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SYMBOL LEGEND:

— PROP. STORM SEWER	PR. MONUMENT BOX	EX. GAS SERVICE STOP
-E- EX. ELECTRIC	ATG MONUMENT BOX	EX. GAS VALVE
-G- EX. GAS LINE	EX. COMBINED SEWER MANHOLE	EX. TRAFFIC SIGN
-T- EX. TELEPHONE	EX. STORM SEWER MANHOLE	EX. TELEPHONE POLE
-W- EX. WATER LINE	ATG MANHOLE	EX. ELECTRIC POLE
--- EX. STORM	EX. CITY CB-1	EX. TELEPHONE MANHOLE
-CS- EX. COMBINED SEWER	ATG CITY CB-1	EX. ELECTRIC PULL BOX
-Ex R/W- EX. RIGHT OF WAY	PROP. CITY CB-1	EX. TRAFFIC PULL BOX
-x- EX. FENCE	EX. OLD STYLE CB-1	EX. POST/BOLLARD
--- EX. WALL	EX. OLD STYLE CB-2 WITH GRATE	EX. UTILITY POLE
EX. STREETCAR TRACKS	PROP. CITY CB-2	EX. LIGHT POLE
-W- PR. WATER LINE	EX. OLD STYLE CB-2 WITHOUT GRATE	EX. TREE
■ EX. MONUMENT BOX	EX. ELECTRIC MANHOLE	EX. SHRUB
	ATG ELECTRIC MANHOLE	

DESIGN DESIGNATION:

CURRENT ADT (2018)	7,580
DESIGN YEAR ADT (2038)	7,580
DESIGN HOURLY VOLUME (2038)	760
DIRECTIONAL DISTRIBUTION	70%
TRUCKS (24 HOUR B&C)	3.8%
DESIGN SPEED	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL
NHS PROJECT	NO

DESIGN EXCEPTIONS:
NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig



OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

ENGINEERS SEAL:	ENGINEERS SEAL:
SIGNED:	SIGNED:
DATE:	DATE:
SHEETS:	SHEETS:
2-7, 23-47, 129-170	1, 8-22, 48-128, 171-243



PLANS PREPARED BY
1382 West Ninth Street
Suite 400
Cleveland, OH 44113
216-344-3072

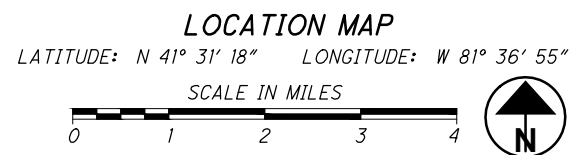
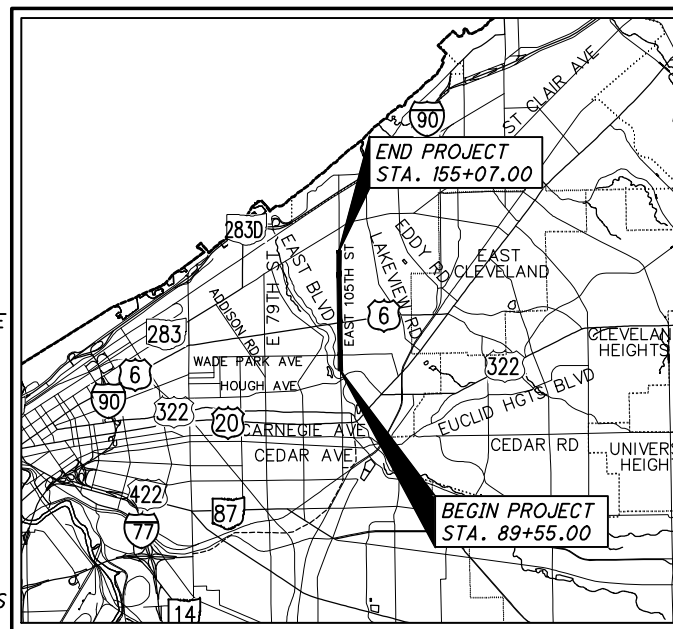
CITY OF CLEVELAND

MAYOR'S OFFICE OF CAPITAL PROJECTS

DIVISION OF ENGINEERING AND CONSTRUCTION

EAST 105TH STREET REHABILITATION

EAST BOULEVARD TO GREENLAWN AVENUE



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

ODOT STANDARD CONSTRUCTION DRAWINGS						CITY STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
BP-2.1	07/17/15	TC-82.10	01/18/19	MT-120.00	01/19/18	CONC-1	06/04/18	800	4/19/19
BP-2.2	07/18/08	TC-83.20	07/21/17			PR-1	08/03/09	832	10/19/18
BP-3.1	07/18/14	TC-85.10	01/18/19			CR-1	12/08/09	902	12/31/12
BP-5.1	01/18/19	TC-85.20	07/20/18			CD-1	12/03/09		
						146-ME	07/08/08		
TC-21.20	07/20/18	MT-95.31	07/21/17			MH-1	07/08/08		
TC-41.20	10/18/13	MT-95.32	07/21/17			CB-1	07/08/08		
TC-41.30	10/18/13	MT-95.50	07/21/17			A-503	07/08/08		
TC-41.40	10/18/13	MT-97.10	07/18/14			A-605	07/08/08		
TC-41.50	10/18/13	MT-97.11	01/20/17			MB-1C	07/08/08		
TC-42.20	10/18/13	MT-99.20	07/20/18						
TC-52.10	10/18/13	MT-101.60	01/20/17						
TC-52.20	07/20/18	MT-101.90	07/21/17						
TC-71.10	01/19/18	MT-105.10	07/19/13						
TC-81.21	01/18/19	MT-110.10	07/19/13						

PROJECT DESCRIPTION:

RECONSTRUCTION AND REHABILITATION OF APPROXIMATELY 1.25 MILES OF EAST 105TH STREET BETWEEN EAST BOULEVARD AND GREENLAWN AVENUE. WORK INCLUDES THE REPAIR AND/OR REHABILITATION OF EXISTING ROADWAY PAVEMENT, CURB AND SIDEWALK REPAIR AS REQUIRED, NEW ADA CURB RAMPS, REPLACEMENT OF CATCH BASINS, AND A NEW T-INTERSECTION AT EAST BOULEVARD. A NEW WATER MAIN FROM EAST BOULEVARD TO NORTH BOULEVARD AND FROM AMOR AVENUE TO GREENLAWN AVENUE WILL BE CONSTRUCTED WITH NEW CONNECTIONS, VALVES AND HYDRANTS ALONG THE ENTIRE CORRIDOR. NEW SIGNING AND PAVEMENT MARKINGS WILL BE PROVIDED AND TRAFFIC SIGNALS WILL BE RECONSTRUCTED AT THE WADE PARK AVENUE, ASHBURY AVENUE, HAMPDEN AVENUE, AND KEMPTON AVENUE/GREENLAWN AVENUE INTERSECTIONS.

FRANK G. JACKSON
Mayor

KEVIN KELLEY
President of Council

KEVIN CONWELL
Councilmember of Ward 9

MATTHEW SPRONZ, PE, PMP
Director of Capital Projects

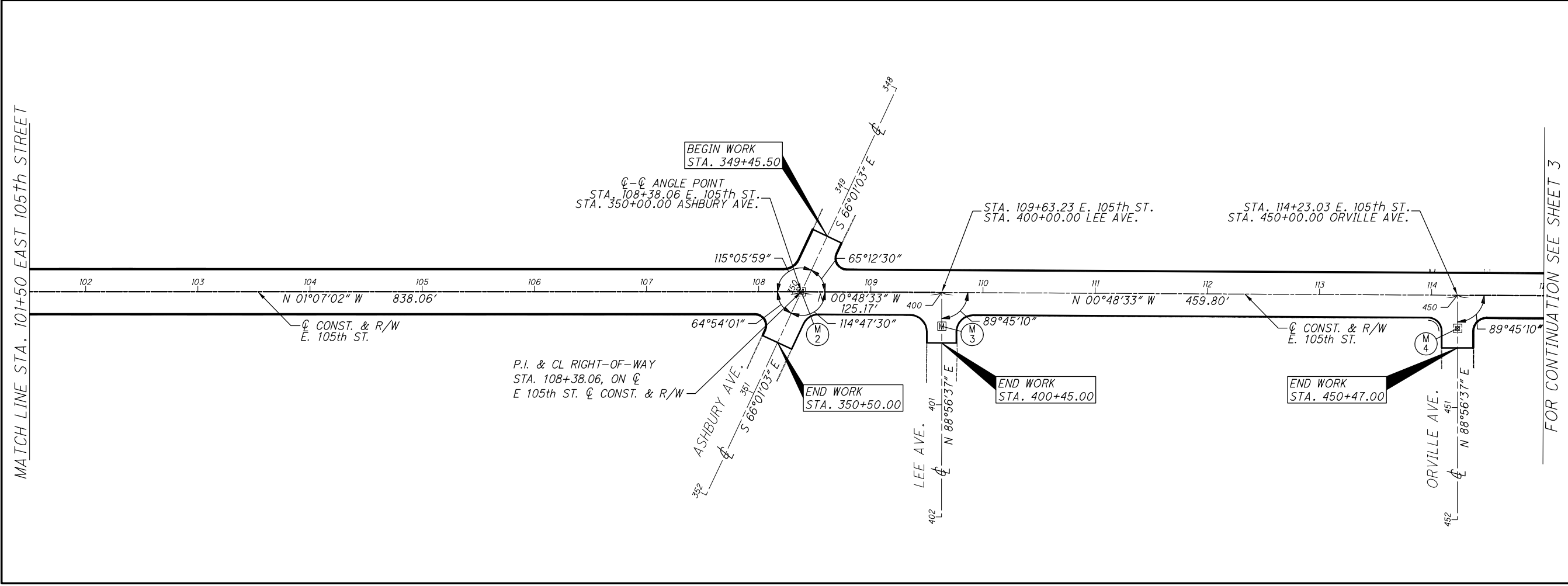
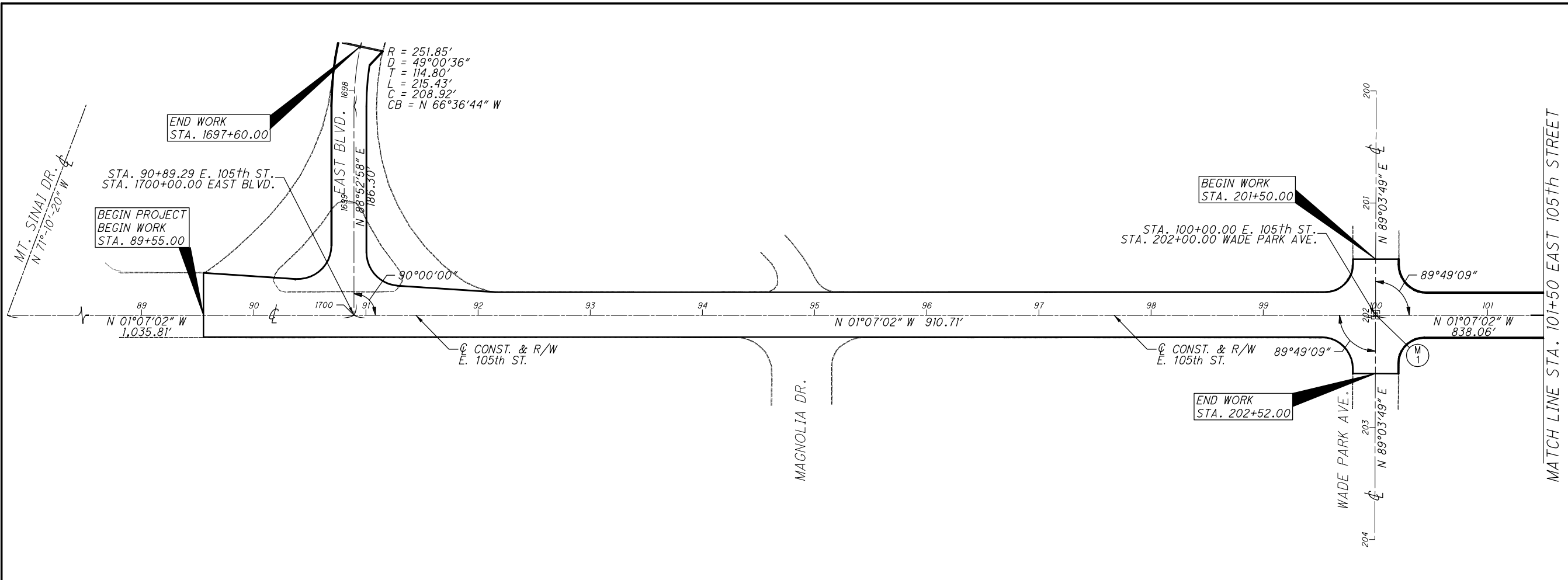
ROBERT L. DAVIS
Director of Public Utilities

STAGE II SUBMITTAL
5/8/2019
NOT FOR CONSTRUCTION

Approved	_____	RICHARD SWITALSKI, P.E., Administration Bureau Manager DIVISION OF ENGINEERING AND CONSTRUCTION	Date
Approved	_____	ALEX MARGEVICIUS, Commissioner DIVISION OF WATER	Date
Approved	_____	ROBERT MAVEC, Commissioner DIVISION OF TRAFFIC ENGINEERING	Date
Approved	_____	IVAN HENDERSON, Commissioner CLEVELAND PUBLIC POWER	Date
Approved	_____	RACHID ZOGHAIB, P.E., Commissioner DIVISION OF WATER POLLUTION CONTROL	Date
Approved	_____	GREG ESBER, P.S., Chief Surveyor DIVISION OF ENGINEERING AND CONSTRUCTION	Date
Approved	_____	THOMAS BOYER, P.E., Chief Engineer DIVISION OF ENGINEERING AND CONSTRUCTION	Date
Approved	_____	FRANK KEEHL, P.E., Project Manager DIVISION OF ENGINEERING AND CONSTRUCTION	Date

C:\pwworkingmp\pwworkingmp\427158568\30151919GT001.dwg 08-May-19 11:49 AM

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 PLOT DATE: 5/17/19



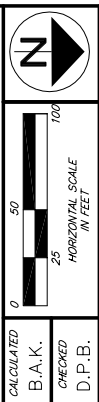
SYMBOL LEGEND

Exist. Monument Box	⊠
New Monument Box	⊞
Drill Hole in Stone Monument Found	⊙ D.H.F.
Iron Pin Found	⊙ I.P.F.
Iron Pin Set	⊙ I.P.S.
Iron Pipe Found	⊙ I.P.F.
Iron Pipe Set	⊙ I.P.S.
P.K. Nail Found	⊙ P.K.F.
P.K. Nail Set	⊙ P.K.S.
Government Control Point Found	⊙

ABBREVIATIONS

Centerline	C/L
Construction	Const.
Right-Of-Way	R/W
With Found	w/ Fnd.
Iron Pin	I.P.
Drill Hole	D.H.
Monument	Mon.
Calculated	Calc.
Observed	Obs.
Recorded and Used	R/U

NEW MON. BOX w/I.P. SET: 5/8"x30" IRON PIN SET (CAPPED "D.F. SHEEHY S-7849")



CENTERLINE SCHEMATIC PLAN EAST 105th STREET BEGIN TO STA. 115+00

CALCULATED: _____
 B.A.K.: _____
 CHECKED: _____
 D.P.B.: _____

PID NO. _____

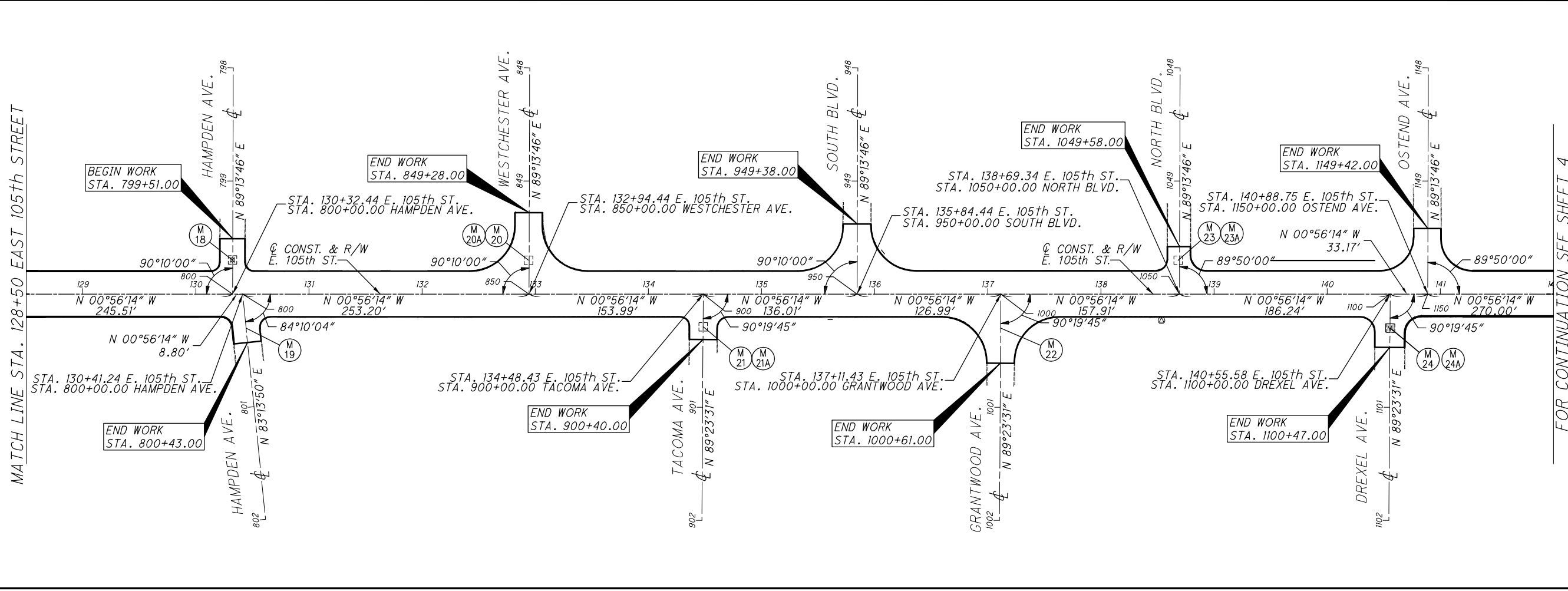
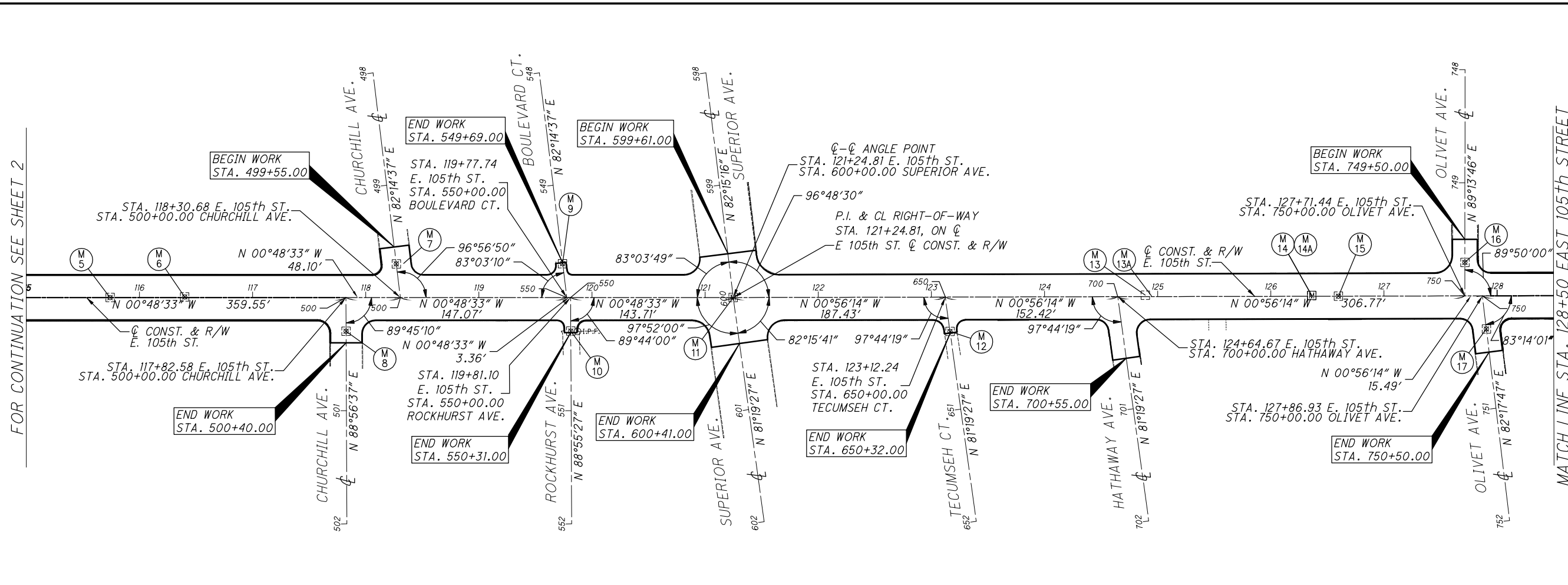
FOR CONTINUATION SEE SHEET 3

SURVEYOR'S SEAL

SIGNED: _____
 DATE: _____

EAST 105th STREET

2
243



SYMBOL LEGEND

Exist. Monument Box	⊠
New Monument Box	⊡
Drill Hole in Stone Monument Found	⊙
Iron Pin Found	⊙
Iron Pin Set	⊙
Iron Pipe Found	⊙
Iron Pipe Set	⊙
P.K. Nail Found	⊙
P.K. Nail Set	⊙
Government Control Point Found	⊙

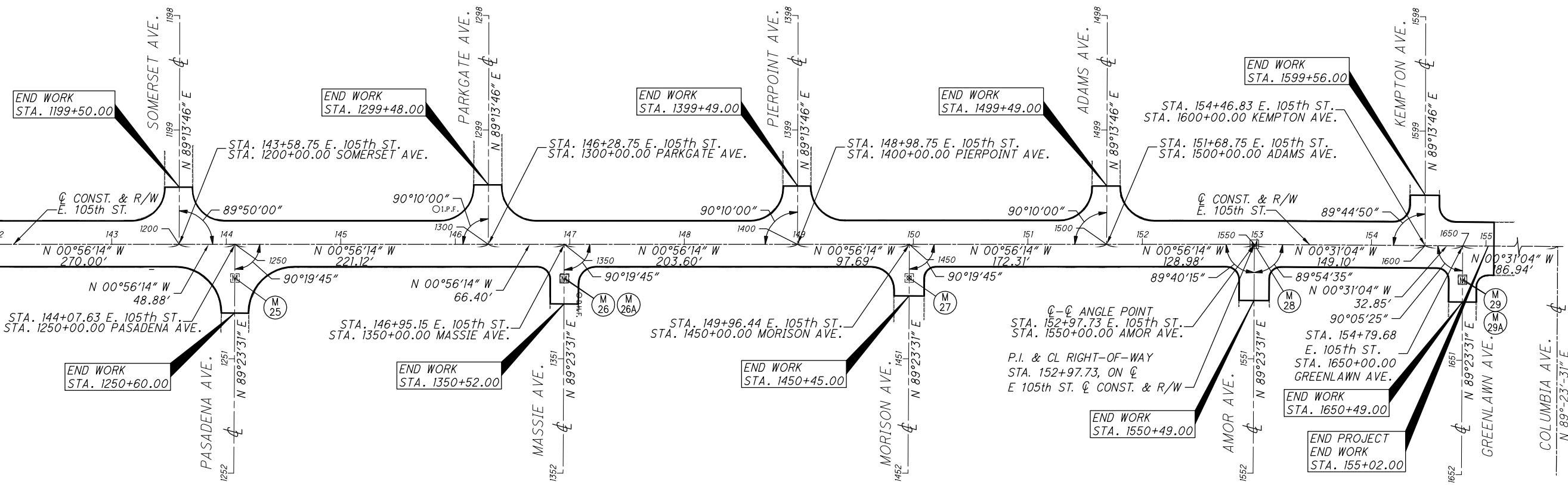
ABBREVIATIONS

Centerline	C/L
Construction	Const.
Right-Of-Way	R/W
With Found	w/ Fnd.
Iron Pin	I.P.
Drill Hole	D.H.
Monument	Mon.
Calculated	Calc.
Observed	Obs.
Recorded and Used	R/U

NEW MON. BOX w/I.P. SET: 5/8"x30" IRON PIN SET (CAPPED "D.F. SHEEHY S-7849")

CALCULATED	B.A.K.	CHECKED	D.P.B.
SURVEYOR'S SEAL			
SIGNED: _____			
DATE: _____			

FOR CONTINUATION SEE SHEET 3



SYMBOL LEGEND

- Exist. Monument Box
- New Monument Box
- Drill Hole in Stone Monument Found
- Iron Pin Found
- Iron Pin Set
- Iron Pipe Found
- Iron Pipe Set
- P.K. Nail Found
- P.K. Nail Set
- Government Control Point Found

ABBREVIATIONS

- Centerline C/L
- Construction Const.
- Right-Of-Way R/W
- With Found w/
- Iron Pin I.P.
- Drill Hole D.H.
- Monument Mon.
- Calculated Calc.
- Observed Obs.
- Recorded R/U

NEW MON. BOX w/I.P.
 SET: 5/8"x30" IRON
 PIN SET (CAPPED "D.F.
 SHEEHY S-7849")

CALCULATED B.A.K. CHECKED D.P.B.

PID NO. -

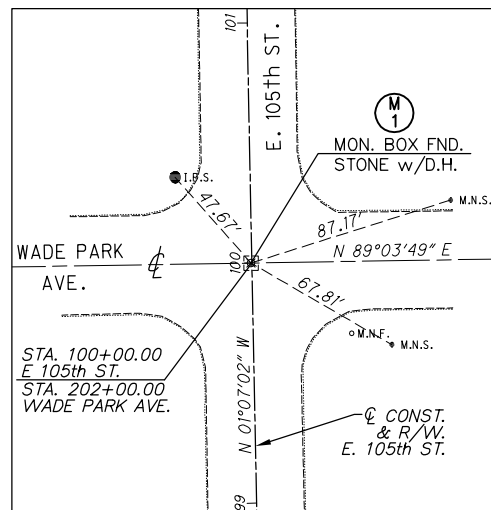
**CENTERLINE SCHEMATIC PLAN
 EAST 105th STREET STA. 142+00 TO END**

EAST 105th STREET

SURVEYOR'S SEAL

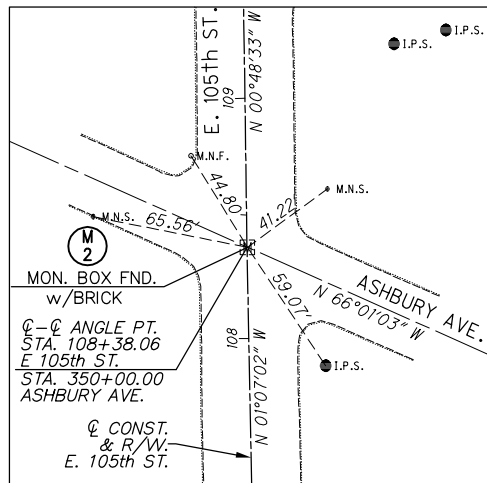
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 DATE: _____

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 PLOT DATE: 5/7/19



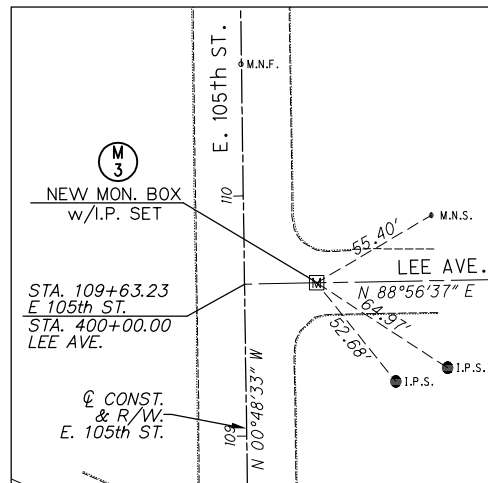
M1
E. 105th ST. & WADE PARK AVE.

STA. 100+00.00, 0.38' LT. (C/L CONST. & R/W E. 105th ST.)
 STA. 201+99.62, on C (C/L CONST. & R/W WADE PARK AVE.)
 NORTHING: 674941.96, EASTING: 2210745.24



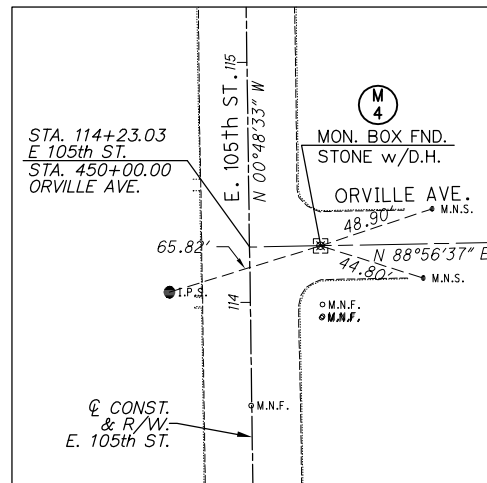
M2
E. 105th ST. & ASHBURY AVE.

STA. 108+37.94, 0.19' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 350+00.22, 0.03' RT. (C/L CONST. & R/W ASHBURY AVE.)
 NORTHING: 675779.75, EASTING: 2210729.46



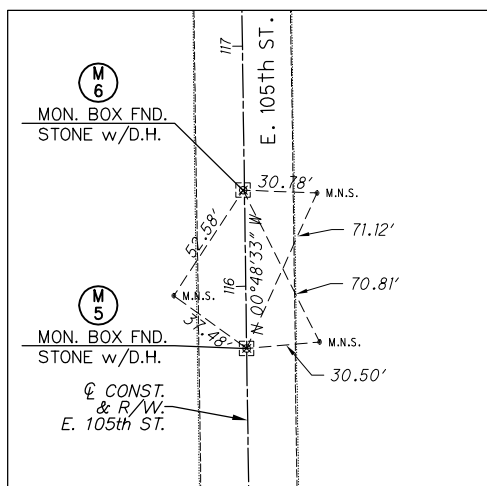
M3
E. 105th ST. & LEE AVE.

STA. 109+63.36, 30.01' LT. (C/L CONST. & R/W E. 105th ST.)
 STA. 400+30.01, on C (C/L CONST. & R/W LEE AVE.)
 NORTHING: 675905.58, EASTING: 2210757.51



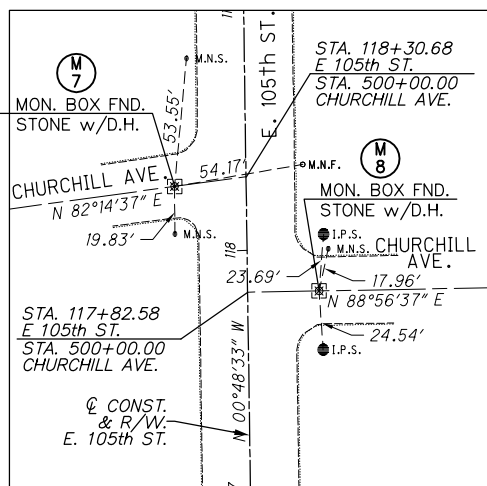
M4
E. 105th ST. & ORVILLE AVE.

STA. 114+23.16, 29.56' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 450+29.56, on C (C/L CONST. & R/W ORVILLE AVE.)
 NORTHING: 676365.33, EASTING: 2210750.57



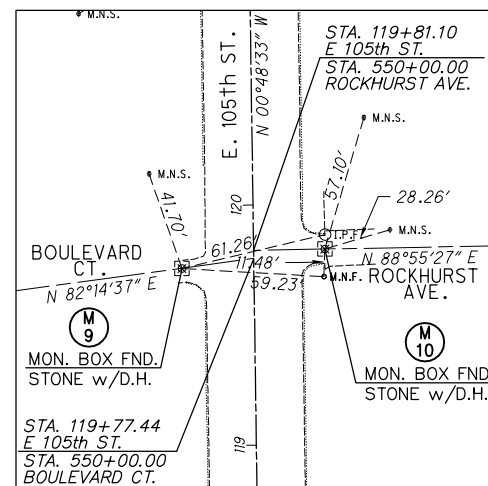
M5
E. 105th ST.

STA. 115+74.11, 0.01' LT. (C/L CONST. & R/W E. 105th ST.)
 NORTHING: 676515.85, EASTING: 2210718.87



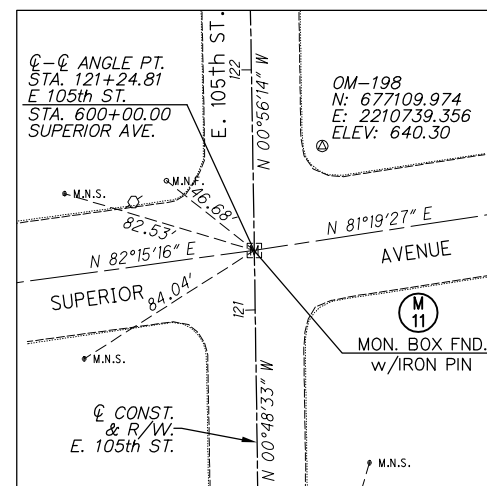
M7
E. 105th ST. & CHURCHILL AVE.

STA. 118+27.05, 29.79' LT. (C/L CONST. & R/W E. 105th ST.)
 STA. 499+69.99, on C (C/L CONST. & R/W CHURCHILL AVE.)
 NORTHING: 676768.34, EASTING: 2210685.52



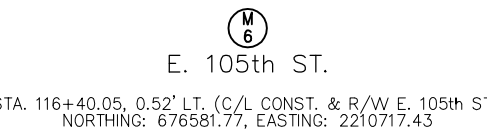
M9
E. 105th ST. & BOULEVARD CT.

STA. 119+73.97, 29.94' LT. (C/L CONST. & R/W E. 105th ST.)
 STA. 549+69.83, 0.13' RT. (C/L CONST. & R/W BOULEVARD CT.)
 NORTHING: 676915.24, EASTING: 2210683.30



M11
E. 105th ST. & SUPERIOR AVE.

STA. 121+24.81, on C (C/L CONST. & R/W E. 105th ST.)
 STA. 600+00.00, on C (C/L CONST. & R/W SUPERIOR AVE.)
 NORTHING: 677066.49, EASTING: 2210711.10



M6
E. 105th ST.

STA. 116+40.05, 0.52' LT. (C/L CONST. & R/W E. 105th ST.)
 NORTHING: 676581.77, EASTING: 2210717.43



M8
E. 105th ST. & CHURCHILL AVE.

STA. 117+82.71, 29.76' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 500+29.76, on C (C/L CONST. & R/W CHURCHILL AVE.)
 NORTHING: 676724.84, EASTING: 2210745.69



M10
E. 105th ST. & ROCKHURST AVE.

STA. 119+81.24, 29.66' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 550+29.66, on C (C/L CONST. & R/W ROCKHURST AVE.)
 NORTHING: 676923.35, EASTING: 2210742.79

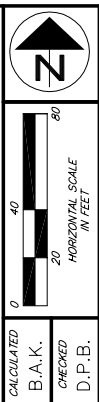
SYMBOL LEGEND

- Exist. Monument Box [Symbol]
- New Monument Box [Symbol]
- Drill Hole in Stone Monument Found [Symbol]
- Iron Pin Found [Symbol]
- Iron Pin Set [Symbol]
- Iron Pipe Found [Symbol]
- Iron Pipe Set [Symbol]
- P.K. Nail Found [Symbol]
- P.K. Nail Set [Symbol]
- Government Control Point Found [Symbol]

ABBREVIATIONS

- Centerline Const. C/L
- Construction Right-Of-Way With Found Iron Pin Drill Hole Monument Calculated Observed Recorded and Used R/W
- Fnd. w/ Fnd. I.P. D.H. Mon. Calc. Obs. R/U

NEW MON. BOX w/I.P. SET: 5/8"x30" IRON PIN SET (CAPPED "D.F. SHEEHY S-7849")



CALCULATED
B.A.K.
CHECKED
D.P.B.

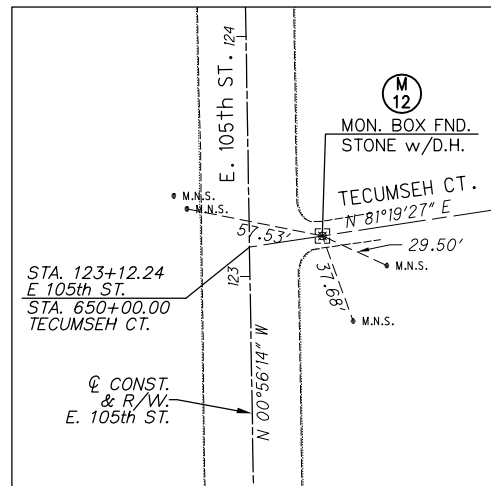
PID NO. 1

MONUMENT REFERENCE (3-POINT) TIES
EAST 105th STREET

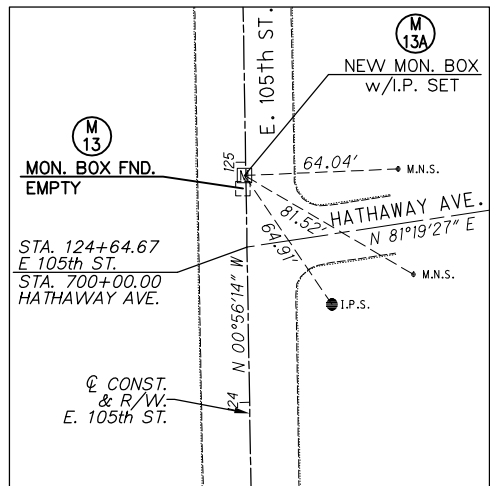
SURVEYOR'S SEAL

SIGNED: _____
DATE: _____

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 centerline schematic.dwg
PLOT DATE: 5/7/19

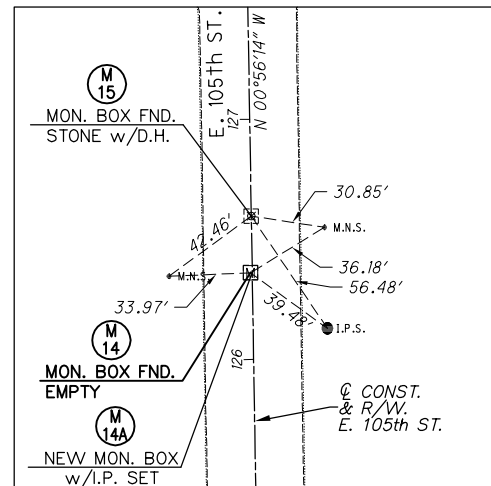


M12
E. 105th ST. & TECUMSEH CT.
STA. 123+16.37, 30.42' RT. (C/L CONST. & R/W E. 105th ST.)
STA. 650+30.70, ON C (C/L CONST. & R/W TECUMSEH CT.)
NORTHING: 677258.53, EASTING: 2210738.39



M13
E. 105th ST. (AT HATHAWAY AVE.)
STA. 124+88.99, 1.28' LT. (C/L CONST. & R/W E. 105th ST.)
STA. 700+00.00 HATHAWAY AVE.
NORTHING: 677430.60, EASTING: 2210703.86

NOTE:
TIES FOR M-13 ARE TO NEW MONUMENT BOX M-13A

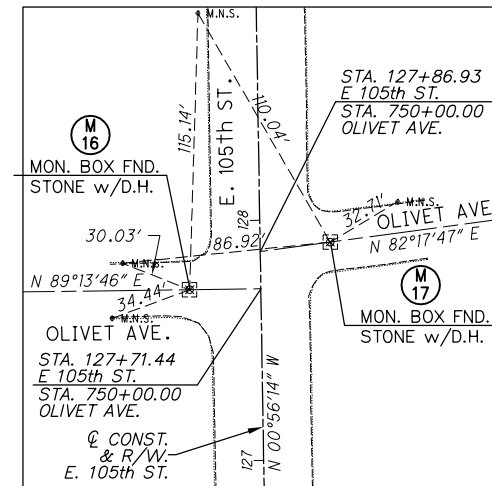


M14
E. 105th ST.
STA. 126+36.17, 0.64' LT. (C/L CONST. & R/W E. 105th ST.)
NORTHING: 677577.78, EASTING: 2210702.10

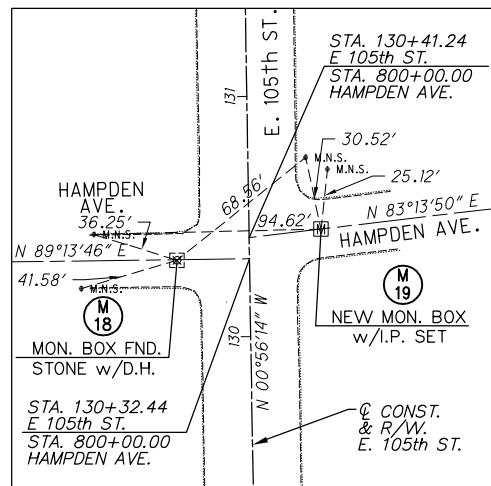
NEW MONUMENT

M14A
E. 105th ST.
STA. 126+36.08, 0.71' LT. (C/L CONST. & R/W E. 105th ST.)
NORTHING: 677577.68, EASTING: 2210702.03

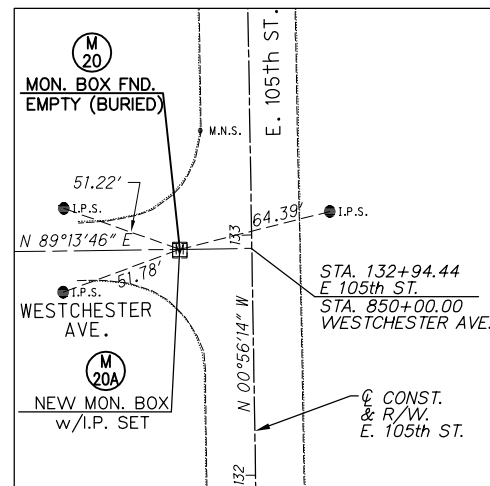
NOTE:
TIES FOR M-14 ARE TO NEW MONUMENT BOX M-14A



M16
E. 105th ST. & OLIVET AVE.
STA. 127+71.52, 29.64' LT. (C/L CONST. & R/W E. 105th ST.)
STA. 749+70.36, ON C (C/L CONST. & R/W OLIVET AVE.)
NORTHING: 677712.63, EASTING: 2210670.89

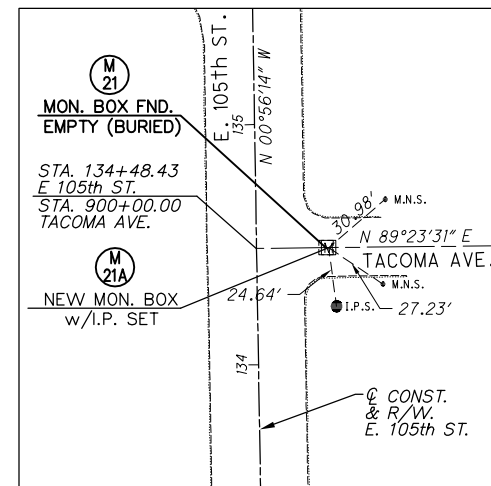


M18
E. 105th ST. & HAMPDEN AVE.
STA. 130+32.30, 30.18' LT. (C/L CONST. & R/W E. 105th ST.)
STA. 799+69.82, 0.23' RT. (C/L CONST. & R/W HAMPDEN AVE.)
NORTHING: 677973.36, EASTING: 2210666.08



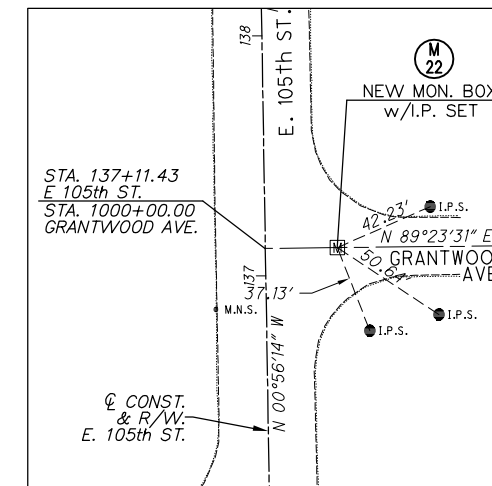
M20
E. 105th ST. & WESTCHESTER AVE.
STA. 132+93.95, 29.95' LT. (C/L CONST. & R/W E. 105th ST.)
STA. 849+70.05, 0.57' RT. (C/L CONST. & R/W WESTCHESTER AVE.)
NORTHING: 678234.98, EASTING: 2210662.03

NOTE:
TIES FOR M-20 ARE TO NEW MONUMENT BOX M-20A



M21
E. 105th ST. & TACOMA AVE.
STA. 134+48.36, 28.86' RT. (C/L CONST. & R/W E. 105th ST.)
STA. 900+28.86, 0.10' LT. (C/L CONST. & R/W TACOMA AVE.)
NORTHING: 678390.34, EASTING: 2210718.32

NOTE:
TIES FOR M-21 ARE TO NEW MONUMENT BOX M-21A



M22
E. 105th ST. & GRANTWOOD AVE.
STA. 137+11.26, 30.00' RT. (C/L CONST. & R/W E. 105th ST.)
STA. 1000+30.00, ON C (C/L CONST. & R/W GRANTWOOD AVE.)
NORTHING: 678653.21, EASTING: 2210715.15

NEW MONUMENT

M19
E. 105th ST. & HAMPDEN AVE.
STA. 130+44.30, 30.00' RT. (C/L CONST. & R/W E. 105th ST.)
STA. 800+30.16, ON C (C/L CONST. & R/W HAMPDEN AVE.)
NORTHING: 677986.35, EASTING: 2210726.06

NEW MONUMENT

M20A
E. 105th ST. & WESTCHESTER AVE.
STA. 132+94.52, 30.00' LT. (C/L CONST. & R/W E. 105th ST.)
STA. 849+70.00, ON C (C/L CONST. & R/W WESTCHESTER AVE.)
NORTHING: 678235.56, EASTING: 2210661.97

NEW MONUMENT

M21A
E. 105th ST. & TACOMA AVE.
STA. 134+48.25, 29.99' RT. (C/L CONST. & R/W E. 105th ST.)
STA. 900+29.99, ON C (C/L CONST. & R/W TACOMA AVE.)
NORTHING: 678390.25, EASTING: 2210719.44

SYMBOL LEGEND

- Exist. Monument Box
- New Monument Box
- Drill Hole in Stone Monument Found
- Iron Pin Found
- Iron Pin Set
- Iron Pipe Found
- Iron Pipe Set
- P.K. Nail Found
- P.K. Nail Set
- Government Control Point Found

ABBREVIATIONS

- Centerline C/L
- Construction Const.
- Right-Of-Way R/W
- With w/
- Found Fnd.
- Iron Pin I.P.
- Drill Hole D.H.
- Monument Mon.
- Calculated Calc.
- Observed Obs.
- Recorded and Used R/U

NEW MON. BOX w/I.P. SET: 5/8"x30" IRON PIN SET (CAPPED "D.F. SHEEHY S-7849")

SCALE: 1" = 40'
HORIZONTAL SCALE IN FEET

CALCULATED B.A.A.K. CHECKED D.P.B.

PID NO. 1

MONUMENT REFERENCE (3-POINT) TIES EAST 105th STREET

EAST 105th STREET

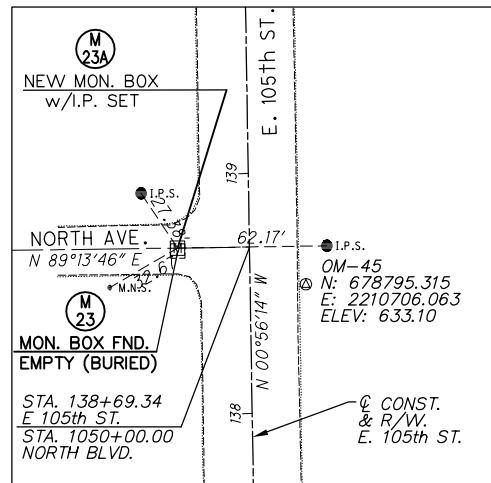
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SURVEYOR'S SEAL

SIGNED: _____

DATE: _____



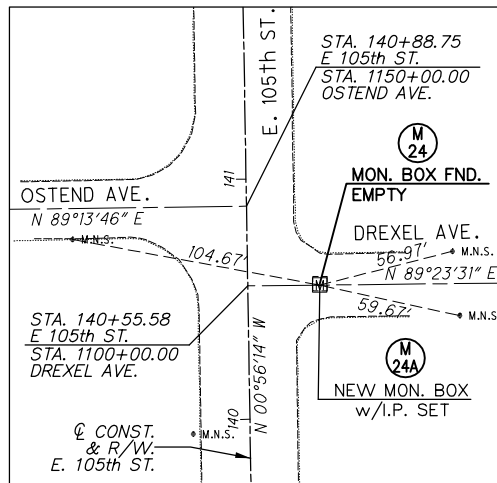
NOTE:
TIES FOR M-23 ARE TO NEW
MONUMENT BOX M-23A

E. 105th ST. & NORTH BLVD.

STA. 138+68.16, 29.85' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1049+70.16, 1.27' RT. (C/L CONST. & R/W NORTH BLVD.)
 NORTHING: 678809.11, EASTING: 2210652.74

NEW MONUMENT

E. 105th ST. & NORTH BLVD.
 STA. 138+69.42, 29.94' LT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1049+70.06, ON \odot (C/L CONST. & R/W NORTH BLVD.)
 NORTHING: 678810.38, EASTING: 2210652.63



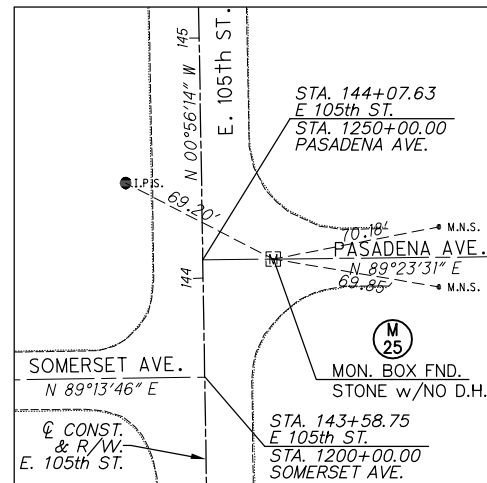
NOTE:
TIES FOR M-24 ARE TO NEW
MONUMENT BOX M-24A

E. 105th ST. & DREXEL AVE.

STA. 140+55.98, 30.07' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1100+30.06, 0.58' LT. (C/L CONST. & R/W DREXEL AVE.)
 NORTHING: 678997.89, EASTING: 2210709.58

NEW MONUMENT

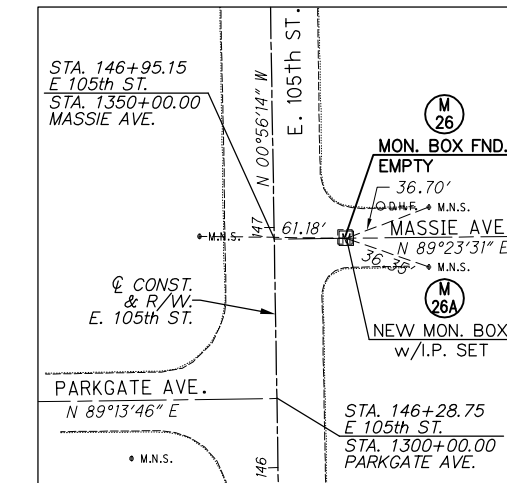
E. 105th ST. & DREXEL AVE.
 STA. 140+55.41, 29.98' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1100+29.98, ON \odot (C/L CONST. & R/W DREXEL AVE.)
 NORTHING: 678997.32, EASTING: 2210709.50



NOTE:
TIES FOR M-26 ARE TO NEW
MONUMENT BOX M-26A

E. 105th ST. & PASADENA AVE.

STA. 144+07.44, 29.39' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1250+29.39, 0.02' RT. (C/L CONST. & R/W PASADENA AVE.)
 NORTHING: 679349.30, EASTING: 2210703.16

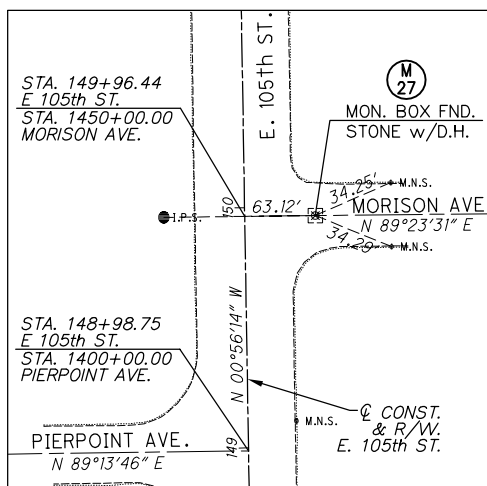


E. 105th ST. & MASSIE AVE.

STA. 146+95.49, 29.43' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1350+29.43, 0.51' LT. (C/L CONST. & R/W MASSIE AVE.)
 NORTHING: 679637.31, EASTING: 2210698.48

NEW MONUMENT

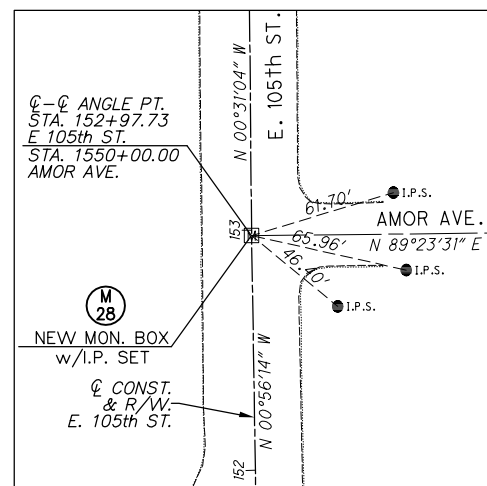
E. 105th ST. & MASSIE AVE.
 STA. 146+94.98, 30.01' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1350+30.01, ON \odot (C/L CONST. & R/W MASSIE AVE.)
 NORTHING: 679636.80, EASTING: 2210699.07



M 27

E. 105th ST. & MORISON AVE.

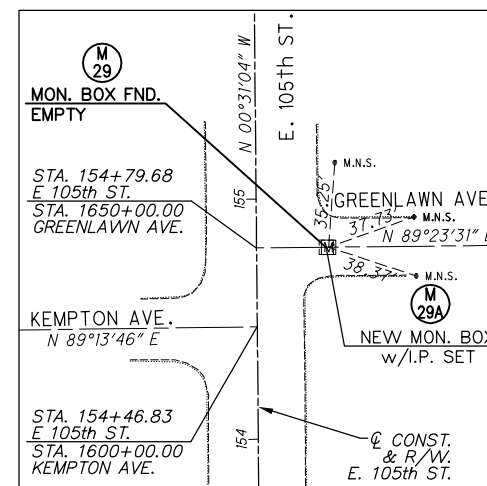
STA. 149+96.27, 29.39' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1450+29.39, ON \odot (C/L CONST. & R/W MORISON AVE.)
 NORTHING: 679938.05, EASTING: 2210693.52



NEW MONUMENT

E. 105th ST. & AMOR AVE.

STA. 152+97.73, ON \odot (C/L CONST. & R/W E. 105th ST.)
 STA. 1550+00.00, ON \odot (C/L CONST. & R/W AMOR AVE.)
 NORTHING: 680238.98, EASTING: 2210659.21



NOTE:
TIES FOR M-29 ARE TO NEW
MONUMENT BOX M-29A

E. 105th ST. & GREENLAWN AVE.

STA. 154+79.73, 29.04' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1650+29.03, ON \odot (C/L CONST. & R/W GREENLAWN AVE.)
 NORTHING: 680421.24, EASTING: 2210686.60

NEW MONUMENT

E. 105th ST. & GREENLAWN AVE.
 STA. 154+79.73, 30.00' RT. (C/L CONST. & R/W E. 105th ST.)
 STA. 1650+30.00, ON \odot (C/L CONST. & R/W GREENLAWN AVE.)
 NORTHING: 680421.24, EASTING: 2210687.56

SYMBOL LEGEND

- Exist. Monument Box \square
- New Monument Box \square
- Drill Hole in Stone Monument Found \odot
- Iron Pin Found \odot
- Iron Pin Set \odot
- Iron Pipe Found \odot
- Iron Pipe Set \odot
- P.K. Nail Found \odot
- P.K. Nail Set \odot
- Government Control Point Found \odot

ABBREVIATIONS

- Centerline Construction \odot
- Right-Of-Way With Found Iron Pin Drill Hole Monument \odot
- Calculated Observed Recorded and Used \odot
- C/L Const. \odot
- R/W w/ Fnd. I.P. D.H. Mon. Calc. Obs. R/U

NEW MON. BOX w/I.P. SET: 5/8"x30" IRON PIN SET (CAPPED "D.F. SHEEHY S-7849")

SURVEYOR'S SEAL

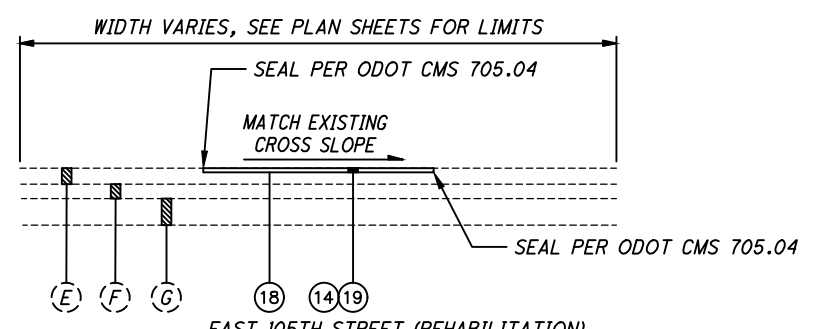
SIGNED: _____
 DATE: _____

MONUMENT REFERENCE (3-POINT) TIES EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B.

PID NO. 1

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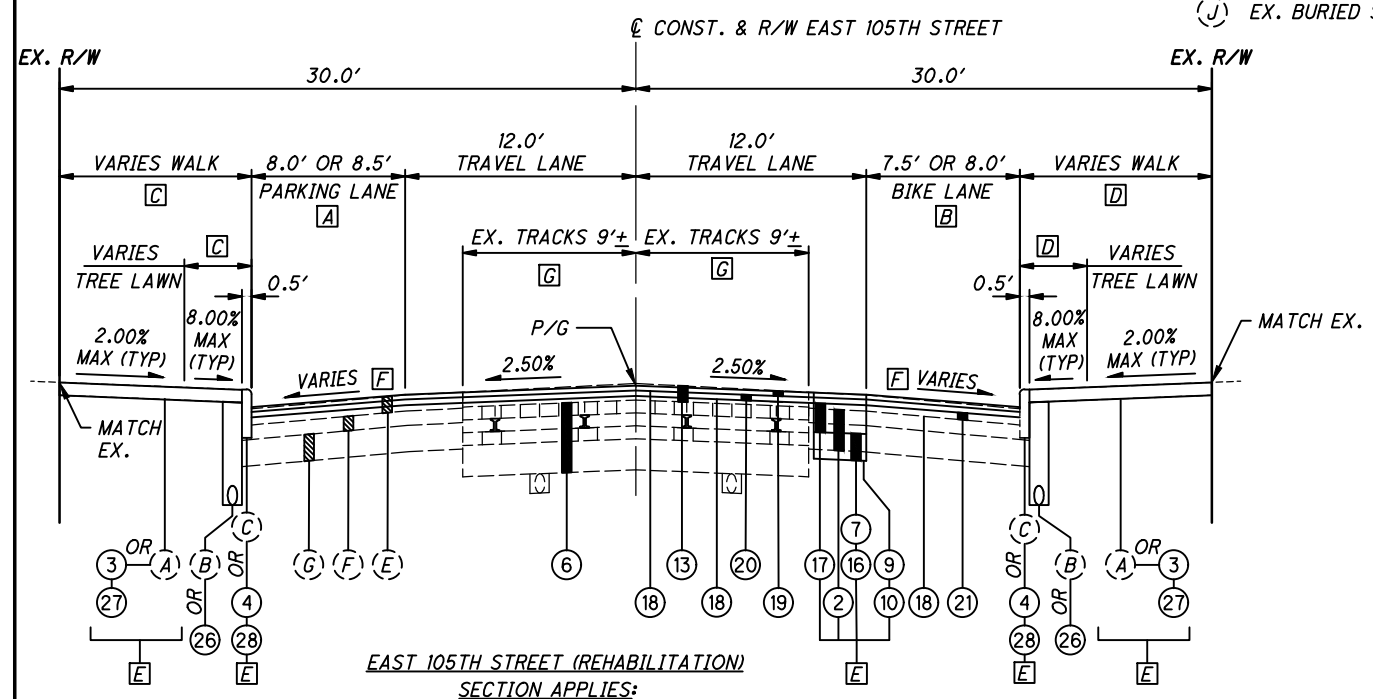
STA. 120+81.39 TO STA. 121+69.93 = 88.54' (SUPERIOR AVENUE INTERSECTION)
 TOTAL = 88.54'

EXISTING LEGEND:

- (A) EX. CONCRETE WALK
- (B) EX. UNDERDRAIN
- (C) EX. CONCRETE CURB
- (D) EX. GRANITE CURB
- (E) EX. ASPHALT SURFACE AND LEVELING COURSE (EAST 105TH STREET) (T=VARIES 1.1" TO 7.8", 4.3" TYP.)
- (F) EX. GRANITE/BRICK PAVERS (SPORADIC) (EAST 105TH STREET) (T=VARIES 0" OR 5.5" TYP. INCLUDING GROUT LAYER)
- (G) EX. CONCRETE BASE (SPORADIC) (EAST 105TH STREET) (T=VARIES 0" TO 15.5", 9.5" TYP.)
- (H) EX. ASPHALT SURFACE AND LEVELING COURSE (EAST BLVD) (T = VARIES 4.75" TO 6", 5.38" TYP.)
- (I) EX. CONCRETE/PAVERS (EAST BLVD) (T = 8" TYP.)
- (J) EX. BURIED STREETCAR TRACKS

PROPOSED LEGEND:

- (1) ITEM 202 - PAVEMENT REMOVED FOR DRIVES, AS PER PLAN, AS PER D-15
- (2) ITEM 202 - PAVEMENT REMOVED, AS PER PLAN, AS PER D-15
- (3) ITEM 202 - WALK REMOVED, AS PER PLAN
- (4) ITEM 202 - CURB REMOVED, AS PER PLAN
- (5) ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN
- (6) ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17
- (7) ITEM 203 - EXCAVATION
- (8) ITEM 203 - EMBANKMENT
- (9) ITEM 204 - SUBGRADE COMPACTION
- (10) ITEM 204 - PROOF ROLLING
- (11) ITEM 209 - LINEAR GRADING, EACH SIDE, AS PER PLAN
- (12) ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN
- (13) ITEM 254 - PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN
- (14) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN
- (15) ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN
- (16) ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN
- (17) ITEM 305 - 9" CONCRETE BASE, AS PER D-23 AND D-24
- (18) ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT 0.100 GAL/SY)
- (19) ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29
- (20) ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448), PG64-22, AS PER D-29
- (21) ITEM 441 - 0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29
- (22) ITEM 441 - ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29
- (23) ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24
- (24) ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24
- (25) ITEM 452 - BUS PAD, AS PER PLAN
- (26) ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER D-42
- (27) ITEM 608 - 4" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24 -OR- ITEM 608 - 6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24 -OR- ITEM 608 - 8" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24
- (28) ITEM 609 - CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24
- (29) ITEM 609 - CURB RESET, GRANITE, AS PER PLAN
- (30) ITEM 659 - SEEDING AND MULCHING, AS PER PLAN, AS PER D-66, D-67 AND D-68



EAST 105TH STREET (REHABILITATION) SECTION APPLIES:

STA. 89+55.00	TO STA. 92+15.00	=	260.00'	(EAST BOULEVARD INTERSECTION)
STA. 92+15.00	TO STA. 94+31.00	=	216.00'	(MAGNOLIA DRIVE INTERSECTION)
STA. 94+31.00	TO STA. 95+43.00	=	112.00'	(WADE PARK AVENUE INTERSECTION)
STA. 95+43.00	TO STA. 99+51.85	=	408.85'	(ASHBURY AVENUE INTERSECTION)
STA. 99+51.85	TO STA. 100+45.64	=	93.79'	(LEE AVENUE INTERSECTION)
STA. 100+45.64	TO STA. 107+96.68	=	751.04'	(ORVILLE AVENUE INTERSECTION)
STA. 107+96.68	TO STA. 108+78.35	=	81.67'	(CHURCHILL AVENUE INTERSECTION)
STA. 108+78.35	TO STA. 109+35.13	=	56.78'	(ROCKHURST AVENUE INTERSECTION)
STA. 109+35.13	TO STA. 109+91.38	=	56.25'	
STA. 109+91.38	TO STA. 113+97.17	=	405.79'	
STA. 113+97.17	TO STA. 114+49.17	=	52.00'	
STA. 114+49.17	TO STA. 117+57.21	=	308.04'	
STA. 117+57.21	TO STA. 118+51.08	=	93.87'	
STA. 118+51.08	TO STA. 119+60.23	=	109.15'	
STA. 119+60.23	TO STA. 119+94.73	=	34.50'	
STA. 119+94.73	TO STA. 120+81.39	=	86.66'	
	TOTAL	=	3126.39'	

- (E) PAVEMENT, WALK, AND CURB WILL BE REPLACED SPORADICALLY ALONG THE CORRIDOR AS INDICATED ON THE PLAN SHEETS AND AS DIRECTED BY THE ENGINEER. REPAIR DETAILS ARE SHOWN ON SHEETS 10-13. PROPOSED CONCRETE CURB WILL HAVE A 6" CURB REVEAL AND RESET GRANITE CURB WILL HAVE A 5" CURB REVEAL. EXISTING CURBS WILL REMAIN ONLY IF THE CURB REVEAL FOR THE PROPOSED GUTTER ELEVATION IS EQUAL TO OR EXCEEDS 4".
- (F) SEE PLAN AND PROFILE VIEWS AND PAVEMENT ELEVATION TABLE FROM SHEETS 97 TO 103 FOR PROPOSED PARKING AND BIKE LANE CROSS SLOPES.
- (G) IT IS LIKELY THAT EX. BURIED STREETCAR TRACK WILL BE ENCOUNTERED AND SPORADICALLY REMOVED FOR THE PROJECT LENGTH ALONG EAST 105TH STREET. EX. ASPHALT DEPTH OVER TRACKS VARIES 4" TO 6", SEE GEOTECH REPORT. FOR TRACK REMOVAL AND PAVEMENT REPLACEMENT DETAIL INCLUDING THE NUMBER OF TRACKS AND LOCATIONS, SEE SHEET 13.

(A) LEFT PARKING LANE WIDTH:

8.5'	STA. 92+15.00 TO STA. 99+55.14
8.0'	STA. 100+45.64 TO STA. 108+22.15
	STA. 108+78.35 TO STA. 118+06.11
	STA. 118+51.08 TO STA. 119+60.23
	STA. 119+82.76 TO STA. 120+81.39

(B) RIGHT PARKING LANE WIDTH:

7.5'	STA. 89+55.00 TO STA. 94+31.00
	STA. 95+43.00 TO STA. 99+51.85
8.0'	STA. 100+43.36 TO STA. 107+96.68
	STA. 108+53.56 TO STA. 109+35.13
	STA. 109+91.38 TO STA. 113+97.17
	STA. 114+49.17 TO STA. 117+57.21
	STA. 118+08.72 TO STA. 119+69.22
	STA. 119+94.73 TO STA. 120+88.39

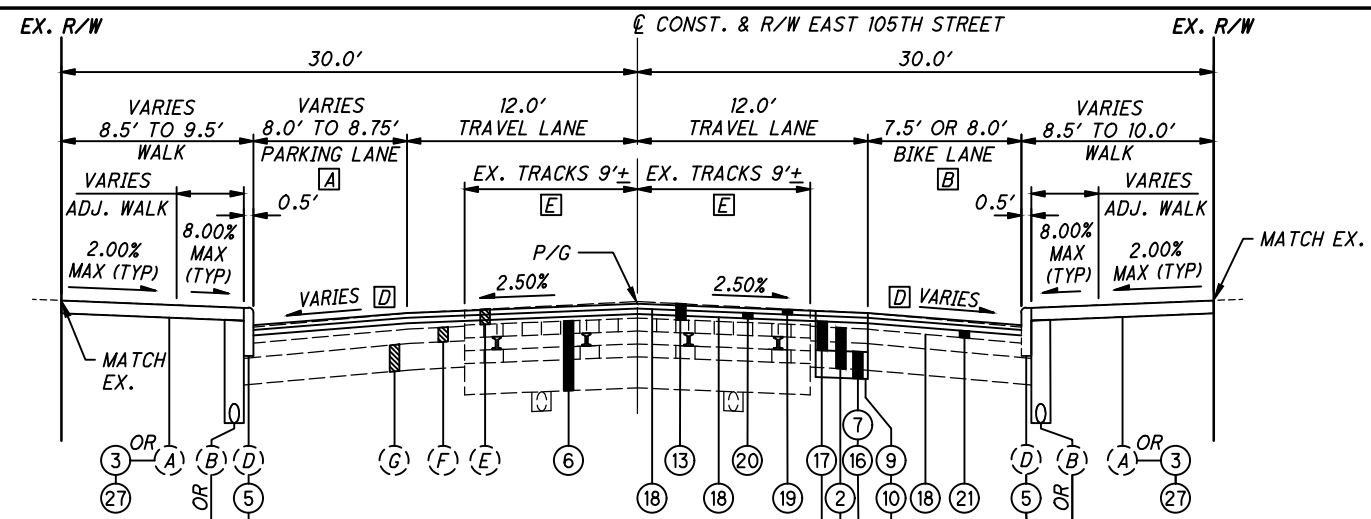
(C) LEFT SIDE:

TREE LAWN	BEGIN PROJECT	TO	EAST BOULEVARD
ADJACENT WALK	EAST BOULEVARD	TO	WADE PARK AVENUE
TREE LAWN	WADE PARK AVENUE	TO	ASHBURY AVENUE
ADJACENT WALK	ASHBURY AVENUE	TO	SUPERIOR AVENUE

(D) RIGHT SIDE:

ADJACENT WALK	BEGIN PROJECT	TO	WADE PARK AVENUE
TREE LAWN	WADE PARK AVENUE	TO	ASHBURY AVENUE
ADJACENT WALK	ASHBURY AVENUE	TO	SUPERIOR AVENUE

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EAST 105TH STREET (REHABILITATION)

SECTION APPLIES:

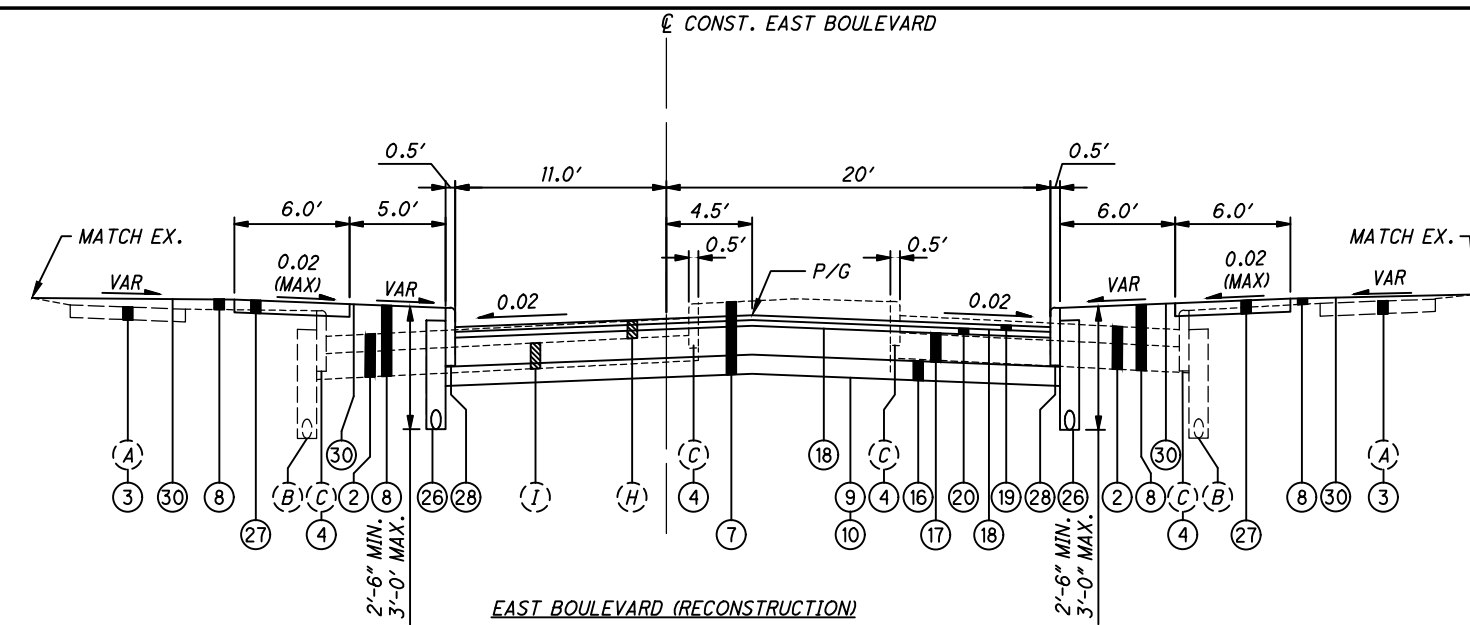
STA. 121+69.93	TO STA. 123+01.18	=	131.25'	
STA. 123+01.18	TO STA. 123+30.17	=	28.99'	(TECUMSEH COURT INTERSECTION)
STA. 123+30.17	TO STA. 124+45.67	=	115.50'	
STA. 124+45.67	TO STA. 124+93.23	=	47.56'	(HATHAWAY AVENUE INTERSECTION)
STA. 124+93.23	TO STA. 127+44.54	=	251.31'	
STA. 127+44.54	TO STA. 128+12.64	=	68.10'	(OLIVET AVENUE INTERSECTION)
STA. 128+12.64	TO STA. 130+13.27	=	200.63'	
STA. 130+13.27	TO STA. 130+65.86	=	52.59'	(HAMPDEN AVENUE INTERSECTION)
STA. 130+65.86	TO STA. 132+42.11	=	176.25'	
STA. 132+42.11	TO STA. 133+46.11	=	104.00'	(WESTCHESTER AVENUE INTERSECTION)
STA. 133+46.11	TO STA. 134+28.26	=	82.15'	
STA. 134+28.26	TO STA. 134+70.50	=	42.24'	(TACOMA AVENUE INTERSECTION)
STA. 134+70.50	TO STA. 135+32.11	=	61.61'	
STA. 135+32.11	TO STA. 136+36.61	=	104.50'	(SOUTH BOULEVARD INTERSECTION)
STA. 136+36.61	TO STA. 136+59.08	=	22.47'	
STA. 136+59.08	TO STA. 137+63.33	=	104.25'	(GRANTWOOD AVENUE INTERSECTION)
STA. 137+63.33	TO STA. 138+48.67	=	85.34'	
STA. 138+48.67	TO STA. 138+92.94	=	44.27'	(NORTH BOULEVARD INTERSECTION)
STA. 138+92.94	TO STA. 140+29.14	=	136.20'	
STA. 140+29.14	TO STA. 141+28.39	=	99.25'	(DREXEL AVENUE/OSTEND AVENUE INTERSECTION)
STA. 141+28.39	TO STA. 143+17.39	=	189.00'	
STA. 143+17.39	TO STA. 144+59.29	=	141.90'	(SOMERSET AVENUE/PASADENA AVENUE INTERSECTION)
STA. 144+59.29	TO STA. 145+86.15	=	126.86'	
STA. 145+86.15	TO STA. 146+70.40	=	84.25'	(PARKGATE AVENUE INTERSECTION)
STA. 146+70.40	TO STA. 146+71.97	=	1.57'	
STA. 146+71.97	TO STA. 147+22.45	=	50.48'	(MASSIE AVENUE INTERSECTION)
STA. 147+22.45	TO STA. 148+57.39	=	134.94'	
STA. 148+57.39	TO STA. 149+40.15	=	82.76'	(PIERPONT AVENUE INTERSECTION)
STA. 149+40.15	TO STA. 149+63.21	=	23.06'	
STA. 149+63.21	TO STA. 150+19.27	=	56.06'	(MORISON AVENUE INTERSECTION)
STA. 150+19.27	TO STA. 151+27.14	=	107.87'	
STA. 151+27.14	TO STA. 152+10.40	=	83.26'	(ADAMS AVENUE INTERSECTION)
STA. 152+10.40	TO STA. 152+73.55	=	63.15'	
STA. 152+73.55	TO STA. 153+20.77	=	47.22'	(AMOR AVENUE INTERSECTION)
STA. 153+20.77	TO STA. 154+18.67	=	97.90'	
STA. 154+18.67	TO STA. 155+01.73	=	83.06'	(KEMPTON AVENUE/GREENLAWN AVENUE INTERSECTION)
STA. 155+01.73	TO STA. 155+07.00	=	5.27'	
TOTAL		=	3337.07'	

[A] LEFT PARKING LANE WIDTH:

8.0'	STA. 121+65.35 TO STA. 127+44.54
8.25'	STA. 127+94.53 TO STA. 130+13.27 STA. 130+51.27 TO STA. 132+42.11 STA. 133+46.11 TO STA. 135+32.11
8.50'	STA. 136+36.61 TO STA. 138+48.67 STA. 138+92.94 TO STA. 140+46.39 STA. 141+28.39 TO STA. 143+17.39 STA. 143+98.39 TO STA. 145+86.15 STA. 146+70.40 TO STA. 148+57.39 STA. 152+10.40 TO STA. 154+18.67 STA. 154+72.92 TO STA. 155+02.00
8.75'	STA. 149+40.15 TO STA. 151+27.14

[B] RIGHT PARKING LANE WIDTH:

7.5'	STA. 140+83.38 TO STA. 143+55.79 STA. 144+59.29 TO STA. 146+71.97 STA. 147+22.45 TO STA. 149+63.21 STA. 150+19.27 TO STA. 152+73.55 STA. 153+20.77 TO STA. 154+57.72
8.0'	STA. 121+69.93 TO STA. 123+01.18 STA. 123+30.17 TO STA. 124+45.67 STA. 124+93.23 TO STA. 127+67.45 STA. 128+12.64 TO STA. 130+22.18 STA. 130+65.86 TO STA. 134+28.26 STA. 134+70.50 TO STA. 136+59.08 STA. 137+63.33 TO STA. 140+29.14



EAST BOULEVARD (RECONSTRUCTION)

SECTION APPLIES:

STA. 1697+60.00	TO STA. 1699+37.84	=	177.84'
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NOTES:

- FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.
- SEE SHEET 123 FOR EAST BOULEVARD REMOVAL DETAIL.

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TYPICAL SECTIONS

EAST 105TH STREET

NOTES:

FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.

THE UNDERDRAINS SHALL BE CONSTRUCTED SO AS TO MATCH THE LOCATION AND TIE INTO THE EXISTING UNDERDRAIN TO REMAIN.

CONSTRUCT DRIVEWAY, IF APPLICABLE, PER DRIVE DETAILS ON SHEET 124.

SIDEWALK AND DRIVE APRONS WILL BE SPORADICALLY REPLACED ALONG THE CORRIDOR. SLOPE ALONG THE SIDEWALK REPLACEMENT AREAS SHALL MATCH ADJACENT SIDEWALK THAT IS TO REMAIN. SEE SHEET 125 FOR ADDITIONAL INFORMATION ON DRIVE APRON SLOPES. THE SLOPE IN THE WALK AREA OF DRIVE APRONS SHALL NOT EXCEED 0.02 CROSS SLOPE.

PERFORM WALK/APRON REPAIR PER THE LIMITS DEPICTED ON THE PLANS. WALK/APRON REPAIR LIMITS SHALL EXTEND FURTHER TO THE NEAREST EXISTING TRANSVERSE JOINT, AS DIRECTED BY THE ENGINEER.

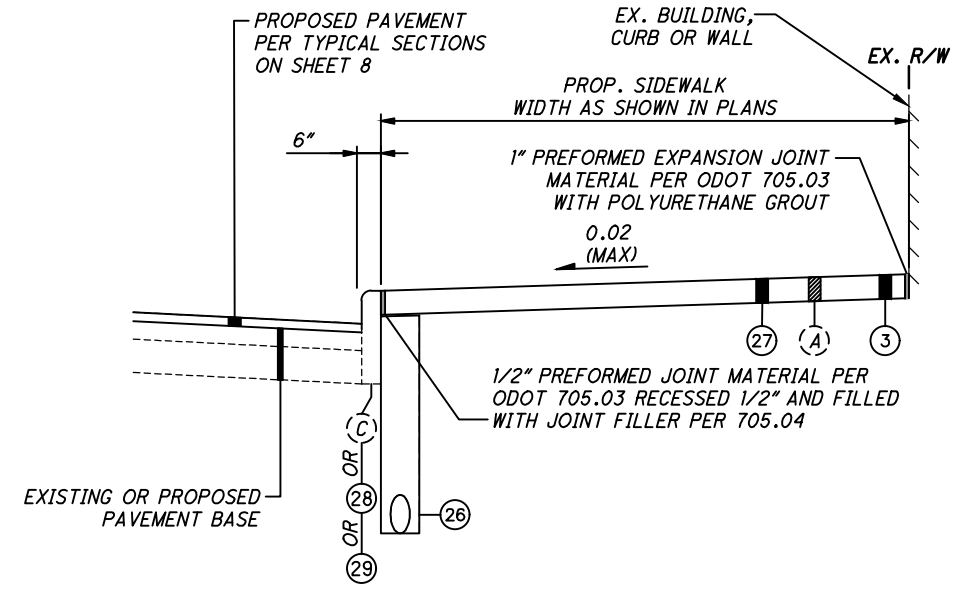
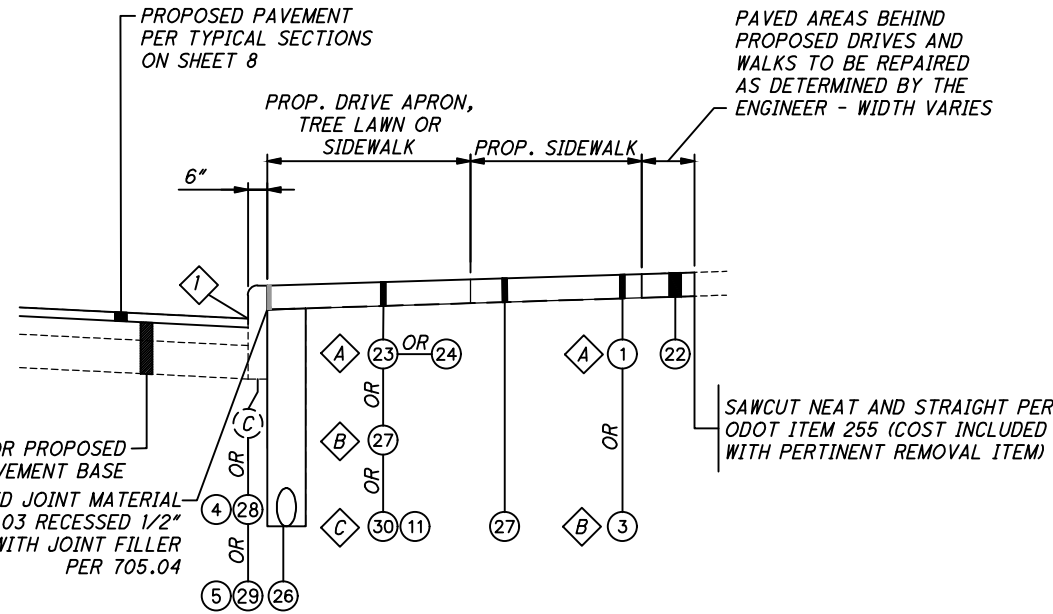
DIVIDE THE SURFACE OF THE WALK INTO EQUALLY SPACED RECTANGULAR BLOCKS AT INTERVALS NO SMALLER THAN 4-FOOT.

IT IS ANTICIPATED THAT PAVED AREAS BEHIND PROPOSED DRIVES AND WALKS WILL REQUIRE REPAIR AFTER THE INSTALLATION OF THE PROPOSED DRIVE OR WALK. AN ESTIMATED QUANTITY FOR THESE REPAIRS IS PROVIDED BY ITEM 441 - ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29 AND IS SHOWN ON THE GENERAL SUMMARY.

- 1 HOT APPLIED CRACK SEALANT PER ODOT CMS 423 AND 705.04 (4" WIDE)
- A ITEM TO BE USED IF WITHIN DRIVE APRON LIMITS
- B ITEM TO BE USED IF WITHIN WALK LIMITS

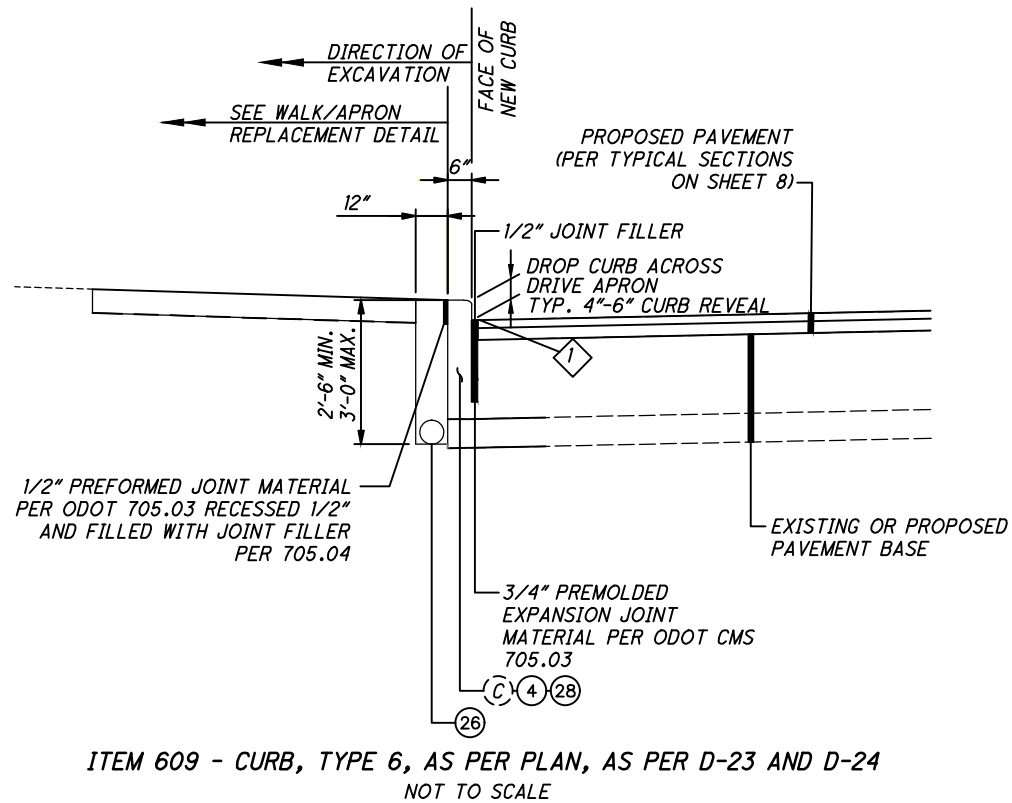
CONCRETE WALK DETAIL
NOT TO SCALE

- C ITEM TO BE USED IF WITHIN TREE LAWN LIMITS



CONCRETE WALK ADJACENT TO BUILDING, CURB OR WALL
NOT TO SCALE

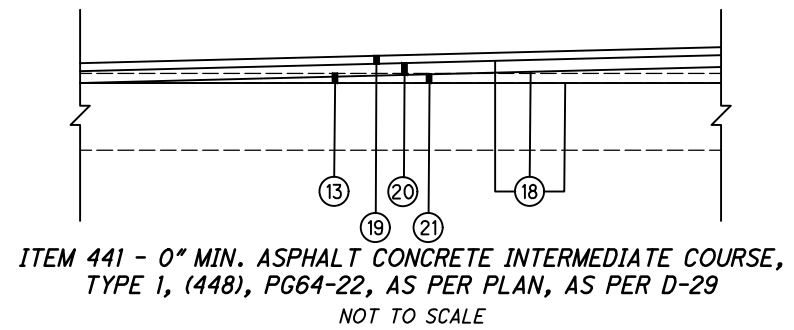
NOTES:
FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.



- 1 HOT APPLIED CRACK SEALANT PER ODOT CMS 423 AND 705.04 (4" WIDE)

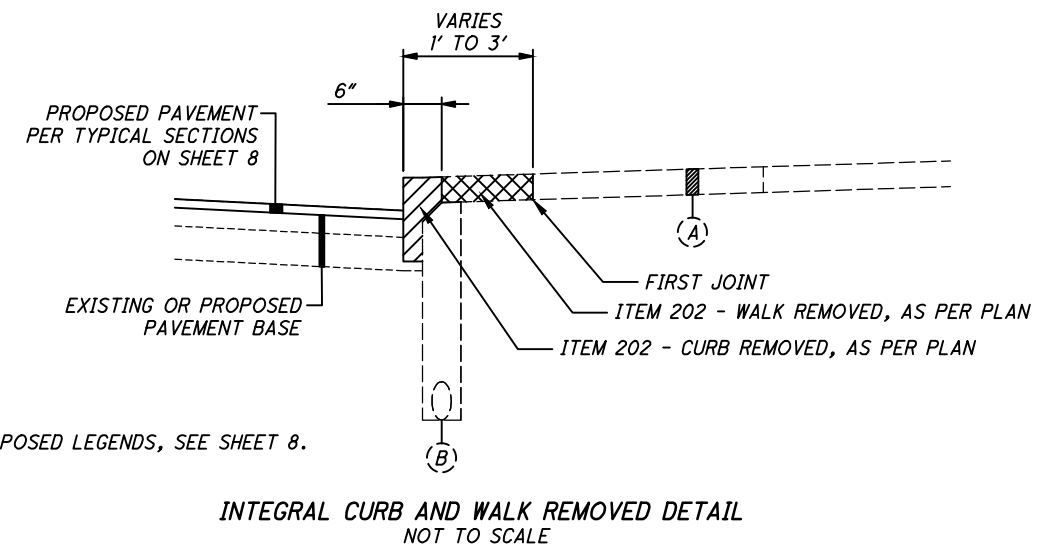
NOTES:

- FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.
- THE UNDERDRAINS SHALL BE CONSTRUCTED SO AS TO MATCH THE LOCATION AND TIE INTO THE EXISTING UNDERDRAIN TO REMAIN.
- SEE SHEET 171 FOR ITEM 609 - CURB RESET, GRANITE, AS PER PLAN, AS PER D-23 AND D-24.



NOTES:

- USE ITEM ITEM 441 - 0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29 ONLY IN AREAS WHERE ITEM 441 - ASPHALT CONCRETE SURFACE AND/OR INTERMEDIATE COURSE IS NOT OF SUFFICIENT DEPTH TO ACHIEVE THE PROPOSED DESIGN.
- FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.



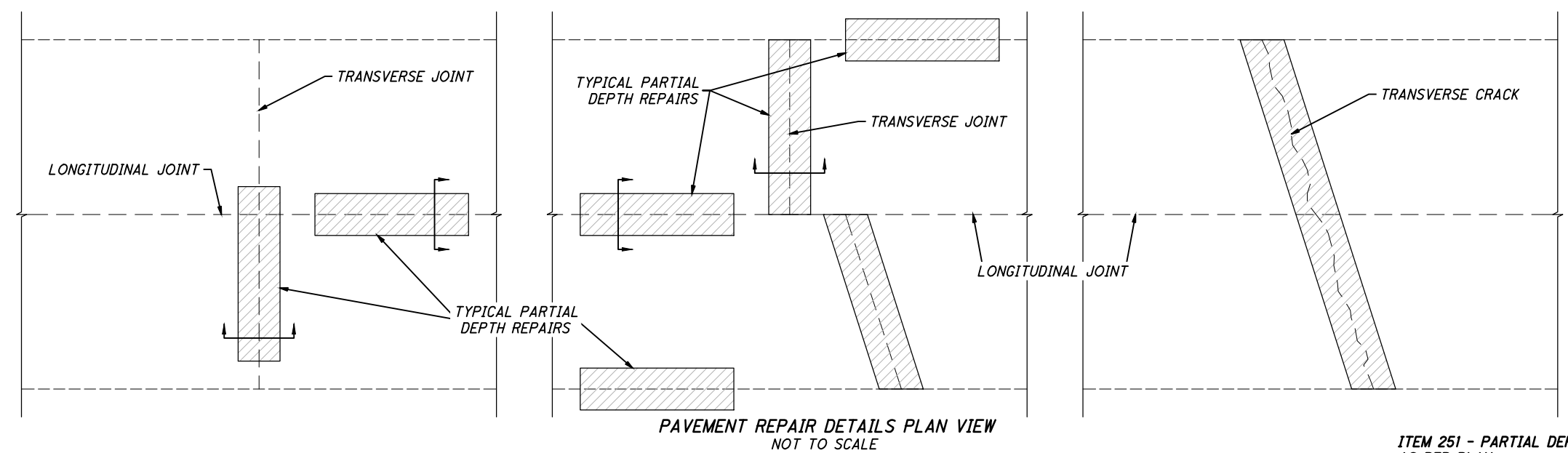
NOTES:

- FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.

CALCULATED
KJM
CHECKED
JTS

PAVEMENT REPAIR DETAILS

EAST 105TH STREET



PAVEMENT REPAIR DETAILS PLAN VIEW
NOT TO SCALE

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN

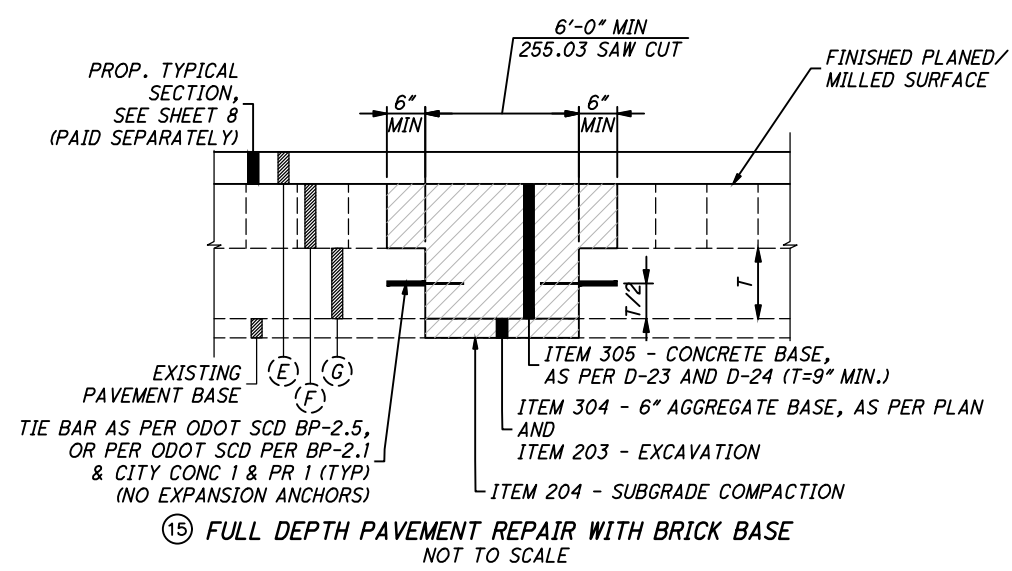
- PARTIAL DEPTH PAVEMENT REPAIRS SHALL CONSIST OF 3" ASPHALT OR CONCRETE REMOVAL AND REPLACEMENT WITH 3" OF ITEM 441, TYPE 2, (448) MATERIAL OR ITEM 301.
- PLACE AND COMPACT THE ABOVE ASPHALT CONCRETE REPLACEMENT MATERIALS (ITEM 301 AND ITEM 441) IN ONE OR MORE LIFTS IN ACCORDANCE WITH 252.04 OF THE SPECIFICATIONS.
- FOR ADDITIONAL NOTES, SEE SHEET 20.

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN

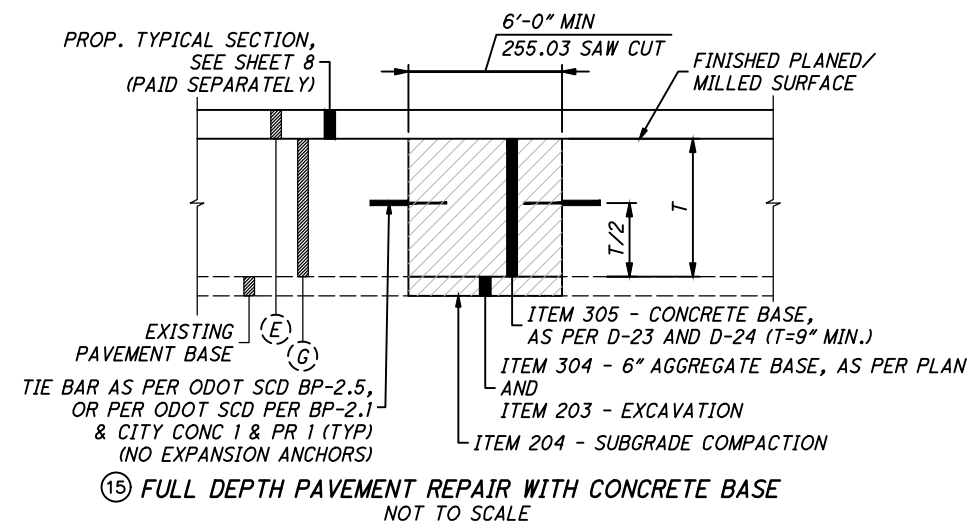
- FOR DOWEL SIZE AND SPACING, REFER ODOT SCD BP-2.1 & CITY OF CLEVELAND SCD CONC 1 & PR 1.
- REMOVE REMAINING ASPHALT AND CONCRETE/BRICK BASE UNDER ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN.
- FOR ADDITIONAL NOTES, SEE SHEET 21.

NOTES:

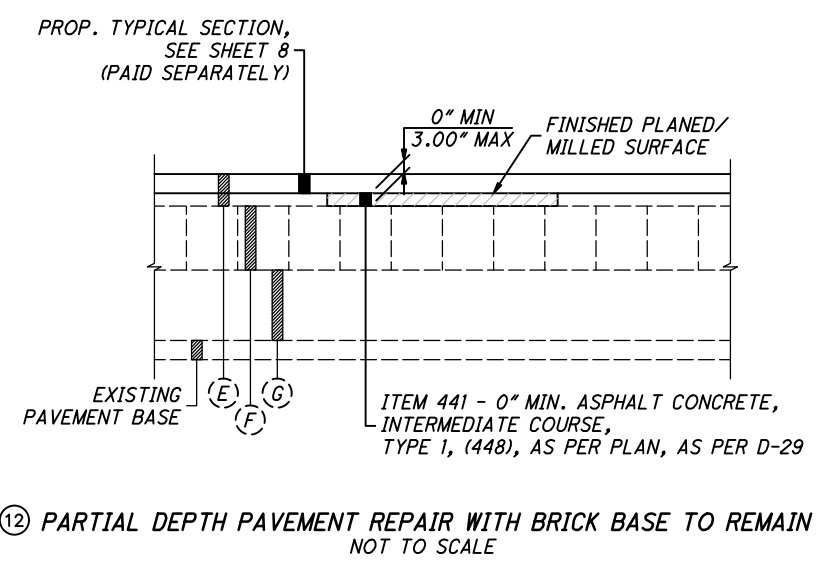
FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.



