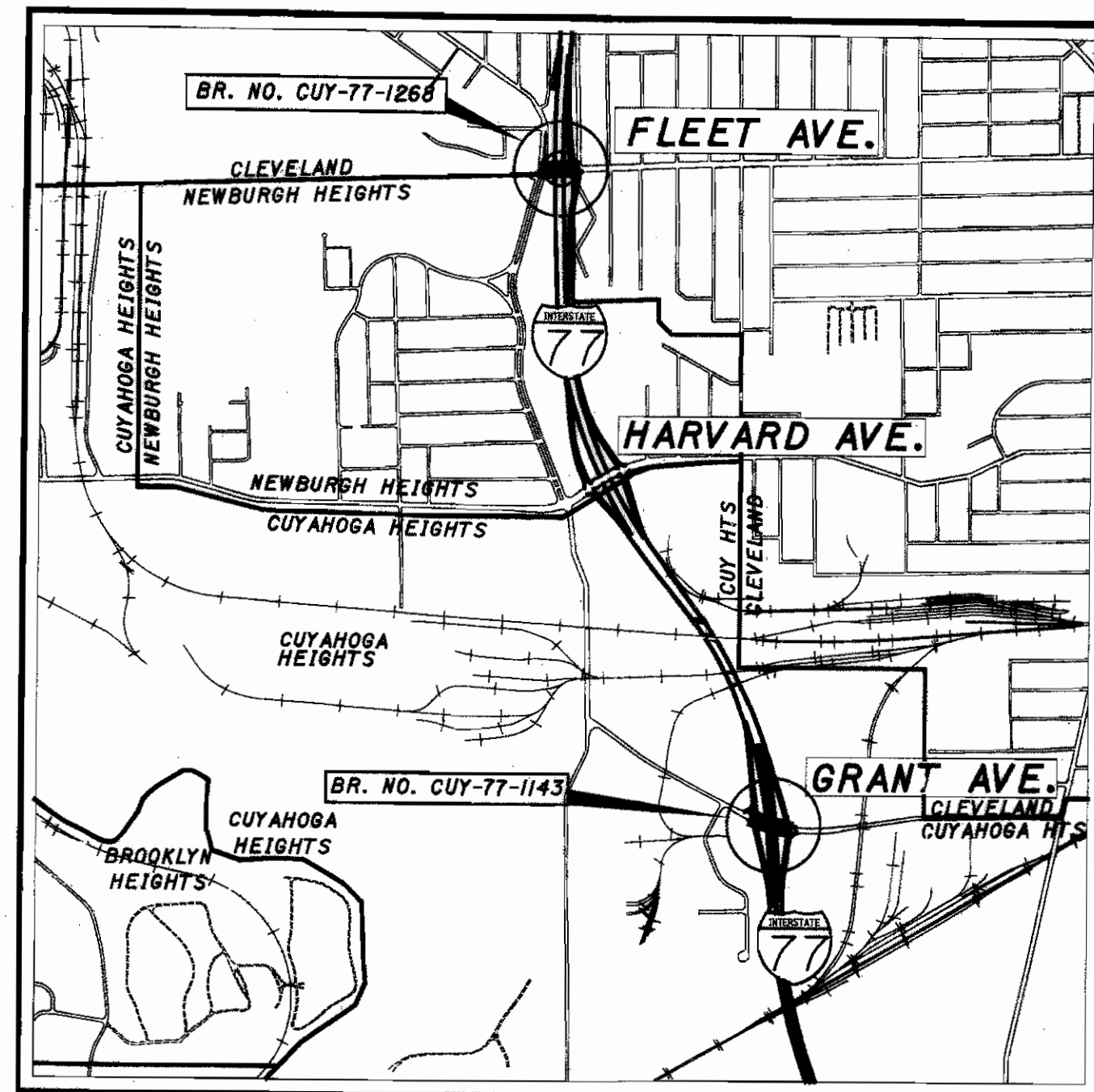


CUY - IR 77-11.43/12.68
030586 PID - 13564
DIST 12 12/17/2003

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LOCATION MAP

(GRANT AVE.)
LATITUDE: 41°26'19" LONGITUDE: 81°38'54"
(FLEET AVE.)
LATITUDE: 41°27'20" LONGITUDE: 81°39'52"

