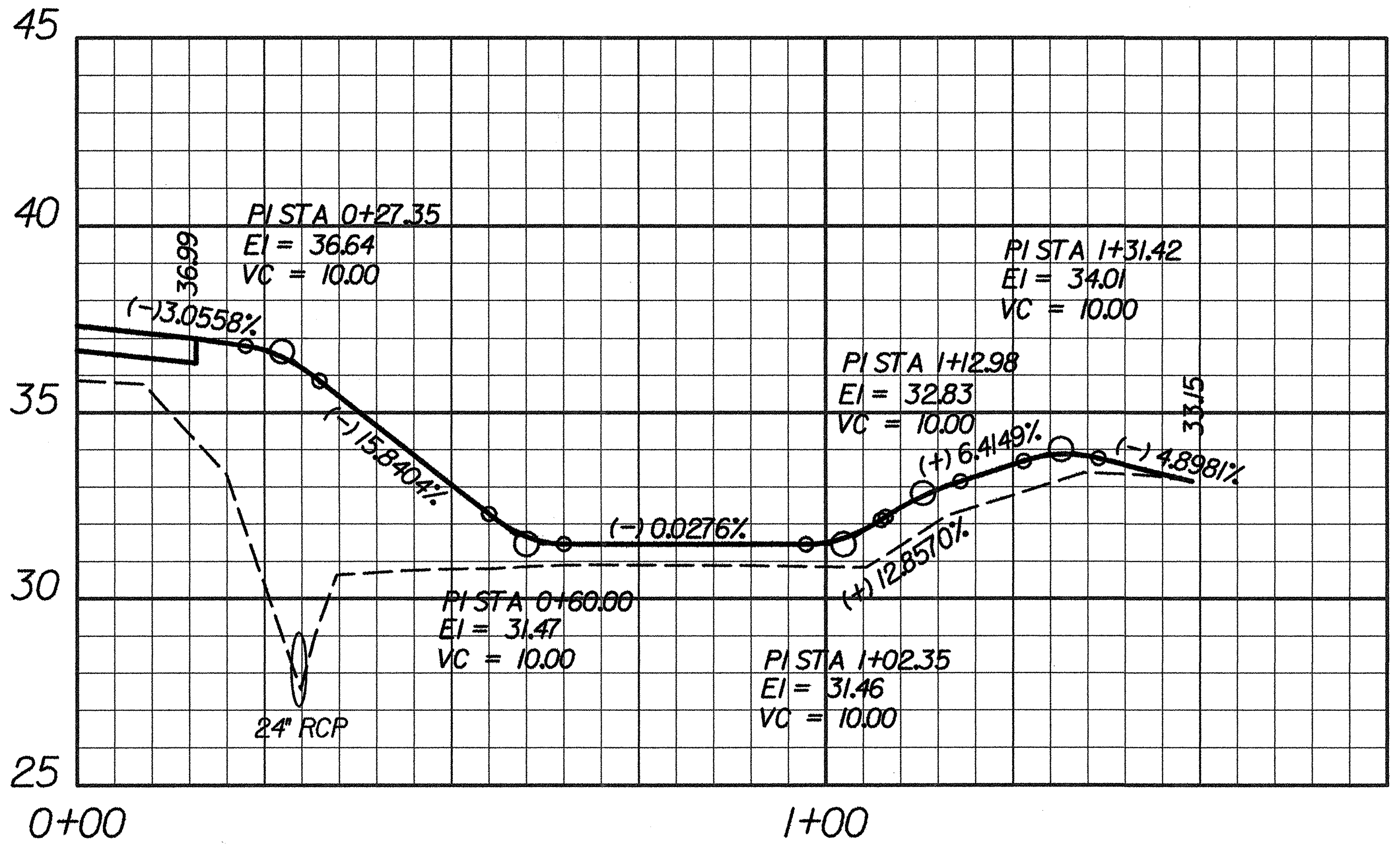


HORIZONTAL CURVE DATA (-DRIVE2-)

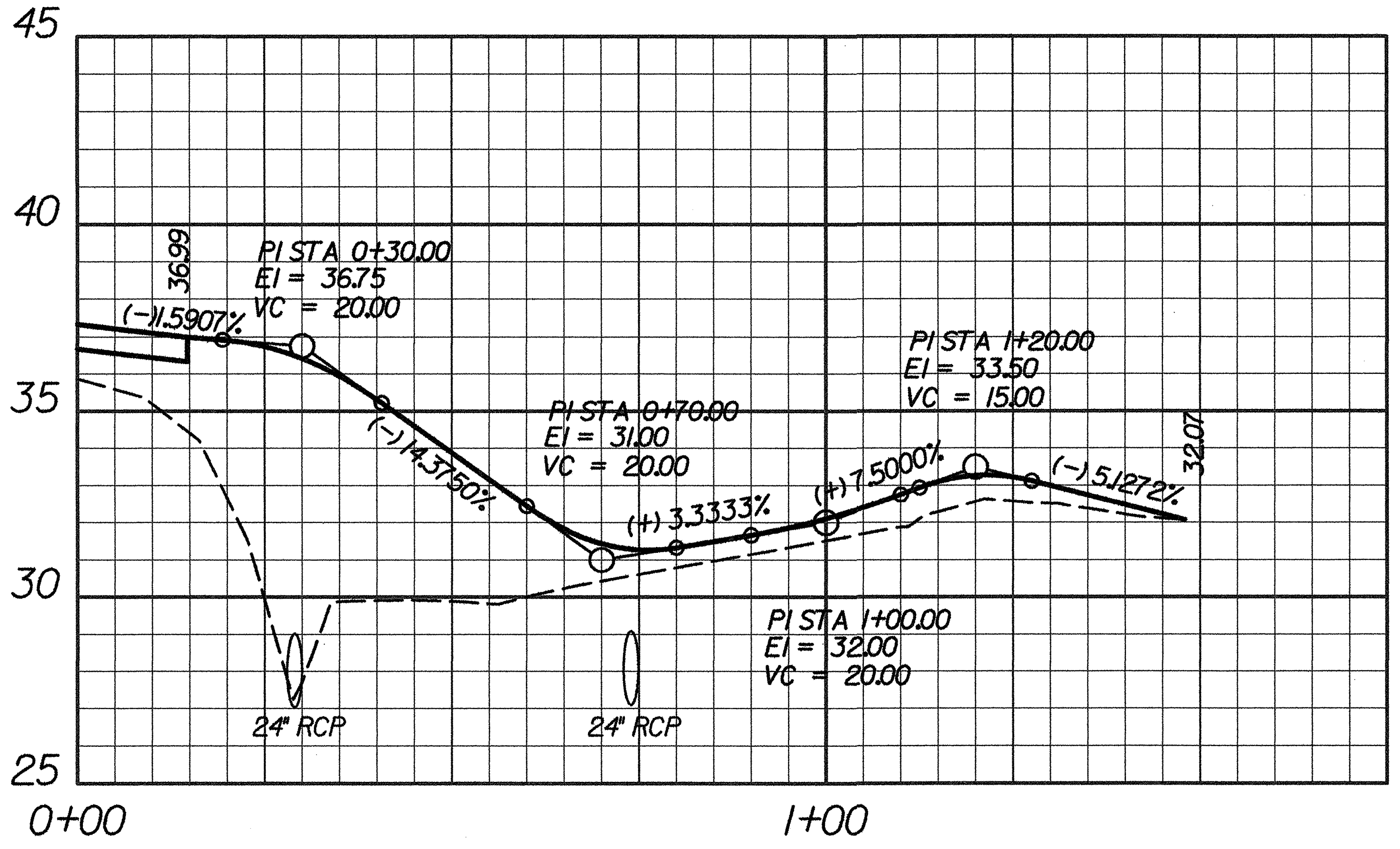
PI STA. 0+56.70	PI STA. 1+38.33
Δ = 70°27'54" (RT)	Δ = 64°40'19" (LT)
D = 249°06'44"	D = 477°27'53"
L = 28.29'	L = 13.55'
T = 16.24'	T = 7.60'
R = 23.00'	R = 12.00'

DRIVE 2 DETAIL

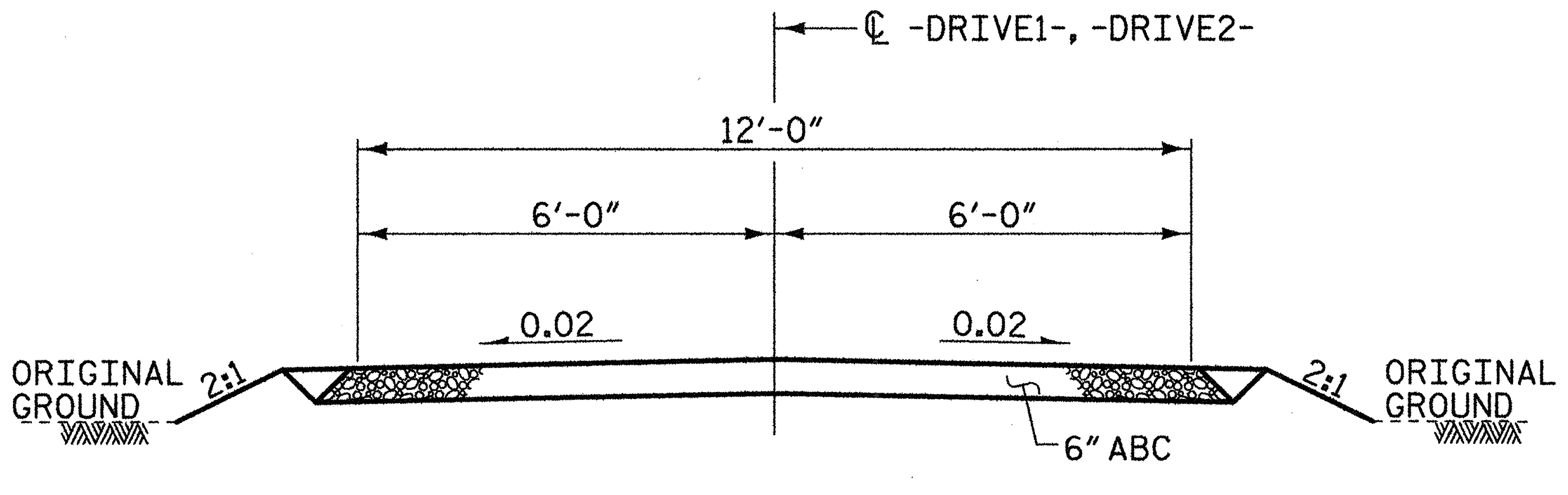
SCALE : 1" = 20'



DRIVE 1 PROFILE



DRIVE 2 PROFILE



TYPICAL DRIVEWAY SECTION

RIGHT OF WAY AREA DATA

PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL AREA	AREA TAKEN	AREA REMAINING RT.	AREA REMAINING LT.	CONST. EASE.	PERM. DRAIN. EASE.	TEMP. DRAIN. EASE.
1	ELIZABETH STOCKS NEWLIN, ET AL	87.52 AC	0.27 AC	9.04 AC＊	78.21 AC ＊	0.14 AC		
2	FRANK M. KILPATRICK, JR.	124.51 AC	0.12 AC		124.39 AC	3568 SF		

＊ APPROXIMATE AREAS, MEASUREMENT TAKEN FROM PITT COUNTY GIS.

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 2 OF 2

L. KEVIN AUSTIN
19661
L. Kevin Austin 7/7/10

PLANS PREPARED BY:

MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
RALEIGH, N.C. 27636
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ROADWAY DETAILS

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	3
1			3			TOTAL SHEETS
2			4			33

DRAWN BY :	W. B. ALLEN	DATE :	5/10
CHECKED BY :	L. K. AUSTIN	DATE :	6/10

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PROJ. REFERENCE NO.	SHEET NO.
B-5214	4

8/23/99

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	B-5214	5

8/23/99

BEGIN APPROACH SLAB
-L- STA.14+77.97
BEGIN BRIDGE
-L- STA 14+88.99

14+50.00

14+00.00

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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-5214	6

15+50.00

15+00.00

-L-

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	B-5214	7

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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-5214	9

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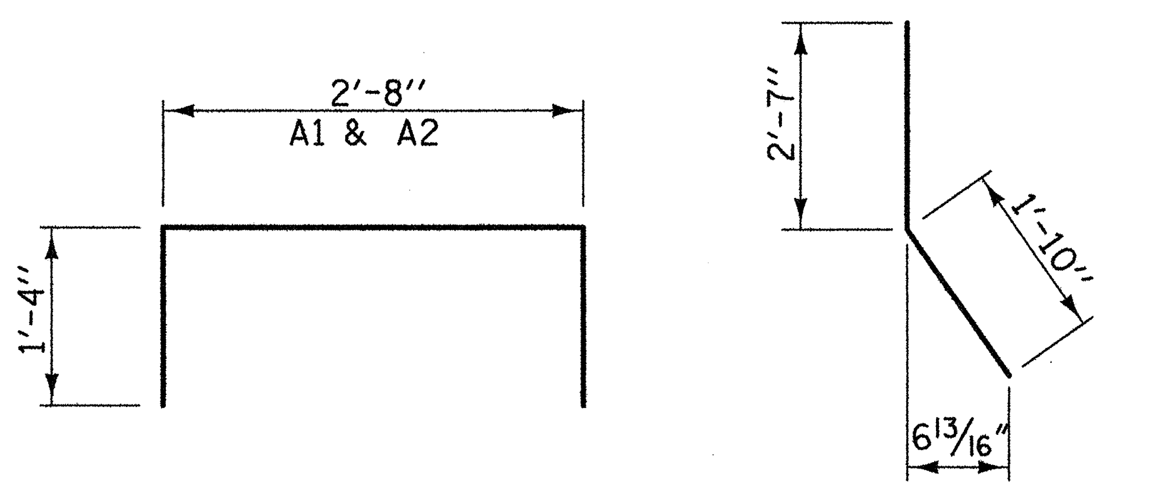
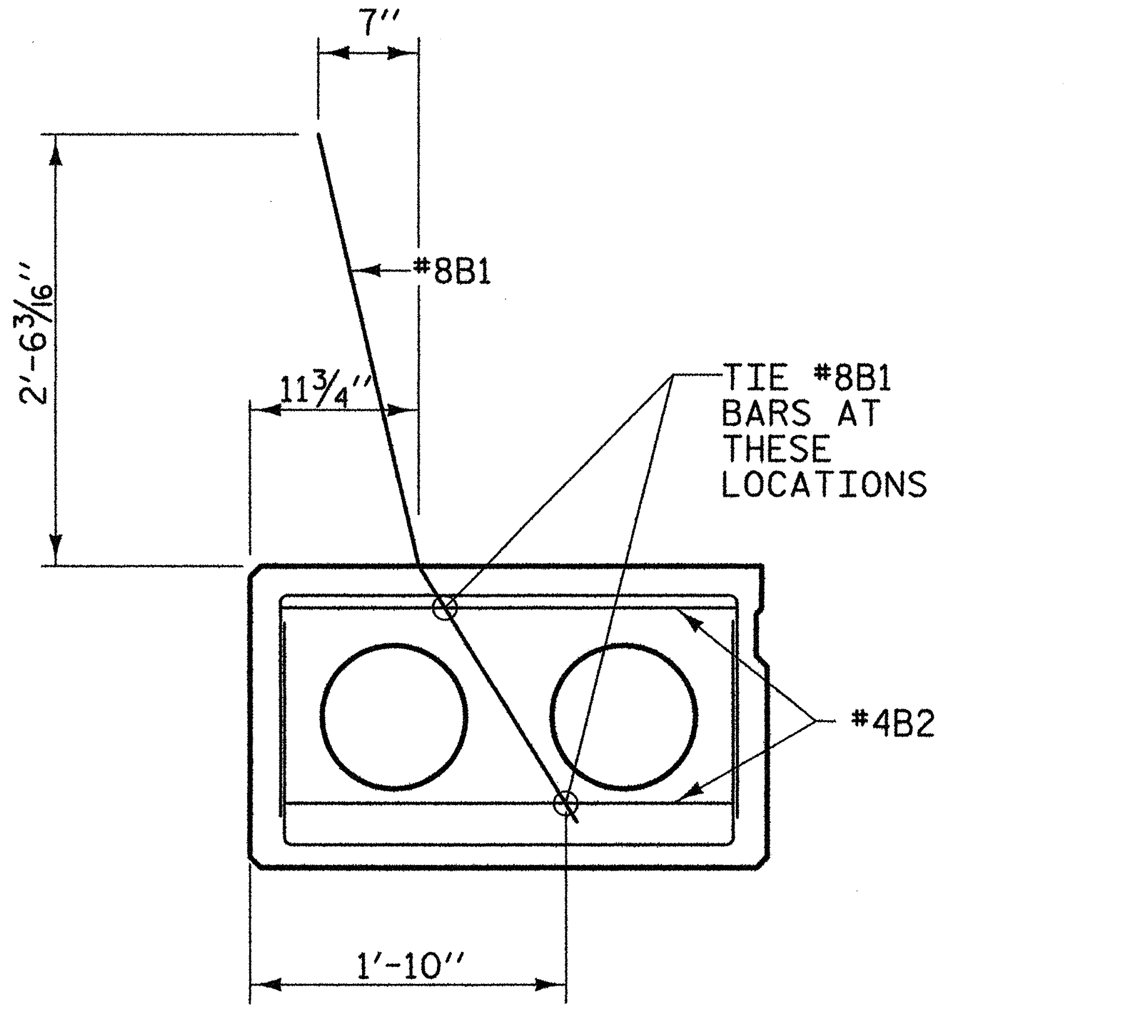


REINFORCING BAR TYPES

BAR DIMENSIONS ARE OUT TO OUT

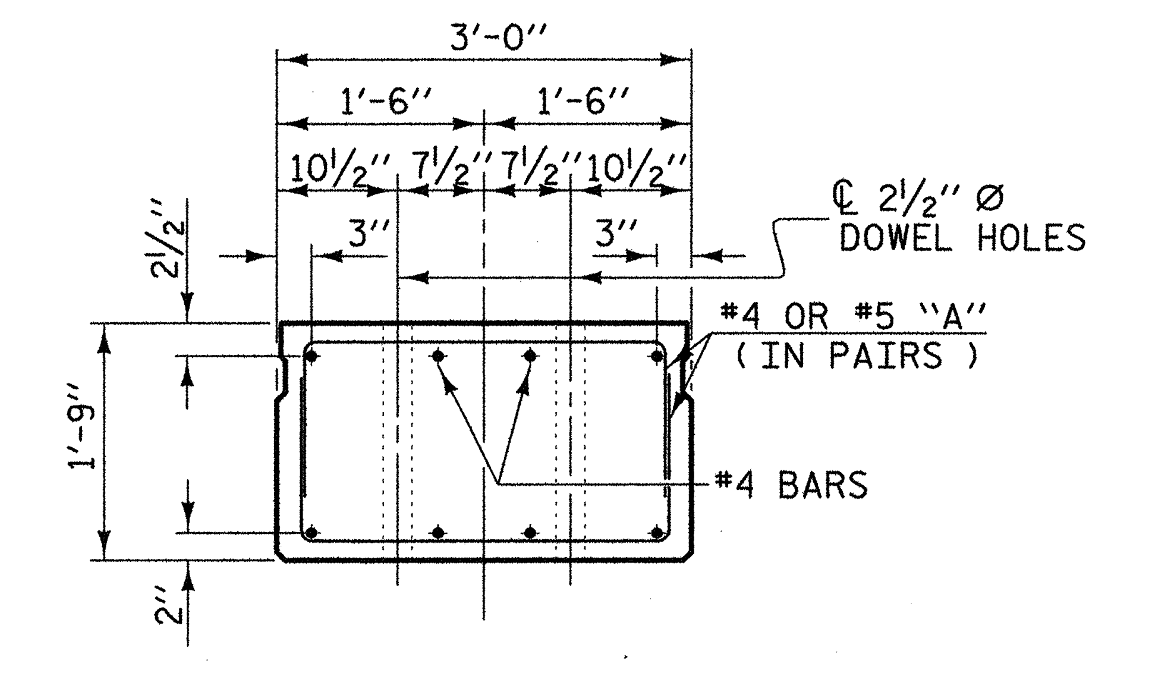


TIE LOCATION FOR #8 "B"

SHEATH CHART		
SPAN LENGTH	NUMBER OF SHEATHED STRANDS PER EXTERIOR SLAB SECTIONS	NUMBER OF SHEATHED STRANDS PER INTERIOR SLAB SECTIONS
25'	0	0
55'	4	4
40'	2	1

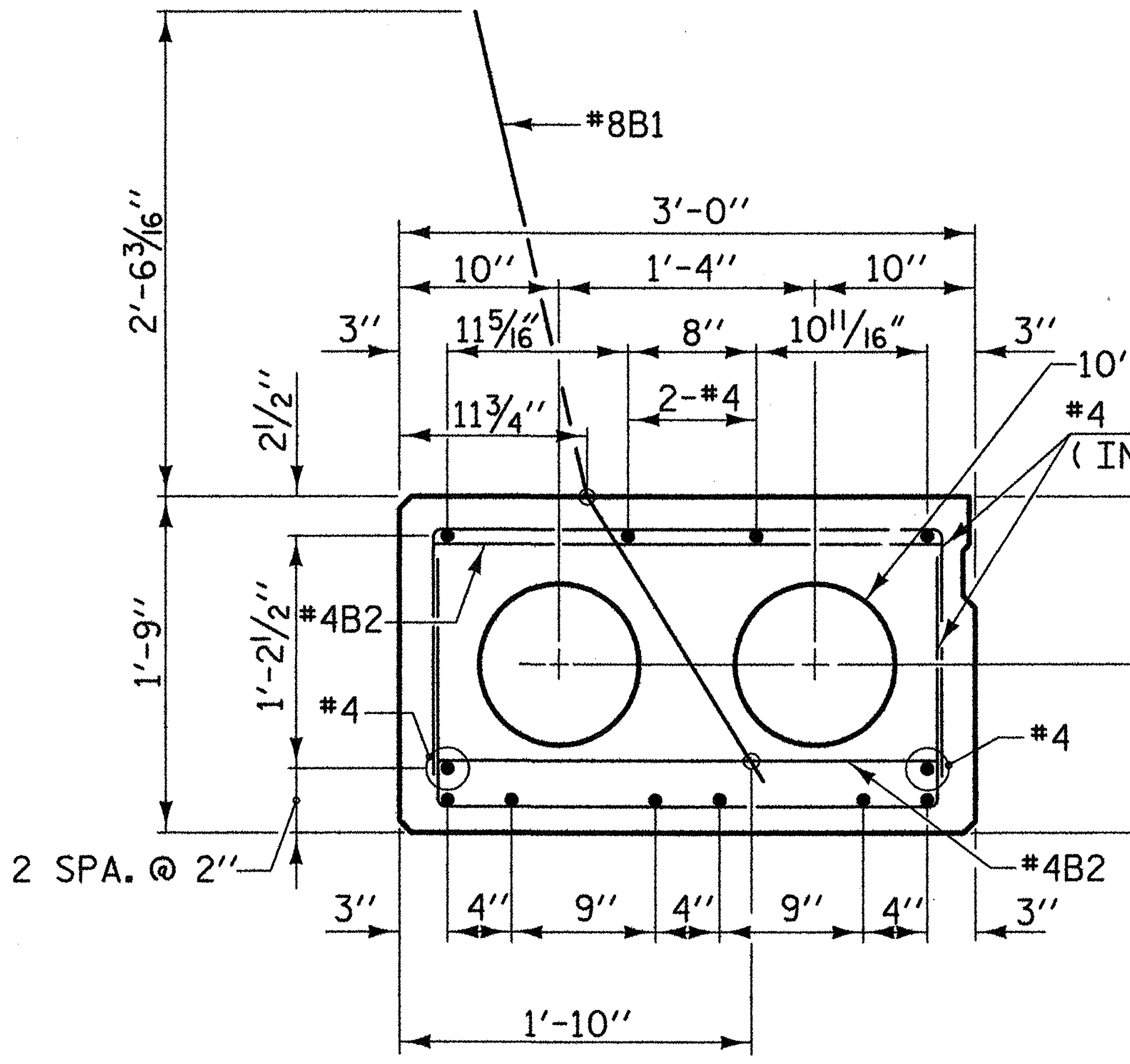
BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 5'-0" FROM END OF SLAB ON 55' SPAN

BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 4'-0" FROM END OF SLAB ON 40' SPAN



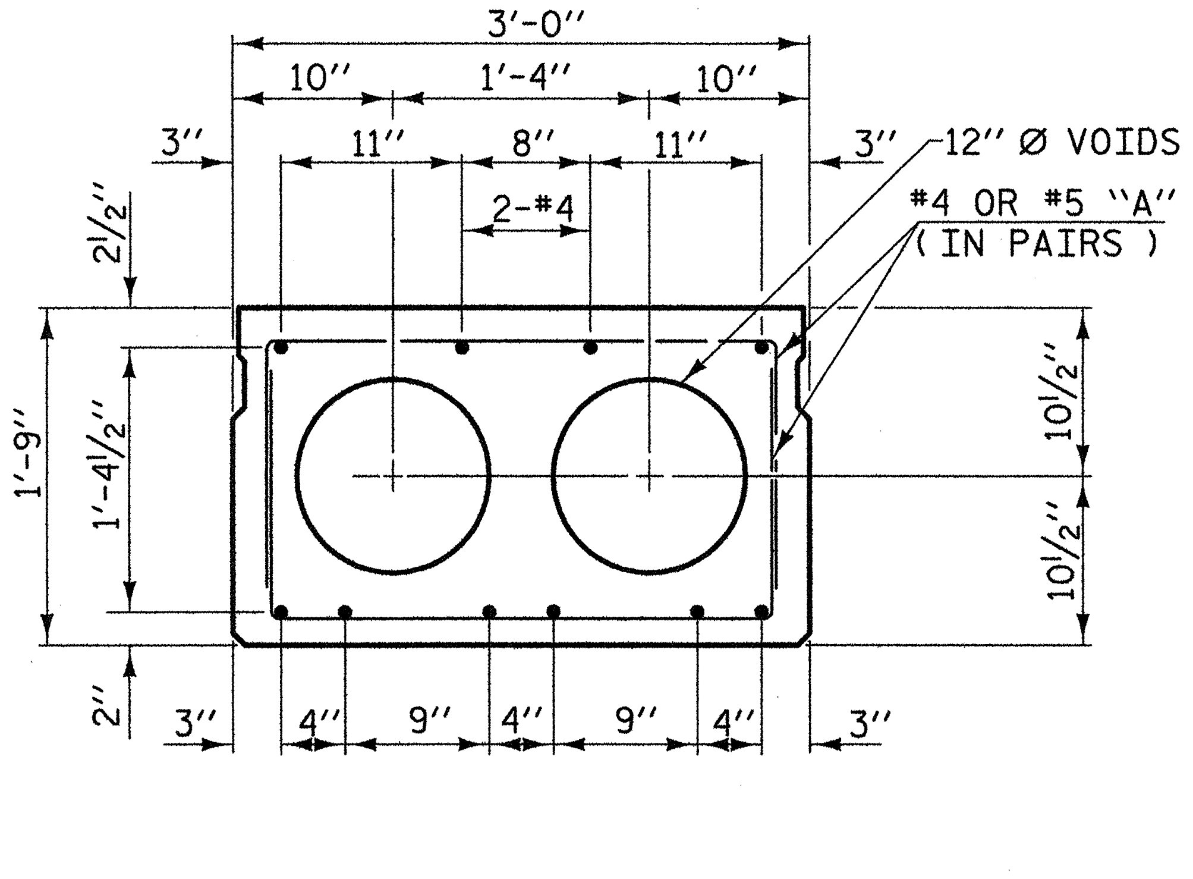
SLAB END ELEVATION

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT, SEE SPECIAL PROVISIONS.



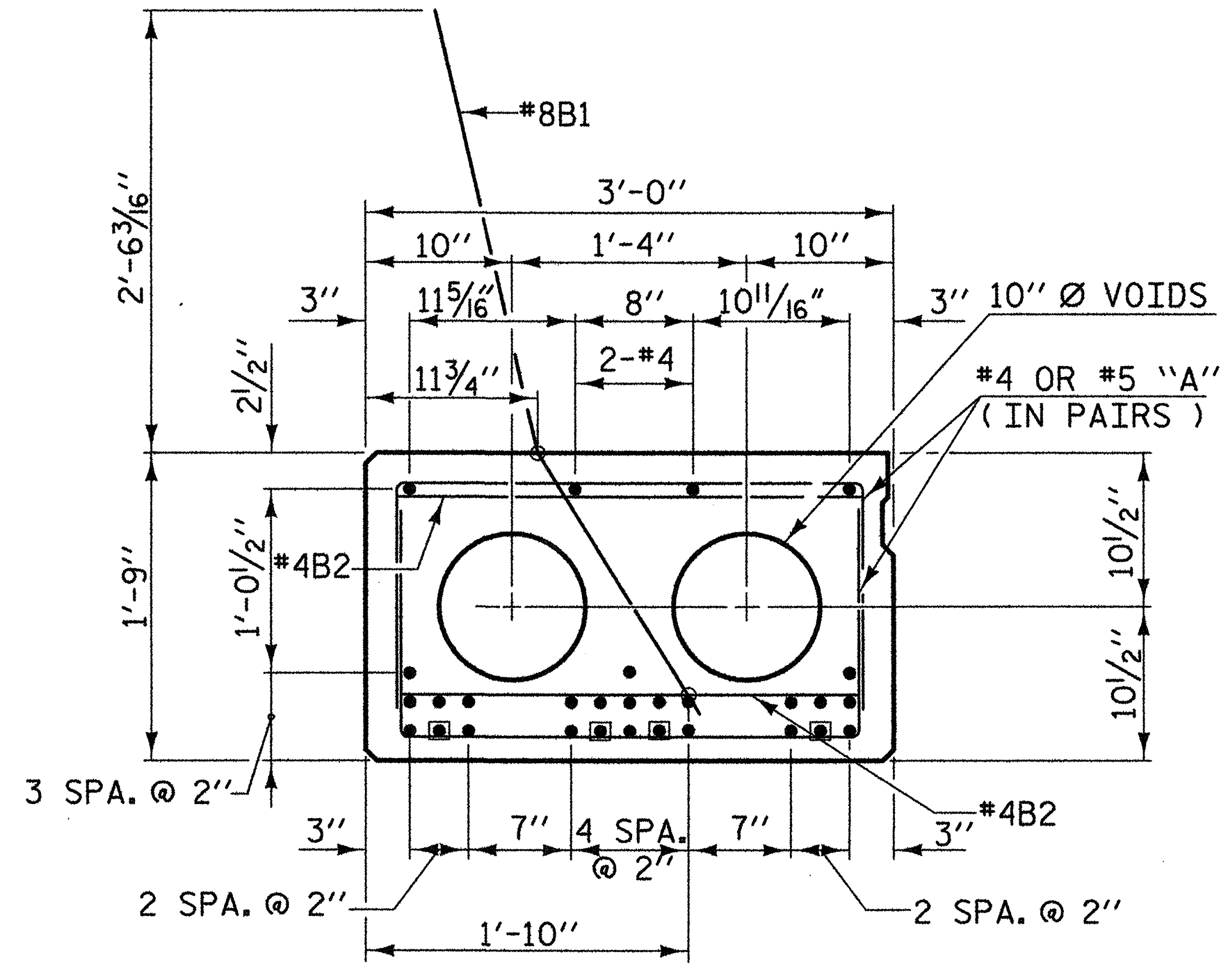
25' SPAN

8 - 1/2" Ø H.S. STRANDS
EXTERIOR SLAB SECTIONS



25' SPAN

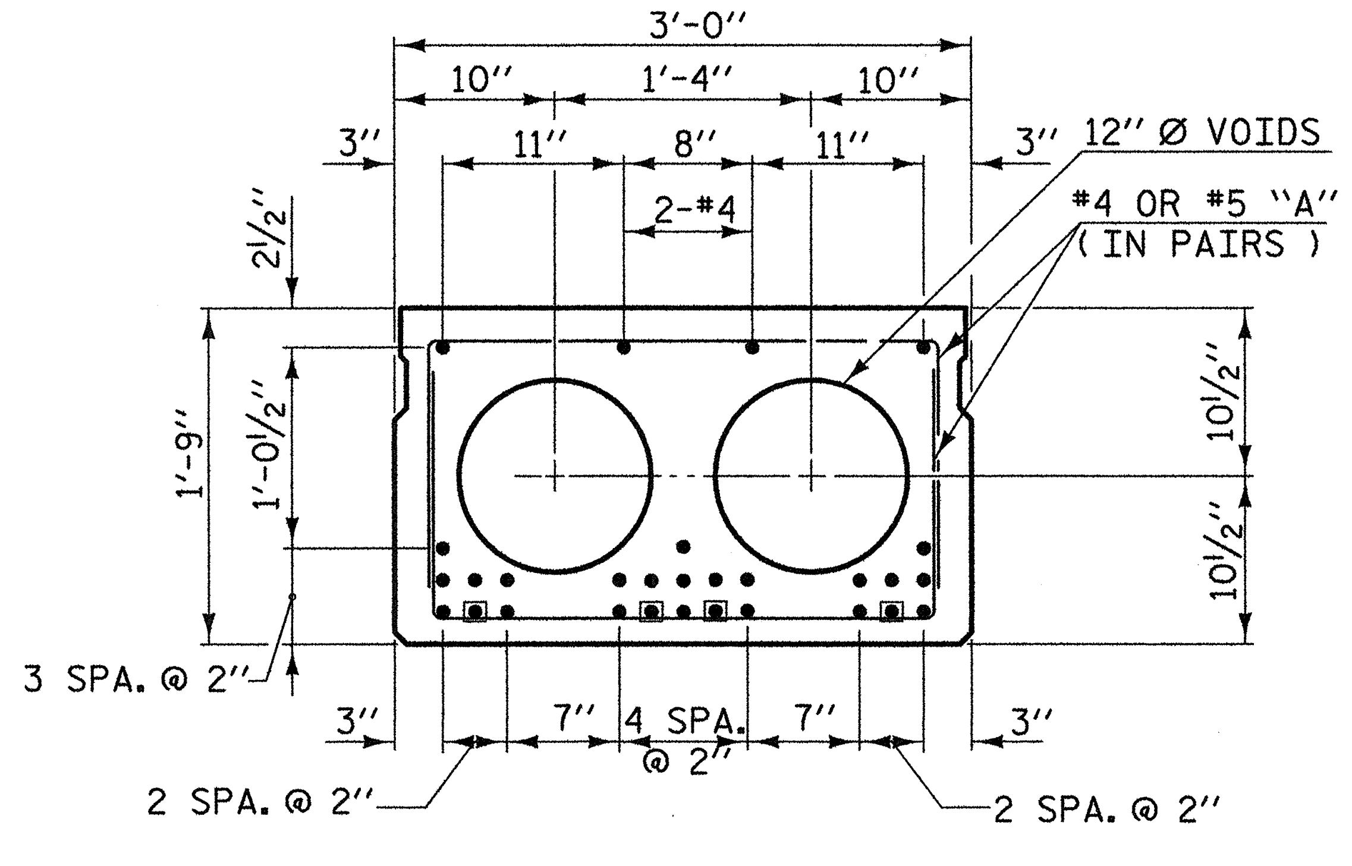
8- 1/2" Ø H.S. STRANDS
INTERIOR SLAB SECTIONS



