

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**CUY-10-20.98**  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY

**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF THE RECONSTRUCTION AND WIDENING OF 0.15 MILES OF E. 105TH ST. FROM QUINCY AVE. TO JUST SOUTH OF NORMAN AVE. WORK INCLUDES PAVEMENT, DRAINAGE, WATERWORK, LIGHTING, POWER DISTRIBUTION, TRAFFIC CONTROL, LANDSCAPING, RECONSTRUCTION AND WIDENING OF THE EXISTING BRIDGE OVER GCRTA/NORFOLK SOUTHERN RAILWAYS AND ADJUSTMENT OF UTILITY APPURTENANCES. ALSO INCLUDED IS CONSTRUCTION OF 0.42 MILES OF THE OPPORTUNITY CORRIDOR ROADWAY ON NEW ALIGNMENT FROM E. 93RD ST. TO QUINCY AVE. WORK INCLUDES PAVEMENT, DRAINAGE, LIGHTING, TRAFFIC CONTROL AND LANDSCAPING. THIS PROJECT SHALL BE COMPLETED IN A DESIGN BUILD FORMAT.

THE PROPOSED  $\frac{1}{2}$  OF RIGHT OF WAY FOR THE STATE ROUTE 10 ROADWAY WAS USED AS REFERENCE FOR THE EXISTING AND PROPOSED RIGHT OF WAY LINES SHOWN HEREIN.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 27.00 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.00 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: 27.00 ACRES  
 (AREA SERVICED BY COMBINED SEWER)

**2013 SPECIFICATIONS**

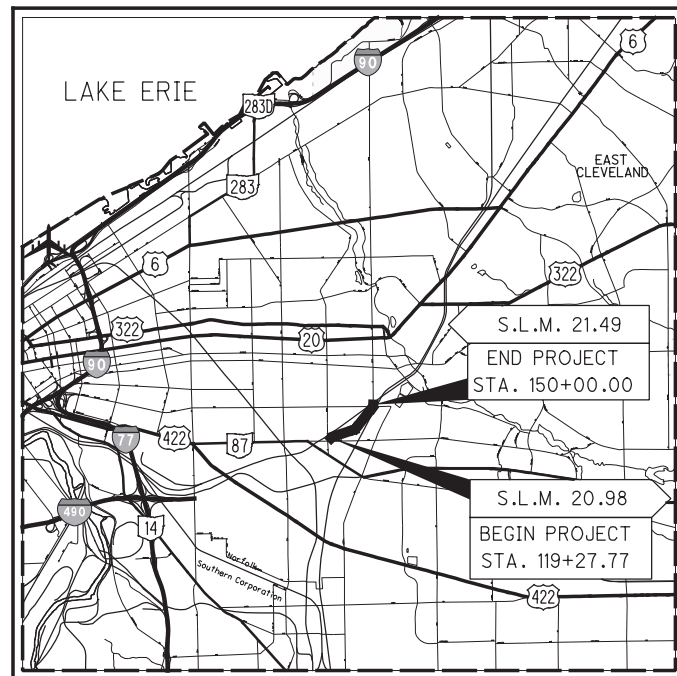
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 21 - 23.

**PLAN CERTIFIED BY:**

NAME \_\_\_\_\_  
 DATE \_\_\_\_\_ OHIO DEPARTMENT OF TRANSPORTATION,  
 DISTRICT 12 DIRECTOR

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF  
 TRANSPORTATION



**LOCATION MAP**

LATITUDE: 41°29'31" LONGITUDE: 81°37'01"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

FOR DESIGN DESIGNATIONS SEE SHEET 2.

**UNDERGROUND UTILITIES**  
 CONTACT BOTH SERVICES  
 CALL TWO WORKING DAYS  
**BEFORE YOU DIG**

CALL  
**1-800-362-2764**  
 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
 NON-MEMBERS  
 MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND  
 PROTECTION SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:

**GPD GROUP**  
 Glaus, Pyle, Schomer, Burns & DeHaven, Inc.  
 5595 Transportation Boulevard  
 Suite 100, Cleveland, Ohio 44125  
 216.518.5544 Fax 216.518.5545  
 Copyright: Glaus, Pyle, Schomer, Burns & DeHaven, Inc. 2016

ENGINEERS SEAL:

SIGNED: \_\_\_\_\_  
 DATE: 1/20/17

(INDEX OF SHEETS ON SHEET 2)

FOR CPP DUCT BANK & LIGHTING, SEE BUILDABLE UNIT 3  
 FOR BRIDGE OVER GCRTA & NS RAILROADS, SEE BUILDABLE UNIT 4

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
AS-1-15	7-17-2015	RM-1.1	7-18-2014	MT-95.31	7-18-2014	TC-21.20	1-16-2015	800	10-16-2015		
		RM-4.2	4-18-2014	MT-95.45	7-15-2016	TC-41.20	10-18-2013	821	4-20-2012		
BP-1.1	7-28-2000			MT-97.11	7-18-2014	TC-41.30	10-18-2013	832	1-17-2014		
BP-2.1	7-17-2015	CB-1.1	1-18-2013	MT-99.20	7-19-2013	TC-41.40	10-18-2013	861	1-16-2015		
BP-2.2	7-18-2008	CB-2.3	1-18-2013	MT-101.60	7-19-2013	TC-41.41	10-18-2013	921	4-20-2012		
BP-2.3	7-18-2014			MT-101.70	1-17-2014	TC-42.20	10-18-2013				
BP-5.1	7-19-2013			MT-101.90	7-17-2015	TC-52.10	10-18-2013				
BP-7.1	7-18-2014			MT-105.10	7-19-2013	TC-52.20	7-18-2014				
BR-2-15	7-17-2015			MT-110.10	7-19-2013	TC-71.10	1-17-2014				
EXJ-4-87	7-19-2002			MT-120.00	7-19-2013	TC-81.21	7-17-2015				
						TC-82.10	7-17-2015				
GSD-1-96	7-19-2002			HL-30.11	1-16-2015	TC-83.10	1-17-2014				
				HL-30.22	1-17-2014	TC-83.20	7-17-2015				
F-1.1	7-19-2013					TC-85.10	10-18-2013				
F-3.3	7-19-2013					TC-85.20	1-16-2015				
F-3.4	7-19-2013										

CONVENTIONAL SYMBOLS

COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CORPORATION LINE	
FENCE LINE (EXISTING)	
FENCE LINE (PROPOSED)	
CENTER LINE	
RIGHT OF WAY (EXISTING)	
RIGHT OF WAY (PROPOSED)	
STANDARD HIGHWAY EASEMENT (EXISTING)	
TEMPORARY RIGHT OF WAY	
CHANNEL EASEMENT (PROPOSED)	
UTILITY EASEMENT (EXISTING)	
RAILROAD	
GUARDRAIL (EXISTING)	
GUARDRAIL (PROPOSED)	
CONSTRUCTION LIMITS	
EDGE OF PAVEMENT (EXISTING)	
EDGE OF PAVEMENT (PROPOSED)	
EDGE OF SHOULDER (EXISTING)	
EDGE OF SHOULDER (PROPOSED)	
DITCH / CREEK (EXISTING)	
DITCH / CREEK (PROPOSED)	
TREE LINE (EXISTING)	

ABBREVIATIONS USED WITHIN THESE PLANS

TBR = TO BE REMOVED  
 TBRL = TO BE RELOCATED  
 TBA = TO BE ABANDONED  
 APP = AS PER PLAN  
 ATG = ADJUST TO GRADE  
 RTG = RECONSTRUCT TO GRADE  
 DND = DO NOT DISTURB