SCALE IN FEET
0 1200 2400 3600 4800



PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
RAILROADS
OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CUY-77-11.43/12.68
CITY OF CLEVELAND
VILLAGE OF NEWBURGH HEIGHTS
VILLAGE OF CUYAHOGA HEIGHTS
CUYAHOGA COUNTY

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NOT USED: 15, 16
ADDED: 36A, 194A-C

PLAN PREPARED BY:

ENGINEERS SEAL: BAKER AND ASSOCIATES 2000 EAST NINTH STREET SUITE 1220 CLEVELAND, OHIO 44115 SIGNED: <i>Andrew J. Barr</i> DATE: <i>Aug 19, 2003</i>	STRUCTURE 1143: BARR ENGINEERING, I.C. 1108 CITY PARK AVENUE SUITE 200 COLUMBUS, OHIO 43206	ENGINEERS SEAL: SIGNED: <i>Andrew J. Barr</i> DATE: <i>9-12-03</i>	TEMPORARY AND PERMANENT TRAFFIC SIGNALS: TRAFF-PRO CONSULTANTS, INC. 2501 E. 9th Avenue Cleveland, Ohio 44115 (416) 944-6114 FAX (416) 944-9926	ENGINEERS SEAL: SIGNED: <i>Michael Williams</i> DATE: <i>9-2-03</i>
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DESIGN EXCEPTIONS
NONE REQUIRED

FOR DESIGN DESIGNATION,
SEE SHEETS 2 & 3.



STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS
BP-1.1	07/28/00	GR-3.5	04/18/03	HL-30.33	04/19/02	MT-101.60	10/18/02	TC-73.10	01/19/01			826 07/18/03
BP-2.1	07/28/00	GR-4.2	04/18/03	HL-40.10	04/19/02	MT-101.70	10/18/02	TC-81.10	05/01/00			832 02/12/03
BP-2.2	07/28/00	GR-5.2	04/18/03	HL-50.21	04/19/02	MT-105.10	10/18/02	TC-81.20	05/01/00			833 02/12/03
BP-2.3	07/28/00	GR-5.3	04/18/03	HL-50.22	01/18/02	MT-105.11	10/18/02	TC-82.10	01/19/01			864 07/11/00
BP-2.5	07/28/00			HL-60.11	07/20/01	RM-4.2	04/18/03	TC-83.10	05/01/00			908 04/18/03
BP-3.1	07/28/00	HL-10.11	04/19/02	HL-60.12	07/20/01	RM-4.5	04/18/03	TC-83.20	05/01/00			
BP-5.1	07/28/00	HL-10.12	04/19/02	HL-60.21	07/20/01	RM-4.6	04/18/03	TC-84.20	05/01/00			
MH-1.1	07/19/02	HL-10.13	01/17/03	HL-60.31	07/20/01	TC-12.30	01/19/01	TC-84.21	03/06/00			
MH-1.2	07/19/02	HL-20.11	04/19/02			TC-21.10	01/19/01	TC-85.10	05/01/00			
DM-1.1	07/18/03	HL-20.14	01/17/03	I-1.2	07/19/02	TC-21.20	01/19/01	TC-85.20	05/01/00			
DM-1.4	07/19/02	HL-20.15	01/17/03	LA-1.1	07/28/00	TC-22.10	01/19/01	AS-1-81	07/19/02			
DM-4.4	07/19/02	HL-30.11	04/19/02	LA-1.2	07/28/00	TC-22.20	01/19/01	BS-1-93	07/19/02			
GR-1.1	04/18/03	HL-30.21	04/19/02	MT-35.10	04/20/01	TC-31.21	04/20/01	GSD-1-96	07/19/02			
GR-2.1	04/18/03	HL-30.22	04/19/02	MT-95.31	04/19/02	TC-42.10	01/19/01	PCB-91	07/19/02			
GR-3.1	04/18/03	HL-30.31	01/17/03	MT-95.32	04/19/02	TC-42.20	04/20/01	SICD-1-96	07/19/02			
GR-3.2	04/18/03	HL-30.32	04/19/02	MT-95.41	04/19/02	TC-71.10	04/19/02	VPF-1-90	07/19/02			