55' SPAN

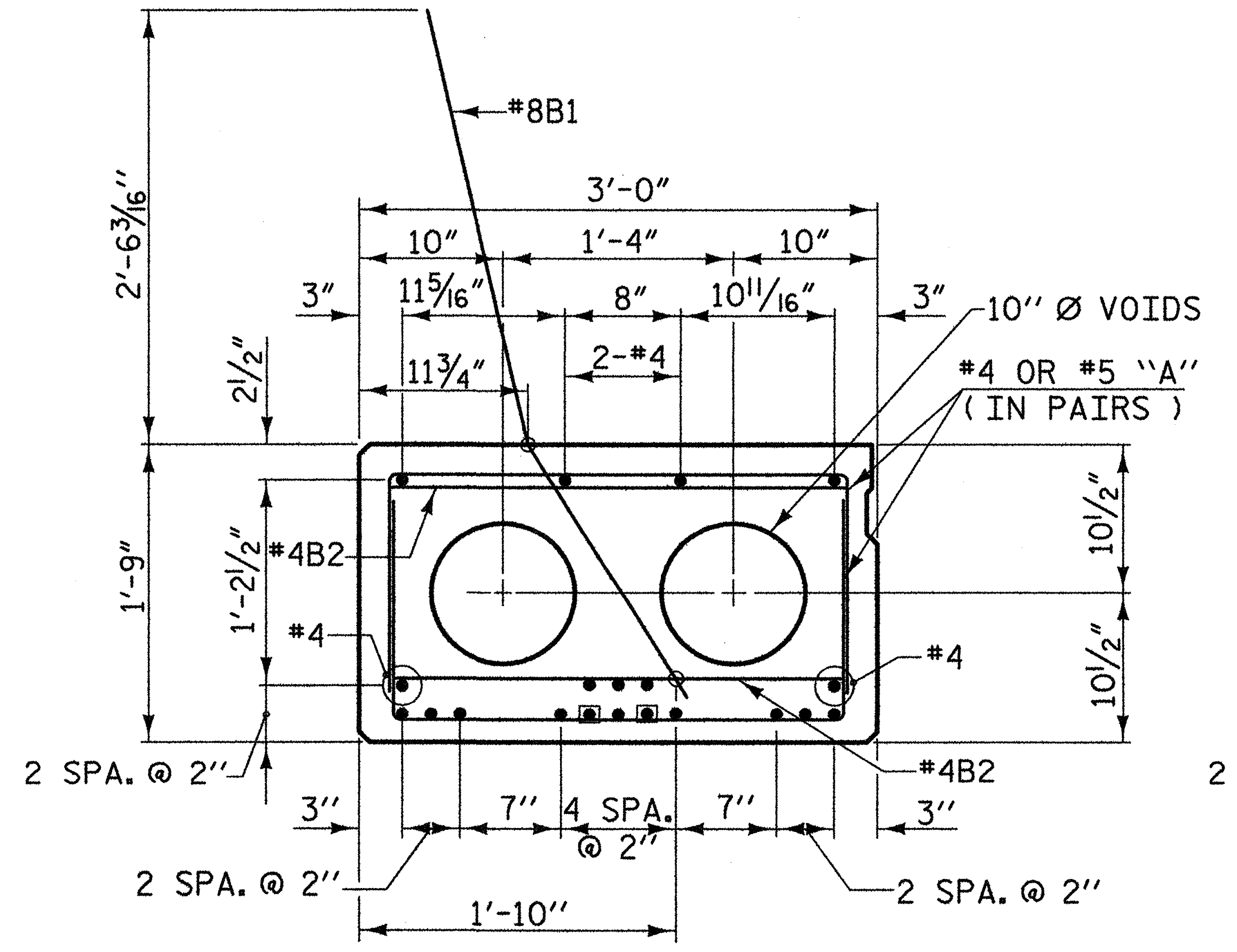
27 - 1/2" Ø H.S. STRANDS
EXTERIOR SLAB SECTIONS

▣ DENOTES SHEATHED STRAND
(SEE SHEATH CHART)



55' SPAN

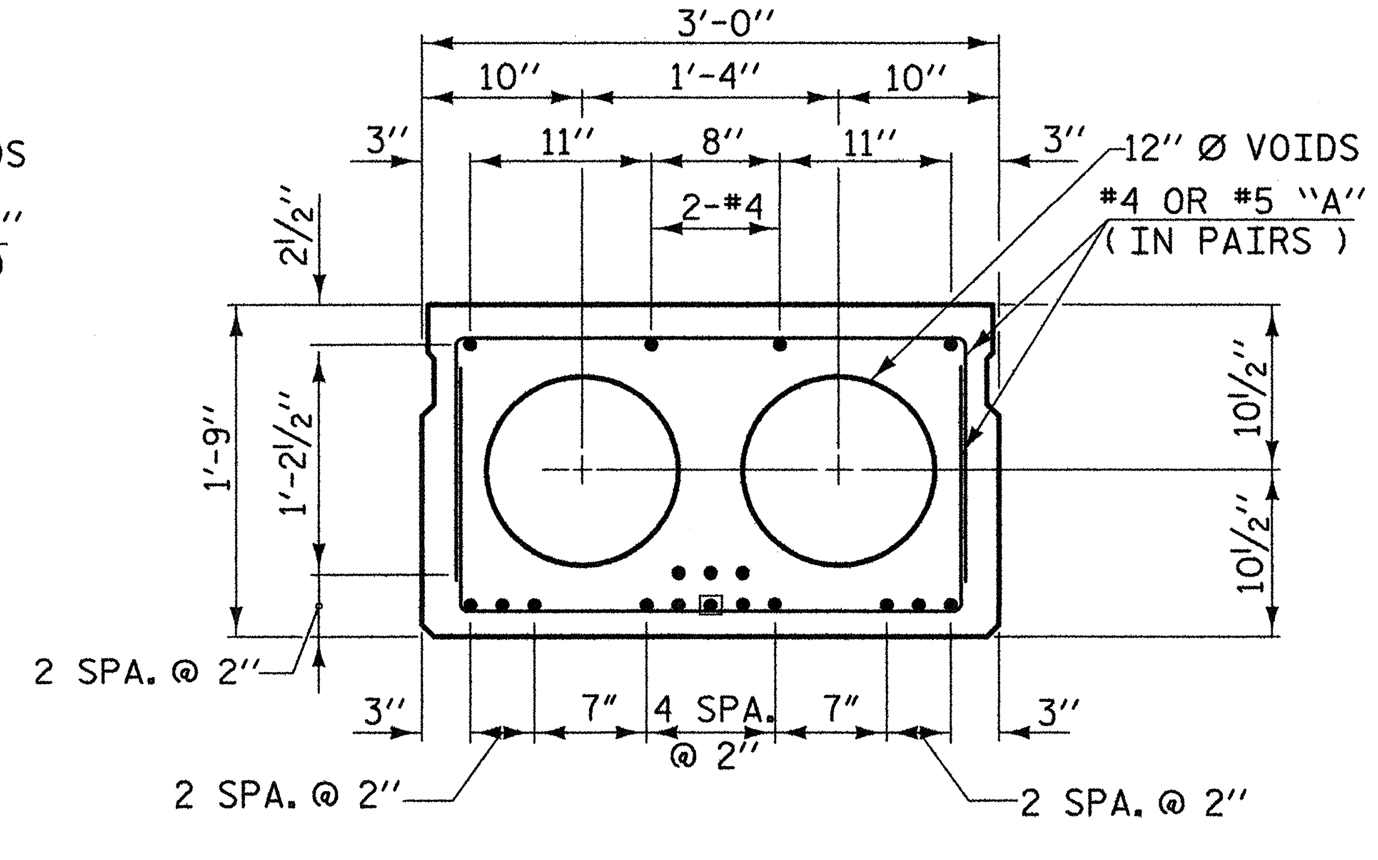
27 - 1/2" Ø H.S. STRANDS
INTERIOR SLAB SECTIONS



40' SPAN

16 - 1/2" Ø H.S. STRANDS
EXTERIOR SLAB SECTIONS

▣ DENOTES SHEATHED STRAND
(SEE SHEATH CHART)



40' SPAN

16 - 1/2" Ø H.S. STRANDS
INTERIOR SLAB SECTIONS

GENERAL NOTES

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING, EXCEPT THAT CORED SLAB UNITS IN SPANS A AND C HAVE BEEN DESIGNED FOR HS 25. CORED SLAB UNITS IN SPAN B HAVE BEEN DESIGNED FOR HS 20.

CONCRETE = f'c - 5000psi 25' SPAN ONLY. (MIN. COMP. STRENGTH @ 28 DAYS).
f'ci - 4000psi 25' SPAN ONLY (MIN. COMP. STRENGTH @ TRANSFER OF STRESSING FORCE).

CONCRETE = f'c - 7000psi 55' SPAN ONLY. (MIN. COMP. STRENGTH @ 28 DAYS).
f'ci - 5000psi 55' SPAN ONLY (MIN. COMP. STRENGTH @ TRANSFER OF STRESSING FORCE).

SIZE	TYPE	AREA	ULTIMATE STR.	APPLIED FORCE
1/2" Ø	HIGH STR.	0.153 SQ. IN. PER CABLE	41,300 LBS.	30,980 LBS. PER CABLE

STRUCTURAL STEEL ITEMS SHALL BE OF A GRADE CONFORMING TO EITHER ASTM A36 OR A373, EXCEPT HIGH STRENGTH BOLTS. HIGH STRENGTH BOLTS SHALL BE ASTM A325. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AS PER THE SPECIFICATION.

ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OF THE NC DEPARTMENT OF TRANSPORTATION DATED JULY 2006 AND WITH THE SPECIAL PROVISIONS.

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF SUPERSTRUCTURE.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER . SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS. THE JOINT SHALL BE FILLED WITH GROUT.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH. AT LEAST THREE WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

#8B1 BARS SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

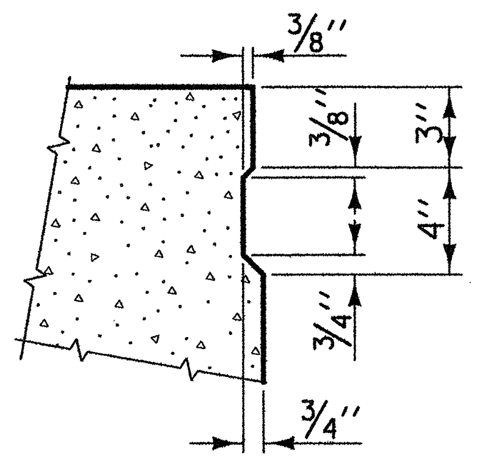
APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4".

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

FOR DEFLECTION TABLE, SEE "PRECAST CONCRETE BARRIER RAIL SECTIONS 25', 55' & 40' SPANS" SHEET.



SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE OF EXTERIOR CORED SLAB

L. KEVIN AUSTIN 19661
7/7/10

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WWW.MULKEYINC.COM

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

PRESTRESSED CORED SLAB
25', 55' & 40' SPANS

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	10
1			3			TOTAL SHEETS
2			4			33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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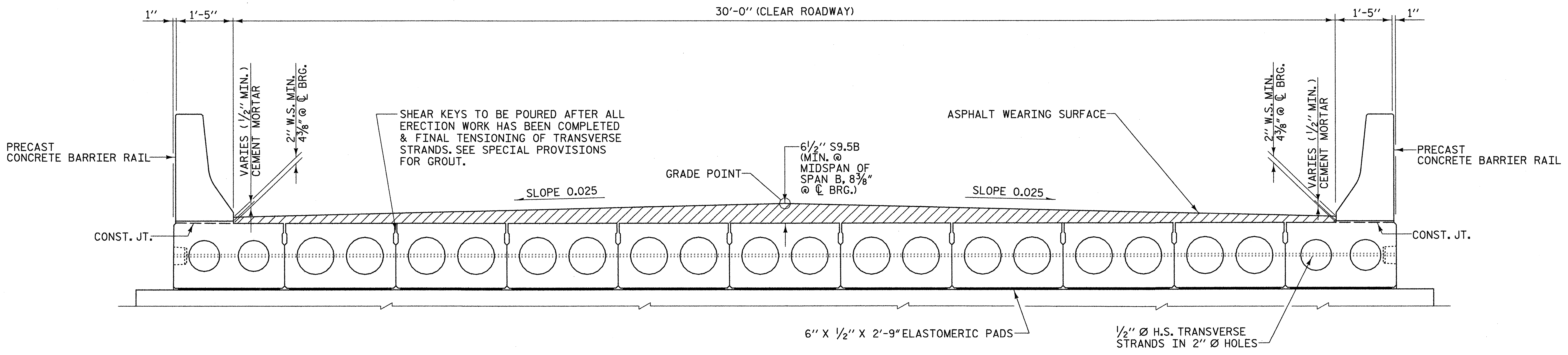
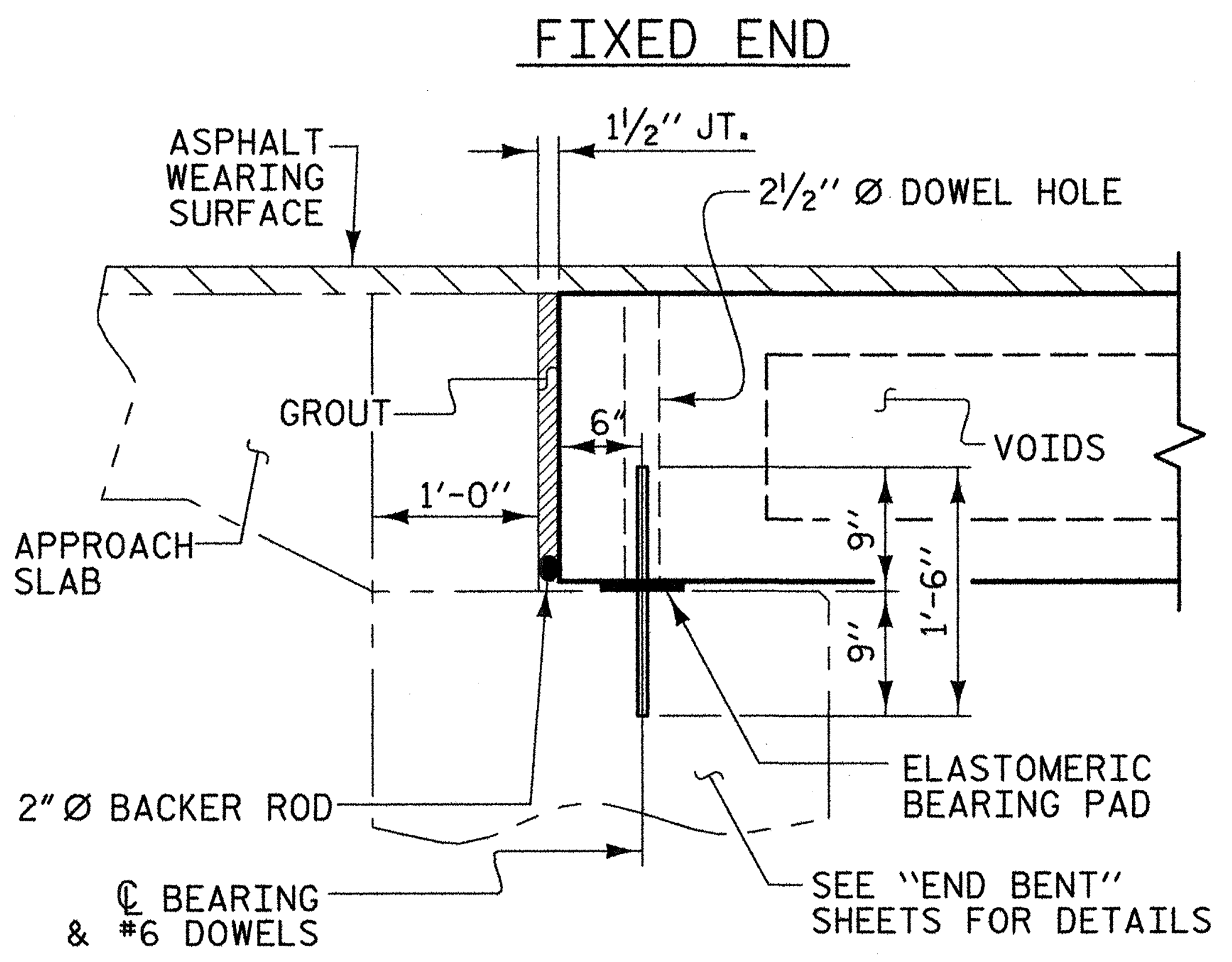
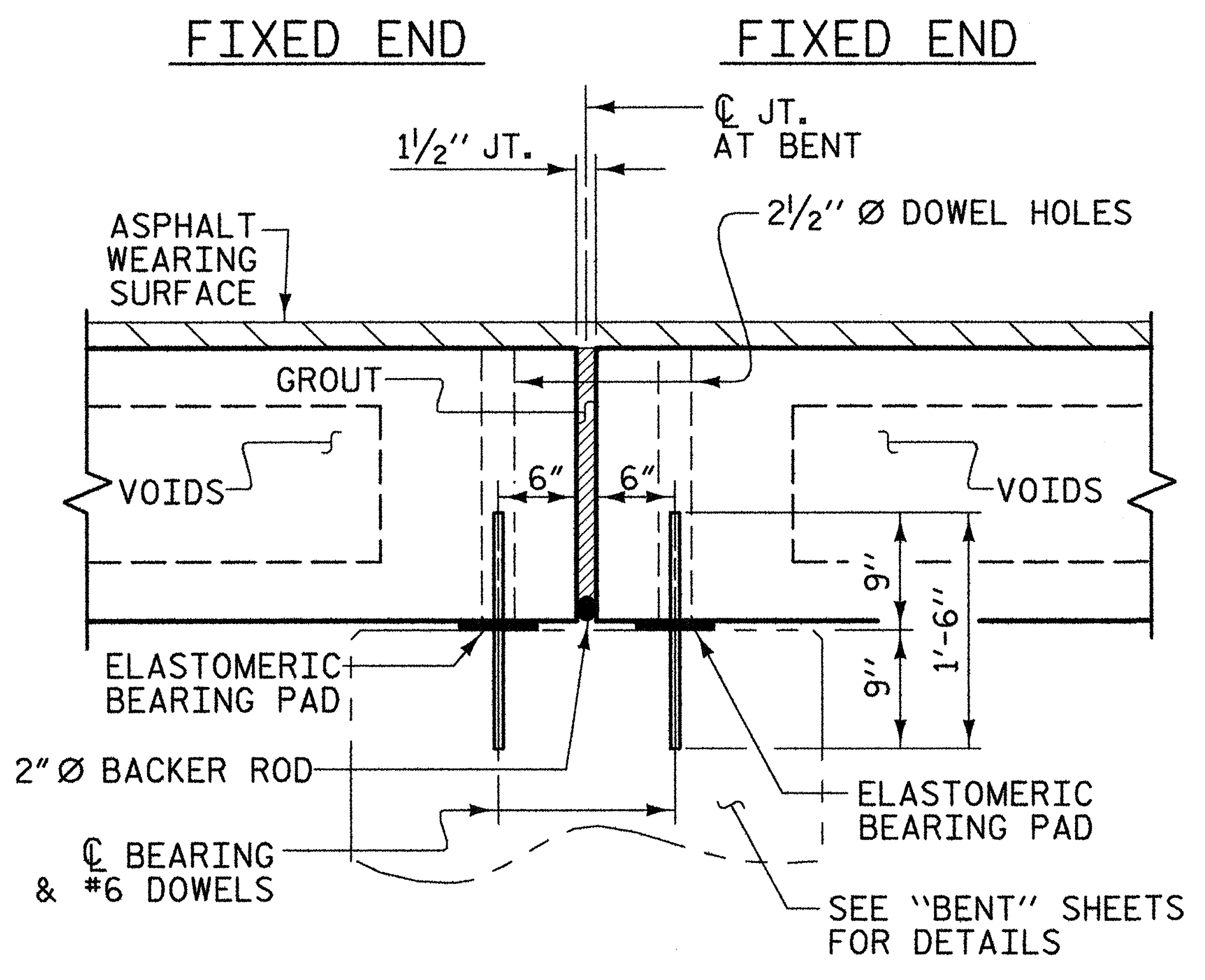


TYPICAL SECTION



SECTION AT END BENT



SECTION AT BENT

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 2 OF 2

L. Kevin Austin
1966I
7/7/10

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

PRESTRESSED CORED SLAB
25', 55' & 40' SPANS

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	11
1			3			TOTAL SHEETS
2			4			33

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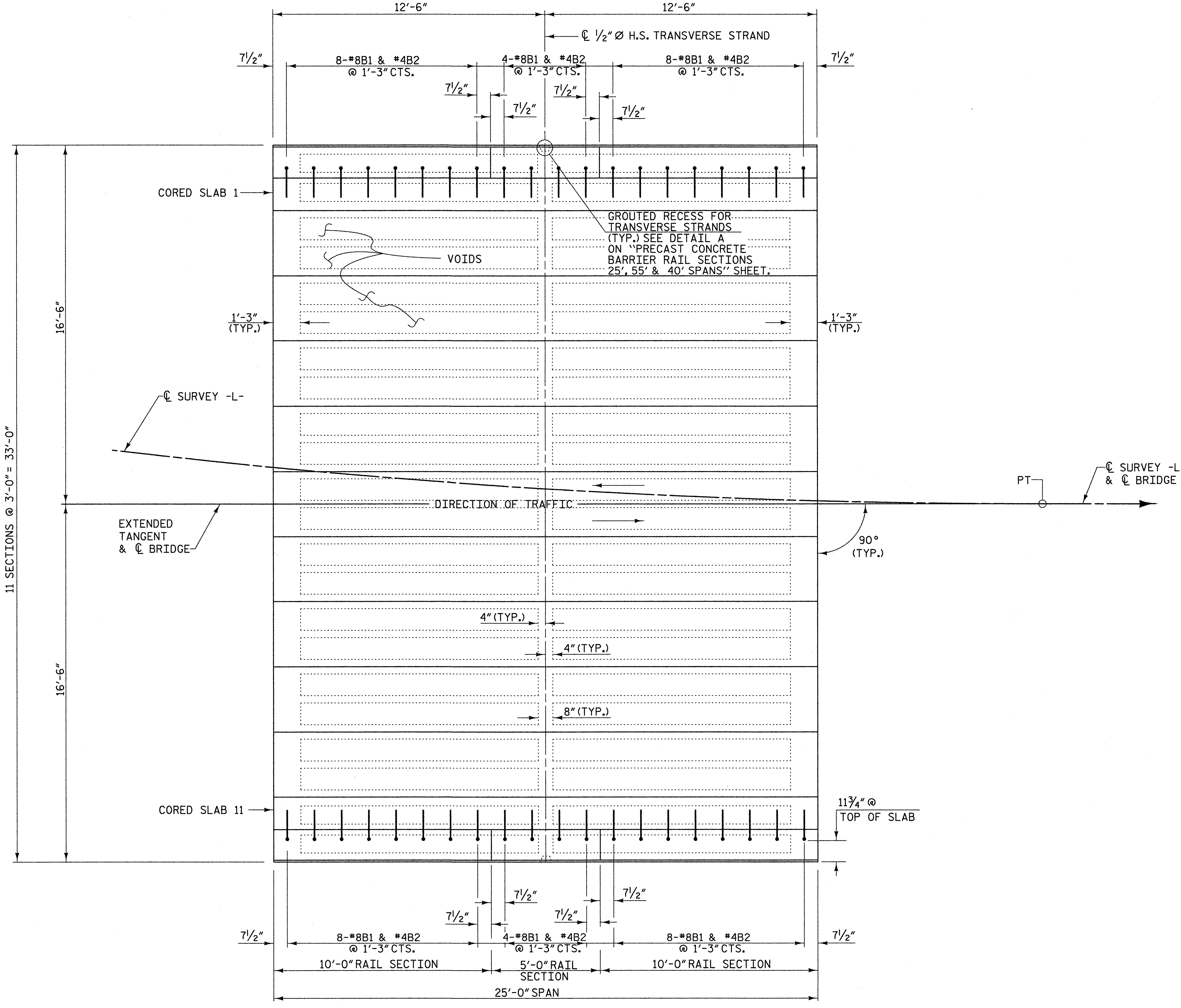
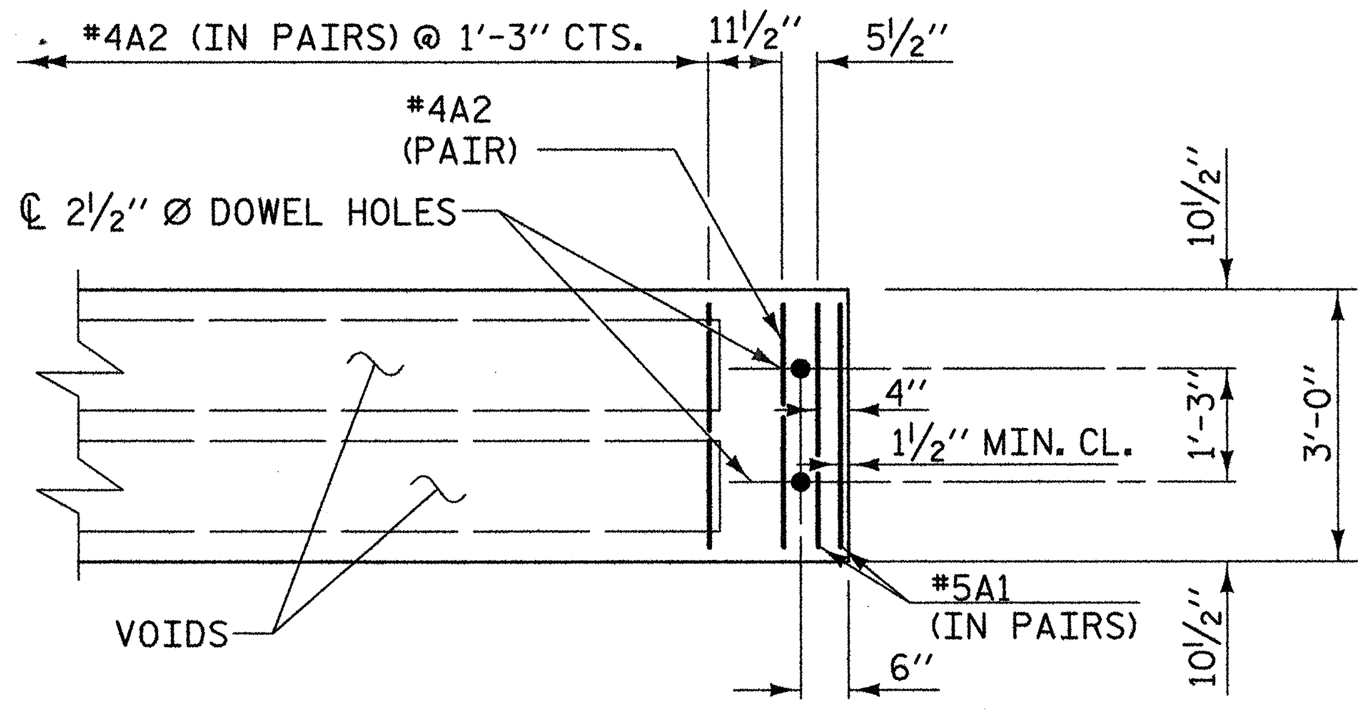
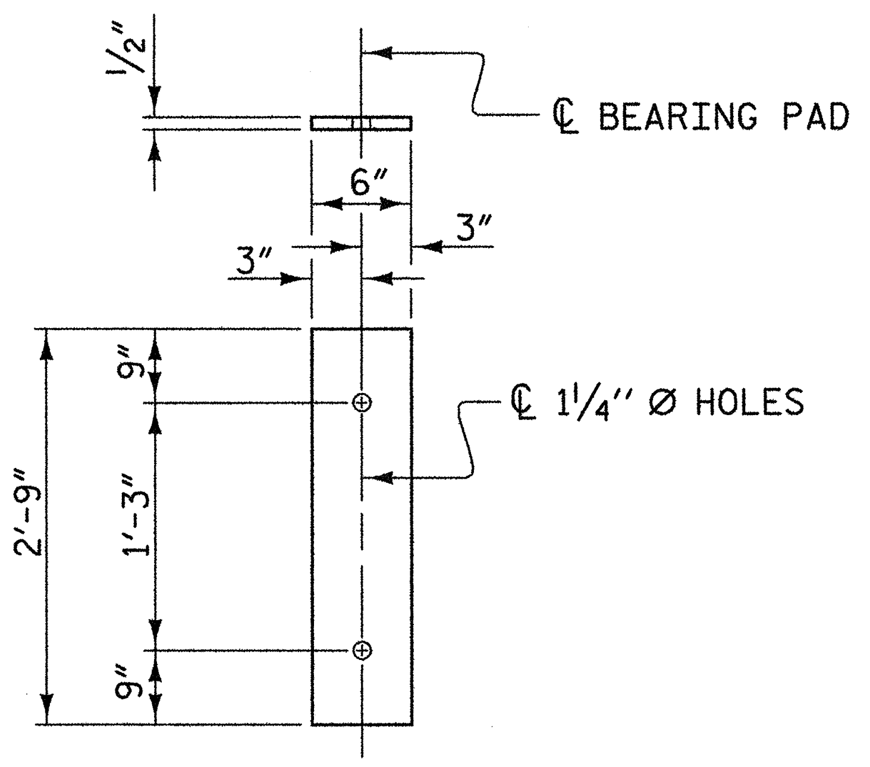


PLAN OF SPAN



PART PLAN - SLAB SECTION



FIXED

(TYPE I - 72 REQ'D)

ELASTOMERIC BEARING DETAILS

NOTE: ELASTOMER HARDNESS SHALL BE 50 DUROMETERS.

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

PRESTRESSED CORED SLAB
25' SPAN

30' CLEAR ROADWAY - 90° SKEW

L. KEVIN AUSTIN
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2			4		

SHEET NO. 12

TOTAL SHEETS 33

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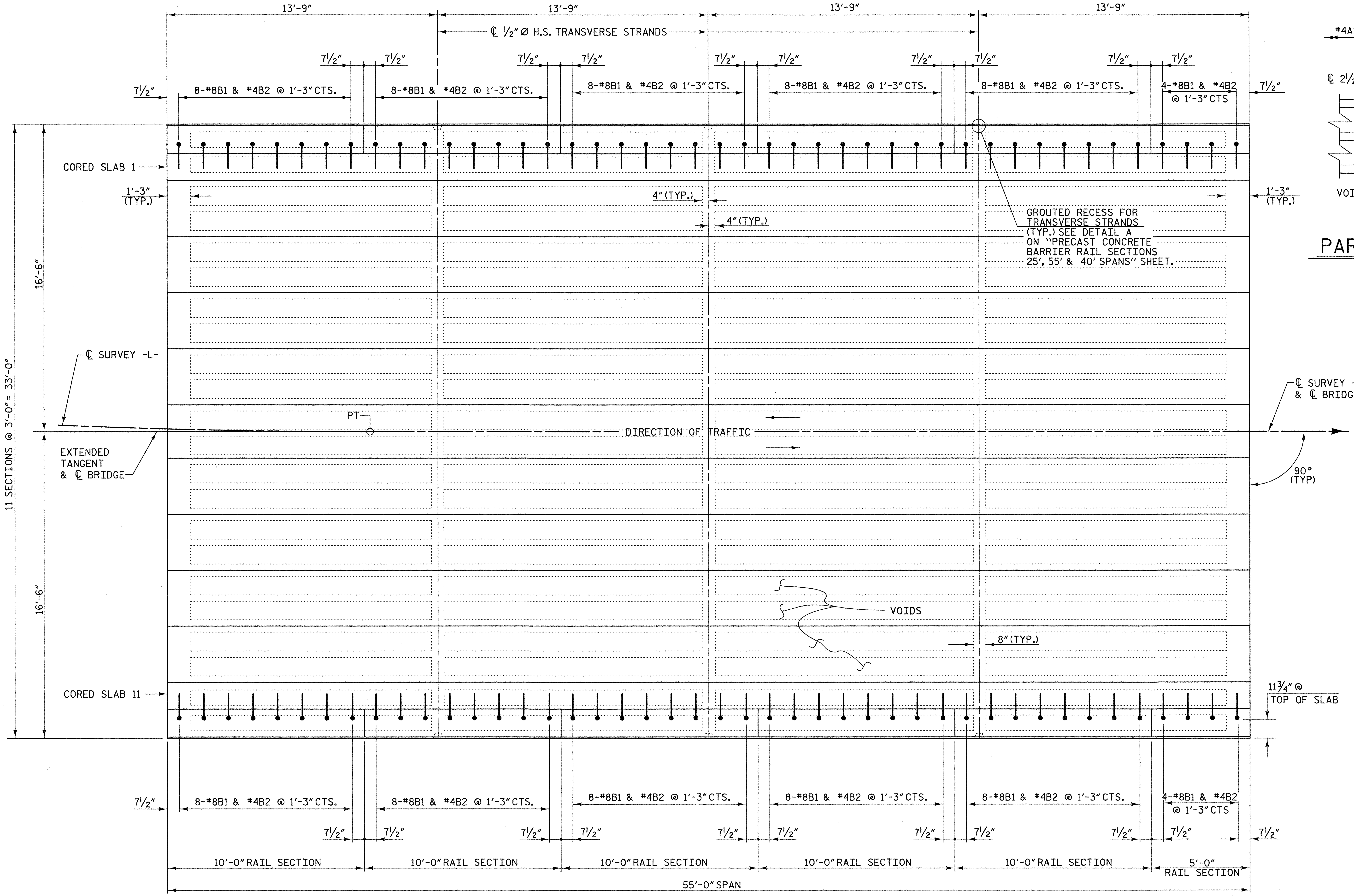
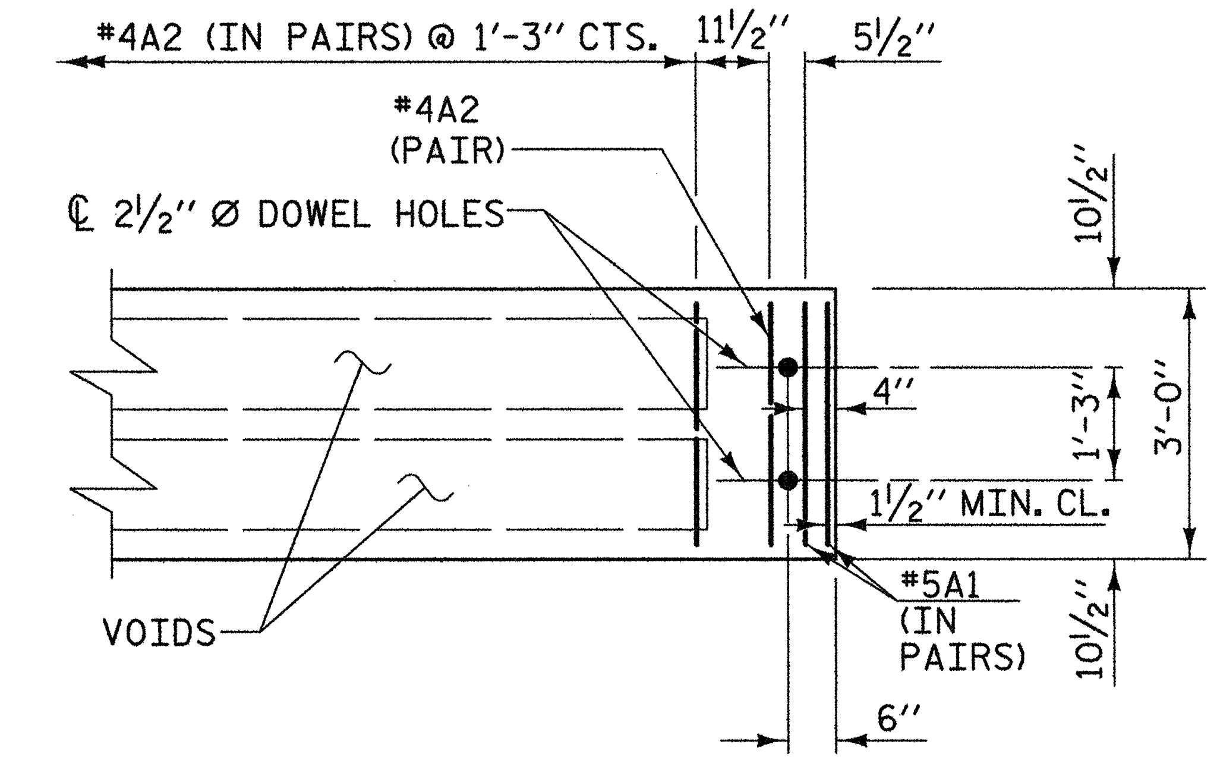


PLAN OF SPAN



PART PLAN - SLAB SECTION

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

PRESTRESSED CORED SLAB
55' SPAN

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	13
1			3			TOTAL SHEETS
2			4			33