OWNERSHIP HOOK SYMBOL	
PROPERTY LINE SYMBOL	
BREAK LINE SYMBOL	
TREE (EXISTING)	
TREE (PROPOSED)	
SHRUB (EXISTING)	
TREE (REMOVAL)	
SHRUB (REMOVAL)	
EVERGREEN (EXISTING)	
STUMP	
EVERGREEN (REMOVAL)	
STUMP (REMOVAL)	
WETLAND (PROPOSED)	
GRASS (PROPOSED)	
AERIAL TARGET	
POST (EXISTING)	
MAILBOX (EXISTING)	
MAILBOX (PROPOSED)	
LIGHT (EXISTING)	
TELEPHONE MARKER (EXISTING)	
FIRE HYDRANT (EXISTING)	
WATER METER (EXISTING)	
WATER VALVE (EXISTING)	
UTILITY VALVE UNKNOWN (EXISTING)	
TELEPHONE POLE (EXISTING)	
POWER POLE (EXISTING)	
LIGHT POLE (EXISTING)	

BALLOON LEGEND

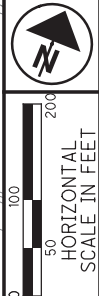
	ABANDON
	CATCH BASINS, MANHOLES AND INLETS
	CATCH BASINS, MANHOLES, INLETS REMOVED
	CATCH BASINS, MANHOLES AND INLETS ADJUSTED/RECONSTRUCTED TO GRADE
	PIPES REMOVED
	DRAINAGE PIPES
	SANITARY MANHOLE
	SANITARY PIPE
	UNDERDRAINS
	WATER WORK
	WATER WORK ADJUSTED TO GRADE

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JANUARY 20, 2017**



SCHEMATIC PLAN  
BEGIN TO END

CUY-10-20.98

3  
209

**DESIGN DESIGNATION - EAST 93RD. STREET**

CURRENT ADT (2010)	3440
DESIGN YEAR ADT (2020)	7110
DESIGN HOURLY VOLUME (2020)	
DIRECTIONAL DISTRIBUTION	
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED - E. 93RD ST. TO QUINCY AVE.	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN LOCAL
NHS PROJECT	NO

**DESIGN EXCEPTIONS**  
NONE REQUIRED

**DESIGN DESIGNATION - QUEBEC AVENUE**

CURRENT ADT (2010)	
DESIGN YEAR ADT (2020)	
DESIGN HOURLY VOLUME (2020)	
DIRECTIONAL DISTRIBUTION	
TRUCKS (24 HOUR B&C)	-%
DESIGN SPEED - E. 93RD ST. TO QUINCY AVE.	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN LOCAL
NHS PROJECT	NO

**DESIGN EXCEPTIONS**  
NONE REQUIRED

**CURVE 4**  
P.I. STA. 200+48.80  
Δ = 30°46'47"  
Dc = 28°56'14"  
T = 54.50'  
L = 106.37'  
R = 198.00'  
E = 7.36'  
P.R.C. STA. 199+94.30  
P.T. STA. 201+00.67

**CURVE 3**  
P.I. STA. 199+29.18  
Δ = 39°18'12"  
Dc = 28°56'14"  
T = 70.71'  
L = 135.82'  
R = 198.00'  
E = 12.25'  
P.C. STA. 198+58.48  
P.R.C. STA. 199+94.30

**CURVE 2**  
P.I. STA. 143+26.68  
Δ = 40°26'41"  
Dc = 3°30'00"  
T = 603.03'  
L = 1155.55'  
R = 1637.00'  
E = 107.54'  
P.C. STA. 137+23.65  
P.T. STA. 148+79.20

**CURVE 1**  
P.I. STA. 127+67.93  
Δ = 35°36'23"  
Dc = 3°00'00"  
T = 613.31'  
L = 1186.88'  
R = 1909.86'  
E = 96.06'  
P.C. STA. 121+54.63  
P.T. STA. 133+41.51

**DESIGN DESIGNATION - OC BOULEVARD/E. 105TH ST.**

CURRENT ADT (2010)	0
DESIGN YEAR ADT (2020)	29090
DESIGN HOURLY VOLUME (2020)	
DIRECTIONAL DISTRIBUTION	
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED - E. 93RD ST. TO QUINCY AVE.	40 MPH
QUINCY AVE. TO NORTH PROJECT LIMIT	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN PRINCIPAL ARTERIAL
NHS PROJECT	NO