SPECIAL PROVISIONS

PROJECT DESCRIPTION
STRUCTURE REPLACEMENT FOR FLEET AND GRANT AVENUES OVER I-77 AND THE ASSOCIATED APPROACH PAVEMENT INCLUDING FULL DEPTH PAVEMENT, CURB, DRAINAGE IMPROVEMENTS, NEW TRAFFIC CONTROL, AND PAVEMENT MARKINGS.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2002 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, EXCEPT AS NOTED ON SHEET 18-19, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED *David J. Barr*
DATE *11/20/2003* DISTRICT DEPUTY DIRECTOR
APPROVED *David J. Barr*
DATE *9-19-03* DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.

E032(593)

PID NO.

13564

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

NONE

CUY-77-11.43/12.68

1
242

CURRENT ADT (2005).....	12300
DESIGN YEAR ADT (2025).....	13000
DESIGN HOURLY VOLUME (2025).....	1300
DIRECTIONAL DISTRIBUTION.....	60%
TRUCKS (24 HOUR B&C).....	17%
DESIGN SPEED.....	30 MPH
LEGAL SPEED.....	25 MPH

I-77 CURVE B DATA
P.I. Sta = 86+57.78
D = 32° 47' 30" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 1,123.90'
L = 2,186.11'
E = 161.92'

I-77 CURVE A DATA
P.I. Sta = 59+09.40
D = 16° 33' 47" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 833.97'
L = 1,656.31'
E = 60.38'

BEGIN PROJECT
STA. 74+25.00
SLM 11.39

END WORK
STA. 5+00.00

62°

SUSPEND PROJECT
STA. 78+25.00

SLM 11.47

STRUCTURE NO.
CUY-77-1143

CURRENT ADT (2005).....	127000
DESIGN YEAR ADT (2025).....	162500
DESIGN HOURLY VOLUME (2025).....	14625
DIRECTIONAL DISTRIBUTION.....	60%
TRUCKS (24 HOUR B&C).....	9%
DESIGN SPEED.....	60 MPH
LEGAL SPEED.....	55 MPH

CXST MAINLINE#2
CXST MAINLINE#1

P.I. Sta = 11+50.68
D = 36° 32' 28" (LT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 472.90'
L = 913.53'
E = 76.05' POT Sta. 23+62.96