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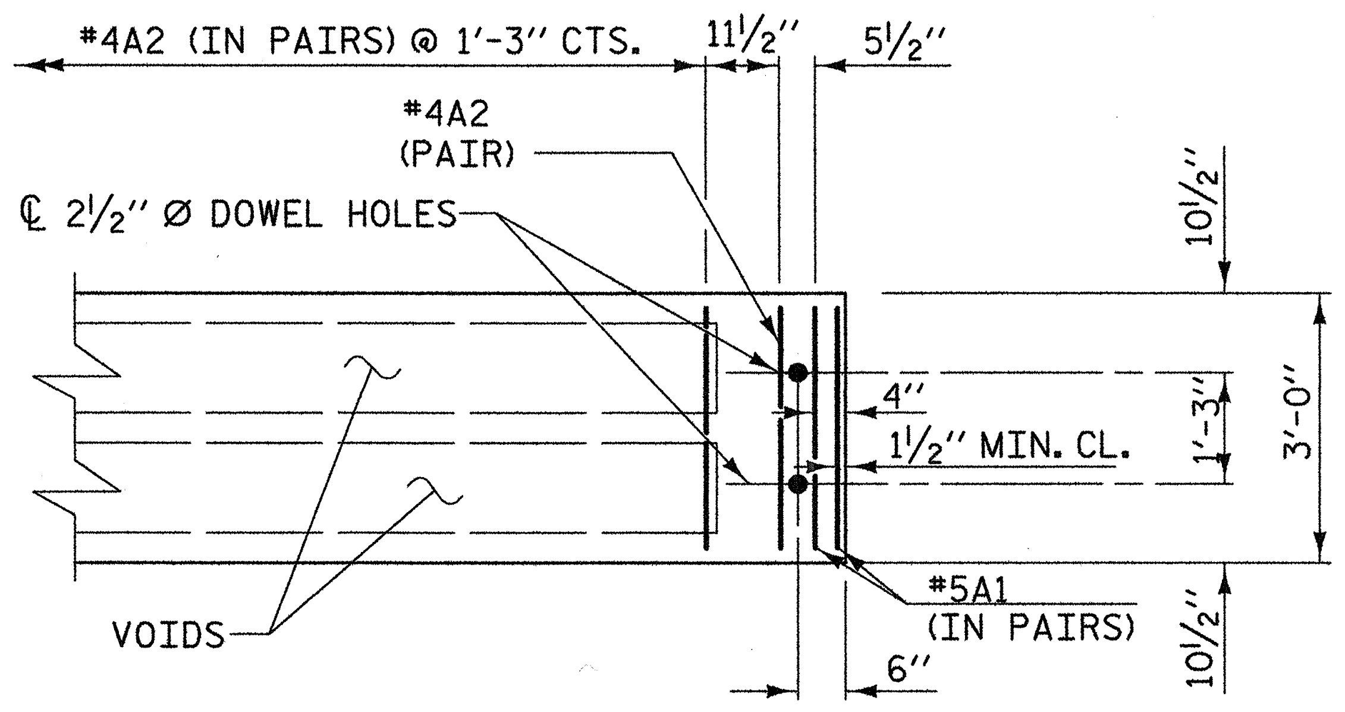
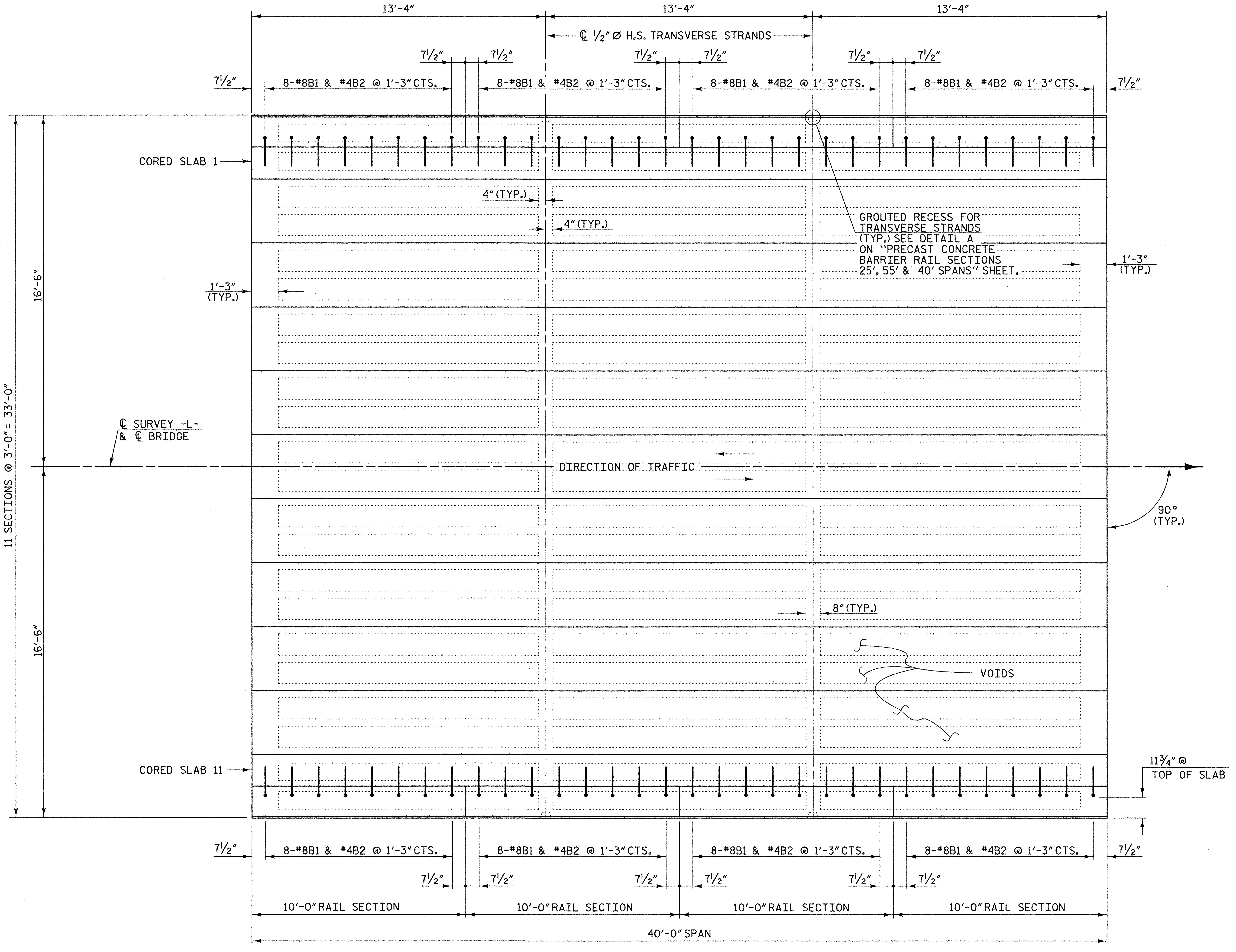


PART PLAN - SLAB SECTION



PLAN OF SPAN

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PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

L. KEVIN AUSTIN
19661
L. Kevin Austin 7/7/10

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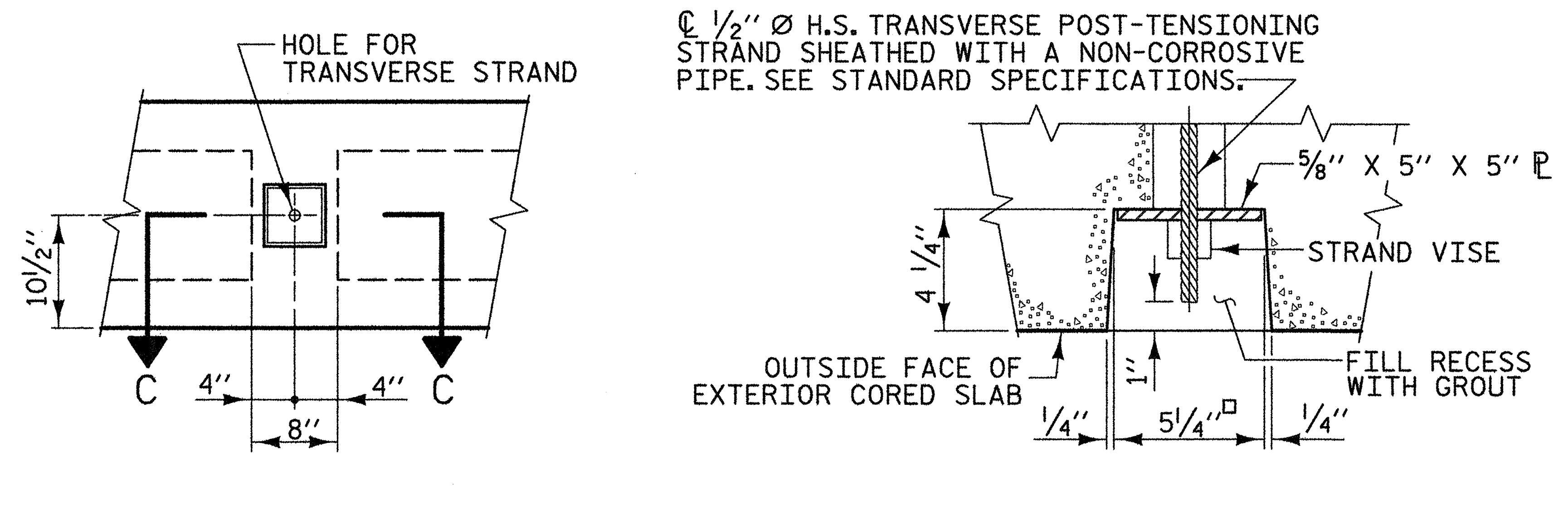
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

PRESTRESSED CORED SLAB
40' SPAN

30' CLEAR ROADWAY - 90°SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	14
1			3			TOTAL SHEETS
2			4			33



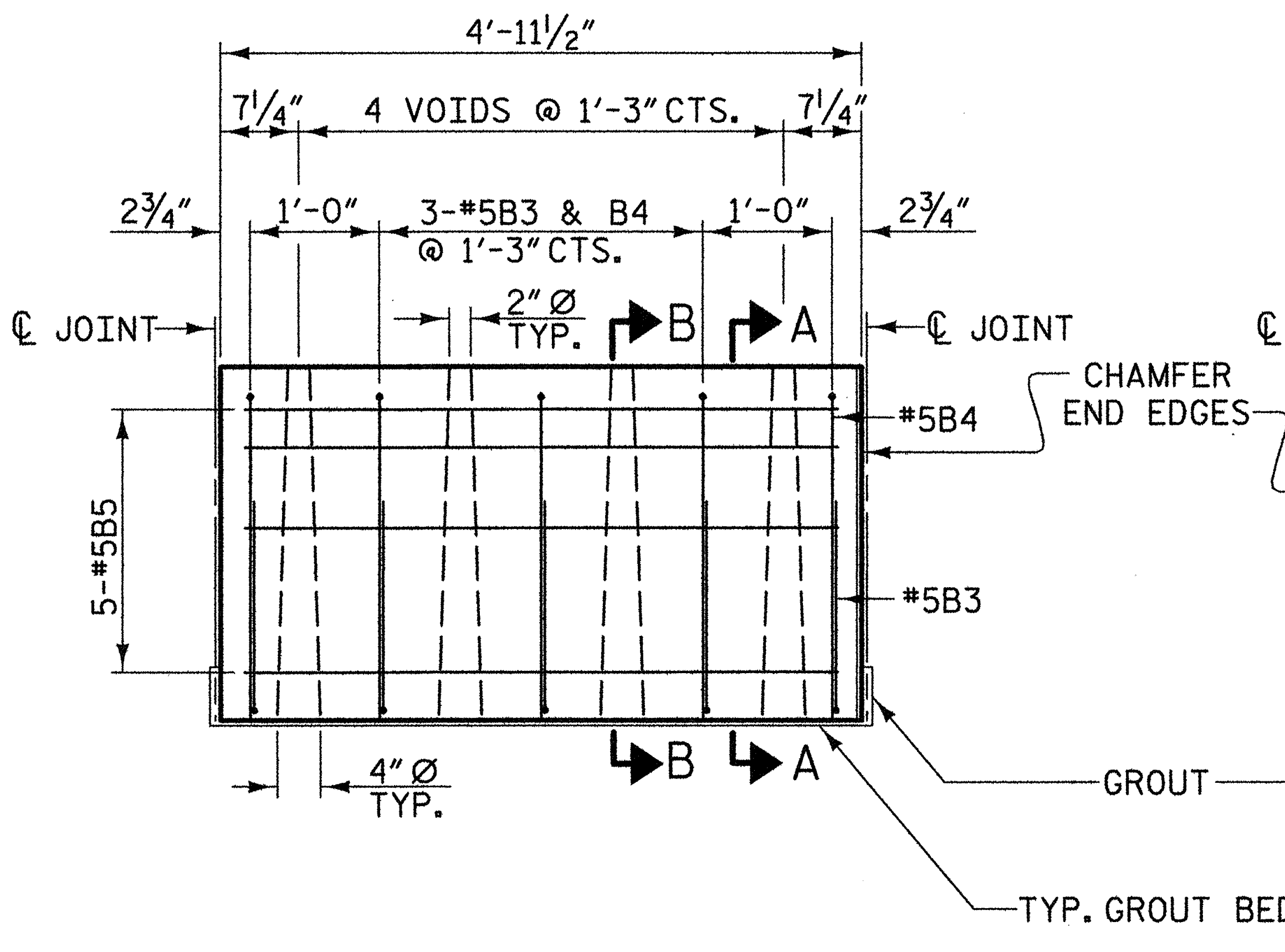
ELEVATION

SECTION C-C

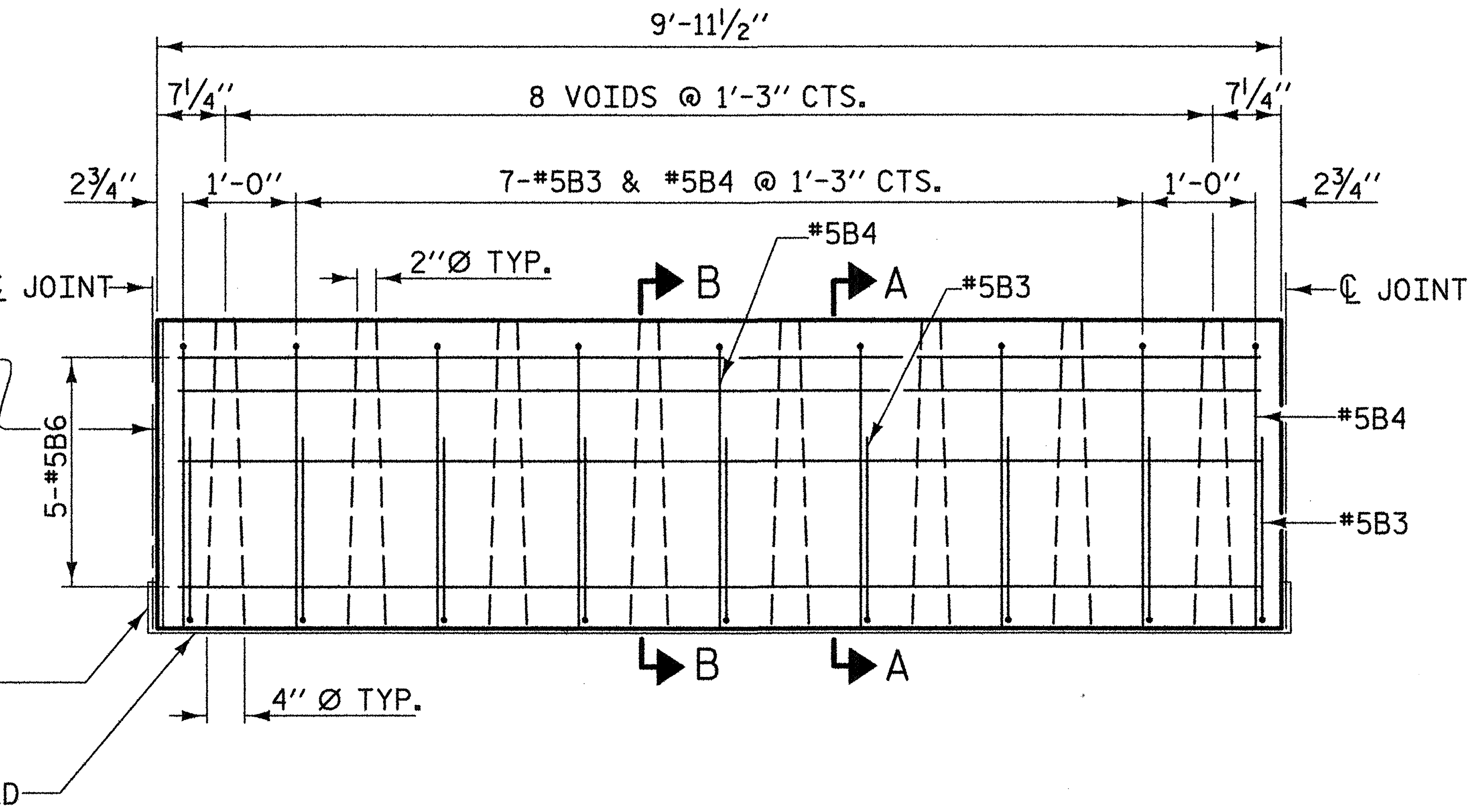
DETAIL A
GROUTED RECESS AT END OF POST-TENSIONED STRAND CORED SLAB

EXTERIOR SLAB UNIT	25′	55′	40′
CAMBER (SLAB UNIT ALONE IN PLACE)	⅛″ (UP)	2½″ (UP)	1″ (UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	* 0 ″ (DOWN)	* 7⁄16″ (DOWN)	* ⅛″ (DOWN)
FINAL DEFLECTION	⅛″ (UP)	2 1⁄16″ (UP)	⅞″ (UP)
* INCLUDES FUTURE WEARING SURFACE			

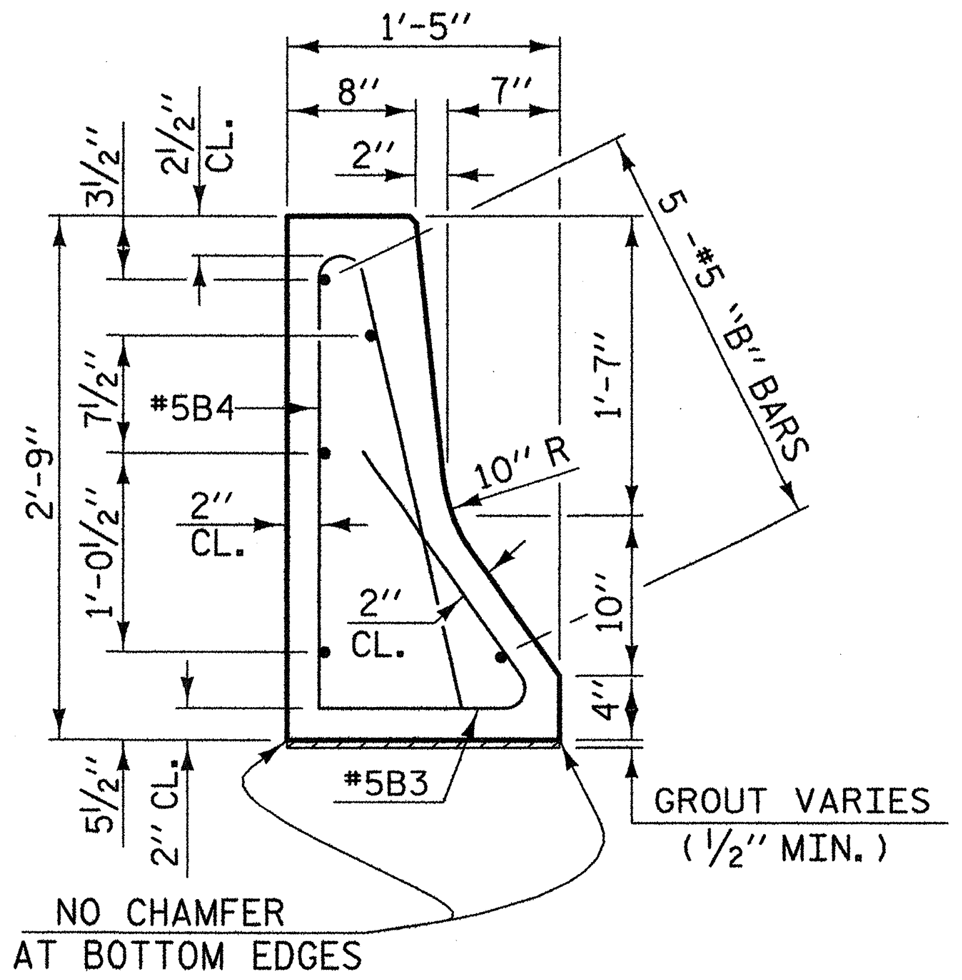
INTERIOR SLAB UNIT	25′	55′	40′
CAMBER (SLAB UNIT ALONE IN PLACE)	⅛″ (UP)	2⅞″ (UP)	1⅛″ (UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	* 0″ (DOWN)	* ½″ (DOWN)	* ⅛″ (DOWN)
FINAL DEFLECTION	⅛″ (UP)	2⅜″ (UP)	1″ (UP)
* INCLUDES FUTURE WEARING SURFACE			



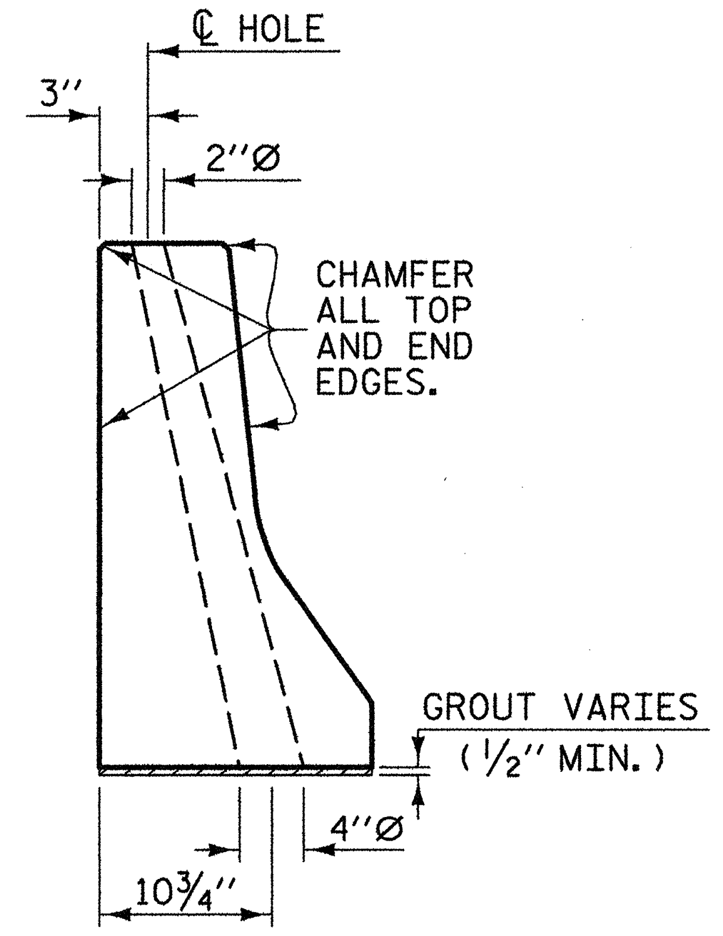
TYPICAL 5′-0″ PRECAST UNIT



TYPICAL 10′-0″ PRECAST UNIT



SECTION A-A



SECTION B-B

NOTES

EACH PRECAST RAIL UNIT SHALL BE CAST WITH CLASS AA CONCRETE.

RAIL TO BE FLUSH WITH CORED SLAB UNITS AT EACH END OF SPAN.

GROUT SHALL BE 5″ ABOVE THE BOTTOM OF THE RAIL BETWEEN RAIL SECTIONS AND THE JOINTS AT THE BENTS.

EACH PRECAST RAIL UNIT SHALL BE SUPPLIED WITH LIFTING DEVICE(S). NO CABLES ARE TO BE WRAPPED AROUND THE RAIL UNITS FOR LIFTING.

CONCRETE CHAMFERS:
UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾″ WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½″ RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼″ FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼″ RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE ON PLANS.

DECK DRAINS ARE NOT PERMITTED.

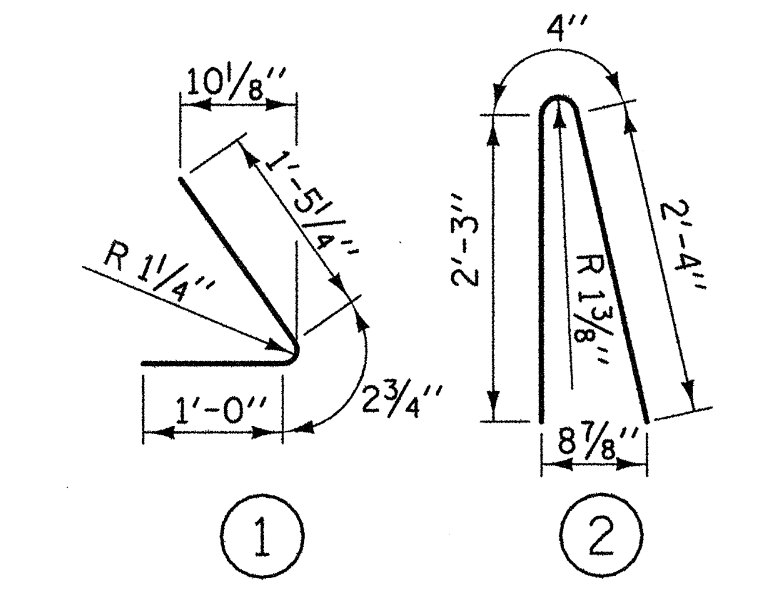
BILL OF MATERIAL FOR ONE 5′-0″ RAIL SECTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B3	5	#5	1	2′-8″	14
B4	5	#5	2	4′-11″	26
B5	5	#5	STR.	4′-7″	24
REINFORCING STEEL LBS. =					64
CLASS AA CONCRETE CU. YDS. =					0.5

BILL OF MATERIAL FOR ONE 10′-0″ RAIL SECTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B3	9	#5	1	2′-8″	25
B4	9	#5	2	4′-11″	46
B6	5	#5	STR.	9′-7″	50
REINFORCING STEEL LBS. =					121
CLASS AA CONCRETE CU. YDS. =					1.0

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

L. KEVIN AUSTIN 19661
7/7/10

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
PRECAST CONCRETE
BARRIER RAIL SECTIONS
25′, 55′ & 40′ SPANS
30′ CLEAR ROADWAY - 90° SKEW

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 15
TOTAL SHEETS 33

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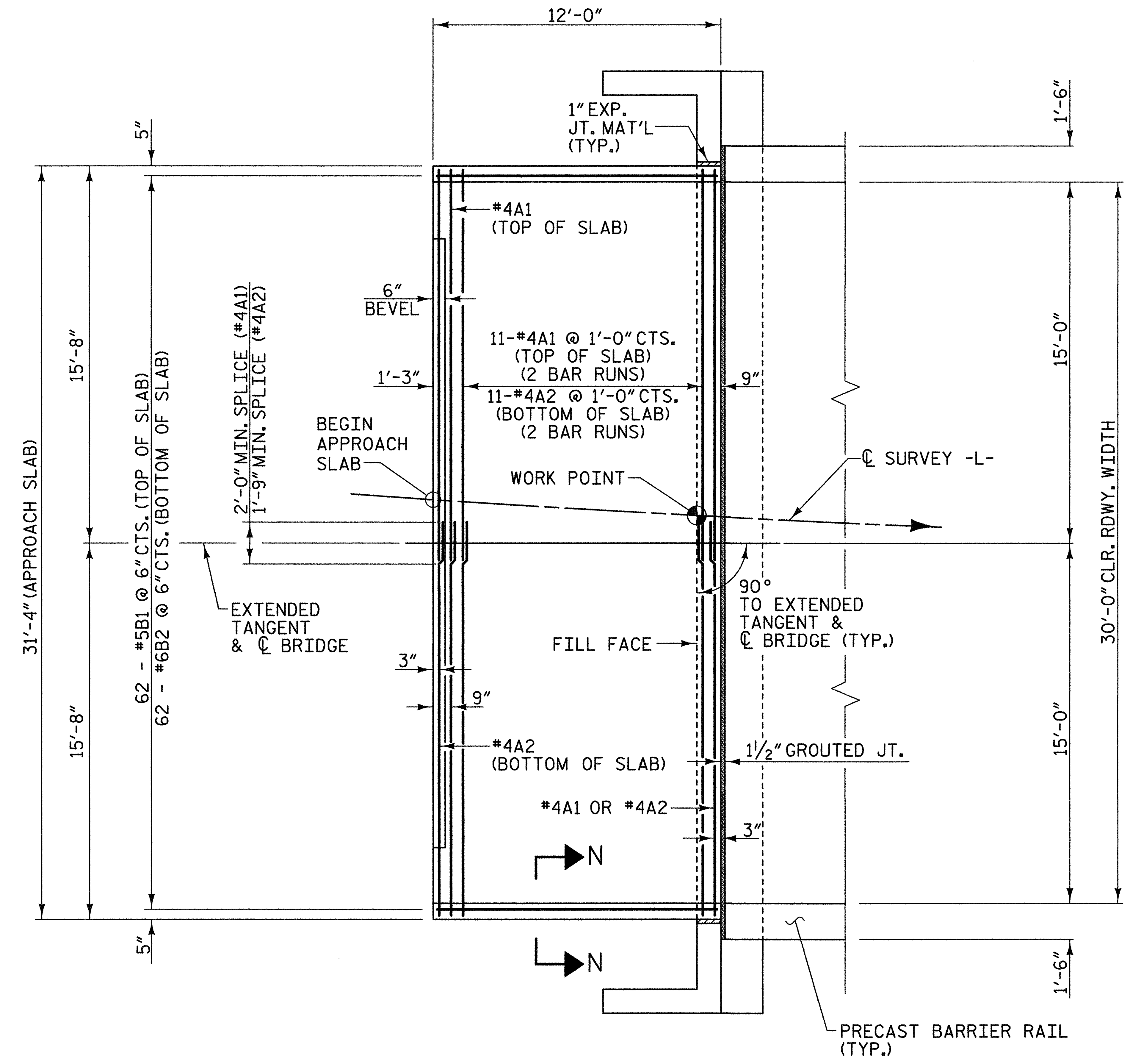
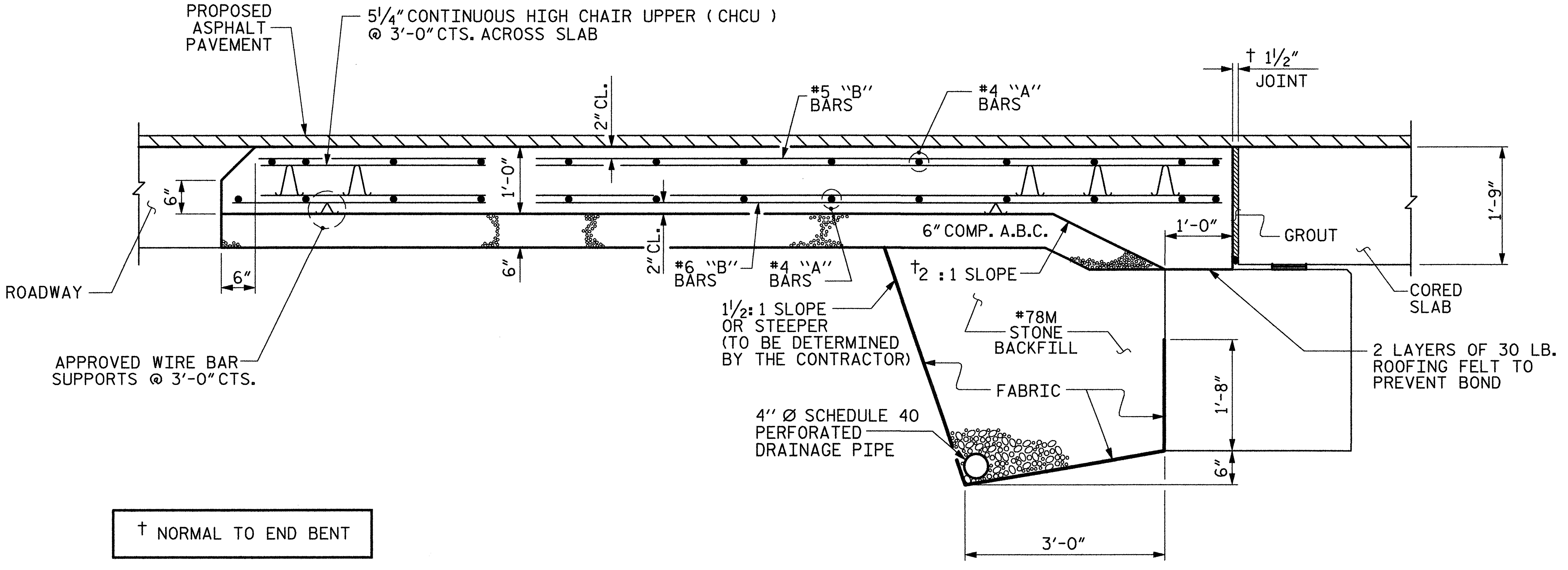


PLAN OF APPROACH SLAB

END BENT 1 APPROACH SLAB SHOWN
END BENT 2 APPROACH SLAB SIMILAR



† NORMAL TO END BENT

SECTION THRU SLAB

NOTES

REINFORCED BRIDGE APPROACH FILL INCLUDING FABRIC, IMPERMEABLE GEOMEMBRANE, 4" Ø DRAINAGE PIPE, #78M STONE, AND SELECT MATERIAL, SHALL BE INCLUDED IN THE LUMP SUM CONTRACT BID PRICE FOR BRIDGE APPROACH SLABS.

FABRIC SHALL BE TYPE 1 ENGINEERING FABRIC IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

#78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

#78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

FOR THE 4" Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED.

THE 6" COMP. A.B.C. SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB AND SHALL EXTEND 1'-0" OUTSIDE OF EACH EDGE OF THE APPROACH SLAB.

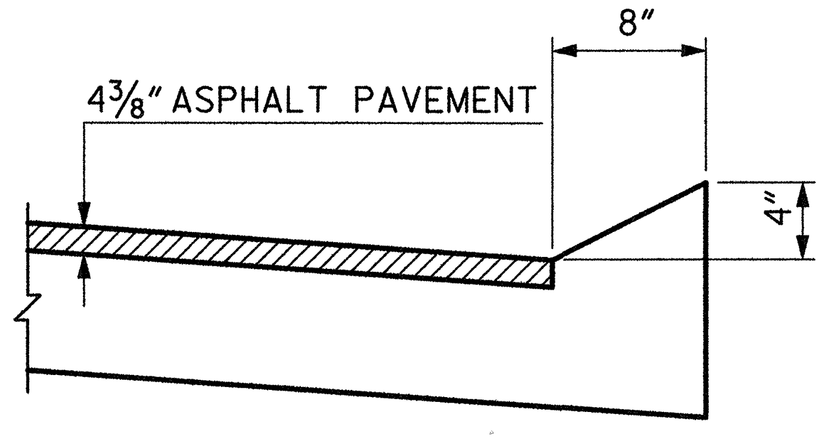
THE CONTRACTOR MAY USE 4" TYPE B-25.0B ASPHALT CONCRETE BASE COURSE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30 LB ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

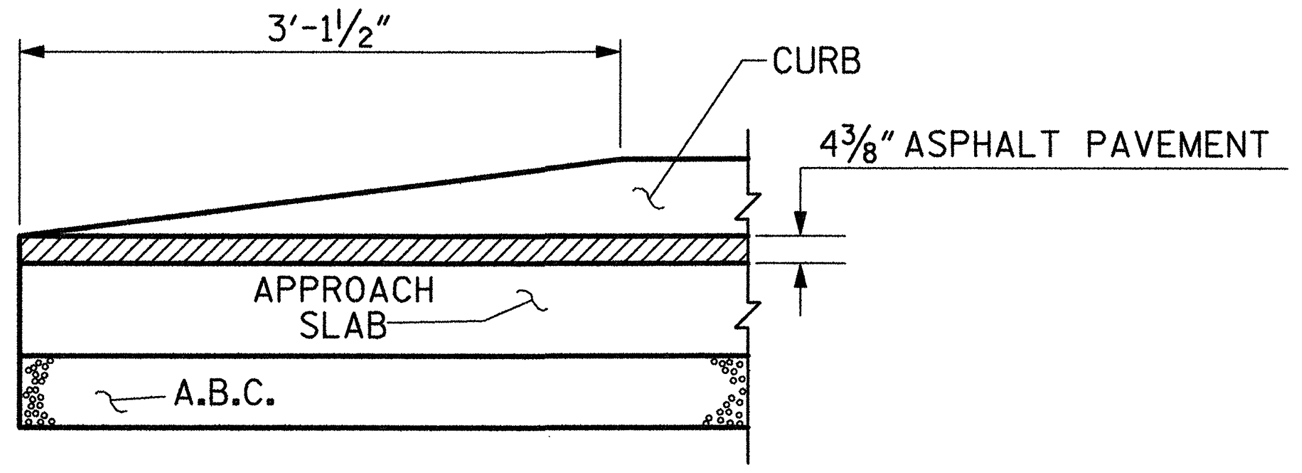
FOR JOINT DETAILS, SEE "PRESTRESSED CORED SLAB, 25', 55' & 40' SPANS" SHEET 2 OF 2.

THE JOINT AT THE END BENT SHALL BE GROUTED AS SOON AS PRACTICAL AFTER THE CONSTRUCTION OF THE APPROACH SLABS.

APPROACH SLAB GROOVING IS NOT REQUIRED.