**DESIGN EXCEPTIONS**  
NONE REQUIRED

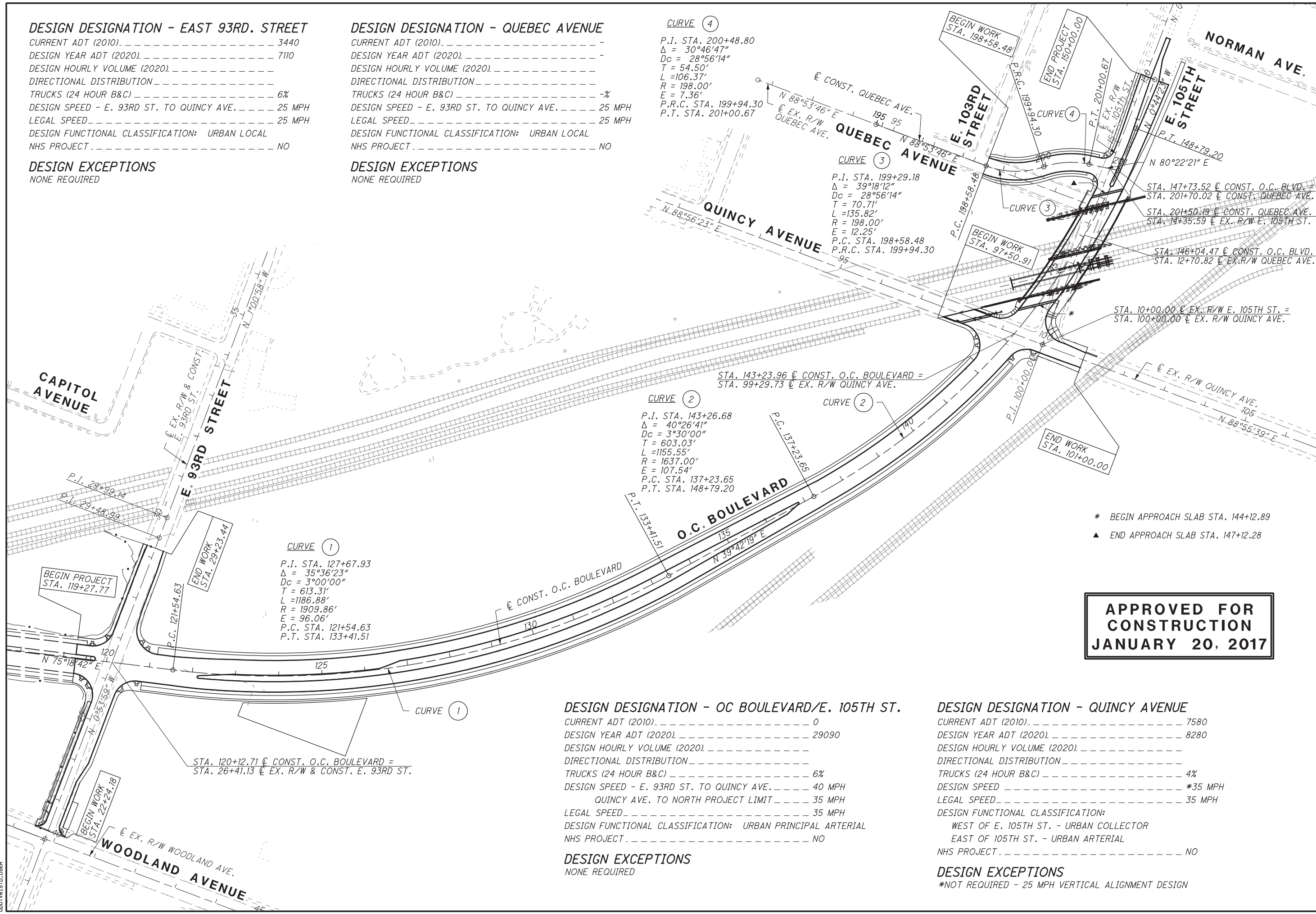
**DESIGN DESIGNATION - QUINCY AVENUE**

CURRENT ADT (2010)	7580
DESIGN YEAR ADT (2020)	8280
DESIGN HOURLY VOLUME (2020)	
DIRECTIONAL DISTRIBUTION	
TRUCKS (24 HOUR B&C)	4%
DESIGN SPEED	*35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
WEST OF E. 105TH ST. - URBAN COLLECTOR	
EAST OF 105TH ST. - URBAN ARTERIAL	
NHS PROJECT	NO

**DESIGN EXCEPTIONS**  
\*NOT REQUIRED - 25 MPH VERTICAL ALIGNMENT DESIGN

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\* BEGIN APPROACH SLAB STA. 144+12.89  
▲ END APPROACH SLAB STA. 147+12.28



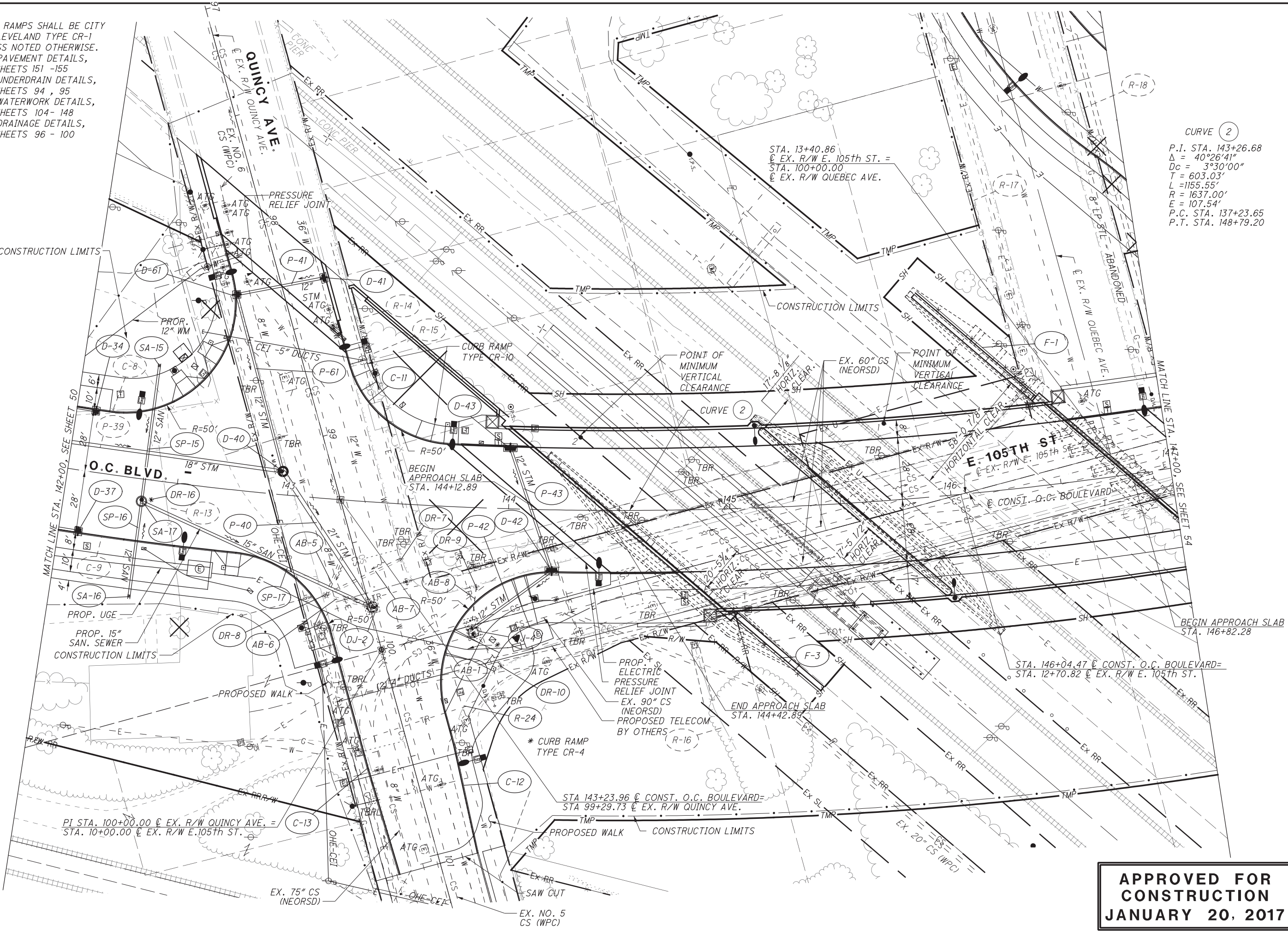
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**NOTES:**

1. CURB RAMP SHALL BE CITY OF CLEVELAND TYPE CR-1 UNLESS NOTED OTHERWISE.
2. FOR PAVEMENT DETAILS, SEE SHEETS 151 -155
3. FOR UNDERDRAIN DETAILS, SEE SHEETS 94 , 95
4. FOR WATERWORK DETAILS, SEE SHEETS 104- 148
5. FOR DRAINAGE DETAILS, SEE SHEETS 96 - 100



**CURVE 2**  
 P.I. STA. 143+26.68  
 $\Delta = 40^{\circ}26'41''$   
 $D_c = 3^{\circ}30'00''$   
 $T = 603.03'$   
 $L = 1155.55'$   
 $R = 1637.00'$   
 $E = 107.54'$   
 P.C. STA. 137+23.65  
 P.T. STA. 148+79.20