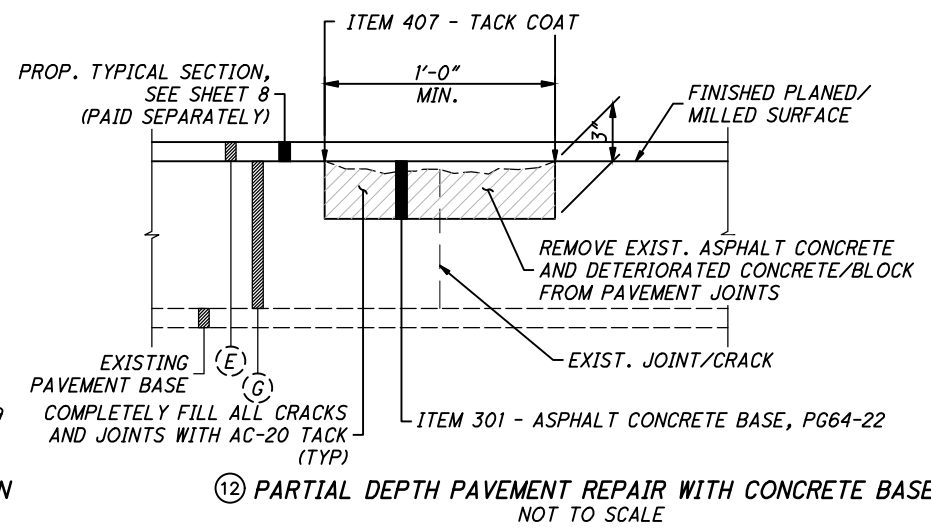
15 FULL DEPTH PAVEMENT REPAIR WITH BRICK BASE
NOT TO SCALE



15 FULL DEPTH PAVEMENT REPAIR WITH CONCRETE BASE
NOT TO SCALE

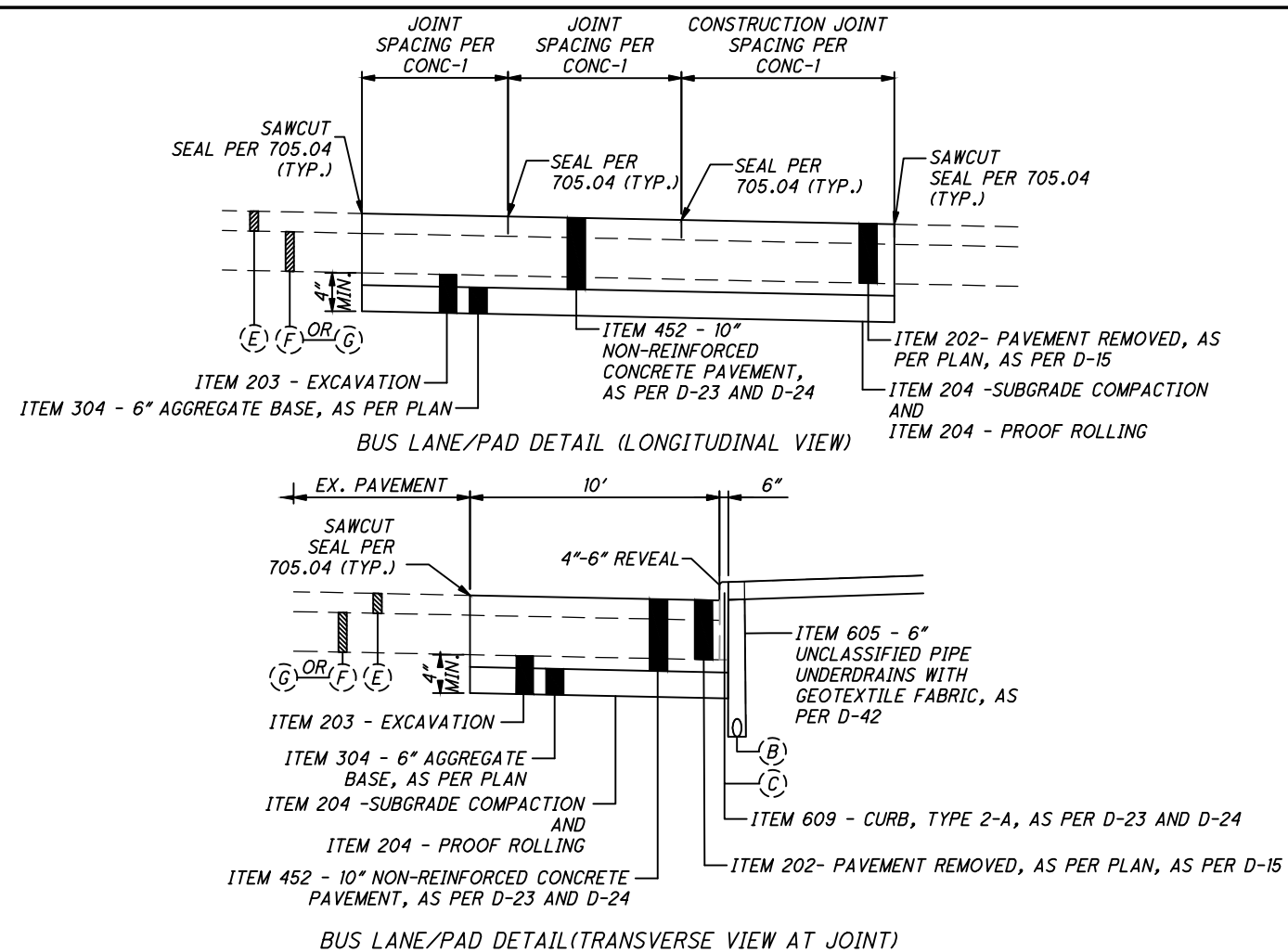


12 PARTIAL DEPTH PAVEMENT REPAIR WITH BRICK BASE TO REMAIN
NOT TO SCALE



12 PARTIAL DEPTH PAVEMENT REPAIR WITH CONCRETE BASE
NOT TO SCALE

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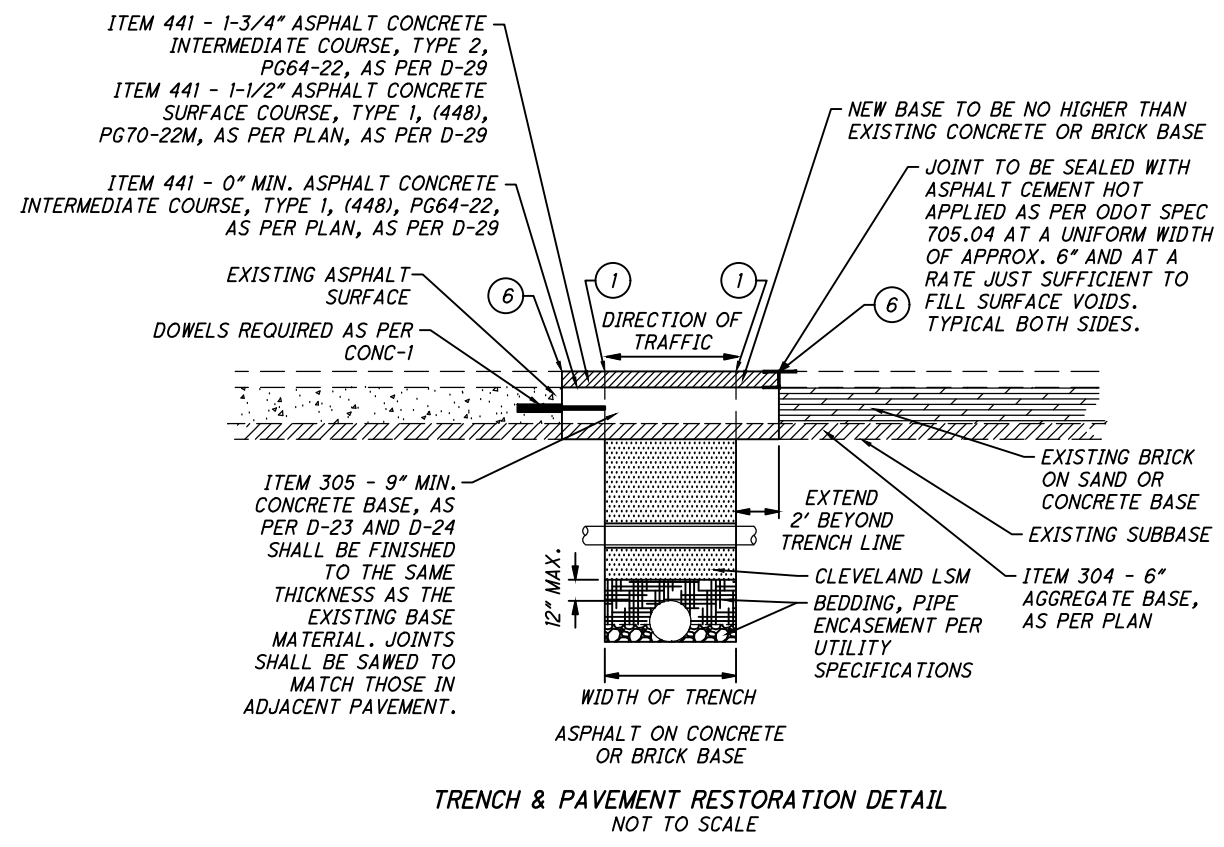
25 ITEM 452 - BUS PAD, AS PER PLAN
NOT TO SCALE

NOTES:

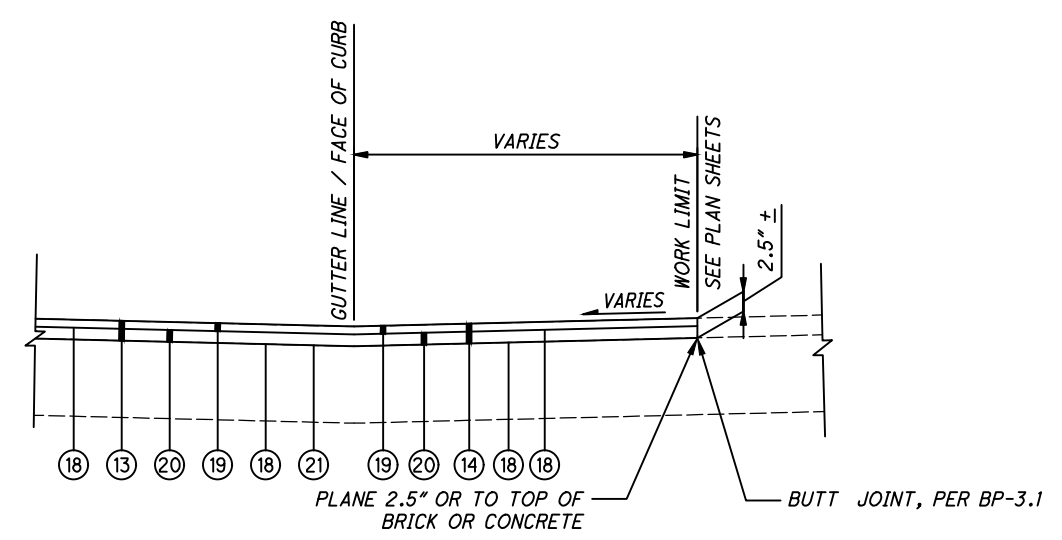
FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.

ALL BUS PAD CONSTRUCTION SHALL CONFORM TO CLEVELAND STANDARD CONSTRUCTION DRAWINGS CONC-1 AND PR-1, EXCEPT WHERE MODIFIED HEREIN.

PROPOSED CONCRETE BUS PAD (LOCATIONS AS SHOWN ON PLANS)



- TRENCH & PAVEMENT RESTORATION SEQUENCE OF CONSTRUCTION**
- ① PERFORM INITIAL FULL DEPTH PAVEMENT SAWCUTS EQUAL TO OR GREATER THAN PIPE SIZE PLUS ONE FOOT ON EACH SIDE OF PIPE.
 - ② REMOVE PAVEMENT & EXCAVATE TO PIPE DEPTH.
 - ③ PLACE PIPE w/OWNER SPECIFIED BEDDING UP TO 12" ABOVE TOP OF PIPE.
 - ④ PLACE LSM
 - ⑤ PLACE 304 AGGREGATE BASE.
 - ⑥ PERFORM 2 FT OVERCUT (SECOND SAWCUT OPERATION) ON EACH SIDE OF TRENCH.
 - ⑦ COMPACT SUBBASE.
 - ⑧ PLACE HOOK BOLTS OR DOWEL BARS AS REQUIRED.
 - ⑨ PLACE PAVEMENT.
 - ⑩ PLACE ASPHALT IN LIFTS.
 - ⑪ SEAL ASPHALT JOINTS.



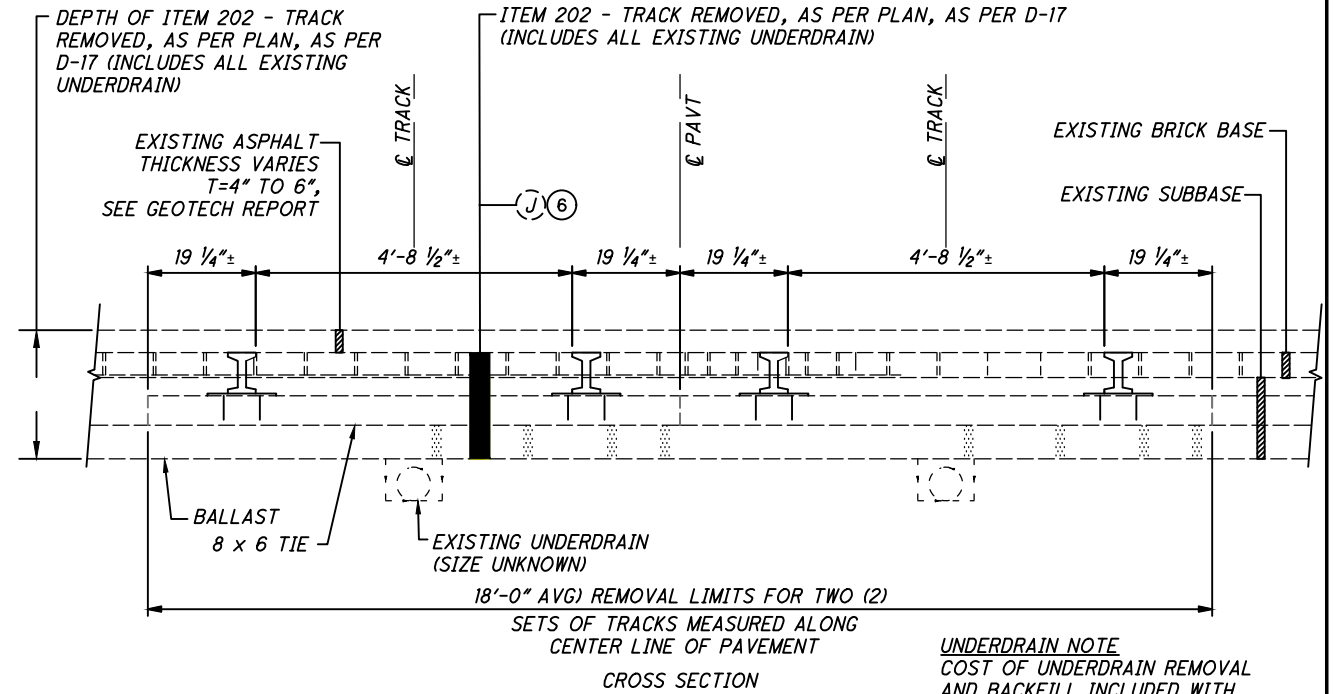
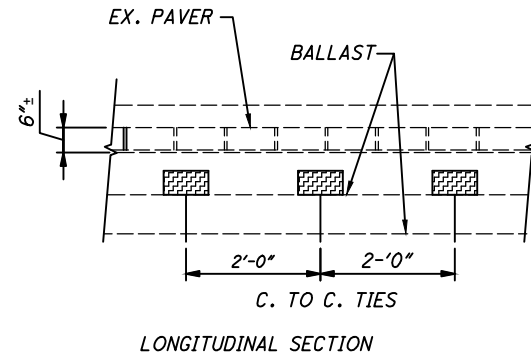
NOTES:

FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.

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ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17

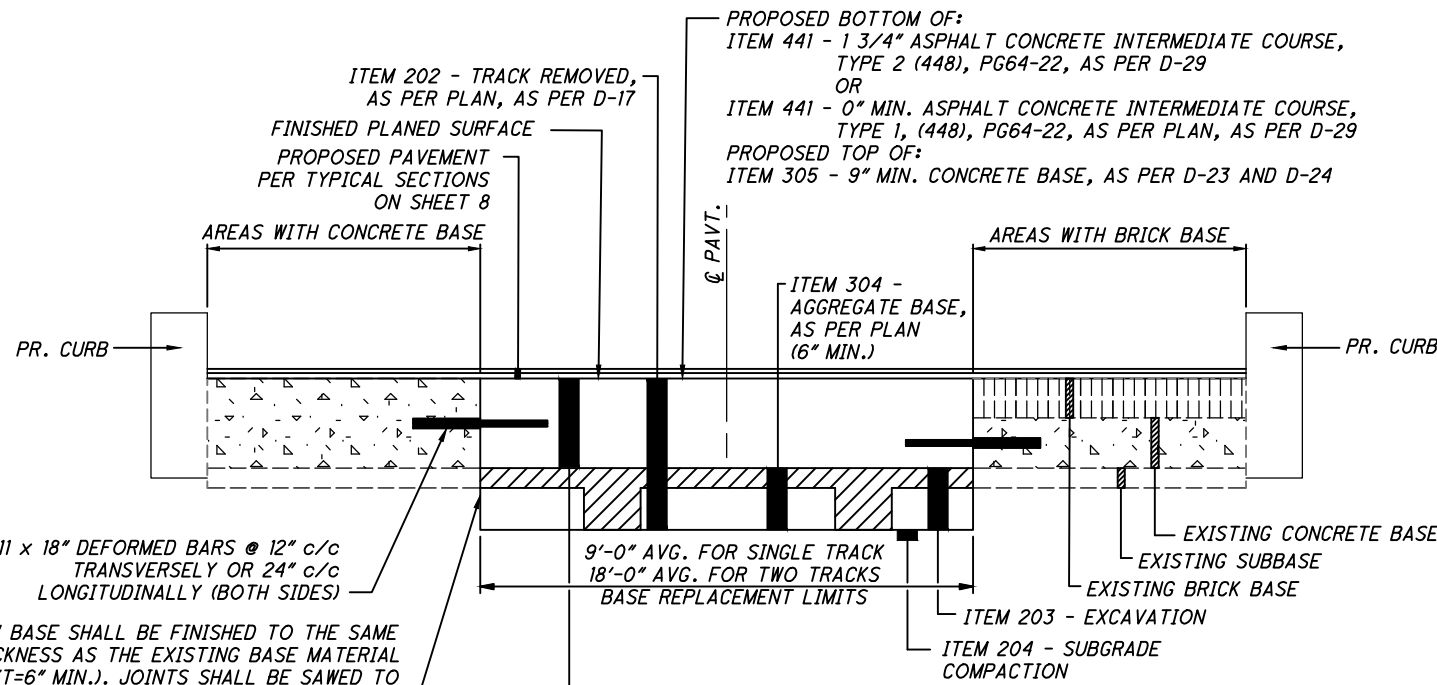
1. TRENCH WIDTH, COMPOSITION AND THICKNESS ARE FROM RECORD DRAWINGS AND ARE APPROXIMATE ONLY.
2. TRACK INFORMATION SHOWN IS TAKEN FROM AVAILABLE RECORDS IN THE VICINITY OF THE PROJECT. THE DIMENSIONS SHOWN ARE FROM RECORD DRAWINGS AND ARE APPROXIMATE ONLY. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED. IT IS POSSIBLE THAT EXISTING BURIED STREETCAR TRACK WILL BE ENCOUNTERED WITHIN PROJECT LIMITS. THE EXACT LOCATION, LIMITS AND TYPE OF TRACK IS UNKNOWN BUT RECORDS INDICATE THAT TRACKS RAN ALONG EAST 105TH STREET AT ONE TIME.
3. THICKNESS OF EXISTING ASPHALT OVER TRACKS VARIES 4" TO 6", SEE GEOTECHNICAL EXPLORATION REPORT.
4. SEE SHEET 15 FOR ADDITIONAL NOTES.



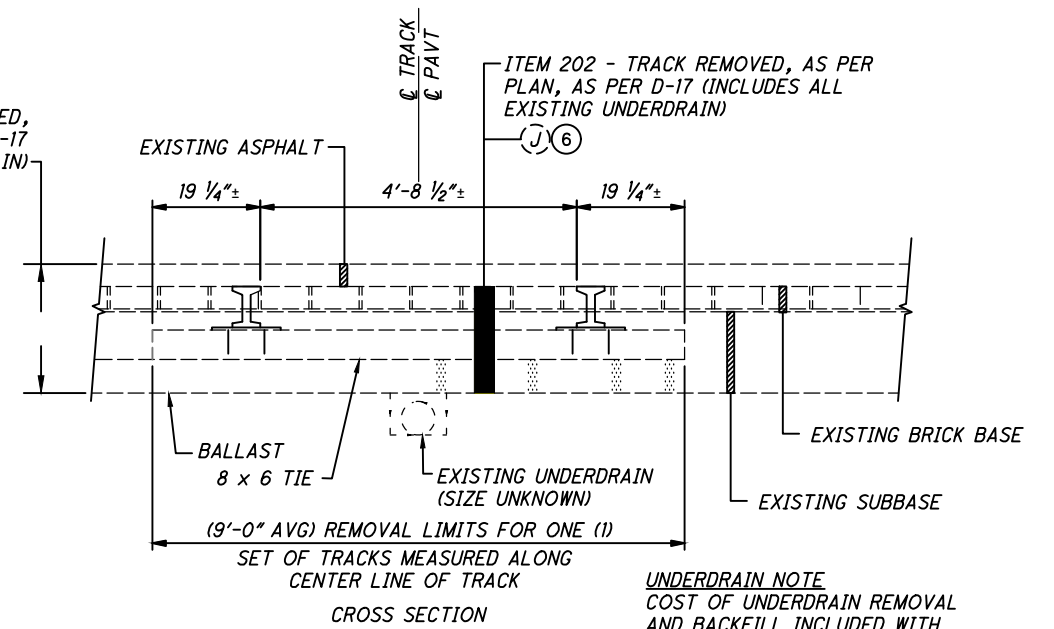
TYPICAL BURIED STREET CAR TRACK (TWO SETS)
SECTION APPLIES:

BEGIN TO SUPERIOR AVENUE
PIERPOINT AVENUE TO END

UNDERDRAIN NOTE
COST OF UNDERDRAIN REMOVAL AND BACKFILL INCLUDED WITH ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17.



DEPTH OF ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17 (INCLUDES ALL EXISTING UNDERDRAIN)



TYPICAL BURIED STREET CAR TRACK (ONE SET)
SECTION APPLIES:

SUPERIOR AVENUE TO PIERPOINT AVENUE

UNDERDRAIN NOTE
COST OF UNDERDRAIN REMOVAL AND BACKFILL INCLUDED WITH ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17.

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PAVEMENT REPAIR DETAILS

EAST 105TH STREET

GENERAL

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

SEWER
CITY OF CLEVELAND
DIVISION OF WATER POLLUTION CONTROL
ATTN.: ELIE RAMY
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
PHONE: (216) 664-2756

ELECTRIC
CITY OF CLEVELAND
DIVISION OF CLEVELAND PUBLIC POWER (MELP)
ATTN.: CHRIS HIRZEL
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
PHONE: (216) 664-3922 EXT. 115

NORTHEAST OHIO REGIONAL SEWER DISTRICT
ATTN.: MARY MACIEJOWSKI
3900 EUCLID AVENUE
CLEVELAND, OHIO 44115
PHONE: (216) 881-6600 EXT. 6466

STREETLIGHTING
ATTN.: BRYAN SHEPHERD
PHONE: (216) 664-6808

PUBLIC TRANSIT
GREATER CLEVELAND
REGIONAL TRANSIT AUTHORITY
ATTN.: BRIAN TEMMING
1240 WEST 6TH STREET
CLEVELAND, OHIO 44113-1331
PHONE: (216) 356-3270

ILLUMINATING COMPANY (CEI)
ATTN.: TED RADER
6896 MILLER ROAD, SUITE 110
BRECKSVILLE, OHIO 44141
PHONE: (440) 546-8738

WATER
CITY OF CLEVELAND
DIVISION OF WATER
ATTN.: FRED ROBERTS
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
PHONE: (216) 664-2444 EXT. 5590
EMERGENCY DISPATCH
PHONE: (216) 664-3060
INSPECTION
PHONE: (216) 664-2342

TELECOMMUNICATIONS
AT&T OHIO
ATTN.: JAMES JANIS
13630 LORAIN AVENUE, ROOM 350
CLEVELAND, OHIO 44111-3436
PHONE: (216) 476-6142

CHARTER COMMUNICATIONS
ATTN.: GARY NAUMANN
8179 DOW CIRCLE
STRONGSVILLE, OHIO 44136
PHONE: (216) 575-8016 EXT. 5033

TRAFFIC
CITY OF CLEVELAND
DEPARTMENT OF PUBLIC WORKS
DIVISION OF TRAFFIC ENGINEERING
ATTN.: ROBERT MAVEC
601 LAKESIDE AVENUE, ROOM 25
CLEVELAND, OHIO 44114-1067
PHONE: (216) 664-3194

CROWN CASTLE
ED DALY
15565 NEO PARKWAY
GARFIELD HEIGHTS, OHIO 44128
PHONE: (585) 397-5988

GAS
DOMINION ENERGY OHIO
ATTN.: KEVIN BIRT
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
PHONE: (330) 664-2781

EVERSTREAM
ATTN.: DAVID CHAPPELL
1228 EUCLID AVENUE, SUITE 250
CLEVELAND, OHIO 44115
PHONE: (330) 461-1083

WINDSTREAM
ATTN.: GEOFFREY HAMM
560 TERNES AVENUE
ELYRIA, OHIO 44035
PHONE: (440) 256-6133

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C. THE CITY DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE UTILITY INFORMATION SHOWN. THE CITY IS NOT LIABLE FOR UTILITIES OR CONNECTIONS NOT SHOWN ON THE PLANS OR ABANDONED UTILITIES OR CONNECTIONS. THE CONTRACTOR SHALL CUT OUT ANY ABANDONED UTILITIES AND ALL COSTS INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE BID ITEM FOR THAT WORK. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.

DOMINION ENERGY OHIO NOTES

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINIONS ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINE, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUER (330-478-3757).

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

DEFINITIONS AND TERMS

WHEREVER THERE APPEARS IN THE STANDARD SPECIFICATIONS (ODOT ITEMIZED CMS) SUPPLEMENTAL SPECIFICATIONS OR PROPOSAL NOTES, THE TERM "THE STATE", "DIRECTOR OF TRANSPORTATION", "DEPARTMENT", "DISTRICT CONSTRUCTION ENGINEER (DCE)", "ENGINEER", OR ANY OTHER TERM DESIGNATING ANY REPRESENTATIVE OR EMPLOYEE OF THE STATE OR ITS DEPARTMENT OF TRANSPORTATION, SUCH TERM SHALL, FOR THE PURPOSE OF THIS CONTRACT, BE CONSIDERED AND TAKEN AS MEANING AND DESIGNATING THE RESPECTIVE BOARD OFFICER OR EMPLOYEE OF THE CITY OF CLEVELAND WHOSE DUTY OR FUNCTION IT IS TO DEAL WITH THE SUBJECT MATTER IN CONNECTION WITH SUCH TERMS IS USED AND SPECIFICALLY:

THE STATE SHALL MEAN THE CITY OF CLEVELAND.
DEPARTMENT SHALL MEAN THE CLEVELAND DIVISION OF ENGINEERING AND CONSTRUCTION.
DIRECTOR SHALL MEAN THE CITY OF CLEVELAND DIRECTOR, MAYOR'S OFFICE OF CAPITAL PROJECTS, HIS DEPUTIES OR ANY ENGINEER DESIGNATED AS THE CITY ENGINEER'S REPRESENTATIVE.
DISTRICT CONSTRUCTION ENGINEER SHALL MEAN THE DULY AUTHORIZED AGENT OR REPRESENTATIVE ENGINEER OF THE CITY OF CLEVELAND DIRECTOR, MAYOR'S OFFICE OF CAPITAL PROJECTS, ACTING WITHIN THE SCOPE OF HIS/HER AUTHORITY FOR THE PURPOSES OF CONSTRUCTION ENGINEERING AND ADMINISTRATION OF THE CONTRACT.
LABORATORY SHALL MEAN THE LABORATORY APPROVED BY THE CITY OF CLEVELAND.

GENERAL PROVISIONS

ALL REFERENCES TO THE GENERAL PROVISIONS (SECTION 100) OF THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS (ODOT CMS) THAT ARE CITED IN THE ITEMIZED SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, PROPOSAL NOTES, PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS SHALL, FOR THE PURPOSE OF THIS CONTRACT, BE CONSIDERED AND TAKEN AS MEANING THE CITY OF CLEVELAND ENGINEER'S GENERAL PROVISIONS AS CONTAINED IN THE "CITY OF CLEVELAND ENGINEER'S SPECIFICATION BOOKLET" AND D-SPECIFICATIONS. THE SUBSECTION NUMBERS AND TOPICS USED IN THE CITY'S GENERAL PROVISIONS CORRESPOND TO THOSE CONTAINED IN THE ODOT CMS.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE CITY OF CLEVELAND AND THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION, JANUARY 1, 2019 EDITION SHALL GOVERN THIS PROJECT. THIS SHALL INCLUDE ANY CHANGES OR SUPPLEMENTAL SPECIFICATIONS. SHOULD A CONFLICT ARISE BETWEEN THESE OR OTHER PROJECT SPECIFICATIONS, THE CITY OF CLEVELAND STANDARDS SHALL TAKE PRECEDENCE.

LOCAL LAWS, ORDINANCES, AND REGULATIONS

IN ACCORDANCE WITH SECTION 107.01 OF THE GENERAL PROVISIONS, THE CONTRACTOR SHALL STAY FULLY INFORMED OF ALL LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS, AND DECREES THAT AFFECT THE WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBSERVE AND COMPLY WITH ALL SUCH LAWS, ORDINANCES, REGULATIONS, ORDERS, AND DECREES AT NO ADDITIONAL COST TO THE PROJECT/CITY.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 8:00 PM AND 7:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

CONTRACTOR WORK HOURS

THE DEFAULT CONTRACTOR WORK HOURS SHALL BE AN EIGHT-HOUR DAY, FIVE DAYS A WEEK FOR A MAXIMUM OF 40 HOURS, UNLESS A DIFFERENT WORK SCHEDULE HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE CITY.

THE CONTRACTOR SHALL RESTRICT HIS WORKING HOURS TO THOSE PERMITTED BY LOCAL OR OTHER APPLICABLE ORDINANCE, LAWS AND REGULATIONS UNLESS A WRITTEN VARIANCE HAS BEEN ACCEPTED FROM THE APPROPRIATE GOVERNING AUTHORITIES.

BASE MAPPING

BASE MAPPING BY CHAGRIN VALLEY ENGINEERING, LTD. WAS COMPLETED IN JULY 2018. THE CONTRACTOR SHALL VERIFY ALL EXISTING HORIZONTAL AND VERTICAL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON THE CLEVELAND REGIONAL GEODETIC SURVEY DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION, AND OPERATION (INCLUDING ERECTION, MAINTENANCE AND REMOVAL) OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS, EXCEPT WHERE OTHERWISE NOTED, SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS. IT IS ANTICIPATED THAT ALL WORK WILL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY ALONG EAST 105TH STREET, AS SHOWN ON THE PLANS.

AT VARIOUS LOCATIONS ALONG THE EAST 105TH STREET CORRIDOR PRIVATE PROPERTY FENCING AND LANDSCAPE RETAINING WALLS ARE LOCATED ADJACENT TO THE EXISTING RIGHT OF WAY AND SIDEWALK. THE FENCING SHALL NOT BE DISTURBED UNLESS DIRECTED BY THE ENGINEER. IF DAMAGED THE FENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

STATIONING AND LOCATIONS

STATIONING AND LOCATIONS INDICATED ON THESE PLANS ARE APPROXIMATE. ALL LOCATIONS AND ITEMS CALLED OUT BY STATION ARE SUBJECT TO ADJUSTMENT IN THE FIELD "AS DIRECTED BY THE ENGINEER" AT NO ADDITIONAL COST.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN DEVELOPED FROM SITE MEASUREMENTS, PAVEMENT CORES AND RECORD PLANS AND ARE BELIEVED TO REPRESENT THE WIDTH AND COMPOSITION OF THE EXISTING PAVEMENT, BUT THE CITY OF CLEVELAND DOES NOT GUARANTEE THE ACCURACY OF SAME. SIDE ROAD PAVEMENT TYPES MAY DIFFER, BUT ALL PAVEMENT REMOVAL WILL BE PAID FOR UNDER ITEM 202 - PAVEMENT REMOVED, AS PER PLAN, AS PER D-15.

ITEM SPECIAL - AS-BUILT RECORD DRAWINGS, AS PER D-77

A FULL SIZE SET OF AS-BUILT FIELD RECORD PLANS SHALL BE KEPT UP TO DATE IN THE FIELD OFFICE BY THE CONTRACTOR. DETAILS, LOCATIONS AND DIMENSIONS OF FIELD CHANGES SHALL BE RECORDED IN THESE PLANS BY THE CONTRACTOR'S PERSONNEL. THIS SET WILL BE SUBMITTED TO THE CITY 30 DAYS FROM THE DATE OF SUBSTANTIAL COMPLETION. FAILURE TO COMPLY: LIQUIDATED DAMAGES WILL BE ASSESSED FOR FAILURE TO COMPLY AT \$600.00 PER DAY IN CONFORMANCE WITH PROJECT MANUAL CONDITIONS.

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GENERAL NOTES

EAST 105TH STREET

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GENERAL (CONTINUED)

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES

AT PROJECT LOCATIONS WHERE THE CONTRACTOR IS WORKING ADJACENT TO PROPERTY OR SERVICES OF UTILITY COMPANIES SUCH AS, BUT NOT LIMITED TO, POWER, TELECOMMUNICATIONS, GAS, ETC. WORK SHALL NOT COMMENCE UNTIL ARRANGEMENTS FOR PROPER PROTECTION OF SUCH FACILITIES HAVE BEEN MADE, AS DIRECTED IN SECTION 107 OF THE ODOT CMS.

ADDITIONAL COORDINATION

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCRTA) - AT SEVERAL LOCATIONS ALONG THE CORRIDOR (AS NOTED ON THE PLANS) GCRTA HAS BUS SHELTERS THAT WILL NEED TO BE REMOVED AND REINSTALLED. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT BRIAN TEMMING (216-356-3270) AT GCRTA TO COORDINATE THIS OPERATION. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO GCRTA FOURTEEN (14) DAYS PRIOR TO ANY CONSTRUCTION THAT WILL AFFECT NEARBY BUS STOPS OR SERVICE. GCRTA WILL REMOVE AND REINSTALL ALL BUS SHELTERS ALONG THE CORRIDOR. UPON COMPLETION OF WORK IN THESE AREAS THE CONTRACTOR SHALL CONTACT BRIAN TEMMING AGAIN TO ADVISE HIM THAT REINSTALLATION CAN BEGIN. THE CONTRACTOR MAY NOT REMOVE ANY BUS STOP SIGNS WITHOUT PRIOR AUTHORIZATION FROM GCRTA. THE CONTRACTOR SHALL NOTIFY GCRTA AT LEAST FIVE (5) BUSINESS DAYS IN ADVANCE OF CONSTRUCTION COMPLETION SO THAT PERMANENT BUS STOP SIGNS CAN BE REINSTALLED BY GCRTA.

UNITED STATES POSTAL SERVICE (USPS) - ON THE WEST SIDE OF EAST 105TH STREET BETWEEN ASHBURY AVENUE AND WADE PARK AVENUE AND THE SOUTHEAST CORNER OF THE EAST 105TH STREET AND HAMPDEN AVENUE INTERSECTION THE USPS CURRENTLY OWNS AND OPERATES A STANDARD MAIL COLLECTION BOX (BLUE BOX). THE CONTRACTOR WILL NEED TO COORDINATE THE REMOVAL AND REINSTALLATION OF THIS COLLECTION BOX WITH THE USPS NORTHERN OHIO CONSUMER AFFAIRS DEPARTMENT AT 216-433-4416. USPS WILL GIVE THE PUBLIC 30 DAYS NOTICES PRIOR TO RELOCATING THE MAIL BOX, THE CONTRACTOR IS ADVISED TO CONTACT USPS 60 DAYS PRIOR TO CONSTRUCTION. UPON COMPLETION OF WORK IN THIS AREA THE CONTRACTOR SHALL CONTACT USPS AGAIN TO ADVISE THEM THAT REINSTALLATION CAN BEGIN.

AT&T - THERE IS AN AT&T PAY TELEPHONE ON THE SOUTHEAST CORNER OF EAST 105TH STREET AND SUPERIOR AVENUE THAT WILL REQUIRE REMOVAL PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OR RELOCATION WITH JAMES JANIS (216-476-6142) AT AT&T PRIOR TO THE START OF CONSTRUCTION.

COOPERATION BETWEEN CONTRACTORS

IT IS ANTICIPATED THAT OTHER CONTRACTORS WILL BE WORKING ON PROJECTS ADJACENT TO OR WITHIN THE LIMITS OF THIS PROJECT, EITHER FOR THE CITY OR FOR OTHER PUBLIC AGENCIES. THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS OPERATIONS, INCLUDING PROVISIONS FOR THE MAINTENANCE OF TRAFFIC, WITH THE CONTRACTORS OF OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THIS CONTRACT INCLUDING WPC, NEORS, CWD, DOMINION ENERGY OHIO GAS COMPANY, CPP, CEI, AT&T, CHARTER COMMUNICATIONS, CENTURYLINK, GCRTA, ODOT CONTRACTORS, ETC.

PROJECT PROGRESS MEETINGS

PROGRESS MEETINGS WILL BE HELD AT LEAST EVERY TWO (2) WEEKS AT THE PROJECT OFFICE OR OTHER LOCATION DESIGNATED BY THE CONSTRUCTION ENGINEER, AND WILL BE ATTENDED BY THE CITY AND THE CONTRACTOR DECISION-MAKING PERSONNEL.

THE PURPOSE OF THESE MEETINGS IS TO DISCUSS CRITICAL OPERATIONS AND POTENTIAL PROBLEMS. ALSO, THE CONTRACTOR WILL CONFORM THE NUMBER AND DURATION OF WORK SHIFTS, NUMBER OF WORK CREWS, AND SPECIFIC PORTIONS OF THE WORK TO BE PERFORMED DURING THE FOLLOWING WEEKS.

THESE MEETINGS CAN ONLY BE WAIVED BY THE PROJECT ENGINEER.

TRASH CANS

THE CONTRACTOR SHALL NOTIFY THE CITY WASTE COLLECTION DIVISION FOR THE REMOVAL OF EXISTING TRASH RECEPTACLES PRIOR TO THE BEGINNING OF CONSTRUCTION. UPON COMPLETION OF WORK IN THIS AREA THE CONTRACTOR SHALL CONTACT THE CITY WASTE COLLECTION DIVISION AGAIN TO ADVISE THEM THAT REINSTALLATION CAN BEGIN. ALL COORDINATION RELATED TO THE REMOVAL AND RESETTING OF THE PUBLIC TRASH CANS IS THE RESPONSIBILITY OF THE CONTRACTOR.

ITEM SPECIAL - PROJECT SIGNS, AS PER C-11

THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN PROJECT SIGNS ON THE PROJECT THROUGH COMPLETION. THE PROJECT SIGNS SHALL CONFORM TO SECTION C-11 OF THE DOCUMENTS.

ITEM SPECIAL - PROJECT SIGNS, AS PER C-11 2 EACH

WATER SUPPLY

WATER SUPPLY WILL BE SUPPLIED TO THE CONTRACTOR AT THE NEAREST HYDRANT. THE COST OF THE WATER SUPPLY SHALL BE BORNE BY THE CONTRACTOR UNDER THE VARIOUS PAY ITEMS FOR THIS PROJECT, AND NO SEPARATE PAYMENT SHALL BE MADE. THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMIT FROM THE CITY OF CLEVELAND DIVISION OF WATER.

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE APPROVED STANDARD TIGHT HOSE AND FITTINGS WITH WHICH TO MAKE CONNECTIONS TO HYDRANTS AND OUTLETS. NO IMPROPER, WASTEFUL OR UNDUE USE OF WATER WILL BE PERMITTED.

TESTING OF CONSTRUCTION MATERIALS, AS PER D-73

SECTION D-73 OF THE TECHNICAL SPECIFICATION PROVIDES INFORMATION REGARDING TESTING REQUIREMENTS FOR MATERIALS FURNISHED AND INSTALLED ON THIS PROJECT AS WELL AS TESTING RATES. THE UNIT PRICE BID FOR PERFORMANCE OF THESE TESTS SHALL INCLUDE ANY PREMIUM TIME NECESSARY TO PERFORM WORK ON HOLIDAYS, WEEKENDS, AND/OR OVERNIGHT.

ASPHALT PAVING CONTRACTOR SHALL PERFORM ALL ASPHALT COMPACTION TESTING THROUGH THE USE OF AN INDEPENDENT TESTING AGENCY. THE INDEPENDENT TESTING AGENCY SHALL BE APPROVED BY THE CITY. ALL MATERIAL, LABOR, AND EQUIPMENT TO PERFORM ASPHALT COMPACTION TESTING SHALL BE INCLUDED WITH THE UNIT COST BID FOR BASE INTERMEDIATE AND SURFACE COURSES.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - ASPHALT EXTRACTION TEST, AS PER PLAN, AS PER D-73 50 EACH

ITEM SPECIAL - THICKNESS OF COMPACTED ASPHALT TEST, AS PER PLAN, AS PER D-73 25 EACH

ITEM SPECIAL - CONCRETE TEST CYLINDERS (4 SPECIMENS PER SET), AS PER PLAN, AS PER D-73 10 EACH

ITEM SPECIAL - SUBSEQUENT SLUMP AND TEMPERATURE TEST, AS PER PLAN, AS PER D-73 5 EACH

ITEM SPECIAL - SUBSEQUENT AIR CONTENT AND TEMPERATURE TEST, AS PER PLAN, AS PER D-73 5 EACH

ITEM SPECIAL - FLEXURAL STRENGTH OF CONCRETE (BEAM) TEST, AS PER PLAN, AS PER D-73 5 EACH

ITEM SPECIAL - TECHNICIAN WITH NUCLEAR DENSITY METER (SUBGRADE/SUBBASE COMPACTION/ASPHALT), AS PER PLAN, AS PER D-73 60 HOURS

ITEM SPECIAL - PROCTOR TEST, AS PER PLAN, AS PER D-73 5 EACH

ROADWAY

ITEM 202 - POLE REMOVED, AS PER PLAN, AS PER D-18

THE WORK PERFORMED UNDER THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF EXISTING ABANDONED POLES AS SHOWN ON THE PLAN DRAWINGS OR AS DIRECTED BY THE ENGINEER AS PER ODOT ITEM 202.

ALL POLE FOUNDATIONS ENCOUNTERED SHALL BE REMOVED AS A PART OF THE APPLICABLE POLE REMOVAL ITEM. REMOVAL OF THE POLE FOUNDATION SHALL CONFORM TO ITEM 202, POLE REMOVED, AS PER PLAN. EXISTING POLE FOUNDATIONS SHALL BE REMOVED BELOW THE FINISHED SUBGRADE OR GROUND SURFACE AND THE REMAINING CAVITY BACKFILLED AS REQUIRED.

PAYMENT SHALL INCLUDE LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR REMOVAL OF POLE, POLE FOUNDATIONS, SWEEPS, BOLTS, INTERCONNECT MESSENGER WIRE, CABLE, HARDWARE, BACKFILL, AND ALL APPURTENANCES ASSOCIATED WITH THIS ITEM TO COMPLETE ABOVE GRADE AND BELOW GRADE REMOVAL OF THIS ITEM.

ITEM 202 - REMOVAL MISC.: BOLLARD REMOVAL AND DISPOSAL OR RESETTING

IN ADDITION TO THE GENERAL REQUIREMENTS OF ITEM 202, ITEM 202 - REMOVAL MISC.: BOLLARD REMOVAL AND DISPOSAL OR RESETTING SHALL INCLUDE THE COMPLETE REMOVAL OF THE 18 EXISTING BOLLARDS FOUND AT THE EAST 105TH STREET/SOMERSET AVENUE, EAST 105TH ST/PASEDNA AVENUE, EAST 105TH STREET/PARKGATE AVENUE AND EAST 105TH STREET/MASSIE AVENUE INTERSECTIONS. THIS SHALL ALSO CONSIST OF DISPOSAL OR RESETTING OF THE BOLLARDS AND REPAIR OF ANY DAMAGE CREATED BY THE REMOVAL, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR THE ABOVE REMOVAL AND DISPOSAL OR RESETTING HAS BEEN CARRIED FROM THE ROADWAY SUBSUMMARY TO THE GENERAL SUMMARY ON A PER EACH QUANTITY FOR ITEM 202 - REMOVAL MISC.: BOLLARD REMOVAL AND DISPOSAL OR RESETTING. PAYMENT FOR THE ABOVE DESCRIBED WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE COMPLETE REMOVAL AND DISPOSAL OR RESETTING OF THE EXISTING BOLLARDS.

ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17

IT IS ANTICIPATED THAT OLD STREETCAR TRACKS ARE BURIED UNDER THE EXISTING ASPHALT AND PORTIONS OF TRACK WILL REQUIRE REMOVAL AS PART OF THIS PROJECT. THE EXACT LOCATION, LIMITS AND TYPE OF TRACK IS UNKNOWN BUT RECORDS INDICATE THE TRACKS RUN ALONG EAST 105TH STREET FROM EAST BOULEVARD TO GREENLAWN AVENUE.

THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17 SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE FULL DEPTH OF TRACK, PER D-17, INCLUDING THE UNDERDRAIN BELOW THE TRACKS. THE LIMITS OF REMOVAL SHALL BE THE WIDTH OF THE RAILROAD TIE BY THE LENGTH OF UNDERDRAINS, TIES, ANY ANGLES OR OTHER HARDWARE, RAIL, BALLAST AND THE BASE, COMPLETE. IN THE AREAS OF PAVEMENT REMOVAL AND REPLACEMENT, THE REMOVAL OF ASPHALT WEARING COURSE IS CONSIDERED INCIDENTAL TO THE UNIT BID FOR THIS ITEM.

IN AREAS WHERE THE TRACK BASE IS BELOW THE PROPOSED ROADWAY SUBGRADE: THE PART OF THE TRACK WHICH IS BELOW THE PROPOSED ROADWAY SUBGRADE SHALL BE REMOVED AND REPLACED WITH ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN. ANY ADDITIONAL EXCAVATION, REMOVAL, DISPOSAL, AGGREGATE BASE OR UNDERDRAIN REMOVAL FROM THE BOTTOM OF THE ROADWAY SUBGRADE TO THE BOTTOM OF THE TRACK UNDERDRAIN SHALL BE PAID AT UNIT PRICE FOR ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17.

IN AREAS WHERE THE TRACK BASE IS ABOVE THE PROPOSED ROADWAY SUBGRADE: ANY ADDITIONAL EXCAVATION, REMOVAL, DISPOSAL OR AGGREGATE BASE REQUIRED BETWEEN THE BOTTOM OF THE TRACK BASE AND THE PROPOSED SUBGRADE WILL BE PAID FOR UNDER ITEM 203 - EXCAVATION.

SHEET 13 CONTAINS A DETAIL OF THE MOST PROBABLE TYPE OF TRACK, AS DETERMINED FROM RECORD DRAWINGS.

IN ADDITION TO THE LONGITUDINAL TRACKS, THERE MAY BE OTHER TRACKS RUNNING TO ABUTTING PROPERTIES OR SIDE STREETS, NO ADDITIONAL PAYMENT WILL BE MADE FOR THE REMOVAL OF THESE TRACKS.

THE FOLLOWING CONTINGENCY ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE:

ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17	100 SY
ITEM 203 - EXCAVATION	10 CY
ITEM 203 - EMBANKMENT	20 CY

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CALCULATED
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GENERAL NOTES

EAST 105TH STREET

ROADWAY (CONTINUED)

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 4 HOUR

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN, AS PER D-47

WORK UNDER THIS ITEM SHALL BE PERFORMED IN ACCORDANCE WITH ODOT CMS SECTION 623, AND SHALL ALSO INCLUDE THE FOLLOWING:

- A. CONTRACTOR SHALL PLACE LAYOUT STAKES AND PROVIDE SURVEYING TO HELP EVALUATE AND ESTABLISH THE ACCEPTABLE ROADWAY CROWN BASED ON CONDITIONS ENCOUNTERED IN THE FIELD.
- B. CONTRACTOR SHALL FURNISH DIMENSIONS, MEASUREMENT, SKETCHES, ETC. NECESSARY TO DETERMINE PAY QUANTITIES. THIS WILL MAINLY APPLY TO CHANGE ORDERS, QUANTITIES TO BE USED AS DIRECTED AND DISPUTED PAYMENT QUANTITIES OR CALCULATIONS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SURVEYING, CALCULATIONS AND/OR LAYOUT NOT FURNISHED IN THE BID DOCUMENTS TO COMPLY WITH THE ENGINEER'S DIRECTION. CONTRACTOR SHALL PROVIDE CUT SHEETS, TEMPORARY BENCH MARKS, AND LAYOUT (INCLUDING STATIONING AND HUBS) AS DIRECTED BY THE ENGINEER OR HIS REPRESENTATIVE. ALL STATIONING AND REFERENCE MARKS SHALL BE MAINTAINED AS DIRECTED BY THE ENGINEER OR HIS REPRESENTATIVE.
- D. THE CONTRACTOR SHALL USE COMPETENT PERSONNEL AND SUITABLE EQUIPMENT FOR THE LAYOUT WORK REQUIRED AND SHALL PROVIDE THAT IT BE DONE UNDER THE SUPERVISION OF A REGISTERED SURVEYOR, LICENSED TO PRACTICE IN THE STATE OF OHIO.
- E. CONTRACTOR SHALL VERIFY ALL EXISTING HORIZONTAL AND VERTICAL DIMENSIONS INCLUDING BENCHMARKS, HORIZONTAL CONTROL AND MONUMENT BOX THREE POINT REFERENCES PRIOR TO BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- F. THE CONTRACTOR SHALL REFERENCE ALL EXISTING ROADWAY AND RIGHT OF WAY MONUMENTS WITHIN THE CONSTRUCTION LIMITS TO POINTS AND/OR PERMANENT STRUCTURES OUTSIDE OF THE CONSTRUCTION LIMITS, SO AS TO BE ABLE TO RE-ESTABLISH THEIR POSITION AND REPLACE THE POINT. NO LESS THAN THREE SUCH REFERENCES PER MONUMENT ARE TO BE FURNISHED BY A REGISTERED SURVEYOR WHERE THE PLANS DO NOT PROVIDE, OR WHERE THE PLAN TIES ARE MISSING. THE REFERENCES WILL BE DOCUMENTED ON A FIELD BOOK PROVIDED BY THE CITY OF CLEVELAND SURVEY DEPARTMENT. THE DOCUMENTATION AND/OR REPLACEMENT WILL BE MADE UNDER SUPERVISION OF A LICENSED SURVEYOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE ABOVE DOCUMENTATION AND CARE OF THE FIELD BOOK.
- G. BENCHMARKS PROVIDED ON THE PLAN AND PROFILE SHEETS ARE TO BE USED BY THE CONTRACTOR FOR INITIAL PROJECT CONTROL SET UP ONLY. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SET ADDITIONAL BENCHMARKS THAT WILL NOT BE DISTURBED DURING CONSTRUCTION ACTIVITIES AND THAT WILL SUBSEQUENTLY BE USED FOR SURVEYING AND STAKING ACTIVITIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE SETTING OF ADDITIONAL BENCHMARKS.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE OF ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN, AS PER D-47.

ITEM SPECIAL - BACKFILL MATERIAL - FLOWABLE FILL, AS PER D-31

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - BACKFILL MATERIAL - FLOWABLE FILL, 250 CY AS PER D-31

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
10"	1	0	1
12"	1	0	1
15"	4	0	4
18"	1	0	1

ITEM 201 - CLEARING AND GRUBBING SHALL ALSO INCLUDE THE REMOVAL OF ANY LANDSCAPING FOUND ALONG THE CORRIDOR, AS DIRECTED BY THE ENGINEER. IT IS ANTICIPATED THAT THIS WILL INCLUDE THE REMOVAL OF ADDITIONAL TOPSOIL FOUND IN VARIOUS PLANTING BEDS, BUSHES AND OTHER PLANTS, RAILROAD TIES AND OTHER TIMBER EDGES, CONCRETE PARKING BLOCKS, ETC. AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE REMOVAL OF THE ABOVE LISTED ITEMS ALONG THE CORRIDOR.

ITEM 202 - PAVEMENT REMOVED FOR DRIVES, AS PER PLAN, AS PER D-15

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN, AS PER D-15

ITEM 202 - WALK REMOVED, AS PER PLAN

ITEM 202 - CURB REMOVED, AS PER PLAN

ALL REMOVAL ITEMS THAT IMPACT PAVEMENT, DRIVES, WALKS, CURB OR OTHER HARD SURFACES SHALL INCLUDE THE COST FOR FULL-DEPTH SAW CUTTING, AND ALL ADDITIONAL EQUIPMENT, MATERIAL AND LABOR TO PERFORM THE WORK. SAW CUTTING SHALL BE PERFORMED AT THE NEAREST EXISTING JOINT, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

WORK UNDER THESE ITEMS SHALL INCLUDE REMOVAL OF ASPHALT, CONCRETE, BRICK, GROUT, GRANITE OR SANDSTONE BLOCK, AND/OR OTHER MATERIALS TO THE TOP OF THE EXISTING CUSHION/SAND BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE FOR DIFFERENT TYPES OF MATERIAL. PAVEMENT CORING REPORTS ARE AVAILABLE TO THE CONTRACTOR AT THE CITY OF CLEVELAND, DIVISION OF ENGINEERING AND CONSTRUCTION.

ITEM 202 PAVEMENT REMOVED, AS PER PLAN, AS PER D-15, SHALL INCLUDE THE REMOVAL OF ALL DRIVING SURFACE AND OTHER PAVED SHOULDERS/PARKING AREAS. THE LIMITS FOR REMOVAL SHALL BE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ADDITIONAL REQUIREMENTS FOR ITEM 202 PAVEMENT REMOVED, AS PER PLAN, AS PER D-15 ARE PROVIDED IN SUPPLEMENTAL SPECIFICATION DS-11.

ITEM 202 CURB REMOVED, AS PER PLAN, SHALL INCLUDE THE REMOVAL OF EXISTING ADJACENT UNDERDRAINS. NO SEPARATE PAYMENT WILL BE MADE FOR UNDERDRAIN REMOVAL. THE LIMITS FOR REMOVAL SHALL BE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ITEM 202 REMOVAL MISC.: PAVEMENT REMOVED FOR DRIVES, AS PER PLAN, AS PER D-15 SHALL INCLUDE THE REMOVAL OF ALL DRIVEWAY APRONS AND THE PORTION OF THE WALK AT THE BACK OF THE APRON AS SHOWN ON THE DRIVEWAY SUB SUMMARY SHEET.

ITEM 202 WALK REMOVED, AS PER PLAN, SHALL INCLUDE THE REMOVAL OF ALL SIDEWALK MARKED FOR REMOVAL ON THE PLAN SHEETS WITHIN THE THE PROJECT LIMITS. IN SOME AREAS ALONG EAST 105TH STREET THE TREELAWN OR SPACE BEHIND THE EXISTING SIDEWALK HAS BEEN PAVED USING A VARIETY OF MATERIALS (CONCRETE, ASPHALT, AGGREGATE, PAVERS, BRICKS, STONES, ETC.) AND SHALL BE INCIDENTAL TO ITEM 202 WALK REMOVED, AS PER PLAN, UNLESS OTHERWISE QUANTIFIED. THE LIMITS FOR REMOVAL SHALL BE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIDE ROAD PAVEMENT REMOVAL

THE COMPOSITION OF SIDE ROAD PAVEMENTS REMOVED MAY DIFFER FROM THE TYPICAL SECTIONS. THE COST PER SQUARE YARD FOR ITEM 202 - PAVEMENT REMOVED, AS PER PLAN, AS PER D-15 REMOVED SHALL INCLUDE THE COMPLETE REMOVAL OF THESE PAVEMENTS AS SHOWN ON THE PLANS OR AS DIRECTED IN ACCORDANCE WITH ITEM 202 OR ITEM 203.

INTEGRAL CURB AND WALK REMOVED

INTEGRAL CONCRETE CURB REMOVED SHALL BE PAID FOR UNDER ITEM 202 CURB REMOVED, AS PER PLAN. ANY ADJACENT PAVEMENT BASE REMOVAL SHALL BE INCIDENTAL TO REMOVAL OF THE CURB.

ITEM 608 - 4" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24
ITEM 608 - 6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24
ITEM 608 - 8" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24

IN ADDITION TO THE REQUIREMENTS OF 608, D-23, D-24 AND D-76, THE FOLLOWING SHALL APPLY:

REQUIRED SUBBASE - ALL CONCRETE FOR ITEM 608 - 6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24 WILL HAVE 2" COMPACTED #10 LIMESTONE SCREENINGS INSTALLED AS PART OF THE SUBBASE BELOW THE CONCRETE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS SUBBASE SPECIFICATION.

SURFACE TEXTURE - WALK SHALL BE TEXTURED BY USE OF AN ACCEPTED BROOM SO AS TO PRODUCE A UNIFORM, GRITTY, TRANSVERSE TEXTURE, AFTER WHICH, THE CONTRACTOR IS REQUIRED TO RETRACE THE PREVIOUSLY FORMED JOINTS AND OUTSIDE EDGES OF THE WALK. WALK SHALL BE TOOL JOINTED.

TREE ROOTS - WHERE TREE ROOTS ARE ENCOUNTERED ALONG THE CORRIDOR THAT PROHIBIT THE CONTRACTOR FROM INSTALLING THE WALK IN THE SPECIFIED LOCATION THE CONTRACTOR SHALL PRUNE THE ROOTS AWAY FROM THE WALK LIMITS AS DESCRIBED IN THE "ROOT PRUNING" CITY OF CLEVELAND SPECIFICATION D-71.

CROSS SLOPE - A MINIMUM 4' WIDE ACCESSIBLE ROUTE WITH A MAXIMUM 2% CROSS SLOPE SHALL BE PROVIDED FOR ALL WALK REPLACEMENT AREAS. WALK SHALL MAINTAIN POSITIVE DRAINAGE TO THE STREET UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

AT ANY MAN DOOR LOCATIONS WHERE THE ADJACENT PROPOSED CONCRETE WALK CONSISTS OF A LOWER ELEVATION THAN THE EXISTING CONDITIONS, A CONCRETE STEP SHALL BE FORMED TO PROVIDE BUILDING ACCESS.

THE COST OF THE MATERIAL, LABOR AND EQUIPMENT ASSOCIATED WITH THE ABOVE WORK IS INCLUDED IN THE CONTRACT UNIT PRICE BID.

ITEM SPECIAL - UNDERCUTTING SUBGRADE AND SUBBASE, AS PER PLAN, AS PER D-16

WHERE SOFT SUBGRADE IS ENCOUNTERED, DUE TO NO FAULT OR NEGLIGENCE OF THE CONTRACTOR, THE UNSTABLE MATERIAL SHALL BE EXCAVATED TO THE DEPTH APPROVED BY THE ENGINEER, AND DISPOSED OF IN ACCORDANCE WITH D-16 AND 203.05. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SITE DRAINAGE TO ENSURE THAT THE SUBGRADE DOES NOT BECOME SATURATED. THIS MAY INCLUDE THE NEED TO PROVIDE SUMP AND PUMPS IF SUFFICIENT OUTLETS ARE NOT AVAILABLE FOR STORMWATER DRAINAGE. THE UNDERCUT SUBGRADE SHALL BE REPLACED WITH NO. 1'S AND 2'S (PER TABLE 703.01-1 AASHTO M 43), CHOKED WITH ITEM 304, AND PLACED AND COMPACTED IN ACCORDANCE WITH ITEM 304. THE AREA SHALL BE PROOF ROLLED TO DETERMINE IF ADEQUATE STABILIZATION WAS ACHIEVED.

GEOTEXTILE FABRIC, TYPE D, 712.09 SHALL BE REQUIRED AT THE UNDERCUT DEPTHS BEFORE PLACING THE ABOVE STONE. PAYMENT FOR GEOTEXTILE FABRIC, TYPE D, 712.09 SHALL BE PER SY AND SHALL BE ITEMIZED SEPARATELY.

AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL CONSTRUCT AN AGGREGATE DRAIN 1 FT BY 1 FT WITH NO. 3 STONE IN FABRIC SOCK, TO BE PLACED AT THE APPROXIMATE LOW POINT OF STABILIZED AREAS TO DISCHARGE DRAINAGE INTO THE UNDERDRAIN AGGREGATE. PAYMENT FOR THE AGGREGATE DRAIN SHALL INCLUDE ALL EQUIPMENT, LABOR AND MATERIAL COMPLETE IN PLACE. PAYMENT FOR THE AGGREGATE DRAIN SHALL BE PER FT AND SHALL BE ITEMIZED SEPARATELY.

WHERE SOFT SUBGRADE IS DUE TO THE FAILURE, NEGLIGENCE OR ANY OTHER FAULT OF THE CONTRACTOR, THE UNSTABLE CONDITION SHALL BE CORRECTED AS OUTLINED ABOVE AT NO ADDITIONAL EXPENSE TO THE PROJECT.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL EXCAVATION, EMBANKMENT, AGGREGATE AND ADDITIONAL PROOF ROLLING, AND SHALL BE PAID FOR AT THE BID UNIT PRICE PER CUBIC YARD FOR ITEM 204 - EXCAVATION OF SUBGRADE, AS PER PLAN, AS PER D-16.

THE FOLLOWING CONTINGENCY QUANTITIES ARE TO BE USED FOR AREAS DETERMINED AFTER PROOF ROLLING AND FIELD TESTS, AS NOT ACHIEVING THE PROPER COMPACTION REQUIREMENTS:

ITEM SPECIAL - UNDERCUTTING SUBGRADE AND SUBBASE, AS PER PLAN, AS PER D-16 240 CY
ITEM 204 - GEOTEXTILE FABRIC, TYPE D, 712.09 475 SY
ITEM 605 - AGGREGATE DRAINS 100 FT

CALCULATED
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GENERAL NOTES

EAST 105TH STREET

ROADWAY (CONTINUED)

ITEM 608 - CURB RAMP, AS PER PLAN, AS PER D-75

CURB RAMPS SHALL BE INSTALLED PER THE CITY OF CLEVELAND'S STANDARD CONSTRUCTION DRAWING CR-1 AND PER SPECIFICATION D-75 (PROVIDED IN THE BID PACKET), THE TYPE OF CURB RAMP ESTIMATED HAS BEEN INDICATED ON SHEET 62.

NO SEPARATE PAYMENT SHALL BE MADE FOR TACTILE STRIPS AND ADDITIONAL CONCRETE REQUIRED TO MEET THE 8" MINIMUM THICKNESS REQUIREMENT SET FORTH ON CLEVELAND STANDARD CONSTRUCTION DRAWING CR-1.

REMOVAL OF EXISTING WALK AND PLACEMENT OF 4-INCH OR 6-INCH WALK AND WALK THROUGH RAMP AREAS ARE PAID UNDER SEPARATE ITEMS. PAYMENT SHALL BE MADE PER EACH CORNER COMPLETE AND INCLUDE LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM EXCAVATION, PLACEMENT OF 2" SCREENING BED, RAMP LAYOUT AND PLACEMENT OF TRUNCATED DOME TACTILE STRIP LOCATED WITHIN THE CORNER OR MID-BLOCK CROSSING AS SPECIFIED IN D-75.

ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN, AS PER D-40

WHERE EXISTING MONUMENT BOXES ARE TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL REMOVE THE EXISTING MONUMENT ASSEMBLY AND REPLACE IT WITH A CITY OF CLEVELAND MONUMENT ASSEMBLY AS DETAILED ON THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING MB-1C. PAYMENT FOR THE ABOVE SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN, AS PER D-40.

CARE AND PROTECTIVE MEASURES SHALL BE EMPLOYED BY THE CONTRACTOR TO AVOID DAMAGE OR DISPLACEMENT OF THE EXISTING MONUMENT DURING THE OPERATIONS IN THE PROXIMITY. WHERE PAVEMENT REMOVAL IS NECESSARY ADJACENT TO A MONUMENT BOX, SAW-CUTTING OF THE ADJACENT PAVEMENT WILL BE REQUIRED TO HELP PRESERVE THE MONUMENT. THOSE EXISTING CLEVELAND REGIONAL GEODETIC SURVEY (C.R.G.S.) MONUMENT ASSEMBLIES DISPLACED OR DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED WITH C.R.G.S. MONUMENT ASSEMBLY UNDER THE SUPERVISION A PROFESSIONAL SURVEYOR LICENSED TO PRACTICE IN THE STATE OF OHIO.

THOSE EXISTING CITY OF CLEVELAND ASSEMBLIES DISPLACED OR DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED WITH A CITY OF CLEVELAND ASSEMBLY UNDER THE SUPERVISION OF AN OHIO LICENSED SURVEYOR. ALL WORK WILL BE AT THE CONTRACTOR'S EXPENSE.

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN, AS PER D-41

WHERE MONUMENT BOXES ARE BOTH SUITABLE FOR RE-USE AND CONFORM TO CITY OF CLEVELAND STANDARD DRAWING MB-1C, THEY SHALL BE ADJUSTED TO GRADE AS REQUIRED AND SPECIFIED. SUCH ADJUSTMENTS SHALL BE PERFORMED BY THE CONTRACTOR'S USE OF COMPETENT PERSONNEL AND SUITABLE EQUIPMENT WITH SAID WORK DONE UNDER THE SUPERVISION OF A PROFESSIONAL SURVEYOR, LICENSED TO PRACTICE IN THE STATE OF OHIO. WHERE PAVEMENT REMOVAL IS NECESSARY ADJACENT TO A MONUMENT BOX, SAW-CUTTING OF THE ADJACENT PAVEMENT WILL BE REQUIRED TO HELP PRESERVE THE MONUMENT.

ALL MONUMENTS EXISTING AND PROPOSED MUST BE REFERENCED PRIOR TO CONSTRUCTION. A MINIMUM OF 3 POINTS OF REFERENCE PER MONUMENT MUST BE USED AND MUST BE LOCATED OUTSIDE OF THE CONSTRUCTION ZONE WORK AREA.

ALL MONUMENTS MUST BE REFERENCED PRIOR TO ADJUSTING BOX TO GRADE OR REPLACING CASTING. ALL MONUMENTS ADJUSTED OR REPLACED SHALL BE AS PER THE CLEVELAND MONUMENT BOX AS DETAILED ON CITY OF CLEVELAND STANDARD DRAWINGS MB-1C, SET TO PROPER GRADE.

IN ADDITION TO ADJUSTING THE CASTING VERTICALLY THIS PAY ITEM SHALL INCLUDE CENTERING THE CASTING OVER THE EXISTING IRON PIN OR STONE. THE ENTIRE MONUMENT BOX CASTING SHALL BE ADJUSTED TO GRADE AND NO INSERTS OR ADJUSTING RINGS WILL BE PERMITTED.

CARE AND PROTECTIVE MEASURES SHALL BE EMPLOYED BY THE CONTRACTOR TO AVOID DAMAGE OR DISPLACEMENT OF THE EXISTING MONUMENT DURING THE MONUMENT BOX ADJUSTMENT OR REPLACEMENT OPERATIONS AND ALL OTHER OPERATIONS IN THE PROXIMITY.

PRIOR TO THE BEGINNING OF WORK A COPY OF ALL SURVEY AND REFERENCE NOTES WILL BE SENT TO THE ATTENTION OF THE CHIEF SURVEYOR AT THE CITY OF CLEVELAND, MAYOR'S OFFICE OF CAPITAL PROJECTS, DIVISION OF ENGINEERING AND CONSTRUCTION, PLATS AND SURVEY, ROOM 518, CLEVELAND CITY HALL.

PAYMENT FOR THE ABOVE SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN, AS PER D-41.

ITEM 209 - LINEAR GRADING, EACH SIDE, AS PER PLAN

THIS ITEM OF WORK SHALL BE PERFORMED AS PER ODOT ITEM 209, LINEAR GRADING, EXCEPT AS MODIFIED HEREIN:

IN THE TREE LAWN AREA, BETWEEN THE EXISTING/PROPOSED SIDEWALK AND THE EXISTING/PROPOSED CURB, THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL SO THAT THE GROUND ELEVATION IS ONE QUARTER OF ONE INCH (1/4") BELOW THE ELEVATION OF A THEORETICAL PLANE PROJECTED FROM THE TOP OF THE EXISTING/PROPOSED SIDEWALK TO THE TOP OF THE EXISTING/PROPOSED CURB.

IN THE AREA BETWEEN THE RIGHT OF WAY AND THE BACK OF THE EXISTING/PROPOSED WALK, THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL SO THAT THE GROUND ELEVATION IS ONE QUARTER OF ONE INCH (1/4") BELOW THE ELEVATION OF A THEORETICAL PLANE PROJECTED FROM THE TOP OF THE EXISTING/PROPOSED SIDEWALK FOLLOWING THE NATURAL CONTOUR OF THE EXISTING GROUND.

PAYMENT FOR THIS ITEM OF WORK SHALL BE PER HUNDRED FOOT (100') STATION AS MEASURED ALONG THE CENTERLINE FOR BOTH THE LEFT AND RIGHT SIDE OF THE STREET. THIS MEASUREMENT INCLUDES THE AREA BETWEEN THE EXISTING/PROPOSED CURB AND EXISTING/PROPOSED SIDEWALK AND THE AREA BEHIND THE EXISTING/PROPOSED SIDEWALK.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND INCIDENTAL COSTS NECESSARY TO COMPLETE THE WORK, INCLUDING THE REMOVAL AND DISPOSAL OF MATERIALS DEEMED UNFIT FOR REUSE BY THE ENGINEER AND ADDITIONAL OR REPLACEMENT EMBANKMENT MATERIAL REGARDLESS OF THE SOURCE, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 209 - LINEAR GRADING, EACH SIDE, AS PER PLAN

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EROSION CONTROL

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN, AS PER D-66, D-67 AND D-68

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 653 - 4" TOPSOIL FURNISHED AND PLACED	189	CY
ITEM 659 - SOIL ANALYSIS TEST	1	EACH
ITEM 659 - SEEDING AND MULCHING, AS PER PLAN, AS PER D-66, D-67 AND D-68	1,704	SY
ITEM 659 - COMMERCIAL FERTILIZER, AS PER D-68	0.24	TON
ITEM 659 - LIME	0.35	ACRE
ITEM 659 - WATER FOR SEEDING, AS PER D-67	9	M GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT OF WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT OF WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

THE CONTRACTOR SHALL SUBMIT EVIDENCE TO THE ENGINEER WITHIN 21 DAYS OF THE NOTICE TO PROCEED IDENTIFYING THE SEED SOURCE, AND CERTIFYING THE SPECIFIED SEED HAS BEEN RESERVED AND/OR SECURED FOR USE ON THE PROJECT.

ITEM 832 - EROSION CONTROL, AS PER PLAN, AS PER D-22

SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL.

ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED HEREIN OR DIRECTED BY THE ENGINEER PER D-22 SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THESE CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR THE DEVELOPMENT, SUBMISSION, AND MEASURES NECESSARY FOR APPROVAL OF THE NOTICE OF INTENT (NOI) FORM INCLUDING PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED FOR TEMPORARY SEDIMENT AND EROSION CONTROL (TSEC) IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 832:

ITEM 832 - EROSION CONTROL, AS PER PLAN, AS PER D-22	LS
ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN	LS

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GENERAL NOTES

EAST 105TH STREET

DRAINAGE

CONSTRUCTION STANDARDS FOR SEWERS

- A. ALL SEWER CONSTRUCTION AND MATERIALS INCLUDED ON THIS PROJECT SHALL BE IN ACCORDANCE TO THE STANDARDS OF THE CITY OF CLEVELAND DIVISION OF WATER POLLUTION CONTROL.
- B. ALL PIPES 18" IN DIAMETER AND SMALLER SHALL BE VCP, C-700 EXTRA STRENGTH WITH PREMIUM JOINTS AS PER ODOT 706.08.
- C. ALL PIPES 21" IN DIAMETER AND LARGER SHALL BE RCP, CLASS 3 WITH PREMIUM JOINTS AS PER ODOT 706.02.
- D. ALL PIPES WITH LESS THAN 3' OF COVER SHALL BE DUCTILE IRON PIPE ANSI CLASS 52, WITH PUSH ON JOINTS AND FITTING.
- E. THE REPAIR OF ALL DISTURBED CITY BRICK SEWERS SHOULD BE COORDINATED WITH WPC ENGINEER.
- F. FOR THE SEWER CONNECTION REPAIR, THE FOLLOWING GUIDELINES SHALL BE USED:
 - a. REPAIR ALL DAMAGED SEWER CONNECTIONS IN KIND.
 - b. USE VCP FOR ALL REPAIRED/RELOCATED SEWER CONNECTIONS.
 - c. ALL SEWER REPAIRED/RELOCATED CONNECTIONS SHOULD BE LAID AT NO LESS THAN 1% GRADE.
 - d. THE MINIMUM SIZE FOR A SEWER CONNECTION SHOULD BE 6".
 - e. A MINIMUM COVER OF 3 FEET IS REQUIRED FOR ALL PROPOSED SEWER CONNECTIONS.
 - f. A 6" VCP TEST TEE MAY BE REQUIRED FOR A RELOCATED SEWER CONNECTION.
 - g. NO HORIZONTAL BENDS ARE ALLOWED FOR SEWER CONNECTIONS.

CLEVELAND WATER POLLUTION CONTROL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE DIVISION OF WATER POLLUTION CONTROL (WPC) PRIOR TO THE START OF CONSTRUCTION AT 216-664-2756.
- 2. THE CONTRACTOR IS REQUIRED TO SUBMIT SEWER SHOP DRAWINGS TO WPC PRIOR TO THE SEWER INSTALLATION. THE DRAWINGS SHOULD INCLUDE THE SEWER PIPES, MANHOLES, CATCH BASINS AND OTHER SEWER APPURTENANCES.
- 3. WPC WILL INSPECT THE CITY SEWER INSTALLATION.
- 4. THE PROPOSED CITY SEWERS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY WPC. ANY DEVIATIONS FROM THE APPROVED PLANS OR SPECIFICATIONS REQUIRE A NEW SUBMITTAL REFLECTING THE CHANGES. UPON REVIEW OF THE REVISED ITEMS, WPC WILL REISSUE A NEW APPROVAL. IT IS STRICTLY PROHIBITED TO CONSTRUCT ANY CITY SEWERS UNLESS THEY ARE APPROVED BY WPC.
- 5. UPON COMPLETION OF THE CITY SEWER INSTALLATION, THE CONTRACTOR IS REQUIRED TO SUBMIT AS-BUILT PLANS AND A VIDEO TAPED COPY OF THE NEW CITY SEWERS. WPC RESERVES THE RIGHT NOT TO APPROVE ANY CITY SEWER THAT DOES NOT MEET THE CITY REQUIREMENTS.
- 6. ALL EXISTING CITY CATCH BASIN CONNECTIONS SHOULD BE TELEVISED BY THE CONTRACTOR, AND INSPECTED AND APPROVED BY WPC INSPECTOR PRIOR TO THEIR REUSE.
- 7. THE DIVISION OF WATER POLLUTION CONTROL (WPC) WILL COLLECT ALL CITY SEWER CASTINGS INCLUDING CATCH BASIN FRAMES AND GRATES, AND MANHOLE FRAMES AND COVERS, FOR ALL EXISTING CATCH BASINS THAT NEED TO BE ABANDONED OR REMOVED AND EXISTING MANHOLE COVERS THAT NEED TO BE REPLACED. THE CONTRACTOR SHALL DESIGNATE A LOCATION WHERE ALL SEWER CASTINGS ARE TO BE STORED AND SHALL COORDINATE WITH WPC FOR THE COLLECTIONS OF ALL SEWER CASTINGS STORED IN THE DESIGNATED LOCATION.

WATER POLLUTION CONTROL

THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS AND A VIDEOTAPE COPY (PER D-37) OF THE STORM SEWERS WHERE NEW CATCH BASINS ARE BEING PLACED (FROM THE CATCH BASIN TO THE MAINLINE) TO THE CITY OF CLEVELAND, DIVISION OF WATER POLLUTION CONTROL.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIALS TO PERFORM THE REQUIRED WORK. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE SEWER WORK. NO SEPARATE PAY ITEM WILL BE MADE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

CONNECTIONS TO EXISTING UTILITIES

PRIOR TO THE INSTALLATION OF PROPOSED CONNECTIONS TO EXISTING FACILITIES THE CONTRACTOR SHALL LOCATE AND CONFIRM THE EXISTING LINE AND GRADE AT THE CONNECTION MATCHES THE PROPOSED PLAN ELEVATIONS. ANY DEVIATION FROM PLAN ELEVATIONS OR OTHER PLAN REVISIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONNECTION INSTALLATION.

PRIOR TO THE INSTALLATION OF PROPOSED CONNECTIONS THE CONTRACTOR SHALL CONFIRM CLEARANCES TO THE ADJACENT UNDERGROUND UTILITIES. A CONFLICT REQUIRING A PLAN REVISION SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONNECTION INSTALLATION.

PAYMENT FOR THESE OPERATIONS DESCRIBED IN THESE SPECIFICATIONS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE PERTINENT ODOT ITEM 611 CONDUITS.

SURFACE DRAINAGE CONTINGENCY

EVERY EFFORT HAS BEEN MADE TO PROVIDE FOR ADEQUATE CURB INLETS AND PIPE TO PROPERLY ACCOUNT FOR THE SURFACE DRAINAGE. IN THE EVENT THAT ISOLATED LOW AREAS DEVELOP DURING CONSTRUCTION OF THE PROJECT, THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 25 FT
ITEM 611 - CATCH BASIN, CITY OF CLEVELAND CB-1,
AS PER PLAN, AS PER D-34 1 EACH

ITEM 202 - PIPE REMOVED, 24" AND UNDER, AS PER PLAN

PIPE REMOVALS THAT OCCUR IN THE SAME TRENCH AS PROPOSED PIPE ARE INCIDENTAL TO THE PROPOSED PIPE AND NO SEPARATE PAYMENT SHALL BE MADE.

ITEM 611 - MANHOLE, MISC.: CITY OF CLEVELAND NO. 1

ITEM 611 - MANHOLE, MISC.: CITY OF CLEVELAND NO. 1 SHALL FOLLOW THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING MH-1 WITH THE EXCEPTION THAT THE BEND TO CONNECT THE STORM SEWER SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE. ALL INVERT ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE ORDERING MATERIAL.

ITEM SPECIAL - MISCELLANEOUS METAL (WPC), AS PER D-72

EXISTING CASTINGS ARE THE PROPERTY OF CLEVELAND WATER POLLUTION CONTROL (WPC). EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ELIE RAMY AT (216) 664-2756 TO DETERMINE THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL PROVIDED BY THE CONTRACTOR SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL - MISCELLANEOUS METAL (WPC), AS PER D-72 30,000 LB

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM 611 - 10" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32
ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32
ITEM 611 - 12" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN
ITEM 611 - 12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32
ITEM 611 - 15" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32

PIPE REMOVAL IS INCIDENTAL TO THE INSTALLATION OF NEW PIPE WHEN THE PROPOSED PIPE IS INSTALLED IN THE SAME TRENCH AS EXISTING.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

ADDITIONALLY, SOME EXISTING DRAINAGE INFORMATION SHOWN ON THESE PLANS IS FROM RECORD PLAN INFORMATION AND COULD NOT BE FIELD VERIFIED. PRIOR TO THE ORDERING OF ANY PRECAST MATERIALS, THE CONTRACTOR SHALL VERIFY AND RECORD THE DEPTHS OF THE EXISTING DRAINAGE STRUCTURES WHICH ARE BEING REMOVED AND REPLACED WITH NEW.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

DRAINAGE (CONTINUED)

ITEM 611 - CATCH BASIN, CITY OF CLEVELAND CB-1, ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39

ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE)

ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (DRAINAGE)

ALL MANHOLES, CATCH BASINS, WATER METER MANHOLES, VALVE BOXES AND TRAFFIC PULL BOXES SHALL BE BROUGHT TO PROPER GRADE BY THE CONTRACTOR BY ADJUSTING SAID CASTINGS WITH MORTAR, BRICK, OR STONE MASONRY AS MAY BE DIRECTED BY THE ENGINEER. NO ADJUSTING RINGS OR BANDS WILL BE PERMITTED. ALL MANHOLES AND CATCH BASINS ADJUSTED TO GRADE SHALL INCLUDE A NEW LID OR GRATE.

ADJUST OR RECONSTRUCT VAULTS/MANHOLE AS SHOWN IN THE PLANS AND AS PER D-39, ACCORDING TO ODOT ITEM 611. MANHOLES WHICH REQUIRE A CHANGE IN ELEVATION OF MORE THAN 12 INCHES IN THE POSITIVE DIRECTION OR 6 INCHES IN THE NEGATIVE DIRECTION SHALL BE PAID FOR UNDER ITEM - 611 VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN. MANHOLES WHICH FALL WITHIN THESE LIMITS ARE PAID FOR AS ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39.

THE CONTRACTOR SHALL USE EXTREME CARE IN THE REMOVAL AND ADJUSTMENT OF THE CASTINGS. THE CONTRACTOR SHALL REMOVE EXISTING PAVEMENT AS REQUIRED TO ADJUST THE CASTING AND SHALL REPLACE SAME WITH CLEVELAND MS OR FS CONCRETE AS DIRECTED BY THE ENGINEER.

CASTINGS, VALVES, SHUT-OFFS AND PULL BOXES BELONGING TO PRIVATE UTILITIES SHALL BE ADJUSTED TO GRADE BY UTILITY OWNER AND DO NOT CONSTITUTE A PART OF THE CONTRACTOR'S OBLIGATIONS. HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THIS WORK.

ADDITIONALLY, WHILE ADJUSTING OR RECONSTRUCTING DRAINAGE MANHOLES TO GRADE THE CONTRACTOR SHALL ROTATE ALL CASTINGS AWAY FROM CONFLICTS WITH THE PROPOSED CURBS.

THE PRICE PAID FOR BRINGING EACH STREET CASTING TO LINE AND GRADE SHALL BE THE CONTRACTOR'S BID UNIT PRICE FOR EACH AND SHALL INCLUDE ALL LABOR AND MATERIAL NECESSARY FOR THIS WORK.

CARE SHALL BE EXERCISED IN MOVING THE CASTINGS SO AS NOT TO DAMAGE THE CASTING OR THE STRUCTURE. DAMAGED CASTINGS OR STRUCTURES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE) 2 EACH

ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (DRAINAGE) 1 EACH

ITEM SPECIAL - PIPE CLEANOUT

ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS THAT CONNECT FROM DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS TO THE COMBINED SEWER TRUNK LINE. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM SPECIAL - PIPE CLEANOUT 1,600 FT

ITEM 611 - CATCH BASIN, CITY OF CLEVELAND CB-1, AS PER PLAN, AS PER D-34
ITEM 611 - CATCH BASIN, CITY OF CLEVELAND CB-2, AS PER PLAN, AS PER D-34

CATCH BASIN, CITY OF CLEVELAND CB-1, AS PER PLAN AND CATCH BASIN, CITY OF CLEVELAND CB-2 AS PER PLAN SHALL FOLLOW THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CB-1 AND CB-2 RESPECTIVELY AND CITY OF CLEVELAND D-34 SPECIFICATION WITH THE EXCEPTION THAT ROUND CATCH BASINS MAY NOT BE USED. THE BEND TO CONNECT TO THE STORM SEWER SHALL BE INCIDENTAL TO THE COST OF THE CATCH BASIN. ALL OUTLET ELEVATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR BEFORE ORDERING MATERIAL. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ITEM 611. PAYMENT WILL BE BASED ON A PER EACH BASIS OF COMPLETED AND ACCEPTED CATCH BASINS. CATCH BASINS AND CONNECTIONS SHALL BE FREE OF ALL DEBRIS BEFORE FINAL ACCEPTANCE AT NO ADDITIONAL COSTS.

THE CONTRACT BID ITEM COST FOR THE REPLACEMENT OF AN EXISTING CATCH BASIN WITH A NEW CATCH BASIN SHALL INCLUDE THE REMOVAL AND DISPOSAL COST OF SAID EXISTING CATCH BASIN UNLESS A SEPARATE PAY ITEM FOR THE REMOVAL OF THE CATCH BASIN IS INCLUDED IN THE CONTRACT.

IN INSTANCES WHERE A CB-1 BASIN WILL NOT FIT DUE TO CONFLICT WITH OTHER UTILITIES, CITY OF CLEVELAND STANDARD CB-2 SHALL BE INSTALLED (AS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CB-1 AND CITY OF CLEVELAND D-34 SPECIFICATION) AND THE CB-1 ITEM SHALL BE NON-PERFORMED. CONTRACTOR SHALL VERIFY TYPE OF CATCH BASIN REQUIRED PRIOR TO ORDERING. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR INSTANCES WHERE A CB-2 MUST BE PLACED IN LIEU OF A CB-1:

ITEM 611 - CATCH BASIN, CITY OF CLEVELAND CB-2, AS PER PLAN, AS PER D-34 2 EACH

ITEM 611 - CATCH BASIN, MISC.: TEST HOLE

WHERE PLANS INDICATE OTHER UTILITIES ARE IN CLOSE PROXIMITY OF A NEW CATCH BASIN INSTALLATION, THE ENGINEER AND/OR CONTRACTOR MAY DECIDE TO EXCAVATE TO ENSURE THE CATCH BASIN CAN BE PLACED WITHOUT INTERFERENCE. IF INTERFERENCE IS FOUND, THE CATCH BASIN LOCATION OR TYPE IS TO BE REVISED, AS DIRECTED BY THE ENGINEER.

TEST HOLES SHALL BE PERFORMED FOR THE FOLLOWING DRAINAGE STRUCTURES: D-11, D-12, D-14, D-17, D-20, D-23, D-30, D-34, D-37, D-72, D-75, D-90, D-95 AND ANY OTHER LOCATIONS DEEMED NECESSARY BY THE ENGINEER. IF A CITY OF CLEVELAND CB-1 IS ABLE TO REPLACE THE EXISTING STRUCTURE, IT SHALL BE USED. A CITY OF CLEVELAND CB-2 SHALL BE USED IN ALL OTHER AREAS.

ONCE THE TEST HOLE IS COMPLETE, THE EXCAVATION SHALL BE BACKFILLED AND SURFACE RESTORED. NO PAYMENT FOR CATCH BASIN, MISC.: TEST HOLE, WILL BE GIVEN WITHOUT PRIOR APPROVAL FROM THE ENGINEER. PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, AND OTHER INCIDENTALS, INCLUDING BACKFILL, COMPACTION, AND SURFACE RESTORATION SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ITEM 611 - CATCH BASIN, MISC.: TEST HOLE. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE BY THE ENGINEER:

ITEM 611 - CATCH BASIN, MISC.: TEST HOLE 15 EACH

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE:

ITEM 202 - PIPE REMOVED, 24" AND UNDER, AS PER PLAN 100 FT
ITEM 611 - 10" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 25 FT
ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 50 FT
ITEM 611 - 12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32 50 FT
ITEM 611 - 12" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN 50 FT
ITEM 611 - MANHOLE, MISC.: CITY OF CLEVELAND NO. 1 1 EACH

ITEM SPECIAL - CLEAN AND TELEVISION SEWER, AS PER D-37

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL TELEVISION EXISTING SEWER LATERALS TO REMAIN AT ALL LOCATIONS WHERE EXISTING DRAINAGE STRUCTURES ARE BEING REPLACED. THE TELEVISIONING SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND CITY OF CLEVELAND DIVISION OF WATER POLLUTION CONTROL REPRESENTATIVE(S). THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS AND A VIDEOTAPE COPY (PER D-37) OF THE TELEVISIONING TO THE CITY OF CLEVELAND, DIVISION OF WATER POLLUTION CONTROL.

IF, IN THE OPINION OF THE CITY REPRESENTATIVE(S), THE LATERAL HAS REACHED ITS DESIGN SERVICE LIFE AND/OR WARRANTS REPLACEMENT, THE CONTRACTOR SHALL INSTALL A NEW SEWER LATERAL FROM THE NEW DRAINAGE STRUCTURE TO THE SEWER MAIN.

NEW SEWER LATERALS SHALL MATCH THE EXISTING LATERALS IN TERMS OF PIPE SIZE, LOCATION AND SLOPE. EXISTING LATERAL SHALL BE REMOVED. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 25 FT
ITEM 611 - 15" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 25 FT

ANY ADDITIONAL COST FOR PAVEMENT REMOVED, MAINTENANCE OF TRAFFIC OR OUT OF SEQUENCE PLANNED WORK SHALL BE INCLUDED WITH PERTINENT ITEM 611. THESE ITEMS ARE CONSIDERED COMPLETE IN PLACE.

AN INSPECTION REPORT SHALL BE DELIVERED TO THE CITY OF CLEVELAND DIVISION OF WATER POLLUTION CONTROL. THE INSPECTION SHALL FOLLOW THE GUIDELINES OF THE NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES.

PAYMENT FOR THIS ITEM INCLUDES THE CCTV SEWER INSPECTION, NASSCO INSPECTION REPORT, AND ANY ADDITIONAL COST FOR MAINTENANCE OF TRAFFIC OR ITEMS NECESSARY TO COMPLETE THE INSPECTION AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR:

ITEM SPECIAL - CLEAN AND TELEVISION SEWER, AS PER D-37 1600 FT

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GENERAL NOTES

EAST 105TH STREET

DRAINAGE (CONTINUED)

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULK HEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH LEAN GROUT, ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS DIRECTED BY THE ENGINEER. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE:

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT 800 FT

ITEM SPECIAL - CORING FOR STORM SEWERS

DESCRIPTION

THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, AND MATERIALS REQUIRED TO FURNISH AND INSTALL VIA CORE DRILLING VARIOUS 12-INCH STORM SEWERS ALONG THE CORRIDOR AS INDICATED IN THE PLANS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, AND DIMENSIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.

INSTALLATION

THE PROPOSED 12-INCH STORM SEWER FROM D-3 SHALL BE CORE DRILLED INTO THE EXISTING MANHOLE D-4.

THE PROPOSED 12-INCH STORM SEWER FROM D-29 SHALL BE CORE DRILLED INTO THE EXISTING MANHOLE S-21.

FOR ALL CORING ACTIVITIES A MECHANICAL RADIAL CORING SHALL BE PERFORMED TO LEAVE A HOLE NOT TO EXCEED TWO (2) INCHES GREATER IN DIAMETER THAN THE OUTSIDE DIAMETER OF THE PROPOSED STORM SEWER. POWER HAMMERING OR IMPACT CHISELING WILL NOT BE PERMISSIBLE. ALL DRILLING DEBRIS SHALL BE REMOVED FROM THE INSIDE OF THE EXISTING MANHOLE, PIPE OR CULVERT. THE PROPOSED STORM SEWER SHALL NOT PROTRUDE INTO THE EXISTING MANHOLE, PIPE OR CULVERT MORE THAN THREE (3) INCHES AT ANY POINT. USING INSERTA TEE, KOR-N-TEE OR THROUGH GROUT CONNECT THE PROPOSED STORM SEWER TO THE EXISTING MANHOLE, PIPE OR CULVERT WITH A FLUSH MORTAR JOINT. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE CONTRACT UNIT BID PRICE FOR ITEM SPECIAL - CORING FOR STORM SEWERS.

PAVEMENT

PAVEMENT REPAIR OPERATIONS

AREAS OF PAVEMENT BASE ALONG EAST 105TH STREET WILL BE REPAIRED OR REPLACED TO REHABILITATE DETERIORATING PAVEMENT BASE CONDITIONS. THE FOLLOWING METHODOLOGY WILL BE USED TO IDENTIFY AREAS OF BASE REPAIR.

PAVEMENT PLANING: PER THE TYPICAL SECTIONS, THE CONTRACTOR WILL PERFORM UNIFORM 4" FULL WIDTH PAVEMENT PLANING ALONG THE ENTIRE LENGTH OF THE CORRIDOR. EXISTING ASPHALT THICKNESS VARIES FROM 1.1" TO 7.8" PER PAVEMENT CORES. IN AREAS WHERE THERE IS LESS THAN 4" OF EXISTING ASPHALT THICKNESS, THE CONTRACTOR SHALL PLANE INTO THE EXISTING BRICK, GRANITE, OR CONCRETE BASE. IN AREAS WHERE THERE IS GREATER THAN 4" OF EXISTING ASPHALT, THE CONTRACT SHALL PLANE A MAXIMUM OF 4". THE UNIFORM 4" PAVEMENT PLANING IS QUANTIFIED ON THE PAVEMENT SUBSUMMARY AND CARRIED TO THE GENERAL SUMMARY UNDER ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (4" UNIFORM PLANING).

BASE REPAIR: UPON COMPLETION OF ALL PAVEMENT PLANING OPERATIONS, THE ENGINEER WILL DESIGNATE LOCATIONS AND LIMITS OF PAVEMENT BASE REPAIR. BASE REPAIR ESTIMATED QUANTITIES ARE INCLUDED IN THESE CONTRACT PLANS AND WERE DEVELOPED USING THE FOLLOWING METHODOLOGY:

BASED ON EXISTING PAVEMENT SURFACE CONDITIONS ALONG THE CORRIDOR, IT IS EXPECTED THAT AREAS OF EXISTING BASE ARE FAILING AND IN NEED OF REPAIR. THE CITY OF CLEVELAND PERFORMED A FIELD CONDITION REVIEW TO DETERMINE AN ESTIMATED QUANTITY FOR THESE AREAS AS DEPICTED ON THE PLAN SHEETS. IN ADDITION TO THE AREAS SHOWN ON THE PLAN SHEETS, IT IS EXPECTED THAT ADDITIONAL AREAS OF PAVEMENT BASE REPAIR WILL BE REQUIRED ONCE THE PAVEMENT PLANING OPERATION IS COMPLETE. THESE AREAS WILL BE DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE FOR:

FOR FULL DEPTH PAVEMENT REPAIR AREAS GREATER THAN 20 SY:

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN, AS PER D-15	2,950 SY
ITEM 203 - EXCAVATION	495 CY
ITEM 204 - SUBGRADE COMPACTION	2,950 SY
ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN	495 CY
ITEM 305 - 9" CONCRETE BASE, AS PER D-23 AND D-24	2,950 SY

FOR PAVEMENT REPAIR AREAS LESS THAN 20 SY:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	385 SY
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN	385 SY

ITEM 254 - PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN

THIS ITEM OF WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 254 IN THE CMS. IT IS EXPECTED THAT THE PLANING DEPTH WITH BE A UNIFORM DEPTH OF 3.5". THIS MAY RESULT IN PLANING ASPHALT, CONCRETE, GRANITE AND BRICK. THE PAVEMENT CORES INDICATE THAT THE EXISTING ASPHALT LAYER THICKNESS VARIES FROM 1.1" TO 7.8". IN AREAS WHERE THE ASPHALT THICKNESS EXCEEDS 3.5" A MAXIMUM OF 3.5" SHALL BE PLANED. IN AREAS WHERE THE THICKNESS IS FOUND TO BE LESS THAN 3.5" DURING PLANING OPERATIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER. ALL PLANING SHALL BEGIN IN THE CENTER TO THE TRACKS, FOLLOWED BY PLANING THE CURB LANE AREA.

IF AFTER PLANING A SMALL THICKNESS OF ASPHALT REMAINS ON THE BRICK THAT IS NOT SOUND OR ADHERING WELL TO THE BRICK, IT SHALL BE REMOVED BY ADDITIONAL PLANING OR BY SCRAPING, AT NO ADDITIONAL COST. ALL EQUIPMENT, LABOR, TOOLS, AND OTHER INCIDENTALS REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 254 - PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN

FOR THE INTERSECTION OF EAST 105TH STREET AND SUPERIOR AVENUE FROM STA. 120+81.39 TO STA. 121+69.93, IT IS EXPECTED THAT THE PLANING DEPTH SHALL BE A UNIFORM DEPTH OF 1 1/2". ALL EQUIPMENT, LABOR, TOOLS, AND OTHER INCIDENTALS REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN

THE ENGINEER SHALL IDENTIFY AREAS REQUIRING PARTIAL DEPTH REPAIR AFTER INITIAL PAVEMENT PLANING IS COMPLETE. ALL APPLICABLE PROVISIONS OF ITEM 251, AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL APPLY EXCEPT AS MODIFIED HEREIN.

251.02 REMOVAL OF EXISTING PAVEMENT: APPROVED REMOVAL METHODS SHALL SATISFACTORILY ESTABLISH A NEAT VERTICAL FACE ALONG THE ENTIRE PERIMETER OF THE REPAIR AREA IN ORDER TO SUBSEQUENTLY PERMIT THE PROPER PLACEMENT AND COMPACTION OF THE ASPHALT CONCRETE PATCHING MATERIAL. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, REMOVAL DEPTHS SHALL VARY FROM A ONE AND A HALF (1-1/2) INCH MINIMUM TO A THREE (3) INCH MAXIMUM.

PARTIALLY EMBEDDED STEEL MESH EXPOSED SHALL BE WIRE-BRUSHED OR OTHERWISE CLEANED TO REMOVE ALL LOOSE RUST. LOOSENED OR TOTALLY EXPOSED WIRE MESH REINFORCING SHALL BE CUT AND REMOVED AS REQUIRED WITHOUT DISPLACEMENT OR DISRUPTION TO THE REINFORCEMENT AND/OR PAVEMENT TO REMAIN.

RECORD DRAWINGS AND PAVEMENT CORES INDICATE THAT BOTH BRICK AND CONCRETE BASE IS LOCATED UNDER THE EXISTING ASPHALT WEARING COURSE. CONTRACTOR SHALL REFER TO THE PARTIAL-DEPTH PAVEMENT REPAIR DETAILS INCLUDED IN THE PLANS THAT INCLUDE TYPICAL REPAIR OPERATIONS FOR PARTIAL DEPTH PAVEMENT REPAIR WITH BRICK BASE REMOVED, PARTIAL DEPTH PAVEMENT REPAIR WITH BRICK BASE TO REMAIN AND PARTIAL DEPTH PAVEMENT REPAIR WITH CONCRETE BASE.

THE CONTINGENCY ESTIMATED QUANTITIES PROVIDED IN THE "PAVEMENT REPAIR OPERATIONS" PLAN NOTE HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE FOR ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN.

ITEM 409 - SEALING, MISC.: CONCRETE SEALER, AS PER D-28

THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO APPLY PORTLAND CEMENT CONCRETE SEALANT TO ALL NEWLY CONSTRUCTED CONCRETE SURFACES AS PER D-28.

ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS

UNLESS OTHERWISE SPECIFIED OR PERMITTED, GUTTERS SHALL BE SEALED WITH THE SAME TYPE OF ASPHALT CEMENT USED IN THE CONCRETE MIXTURE FOR A DISTANCE OF FOUR (4) INCHES FROM THE CURB. THE SEAL SHALL BE APPLIED AT A UNIFORM RATE AND WIDTH BY THE MEANS OF A SQUEEGEE OR DISTRIBUTED IN SUCH A MANNER THAT NO EXCESS MATERIAL WILL BE LEFT ON THE SURFACE. THE ASPHALT GUTTER SEAL SHALL BE APPLIED AT A TEMPERATURE BETWEEN 300 DEGREES FAHRENHEIT AND 350 DEGREES FAHRENHEIT IMMEDIATELY UPON THE COMPLETION OF THE SURFACE COURSE.

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED ON SCD BP-3.1 AND IN 401.15, AFTER COMPLETION OF THE SURFACE COURSE, THE CONTRACTOR SHALL SEAL, WITH A CERTIFIED PG BINDER, THE FOLLOWING LOCATIONS:

- ALL CASTINGS INCLUDING, BUT NOT LIMITED TO, MONUMENTS, MANHOLES, WATER VALVES, AND CATCH BASINS.
- BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES.
- FORWARD JOINT FOR DRIVEWAY ASPHALT AND TRAILING JOINT WHEN BUTTING TO EXISTING ASPHALT DRIVE.
- PERIMETER OF ALL PAVEMENT REPAIRS WHEN PAVEMENT REPAIRS ARE NOT OVERLAID WITH ASPHALT CONCRETE.
- ALL COLD TRANSVERSE CONSTRUCTION JOINTS PER 401.17.
- ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE HOT APPLIED CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2 INCHES.

THE COST OF THE GUTTER SEAL APPLIED AS HEREIN SPECIFIED SHALL BE INCLUDED IN THE PRICE PER SQUARE YARD FOR SURFACE COURSE BID BY THE CONTRACTOR.

CALCULATED
MGW
CHECKED
JTS

GENERAL NOTES

EAST 105TH STREET

20
243

PAVEMENT (CONTINUED)

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN

AFTER THE EXISTING ASPHALT PAVEMENT HAS BEEN REMOVED BY THE PLANING OPERATION, THE ENGINEER WILL INSPECT THE CONDITION OF THE EXISTING BASE. ANY DEFECTIVE AREAS SHALL BE REMOVED AND REPLACED PER THE DETAILS IN THE PLANS, AT THE DIRECTION OF THE ENGINEER, AFTER HIS/HER APPROVAL. ALL APPLICABLE PROVISIONS OF ITEM 255 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY EXCEPT WHERE MODIFIED IN THESE GENERAL NOTES:

255.02 - MATERIALS:

THE CONCRETE USED FOR THE RIGID REPLACEMENT (255) SHALL BE AS PER D-23 AND D-24. AGGREGATE BASE PAID FOR UNDER ITEM 255 SHALL MEET THE REQUIREMENTS SET FORTH IN CMS 304 AND NOTES FOUND IN THESE PLANS.

255.04 - CORRECTION OF DISTURBED SUBBASE AND SUBGRADE:

SUITABLE SUBBASE DISTURBED IN AREAS WHERE CONCRETE PAVEMENT IS REMOVED SHALL BE SHAPED AND RECOMPACTED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST. UNSUITABLE SUBBASE, AS DETERMINED BY THE ENGINEER, SHALL BE REMOVED AND REPLACED WITH ITEM 304 AGGREGATE BASE, AS PER PLAN TO THE DEPTH OF ADJACENT SUBBASE SIX (6) INCHES MINIMUM. WHERE UNSUITABLE SUBGRADE MATERIAL IS ENCOUNTERED, IT SHALL BE REMOVED TO THE DEPTH DETERMINED BY THE ENGINEER, AND REPLACED IN THE FOUR (4) INCH LIFTS (LOOSE DEPTH). NO ADDITIONAL PAYMENT WILL BE MADE FOR ITEM 304 AGGREGATE BASE, AS PER PLAN.

MECHANICALLY COMPACTED LAYERS:

SUITABLE EMBANKMENT MATERIAL (204.02) REQUIRED TO REPLACE THE UNDERCUT SUBGRADE SHALL, TO THE EXTENT POSSIBLE, EXHIBIT THE SAME PHYSICAL PROPERTIES AS THE ADJACENT SOUND SUBGRADE MATERIALS. HOWEVER, USE OF GRANULATED SLAG, IN ANY FORM, IS NOT PERMITTED. GRANULAR EMBANKMENT MATERIAL SHALL BE LIMITED TO CRUSHED CARBONATE STONE. ALL EXPOSED OR RECONSTRUCTED SUBGRADE SOILS SHALL BE COMPACTED TO THE SATISFACTION OF THE ENGINEER. REMOVAL AND DISPOSAL OF THE UNSUITABLE SUBBASE OR SUBGRADE MATERIAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 255 AND NO SEPARATE PAYMENT WILL BE MADE.

255.09 - METHOD OF MEASUREMENT:

UNSUITABLE SUBGRADE SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH ITEM 204 EXCAVATION OF SUBGRADE, AS PER PLAN. THE REPLACEMENT MATERIAL FOR UNSUITABLE SUBBASE SHALL BE FURNISHED, IN ACCORDANCE WITH ITEM 304 - 6" MIN. AGGREGATE BASE, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR ITEM 304 OR ITEM 204 AND WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR ITEM 255.

255.10 - BASIS OF PAYMENT:

PAYMENT FOR ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN IS FULL COMPENSATION FOR FURNISHING ALL MATERIALS AND LABOR PER 255.10 AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO FULL DEPTH PAVEMENT SAWING, PAVEMENT REMOVAL INCLUDING CONCRETE AND BRICK BASE, SUBBASE/SUBGRADE CORRECTION AND/OR REMOVAL, AS NECESSARY, PLACEMENT OF NEW 304 AGGREGATE BASE, AS NECESSARY, FURNISHING AND PLACING DOWELS, TIE BARS, MESH AND CONCRETE FOR BOTH ITEM 255 AND ITEM 305 CONCRETE BASE TO REPLACE BRICK BASE AS REQUIRED.

RECORD DRAWINGS AND PAVEMENT CORES INDICATE THAT BRICK, GRANITE, AND CONCRETE BASE IS LOCATED UNDER THE EXISTING ASPHALT WEARING COURSE. CONTRACTOR SHALL REFER TO THE FULL DEPTH PAVEMENT REPAIR DETAILS INCLUDED IN THE PLANS THAT INCLUDE TYPICAL REPAIR OPERATIONS FOR FULL DEPTH PAVEMENT REPAIR WITH BRICK/GRAVITE BASE AND FULL DEPTH PAVEMENT REPAIR WITH CONCRETE BASE.

THE CONTINGENCY ESTIMATED QUANTITIES PROVIDED IN THE "PAVEMENT REPAIR OPERATIONS" PLAN NOTE HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT BID PRICE FOR ITEM 255 - FULL DEPTH PAVEMENT REMOVAL & RIGID REPLACEMENT, AS PER PLAN.

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER, TO PATCH PLANED SURFACES THAT HAVE SPALLING OR DISLODGED UNSOUND PAVEMENT:

ITEM 254 - PATCHING PLANED SURFACE

300 SY

ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. CRUSHED CARBONATE STONE, CRUSHED AIR COOLED BLAST FURNACE SLAG, OR GRAVEL SHALL BE USED FOR THIS ITEM INCLUDING UNDERCUTTING. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE. AGGREGATE BASE SHALL BE A MINIMUM OF 6" IN DEPTH

PAVEMENT RESTORATION

THE COST FOR PAVEMENT RESTORATION FOR PIPE/CONDUIT OR ANY OTHER ITEMS UNLESS SPECIFICALLY ITEMIZED, SHALL BE INCLUDED WITH THE PERTINENT ITEM. NO SEPARATE PAYMENT WILL BE MADE.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL BE 15 FEET AND IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS. EXPANSION JOINTS SHALL HAVE SPACING OF APPROXIMATELY 300' AND PRIOR TO EACH INTERSECTION.

CONTRACTION JOINTS IN CONCRETE

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE SO AS TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE PAVEMENT SHALL BE 15 FEET AND IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

ITEM SPECIAL - SURCHARGE FOR CLASS MS CONCRETE, AS PER D-25

ITEM SPECIAL - SURCHARGE FOR CLASS FS CONCRETE, AS PER D-26

AT VARIOUS LOCATIONS ALONG THE CORRIDOR AND TIMES DURING CONSTRUCTION CIRCUMSTANCES MAY REQUIRE THE USE OF CLASS MS OR CLASS FS CONCRETE. THE USE OF THESE TYPES OF CONCRETE SHALL BE AT THE DISCRETION AND DIRECTION OF THE ENGINEER AND THE SPECIFICATIONS OUTLINED IN THESE NOTES. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL - SURCHARGE FOR CLASS MS CONCRETE, AS PER D-25 50 CY
ITEM SPECIAL - SURCHARGE FOR CLASS FS CONCRETE, AS PER D-26 50 CY

DOWEL BASKET ASSEMBLIES

WHERE DOWEL BASKET ASSEMBLIES ARE USED BY THE CONTRACTOR, ALL SPACER WIRES (SHIPPING WIRES) SHALL BE REMOVED FROM THE BASKET ASSEMBLIES PRIOR TO PAVING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE DOWEL BASKET ASSEMBLIES ARE STABLE AND HELD FIRMLY IN PLACE. ALL DOWELS AND BASKETS SHALL BE EPOXY COATED PER 709.13

ITEM 609 - CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24

ITEM 609 - CURB, TYPE 6, AS PER PLAN AS PER D-23 AND D-24 SHALL CONFORM TO ALL REQUIREMENTS OF ITEM 609 EXCEPT THAT THE NOSING OF THE CURB SHALL BE 1/2 INCH.