SECTION N-N



END OF CURB WITHOUT SHOULDER BERM GUTTER

CURB DETAILS

BILL OF MATERIAL

APPROACH SLAB AT EB #1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✱A1	26	#4	STR	16'-6"	287
A2	26	#4	STR	16'-5"	285
✱B1	62	#5	STR	11'-3"	727
B2	62	#6	STR	11'-8"	1086
REINFORCING STEEL				LBS.	1371
✱EPOXY COATED REINFORCING STEEL				LBS.	1014
CLASS AA CONCRETE				C. Y.	14.9

APPROACH SLAB AT EB #2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✱A1	26	#4	STR	16'-5"	287
A2	26	#4	STR	16'-5"	285
✱B1	62	#5	STR	11'-3"	727
B2	62	#6	STR	11'-8"	1086
REINFORCING STEEL				LBS.	1371
✱EPOXY COATED REINFORCING STEEL				LBS.	1014
CLASS AA CONCRETE				C. Y.	14.9

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:

19661
L. KEVIN AUSTIN
L. Kevin Austin 7/7/10

PLANS PREPARED BY:
MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
Raleigh, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
BRIDGE APPROACH SLAB
FOR PRESTRESSED CONCRETE
CORED SLAB UNIT
(SUB-REGIONAL TIER)
STD. NO. BAS13

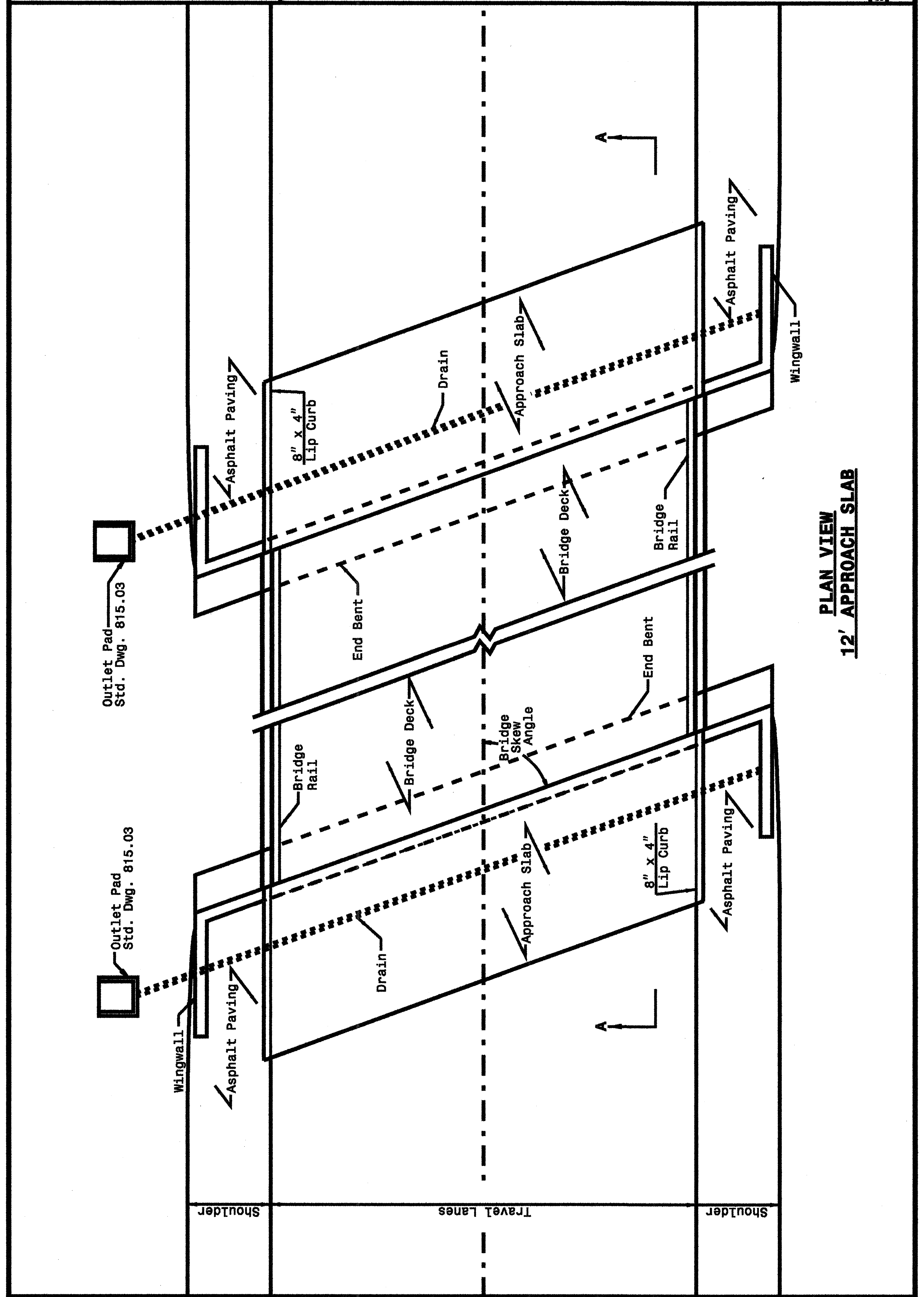
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	16
1			3			TOTAL SHEETS
2			4			33

ASSEMBLED BY :	W. B. ALLEN	DATE :	5/10
CHECKED BY :	L. K. AUSTIN	DATE :	6/10
DRAWN BY :	KMM 3-08		
CHECKED BY :	GM 3-08		

PROJECT REFERENCE NO.	SHEET NO.
B-5214	17

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER
SHEET 1 OF 2
422D11

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER
SHEET 2 OF 2
422D11

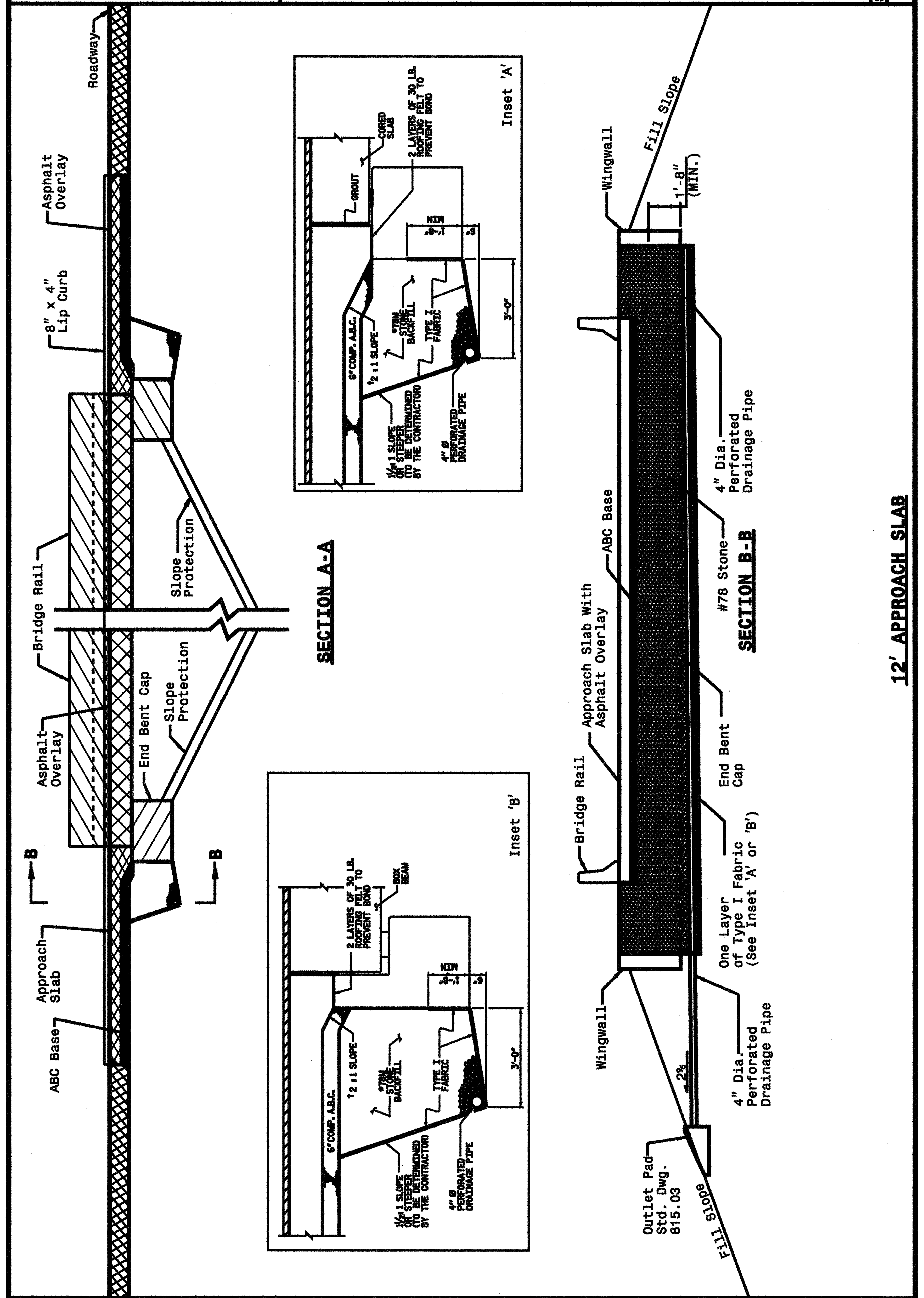


PLAN VIEW
12' APPROACH SLAB

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

ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

SHEET 1 OF 2
422D11



SECTION A-A

SECTION B-B

12' APPROACH SLAB

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

ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

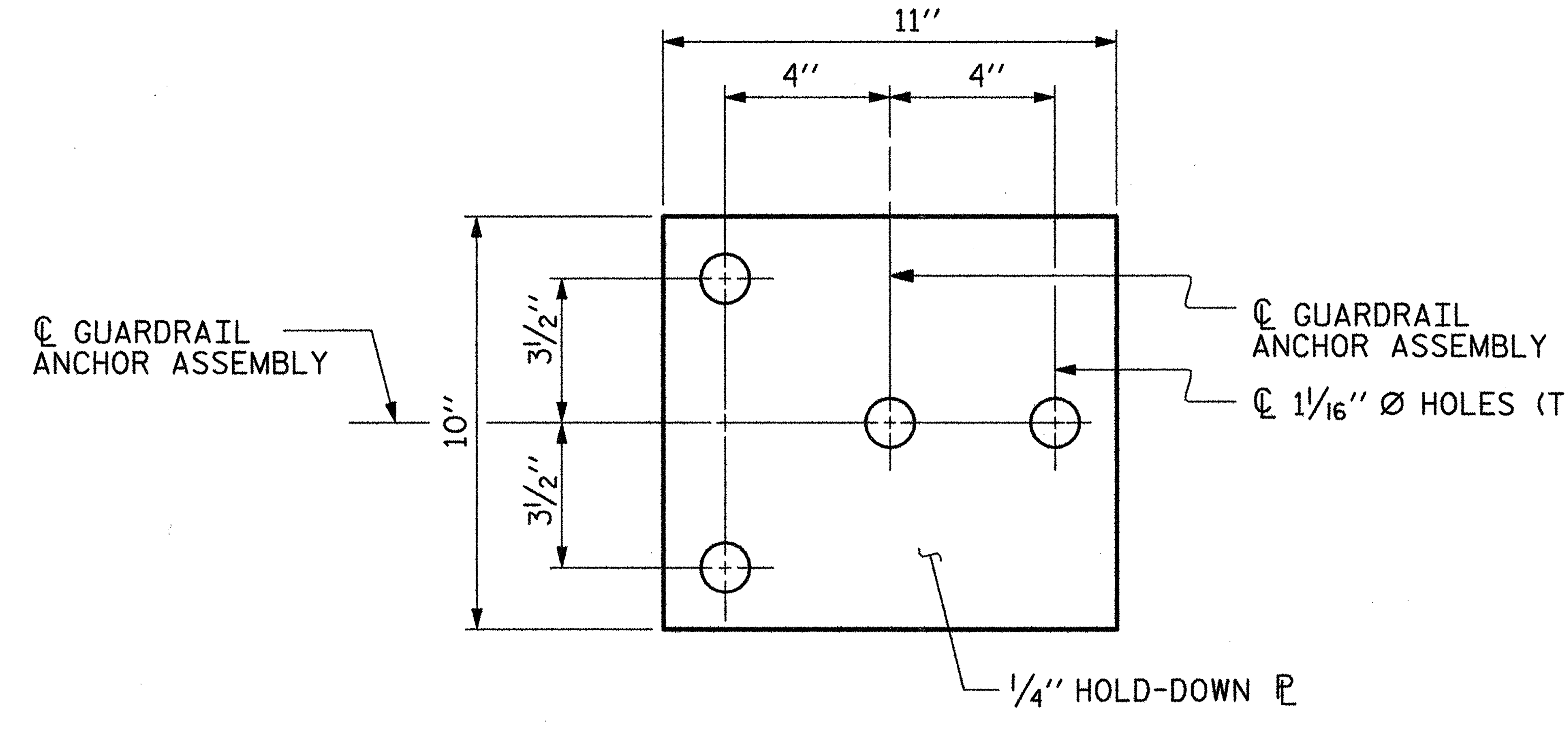
SHEET 2 OF 2
422D11

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

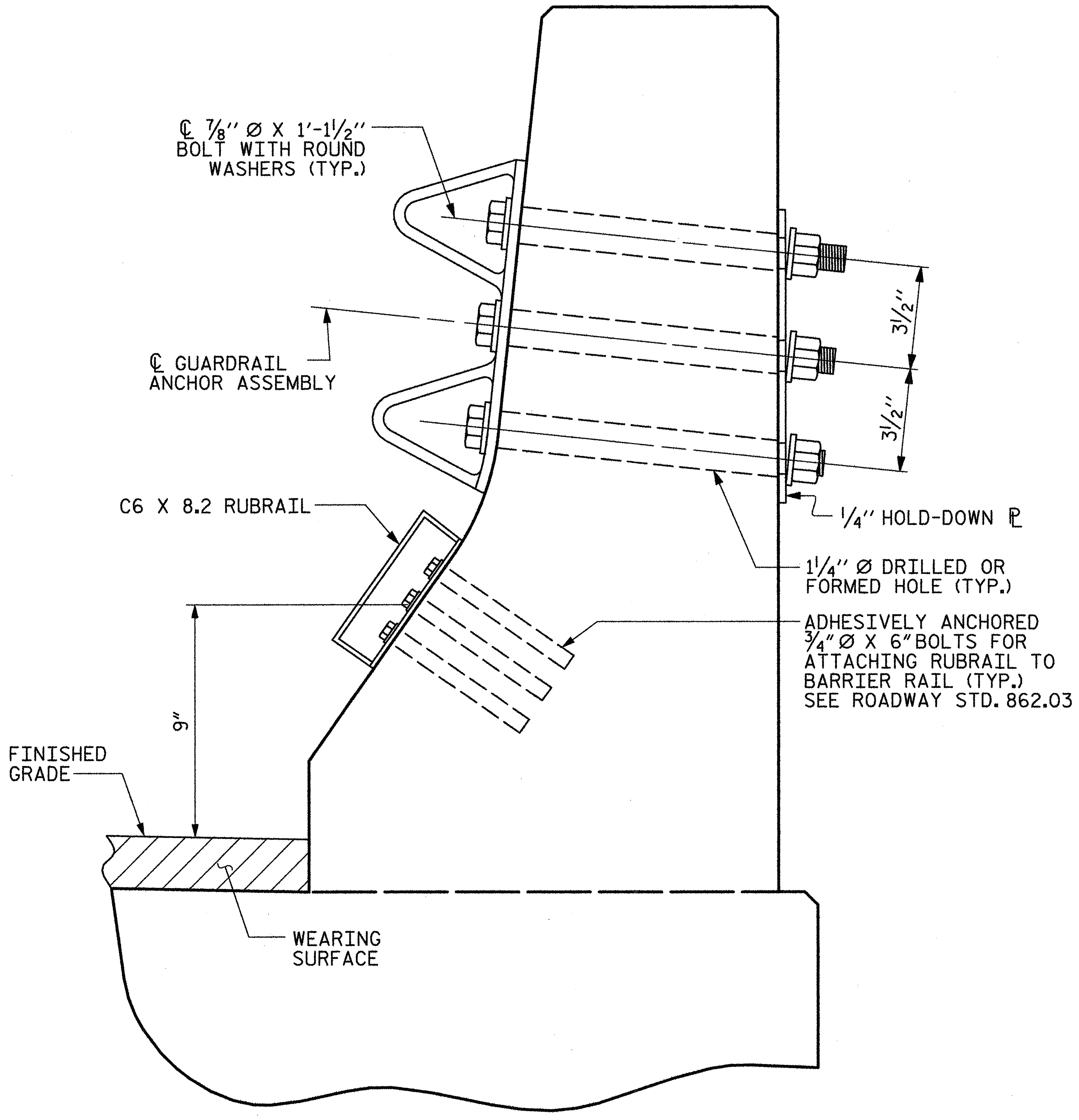
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

ORIGINAL BY: K. A. Kempf DATE: 6-10-08
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: kkempf\english\bridge approach fills.dgn

01-JUN-2009 14:15
s:\contracts\contracts\special details\ericward\stds\06' stds to special details\4221l\bridge approach fill sub reg tier.dgn
jhowerton AT PS237501

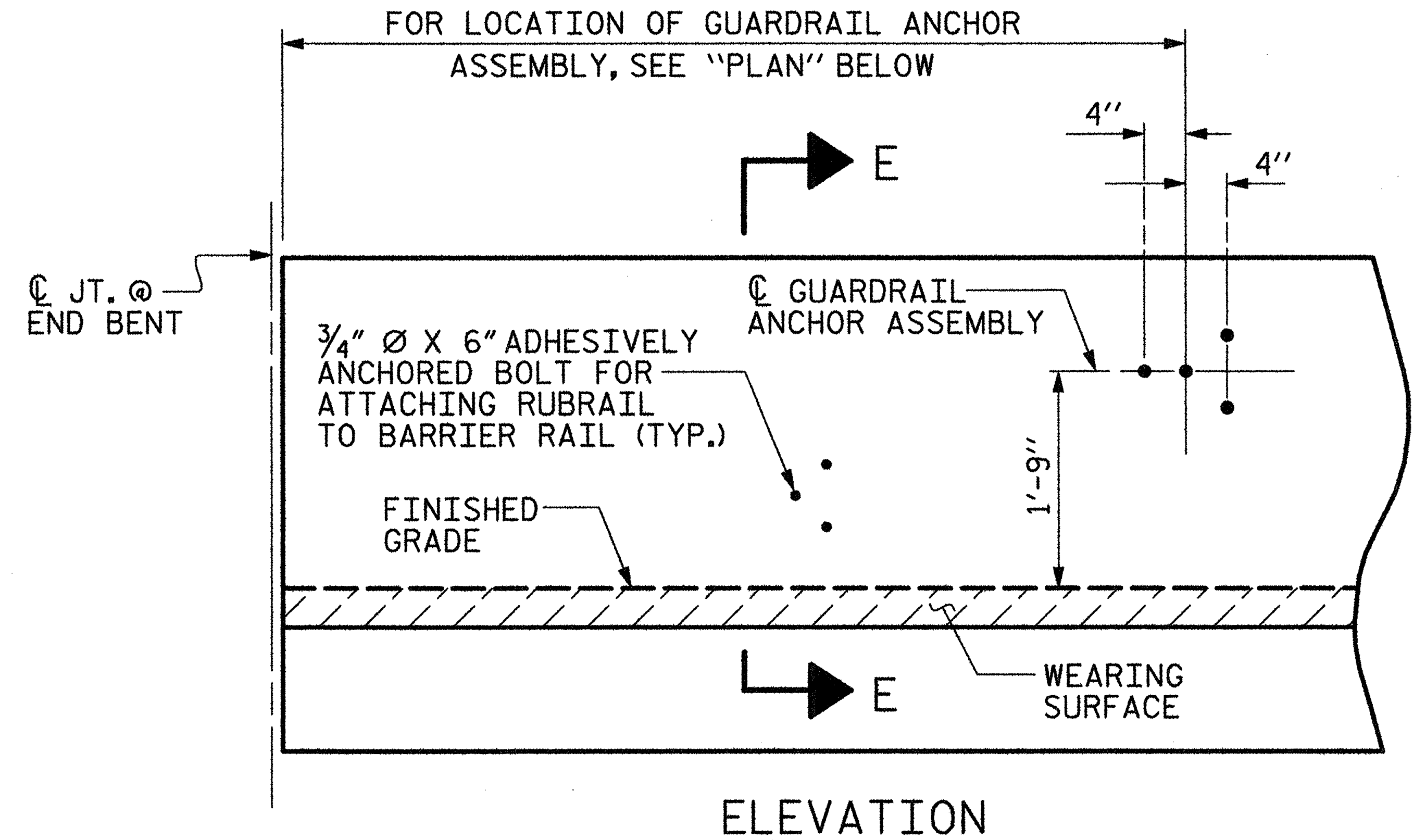


PLAN



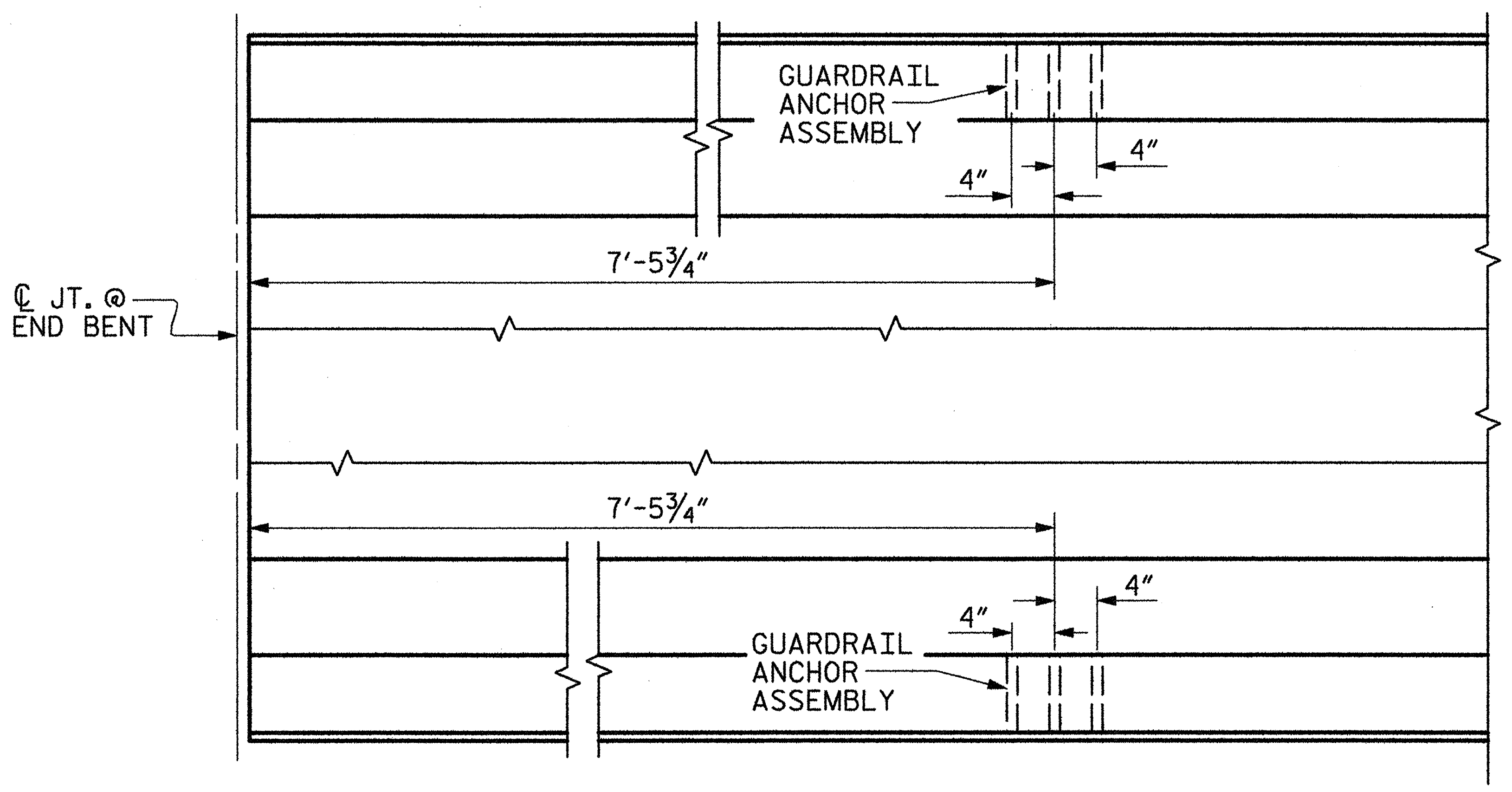
SECTION E-E

GUARDRAIL ANCHOR ASSEMBLY DETAILS



ELEVATION

FOR LOCATION OF RUBRAIL, SEE ROADWAY STD. 862.03



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #1 SHOWN, END BENT #2 SIMILAR.

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4 " HOLD DOWN PLATE AND 4 - 7/8 " Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8 " Ø GALVANIZED BOLTS,

NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

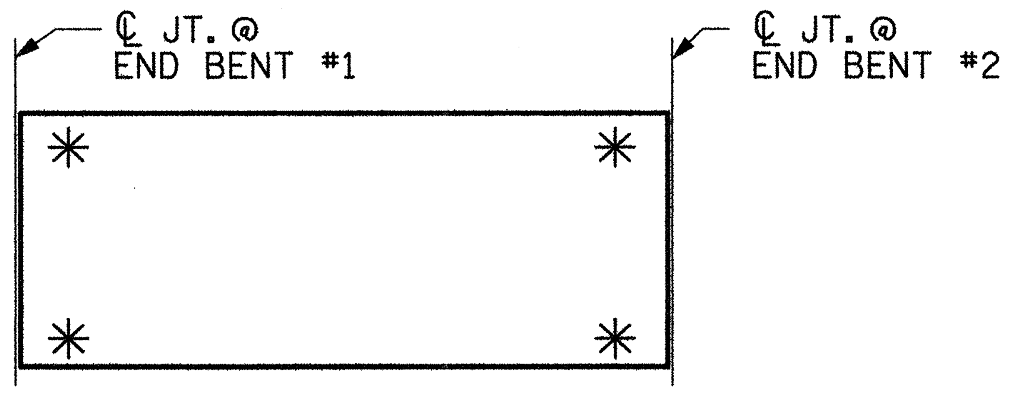
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR STEEL BEAM GUARDRAIL.

THE 1 1/4 " Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 3/4 "Ø X 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4 "Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.



SKETCH SHOWING POINTS OF ATTACHMENTS

✳ DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

GUARDRAIL ANCHORAGE FOR BARRIER RAIL

STD. NO. GRA2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	18
1			3			TOTAL SHEETS
2			4			33

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:

L. Kevin Austin
19661
7/7/10

PLANS PREPARED BY:
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(919) 851-1918 (FAX)
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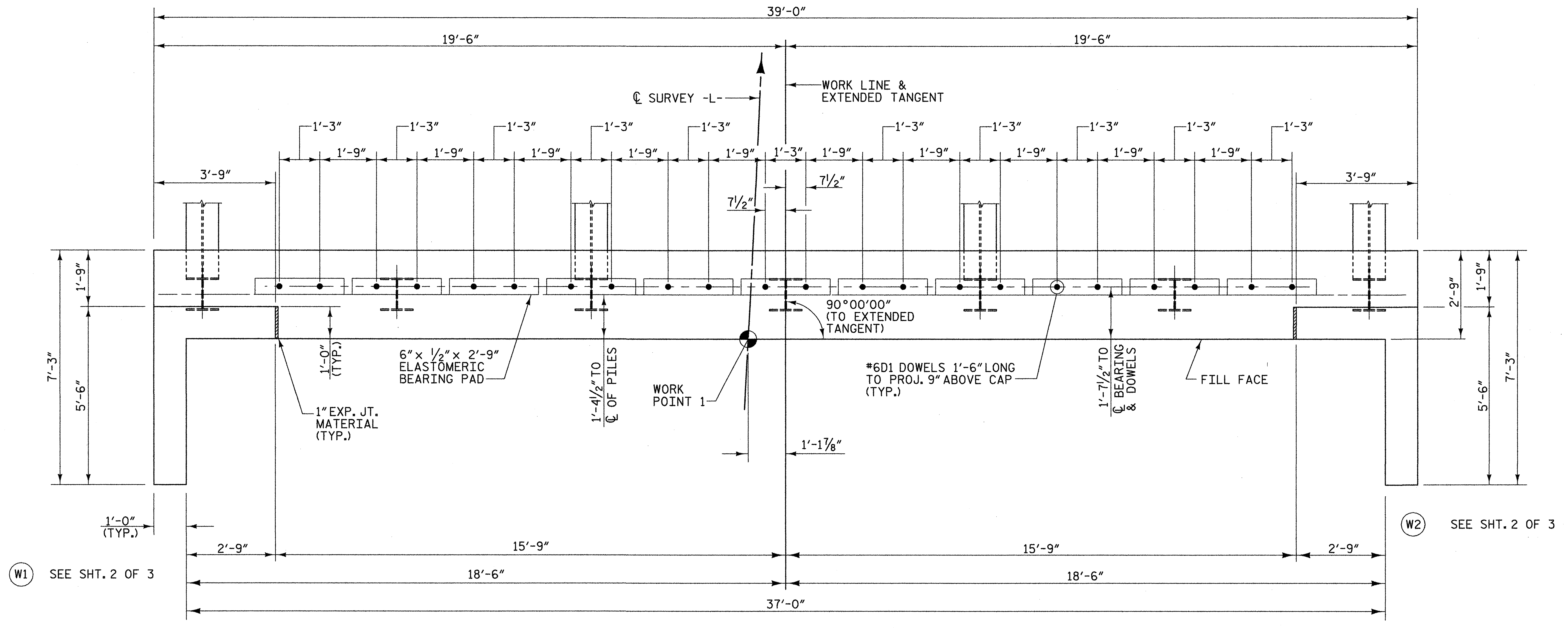
ASSEMBLED BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10
DRAWN BY : TLA 5/06
CHECKED BY : GM 5/06
ADDED 5/1/06R KMM/GM

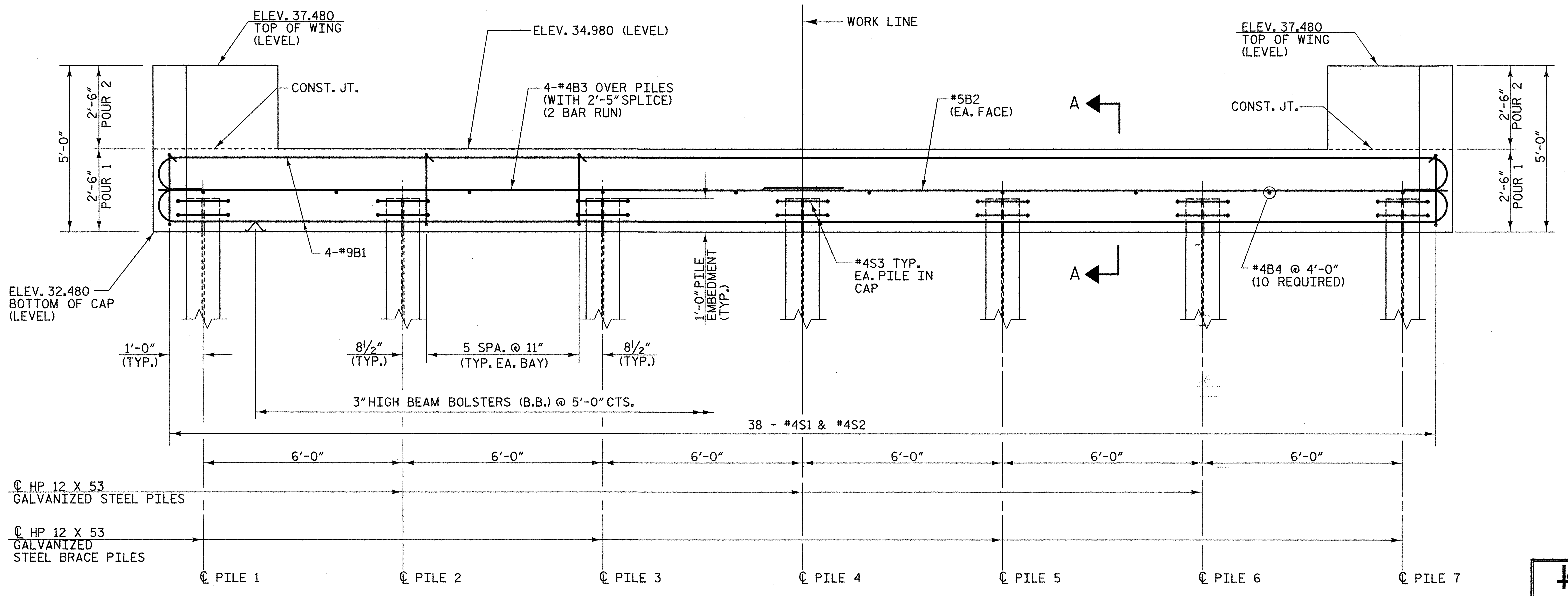
6/15/2010 11:37:32 AM R:\Structures\B5214_SD_GR_01.dgn



PLAN

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #6D1 DOWELS.