**PLAN - O.C. BLVD.**  
**STA. 142+00 TO STA. 147+00**

**CUY-10-20.98**

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**JANUARY 20, 2017**

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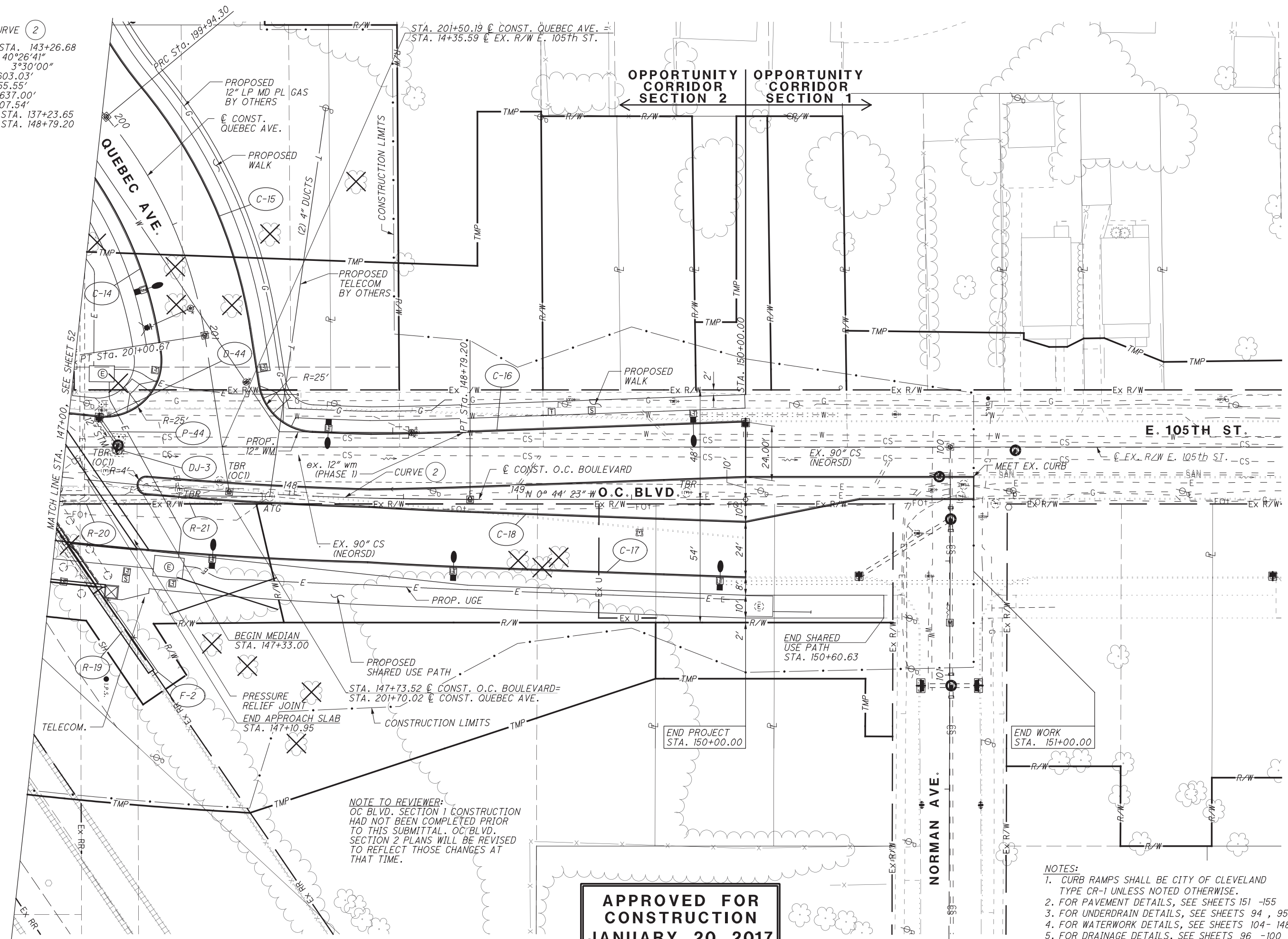
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 CLH 10  
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PLAN - O.C. BLVD.  
 STA. 147+00 TO END PROJECT

CUY-10-20.98

54  
 209

CURVE ②  
 P.I. STA. 143+26.68  
 $\Delta = 40^{\circ}26'41''$   
 $D_c = 3^{\circ}30'00''$   
 $T = 603.03'$   
 $L = 1155.55'$   
 $R = 1637.00'$   
 $E = 107.54'$   
 P.C. STA. 137+23.65  
 P.T. STA. 148+79.20



NOTE TO REVIEWER:  
 O.C. BLVD. SECTION 1 CONSTRUCTION  
 HAD NOT BEEN COMPLETED PRIOR  
 TO THIS SUBMITTAL. O.C. BLVD.  
 SECTION 2 PLANS WILL BE REVISED  
 TO REFLECT THOSE CHANGES AT  
 THAT TIME.

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 CONSTRUCTION  
 JANUARY 20, 2017**

- NOTES:
1. CURB RAMPS SHALL BE CITY OF CLEVELAND TYPE CR-1 UNLESS NOTED OTHERWISE.
  2. FOR PAVEMENT DETAILS, SEE SHEETS 151 -155
  3. FOR UNDERDRAIN DETAILS, SEE SHEETS 94 , 95
  4. FOR WATERWORK DETAILS, SEE SHEETS 104- 148
  5. FOR DRAINAGE DETAILS, SEE SHEETS 96 -100

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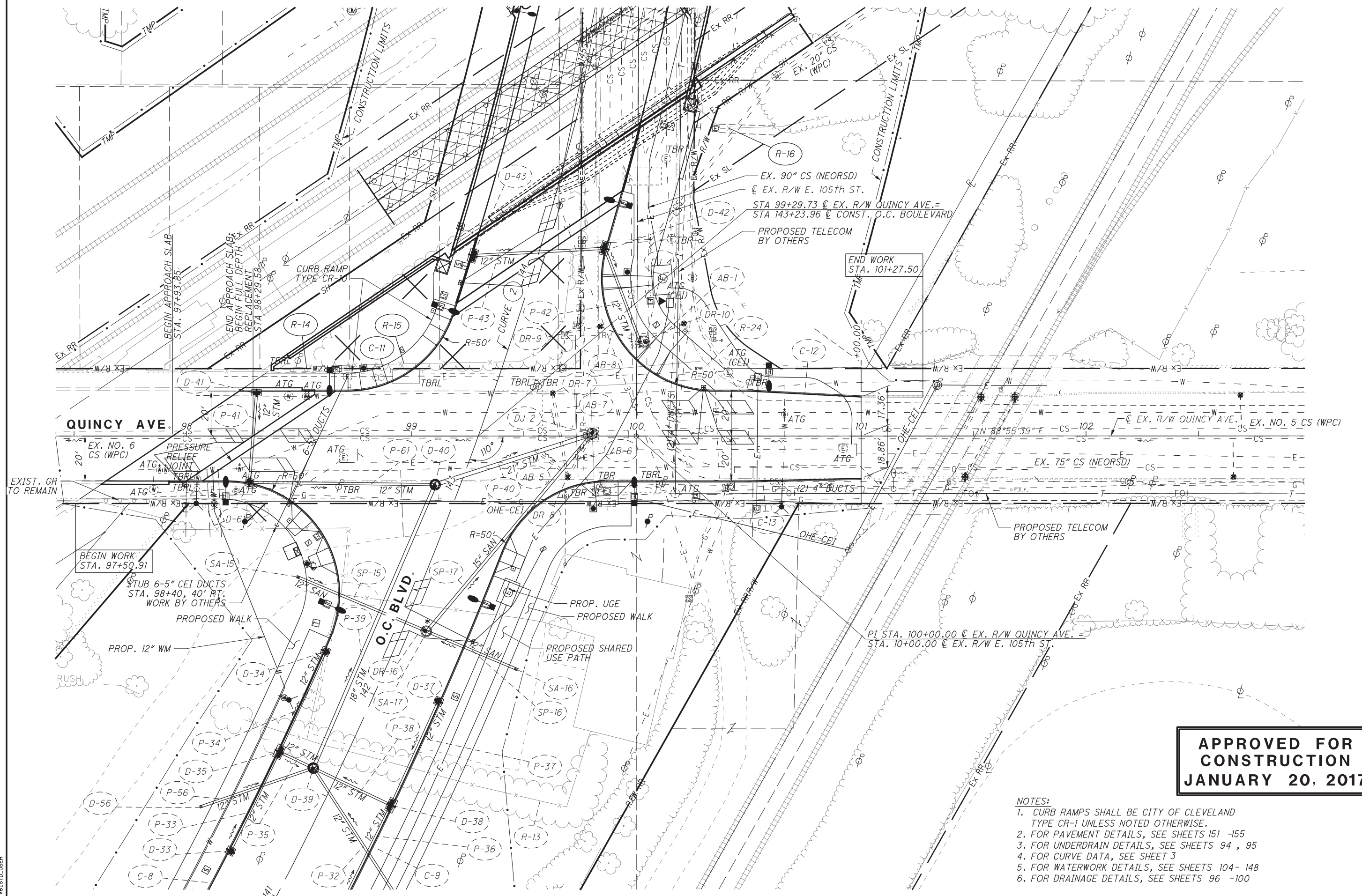
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0 10 20 40  
HORIZONTAL  
SCALE IN FEET