PT Sta. 15
15+91.31

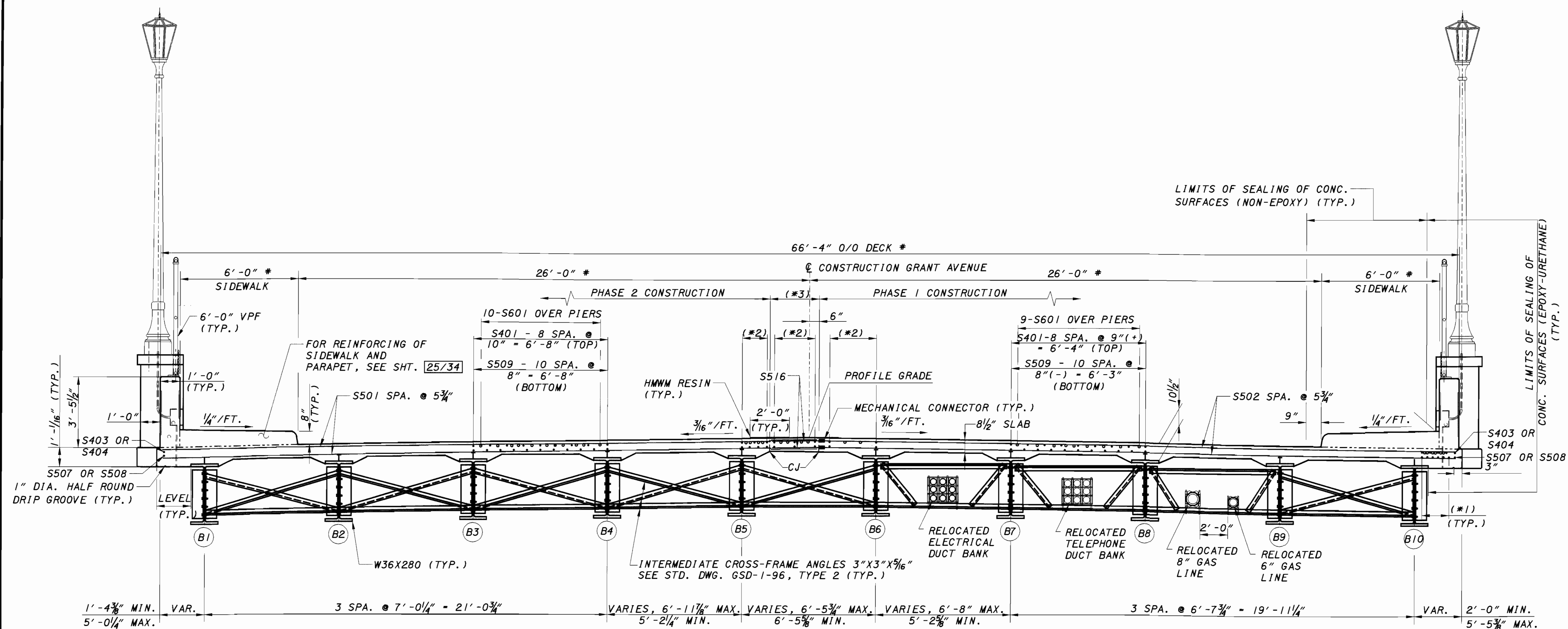
20 12' 20" E

CUYAHOGA HEIGHTS
CLEVELAND

SCHEMATIC PLAN & DESIGN DESIGNATION

CUY-77-11.43/12.68

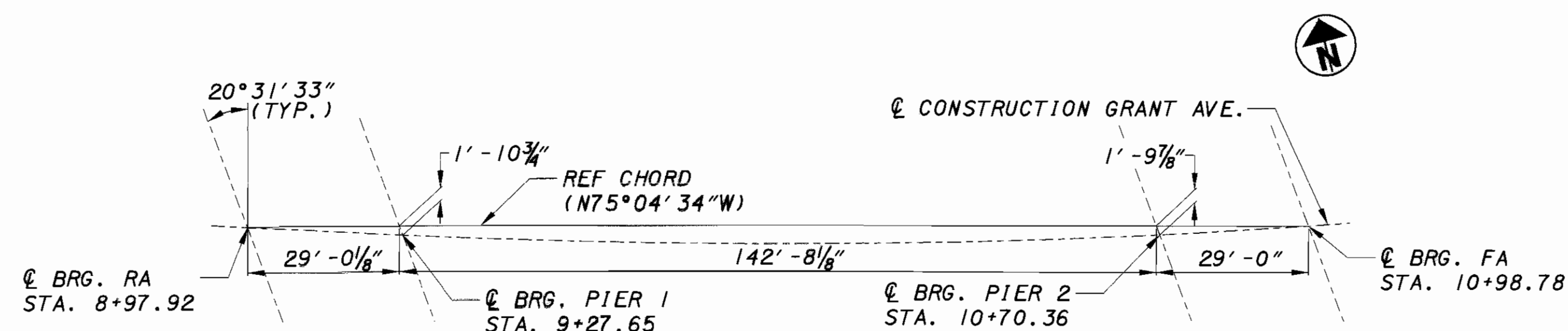
$$\frac{2}{242}$$



(*1) - S401 - 4 SPA. @ 10" = 3'-4" (TOP)
S509 - 6 SPA. @ 7" = 3'-6" (BOTTOM)
6-S601 OVER PIERS (TOP)