ITEM 441 - ASPHALT CONCRETE

ASPHALT CONCRETE SHALL COMPLY WITH ODOT ITEM 441 UNLESS SPECIFIED DIFFERENT ON THE BID FORM, PLANS OR SUPPLEMENT SPECIFICATIONS.

RECYCLED MATERIAL SHALL BE LIMITED TO 10% MAXIMUM IN THE WEARING COURSE, 20% MAXIMUM IN THE INTERMEDIATE COURSE, AND 30% MAXIMUM IN THE BITUMINOUS BASE COURSE. THE USE OF GRAVEL IS PROHIBITED IN THE SURFACE COURSE.

ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29

THE COARSE AGGREGATE FOR THIS ITEM SHALL BE A BLEND OF 60% MINIMUM AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. THE USAGE OF GRAVEL IS PROHIBITED. FOR THIS ITEM, A THIRD ROLLER IS REQUIRED FOR MAINLINE PAVING OPERATIONS. THE ROLLER SHALL CONFORM TO THE REQUIREMENTS OF 401.13.

ITEM 441 - ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29

WHERE DIRECTED IN THE FIELD BY THE ENGINEER THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING ASPHALT BEHIND THE RIGHT OF WAY (SIDEWALK) TO THE LIMITS INDICATED BY THE ENGINEER IN THE FIELD.

THE COST FOR PAVEMENT REMOVAL, ITEM 304 AGGREGATE BASE, ITEM 407 TACK COAT, ITEM 441 INTERMEDIATE COURSE AND ITEM 441 SURFACE COURSE SHALL BE INCLUDED IN THE COST FOR ITEM 441 - ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALK (448), AS PER D-29.

ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24

ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24

IN ADDITION TO THE REQUIREMENTS OF THE D-23 SECTIONS 5.4h AND 5.5a, ALL CONCRETE FOR DRIVES AND WALKS SHALL HAVE RETRACED PICTURE FRAME TOOLED EDGE JOINTS.

ITEM 441 - 0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29

THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PLACE 0" MIN. ASPHALT CONCRETE AND TACK COAT IN AREAS WHERE ASPHALT CONCRETE SURFACE AND INTERMEDIATE COURSE IS NOT OF SUFFICIENT DEPTH TO ACHIEVE A MINIMUM CROSS SLOPE OR AS OTHERWISE DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN ADDITION TO THE CALCULATED QUANTITIES SHOWN ON SHEET 43:

ITEM 441 - 0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29 25 CY
ITEM 407 - NON-TRACKING TACK COAT 30 GAL

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GENERAL NOTES

EAST 105TH STREET

SANITARY

ITEM 611 - DRAINAGE STRUCTURE, MISC.: TEST TEE ADJUST TO GRADE

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 611 - DRAINAGE STRUCTURE, MISC.: TEST TEE ADJUST TO GRADE 100 EACH

**ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (SANITARY)
ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (SANITARY)**

ALL PROVISIONS PREVIOUSLY INDICATED WITH ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE) & ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (DRAINAGE) APPLY EXCEPT WHERE MODIFIED HEREIN:

EXISTING CASTINGS THAT ARE THE PROPERTY OF NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORS) MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY DOUG LOPATA AT (216) 881-6600 OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY) FOR THE PARTICULAR STRUCTURE IN QUESTION. NEORS WILL PROVIDE THE MATERIAL. CONTRACTOR WILL INSTALL AND ADJUST TO GRADE. CASTING DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ADDITIONALLY, WHILE ADJUSTING OR RECONSTRUCTING SANITARY MANHOLES TO GRADE THE CONTRACTOR SHALL ROTATE ALL CASTINGS AWAY FROM CONFLICTS WITH THE PROPOSED CURBS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 611 - VAULT/MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (SANITARY) 2 EACH

ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (SANITARY) 1 EACH

TRAFFIC CONTROL

ITEM 630 - SIGNING, MISC.: (ELTEC) SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A ELTEC SOLAR 5-LED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY. THE FLASHING UNIT SHALL BE 2-SIDED LED, SOLAR POWERED AND PEDESTRIAN ACTIVATED. MULTIPLE UNITS SHALL BE WIRELESSLY CONTROLLED AND SYNCHRONIZED. THE UNIT SHALL BE COMPLIANT WITH THE MOST CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) AND FHWA INTERIM APPROVAL FOR RRFB (IA-11).

GENERAL REQUIREMENTS

EACH RRFB SHALL CONSIST OF TWO RAPIDLY AND ALTERNATELY FLASHING RECTANGULAR YELLOW INDICATIONS HAVING LED ARRAY BASED PULSING LIGHT SOURCES.

EACH RRFB SHALL BE A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.).

FUNCTIONAL REQUIREMENTS

EACH RRFB SHALL UTILIZE SOLAR POWER.

EACH RRFB SHALL BE ACTIVATED BY ADA COMPLIANT POLAR BDSP-014-Y BULLDOG STYLE PUSHBUTTONS.

THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER A PREDETERMINED TIME LIMIT (BASED ON OMUTCD PROCEDURES).

EACH REMOTE RRFB SHALL BE WIRELESSLY ACTIVATED.

ALL RRFB LIGHT INDICATIONS SHALL BE WIRELESSLY SYNCHRONIZED (ALL LIGHTS WILL TURN ON WITHIN 120 MSEC AND REMAIN SYNCHRONIZED THROUGHOUT THE DURATION OF THE FLASHING CYCLE).

THE UNIT SHALL BE CAPABLE OF RUNNING 14 DAYS WITHOUT SUNLIGHT.

MATERIALS

FURNISH A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.). THE RRFB ASSEMBLY INCLUDES THE FOLLOWING ITEMS:

1. RRFB INDICATIONS
 - A. EACH RRFB INDICATION LENS SHALL BE A MINIMUM SIZE OF APPROXIMATELY 5" WIDE X 2" HIGH.
 - B. THE RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION OF THE INDICATION HORIZONTAL. THERE SHALL BE TWO INDICATIONS ON THE FRONT AND TWO INDICATIONS ON THE BACK.
 - C. EACH RRFB SHALL BE SUPPLIED WITH ALL REQUIRED HARDWARE TO INSTALL ASSEMBLY. ALL EXPOSED HARDWARE SHALL BE ANTI-VANDAL.
 - D. EACH RRFB SHALL BE LOCATED BETWEEN THE BOTTOM OF THE CROSSING WARNING SIGN AND THE TOP OF THE SUPPLEMENTAL DOWNWARD DIAGONAL ARROW PLAQUE.
 - E. THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM CLASS 1 SPECIFICATIONS OF SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES) DATED JANUARY, 2005.
 - F. A SMALL LED CONFIRMATION LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSHBUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.

ITEM 630 - SIGNING, MISC.: (ELTEC) SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY (CONTINUED)

2. SIGNS
 - A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.
 - B. PEDESTRIAN PUSHBUTTONS SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS". SIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON.
 - C. TWO SETS OF SIGNS SHALL BE REQUIRED PER UNIT FOR VIEW FROM EACH APPROACH.
 - D. ASSURE SIGN MEETS THE REQUIREMENTS OF C&MS 630.
3. CONTROL CIRCUIT
 - A. THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF INDEPENDENTLY FLASHING UP TO TWO INDEPENDENT OUTPUTS. THE LED LIGHT OUTPUTS AND FLASH PATTERN SHALL BE COMPLETELY PROGRAMMABLE.
 - B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.
 - C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.
4. BATTERY AND SOLAR PANELS
 - A. BATTERY UNIT SHALL BE A 12VDC, 35 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL REPLACEMENT WARRANTY.
 - B. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS PEAK TOTAL OUTPUT.
 - C. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES- 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.
 - D. ALL FASTENERS USED SHALL BE ANTI-VANDAL.
5. WIRELESS RADIO
 - A. RADIO CONTROL SHALL OPERATE ON A 900 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.
 - B. RADIO SHALL INTEGRATE COMMUNICATION OF RRFB CONTROL CIRCUIT TO ACTIVATE SIGN FROM PUSHBUTTON INPUT.
 - C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE RRFB LIGHT INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.
6. PUSHBUTTON
 - A. THE PUSHBUTTON SHALL BE CAPABLE OF CONTINUOUS OPERATION OVER A TEMPERATURE RANGE OF -30 DEGREES F TO +165 DEGREES F.
 - B. PUSHBUTTON SHALL BE ADA COMPLIANT.
7. PEDESTAL SHAFT AND BASE - MOUNT ON A STANDARD 4.5-INCH OD ALUMINUM PEDESTAL POLE WITH BREAKAWAY BASE. A 14 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED AND CAPPED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS. POLE AND BASE MANUFACTURER SHALL BE LISTED ON ODOT'S QUALIFIED PRODUCTS LIST.

CONSTRUCTION

THE RRFB SHALL BE ASSEMBLED AND CONSTRUCTED BY THE CONTRACTOR AS SHOWN AND SPECIFIED ON THE PLANS.

WARRANTY

WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

MEASUREMENT

THE CITY WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL UNIT.

PAYMENT

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 630 - SIGNING, MISC.: (ELTEC) SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY.

CALCULATED
MGW
CHECKED
JTS

GENERAL NOTES

EAST 105TH STREET

MAINTENANCE OF TRAFFIC:

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN

THE PROJECT WORK SHALL START AT THE EAST BOULEVARD INTERSECTION AT THE COMMENCEMENT OF THE PROJECT, AND WORK NORTH. A MINIMUM OF ONE LANE OF TRAFFIC IN THE SOUTHBOUND DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND/OR THE COMPLETED PAVEMENT. PART WIDTH CONSTRUCTION SHALL BE USED TO FACILITATE MAINTAINING ONE WAY TRAFFIC. WORK SHALL BE DONE IN PHASES AS OUTLINED BELOW.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SAFE VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES THROUGHOUT THE PROJECT AREA. THE PROJECT SHALL BE CONSTRUCTED IN PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS, AND MANPOWER NEEDED TO ADEQUATELY MAINTAIN TRAFFIC AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL MAINTAIN SAFE AND SATISFACTORY ACCESS TO ABUTTING PROPERTY AND ADJACENT STREETS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE PEDESTRIAN WALKS AT ALL INTERSECTIONS, INCLUDING ASPHALT CONCRETE WALKS, WHERE DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DIVERT TRAFFIC FROM NORMAL CHANNELS BY PLASTIC DRUMS, FLASHING ARROW PANELS COMPLYING WITH SUPPLEMENTAL SPECIFICATION 821, TRAFFIC SIGNS AND WORK ZONE PAVEMENT MARKINGS, AS SHOWN ON SHEETS 33-47.

ALL CONSTRUCTION TRAFFIC CONTROL DEVICES USED FOR THIS PROJECT SHALL CONFORM TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY SAFEGUARDS, SUCH AS TYPE III BARRICADES, LIGHTING, FLAGGERS, AND SUCH OTHER TRAFFIC CONTROL DEVICES AS PROVIDED IN ITEM 614, MAINTAINING TRAFFIC, SO AS TO AVOID DAMAGE AND/OR INJURY TO VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION.

EXISTING TRAFFIC CONTROL DEVICES (SIGNS AND/OR TRAFFIC SIGNALS), LOCATED WITHIN THE WORK AREA, WHICH ARE REQUIRED FOR INTERIM OR PERMANENT TRAFFIC CONTROL, SHALL BE RELOCATED TO POINTS APPROVED BY THE ENGINEER. APPROPRIATE TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED, IN COMPLIANCE WITH THE MANUAL, AT ALL TIMES WHILE TRAFFIC IS MAINTAINED. THE COST OF RELOCATION, IF REQUIRED, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

THE LENGTH AND DURATION OF LANE CLOSURES AND/OR TRAFFIC RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. THE INTENT IS TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ADVANCE TRAFFIC SIGNING AND SUPPORTS, INCLUDING CONSTRUCTION WORK ZONE APPROACH SIGNING, BARRICADES, AND SIGNS ON BARRICADES SHOWN ON THE PLANS BEYOND THE WORK LIMITS SHALL BE FURNISHED, ERECTED, MAINTAINED AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

TWO ONE-WAY SIGNS PER INTERSECTION AND MAJOR DRIVES WHERE DIRECTED SHALL BE IN PLACE AT ALL TIMES WHEN APPLICABLE, AND COVERED OR REMOVED WHEN NOT APPLICABLE.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614 - MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

AT THE END OF EACH WORK DAY THE DROP-OFF DEPTH AS MEASURED FROM THE TRAVELED LANE TO THE WORK ZONE SHALL NOT EXCEED 5", DRUMS SHALL BE PLACED PER THE TYPICAL SECTION. THE LENGTH AND DURATION OF LANE RESTRICTIONS SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATIONS REQUIREMENTS FOR PROTECTION OF COMPLETED PAVEMENT COURSES, AND SHALL BE AT THE APPROVAL OF THE ENGINEER.

HOLIDAY TRAFFIC LIMITATION

NO WORK SHALL BE PERFORMED, AND ALL EXISTING LANES WHICH ARE NOT INSIDE A DESIGNATED WORK ZONE SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

NEW YEARS DAY (JANUARY 1)
MARTIN LUTHER KING DAY (THIRD MONDAY IN JANUARY)
EASTER SUNDAY (DATE VARIES)
MEMORIAL DAY (LAST MONDAY IN MAY)
INDEPENDENCE DAY (JULY 4)
LABOR DAY (FIRST MONDAY IN SEPTEMBER)
THANKSGIVING DAY (FOURTH THURSDAY IN NOVEMBER)
CHRISTMAS DAY (DECEMBER 25)

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07.

WINTER TRAFFIC LIMITATION

UNLESS OTHERWISE APPROVED BY THE ENGINEER, ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 15. NOVEMBER 15 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SUPPLEMENTAL GENERAL CONDITIONS C-25 FOR EACH CALENDAR DAY BEYOND NOVEMBER 15 OR PRIOR TO APRIL 15 THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC. DAYTIME UTILITY WORK USING MOVING OPERATIONS ZONES WILL BE ACCEPTABLE BETWEEN NOVEMBER 15 AND APRIL 15.

COORDINATION

SCHOOLS:

THE CONTRACTOR IS REQUIRED TO NOTIFY AND COORDINATE WITH THE CLEVELAND SCHOOL OF THE ARTS AT HARRY E. DAVIS ON CHURCHILL AVENUE FOR APPROXIMATE ACCESS AND STUDENT SAFETY CONSIDERATION DURING THE VARIOUS MAINTENANCE OF TRAFFIC PHASES, INCLUDING BUS STAGING AS NEEDED.

SIDE STREETS IMMEDIATELY ADJACENT TO SCHOOLS SHALL ONLY BE CLOSED DURING THE SCHOOL'S SPRING BREAK OR AFTER THE SCHOOL YEAR IS COMPLETED

BUSINESS OWNERS:

THE CONTRACTOR SHALL WORK WITH THE LOCAL BUSINESS OWNERS TO ENSURE ACCESS TO ALL PROPERTIES AT ALL TIMES. HOWEVER, SOME INCONVENIENCES WILL OCCUR. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE COORDINATION OR PROVIDING ACCESS TO THE BUSINESSES.

CIRCLE NORTH EAST 105th STREET STREETScape PROJECT:

THE CONTRACTOR SHOULD BE AWARE OF THE CIRCLE NORTH EAST 105th STREET STREETScape PROJECT AND THAT ANOTHER CONTRACTOR MAY BE WORKING WITHIN THE PROJECT LIMITS. SECTION 105.08 OF ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS WILL APPLY TO THIS CONTRACT.

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY IN WRITING THE FOLLOWING AGENCIES AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST SEVEN (7) CALENDAR DAYS BEFORE IMPLEMENTING ANY SUBSTANTIAL CHANGE IN TRAFFIC PATTERN OR CLOSING ANY STREET TO TRAFFIC:

CITY OF CLEVELAND:
DIVISION OF ENGINEERING AND CONSTRUCTION 216-664-2381
DIVISION OF STREETS 216-664-2150
DIVISION OF TRAFFIC ENGINEERING 216-664-3194

CITY OF CLEVELAND DEPARTMENT OF PUBLIC SAFETY:
DIVISION OF EMERGENCY MEDICAL SERVICE (EMS) 216-664-2066
DIVISION OF FIRE 216-664-6813
DIVISION OF POLICE 216-664-1234

CLEVELAND METROPOLITAN SCHOOL DISTRICT 216-574-8000

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (RTA) 216-566-5100
THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ANY TEMPORARY BUS STOPS WITH THE RTA.

UNITED STATES POSTAL SERVICE 216-443-4573

OHIO DEPARTMENT OF TRANSPORTATION 216-584-4030
DISTRICT 12 - PUBLIC INFORMATION OFFICE

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

PEDESTRIAN ACCESS

DURING TEMPORARY CLOSURE OR RELOCATION OF SIDEWALKS AND OTHER PEDESTRIAN FACILITIES, TEMPORARY FACILITIES SHALL BE PROVIDED. THESE FACILITIES SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING FACILITY. PEDESTRIAN SIDEWALK CLOSURES, CROSSWALK CLOSURES, AND PEDESTRIAN DETOURS OR BYPASSES SHALL BE INSTALLED ACCORDING TO ODOT TYPICAL APPLICATIONS TA-28 AND TA-29 AND ODOT STD. DWG. MT-110.10.

CONTRACTOR'S VEHICLES AND EQUIPMENT

ALL VEHICLES AND EQUIPMENT BELONGING TO THE CONTRACTOR OR THE CONTRACTOR'S WORKERS MUST BE PARKED IN ACCORDANCE WITH CITY REGULATIONS, VEHICLES AND EQUIPMENT MAY NOT BE PARKED IN PRIVATE PARKING LOTS OR OTHER PRIVATE PROPERTY UNLESS WRITTEN APPROVAL OF THE OWNER AND THE ENGINEER HAS BEEN GRANTED. THE CONTRACTOR OR CONTRACTOR'S WORKERS MAY NOT PARK VEHICLES OR EQUIPMENT OR STORE MATERIALS WHERE IT IS DEEMED BY THE ENGINEER TO BE A SAFETY HAZARD; NOR IN MANNER WHICH OBSTRUCTS SIGNS, BARRIERS, BARRICADES, OR OTHER TRAFFIC CONTROL DEVICES OR INTERFERES WITH ACCESS TO ABUTTING PROPERTIES.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER
ITEM 616 - CALCIUM CHLORIDE

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MAINTENANCE OF TRAFFIC NOTES

EAST 105th STREET

23
243

MAINTENANCE OF TRAFFIC (CONTINUED):

TEMPORARY PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED PER THE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS AND DETAILS. 642 PAINT SHALL BE UTILIZED FOR ALL TEMPORARY PAVEMENT MARKINGS WITHIN THE WORK LIMITS. REMOVABLE MARKINGS PER ODOT 740.06 TYPE 1 SHALL BE USED OUTSIDE THE PAVING LIMITS.

ALL PAVEMENT MARKINGS (CENTERLINE, LANE LINE, EDGE LINE, STOP LINE, CROSS WALK, ETC.) NECESSARY TO MAINTAIN TRAFFIC ON THE COMPLETED ASPHALT SURFACE COURSE BEFORE FINAL PAVEMENT MARKINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

INSTALLATION OF WORK ZONE PAVEMENT MARKINGS AND SIGNS

ALL WORK ZONE PAVEMENT MARKINGS AND SIGNS REQUIRED FOR A PARTICULAR LANE CLOSURE OR TRAFFIC PATTERN SHALL BE INSTALLED ON A SINGLE WORK DAY, AND THE CORRESPONDING TRAFFIC PATTERN, AS DETAILED ON THE PLANS, SHALL BE IMPLEMENTED IMMEDIATELY. IN ADDITION, THE REQUIREMENTS OF 614.11(G) SHALL APPLY. THE CONTRACTOR SHALL BE RESPONSIBLE, WITH THE ASSISTANCE OF THE ENGINEER AND RECORDS OF THE DIVISION OF TRAFFIC ENGINEERING, FOR THE ENTIRE LAYOUT AND LOCATIONS OF THE REQUIRED PAVEMENT MARKINGS.

FOR QUANTITIES SEE SHEET 32

SIGNAL REMOVALS

THE TRAFFIC SIGNALS TO BE REMOVED, AND NOT REPLACED, ARE TO BE PLACED IN FLASH MODE AT LEAST 30 DAYS PRIOR TO REMOVAL.

CONSTRUCTION WARNING SIGNS

IMMEDIATELY PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL THE CONSTRUCTION WARNING SIGNS SHOWN.

AS A MINIMUM, G20-1 SIGNS FACING TRAFFIC ENTERING THE PROJECT, AND G20-2 SIGNS FACING TRAFFIC LEAVING THE PROJECT, SHALL BE PLACED AS SHOWN IN THE MANUAL. ADDITIONAL G20-1 SIGNS SHALL BE PLACED AFTER EACH MAJOR INTERSECTION, IN BOTH DIRECTIONS, AND AFTER EACH SUSPENSION AND RESUMPTION OF WORK.

ADDITIONALLY, A W20-1 SIGN SHALL BE PLACED ON EACH INTERSECTING STREET A MINIMUM OF 200 FEET IN ADVANCE OF THE PROJECT, AND ON THE APPROACHES TO THE PROJECT A MINIMUM OF 500 FEET IN ADVANCE OF THE WORK LIMITS. G20-2 SIGNS SHALL ALSO BE INSTALLED ON EACH MAJOR INTERSECTING STREET, FACING TRAFFIC LEAVING THE PROJECT, A MINIMUM OF 200 FEET FROM THE PROJECT.

THE TRAFFIC CONTROL DEVICES SHOWN ON MT-97.11, MT-95.31 AND MT-95.32 SHALL BE IN ADDITION TO THOSE INDICATED ABOVE. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL ALSO INSTALL W8-11 "UNEVEN LANES", W8-7 "LOOSE GRAVEL," AND/OR W21-2 "FRESH OIL/TAR" SIGNS.

FLUORESCENT ORANGE TYPE G SIGN SHEETING SHALL BE USED FOR ALL DETOUR AND CONSTRUCTION WARNING SIGNS.

REPLACEMENT SIGNS

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS, AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO THE APPROVAL OF THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

REPLACEMENT DRUMS

THE CONSTRUCTION DRUMS WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN AND SHALL INCLUDE THE COST FOR REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENT OF THE ORIGINAL DRUM.

CONSTRUCTION ADJACENT TO DRIVES

ACCESS TO COMMERCIAL AND HANDICAP PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, THE CONTRACTOR SHALL MAKE REASONABLE PROVISIONS TO ALLOW RESIDENTIAL ACCESS AT ALL TIMES OR OTHERWISE ALLOW RESIDENTS TO PARK SAFELY WITHIN THE PROJECT WORK LIMITS WHEN ACCESS IS NOT POSSIBLE; ALL AT THE APPROVAL/DIRECTION OF THE ENGINEER. THE MAXIMUM OUT OF SERVICE TIME FOR ANY RESIDENTIAL DRIVE SHALL BE SEVEN (7) DAYS. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE APPROVAL OF THE ENGINEER WHICH OUTLINES HIS/HER STRATEGY FOR THE MAINTENANCE OF SAFE ACCESS TO COMMERCIAL, HANDICAP AND RESIDENTIAL PROPERTIES AND/OR FOR ALLOWING RESIDENTS TO PARK SAFELY WITHIN THE PROJECT LIMITS WHEN ACCESS IS NOT POSSIBLE. THE PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO MAINTAIN COMMERCIAL, HANDICAP AND RESIDENTIAL ACCESS AND/OR SAFE PARKING AREAS FOR RESIDENTS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 -MAINTAINING TRAFFIC".AS PER PLAN; EXCEPT FOR THE SEPARATELY ESTIMATED ITEMS/QUANTITIES ADDITIONALLY PROVIDED IN THE PLANS FOR MAINTAINING TRAFFIC (ACCESS).

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE, AS PER PLAN

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE, AS PER PLAN **130 HOURS**

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS.

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PLOT DATE: 5/8/19

MAINTENANCE OF TRAFFIC NOTES

EAST 105th STREET

CALCULATED	B.A.K.	CHECKED	D.P.B.
PID NO.		-	

MAINTENANCE OF TRAFFIC (CONTINUED):

SIDE STREET CLOSURE LIMITATION

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON THE FOLLOWING STREETS:

CHURCHILL AVENUE (WEST) - 5 DAYS MAXIMUM PER PHASE

ONE WAY EASTBOUND TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING INTERSECTION WORK ON THE FOLLOWING SIDE STREETS:

- LEE AVENUE
- HATHAWAY AVENUE
- OLIVET AVENUE
- HAMPDEN AVENUE
- SOUTH BOULEVARD
- GRANTWOOD AVENUE
- DREXEL AVENUE
- OSTEND AVENUE
- PARKGATE AVENUE
- MASSIE AVENUE
- AMOR AVENUE

ONE WAY WESTBOUND TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING INTERSECTION WORK ON THE FOLLOWING SIDE STREETS:

- ORVILLE AVENUE
- OLIVET AVENUE
- HAMPDEN AVENUE
- WESTCHESTER AVENUE
- TACOMA AVENUE
- NORTH BOULEVARD
- SOMERSET AVENUE
- PASADENA AVENUE
- PIERPOINT AVENUE
- MORISON AVENUE
- GREENLAWN AVENUE

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON MAGNOLIA DRIVE, WADE PARK AVENUE AND SUPERIOR AVENUE PER THE PHASED INTERSECTION DETAILS.

THE REMAINING SIDE STREETS MAY BE CLOSED TO TRAFFIC DURING EACH PHASE FOR A MAXIMUM OF THIRTY (30) CONSECUTIVE CALENDAR DAYS. CONSECUTIVE SIDE STREETS MAY NOT BE CLOSED AT THE SAME TIME. ALL CLOSED STREETS SHALL BE BARRICADED AT THE WORK LIMITS WITH GATES AND BARRICADES PER MT-101.60 AND SIGNED WITH A "ROAD CLOSED" (R11-2-48) SIGN MOUNTED ON THE BARRICADES. IN ADDITION, A "ROAD CLOSED AHEAD" (W 20-3-36) SIGN WHERE SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE ALL SIGNS AND BARRICADES REQUIRED FOR THIS PURPOSE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CITY OF CLEVELAND DIVISION OF ENGINEERING AND CONSTRUCTION AND THE DIVISION OF TRAFFIC ENGINEERING WITH A PRECISE SCHEDULE OF THE DATE AND DURATION OF ALL PROPOSED STREET CLOSURES. ANY CHANGES IN THIS SCHEDULE DURING CONSTRUCTION SHALL BE SUBMITTED IN WRITING, FAX WITH HARD COPY TO FOLLOW, TO THE DIVISION OF ENGINEERING AND CONSTRUCTION AND THE DIVISION OF TRAFFIC ENGINEERING A MINIMUM OF SEVEN (7) DAYS PRIOR TO THE REQUESTED CHANGE FOR THEIR REVIEW, COMMENT, AND APPROVAL. NO CHANGE IN THE SCHEDULE CAN BE MADE WITHOUT THE WRITTEN APPROVAL OF BOTH DIVISIONS.

LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SECTION 108.07 FOR EACH CALENDAR DAY THAT ANY INTERSECTING STREET REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. ALL CLOSED STREETS SHALL BE BARRICADED AT THE WORK LIMITS WITH GATES AND BARRICADES PER MT-101.60 AND SIGNED WITH A "ROAD CLOSED" R11-2 SIGN MOUNTED ON THE BARRICADES. IN ADDITION, A "ROAD CLOSED AHEAD" SIGN SHALL BE INSTALLED AT THE FIRST INTERSECTION BEYOND THE WORK, AND/OR WHERE SHOWN ON THE PLANS.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE ALL SIGNS AND BARRICADES REQUIRED FOR THIS PURPOSE. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

TEMPORARY PAVING OF VERTICAL SURFACES

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING DRIVES SHALL BE TEMPORARILY RAMPED. TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN (10) FEET IN LENGTH AND TRAFFIC SHALL BE WARNED WITH W8-1 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS.

ALL CASTINGS ENCOUNTERED SHALL BE SET TO GRADE AND PAID FOR UNDER VARIOUS ITEMS DESCRIBED ELSEWHERE IN THE GENERAL NOTES OR SPECIFICATIONS. THE CASTING ELEVATION DIFFERENTIAL SHALL NOT BE GREATER THAN ONE (1) INCH WHEN EXPOSED TO TRAFFIC. CASTINGS MAY BE REQUIRED TO BE ADJUSTED MORE THAN ONCE, BUT PAYMENTS FOR ADJUSTING WILL ONLY BE PAID ONCE. WHEN CONSTRUCTION IS ADJACENT TO DRIVES, MAINTAIN ACCESS TO DRIVES BY ONLY CONSTRUCTING THE PORTIONS OF THE ROADWAY NOT IN CONFLICT WITH THE DRIVES. ADDITIONAL CONSTRUCTION JOINTS SHALL BE ALLOWED BY THE ENGINEER. IN ORDER TO PROVIDE FOR LOCAL ACCESS, TEMPORARY RAMPING SHALL BE INSTALLED ALONG ALL LONGITUDINAL VERTICAL FACES ABUTTING DRIVES USING ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE FOR TEMPORARY RAMPING SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

MAINTAINING DRIVEWAY ACCESS

COMMERCIAL AND HANDICAP PROPERTIES: ACCESS TO ALL COMMERCIAL AND HANDICAP PROPERTY SHALL BE MAINTAINED AT ALL TIMES, AS FOLLOWS:

FOR PROPERTIES WITH MULTIPLE DRIVEWAYS: DRIVEWAY CONSTRUCTION WILL BE SCHEDULED SO THAT AT LEAST ONE ACCESS DRIVEWAY IS OPEN AND CLEAR WHILE THE OTHER DRIVEWAY(S) ARE BEING CONSTRUCTED.

FOR PROPERTIES WITH ONLY ONE ACCESS: IF THE PROPERTY CAN NOT BE WITHOUT ACCESS TEMPORARILY (SUCH AS OUTSIDE OF NORMAL BUSINESS HOURS OR OVER THE WEEKEND), ACCESS TO THE PROPERTY SHALL BE MAINTAINED AS FOLLOWS:

- THE PAVEMENT IN FRONT OF THE DRIVEWAY SHALL BE REMOVED AND TRAFFIC COMPACTED SURFACE FURNISHED, INSTALLED, AND COMPACTED ON TOP OF THE EXPOSED SUBGRADE. THIS WORK SHALL BE PERFORMED IN ONE OPERATION SO THAT THE DISRUPTION TO THE PROPERTY IS KEPT AT AN ABSOLUTE MINIMUM. THE CONTRACTOR WILL MAINTAIN THE RAMP AND REPLACE MATERIAL AS NECESSARY.
- THE INSTALLATION OF THE PROPOSED DRIVEWAY AND THE CONCRETE PAVEMENT IN FRONT OF THE DRIVEWAY SHALL BE PERFORMED AS ONE OPERATION. IF THE DRIVEWAY IS MORE THAN 20 FEET WIDE, CONSTRUCTION ON THE DRIVEWAY AND PAVEMENT MAY BE IN TWO (2) PHASES, WITH ONE HALF OF THE DRIVE REMAINING OPEN WHILE THE OTHER HALF IS CLOSED AND BEING CONSTRUCTED. FOR DRIVEWAYS LESS THAN 20 FEET WIDE, THE DRIVEWAY AND CONCRETE PAVEMENT SHALL BE CONSTRUCTED USING CLASS FS OR CLASS MS CONCRETE.

IN LOCATIONS WHERE A DRIVEWAY TO A PARKING LOT IS CLOSED TO TRAFFIC, THE DRIVE SHALL HAVE PROPER PROTECTION, SUCH AS SIGNS, FENCING, BARRICADES, AND DRUMS, PLACED AND MAINTAINED AROUND IT.

WHERE DIRECTED BY THE ENGINEER, ONE (1) BUSINESS ENTRANCE SIGN (M4-H15) SIGN SHALL BE PROVIDED, INSTALLED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR AT AFFECTED COMMERCIAL DRIVEWAYS. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING AND BE MOUNTED ON TWO #3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING MT-105.10. THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND, EXCEPT THAT THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD "BUSINESS."

RESIDENTIAL PROPERTIES: RESIDENTIAL ACCESS SHALL BE MAINTAINED USING THE FOLLOWING PROCEDURES, AS DIRECTED BY THE ENGINEER:

- AFTER THE EXISTING PAVEMENT AND CURB HAVE BEEN REMOVED, THE CONTRACTOR SHALL IMMEDIATELY MAINTAIN VEHICULAR ACCESS TO THE DRIVEWAY USING ITEM 410, TRAFFIC COMPACTED SURFACE, BETWEEN THE PAVEMENT AND THE DRIVEWAY.
- WHILE THE CONCRETE PAVEMENT AND CURB IS BEING INSTALLED AND IS CURING, THE CONTRACTOR SHALL PROVIDE PARKING AREAS ALONG ADJACENT SIDE STREETS. DURING THIS TIME, THE EXISTING SIDEWALKS BETWEEN THE SIDE STREETS SHALL REMAIN IN SERVICE FOR ACCESS FROM THE PARKING AREA TO THE PROPERTY.
- AFTER THE PAVEMENT AND CURB HAVE CURED, THE CONTRACTOR SHALL INSTALL THE DRIVEWAY APRON AND DRIVEWAY THROUGH THE SIDEWALK. DURING THIS TIME, THE CONTRACTOR SHALL PROVIDE SAFE PEDESTRIAN ACCESS ON THE COMPLETED PAVEMENT FOR ACCESS FROM THE PARKING AREA TO THE PROPERTY.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR WILL NEED TO SUBMIT A PLAN FOR THE APPROVAL OF THE ENGINEER WHICH OUTLINES HIS/HER STRATEGY FOR THE MAINTENANCE OF SAFE ACCESS TO COMMERCIAL, HANDICAP AND RESIDENTIAL PROPERTY AND/OR FOR ALLOWING RESIDENTS TO PARK SAFELY WITHIN THE PROJECT LIMITS WHEN ACCESS IS NOT POSSIBLE.

CONSTRUCTION PHASING

STAGE 1 - EAST 105TH STREET (EAST BOULEVARD TO NORTH BOULEVARD)

PHASE 1 SHALL CONSIST OF ALL WORK FOR THE RECONFIGURATION OF THE EAST BOULEVARD AND E. 105TH STREET INTERSECTION. EAST BOULEVARD WILL BE CLOSED FROM THE EXIT OF THE VA PARKING GARAGE TO EAST 105TH STREET. THIS PHASE AND DETOUR SHALL BE LIMITED TO 30 WORKING DAYS.

PHASE 2 SHALL CONSIST OF ALL WORK IN THE WESTERN PORTION OF EAST 105TH STREET INCLUDING THE INSTALLATION OF A 12" WATERMAIN EXCEPT ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS. ONE-WAY SOUTHBOUND TRAFFIC WILL BE MAINTAINED ON THE EXISTING PAVEMENT ON THE EASTERN HALF OF E. 105TH STREET AS SHOWN ON THE PHASE 2 TYPICAL SECTIONS. NORTHBOUND TRAFFIC WILL BE DETOURED AS SHOWN ON THE STAGE 1 DETOUR. (DETOUR WILL BE EAST BLVD NORTH, TO ST. CLAIR AVE. EAST, TO E. 105TH ST.)

PHASE 3 SHALL CONSIST OF ALL WORK IN THE EASTERN PORTION OF EAST 105TH STREET INCLUDING ALL INTERSECTIONS EXCEPT ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS. ONE-WAY SOUTHBOUND TRAFFIC WILL BE MAINTAINED ON THE NEWLY CONSTRUCTED PAVEMENT ON THE WESTERN HALF OF E. 105TH STREET AS SHOWN ON THE PHASE 3 TYPICAL SECTIONS. NORTHBOUND TRAFFIC WILL BE DETOURED AS SHOWN ON THE STAGE 1 DETOUR. (DETOUR WILL BE EAST BLVD NORTH, TO ST. CLAIR AVE., EAST TO E. 105TH ST.)

STAGE 2 - EAST 105TH STREET (NORTH BOULEVARD TO GREENLAWN AVENUE)

PHASE 1 SHALL CONSIST OF ALL WORK IN THE WESTERN PORTION OF EAST 105TH STREET INCLUDING THE INSTALLATION OF A 12" WATERMAIN EXCEPT ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS. ONE-WAY SOUTHBOUND TRAFFIC WILL BE MAINTAINED ON THE EXISTING PAVEMENT ON THE EASTERN HALF OF E. 105TH STREET AS SHOWN ON THE PHASE 1 TYPICAL SECTIONS. NORTHBOUND TRAFFIC WILL BE DETOURED AS SHOWN ON THE STAGE 2 DETOUR. (DETOUR WILL BE SUPERIOR AVE WEST, TO EAST BLVD NORTH, TO ST. CLAIR AVE. EAST TO E. 105TH ST.)

PHASE 2 SHALL CONSIST OF ALL WORK IN THE EASTERN PORTION OF EAST 105TH STREET INCLUDING ALL INTERSECTIONS EXCEPT ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS. ONE-WAY SOUTHBOUND TRAFFIC WILL BE MAINTAINED ON THE NEWLY CONSTRUCTED PAVEMENT ON THE WESTERN HALF OF E. 105TH STREET AS SHOWN ON THE PHASE 2 TYPICAL SECTIONS. NORTHBOUND TRAFFIC WILL BE DETOURED AS SHOWN ON THE STAGE 2 DETOUR. (DETOUR WILL BE SUPERIOR AVE WEST, TO EAST BLVD NORTH, TO ST. CLAIR AVE. EAST TO E. 105TH ST.)

CONSTRUCTION SEQUENCE

THE REHABILITATION EAST 105TH STREET WITHIN THE LIMITS OF THIS PROJECT SHALL BE ACCOMPLISHED IN CONSTRUCTION SECTIONS THAT CAN BE COMPLETED WITHIN ONE CONSTRUCTION SEASON.

THE CONTRACTOR CAN COMMENCE WORK IN ANY STAGE, SUBJECT TO THE APPROVAL OF THE ENGINEER. THE SURFACE COURSE ASPHALT MUST BE PLACED, AND ALL LANES OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 15. NORMAL VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BEYOND THE WORK LIMITS OF THE SECTION CURRENTLY UNDER CONSTRUCTION.

PHASED CONSTRUCTION

ALL WORK IN A GIVEN PHASE, INCLUDING SUCH ITEMS AS REMOVAL OF THE EXISTING WEARING COURSE, CURB AND BASE REPAIR, ASPHALT CONCRETE INTERMEDIATE COURSE, ADJUSTMENT OF CASTINGS, SIDEWALKS, DRIVEWAY REPAIRS, TRAFFIC SIGNALS AND TRAFFIC SIGNS SHALL BE COMPLETED PRIOR TO BEGINNING THE NEXT PHASE, WITH THE EXCEPTION OF THE ITEM 441 ASPHALT CONCRETE SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND ANY SIGNS WHICH CONFLICT WITH THE MAINTENANCE OF TRAFFIC PLANS.

AT THE END OF THE LAST PHASE (IN ANY CONSTRUCTION STAGE), THE 407 TACK COAT FOR INTERMEDIATE COURSE AND THE ITEM 441 ASPHALT CONCRETE SURFACE COURSE SHALL BE INSTALLED ACROSS THE ENTIRE PAVEMENT WIDTH, LANDSCAPING, FINAL PAVEMENT MARKINGS, AND THE BALANCE OF THE SIGNS SHALL BE INSTALLED. DURING THIS PHASE, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.31, MT-95.32 OR MT-99.20, AS APPROPRIATE.

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MAINTENANCE OF TRAFFIC NOTES

EAST 105th STREET

CALCULATED
B.A.K.

CHECKED
D.P.B.

PID NO. -

MAINTENANCE OF TRAFFIC (CONTINUED):

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC DIVISION SIGNAL SHOP (216-420-8275) REGARDING ALL TRAFFIC SIGNAL WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF CLEVELAND FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00 AM TO 10:00 AM OR 3:00 PM TO 7:00 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

TEMPORARY TRAFFIC SIGNAL INSTALLATIONS

INCIDENTAL TO THE REQUIREMENTS FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH 614.03, EXISTING TRAFFIC SIGNAL HEADS (OR ADDITIONAL TRAFFIC SIGNAL HEADS SUPPLIED BY THE CONTRACTOR) SHALL BE POSITIONED SO AS TO PROVIDE A MINIMUM OF TWO TRAFFIC SIGNAL HEADS OVER THE PORTION OF THE ROADWAY USED IN EACH DIRECTION OF TRAFFIC AND THE OPERATION SHALL BE MODIFIED AS NEEDED TO MAINTAIN TRAFFIC FLOW. THE NUMBER, LOCATION, VISIBILITY AND HEIGHT OF ALL TRAFFIC SIGNALS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE ODOTCD. ANY TRAFFIC SIGNAL HEADS OR FACES WITHIN EXISTING HEADS THAT ARE NOT USED DURING CONSTRUCTION SIGNAL PHASING SHALL BE COVERED IN ACCORDANCE WITH 632.25. THE FINAL LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

"NO PARKING ANY TIME" SIGN (R7-1)

"NO PARKING ANY TIME" SIGNS, WITH ARROWS POINTING NORTH AND SOUTH, ARE TO BE INSTALLED ON BOTH SIDES OF THE WORK ZONE AT APPROXIMATELY 150' INTERVALS IN ALL SECTIONS AND PHASES OF CONSTRUCTION.



R7-1

DETOUR SIGNING

ADVANCE TRAFFIC SIGNING AND SUPPORTS, INCLUDING DETOUR SIGNING, CONSTRUCTION WORK ZONE APPROACH SIGNING, BARRICADES AND SIGNS ON BARRICADES SHOWN ON THE PLANS BEYOND THE WORK LIMITS SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR, FLUORESCENT ORANGE TYPE G SIGN SHEETING SHALL BE USED FOR ALL DETOUR AND CONSTRUCTION WARNING SIGNS.

PORTABLE CHANGEABLE MESSAGE SIGNS

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE, WHEN NO LONGER NEEDED, TWO (2) CHANGEABLE MESSAGE SIGNS (PCMS), ON SITE, WITH A MINIMUM LEGIBILITY DISTANCE OF 475 FEET, FOR THE DURATION OF THE PROJECT.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONING DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO ODOT CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PCMS SHALL BE LOCATED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM TRAFFIC.

ALL MESSAGES TO BE DISPLAYED ON THE PCMS WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE PCMS SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD.

THE PCMS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF ODOT CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND/OR THE CITY TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THE PCMS FOR THE DURATION OF THE PROJECT.

PAYMENT FOR THIS ITEM, INCLUDING, BUT NOT LIMITED TO, ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

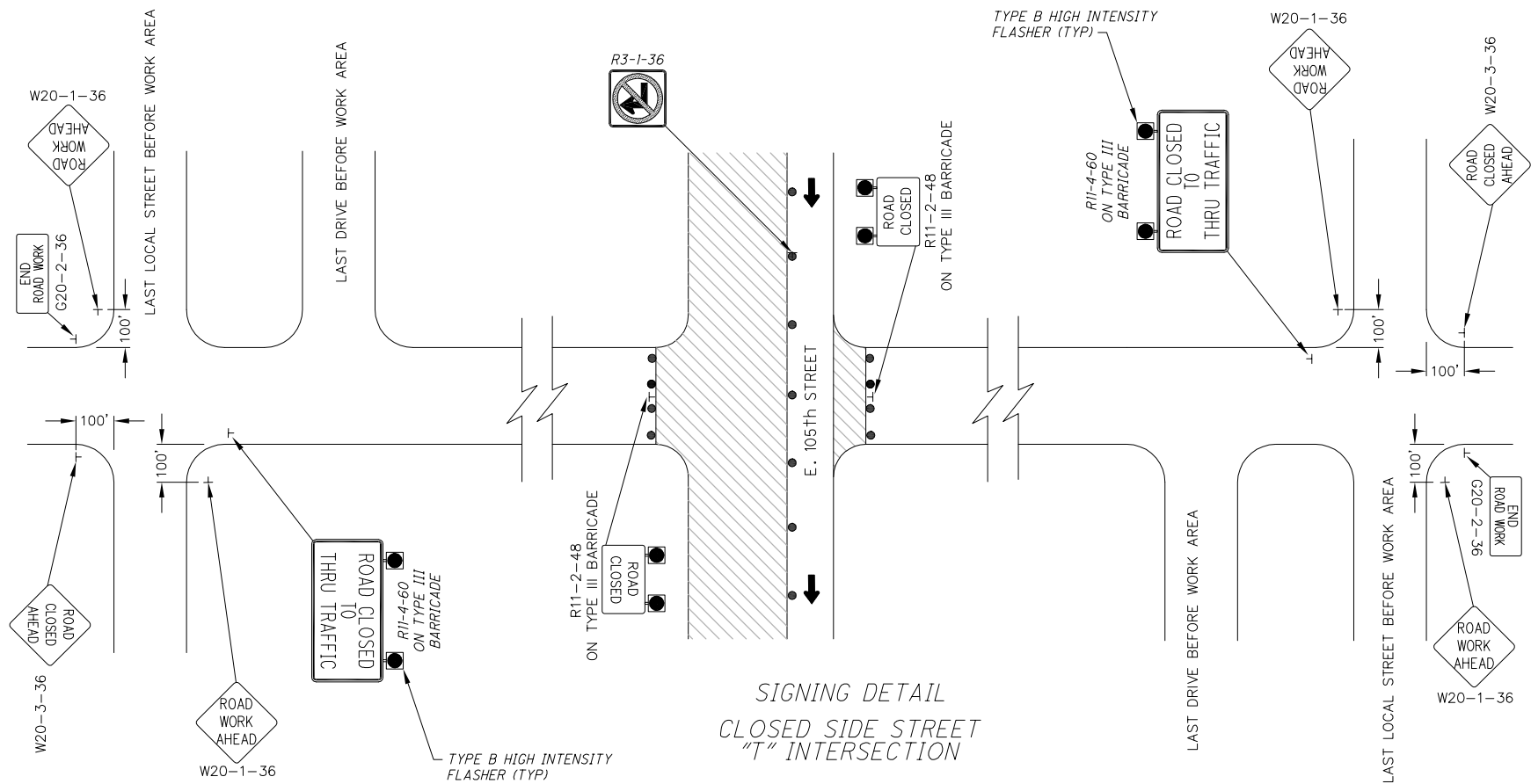
ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN AS PER PLAN

20 SIGN MONTH

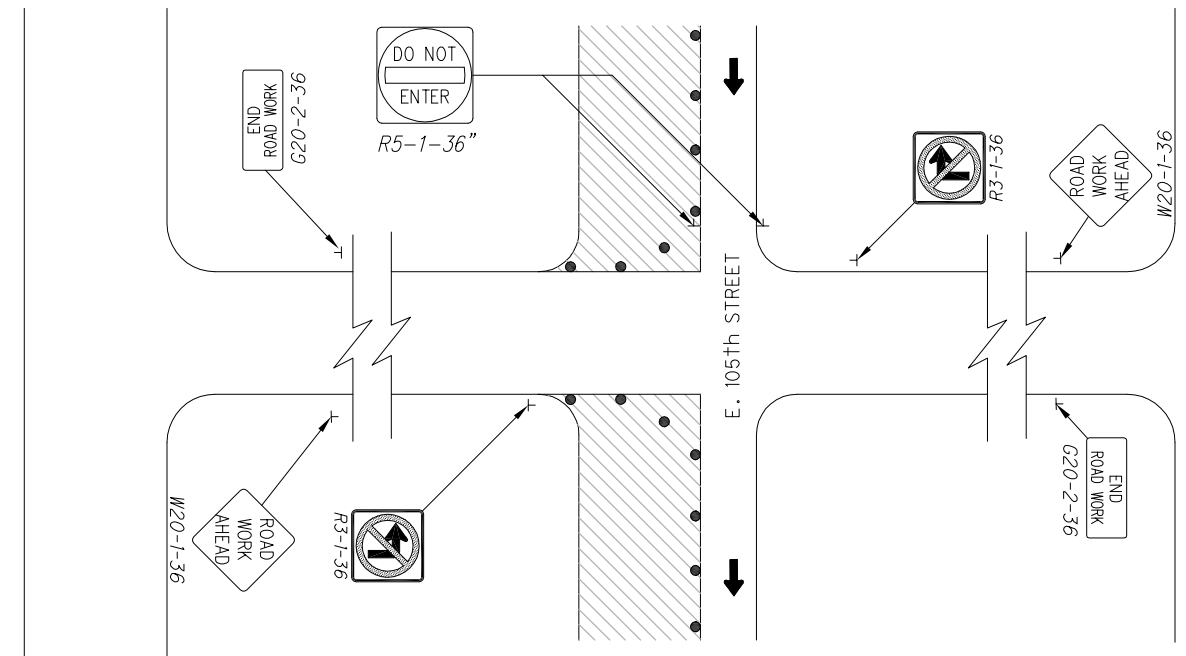
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PLOT DATE: 5/8/19

MAINTENANCE OF TRAFFIC NOTES

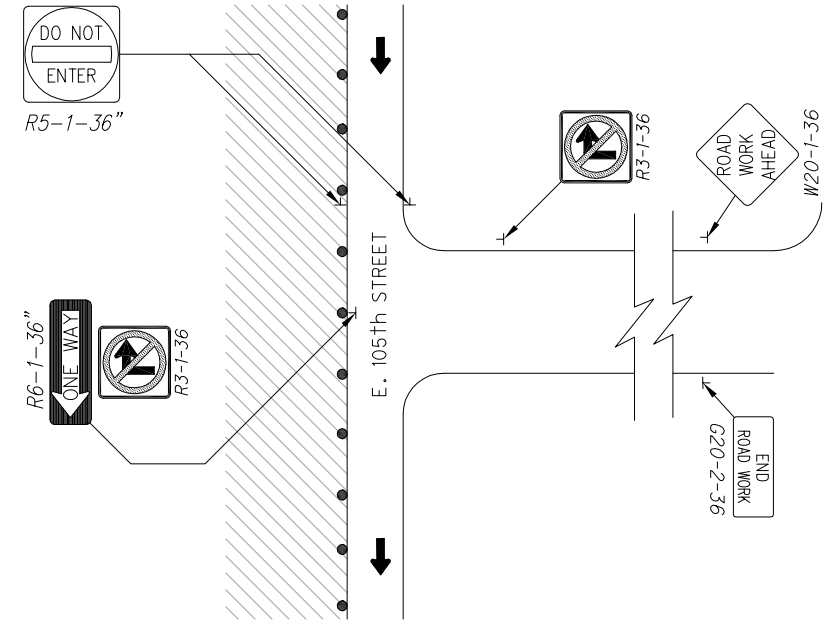
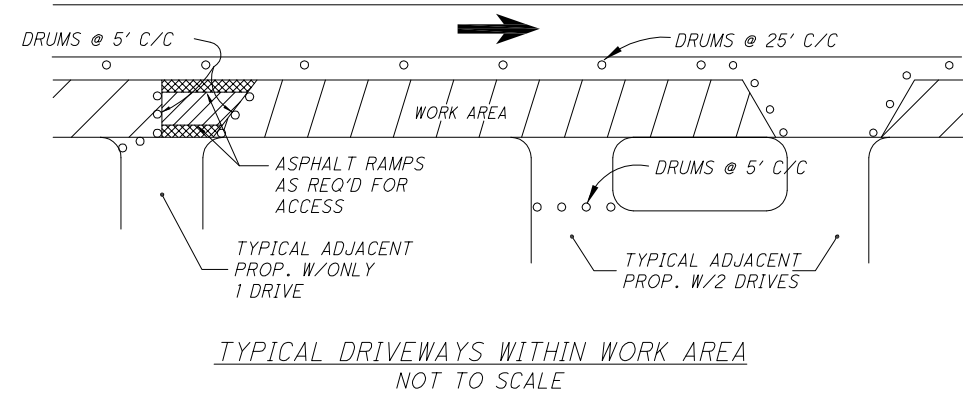
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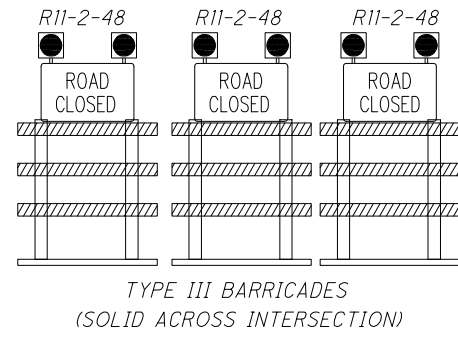
SIGNING DETAIL
CLOSED SIDE STREET
"T" INTERSECTION



SIGNING DETAIL
OPEN SIDE STREET



SIGNING DETAIL
OPEN SIDE STREET
"T" INTERSECTION

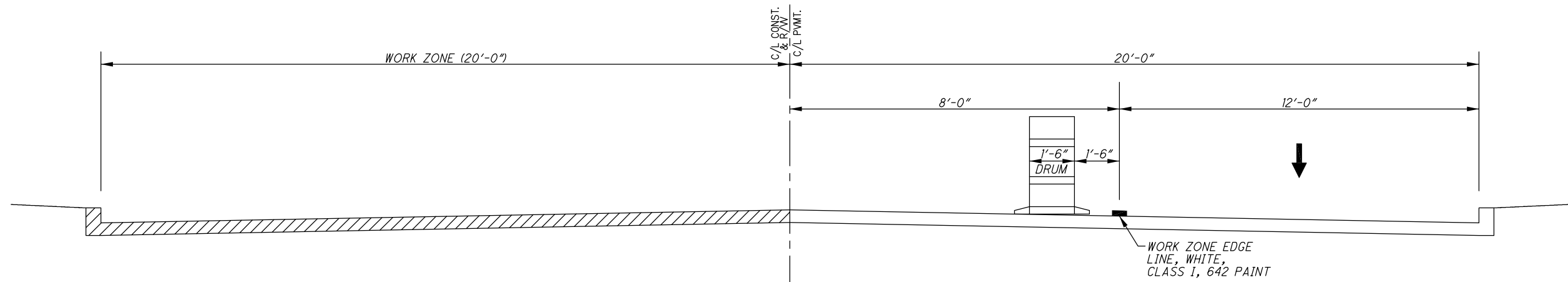


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MAINTENANCE OF TRAFFIC DETAILS

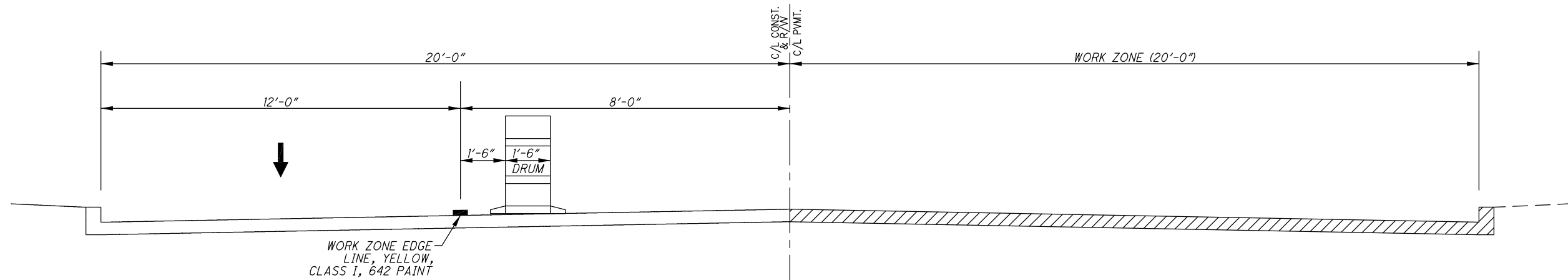
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PROP. 12" W.M.
STA. 89+60
TO STA. 138+68
AND STA. 152+72
TO STA. 155+00

MAINTENANCE OF TRAFFIC PLAN - STAGE 1, PHASE 2
MAINTENANCE OF TRAFFIC PLAN - STAGE 2, PHASE 1
TYPICAL ONE-WAY TRAFFIC SECTION
EAST 105th STREET STA. 89+56 TO STA. 155+02



CONSTRUCTED 12" W.M.
STA. 89+60
TO STA. 138+68
AND STA. 152+72
TO STA. 155+00

MAINTENANCE OF TRAFFIC PLAN - STAGE 1, PHASE 3
MAINTENANCE OF TRAFFIC PLAN - STAGE 2, PHASE 2
TYPICAL ONE-WAY TRAFFIC SECTION
EAST 105th STREET STA. 89+56 TO STA. 155+02

CALCULATED	B.A.K.
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**MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS**

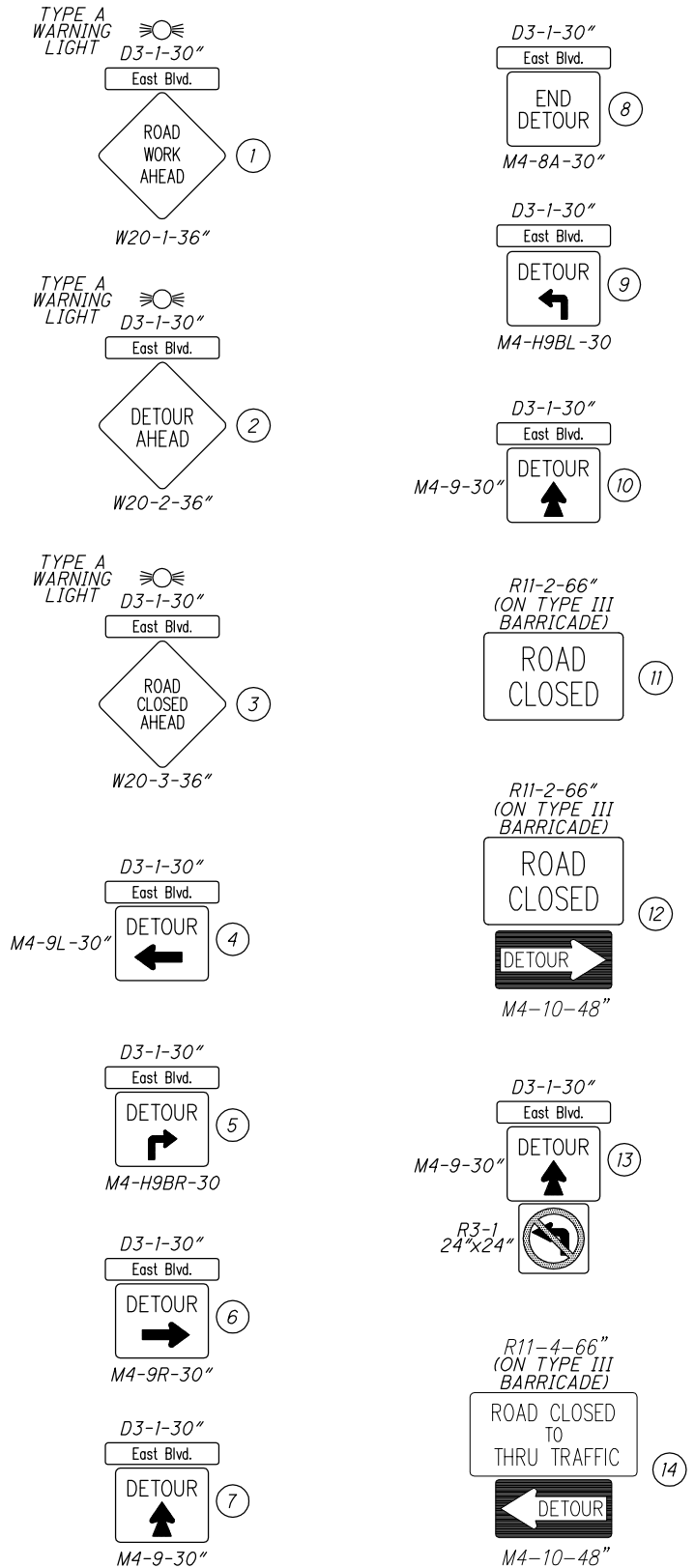
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 PLOT DATE: 5/8/19

LEGEND: DETOURED TRAFFIC WORK ZONE

NOTES:

1. ALL DETOUR SIGNS TO BE TYPE "G" SHEETING.
2. R11-2, R11-3 AND R11-4 SIGNS (ON TYPE III BARRICADES) SHALL BE EQUIPPED WITH TYPE B FLASHING WARNING LIGHTS. SEE MT-101.60 FOR ADDITIONAL INFORMATION.
3. CONTRACTOR TO COVER EXISTING CONFLICTING SIGNS AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS. PAYMENT TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".
4. PAYMENT FOR SIGN OVERLAYS USED FOR DETOURS WILL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".



**MAINTENANCE OF TRAFFIC
 DETOUR PLAN - STAGE 1 - PHASE 1**

EAST 105th STREET

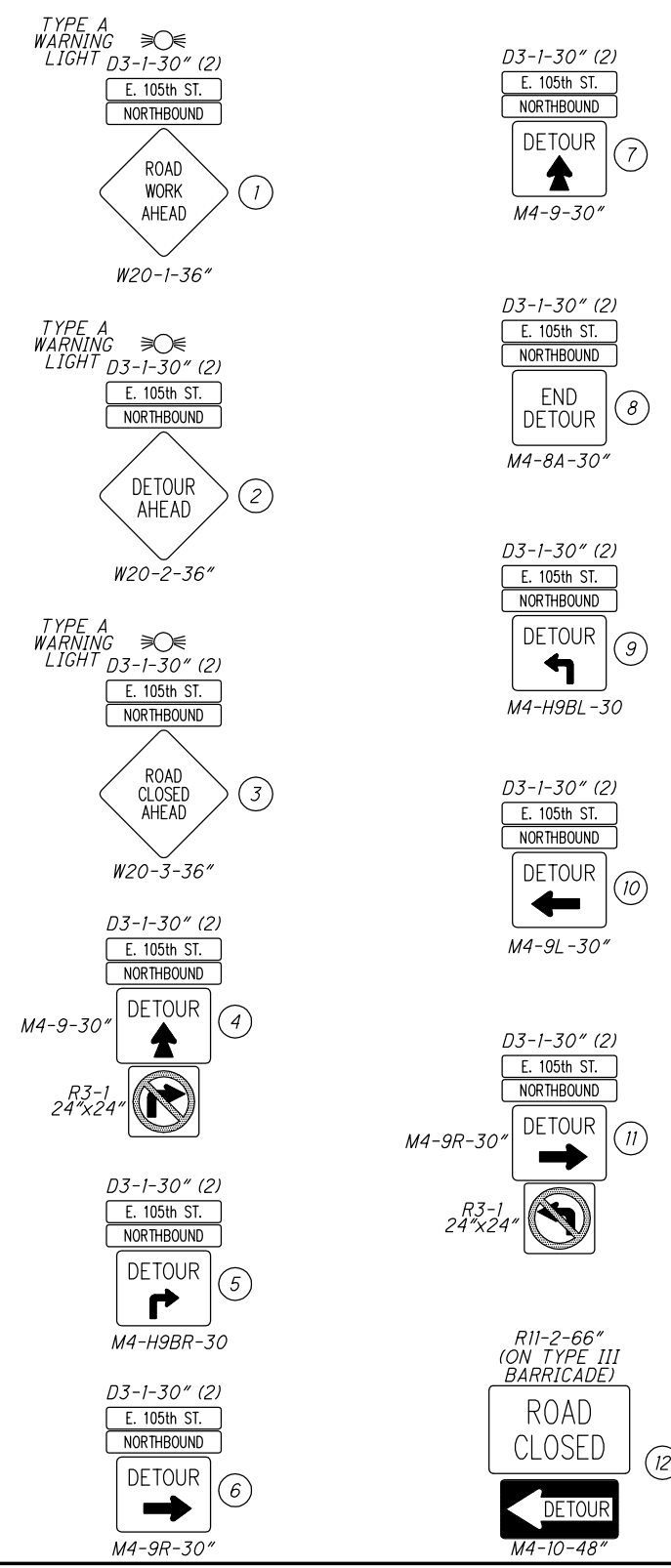
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LEGEND: DETOURED TRAFFIC WORK ZONE

NOTES:

- ALL DETOUR SIGNS TO BE TYPE "G" SHEETING.
- R11-2, R11-3 AND R11-4 SIGNS (ON TYPE III BARRICADES) SHALL BE EQUIPPED WITH TYPE B FLASHING WARNING LIGHTS. SEE MT-101.60 FOR ADDITIONAL INFORMATION.
- CONTRACTOR TO COVER EXISTING CONFLICTING SIGNS AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS. PAYMENT TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".
- PAYMENT FOR SIGN OVERLAYS USED FOR DETOURS WILL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".



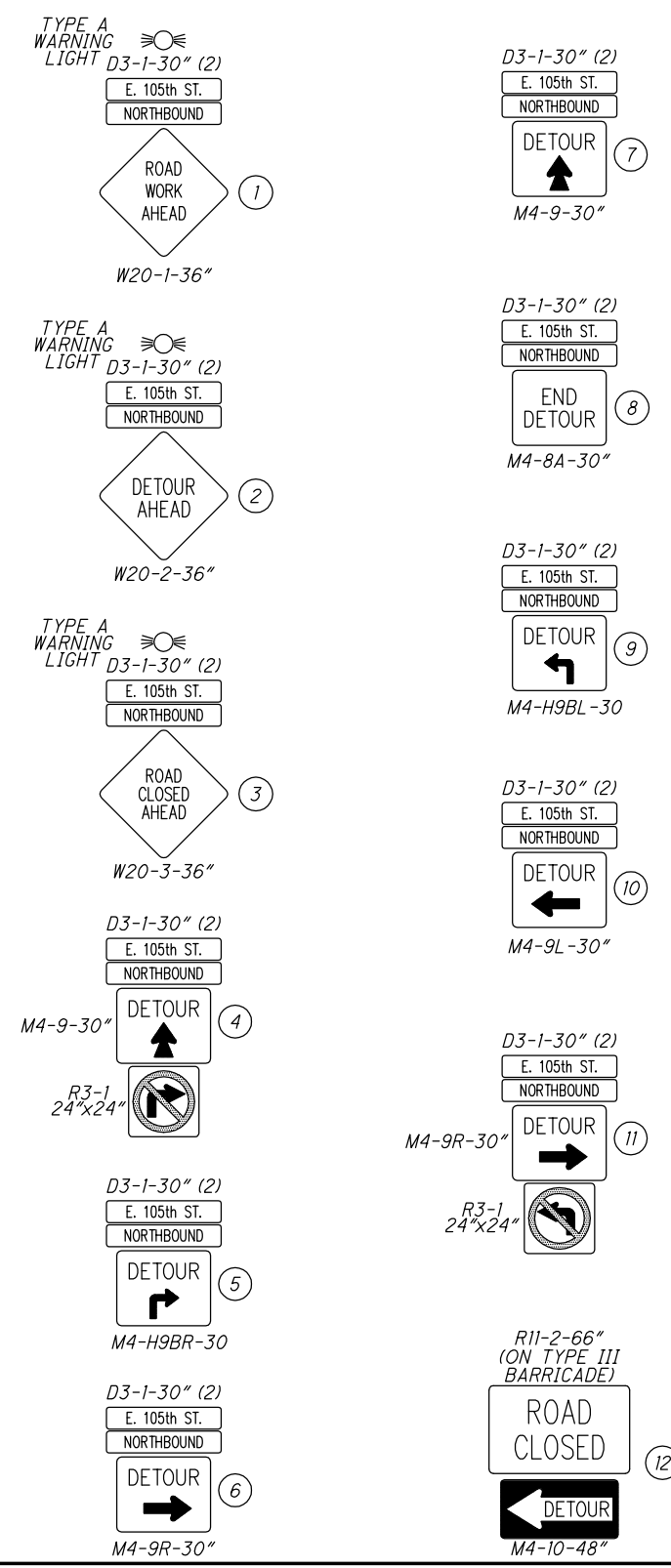
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LEGEND: DETOURED TRAFFIC WORK ZONE

NOTES:

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2. R11-2, R11-3 AND R11-4 SIGNS (ON TYPE III BARRICADES) SHALL BE EQUIPPED WITH TYPE B FLASHING WARNING LIGHTS. SEE MT-101.60 FOR ADDITIONAL INFORMATION.
3. CONTRACTOR TO COVER EXISTING CONFLICTING SIGNS AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS. PAYMENT TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".
4. PAYMENT FOR SIGN OVERLAYS USED FOR DETOURS WILL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN".



**MAINTENANCE OF TRAFFIC
DETOUR PLAN - STAGE 2**

EAST 105TH STREET

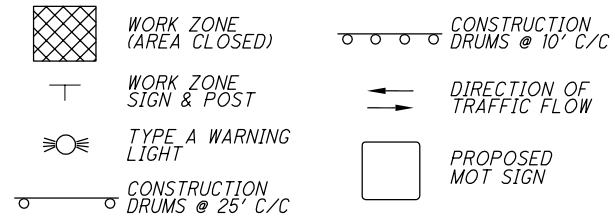
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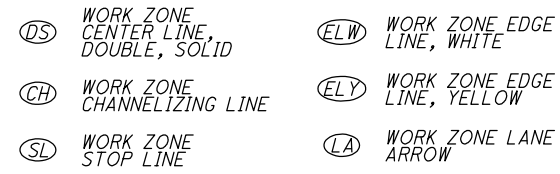
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IN FEET

WORK ZONE LEGEND

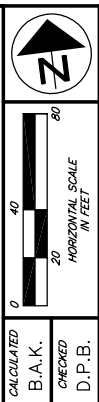


PAVEMENT MARKING LEGEND



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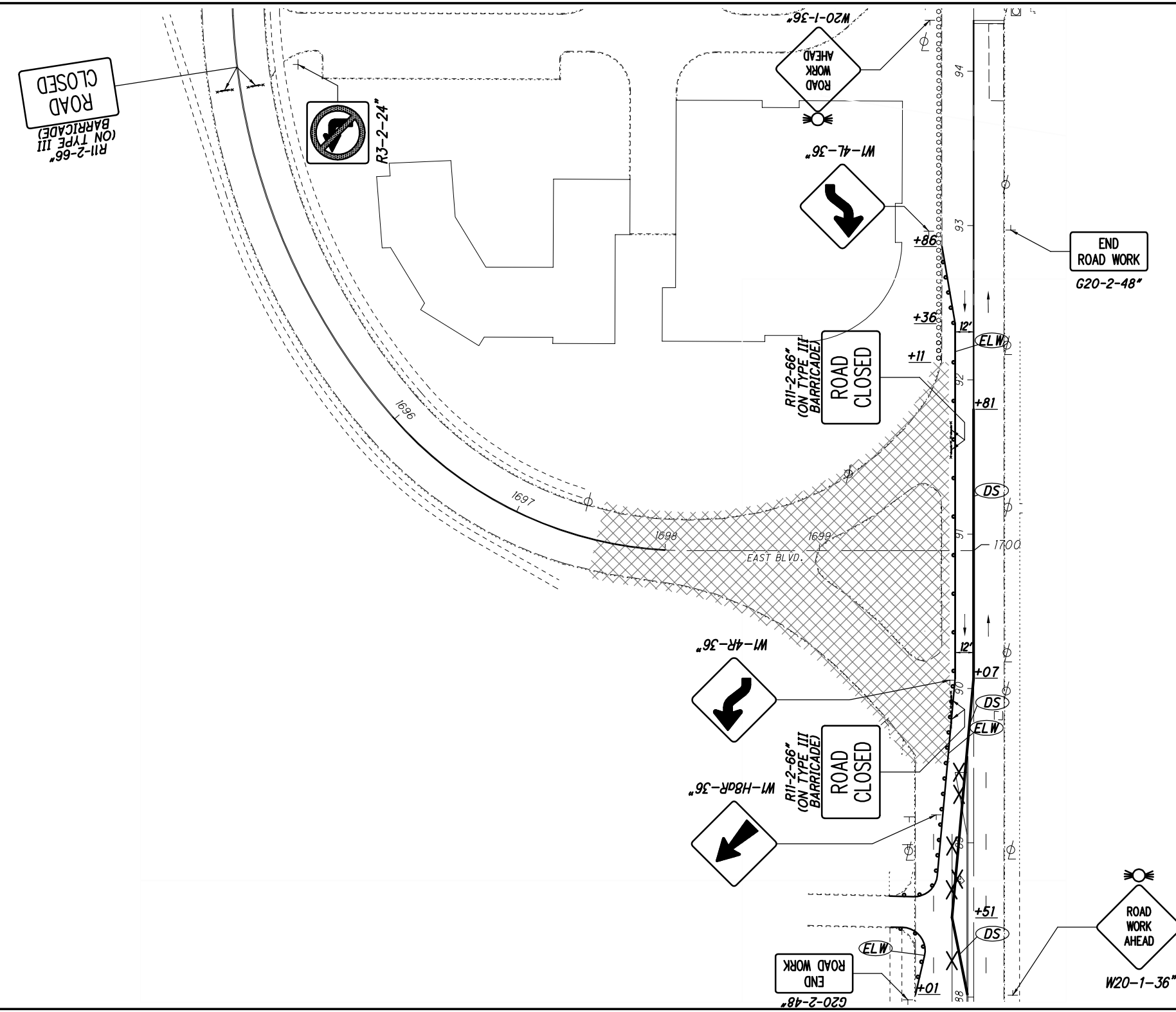


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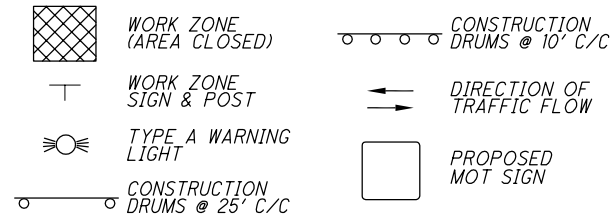
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 1
EAST 105th STREET AND EAST BOULEVARD**

EAST 105th STREET

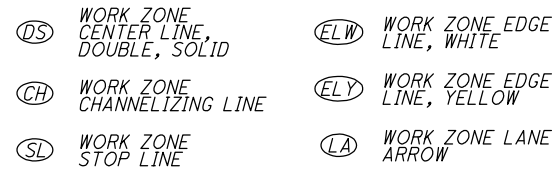
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PLOT DATE: 5/8/19



WORK ZONE LEGEND

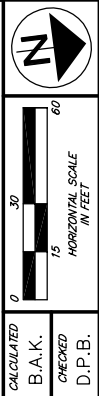


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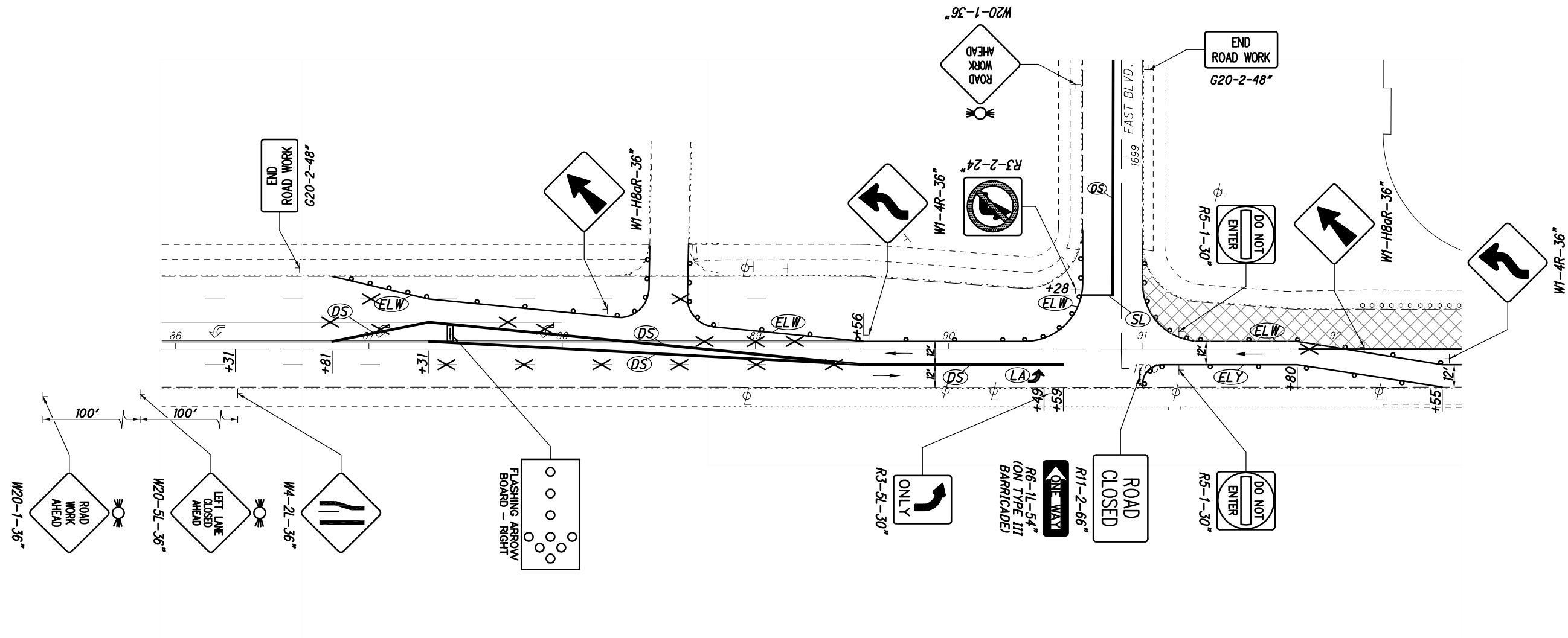


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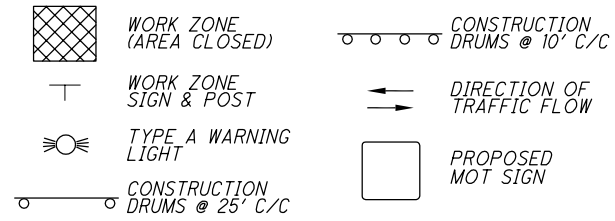
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 2
EAST 105th STREET AND EAST BOULEVARD**

EAST 105th STREET

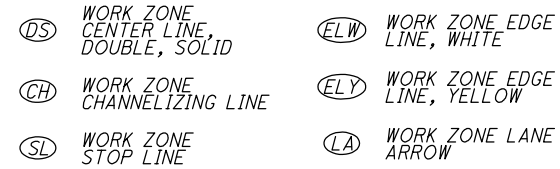
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WORK ZONE LEGEND

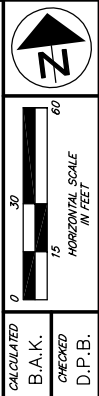


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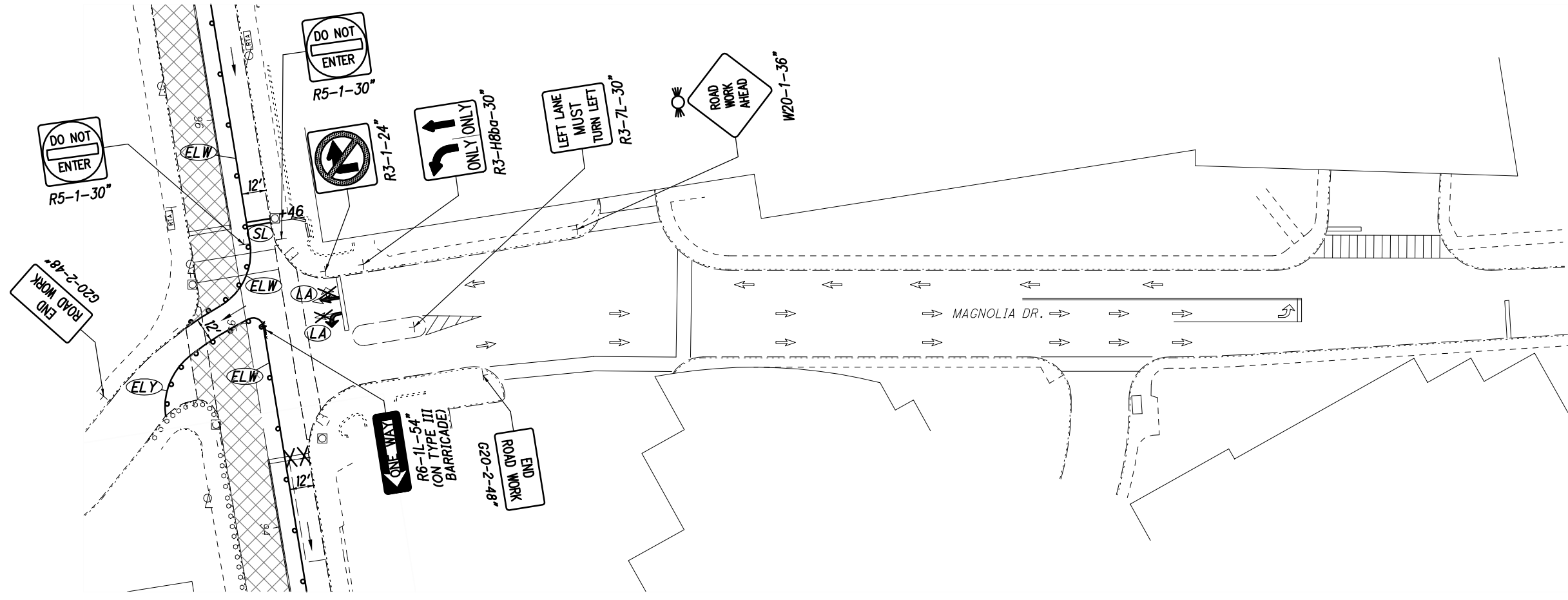


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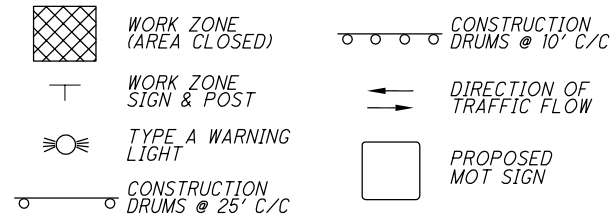
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 2
EAST 105th STREET AND MAGNOLIA DRIVE**

EAST 105th STREET

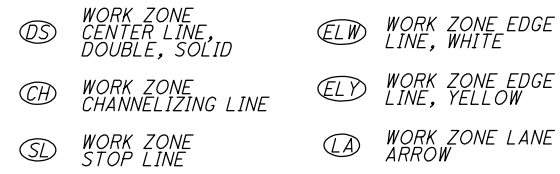
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WORK ZONE LEGEND

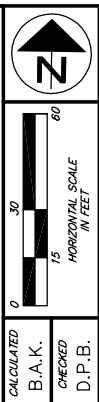


PAVEMENT MARKING LEGEND



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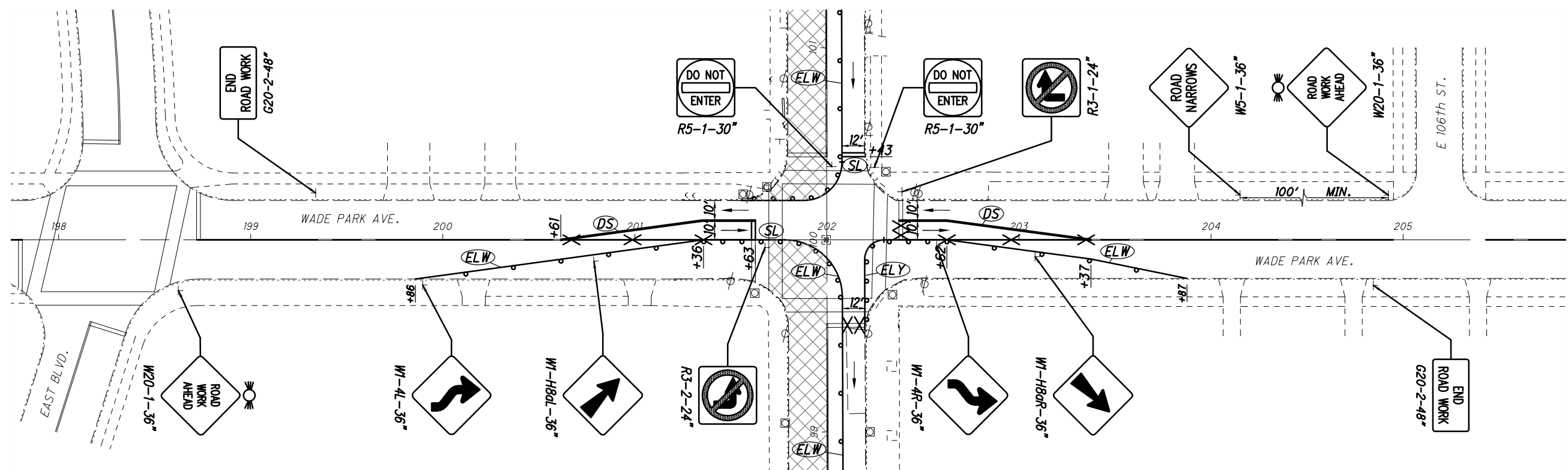
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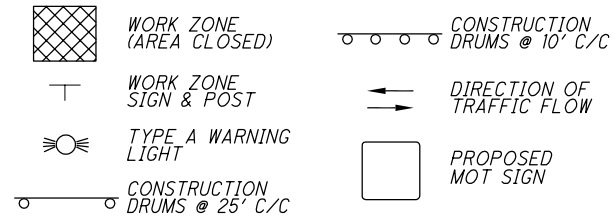
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 2
EAST 105TH STREET AND WADE PARK AVENUE**

EAST 105TH STREET

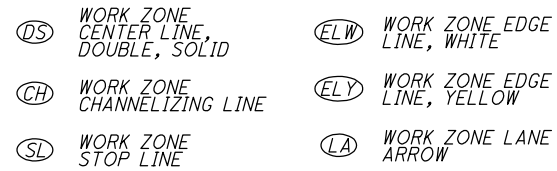
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WORK ZONE LEGEND

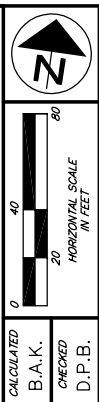


PAVEMENT MARKING LEGEND



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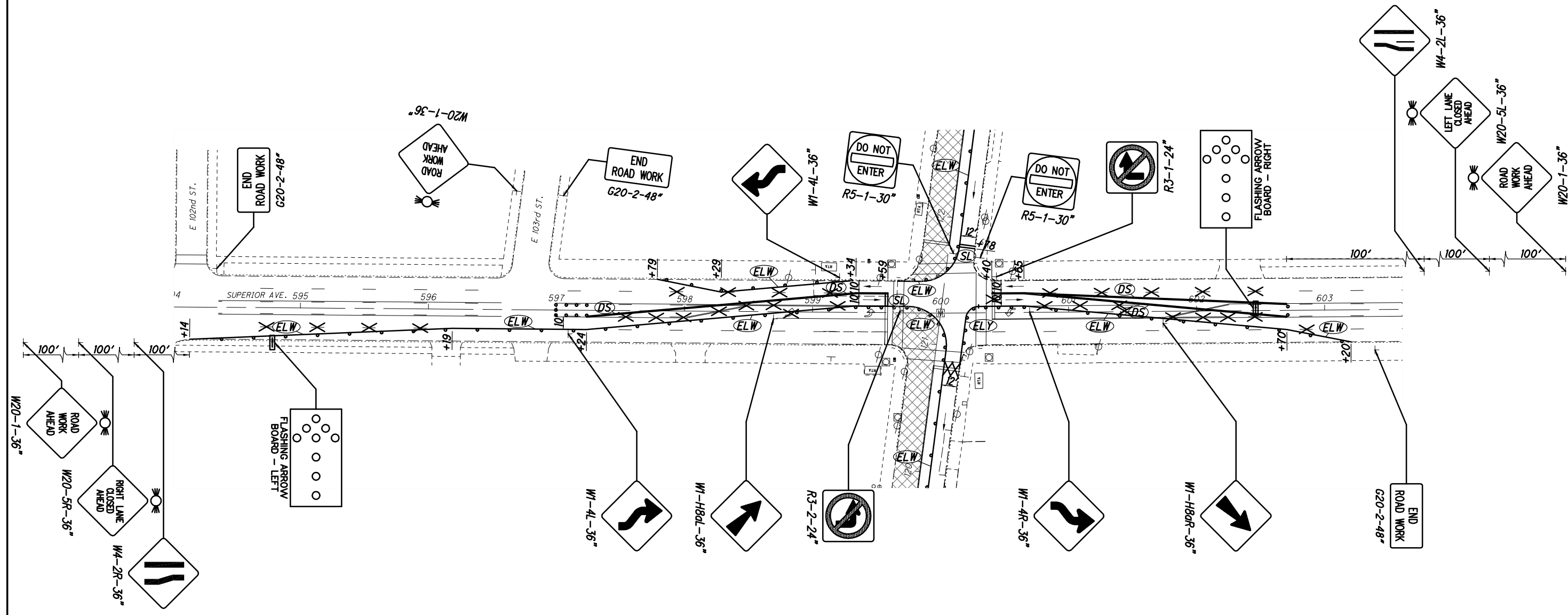


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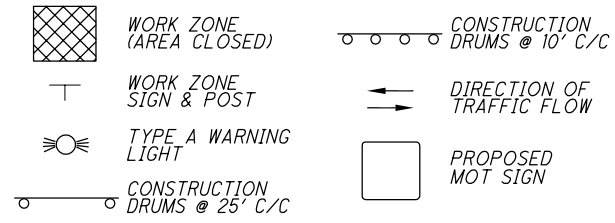
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 2
EAST 105th STREET AND SUPERIOR AVENUE**

EAST 105th STREET

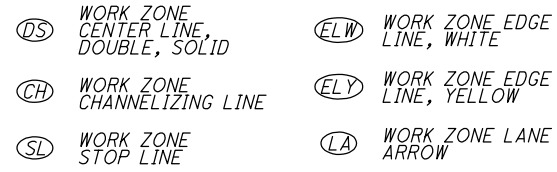
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WORK ZONE LEGEND

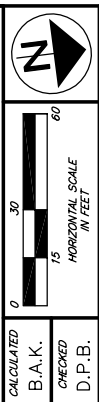


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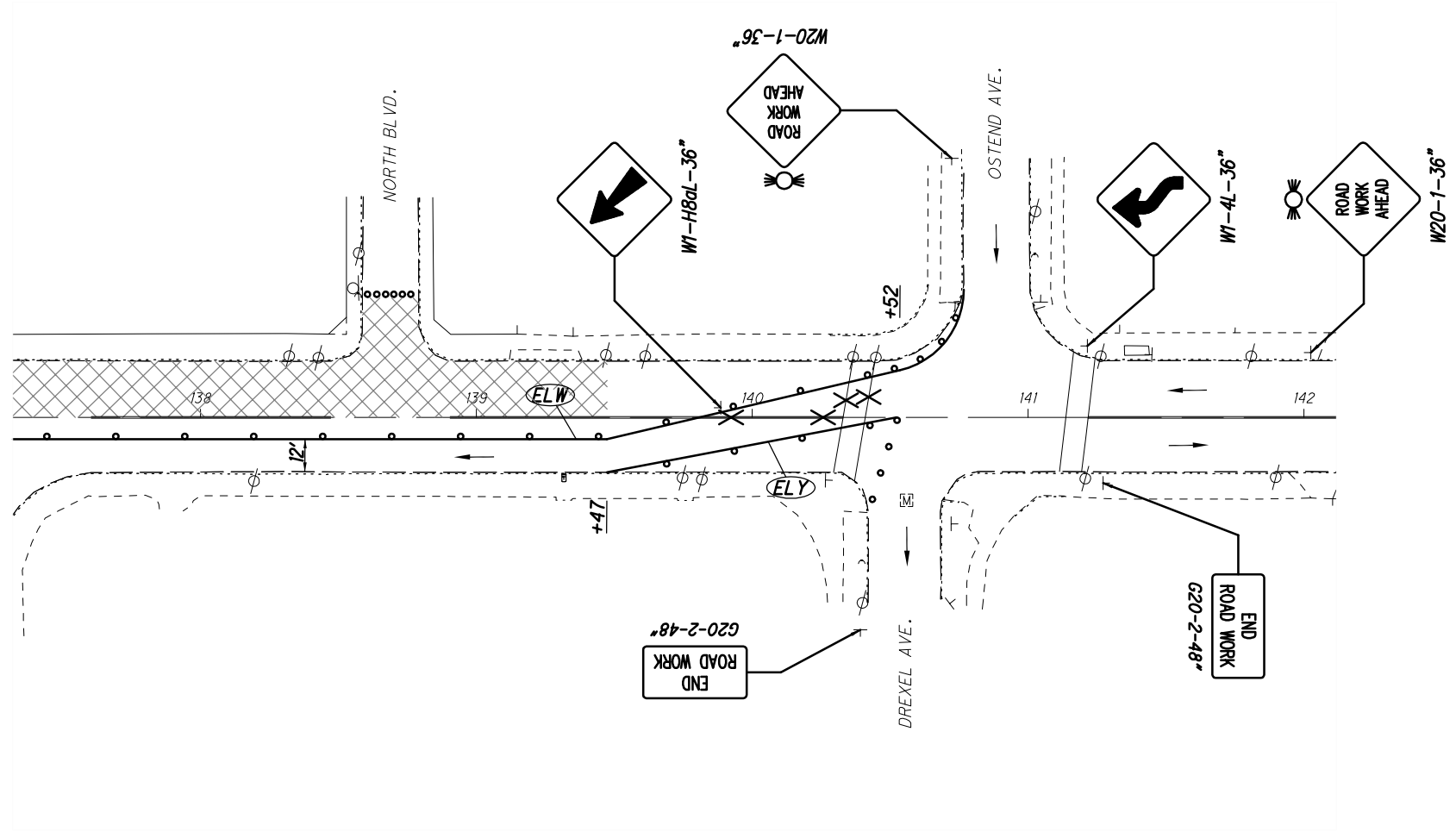
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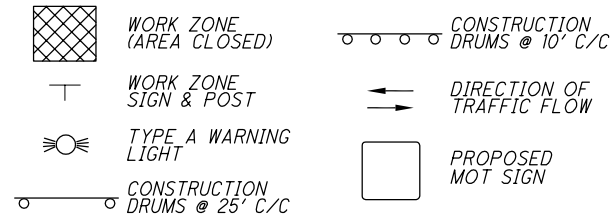
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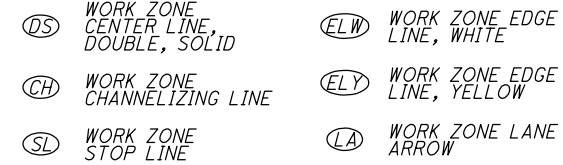
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 2
 EAST 105th STREET AND NORTH BOULEVARD**

EAST 105th STREET

WORK ZONE LEGEND



PAVEMENT MARKING LEGEND



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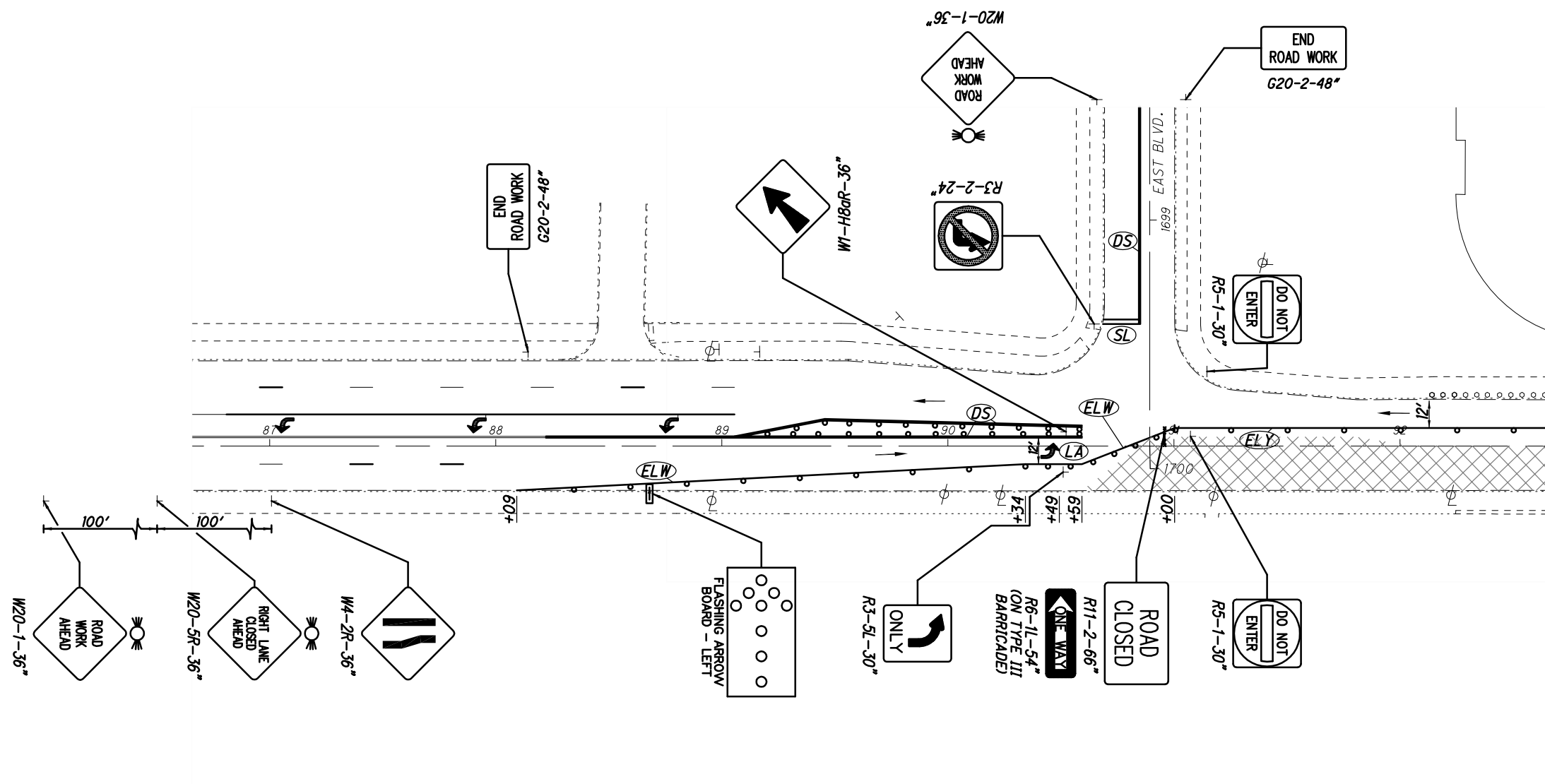
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


**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 3
EAST 105th STREET AND EAST BOULEVARD**

EAST 105th STREET







DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 maintenance of traffic.dwg
PLOT DATE: 5/8/19



WORK ZONE LEGEND

	WORK ZONE (AREA CLOSED)		CONSTRUCTION DRUMS @ 10' C/C
	WORK ZONE SIGN & POST		DIRECTION OF TRAFFIC FLOW
	TYPE A WARNING LIGHT		PROPOSED MOT SIGN
	CONSTRUCTION DRUMS @ 25' C/C		

PAVEMENT MARKING LEGEND

	WORK ZONE CENTER LINE, DOUBLE, SOLID		WORK ZONE EDGE LINE, WHITE
	WORK ZONE CHANNELIZING LINE		WORK ZONE EDGE LINE, YELLOW
	WORK ZONE STOP LINE		WORK ZONE LANE ARROW


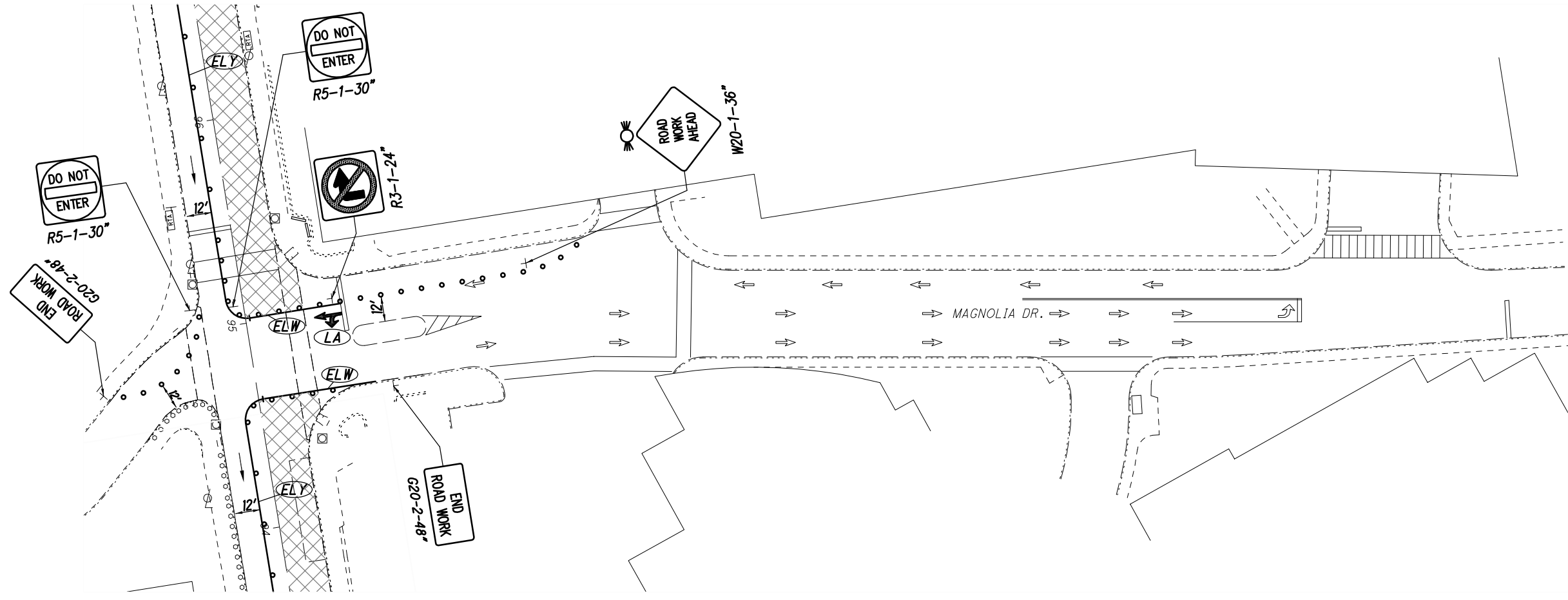
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PID NO. -

0 15 30 60 HORIZONTAL SCALE IN FEET

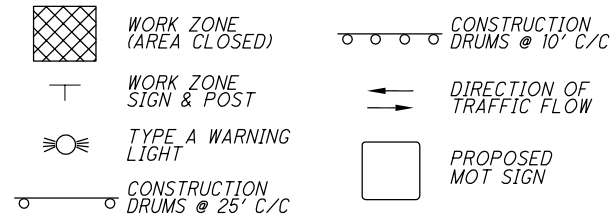



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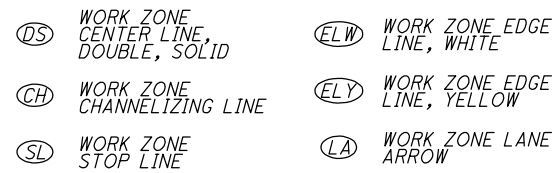
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 3
 EAST 105TH STREET AND MAGNOLIA DRIVE**