PLAN - QUINCY AVE.  
STA. 97+50 TO END

CUY-10-20.98

60  
209



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JANUARY 20, 2017**

- NOTES:
1. CURB RAMP SHALL BE CITY OF CLEVELAND TYPE CR-1 UNLESS NOTED OTHERWISE.
  2. FOR PAVEMENT DETAILS, SEE SHEETS 151 -155
  3. FOR UNDERDRAIN DETAILS, SEE SHEETS 94 , 95
  4. FOR CURVE DATA, SEE SHEET 3
  5. FOR WATERWORK DETAILS, SEE SHEETS 104- 148
  6. FOR DRAINAGE DETAILS, SEE SHEETS 96 -100

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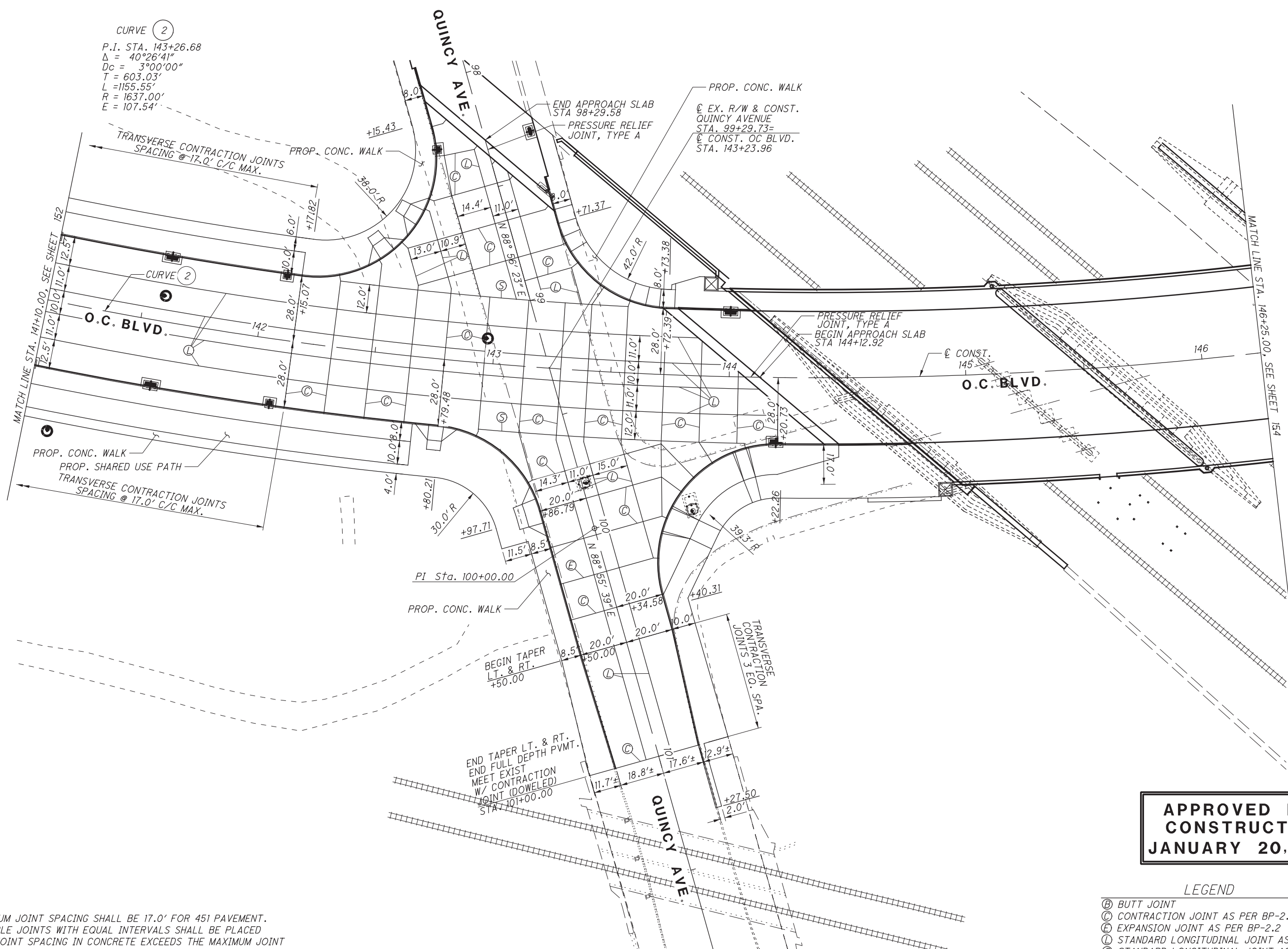
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PAVEMENT DETAILS - O.C. BLVD.  
STA. 141+10.00 TO STA. 146+25.00

CUY-10-20.98

153  
209

CURVE ②  
P.I. STA. 143+26.68  
Δ = 40°26'41"  
Dc = 3°00'00"  
T = 603.03'  
L = 1155.55'  
R = 1637.00'  
E = 107.54'



TRANSVERSE CONTRACTION JOINTS  
SPACING @ 17.0' C/C MAX.

PROP. CONC. WALK  
PROP. SHARED USE PATH  
TRANSVERSE CONTRACTION JOINTS  
SPACING @ 17.0' C/C MAX.

END APPROACH SLAB  
STA 98+29.58  
PRESSURE RELIEF  
JOINT, TYPE A

PROP. CONC. WALK  
EX. R/W & CONST.  
QUINCY AVENUE  
STA. 99+29.73=  
CONST. OC BLVD.  
STA. 143+23.96

PRESSURE RELIEF  
JOINT, TYPE A  
BEGIN APPROACH SLAB  
STA 144+12.92

CONST.  
145  
O.C. BLVD.