(*2) - AS SHOWN:
LEFT: S401 - 2 SPA. @ 10" = 1'-8" (TOP)
S509 - 3 SPA. @ 8" = 2'-0" (BOTTOM)
4-S601 OVER PIERS (TOP)
CENTER: S401 - 2 SPA. @ 11" = 1'-10" (TOP)
S509 - 2 SPA. @ 9" (+) = 1'-7" (BOTTOM)
4-S601 OVER PIERS (TOP)
RIGHT: S401 - 1 SPA. @ 9" (+) (TOP)
S509 - 1 SPA. @ 8" (-) (BOTTOM)
2-S601 OVER PIERS (TOP)

(*3) - PHASE 3 - 2'-6" CLOSURE POUR



GEOMETRY DIAGRAM

ABBREVIATIONS:

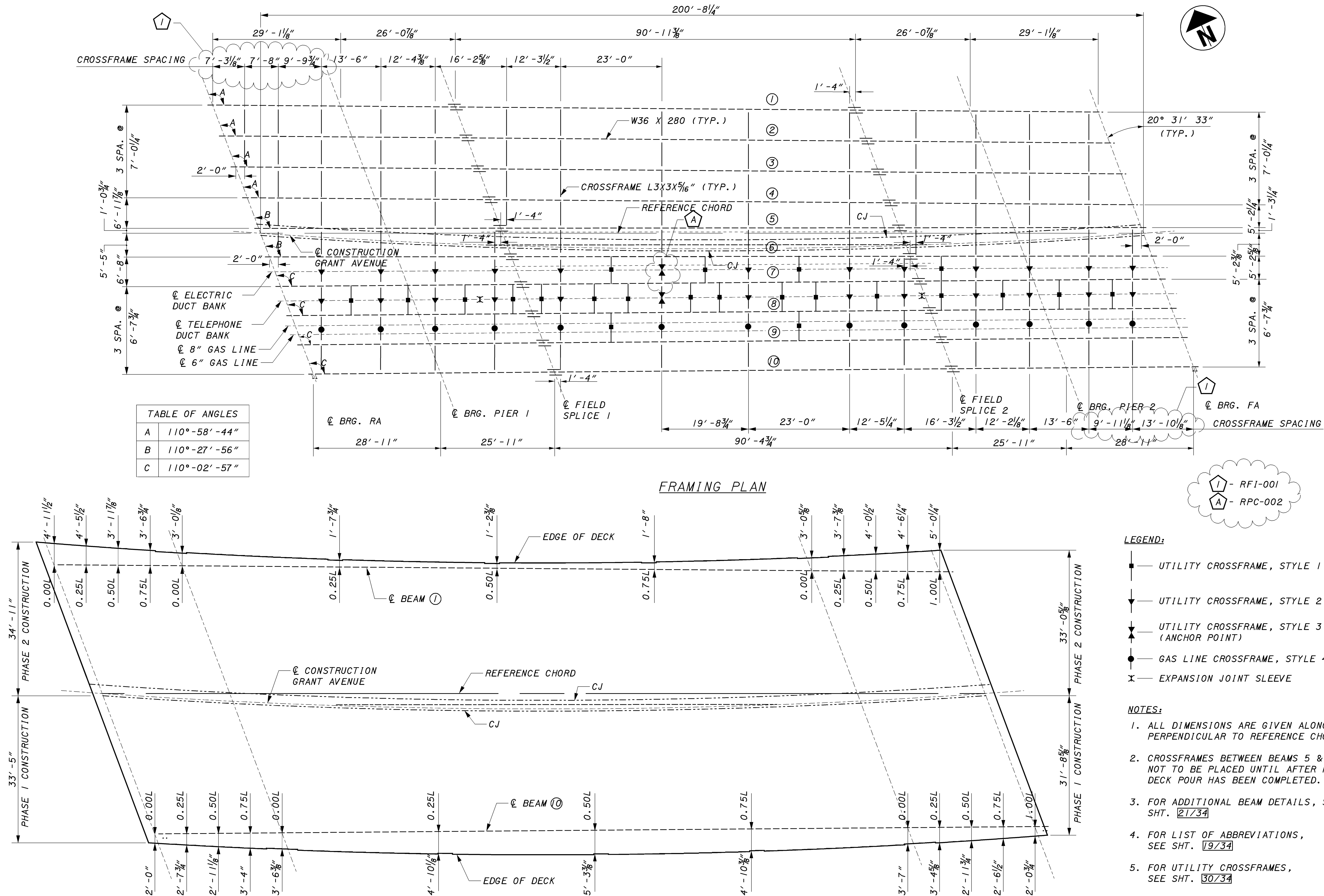
ABUT.	- ABUTMENT	FA	- FORWARD ABUTMENT
AGG.	- AGGREGATE	FF	- FAR FACE
APPR.	- APPROACH	INV.	- INVERT
BRG.	- BEARING	JT.	- JOINT
B/W	- BETWEEN	NF	- NEAR FACE
CIP	- CAST-IN-PLACE	NPCPP	- NON-PERFORATED CORRUGATED PLASTIC PIPE
CIPRC	- CAST-IN-PLACE REINFORCED CONCRETE	PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
CLR.	- CLEARLINE	P	- PLATE
CONC.	- CONCRETE	RA	- REAR ABUTMENT
CPP	- CORRUGATED PLASTIC PIPE	R/W	- RIGHT-OF-WAY
CVN	- CHARPY V-NOTCH	SER.	- SERIES
DIA.	- DIAMETER	SHT.	- SHEET
EF	- EACH FACE	SPA.	- SPACE
EL	- ELEVATION	STA.	- STATION
E/P	- EDGE OF PAVEMENT	TBR	- TO BE REMOVED
E/S	- EDGE OF SLOPE	T/S	- TOP OF SLOPE
EXIST.	- EXISTING	TYP.	- TYPICAL
		U.N.O.	- UNLESS NOTED OTHERWISE
		VAR.	- VARIES
		VPF	- VANDAL PROTECTION FENCE