EAST 105th STREET

WORK ZONE LEGEND

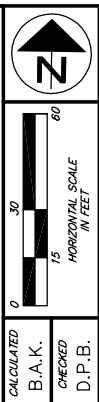


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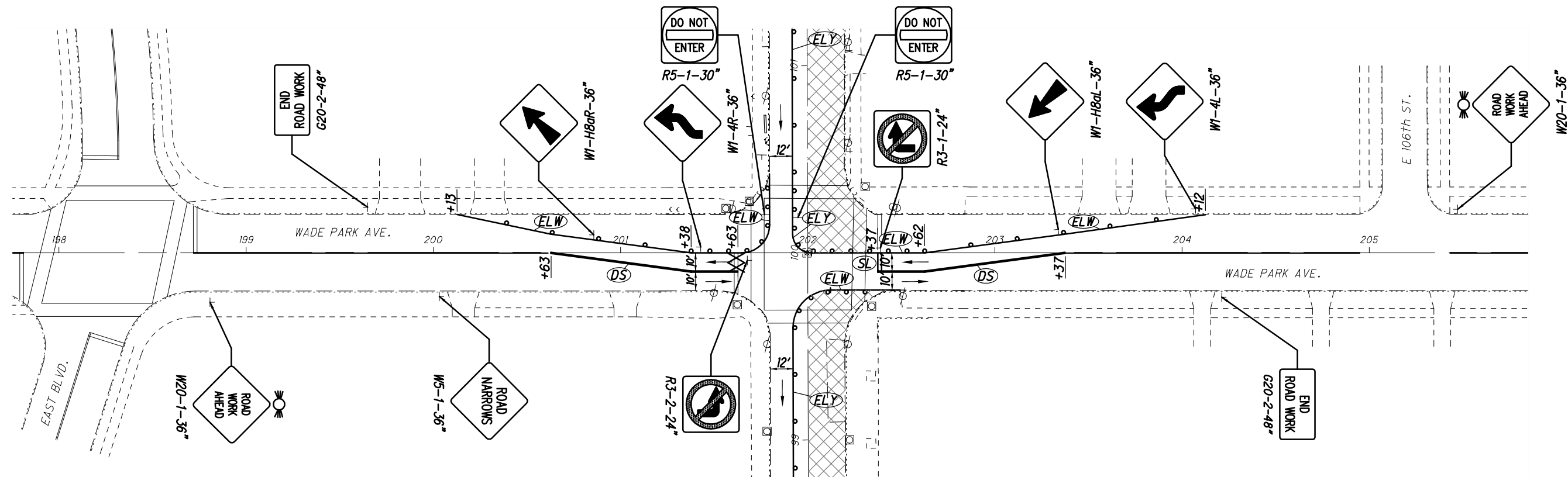
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**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 3
EAST 105th STREET AND WADE PARK AVENUE**

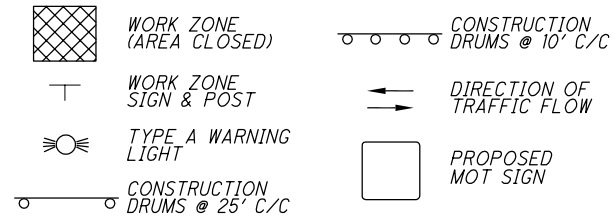
EAST 105th STREET

41
243

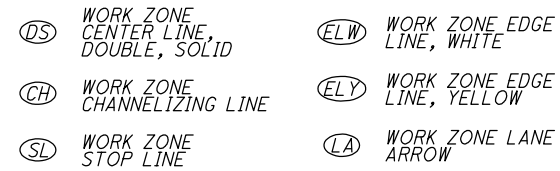


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WORK ZONE LEGEND

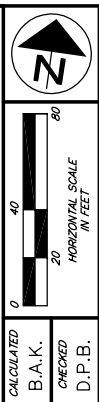


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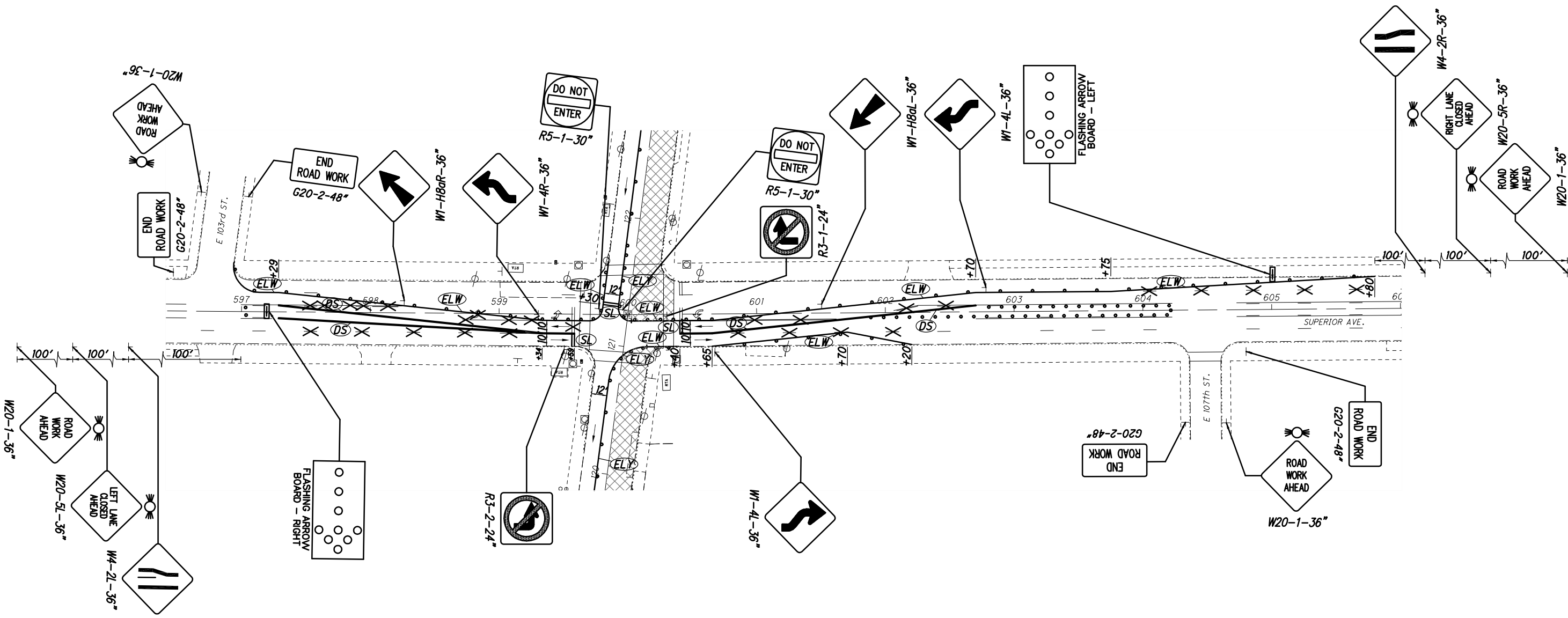
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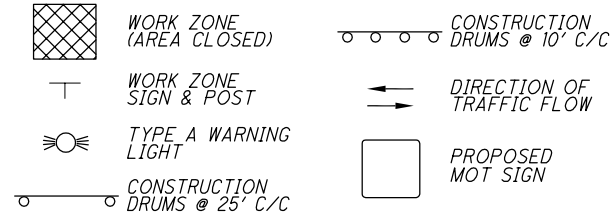
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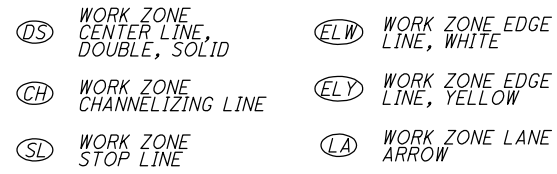
**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 3
EAST 105th STREET AND SUPERIOR AVENUE**

EAST 105th STREET

WORK ZONE LEGEND



PAVEMENT MARKING LEGEND



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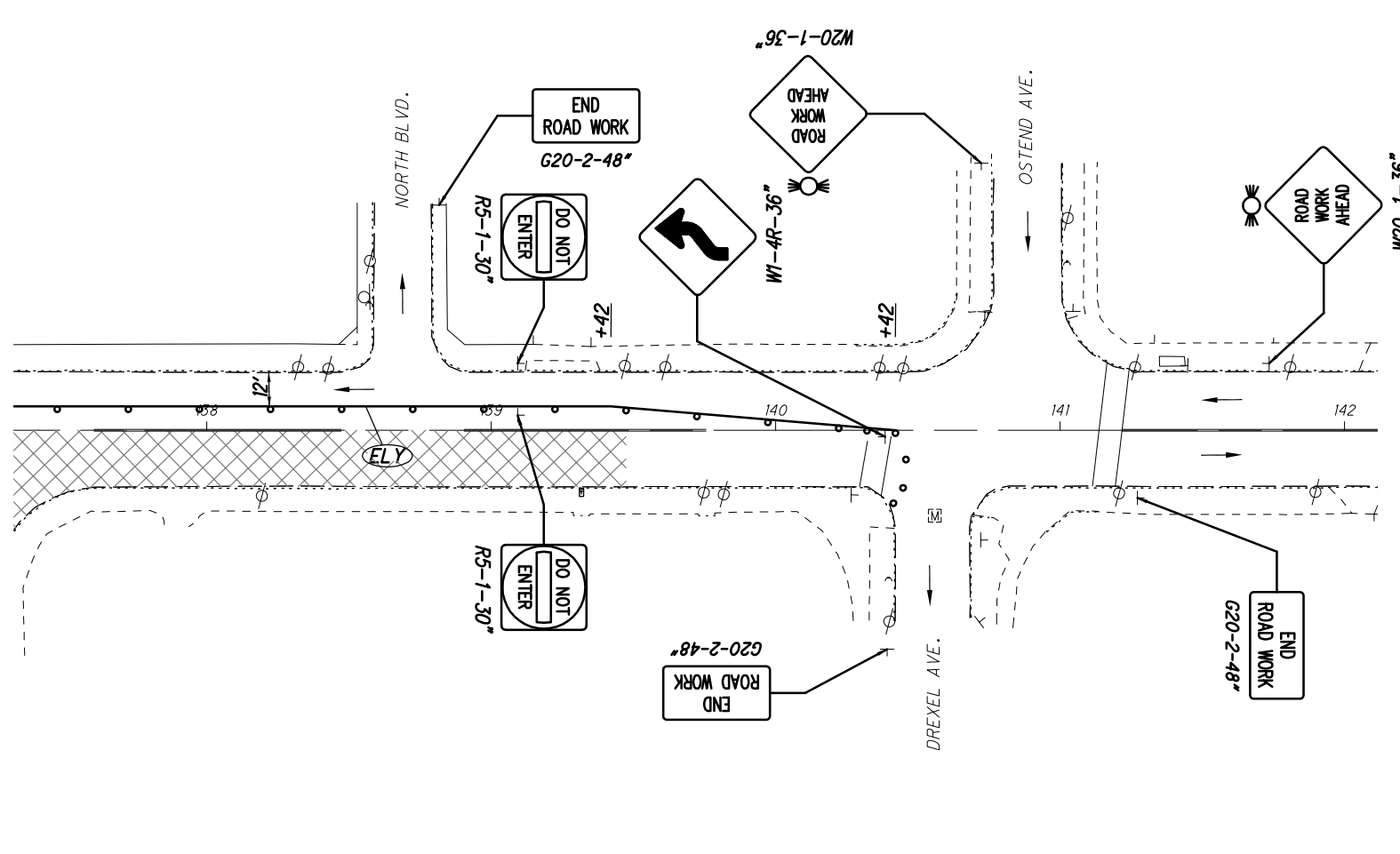
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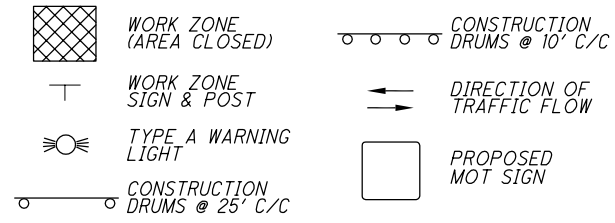
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**MAINTENANCE OF TRAFFIC - STAGE 1, PHASE 3
 EAST 105th STREET AND NORTH BOULEVARD**

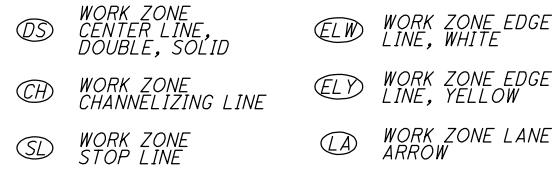
EAST 105th STREET



WORK ZONE LEGEND



PAVEMENT MARKING LEGEND



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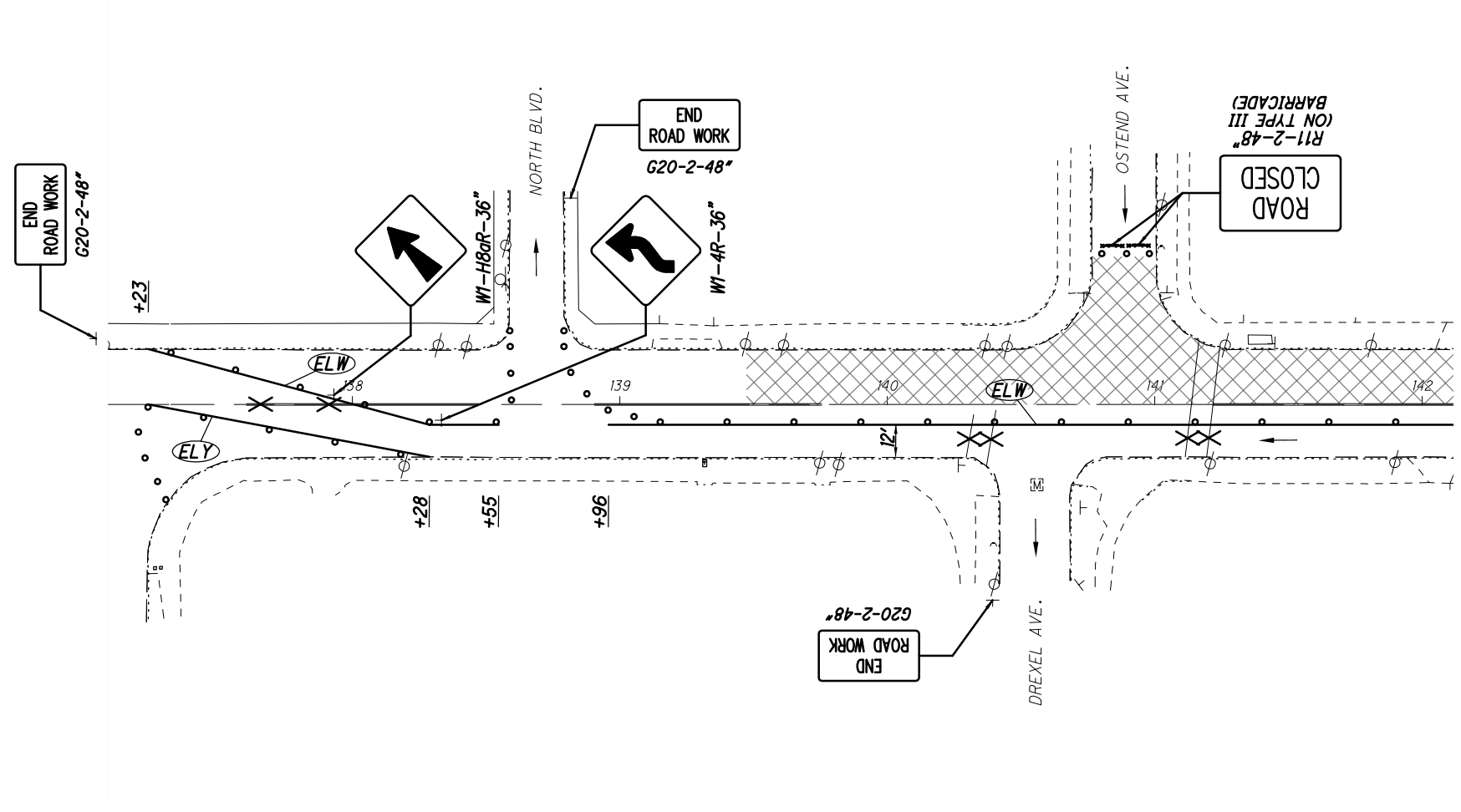
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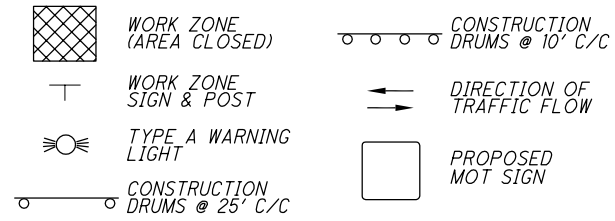
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**MAINTENANCE OF TRAFFIC - STAGE 2, PHASE 1
 EAST 105th STREET AND NORTH BOULEVARD**

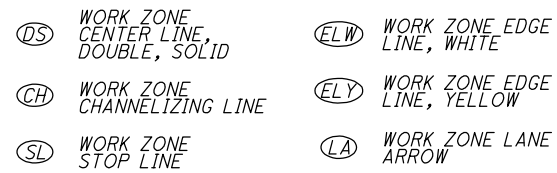
EAST 105th STREET



WORK ZONE LEGEND



PAVEMENT MARKING LEGEND



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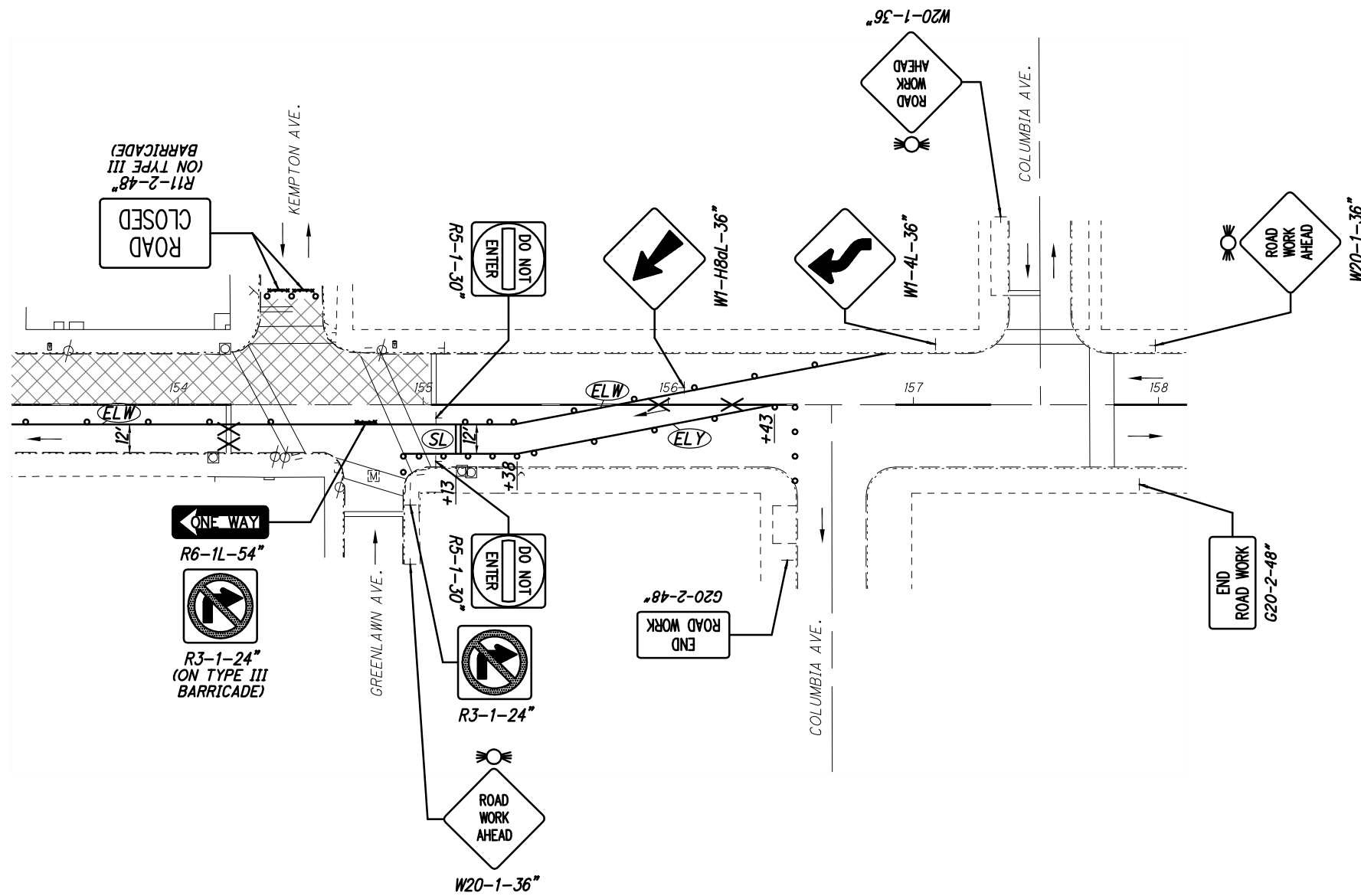
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2. ALL CONSTRUCTION SIGNS SHALL BE TYPE G SHEETING.
3. CONTRACTOR TO REMOVE ANY CONFLICTING PAVEMENT MARKINGS. WORK PERFORMED PER 641.10 TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.
4. CONTRACTOR TO COVER EXISTING CONFLICTING SIGNS. PAYMENT TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.
5. CONTRACTOR SHALL COORDINATE DETOUR WITH CIRCLENORTH PROJECT (EAST 105TH STREET MIXED-USE DEVELOPMENT) AND MODIFY DETOUR ROUTE AS REQUIRED.



CALCULATED B.A.K. CHECKED D.P.B.
PID NO. -

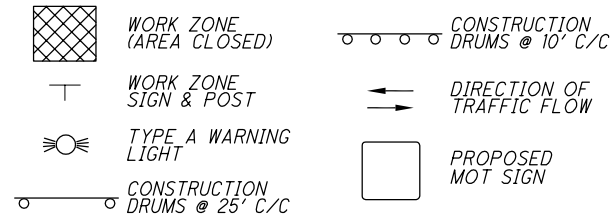
**MAINTENANCE OF TRAFFIC - STAGE 2, PHASE 1
EAST 105th STREET AND GREENLAWN AVENUE**

EAST 105th STREET

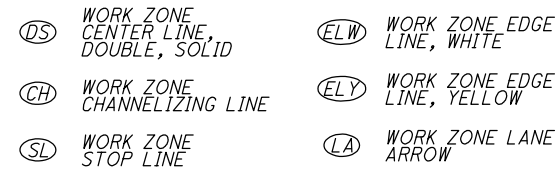


DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 maintenance of traffic.dwg
PLOT DATE: 5/8/19

WORK ZONE LEGEND

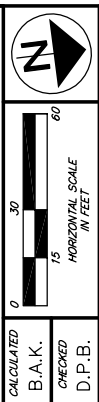


PAVEMENT MARKING LEGEND



NOTES:

1. SEE DETOUR PLANS (SHEETS 25-27) FOR ADDITIONAL REQUIRED MAINTENANCE OF TRAFFIC SIGNS.
2. ALL CONSTRUCTION SIGNS SHALL BE TYPE G SHEETING.
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5. CONTRACTOR SHALL COORDINATE DETOUR WITH CIRCLENORTH PROJECT (EAST 105TH STREET MIXED-USE DEVELOPMENT) AND MODIFY DETOUR ROUTE AS REQUIRED.



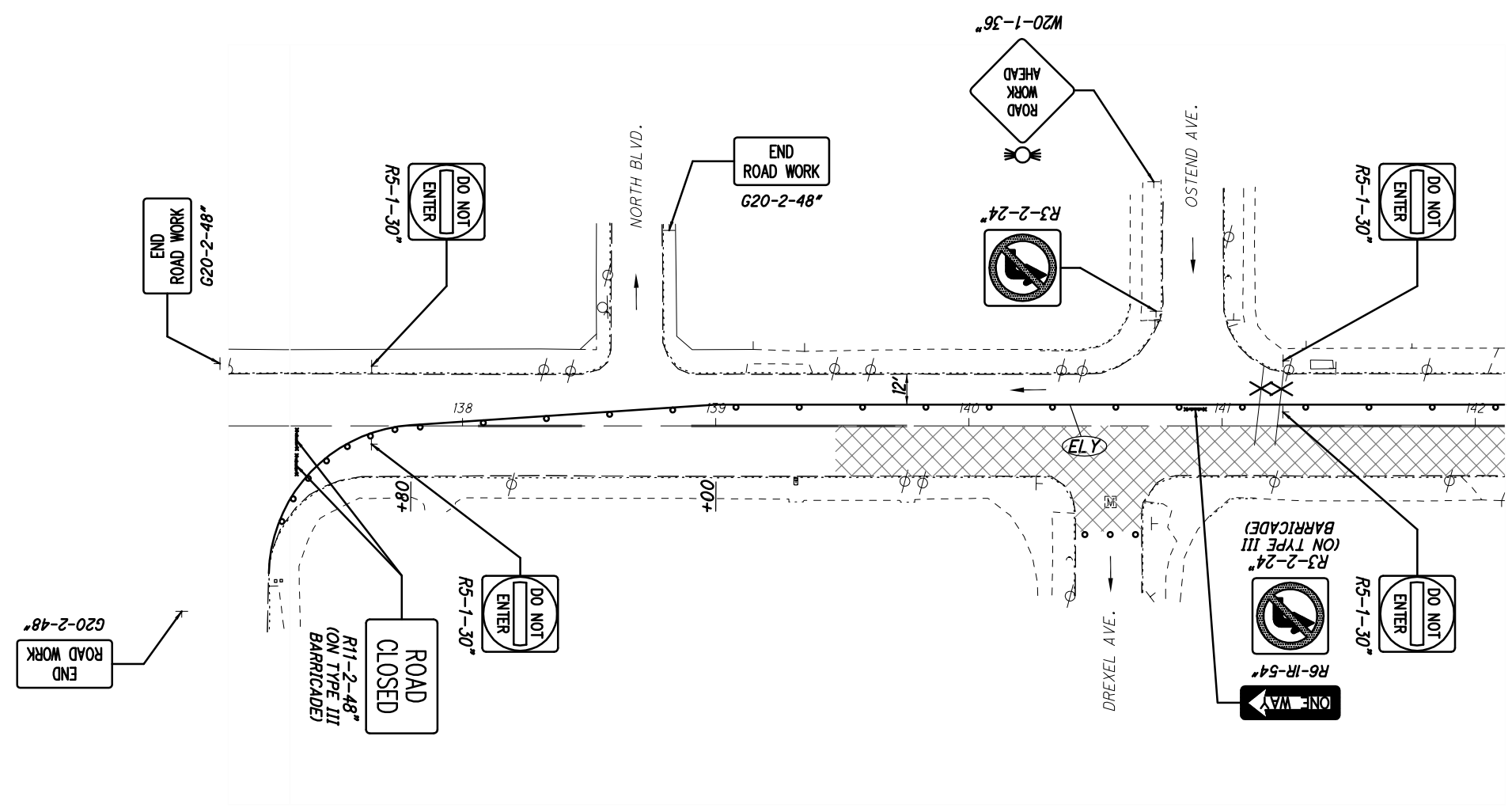
CALCULATED B.A.K. CHECKED D.P.B.

PID NO. -

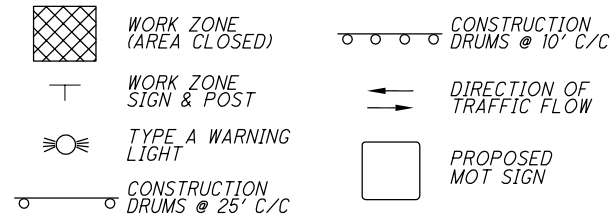
**MAINTENANCE OF TRAFFIC - STAGE 2, PHASE 2
EAST 105th STREET AND NORTH BOULEVARD**

EAST 105th STREET

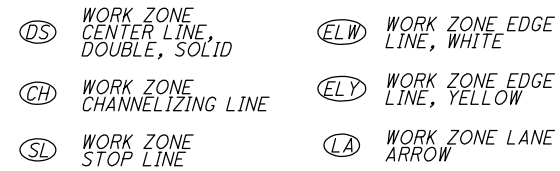
DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 maintenance of traffic.dwg
PLOT DATE: 5/8/19



WORK ZONE LEGEND

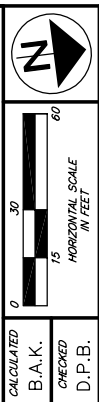


PAVEMENT MARKING LEGEND



NOTES:

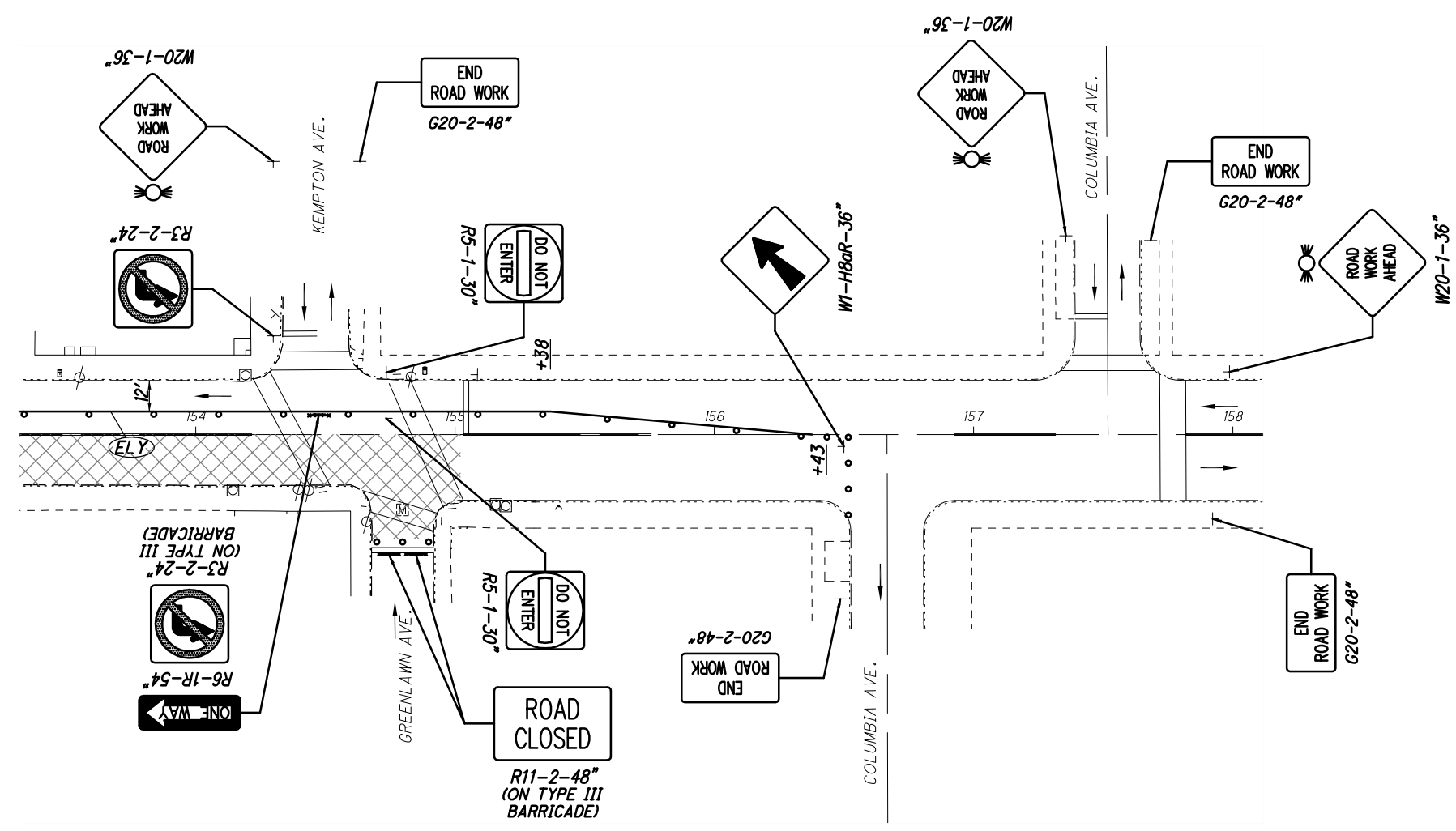
1. SEE DETOUR PLANS (SHEETS 25-27) FOR ADDITIONAL REQUIRED MAINTENANCE OF TRAFFIC SIGNS.
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4. CONTRACTOR TO COVER EXISTING CONFLICTING SIGNS. PAYMENT TO BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.
5. CONTRACTOR SHALL COORDINATE DETOUR WITH CIRCLENORTH PROJECT (EAST 105TH STREET MIXED-USE DEVELOPMENT) AND MODIFY DETOUR ROUTE AS REQUIRED.



CALCULATED B.A.K. CHECKED D.P.B.
PID NO. -

**MAINTENANCE OF TRAFFIC - STAGE 2, PHASE 2
EAST 105th STREET AND GREENLAWN AVENUE**

EAST 105th STREET



DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 maintenance of traffic.dwg
PLOT DATE: 5/8/19

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REF. NO.	SHEET NUMBER																			ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
	GEN. NOTES	MOT NOTES	32	57	59	61	62	63	64	66	67	68	WATER NOTES	152	153	172	180	194	204					
ROADWAY																								
1	LS																			201	LS	-	CLEARING AND GRUBBING, AS PER PLAN	16
2	2950		1810																	202	4760	SY	PAVEMENT REMOVED, AS PER PLAN, AS PER D-15	16
3				1094																202	1094	SY	PAVEMENT REMOVED FOR DRIVES, AS PER PLAN, AS PER D-15	16
4					61249															202	61249	SF	WALK REMOVED, AS PER PLAN	16
5			6510																	202	6510	FT	CURB REMOVED, AS PER PLAN	16
6															5197					202	5197	FT	CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN	171
7	100																			202	100	FT	PIPE REMOVED, 24" AND UNDER, AS PER PLAN	18
8										1										202	1	EACH	CATCH BASIN ABANDONED	
9											13									202	13	EACH	MONUMENT ASSEMBLY REMOVED	
10											8									202	8	EACH	POLE REMOVED, AS PER PLAN, AS PER D-18	15
11											26									202	26	EACH	REMOVAL MISC.: BOLLARD REMOVAL AND DISPOSAL OR RESETTNG	15
12	100												100							202	200	SY	TRACK REMOVED, AS PER PLAN, AS PER D-17	15
13	505																			203	505	CY	EXCAVATION	
14	20																			203	20	CY	EMBANKMENT	
15	2950		1122	464																204	4536	SY	SUBGRADE COMPACTION	
16	240																			SPECIAL	240	CY	UNDERCUTTING SUBGRADE AND SUBBASE, AS PER PLAN, AS PER D-16	16
17	4																			204	4	HOURL	PROOF ROLLING	
18	475																			204	475	SY	GEOTEXTILE FABRIC, TYPE D, 712.09	
19	66																			209	66	STA	LINEAR GRADING, EACH SIDE, AS PER PLAN	17
20																				608	14577	SF	4" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24	16
21																				608	50310	SF	6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24	16
22																				608	2018	SF	8" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24	16
23																				608	71	CORNER	CURB RAMP, AS PER PLAN, AS PER D-75	17
24																				623	13	EACH	MONUMENT ASSEMBLY, AS PER PLAN, AS PER D-40	17
25																				623	16	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN, AS PER D-41	17
26	250																			SPECIAL	250	CY	BACKFILL MATERIAL - FLOWABLE FILL, AS PER D-31	16
EROSION CONTROL																								
27	189																			653	189	CY	4" TOPSOIL FURNISHED AND PLACED	
28	1																			659	1	EACH	SOIL ANALYSIS TEST	
29	1704																			659	1704	SY	SEEDING AND MULCHING, AS PER PLAN, AS PER D-66, D-67 AND D-68	17
30	0.24																			659	0.24	TON	COMMERCIAL FERTILIZER, AS PER D-68	
31	0.35																			659	0.35	ACRE	LIME	
32	9																			659	9	MGAL	WATER FOR SEEDING, AS PER D-67	
33	LS																			832	LS	-	STORM WATER POLLUTION PREVENTION PLAN	
34	LS																			832	LS	-	EROSION CONTROL, AS PER PLAN, AS PER D-22	17
DRAINAGE																								
35																				605	10502	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER D-42	
36	100																			605	100	FT	AGGREGATE DRAINS	
37																				611	880	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
38	25																			611	25	FT	10" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32	18
39	100																			611	592	FT	12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32	18
40	50																			611	50	FT	12" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN	18
41	50																			611	203	FT	12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32	18
42	25																			611	25	FT	15" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32	18
43	2																			611	10	EACH	CATCH BASIN, CITY OF CLEVELAND CB-2, AS PER PLAN, AS PER D-34	19
44	1																			611	73	EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, AS PER PLAN, AS PER D-34	19
45																				611	3	EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39	19
46	15																			611	15	EACH	CATCH BASIN, MISC.: TEST HOLE	19
47	2																			611	15	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE)	19
48	1																			611	1	EACH	VAULT / MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (DRAINAGE)	19
49	1																			611	1	EACH	MANHOLE, MISC.: CITY OF CLEVELAND NO.1	18

GENERAL SUMMARY

EAST 105TH STREET

CALCULATED
KJM
CHECKED
JTS

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REF. NO.	SHEET NUMBER																			ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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DRAINAGE (CONTINUED)																				50	30000																			SPECIAL	30000	LB	MISCELLANEOUS METAL (WPC), AS PER D-72	18	51										2										SPECIAL	2	EACH	CORING FOR STORM SEWERS	20	52	800																			SPECIAL	800	FT	FILL AND PLUG EXISTING CONDUIT	20	53	1600																			SPECIAL	1600	FT	PIPE CLEANOUT	19	54	1600																			SPECIAL	1600	FT	CLEAN AND TELEWISE SEWER, AS PER D-37	19	PAVEMENT																				55	385																			251	385	SY	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	20	56				30768																254	30768	SY	PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN	20	57				634																254	634	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN	20	58	300																			254	300	SY	PATCHING PLANED SURFACE		59	385																			255	385	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN	21	60	495			187																304	682	CY	6" AGGREGATE BASE, AS PER PLAN	21	61	2950			1087																305	4037	SY	9" CONCRETE BASE, AS PER D-23 AND D-24		62	30			6264																407	6294	GAL	NON-TRACKING TACK COAT		63				674	464	7143														409	8281	SY	SEALING, MISC: CONCRETE SEALER, AS PER D-28	20	64				32488																441	32488	SY	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29	21	65	25			330																441	355	CY	0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29	21	66				31855																441	31855	SY	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS PER D-29		67					14															441	14	CY	ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29	21	68					94															452	94	SY	6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24	21	69					371															452	371	SY	8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24	21	70				1348																452	1348	SY	BUS PAD, AS PER PLAN	12	71				6407																609	6407	FT	CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24	21	72																				609	4375	FT	CURB RESET, GRANITE, AS PER PLAN	171	73	50																			SPECIAL	50	CY	SURCHARGE FOR CLASS MS CONCRETE, AS PER D-25	21	74	50																			SPECIAL	50	CY	SURCHARGE FOR CLASS FS CONCRETE, AS PER D-26	21	ELECTRIC																				75											21									611	21	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER D-39 (CPP)		WATERWORK																				76														5082						202	5082	LF	PIPE REMOVED, 24" AND UNDER	129-170	77														39						202	39	EACH	VALVE BOX REMOVED	129-170	78													100							202	100	SY	TRACK REMOVED, AS PER PLAN, AS PER D-17	129-170	79														18						611	18	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, PER D-39, E-12	129-170	80													3							611	3	EACH	VAULT / MANHOLE RECONSTRUCTED TO GRADE, PER D-39 / E-12	129-170	81														40						638	40	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12	129-170	82													5							638	5	EACH	SERVICE BOX ADJUSTED TO GRADE, AS PER E-12	129-170	83														24						638	24	EACH	FIRE HYDRANT REMOVED, AS PER E-12	129-170	84														23						638	23	FT	4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	129-170	85														52						638	52	FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	129-170	86													25000							638	25000	DOLLARS	WATERWORK, MISC.: DIVISION OF WATER CHARGES	129-170	87													10000							SPECIAL	10000	LB	MISCELLANEOUS METAL (CWD), AS PER D-72	129-170	88														810						SPECIAL	810	FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1	129-170
50	30000																			SPECIAL	30000	LB	MISCELLANEOUS METAL (WPC), AS PER D-72	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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PAVEMENT																				55	385																			251	385	SY	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	20	56				30768																254	30768	SY	PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN	20	57				634																254	634	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN	20	58	300																			254	300	SY	PATCHING PLANED SURFACE		59	385																			255	385	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN	21	60	495			187																304	682	CY	6" AGGREGATE BASE, AS PER PLAN	21	61	2950			1087																305	4037	SY	9" CONCRETE BASE, AS PER D-23 AND D-24		62	30			6264																407	6294	GAL	NON-TRACKING TACK COAT		63				674	464	7143														409	8281	SY	SEALING, MISC: CONCRETE SEALER, AS PER D-28	20	64				32488																441	32488	SY	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29	21	65	25			330																441	355	CY	0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29	21	66				31855																441	31855	SY	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS PER D-29		67					14															441	14	CY	ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29	21	68					94															452	94	SY	6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24	21	69					371															452	371	SY	8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24	21	70				1348																452	1348	SY	BUS PAD, AS PER PLAN	12	71				6407																609	6407	FT	CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24	21	72																				609	4375	FT	CURB RESET, GRANITE, AS PER PLAN	171	73	50																			SPECIAL	50	CY	SURCHARGE FOR CLASS MS CONCRETE, AS PER D-25	21	74	50																			SPECIAL	50	CY	SURCHARGE FOR CLASS FS CONCRETE, AS PER D-26	21	ELECTRIC																				75											21									611	21	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER D-39 (CPP)		WATERWORK																				76														5082						202	5082	LF	PIPE REMOVED, 24" AND UNDER	129-170	77														39						202	39	EACH	VALVE BOX REMOVED	129-170	78													100							202	100	SY	TRACK REMOVED, AS PER PLAN, AS PER D-17	129-170	79														18						611	18	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, PER D-39, E-12	129-170	80													3							611	3	EACH	VAULT / MANHOLE RECONSTRUCTED TO GRADE, PER D-39 / E-12	129-170	81														40						638	40	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12	129-170	82													5							638	5	EACH	SERVICE BOX ADJUSTED TO GRADE, AS PER E-12	129-170	83														24						638	24	EACH	FIRE HYDRANT REMOVED, AS PER E-12	129-170	84														23						638	23	FT	4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	129-170	85														52						638	52	FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	129-170	86													25000							638	25000	DOLLARS	WATERWORK, MISC.: DIVISION OF WATER CHARGES	129-170	87													10000							SPECIAL	10000	LB	MISCELLANEOUS METAL (CWD), AS PER D-72	129-170	88														810						SPECIAL	810	FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1	129-170																																																																																																																																																	
55	385																			251	385	SY	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
56				30768																254	30768	SY	PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
57				634																254	634	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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59	385																			255	385	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
60	495			187																304	682	CY	6" AGGREGATE BASE, AS PER PLAN	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
61	2950			1087																305	4037	SY	9" CONCRETE BASE, AS PER D-23 AND D-24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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63				674	464	7143														409	8281	SY	SEALING, MISC: CONCRETE SEALER, AS PER D-28	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
64				32488																441	32488	SY	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
65	25			330																441	355	CY	0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
66				31855																441	31855	SY	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS PER D-29																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
67					14															441	14	CY	ASPHALT CONCRETE, MISC.: SURFACE REPAIR BEHIND DRIVES AND WALKS (448), AS PER D-29	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
68					94															452	94	SY	6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN, AS PER D-23 AND D-24	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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71				6407																609	6407	FT	CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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CALCULATED KJM CHECKED JTS
GENERAL SUMMARY
EAST 105TH STREET
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 243

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REF. NO.	SHEET NUMBER																			ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET					
	GEN. NOTES	MOT. NOTES	32	57	59	61	62	63	64	66	67	68	WATER NOTES	152	153	172	180	194	204										
WATERWORK (CONTINUED)																													
89														5443							SPECIAL	5443	FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1	129-170				
90													12500								SPECIAL	12500	FT	TEMPORARY BY-PASS 4" DUCTILE IRON PIPE WITH RESTRAINED MECHANICAL JOINTS AND FITTINGS, ANSI CLASS 52	129-170				
91													42								SPECIAL	42	EACH	TEMPORARY SERVICE CONNECTION	129-170				
92													4500								SPECIAL	4500	DOLLARS	FILTER ALLOWANCE	129-170				
93														1							SPECIAL	1	EACH	4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	129-170				
94														2							SPECIAL	2	EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	129-170				
95														35							SPECIAL	35	EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	129-170				
96														37							SPECIAL	37	EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	129-170				
97														23							SPECIAL	23	EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17	129-170				
98														4922							SPECIAL	4922	SY	PAVEMENT BASE REPAIR, AS PER PLAN	129-170				
99																					SPECIAL	107	EACH	PLUG EXISTING WATER SERVICE CONNECTION	129-170				
100																					SPECIAL	17	EACH	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	129-170				
101																					SPECIAL	19	EACH	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	129-170				
102																					SPECIAL	1	EACH	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	129-170				
103																					SPECIAL	1	EACH	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	129-170				
104																					SPECIAL	4	EACH	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	129-170				
105														1							SPECIAL	1	EACH	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	129-170				
106														1							SPECIAL	3	EACH	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	129-170				
107														3							SPECIAL	17	EACH	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	129-170				
108														1							SPECIAL	5	EACH	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	129-170				
SANITARY SEWER																													
109	2																					611	74	EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (SANITARY)	22			
110	1																					611	1	EACH	VAULT / MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN (SANITARY)	22			
111	100																					611	100	EACH	DRAINAGE STRUCTURE, MISC.: TEST TEE ADJUST TO GRADE	22			
TRAFFIC CONTROL																													
112																						6	625	6	EACH	GROUND ROD, AS PER D-58	217		
113																							1011.0	630	1011.0	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
114																							153.5	630	153.5	FT	ONE WAY SUPPORT, NO. 3 POST		
115																							23	630	23	EACH	SIGN POST REFLECTOR		
116																							162	630	162	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED		
117																							832.1	630	832.1	SF	SIGN, FLAT SHEET		
118																							55	630	55	EACH	SIGN, DOUBLE FACED, STREET NAME		
119																							60	630	60	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
120																							13	630	13	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
121																							43	630	43	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
122																							244	630	244	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL		
123																							4	630	4	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION		
124																							6	630	6	EACH	SIGNING, MISC.: (ELTEC) SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY	22	
125																							6	632	6	EACH	PEDESTAL FOUNDATION		
126																													
127																													
128																													
129																													
130																													
131																													
132																													
133																													
134																													
135																													
136																													

GENERAL SUMMARY

EAST 105TH STREET

CALCULATED
KJM
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STATION TO STATION		SIDE	WORK	LENGTH (L)	AVERAGE PAVEMENT WIDTH (W)	PAVEMENT REMOVED AREA (R1)	MAINLINE SURFACE AREA (A1)	INTERSECTION SURFACE AREA (A2)	COMPOSITE PAVEMENT (A3)	MAINLINE TYPE 6 CURB LENGTH (C1)	INTERSECTION TYPE 6 CURB LENGTH (C2)	202	202	204	254	254	304	305	407	407	409	441	441	441	452	609
FROM	TO											SY	FT	SY	SY	SY	SY	CY	SY	GAL	GAL	SY	SY	CY	SY	GAL
		FT	FT	CADD	LxW	CADD	CADD	L	CADD	R1/9	A3/9+C2*0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH*0.5*0.5/27	A3/9	(A3/9)*0.10	2*((A1 OR A2)/9)*0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	C1 OR C2			
EAST 105TH ST MAINLINE																										
89+55.00	155+07.00	LT/RT	LEVELING COURSE																							
EAST BLVD INT.																										
89+55.00	92+15.00	LT/RT	ASPHALT	260.00		16287.05		19659.07	9779.07																	
89+55.00	92+15.00	LT	CURB							630.00																630.00
91+22.28	91+37.28	RT	CURB	15.00						15.00																15.00
EAST 105TH ST MAINLINE																										
92+15.00	94+31.00	LT/RT	ASPHALT	216.00	40.00		8640.00																			
93+81.00	94+31.00	RT	CURB	50.00						50.00																50.00
MAGNOLIA DR INT.																										
94+31.00	95+43.00	LT/RT	ASPHALT	112.00	40.00			4480.00																		
95+16.52	95+43.00	LT	CURB	26.48						26.48																26.48
EAST 105TH ST MAINLINE																										
95+43.00	95+50.00	LT	ASPHALT	7.00	20.50		143.50																			
95+50.00	96+70.00	LT	ASPHALT	120.00	10.50		1260.00																			
95+43.00	96+63.00	RT	ASPHALT	120.00	9.50		1140.00																			
96+63.00	98+31.85	RT	ASPHALT	168.85	19.50		3292.58																			
96+70.00	99+51.85	LT	ASPHALT	281.85	20.50		5777.93																			
98+31.85	99+51.85	RT	ASPHALT	120.00	9.50		1140.00																			
95+43.00	95+50.00	LT	CURB	7.00						7.00																7.00
96+63.00	98+31.85	RT	CURB	168.85						168.85																168.85
96+70.00	99+51.85	LT	CURB	281.85						281.85																281.85
95+43.00	96+63.00	LT	BUS PAD	120.00	10.00		1200.00																			140.00
95+50.00	96+70.00	LT	BUS PAD	120.00	10.00		1200.00																			140.00
98+31.85	99+51.85	RT	BUS PAD	120.00	10.00		1200.00																			140.00
WADE PARK AVE INT.																										
99+51.85	100+45.64	LT/RT	ASPHALT	93.79				6813.14																		
99+51.85	100+45.64	LT/RT	CURB							187.22																187.22
EAST 105TH ST MAINLINE																										
100+45.64	101+65.64	LT	ASPHALT	120.00	10.00		1200.00																			
100+45.64	106+76.68	RT	ASPHALT	631.04	20.00		12620.80																			
101+65.64	107+96.68	LT	ASPHALT	631.04	20.00		12620.80																			
106+76.68	107+96.68	RT	ASPHALT	120.00	10.00		1200.00																			
100+45.64	106+76.68	RT	CURB	631.04						631.04																631.04
101+65.64	107+96.68	LT	CURB	631.04						631.04																631.04
100+45.64	101+65.64	LT	BUS PAD	120.00	10.00		1200.00																			140.00
106+76.68	107+96.68	RT	BUS PAD	120.00	10.00		1200.00																			140.00
ASHBURY AVE INT.																										
107+96.68	108+78.35	LT/RT	ASPHALT	81.67				5119.35																		
107+96.68	108+78.35	LT/RT	CURB							194.38																194.38
SUBTOTALS THIS SHEET (CARRIED TO SHEET 57)												1810	3018	1122	8370	0	187	1087		1783	314	9457	330	9457	700	2823

CALCULATED	KJM
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PAVEMENT SUBSUMMARY

EAST 105TH STREET

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STATION TO STATION		SIDE	WORK	LENGTH (L) FT	AVERAGE PAVEMENT WIDTH (W) FT	PAVEMENT REMOVED AREA (R1) SF	MAINLINE SURFACE AREA (A1) SF	INTERSECTION SURFACE AREA (A2) SF	COMPOSITE PAVEMENT (A3) SF	MAINLINE TYPE 6 CURB LENGTH (C1) FT	INTERSECTION TYPE 6 CURB LENGTH (C2) FT	202	202	204	254	254	304	305	407	407	409	441	441	441	452	609					
FROM	TO											SY	FT	SY	SY	SY	SY	CY	SY	GAL	GAL	SY	SY	CY	SY	SY	SY	SY	FT		
						CADD	LxW	CADD	CADD	L	CADD	R1/9		A3/9+C2* 0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH* 0.5* 0.5/27	A3/9	(A3/9) *0.10	2* ((A1 OR A2)/9) *0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	C1 OR C2					
EAST 105TH ST MAINLINE																															
108+78.35	109+19.60	LT	ASPHALT	41.25	20.00		825.00																								
108+78.35	109+35.13	RT	ASPHALT	56.78	20.00		1135.60																								
109+19.60	109+35.13	LT	ASPHALT	15.53	10.00		155.30																								
108+78.35	108+87.76	LT	CURB	9.41						9.41																		9.41			
108+78.35	109+35.13	RT	CURB	56.78						56.78																		56.78			
109+19.60	109+35.13	LT	BUS PAD	15.53	10.00		155.30																					18.12			
LEE AVE INT.																															
109+35.13	109+91.38	LT/RT	ASPHALT	56.25				2440.33																							
109+35.13	109+91.38	RT	CURB							67.12																			67.12		
109+35.13	109+91.38	LT	BUS PAD	56.25	10.00			562.50																					65.63		
EAST 105TH ST MAINLINE																															
109+91.38	110+39.60	LT	ASPHALT	48.22	10.00		482.20																								
109+91.38	113+97.17	RT	ASPHALT	405.79	20.00		8115.80																								
110+39.60	113+97.17	LT	ASPHALT	357.57	20.00		7151.40																								
109+91.38	113+97.17	RT	CURB	405.79						405.79																			405.79		
109+91.38	110+39.60	LT	BUS PAD	48.22	10.00																								2.68		
ORVILLE AVE INT.																															
113+97.17	114+49.17	LT/RT	ASPHALT	52.00				2897.77																							
113+97.17	114+49.17	RT	CURB							67.70																			67.70		
EAST 105TH ST MAINLINE																															
114+49.17	117+57.21	LT/RT	ASPHALT	308.04	40.00		12321.60																								
114+49.17	117+57.21	RT	CURB	308.04						308.04																			308.04		
CHURCHILL AVE INT.																															
117+57.21	118+51.08	LT/RT	ASPHALT	93.87				5057.44																							
117+57.21	118+51.08		CURB	93.87						95.77																			95.77		
EAST 105TH ST MAINLINE																															
118+51.08	119+60.23	LT/RT	ASPHALT	109.15	40.00		4366.00																								
118+51.08	119+60.23	LT	CURB	109.15						109.15																			109.15		
118+51.08	119+60.23	RT	CURB	109.15						109.15																			109.15		
ROCKHURST AVE INT.																															
119+60.23	119+94.73	LT/RT	ASPHALT	34.50				1362.38																							
119+60.23	119+94.73	LT	CURB							39.51																			39.51		
119+60.23	119+66.64	RT	CURB	6.41						6.41																			6.41		
119+69.22	119+94.73	RT	CURB							27.70																			27.70		
119+66.64	119+94.73	RT	BUS PAD	28.09	10.00			279.70																					32.64		
EAST 105TH ST MAINLINE																															
119+94.73	120+81.39	LT	ASPHALT	86.66	20.00		1733.20																								
119+94.73	120+81.39	RT	ASPHALT	86.66	10.00		866.60																								
119+94.73	120+81.39	LT	CURB	86.66						86.66																			86.66		
SUBTOTALS THIS SHEET (CARRIED TO SHEET 57)												0	1390	0	5435	0	0	0							1087	155	5435	0	5435	120	1390

PAVEMENT SUBSUMMARY

EAST 105TH STREET

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STATION TO STATION		SIDE	WORK	LENGTH (L)	AVERAGE PAVEMENT WIDTH (W)	PAVEMENT REMOVED AREA (R1)	MAINLINE SURFACE AREA (A1)	INTERSECTION SURFACE AREA (A2)	COMPOSITE PAVEMENT (A3)	MAINLINE TYPE 6 CURB LENGTH (C1)	INTERSECTION TYPE 6 CURB LENGTH (C2)	202	202	204	254	254	304	305	407	407	409	441	441	441	452	609	
FROM	TO											SY	FT	SY	SY	SY	SY	CY	SY	GAL	GAL	SY	SY	CY	SY	GAL	GAL
				FT	FT	SF	SF	SF	SF	FT	FT	R1/9		A3/9+C2* 0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH* 0.5* 0.5/27	A3/9	(A3/9) *0.10	2* ((A1 OR A2)/9) *0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	(A1 OR A2) + (LENGTH * 0.5)/9	
EAST 105TH ST MAINLINE (CONT.)																											
119+94.73	120+81.39	RT	BUS PAD	86.66	10.00		866.60																			101.10	
SUPERIOR AVE INT.																											
120+81.39	121+69.93	LT/RT	RESURFACING	88.54				5698.02																			
121+65.35	121+69.93	LT	CURB	4.58					4.58				4.58								0.51						4.58
120+81.39	120+86.64	RT	BUS PAD	5.25	10.00			52.56																			6.13
EAST 105TH ST MAINLINE																											
121+69.93	121+98.00	LT	ASPHALT	28.07	20.00		561.40																				
121+69.93	123+01.18	RT	ASPHALT	131.25	20.00		2625.00														12.48			62.38		62.38	
121+98.00	123+01.18	LT	ASPHALT	103.18	10.00		1031.80														58.33			291.67		291.67	
121+69.93	121+98.00	LT	CURB	28.07					28.07				28.07								22.93			114.64		114.64	
121+98.00	123+01.18	LT	BUS PAD	103.18	10.00		1031.80																				120.38
TECUMSEH CT INT.																											
123+01.18	123+30.17	LT/RT	ASPHALT	28.99				1160.65																			
123+01.18	123+30.17	RT	CURB							33.61			33.61								25.79				128.96		128.96
123+18.00	123+30.17	LT	CURB	12.17					12.17				12.17									1.13					12.17
123+01.18	123+18.00	LT	BUS PAD	16.82	10.00			168.20																			19.62
EAST 105TH ST MAINLINE																											
123+30.17	124+45.67	LT/RT	ASPHALT	115.50	40.00		4620.00																				
123+30.17	124+45.67	LT	CURB	115.50					115.50				115.50									10.69					115.50
HATHAWAY AVE INT.																											
124+45.67	124+93.23	LT/RT	ASPHALT	47.56				2799.02																			
124+45.67	124+93.23	LT	CURB	47.56					47.56				47.56									4.40			311.00		311.00
124+45.67	124+93.23	RT	CURB							43.18			43.18									4.00					43.18
EAST 105TH ST MAINLINE																											
124+93.23	127+44.54	LT/RT	ASPHALT	251.31	40.00		10052.40																				
124+93.23	127+44.54	LT	CURB	251.31					251.31				251.31									23.27					251.31
OLIVET AVE INT.																											
127+44.54	128+12.64	LT/RT	ASPHALT	68.10				4241.57																			
127+44.54	127+94.53	LT	CURB							75.73			75.73									94.26			471.29		471.29
127+67.45	128+12.64	RT	CURB							71.56			71.56									7.01					75.73
127+67.45	128+12.64	RT	CURB																			6.63					71.56
EAST 105TH ST MAINLINE																											
128+12.64	130+13.27	LT/RT	ASPHALT	200.63	40.25		8075.36																				
128+12.64	130+13.27	LT/RT	ASPHALT	200.63	40.25		8075.36																				
HAMPDEN AVE INT.																											
130+13.27	130+65.86	LT/RT	ASPHALT	52.59				3367.56																			
130+13.27	130+51.27	LT	CURB							66.63			66.63									6.17					66.63
130+22.18	130+65.86	RT	CURB							56.82			56.82									5.26					56.82
SUBTOTALS THIS SHEET (CARRIED TO SHEET 57)												0	807	0	4282	634	0	0			857	75	4915	0	4282	248	807

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PAVEMENT SUBSUMMARY	
EAST 105TH STREET	
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STATION TO STATION		SIDE	WORK	LENGTH (L)	AVERAGE PAVEMENT WIDTH (W)	PAVEMENT REMOVED AREA (R1)	MAINLINE SURFACE AREA (A1)	INTERSECTION SURFACE AREA (A2)	COMPOSITE PAVEMENT (A3)	MAINLINE TYPE 6 CURB LENGTH (C1)	INTERSECTION TYPE 6 CURB LENGTH (C2)	202		204		254		304		305		407		409		441		441		452		609										
FROM	TO											SY	FT	SY	SY	SY	SY	CY	SY	SY	SY	FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	FT		
				FT	FT	SF	SF	SF	SF	FT	FT	R1/9			A3/9+C2* 0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH* 0.5* 0.5/27	A3/9	(A3/9) *0.10	2* ((A1 OR A2)/9) *0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	C1 OR C2															
EAST 105TH ST MAINLINE																																										
130+65.86	132+42.11	LT/RT	ASPHALT	176.25	40.25		7094.06																																			
WESTCHESTER AVE INT.																																										
132+42.11	133+46.11	LT/RT	ASPHALT	104.00				6114.82																																		
	132+42.11	LT	CURB							149.17			149.17																			149.17										
EAST 105TH ST MAINLINE																																										
133+46.11	134+28.26	LT/RT	ASPHALT	82.15	40.25		3306.54																																			
TACOMA AVE INT.																																										
134+28.26	134+70.50	LT/RT	ASPHALT	42.24				2220.17																																		
	134+28.26	RT	CURB							50.27			50.27																			50.27										
EAST 105TH ST MAINLINE																																										
134+70.50	135+32.11	LT/RT	ASPHALT	61.61	40.25		2479.80																																			
SOUTH BLVD INT.																																										
135+32.11	136+36.61	LT/RT	ASPHALT	104.50				5925.85																																		
	135+32.11	LT	CURB							66.89			66.89																			66.89										
EAST 105TH ST MAINLINE																																										
136+36.61	136+59.08	LT/RT	ASPHALT	22.47	40.50		910.03																																			
GRANTWOOD AVE INT.																																										
136+59.08	137+63.33	LT/RT	ASPHALT	104.25				5903.15																																		
	136+59.08	RT	CURB							127.66			127.66																			127.66										
EAST 105TH ST MAINLINE																																										
137+63.33	138+48.67	LT/RT	ASPHALT	85.34	40.50		3456.27																																			
NORTH BLVD INT.																																										
138+48.67	138+92.94	LT/RT	ASPHALT	44.27				2291.84																																		
	138+48.67	LT	CURB							56.70			56.70																			56.70										
EAST 105TH ST MAINLINE																																										
138+92.94	140+29.14	LT/RT	ASPHALT	136.20	40.50		5516.10																																			
	139+50.00	LT	CURB	79.14							79.14																					79.14										
DREXEL AVE/OSTEND AVE INT.																																										
140+29.14	141+28.39	LT/RT	ASPHALT	99.25				6044.10																																		
	140+29.14	LT	CURB							12.86																						12.86										
	140+29.14	RT	CURB							70.48			70.48																			70.48										
	140+46.39	LT	CURB							106.35			106.35																			106.35										
EAST 105TH ST MAINLINE																																										
141+28.39	143+17.39																																									
SUBTOTALS THIS SHEET (CARRIED TO SHEET 57)												0	628	0	6536	0	0	0																								

CALCULATED	KJM
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PAVEMENT SUBSUMMARY	
EAST 105TH STREET	
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STATION TO STATION		SIDE	WORK	LENGTH (L)	AVERAGE PAVEMENT WIDTH (W)	PAVEMENT REMOVED AREA (R1)	MAINLINE SURFACE AREA (A1)	INTERSECTION SURFACE AREA (A2)	COMPOSITE PAVEMENT (A3)	MAINLINE TYPE 6 CURB LENGTH (C1)	INTERSECTION TYPE 6 CURB LENGTH (C2)	202 PAVEMENT REMOVED, AS PER PLAN, AS PER D-15	202 CURB REMOVED, AS PER PLAN	204 SUBGRADE COMPACTION	254 PAVEMENT PLANING, ASPHALT OR CONCRETE (3.5" UNIFORM PLANING), AS PER PLAN	254 PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5" TO 2.75"), AS PER PLAN	304 6" AGGREGATE BASE, AS PER PLAN	305 9" CONCRETE BASE, AS PER D-23 AND D-24	407 NON-TRACKING TACK COAT	407 NON-TRACKING TACK COAT	409 SEALING, MISC: CONCRETE SEALER, AS PER D-28	441 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, AS PER PLAN, AS PER D-29	441 0" MIN. ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN, AS PER D-29	441 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS PER PLAN, AS PER D-29	452 BUS PAD, AS PER PLAN	609 CURB, TYPE 6, AS PER PLAN, AS PER D-23 AND D-24		
FROM	TO			FT	FT	SF	SF	SF	SF	FT	FT	SY	FT	SY	SY	SY	CY	SY	GAL	GAL	SY	SY	CY	SY	SY	SY	FT	
						CADD	LxW	CADD	CADD	L	CADD	R1/9		A3/9+C2*0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH*0.5*0.5/27	A3/9	(A3/9)*0.10	2*((A1 OR A2)/9)*0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	C1 OR C2		
SOMERSET AVE/PASADENA AVE INT.																												
143+17.39	144+59.29	LT/RT	ASPHALT					8371.04							930.12													
143+55.79	144+59.29	RT	CURB								126.67		126.67															126.67
143+91.88	143+98.39	LT	CURB								6.57		6.57															6.57
EAST 105TH ST MAINLINE																												
144+59.29	145+86.15	LT	ASPHALT	126.86	20.50		2600.63								288.96													
144+59.29	145+79.29	RT	ASPHALT	120.00	9.50		1140.00								126.67													
145+79.29	145+86.15	RT	ASPHALT	6.86	19.50		133.77								14.86													
144+59.29	145+79.29	RT	BUS PAD	120.00	10.00		1200.00																				140.00	
PARKGATE AVE INT.																												
145+86.15	146+70.40	LT/RT	ASPHALT	84.25				4520.40							502.27													
146+61.23	146+70.40	LT	CURB								9.31		9.31															9.31
EAST 105TH ST MAINLINE																												
146+70.40	146+71.97	LT/RT	ASPHALT	1.57	40.00		62.80								6.98													
MASSIE AVE INT.																												
146+71.97	147+22.45	LT/RT	ASPHALT	50.48				2889.39							321.04													
146+71.97	147+22.45	RT	CURB								67.50		67.50															67.50
EAST 105TH ST MAINLINE																												
147+22.45	147+28.00	LT	ASPHALT	5.55	20.50		113.77								12.64													
147+22.45	148+57.39	RT	ASPHALT	134.94	19.50		2631.33								292.37													
147+28.00	148+48.00	LT	ASPHALT	120.00	10.50		1260.00								140.00													
148+48.00	148+57.39	LT	ASPHALT	9.39	20.50		192.49								21.39													
147+28.00	148+48.00	LT	BUS PAD	120.00	10.00		1200.00																				140.00	
PIERPOINT AVE INT.																												
148+57.39	149+40.15	LT/RT	ASPHALT	82.76				4415.81							490.65													
148+57.39	149+40.15	LT	CURB								94.43		94.43															94.43
EAST 105TH ST MAINLINE																												
149+40.15	149+63.21	LT/RT	ASPHALT	23.06	40.25		928.16								103.13													
MORISON AVE INT.																												
149+63.21	150+19.27	LT/RT	ASPHALT	56.06				3027.51							336.39													
149+63.21	150+19.27	RT	CURB								68.12		68.12															68.12
EAST 105TH ST MAINLINE																												
150+19.27	151+27.14	LT/RT	ASPHALT	107.87	40.25		4341.77								482.42													
ADAMS AVE INT.																												
151+27.14	152+10.40	LT/RT	ASPHALT	83.26				4450.71							494.52													
151+27.14	152+10.40	LT	CURB								94.43		94.43															94.43
SUBTOTALS THIS SHEET (CARRIED TO SHEET 57)												0	468	0	4565	0	0	0	913	44	4565	0	4565	280	468			

CALCULATED	KJM	CHECKED	JTS
PAVEMENT SUBSUMMARY			
EAST 105TH STREET			
56			
243			

STATION TO STATION		SIDE	WORK	LENGTH (L)	AVERAGE PAVEMENT WIDTH (W)	PAVEMENT REMOVED AREA (R1)	MAINLINE SURFACE AREA (A1)	INTERSECTION SURFACE AREA (A2)	COMPOSITE PAVEMENT (A3)	MAINLINE TYPE 6 CURB LENGTH (C1)	INTERSECTION TYPE 6 CURB LENGTH (C2)	202	202	204	254	254	304	305	407	407	409	441	441	441	452	609											
FROM	TO			FT	FT	SF	SF	SF	SF	FT	FT	SY	FT	SY	SY	SY	CY	SY	GAL	GAL	SY	SY	CY	SY	SY	FT											
						CADD	LxW	CADD	CADD	L	CADD	R1/9		A3/9+C2* 0.5/9	(A1 OR A2)/9	A2/9	A3*0.5/27 + CURB LENGTH* 0.5* 0.5/27	A3/9	(A3/9) *0.10	2* ((A1 OR A2)/9) *0.10	(C1 OR C2)/9	(A1 OR A2)/9	CADD	(A1 OR A2)/9	(A1 OR A2) + (LENGTH * 0.5)/9	C1 OR C2											
EAST 105TH ST MAINLINE																																					
152+10.40	152+73.55	LT/RT	ASPHALT	63.15	40.00		2526.00																														
AMOR AVE INT.																																					
152+73.55	153+20.77	LT/RT	ASPHALT	47.22				2703.26																													
152+73.55	153+20.77	RT	CURB							70.89			70.89									6.56					70.89										
EAST 105TH ST MAINLINE																																					
153+20.77	154+18.67	LT/RT	ASPHALT	97.90	40.00		3916.00																														
KEMPTON AVE/GREENLAWN AVE INT.																																					
154+18.67	155+01.73	LT/RT	ASPHALT	83.06				4828.02																													
154+18.67	154+72.92	LT	CURB							63.30			63.30									5.86					63.30										
154+57.72	155+01.73	RT	CURB							64.42			64.42									5.96					64.42										
EAST 105TH ST MAINLINE																																					
155+01.73	155+07.00	LT/RT	ASPHALT	5.27	46.25		243.74																														
SUBTOTALS THIS SHEET												0	199	0	1580	0	0	0											316		19	1580	0	1580	0	199	
SUBTOTALS SHEET 52												1810	3018	1122	8370	0	187	1087												1783		314	9457	330	9457	700	2823
SUBTOTALS SHEET 53												0	1390	0	5435	0	0	0												1087		155	5435	0	5435	120	1390
SUBTOTALS SHEET 54												0	807	0	4282	634	0	0												857		75	4915	0	4282	248	807
SUBTOTALS SHEET 55												0	628	0	6536	0	0	0												1308		67	6536	0	6536	0	720
SUBTOTALS SHEET 56												0	468	0	4565	0	0	0												913		44	4565	0	4565	280	468
TOTALS CARRIED TO GENERAL SUMMARY												1810	6510	1122	30768	634	187	1087												6264		674	32488	330	31855	1348	6407

CALCULATED	KJM
	CHECKED
JTS	
PAVEMENT SUBSUMMARY	
EAST 105TH STREET	
57	243

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SHEET NO.	REF. NO.	STATION	SIDE	PROPOSED APRON COMPOSITION	PROPOSED DRIVE COMPOSITION	DRIVE TYPE	APRON LENGTH (OAL)	APRON WIDTH (AW)	WALK WIDTH (FWW)	DRIVE LENGTH (DL)	DRIVE WIDTH (DW)	LENGTH OF CURB CUT (LC)	APRON AREA (AA)	DRIVE AREA (DA)	202	204	409	441	452	452	452	452	608	608					
							FT	FT	FT	FT	FT	FT	FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY
							((LC+AW)*OAL)/2		DL*DW		CADD AREA	(AA+DA)/9	(AA+DA)/9	(AW*1*.5)/9	AA/9	DA/9	AA/9	DA/9	FWW*AW	FWW*AW									
73	DR-1	101+01	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	6.00	1.00	10.00	18.00	35.00	10.00	11.70	5.00	5.00	0.19	3.89	1.11			60						
73	DR-2	101+35	LT	CONCRETE	CONCRETE	RESIDENTIAL	3.50	25.00	5.00	1.00	25.00	33.00	101.50	25.00	25.53	14.06	14.06	0.46	11.28	2.78			125						
73	DR-3	101+48	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	9.00	6.00	1.00	9.00	17.00	32.50	9.00	9.56	4.61	4.61	0.17	3.61	1.00			54						
73	DR-4	101+86	LT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	6.00	1.00	10.00	18.00	35.00	10.00	11.38	5.00	5.00	0.19	3.89	1.11			60						
73	DR-5	101+96	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	EX	EX	10.00	18.00	35.00		3.21	3.89	3.89	0.19	3.89										
73	DR-6	102+33	LT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	6.00	1.00	10.00	18.00	35.00	10.00	10.12	5.00	5.00	0.19	3.89	1.11			60						
73	DR-7	102+49	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	6.00	1.00	10.00	18.00	35.00	10.00	11.27	5.00	5.00	0.19	3.89	1.11			60						
73	DR-8	102+94	LT	CONCRETE	CONCRETE	COMMERCIAL	2.50	16.00	6.00	1.00	16.00	26.00	52.50	16.00	18.84	7.61	7.61	0.30	3.89		5.83	1.78		96					
73	DR-9	102+99	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	9.00	EX	EX	9.00	17.00	32.50		2.94	3.61	3.61	0.17	3.61										
75	DR-10	103+49	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	EX	EX	10.00	18.00	35.00		2.79	3.89	3.89	0.19	3.89										
75	DR-11	103+97	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	9.00	EX	EX	9.00	17.00	32.50		3.23	3.61	3.61	0.17	3.61										
75	DR-12	104+50	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	EX	EX	10.00	18.00	35.00		3.15	3.89	3.89	0.19	3.89										
75	DR-13	105+48	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	EX	EX	10.00	18.00	35.00		3.41	3.89	3.89	0.19	3.89										
75	DR-14	106+03	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	6.00	1.00	10.00	18.00	35.00	10.00	10.99	5.00	5.00	0.19	3.89	1.11			60						
75	DR-15	106+53	RT	CONCRETE	CONCRETE	RESIDENTIAL	2.50	10.00	EX	EX	10.00	18.00	35.00		3.12	3.89	3.89	0.19	3.89										
77	DR-16	111+50	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								16.17														
79	DR-17	115+66	RT	CONCRETE	CONCRETE	COMMERCIAL	4.00	8.00	4.00	1.50	8.00	18.00	52.00	12.00	11.51	7.11	7.11	0.15			5.78	1.33		32					
81	DR-18	118+42	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								13.25														
81	DR-19	118+87	LT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								10.33														
81	DR-20	120+01		CONCRETE	CONCRETE	COMMERCIAL	5.00	28.00	4.50	EX	28.00	38.00	165.00		32.32	18.33	18.33	0.52			18.33			126					
81	DR-21	120+16	RT	CONCRETE	CONCRETE	COMMERCIAL	5.00	22.00	4.00	1.00	22.00	32.00	135.00	22.00	22.44	17.44	17.44	0.41			15.00	2.44		88					
83	DR-22	122+62	RT	CONCRETE	CONCRETE	COMMERCIAL	5.50	28.00	4.00	EX	28.00	38.00	181.50		31.19	20.17	20.17	0.52			20.17			112					
83	DR-23	123+43	LT	CONCRETE	CONCRETE	COMMERCIAL	5.50	17.00	4.00	EX	17.00	27.00	121.00		20.81	13.44	13.44	0.31			13.44			68					
83	DR-24	123+72	RT	CONCRETE	CONCRETE	COMMERCIAL	5.50	17.00	4.00	EX	17.00	27.00	121.00		27.19	13.44	13.44	0.31			13.44			68					
83	DR-25	125+53	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								16.50														
83	DR-26	125+81	LT	CONCRETE	CONCRETE	COMMERCIAL	5.50	39.00	4.00	EX	39.00	49.00	242.00		39.76	26.89	26.89	0.72			26.89			156					
83	DR-27	126+65	RT	CONCRETE	CONCRETE	COMMERCIAL	5.00	19.00	4.00	0.50	19.00	29.00	120.00	9.50	35.31	14.39	14.39	0.35			13.33	1.06		76					
83	DR-28	127+30	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								38.12														
85	DR-29	128+43	LT	CONCRETE	CONCRETE	COMMERCIAL	4.25	23.00	4.00	1.00	23.00	33.00	119.00	23.00	29.67	15.78	15.78	0.43			13.22	2.56		92					
85	DR-30	128+54	RT	CONCRETE	CONCRETE	COMMERCIAL	4.50	15.00	4.00	1.00	15.00	25.00	90.00	15.00	15.72	11.67	11.67	0.28			10.00	1.67		60					
85	DR-31	129+19	RT	CONCRETE	CONCRETE	COMMERCIAL	4.50	20.00	4.00	1.00	20.00	30.00	112.50	20.00	21.04	14.72	14.72	0.37			12.50	2.22		80					
85	DR-32	130+93	LT	CONCRETE	CONCRETE	COMMERCIAL	5.00	24.00	4.00	0.50	24.00	34.00	145.00	12.00	26.15	17.44	17.44	0.44			16.11	1.33		96					
85	DR-33	131+46	LT	CONCRETE	CONCRETE	COMMERCIAL	5.00	24.00	4.00	0.50	24.00	34.00	145.00	12.00	23.70	17.44	17.44	0.44			16.11	1.33		96					
85	DR-34	131+85	RT	CONCRETE	CONCRETE	COMMERCIAL	5.00	22.00	4.00	0.50	22.00	32.00	135.00	11.00	23.69	16.22	16.22	0.41			15.00	1.22		88					
85	DR-35	131+88	LT	CONCRETE	CONCRETE	COMMERCIAL	5.00	23.00	4.00	0.50	23.00	33.00	140.00	11.50	22.98	16.83	16.83	0.43			15.56	1.28		92					
87	DR-36	132+75	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								44.43														
87	DR-36A849+36 (WESTCHESTER AVE)	LT	CONCRETE	CONCRETE	COMMERCIAL	8.00	8.00	4.00	0.50	8.00	18.00	104.00	4.00	22.98	12.00	12.00	0.15			11.56	0.44		32						
87	DR-36B849+37 (WESTCHESTER AVE)	LT		CONCRETE			CONCRETE								22.98	11.39	11.39	0.17			10.89	0.50		36					
87	DR-37	134+70	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								25.57														
87	DR-38	134+03	LT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								25.54														
87	DR-39	134+03	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								26.30														
87	DR-40	134+39	LT	CONCRETE	CONCRETE	COMMERCIAL	5.50	20.00	4.00	EX	20.00	30.00	137.50		22.48	15.28	15.28	0.37			15.28			80					
87	DR-41	136+01	RT				EX. DRIVE TO BE REMOVED AND NOT REPLACED								22.93														
89	DR-42	139+25	LT	CONCRETE	CONCRETE	RESIDENTIAL	5.00	21.00	4.00	0.50	21.00	29.00	125.00	10.50	24.32	15.06	15.06	0.39	13.89	1.17			84						
89	DR-43	142+07	RT	CONCRETE	CONCRETE	RESIDENTIAL	5.50	8.00	4.00	0.50	8.00	16.00	66.00	4.00	13.62	7.78	7.78	0.15	7.33	0.44			32						

SUBTOTALS THIS SHEET (CARRIED TO SHEET 59)

861 381 381 11 94 288 595 1574

CALCULATED KJM CHECKED JTS
DRIVE CALCULATIONS
EAST 105TH STREET
 58
 243

SHEET NO.	REF. NO.	STATION	SIDE	PROPOSED APRON COMPOSITION	PROPOSED DRIVE COMPOSITION	DRIVE TYPE	APRON LENGTH (QAL)	APRON WIDTH (AW)	WALK WIDTH (FWW)	DRIVE LENGTH (DL)	DRIVE WIDTH (DW)	LENGTH OF CURB CUT (LC)	APRON AREA (AA)	DRIVE AREA (DA)	202	204	409	441	452	452	452	452	608	608					
							FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
							SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY
89	DR-44	142+22	LT	CONCRETE	CONCRETE	COMMERCIAL	5.50	25.00	4.00	EX	25.00	35.00	165.00		30.95	18.33	18.33	0.46				18.33		100					
91	DR-45	142+91	LT	CONCRETE	CONCRETE	COMMERCIAL	5.00	29.00	4.00	EX	29.00	39.00	170.00		32.21	18.89	18.89	0.54				18.89		116					
91	DR-46	144+37	LT	EX. DRIVE TO BE REMOVED AND NOT REPLACED										18.91															
91	DR-47	144+65	RT	EX. DRIVE TO BE REMOVED AND NOT REPLACED										22.05															
91	DR-48	145+26	RT	EX. DRIVE TO BE REMOVED AND NOT REPLACED										30.08															
91	DR-49	146+22	RT	EX. DRIVE TO BE REMOVED AND NOT REPLACED										21.60															
93	DR-50	148+85	RT	EX. DRIVE TO BE REMOVED AND NOT REPLACED										13.32															
93	DR-51	151+14	RT	CONCRETE	CONCRETE	COMMERCIAL	5.5	22	4	0.5	22	32	148.5	11	25.67	17.72	17.72	0.41				16.50	1.22	88					
93	DR-52	151+97	RT	CONCRETE	CONCRETE	COMMERCIAL	5.5	23	4	0.5	23	33	154	11.5	23.31	18.39	18.39	0.43				17.11	1.28	92					
95	DR-53	153+32	LT	CONCRETE	CONCRETE	COMMERCIAL	5	12	4	EX	12	22	85		14.13	9.44	9.44	0.22				9.44		48					
SUBTOTALS THIS SHEET															233	83	83	3	0		83	0	444						
SUBTOTALS SHEET 58															861	381	381	11	94		288	595	1574						
TOTALS CARRIED TO GENERAL SUMMARY															1094	464	464	14	94		371	595	2018						

CALCULATED	KJM
	CHECKED
JTS	
DRIVE CALCULATIONS	
EAST 105TH STREET	
59	243

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SHEET NO.	REF. NO.	STATION TO STATION		SIDE	SURFACE AREA (A)							
					WALK REMOVED, AS PER PLAN		4" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24		6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24		SEALING- MISC: CONCRETE SEALER, AS PER D-28	
					CADD	A	A	A	A/9			
FROM	TO	SF	SF	SF	SF	SY						
69	SW-1	89+55	1697+53 (EAST BLVD)	LT	2064.91	789.39	2064.91		229.43			
69	SW-2	1697+60 (EAST BLVD)	92+15	LT	2188.54	1542.18	2188.54		243.17			
69	SW-3	91+22	91+37	RT	150.00	150.00	150.00		16.67			
71	SW-4	93+81	94+31	RT	100.00	100.00	100.00		11.11			
71	SW-5	95+17	201+50 (WADE PARK AVE)	LT	3762.74	3762.74	3762.74		418.08			
71	SW-6	95+43	202+51 (WADE PARK AVE)	RT	1622.66	1622.66	1622.66		180.30			
73	SW-7	201+50 (WADE PARK AVE)	101+22	LT	522.85	513.19	522.85		58.09			
73	SW-8	202+43 (WADE PARK AVE)	100+43	RT	278.23	261.78	278.23		30.91			
73	SW-9	101+47	101+81	LT	199.26	199.26	199.26		22.14			
73	SW-10	101+91	102+28	LT	223.60	223.60	223.60		24.84			
75	SW-11	103+02	103+12	LT	60.00	60.00	60.00		6.67			
75	SW-12	103+66	103+80	LT	84.00	84.00	84.00		9.33			
75	SW-13	103+86	105+00	LT	283.75	283.75	283.75		31.53			
75	SW-14	104+01	104+45	RT	242.23	242.23	242.23		26.91			
75	SW-15	106+08	106+18	RT	55.16	55.16	55.16		6.13			
75	SW-16	106+62	106+75	LT	65.00	65.00	65.00		7.22			
75	SW-17	107+03	349+61 (ASHBURY AVE)	LT	920.71	700.89	920.71		102.30			
75	SW-18	107+10	107+25	RT	82.50	82.50	82.50		9.17			
77	SW-19	107+85	350+50 (ASHBURY AVE)	RT	222.62	184.30	222.62		24.74			
77	SW-20	350+50 (ASHBURY AVE)	400+45 (LEE AVE)	RT	1196.18	1196.18	1196.18		132.91			
77	SW-21	349+46 (ASHBURY AVE)	108+88	LT	252.39	252.39	252.39		28.04			
77	SW-22	400+45 (LEE AVE)	450+47 (ORVILLE AVE)	RT	4403.70	4403.70	4403.70	4403.70	489.30			
79	SW-23	450+47 (ORVILLE AVE)	115+62	RT	552.71	552.71	552.71	552.71	61.41			
79	SW-24	115+70	500+40 (CHURCHILL AVE)	RT	1336.03	1336.03	1336.03	1336.03	148.45			
81	SW-25	500+40 (CHURCHILL AVE)	119+75	RT	1033.12	1033.12	1033.12	1033.12	114.79			
81	SW-26	118+51	119+68	LT	870.74	870.74	870.74	870.74	96.75			
81	SW-27	119+78	119+87	LT	59.81	59.81	59.81	59.81	6.65			
81	SW-28	119+87	120+05	RT	138.03	138.03	138.03	138.03	15.34			
81	SW-29	120+25	120+61	LT	149.31	149.31	149.31	149.31	16.59			
81	SW-30	120+27	120+87	RT	295.85	295.85	295.85	295.85	32.87			
81	SW-31	120+69	120+79	LT	49.85	49.85	49.85	49.85	5.54			
81	SW-32	121+65	123+34	LT	1203.49	1203.49	1203.49	1203.49	133.72			
81	SW-33	121+70	122+48	RT	726.07	726.07	726.07	726.07	80.67			
83	SW-34	122+76	123+11	RT	190.46	190.46	190.46	190.46	21.16			
83	SW-35	123+23	123+64	RT	215.50	215.50	215.50	215.50	23.94			
83	SW-36	123+51	125+61	LT	1232.00	1232.00	1232.00	1232.00	136.89			
83	SW-37	123+81	700+34 (HATHAWAY AVE)	RT	535.25	535.25	535.25	535.25	59.47			
83	SW-38	700+37 (HATHAWAY AVE)	126+56	RT	780.63	780.63	780.63	780.63	86.74			
83	SW-39	126+00	749+50 (OLIVET AVE)	LT	1012.17	1012.17	1012.17	1012.17	112.46			
83	SW-40	126+75	750+38 (OLIVET AVE)	RT	772.10	772.10	772.10	772.10	85.79			
85	SW-41	749+50 (OLIVET AVE)	128+32	LT	407.11	279.55	407.11	407.11	45.23			
85	SW-42	750+50 (OLIVET AVE)	128+47	RT	501.26	501.26	501.26	501.26	55.70			
85	SW-43	128+55	799+51 (HAMPDEN AVE)	LT	1348.58	1348.58	1348.58	1348.58	149.84			
85	SW-44	128+62	129+09	RT	380.76	380.76	380.76	380.76	42.31			
85	SW-45	129+29	800+43 (HAMPDEN AVE)	RT	962.39	962.39	962.39	962.39	106.93			
SUBTOTALS THIS SHEET (CARRIED TO SHEET 61)						31401	14577	19157	3748			

CALCULATED	VN	CHECKED	JTS
SIDEWALK SUBSUMMARY			
EAST 105TH STREET			
60			
243			

SHEET NO.	REF. NO.	STATION TO STATION		SIDE	SURFACE AREA (A)		202	608	608	409
					CADD	SF	WALK REMOVED, AS PER PLAN	4" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24	6" CONCRETE WALK, AS PER PLAN, AS PER D-23 AND D-24	SEALING- MISC: CONCRETE SEALER, AS PER D-28
		FROM	TO		SF	SF	SF	SF	SY	
85	SW-46	799+51 (HAMPDEN AVE)	130+81	LT	473.17	334.00		473.17	52.57	
85	SW-47	800+43 (HAMPDEN AVE)	131+74	RT	571.11	571.11		571.11	63.46	
85	SW-48	131+05	131+34	LT	241.18	241.18		241.18	26.80	
85	SW-49	131+58	131+77	LT	139.78	139.78		139.78	15.53	
85	SW-50	131+96	900+40 (TACOMA AVE)	RT	2222.64	2222.64		2222.64	246.96	
85	SW-51	132+00	849+46 (WESTCHESTER AVE)	LT	662.56	662.56		662.56	73.62	
87	SW-51A	849+28 (WESTCHESTER AVE)	849+33 (WESTCHESTER AVE)	LT	37.50	37.50		37.50	4.17	
87	SW-52	849+44 (WESTCHESTER AVE)	134+29	LT	1185.19	1185.19		1185.19	131.69	
87	SW-52A	849+28 (WESTCHESTER AVE)	849+32 (WESTCHESTER AVE)	RT	31.77	31.77		31.77	3.53	
87	SW-53	134+49	135+34	LT	273.71	273.71		273.71	30.41	
87	SW-54	900+40 (TACOMA AVE)	1000+61 (GRANTWOOD AVE)	RT	1961.96	1961.96		1961.96	218.00	
87	SW-55	949+38 (SOUTH BLVD)	1049+58 (NORTH BLVD)	LT	1441.42	1441.42		1441.42	160.16	
87	SW-56	1000+61 (GRANTWOOD AVE)	1100+47 (DREXEL AVE)	RT	2022.02	1966.83		2022.02	224.67	
89	SW-57	1049+58 (NORTH BLVD)	139+14	LT	337.68	337.68		337.68	37.52	
89	SW-58	139+35	1149+42 (OSTEND AVE)	LT	1429.74	1359.45		1429.74	158.86	
89	SW-59	1100+49 (DREXEL AVE)	142+03	RT	1248.51	1093.36		1248.51	138.72	
89	SW-60	1149+42 (OSTEND AVE)	142+09	LT	779.59	616.42		779.59	86.62	
89	SW-61	142+11	1250+60 (PASADENA AVE)	RT	1839.96	1839.96		1839.96	204.44	
89	SW-62	142+34	142+77	LT	162.86	162.86		162.86	18.10	
91	SW-63	143+06	143+19	LT	104.83	104.83		104.83	11.65	
91	SW-64	143+92	145+89	LT	917.64	917.64		917.64	101.96	
91	SW-65	144+28	1350+46 (MASSIE AVE)	RT	2729.07	2729.07		2729.07	303.23	
91	SW-66	146+61	1399+49 (PIERPOINT AVE)	LT	1747.61	1747.61		1747.61	194.18	
91	SW-67	1350+46 (MASSIE AVE)	1450+45 (MORISON AVE)	RT	1577.80	1577.80		1577.80	175.31	
93	SW-68	1399+49 (PIERPOINT AVE)	1499+49 (ADAMS AVE)	LT	1657.06	1657.06		1657.06	184.12	
93	SW-69	1450+45 (MORISON AVE)	151+03	RT	1036.06	1036.06		1036.06	115.12	
93	SW-70	151+25	151+86	RT	283.36	283.36		283.36	31.48	
93	SW-71	1499+49 (ADAMS AVE)	153+26	LT	701.48	701.48		701.48	77.94	
93	SW-72	152+09	1550+48 (AMOR AVE)	RT	386.19	347.33		386.19	42.91	
95	SW-73	1550+42 (AMOR AVE)	1650+49 (GREENLAWN AVE)	RT	1043.92	1050.62		1043.92	115.99	
95	SW-74	153+38	1599+56 (KEMPTON AVE)	LT	611.01	611.01		611.01	67.89	
95	SW-75	1599+56 (KEMPTON AVE)	155+07	LT	542.10	447.32		542.10	60.23	
95	SW-76	1650+49 (GREENLAWN AVE)	155+07	RT	157.28	157.28		157.28	17.48	
SUBTOTALS THIS SHEET						29848	0	30558	3395	
SUBTOTALS SHEET 60						31401	14577	19157	3748	
TOTALS CARRIED TO GENERAL SUMMARY						61249	14577	49715	7143	

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SHEET NO.	LOCATION	NUMBER OF CURB RAMPS	NUMBER OF CORNERS	REF. NO.	STATION	SIDE	CITY OF CLEVELAND CURB RAMP TYPE	608
								CURB RAMP, AS PER PLAN, AS PER D-75
								CORNER
69	EAST 105TH / EAST INTERSECTION	4	3	CR-1	90+63	LT	CR2	3
69				CR-2	91+04	LT	CR3	
69				CR-3	91+30	LT	CR1	
69				CR-4	91+30	RT	CR1	
71	EAST 105TH	1	1	CR-5	95+28	LT	CR1	1
73	EAST 105TH / WADE PARK INTERSECTION	4	4	CR-6	99+69	RT	CR1	4
73				CR-7	99+71	LT	CR7	
73				CR-8	100+31	LT	CR1	
73				CR-9	100+29	RT	CR1	
77	EAST 105TH / ASHBURY INTERSECTION	7	4	CR-10	108+04	RT	CR1	4
77				CR-11	108+16	LT	CR3	
77				CR-12	108+39	LT	CR3	
77				CR-13	108+70	LT	CR1	
77				CR-14	108+80	LT	CR1	
77				CR-15	108+38	RT	CR1	
77	EAST 105TH / LEE INTERSECTION	2	2	CR-16	108+65	RT	CR1	2
77				CR-17	109+49	RT	CR1	
79	EAST 105TH / ORVILLE INTERSECTION	2	2	CR-18	109+77	RT	CR1	2
79				CR-19	114+05	RT	CR7	
81	EAST 105TH / CHURCHILL INTERSECTION	2	2	CR-20	114+38	RT	CR1	2
81				CR-21	117+65	RT	CR7	
81	EAST 105TH / ROCKHURST INTERSECTION	4	4	CR-22	118+00	RT	CR7	4
81				CR-23	119+67	LT	CR11	
81				CR-24	119+75	RT	CR11	
81				CR-25	119+78	LT	CR11	
83	EAST 105TH / TECUMSEH INTERSECTION	2	2	CR-26	119+88	RT	CR11	2
83				CR-27	123+09	RT	CR11	
83	EAST 105TH / HATHAWAY INTERSECTION	4	3	CR-28	123+23	RT	CR11	3
83				CR-29	124+38	LT	CR1	
83				CR-30	124+39	RT	CR1	
83				CR-31	124+56	RT	CR1	
85	EAST 105TH / OLIVET INTERSECTION	4	4	CR-32	124+83	RT	CR1	4
85				CR-33	127+60	LT	CR5	
85				CR-34	127+78	RT	CR1	
85				CR-35	127+83	LT	CR5	
85	EAST 105TH / HAMPDEN INTERSECTION	7	4	CR-36	128+04	RT	CR1	4
85				CR-37	130+00	LT	CR1	
85				CR-38	130+10	RT	CR1	
85				CR-39	130+21	LT	CR1	
85				CR-40	130+32	RT	CR1	
85				CR-41	130+44	LT	CR1	
85				CR-42	130+59	RT	CR7	
85	CR-43	130+68	LT	CR7				
SUBTOTAL COLUMN 1								35

SHEET NO.	LOCATION	NUMBER OF CURB RAMPS	NUMBER OF CORNERS	REF. NO.	STATION	SIDE	CITY OF CLEVELAND CURB RAMP TYPE	608
								CURB RAMP, AS PER PLAN, AS PER D-75
								CORNER
87	EAST 105TH / WESTCHESTER INTERSECTION	2	2	CR-44	132+73	LT	CR1	2
87				CR-45	133+15	LT	CR1	
87	EAST 105TH / TACOMA INTERSECTION	2	2	CR-46	134+36	RT	CR1	2
87				CR-47	134+61	RT	CR1	
87	EAST 105TH / SOUTH INTERSECTION	2	2	CR-48	135+61	RT	CR1	2
87				CR-49	136+06	LT	CR1	
87	EAST 105TH / GRANTWOOD INTERSECTION	2	2	CR-50	136+96	RT	CR1	2
87				CR-51	137+27	RT	CR1	
89	EAST 105TH / NORTH INTERSECTION	2	2	CR-52	138+56	LT	CR7	2
89				CR-53	138+82	LT	CR7	
89	EAST 105TH / DREXEL INTERSECTION	2	2	CR-54	140+42	RT	CR1	2
89				CR-55	140+69	RT	CR3	
89	EAST 105TH / OSTEND INTERSECTION	4	3	CR-56	140+76	LT	CR3	3
89				CR-57	141+01	LT	CR3	
89				CR-58	141+12	RT	CR1	
89				CR-59	141+14	LT	CR1	
91	EAST 105TH / SOMERSET INTERSECTION	1	1	CR-60	143+35	RT	CR1	1
91	EAST 105TH / PASADENA INTERSECTION	2	2	CR-61	143+81	RT	CR1	2
91				CR-62	144+34	RT	CR1	
91	EAST 105TH / PARKGATE INTERSECTION	1	1	CR-63	146+04	RT	CR1	1
91	EAST 105TH / MASSIE INTERSECTION	2	2	CR-64	146+82	RT	CR1	2
91				CR-65	147+10	RT	CR1	
93	EAST 105TH / PIERPOINT INTERSECTION	2	2	CR-66	148+80	LT	CR1	2
93				CR-67	149+19	LT	CR1	
93	EAST 105TH / MORISON INTERSECTION	4	3	CR-68	149+82	RT	CR1	3
93				CR-69	150+10	RT	CR1	
93				CR-70	150+27	LT	CR1	
93				CR-71	150+27	RT	CR1	
93	EAST 105TH / ADAMS INTERSECTION	2	2	CR-72	151+50	LT	CR1	2
93				CR-73	151+87	LT	CR1	
95	EAST 105TH / AMOR INTERSECTION	2	2	CR-74	152+83	RT	CR3	2
95				CR-75	153+12	RT	CR3	
95	EAST 105TH / KEMPTON INTERSECTION	3	3	CR-76	154+28	LT	CR1	3
95				CR-77	154+28	RT	CR1	
95				CR-78	154+62	LT	CR3	
95	EAST 105TH / GREENLAWN INTERSECTION	3	3	CR-79	154+66	RT	CR1	3
95				CR-80	154+95	RT	CR7	
95				CR-81	154+99	LT	CR1	
SUBTOTAL COLUMN 2								36
SUBTOTAL COLUMN 1								35
TOTALS CARRIED TO GENERAL SUMMARY								71

EAST 105TH STREET	CALCULATED	62
	CHECKED	243
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SHEET NO.	REF. NO.	STATION	SIDE	202	202
				POLE REMOVED, AS PER PLAN, AS PER D-18 EACH	REMOVAL MISC.: BOLLARD REMOVAL AND DISPOSAL OR RESETTING EACH
79	R-1	112+95	RT	1	
79	R-2	113+96	LT	1	
87	R-3	136+81	RT	1	
91	R-4	143+75	LT	1	
91	R-5	143+80	LT		1
91	R-6	143+90	LT		1
91	R-7	144+27	RT		1
91	R-8	144+30	RT		1
91	R-9	144+33	RT	1	
91	R-10	145+97	LT		1
91	R-11	146+05	LT		1
91	R-12	146+19	RT		1
91	R-13	146+22	RT		1
91	R-14	146+26	RT		1
91	R-15	146+35	RT		1
91	R-16	146+43	RT		1
91	R-17	146+51	LT		1
91	R-18	146+61	LT		1
91	R-19	147+10	RT		1
91	R-20	147+10	RT		1
91	R-21	147+10	RT		1
91	R-22	147+18	RT		1
91	R-23	147+20	RT		1
91	R-24	147+28	RT		1
91	R-25	147+37	RT		1
93	R-26	147+53	RT		1
93	R-27	148+02	RT		1
93	R-28	148+45.00	RT		1
93	R-29	148+70.00	LT		1
93	R-30	148+78.00	LT		1
93	R-31	148+93.00	RT		1
93	R-32	149+45.55	LT	1	
95	R-33	154+14.32	RT	1	
95	R-34	154+19.17	LT	1	
TOTALS CARRIED TO GENERAL SUMMARY				8	26

SHEET NO.	REF NO.	REFERENCE LOCATION				202	623	623
		STREET	STATION	OFFSET	SIDE	MONUMENT ASSEMBLY REMOVED EACH	MONUMENT ASSEMBLY, AS PER PLAN, AS PER D-40 EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN, AS PER D-41 EACH
73	M-1	EAST 105TH STREET	100+00.00	0.38'	LT			1
77	M-2	EAST 105TH STREET	108+37.94	0.18'	RT			1
77	M-3	LEE AVENUE	400+30.01		CL	1	1	
79	M-4	ORVILLE AVENUE	450+29.56		CL			1
79	M-5	EAST 105TH STREET	115+74.11	0.01'	LT			1
79	M-6	EAST 105TH STREET	116+40.05	0.52'	LT			1
81	M-7	CHURCHILL AVENUE	500+29.76		CL			1
81	M-8	CHURCHILL AVENUE	499+69.99		CL			1
81	M-9	ROCKHURST AVENUE	549+69.83	0.13'	RT			1
81	M-10	ROCKHURST AVENUE	550+29.66		CL			1
81	M-11	EAST 105TH STREET	121+24.81		CL			1
83	M-12	TECUMSEH COURT	650+30.70		CL			1
83	M-13A	EAST 105TH STREET	124+94.50	0.61'	LT	1	1	
83	M-14A	EAST 105TH STREET	126+36.08	0.71'	LT	1	1	
83	M-15	EAST 105TH STREET	126+59.71		CL			1
85	M-16	OLIVET AVENUE	749+70.36		CL			1
85	M-17	OLIVET AVENUE	750+29.42		CL			1
85	M-18	HAMPDEN AVENUE	799+69.82	0.23'	RT			1
85	M-19	HAMPDEN AVENUE	800+30.16		CL	1	1	
87	M-20A	WESTCHESTER AVENUE	849+70.00		CL	1	1	
87	M-21A	TACOMA AVENUE	900+29.99		CL	1	1	
87	M-22	GRANTWOOD AVENUE	1000+30.00		CL	1	1	
89	M-23A	NORTH BOULEVARD	1049+70.06		CL	1	1	
89	M-24A	DREXEL AVENUE	1100+29.98		CL	1	1	
91	M-25	PASADENA AVENUE	1250+29.39	0.02'	RT	1	1	
91	M-26A	MASSIE AVENUE	1350+30.01		CL	1	1	
93	M-27	MORISON AVENUE	1450+29.39		CL			1
95	M-28	EAST 105TH STREET	152+97.73		CL	1	1	
95	M-29A	GREENLAWN AVENUE	1650+30.00		CL	1	1	
TOTALS CARRIED TO GENERAL SUMMARY						13	13	16

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ROADWAY & MONUMENTATION SUBSUMMARY

EAST 105TH STREET

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REF. NO.	SHEET NO.	STATION	SIDE	611
				VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (SANITARY)
				EACH
<i>EAST 105TH STREET</i>				
S-1	69	91+69.06	RT	1
S-2	71	94+92.35	RT	1
S-3	71	95+35.89	LT	1
S-4	71	97+76.44	LT	1
S-5	71	98+18.43	RT	1
S-6	73	202+35.24 (WADE PARK AVE)	RT	1
S-7	73	100+13.02	LT	1
S-8	73	101+39.08	RT	1
S-9	75	104+28.67	LT	1
S-10	75	104+58.19	RT	1
S-11	77	107+81.58	RT	1
S-12	77	107+95.46	LT	1
S-13	77	349+58.02 (ASHBURY AVE)	LT	1
S-14	77	108+96.94	RT	1
S-15	77	400+37.13 (LEE AVE)	RT	1
S-16	77	110+19.96	RT	1
S-17	79	450+34.29 (ORVILLE AVE)	LT	1
S-18	79	114+35.66	LT	1
S-19	81	500+34.41 (CHURCHILL AVE)	RT	1
S-20	81	118+05.53	LT	1
S-21	81	120+79.20	LT	1
S-22	81	121+71.54	RT	1
S-23	83	124+45.61	RT	1
S-24	83	700+31.48 (HATHAWAY AVE)	LT	1
S-25	83	126+90.23	LT	1
S-26	85	749+66.19 (OLIVET AVE)	LT	1
S-27	85	750+33.61 (OLIVET AVE)	RT	1
S-28	85	127+87.14	LT	1
S-29	85	128+04.47	LT	1
S-30	85	129+05.08	LT	1
S-31	85	130+02.81	LT	1
S-32	85	130+32.65	LT	1
S-33	85	130+40.56	LT	1
S-34	85	130+45.51	LT	1
S-35	85	800+34.82 (HAMPDEN AVE)	LT	1
SUBTOTAL COLUMN 1				35

REF. NO.	SHEET NO.	STATION	SIDE	611
				VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (SANITARY)
				EACH
S-36	87	132+70.74	LT	1
S-37	87	132+93.98	RT	1
S-38	87	849+61.70 (WESTCHESTER AVE)	RT	1
S-39	87	133+20.72	LT	1
S-40	87	134+34.65	LT	1
S-41	87	134+47.30	LT	1
S-42	87	135+82.74	RT	1
S-43	87	949+46.57 (SOUTH BLVD)	LT	1
S-44	87	137+29.15	RT	1
S-45	89	1049+63.94 (NORTH BLVD)	RT	1
S-46	89	138+70.66	LT	1
S-47	89	1100+41.51 (DREXEL AVE)	LT	1
S-48	89	140+57.05	LT	1
S-49	89	140+66.75	LT	1
S-50	89	140+86.84	LT	1
S-51	89	1149+67.90 (OSTEND AVE)	RT	1
S-52	89	141+15.37	LT	1
S-53	91	1199+64.03 (SOMERSET AVE)	RT	1
S-54	91	143+58.89	LT	1
S-55	91	146+01.73	LT	1
S-56	91	1299+64.00 (PARKGATE AVE)	RT	1
S-57	91	146+30.78	LT	1
S-58	91	1350+32.93 (MASSIE AVE)	LT	1
S-59	91	1350+45.83 (MASSIE AVE)	LT	1
S-60	93	1399+63.56 (PIERPONT AVE)	RT	1
S-61	93	1399+63.56 (PIERPONT AVE)	LT	1
S-62	93	149+95.92	LT	1
S-63	93	151+37.12	LT	1
S-64	93	1499+67.45 (ADAMS AVE)	RT	1
S-65	93	151+68.28	LT	1
S-66	93	152+05.37	LT	1
S-67	95	1550+34.77 (AMOR AVE)	RT	1
S-68	95	153+22.96	LT	1
S-69	95	1599+66.28 (KEMPTON AVE)	RT	1
S-70	95	1650+38.89 (GREENLAWN AVE)	RT	1
S-71	95	154+83.04	RT	1
S-72	95	154+85.20	LT	1
SUBTOTALS THIS COLUMN				37
SUBTOTALS CARRIED FROM COLUMN 1				35
TOTALS CARRIED TO GENERAL SUMMARY				72

SANITARY SUBSUMMARY

EAST 105TH STREET

CALCULATED
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REF. NO.	SHEET NO.	STATION	SIDE	202	611	611	611	611	611	611	SPECIAL
				CATCH BASIN ABANDONED EACH	12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 FT	12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32 FT	CATCH BASIN, CITY OF CLEVELAND CB-2, AS PER PLAN, AS PER D-34 EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, AS PER PLAN, AS PER D-34 EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE) EACH	CORING FOR STORM SEWERS EACH
D-1	69	90+19.08	LT							1	
D-2	69	1698+50.23 (EAST BLVD)	LT	1							
D-3	69	1699+32.00 (EAST BLVD)	LT		31			1			
D-4	69	1699+32.00 (EAST BLVD)	RT			58		1			1
D-5	69	92+03.00	LT			6		1			
D-6	73	99+55.00	LT		6			1			
D-7	73	99+55.50	RT		6			1			
D-8	73	202+37.89 (WADE PARK AVE)	LT							1	
D-9	73	202+43.16 (WADE PARK AVE)	LT					1			
D-10	73	202+47.10 (WADE PARK AVE)	RT					1			
D-11	75	104+31.50	LT		6		1				
D-12	75	104+31.50	RT		6		1				
D-13	77	107+83.00	LT		20			1			
D-14	77	107+83.00	RT		6		1				
D-15	77	350+39.00 (ASHBURY AVE)	LT		6			1			
D-16	77	350+44.50 (ASHBURY AVE)	RT		6			1			
D-17	77	109+26.00	RT			6	1				
D-18	77	400+39.00 (LEE AVE)	RT		6	6		1			
D-19	77	400+40.00 (LEE AVE)	LT		6			1			
D-20	79	113+90.00	RT		6		1				
D-21	79	450+41.50 (ORVILLE AVE)	RT		6			1			
D-22	79	450+41.50 (ORVILLE AVE)	LT		6			1			
D-23	81	117+54.50	RT			18	1				
D-24	81	500+31.50 (CHURCHILL AVE)	RT		6			1			
D-25	81	500+32.50 (CHURCHILL AVE)	LT		6			1			
D-26	81	117+99.50	LT		6	6		1			
D-27	81	499+60.00 (CHURCHILL AVE)	RT			6		1			
D-28	81	119+16.00	LT		6			1			
D-29	81	120+75.50	LT		21			1			1
D-30	81	120+82.00	RT			6		1			
D-31	81	121+03.27	RT							1	
D-32	81	600+43.00 (SUPERIOR AVE)	RT					1			
D-33	81	121+81.50	RT		6			1			
D-34	83	124+47.50	RT		6			1			
D-35	83	700+50.00 (HATHAWAY AVE)	LT		6			1			
D-36	83	126+18.50	LT		6			1			
D-37	83	126+18.50	RT		6			1			
D-38	85	749+55.56 (OLIVET AVE)	LT							1	
D-39	85	749+61.50 (OLIVET AVE)	LT		6			1			
D-40	85	749+62.00 (OLIVET AVE)	RT		6			1			
D-41	85	127+90.44	RT							1	
D-42	85	130+07.00	LT		6			1			
D-43	85	130+13.50	RT		6			1			
D-44	85	799+56.00 (HAMPDEN AVE)	LT		6			1			
D-45	85	799+56.00 (HAMPDEN AVE)	RT		6			1			
D-46	85	130+48.61	RT							1	
D-47	87	132+53.50	LT		6			1			
D-48	87	132+80.50	LT		6			1			
D-49	87	133+07.50	LT		6			1			
D-50	87	134+22.00	RT		6			1			
SUBTOTALS THIS SHEET (CARRIED TO SHEET 66)				1	258	112	6	34	3	6	2

NOTE:
 1. PIPE REMOVAL OCCURRING WITHIN THE SAME TRENCH AS PROPOSED PIPE IS TO BE REMOVED AS INCIDENTAL TO THE PROPOSED PIPE ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 OR ITEM 611 - 12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32. NO ADDITIONAL PAYMENT SHALL BE MADE FOR PIPE REMOVAL.
 2. CATCH BASIN REMOVAL AT LOCATIONS WHERE A PROPOSED CATCH BASIN IS BEING INSTALLED IS INCIDENTAL TO THE PROPOSED CATCH BASIN ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE FOR CATCH BASIN REMOVAL.