PI Sta. 100+00.00

BEGIN TAPER  
LT. & RT.  
+50.00

END TAPER LT. & RT.  
END FULL DEPTH PVMT.  
MEET EXIST  
W/ CONTRACTION  
JOINT (DOWELED)  
STA 101+00.00

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JANUARY 20, 2017

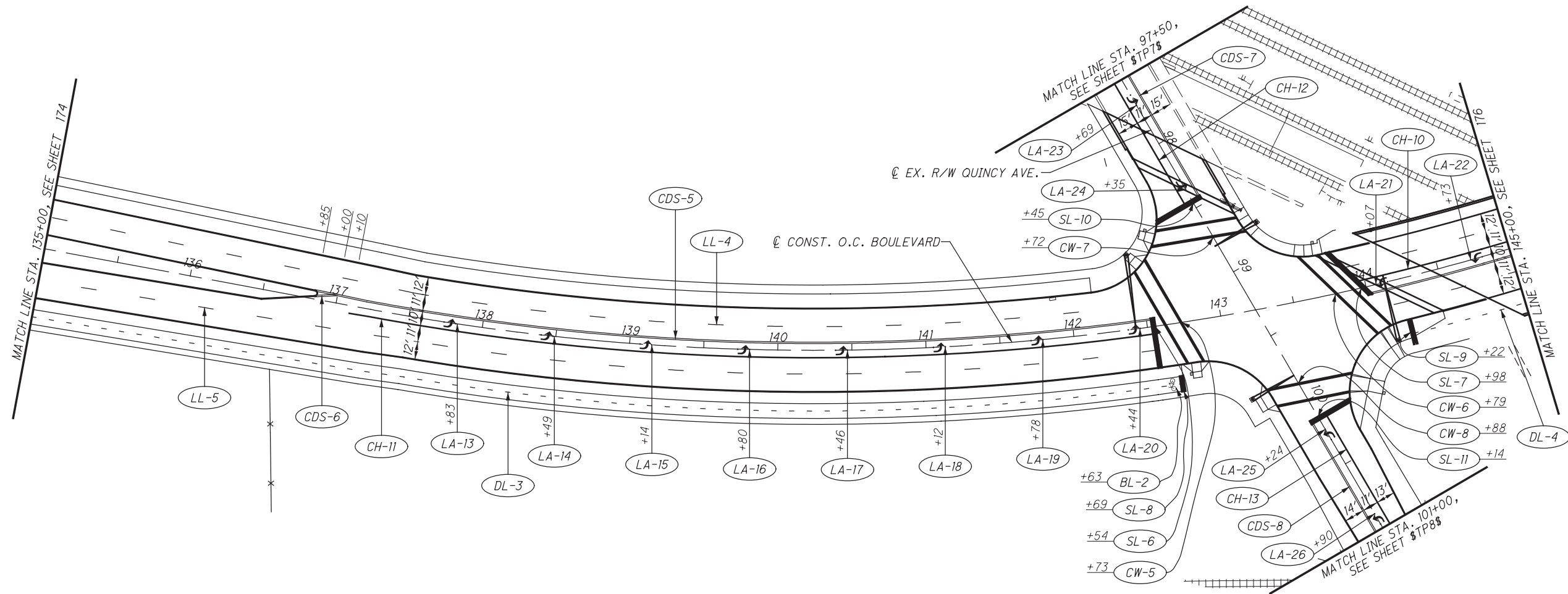
LEGEND

- ⊕ BUTT JOINT
- ⊙ CONTRACTION JOINT AS PER BP-2.2
- ⊕ EXPANSION JOINT AS PER BP-2.2
- ⊙ STANDARD LONGITUDINAL JOINT AS PER BP-2.1
- ⊙ STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS

- NOTES:
1. MAXIMUM JOINT SPACING SHALL BE 17.0' FOR 451 PAVEMENT.
  2. MULTIPLE JOINTS WITH EQUAL INTERVALS SHALL BE PLACED WHEN JOINT SPACING IN CONCRETE EXCEEDS THE MAXIMUM JOINT SPACING.

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**NOTES:**

- 1. FOR SIGNING PLANS, SEE SHEETS 181 TO 184
- 2. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 173

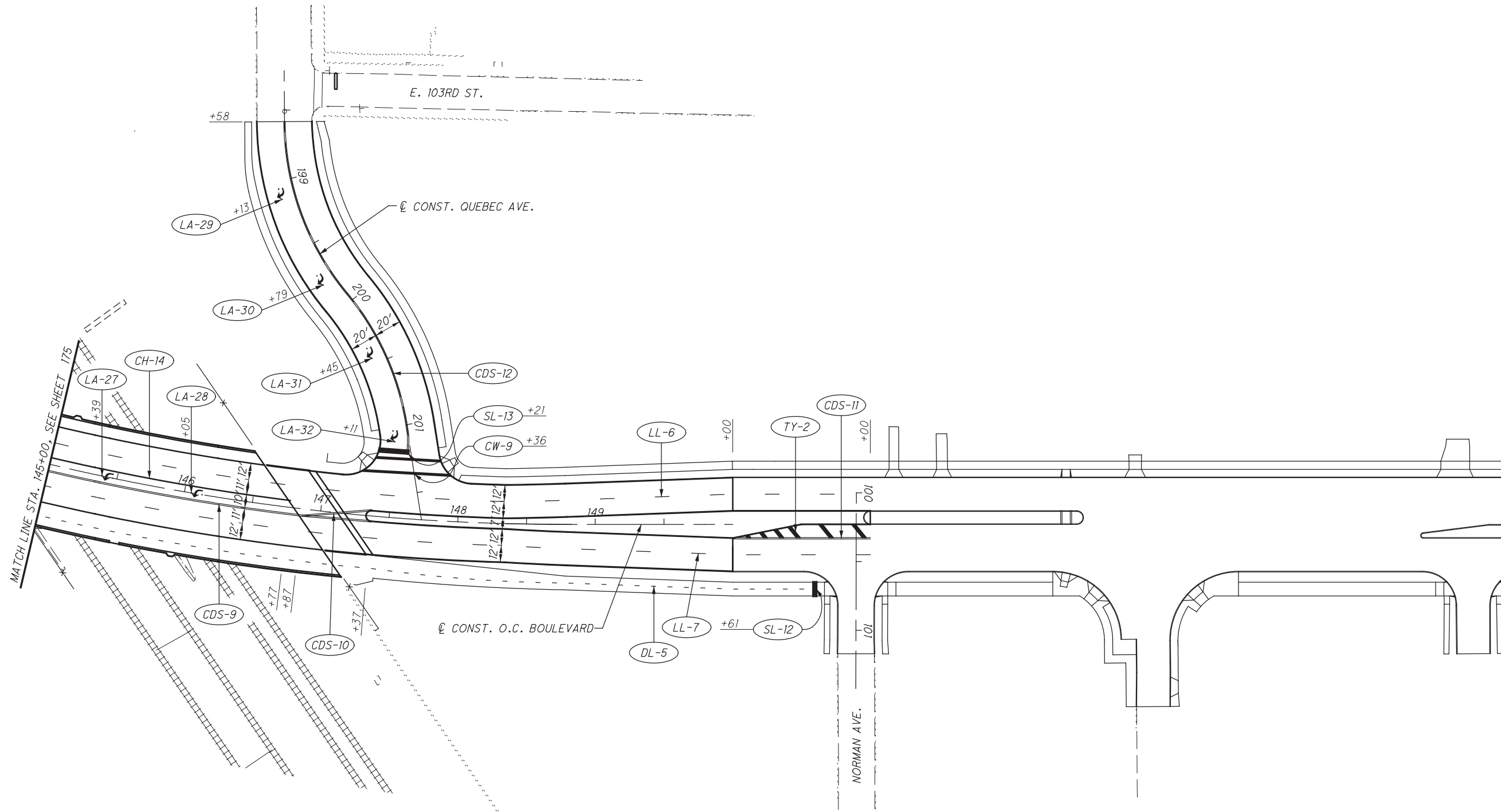
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JANUARY 20, 2017**

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**PAVEMENT MARKING PLAN  
O.C. BLVD. - STA. 135+00 TO STA. 145+00**