ELEVATION

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37　　SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO. 19
1			3			TOTAL SHEETS 33
2			4			

L. KEVIN AUSTIN
1966
7/7/10

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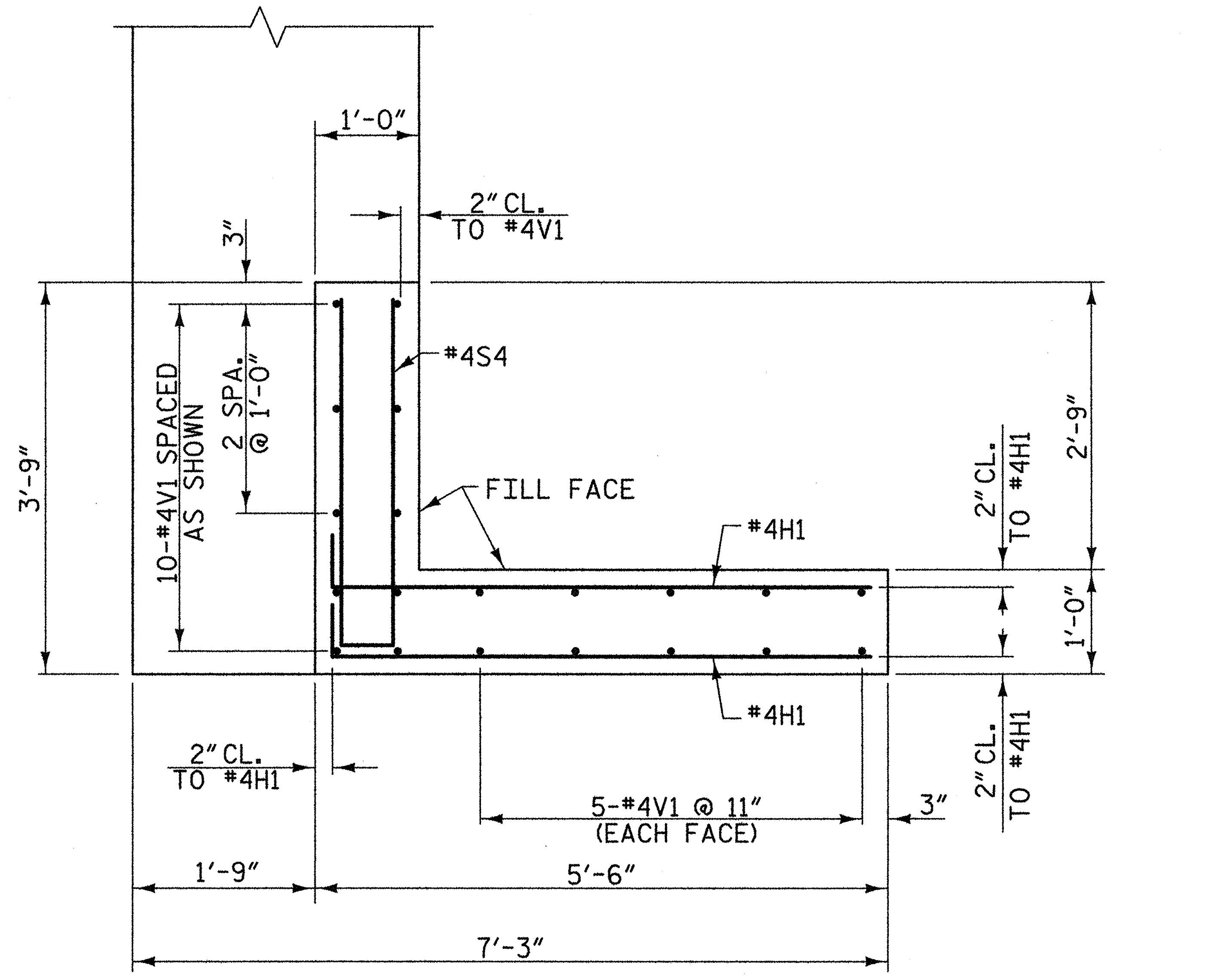
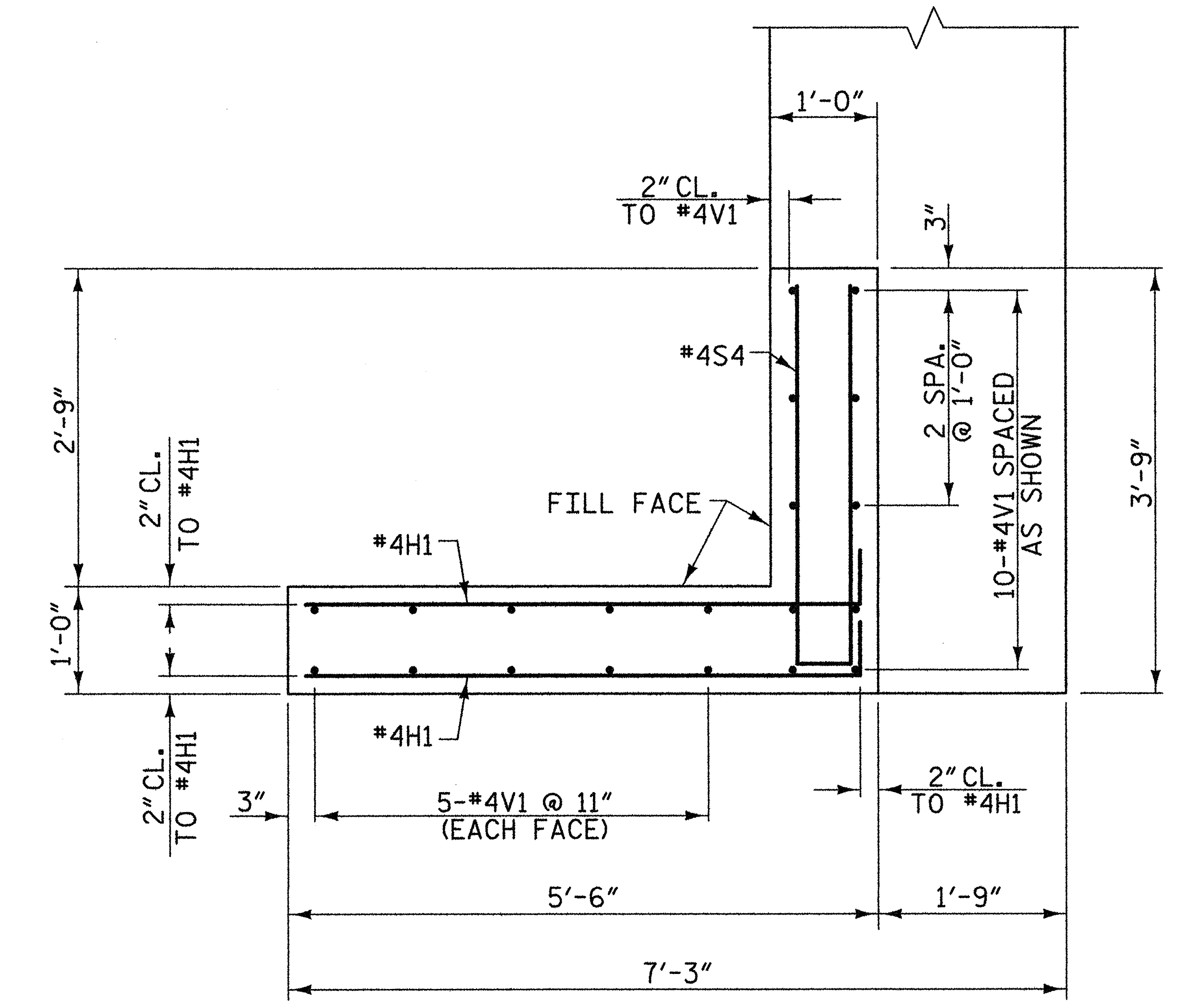
DRAWN BY : W. B. ALLEN　DATE : 5/10
CHECKED BY : L. K. AUSTIN　DATE : 6/10

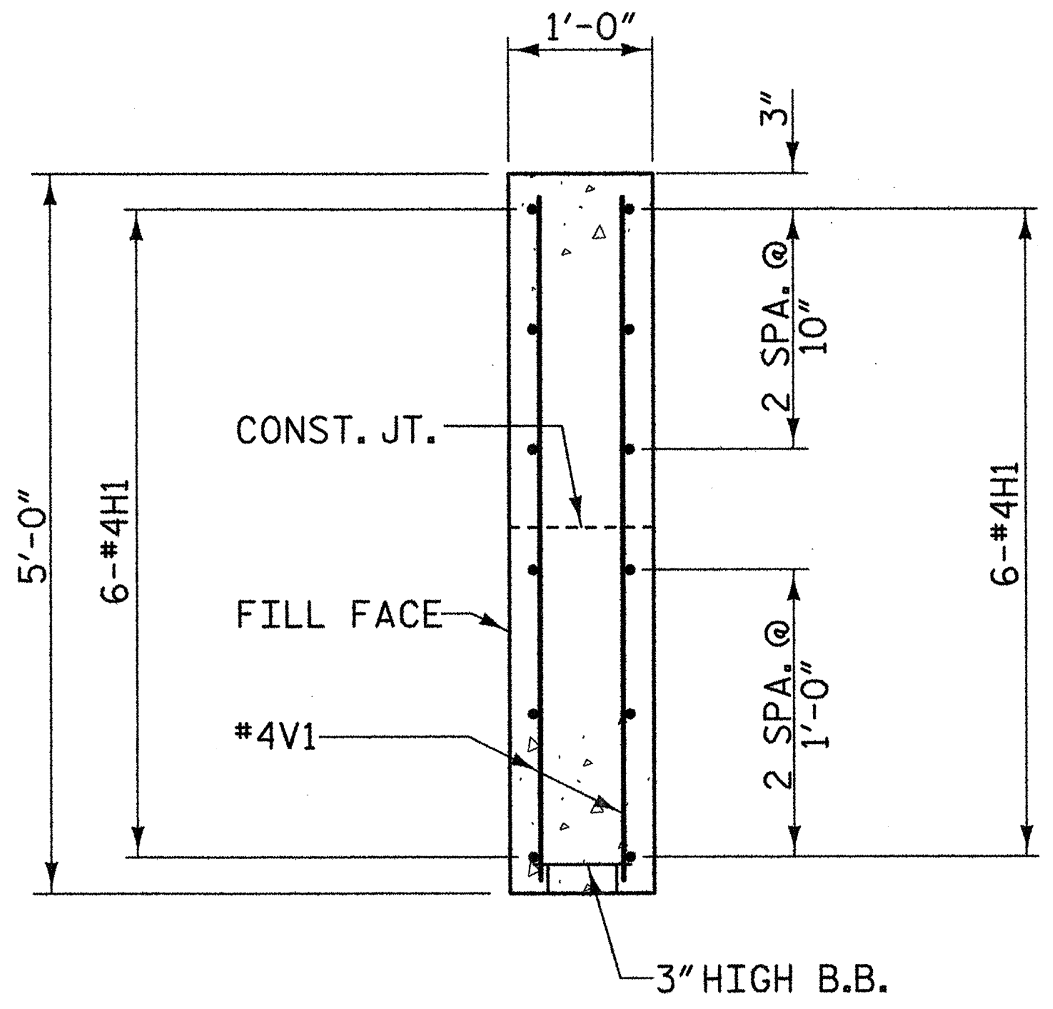
6/15/2010 12:59:04 PM R:\Structures\B5214_SD_EB1_01.dgn



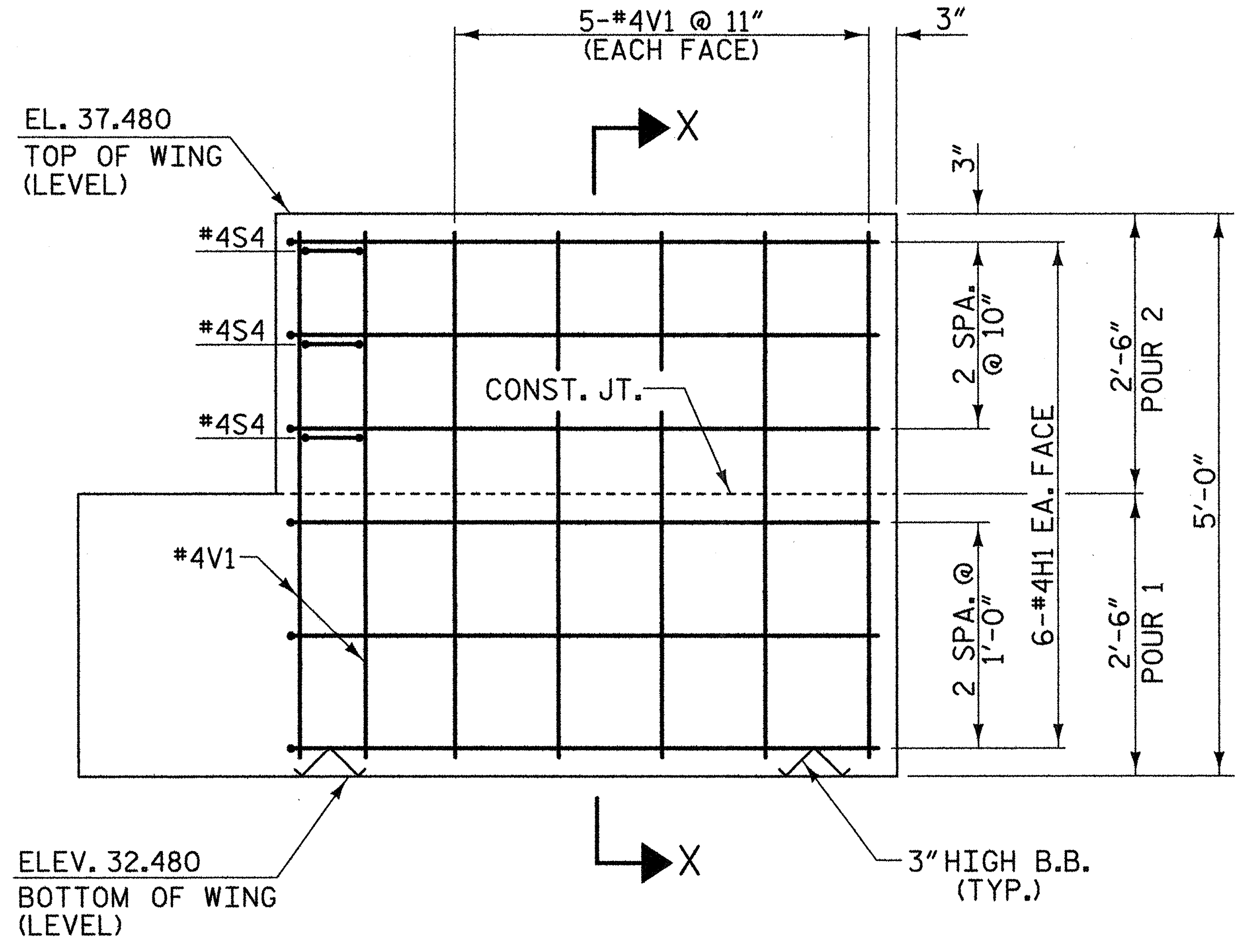
W1 PLAN OF LEFT WING



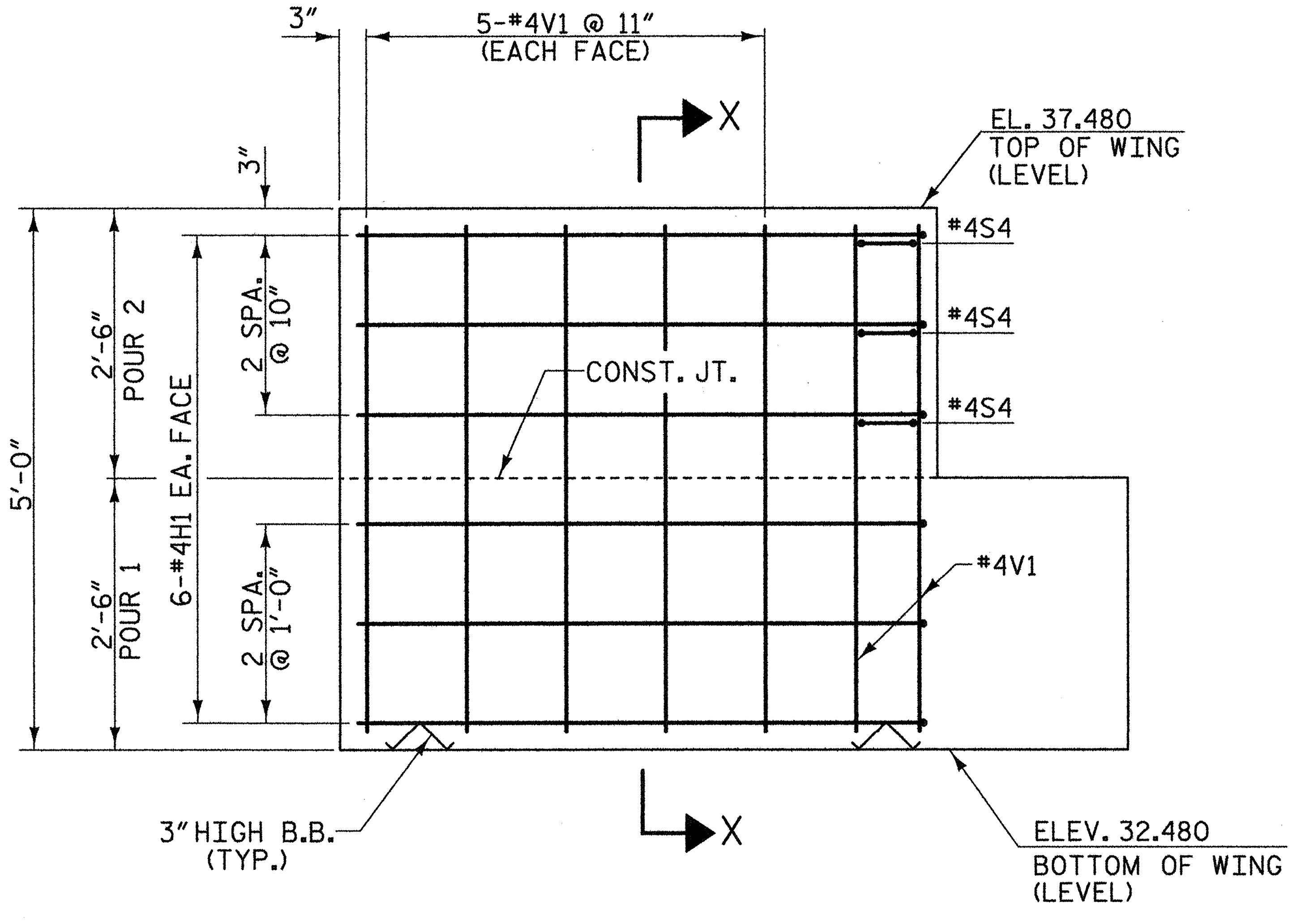
W2 PLAN OF RIGHT WING



SECTION X-X



W1 ELEVATION OF LEFT WING



W2 ELEVATION OF RIGHT WING

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 2 OF 3

19661
L. KEVIN AUSTIN
L. Kevin Austin
7/7/10

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	20
1			3			TOTAL SHEETS
2			4			33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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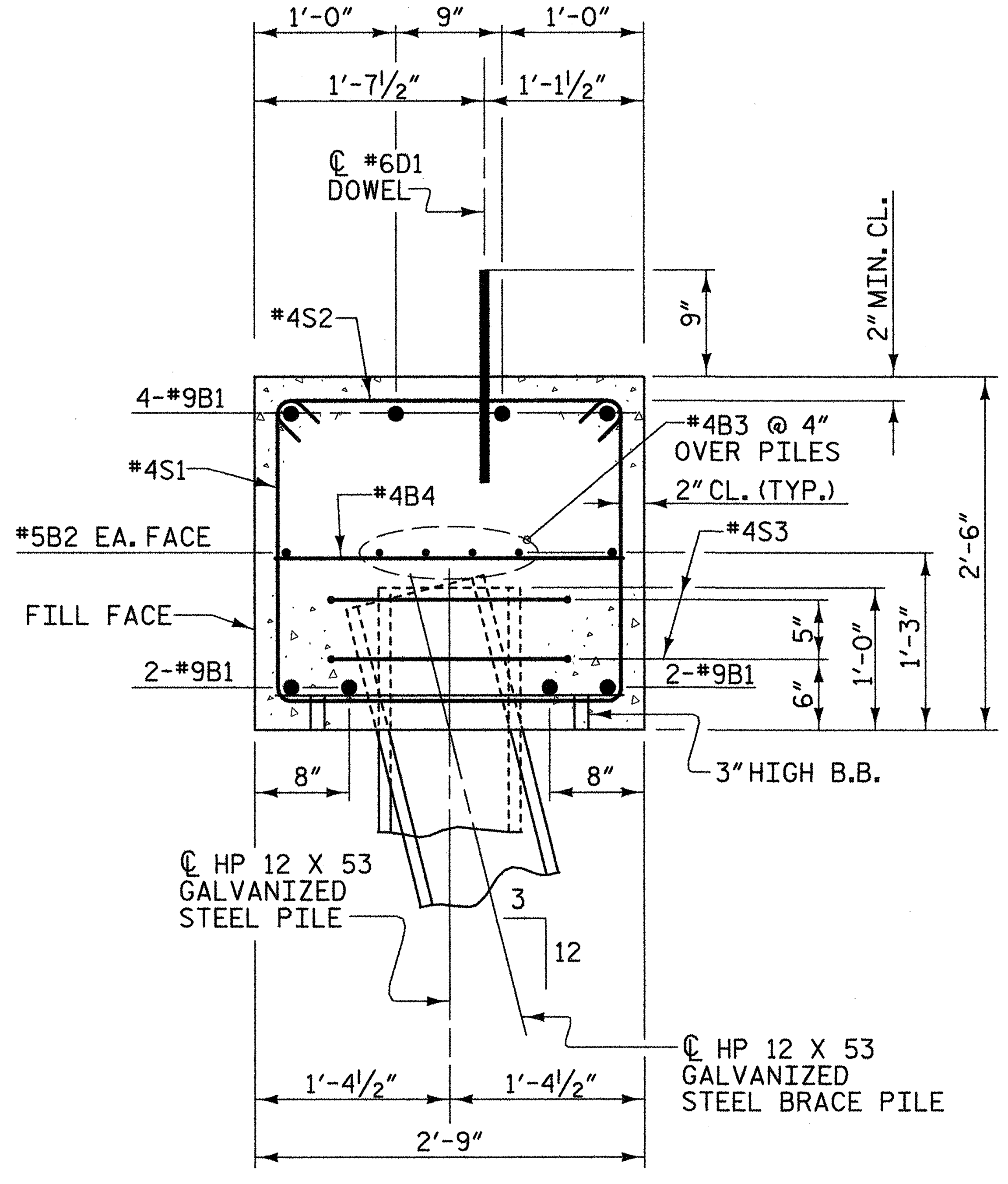
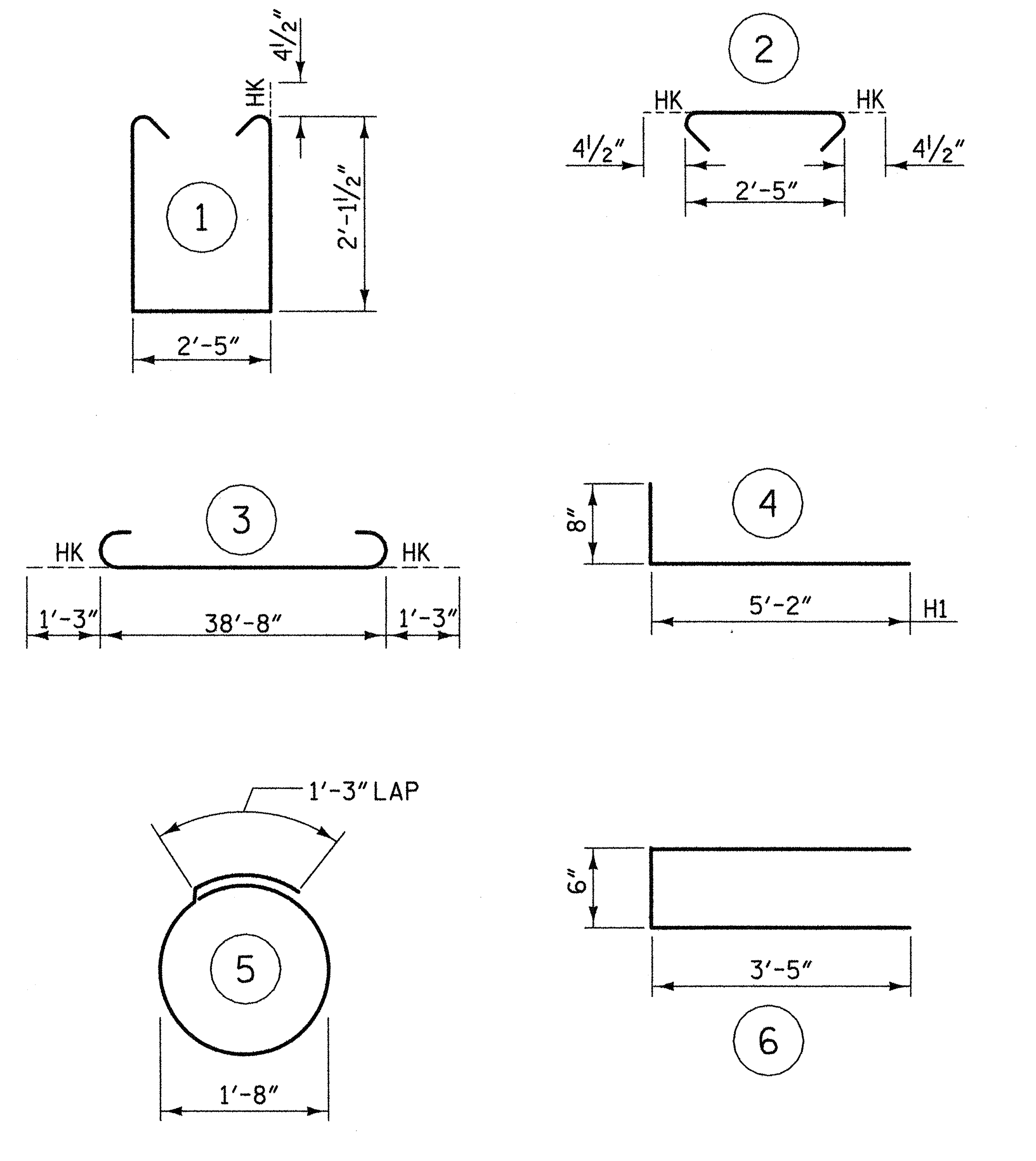


SECTION A-A

BAR TYPES



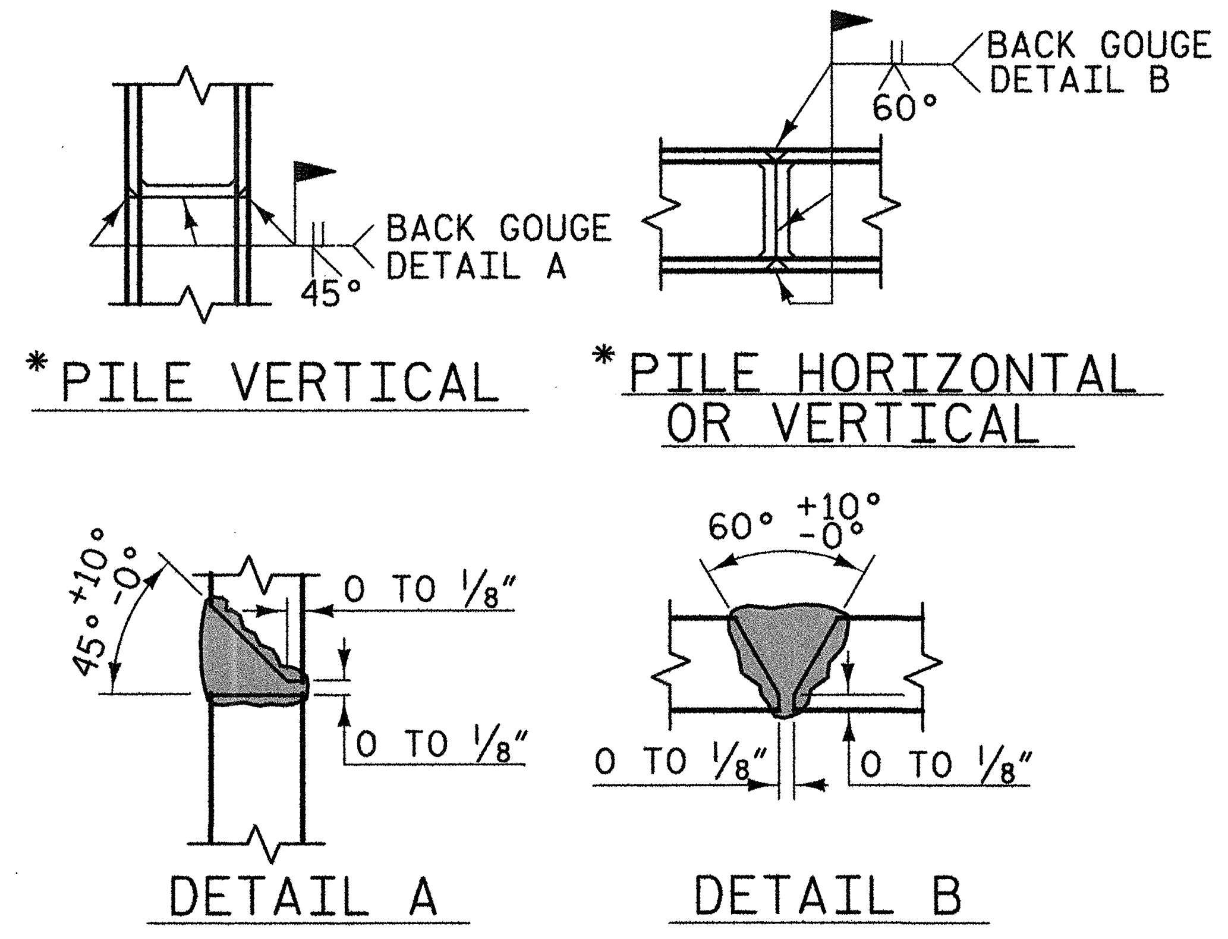
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR END BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	3	41'-2"	1120
B2	2	#5	STR	38'-8"	81
B3	8	#4	STR	20'-7"	110
B4	10	#4	STR	2'-5"	16
D1	22	#6	STR	1'-6"	50
H1	24	#4	4	5'-10"	94
S1	38	#4	1	7'-5"	188
S2	38	#4	2	3'-2"	80
S3	14	#4	5	6'-6"	61
S4	6	#4	6	7'-4"	29
V1	40	#4	STR	4'-8"	125

TOTAL REINFORCING STEEL =		1954 lbs.
CLASS "A" CONCRETE - CU. YARDS		
	POUR 1	10.8 cu. yds.
	POUR 2	1.5 cu. yds.
	TOTAL	12.3 cu. yds.
HP 12 X 53 GALVANIZED STEEL PILES		
7 PILES REQUIRED - LIN. FEET		560



*PILE VERTICAL

*PILE HORIZONTAL OR VERTICAL

DETAIL A

DETAIL B

PILE SPLICE DETAILS

*POSITION OF PILE DURING WELDING.

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37
SHEET 3 OF 3

L. KEVIN AUSTIN
SEAL 19661
L. Kevin Austin 7/7/10

PLANS PREPARED BY:
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

30' CLEAR ROADWAY - 90°SKEW

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 21
TOTAL SHEETS 33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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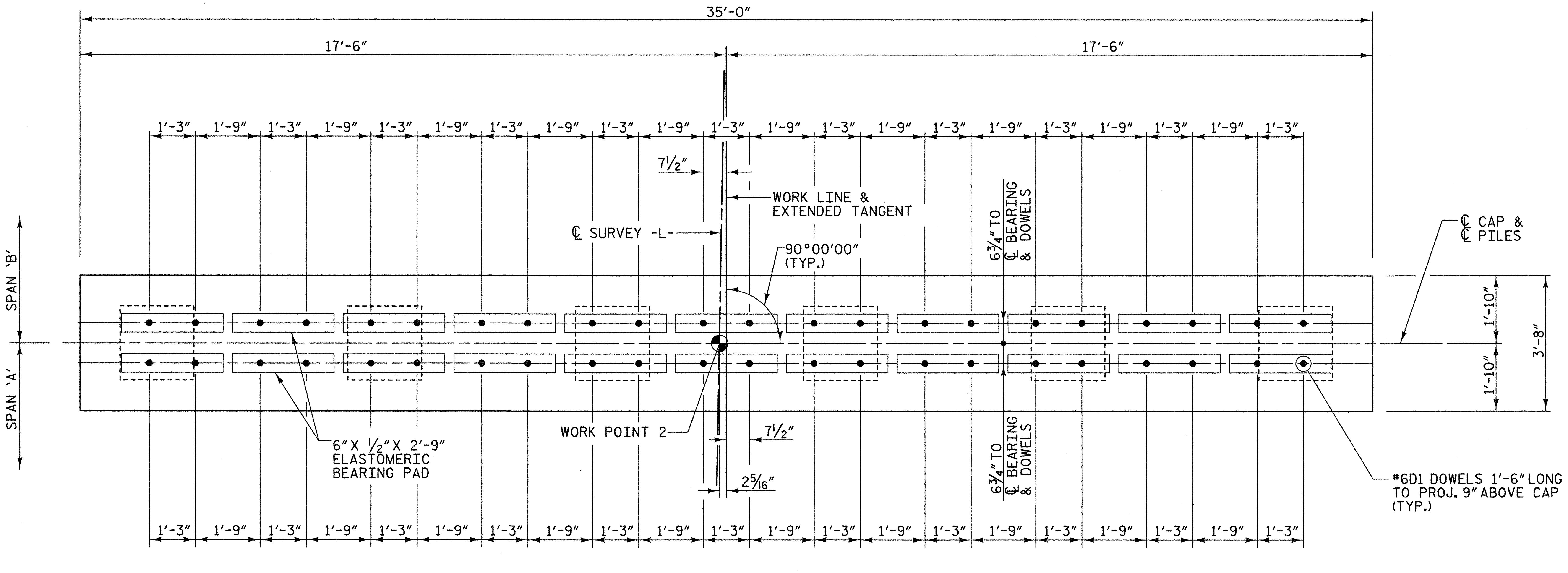
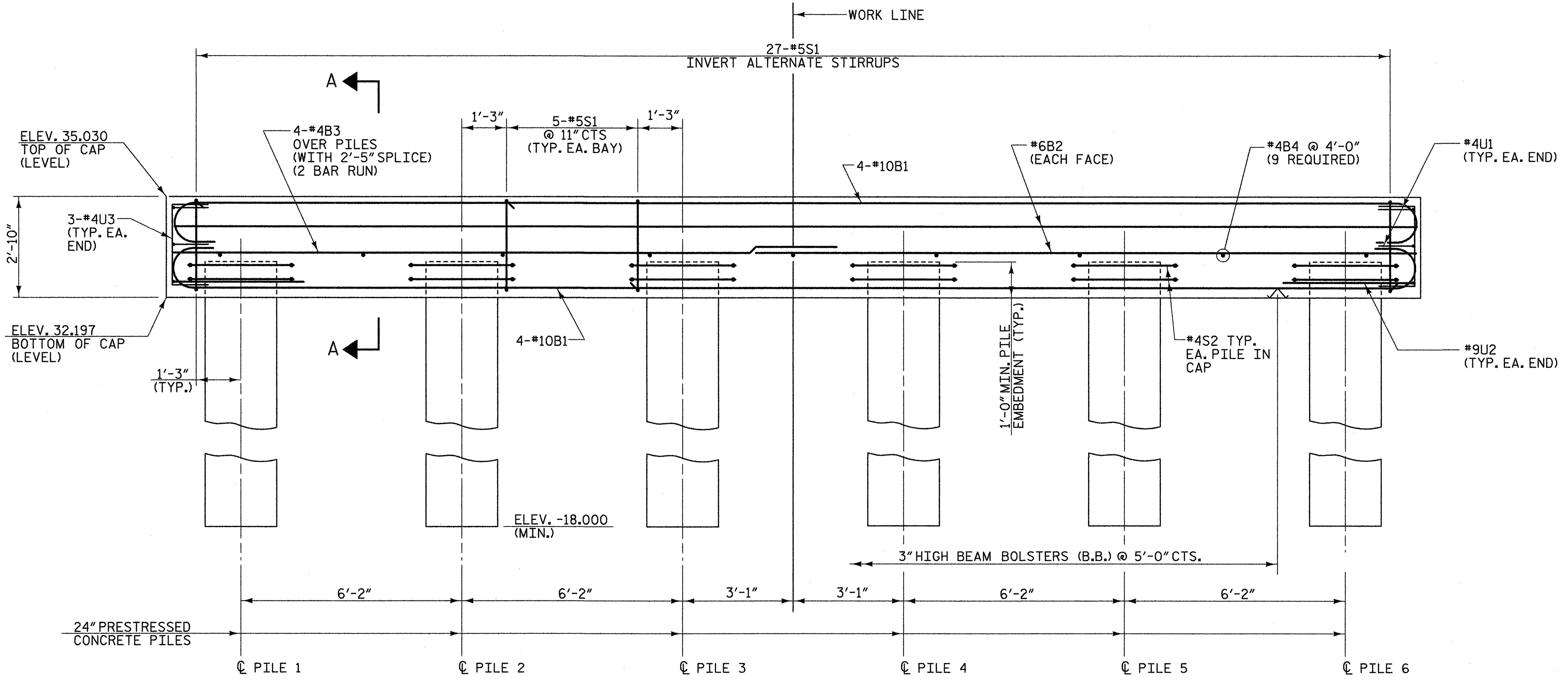


PLAN

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #6D1 DOWELS.