NOTES:

1. REINFORCING STEEL SHOWN IN TRANSVERSE SECTION IS AT MIDSPAN OF SPAN 2. ACTUAL SPACING WILL VARY BETWEEN BEAMS ALONG CURVATURE OF CONSTRUCTION. SEE DECK PLAN ON SHEET 24/34 FOR ADDITIONAL DETAILS.

2. SEE COMMON STRUCTURE NOTES, SHEETS 145-151 OF 242 FOR AESTHETIC DETAILS/NOTES.

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DECK OVERHANG DIMENSIONS

FRAMING PLAN

ADD 2 STYLE "M"
ADD 1 STYLE "4"
ADD 3 STYLE "S"

DON'T FORGET TO
TIGHTEN ALL
REMAINING LOOSE
BOLTS.

DO NOT
USE SLOTTED
HOLES!

DO NOT
USE SLOTTED
HOLES IN PHASE 2
EITHER?

TABLE OF ANGLES	
A	110°-58'-44"
B	110°-27'-56"
C	110°-02'-57"

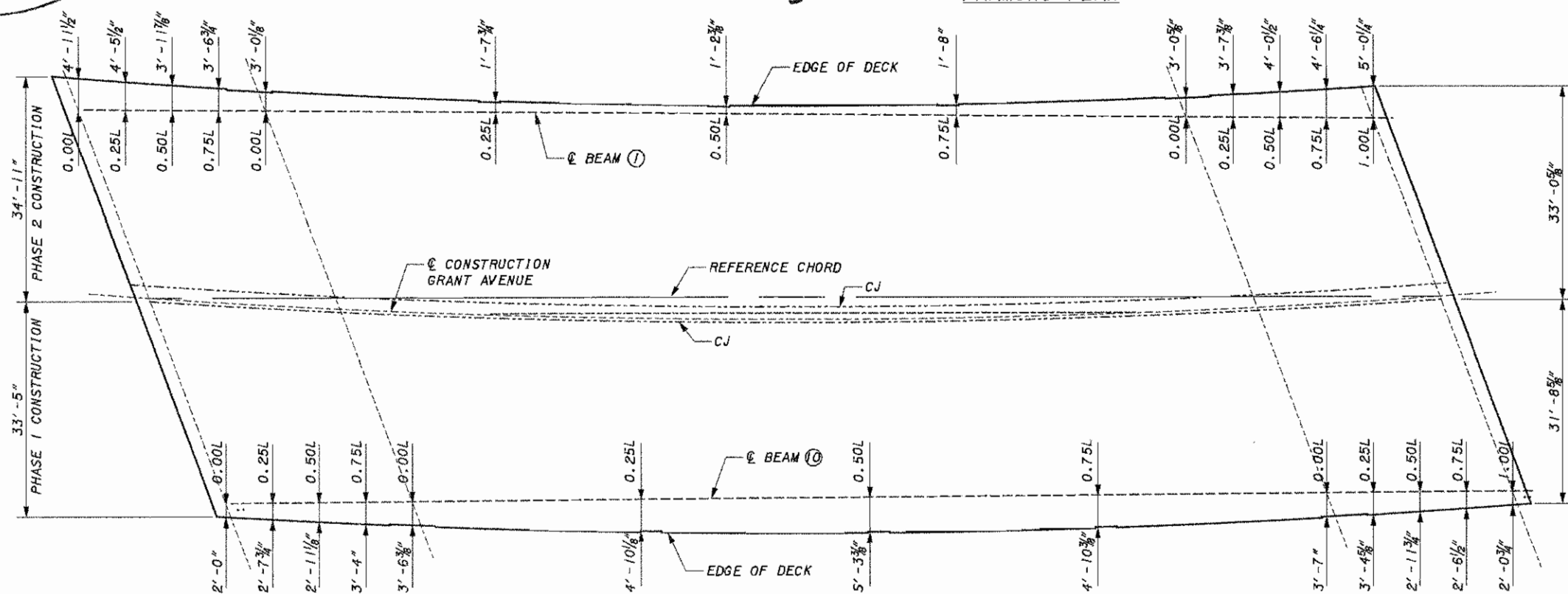
FIELD MEASURE LENGTHS.

STYLE M (TYPE.)

ADD
STYLE 4

STYLE S (TYPE.)

FRAMING PLAN



DECK OVERHANG DIMENSIONS

LEGEND:

- UTILITY CROSSFRAME, STYLE 1
- UTILITY CROSSFRAME, STYLE 2
- UTILITY CROSSFRAME, STYLE 3 (ANCHOR POINT)
- GAS LINE CROSSFRAME, STYLE 4
- EXPANSION JOINT SLEEVE

NOTES:

- ALL DIMENSIONS ARE GIVEN ALONG OR PERPENDICULAR TO REFERENCE CHORD.
- CROSSFRAMES BETWEEN BEAMS 5 & 6 ARE NOT TO BE PLACED UNTIL AFTER PHASE 3 DECK POUR HAS BEEN COMPLETED.
- FOR ADDITIONAL BEAM DETAILS, SEE SH. 21/34
- FOR LIST OF ABBREVIATIONS, SEE SH. 19/34
- FOR UTILITY CROSSFRAMES, SEE SH. 30/34

MM
3/21/05

SUPERSTRUCTURE DETAILS
BRIDGE NO. CUY-77-1143
GRANT AVENUE OVER I-77

CUY-77-11.43/ 12.68

20/34

171
242

DESIGN AGENCY
BARR ENGINEERING, INC.
108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

DATE
08/2003

REVIEWED
JEP

DESIGNED
KCS

CHECKED
ASB

REVISION
02/2004

STRUCTURE FILE NUMBER
1805378