REF. NO.	SHEET NO.	STATION	SIDE	202	611	611	611	611	611	611	SPECIAL
				CATCH BASIN ABANDONED EACH	12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 FT	12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32 FT	CATCH BASIN, CITY OF CLEVELAND CB-2, AS PER PLAN, AS PER D-34 EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, AS PER PLAN, AS PER D-34 EACH	CATCH BASIN, CITY OF CLEVELAND CB-1, ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 EACH	VAULT / MANHOLE ADJUSTED TO GRADE, AS PER PLAN, AS PER D-39 (DRAINAGE) EACH	CORING FOR STORM SEWERS EACH
D-51	87	134+49.75	RT							1	
D-52	87	135+44.00	LT		6			1			
D-53	87	949+48.50 (SOUTH BLVD)	LT		6			1			
D-54	87	949+48.50 (SOUTH BLVD)	RT		6			1			
D-55	87	949+63.41 (SOUTH BLVD)	RT							1	
D-56	87	136+56.50	RT		6			1			
D-57	87	137+11.19	RT							1	
D-58	89	138+46.50	LT		6			1			
D-59	89	1049+64.00 (NORTH BLVD)	LT		6			1			
D-60	89	1049+64.00 (NORTH BLVD)	RT		6			1			
D-61	89	140+26.50	RT		6			1			
D-62	89	140+72.50	LT		6			1			
D-63	89	140+76.11	RT							1	
D-64	89	1149+53.00 (OSTEND AVE)	LT		6			1			
D-65	91	142+59.50	LT		6			1			
D-66	91	1199+54.50 (SOMERSET AVE)	LT		6			1			
D-67	91	143+42.50	LT		6			1			
D-68	91	143+69.00	RT		6			1			
D-69	91	144+07.17	RT							1	
D-70	91	144+53.50	RT		6			1			
D-71	91	145+70.50	LT		6			1			
D-72	91	145+91.50	RT		6	12	1				
D-73	91	146+12.50	LT		6			1			
D-74	91	146+42.00	LT		6			1			
D-75	91	146+65.50	RT		6		1				
D-76	91	146+90.00	LT		6			1			
D-77	91	147+00.02	RT							1	
D-78	91	1350+36.5 (MASSIE AVE)	LT		6			1			
D-79	91	1350+38.5 (MASSIE AVE)	RT		6			1			
D-80	91	147+28.00	RT		6			1			
D-81	91	147+38.50	LT		6			1			
D-82	93	148+54.00	LT		6			1			
D-83	93	148+65.00	RT		6			1			
D-84	93	148+86.00	LT		6			1			
D-85	93	149+14.00	LT		6			1			
D-86	93	1450+39.00 (MORISON AVE)	RT		6			1			
D-87	93	1450+40.00 (MORISON AVE)	LT		6			1			
D-88	93	150+29.00	RT			29		1			
D-89	93	151+35.19	RT							1	
D-90	95	152+70.50	RT		6			1			
D-91	95	1550+36.50 (AMOR AVE)	LT		6			1			
D-92	95	1550+37.50 (AMOR AVE)	RT		6			1			
D-93	95	154+15.00	LT		6			1			
D-94	95	1599+60.50 (KEMPTON AVE)	LT		6			1			
D-95	95	154+56.50	RT		6			1			
D-96	95	1650+44.00	RT		6			1			
D-97	95	1650+44.50	LT		6			1			
SUBTOTALS THIS SHEET				0	234	41	2	38	0	7	0
SUBTOTALS CARRIED FROM SHEET 65				1	258	112	6	34	3	6	2
TOTALS CARRIED TO GENERAL SUMMARY				1	492	153	8	72	3	13	2

NOTE:
 1. PIPE REMOVAL OCCURRING WITHIN THE SAME TRENCH AS PROPOSED PIPE IS TO BE REMOVED AS INCIDENTAL TO THE PROPOSED PIPE ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN, AS PER D-32 OR ITEM 611 - 12" CONDUIT, TYPE C, AS PER PLAN, AS PER D-32. NO ADDITIONAL PAYMENT SHALL BE MADE FOR PIPE REMOVAL.
 2. CATCH BASIN REMOVAL AT LOCATIONS WHERE A PROPOSED CATCH BASIN IS BEING INSTALLED IS INCIDENTAL TO THE PROPOSED CATCH BASIN ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE FOR CATCH BASIN REMOVAL.

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SHEET NO.	REF. NO.	STATION		OUTLET INFORMATION	SIDE	605		611	
		FROM	TO			END STRUCTURE	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER D-42	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
69	UD-1	89+55	1698+50 (EAST BLVD)	D-2	LT	208	10		
69	UD-2	1697+60 (EAST BLVD)	1699+32 (EAST BLVD)	D-3	LT	162	10		
69	UD-3	1697+60 (EAST BLVD)	1699+32 (EAST BLVD)	D-4	RT	167	10		
69	UD-4	1698+50 (EAST BLVD)	92+00	D-3	LT	200	10		
69	UD-5	92+03	92+15	D-5	LT	3	10		
71	UD-6	95+17	99+55	D-6	LT	430	10		
71	UD-7	95+43	99+56	D-7	RT	403	10		
73	UD-8	99+55	201+50 (WADE PARK AVE)	D-6	LT	31	10		
73	UD-9	99+56	202+31 (WADE PARK AVE)	D-7	RT	11	10		
73	UD-10	202+32 (WADE PARK AVE)	202+47 (WADE PARK AVE)	D-10	RT	7	10		
73	UD-11	201+50 (WADE PARK AVE)	104+32	D-11	LT	418	10		
73	UD-12	202+41 (WADE PARK AVE)	104+32	D-12	RT	410	10		
75	UD-13	104+34	107+83	D-13	LT	339	10		
75	UD-14	104+34	107+83	D-14	RT	339	10		
77	UD-15	107+83	349+46 (ASHBURY AVE)	D-13	LT	75	10		
77	UD-16	107+83	350+42 (ASHBURY AVE)	D-14	RT	19	10		
77	UD-17	350+36 (ASHBURY AVE)	109+26	D-17	RT	90	10		
77	UD-18	109+26	400+36 (LEE AVE)	D-17	RT	22	10		
77	UD-19	400+37 (LEE AVE)	113+90	D-20	RT	413	10		
79	UD-20	113+90	450+39 (ORVILLE AVE)	D-20	RT	21	10		
79	UD-21	450+39 (ORVILLE AVE)	117+55	D-23	RT	319	10		
81	UD-22	117+57	500+32 (CHURCHILL AVE)	D-24	RT	7	10		
81	UD-23	500+30 (CHURCHILL AVE)	120+82	D-30	RT	278	10		
81	UD-24	118+51	119+16	D-28	LT	55	10		
81	UD-25	119+16	549+69 (ROCKHURST AVE)	D-28	LT	47	10		
81	UD-26	549+70 (ROCKHURST AVE)	120+76	D-29	LT	94	10		
81	UD-27	550+30 (ROCKHURST AVE)	119+76	UD-23	RT	10			
81	UD-28	550+30 (ROCKHURST AVE)	119+90	UD-23	RT	10			
81	UD-29	121+65	126+19	D-36	LT	444	10		
81	UD-30	121+82	122+53	D-33	RT	62	10		
83	UD-31	122+54	124+48	D-34	RT	185	10		
83	UD-32	650+32 (TECUMSEH CT)	123+10	UD-31	RT	12			
83	UD-33	650+32 (TECUMSEH CT)	123+24	UD-31	RT	10			
83	UD-34	124+48	700+34 (HATHAWAY AVE)	D-34	RT	8	10		
83	UD-35	700+37 (HATHAWAY AVE)	126+19	D-37	RT	135	10		
83	UD-36	126+19	749+65 (OLIVET AVE)	D-36	LT	139	10		
83	UD-37	126+19	750+50 (OLIVET AVE)	D-37	RT	175	10		
85	UD-38	749+50 (OLIVET AVE)	749+62 (OLIVET AVE)	D-40	RT	3	10		
85	UD-39	749+50 (OLIVET AVE)	749+62 (OLIVET AVE)	D-39	LT	2	10		
85	UD-40	749+62 (OLIVET AVE)	127+94	D-39	LT	13	10		
85	UD-41	127+95	130+07	D-42	LT	203	10		
85	UD-42	750+50 (OLIVET AVE)	130+14	D-43	RT	223	10		
85	UD-43	130+07	799+59 (HAMPDEN AVE)	D-42	LT	20	10		
85	UD-44	130+14	800+43 (HAMPDEN AVE)	D-43	RT	27	10		
85	UD-45	799+59 (HAMPDEN AVE)	132+54	D-47	LT	216	10		
85	UD-46	800+43 (HAMPDEN AVE)	134+22	D-50	RT	371	10		
87	UD-47	132+54	132+64	D-47	LT	3	10		
87	UD-48	132+65	132+81	D-48	LT	16	10		
SUBTOTAL COLUMN 1						6,855	440		

SHEET NO.	REF. NO.	STATION		OUTLET INFORMATION	SIDE	605		611	
		FROM	TO			END STRUCTURE	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER D-42	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
87	UD-49	132+81	849+28 (WESTCHESTER AVE)	D-48	LT	13	10		
87	UD-50	849+28 (WESTCHESTER AVE)	133+08	D-49	LT	13	10		
87	UD-51	133+08	133+20	D-49	LT	12	10		
87	UD-52	133+20	135+44	D-52	LT	217	10		
87	UD-53	134+22	900+40 (TACOMA AVE)	D-50	RT	19	10		
87	UD-54	900+40 (TACOMA AVE)	136+57	D-56	RT	200	10		
87	UD-55	949+51 (SOUTH BLVD)	138+47	D-58	LT	249	10		
87	UD-56	136+57	1000+61 (GRANTWOOD AVE)	D-56	RT	55	10		
87	UD-57	1000+61 (GRANTWOOD AVE)	140+27	D-61	RT	315	10		
89	UD-58	138+47	1049+67 (NORTH BLVD)	D-58	LT	9	10		
89	UD-59	1049+67 (NORTH BLVD)	140+73	D-62	LT	193	10		
89	UD-60	140+27	1100+47 (DREXEL AVE)	D-61	RT	25	10		
89	UD-61	1100+47 (DREXEL AVE)	143+69	D-68	RT	310	10		
89	UD-62	140+73	1149+43 (OSTEND AVE)	D-62	LT	12	10		
89	UD-63	1149+53 (OSTEND AVE)	141+11	D-64	LT	12	10		
89	UD-64	141+11	142+60	D-65	LT	140	10		
91	UD-65	142+60	143+19	D-65	LT	50	10		
91	UD-66	143+69	1250+60 (PASADENA AVE)	D-68	RT	39	10		
91	UD-67	143+92	145+71	D-71	LT	169	10		
91	UD-68	1250+60 (PASADENA AVE)	144+54	D-70	RT	46	10		
91	UD-69	144+56	145+92	D-72	RT	126	10		
91	UD-70	145+71	145+89	D-71	LT	9	10		
91	UD-71	145+94	146+66	D-75	RT	62	10		
91	UD-72	146+62	146+90	D-76	LT	19	10		
91	UD-73	146+77	1350+39 (MASSIE AVE)	D-79	RT	18	10		
91	UD-74	146+93	147+39	D-81	LT	36	10		
91	UD-75	1350+34 (MASSIE AVE)	147+28	D-80	RT	17	10		
91	UD-76	147+28	148+62	D-80	RT	125	10		
91	UD-77	147+39	148+00	D-81	LT	52	10		
93	UD-78	148+01	148+54	D-82	LT	44	10		
93	UD-79	148+54	1399+58 (PIERPOINT AVE)	D-82	LT	30	10		
93	UD-80	148+65	1450+37 (MORISON AVE)	D-83	RT	115	10		
93	UD-81	1399+49 (PIERPOINT AVE)	149+14	D-85	LT	6	10		
93	UD-82	149+14	1499+49 (ADAMS AVE)	D-85	LT	140	10		
93	UD-83	1450+37 (MORISON AVE)	150+29	D-88	RT	22	10		
93	UD-84	150+29	151+40	D-88	RT	101	10		
93	UD-85	151+41	152+71	D-90	RT	121	10		
93	UD-86	1499+49 (ADAMS AVE)	154+15	D-93	LT	241	10		
95	UD-87	152+71	1550+35 (AMOR AVE)	D-90	RT	13	10		
95	UD-88	1550+34 (AMOR AVE)	154+57	D-95	RT	144	10		
95	UD-89	154+15	1599+56 (KEMPTON AVE)	D-93	LT	24	10		
95	UD-90	154+57	1650+41 (GREENLAWN AVE)	D-95	RT	17	10		
95	UD-91	1599+61 (KEMPTON AVE)	155+07	D-94	LT	49	10		
95	UD-92	1650+45 (GREENLAWN AVE)	155+07	D-97	RT	18	10		
SUBTOTAL COLUMN 2								3,647	440
SUBTOTAL COLUMN 1								6,855	440
TOTALS CARRIED TO GENERAL SUMMARY								10,502	880

CALCULATED KJM CHECKED JTS
 UNDERDRAIN SUBSUMMARY
 EAST 105TH STREET
 67
 243

REF. NO.	SHEET NO.	STATION	SIDE	611
				VAULT / MANHOLE ADJUSTED TO GRADE, AS PER D-39 (CPP)
				EACH
E-1	69	90+29.26	LT	1
E-2	69	90+71.82	LT	1
E-3	69	91+16.56	LT	1
E-4	69	91+51.99	LT	1
E-5	71	96+37.10	LT	1
E-6	73	98+86.72	LT	1
E-7	73	101+43.39	LT	1
E-8	75	103+73.28	LT	1
E-9	77	108+75.89	LT	1
E-10	81	118+94.73	LT	1
E-11	83	126+75.48	LT	1
E-12	83	127+49.61	LT	1
E-13	85	129+20.28	LT	1
E-14	85	131+41.43	LT	1
E-15	87	134+05.27	LT	1
E-16	89	139+33.36	LT	1
E-17	89	140+53.00	LT	1
E-18	91	146+69.79	LT	1
E-19	93	148+51.11	LT	1
E-20	93	151+94.92	LT	1
E-21	95	154+66.91	LT	1
TOTALS CARRIED TO GENERAL SUMMARY				21

ELECTRIC SUBSUMMARY

EAST 105TH STREET

CURVE DATA
CURVE 1
 P.I. = STA. 1697+13.07
 R = 251.85'
 D = 22° 45' 00"
 L = 215.43'
 T = 114.80'
 C = 208.92
 C.B. = S 66° 36' 44" W
 P.C. = STA. 1695+98.27
 P.T. = STA. 1698+13.70

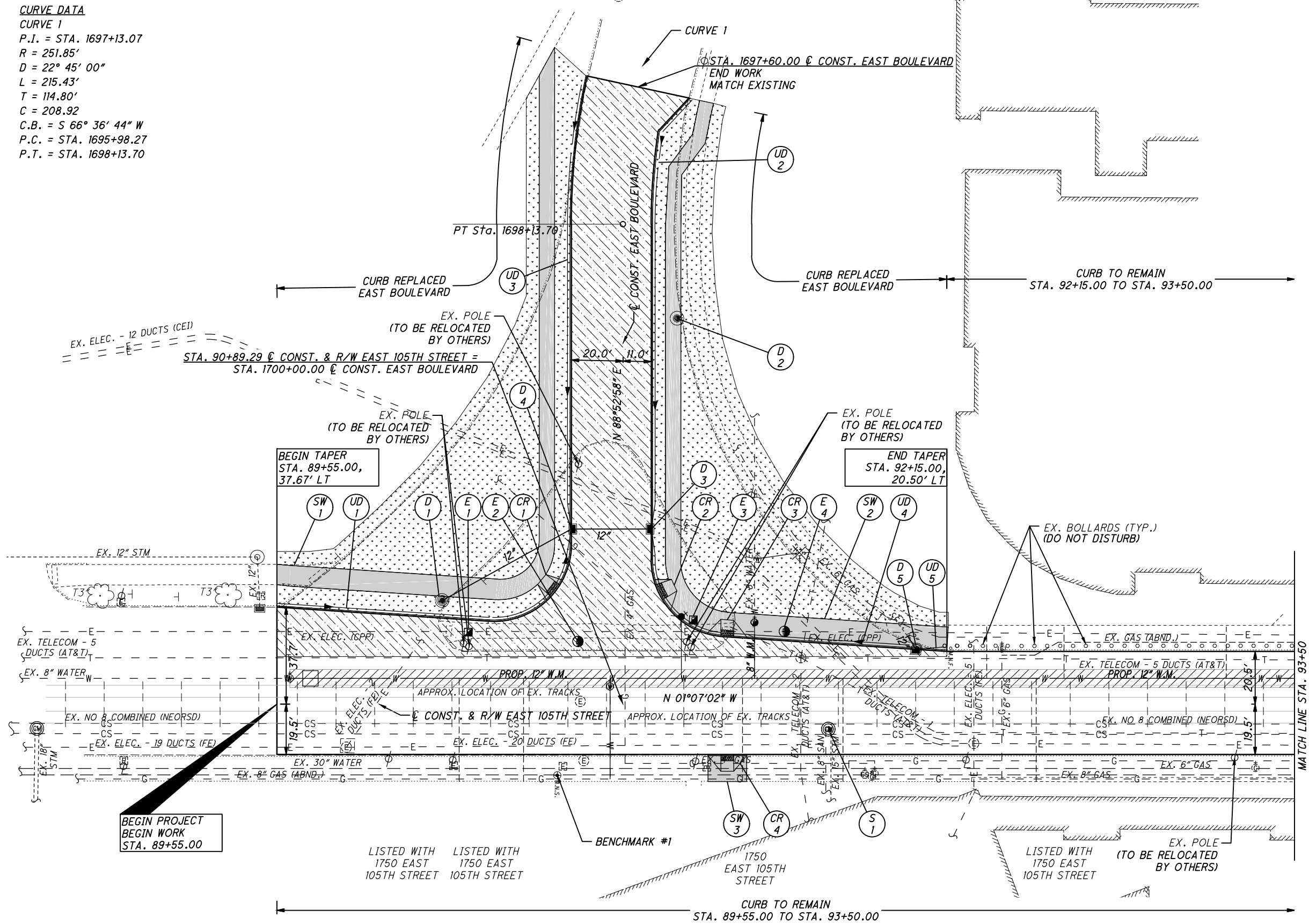
LEGEND:

- (D) DRAINAGE ITEM
- (CR) CURB RAMP ITEM
- (SW) SIDEWALK ITEM
- (R) ROADWAY ITEM
- (M) MONUMENT ITEM
- (S) SANITARY ITEM
- (UD) UNDERDRAIN ITEM
- (E) ELECTRICAL ITEM
- SEEDING AND MULCHING, SEE NOTES ON SHEET 17
- PROPOSED SIDEWALK
- PAVEMENT REPAIR, SEE NOTE 4
- EAST BOULEVARD RECONSTRUCTION
- WATER MAIN RECONSTRUCTION
- LIMITS OF BUS PAD PAVEMENT REPLACEMENT, SEE DETAIL ON SHEET 12



**PLAN - EAST 105TH STREET
 BEGIN TO STA. 93+50**

**EAST 105TH STREET
 BEGIN TO STA. 93+50**



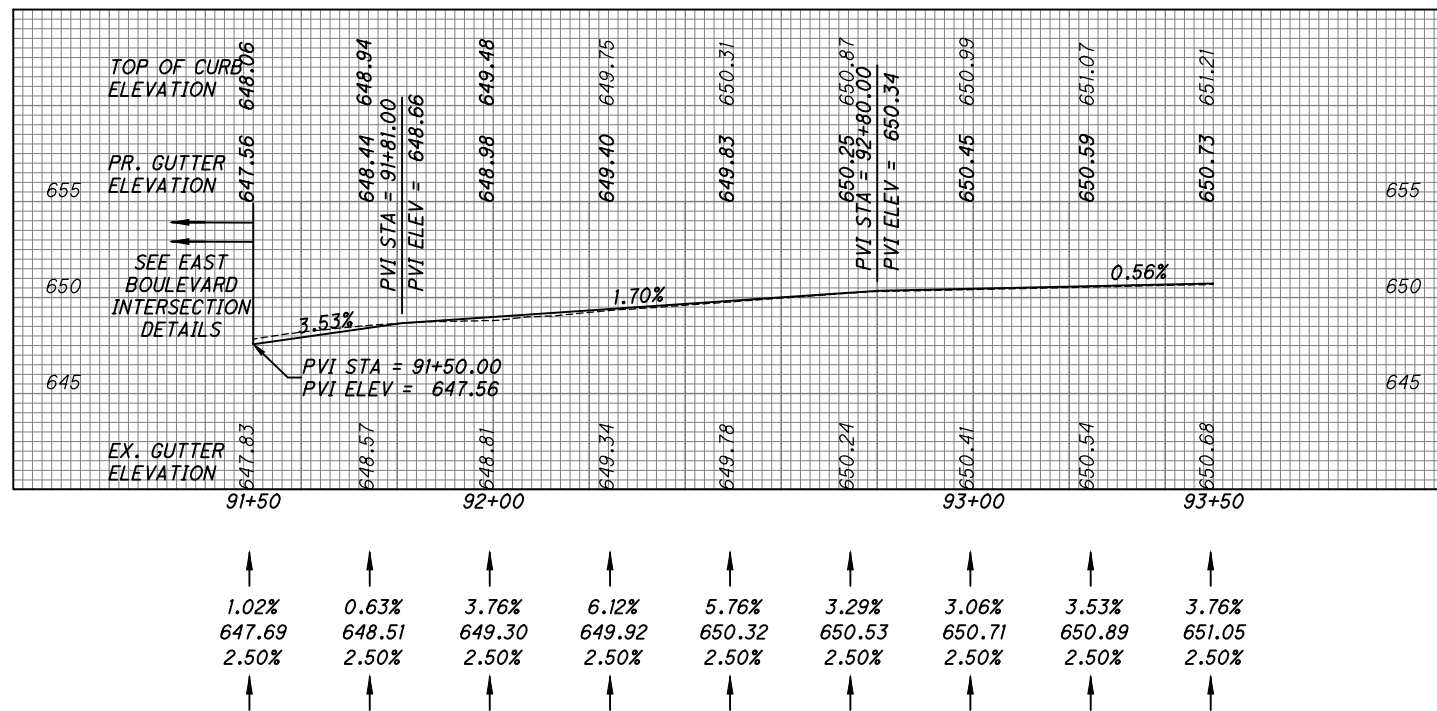
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- NOTES:**
- ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB.
 - INSTALL ALL NEW CURB RAMPS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS. ALL RAMPS MUST BE ADA COMPLIANT. SPECIFIC TYPE OF RAMP IS INDICATED ON SHEET 62.
 - FOR LEGEND SEE SHEET 69.
 - DIMENSIONS SHOWN FOR THE LIMITS OF FULL-DEPTH PAVEMENT REPAIR AND CURB REPLACEMENT ARE INTENDED FOR USE IN ESTIMATING QUANTITIES ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS WILL BE AS DIRECTED BY THE ENGINEER.

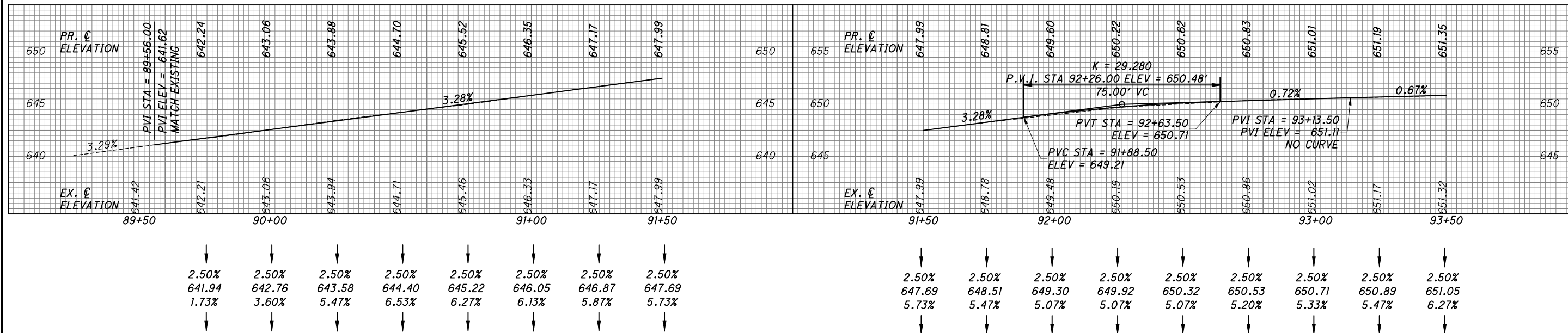
⊕ BENCHMARK #1
 MAG NAIL SET ON THE EAST SIDE OF EAST 105TH STREET IN THE EXISTING WALK
 STA. 90+63.82, 27.63' RT
 ELEV. = 645.22'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

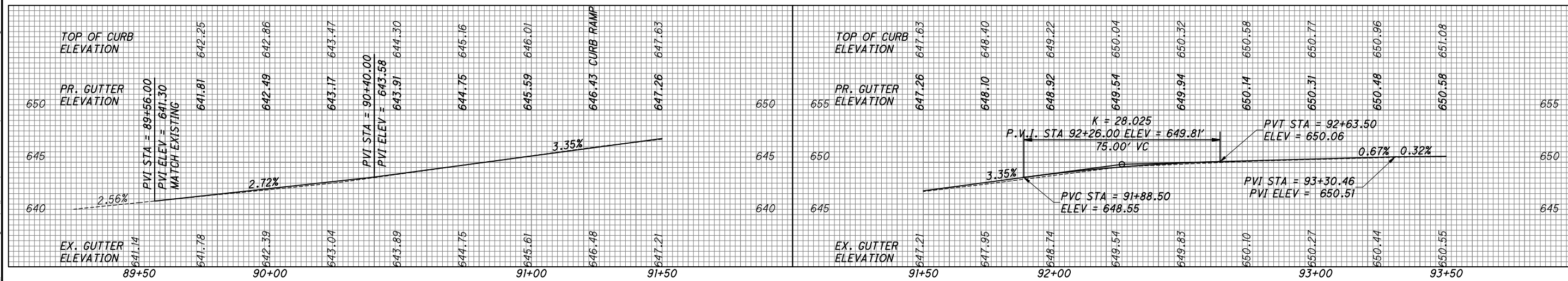
LEFT GUTTER PROFILE



PROFILE



RIGHT GUTTER PROFILE



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CALCULATED
KJM
CHECKED
JTS

PROFILE - EAST 105TH STREET
BEGIN TO STA. 93+50

EAST 105TH STREET



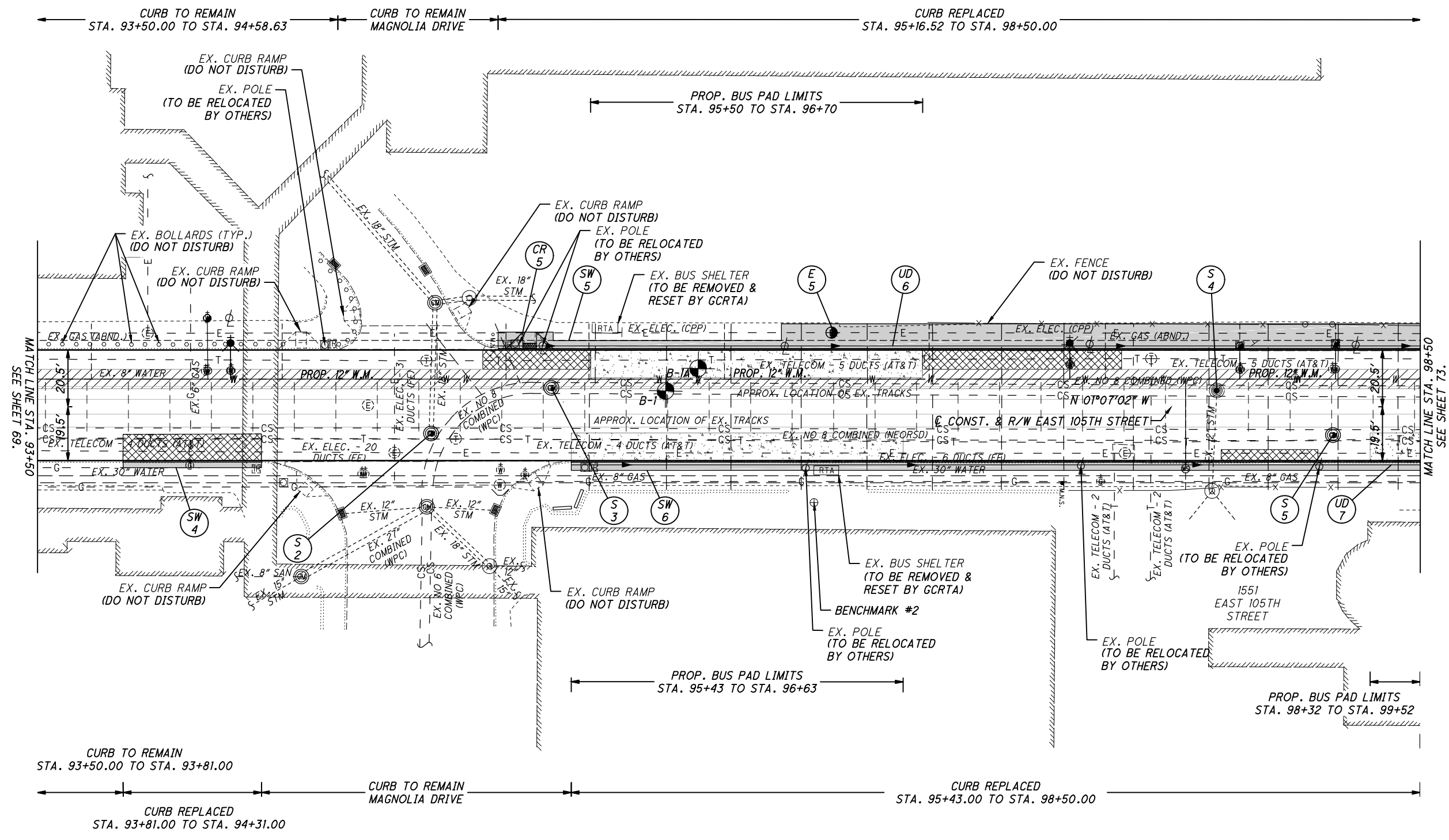
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 93+50 TO STA. 98+50

EAST 105TH STREET

71
243



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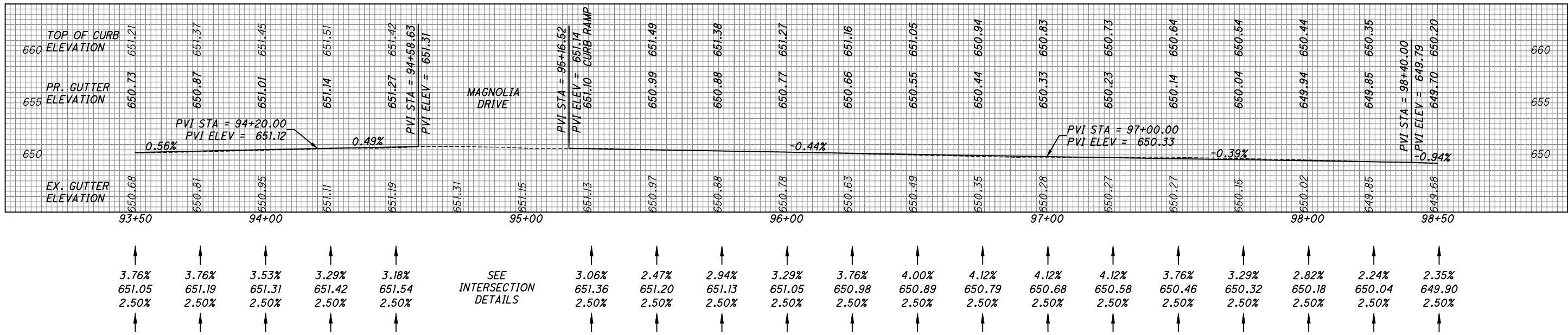
NOTES:

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3. FOR LEGEND SEE SHEET 69.
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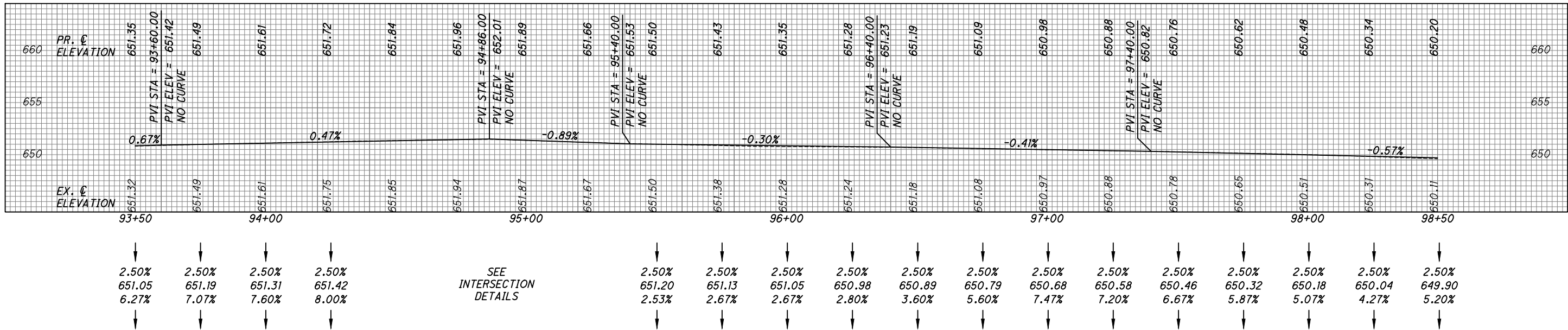
⊕ BENCHMARK # 2
MAG NAIL SET ON THE EAST SIDE OF EAST 105TH STREET
STA. 96+30.81, 34.65' RT
ELEV. = 653.15'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

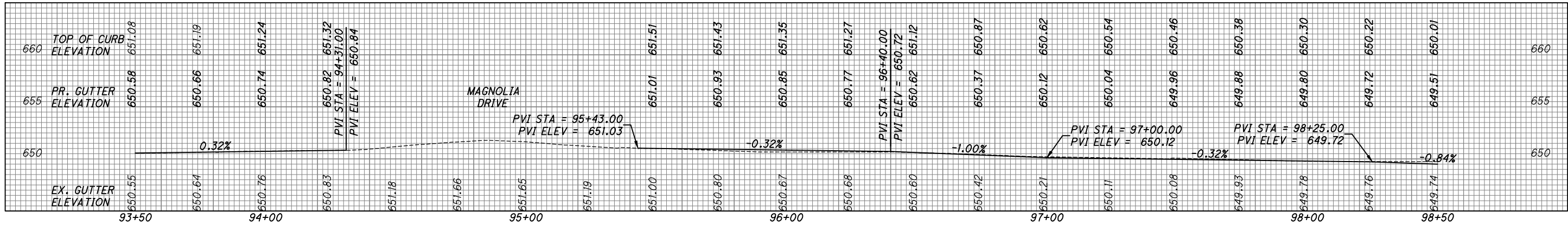
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



PROFILE - EAST 105TH STREET
STA. 93+50 TO STA. 98+50

EAST 105TH STREET

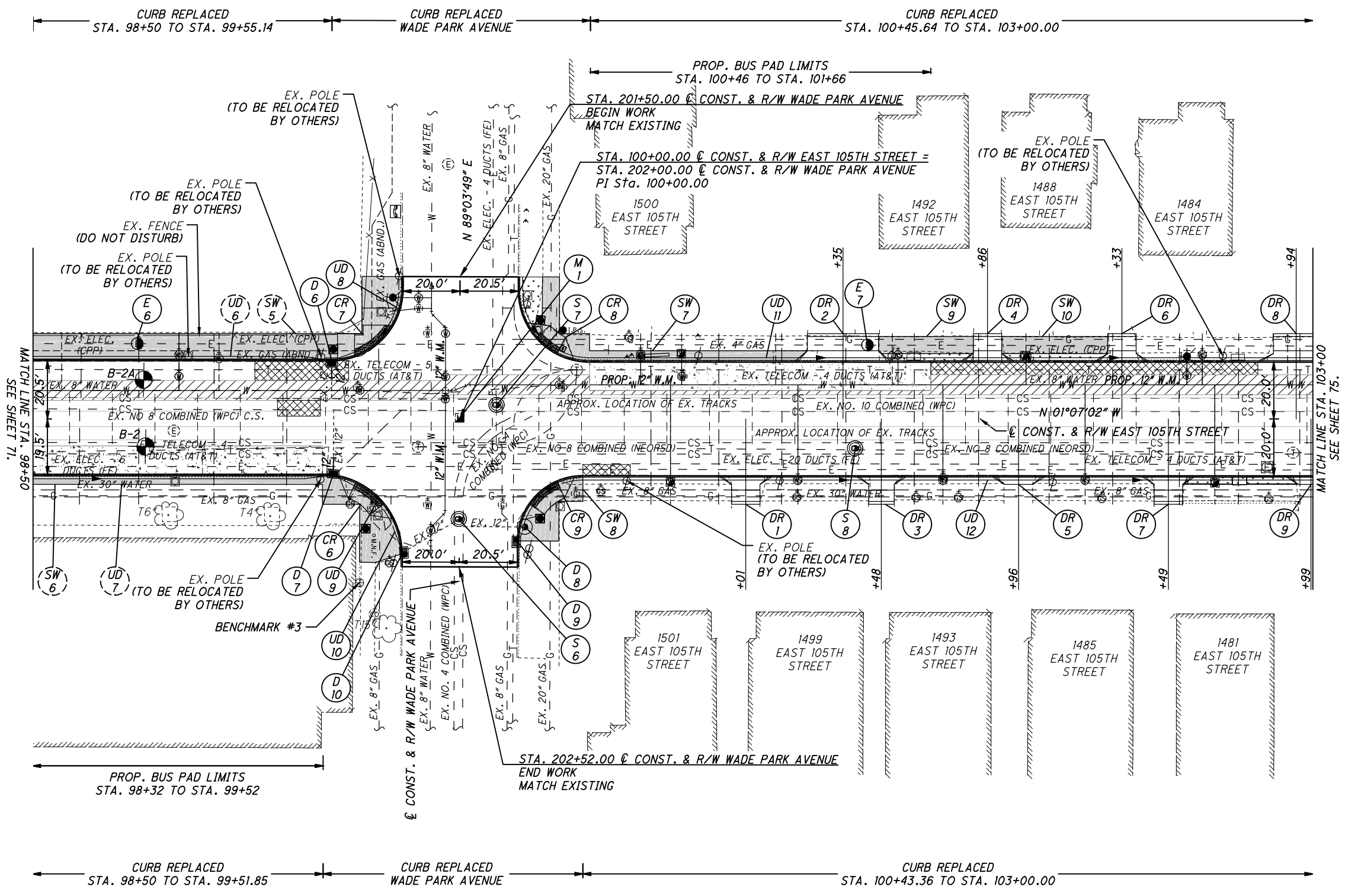
CALCULATED
KJM
CHECKED
JTS



CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 98+50 TO STA. 103+00

EAST 105TH STREET



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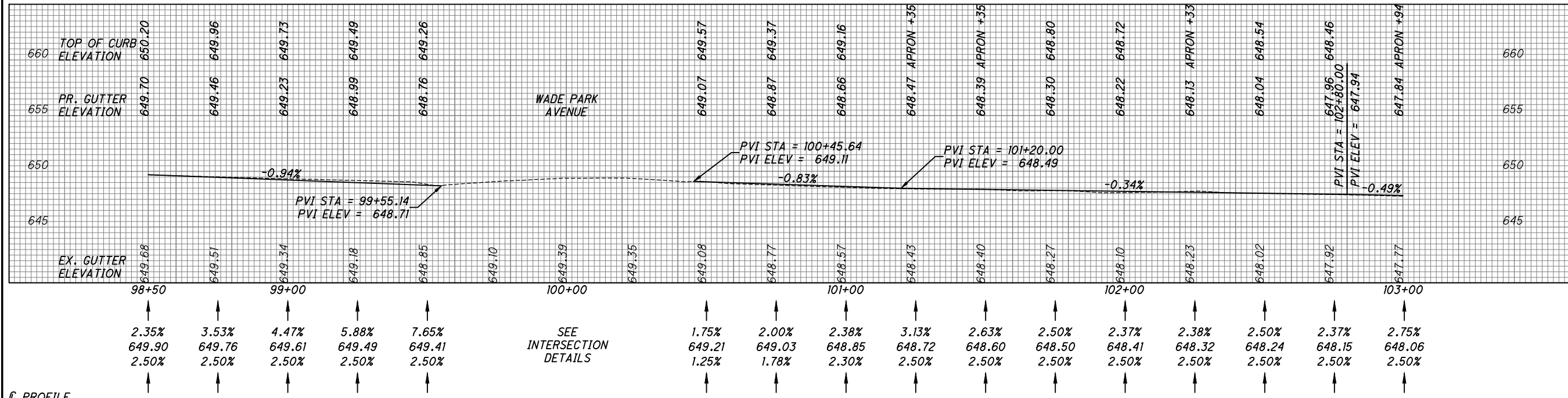
⊕ BENCHMARK # 3
MAG NAIL SET ON THE SOUTH SIDE OF WAIDE PARK AVENUE IN THE EXISTING WALK
STA. 99+64.87, 57.62' RT
ELEV. = 650.98'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

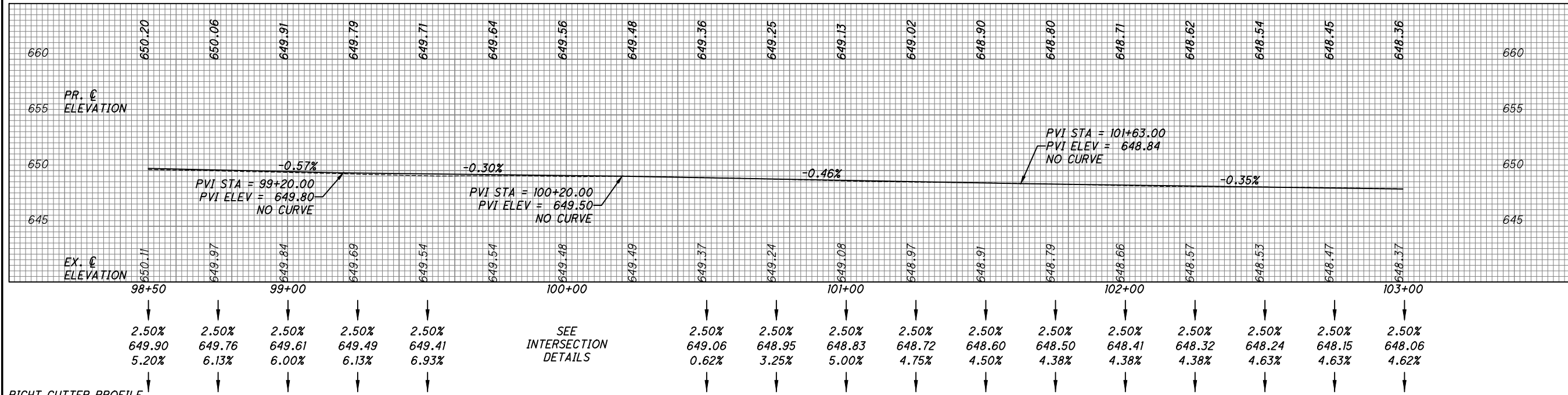
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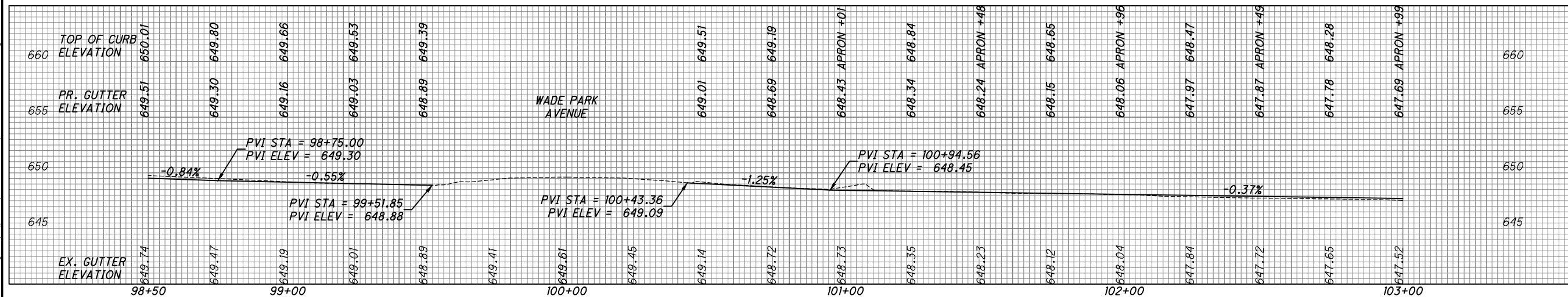
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED
KJM
CHECKED
JTS

PROFILE - EAST 105TH STREET
STA. 98+50 TO STA. 103+00

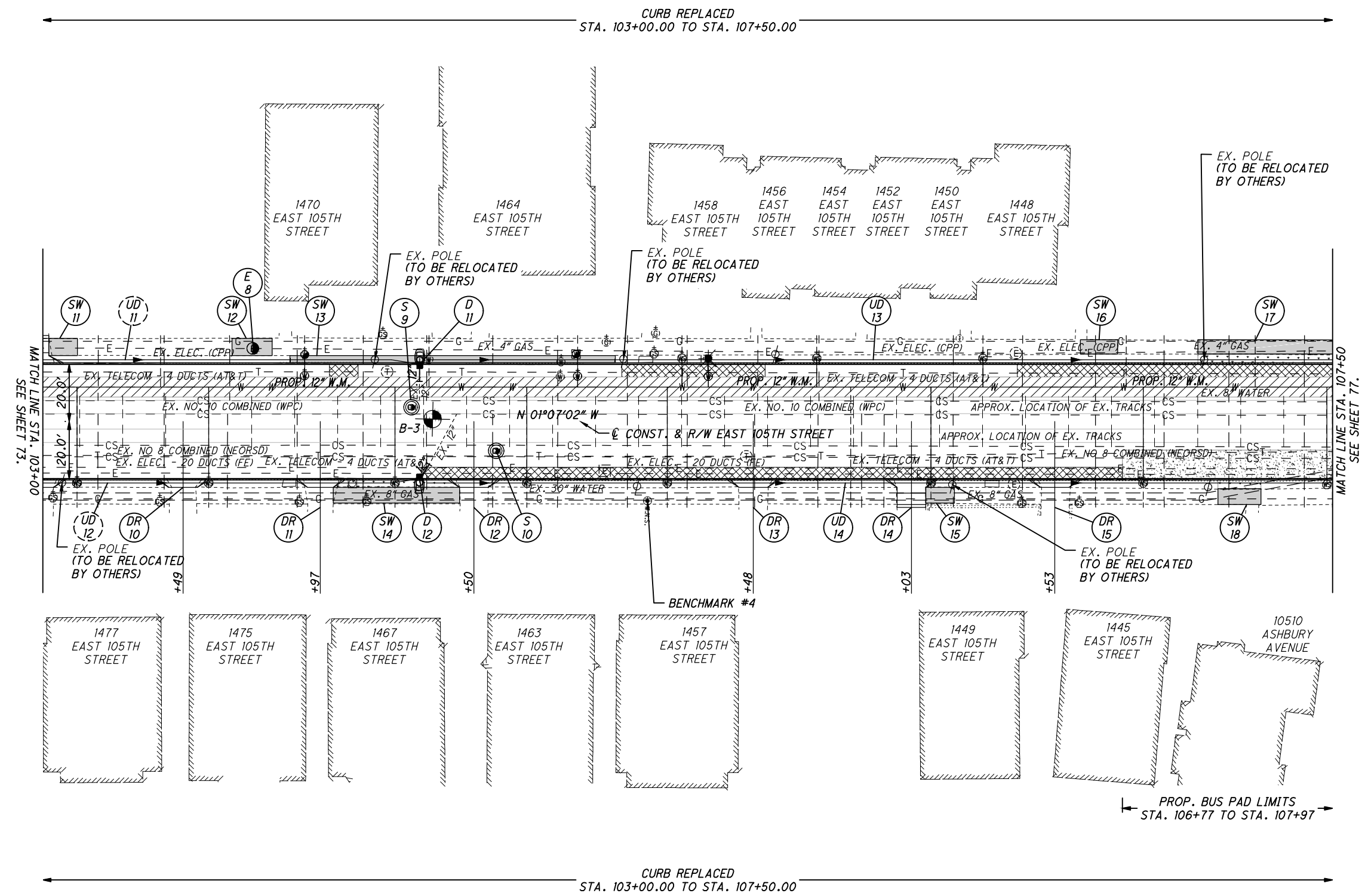
EAST 105TH STREET



CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 103+00 TO STA. 107+50

EAST 105TH STREET



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NOTES:

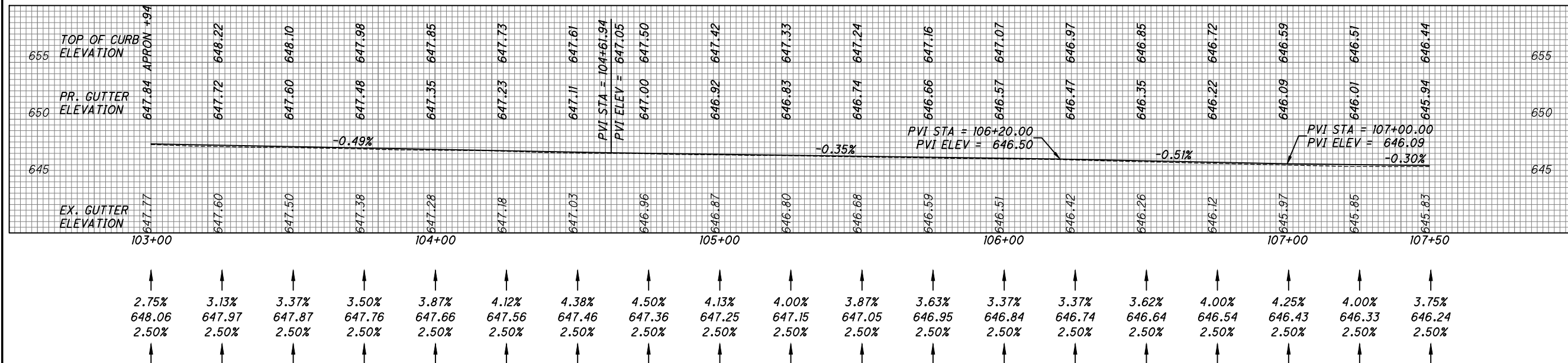
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⊕ BENCHMARK # 4
MAG NAIL SET ON THE EAST SIDE OF EAST 105TH STREET IN THE EXISTING WALK
STA. 105+10.98, 27.77' RT
ELEV. = 647.12'

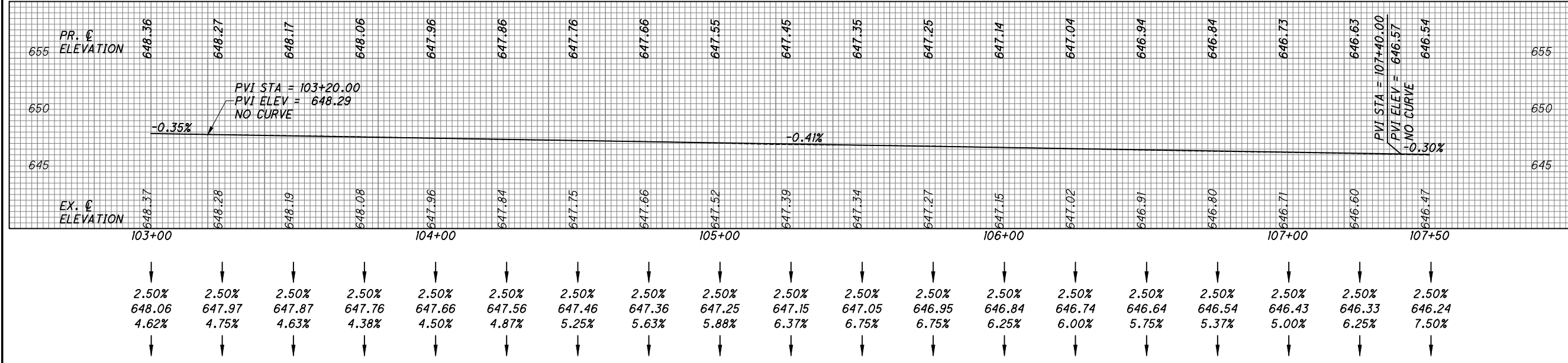
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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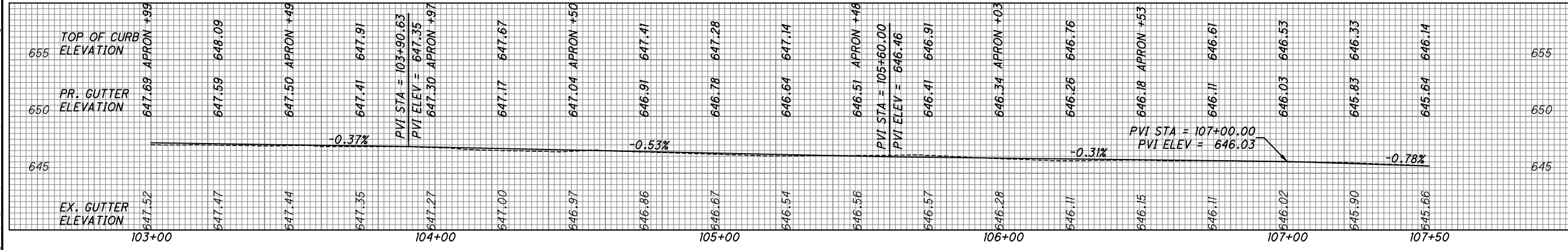
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED
KJM
CHECKED
JTS

PROFILE - EAST 105TH STREET
STA. 103+50 TO STA. 107+50

EAST 105TH STREET

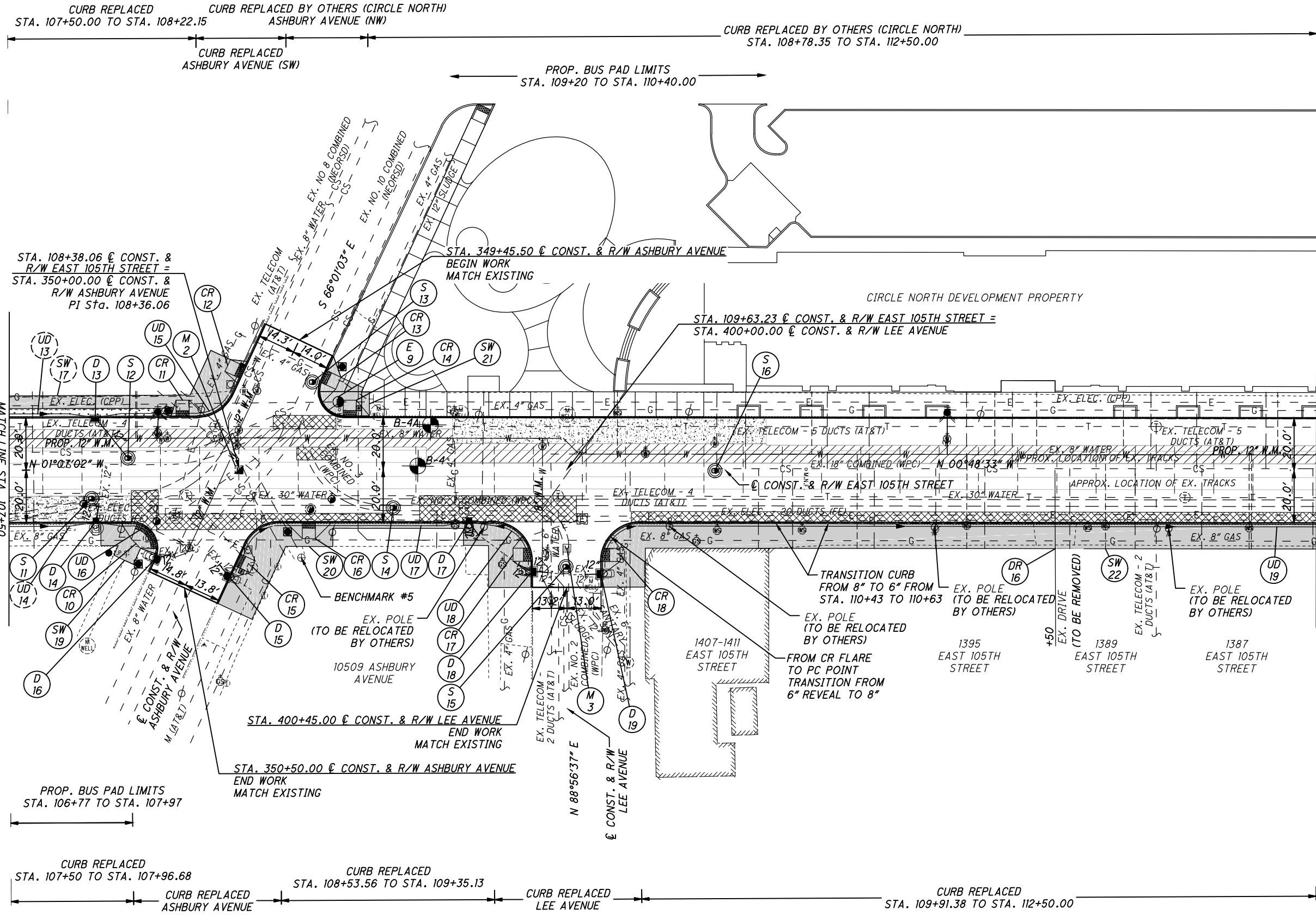


CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 107+50 TO STA. 112+50

EAST 105TH STREET

77
243



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NOTES:

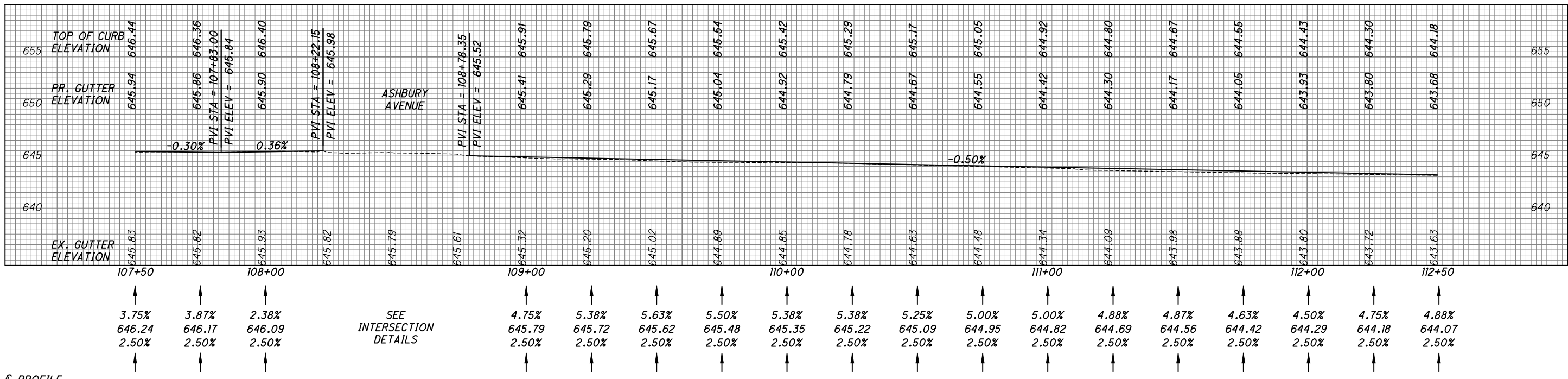
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⊕ BENCHMARK # 5
MAG NAIL SET NORTH OF ASHBURY AVENUE IN THE EXISTING WALK
STA. 108+61.82, 33.79' RT
ELEV. = 646.38'

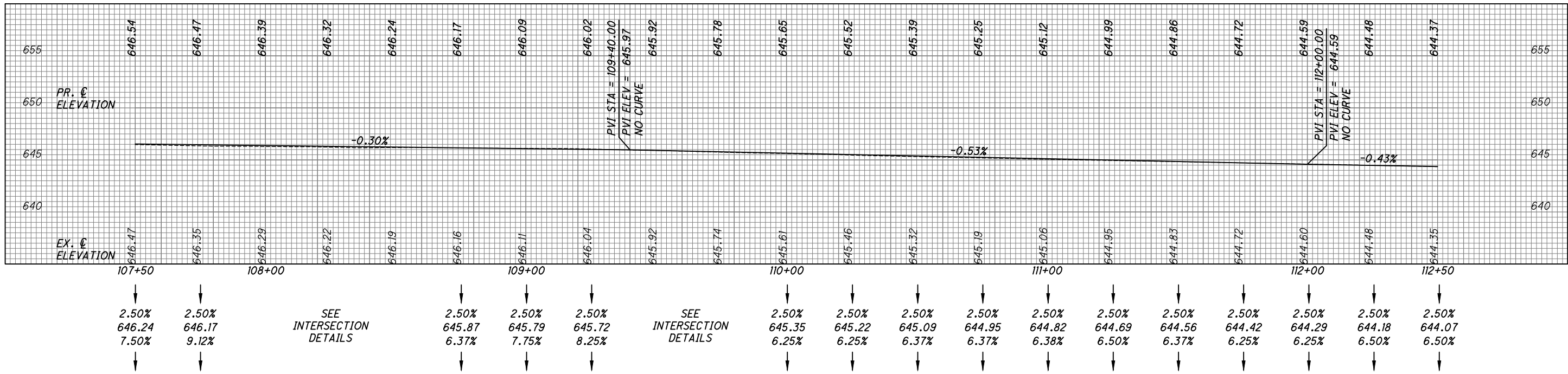
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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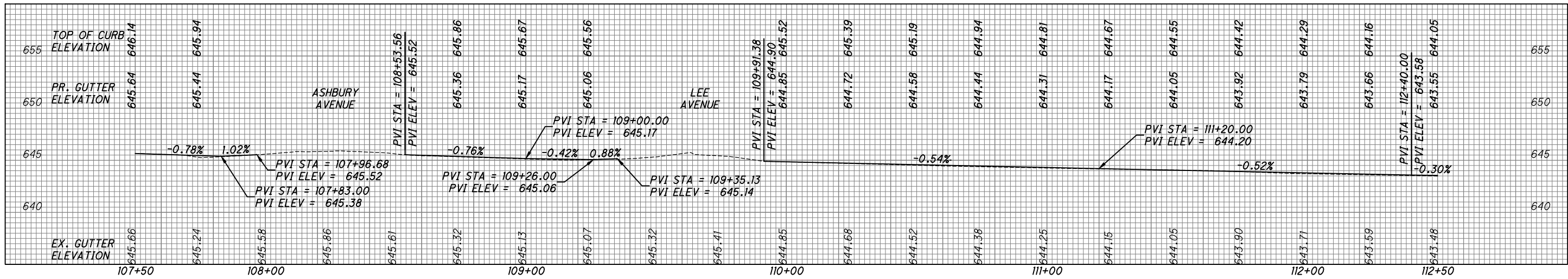
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED
KJM
CHECKED
JTS

PROFILE - EAST 105TH STREET
STA. 107+50 TO STA. 112+50

EAST 105TH STREET



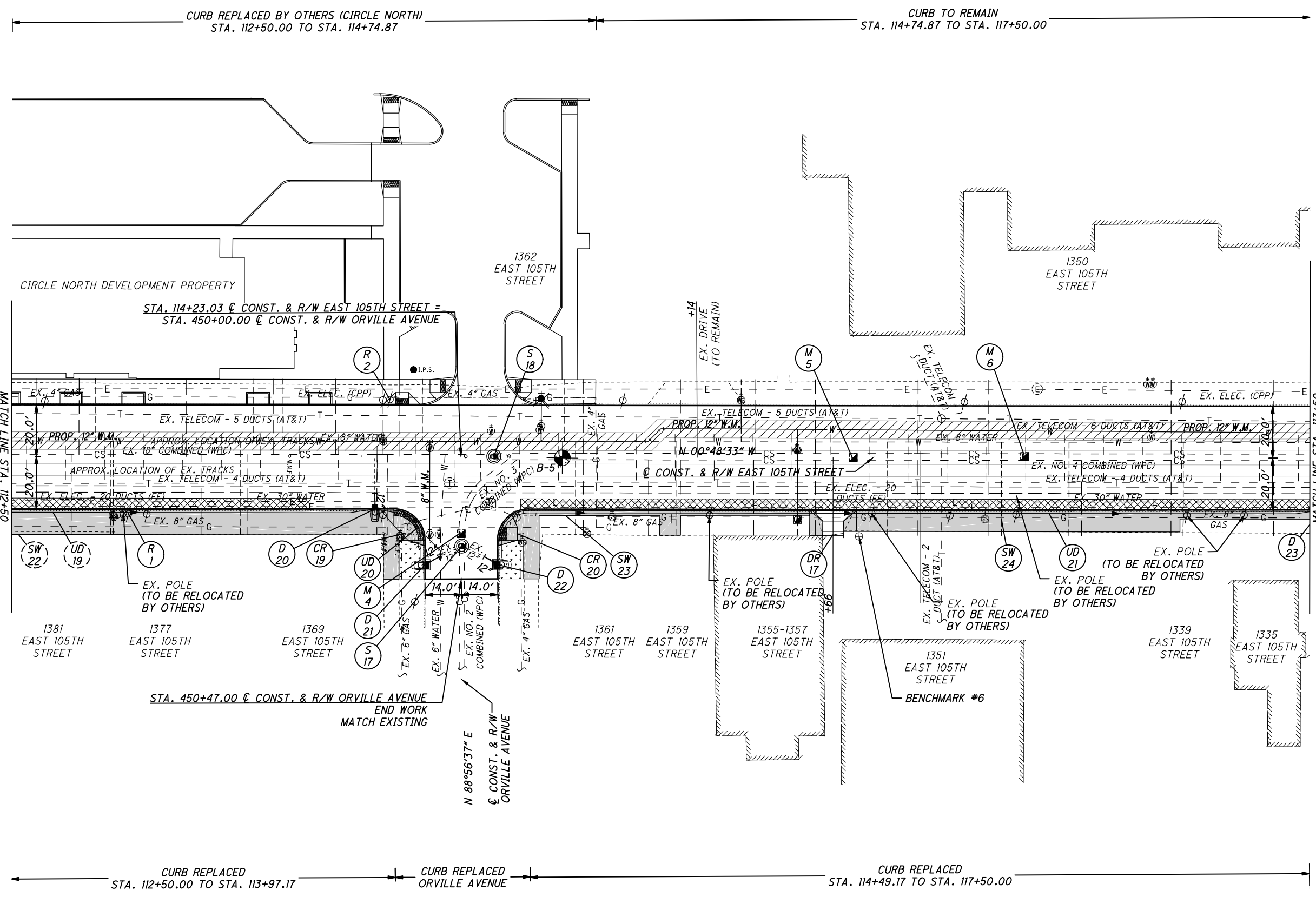
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 112+50 TO STA. 117+50

EAST 105TH STREET

79
243



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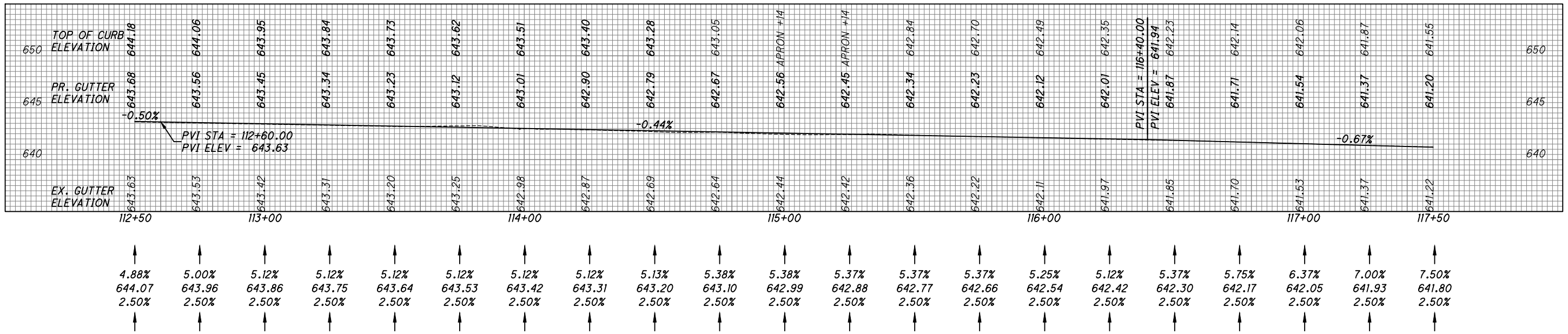
⊕ BENCHMARK # 6
MAG NAIL SET ON EAST SIDE OF EAST 105TH STREET EAST OF THE EXISTING WALK
STA. 115+76.36, 30.42' RT
ELEV. = 643.89'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

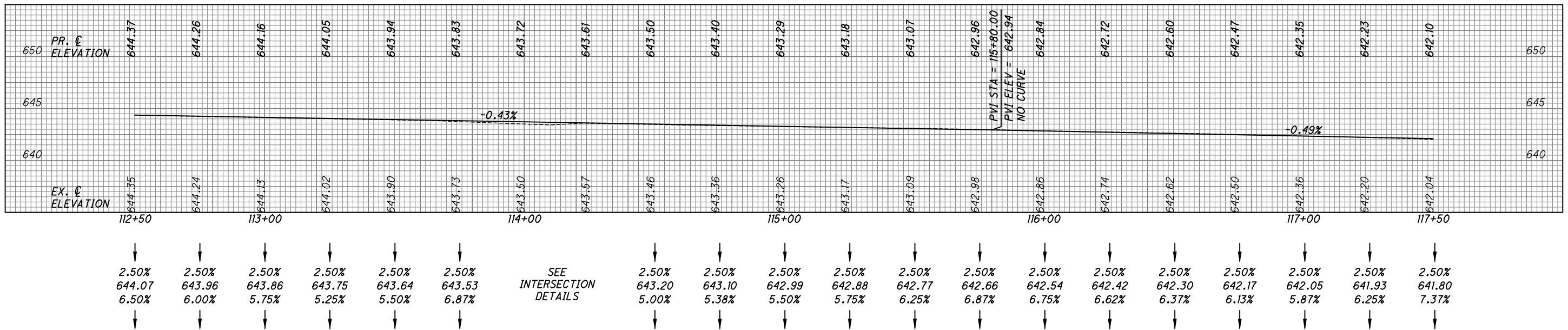
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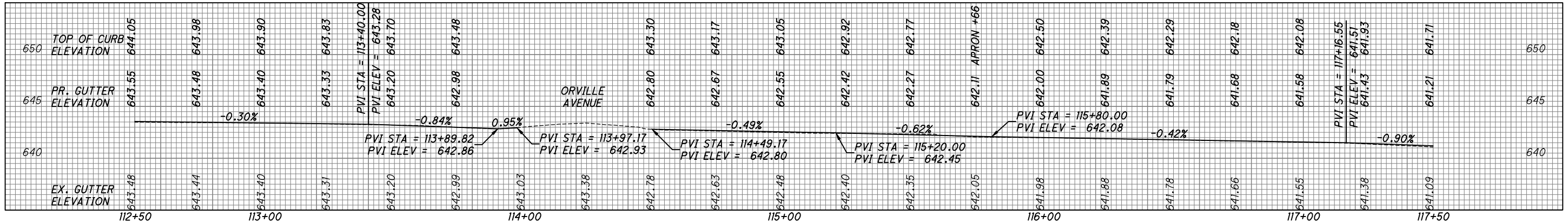
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED
KJM
CHECKED
JTS

PROFILE - EAST 105TH STREET
STA. 112+50 TO STA. 117+50

EAST 105TH STREET



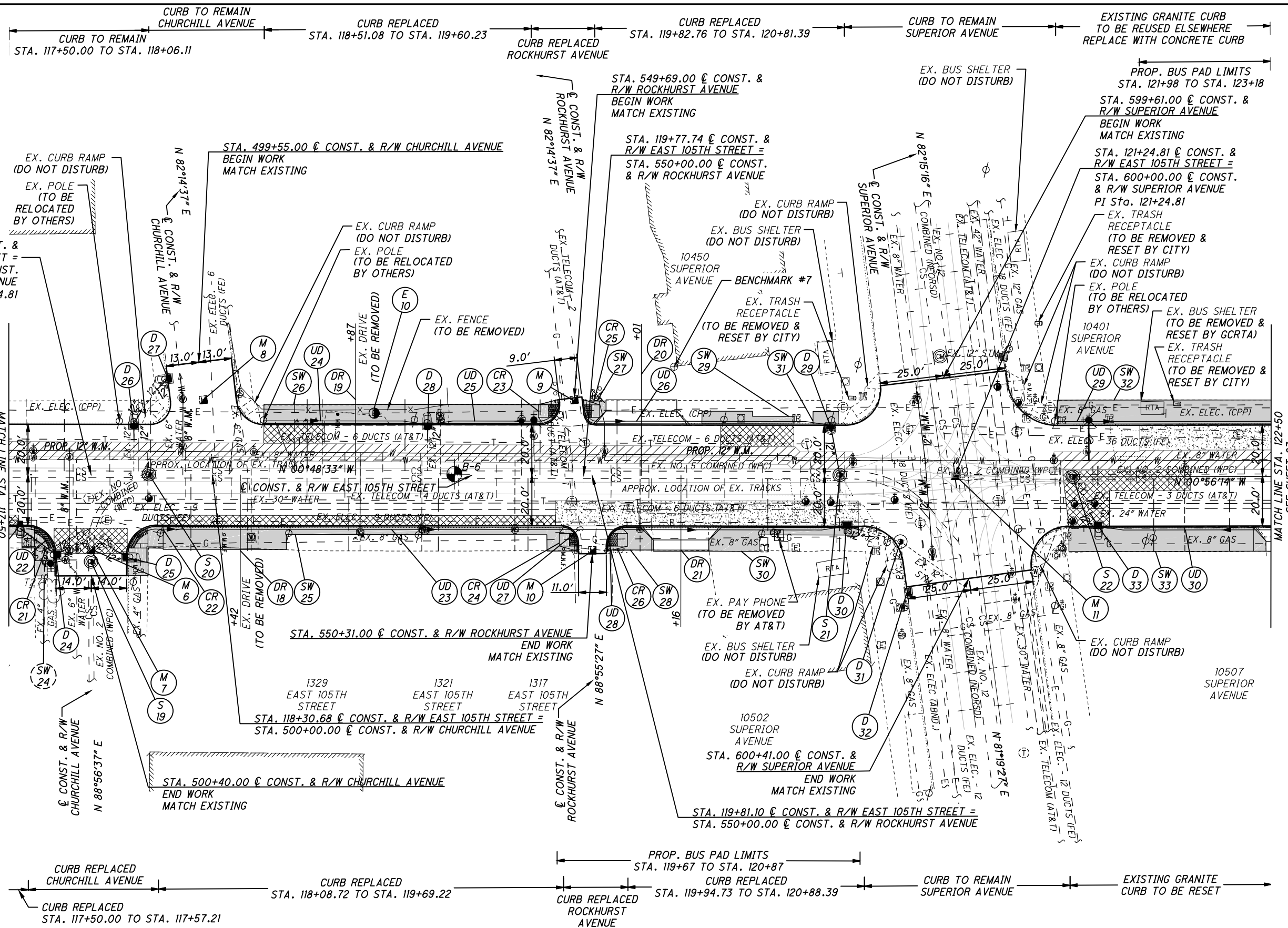
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 117+50 TO STA. 122+50

EAST 105TH STREET

81
243



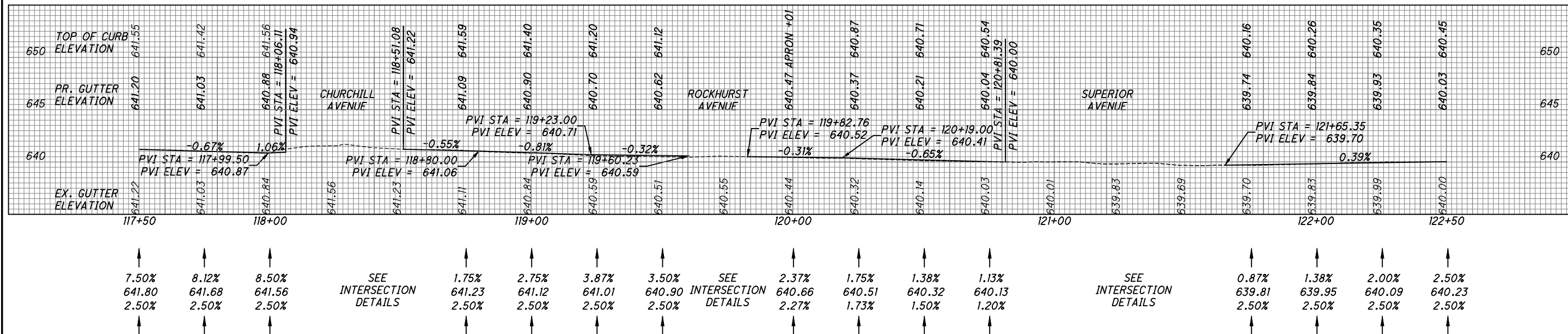
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⊕ BENCHMARK # 7
MAG NAIL SET ON THE WEST SIDE ON EAST 105TH STREET AT THE SOUTH EAST CORNER OF THE EXISTING BUILDING STA. 120+13.56, 43.06' LT ELEV. = 640.94'

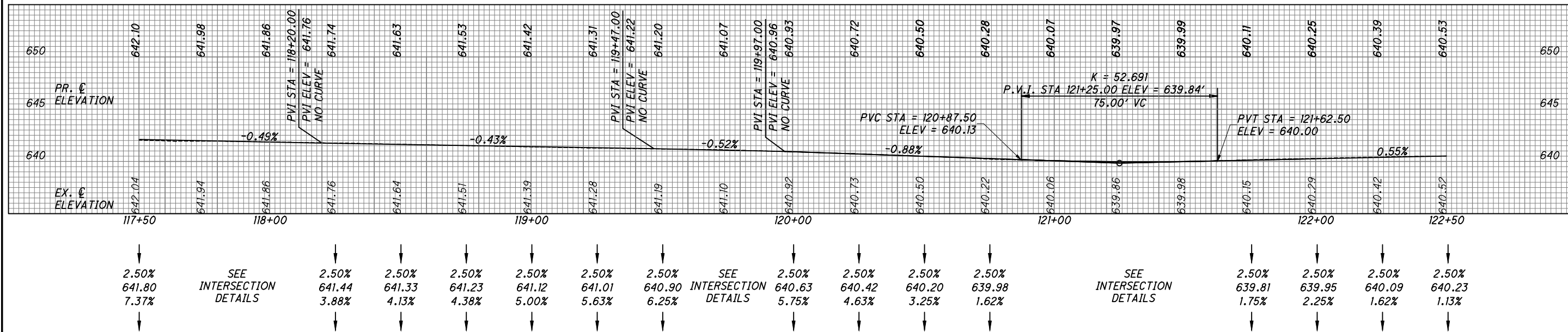
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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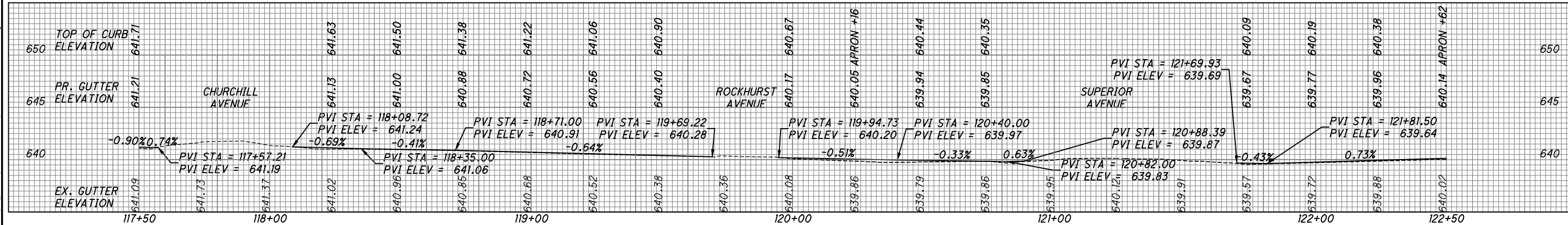
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



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PROFILE - EAST 105TH STREET
STA. 117+50 TO STA. 122+50

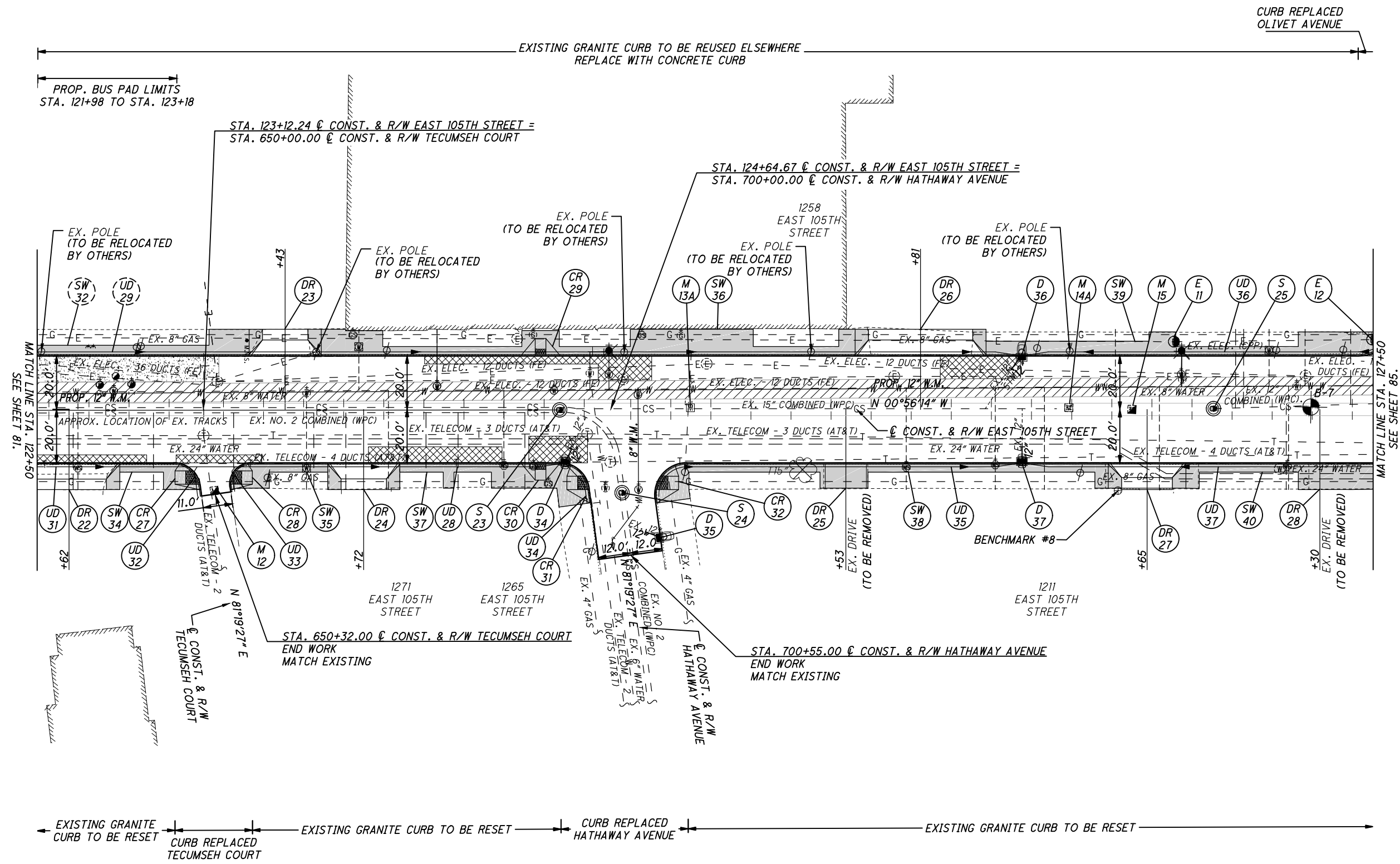
EAST 105TH STREET



CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 122+50 TO STA. 127+50

EAST 105TH STREET



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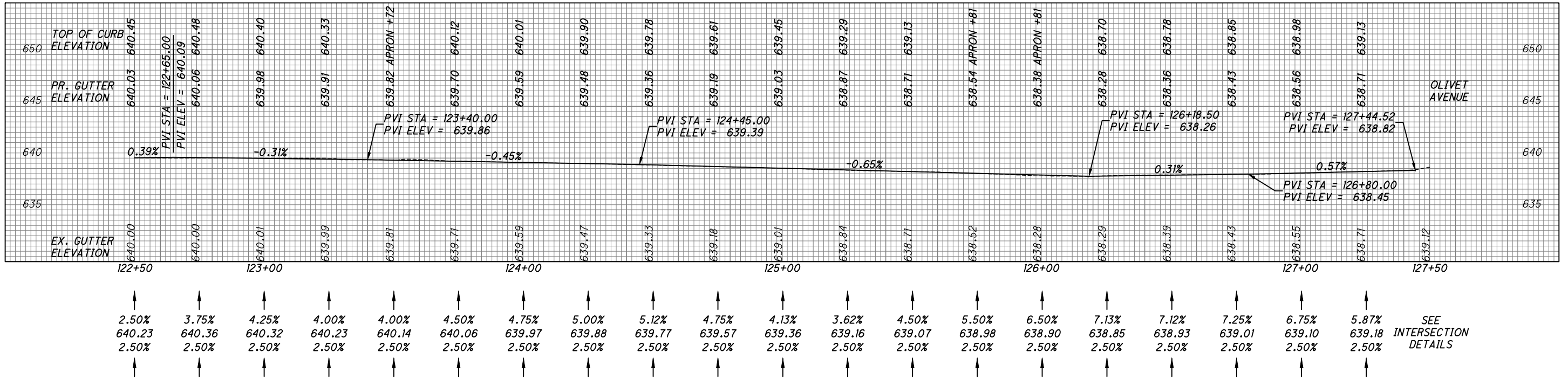
⊕ BENCHMARK # 8
MAG NAIL SET ON THE EAST SIDE OF EAST 105TH STREET JUST SOUTH OF EXISTING DRIVE
STA. 126+54.52, 30.42' RT
ELEV. = 639.19'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
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124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

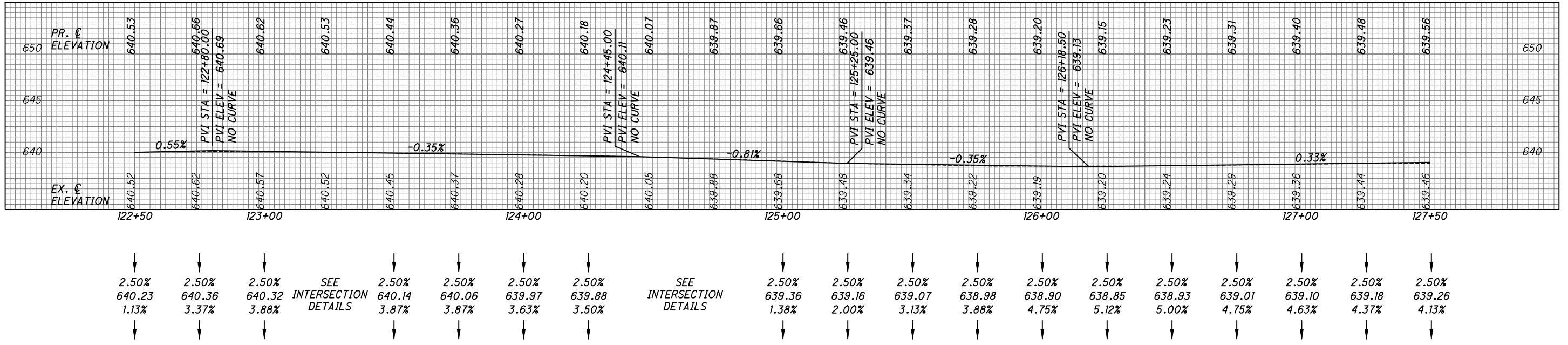
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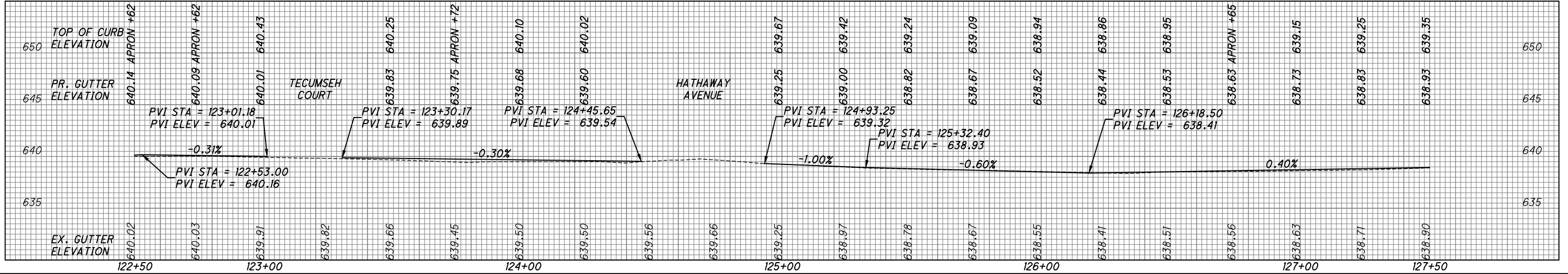
LEFT GUTTER PROFILE



C PROFILE



RIGHT GUTTER PROFILE



CALCULATED MKD CHECKED JTS

PROFILE - EAST 105TH STREET STA. 122+50 TO STA. 127+50

EAST 105TH STREET



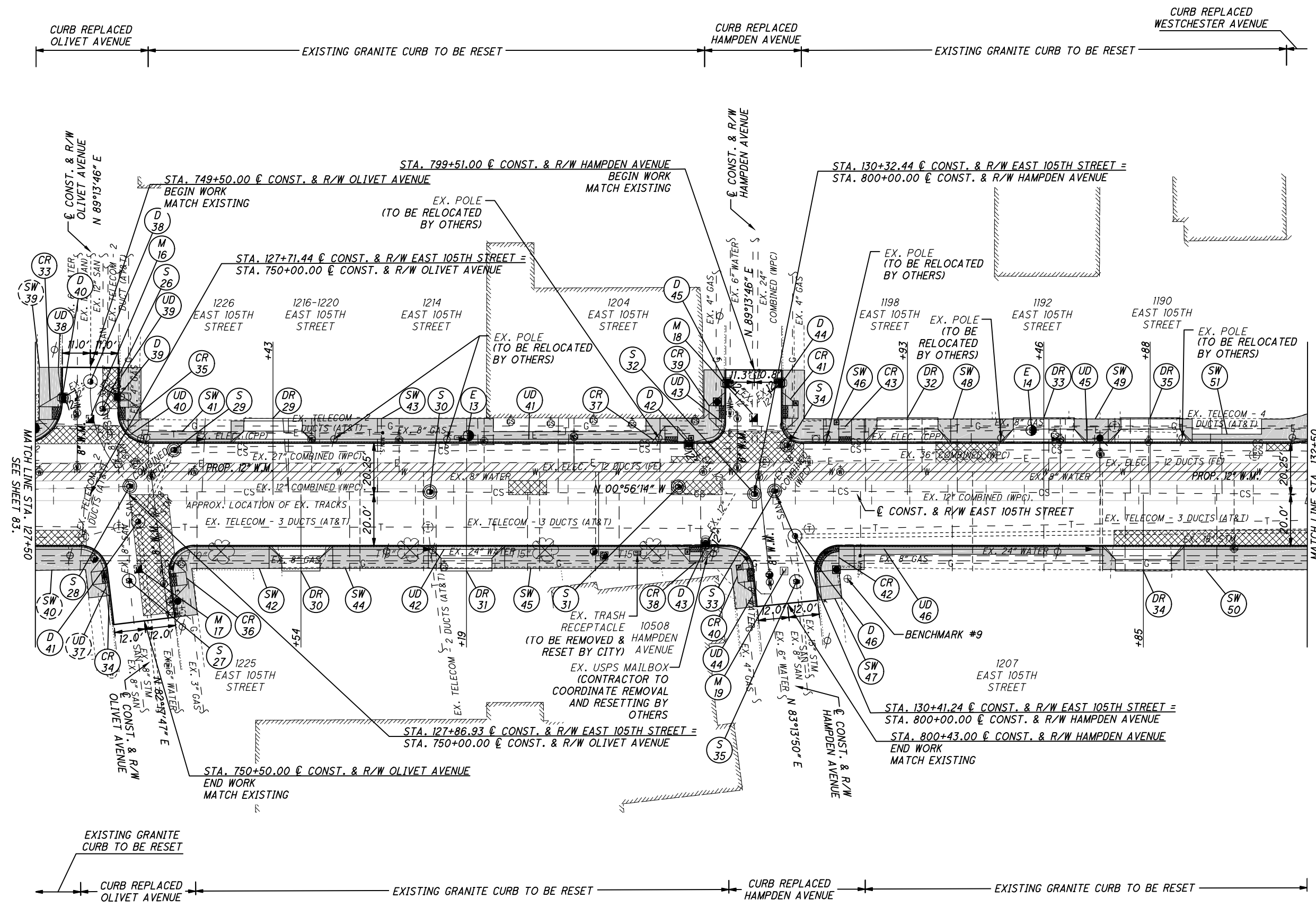
0 20 40
 TO HORIZONTAL
 SCALE IN FEET

CALCULATED
 KJM
 CHECKED
 JTS

PLAN - EAST 105TH STREET
 STA. 127+50 TO STA. 132+50

EAST 105TH STREET

85
 243



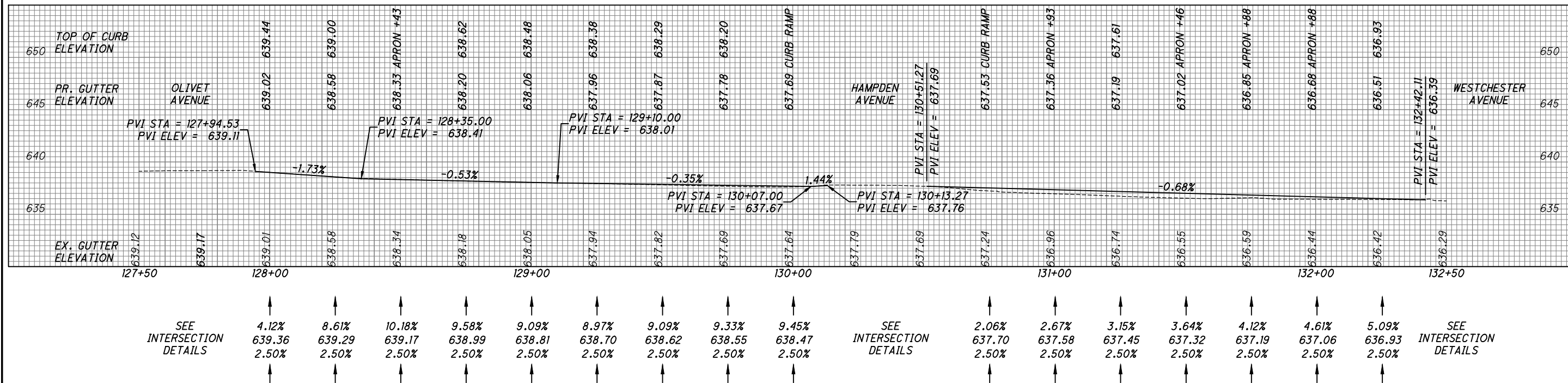
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⊕ BENCHMARK # 9
 MAG NAIL SET IN THE NORTH
 EAST QUADRANT OF THE EAST
 105TH STREET/HAMPDEN
 AVENUE INTERSECTION
 STA. 130+69.24, 33.07' RT
 ELEV. = 638.65'

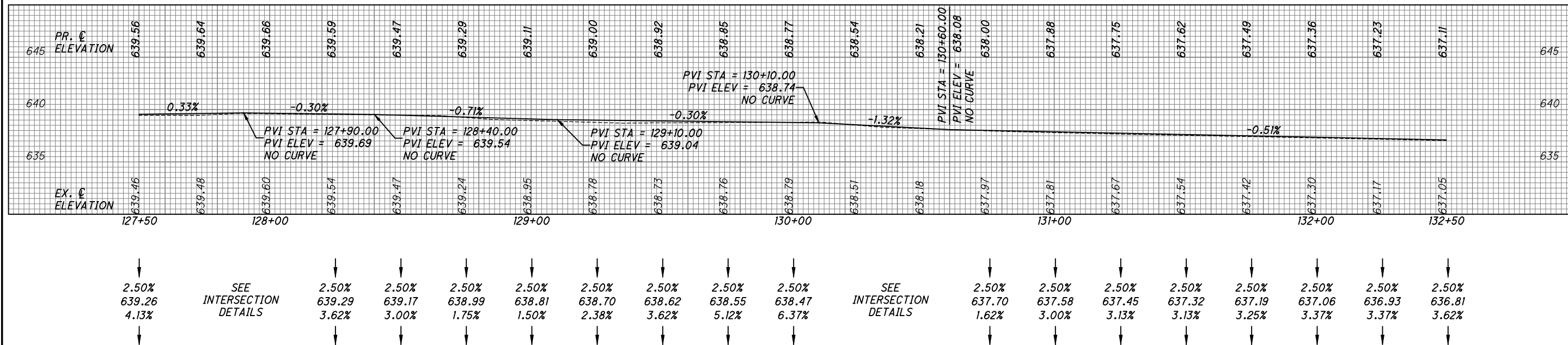
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
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124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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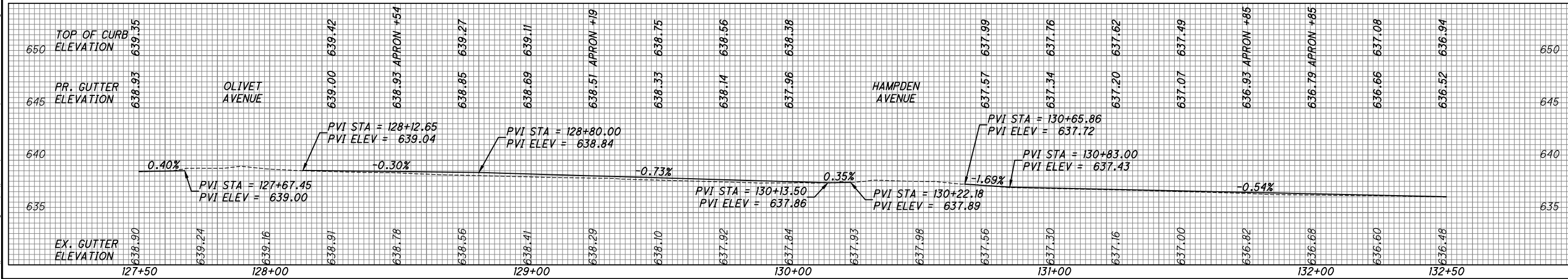
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE

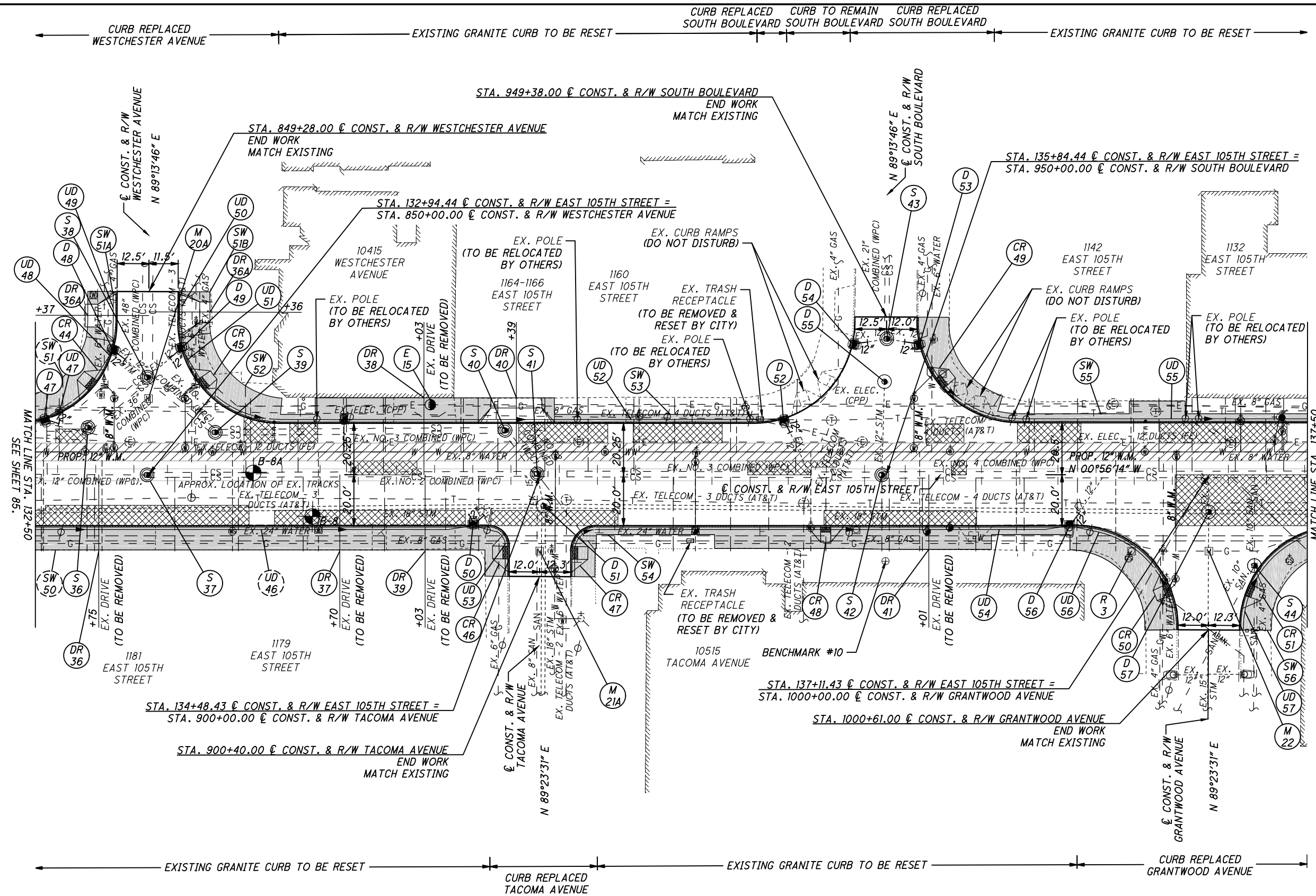


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CALCULATED MKD CHECKED JTS

PROFILE - EAST 105TH STREET
STA. 127+50 TO STA. 132+50

EAST 105TH STREET



CALCULATED
KJM
CHECKED
JTS

0 20 40
HORIZONTAL
SCALE IN FEET

**PLAN - EAST 105TH STREET
STA. 132+50 TO STA. 137+50**

EAST 105TH STREET

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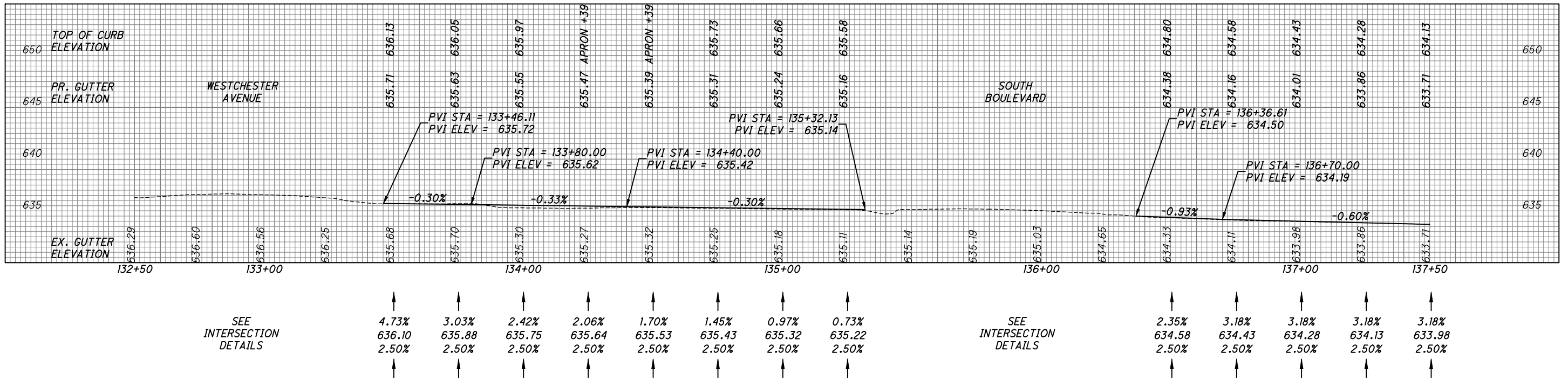
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⊕ BENCHMARK # 10
IRON PIN SET ON THE EAST SIDE OF EAST 105TH STREET IN THE LAWN EAST OF THE EXISTING WALK
STA. 135+84.17, 34.00' RT
ELEV. = 634.79'

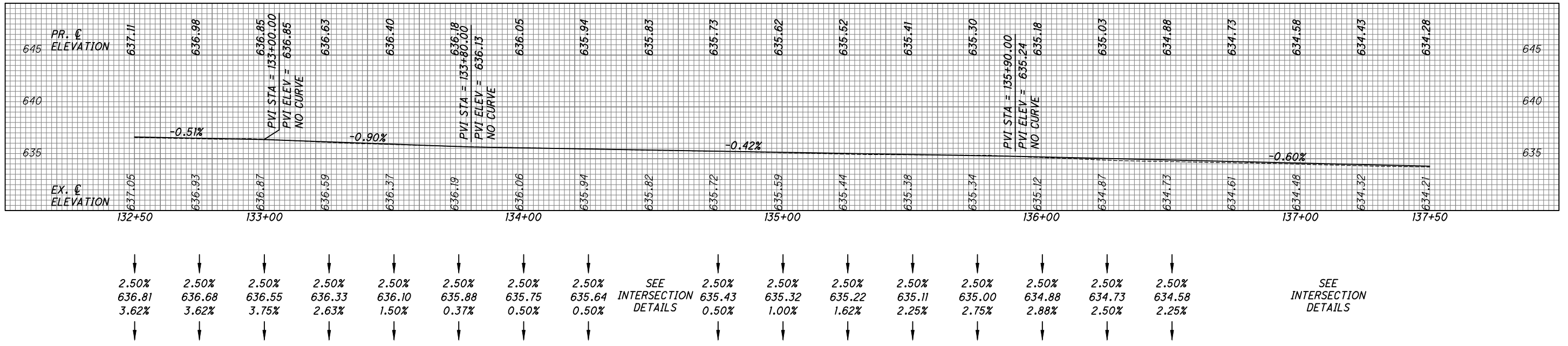
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
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48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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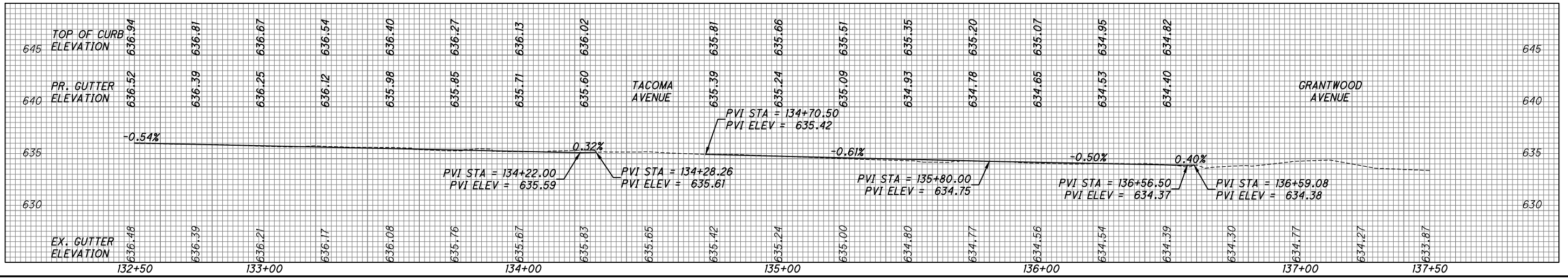
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED MKD CHECKED JTS

PROFILE - EAST 105TH STREET
STA. 132+50 TO STA. 137+50

EAST 105TH STREET



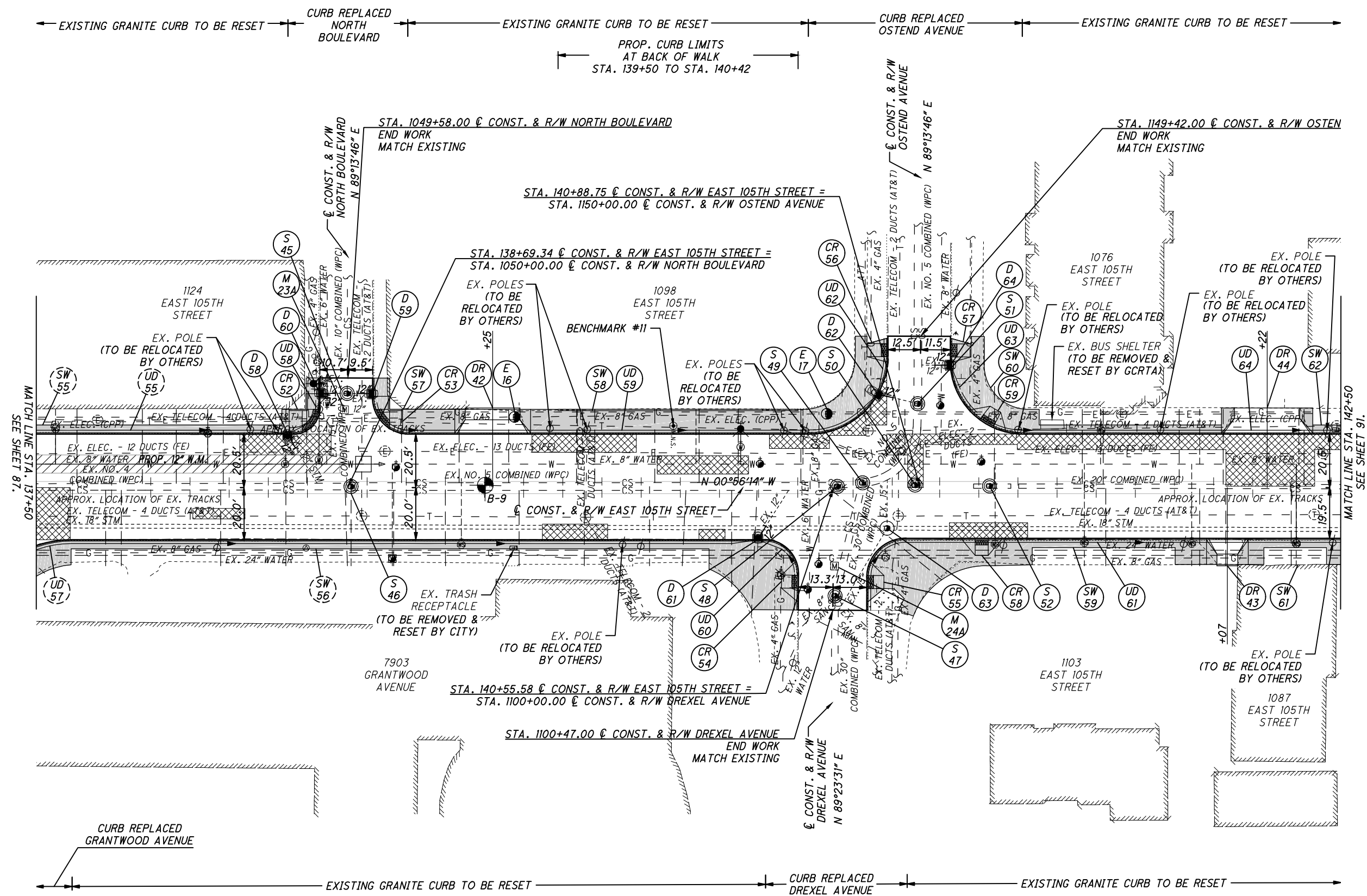
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 137+50 TO STA. 142+50

EAST 105TH STREET

89
243



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NOTES:

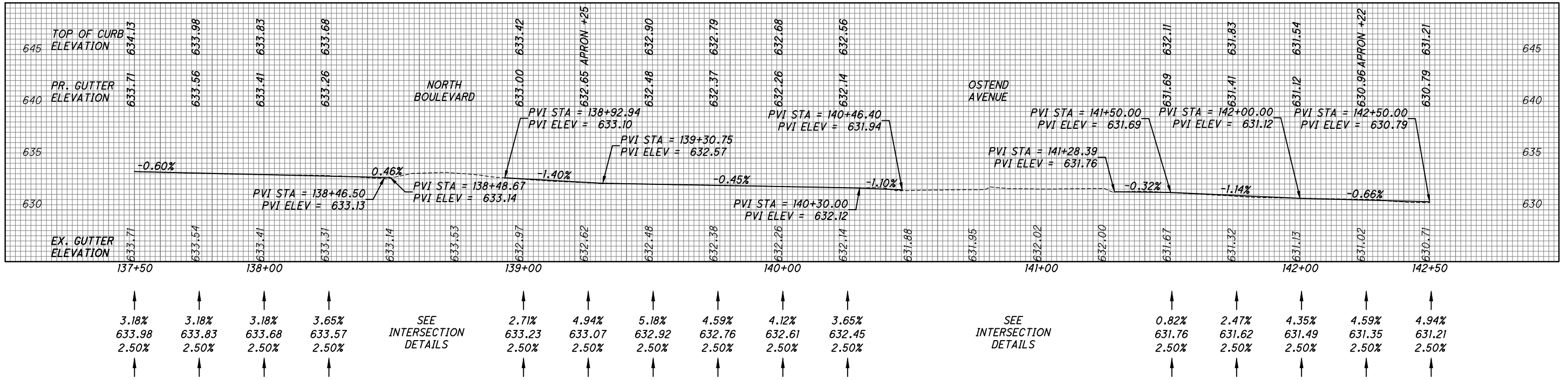
1. ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB.
2. INSTALL ALL NEW CURB RAMPS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS. ALL RAMPS MUST BE ADA COMPLIANT. SPECIFIC TYPE OF RAMP IS INDICATED ON SHEET 62.
3. FOR LEGEND SEE SHEET 69.
4. DIMENSIONS SHOWN FOR THE LIMITS OF FULL-DEPTH PAVEMENT REPAIR AND CURB REPLACEMENT ARE INTENDED FOR USE IN ESTIMATING QUANTITIES ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS WILL BE AS DIRECTED BY THE ENGINEER.

⊕ BENCHMARK # 11
MAG NAIL SET ON THE WEST SIDE OF EAST 105TH STREET ON THE EXISTING WALK
STA. 139+94.23, 23.65' LT
ELEV. = 632.69'

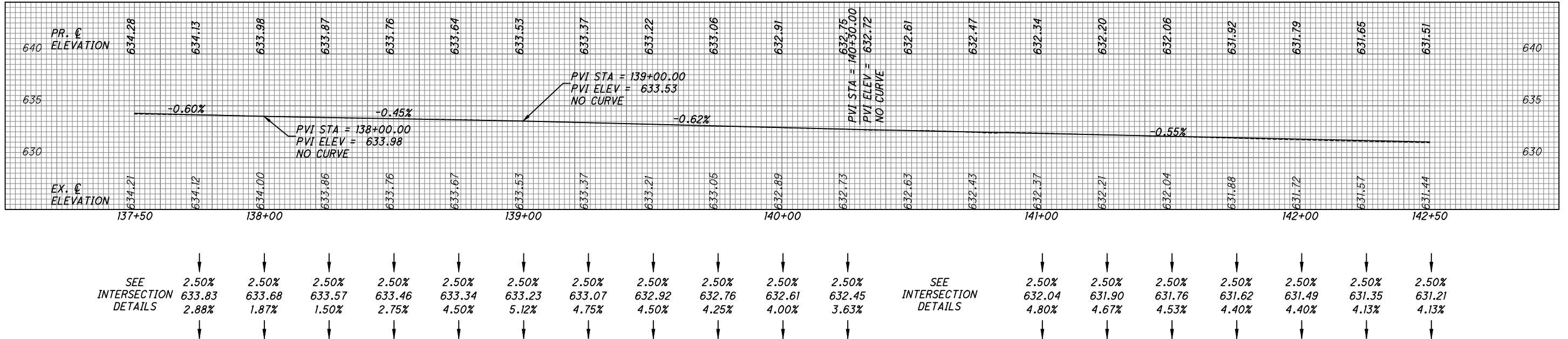
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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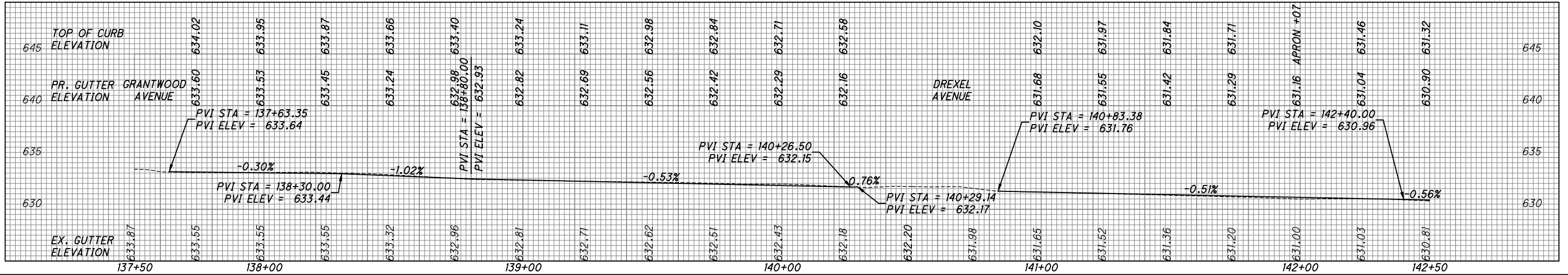
LEFT GUTTER PROFILE



☐ PROFILE



RIGHT GUTTER PROFILE



CALCULATED MKD CHECKED JTS

**PROFILE - EAST 105TH STREET
STA. 137+50 TO STA. 142+50**

EAST 105TH STREET

90
243



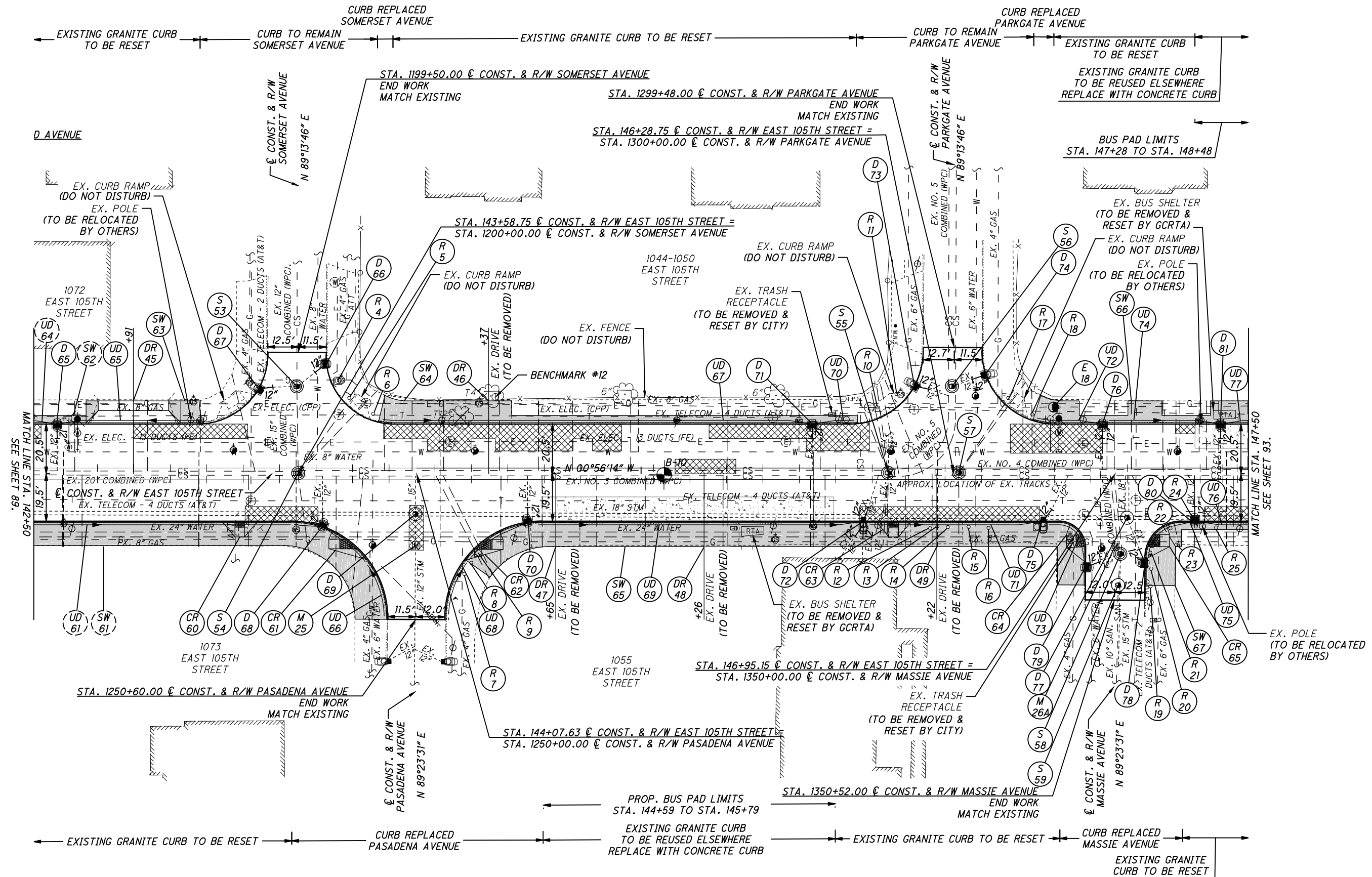
0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 142+50 TO STA. 147+50

EAST 105TH STREET

91
243



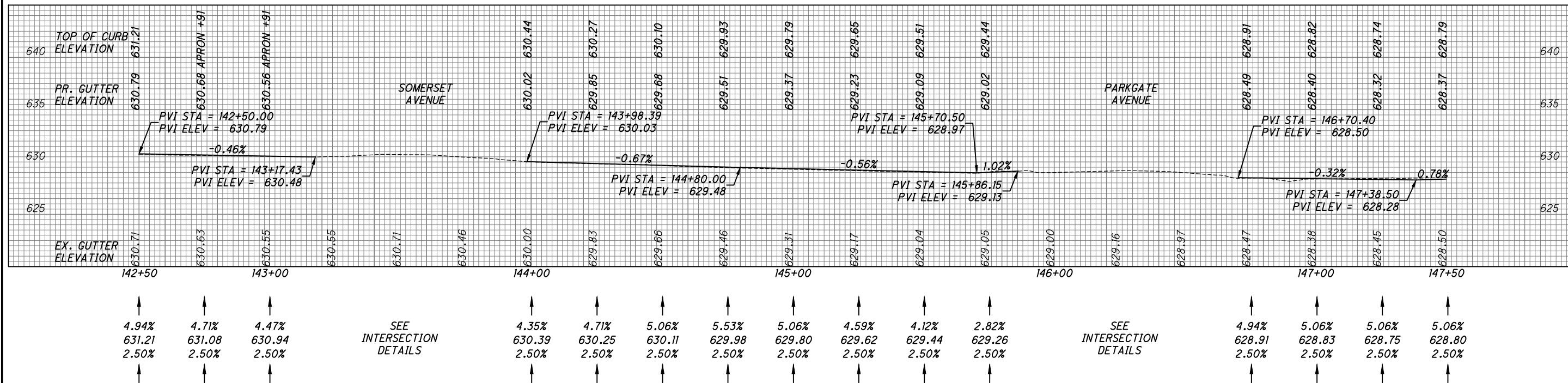
- NOTES:**
1. ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB.
 2. INSTALL ALL NEW CURB RAMPS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS. ALL RAMPS MUST BE ADA COMPLIANT. SPECIFIC TYPE OF RAMP IS INDICATED ON SHEET 62.
 3. FOR LEGEND SEE SHEET 69.
 4. DIMENSIONS SHOWN FOR THE LIMITS OF FULL-DEPTH PAVEMENT REPAIR AND CURB REPLACEMENT ARE INTENDED FOR USE IN ESTIMATING QUANTITIES ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS WILL BE AS DIRECTED BY THE ENGINEER.

⊕ BENCHMARK # 12
IRON PIN SET ON THE WEST SIDE OF EAST 105TH STREET JUST WEST OF THE EXISTING WALK
STA. 144+40.10, 31.62' LT
ELEV. = 630.50'

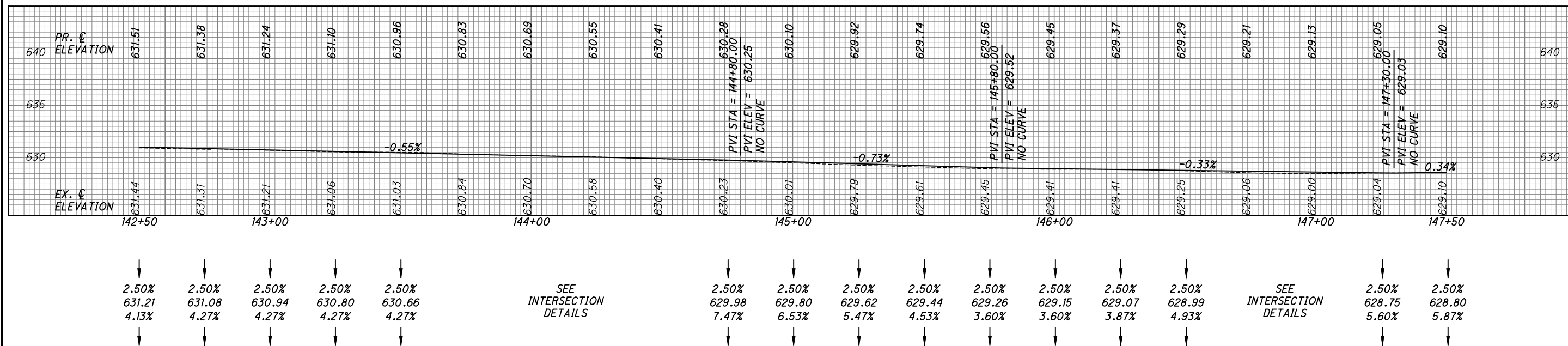
CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

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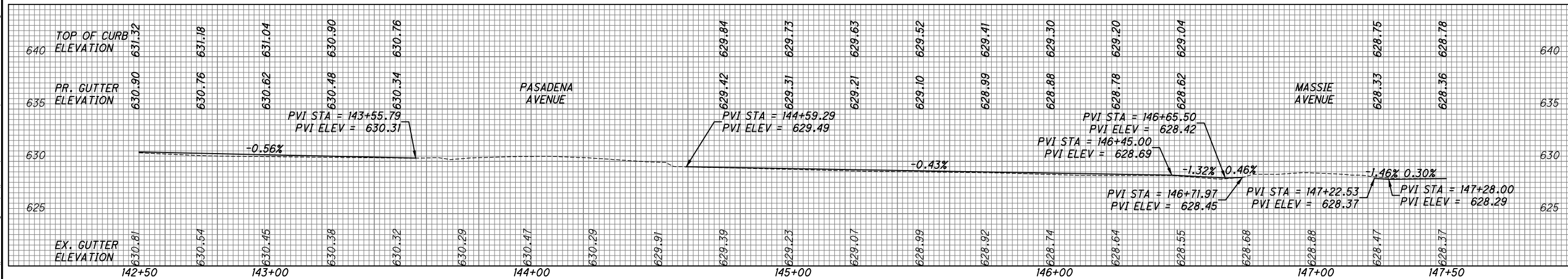
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



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PROFILE - EAST 105TH STREET
STA. 142+50 TO STA. 147+50

EAST 105TH STREET



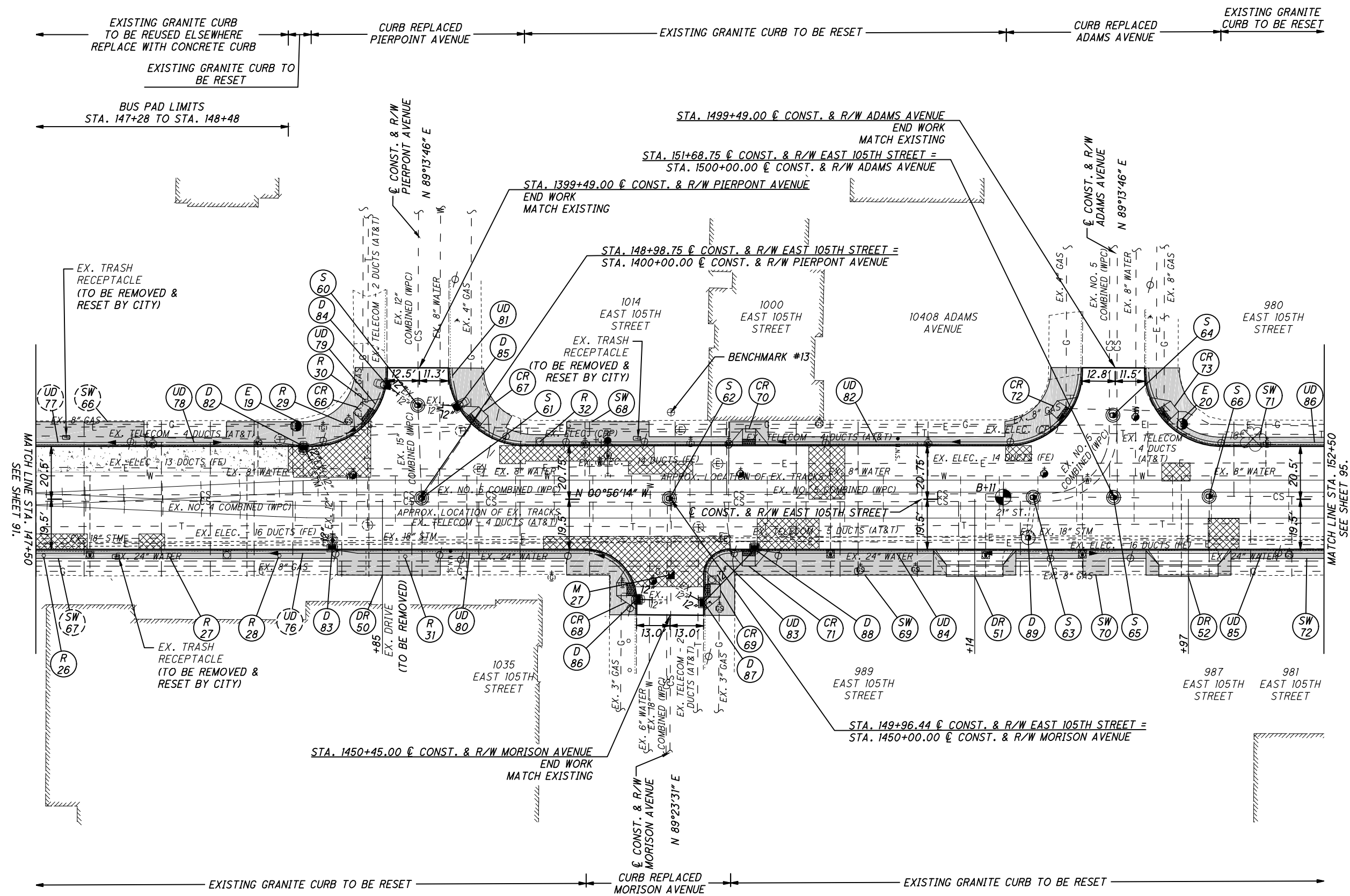
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 147+50 TO STA. 152+50

EAST 105TH STREET

93
243



- NOTES:**
1. ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB.
 2. INSTALL ALL NEW CURB RAMPS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS. ALL RAMPS MUST BE ADA COMPLIANT. SPECIFIC TYPE OF RAMP IS INDICATED ON SHEET 62.
 3. FOR LEGEND SEE SHEET 69.
 4. DIMENSIONS SHOWN FOR THE LIMITS OF FULL-DEPTH PAVEMENT REPAIR AND CURB REPLACEMENT ARE INTENDED FOR USE IN ESTIMATING QUANTITIES ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS WILL BE AS DIRECTED BY THE ENGINEER.

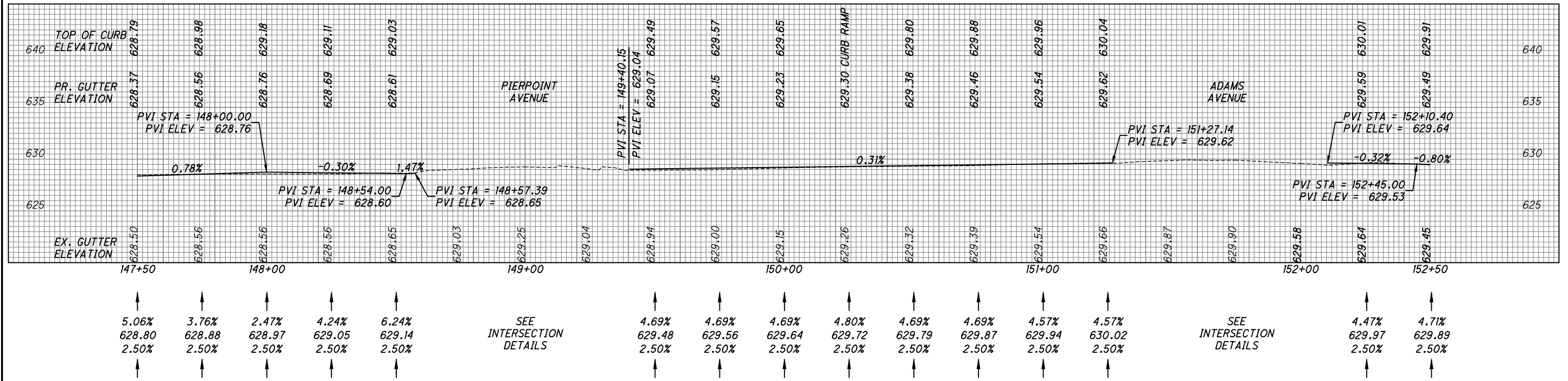
⊕ BENCHMARK # 13
IRON PIN SET ON THE WEST SIDE OF EAST 105TH STREET SOUTH OF THE EXISTING BUILDING AT 1000 EAST 105TH STREET
STA. 149+96.53, 33.73' LT
ELEV. = 629.45'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

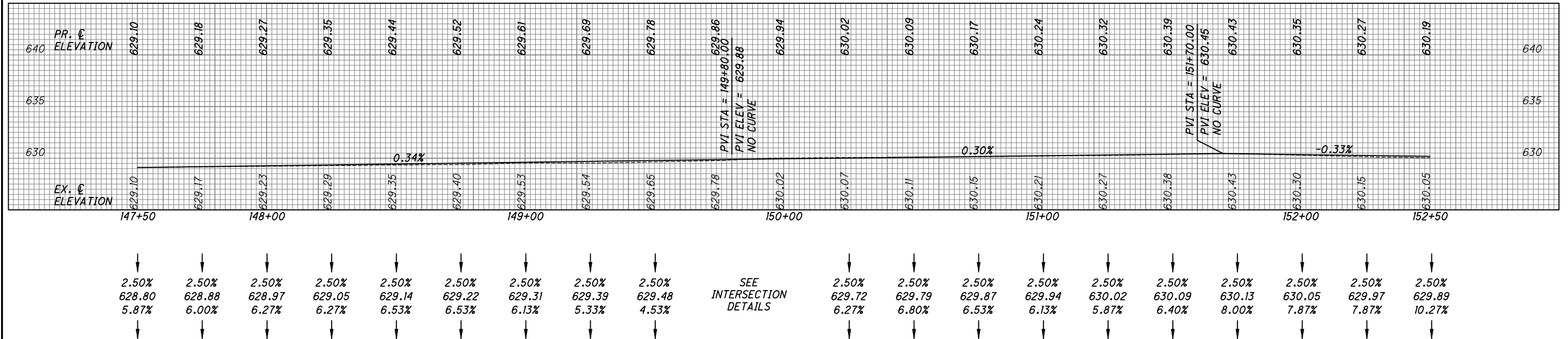
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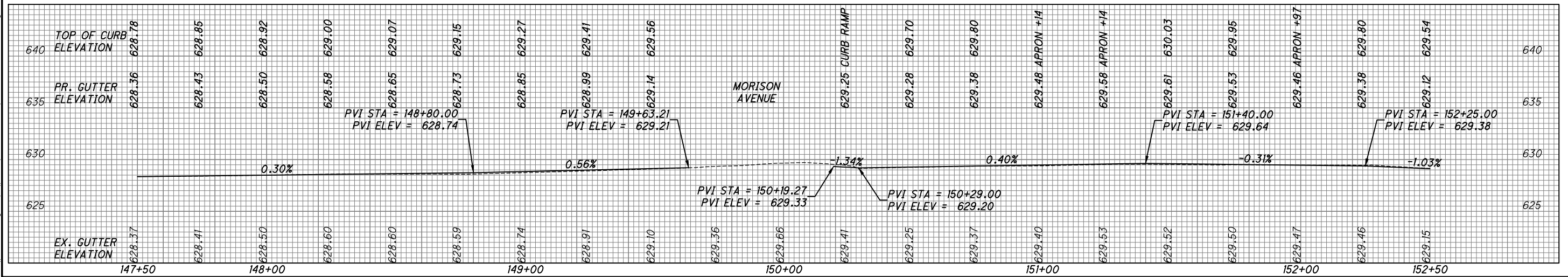
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



CALCULATED MKD CHECKED JTS

PROFILE - EAST 105TH STREET
STA. 147+50 TO STA. 152+50

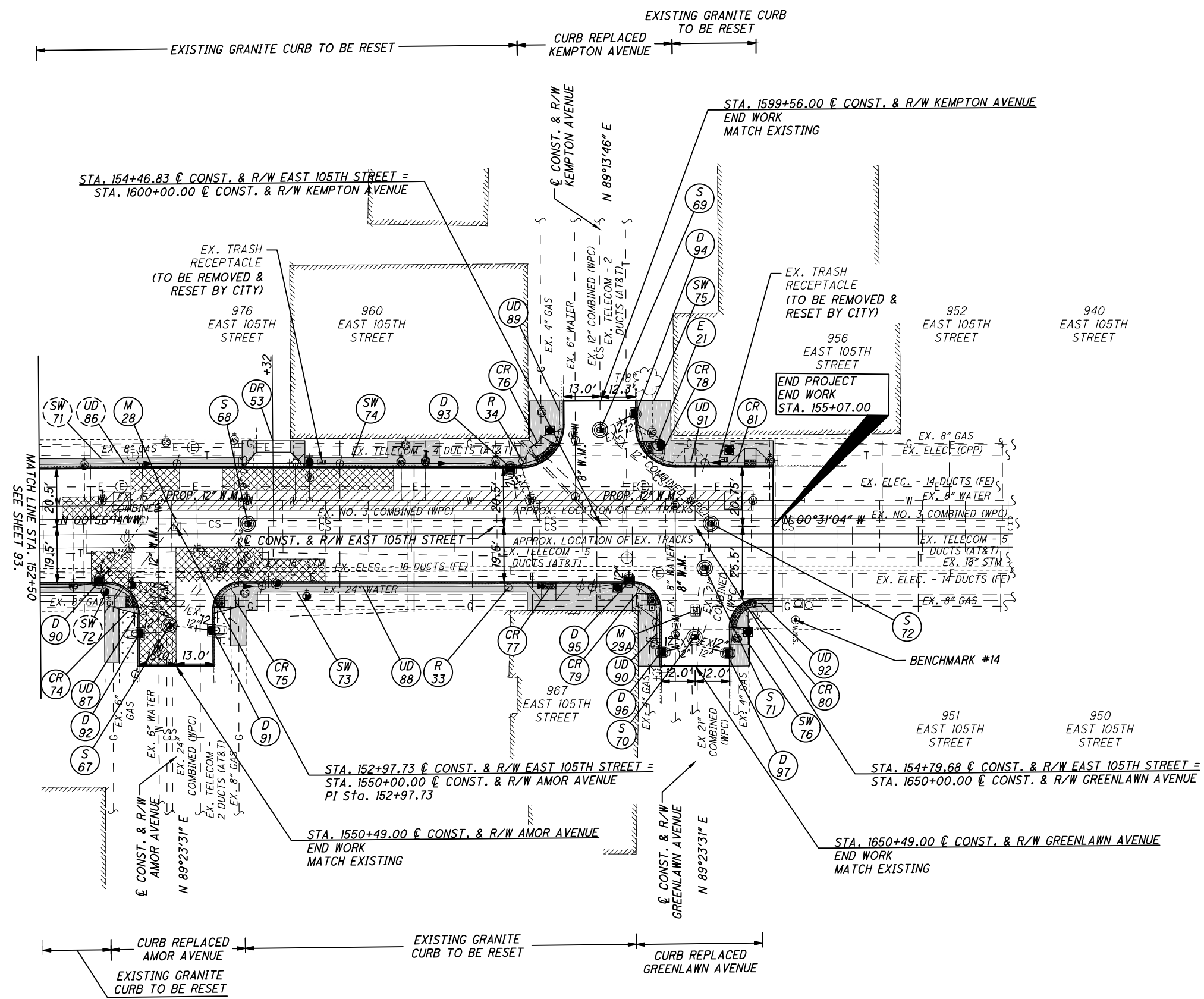
EAST 105TH STREET



CALCULATED
KJM
CHECKED
JTS

PLAN - EAST 105TH STREET
STA. 152+50 TO END

EAST 105TH STREET



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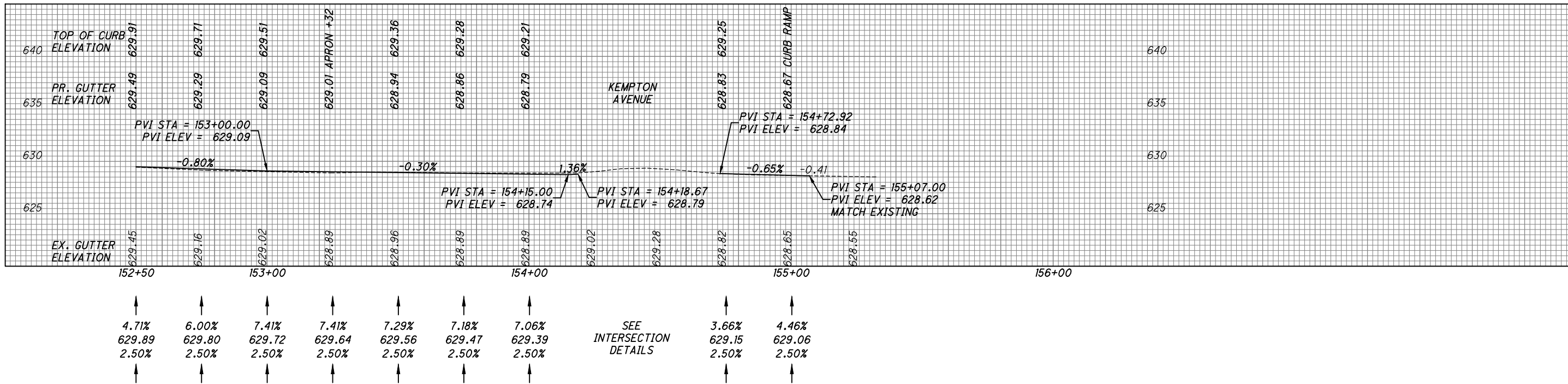
NOTES:

1. ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB.
2. INSTALL ALL NEW CURB RAMPS PER CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS. ALL RAMPS MUST BE ADA COMPLIANT. SPECIFIC TYPE OF RAMP IS INDICATED ON SHEET 62.
3. FOR LEGEND SEE SHEET 69.
4. DIMENSIONS SHOWN FOR THE LIMITS OF FULL-DEPTH PAVEMENT REPAIR AND CURB REPLACEMENT ARE INTENDED FOR USE IN ESTIMATING QUANTITIES ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS WILL BE AS DIRECTED BY THE ENGINEER.

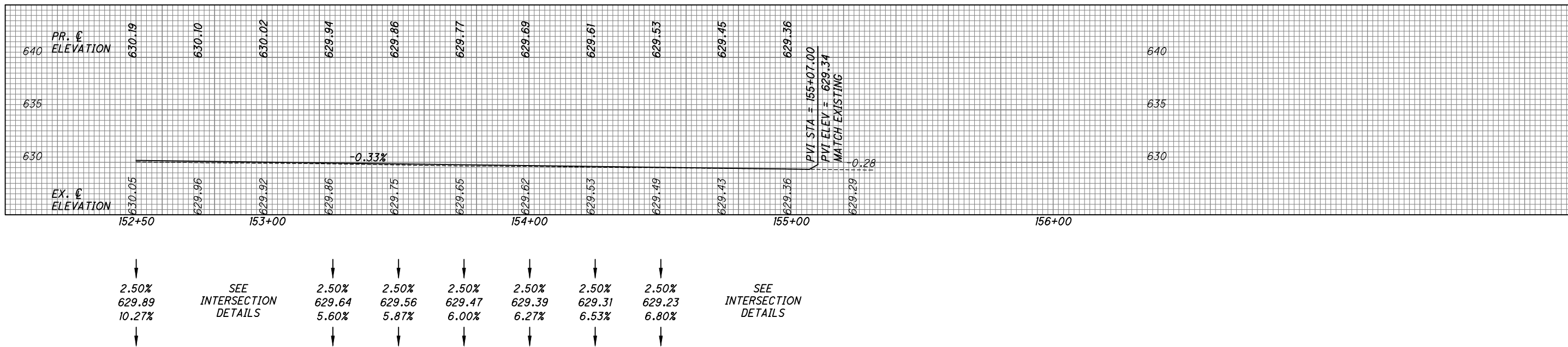
⊕ BENCHMARK # 14
MAG NAIL SET ON THE EAST SIDE OF EAST 105TH STREET IN THE EXISTING WALK
STA. 155+14.86, 32.87' RT
ELEV. = 629.25'

CROSS REFERENCES			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
10 - 13	PAVEMENT REPAIR DETAILS	126 - 128	DRAINAGE DETAILS/PROFILES
48 - 68	ESTIMATED QUANTITIES	129 - 170	WATERWORK PLANS
104 - 122	INTERSECTION DETAILS	171 - 187	GRANITE CURB RESETTING PLANS
124 - 125	DRIVE DETAILS/PROFILES	217 - 243	SIGNAL PLANS

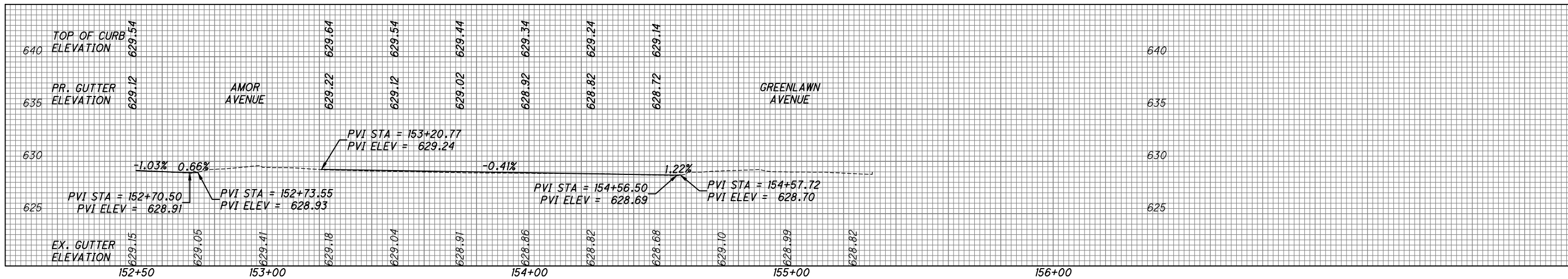
LEFT GUTTER PROFILE



℄ PROFILE



RIGHT GUTTER PROFILE



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CALCULATED MKD CHECKED JTS

PROFILE - EAST 105TH STREET
STA. 152+50 TO END

EAST 105TH STREET

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Pavement Elevation Table with columns for LEFT SIDE (WALK, TREELAWN, CURB, PAVEMENT, EX. TRACKS), EAST 105TH STREET (CENTERLINE, EX. TRACKS), and RIGHT SIDE (PAVEMENT, CURB, TREELAWN, WALK). Includes elevation and slope data for various street intersections.

CALCULATED
KJM
CHECKED
JTS

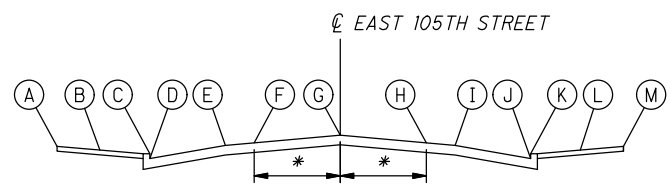
PAVEMENT ELEVATION TABLE

EAST 105TH STREET

97
243

NOTES:

- 1. PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
2. IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
3. FOR TYPICAL SECTIONS SEE SHEETS 8-9.



* 9.0' BEGIN TO SUPERIOR AVENUE
PIERPOINT AVENUE TO END
4.5' SUPERIOR AVENUE TO PIERPOINT AVENUE

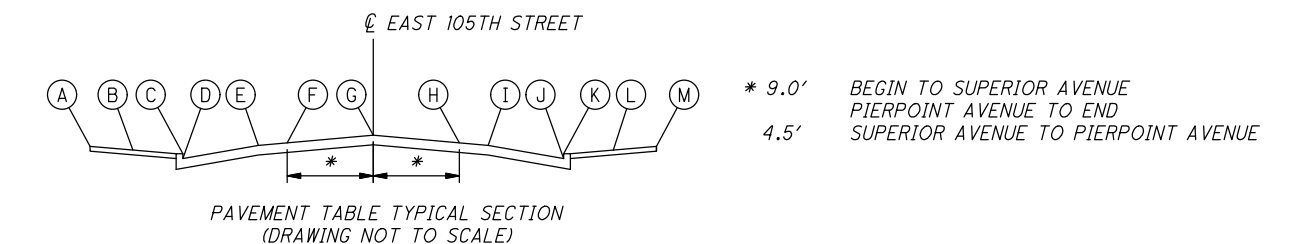
PAVEMENT TABLE TYPICAL SECTION (DRAWING NOT TO SCALE)

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LEFT REMARKS	LEFT SIDE															EAST 105TH STREET		RIGHT SIDE															RIGHT REMARKS													
	WALK					TREETLAWN			CURB	PAVEMENT					EX. TRACKS	CENTERLINE		EX. TRACKS	PAVEMENT					CURB	TREETLAWN			WALK																		
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TREETLAWN CROSS-SLOPE	TREETLAWN WIDTH (FEET)		TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION		PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)		PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)		PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TREETLAWN WIDTH (FEET)	PROPOSED TREETLAWN CROSS-SLOPE		PROPOSED FACE OF WALK ELEVATION	WALK WIDTH (FEET)	PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION	EXISTING BACK OF WALK ELEVATION	BACK OF WALK ELEVATION DIFFERENCE (FEET)							
																A	B	C	D	E	F	G	H	I	J	K	L	M																		
WADE PARK AVE INTERSECTION																99+75.00	649.64	WADE PARK AVE INTERSECTION																												
WADE PARK AVE INTERSECTION																100+00.00	649.56	WADE PARK AVE INTERSECTION																												
WADE PARK AVE INTERSECTION																100+25.00	649.48	WADE PARK AVE INTERSECTION																												
	MATCH EX. 3.5' OFF B/C																649.57	649.07	1.75%	8.00	649.21	1.25%	12.00	649.27	100+50.00	649.36	649.17	12.00	2.50%	649.06	8.00	0.62%	649.01	649.51	EX. WALK & TREETLAWN TO REMAIN											
	MATCH EX. 3.5' OFF B/C																649.37	648.87	2.00%	8.00	649.03	1.78%	12.00	649.11	100+75.00	649.25	649.06	12.00	2.50%	648.95	8.00	3.25%	648.69	649.19	EX. WALK & TREETLAWN TO REMAIN											
	MATCH EX. 3.5' OFF B/C																649.16	648.66	2.38%	8.00	648.85	2.30%	12.00	648.96	101+00.00	649.13	648.94	12.00	2.50%	648.83	8.00	5.00%	648.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	648.47	3.13%	8.00	648.72	2.50%	12.00	648.83	101+25.00	649.02	648.83	12.00	2.50%	648.72	8.00	4.75%	648.34	648.84	EX. WALK & TREETLAWN TO REMAIN																			
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	648.39	2.63%	8.00	648.60	2.50%	12.00	648.71	101+50.00	648.90	648.71	12.00	2.50%	648.60	8.00	4.50%	648.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE											
	0.00	648.87	648.87	0.82%	6.00	648.82	0.82%	2.50	648.80	648.30	2.50%	8.00	648.50	2.50%	12.00	648.61	101+75.00	648.80	648.61	12.00	2.50%	648.50	8.00	4.38%	648.15	648.65	EX. WALK & TREETLAWN TO REMAIN																			
	0.08	648.68	648.76	0.50%	6.00	648.73	0.50%	2.50	648.72	648.22	2.37%	8.00	648.41	2.50%	12.00	648.52	102+00.00	648.71	648.52	12.00	2.50%	648.41	8.00	4.38%	648.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE											
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	648.13	2.38%	8.00	648.32	2.50%	12.00	648.43	102+25.00	648.62	648.43	12.00	2.50%	648.32	8.00	4.38%	647.97	648.47	EX. WALK & TREETLAWN TO REMAIN																			
	EX. WALK & TREETLAWN TO REMAIN																648.54	648.04	2.50%	8.00	648.24	2.50%	12.00	648.35	102+50.00	648.54	648.35	12.00	2.50%	648.24	8.00	4.63%	647.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	EX. WALK & TREETLAWN TO REMAIN																648.46	647.96	2.37%	8.00	648.15	2.50%	12.00	648.26	102+75.00	648.45	648.26	12.00	2.50%	648.15	8.00	4.63%	647.78	648.28	EX. WALK & TREETLAWN TO REMAIN											
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	647.84	2.75%	8.00	648.06	2.50%	12.00	648.17	103+00.00	648.36	648.17	12.00	2.50%	648.06	8.00	4.62%	647.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE												
	EX. WALK & TREETLAWN TO REMAIN																648.22	647.72	3.13%	8.00	647.97	2.50%	12.00	648.08	103+25.00	648.27	648.08	12.00	2.50%	647.97	8.00	4.75%	647.59	648.09	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																648.10	647.60	3.37%	8.00	647.87	2.50%	12.00	647.98	103+50.00	648.17	647.98	12.00	2.50%	647.87	8.00	4.63%	647.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE					
	0.05	647.97	648.02	0.50%	6.00	647.99	0.50%	2.50	647.98	647.48	3.50%	8.00	647.76	2.50%	12.00	647.87	103+75.00	648.06	647.87	12.00	2.50%	647.76	8.00	4.38%	647.41	647.91	EX. WALK & TREETLAWN TO REMAIN																			
	MATCH EX. 2.5' OFF B/C																647.85	647.35	3.87%	8.00	647.66	2.50%	12.00	647.77	104+00.00	647.96	647.77	12.00	2.50%	647.66	8.00	4.50%	647.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	MATCH EX. 2.5' OFF B/C																647.73	647.23	4.12%	8.00	647.56	2.50%	12.00	647.67	104+25.00	647.86	647.67	12.00	2.50%	647.56	8.00	4.87%	647.17	647.67	2.50	0.50%	647.68	5.50	0.50%	647.71	647.65	0.06				
	MATCH EX. 2.5' OFF B/C																647.61	647.11	4.38%	8.00	647.46	2.50%	12.00	647.57	104+50.00	647.76	647.57	12.00	2.50%	647.46	8.00	5.25%	647.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	MATCH EX. 2.5' OFF B/C																647.50	647.00	4.50%	8.00	647.36	2.50%	12.00	647.47	104+75.00	647.66	647.47	12.00	2.50%	647.36	8.00	5.63%	646.91	647.41	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																647.42	646.92	4.13%	8.00	647.25	2.50%	12.00	647.36	105+00.00	647.55	647.36	12.00	2.50%	647.25	8.00	5.88%	646.78	647.28	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																647.33	646.83	4.00%	8.00	647.15	2.50%	12.00	647.26	105+25.00	647.45	647.26	12.00	2.50%	647.15	8.00	6.37%	646.64	647.14	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																647.24	646.74	3.87%	8.00	647.05	2.50%	12.00	647.16	105+50.00	647.35	647.16	12.00	2.50%	647.05	8.00	6.75%	646.51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	EX. WALK & TREETLAWN TO REMAIN																647.16	646.66	3.63%	8.00	646.95	2.50%	12.00	647.06	105+75.00	647.25	647.06	12.00	2.50%	646.95	8.00	6.75%	646.41	646.91	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																647.07	646.57	3.37%	8.00	646.84	2.50%	12.00	646.95	106+00.00	647.14	646.95	12.00	2.50%	646.84	8.00	6.25%	646.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	EX. WALK & TREETLAWN TO REMAIN																646.97	646.47	3.37%	8.00	646.74	2.50%	12.00	646.85	106+25.00	647.04	646.85	12.00	2.50%	646.74	8.00	6.00%	646.26	646.76	EX. WALK & TREETLAWN TO REMAIN											
	EX. WALK & TREETLAWN TO REMAIN																646.85	646.35	3.62%	8.00	646.64	2.50%	12.00	646.75	106+50.00	646.94	646.75	12.00	2.50%	646.64	8.00	5.75%	646.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE				
	0.01	646.76	646.77	0.50%	5.00	646.74	0.50%	3.00	646.72	646.22	4.00%	8.00	646.54	2.50%	12.00	646.65	106+75.00	646.84	646.65	12.00	2.50%	646.54	8.00	5.37%	646.11	646.61	EX. WALK & TREETLAWN TO REMAIN																			
	EX. WALK & TREETLAWN TO REMAIN																646.59	646.09	4.25%	8.00	646.43	2.50%	12.00	646.54	107+00.00	646.73	646.54	12.00	2.50%	646.43	8.00	5.00%	646.03	646.53	EX. WALK & TREETLAWN TO REMAIN											
	0.04	646.52	646.56	0.50%	5.00	646.53	0.50%	3.00	646.51	646.01	4.00%	8.00	646.33	2.50%	12.00	646.44	107+25.00	646.63	646.44	12.00	2.50%	646.33	8.00	6.25%	645.83	646.33	3.00	0.50%	646.35	5.50	0.50%	646.38	646.35	0.03												
	0.08	646.41	646.49	0.50%	5.00	646.46	0.50%	3.00	646.44	645.94	3.75%	8.00	646.24	2.50%	12.00	646.35	107+50.00	646.54	646.35	12.00	2.50%	646.24	8.00	7.50%	645.64	646.14	EX. WALK & TREETLAWN TO REMAIN																			
	0.13	646.28	646.41	0.50%	5.00	646.38	0.50%	3.00	646.36	645.86	3.87%	8.00	646.17	2.50%	12.00	646.28	107+75.00	646.47	646.28	12.00	2.50%	646.17	8.00	9.12%	645.44	645.94	EX. WALK & TREETLAWN TO REMAIN																			
	0.30	646.15	646.45	0.50%	5.00	646.42	0.50%	3.00	646.40	645.90	2.38%	8.00	646.09	2.50%	12.00	646.20	108+00.00	646.39																												
ASHBURY AVE INTERSECTION																108+25.00	646.32	ASHBURY AVE INTERSECTION																												
ASHBURY AVE INTERSECTION																108+50.00	646.24	ASHBURY AVE INTERSECTION																												
ASHBURY AVE INTERSECTION																108+75.00	646.17	645.98	12.00	2.50%	645.87	8.00	6.37%	645.36	645.86	MATCH EX. 2' OFF B/C																				
CIRCLE NORTH DEVELOPMENT																645.91	645.41	4.75%	8.00	645.79	2.50%	12.00	645.90	109+00.00	646.09	645.90	12.00	2.50%	645.79	8.00	7.75%	645.17	645.67	MATCH EX. 2' OFF B/C												
CIRCLE NORTH DEVELOPMENT																645.79	645.29	5.38%	8.00	645.72	2.50%	12.00	645.83	109+25.00	646.02	645.83	12.00	2.50%	645.72	8.00	8.25%	645.06	645.56	3.50	2.00%	645.63	5.00	2.00%	645.73	645.73	0.00					
CIRCLE NORTH DEVELOPMENT																645.67	645.17	5.63%	8.00	645.62	2.50%	12.00	645.73	109+50.00	645.92	LEE AVE INTERSECTION																				

NOTES:

- PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
- IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
- FOR TYPICAL SECTIONS SEE SHEETS 8-9.



PAVEMENT ELEVATION TABLE

EAST 105TH STREET

CALCULATED
KJM
CHECKED
JTS

LEFT REMARKS	LEFT SIDE														EAST 105TH STREET		RIGHT SIDE														RIGHT REMARKS	CALCULATED KJM CHECKED JTS			
	WALK				TREELAWN			CURB	PAVEMENT				EX. TRACKS	CENTERLINE	EX. TRACKS	PAVEMENT				CURB	TREELAWN			WALK											
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TREELAWN CROSS-SLOPE	TREELAWN WIDTH (FEET)	TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION	PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)	PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)	PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TREELAWN WIDTH (FEET)	PROPOSED TREELAWN CROSS-SLOPE	PROPOSED FACE OF WALK ELEVATION	WALK WIDTH (FEET)			PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION	EXISTING BACK OF WALK ELEVATION
A					B			C	D			E			F	G	H			I			J	K			L			M					
	CIRCLE NORTH DEVELOPMENT																	LEE AVE INTERSECTION																	
	CIRCLE NORTH DEVELOPMENT																109+75.00	645.78																	
	CIRCLE NORTH DEVELOPMENT																110+00.00	645.65	645.46	12.00	2.50%	645.35	8.00	6.25%	644.85	645.52	4.50	8.00%		5.00	2.00%	645.98	645.98	0.00	
	CIRCLE NORTH DEVELOPMENT																110+25.00	645.52	645.33	12.00	2.50%	645.22	8.00	6.25%	644.72	645.39	4.50	10.00%		5.00	2.00%	645.94	646.10	-0.16	
	CIRCLE NORTH DEVELOPMENT																110+50.00	645.39	645.20	12.00	2.50%	645.09	8.00	6.37%	644.58	645.19	4.50	2.00%		5.00	2.00%	645.38	645.42	-0.04	
	CIRCLE NORTH DEVELOPMENT																110+75.00	645.25	645.06	12.00	2.50%	644.95	8.00	6.37%	644.44	644.94	4.50	6.89%		5.00	2.00%	645.35	645.35	0.00	
	CIRCLE NORTH DEVELOPMENT																111+00.00	645.12	644.93	12.00	2.50%	644.82	8.00	6.38%	644.31	644.81	4.50	1.16%		5.00	1.16%	644.92	644.92	0.00	
	CIRCLE NORTH DEVELOPMENT																111+25.00	644.99	644.80	12.00	2.50%	644.69	8.00	6.50%	644.17	644.67	4.50	0.50%		5.00	0.50%	644.72	644.62	0.10	
	CIRCLE NORTH DEVELOPMENT																111+50.00	644.86	644.67	12.00	2.50%	644.56	8.00	6.37%	644.05	644.55	4.50	0.50%		5.00	0.50%	644.60	644.48	0.12	
	CIRCLE NORTH DEVELOPMENT																111+75.00	644.72	644.53	12.00	2.50%	644.42	8.00	6.25%	643.92	644.42	4.50	0.50%		5.00	0.50%	644.47	644.37	0.10	
	CIRCLE NORTH DEVELOPMENT																112+00.00	644.59	644.40	12.00	2.50%	644.29	8.00	6.25%	643.79	644.29	4.50	0.50%		5.00	0.50%	644.34	644.31	0.03	
	CIRCLE NORTH DEVELOPMENT																112+25.00	644.48	644.29	12.00	2.50%	644.18	8.00	6.50%	643.66	644.16	4.50	0.74%		5.00	0.74%	644.23	644.23	0.00	
	CIRCLE NORTH DEVELOPMENT																112+50.00	644.37	644.18	12.00	2.50%	644.07	8.00	6.50%	643.55	644.05	4.50	0.74%		5.00	0.74%	644.12	644.12	0.00	
	CIRCLE NORTH DEVELOPMENT																112+75.00	644.26	644.07	12.00	2.50%	643.96	8.00	6.00%	643.48	643.98	4.50	0.50%		5.00	0.50%	644.03	643.95	0.08	
	CIRCLE NORTH DEVELOPMENT																113+00.00	644.16	643.97	12.00	2.50%	643.86	8.00	5.75%	643.40	643.90	4.50	0.50%		5.00	0.50%	643.95	643.84	0.11	
	CIRCLE NORTH DEVELOPMENT																113+25.00	644.05	643.86	12.00	2.50%	643.75	8.00	5.25%	643.33	643.83	4.50	0.50%		5.00	0.50%	643.88	643.74	0.14	
	CIRCLE NORTH DEVELOPMENT																113+50.00	643.94	643.75	12.00	2.50%	643.64	8.00	5.50%	643.20	643.70	4.50	0.50%		5.00	0.50%	643.75	643.67	0.08	
	CIRCLE NORTH DEVELOPMENT																113+75.00	643.83	643.64	12.00	2.50%	643.53	8.00	6.87%	642.98	643.48	4.50	0.95%		5.00	0.95%	643.57	643.57	0.00	
	CIRCLE NORTH DEVELOPMENT																114+00.00	643.72	ORVILLE AVE INTERSECTION																
	CIRCLE NORTH DEVELOPMENT																114+25.00	643.61	ORVILLE AVE INTERSECTION																
	CIRCLE NORTH DEVELOPMENT																114+50.00	643.50	643.31	12.00	2.50%	643.20	8.00	5.00%	642.80	643.30	N/A	N/A		N/A	N/A	N/A	N/A	0.00	
	EX. CURB & WALK TO REMAIN																114+75.00	643.40	643.21	12.00	2.50%	643.10	8.00	5.38%	642.67	643.17	MATCH EX. 2' OFF B/C								
DRIVE	EX. CURB & WALK TO REMAIN																115+00.00	643.29	643.10	12.00	2.50%	642.99	8.00	5.50%	642.55	643.05	4.50	0.50%		5.00	0.50%	643.10	643.08	0.02	
DRIVE	EX. CURB & WALK TO REMAIN																115+25.00	643.18	642.99	12.00	2.50%	642.88	8.00	5.75%	642.42	642.92	MATCH EX. 2' OFF B/C								
	EX. CURB & WALK TO REMAIN																115+50.00	643.07	642.88	12.00	2.50%	642.77	8.00	6.25%	642.27	642.77	MATCH EX. 2' OFF B/C								
	EX. CURB & WALK TO REMAIN																115+75.00	642.96	642.77	12.00	2.50%	642.66	8.00	6.87%	642.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	EX. CURB & WALK TO REMAIN																116+00.00	642.84	642.65	12.00	2.50%	642.54	8.00	6.75%	642.00	642.50	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																116+25.00	642.72	642.53	12.00	2.50%	642.42	8.00	6.62%	641.89	642.39	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																116+50.00	642.60	642.41	12.00	2.50%	642.30	8.00	6.37%	641.79	642.29	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																116+75.00	642.47	642.28	12.00	2.50%	642.17	8.00	6.13%	641.68	642.18	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																117+00.00	642.35	642.16	12.00	2.50%	642.05	8.00	5.87%	641.58	642.08	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																117+25.00	642.23	642.04	12.00	2.50%	641.93	8.00	6.25%	641.43	641.93	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																117+50.00	642.10	641.91	12.00	2.50%	641.80	8.00	7.37%	641.21	641.71	MATCH EX. 3' OFF B/C								
	EX. CURB & WALK TO REMAIN																117+75.00	641.98	CHURCHILL AVE INTERSECTION																
	EX. CURB & WALK TO REMAIN																118+00.00	641.86	CHURCHILL AVE INTERSECTION																
	CHURCHILL AVE INTERSECTION																118+25.00	641.74	641.55	12.00	2.50%	641.44	8.00	3.88%	641.13	641.63	4.00	0.50%	641.65	5.00	0.50%	641.68	641.49	0.19	
	CHURCHILL AVE INTERSECTION																118+50.00	641.63	641.44	12.00	2.50%	641.33	8.00	4.13%	641.00	641.50	4.00	0.50%	641.52	5.00	0.50%	641.55	641.21	0.34	
	0.18	641.45	641.63	0.50%	5.00	641.60	0.50%	2.50	641.59	641.09	1.75%	8.00	641.23	2.50%	12.00	641.34	118+75.00	641.53	641.34	12.00	2.50%	641.23	8.00	4.38%	640.88	641.38	MATCH EX. 3' OFF B/C								
	0.04	641.40	641.44	0.50%	5.00	641.41	0.50%	2.50	641.40	640.90	2.75%	8.00	641.12	2.50%	12.00	641.23	119+00.00	641.42	641.23	12.00	2.50%	641.12	8.00	5.00%	640.72	641.22	MATCH EX. 3' OFF B/C								
	0.15	641.09	641.24	0.50%	5.00	641.21	0.50%	2.50	641.20	640.70	3.87%	8.00	641.01	2.50%	12.00	641.12	119+25.00	641.31	641.12	12.00	2.50%	641.01	8.00	5.63%	640.56	641.06	MATCH EX. 3' OFF B/C								
	0.27	640.89	641.16	0.50%	5.00	641.13	0.50%	2.50	641.12	640.62	3.50%	8.00	640.90	2.50%	12.00	641.01	119+50.00	641.20	641.01	12.00	2.50%	640.90	8.00	6.25%	640.40	640.90	MATCH EX. 3' OFF B/C								

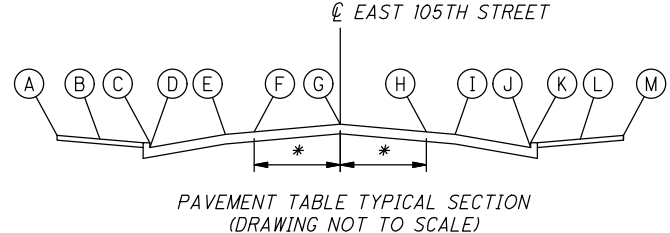
PAVEMENT ELEVATION TABLE

EAST 105TH STREET

CALCULATED
KJM
CHECKED
JTS

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- NOTES:**
- PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
 - IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
 - FOR TYPICAL SECTIONS SEE SHEETS 8-9.



* 9.0'
4.5'
BEGIN TO SUPERIOR AVENUE
PIERPOINT AVENUE TO END
SUPERIOR AVENUE TO PIERPOINT AVENUE

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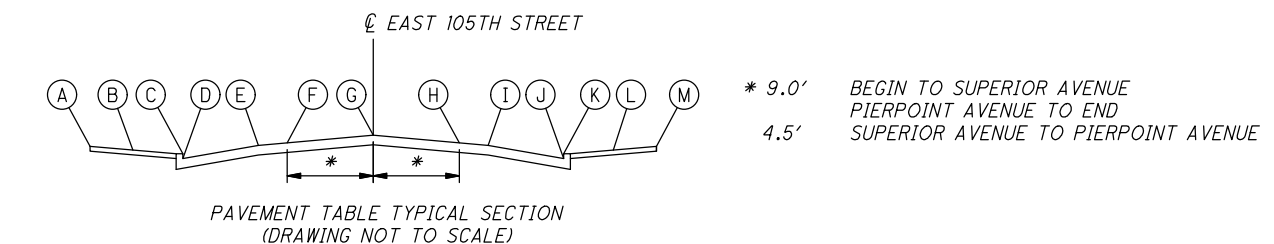
LEFT REMARKS	LEFT SIDE													EAST 105TH STREET		RIGHT SIDE													RIGHT REMARKS							
	WALK					TREELAWN			CURB	PAVEMENT					EX. TRACKS	CENTERLINE	EX. TRACKS	PAVEMENT					CURB	TREELAWN			WALK									
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TREELAWN CROSS-SLOPE	TREELAWN WIDTH (FEET)	TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION	PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)	PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)	PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TREELAWN WIDTH (FEET)	PROPOSED TREELAWN CROSS-SLOPE		PROPOSED FACE OF WALK ELEVATION	WALK WIDTH (FEET)	PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION	EXISTING BACK OF WALK ELEVATION	BACK OF WALK ELEVATION DIFFERENCE (FEET)	
A					B			C	D	E					F	G	H	I					J	K	L			M								
ROCKHURST AVE INTERSECTION																119+75.00	641.07	ROCKHURST AVE INTERSECTION																		
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	640.47	2.37%	8.00	640.66	2.27%	12.00	640.76	120+00.00	640.93	640.74	12.00	2.50%	640.63	8.00	5.75%	640.17	640.67	4.00	1.22%	640.72	5.00	1.22%	640.78	640.78	0.00		
	MATCH EX. 5' OFF B/C								640.87	640.37	1.75%	8.00	640.51	1.73%	12.00	640.58	120+25.00	640.72	640.53	12.00	2.50%	640.42	8.00	4.63%	640.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	640.86	N/A	DRIVE
	MATCH EX. 3' OFF B/C								640.71	640.21	1.38%	8.00	640.32	1.50%	12.00	640.38	120+50.00	640.50	640.31	12.00	2.50%	640.20	8.00	3.25%	639.94	640.44	MATCH EX. 3' OFF B/C									
	MATCH EX. 5' OFF B/C								640.54	640.04	1.13%	8.00	640.13	1.20%	12.00	640.19	120+75.00	640.28	640.09	12.00	2.50%	639.98	8.00	1.62%	639.85	640.35	MATCH EX. 3' OFF B/C									
SUPERIOR AVE INTERSECTION																121+00.00	640.07	SUPERIOR AVE INTERSECTION																		
SUPERIOR AVE INTERSECTION																121+25.00	639.97	SUPERIOR AVE INTERSECTION																		
SUPERIOR AVE INTERSECTION																121+50.00	639.99	SUPERIOR AVE INTERSECTION																		
	0.05	640.16	640.21	0.50%	5.00	640.18	0.50%	4.50	640.16	639.74	0.87%	8.00	639.81	2.50%	12.00	640.05	121+75.00	640.11	640.05	12.00	2.50%	639.81	8.00	1.75%	639.67	640.09	4.50	7.85%	640.44	5.00	2.00%	640.54	640.54	0.00		
	0.01	640.30	640.31	0.50%	5.00	640.28	0.50%	4.50	640.26	639.84	1.38%	8.00	639.95	2.50%	12.00	640.19	122+00.00	640.25	640.19	12.00	2.50%	639.95	8.00	2.25%	639.77	640.19	4.50	1.61%	640.26	5.00	1.61%	640.34	640.34	0.00		
	0.00	640.44	640.44	0.98%	5.00	640.39	0.98%	4.50	640.35	639.93	2.00%	8.00	640.09	2.50%	12.00	640.32	122+25.00	640.39	640.32	12.00	2.50%	640.09	8.00	1.62%	639.96	640.38	4.50	1.51%	640.44	5.00	1.51%	640.52	640.52	0.00		
	0.01	640.49	640.50	0.50%	5.00	640.47	0.50%	4.50	640.45	640.03	2.50%	8.00	640.23	2.50%	12.00	640.46	122+50.00	640.53	640.46	12.00	2.50%	640.23	8.00	1.13%	640.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	MATCH EX. 3.5' BEHIND B/C								640.48	640.06	3.75%	8.00	640.36	2.50%	12.00	640.60	122+75.00	640.66	640.60	12.00	2.50%	640.36	8.00	3.37%	640.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	MATCH EX. 3.5' BEHIND B/C								640.40	639.98	4.25%	8.00	640.32	2.50%	12.00	640.55	123+00.00	640.62	640.55	12.00	2.50%	640.32	8.00	3.88%	640.01	640.43	4.50	0.50%	640.45	5.00	0.50%	640.48	640.43	0.05		
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	639.82	4.00%	8.00	640.14	2.50%	12.00	640.38	123+50.00	640.44	640.38	12.00	2.50%	640.14	8.00	3.87%	639.83	640.25	MATCH EX. 3' BEHIND B/C								
	0.07	640.10	640.17	0.50%	5.00	640.14	0.50%	4.00	640.12	639.70	4.50%	8.00	640.06	2.50%	12.00	640.29	123+75.00	640.36	640.29	12.00	2.50%	640.06	8.00	3.87%	639.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	MATCH EX. 3' BEHIND B/C								640.01	639.59	4.75%	8.00	639.97	2.50%	12.00	640.20	124+00.00	640.27	640.20	12.00	2.50%	639.97	8.00	3.63%	639.68	640.10	MATCH EX. 3' BEHIND B/C									
	MATCH EX. 3' BEHIND B/C								639.90	639.48	5.00%	8.00	639.88	2.50%	12.00	640.12	124+25.00	640.18	640.12	12.00	2.50%	639.88	8.00	3.50%	639.60	640.02	4.00	0.81%	640.05	5.00	0.81%	640.09	640.09	0.00		
	MATCH EX. 3' BEHIND B/C								639.78	639.36	5.12%	8.00	639.77	2.50%	12.00	640.00	124+50.00	640.07	HATHAWAY AVE INTERSECTION																	
	0.00	639.95	639.95	2.00%	5.00	639.85	5.41%	4.50	639.61	639.19	4.75%	8.00	639.57	2.50%	12.00	639.80	124+75.00	639.87	HATHAWAY AVE INTERSECTION																	
	-0.04	639.95	639.91	2.00%	5.00	639.81	8.00%	4.50	639.45	639.03	4.13%	8.00	639.36	2.50%	12.00	639.60	125+00.00	639.66	639.60	12.00	2.50%	639.36	8.00	1.38%	639.25	639.67	MATCH EX. 3' BEHIND B/C									
	MATCH EX. 3' BEHIND B/C								639.29	638.87	3.62%	8.00	639.16	2.50%	12.00	639.40	125+25.00	639.46	639.40	12.00	2.50%	639.16	8.00	2.00%	639.00	639.42	MATCH EX. 3' BEHIND B/C									
	-0.28	639.87	639.59	2.00%	5.00	639.49	8.00%	4.50	639.13	638.71	4.50%	8.00	639.07	2.50%	12.00	639.31	125+50.00	639.37	639.31	12.00	2.50%	639.07	8.00	3.13%	638.82	639.24	4.00	8.00%	639.56	5.00	2.00%	639.66	639.66	0.00		
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	638.54	5.50%	8.00	638.98	2.50%	12.00	639.22	125+75.00	639.28	639.22	12.00	2.50%	638.98	8.00	3.88%	638.67	639.09	MATCH EX. 3' BEHIND B/C								
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	638.38	6.50%	8.00	638.90	2.50%	12.00	639.13	126+00.00	639.20	639.13	12.00	2.50%	638.90	8.00	4.75%	638.52	638.94	MATCH EX. 3' BEHIND B/C								
	MATCH EX. 5' BEHIND B/C								638.70	638.28	7.13%	8.00	638.85	2.50%	12.00	639.09	126+25.00	639.15	639.09	12.00	2.50%	638.85	8.00	5.12%	638.44	638.86	MATCH EX. 3' BEHIND B/C									
	MATCH EX. 5' BEHIND B/C								638.78	638.36	7.12%	8.00	638.93	2.50%	12.00	639.17	126+50.00	639.23	639.17	12.00	2.50%	638.93	8.00	5.00%	638.53	638.95	4.00	2.00%	639.03	5.00	2.00%	639.13	639.16	-0.03		
	-0.19	639.42	639.23	2.00%	5.00	639.13	8.00%	3.50	638.85	638.43	7.25%	8.00	639.01	2.50%	12.00	639.25	126+75.00	639.31	639.25	12.00	2.50%	639.01	8.00	4.75%	638.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE		
	MATCH EX. 3' BEHIND B/C								638.98	638.56	6.75%	8.00	639.10	2.50%	12.00	639.33	127+00.00	639.40	639.33	12.00	2.50%	639.10	8.00	4.63%	638.73	639.15	MATCH EX. 3' BEHIND B/C									
	-0.04	639.55	639.51	2.00%	5.00	639.41	8.00%	3.50	639.13	638.71	5.87%	8.00	639.18	2.50%	12.00	639.41	127+25.00	639.48	639.41	12.00	2.50%	639.18	8.00	4.37%	638.83	639.25	4.50	0.50%	639.27	5.00	0.50%	639.30	639.24	0.06		
OLIVET AVE INTERSECTION																127+50.00	639.56	OLIVET AVE INTERSECTION																		
OLIVET AVE INTERSECTION																127+75.00	639.64	OLIVET AVE INTERSECTION																		
	MATCH EX. 4' BEHIND B/C								639.44	639.02	4.12%	8.25	639.36	2.50%	12.00	639.60	128+00.00	639.66	OLIVET AVE INTERSECTION																	
	MATCH EX. 4' BEHIND B/C								639.00	638.58	8.61%	8.25	639.29	2.50%	12.00	639.52	128+25.00	639.59	639.52	12.00	2.50%	639.29	8.00	3.62%	639.00	639.42	3.50	1.92%	639.48	5.00	1.92%	639.58	639.58	0.00		
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	638.33	10.18%	8.25	639.17	2.50%	12.00	639.40	128+50.00	639.47	639.40	12.00	2.50%	639.17	8.00	3.00%	638.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	-0.17	639.23	639.06	2.00%	5.00	638.96	8.00%	4.25	638.62	638.20	9.58%	8.25	638.99	2.50%	12.00	639.23	128+75.00	639.29	639.23	12.00	2.50%	638.99	8.00	1.75%	638.85	639.27	3.50	8.00%	639.55	5.00	2.00%	639.65	639.73	-0.08		
	-0.24	639.16	638.92	2.00%	5.00	638.82	8.00%	4.25	638.48	638.06	9.09%	8.25	638.81	2.50%	12.00	639.05	129+00.00	639.11	639.05	12.00	2.50%	638.81	8.00	1.50%	638.69	639.11	3.50	8.00%	639.39	5.00	2.00%	639.49	639.63	-0.14		
	-0.15	638.97	638.82	2.00%	5.00	638.72	8.00%	4.25	638.38	637.96	8.97%	8.25	638.70	2.50%	12.00	638.93	129+25.00	639.00	638.93	12.00	2.50%	638.70	8.00	2.38%	638.51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE		
	MATCH EX. 4' BEHIND B/C								638.29	637.87	9.09%	8.25	638.62	2.50%	12.00	638.86	129+50.00	638.92	638.86	12.00	2.50%	638.62	8.00	3.62%	638.33	638.75	3.50	0.86%	638.78	5.00	0.86%	638.82	638.82	0.00		

PAVEMENT ELEVATION TABLE

EAST 105TH STREET

NOTES:

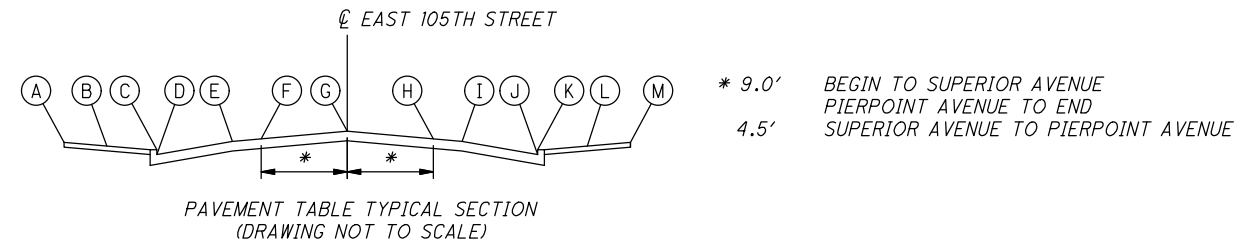
- PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
- IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
- FOR TYPICAL SECTIONS SEE SHEETS 8-9.



LEFT SIDE																		EAST 105TH STREET		RIGHT SIDE																	
LEFT REMARKS	WALK					TREELAWN			CURB	PAVEMENT					EX. TRACKS	CENTERLINE		EX. TRACKS	PAVEMENT					CURB	TREELAWN			WALK					RIGHT REMARKS				
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TREELAWN CROSS-SLOPE	TREELAWN WIDTH (FEET)	TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION	PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)	PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)	PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TREELAWN WIDTH (FEET)	PROPOSED TREELAWN CROSS-SLOPE	PROPOSED FACE OF WALK ELEVATION	WALK WIDTH (FEET)	PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION		EXISTING BACK OF WALK ELEVATION	BACK OF WALK ELEVATION DIFFERENCE (FEET)		
	A					B			C	D		E			F	G		H		I			J	K		L			M								
MATCH EX. 4' OFF B/C									638.20	637.78	9.33%	8.25	638.55	2.50%	12.00	638.78	129+75.00	638.85	638.78	12.00	2.50%	638.55	8.00	5.12%	638.14	638.56	3.50	1.92%	638.62	5.00	1.92%	638.72	638.72	0.00			
CURB RAMP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	637.69	9.45%	8.25	638.47	2.50%	12.00	638.71	130+00.00	638.77	638.71	12.00	2.50%	638.47	8.00	6.37%	637.96	638.38	3.50	4.95%	638.55	5.00	2.00%	638.65	638.65	0.00			
HAMPDEN AVE INTERSECTION																		HAMPDEN AVE INTERSECTION																			
HAMPDEN AVE INTERSECTION																		HAMPDEN AVE INTERSECTION																			
CURB RAMP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	637.53	2.06%	8.25	637.70	2.50%	12.00	637.94	130+75.00	638.00	637.94	12.00	2.50%	637.70	8.00	1.62%	637.57	637.99	4.00	0.50%	638.01	5.00	0.50%	638.04	638.01	0.03			
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	637.36	2.67%	8.25	637.58	2.50%	12.00	637.81	131+00.00	637.88	637.81	12.00	2.50%	637.58	8.00	3.00%	637.34	637.76	MATCH EX. 3' OFF B/C										
	0.00	637.66	637.66	0.59%	5.00	637.63	0.59%	4.00	637.61	637.19	3.15%	8.25	637.45	2.50%	12.00	637.68	131+25.00	637.75	637.68	12.00	2.50%	637.45	8.00	3.13%	637.20	637.62	MATCH EX. 3' OFF B/C										
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	637.02	3.64%	8.25	637.32	2.50%	12.00	637.55	131+50.00	637.62	637.55	12.00	2.50%	637.32	8.00	3.13%	637.07	637.49	MATCH EX. 3' OFF B/C										
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	636.85	4.12%	8.25	637.19	2.50%	12.00	637.43	131+75.00	637.49	637.43	12.00	2.50%	637.19	8.00	3.25%	636.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE			
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	636.68	4.61%	8.25	637.06	2.50%	12.00	637.30	132+00.00	637.36	637.30	12.00	2.50%	637.06	8.00	3.37%	636.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE			
MATCH EX. 3' OFF B/C									636.93	636.51	5.09%	8.25	636.93	2.50%	12.00	637.17	132+25.00	637.23	637.17	12.00	2.50%	636.93	8.00	3.37%	636.66	637.08	4.00	0.93%	637.11	5.00	0.93%	637.16	637.16	0.00			
WESTCHESTER AVE INTERSECTION																		WESTCHESTER AVE INTERSECTION																			
WESTCHESTER AVE INTERSECTION																		WESTCHESTER AVE INTERSECTION																			
WESTCHESTER AVE INTERSECTION																		WESTCHESTER AVE INTERSECTION																			
WESTCHESTER AVE INTERSECTION																		WESTCHESTER AVE INTERSECTION																			
MATCH EX. 3' OFF B/C									636.13	635.71	4.73%	8.25	636.10	2.50%	12.00	636.34	133+50.00	636.40	636.34	12.00	2.50%	636.10	8.00	1.50%	635.98	636.40	4.00	0.81%	636.43	5.00	0.81%	636.47	636.47	0.00			
	-0.04	636.28	636.24	2.00%	5.00	636.14	2.00%	4.50	636.05	635.63	3.03%	8.25	635.88	2.50%	12.00	636.11	133+75.00	636.18	636.11	12.00	2.50%	635.88	8.00	0.37%	635.85	636.27	4.00	1.15%	636.31	5.00	1.15%	636.37	636.37	0.00			
	0.00	636.07	636.02	0.50%	5.00	635.99	0.50%	4.50	635.97	635.55	2.42%	8.25	635.75	2.50%	12.00	635.98	134+00.00	636.05	635.98	12.00	2.50%	635.75	8.00	0.50%	635.71	636.13	4.00	1.37%	636.18	5.00	1.37%	636.25	636.25	0.00			
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	635.47	2.06%	8.25	635.64	2.50%	12.00	635.87	134+25.00	635.94	635.87	12.00	2.50%	635.64	8.00	0.50%	635.60	636.02	4.00	2.00%	636.10	5.00	2.00%	636.20	636.24	-0.04			
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	635.39	1.70%	8.25	635.53	2.50%	12.00	635.77	134+50.00	635.83	TACOMA AVE INTERSECTION																		
MATCH EX. 3' OFF B/C									635.73	635.31	1.45%	8.25	635.43	2.50%	12.00	635.66	134+75.00	635.73	635.66	12.00	2.50%	635.43	8.00	0.50%	635.39	635.81	MATCH EX. 3' OFF B/C										
MATCH EX. 3' OFF B/C									635.66	635.24	0.97%	8.25	635.32	2.50%	12.00	635.56	135+00.00	635.62	635.56	12.00	2.50%	635.32	8.00	1.00%	635.24	635.66	MATCH EX. 3' OFF B/C										
MATCH EX. 3' OFF B/C									635.58	635.16	0.73%	8.25	635.22	2.50%	12.00	635.45	135+25.00	635.52	635.45	12.00	2.50%	635.22	8.00	1.62%	635.09	635.51	3.50	8.00%	635.79	5.00	2.00%	635.89	636.04	-0.15			
SOUTH BLVD INTERSECTION																		SOUTH BLVD INTERSECTION																			
SOUTH BLVD INTERSECTION																		SOUTH BLVD INTERSECTION																			
SOUTH BLVD INTERSECTION																		SOUTH BLVD INTERSECTION																			
SOUTH BLVD INTERSECTION																		SOUTH BLVD INTERSECTION																			
MATCH EX. 3' OFF B/C									634.80	634.38	2.35%	8.50	634.58	2.50%	12.00	634.82	136+50.00	634.88	634.82	12.00	2.50%	634.58	8.00	2.25%	634.40	634.82	MATCH EX. 3' OFF B/C										
MATCH EX. 3' OFF B/C									634.58	634.16	3.18%	8.50	634.43	2.50%	12.00	634.67	136+75.00	634.73	GRANTWOOD AVE INTERSECTION																		
	-0.04	634.63	634.59	2.00%	5.00	634.49	2.00%	3.00	634.43	634.01	3.18%	8.50	634.28	2.50%	12.00	634.52	137+00.00	634.58	GRANTWOOD AVE INTERSECTION																		
MATCH EX. 3' OFF B/C									634.28	633.86	3.18%	8.50	634.13	2.50%	12.00	634.37	137+25.00	634.43	GRANTWOOD AVE INTERSECTION																		
MATCH EX. 3' OFF B/C									634.13	633.71	3.18%	8.50	633.98	2.50%	12.00	634.22	137+50.00	634.28	GRANTWOOD AVE INTERSECTION																		
MATCH EX. 3' OFF B/C									633.98	633.56	3.18%	8.50	633.83	2.50%	12.00	634.07	137+75.00	634.13	634.07	12.00	2.50%	633.83	8.00	2.88%	633.60	634.02	MATCH EX. 3' OFF B/C										
MATCH EX. 3' OFF B/C									633.83	633.41	3.18%	8.50	633.68	2.50%	12.00	633.92	138+00.00	633.98	633.92	12.00	2.50%	633.68	8.00	1.87%	633.53	633.95	MATCH EX. 3' OFF B/C										
MATCH EX. 3' OFF B/C									633.68	633.26	3.65%	8.50	633.57	2.50%	12.00	633.80	138+25.00	633.87	633.80	12.00	2.50%	633.57	8.00	1.50%	633.45	633.87	MATCH EX. 3' OFF B/C										
NORTH BLVD INTERSECTION																		NORTH BLVD INTERSECTION																			
NORTH BLVD INTERSECTION																		NORTH BLVD INTERSECTION																			
	0.00	633.49	633.49	0.81%	5.00	633.45	0.81%	4.00	633.42	633.00	2.71%	8.50	633.23	2.50%	12.00	633.47	139+00.00	633.53	633.47	12.00	2.50%	633.23	8.00	5.12%	632.82	633.24	MATCH EX. 3' OFF B/C										
DRIVE CL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	632.65	4.94%	8.50	633.07	2.50%	12.00	633.31	139+25.00	633.37	633.31	12.00	2.50%	633.07	8.00	4.75%	632.69	633.11	MATCH EX. 3' OFF B/C										
	-0.03	633.11	633.08	2.00%	5.00	632.98	2.00%	4.00	632.90	632.48	5.18%	8.50	632.92	2.50%	12.00	633.15	139+50.00	633.22	633.15	12.00	2.50%	632.92	8.00	4.50%	632.56	632.98	MATCH EX. 3' OFF B/C										

NOTES:

1. PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
2. IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
3. FOR TYPICAL SECTIONS SEE SHEETS 8-9.

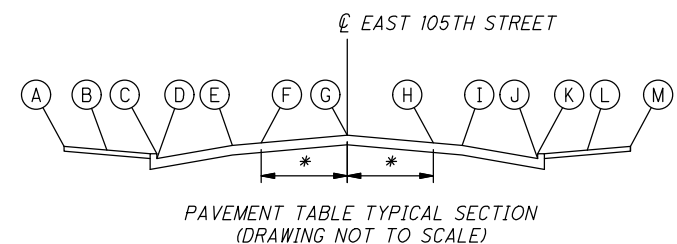


CALCULATED
KJM
CHECKED
JTS

LEFT REMARKS	LEFT SIDE														EAST 105TH STREET		RIGHT SIDE														RIGHT REMARKS																	
	WALK					TRELAWN			CURB	PAVEMENT					EX. TRACKS	CENTERLINE	EX. TRACKS	PAVEMENT					CURB	TRELAWN			WALK																					
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TRELAWN CROSS-SLOPE	TRELAWN WIDTH (FEET)	TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION	PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)	PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)	PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TRELAWN WIDTH (FEET)	PROPOSED TRELAWN CROSS-SLOPE	PROPOSED FACE OF WALK ELEVATION	WALK WIDTH (FEET)		PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION	EXISTING BACK OF WALK ELEVATION	BACK OF WALK ELEVATION DIFFERENCE (FEET)													
	A				B			C	D			E			F	G	H			I			J	K			L			M																		
	-0.01	632.97	632.96	2.00%	5.00	632.86	2.00%	3.50	632.79	632.37	4.59%	8.50	632.76	2.50%	12.00	633.00	139+75.00	633.06	633.00	12.00	2.50%	632.76	8.00	4.25%	632.42	632.84	MATCH EX. 3' OFF B/C																					
	0.00	632.81	632.81	1.57%	5.00	632.73	1.57%	3.50	632.68	632.26	4.12%	8.50	632.61	2.50%	12.00	632.84	140+00.00	632.91	632.84	12.00	2.50%	632.61	8.00	4.00%	632.29	632.71	MATCH EX. 3' OFF B/C																					
	0.00	632.65	632.65	1.10%	5.00	632.60	1.10%	3.50	632.56	632.14	3.65%	8.50	632.45	2.50%	12.00	632.69	140+25.00	632.75	632.69	12.00	2.50%	632.45	8.00	3.63%	632.16	632.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A														
	OSTEND AVE INTERSECTION																140+50.00	632.61	DREXEL AVE INTERSECTION																													
	OSTEND AVE INTERSECTION																140+75.00	632.47	DREXEL AVE INTERSECTION																													
	OSTEND AVE INTERSECTION																141+00.00	632.34	632.27	12.00	2.50%	632.04	7.50	4.80%	631.68	632.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
	OSTEND AVE INTERSECTION																141+25.00	632.20	632.13	12.00	2.50%	631.90	7.50	4.67%	631.55	631.97	4.75	0.50%	631.99	5.00	0.50%	632.02	632.00	0.02														
	MATCH EX. 3' OFF B/C								632.11	631.69	0.82%	8.50	631.76	2.50%	12.00	632.00	141+50.00	632.06	632.00	12.00	2.50%	631.76	7.50	4.53%	631.42	631.84	MATCH EX. 3' OFF B/C																					
	MATCH EX. 3' OFF B/C								631.83	631.41	2.47%	8.50	631.62	2.50%	12.00	631.86	141+75.00	631.92	631.86	12.00	2.50%	631.62	7.50	4.40%	631.29	631.71	MATCH EX. 3' OFF B/C																					
	MATCH EX. 3' OFF B/C								631.54	631.12	4.35%	8.50	631.49	2.50%	12.00	631.72	142+00.00	631.79	631.72	12.00	2.50%	631.49	7.50	4.40%	631.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE									
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	630.96	4.59%	8.50	631.35	2.50%	12.00	631.58	142+25.00	631.65	631.58	12.00	2.50%	631.35	7.50	4.13%	631.04	631.46	MATCH EX. 3' OFF B/C																					
	MATCH EX. 3' OFF B/C								631.21	630.79	4.94%	8.50	631.21	2.50%	12.00	631.45	142+50.00	631.51	631.45	12.00	2.50%	631.21	7.50	4.13%	630.90	631.32	4.50	0.50%	631.34	5.00	0.50%	631.37	631.13	0.24														
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	630.68	4.71%	8.50	631.08	2.50%	12.00	631.31	142+75.00	631.38	631.31	12.00	2.50%	631.08	7.50	4.27%	630.76	631.18	4.50	0.50%	631.20	5.00	0.50%	631.23	631.16	0.07														
DRIVE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	630.56	4.47%	8.50	630.94	2.50%	12.00	631.17	143+00.00	631.24	631.17	12.00	2.50%	630.94	7.50	4.27%	630.62	631.04	4.50	0.50%	631.06	5.00	0.50%	631.09	631.04	0.05														
	SOMERSET AVE INTERSECTION																143+25.00	631.10	631.04	12.00	2.50%	630.80	7.50	4.27%	630.48	630.90	4.50	0.50%	630.92	5.00	0.50%	630.95	630.91	0.04														
	SOMERSET AVE INTERSECTION																143+50.00	630.96	630.90	12.00	2.50%	630.66	7.50	4.27%	630.34	630.76	4.50	0.50%	630.78	5.00	0.50%	630.81	630.75	0.06														
	SOMERSET AVE INTERSECTION																143+75.00	630.83	PASADENA AVE INTERSECTION																													
	0.00	630.60	630.60	1.81%	5.00	630.51	1.81%	4.00	630.44	630.02	4.35%	8.50	630.39	2.50%	12.00	630.62	144+00.00	630.69	PASADENA AVE INTERSECTION																													
	0.00	630.62	630.62	2.00%	5.00	630.52	6.33%	4.00	630.27	629.85	4.71%	8.50	630.25	2.50%	12.00	630.49	144+25.00	630.55	PASADENA AVE INTERSECTION																													
	MATCH EX. 3' OFF B/C								630.10	629.68	5.06%	8.50	630.11	2.50%	12.00	630.35	144+50.00	630.41	PASADENA AVE INTERSECTION																													
	MATCH EX. 3' OFF B/C								629.93	629.51	5.53%	8.50	629.98	2.50%	12.00	630.21	144+75.00	630.28	630.21	12.00	2.50%	629.98	7.50	7.47%	629.42	629.84	5.00	2.00%	629.94	5.00	2.00%	630.04	630.10	-0.06														
	MATCH EX. 3' OFF B/C								629.79	629.37	5.06%	8.50	629.80	2.50%	12.00	630.04	145+00.00	630.10	630.04	12.00	2.50%	629.80	7.50	6.53%	629.31	629.73	5.00	2.00%	629.83	5.00	2.00%	629.93	629.93	0.00														
	MATCH EX. 3' OFF B/C								629.65	629.23	4.59%	8.50	629.62	2.50%	12.00	629.86	145+25.00	629.92	629.86	12.00	2.50%	629.62	7.50	5.47%	629.21	629.63	5.00	1.23%	629.69	5.00	1.23%	629.75	629.75	0.00														
	MATCH EX. 3' OFF B/C								629.51	629.09	4.12%	8.50	629.44	2.50%	12.00	629.67	145+50.00	629.74	629.67	12.00	2.50%	629.44	7.50	4.53%	629.10	629.52	5.00	0.50%	629.54	5.00	0.50%	629.57	629.43	0.14														
	MATCH EX. 3' OFF B/C								629.44	629.02	2.82%	8.50	629.26	2.50%	12.00	629.49	145+75.00	629.56	629.49	12.00	2.50%	629.26	7.50	3.60%	628.99	629.41	5.00	0.50%	629.43	5.00	0.50%	629.46	629.22	0.24														
	PARKGATE AVE INTERSECTION																146+00.00	629.45	629.39	12.00	2.50%	629.15	7.50	3.60%	628.88	629.30	5.00	0.50%	629.32	5.00	0.50%	629.35	629.20	0.15														
	PARKGATE AVE INTERSECTION																146+25.00	629.37	629.31	12.00	2.50%	629.07	7.50	3.87%	628.78	629.20	5.00	0.50%	629.22	5.00	0.50%	629.25	629.21	0.04														
	PARKGATE AVE INTERSECTION																146+50.00	629.29	629.23	12.00	2.50%	628.99	7.50	4.93%	628.62	629.04	5.00	0.50%	629.06	5.00	0.50%	629.09	628.80	0.29														
	0.00	628.97	628.97	0.70%	5.00	628.93	0.70%	4.00	628.91	628.49	4.94%	8.50	628.91	2.50%	12.00	629.14	146+75.00	629.21	MASSIE AVE INTERSECTION																													
	MATCH EX. 3' OFF B/C								628.82	628.40	5.06%	8.50	628.83	2.50%	12.00	629.06	147+00.00	629.13	MASSIE AVE INTERSECTION																													
	MATCH EX. 3' OFF B/C								628.74	628.32	5.06%	8.50	628.75	2.50%	12.00	628.98	147+25.00	629.05	628.98	12.00	2.50%	628.75	7.50	5.60%	628.33	628.75	MATCH EX. 3' OFF B/C																					
	-0.07	629.04	628.97	2.00%	5.00	628.87	2.00%	4.00	628.79	628.37	5.06%	8.50	628.80	2.50%	12.00	629.03	147+50.00	629.10	629.03	12.00	2.50%	628.80	7.50	5.87%	628.36	628.78	MATCH EX. 3' OFF B/C																					
	0.00	629.08	629.08	1.15%	5.00	629.02	1.15%	4.00	628.98	628.56	3.76%	8.50	628.88	2.50%	12.00	629.12	147+75.00	629.18	629.12	12.00	2.50%	628.88	7.50	6.00%	628.43	628.85	MATCH EX. 3' OFF B/C																					
	MATCH EX. 3' OFF B/C								629.18	628.76	2.47%	8.50	628.97	2.50%	12.00	629.20	148+00.00	629.27	629.20	12.00	2.50%	628.97	7.50	6.27%	628.50	628.92	MATCH EX. 3' OFF B/C																					
	0.00	629.17	629.17	0.70%	5.00	629.13	0.70%	4.00	629.11	628.69	4.24%	8.50	629.05	2.50%	12.00	629.29	148+25.00	629.35	629.29	12.00	2.50%	629.05	7.50	6.27%	628.58	629.00	MATCH EX. 3' OFF B/C																					
	0.00	629.35	629.35	2.00%	5.00	629.25	5.58%	4.00	629.03	628.61	6.24%	8.50	629.14	2.50%	12.00	629.37	148+50.00	629.44	629.37	12.00	2.50%	629.14	7.50	6.53%	628.65	629.07	MATCH EX. 3' OFF B/C																					
	PIERPOINT AVE INTERSECTION																148+75.00	629.52	629.33	12.00	2.50%	629.22	7.50	6.53%	628.73	629.15	4.50	2.00%	629.24	5.00	2.00%	629.34	629.40	-0.06														
	PIERPOINT AVE INTERSECTION																149+00.00	629.61	629.42	12.00	2.50%	629.31	7.50	6.13%	628.85	629.27	4.50	2.00%	629.36	5.00	2.00%	629.46	629.50	-0.04														
	PIERPOINT AVE INTERSECTION																149+25.00	629.69	629.50	12.00	2.50%	629.39	7.50	5.33%	628.99	629.41	MATCH EX. 3' OFF B/C																					
	MATCH EX. 3.75' OFF B/C								629.49	629.07	4.69%	8.75	629.48	2.50%	12.00	629.59	149+50.00	629.78	629.59	12.00	2.50%	629.48	7.50	4.53%	629.14	629.56	MATCH EX. 3' OFF B/C																					

NOTES:

- PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
- IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
- FOR TYPICAL SECTIONS SEE SHEETS 8-9.