ELEVATION

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 1

30' CLEAR ROADWAY - 90°SKEW

L. KEVIN AUSTIN
19661
L. Kevin Austin 7/7/10

PLANS PREPARED BY:
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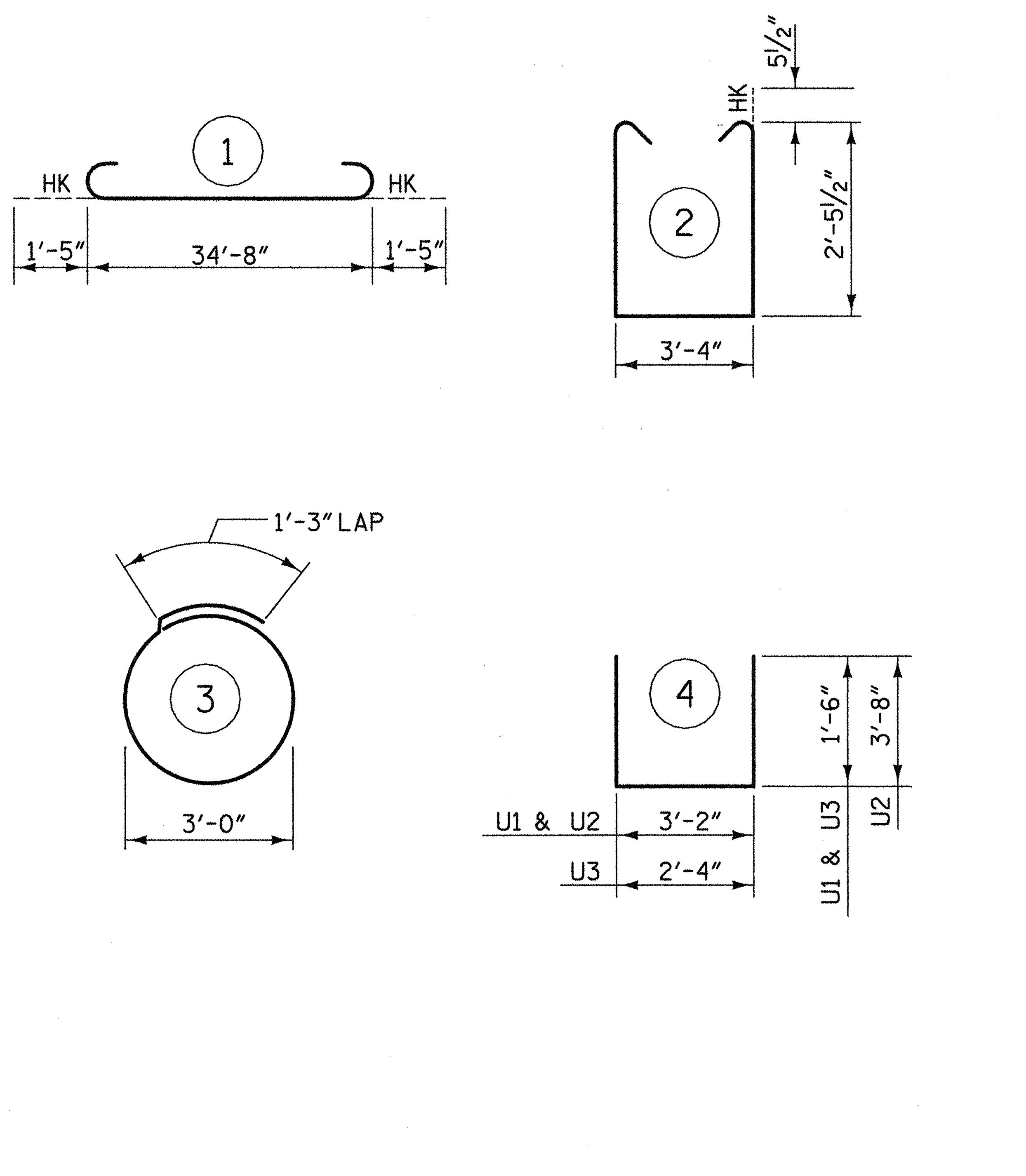
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 22

TOTAL SHEETS 33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

BAR TYPES



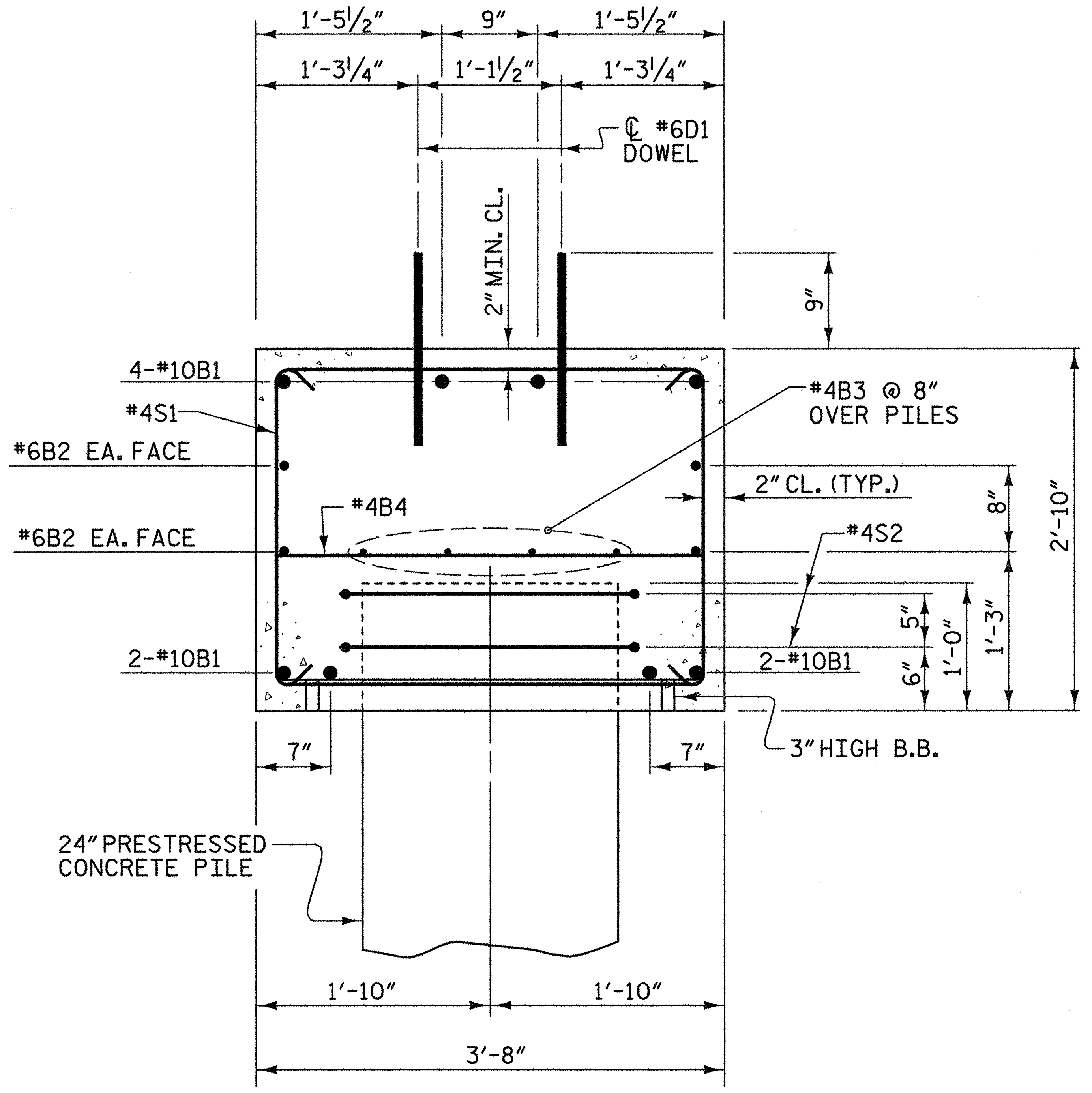
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

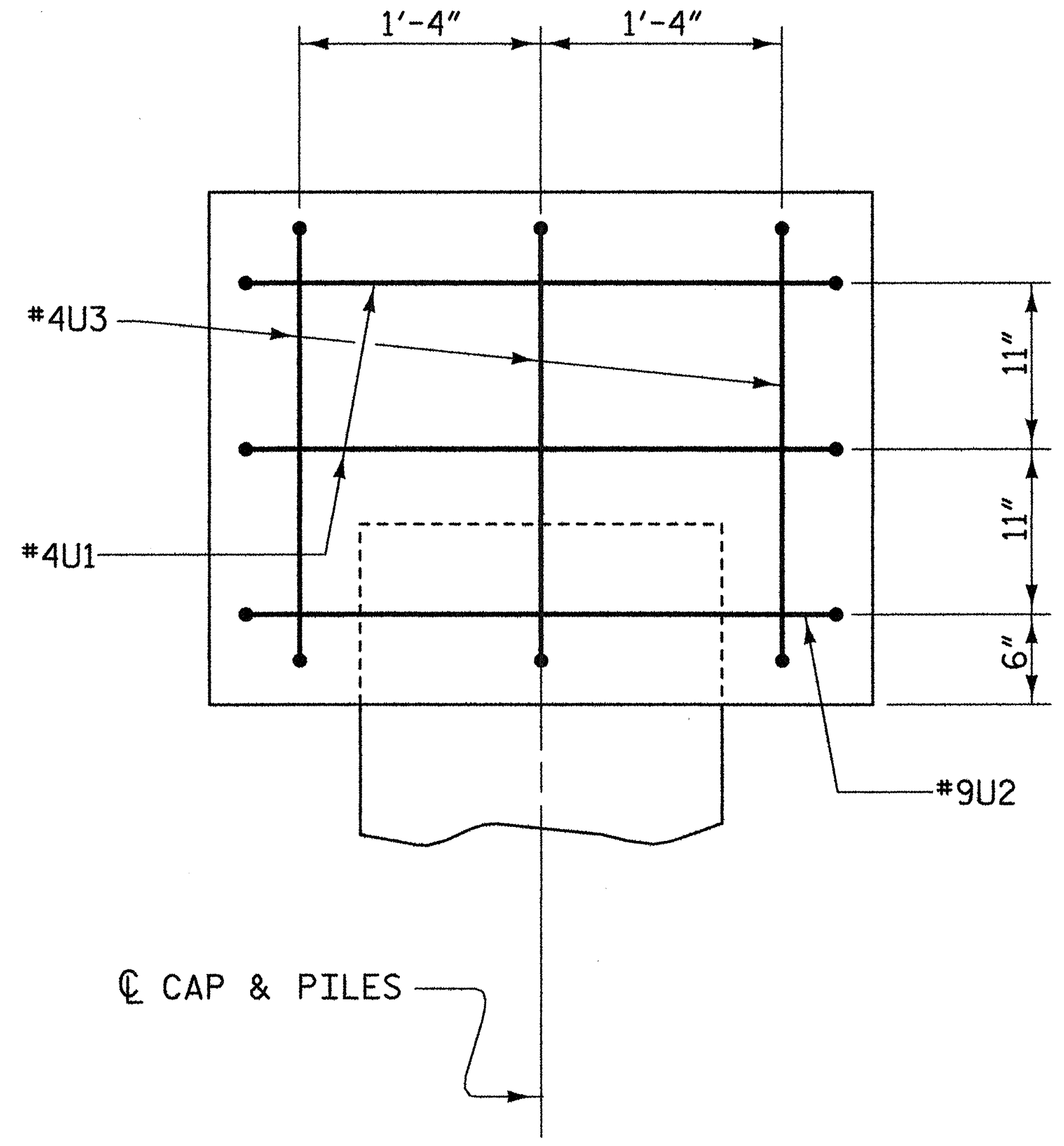
FOR BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#10	1	37'-6"	1291
B2	4	#6	STR	34'-8"	208
B3	8	#4	STR	18'-7"	99
B4	9	#4	STR	3'-4"	20
D1	44	#6	STR	1'-6"	99
S1	27	#5	2	9'-2"	258
S2	12	#4	3	10'-9"	86
U1	4	#4	4	6'-2"	16
U2	2	#9	4	10'-6"	71
U3	6	#4	4	5'-4"	21

TOTAL REINFORCING STEEL =	2169 lbs.
CLASS "A" CONCRETE - CU. YARDS	12.6
24" PRESTRESSED CONC. PILES 6 PILES REQUIRED - LIN. FEET	330



SECTION A-A



END VIEW

(TYPICAL BOTH ENDS)

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE BENT 1

30' CLEAR ROADWAY - 90° SKEW

19661
L. KEVIN AUSTIN
L. Kevin Austin
7/7/10

PLANS PREPARED BY:

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REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 23

TOTAL SHEETS 33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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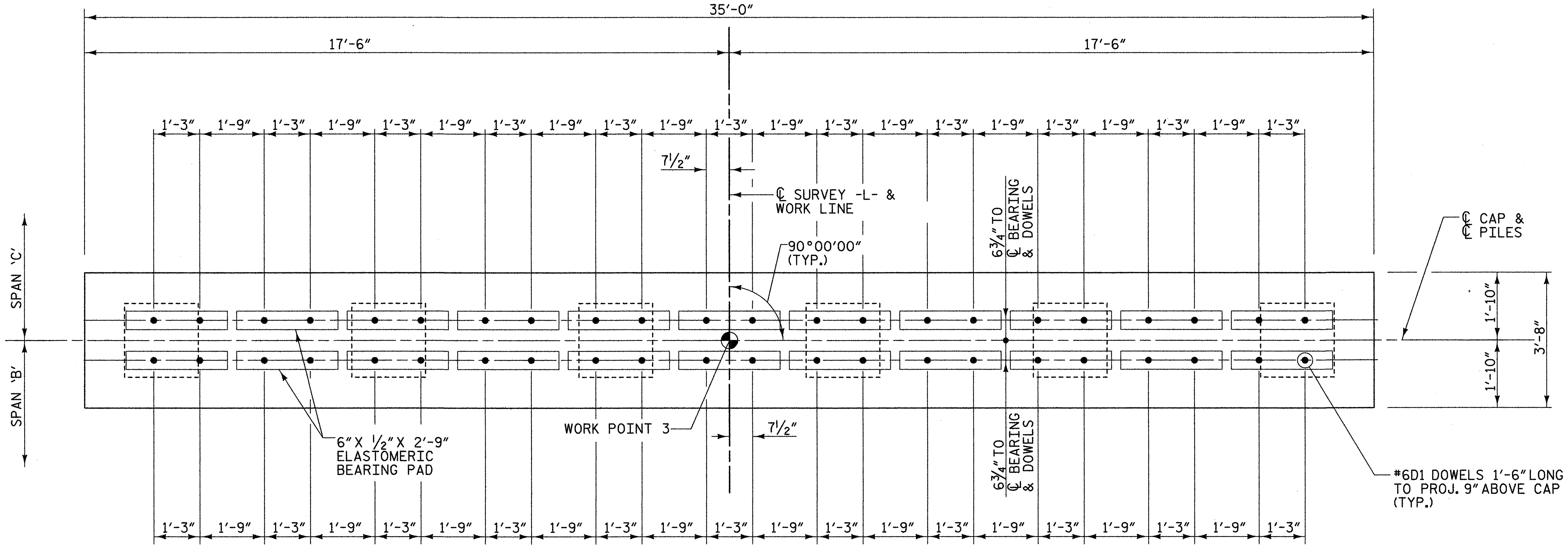
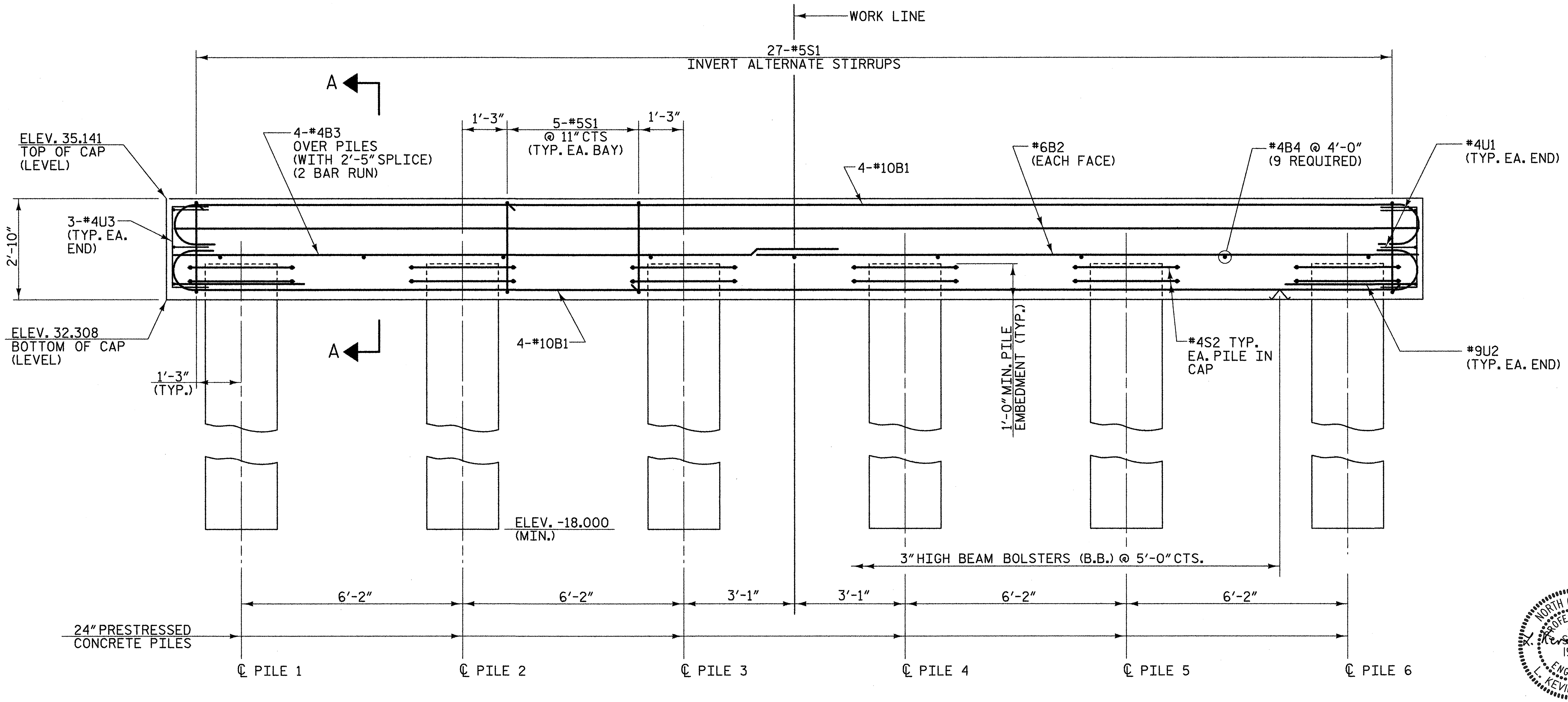


PLAN

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #6D1 DOWELS.



ELEVATION

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

SHEET 1 OF 2

1966l

L. KEVIN AUSTIN

L. Kevin Austin 7/7/10

PLANS PREPARED BY:

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 2

30' CLEAR ROADWAY - 90° SKEW

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
24

TOTAL SHEETS
33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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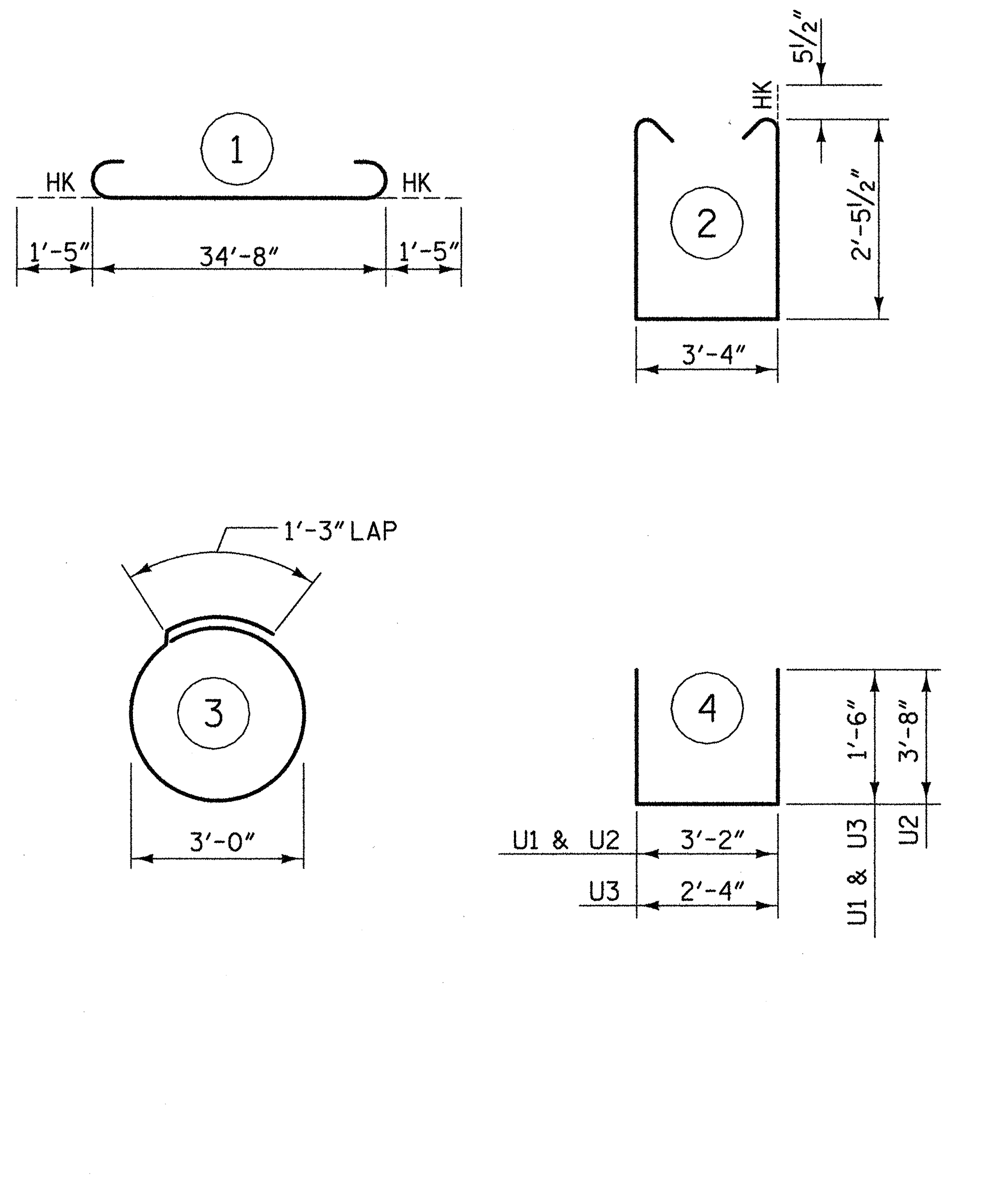
BAR TYPES



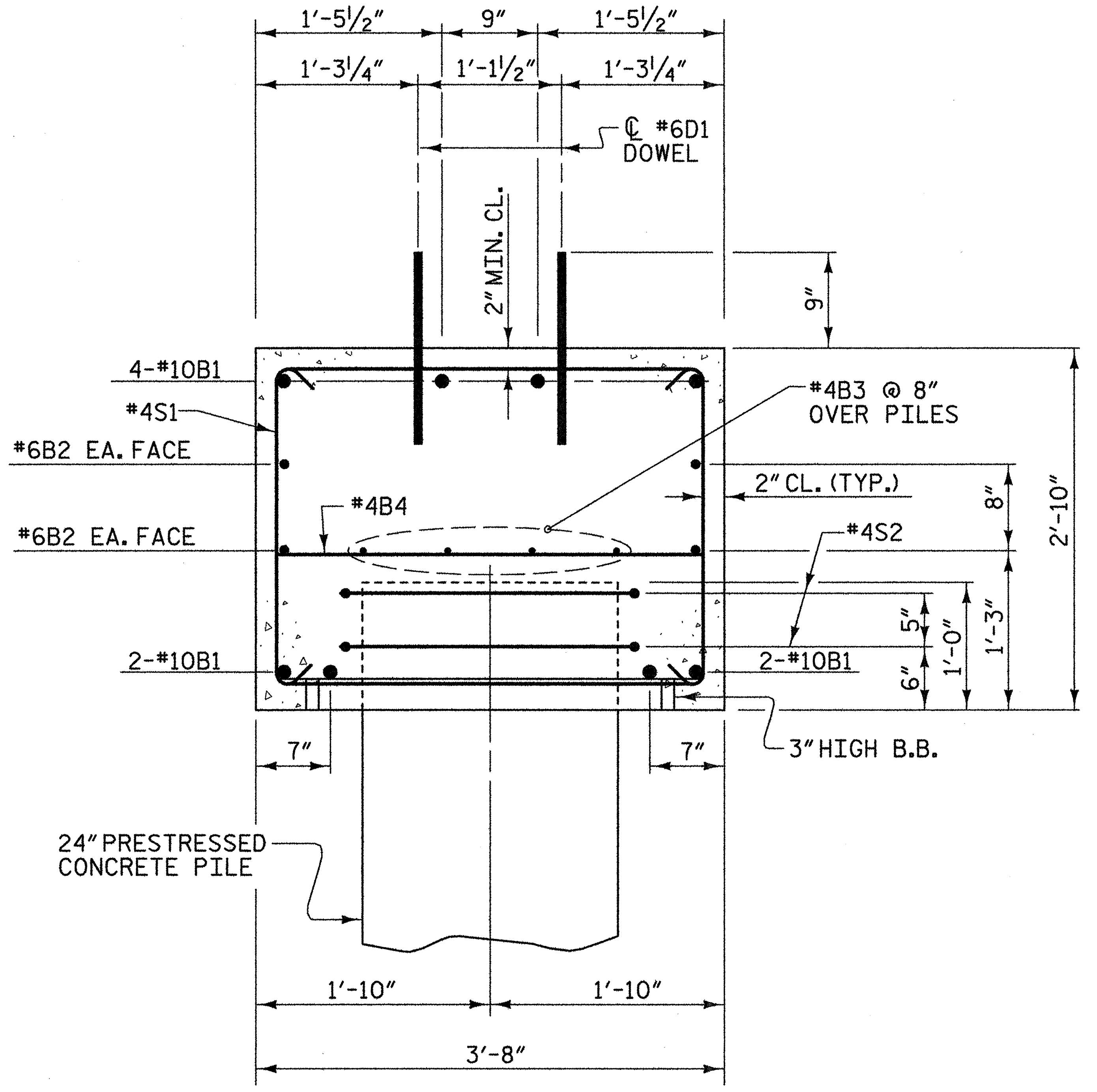
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

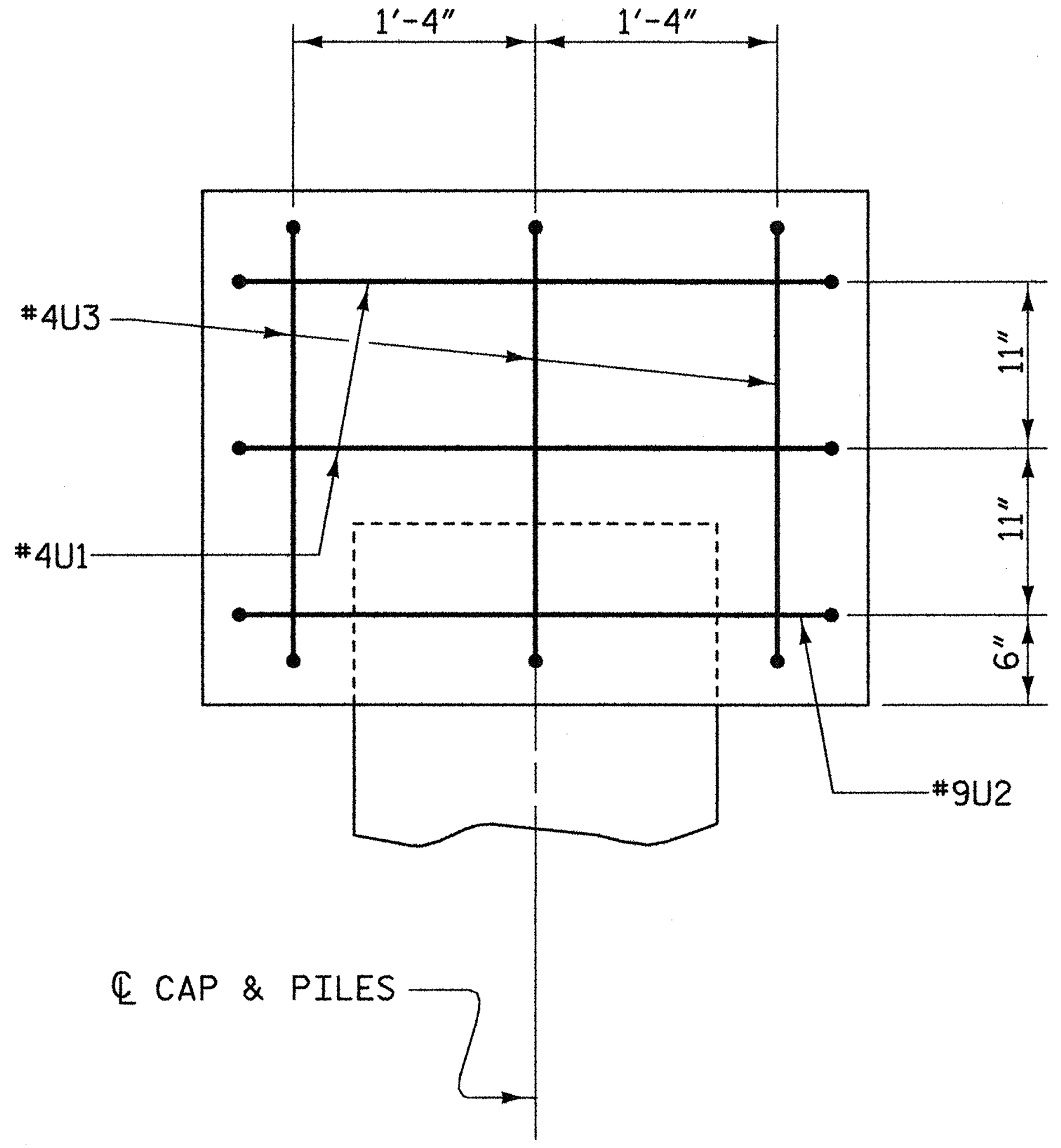
FOR BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#10	1	37'-6"	1291
B2	4	#6	STR	34'-8"	208
B3	8	#4	STR	18'-7"	99
B4	9	#4	STR	3'-4"	20
D1	44	#6	STR	1'-6"	99
S1	27	#5	2	9'-2"	258
S2	12	#4	3	10'-9"	86
U1	4	#4	4	6'-2"	16
U2	2	#9	4	10'-6"	71
U3	6	#4	4	5'-4"	21

TOTAL REINFORCING STEEL =	2169 lbs.
CLASS "A" CONCRETE - CU. YARDS	12.6
24" PRESTRESSED CONC. PILES	
6 PILES REQUIRED - LIN. FEET	330



SECTION A-A



END VIEW

(TYPICAL BOTH ENDS)

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 2 OF 2

L. Kevin Austin
19661
L. KEVIN AUSTIN
7/7/10

PLANS PREPARED BY:

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 2

30' CLEAR ROADWAY - 90° SKEW

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 25

TOTAL SHEETS 33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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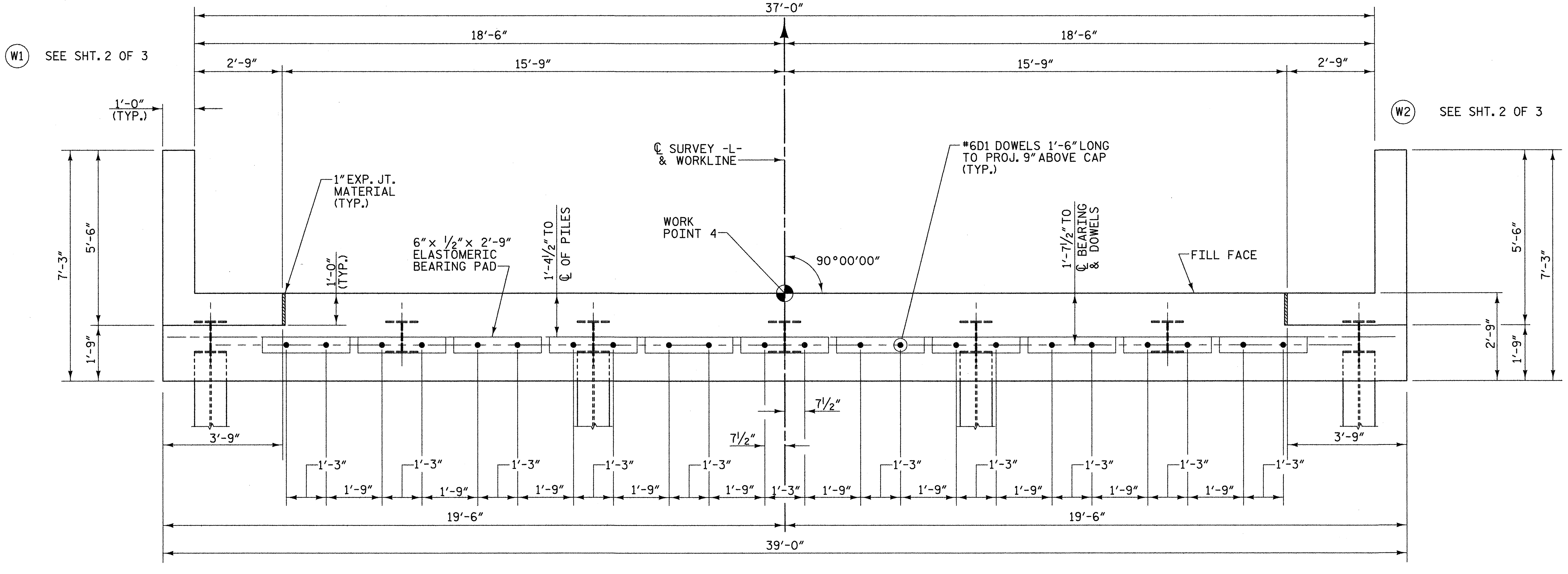
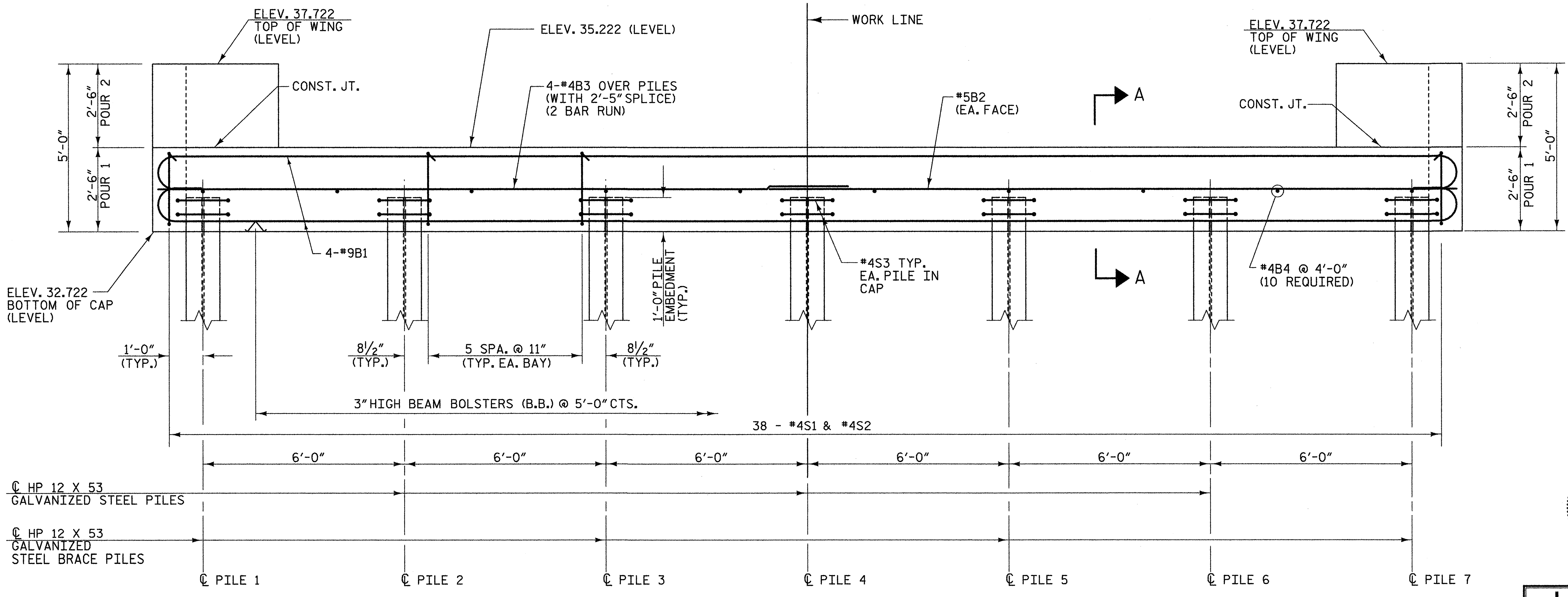


PLAN



ELEVATION

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #6D1 DOWELS.

FOR PILE SPLICE DETAIL, SEE END BENT 1 SHEET 3 OF 3.