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**NOTES:**

1. FOR SIGNING PLANS, SEE SHEETS 181 TO 184
2. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 173

**APPROVED FOR  
 CONSTRUCTION  
 JANUARY 20, 2017**

N

0 20 40 80  
 HORIZONTAL  
 SCALE IN FEET

CALCULATED	MM	CHECKED	RJW
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**PAVEMENT MARKING PLAN  
 O.C. BLVD. - STA. 145+00 TO END**

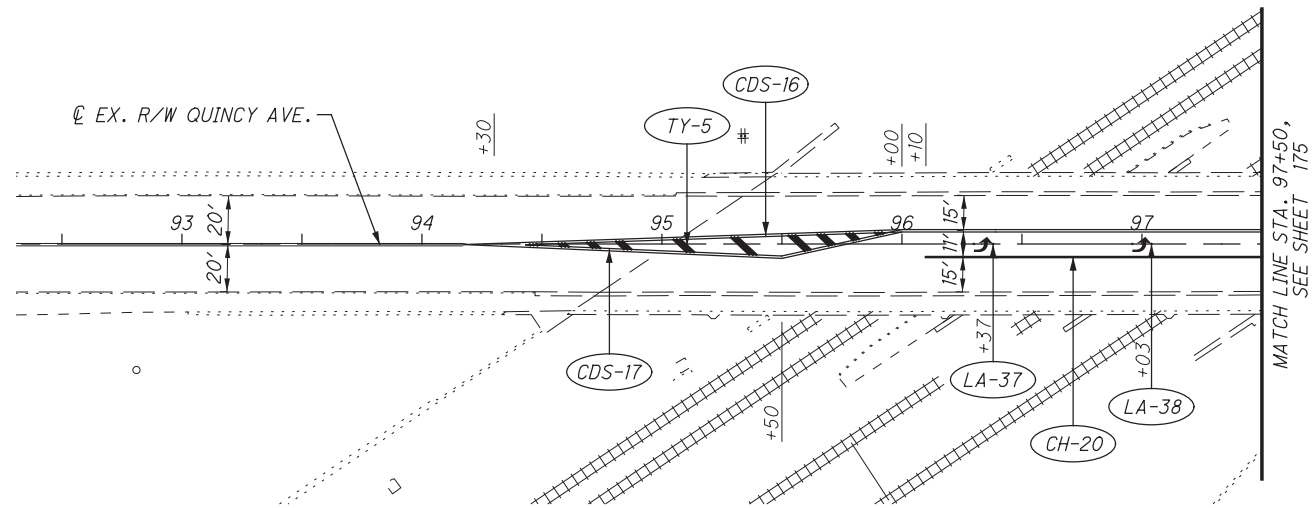
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176  
 209

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**NOTES:**

1. FOR SIGNING PLANS, SEE SHEETS 181 TO 184
2. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 173



**APPROVED FOR  
 CONSTRUCTION  
 JANUARY 20, 2017**

CALCULATED	MM
CHECKED	RJW

0 40 80  
 HORIZONTAL  
 SCALE IN FEET

**PAVEMENT MARKING PLAN  
 QUINCY AVE. - BEGIN TO STA. 97+50**

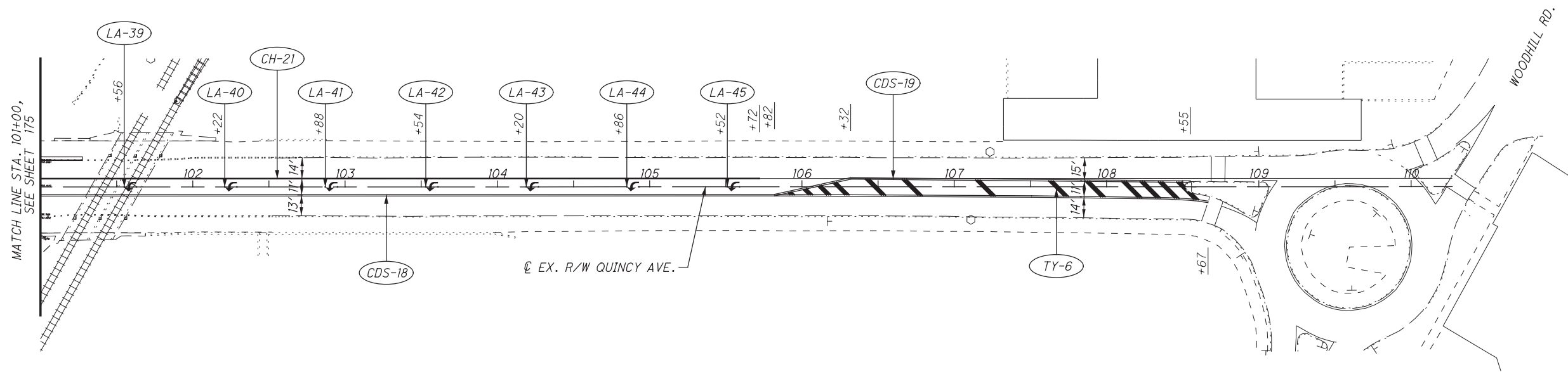
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 209

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**NOTES:**

- 1. FOR SIGNING PLANS, SEE SHEETS 181 TO 184
- 2. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 173



**APPROVED FOR  
CONSTRUCTION  
JANUARY 20, 2017**

**PAVEMENT MARKING PLAN  
QUINCY AVE. - STA. 101+00 TO END**

**CUY-10-20.98**

180  
209

CALCULATED  
MM  
CHECKED  
RJW



(1)-3" CONDUIT WITH (1)-9C, (2)-7C AND (4)-2C LEAD-IN  
(1)-3" CONDUIT (FOR POWER SERVICE)  
IN TRENCH = 114'

PS-1, WITH (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P8B'  
STA. 143+70.7, 36.9' LT.

(1)-2" CONDUIT WITH (1)-7C  
IN TRENCH = 23'

(1)-2" CONDUIT WITH (2)-2C LEAD-IN  
IN TRENCH = 41'

PB-1

(1)-3" CONDUIT WITH (1)-9C AND (1)-7C  
IN TRENCH = 19'

SP-1, TYPE TC-81.21, DESIGN 2 WITH A  
32' MAST ARM, (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P6A'  
STA. 143+35.6, 58.1' LT.

(1)-3" CONDUIT WITH (2)-9C, (4)-7C AND (6)-2C LEAD-IN  
(1)-3" CONDUIT (FOR POWER SERVICE)  
IN TRENCH = 96'

(1)-2" CONDUIT WITH (2)-2C LEAD-IN  
IN TRENCH = 48'

PB-6  
PB-5

(1)-2" CONDUIT WITH (4)-2C LEAD-IN  
IN TRENCH = 20'

PS-2, WITH (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P6B'  
STA. 142+57.5, 65.0' LT.

(1)-2" CONDUIT WITH (1)-7C  
IN TRENCH = 13'

PB-2

(2)-3" CONDUITS WITH (4)-9C, (10)-7C,  
(13)-2C LEAD-IN AND (1)-CAT 5E  
(1)-2" CONDUIT (FOR POWER SERVICE)  
IN TRENCH = 7'

PROPOSED GROUND MOUNTED CONTROLLER WITH WORK PAD  
STA. 142+45.7, 56.6' LT.

(1)-3" CONDUIT WITH (1)-9C, (1)-7C  
(1)-2C LEAD-IN AND (1)-CAT 5E  
IN TRENCH = 10'

SP-2, TYPE TC-81.21, DESIGN 12 WITH A  
48' MAST ARM, (1)-PTZ SURVEILLANCE CAMERA  
(1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P4A'  
STA. 142+42.2, 50.4' LT.