* 9.0'
4.5' BEGIN TO SUPERIOR AVENUE
PIERPOINT AVENUE TO END
SUPERIOR AVENUE TO PIERPOINT AVENUE

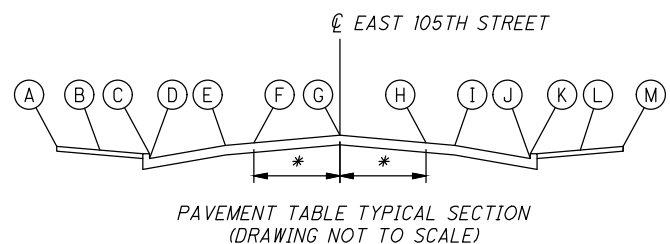
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LEFT SIDE															EAST 105TH STREET		RIGHT SIDE																				
LEFT REMARKS	WALK					TREELAWN			CURB	PAVEMENT					EX. TRACKS	CENTERLINE	EX. TRACKS	PAVEMENT					CURB	TREELAWN			WALK			RIGHT REMARKS							
	BACK OF WALK ELEVATION DIFFERENCE (FEET)	EXISTING BACK OF WALK ELEVATION	PROPOSED BACK OF WALK ELEVATION	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (FEET)	PROPOSED FACE OF WALK ELEVATION	PROPOSED TREELAWN CROSS-SLOPE	TREELAWN WIDTH (FEET)	TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	PROPOSED PARKING LANE CROSS-SLOPE	PARKING LANE WIDTH (FEET)	PROPOSED TRAVEL LANE ELEVATION	PROPOSED TRAVEL LANE CROSS-SLOPE	TRAVEL LANE WIDTH (FEET)	PROPOSED ELEVATION AT TRACK LOCATION	CENTERLINE STATION	PROFILE GRADE	PROPOSED ELEVATION AT TRACK LOCATION	TRAVEL LANE WIDTH (FEET)	PROPOSED TRAVEL LANE CROSS-SLOPE	PROPOSED TRAVEL LANE ELEVATION	BIKE LANE WIDTH (FEET)	PROPOSED BIKE LANE CROSS-SLOPE	PROPOSED GUTTER ELEVATION	TOP OF CURB ELEVATION	TREELAWN WIDTH (FEET)	PROPOSED TREELAWN CROSS-SLOPE	PROPOSED FACE OF WALK ELEVATION		WALK WIDTH (FEET)	PROPOSED WALK CROSS-SLOPE	PROPOSED BACK OF WALK ELEVATION	EXISTING BACK OF WALK ELEVATION	BACK OF WALK ELEVATION DIFFERENCE (FEET)		
	A					B			C	D			E		F		G	H			I			J	K			L			M						
	0.31	629.31	629.62	0.50%	5.00	629.59	0.50%	3.75	629.57	629.15	4.69%	8.75	629.56	2.50%	12.00	629.67	149+75.00	629.86	MORISON AVE INTERSECTION																		
	MATCH EX. 3' OFF B/C								629.65	629.23	4.69%	8.75	629.64	2.50%	12.00	629.75	150+00.00	629.94	MORISON AVE INTERSECTION																		
CURB RAMP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	629.30	4.80%	8.75	629.72	2.50%	12.00	629.83	150+25.00	630.02	629.83	12.00	2.50%	629.72	7.50	6.27%	629.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CURB RAMP	
	MATCH EX. 3' OFF B/C								629.80	629.38	4.69%	8.75	629.79	2.50%	12.00	629.90	150+50.00	630.09	629.90	12.00	2.50%	629.79	7.50	6.80%	629.28	629.70	4.50	0.08	630.06	5.00	2.00%	630.16	630.29	-0.13			
	MATCH EX. 3' OFF B/C								629.88	629.46	4.69%	8.75	629.87	2.50%	12.00	629.98	150+75.00	630.17	629.98	12.00	2.50%	629.87	7.50	6.53%	629.38	629.80	4.50	0.08	630.16	5.00	2.00%	630.26	630.33	-0.07			
	MATCH EX. 3' OFF B/C								629.96	629.54	4.57%	8.75	629.94	2.50%	12.00	630.05	151+00.00	630.24	630.05	12.00	2.50%	629.94	7.50	6.13%	629.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE
	MATCH EX. 3' OFF B/C								630.04	629.62	4.57%	8.75	630.02	2.50%	12.00	630.13	151+25.00	630.32	630.13	12.00	2.50%	630.02	7.50	5.87%	629.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	ADAMS AVE INTERSECTION															151+50.00	630.39	630.20	12.00	2.50%	630.09	7.50	6.40%	629.61	630.03	MATCH EX. 3' OFF B/C											
	ADAMS AVE INTERSECTION															151+75.00	630.43	630.24	12.00	2.50%	630.13	7.50	8.00%	629.53	629.95	MATCH EX. 3' OFF B/C											
	ADAMS AVE INTERSECTION															152+00.00	630.35	630.16	12.00	2.50%	630.05	7.50	7.87%	629.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRIVE	
	MATCH EX. 3' OFF B/C								630.01	629.59	4.47%	8.50	629.97	2.50%	12.00	630.08	152+25.00	630.27	630.08	12.00	2.50%	629.97	7.50	7.87%	629.38	629.80	MATCH EX. 3' OFF B/C										
	MATCH EX. 3' OFF B/C								629.91	629.49	4.71%	8.50	629.89	2.50%	12.00	630.00	152+50.00	630.19	630.00	12.00	2.50%	629.89	7.50	10.27%	629.12	629.54	MATCH EX. 3' OFF B/C										
	MATCH EX. 3' OFF B/C								629.71	629.29	6.00%	8.50	629.80	2.50%	12.00	629.91	152+75.00	630.10	AMOR AVE INTERSECTION																		
	MATCH EX. 3' OFF B/C								629.51	629.09	7.41%	8.50	629.72	2.50%	12.00	629.83	153+00.00	630.02	AMOR AVE INTERSECTION																		
DRIVE	MATCH EX. 3' OFF B/C								N/A	629.01	7.41%	8.50	629.64	2.50%	12.00	629.75	153+25.00	629.94	629.75	12.00	2.50%	629.64	7.50	5.60%	629.22	629.64	4.50	0.01	629.66	5.00	0.50%	629.69	629.62	0.07			
	MATCH EX. 3' OFF B/C								629.36	628.94	7.29%	8.50	629.56	2.50%	12.00	629.67	153+50.00	629.86	629.67	12.00	2.50%	629.56	7.50	5.87%	629.12	629.54	MATCH EX. 3' OFF B/C										
	0.00	629.55	629.55	2.00%	5.00	629.45	4.33%	4.00	629.28	628.86	7.18%	8.50	629.47	2.50%	12.00	629.58	153+75.00	629.77	629.58	12.00	2.50%	629.47	7.50	6.00%	629.02	629.44	MATCH EX. 3' OFF B/C										
	MATCH EX. 3' OFF B/C								629.21	628.79	7.06%	8.50	629.39	2.50%	12.00	629.50	154+00.00	629.69	629.50	12.00	2.50%	629.39	7.50	6.27%	628.92	629.34	MATCH EX. 3' OFF B/C										
	KEMPTON AVE INTERSECTION															154+25.00	629.61	629.42	12.00	2.50%	629.31	7.50	6.53%	628.82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CURB RAMP	
	KEMPTON AVE INTERSECTION															154+50.00	629.53	629.34	12.00	2.50%	629.23	7.50	6.80%	628.72	629.14	4.50	0.03	629.29	5.00	0.50%	629.32	629.31	0.01				
	0.00	629.39	629.39	1.51%	5.00	629.31	1.51%	4.50	629.25	628.83	3.66%	8.75	629.15	2.50%	12.00	629.26	154+75.00	629.45	GREENLAWN AVE INTERSECTION																		
CURB RAMP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	628.67	4.46%	8.75	629.06	2.50%	12.00	629.17	155+00.00	629.36	GREENLAWN AVE INTERSECTION																		

NOTES:

1. PROPOSED DRIVEWAY ELEVATION AND SLOPES VARY AND INCLUDE A 4.0' MINIMUM WALK THROUGH EACH. SEE SHEET 124 FOR DRIVE DETAILS AND SHEET 125 FOR DRIVE PROFILES.
2. IT IS ANTICIPATED THAT OLD TROLLEY TRACKS ARE BURIED UNDER THE EXISTING ASPHALT PAVEMENT. FROM THE BEGINNING OF THE PROJECT TO SUPERIOR AVENUE AND FROM PIERPOINT AVENUE TO THE END OF THE PROJECT, TRACK LIMITS ARE APPROXIMATELY 9.0'+/- EITHER SIDE OF THE CENTERLINE. FROM SUPERIOR AVENUE TO PIERPOINT AVENUE, TRACK LIMITS ARE APPROXIMATELY 4.5'+/- EITHER SIDE OF THE CENTERLINE. TRACKS ARE TO REMAIN UNLESS THE ENGINEER DETERMINES FULL DEPTH REPLACEMENT IS REQUIRED. THE PAVEMENT OVER THE TRACKS WILL BE MILLED RESURFACED WITH A 2.50% CROSS-SLOPE. TRACK DETAIL IS SHOWN ON SHEET 13.
3. FOR TYPICAL SECTIONS SEE SHEETS 8-9.



* 9.0'
4.5'

BEGIN TO SUPERIOR AVENUE
PIERPOINT AVENUE TO END
SUPERIOR AVENUE TO PIERPOINT AVENUE

CURVE DATA
CURVE 2
 P.I. = STA. 91+00.29, 28.07' LT
 $\Delta = 86^\circ 13' 28''$
 R = 30'
 L = 45.15'
 PC = STA. 91+00.29, 56.16' LT
 PT = STA. 91+28.31, 26.22' LT

STA. 90+89.29 @ CONST. & R/W EAST 105TH STREET =
 STA. 1700+00.00 @ CONST. & R/W EAST BOULEVARD

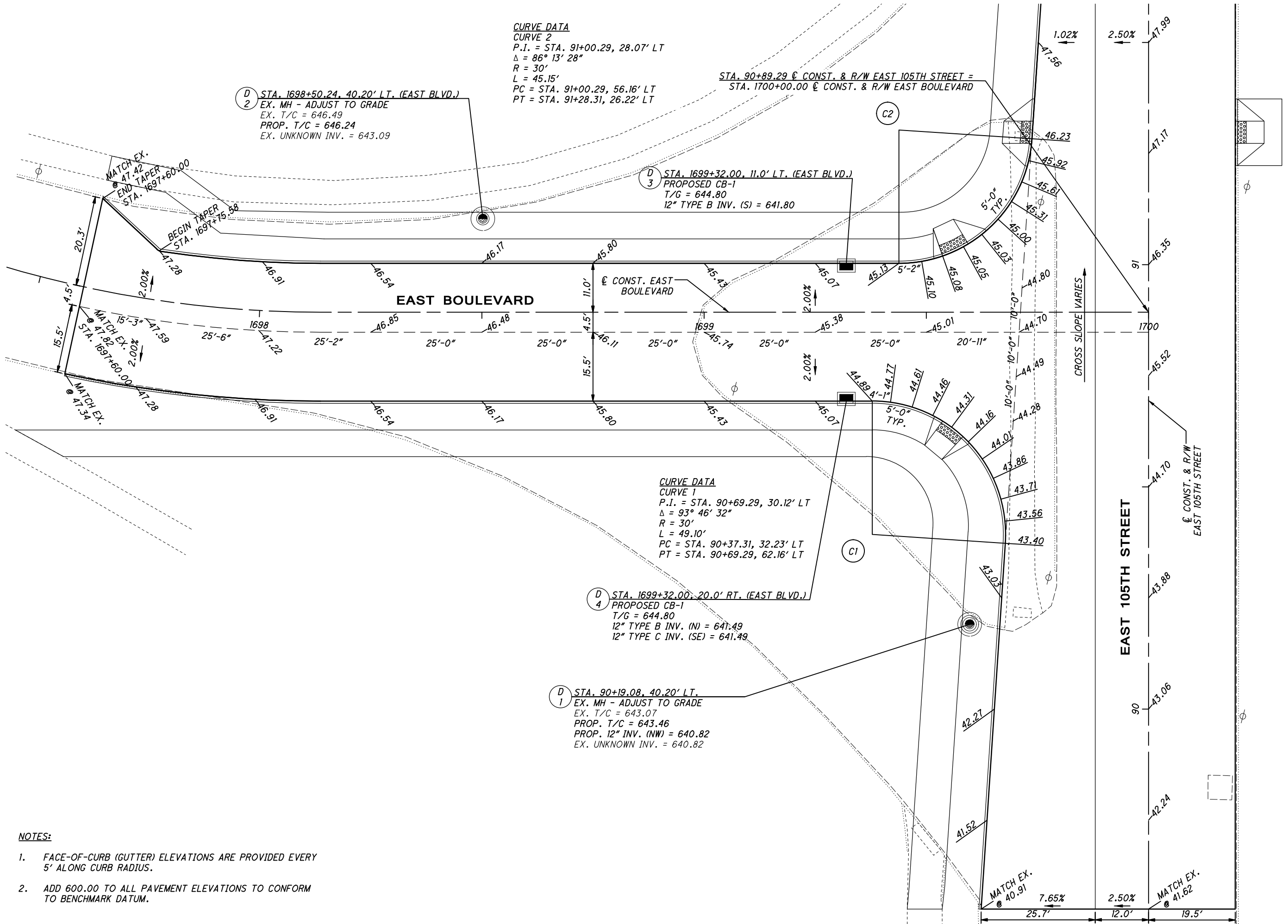
(D) 2 STA. 1698+50.24, 40.20' LT. (EAST BLVD.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 646.49
 PROP. T/C = 646.24
 EX. UNKNOWN INV. = 643.09

(D) 3 STA. 1699+32.00, 11.0' LT. (EAST BLVD.)
 PROPOSED CB-1
 T/G = 644.80
 12" TYPE B INV. (S) = 641.80

(D) 4 STA. 1699+32.00, 20.0' RT. (EAST BLVD.)
 PROPOSED CB-1
 T/G = 644.80
 12" TYPE B INV. (N) = 641.49
 12" TYPE C INV. (SE) = 641.49

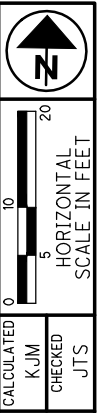
(D) 1 STA. 90+19.08, 40.20' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 643.07
 PROP. T/C = 643.46
 PROP. 12" INV. (NW) = 640.82
 EX. UNKNOWN INV. = 640.82

CURVE DATA
CURVE 1
 P.I. = STA. 90+69.29, 30.12' LT
 $\Delta = 93^\circ 46' 32''$
 R = 30'
 L = 49.10'
 PC = STA. 90+37.31, 32.23' LT
 PT = STA. 90+69.29, 62.16' LT



NOTES:

1. FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
2. ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

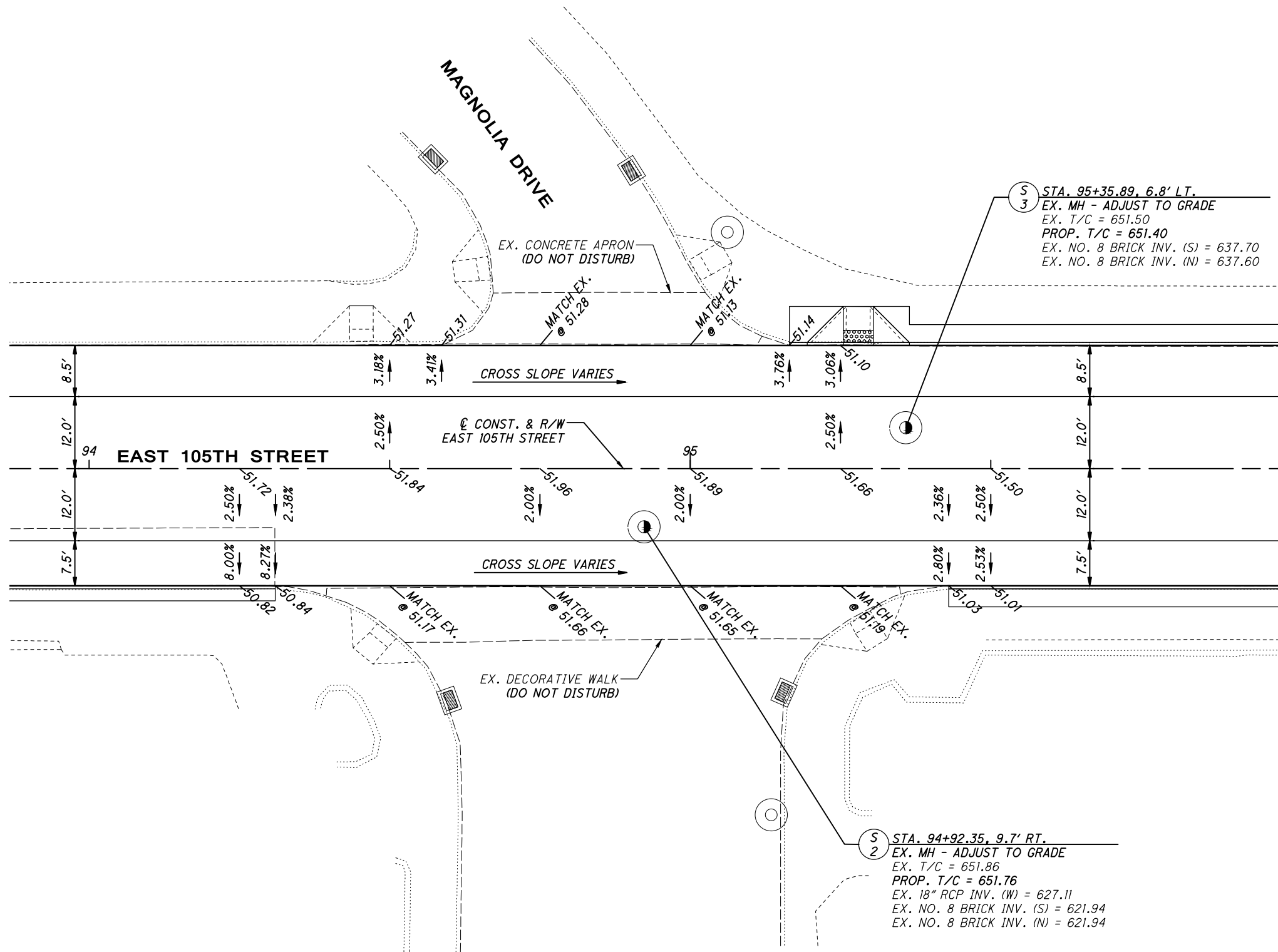


INTERSECTION DETAIL
EAST 105TH STREET & EAST BOULEVARD

EAST 105TH STREET

104
243

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S
 3
 STA. 95+35.89, 6.8' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 651.50
 PROP. T/C = 651.40
 EX. NO. 8 BRICK INV. (S) = 637.70
 EX. NO. 8 BRICK INV. (N) = 637.60

S
 2
 STA. 94+92.35, 9.7' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 651.86
 PROP. T/C = 651.76
 EX. 18" RCP INV. (W) = 627.11
 EX. NO. 8 BRICK INV. (S) = 621.94
 EX. NO. 8 BRICK INV. (N) = 621.94

- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

CALCULATED 0
 KJM
 CHECKED
 JTS

0 5 10
 HORIZONTAL
 SCALE IN FEET

INTERSECTION DETAIL
 EAST 105TH STREET & MAGNOLIA DRIVE

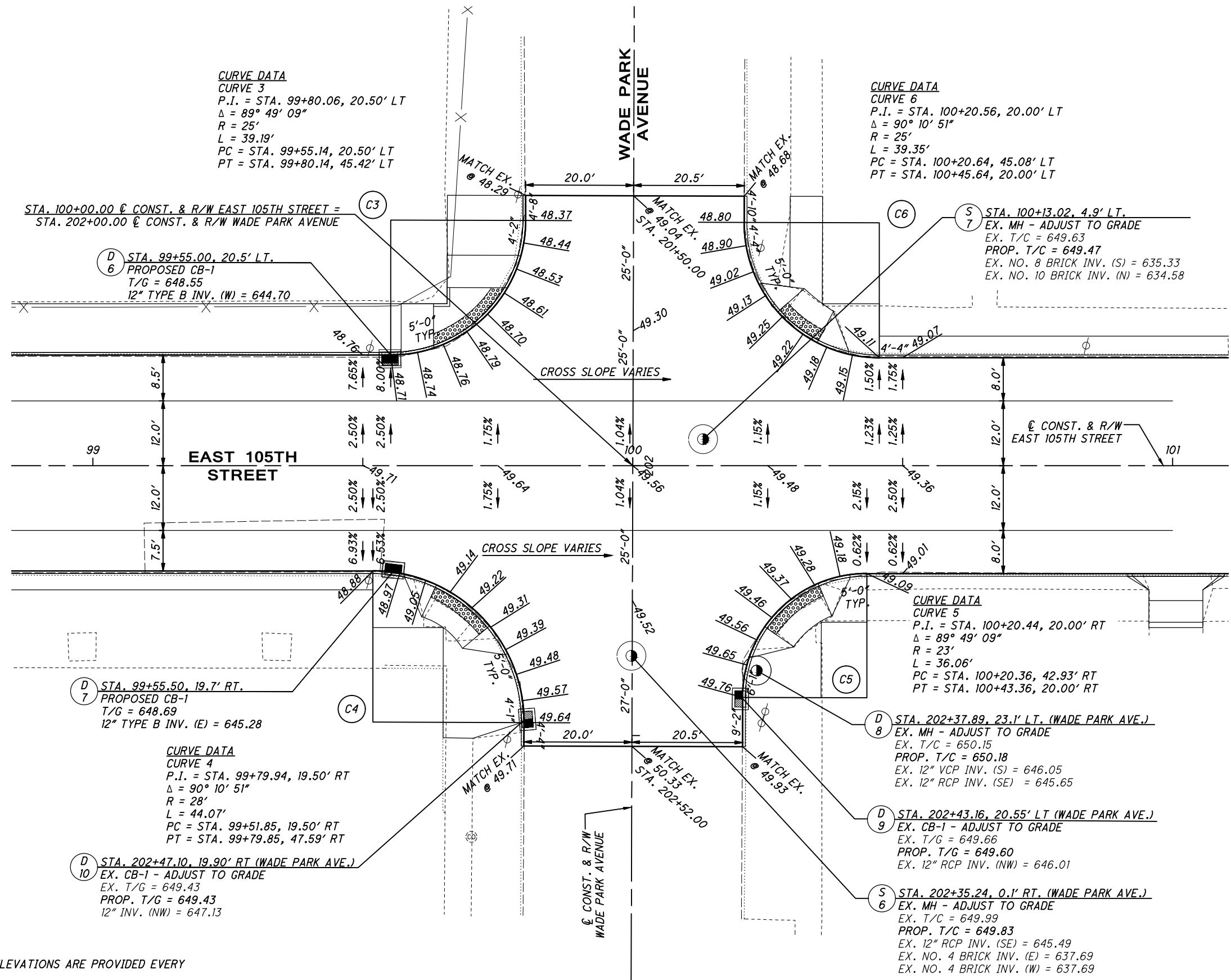
EAST 105TH STREET



CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
EAST 105TH STREET & WADE PARK AVENUE

EAST 105TH STREET



- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

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CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
EAST 105TH ST & ASHBURY AVE & LEE AVE

EAST 105TH STREET

CURVE DATA
CURVE 8
 P.I. = STA. 108+31.69, 20.00' LT
 $\Delta = 64^\circ 54' 01''$
 R = 15'
 L = 16.99'
 PC = STA. 108+22.15, 20.00' LT
 PT = STA. 108+35.74, 28.64' LT

CURVE DATA
CURVE 10
 P.I. = STA. 108+62.72, 20.00' LT
 $\Delta = 114^\circ 47' 30''$
 R = 10'
 L = 20.04'
 PC = STA. 108+69.27, 34.19' LT
 PT = STA. 108+78.35, 20.00' LT

S 16 STA. 110+19.96, 0.3' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 645.46
 PROP. T/C = 645.54
 EX. 6" VCP INV. (W) = 634.26
 EX. 18" VCP INV. (N) = 634.01

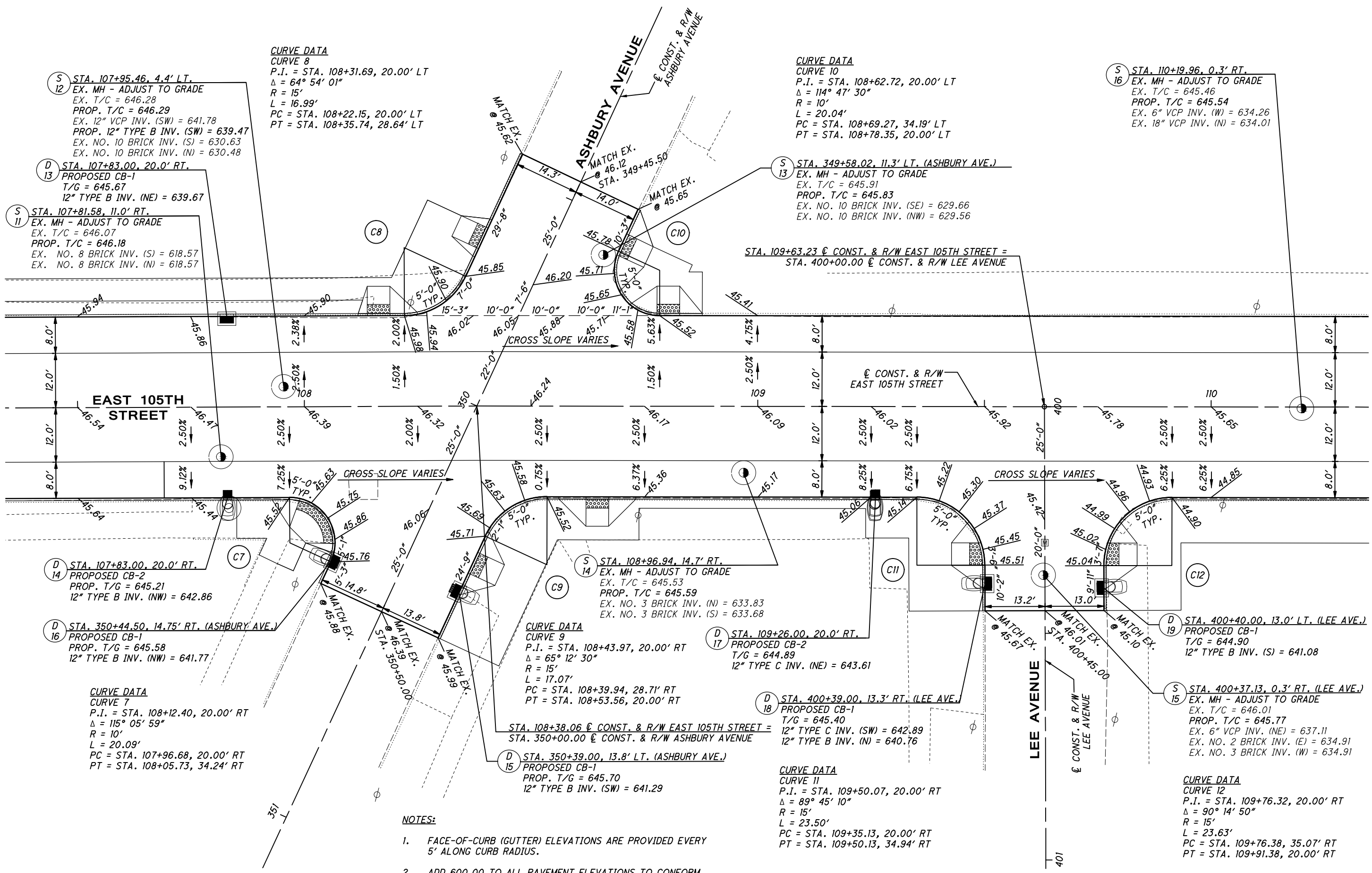
S 12 STA. 107+95.46, 4.4' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 646.28
 PROP. T/C = 646.29
 EX. 12" VCP INV. (SW) = 641.78
 PROP. 12" TYPE B INV. (SW) = 639.47
 EX. NO. 10 BRICK INV. (S) = 630.63
 EX. NO. 10 BRICK INV. (N) = 630.48

D 13 STA. 107+83.00, 20.0' RT.
 PROPOSED CB-1
 T/G = 645.67
 12" TYPE B INV. (NE) = 639.67

S 11 STA. 107+81.58, 11.0' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 646.07
 PROP. T/C = 646.18
 EX. NO. 8 BRICK INV. (S) = 618.57
 EX. NO. 8 BRICK INV. (N) = 618.57

S 13 STA. 349+58.02, 11.3' LT. (ASHBURY AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 645.91
 PROP. T/C = 645.83
 EX. NO. 10 BRICK INV. (SE) = 629.66
 EX. NO. 10 BRICK INV. (NW) = 629.56

STA. 109+63.23 @ CONST. & R/W EAST 105TH STREET =
 STA. 400+00.00 @ CONST. & R/W LEE AVENUE



NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

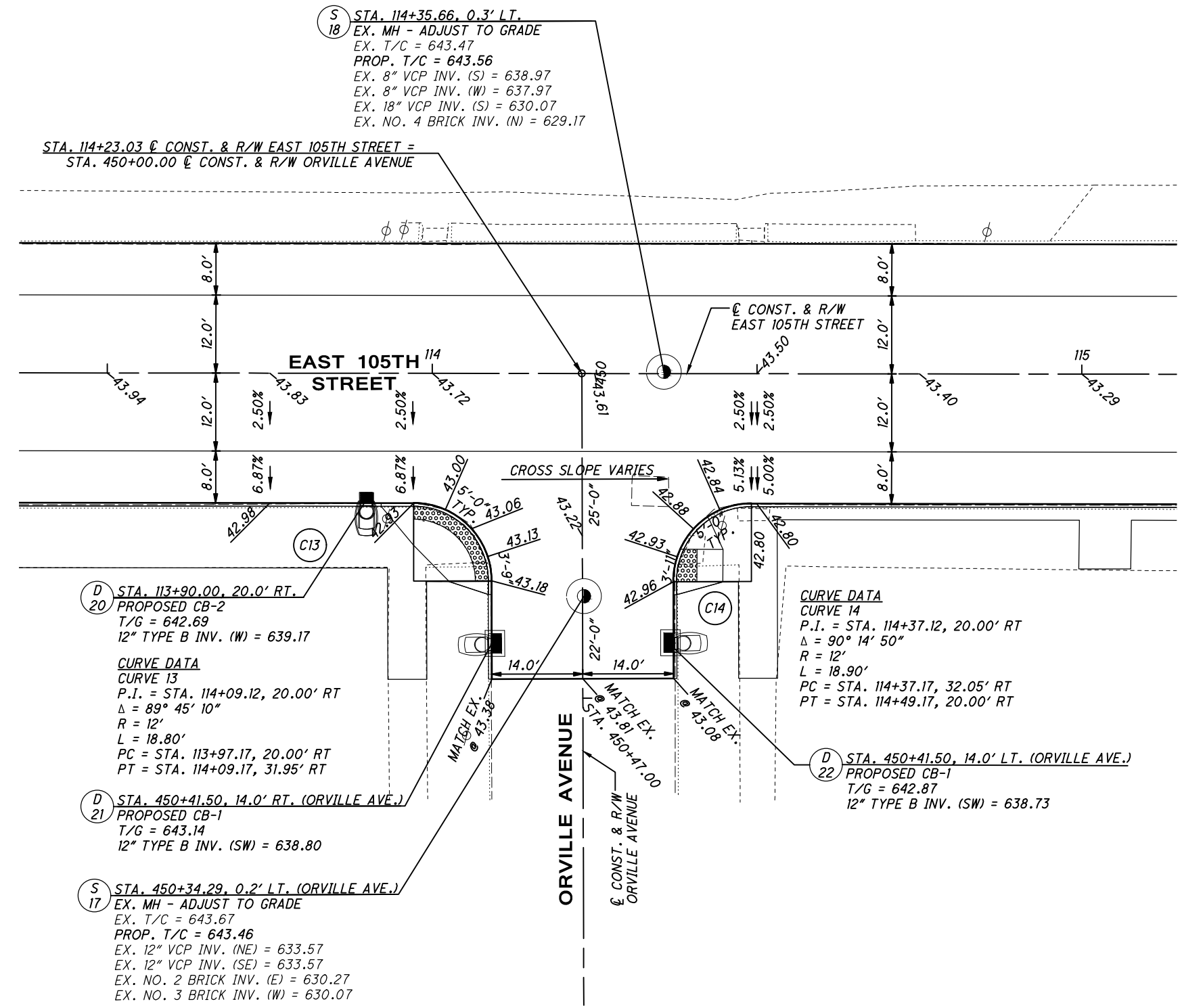
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CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
EAST 105TH STREET & ORVILLE AVENUE

EAST 105TH STREET



- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

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NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

CURVE DATA

CURVE 17
 P.I. = STA. 118+15.14, 20.00' LT
 $\Delta = 96^\circ 56' 50''$
 R = 8'
 L = 13.54'
 PC = STA. 118+06.11, 20.00' LT
 PT = STA. 118+14.05, 28.97' LT

CURVE DATA

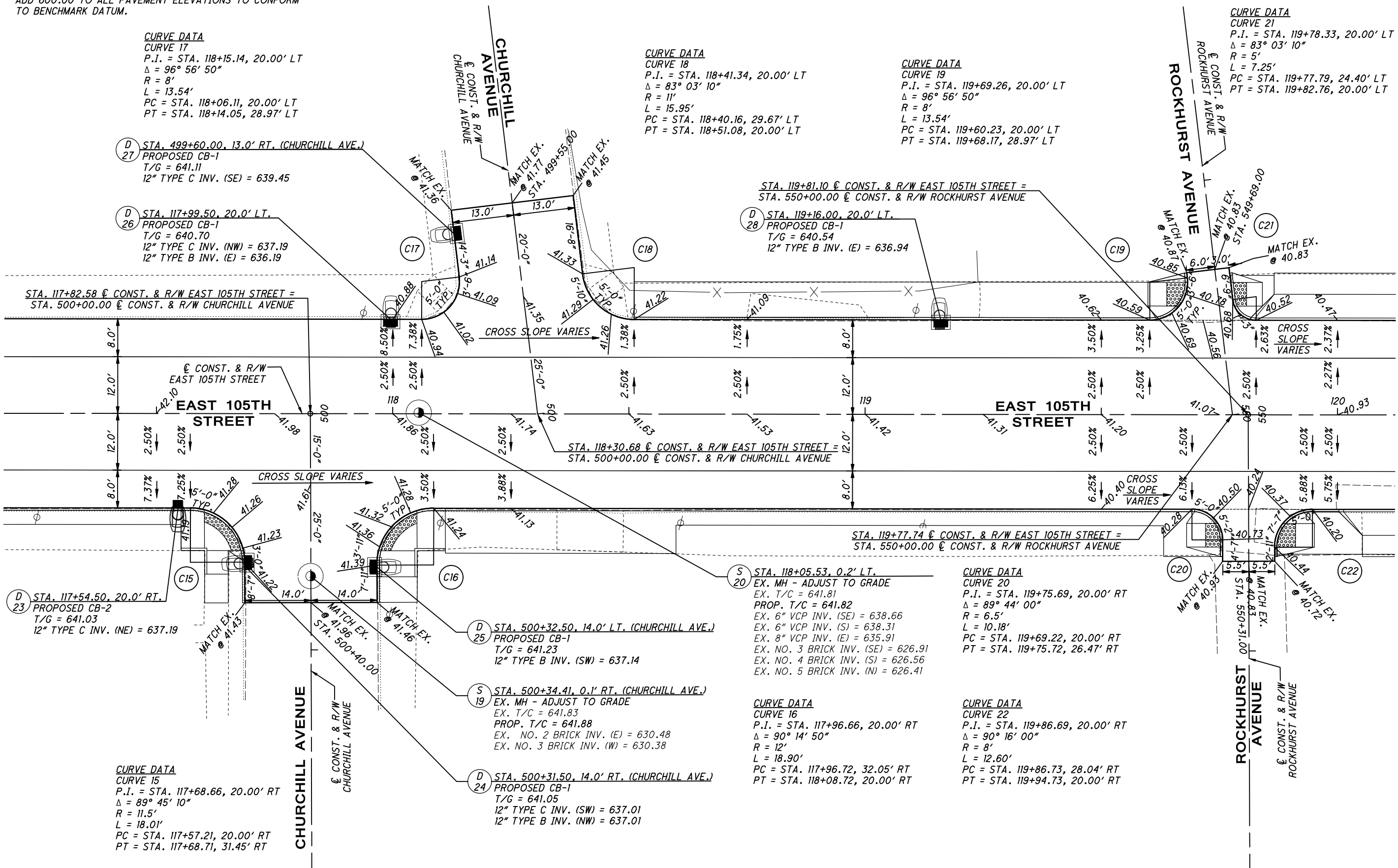
CURVE 18
 P.I. = STA. 118+41.34, 20.00' LT
 $\Delta = 83^\circ 03' 10''$
 R = 11'
 L = 15.95'
 PC = STA. 118+40.16, 29.67' LT
 PT = STA. 118+51.08, 20.00' LT

CURVE DATA

CURVE 19
 P.I. = STA. 119+69.26, 20.00' LT
 $\Delta = 96^\circ 56' 50''$
 R = 8'
 L = 13.54'
 PC = STA. 119+60.23, 20.00' LT
 PT = STA. 119+68.17, 28.97' LT

CURVE DATA

CURVE 21
 P.I. = STA. 119+78.33, 20.00' LT
 $\Delta = 83^\circ 03' 10''$
 R = 5'
 L = 7.25'
 PC = STA. 119+77.79, 24.40' LT
 PT = STA. 119+82.76, 20.00' LT



CURVE DATA

CURVE 15
 P.I. = STA. 117+68.66, 20.00' RT
 $\Delta = 89^\circ 45' 10''$
 R = 11.5'
 L = 18.01'
 PC = STA. 117+57.21, 20.00' RT
 PT = STA. 117+68.71, 31.45' RT

CURVE DATA

CURVE 16
 P.I. = STA. 117+96.66, 20.00' RT
 $\Delta = 90^\circ 14' 50''$
 R = 12'
 L = 18.90'
 PC = STA. 117+96.72, 32.05' RT
 PT = STA. 118+08.72, 20.00' RT

CURVE DATA

CURVE 22
 P.I. = STA. 119+86.69, 20.00' RT
 $\Delta = 90^\circ 16' 00''$
 R = 8'
 L = 12.60'
 PC = STA. 119+86.73, 28.04' RT
 PT = STA. 119+94.73, 20.00' RT

S 20 STA. 118+05.53, 0.2' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 641.81
 PROP. T/C = 641.82
 EX. 6" VCP INV. (SE) = 638.66
 EX. 6" VCP INV. (S) = 638.31
 EX. 8" VCP INV. (E) = 635.91
 EX. NO. 3 BRICK INV. (SE) = 626.91
 EX. NO. 4 BRICK INV. (S) = 626.56
 EX. NO. 5 BRICK INV. (N) = 626.41

CURVE DATA

CURVE 20
 P.I. = STA. 119+75.69, 20.00' RT
 $\Delta = 89^\circ 44' 00''$
 R = 6.5'
 L = 10.18'
 PC = STA. 119+69.22, 20.00' RT
 PT = STA. 119+75.72, 26.47' RT

D 25 STA. 500+32.50, 14.0' LT. (CHURCHILL AVE.)
 PROPOSED CB-1
 T/G = 641.23
 12" TYPE B INV. (SW) = 637.14

S 19 STA. 500+34.41, 0.1' RT. (CHURCHILL AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 641.83
 PROP. T/C = 641.88
 EX. NO. 2 BRICK INV. (E) = 630.48
 EX. NO. 3 BRICK INV. (W) = 630.38

D 24 STA. 500+31.50, 14.0' RT. (CHURCHILL AVE.)
 PROPOSED CB-1
 T/G = 641.05
 12" TYPE C INV. (SW) = 637.01
 12" TYPE B INV. (NW) = 637.01

D 23 STA. 117+54.50, 20.0' RT.
 PROPOSED CB-2
 T/G = 641.03
 12" TYPE C INV. (NE) = 637.19

D 28 STA. 119+16.00, 20.0' LT.
 PROPOSED CB-1
 T/G = 640.54
 12" TYPE B INV. (E) = 636.94

D 26 STA. 117+99.50, 20.0' LT.
 PROPOSED CB-1
 T/G = 640.70
 12" TYPE C INV. (NW) = 637.19
 12" TYPE B INV. (E) = 636.19

D 27 STA. 499+60.00, 13.0' RT. (CHURCHILL AVE.)
 PROPOSED CB-1
 T/G = 641.11
 12" TYPE C INV. (SE) = 639.45

STA. 119+81.10 @ CONST. & R/W EAST 105TH STREET =
 STA. 550+00.00 @ CONST. & R/W ROCKHURST AVENUE

STA. 117+82.58 @ CONST. & R/W EAST 105TH STREET =
 STA. 500+00.00 @ CONST. & R/W CHURCHILL AVENUE

STA. 118+30.68 @ CONST. & R/W EAST 105TH STREET =
 STA. 500+00.00 @ CONST. & R/W CHURCHILL AVENUE

STA. 119+77.74 @ CONST. & R/W EAST 105TH STREET =
 STA. 550+00.00 @ CONST. & R/W ROCKHURST AVENUE

INTERSECTION DETAIL
 E. 105TH ST & CHURCHILL AVE & ROCKHURST AVE

EAST 105TH STREET

CALCULATED: KJM
 CHECKED: JTS

SCALE IN FEET
 0 5 10 20
 HORIZONTAL

109
243

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NOTES:

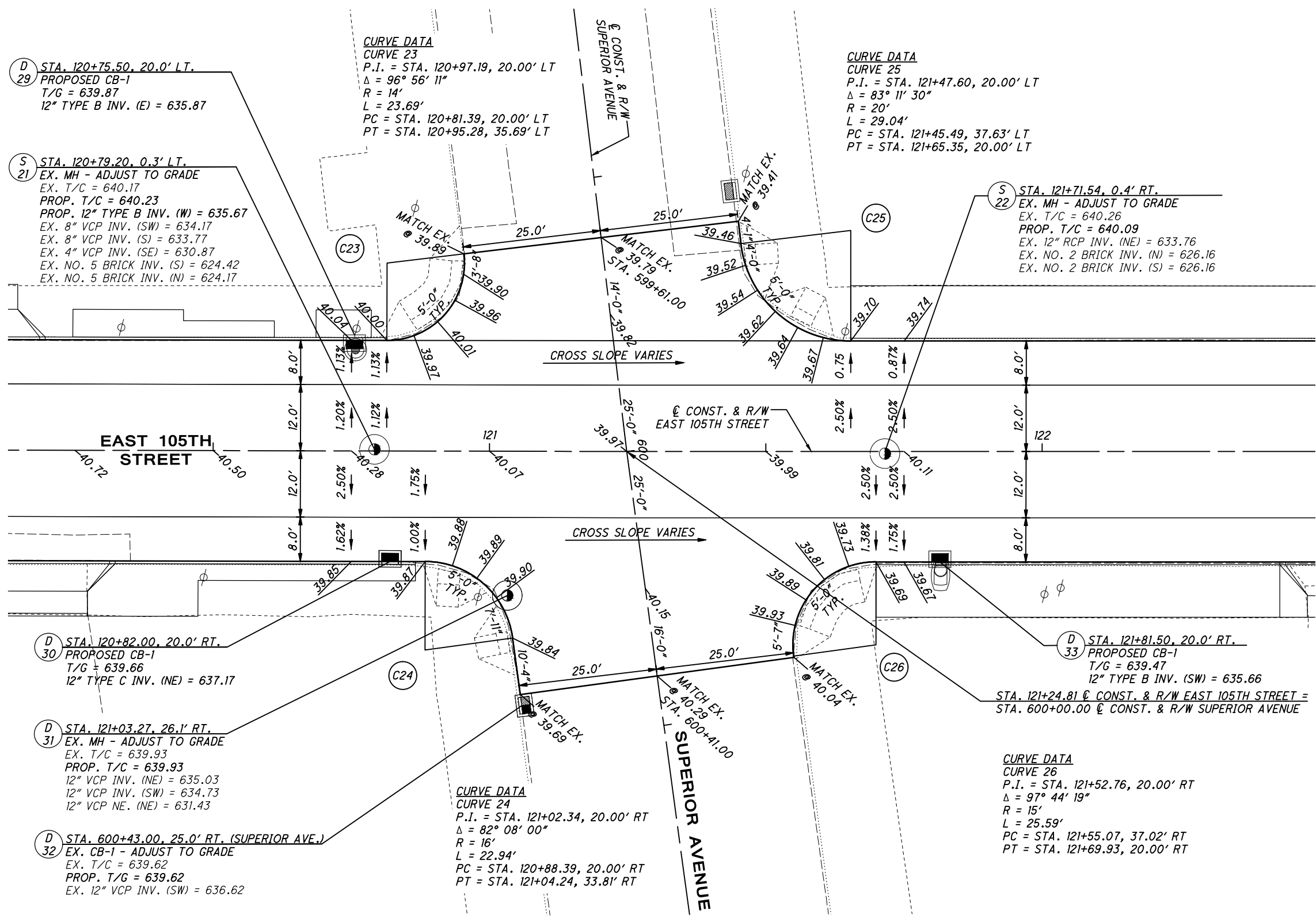
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

CALCULATED
KJM
CHECKED
JTS

0 5 10 20
HORIZONTAL
SCALE IN FEET

**INTERSECTION DETAIL
EAST 105TH STREET & SUPERIOR AVENUE**

EAST 105TH STREET



(D) STA. 120+75.50, 20.0' LT.
29 PROPOSED CB-1
T/G = 639.87
12" TYPE B INV. (E) = 635.87

(S) STA. 120+79.20, 0.3' LT.
21 EX. MH - ADJUST TO GRADE
EX. T/C = 640.17
PROP. T/C = 640.23
EX. 12" TYPE B INV. (W) = 635.67
EX. 8" VCP INV. (SW) = 634.17
EX. 8" VCP INV. (S) = 633.77
EX. 4" VCP INV. (SE) = 630.87
EX. NO. 5 BRICK INV. (S) = 624.42
EX. NO. 5 BRICK INV. (N) = 624.17

CURVE DATA
CURVE 23
P.I. = STA. 120+97.19, 20.00' LT
 $\Delta = 96^\circ 56' 11''$
R = 14'
L = 23.69'
PC = STA. 120+81.39, 20.00' LT
PT = STA. 120+95.28, 35.69' LT

CURVE DATA
CURVE 25
P.I. = STA. 121+47.60, 20.00' LT
 $\Delta = 83^\circ 11' 30''$
R = 20'
L = 29.04'
PC = STA. 121+45.49, 37.63' LT
PT = STA. 121+65.35, 20.00' LT

(S) STA. 121+71.54, 0.4' RT.
22 EX. MH - ADJUST TO GRADE
EX. T/C = 640.26
PROP. T/C = 640.09
EX. 12" RCP INV. (NE) = 633.76
EX. NO. 2 BRICK INV. (N) = 626.16
EX. NO. 2 BRICK INV. (S) = 626.16

(D) STA. 120+82.00, 20.0' RT.
30 PROPOSED CB-1
T/G = 639.66
12" TYPE C INV. (NE) = 637.17

(D) STA. 121+03.27, 26.1' RT.
31 EX. MH - ADJUST TO GRADE
EX. T/C = 639.93
PROP. T/C = 639.93
EX. 12" VCP INV. (NE) = 635.03
EX. 12" VCP INV. (SW) = 634.73
EX. 12" VCP NE. (NE) = 631.43

(D) STA. 600+43.00, 25.0' RT. (SUPERIOR AVE.)
32 EX. CB-1 - ADJUST TO GRADE
EX. T/C = 639.62
PROP. T/G = 639.62
EX. 12" VCP INV. (SW) = 636.62

CURVE DATA
CURVE 24
P.I. = STA. 121+02.34, 20.00' RT
 $\Delta = 82^\circ 08' 00''$
R = 16'
L = 22.94'
PC = STA. 120+88.39, 20.00' RT
PT = STA. 121+04.24, 33.81' RT

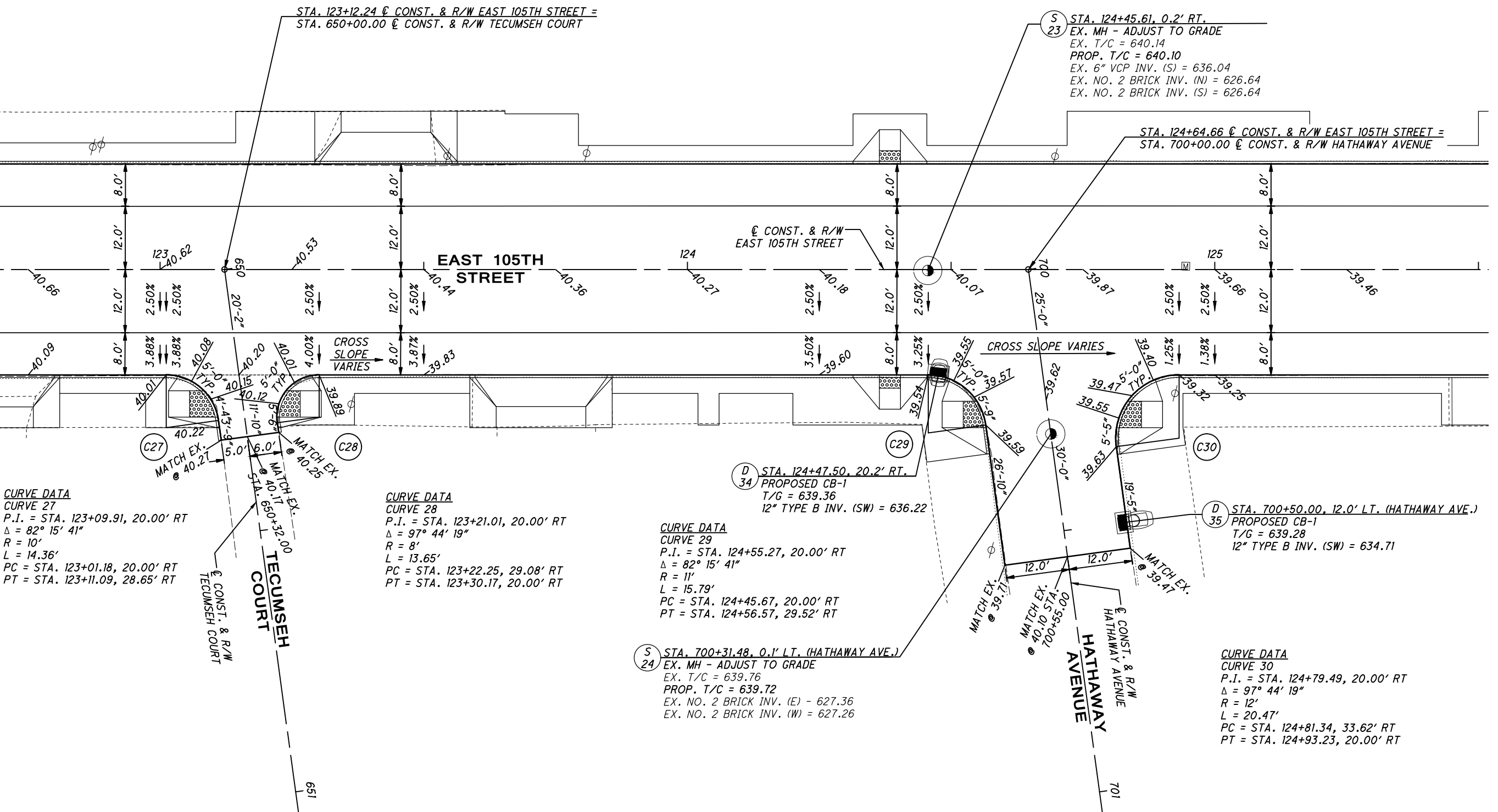
CURVE DATA
CURVE 26
P.I. = STA. 121+52.76, 20.00' RT
 $\Delta = 97^\circ 44' 19''$
R = 15'
L = 25.59'
PC = STA. 121+55.07, 37.02' RT
PT = STA. 121+69.93, 20.00' RT

(D) STA. 121+81.50, 20.0' RT.
33 PROPOSED CB-1
T/G = 639.47
12" TYPE B INV. (SW) = 635.66
STA. 121+24.81 ϕ CONST. & R/W EAST 105TH STREET =
STA. 600+00.00 ϕ CONST. & R/W SUPERIOR AVENUE

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NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



CURVE DATA
CURVE 27
 P.I. = STA. 123+09.91, 20.00' RT
 $\Delta = 82^\circ 15' 41''$
 R = 10'
 L = 14.36'
 PC = STA. 123+01.18, 20.00' RT
 PT = STA. 123+11.09, 28.65' RT

CURVE DATA
CURVE 28
 P.I. = STA. 123+21.01, 20.00' RT
 $\Delta = 97^\circ 44' 19''$
 R = 8'
 L = 13.65'
 PC = STA. 123+22.25, 29.08' RT
 PT = STA. 123+30.17, 20.00' RT

CURVE DATA
CURVE 29
 P.I. = STA. 124+55.27, 20.00' RT
 $\Delta = 82^\circ 15' 41''$
 R = 11'
 L = 15.79'
 PC = STA. 124+45.67, 20.00' RT
 PT = STA. 124+56.57, 29.52' RT

CURVE DATA
CURVE 30
 P.I. = STA. 124+79.49, 20.00' RT
 $\Delta = 97^\circ 44' 19''$
 R = 12'
 L = 20.47'
 PC = STA. 124+81.34, 33.62' RT
 PT = STA. 124+93.23, 20.00' RT

S 24 STA. 700+31.48, 0.1' LT. (HATHAWAY AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.76
 PROP. T/C = 639.72
 EX. NO. 2 BRICK INV. (E) = 627.36
 EX. NO. 2 BRICK INV. (W) = 627.26

D 34 STA. 124+47.50, 20.2' RT.
 PROPOSED CB-1
 T/G = 639.36
 12" TYPE B INV. (SW) = 636.22

S 23 STA. 124+45.61, 0.2' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 640.14
 PROP. T/C = 640.10
 EX. 6" VCP INV. (S) = 636.04
 EX. NO. 2 BRICK INV. (N) = 626.64
 EX. NO. 2 BRICK INV. (S) = 626.64

D 35 STA. 700+50.00, 12.0' LT. (HATHAWAY AVE.)
 PROPOSED CB-1
 T/G = 639.28
 12" TYPE B INV. (SW) = 634.71



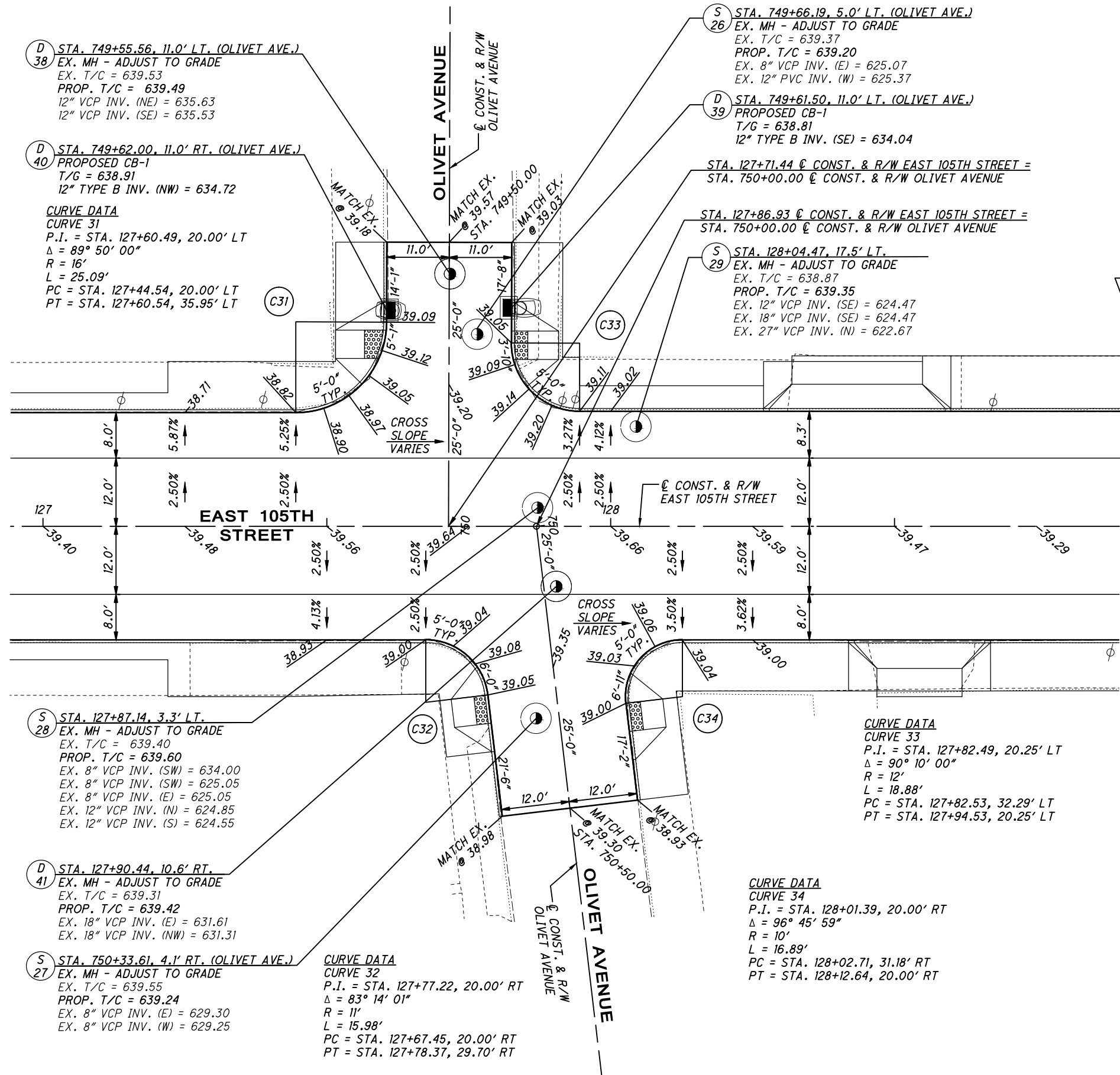
INTERSECTION DETAIL
E. 105TH ST & TECUMSEH CT & HATHAWAY AVE

EAST 105TH STREET

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NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



(D) STA. 749+55.56, 11.0' LT. (OLIVET AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.53
 PROP. T/C = 639.49
 12" VCP INV. (NE) = 635.63
 12" VCP INV. (SE) = 635.53

(D) STA. 749+62.00, 11.0' RT. (OLIVET AVE.)
 PROPOSED CB-1
 T/G = 638.91
 12" TYPE B INV. (NW) = 634.72

CURVE DATA
 CURVE 31
 P.I. = STA. 127+60.49, 20.00' LT
 $\Delta = 89^\circ 50' 00''$
 R = 16'
 L = 25.09'
 PC = STA. 127+44.54, 20.00' LT
 PT = STA. 127+60.54, 35.95' LT

(S) STA. 749+66.19, 5.0' LT. (OLIVET AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.37
 PROP. T/C = 639.20
 EX. 8" VCP INV. (E) = 625.07
 EX. 12" PVC INV. (W) = 625.37

(D) STA. 749+61.50, 11.0' LT. (OLIVET AVE.)
 PROPOSED CB-1
 T/G = 638.81
 12" TYPE B INV. (SE) = 634.04

STA. 127+71.44 @ CONST. & R/W EAST 105TH STREET =
 STA. 750+00.00 @ CONST. & R/W OLIVET AVENUE

STA. 127+86.93 @ CONST. & R/W EAST 105TH STREET =
 STA. 750+00.00 @ CONST. & R/W OLIVET AVENUE

(S) STA. 128+04.47, 17.5' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 638.87
 PROP. T/C = 639.35
 EX. 12" VCP INV. (SE) = 624.47
 EX. 18" VCP INV. (SE) = 624.47
 EX. 27" VCP INV. (N) = 622.67

(S) STA. 127+87.14, 3.3' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.40
 PROP. T/C = 639.60
 EX. 8" VCP INV. (SW) = 634.00
 EX. 8" VCP INV. (SW) = 625.05
 EX. 8" VCP INV. (E) = 625.05
 EX. 12" VCP INV. (N) = 624.85
 EX. 12" VCP INV. (S) = 624.55

CURVE DATA
 CURVE 33
 P.I. = STA. 127+82.49, 20.25' LT
 $\Delta = 90^\circ 10' 00''$
 R = 12'
 L = 18.88'
 PC = STA. 127+82.53, 32.29' LT
 PT = STA. 127+94.53, 20.25' LT

(D) STA. 127+90.44, 10.6' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.31
 PROP. T/C = 639.42
 EX. 18" VCP INV. (E) = 631.61
 EX. 18" VCP INV. (NW) = 631.31

(S) STA. 750+33.61, 4.1' RT. (OLIVET AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 639.55
 PROP. T/C = 639.24
 EX. 8" VCP INV. (E) = 629.30
 EX. 8" VCP INV. (W) = 629.25

CURVE DATA
 CURVE 32
 P.I. = STA. 127+77.22, 20.00' RT
 $\Delta = 83^\circ 14' 01''$
 R = 11'
 L = 15.98'
 PC = STA. 127+67.45, 20.00' RT
 PT = STA. 127+78.37, 29.70' RT

CURVE DATA
 CURVE 34
 P.I. = STA. 128+01.39, 20.00' RT
 $\Delta = 96^\circ 45' 59''$
 R = 10'
 L = 16.89'
 PC = STA. 128+02.71, 31.18' RT
 PT = STA. 128+12.64, 20.00' RT

NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

CURVE DATA

CURVE 35
 P.I. = STA. 130+21.24, 20.25' LT
 $\Delta = 89^\circ 50' 00''$
 R = 8'
 L = 12.54'
 PC = STA. 130+13.27, 20.25' LT
 PT = STA. 130+21.27, 28.23' LT

D 45 STA. 799+56.00, 11.3' RT. (HAMPDEN AVE.)
 PROPOSED CB-1
 T/G = 637.62
 12" TYPE B INV. (NE) = 633.59
 STA. 130+32.44 @ CONST. & R/W EAST 105TH STREET =
 STA. 800+00.00 @ CONST. & R/W HAMPDEN AVENUE

D 42 STA. 130+07.00, 20.3' LT.
 PROPOSED CB-1
 T/G = 637.50
 12" TYPE B INV. (NE) = 632.71

S 31 STA. 130+02.81, 3.0' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 638.22
 PROP. T/C = 638.68
 TOP SILT = 636.22

D 43 STA. 130+13.50, 20.0' RT.
 PROPOSED CB-1
 T/G = 637.69
 12" TYPE B INV. (NW) = 633.25

S 32 STA. 130+32.65, 0.2' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 638.32
 PROP. T/C = 638.43
 EX. 12" VCP INV. (N, BLKHD.) = 623.72
 EX. 12" VCP INV. (S) = 623.47
 EX. 18" VCP INV. (E) = 627.82
 EX. 18" VCP INV. (NW) = 623.87

CURVE DATA

CURVE 36
 P.I. = STA. 130+31.21, 20.00' RT
 $\Delta = 84^\circ 10' 04''$
 R = 10'
 L = 14.69'
 PC = STA. 130+22.18, 20.00' RT
 PT = STA. 130+32.13, 28.98' RT

D 44 STA. 799+56.00, 10.8' LT. (HAMPDEN AVE.)
 PROPOSED CB-1
 T/G = 637.68
 12" TYPE B INV. (SE) = 632.39
 UNKNOWN INV. (E) = 634.79
 UNKNOWN INV. (W) = 634.79

S 34 STA. 130+45.51, 19.4' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 637.90
 PROP. T/C = 637.97
 EX. 18" VCP INV. (SE) = 622.65
 EX. 27" VCP INV. (S) = 621.90
 EX. 36" BRICK INV. (N) = 621.45

S 33 STA. 130+40.56, 1.5' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 638.29
 PROP. T/C = 638.30
 EX. 8" VCP INV. (W) = 624.19
 EX. 8" VCP INV. (E) = 624.19
 EX. 12" VCP INV. (N) = 623.84
 EX. 12" VCP INV. (S, BLKHD.) = 623.74

CURVE DATA

CURVE 37
 P.I. = STA. 130+43.24, 20.25' LT
 $\Delta = 90^\circ 10' 00''$
 R = 8'
 L = 12.59'
 PC = STA. 130+43.27, 28.27' LT
 PT = STA. 130+51.27, 20.25' LT

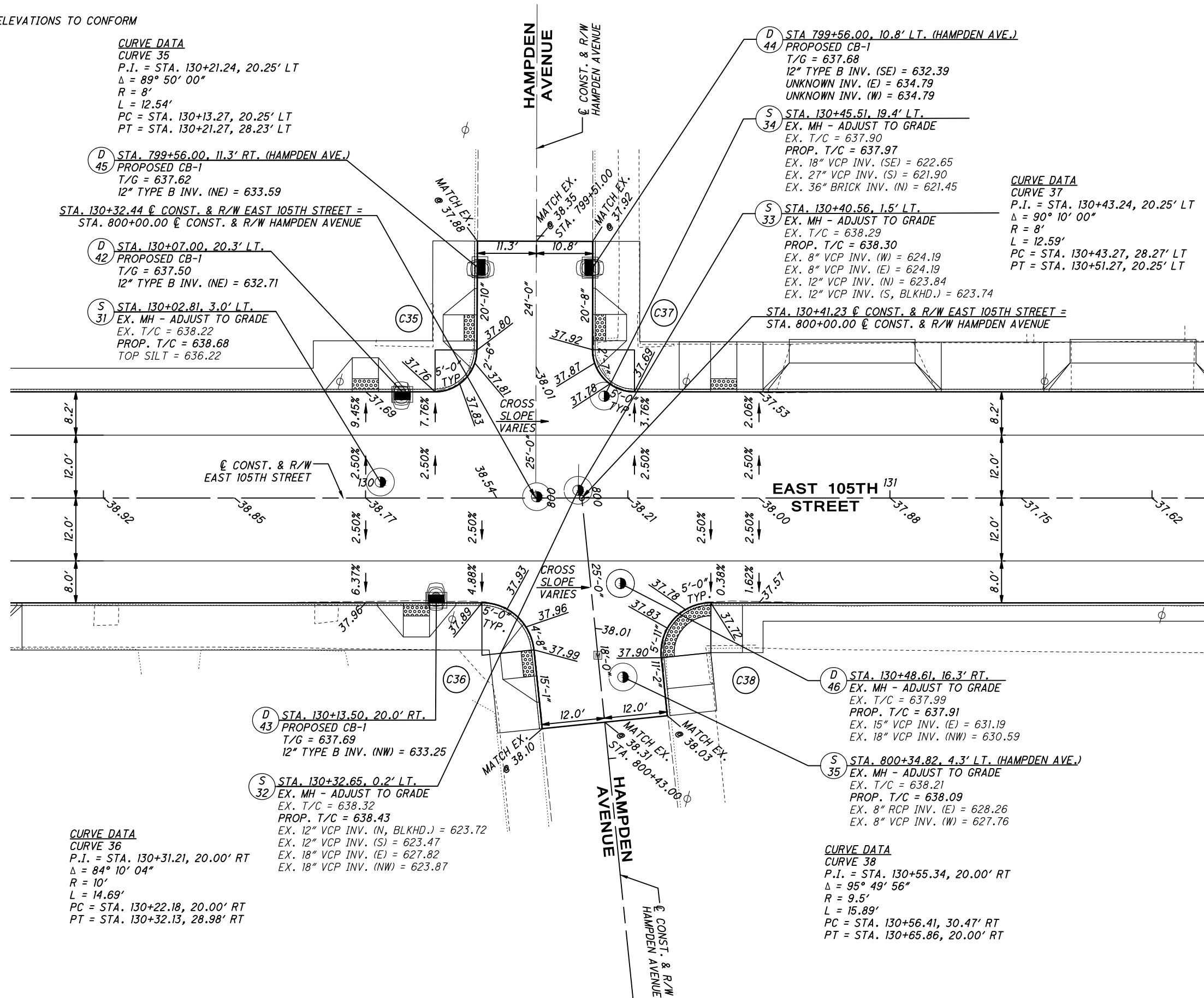
STA. 130+41.23 @ CONST. & R/W EAST 105TH STREET =
 STA. 800+00.00 @ CONST. & R/W HAMPDEN AVENUE

D 46 STA. 130+48.61, 16.3' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 637.99
 PROP. T/C = 637.91
 EX. 15" VCP INV. (E) = 631.19
 EX. 18" VCP INV. (NW) = 630.59

S 35 STA. 800+34.82, 4.3' LT. (HAMPDEN AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 638.21
 PROP. T/C = 638.09
 EX. 8" RCP INV. (E) = 628.26
 EX. 8" VCP INV. (W) = 627.76

CURVE DATA

CURVE 38
 P.I. = STA. 130+55.34, 20.00' RT
 $\Delta = 95^\circ 49' 56''$
 R = 9.5'
 L = 15.89'
 PC = STA. 130+56.41, 30.47' RT
 PT = STA. 130+65.86, 20.00' RT



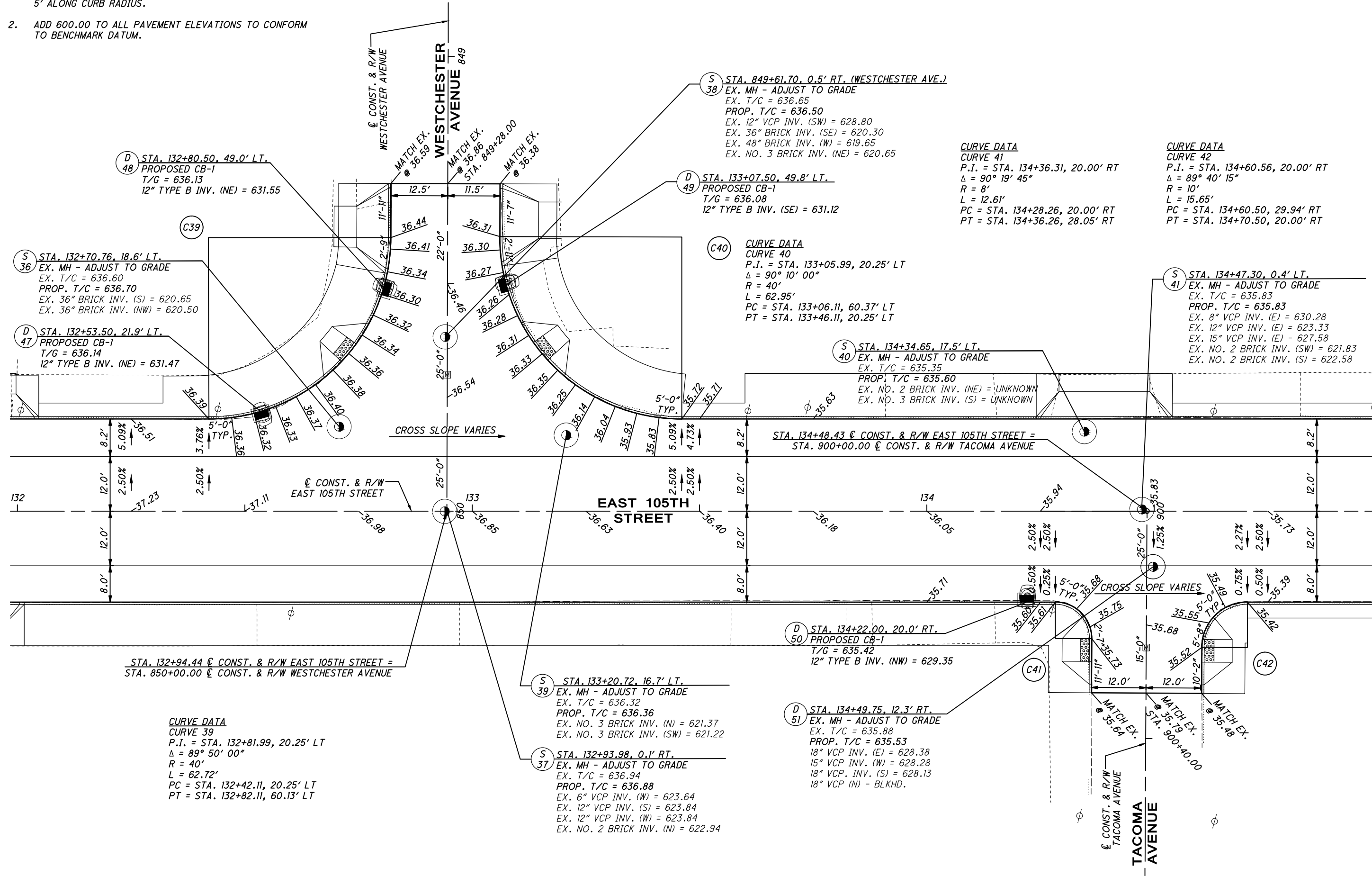
CALCULATED
 KJM
 CHECKED
 JTS

0 5 10 20
 HORIZONTAL
 SCALE IN FEET

INTERSECTION DETAIL
 EAST 105TH STREET & HAMPDEN AVENUE

NOTES:

- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
- ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



(D) STA. 132+80.50, 49.0' LT.
 PROPOSED CB-1
 T/G = 636.13
 12" TYPE B INV. (NE) = 631.55

(S) STA. 132+70.76, 18.6' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 636.60
 PROP. T/C = 636.70
 EX. 36" BRICK INV. (S) = 620.65
 EX. 36" BRICK INV. (NW) = 620.50

(D) STA. 132+53.50, 21.9' LT.
 PROPOSED CB-1
 T/G = 636.14
 12" TYPE B INV. (NE) = 631.47

CURVE DATA
 CURVE 39
 P.I. = STA. 132+81.99, 20.25' LT
 $\Delta = 89^\circ 50' 00''$
 R = 40'
 L = 62.72'
 PC = STA. 132+42.11, 20.25' LT
 PT = STA. 132+82.11, 60.13' LT

(S) STA. 849+61.70, 0.5' RT. (WESTCHESTER AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 636.65
 PROP. T/C = 636.50
 EX. 12" VCP INV. (SW) = 628.80
 EX. 36" BRICK INV. (SE) = 620.30
 EX. 48" BRICK INV. (W) = 619.65
 EX. NO. 3 BRICK INV. (NE) = 620.65

(D) STA. 133+07.50, 49.8' LT.
 PROPOSED CB-1
 T/G = 636.08
 12" TYPE B INV. (SE) = 631.12

(C40) **CURVE DATA**
 CURVE 40
 P.I. = STA. 133+05.99, 20.25' LT
 $\Delta = 90^\circ 10' 00''$
 R = 40'
 L = 62.95'
 PC = STA. 133+06.11, 60.37' LT
 PT = STA. 133+46.11, 20.25' LT

CURVE DATA
 CURVE 41
 P.I. = STA. 134+36.31, 20.00' RT
 $\Delta = 90^\circ 19' 45''$
 R = 8'
 L = 12.61'
 PC = STA. 134+28.26, 20.00' RT
 PT = STA. 134+36.26, 28.05' RT

CURVE DATA
 CURVE 42
 P.I. = STA. 134+60.56, 20.00' RT
 $\Delta = 89^\circ 40' 15''$
 R = 10'
 L = 15.65'
 PC = STA. 134+60.50, 29.94' RT
 PT = STA. 134+70.50, 20.00' RT

(S) STA. 134+34.65, 17.5' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 635.35
 PROP. T/C = 635.60
 EX. NO. 2 BRICK INV. (NE) = UNKNOWN
 EX. NO. 3 BRICK INV. (S) = UNKNOWN

(S) STA. 134+47.30, 0.4' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 635.83
 PROP. T/C = 635.83
 EX. 8" VCP INV. (E) = 630.28
 EX. 12" VCP INV. (E) = 623.33
 EX. 15" VCP INV. (E) = 627.58
 EX. NO. 2 BRICK INV. (SW) = 621.83
 EX. NO. 2 BRICK INV. (S) = 622.58

(D) STA. 134+22.00, 20.0' RT.
 PROPOSED CB-1
 T/G = 635.42
 12" TYPE B INV. (NW) = 629.35

(S) STA. 133+20.72, 16.7' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 636.32
 PROP. T/C = 636.36
 EX. NO. 3 BRICK INV. (N) = 621.37
 EX. NO. 3 BRICK INV. (SW) = 621.22

(S) STA. 132+93.98, 0.1' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 636.94
 PROP. T/C = 636.88
 EX. 6" VCP INV. (W) = 623.64
 EX. 12" VCP INV. (S) = 623.84
 EX. 12" VCP INV. (W) = 623.84
 EX. NO. 2 BRICK INV. (N) = 622.94

(D) STA. 134+49.75, 12.3' RT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 635.88
 PROP. T/C = 635.53
 18" VCP INV. (E) = 628.38
 15" VCP INV. (W) = 628.28
 18" VCP INV. (S) = 628.13
 18" VCP (N) - BLKHD.



INTERSECTION DETAIL
 E. 105TH ST & WESTCHESTER AVE & TACOMA AVE

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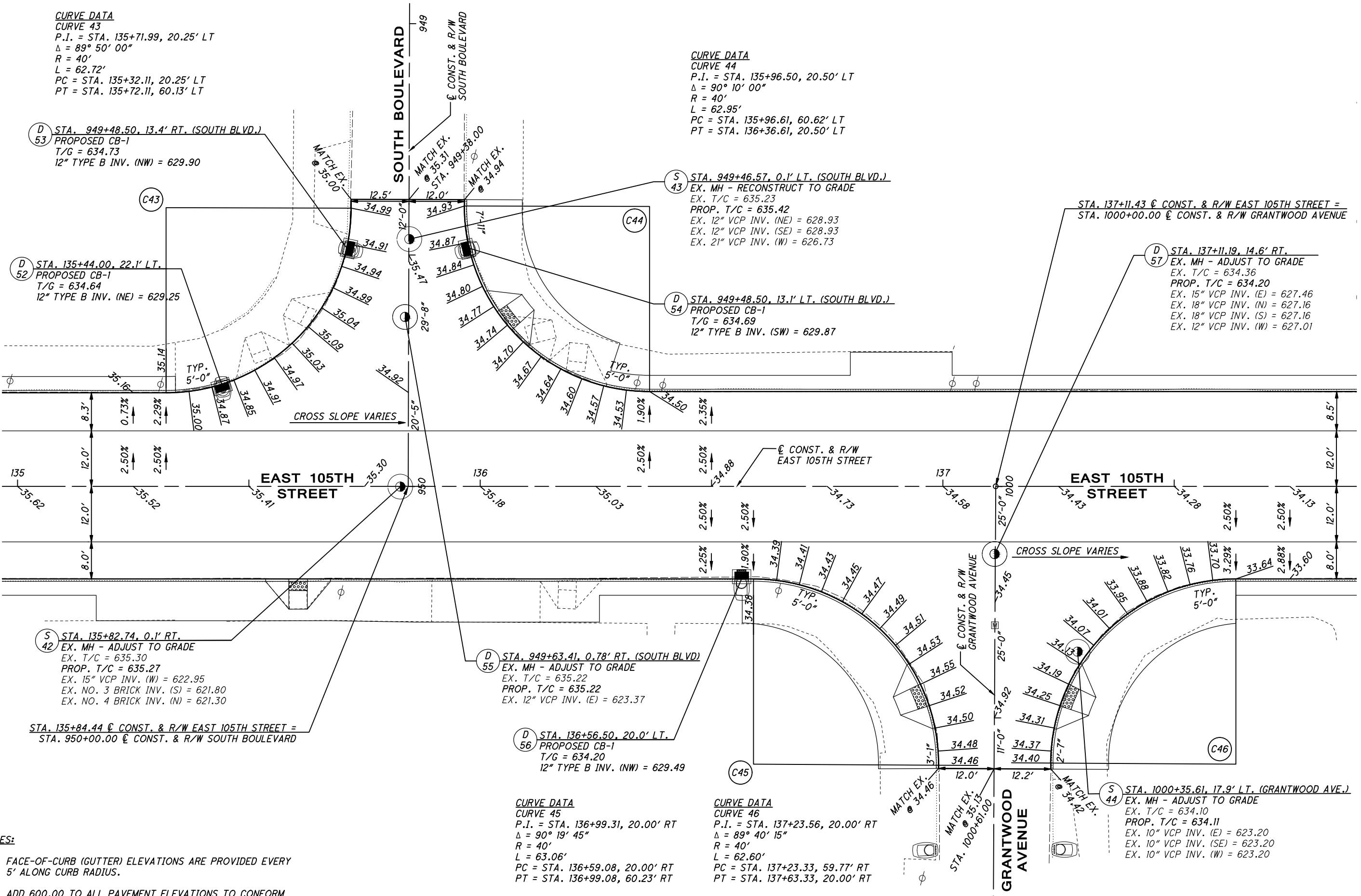
CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
E. 105TH ST & SOUTH BLVD & GRANTWOOD AVE

EAST 105TH STREET

CURVE DATA
CURVE 43
P.I. = STA. 135+71.99, 20.25' LT
 $\Delta = 89^\circ 50' 00''$
R = 40'
L = 62.72'
PC = STA. 135+32.11, 20.25' LT
PT = STA. 135+72.11, 60.13' LT

CURVE DATA
CURVE 44
P.I. = STA. 135+96.50, 20.50' LT
 $\Delta = 90^\circ 10' 00''$
R = 40'
L = 62.95'
PC = STA. 135+96.61, 60.62' LT
PT = STA. 136+36.61, 20.50' LT



D 53 STA. 949+48.50, 13.4' RT. (SOUTH BLVD.)
PROPOSED CB-1
T/G = 634.73
12" TYPE B INV. (NW) = 629.90

D 52 STA. 135+44.00, 22.1' LT.
PROPOSED CB-1
T/G = 634.64
12" TYPE B INV. (NE) = 629.25

S 43 STA. 949+46.57, 0.1' LT. (SOUTH BLVD.)
EX. MH - RECONSTRUCT TO GRADE
EX. T/C = 635.23
PROP. T/C = 635.42
EX. 12" VCP INV. (NE) = 628.93
EX. 12" VCP INV. (SE) = 628.93
EX. 21" VCP INV. (W) = 626.73

D 54 STA. 949+48.50, 13.1' LT. (SOUTH BLVD.)
PROPOSED CB-1
T/G = 634.69
12" TYPE B INV. (SW) = 629.87

STA. 137+11.43 ϕ CONST. & R/W EAST 105TH STREET =
STA. 1000+00.00 ϕ CONST. & R/W GRANTWOOD AVENUE

D 57 STA. 137+11.19, 14.6' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 634.36
PROP. T/C = 634.20
EX. 15" VCP INV. (E) = 627.46
EX. 18" VCP INV. (N) = 627.16
EX. 18" VCP INV. (S) = 627.16
EX. 12" VCP INV. (W) = 627.01

S 42 STA. 135+82.74, 0.1' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 635.30
PROP. T/C = 635.27
EX. 15" VCP INV. (W) = 622.95
EX. NO. 3 BRICK INV. (S) = 621.80
EX. NO. 4 BRICK INV. (N) = 621.30

D 55 STA. 949+63.41, 0.78' RT. (SOUTH BLVD.)
EX. MH - ADJUST TO GRADE
EX. T/C = 635.22
PROP. T/C = 635.22
EX. 12" VCP INV. (E) = 623.37

D 56 STA. 136+56.50, 20.0' LT.
PROPOSED CB-1
T/G = 634.20
12" TYPE B INV. (NW) = 629.49

CURVE DATA
CURVE 45
P.I. = STA. 136+99.31, 20.00' RT
 $\Delta = 90^\circ 19' 45''$
R = 40'
L = 63.06'
PC = STA. 136+59.08, 20.00' RT
PT = STA. 136+99.08, 60.23' RT

CURVE DATA
CURVE 46
P.I. = STA. 137+23.56, 20.00' RT
 $\Delta = 89^\circ 40' 15''$
R = 40'
L = 62.60'
PC = STA. 137+23.33, 59.77' RT
PT = STA. 137+63.33, 20.00' RT

S 44 STA. 1000+35.61, 17.9' LT. (GRANTWOOD AVE.)
EX. MH - ADJUST TO GRADE
EX. T/C = 634.10
PROP. T/C = 634.11
EX. 10" VCP INV. (E) = 623.20
EX. 10" VCP INV. (SE) = 623.20
EX. 10" VCP INV. (W) = 623.20

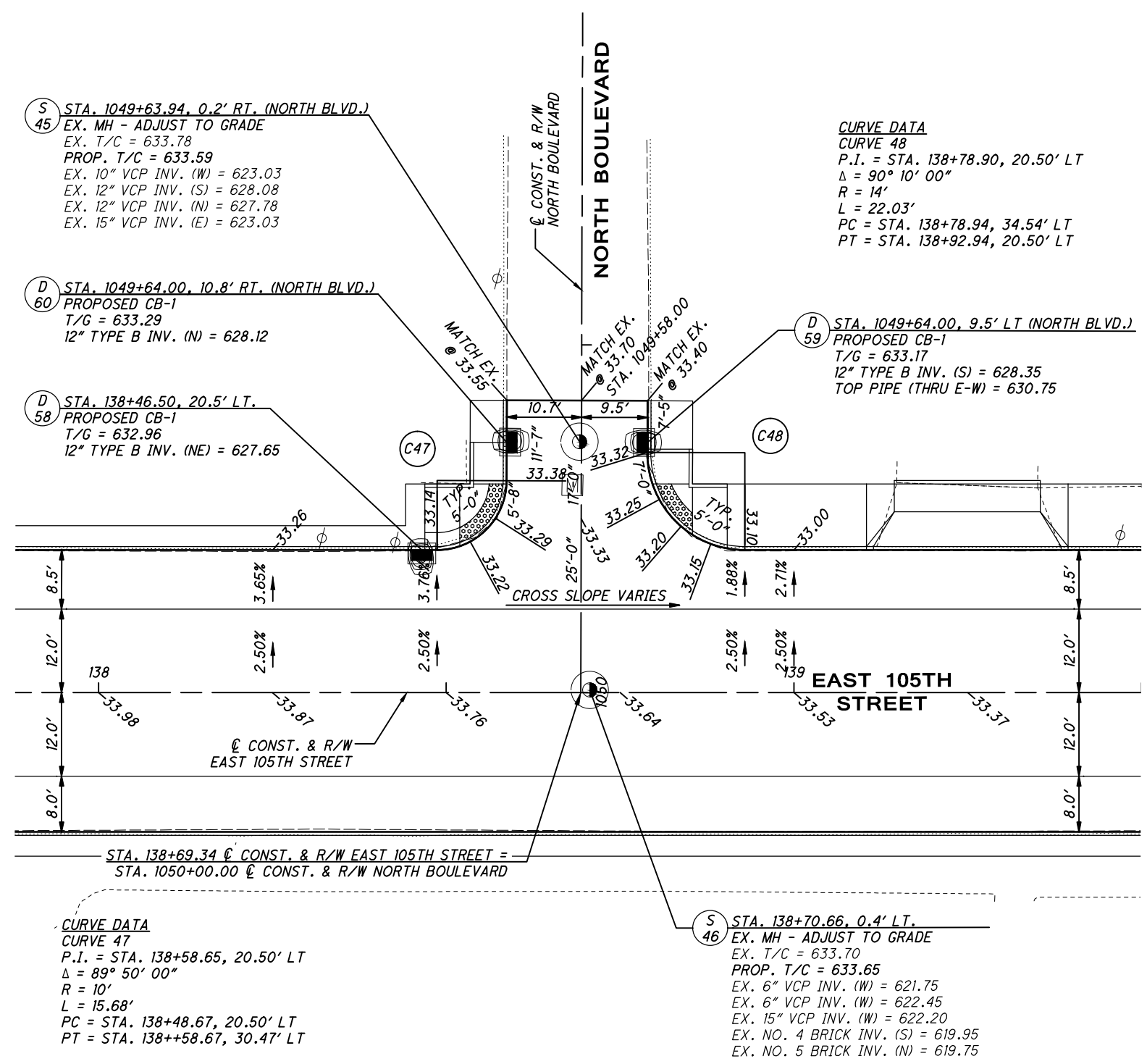
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- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

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INTERSECTION DETAIL
EAST 105TH STREET & NORTH BOULEVARD



- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
EAST 105TH ST & DREXEL AVE & OSTEND AVE

EAST 105TH STREET

CURVE DATA
CURVE 51
P.I. = STA. 140+76.31, 20.50' LT
 $\Delta = 89^\circ 50' 00''$
R = 30'
L = 47.04'
PC = STA. 140+46.39, 20.50' LT
PT = STA. 140+76.39, 50.41' LT

(D) STA. 140+72.50, 35.7' LT.
62 PROPOSED CB-1
T/G = 631.49
12" TYPE B INV. (NE) = 628.00

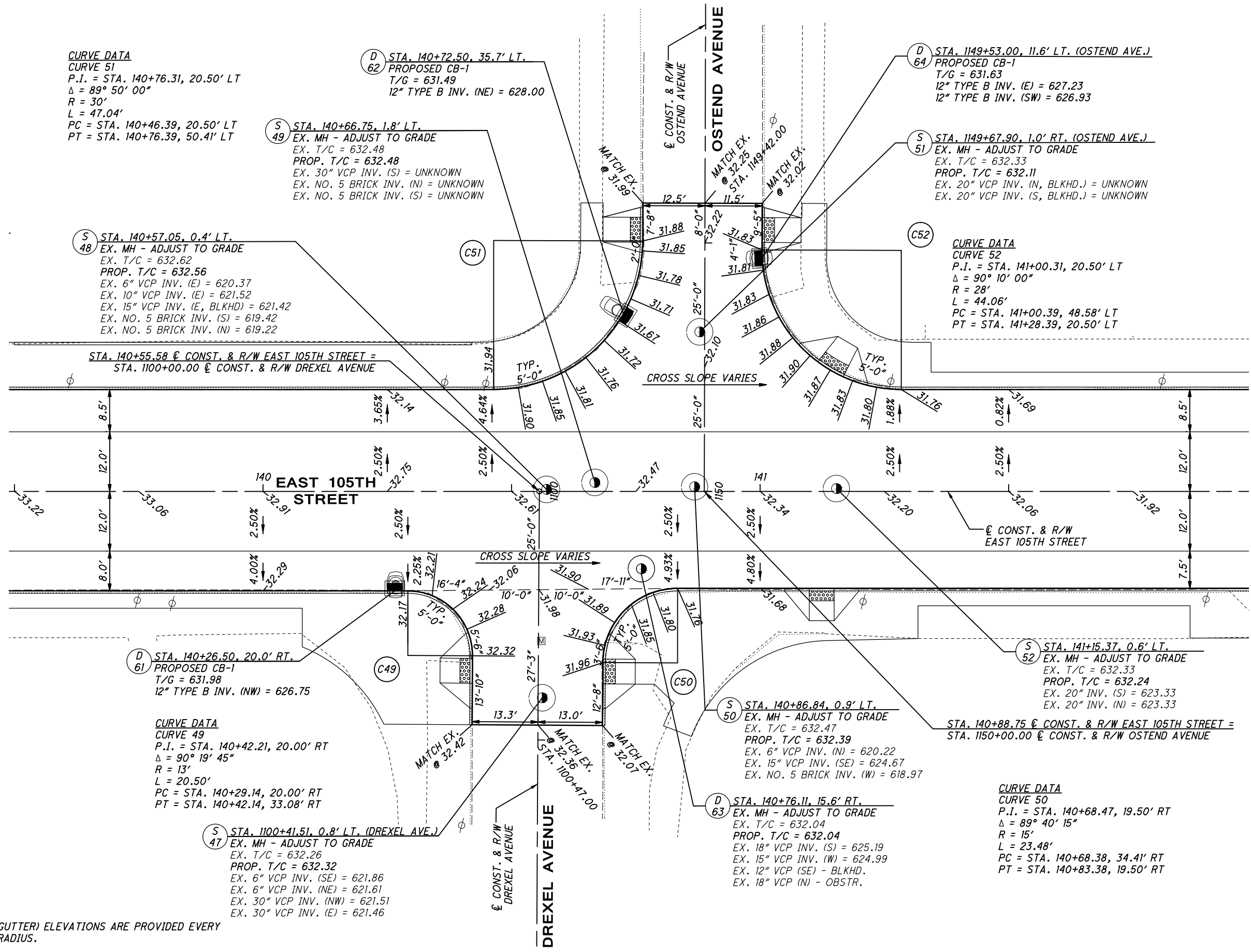
(S) STA. 140+66.75, 1.8' LT.
49 EX. MH - ADJUST TO GRADE
EX. T/C = 632.48
PROP. T/C = 632.48
EX. 30" VCP INV. (S) = UNKNOWN
EX. NO. 5 BRICK INV. (N) = UNKNOWN
EX. NO. 5 BRICK INV. (S) = UNKNOWN

(D) STA. 1149+53.00, 11.6' LT. (OSTEND AVE.)
64 PROPOSED CB-1
T/G = 631.63
12" TYPE B INV. (E) = 627.23
12" TYPE B INV. (SW) = 626.93

(S) STA. 1149+67.90, 1.0' RT. (OSTEND AVE.)
51 EX. MH - ADJUST TO GRADE
EX. T/C = 632.33
PROP. T/C = 632.11
EX. 20" VCP INV. (N, BLKHD.) = UNKNOWN
EX. 20" VCP INV. (S, BLKHD.) = UNKNOWN

(S) STA. 140+57.05, 0.4' LT.
48 EX. MH - ADJUST TO GRADE
EX. T/C = 632.62
PROP. T/C = 632.56
EX. 6" VCP INV. (E) = 620.37
EX. 10" VCP INV. (E) = 621.52
EX. 15" VCP INV. (E, BLKHD) = 621.42
EX. NO. 5 BRICK INV. (S) = 619.42
EX. NO. 5 BRICK INV. (N) = 619.22

CURVE DATA
CURVE 52
P.I. = STA. 141+00.31, 20.50' LT
 $\Delta = 90^\circ 10' 00''$
R = 28'
L = 44.06'
PC = STA. 141+00.39, 48.58' LT
PT = STA. 141+28.39, 20.50' LT



CURVE DATA
CURVE 49
P.I. = STA. 140+42.21, 20.00' RT
 $\Delta = 90^\circ 19' 45''$
R = 13'
L = 20.50'
PC = STA. 140+29.14, 20.00' RT
PT = STA. 140+42.14, 33.08' RT

(S) STA. 1100+41.51, 0.8' LT. (DREXEL AVE.)
47 EX. MH - ADJUST TO GRADE
EX. T/C = 632.26
PROP. T/C = 632.32
EX. 6" VCP INV. (SE) = 621.86
EX. 6" VCP INV. (NE) = 621.61
EX. 30" VCP INV. (NW) = 621.51
EX. 30" VCP INV. (E) = 621.46

(S) STA. 140+86.84, 0.9' LT.
50 EX. MH - ADJUST TO GRADE
EX. T/C = 632.47
PROP. T/C = 632.39
EX. 6" VCP INV. (N) = 620.22
EX. 15" VCP INV. (SE) = 624.67
EX. NO. 5 BRICK INV. (W) = 618.97

(D) STA. 140+76.11, 15.6' RT.
63 EX. MH - ADJUST TO GRADE
EX. T/C = 632.04
PROP. T/C = 632.04
EX. 18" VCP INV. (S) = 625.19
EX. 15" VCP INV. (W) = 624.99
EX. 12" VCP INV. (SE) - BLKHD.
EX. 18" VCP (N) - OBSTR.