6/15/2010 1:02:37 PM R:\Structures\B5214_SD_E2_01.dgn

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

L. KEVIN AUSTIN
19661
L. Kevin Austin 7/7/16

PLANS PREPARED BY:
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PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

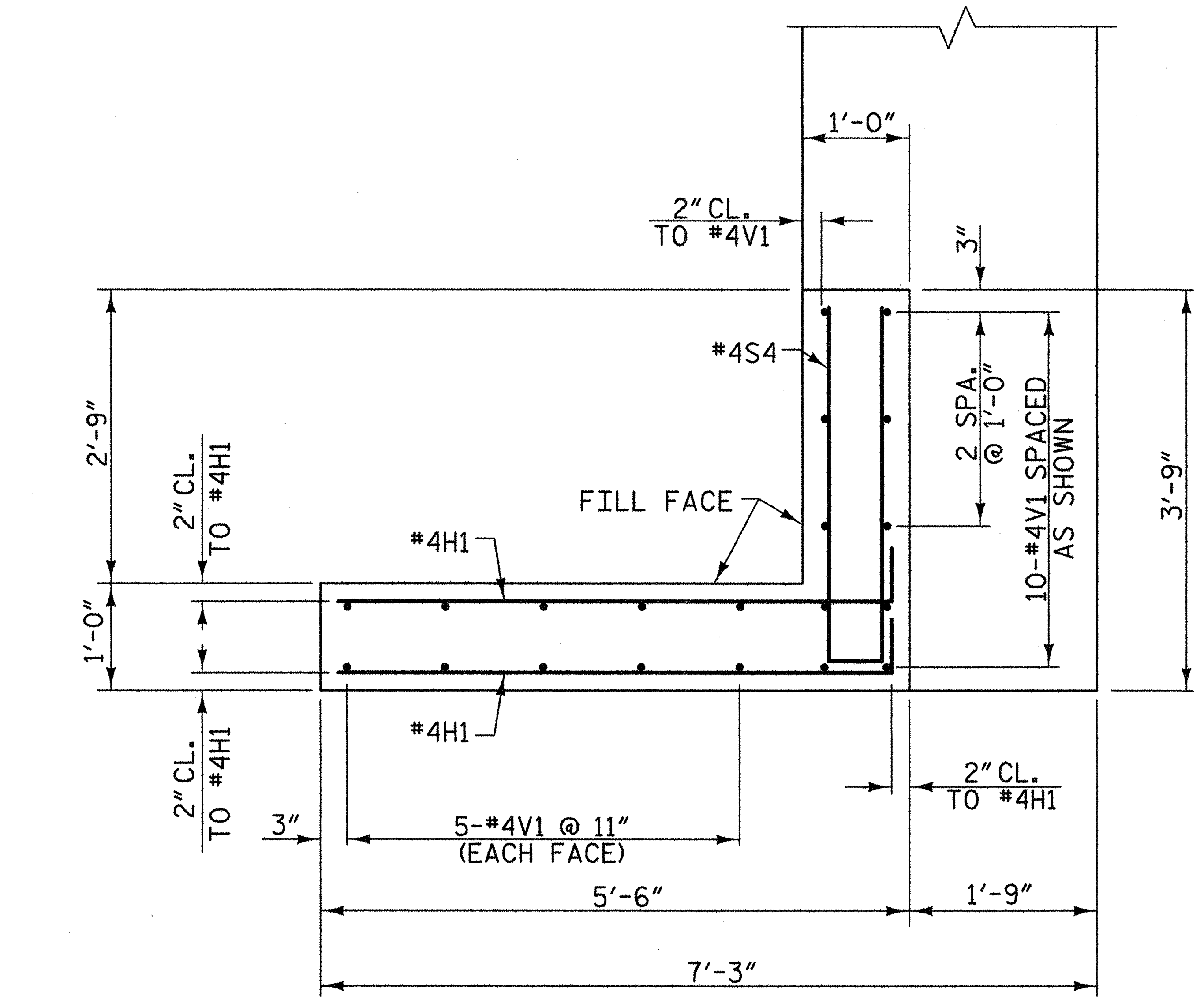
REPLACES BRIDGE NO. 37 SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

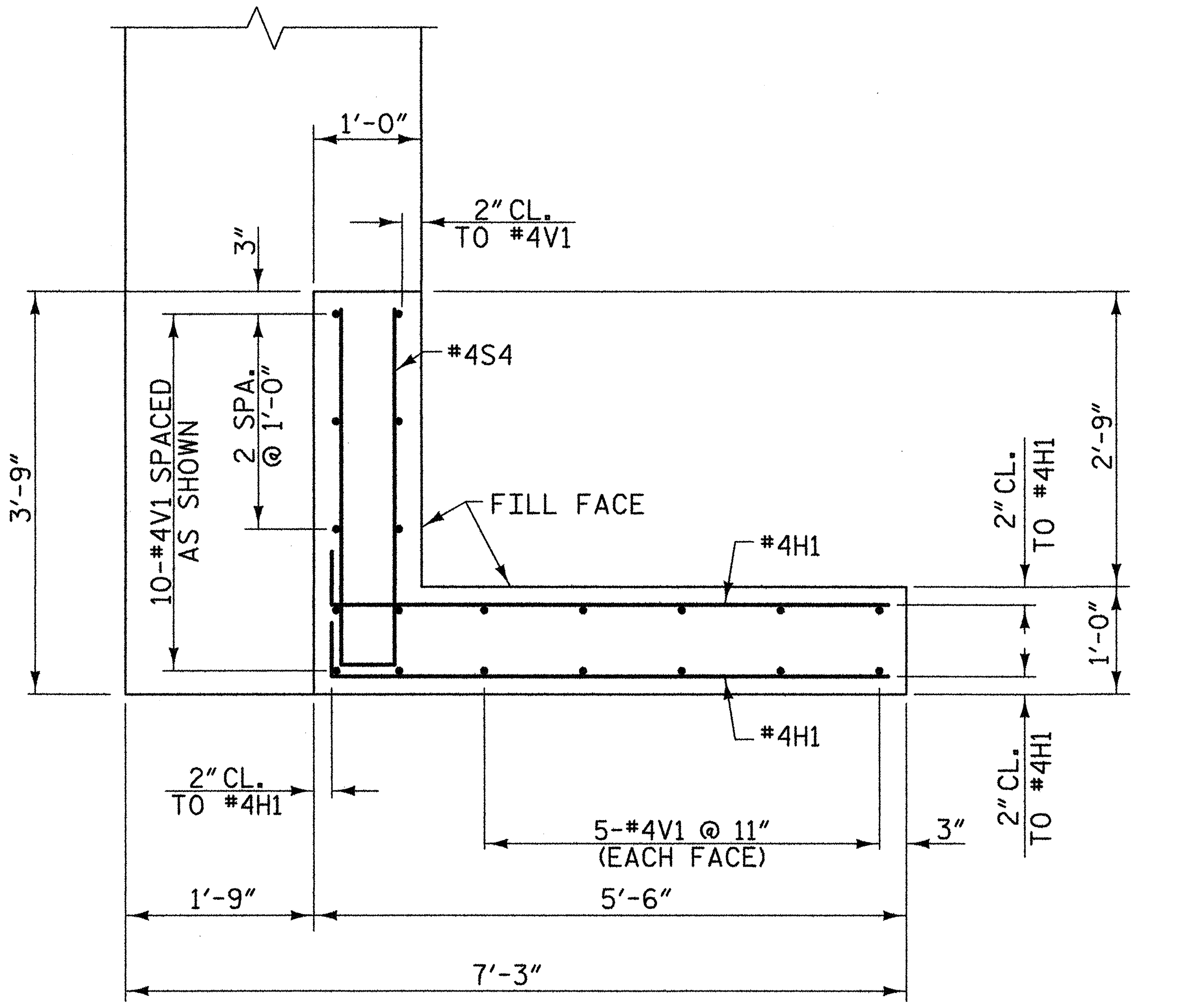
SUBSTRUCTURE
END BENT 2

30' CLEAR ROADWAY - 90° SKEW

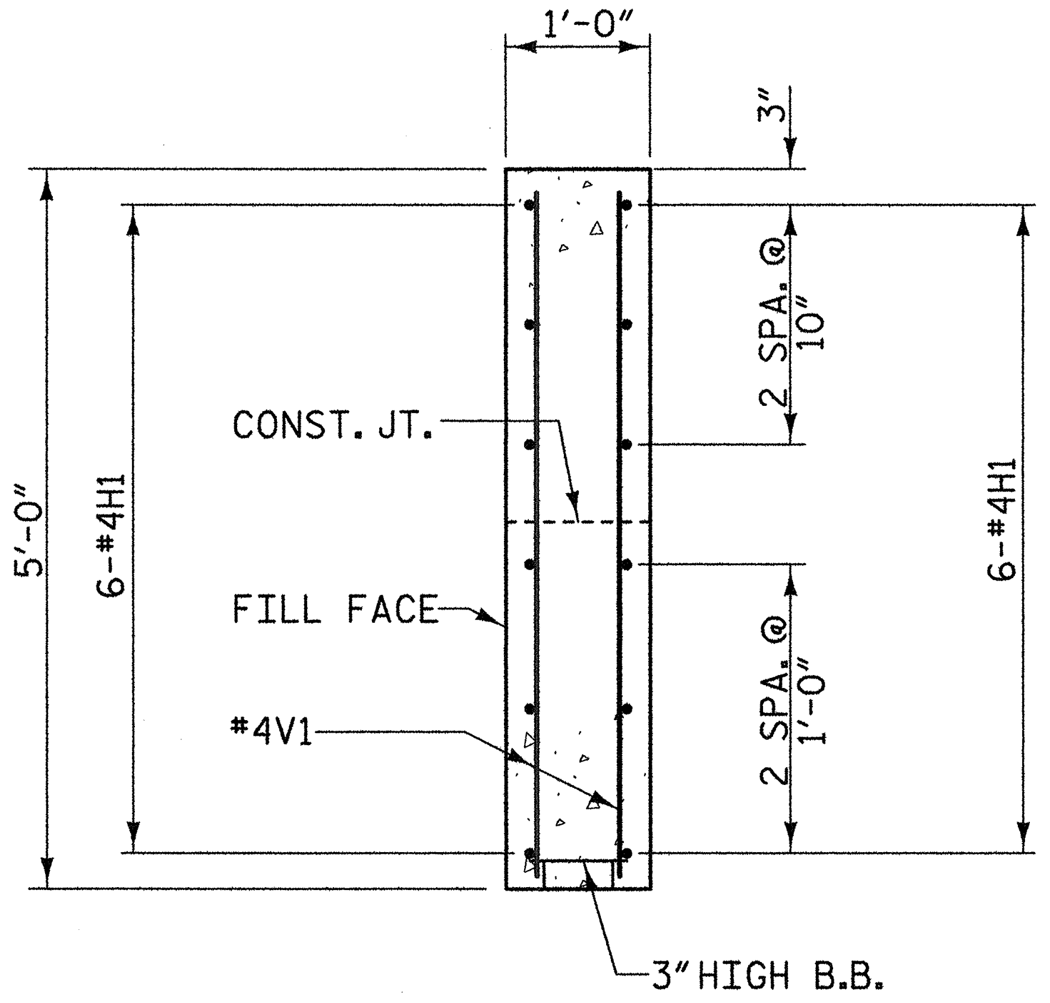
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	26
1			3			TOTAL SHEETS
2			4			33



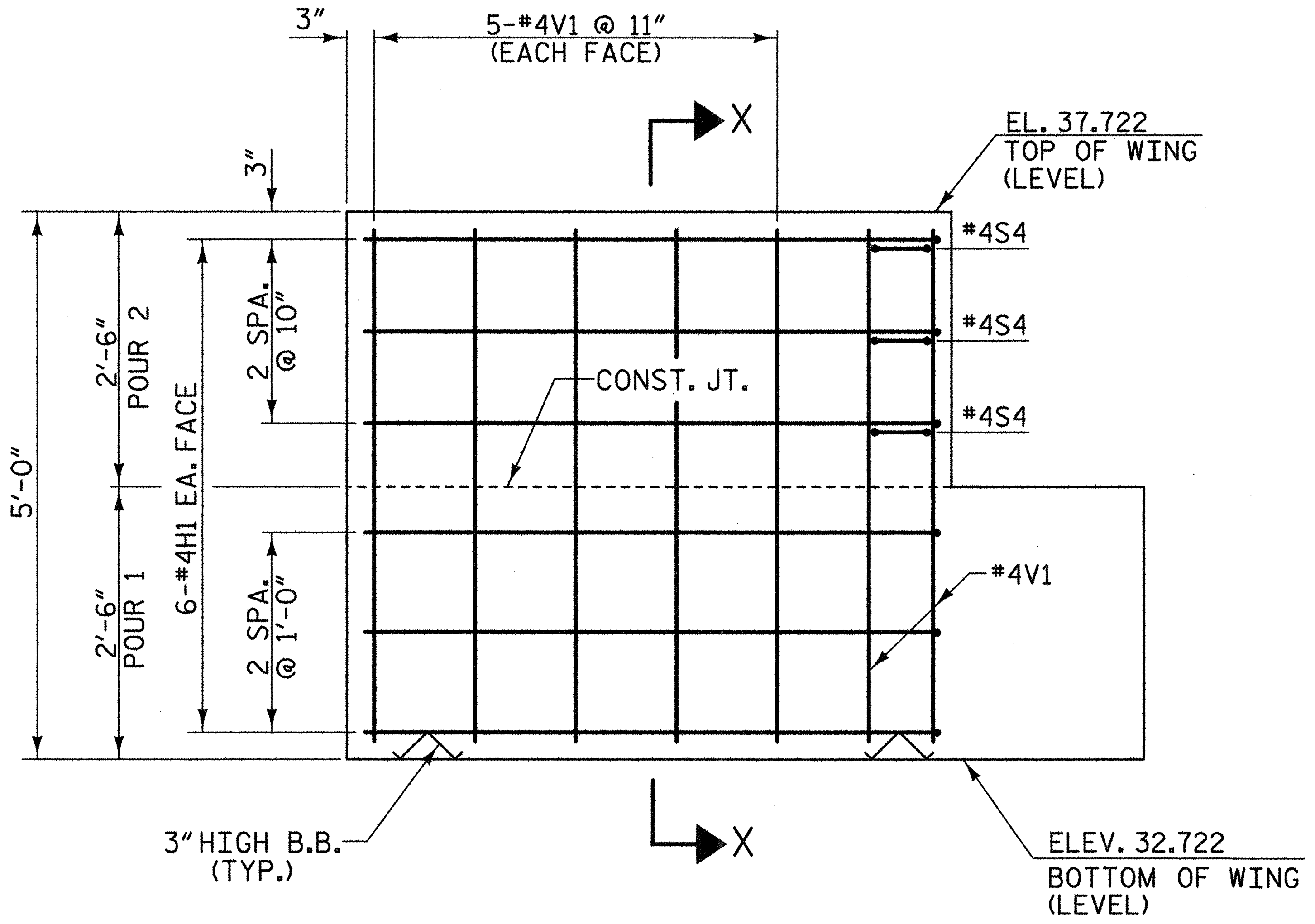
W1 PLAN OF LEFT WING



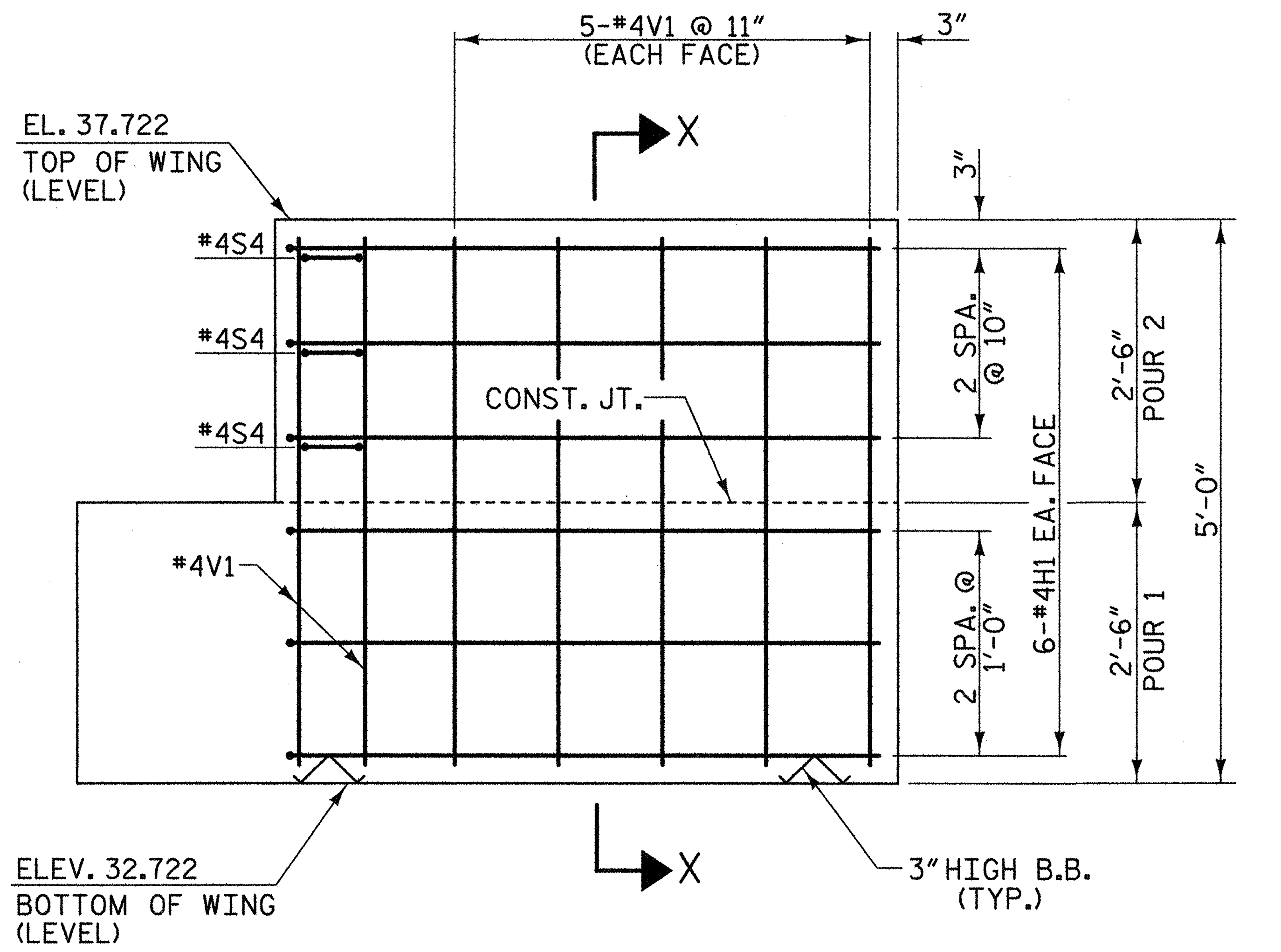
W2 PLAN OF RIGHT WING



SECTION X-X



W1 ELEVATION OF LEFT WING



W2 ELEVATION OF RIGHT WING

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37 SHEET 2 OF 3

L. KEVIN AUSTIN
19661
L. Kevin Austin 7/7/10

PLANS PREPARED BY:
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2

30' CLEAR ROADWAY - 90°SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	27
1			3			TOTAL SHEETS
2			4			33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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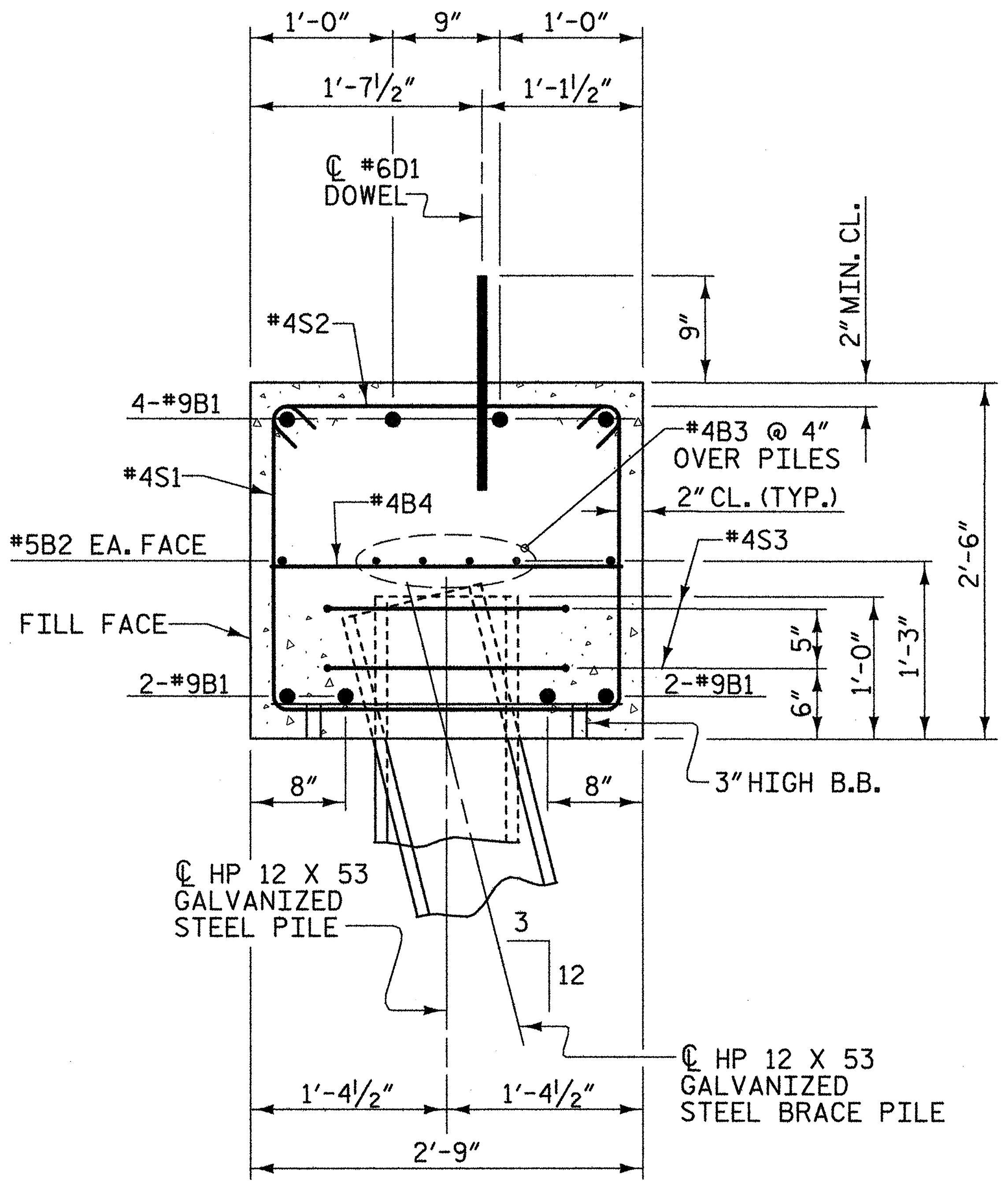
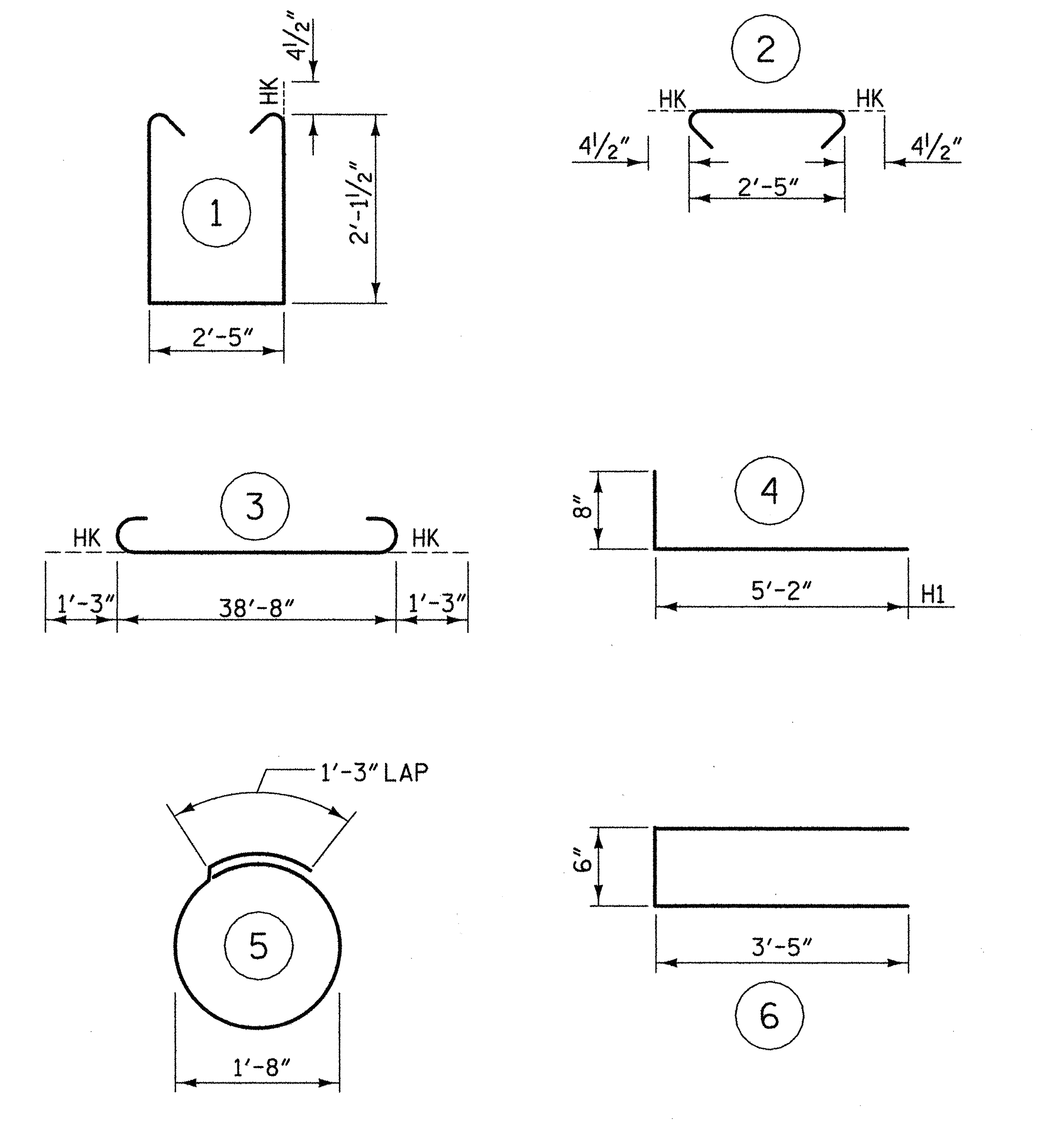


SECTION A-A

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR END BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	3	41'-2"	1120
B2	2	#5	STR	38'-8"	81
B3	8	#4	STR	20'-7"	110
B4	10	#4	STR	2'-5"	16
D1	22	#6	STR	1'-6"	50
H1	24	#4	4	5'-10"	94
S1	38	#4	1	7'-5"	188
S2	38	#4	2	3'-2"	80
S3	14	#4	5	6'-6"	61
S4	6	#4	6	7'-4"	29
V1	40	#4	STR	4'-8"	125

TOTAL REINFORCING STEEL =		1954 lbs.
CLASS "A" CONCRETE - CU. YARDS		
	POUR 1	10.8 cu. yds.
	POUR 2	1.5 cu. yds.
	TOTAL	12.3 cu. yds.
HP 12 X 53 GALVANIZED STEEL PILES		
7 PILES REQUIRED - LIN. FEET		525

PROJECT NO. 42811

PITT COUNTY

STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

SHEET 3 OF 3

L. KEVIN AUSTIN 7/7/10

PLANS PREPARED BY:

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2

30' CLEAR ROADWAY - 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	28
1			3			TOTAL SHEETS
2			4			33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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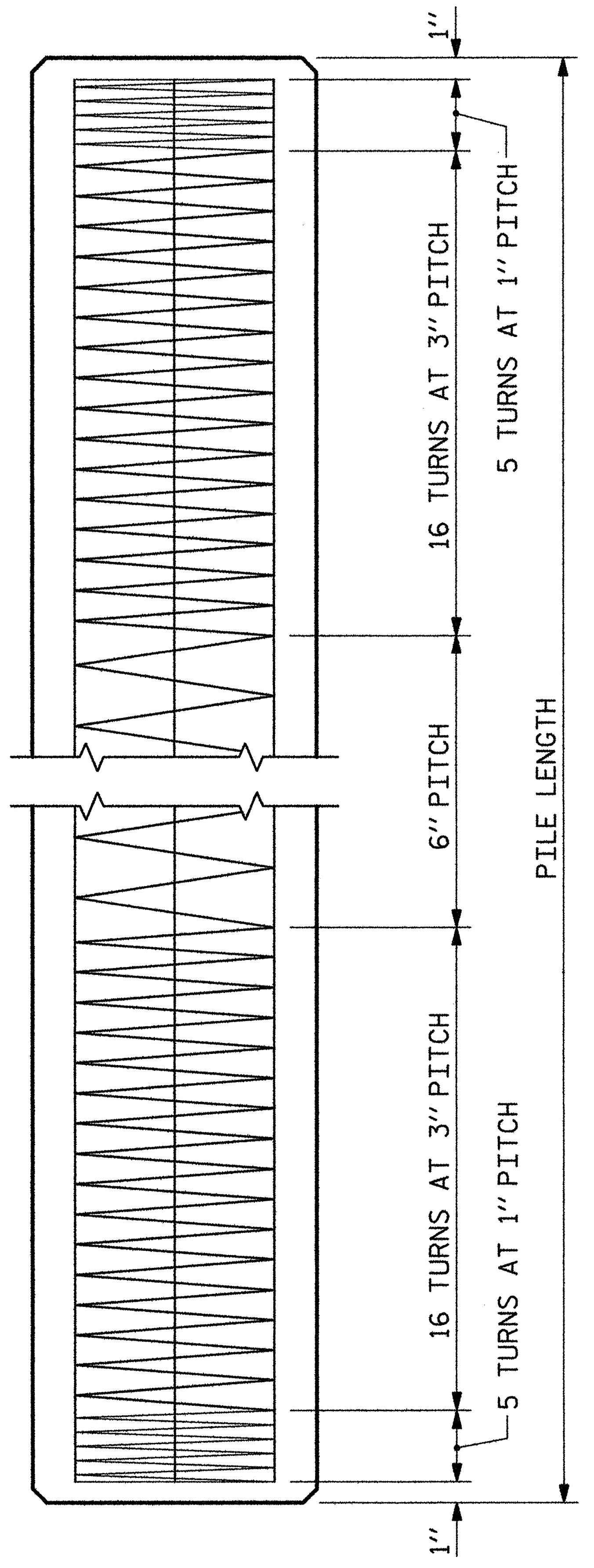
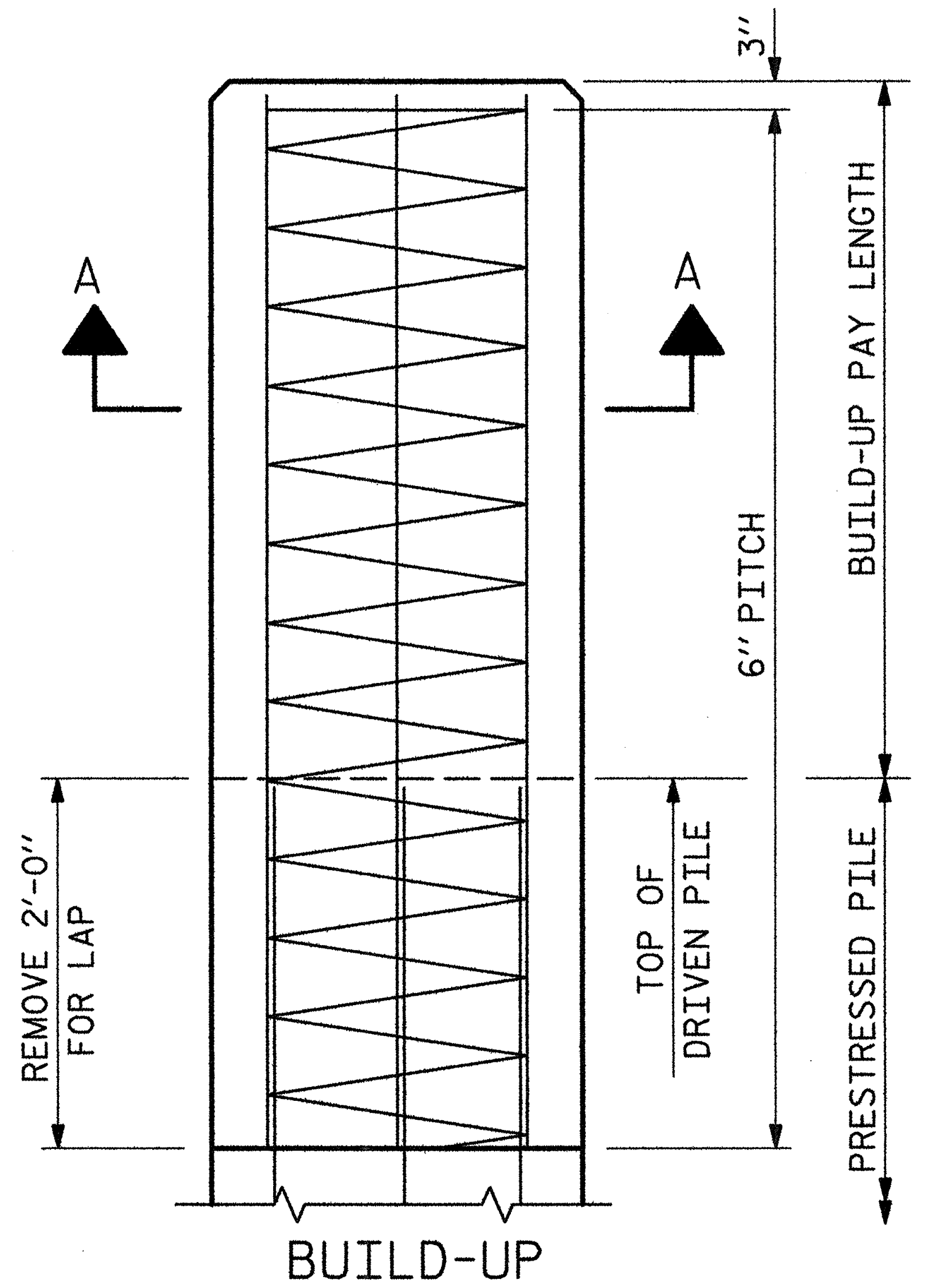
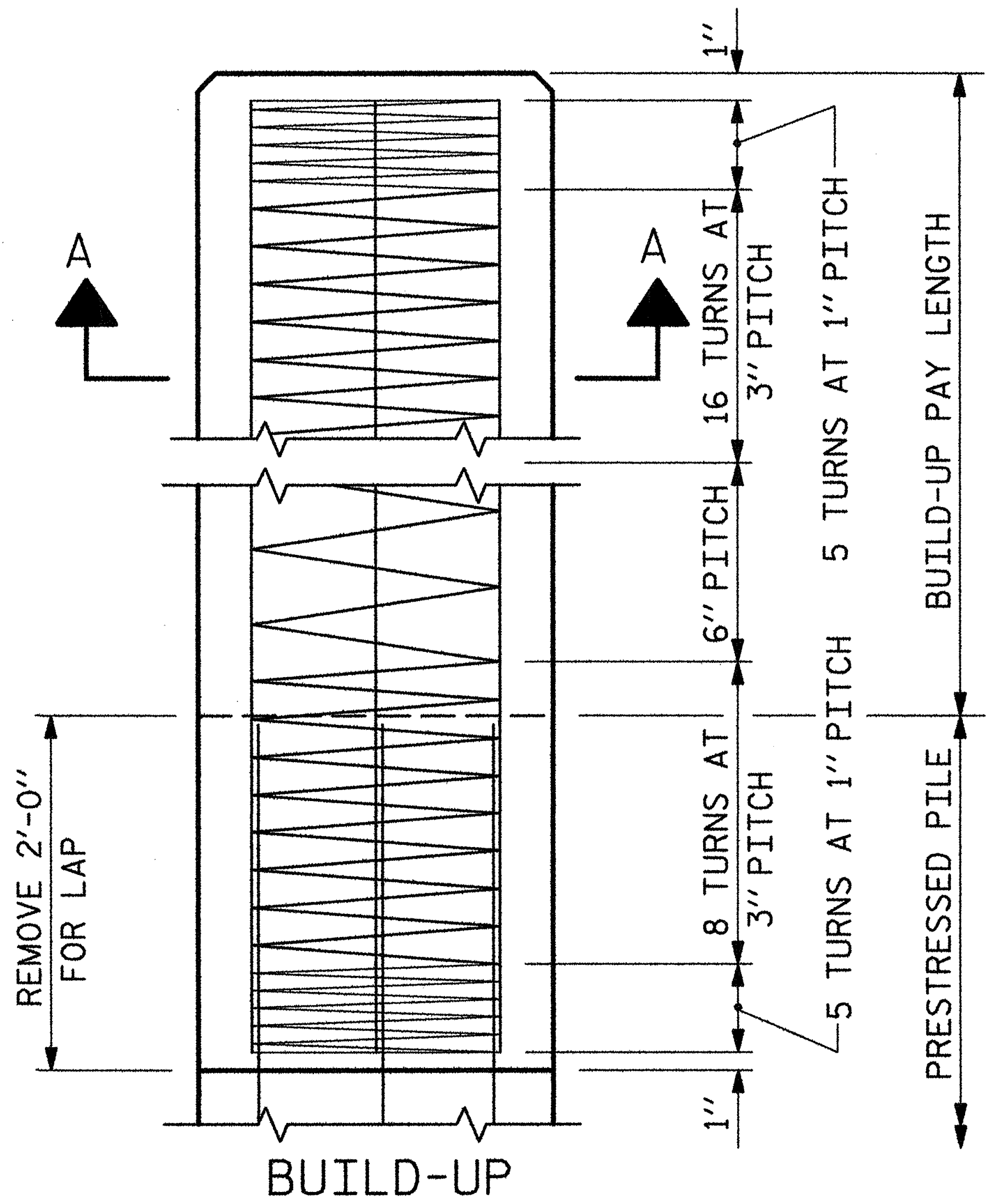


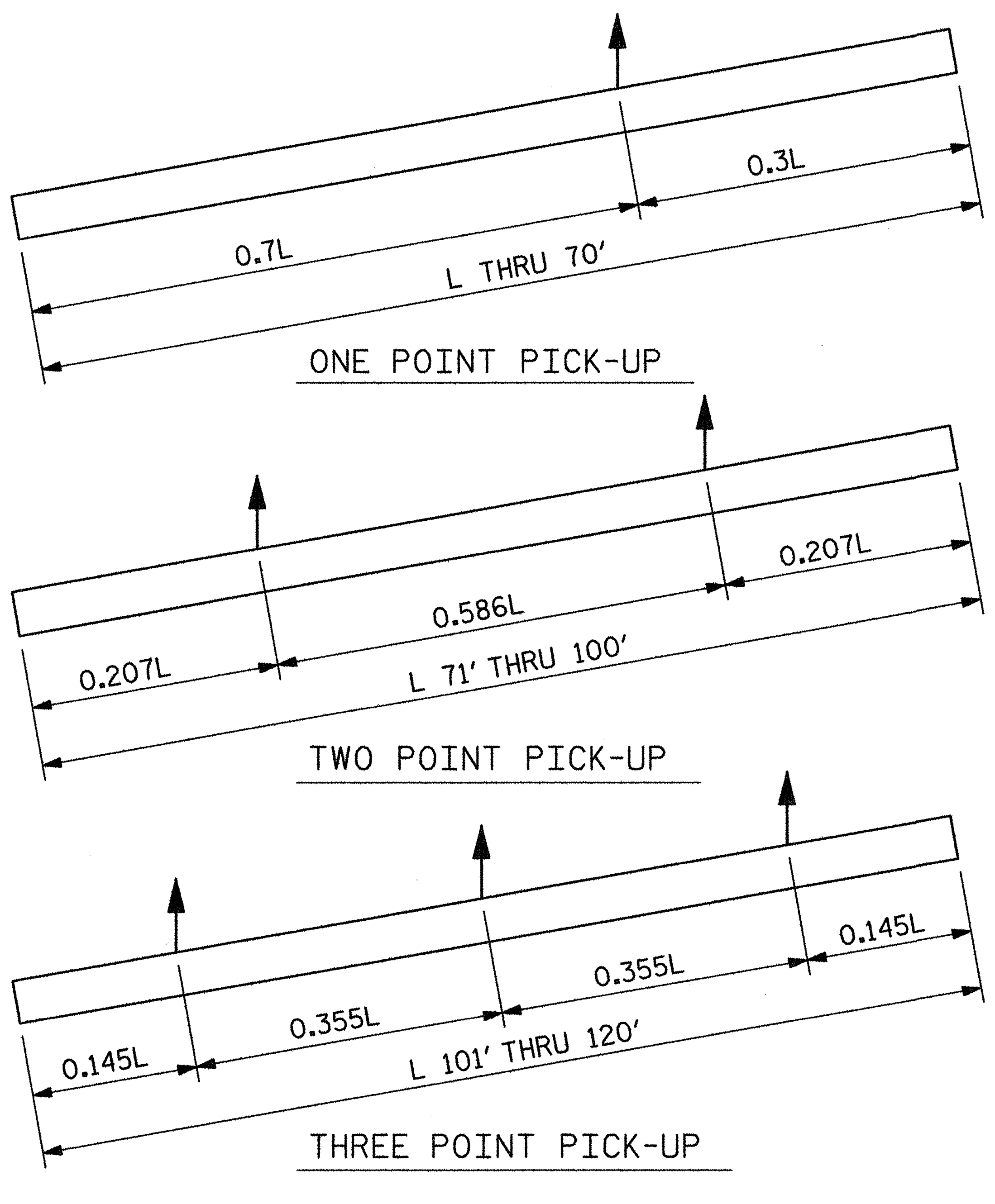
ELEVATION



BUILD-UP
WITHOUT DRIVING



BUILD-UP
WITH DRIVING



ONE POINT PICK-UP

TWO POINT PICK-UP

THREE POINT PICK-UP

PICK-UP POINTS

NOTES

CONCRETE DESIGN DATA : f'c= 5,000 PSI ;fc= 2,000 PSI

IMPACT IN HANDLING = 50%

IN DRIVING PILES, A METHOD APPROVED BY THE ENGINEER SHALL BE USED, WHEREBY THE HEAD OF THE PILE IS NOT DAMAGED.