(1)-3" CONDUIT (EMPTY) FOR FUTURE INTERCONNECT  
IN TRENCH = 33'

SP-3, TYPE TC-81.21, DESIGN 11 WITH A  
45' MAST ARM, (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P8A'  
STA. 144+12.9, 40.3' RT.

(1)-3" CONDUIT WITH (1)-9C AND (1)-7C  
IN TRENCH = 27'

PROPOSED CPP TRANSFORMER PAD  
STA. 144+06.6, 24.9' RT.

(2)-2" PVC CONDUITS FOR POWER SERVICE  
IN TRENCH = 9'

PB-3

(1)-2" CONDUIT WITH (1)-7C  
IN TRENCH = 14'

PS-3, WITH (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P2B'  
STA. 143+95.6, 72.4' RT.

(1)-2" CONDUIT WITH (4)-2C LEAD-IN  
IN TRENCH = 35'

PB-8

SP-4, TYPE TC-81.21, DESIGN 2 WITH A  
32' MAST ARM, (1)-SUPPLEMENTAL SIGNAL HEAD,  
(1)-PEDESTRIAN SIGNAL HEAD AND  
(1)-PEDESTRIAN PUSHBUTTON 'P2A'  
STA. 143+11.4, 59.1' RT.

(1)-3" CONDUIT WITH (1)-9C AND (3)-7C  
IN TRENCH = 29'

PB-4

(1)-2" CONDUIT WITH (1)-7C  
IN TRENCH = 16'

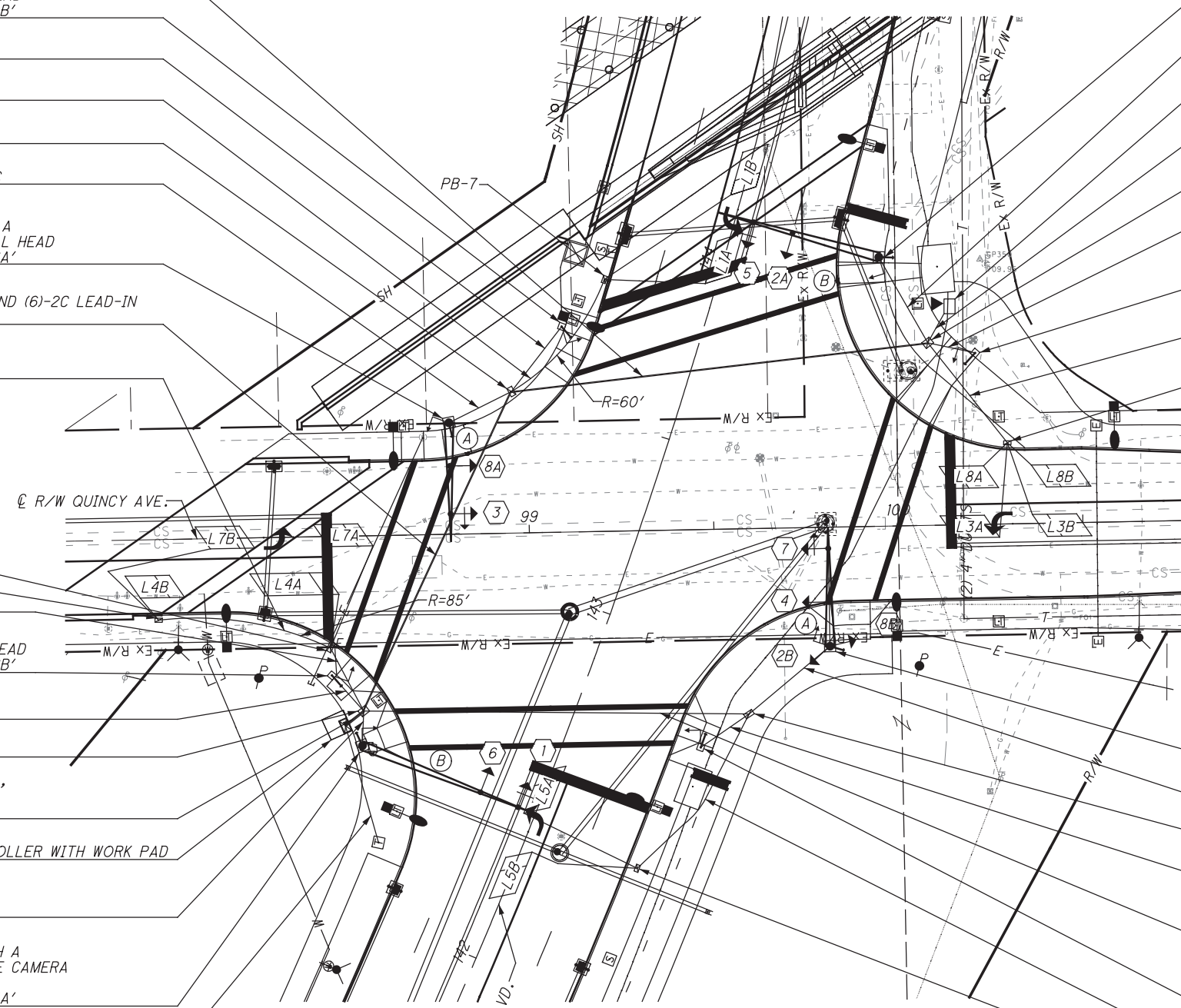
(1)-3" CONDUIT WITH (1)-9C, (4)-7C AND  
(2)-2C LEAD-IN  
IN TRENCH = 105'

PS-4, WITH (1)-PEDESTRIAN SIGNAL HEAD  
AND (1)-PEDESTRIAN PUSHBUTTON 'P4B'  
STA. 142+74.8, 35.4' RT.

(1)-2" CONDUIT WITH (2)-2C LEAD-IN  
IN TRENCH = 53'

PB-9

**APPROVED FOR  
CONSTRUCTION  
JANUARY 20, 2017**



**SIGNAL TYPES**

PEDESTRIAN HEADS  
(LED, COUNTDOWN,  
TYPE D2)

- ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
- ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR AND HAVE BACKPLATES.
- ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

**PULL BOX TABLE**

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	143+49.3	LT.	44.7'	30x17
PB-2	142+51.4	LT.	53.4'	36x24
PB-3	143+94.7	RT.	59.4'	30x17
PB-4	142+87.5	RT.	44.6'	30x17
PB-5	142+54.1	LT.	114.3'	13x24
PB-6	142+64.5	LT.	68.0'	13x24
PB-7	143+86.6	LT.	29.6'	13x24
PB-8	143+75.8	RT.	87.7'	13x24
PB-9	142+38.7	RT.	31.1'	13x24

**PEDESTRIAN SIGNS**

R10-4b

4-LEFT ARROW (SP-1, SP-2, SP-3, SP-4)  
4-RIGHT ARROW (PS-1, PS-2, PS-3, PS-4)

- NOTES:**
- THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ON COMING VEHICLES; CLEAR OF ANY OBSTRUCTIONS ONCE MOUNTED TO THE MAST ARMS.
  - THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.
  - FOR SIGNS (A) AND (B) SEE SHEET 183.

**LEGEND**

- TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
- TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"
- SIGNAL SUPPORT POLE
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSH BUTTON
- PEDESTAL SUPPORT
- CONTROLLER CABINET AND WORK PAD
- TRAFFIC PULL BOX
- DETECTOR LOOP
- SURVEILLANCE CAMERA