PROPOSED DEVICES FOR LIFTING PILES, RECESS DETAILS, AND PATCHING MATERIAL SHALL BE DETAILED IN SHOP DRAWINGS. AFTER ATTACHMENTS HAVE BEEN REMOVED, OPENINGS SHALL BE REPAIRED SUCH THAT THE APPEARANCE OF THE PILE IS UNIFORM.

THE CONTRACTOR SHALL USE THE FOLLOWING STRAND TYPE:

SIZE	GRADE	NUMBER OF STRANDS	AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS FORCE
1/2"	270 L.R.	16	0.153	41,300# PER STRAND	30,980# PER STRAND

STRANDS SHALL BE EQUALLY SPACED AS SHOWN IN THE "TYPICAL SECTION".

A CIRCULAR STRAND PATTERN SHALL NOT BE PERMITTED.

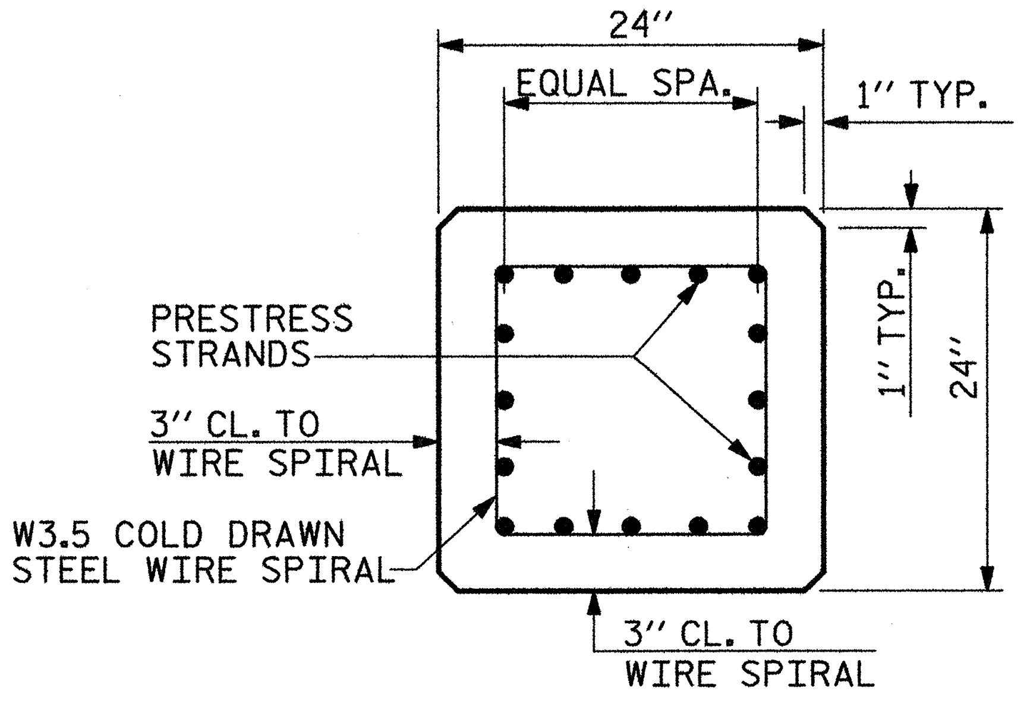
THE SLIP-FORM METHOD OF CASTING PILES WILL NOT BE PERMITTED.

IF STRAND STRESS IS RELIEVED BY BURNING, THE STRANDS SHALL BE BURNED IN OPPOSITE PAIRS AS INDICATED IN THE TYPICAL PATTERN SHOWN. FOR ANY NUMBER OF STRANDS BURN IN OPPOSITE PAIRS AND SYMMETRICAL ABOUT BOTH VERTICAL AND HORIZONTAL AXES, STRANDS 1-1 SHALL BE BURNED BEFORE 2-2, ETC. NOT MORE THAN 4 STRANDS, SAY 5-5 AND 6-6, MAY BE BURNED AT ANY ONE SECTION BEFORE THESE SAME PAIRS OF STRANDS ARE BURNED AT BOTH ENDS OF THE BED AND BETWEEN EACH PAIR OF PILES IN THE BED.

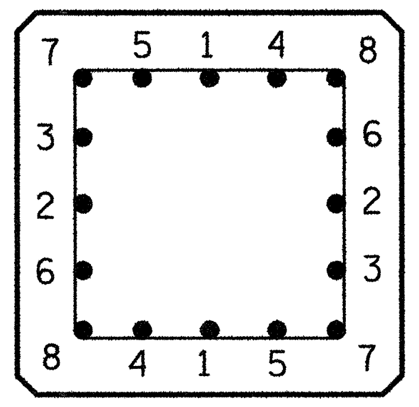
BUILD-UPS SHALL BE OF 'CLASS A' CONCRETE WITH 20% ADDITIONAL CEMENT. NO DRIVING OF THE BUILT-UP PILE WILL BE PERMITTED UNTIL THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AND UNTIL A PERIOD OF SEVEN DAYS HAS ELAPSED SINCE CASTING OF THE BUILD-UP.

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

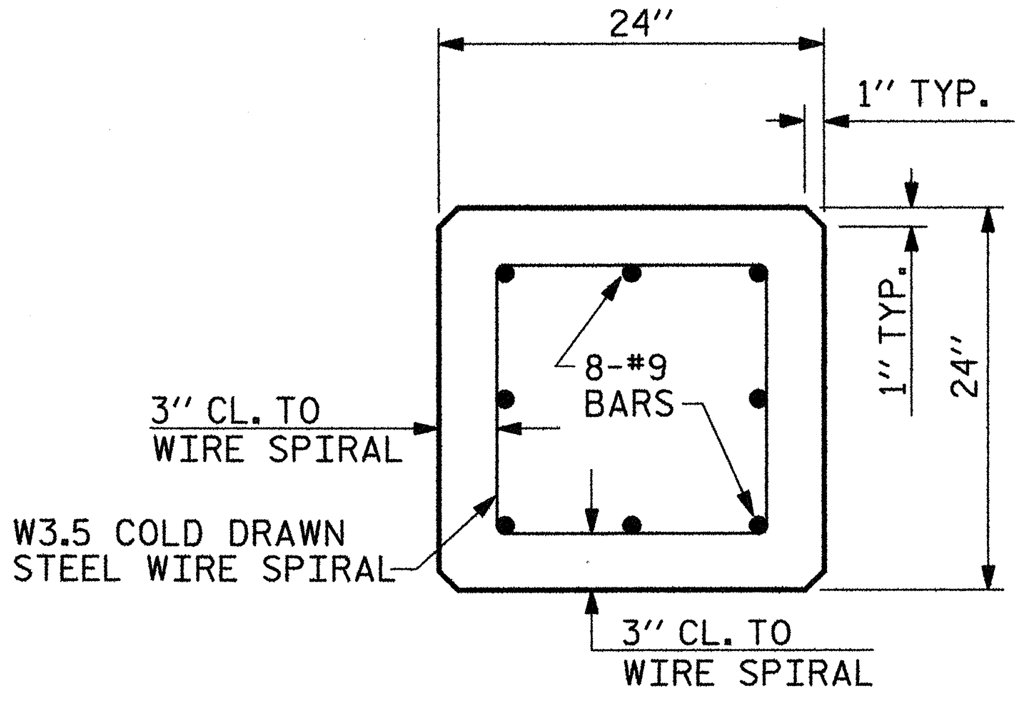
THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE PILE SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 3500 PSI.



TYPICAL SECTION



TYPICAL PATTERN
FOR BURNING STRANDS



SECTION A-A

QUANTITIES FOR ONE 24" SQUARE PILE

	CONCRETE	PILE WT.	ONE PICK-UP POINT		TWO PICK-UP POINTS		THREE PICK-UP POINTS	
LENGTH	CU. YDS.	TONS	0.3L	0.7L	0.207L	0.586L	0.145L	0.355L
25'-0"	3.69	7.47	7'-6"	17'-6"				
30'-0"	4.43	8.97	9'-0"	21'-0"				
35'-0"	5.17	10.46	10'-6"	24'-6"				
40'-0"	5.91	11.96	12'-0"	28'-0"				
45'-0"	6.64	13.45	13'-6"	31'-6"				
50'-0"	7.38	14.95	15'-0"	35'-0"				
55'-0"	8.12	16.44	16'-6"	38'-6"				
60'-0"	8.86	17.94	18'-0"	42'-0"				
65'-0"	9.60	19.43	19'-6"	45'-6"				
70'-0"	10.33	20.93	21'-0"	49'-0"				
75'-0"	11.07	22.42			15'-6 1/2"	43'-11"		
80'-0"	11.81	23.92			16'-6 1/2"	46'-11"		
85'-0"	12.55	25.41			17'-7"	49'-10"		
90'-0"	13.29	26.91			18'-7 1/2"	52'-9"		
95'-0"	14.03	28.40			19'-8"	55'-8"		
100'-0"	14.76	29.90			20'-8 1/2"	58'-7"		
105'-0"	15.50	31.39					15'-3"	37'-3"
110'-0"	16.24	32.89					15'-11 1/2"	39'-0 1/2"
115'-0"	16.98	34.38					16'-8"	40'-10"
120'-0"	17.72	35.87					17'-5"	42'-7"

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:

19661
L. KEVIN AUSTIN
7/7/10

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

24" PRESTRESSED CONCRETE PILE

STD. NO. PCP4

PLANS PREPARED BY:
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(919) 851-1912
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	29
1			3			TOTAL SHEETS
2			4			33

ASSEMBLED BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

DRAWN BY : WJH 1/89
CHECKED BY : CRK 3/89

REV. 6/1/94 EEM/GRP
REV. 8/16/99R RAL/LES
REV. 5/1/06 TLA/GM

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PROJECT: B-5214

CONCTRACT: DO000038

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5214	30	

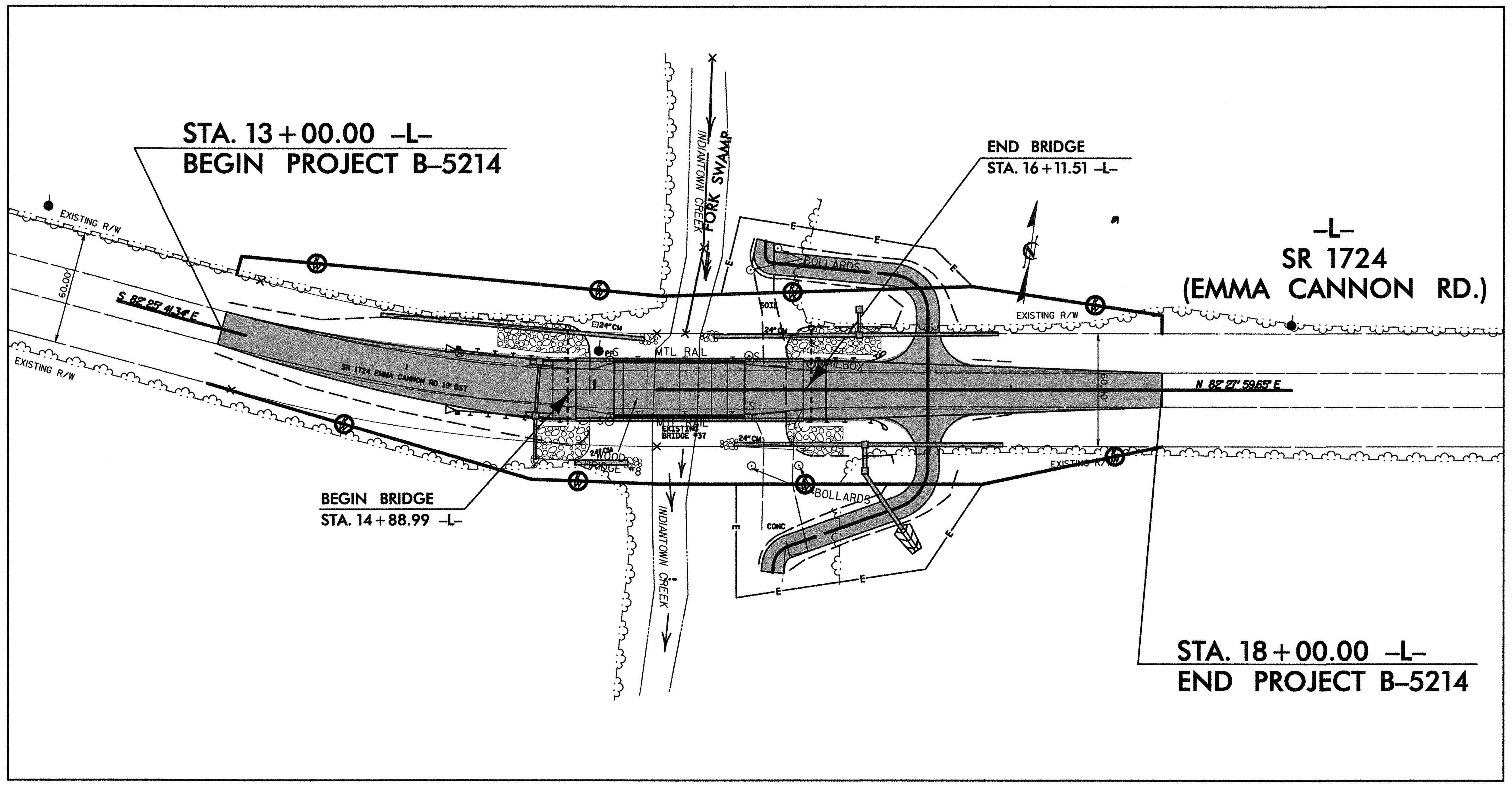
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle/Coir Fiber Wattle	
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT LENGTH

LENGTH ROADWAY PROJECT B-5214 = 0.072 MILE

LENGTH STRUCTURE PROJECT B-5214 = 0.023 MILE

TOTAL LENGTH PROJECT B-5214 = 0.095 MILE

Prepared In the Office of:

Mulkey Engineers & Consultants

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
2006 STANDARD SPECIFICATIONS

MATTHEW HARVEY
MULKEY E & C
ENGINEER

LEVEL III-A CERTIFICATION No.: 412

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.01	Riser Basin
1630.03	Temporary Silt Ditch
1630.04	Stilling Basin
1630.05	Temporary Diversion
1630.06	Special Stilling Basin
1632.01	Rock Inlet Sediment Trap Type A
1632.02	Rock Inlet Sediment Trap Type B
1632.03	Rock Inlet Sediment Trap Type C
1633.01	Temporary Rock Silt Check Type A
1634.01	Temporary Rock Sediment Dam Type A
1634.02	Temporary Rock Sediment Dam Type B
1635.01	Rock Pipe Inlet Sediment Trap Type A
1635.02	Rock Pipe Inlet Sediment Trap Type B

EROSION CONTROL PLANS

EXISTING BRIDGE No. 37
28'-0" CLEAR ROADWAY
SPANS: 1 @ 17'-8", 2 @ 17'-0", 1 @ 17'-9"
RC FLOOR ON TIMBER JOISTS
END BENTS & INT. BENT-
TIMBER CAPS ON TIMBER PILES

TBM: #1
'BENCHLITE' NAIL SET IN 24" GUM TREE
72.48' RIGHT OF -L- STA. 15+67.11
ELEV. 34.49 NAVD 88

PLAN
SCALE : 1" = 20'

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2006 STANDARD SPECIFICATIONS

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	—‖—‖—‖—
1606.01	Special Sediment Control Fence Section	⩔
1607.01	Gravel Construction Entrance (GCE)	
1622.01	Temporary Berms and Slope Drains	⊤ ← ←
1632.03	Rock Inlet Sediment Trap Type C	▣
1633.01	Temporary Rock Silt Check Type A	▩

▨ ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE ON SR 1724
OVER FORK SWAMP
BETWEEN SR 1723 & SR 1725

30' CLEAR ROADWAY - 90° SKEW

PLANS PREPARED BY:

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	31
1			3			TOTAL SHEETS
2			4			33

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B-5214

#37 PITT

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5214	32	

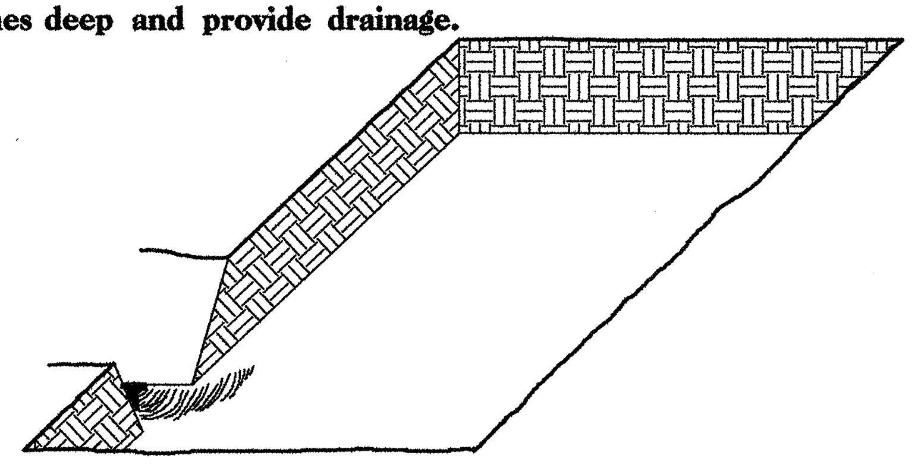
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

PLANTING DETAILS

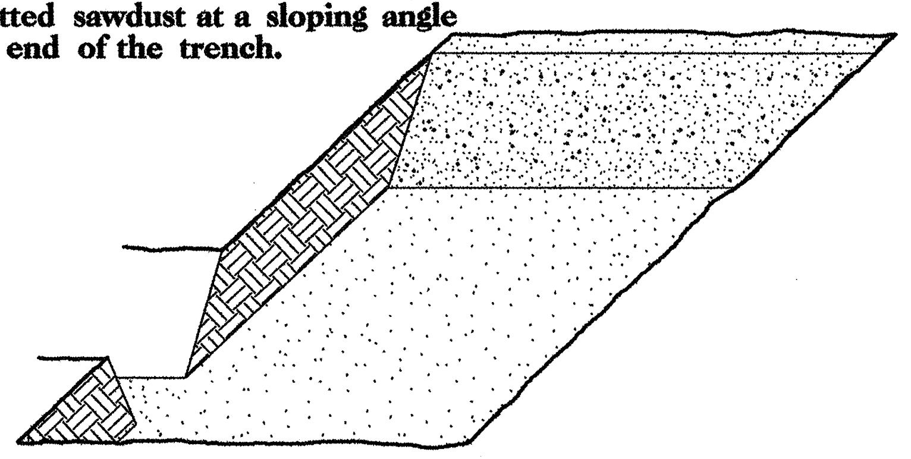
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

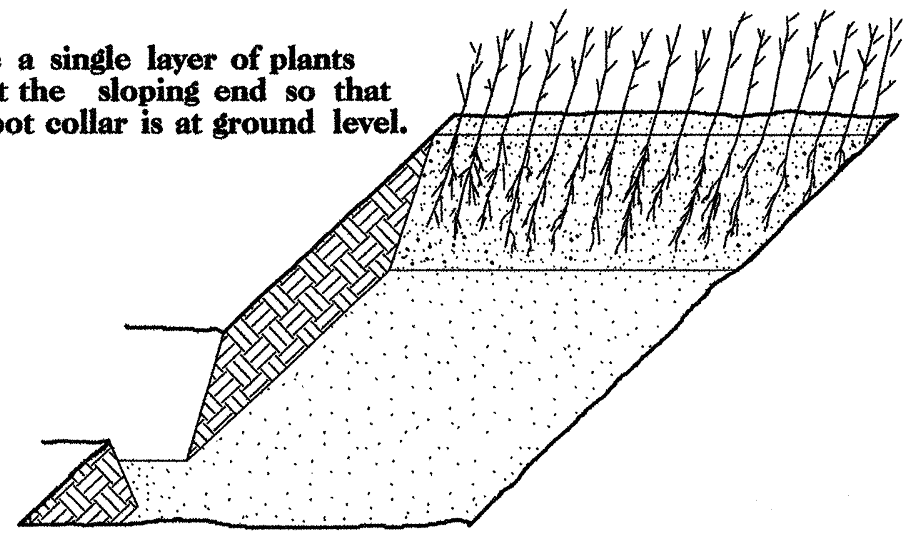
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



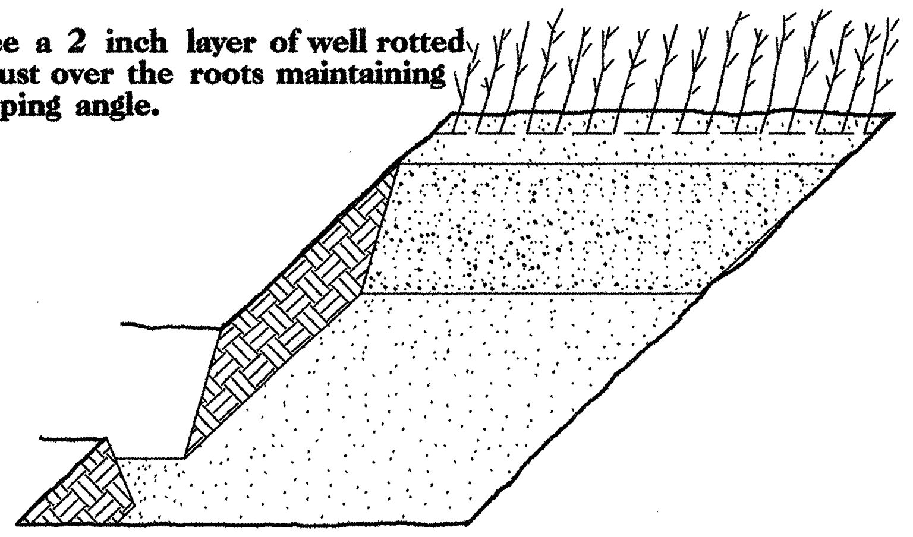
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

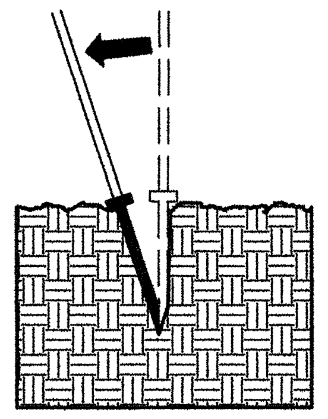


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

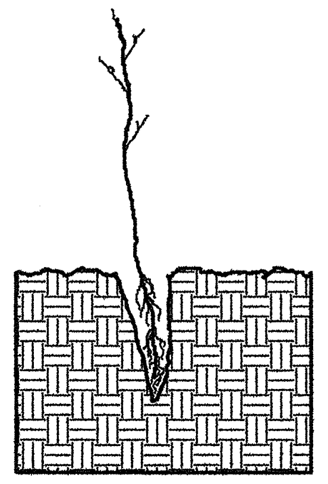


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

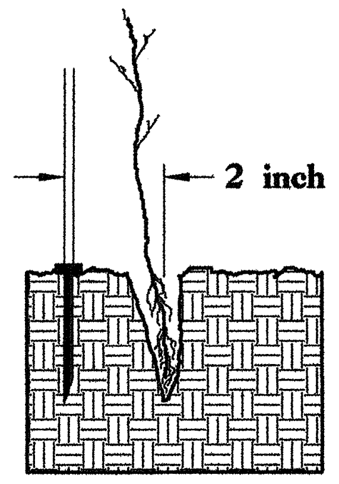
DIBBLE PLANTING METHOD USING THE KBC PLANTING BAR



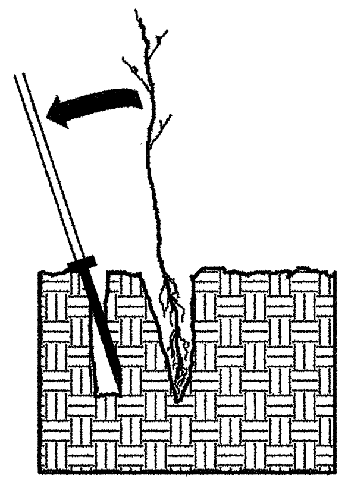
1. Insert planting bar as shown and pull handle toward planter.



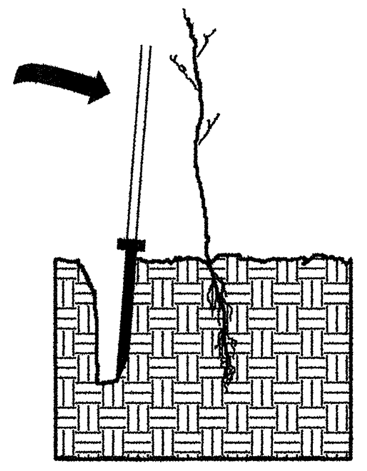
2. Remove planting bar and place seedling at correct depth.



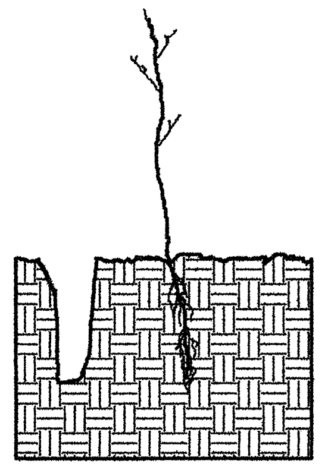
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.

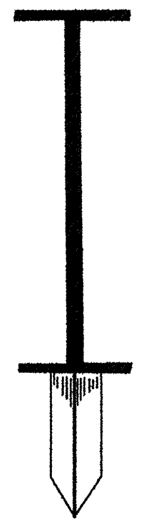


6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

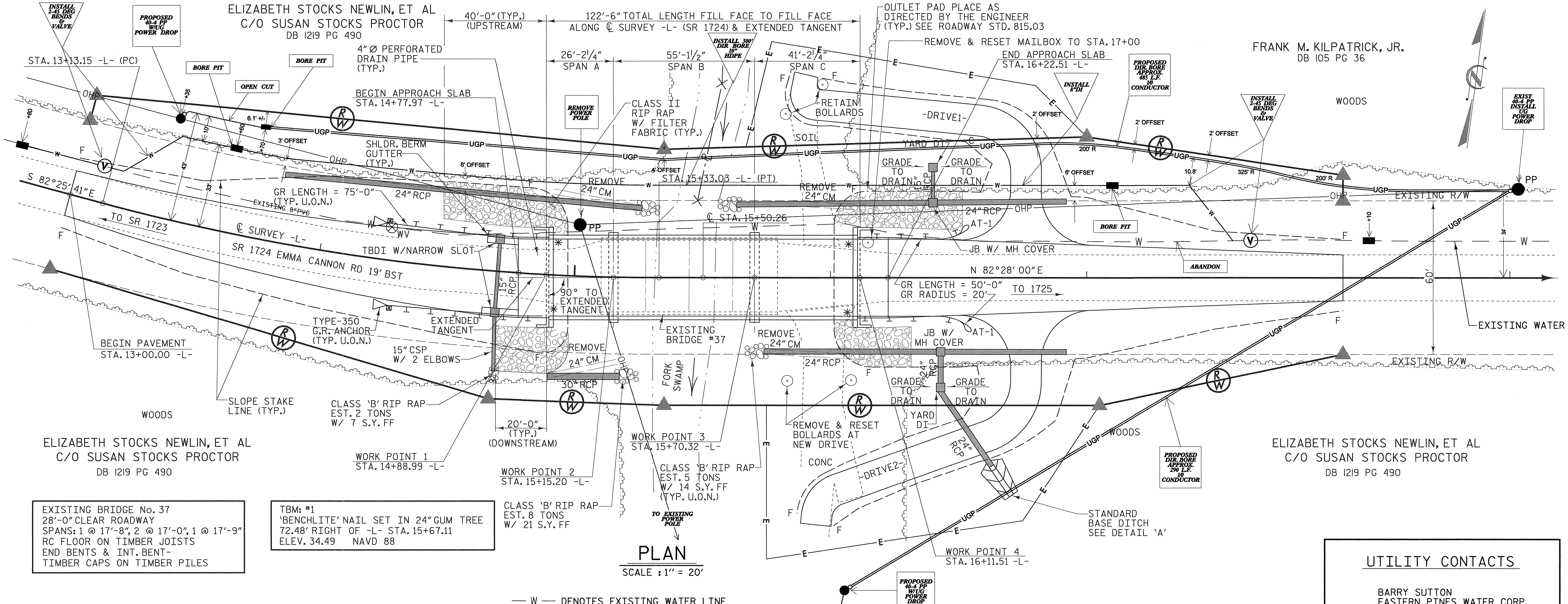
REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25% LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25% PLATANUS OCCIDENTALIS	SYCAMORE	12 in - 18 in BR
25% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25% BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT



PLAN

SCALE : 1" = 20'

EXISTING BRIDGE No. 37
28'-0" CLEAR ROADWAY
SPANS: 1 @ 17'-8", 2 @ 17'-0", 1 @ 17'-9"
RC FLOOR ON TIMBER JOISTS
END BENTS & INT. BENT-
TIMBER CAPS ON TIMBER PILES

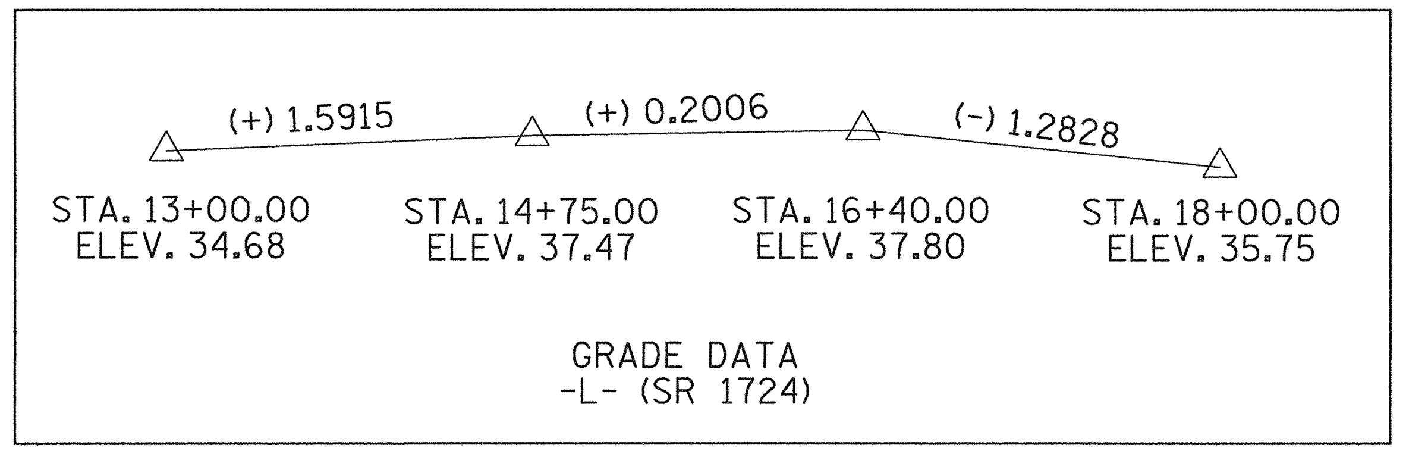
TBM: #1
'BENCHLITE' NAIL SET IN 24" GUM TREE
72.48' RIGHT OF -L- STA. 15+67.11
ELEV. 34.49 NAVD 88

— W — DENOTES EXISTING WATER LINE

—OHP— DENOTES EXISTING OVERHEAD POWER LINE

NOTE: GUARDRAIL LENGTHS AS SHOWN INCLUDE ANCHOR UNITS.

U.O.N. - UNLESS OTHERWISE NOTED



GRADE DATA
-L- (SR 1724)

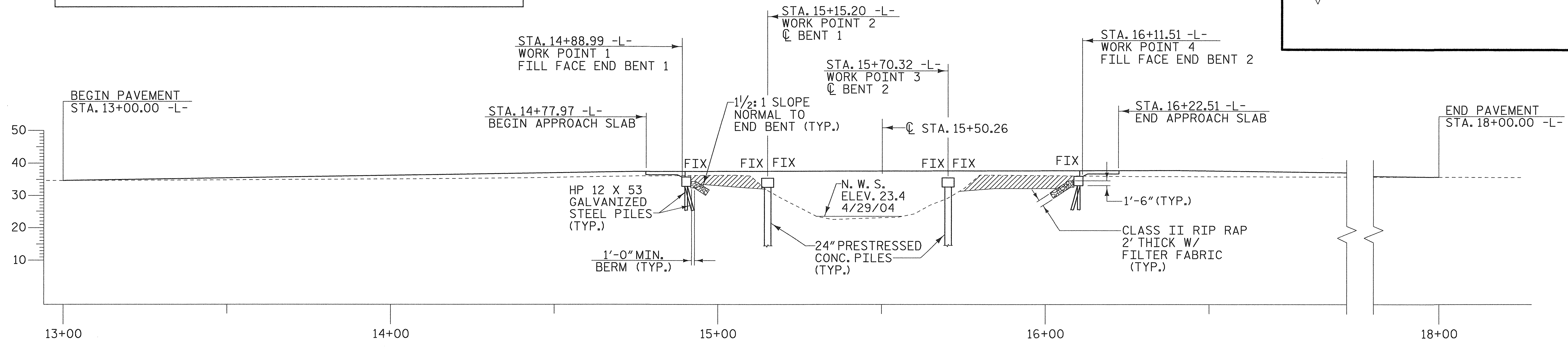
UTILITY SHAPE LEGEND

☐	**ELECTRIC (TOWN OF AYDEN) MODIFICATIONS**
▽	**WATER (EASTERN PINES) MODIFICATIONS**

UTILITY CONTACTS

BARRY SUTTON
EASTERN PINES WATER CORP
252-752-7420

ROBERT SUTTON
TOWN OF AYDEN (ELECTRIC)
252-746-7081



▨ DENOTES ROADWAY FILL TO BE REMOVED

PROFILE ALONG ℄ SURVEY

SCALE : 1" = 20'

PROJECT NO. 42811
PITT COUNTY
STATION: 15+50.26 -L-

REPLACES BRIDGE NO. 37

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

UTILITY BY OTHERS PLAN
BRIDGE ON SR 1724
OVER FORK SWAMP
BETWEEN SR 1723 & SR 1725
30' CLEAR ROADWAY - 90°SKEW

PLANS PREPARED BY:

MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
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(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. 33
TOTAL SHEETS 33

DRAWN BY : W. B. ALLEN DATE : 5/10
CHECKED BY : L. K. AUSTIN DATE : 6/10

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