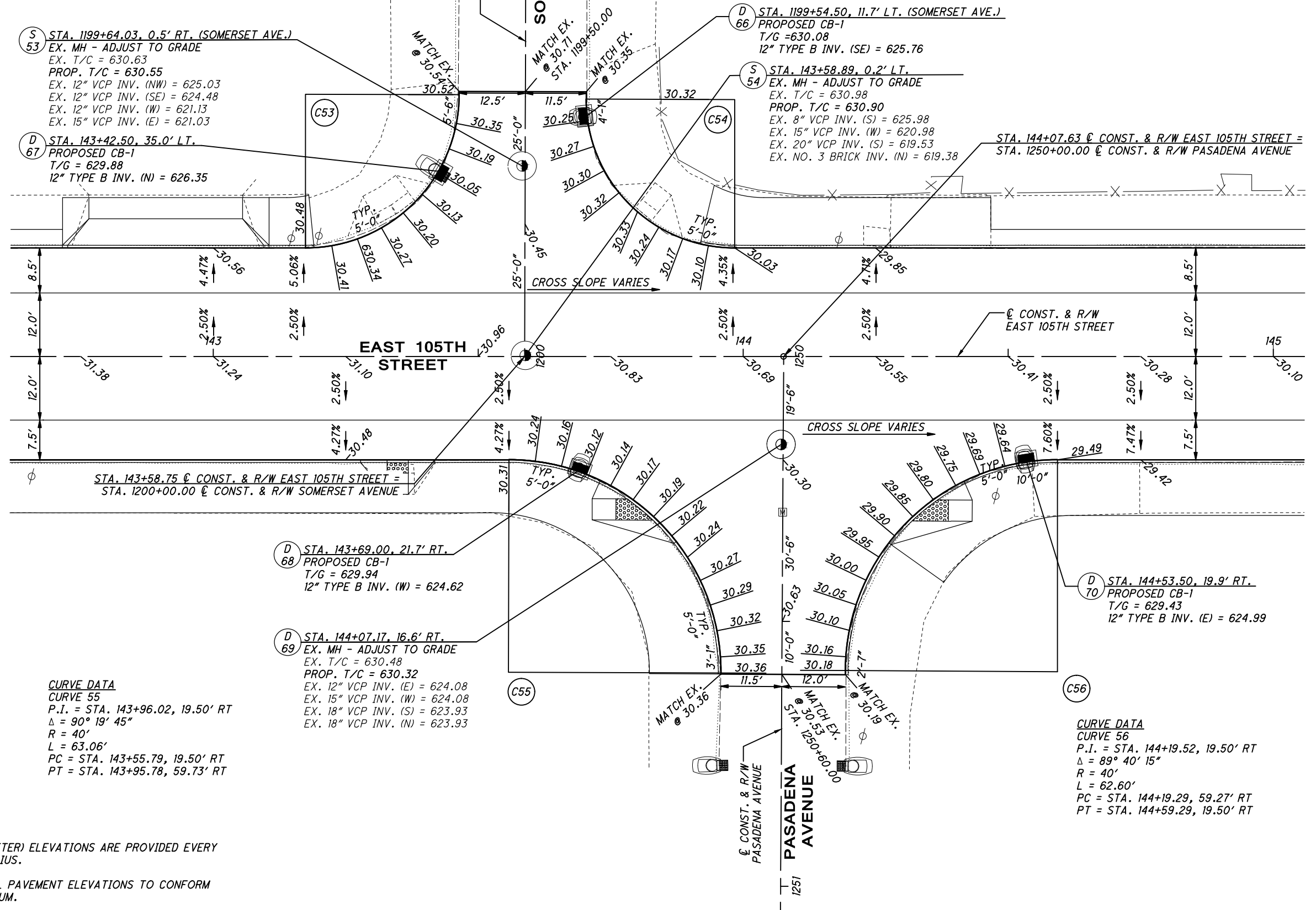
CURVE DATA
CURVE 50
P.I. = STA. 140+68.47, 19.50' RT
 $\Delta = 89^\circ 40' 15''$
R = 15'
L = 23.48'
PC = STA. 140+68.38, 34.41' RT
PT = STA. 140+83.38, 19.50' RT

- NOTES:**
1. FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 2. ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

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CURVE DATA
CURVE 53
 P.I. = STA. 143+46.31, 20.50' LT
 $\Delta = 89^\circ 50' 00''$
 R = 29'
 L = 45.47'
 PC = STA. 143+17.39, 20.50' LT
 PT = STA. 143+46.39, 49.42' LT

CURVE DATA
CURVE 54
 P.I. = STA. 143+70.31, 20.50' LT
 $\Delta = 90^\circ 10' 00''$
 R = 28'
 L = 44.06'
 PC = STA. 143+70.39, 48.58' LT
 PT = STA. 143+98.39, 20.50' LT



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- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



0 5 10 20
HORIZONTAL SCALE IN FEET

CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
E. 105TH ST & PARKGATE AVE & MASSIE AVE

EAST 105TH STREET

119
243

S STA. 1299+64.00, 0.9' RT. (PARKGATE AVE.)
56 EX. MH - ADJUST TO GRADE
EX. T/C = 629.14
PROP. T/C = 629.11
EX. 12" VCP INV. (NW) = 622.54
EX. NO. 5 BRICK INV. (E) = 617.04
EX. NO. 5 BRICK INV. (W) = 616.79

CURVE DATA
CURVE 57
P.I. = STA. 146+16.06, 20.50' LT
 $\Delta = 89^\circ 50' 00''$
R = 30'
L = 47.04'
PC = STA. 145+86.15, 20.50' LT
PT = STA. 146+16.15, 50.41' LT

CURVE DATA
CURVE 58
P.I. = STA. 146+40.31, 20.50' LT
 $\Delta = 90^\circ 10' 00''$
R = 30'
L = 47.21'
PC = STA. 146+40.40, 50.59' LT
PT = STA. 146+70.40, 20.50' LT

D STA. 146+12.50, 36.2' LT.
73 PROPOSED CB-1
T/G = 628.47
12" TYPE B INV. (NE) = 624.35

D STA. 144+70.50, 20.5' LT.
71 PROPOSED CB-1
T/G = 628.80
12" TYPE B INV. (E) = 626.22

D STA. 146+42.00, 40.83' LT.
74 PROPOSED CB-1
T/G = 628.55
12" TYPE B INV. (SE) = 624.66

STA. 146+28.75 @ CONST. & R/W EAST 105TH STREET =
STA. 1300+00.00 @ CONST. & R/W PARKGATE AVENUE

S STA. 146+30.78, 0.5' LT.
57 EX. MH - ADJUST TO GRADE
EX. T/C = 629.49
PROP. T/C = 629.34
EX. 18" VCP INV. (S) = 619.99
EX. NO. 4 BRICK INV. (S) = 618.69
EX. NO. 4 BRICK INV. (N) = 618.59

D STA. 146+90.00, 20.5' LT.
76 PROPOSED CB-1
T/G = 628.44
12" TYPE B INV. (E) = 624.44

STA. 146+95.15 @ CONST. & R/W EAST 105TH STREET =
STA. 1350+00.00 @ CONST. & R/W MASSIE AVENUE

D STA. 147+38.50, 20.5' LT.
81 PROPOSED CB-1
T/G = 628.11
12" TYPE B INV. (E) = 624.84

S STA. 146+01.73, 0.4' LT.
55 EX. MH - ADJUST TO GRADE
EX. T/C = 629.62
PROP. T/C = 629.44
EX. 6" VCP INV. (S) = 625.62
EX. 18" VCP INV. (E) = 623.02
EX. 18" VCP INV. (W) = 623.02
EX. NO. 3 BRICK INV. (S) = 618.62
EX. NO. 5 BRICK INV. (N) = 618.57

D STA. 145+91.50, 19.5' RT.
72 PROPOSED CB-2
T/G = 628.92
12" TYPE B INV. (NW) = 626.15
12" TYPE C INV. (E) = 625.55
12" TYPE C INV. (SE) = 625.55

CURVE DATA
CURVE 59
P.I. = STA. 146+83.03, 19.50' RT
 $\Delta = 90^\circ 19' 45''$
R = 11'
L = 17.34'
PC = STA. 146+71.97, 19.50' RT
PT = STA. 146+82.97, 30.56' RT

D STA. 146+65.50, 19.5' RT.
75 PROPOSED CB-2
T/G = 628.25
12" TYPE B INV. (NW) = 623.74
10" TYPE B INV. (W) = 626.74

D STA. 1350+38.50, 12.0' RT. (MASSIE AVE.)
79 PROPOSED CB-1
T/G = 628.28
UNKNOWN SIZE (N) = 625.05

S STA. 1350+32.93, 2.3' LT. (MASSIE AVE.)
58 EX. MH - ADJUST TO GRADE
EX. T/C = 628.68
PROP. T/C = 628.92
EX. 10" VCP INV. (E) = 620.53
EX. 12" VCP INV. (N) = 625.43
EX. 12" VCP INV. (SE) = 623.43
EX. 15" VCP INV. (E) = 622.83
EX. 18" VCP INV. (W) = 620.38

S STA. 1350+48.83, 1.5' LT. (MASSIE AVE.)
59 EX. MH - ADJUST TO GRADE
EX. T/C = 629.05
PROP. T/C = 628.84
EX. 10" VCP INV. (E) = 620.65
EX. 10" VCP INV. (W) = 620.65
EX. 15" OPEN BLKHD. (S) = 622.05

D STA. 147+28.00, 19.5' RT.
80 PROPOSED CB-1
T/G = 628.12
12" TYPE B INV. (W) = 626.20
12" TYPE B INV. (N) = 626.00

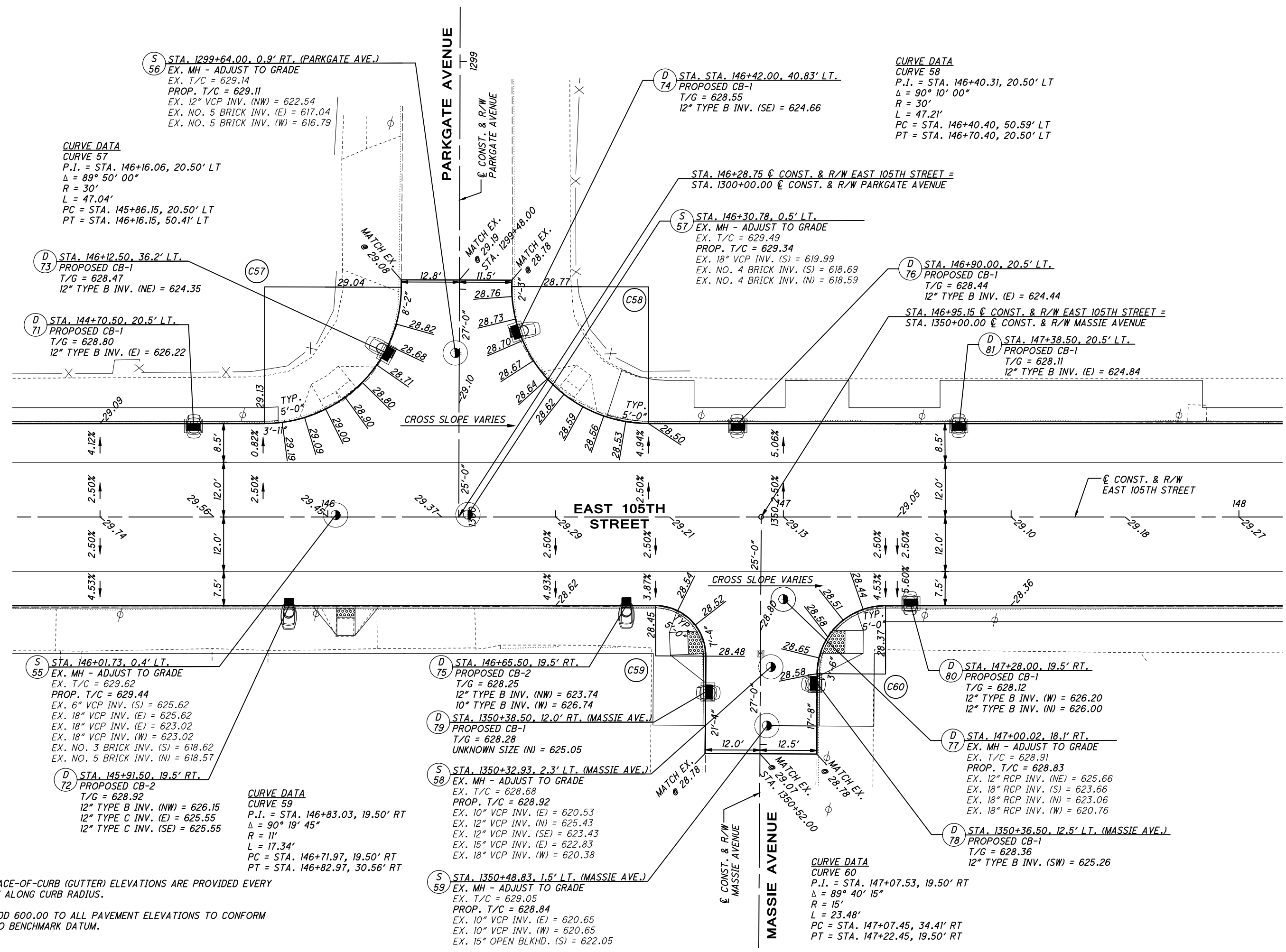
D STA. 147+00.02, 18.1' RT.
77 EX. MH - ADJUST TO GRADE
EX. T/C = 628.91
PROP. T/C = 628.83
EX. 12" RCP INV. (NE) = 625.66
EX. 18" RCP INV. (S) = 623.66
EX. 18" RCP INV. (N) = 623.06
EX. 18" RCP INV. (W) = 620.76

D STA. 1350+36.50, 12.5' LT. (MASSIE AVE.)
78 PROPOSED CB-1
T/G = 628.36
12" TYPE B INV. (SW) = 625.26

CURVE DATA
CURVE 60
P.I. = STA. 147+07.53, 19.50' RT
 $\Delta = 89^\circ 40' 15''$
R = 15'
L = 23.48'
PC = STA. 147+07.45, 34.41' RT
PT = STA. 147+22.45, 19.50' RT

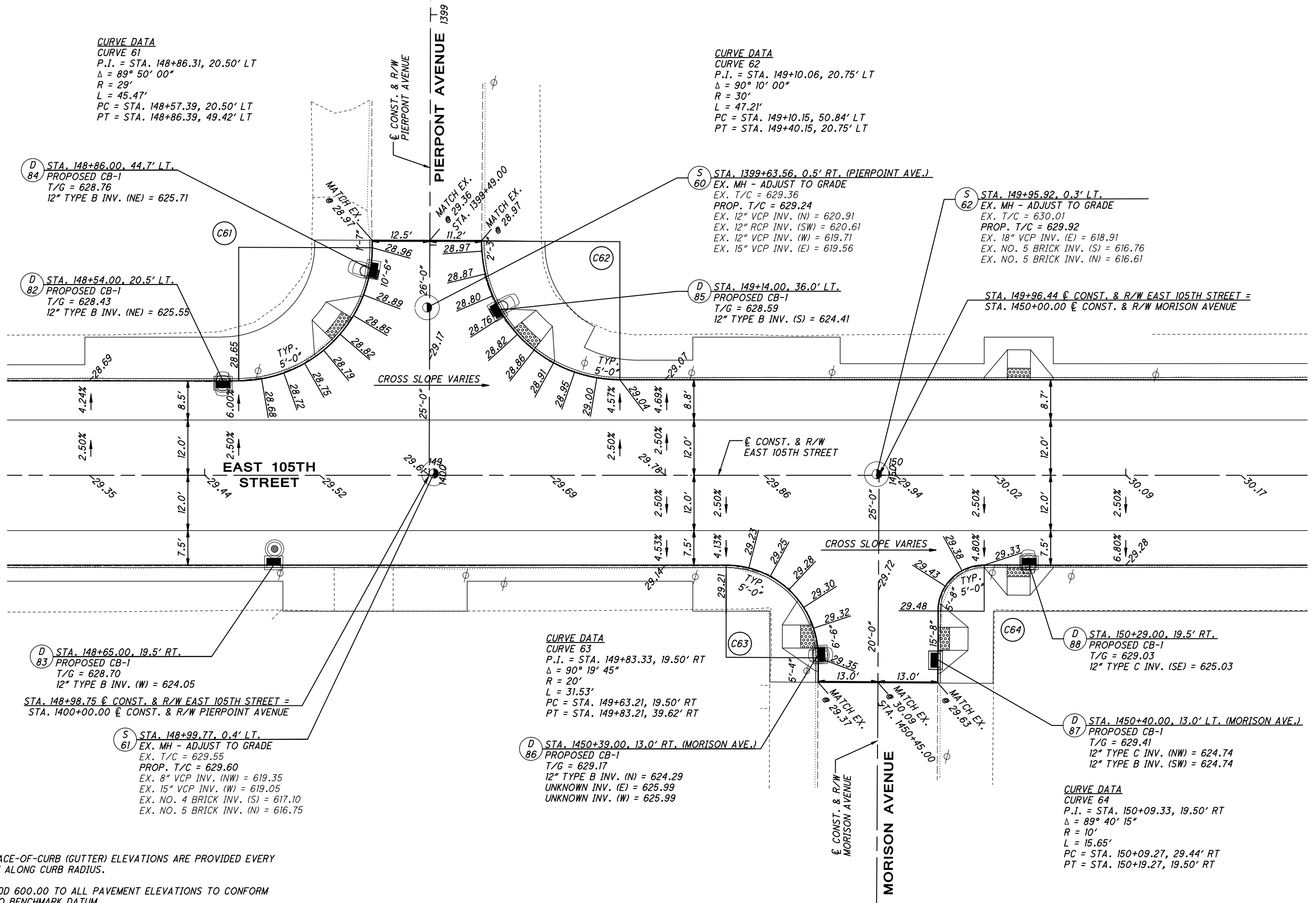
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- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.



CURVE DATA
 CURVE 61
 P.I. = STA. 148+86.31, 20.50' LT
 $\Delta = 89^\circ 50' 00''$
 R = 29'
 L = 45.47'
 PC = STA. 148+57.39, 20.50' LT
 PT = STA. 148+86.39, 49.42' LT

CURVE DATA
 CURVE 62
 P.I. = STA. 149+10.06, 20.75' LT
 $\Delta = 90^\circ 10' 00''$
 R = 30'
 L = 47.21'
 PC = STA. 149+10.15, 50.84' LT
 PT = STA. 149+40.15, 20.75' LT



(D) STA. 148+86.00, 44.7' LT.
 PROPOSED CB-1
 T/G = 628.76
 12" TYPE B INV. (NE) = 625.71

(D) STA. 148+54.00, 20.5' LT.
 PROPOSED CB-1
 T/G = 628.43
 12" TYPE B INV. (NE) = 625.55

(S) STA. 1399+63.56, 0.5' RT. (PIERPOINT AVE.)
 EX. MH - ADJUST TO GRADE
 EX. T/C = 629.36
 PROP. T/C = 629.24
 EX. 12" VCP INV. (N) = 620.91
 EX. 12" RCP INV. (SW) = 620.61
 EX. 12" VCP INV. (W) = 619.71
 EX. 15" VCP INV. (E) = 619.56

(D) STA. 149+14.00, 36.0' LT.
 PROPOSED CB-1
 T/G = 628.59
 12" TYPE B INV. (S) = 624.41

(S) STA. 149+95.92, 0.3' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 630.01
 PROP. T/C = 629.92
 EX. 18" VCP INV. (E) = 618.91
 EX. NO. 5 BRICK INV. (S) = 616.76
 EX. NO. 5 BRICK INV. (N) = 616.61

STA. 149+96.44 @ CONST. & R/W EAST 105TH STREET =
 STA. 1450+00.00 @ CONST. & R/W MORISON AVENUE

(D) STA. 148+65.00, 19.5' RT.
 PROPOSED CB-1
 T/G = 628.70
 12" TYPE B INV. (W) = 624.05

STA. 148+98.75 @ CONST. & R/W EAST 105TH STREET =
 STA. 1400+00.00 @ CONST. & R/W PIERPOINT AVENUE

(S) STA. 148+99.77, 0.4' LT.
 EX. MH - ADJUST TO GRADE
 EX. T/C = 629.55
 PROP. T/C = 629.60
 EX. 8" VCP INV. (NW) = 619.35
 EX. 15" VCP INV. (W) = 619.05
 EX. NO. 4 BRICK INV. (S) = 617.10
 EX. NO. 5 BRICK INV. (N) = 616.75

CURVE DATA
 CURVE 63
 P.I. = STA. 149+83.33, 19.50' RT
 $\Delta = 90^\circ 19' 45''$
 R = 20'
 L = 31.53'
 PC = STA. 149+63.21, 19.50' RT
 PT = STA. 149+83.21, 39.62' RT

(D) STA. 1450+39.00, 13.0' RT. (MORISON AVE.)
 PROPOSED CB-1
 T/G = 629.17
 12" TYPE B INV. (N) = 624.29
 UNKNOWN INV. (E) = 625.99
 UNKNOWN INV. (W) = 625.99

(D) STA. 150+29.00, 19.5' RT.
 PROPOSED CB-1
 T/G = 629.03
 12" TYPE C INV. (SE) = 625.03

(D) STA. 1450+40.00, 13.0' LT. (MORISON AVE.)
 PROPOSED CB-1
 T/G = 629.41
 12" TYPE C INV. (NW) = 624.74
 12" TYPE B INV. (SW) = 624.74

CURVE DATA
 CURVE 64
 P.I. = STA. 150+09.33, 19.50' RT
 $\Delta = 89^\circ 40' 15''$
 R = 10'
 L = 15.65'
 PC = STA. 150+09.27, 29.44' RT
 PT = STA. 150+19.27, 19.50' RT

- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

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CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
E. 105TH ST & ADAMS AVE & AMOR AVE

EAST 105TH STREET

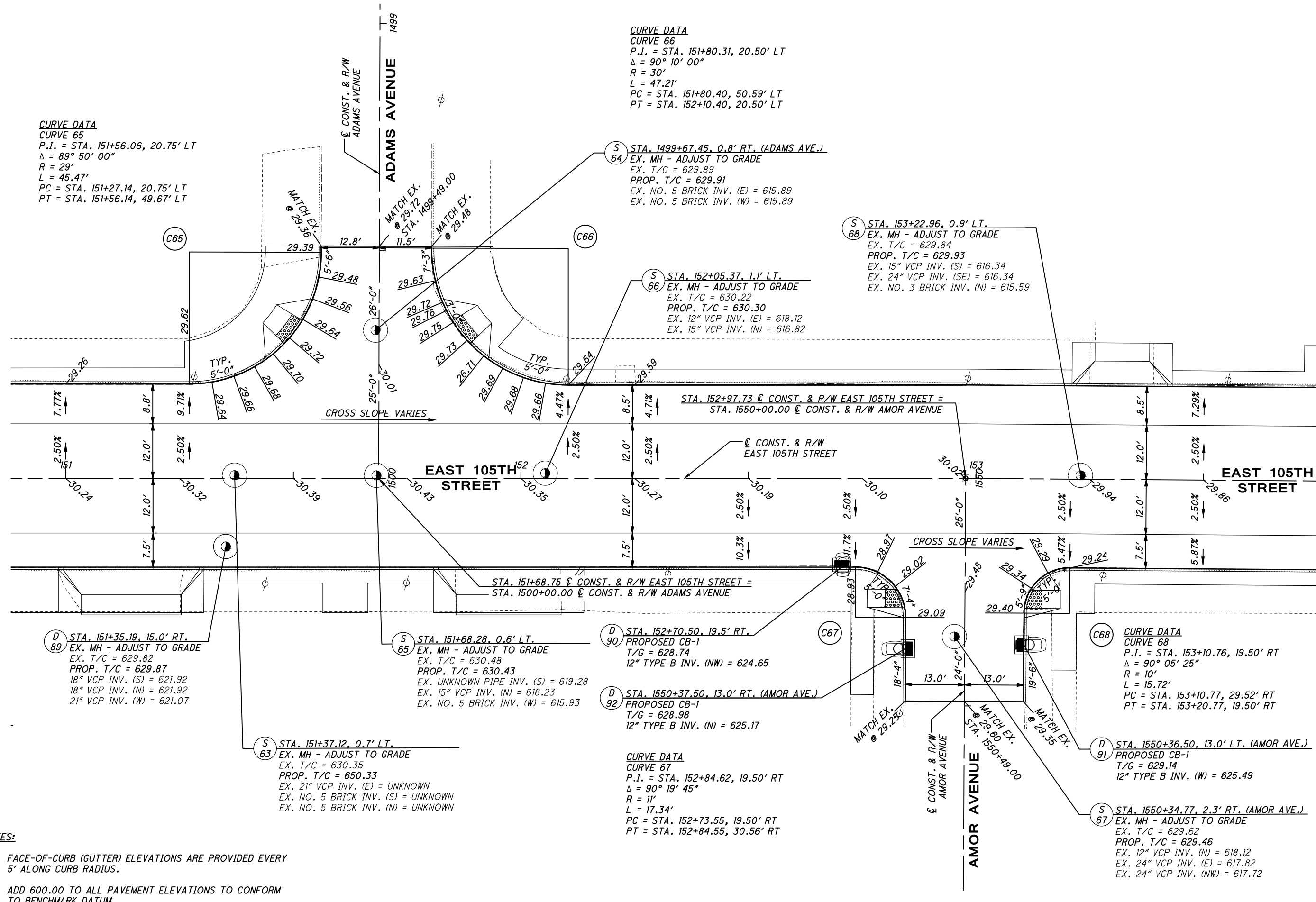
CURVE DATA
CURVE 65
P.I. = STA. 151+56.06, 20.75' LT
 $\Delta = 89^\circ 50' 00''$
R = 29'
L = 45.47'
PC = STA. 151+27.14, 20.75' LT
PT = STA. 151+56.14, 49.67' LT

CURVE DATA
CURVE 66
P.I. = STA. 151+80.31, 20.50' LT
 $\Delta = 90^\circ 10' 00''$
R = 30'
L = 47.21'
PC = STA. 151+80.40, 50.59' LT
PT = STA. 152+10.40, 20.50' LT

S STA. 153+22.96, 0.9' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 629.84
PROP. T/C = 629.93
EX. 15" VCP INV. (S) = 616.34
EX. 24" VCP INV. (SE) = 616.34
EX. NO. 3 BRICK INV. (N) = 615.59

CURVE DATA
CURVE 68
P.I. = STA. 153+10.76, 19.50' RT
 $\Delta = 90^\circ 05' 25''$
R = 10'
L = 15.72'
PC = STA. 153+10.77, 29.52' RT
PT = STA. 153+20.77, 19.50' RT

CURVE DATA
CURVE 67
P.I. = STA. 152+84.62, 19.50' RT
 $\Delta = 90^\circ 19' 45''$
R = 11'
L = 17.34'
PC = STA. 152+73.55, 19.50' RT
PT = STA. 152+84.55, 30.56' RT



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- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

D STA. 151+35.19, 15.0' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 629.82
PROP. T/C = 629.87
EX. 18" VCP INV. (S) = 621.92
EX. 18" VCP INV. (N) = 621.92
EX. 21" VCP INV. (W) = 621.07

S STA. 151+37.12, 0.7' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 630.35
PROP. T/C = 650.33
EX. 21" VCP INV. (E) = UNKNOWN
EX. NO. 5 BRICK INV. (S) = UNKNOWN
EX. NO. 5 BRICK INV. (N) = UNKNOWN

S STA. 151+68.28, 0.6' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 630.48
PROP. T/C = 630.43
EX. UNKNOWN PIPE INV. (S) = 619.28
EX. 15" VCP INV. (N) = 618.23
EX. NO. 5 BRICK INV. (W) = 615.93

D STA. 152+70.50, 19.5' RT.
PROPOSED CB-1
T/G = 628.74
EX. 12" TYPE B INV. (NW) = 624.65

D STA. 1550+37.50, 13.0' RT. (AMOR AVE.)
PROPOSED CB-1
T/G = 628.98
EX. 12" TYPE B INV. (N) = 625.17

D STA. 1550+36.50, 13.0' LT. (AMOR AVE.)
PROPOSED CB-1
T/G = 629.14
EX. 12" TYPE B INV. (W) = 625.49

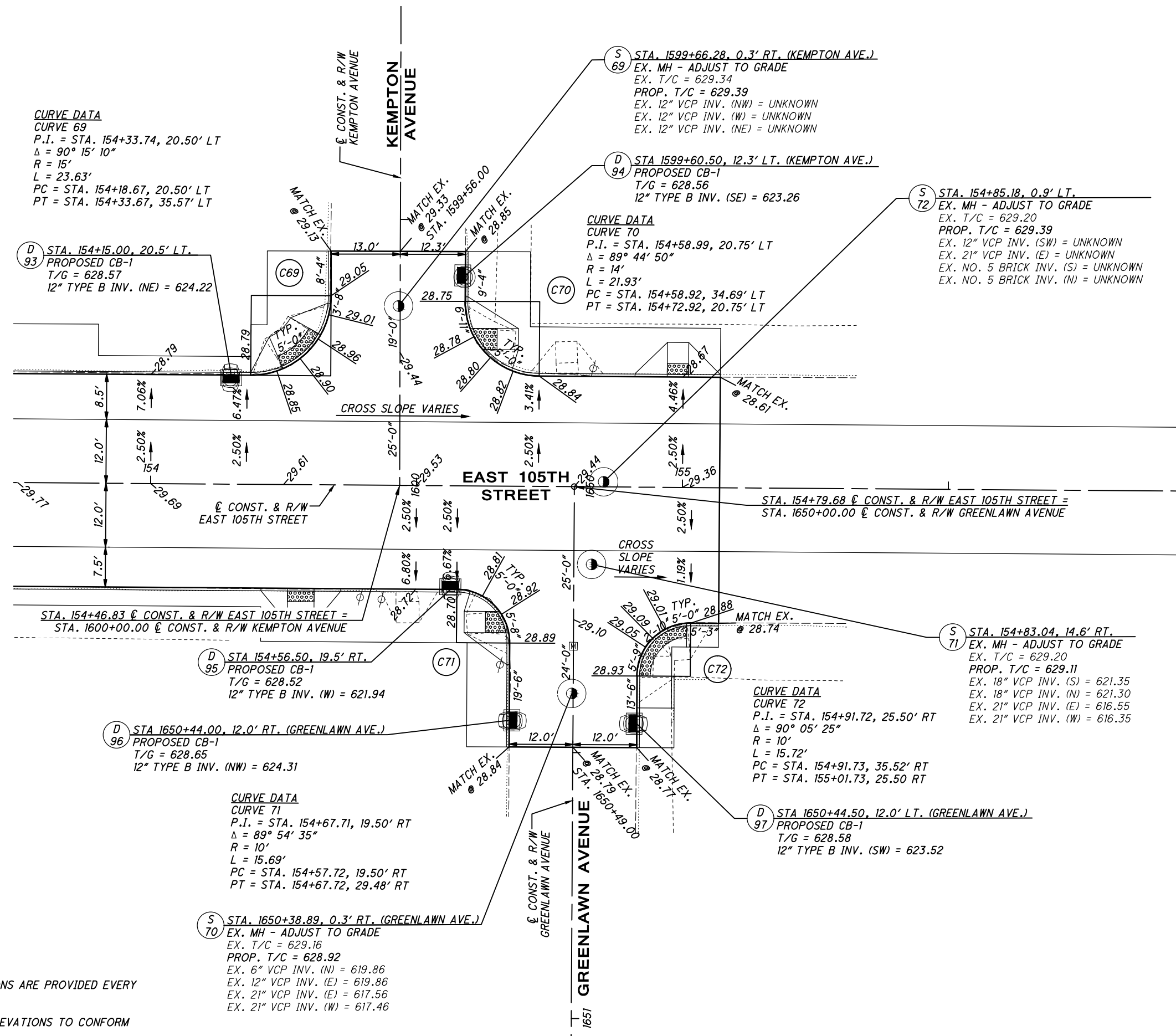
S STA. 1550+34.77, 2.3' RT. (AMOR AVE.)
EX. MH - ADJUST TO GRADE
EX. T/C = 629.62
PROP. T/C = 629.46
EX. 12" VCP INV. (N) = 618.12
EX. 24" VCP INV. (E) = 617.82
EX. 24" VCP INV. (NW) = 617.72



CALCULATED
KJM
CHECKED
JTS

INTERSECTION DETAIL
E. 105TH ST & KEMPTON AVE & GREENLAWN AVE

EAST 105TH STREET



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- NOTES:**
- FACE-OF-CURB (GUTTER) ELEVATIONS ARE PROVIDED EVERY 5' ALONG CURB RADIUS.
 - ADD 600.00 TO ALL PAVEMENT ELEVATIONS TO CONFORM TO BENCHMARK DATUM.

ITEM 202 - REMOVAL MISC.: EAST BOULEVARD INTERSECTION

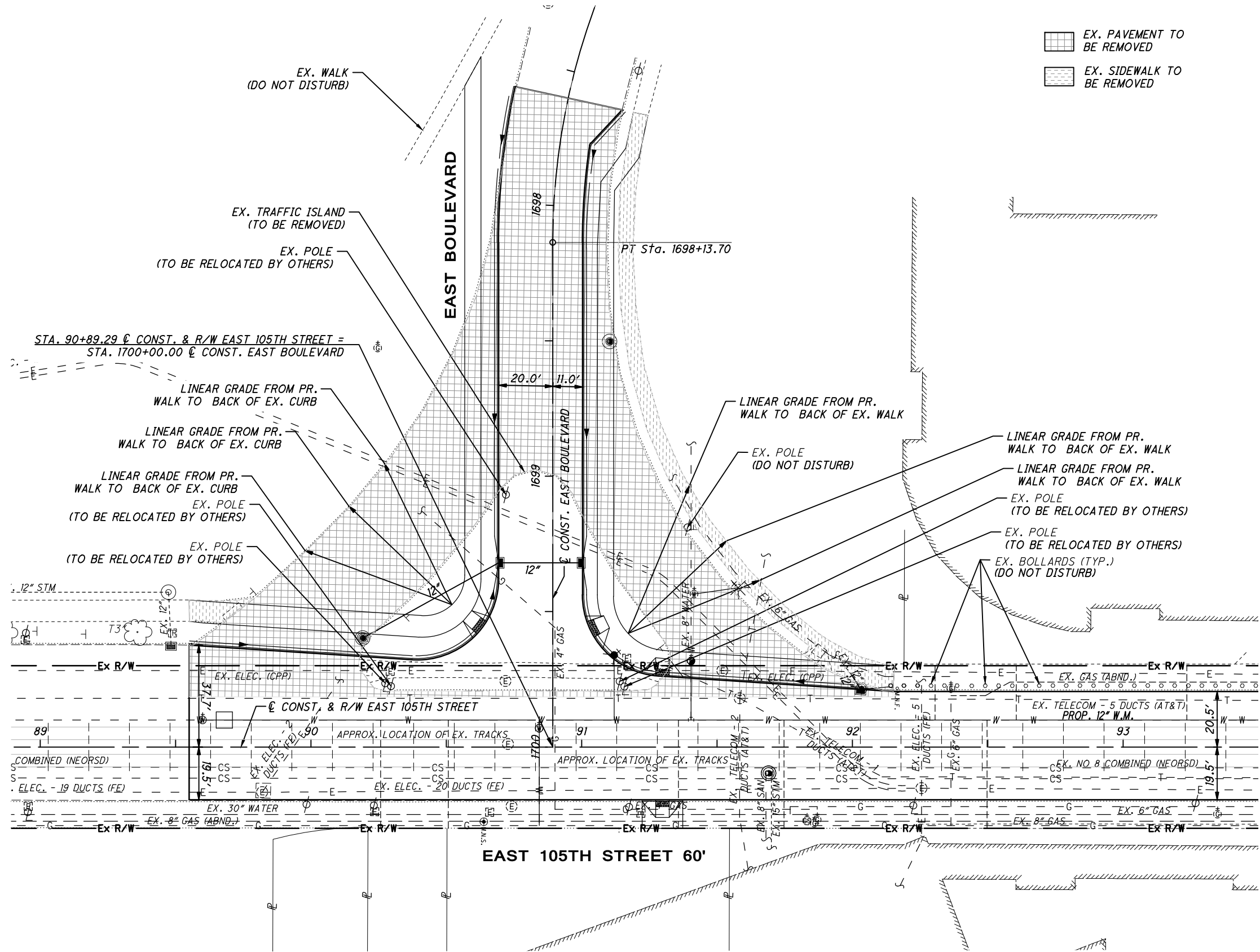
AS SHOWN ON THE PLAN TO THE RIGHT, THE EAST 105TH STREET / EAST BOULEVARD INTERSECTION WILL BE CONVERTED FROM A TWO-WAY SPLIT "Y" INTERSECTION TO A TRADITIONAL "T" INTERSECTION. ALL REGRADING, EXCAVATION, EMBANKMENT, AND REMOVALS WILL BE PAID FOR UNDER THE LUMP SUM UNIT PRICE BID FOR ITEM 202 - REMOVAL MISC.: EAST BOULEVARD INTERSECTION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING SCOPE OF WORK:

SW QUADRANT - THE CONTRACTOR SHALL INSTALL THE PROPOSED ROADWAY AND SIDEWALK PER THE TYPICAL SECTIONS AND THE ELEVATIONS ON THE EAST BOULEVARD INTERSECTION DETAIL. FROM THE BACK OF WALK TO THE BACK OF THE EXISTING CURB, THE CONTRACTOR SHALL REMOVE ALL MATERIALS SO THAT THE GROUND ELEVATION IS ONE QUARTER OF ONE INCH (1/4") BELOW THE ELEVATION OF A THEORETICAL PLANE PROJECTED FROM THE TOP OF THE PROPOSED SIDEWALK TO THE BACK OF THE EXISTING CURB. GRADING SHALL NOT CREATE ANY LOCALIZED LOW POINTS AND THE CONTRACTOR SHALL GRADE THE AREA TO DRAIN. NO ADDITIONAL PAYMENT WILL BE MADE FOR EXCAVATION OR EMBANKMENT REQUIRED TO CREATE POSITIVE DRAINAGE OR FOR THE ROADWAY REALIGNMENT. EARTHWORK QUANTITIES ARE NOT INCLUDED. CONTRACTOR SHALL PLUG AND ABANDON ANY EXISTING UNDERDRAINS LOCATED ON EAST BOULEVARD.

NW QUADRANT - THE CONTRACTOR SHALL INSTALL THE PROPOSED ROADWAY AND SIDEWALK PER THE TYPICAL SECTIONS AND THE ELEVATIONS ON THE EAST BOULEVARD INTERSECTION DETAIL. FROM THE BACK OF WALK TO THE BACK OF THE EXISTING CURB, THE CONTRACTOR SHALL REMOVE ALL MATERIALS SO THAT THE GROUND ELEVATION IS ONE QUARTER OF ONE INCH (1/4") BELOW THE ELEVATION OF A THEORETICAL PLANE PROJECTED FROM THE TOP OF THE PROPOSED SIDEWALK TO THE BACK OF THE EXISTING SIDEWALK. GRADING SHALL NOT CREATE ANY LOCALIZED LOW POINTS AND THE CONTRACTOR SHALL GRADE THE AREA TO DRAIN. NO ADDITIONAL PAYMENT WILL BE MADE FOR EXCAVATION OR EMBANKMENT REQUIRED TO CREATE POSITIVE DRAINAGE OR FOR THE ROADWAY REALIGNMENT. EARTHWORK QUANTITIES ARE NOT INCLUDED. CONTRACTOR SHALL PLUG AND ABANDON ANY EXISTING UNDERDRAINS LOCATED ON EAST BOULEVARD.

ALL EXISTING PAVEMENT, CURB, AND SIDEWALK ARE QUANTIFIED SEPARATELY IN THE SUBSUMMARIES AND WILL BE PAID FOR SEPARATELY.

ALL REMOVALS DESCRIBED ABOVE SHALL BE DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE DESCRIBED WORK SHALL INCLUDE LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE COMPLETION OF THE DESCRIBED WORK. NO ADDITIONAL PAYMENTS WILL BE MADE TO ACCOMPLISH THIS WORK FOR DIFFERING SITE CONDITIONS. THE INTENT OF THIS PLAN NOTE AND ASSOCIATED DETAIL IS TO, IN GOOD FAITH, COMMUNICATE ITEMS NOT SEPARATELY QUANTIFIED IN THE SUBSUMMARIES AND PAID FOR SEPARATELY.



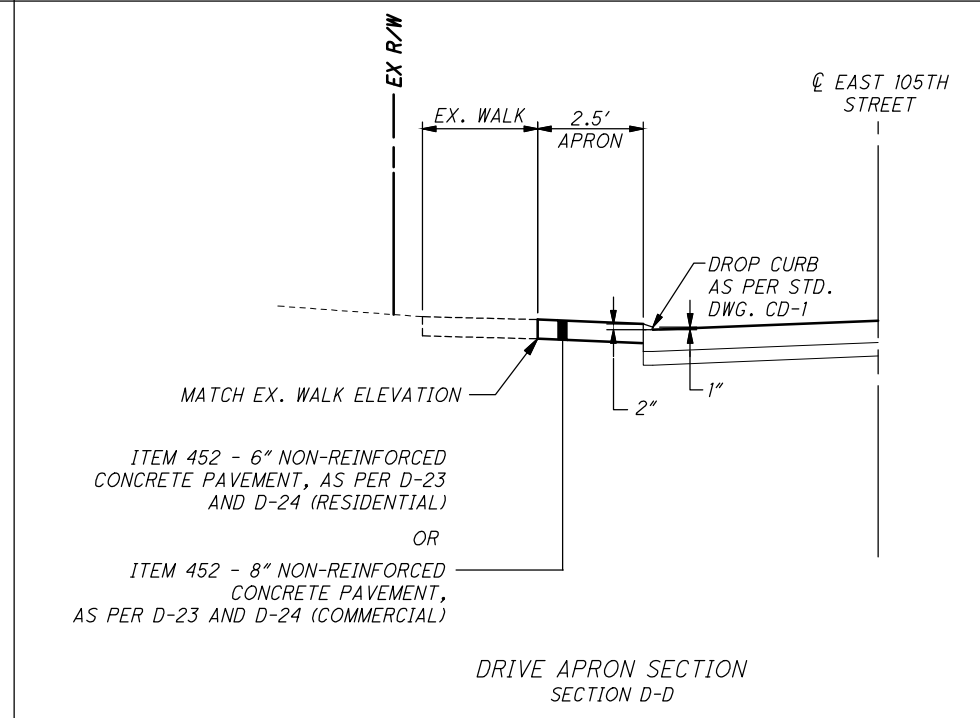
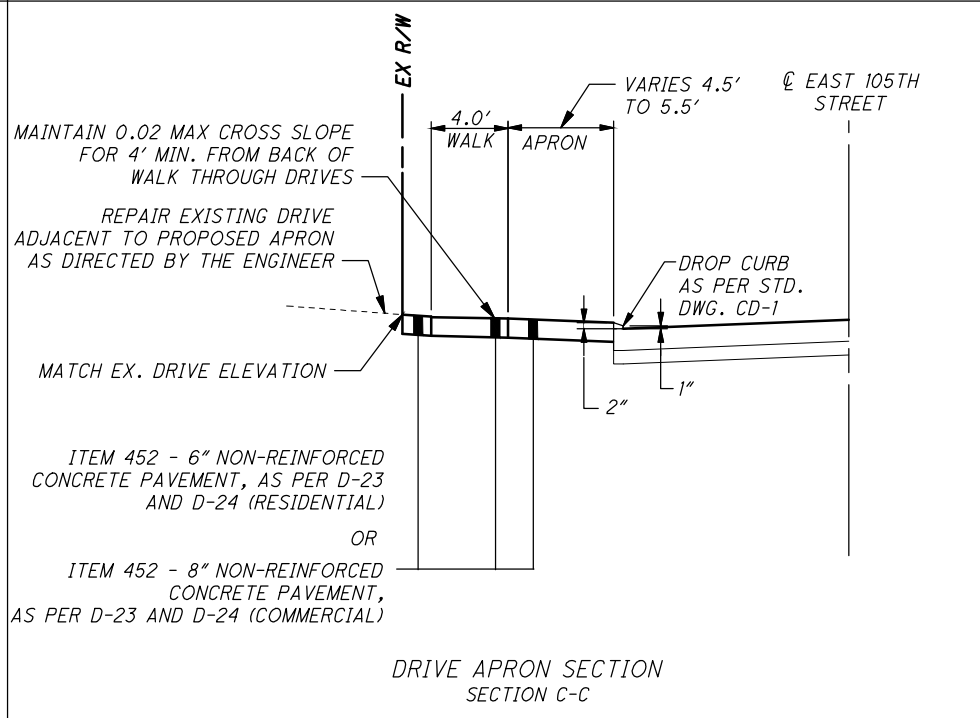
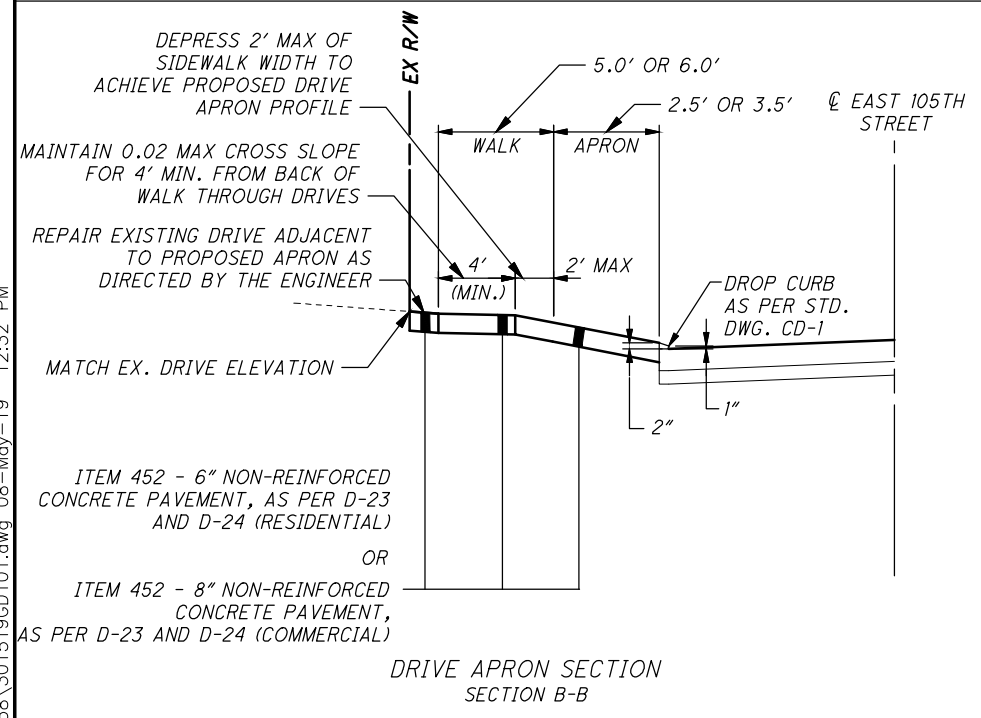
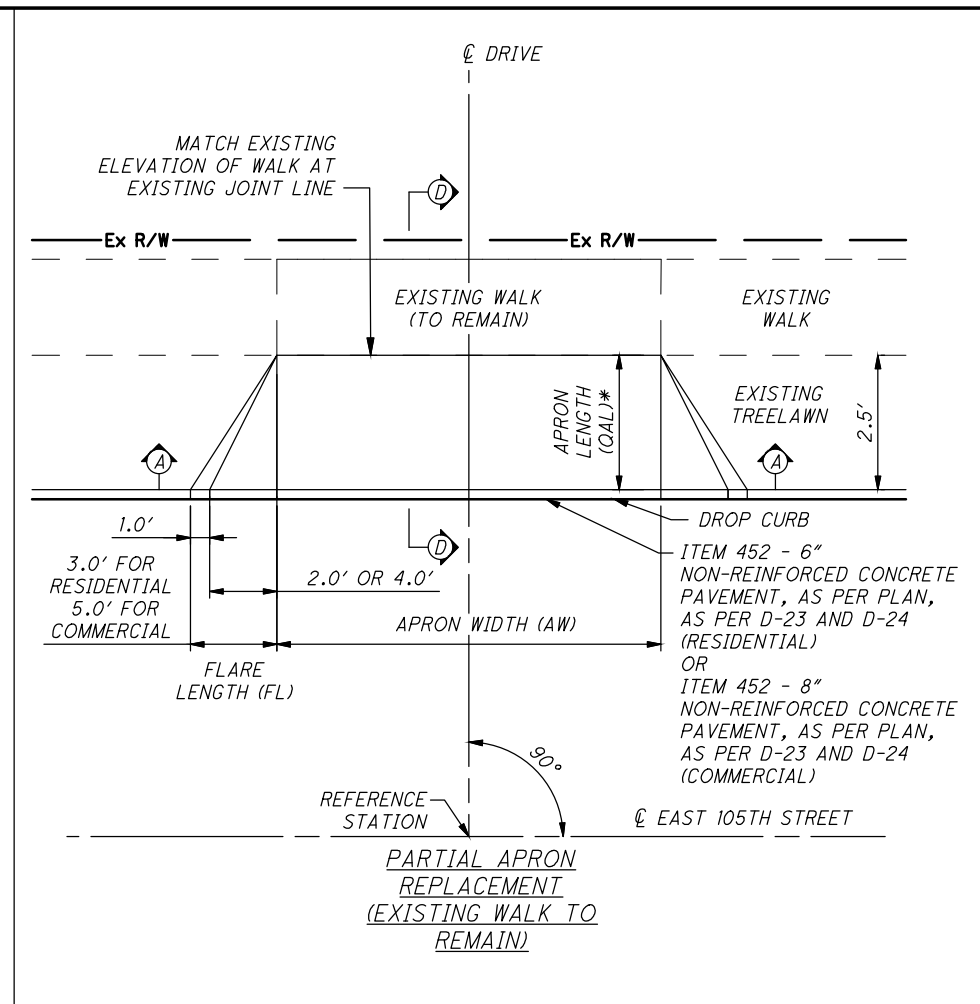
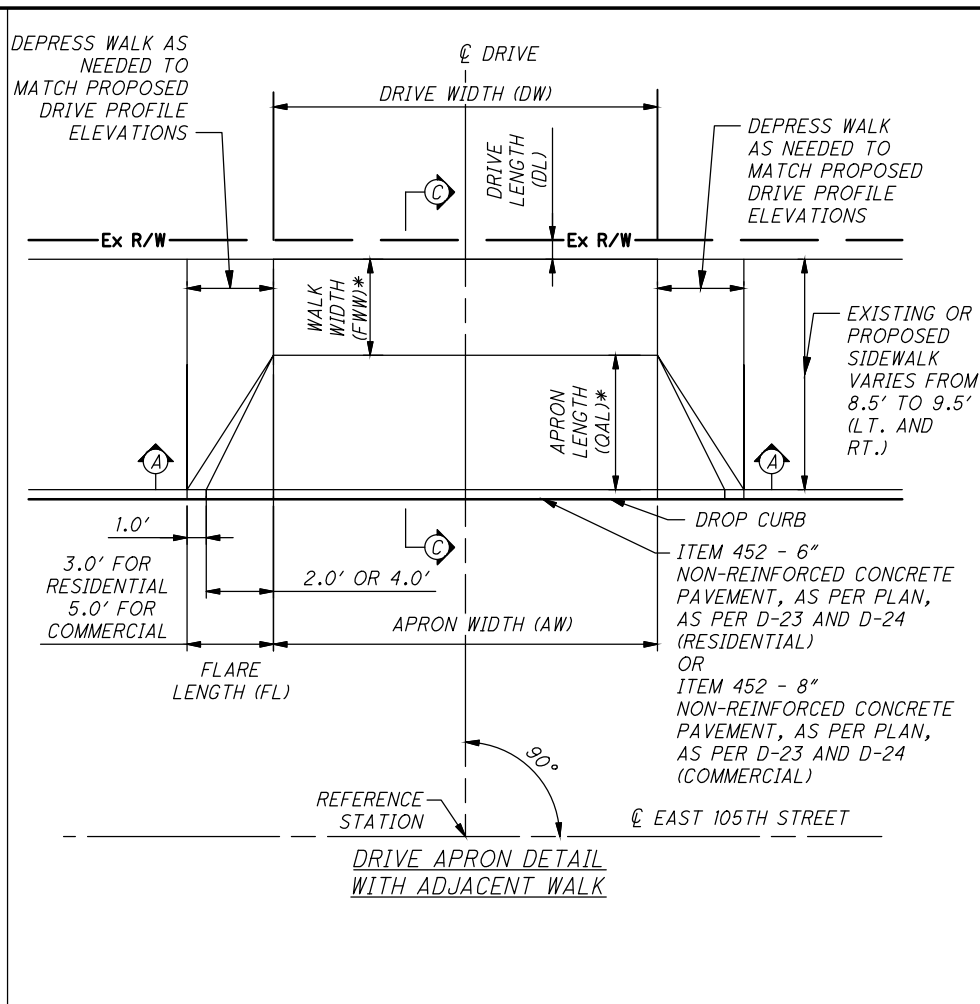
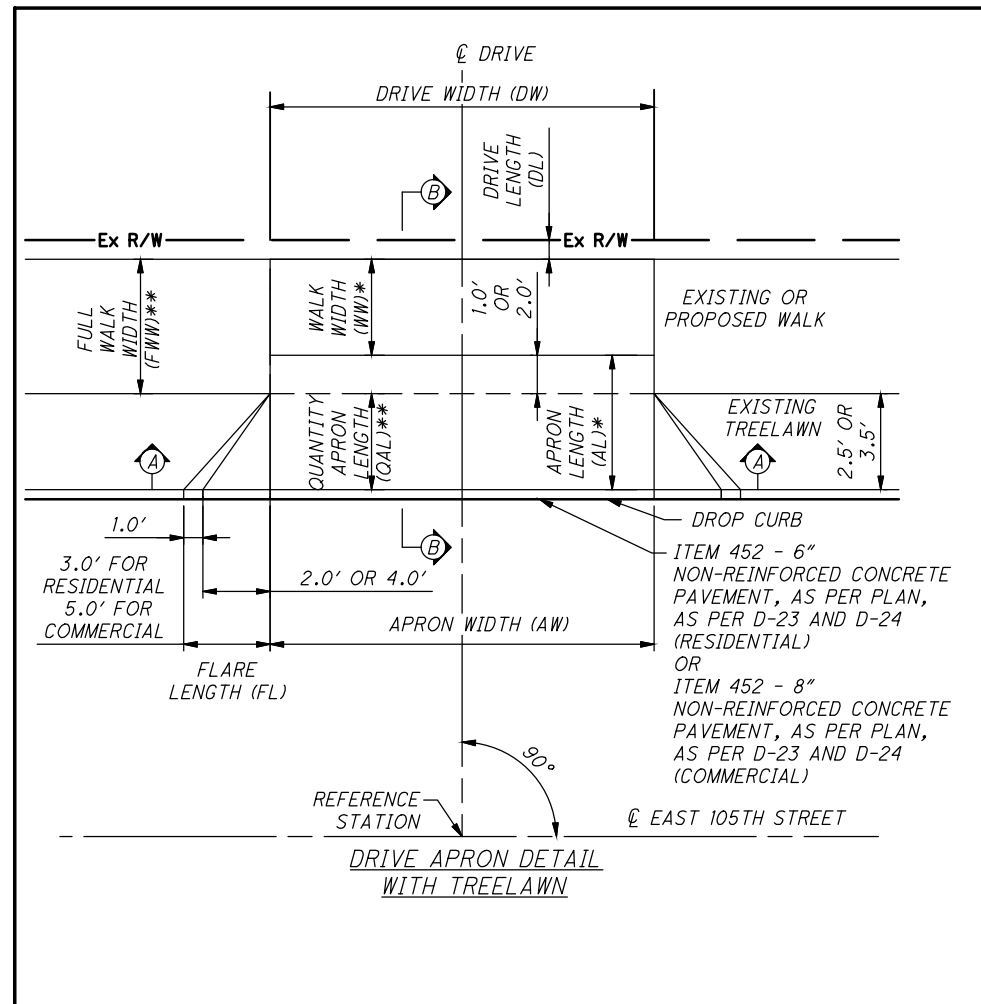
EX. PAVEMENT TO BE REMOVED
 EX. SIDEWALK TO BE REMOVED



EAST BOULEVARD
 REMOVAL DETAIL

EAST 105TH STREET

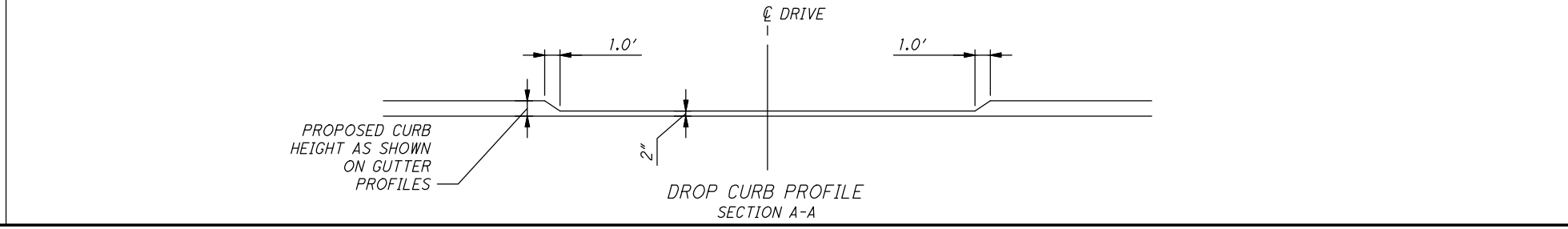
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NOTES:

- ALL DRIVE APRONS SHALL ALSO CONFORM TO CLEVELAND STANDARD CONSTRUCTION DRAWING CD-1, EXCEPT AS MODIFIED HEREIN.
- SEE DRIVE PROFILE TABLE ON SHEET 125 FOR ELEVATIONS AND DRIVE APRON DIMENSIONS.

* SEE DRIVE PROFILES ON SHEET 125 FOR SPECIFIC DRIVE APRON DIMENSIONS AND OTHER ADDITIONAL INFORMATION.
** SEE DRIVE CALCULATIONS ON SHEET 58 FOR SPECIFIC DRIVE DIMENSIONS.

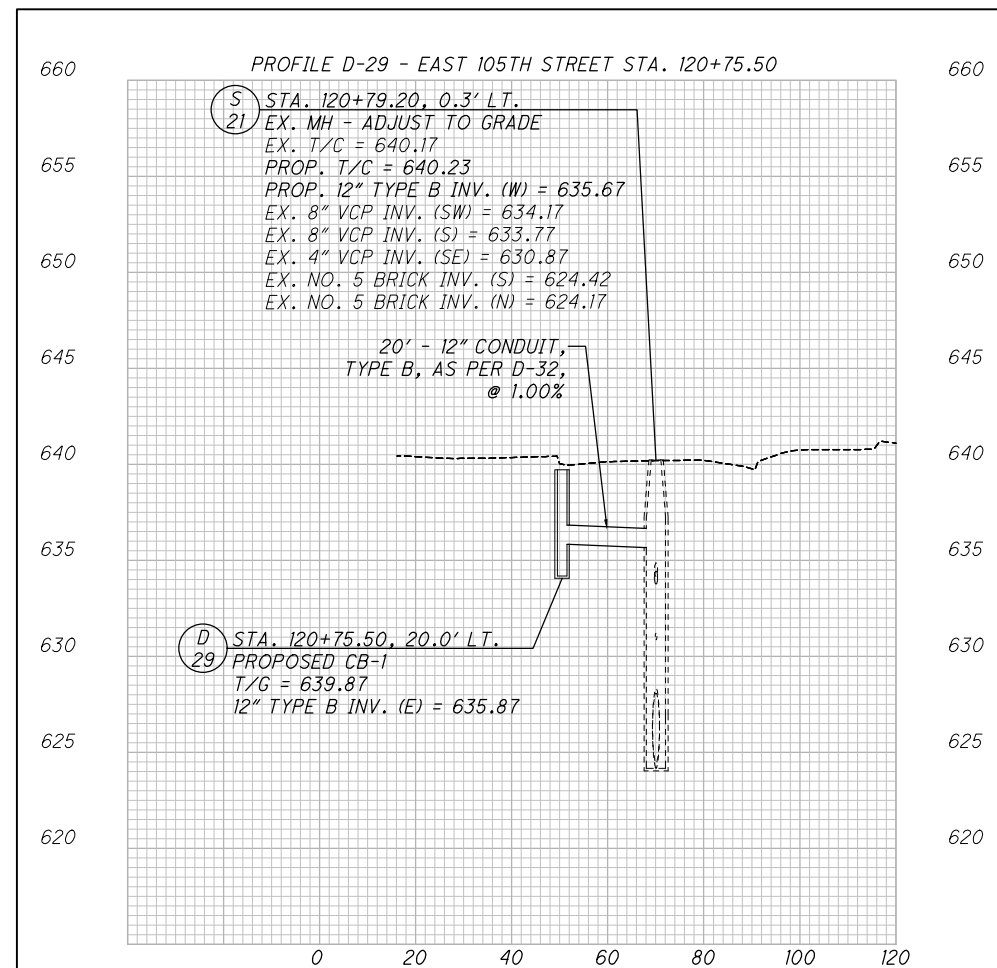
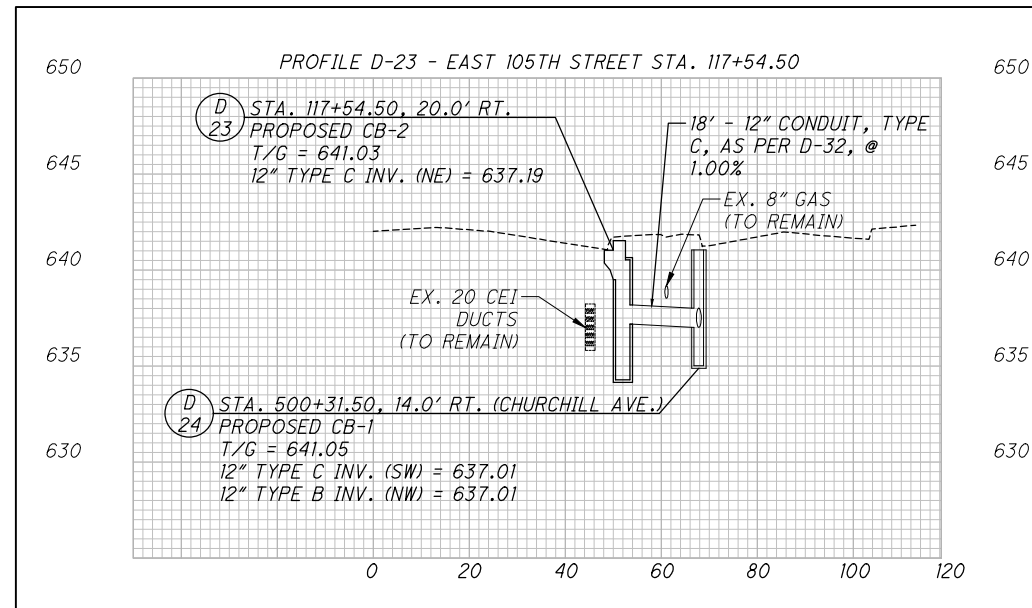
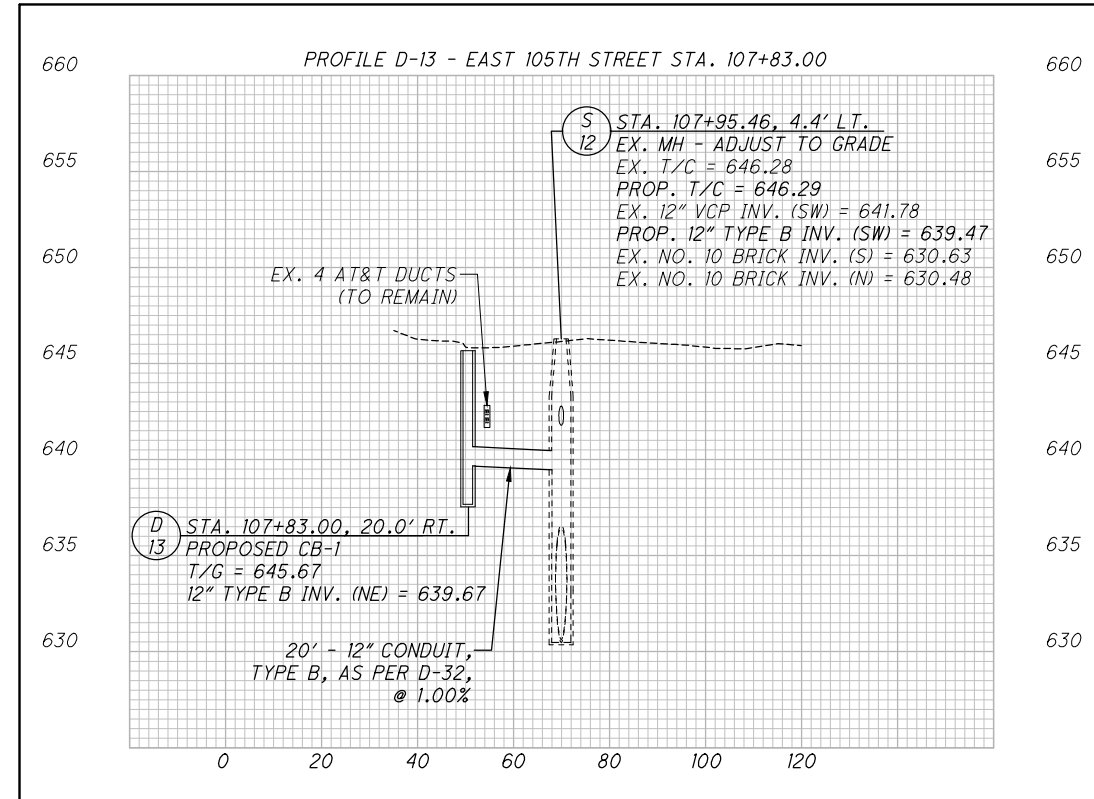
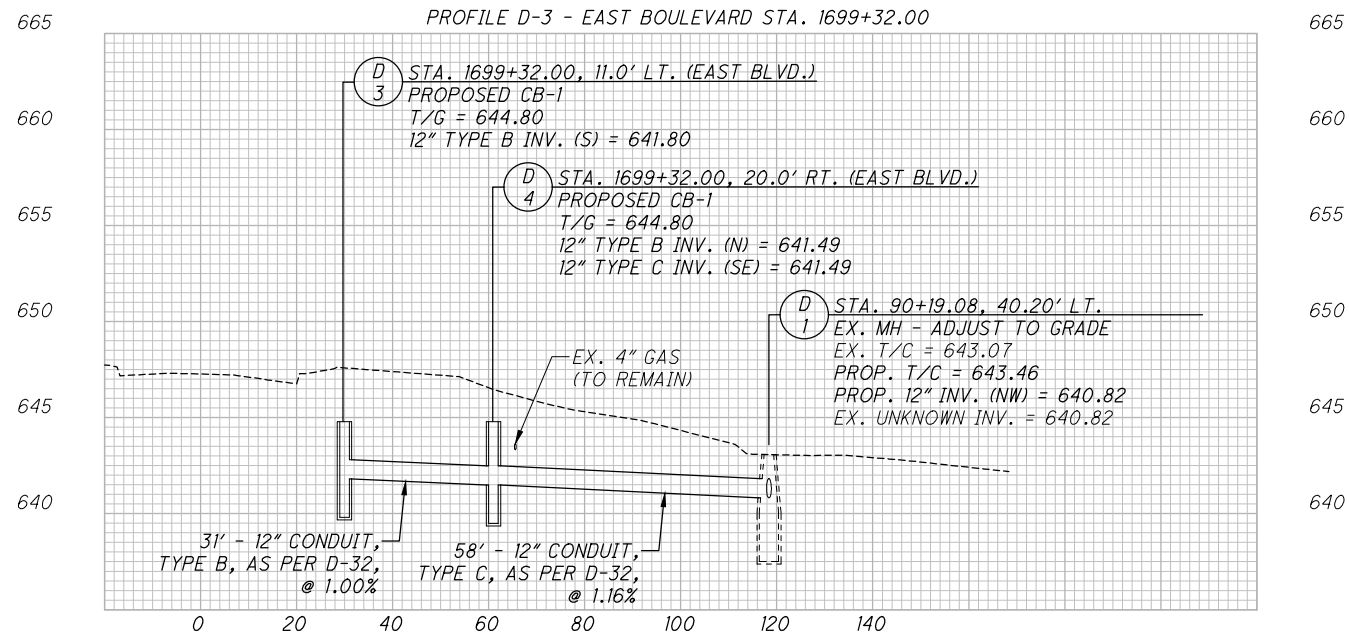


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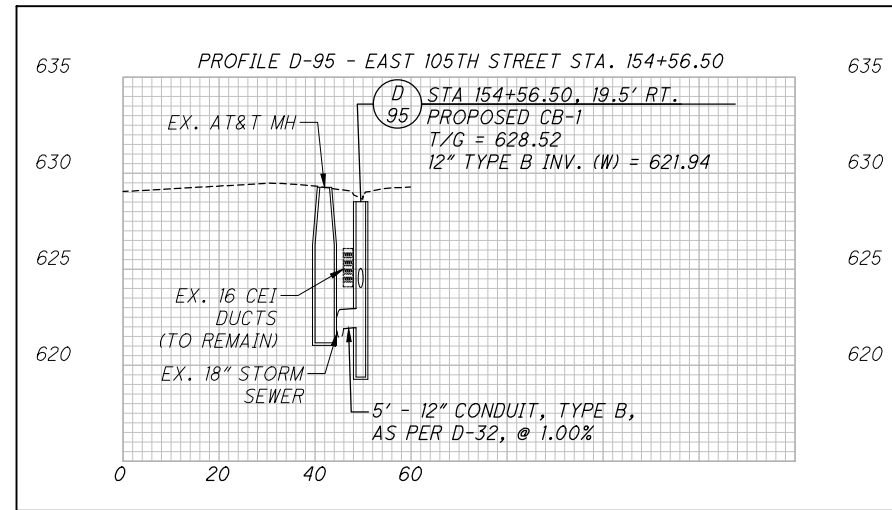
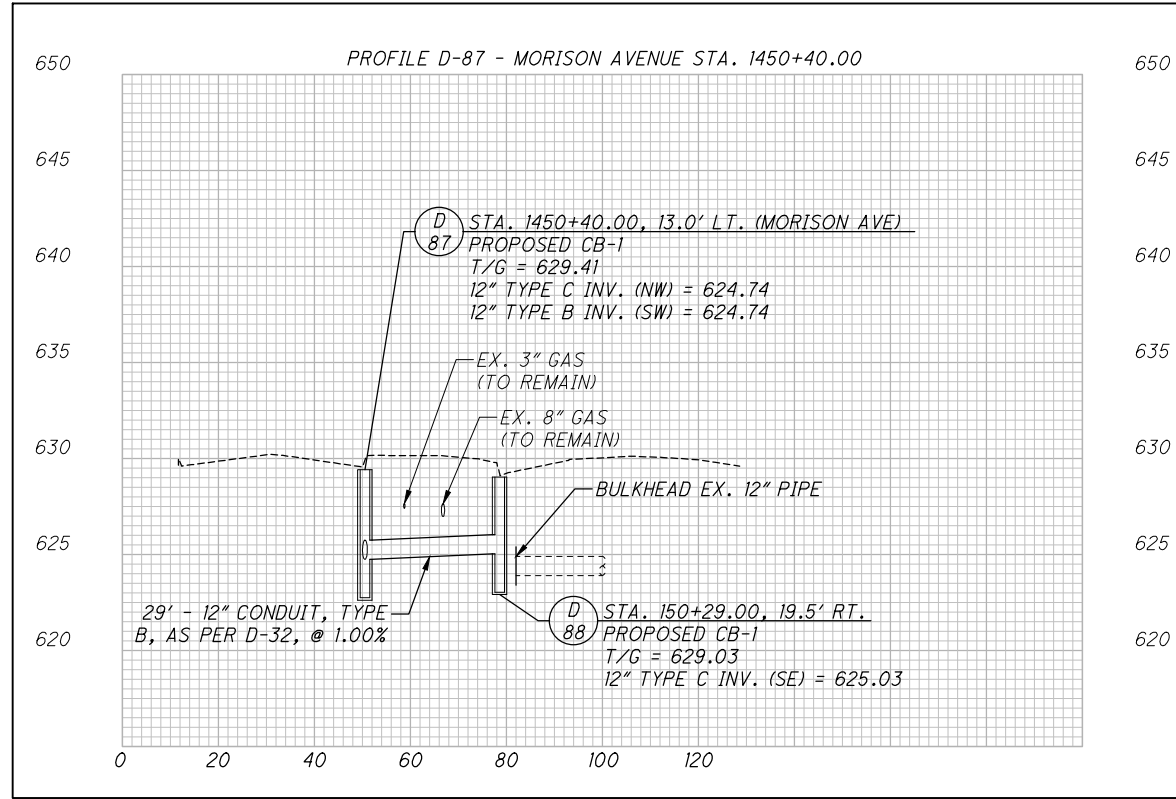
WALK					APRON			CURB			PROFILE GRADE		CURB		APRON			WALK				
EXISTING ELEVATION AT BACK OF WALK	DIFFERENCE BETWEEN PROPOSED AND EXISTING ELEVATION AT BACK OF WALK (FEET)	PROPOSED ELEVATION AT BACK OF WALK	WALK WIDTH	PROPOSED WALK CROSS-SLOPE	APRON PROFILE	ELEVATION AT BACK OF APRON	APRON LENGTH (AL)	PROPOSED TOP OF CURB ELEVATION	PROPOSED GUTTER ELEVATION	DRIVE REF. NO.	CENTERLINE STATION	APRON WIDTH (AW) AND DRIVE WIDTH (DW)	PROPOSED GUTTER ELEVATION	PROPOSED TOP OF CURB ELEVATION	APRON LENGTH (AL)	ELEVATION AT BACK OF APRON	APRON PROFILE	PROPOSED WALK CROSS-SLOPE	WALK WIDTH (WW)	PROPOSED ELEVATION AT BACK OF WALK	DIFFERENCE BETWEEN PROPOSED AND EXISTING ELEVATION AT BACK OF WALK (FEET)	EXISTING ELEVATION AT BACK OF WALK
										DR-1	101+01	10.00	648.43	648.60	4.50	649.01	9.11%	2.00%	4.00	649.09	0.00	649.09
649.01	0.00	649.01	5.00	2.00%	8.57%	648.91	3.50	648.61	648.44	DR-2	101+35	25.00										
										DR-3	101+48	9.00	648.25	648.42	4.50	648.79	8.22%	2.00%	4.00	648.87	0.10	648.97
648.87	0.03	648.84	5.00	2.00%	8.86%	648.74	3.50	648.43	648.26	DR-4	101+86	10.00										
										DR-5	101+96	10.00	648.07	648.24	2.50	648.42	7.20%	N/A	N/A	N/A	N/A	N/A
648.48	0.00	648.48	5.00	2.00%	3.14%	648.38	3.50	648.27	648.10	DR-6	102+33	10.00										
										DR-7	102+49	10.00	647.88	648.05	4.50	648.33	6.22%	2.00%	4.00	648.41	0.00	648.41
648.39	0.00	648.39	5.00	2.00%	7.14%	648.29	3.50	648.04	647.87	DR-8	102+94	16.00										
										DR-9	102+99	9.00	647.69	647.86	2.50	648.04	7.20%	N/A	N/A	N/A	N/A	N/A
										DR-10	103+49	10.00	647.50	647.67	2.50	647.82	6.00%	N/A	N/A	N/A	N/A	N/A
										DR-11	103+97	9.00	647.32	647.49	2.50	647.64	6.00%	N/A	N/A	N/A	N/A	N/A
										DR-12	104+50	10.00	647.04	647.21	2.50	647.33	4.80%	N/A	N/A	N/A	N/A	N/A
										DR-13	105+48	10.00	646.52	646.69	2.50	646.87	7.20%	N/A	N/A	N/A	N/A	N/A
										DR-14	106+03	10.00	646.33	646.50	4.50	646.73	5.11%	2.00%	4.00	646.81	0.00	646.81
										DR-15	106+53	10.00	646.17	646.34	2.50	646.48	5.60%	N/A	N/A	N/A	N/A	N/A
										DR-16	111+50											
										DR-17	115+66	8.00	642.16	642.33	4.00	642.58	6.25%	2.00%	4.00	642.66	0.00	642.66
										DR-18	118+42											
										DR-19	118+87											
										DR-20	120+01	28.00										
640.58	0.00	640.58	4.50	2.00%	-3.00%	640.49	5.00	640.64	640.47	DR-21	120+16	22.00	640.09	640.26	5.00	640.74	9.60%	2.00%	4.00	640.82	0.00	640.82
										DR-22	122+62	28.00	640.13	640.30	5.50	640.42	2.18%	2.00%	4.00	640.50	0.00	640.50
640.21	0.00	640.21	4.00	2.00%	2.00%	640.13	5.50	640.02	639.85	DR-23	123+43	17.00										
										DR-24	123+72	17.00	639.76	639.93	5.50	640.09	2.91%	2.00%	4.00	640.17	0.00	640.17
										DR-25	125+53											
639.66	0.10	639.56	4.00	2.00%	14.73%	639.48	5.50	638.67	638.50	DR-26	125+81	39.00										
										DR-27	126+65	19.00	638.59	638.76	5.00	639.09	6.60%	2.00%	4.00	639.17	0.00	639.17
										DR-28	127+30											
639.12	0.10	639.02	4.00	2.00%	9.41%	638.94	4.25	638.54	638.37	DR-29	128+43	23.00										
										DR-30	128+54	15.00	638.92	639.09	4.50	639.50	9.11%	2.00%	4.00	639.58	0.10	639.68
										DR-31	129+19	20.00	638.55	638.72	4.50	639.13	9.11%	2.00%	4.00	639.21	0.10	639.31
637.85	0.10	637.75	4.00	2.00%	1.80%	637.67	5.00	637.58	637.41	DR-32	130+93	24.00										
637.85	0.10	637.75	4.00	2.00%	9.20%	637.67	5.00	637.21	637.04	DR-33	131+46	24.00										
										DR-34	131+85	22.00	636.88	637.05	5.00	637.22	3.40%	2.00%	4.00	637.30	0.00	637.30
637.50	0.10	637.40	4.00	2.00%	7.80%	637.32	5.00	636.93	636.76	DR-35	131+88	23.00										
										DR-36	132+75											
637.15	0.00	637.15	4.00	2.00%	7.53%	637.07	7.57	636.50	636.33	DR-36A	849+36 (WESTCHESTER AVE)	8.00										
										DR-36B	849+37 (WESTCHESTER AVE)	9.00	636.370	636.54	8.000	637.19	8.12%	2.00%	4.00	637.270	0.00	637.270
										DR-37	133+70											
										DR-38	134+03											
										DR-39	134+03											
635.93	0.00	635.93	4.00	2.00%	4.73%	635.85	5.50	635.59	635.42	DR-40	134+39	20.00										
										DR-41	136+01											
633.26	0.00	633.26	4.00	2.00%	7.20%	633.18	5.00	632.82	632.65	DR-42	139+25	21.00										
										DR-43	142+07	8.00	631.13	631.30	5.50	631.33	0.55%	2.00%	4.00	631.41	0.00	631.41
631.60	0.00	631.60	4.00	2.00%	6.91%	631.52	5.50	631.14	630.97	DR-44	142+22	25.00										
631.29	0.00	631.29	4.00	2.00%	8.80%	631.21	5.00	630.77	630.60	DR-45	142+91	29.00										
										DR-46	144+37											
										DR-47	144+65											
										DR-48	145+26											
										DR-49	146+22											
										DR-50	148+85											
										DR-51	151+14	22.00	629.54	629.71	5.50	630.17	8.36%	2.00%	4.00	630.25	0.00	630.25
										DR-52	151+97	23.00	629.47	629.64	5.50	629.98	6.18%	2.00%	4.00	630.06	0.00	630.06
629.60	0.00	629.60	4.00	2.00%	8.00%	629.52	5.00	629.12	628.95	DR-53	153+32	12.00										

CALCULATED KJM
 CHECKED JTS
DRIVE PROFILE TABLE
EAST 105TH STREET
 125
 243



STORM SEWER PROFILES
EAST 105TH STREET

EAST 105TH STREET



CALCULATED	0	20	40
KJM			
CHECKED			
JTS			

**STORM SEWER PROFILES
EAST 105TH STREET**

EAST 105TH STREET

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S
2 STA. 94+92.35, 9.7' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 651.86
PROP. T/C = 651.76
EX. 18" RCP INV. (W) = 627.11
EX. NO. 8 BRICK INV. (S) = 621.94
EX. NO. 8 BRICK INV. (N) = 621.94

S
3 STA. 95+35.89, 6.8' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 651.50
PROP. T/C = 651.40
EX. NO. 8 BRICK INV. (S) = 637.70
EX. NO. 8 BRICK INV. (N) = 637.60

S
4 STA. 97+76.42, 5.8' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 650.60
PROP. T/C = 650.46
EX. 12" VCP INV. (E) = 641.80
EX. NO. 8 BRICK INV. (S) = 636.45
EX. NO. 8 BRICK INV. (N) = 636.30

S
5 STA. 98+18.43, 10.3' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 650.11
PROP. T/C = 650.12
EX. 6" VCP INV. (W) = 646.41
EX. NO. 8 BRICK INV. (S) = 621.14
EX. NO. 8 BRICK INV. (N) = 621.14

S
8 STA. 101+39.08, 10.4' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 648.92
PROP. T/C = 648.69
EX. NO. 8 BRICK INV. (S) = 620.20
EX. NO. 8 BRICK INV. (N) = 620.20

S
9 STA. 104+28.67, 4.9' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 647.81
PROP. T/C = 647.72
EX. 8" VCP INV. (S) = 642.61
EX. NO. 10 BRICK INV. (S) = 632.31
EX. NO. 10 BRICK INV. (N) = 632.11

D
11 STA. 104+31.50, 20.0' LT.
PROPOSED CB-2
T/G = 647.02
12" TYPE B INV. (E) = 642.34

D
12 STA. 104+31.50, 20.0' RT.
PROPOSED CB-2
T/G = 646.96
12" TYPE B INV. (NW) = 645.59

S
10 STA. 104+58.19, 10.3' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 647.47
PROP. T/C = 647.46
EX. 12" VCP INV. (SE) = 638.97

D
36 STA. 126+18.50, 20.0' LT.
PROPOSED CB-1
T/G = 638.09
12" TYPE B INV. (SE) = 636.77

D
37 STA. 126+18.50, 20.0' RT.
PROPOSED CB-1
T/G = 638.24
12" TYPE B INV. (W) = 633.43

S
25 STA. 126+90.23, 0.3' LT.
EX. MH - ADJUST TO GRADE
EX. T/C = 639.46
PROP. T/C = 639.35
EX. 8" VCP INV. (S) = 630.91
EX. 10" VCP INV. (N) = 633.66
EX. 12" VCP INV. (N) = 628.61

S
30 STA. 129+05.08, 1.1' RT.
EX. MH - ADJUST TO GRADE
EX. T/C = 638.78
PROP. T/C = 639.05
EX. 12" VCP INV. (S) = 624.23
EX. 12" VCP INV. (N) = 624.03

D
65 STA. 142+59.50, 20.5' RT.
PROPOSED CB-1
T/G = 630.75
12" TYPE B INV. (E) = 627.13

NOTES:

1. INFORMATION FOR ALL OTHER STRUCTURES ARE LOCATED ON THE INTERSECTION DETAILS FROM SHEETS 104 TO 123.
2. ALL STRUCTURES LISTED HERE ARE THOSE ON THE CORRIDOR THAT ARE NOT AT AN INTERSECTION AND SHOWN ON THE INTERSECTION DETAILS.

CALCULATED
KJM
CHECKED
JTS

DRAINAGE STRUCTURE DETAILS

EAST 105TH STREET

128
243

CLEVELAND WATER NOTES FOR WATER MAIN INSTALLATION AND/OR REPLACEMENT:

DEVELOPERS, ENGINEERS, AND CONTRACTORS ARE TO ABIDE BY THE MOST CURRENT VERSION OF THE CLEVELAND WATER NOTES AND DETAILS. THE MOST UP-TO-DATE VERSION CAN BE FOUND AT WWW.CLEVELANDWATER.COM/CONSTRUCTION/

GENERAL:

1. ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY CLEVELAND WATER, SHALL BE AT THE EXPENSE OF THE PROJECT UNLESS OTHERWISE AGREED TO BY THE COMMISSIONER OF THE CLEVELAND DIVISION OF WATER.

2. THE INFORMATION SHOWN ON THE CLEVELAND DIVISION OF WATER'S SUMMARY OF WORK/CHARGE LETTER, STRIP MAPS, AS BUILT DRAWINGS, AND GIS ARE TAKEN FROM EXISTING AVAILABLE RECORDS, AND THEIR ACCURACY IS NOT GUARANTEED.

3. CALL THE INSPECTION AND ENFORCEMENT UNIT AT 216-664-2342 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST 1 WEEK PRIOR TO STARTING CONSTRUCTION. THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY CONTRACTORS OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF THE CLEVELAND DIVISION OF WATER INSPECTOR. SEE ALSO NOTE 20 REGARDING ADDITIONAL ADVANCE NOTIFICATION REQUIRED IN AREAS SUSPECTED TO CONTAIN LEAD SERVICE CONNECTION (ALL AREAS INSTALLED PRIOR TO 1954).

4. PRIOR TO REQUESTING CHLORINATION, THE CONTRACTOR SHALL SUPPLY THE CLEVELAND WATER INSPECTOR WITH REDLINE DRAWINGS SHOWING CHANGES MADE FROM THE APPROVED DESIGN DRAWINGS AND ACTUAL MEASUREMENTS. CHLORINATION SHALL NOT OCCUR BEFORE THESE DRAWINGS ARE SUBMITTED.

5. FOR THE PURPOSES OF CHLORINATION AND BACTERIOLOGICAL TESTING OF THE WATER MAINS THE CONTRACTOR SHALL PROVIDE AND INSTALL, AT EACH OF THE CHLORINATION PIT LOCATIONS SHOWN AND AT OTHER LOCATIONS DETERMINED BY CLEVELAND WATER. FLUSHING/SAMPLING TAP SIZES ARE TO BE DETERMINED CLEVELAND WATER. CHLORINATION PITS SHALL BE SIX (6) FOOT SQUARE AND ARE TO MEET OSHA STANDARDS. NO CUSTOMER TAPS SHALL BE INSTALLED PRIOR TO CHLORINATION.

6. A TWO YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION SHALL BE PROVIDED BY THE BUILDER/DEVELOPER AND/OR CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED BY THE CONTRACTOR, INCLUDING TAPS IF PERFORMED. SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP. A LETTER INDICATING THE COMMENCEMENT DATE AND END DATE OF THE WARRANTY SHALL BE INCLUDED WITH THE AS-BUILT SUBMISSION IN NOTE 12.

7. USE BACKFILL MATERIAL AS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND WATER SERVICE CONNECTIONS ARE EXPOSED. (SEE CLEVELAND WATER STANDARD DETAIL STD-001)

8. ALL MATERIALS, INCLUDING BUT NOT LIMITED TO WATER MAINS, FIRE HYDRANTS, VALVES, CONNECTION MATERIALS AND OTHER WATER APPURTENANCES, SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE MOST CURRENT CLEVELAND WATER SPECIFICATIONS. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH CLEVELAND WATER'S STANDARDS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS AND APPURTENANCES THEREOF WHEN CONSTRUCTING OR CONNECTING THE NEW WATER MAIN. THIS SHALL INCLUDE LEADED JOINTS IN EXISTING FITTINGS WHICH MAY REQUIRE REPLACEMENT FITTINGS AT THE DISCRETION OF THE INSPECTOR IF IT IS DETERMINED THEY WERE DISTURBED. ALL REPAIRS TO DAMAGED EXISTING FACILITIES SHALL BE MADE BY THE CONTRACTOR, AT THE PROJECT'S EXPENSE, TO THE SATISFACTION OF CLEVELAND WATER.

10. ALL HYDROSTATIC PRESSURE TESTING SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE CLEVELAND WATER INSPECTOR. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI. THE PRESSURE TEST SHALL BE FOR A DURATION OF TWO (2) HOURS WITH THE PRESSURE BEING MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE. SHOULD THE PRESSURE TEST FAIL THE CONTRACTOR SHALL FIND AND CORRECT THE DEFICIENCY(IES) TO THE SATISFACTION OF CLEVELAND WATER AND REPEAT THE TWO (2) HOUR PRESSURE TEST.

11. ALL BURIED WATER MAINS, FITTINGS, VALVES, FIRE HYDRANT BRANCH PIPING AND APPURTENANCES SHALL BE ENCASED WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THE MOST CURRENT REVISION OF ANSI/AWWA C-105/A21.5 INSTALLATION METHOD "A". ALTERNATE INSTALLATION METHOD A FOR WET TRENCH CONDITIONS SHALL BE USED WHEN WATER MAINS ARE INSTALLED IN UNPAVED LOCATIONS SUCH AS TREE LAWNS AND EASEMENTS TRAVERSING PRIVATE PROPERTY.

12. THE PROJECT'S PROFESSIONAL ENGINEER OR A DESIGNATED PROFESSIONAL SURVEYOR SHALL OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SHALL FURNISH THE CLEVELAND WATER INSPECTOR WITH AS-BUILT DRAWINGS MEETING CLEVELAND WATER STANDARDS WITHIN 30 DAYS OF THE WATER MAIN GOING INTO SERVICE AND ALL TAPS/RETAPS BEING MADE. ONE HARD COPY AND ONE PDF COPY SHALL BE PROVIDED. DRAWINGS SHALL BE SIGNED, DATED, AND STAMPED WITH THE ENGINEER OR SURVEYOR'S SEAL. REDLINE DRAWINGS ARE NOT SUFFICIENT. CLEVELAND WATER RESERVES THE RIGHT TO WITHHOLD PAYMENT AND/OR APPROVAL OF FUTURE WORK IF AS-BUILTS ARE NOT SUBMITTED.

WATER MAINS:

13. ALL PIPE, UNLESS OTHERWISE APPROVED BY CLEVELAND WATER, SHALL BE DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED HAVING PUSH-ON JOINTS WITH RADIIALLY COMPRESSED RUBBER RING GASKET AND INSTALLED AS PER THE MOST CURRENT REVISION OF AWWA C600.

14. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE APPROVED DUCTILE IRON, CLASS 350, CEMENT LINED OR FUSION BONDED EPOXY COATED. ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT CONFORMING TO THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI/AWWA C-110/A21.10 AND ANSI/AWWA C-111/A21.11, OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C-153/A21.53. EXCEPT FOR ANCHOR TEES, REDUCERS OR OTHER SPECIAL CIRCUMSTANCES WHEN BY CLEVELAND WATER, ALL FITTINGS ARE TO HAVE BELL ENDS.

15. ALL BOLTS AND NUTS ON ALL "RETAINED" MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING.

16. WHERE SHOWN ON THE PLANS, OR WHEN OTHERWISE CALLED FOR, PIPE AND FITTINGS SHALL HAVE AN APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.

17. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL PLUG ALL OPEN PIPE ENDS WITH WATER TIGHT PLUGS AS PER THE "PREVENTITIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION" SECTION OF THE MOST CURRENT REVISION OF AWWA C-651 AS TO PREVENT THE INFILTRATION OR INTRUSION OF ANY FOREIGN OBJECTS OR MATERIALS. DATE STAMPED DIGITAL PHOTOS SHALL BE PROVIDED FOR EACH WORKDAY DEMONSTRATING THAT PROPER AWWA C-651 METHODS WERE USED TO PLUG ALL OPEN WATER MAIN ENDS. EACH PHOTO SHALL CLEARLY IDENTIFY THE STATION AT WHICH THE PIPE IS PLUGGED. THE STATIONING SHALL BE SHOWN BY THE USE OF A STATION MARKER PLACED AT THE PLUGGED PIPE END.

PHOTOS SHALL BE SUBMITTED ON A DAILY BASIS UNLESS OTHERWISE DEFINED BY THE CLEVELAND WATER INSPECTOR OR ENGINEER. ALL PHOTOS TAKEN OVER THE COURSE OF THE PROJECT SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE AS-BUILT SUBMITTAL. PHOTOS ARE TO INCLUDE STATIONING MARKERS. AS-BUILTS SHALL BE DEEMED INCOMPLETE WITHOUT SAID COLLECTION OF DIGITAL PHOTOS.

HYDRANTS:

18. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANT'S 4" (STEAMER) NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. ONLY CLEVELAND WATER APPROVED HYDRANT MODELS SHALL BE INSTALLED. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINEERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS. ALL HYDRANTS SHALL BE FACTORY EQUIPPED WITH THE APPROPRIATE HYDRANT NOZZLE.

HYDRANT BRANCHES SHALL BE FULLY RESTRAINED AND INSTALLED PER THE APPROPRIATE HYDRANT CLEVELAND WATER HYDRANT DETAIL. HYDRANT BRANCH VALVES SHALL BE PLACED DIRECTLY AFTER THE HYDRANT TEE UNLESS OTHERWISE APPROVED BY THE INSPECTOR IN WRITING.

VALVES:

19. ALL VALVES SHALL BE AN APPROVED MODEL RESILIENT SEATED GATE VALVES AS PER THE MOST CURRENT VERSION OF AWWA C509 OR C515. VALVE OPERATING NUTS SHALL BE TAPERED (1-7/8" TO 2" FROM TOP TO BOTTOM) AND 2" DEEP. VALVES MORE THAN 10 YEARS OLD AT TIE IN POINTS TO EXISTING MAINS SHALL BE REPLACED AT THE PROJECT'S EXPENSE UNLESS OTHERWISE DIRECTED.

LEAD SERVICE CONNECTIONS:

20. LEAD SERVICES: A MINIMUM OF 45 DAYS BEFORE THE PRECONSTRUCTION MEETING, CWD SHALL PROVIDE A NOTICE TO ALL AFFECTED CUSTOMERS THAT THEIR WATER SERVICE LINE WILL BE DISTURBED. A MINIMUM OF 75 DAYS BEFORE THE PRECONSTRUCTION MEETING, THE CONTRACTOR OR ENGINEER SHALL PROVIDE CWD (AND THE LOCAL MUNICIPALITY OF OUTSIDE THE CITY OF CLEVELAND) A LIST OF ALL CUSTOMER ADDRESSES THAT WILL BE AFFECTED BY THE WATER MAIN REPLACEMENT PROJECT. FAILURE TO PROVIDE A LIST OF CUSTOMER ADDRESSES IN A TIMELY MANNER MAY RESULT IN PROJECT DELAYS.

ANY CITY-OWNED LEAD SERVICE LINE ENCOUNTERED SHALL BE REPLACED WITH TYPE K COPPER. THE REPLACEMENT SERVICE LINE SHALL BE SIZE-ON-SIZE WITH A 1-INCH MINIMUM DIAMETER. IF A CUSTOMER-OWNED LEAD SERVICE LINE IS ENCOUNTERED, THE CONTRACTOR SHALL LEAVE A CWD-SUPPLIED CUSTOMER NOTIFICATION DOOR HANGER ON ALL ACCESSIBLE POINTS OF ENTRY TO THE HOME AND IMMEDIATELY NOTIFY THE CWD INSPECTOR. IF THE CWD INSPECTOR IS NOT AVAILABLE, CALL PAYTON HALL AT (216) 664-2444, EXT. 73000 OR (216) 971-2721. CUSTOMERS WITH A CUSTOMER-OWNED LEAD SERVICE LINE SHALL NOT BE RECONNECTED TO THE NEW WATER MAIN WITHOUT EXPRESS WRITTEN APPROVAL FROM PAYTON HALL, OR HIS APPROVED REPRESENTATIVE AT CWD.

AS PART OF THIS CONTRACT, THE CONTRACTOR SHALL OFFER EACH CUSTOMER TO REPLACE LEAD SERVICES FROM THE CORPORATION STOP TO THE INLET STOP & WASTE VALVE INSIDE THE CUSTOMER'S HOME. IF THE REPLACEMENT IS NOT COVERED UNDER THE BID ITEMS, THE CONTRACTOR SHALL PROVIDE CWD (AND THE LOCAL MUNICIPALITY OF OUTSIDE THE CITY OF CLEVELAND) WITH A CHANGE ORDER AND COST ESTIMATES FOR THE CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT. UPON APPROVAL FROM CWD (AND THE LOCAL MUNICIPALITY OF OUTSIDE THE CITY OF CLEVELAND), THE CONTRACTOR SHALL PERFORM THE REPLACEMENT OF THE CUSTOMER-OWNED LEAD SERVICE LINE. AS STATED ABOVE, CUSTOMERS WITH CUSTOMER-OWNED LEAD SERVICE LINES SHALL NOT BE RECONNECTED TO THE NEW WATER MAIN WITHOUT EXPRESS WRITTEN APPROVAL FROM PAYTON HALL, OR HIS APPROVED REPRESENTATIVE AT CWD.

IN THE EVENT THAT A CWD WAIVER IS GRANTED SUCH THAT A CUSTOMER-OWNED LEAD SERVICE LINE IS NOT REPLACED, CWD SHALL SUPPLY THE CONTRACTOR WITH LEAD FILTERS AND PITCHERS THAT THE CONTRACTOR SHALL DISTRIBUTE TO EACH RESIDENCE WITHIN THE PROJECT AREA, INCLUDING TO ALL UNITS OF MULTI-UNIT HOUSING BUILDINGS. THE FILTERS SHALL BE POUR-THROUGH PITCHER TYPE LEAD FILTERS THAT ARE NSF/ANSI-53 CERTIFIED TO REMOVE LEAD. THE PITCHER, A 3-MONTH SUPPLY OF FILTERS, AND CWD-SUPPLIED USE INSTRUCTIONS AND OTHER APPLICABLE MATERIALS SHALL BE DISTRIBUTED. RECORDS OF RESIDENTS WHO RECEIVED AND WHO REFUSED THE FILTERS SHALL BE PROVIDED BY THE CONTRACTOR TO CWD (AND THE LOCAL MUNICIPALITY OF OUTSIDE THE CITY OF CLEVELAND).

AT THE BEGINNING OF THE DAY THAT A CUSTOMER IS SCHEDULED TO BE CONNECTED TO THE NEW WATER MAIN, THE CONTRACTOR SHALL DISTRIBUTE THE APPROPRIATE CWD-SUPPLIED CUSTOMER NOTIFICATION DOOR HANGER AND OTHER APPLICABLE MATERIALS ON ALL ACCESSIBLE POINTS OF ENTRY TO THE HOME AND IN A PROMINENT LOCATION AT ALL MULTI-UNIT HOUSING BUILDINGS. THE APPROPRIATE DOOR NOTIFICATION WILL BE DETERMINED BY (1) WHETHER A CUSTOMER-OWNED LEAD SERVICE LINE REMAINS IN THE PROJECT AREA AND (2) THE TYPE OF MATERIAL OF THE INDIVIDUAL CUSTOMER-OWNED SERVICE LINE.

21. DIELECTRIC COUPLINGS: IN THE EVENT THAT A CWD WAIVER IS GRANTED SUCH THAT A CUSTOMER-OWNED LEAD SERVICE LINE IS NOT REPLACED, AND A NEW SERVICE IS CONNECTED TO A CUSTOMER-OWNED LEAD SERVICE LINE, A DIELECTRIC COUPLING SHALL BE PROVIDED TO TRANSITION FROM THE NEW MATERIALS TO THE LEAD PIPE. THE MODEL COUPLING USED IS SUBJECT TO APPROVAL FROM CWD. HARCO-PHILMAC UTC OR CWD-APPROVED EQUAL.

GENERAL SERVICE CONNECTIONS:

22. AS PART OF THE AS-BUILT SUBMISSION IN NOTE 12, THE CONTRACTOR SHALL PROVIDE A TABLE SHOWING ALL EXISTING CONNECTIONS, IDENTIFIED BY CLEVELAND WATER CONNECTION NUMBER, SHOWING THE FOUND CONNECTION MATERIAL FOR BOTH THE CITYSIDE AND OWNERSIDE CONNECTION, AS WELL AS THE NEW CONNECTION MATERIAL FOR ALL CONNECTIONS REPLACED. THE TABLE SHALL ALSO NOTE ANY REVISED CONNECTION MEASUREMENTS AND SIZES. A SAMPLE TABLE WILL BE PROVIDED. THE SUBMISSION SHALL BE IN MICROSOFT EXCEL FORMAT. CLEVELAND WATER SHALL REQUIRE THE DELIVERY AND ACCEPTANCE OF THIS TABLE BEFORE THE PRESSURE TEST AND CHLORINATION/DISINFECTION OF THE MAIN WILL BE PERMITTED.

23. NEW WATER SERVICE CONNECTIONS LOCATIONS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY AND ARE NOT PART OF THE WATER MAIN APPROVAL. THE SPECIFIC LOCATION FOR EACH CONNECTION WILL BE DETERMINED BY CLEVELAND WATER PRIOR TO THE TAPS BEING INSTALLED. ALL PERMITS FOR TAPS AND METERS FOR PARCELS ASSOCIATED WITH THE WATER MAINS INSTALLED ON THIS PROJECT ARE TO BE OBTAINED BY THE LAND OWNER OF SAID IMPROVEMENT PLANS. IT IS THE LAND OWNERS RESPONSIBILITY TO ARRANGE FOR OBTAINING PERMITS FOR ALL WATER SERVICE CONNECTIONS BEFORE ANY SERVICE CONNECTION WORK MAY PROCEED. ALL FEES CAN BE OBTAINED FROM THE CLEVELAND WATER PERMITS AND SALES SECTION AT 216-664-3130 PROMPT #7 OR 216-664-2444 X75209.

ACCOUNTS SHALL BE INITIATED IN THE LAND OWNER'S NAME AS PART OF THE PERMITTING PROCESS. ALL RESPONSIBILITIES ASSOCIATED WITH EACH WATER SERVICE, INCLUDING, THE OWNER SIDE INSPECTIONS, METER SET/METER PIPING INSPECTION AND THE METER INSTALLATION SHALL BE THE RESPONSIBILITY OF SAID OWNER.

METERS INSTALLATIONS WILL NOT BE AUTHORIZED TO BE INSTALLED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED. ESTIMATED BILLS MAY ENSUE IF A HOME IS IDENTIFIED AS HAVING WATER SERVICE BUT NO METER HAS BEEN INSTALLED. IF NEW OWNERS, ONCE PARCELS ARE SOLD OFF AND TRANSFER TITLE, DO NOT CONTACT CLEVELAND WATER TO ESTABLISH ACCOUNTS IN THEIR NAME, ACCOUNTS AND THEIR ASSOCIATED BILLS WILL REMAIN IN THE NAME OF OUR LAST OWNER OF RECORD WHICH MAY BE THE DEVELOPER OR BUILDER. IT IS THE RESPONSIBILITY OF THE NEW OWNER TO TRANSFER ACCOUNTS INTO THEIR NAME WHEN THE PROPERTIES LEGALLY TRANSFER. UPON TRANSFER OF PROPERTY, SELLER OF PROPERTY MUST COMMUNICATE ALL UNCOMPLETED PORTIONS OF THE REFERENCED RESPONSIBILITIES TO THE NEW OWNER.

24. ONE INCH SERVICE CONNECTIONS SHALL BE PERMITTED TO SERVICE NEW HOMES (AS SHOWN ON APPROVED WATER MAIN EXTENSION PLANS) BASED ON THE FOLLOWING CRITERIA:

PEAK FLOW DEMANDS DO NOT EXCEED 25 GPM FOR AN INDIVIDUAL HOME/UNIT. INCLUSIVE OF ALL USAGE (DOMESTIC AND/OR IRRIGATION),

LENGTH OF ONE INCH CONNECTION DOES NOT EXCEED 75 FEET AS MEASURED FROM THE MAIN TO THE POINT OF ENTRY INTO THE PROPOSED HOME/UNIT.

THE CONNECTIONS DO NOT INCLUDE LIMITED AREA OR NFPA 13D SPRINKLER SYSTEMS

ANY SERVICE REQUESTS DIFFERING FROM THE STATED CRITERIA SHALL REQUIRE THE SUBMITTAL OF A COMPLETE WATER SERVICE APPLICATION FOR EACH WATER SERVICE REQUESTED.

25. ALL CURB VALVE BOXES & METER VAULTS WILL BE INSTALLED IN GRASS AREAS WHEN POSSIBLE. CURB VALVES SHALL BE PLACED APPROXIMATELY 2 FEET OFF THE CURB. CURB VALVES IN EASEMENTS SHALL BE PLACED APPROXIMATELY 3 FEET OFF THE WATER MAIN. IF VALVE BOXES OR METER VAULTS ARE INSTALLED OUTSIDE OF A DEDICATED RIGHT OF WAY OR EASEMENT FOR THE PURPOSES OF WATER SUPPLY, A STANDARD CLEVELAND EASEMENT FOR A VAULT SHALL BE PROVIDED.

EMERGENCIES:

26. IF A WATER MAIN OR SERVICE CONNECTION BREAK OCCURS DURING CONSTRUCTION AND EMERGENCY ASSISTANCE IS REQUIRED, PLEASE NOTIFY CLEVELAND WATER AT 216-664-3060. THIS LINE IS AVAILABLE 24/7/365.

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PLOT DATE: 5/7/19

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WATER WORK NOTES

EAST 105th STREET

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WATER WORK:

ALL WATERWORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE CITY OF CLEVELAND, DEPARTMENT OF PUBLIC UTILITIES, DIVISION OF WATER (C.W.D.), 1201 LAKESIDE AVENUE, CLEVELAND, OHIO (AND THE NOTES & DETAILS SHOWN ON SHEETS 132-135). THE COST OF ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, EXCAVATION, BEDDING AND BACKFILL FOR THE WATER WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR EACH WATER WORK ITEM. THE REPLACEMENT OF PAVEMENT, DRIVES, LANDSCAPING AND ALL OTHER WORK EXCEPTING THE "WATERWORK" ITSELF, SHALL BE AS STIPULATED IN THE CONTRACT SPECIFICATIONS.

NO CONTRACTOR'S MARKUP ALLOWED ON BID ITEM 107 WATER WORK, MISC.: DIVISION OF WATER CHARGES. THIS IS AN ALLOWANCE SET UP FOR THE CONTRACTOR TO PAY FOR PERMITS, FEES AND OTHER CHARGES TO BE REIMBURSED BY THE CITY THROUGH THIS PAY ITEM.

ALL PERMITS, FEES AND C.W.D. CHARGES AND THEIR ASSOCIATED COSTS SHALL BE INCLUDED IN THE CONTRACT ALLOWANCE FOR ITEM 638 - WATER WORK, MISC.: DIVISION OF WATER CHARGES. CITY OF CLEVELAND DIVISION OF WATER (CWD) CHARGES AND FEES MAY BE OBTAINED FROM THE DIVISION OF WATER, PERMIT AND SALES SECTION AT (216) 664-2444 X 5203.

ITEM 638 - WATER WORK, MISC.: DIVISION OF WATER CHARGES 25,000 DOLLARS

AFTER THE WATERLINE TRENCH AND 2 FOOT PAVEMENT OVERCUT ARE MADE, PAVEMENT LESS THAN 2 FEET WIDE BETWEEN THE TRENCH OVERCUT AND THE CURB SHALL BE REMOVED AND REPLACED.

ALL WATER MAIN AND WATER SERVICE CONNECTION ARE COMPLETE IN PLACE PAY ITEMS. THESE COMPLETE IN PLACE WATER PAY ITEMS INCLUDE WALK, DRIVE AND CURB REMOVALS AND REPLACEMENTS IN KIND AS NECESSARY TO COMPLETE THIS WATER WORK, AS WELL AS ALL OTHER WORK NECESSARY TO PERFORM THE WATER LINE WORK, AS STATED IN THE PART E1-1 OF THE CLEVELAND WATER SPECIFICATIONS, IN THE CONTACT AND SPECIFICATIONS BOOK, AND ARE INCLUDED IN THE LINEAR FOOT PRICE, EXCEPT FOR STREET TRACK REMOVAL. ALL OTHER COSTS ASSOCIATED WITH THE WATERLINE INSTALLATIONS ARE CONSIDERED TO BE INCIDENTAL AND INCLUDED IN THE WATER LINE COST PER LINEAR FOOT.

THE ESTIMATED QUANTITIES FOR STREET TRACK REMOVAL NEEDED FOR WATER WORK IS ITEMIZED SEPARATELY AND IS TO BE PAID AS FOLLOWS:

ITEM 202 - TRACK REMOVED, AS PER PLAN, AS PER D-17 100 SY

ITEM SPECIAL - MISCELLANEOUS METAL (CWD), AS PER D-72

EXISTING CASTINGS ARE THE PROPERTY OF CITY OF CLEVELAND DIVISION OF WATER (CWD). EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY FRED ROBERTS AT (216) 664-2444 EXT. 5590 TO DETERMINE THE REQUIRED TYPE, SIZE, AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL PROVIDED BY THE CONTRACTOR SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

**ITEM SPECIAL-MISCELLANEOUS METAL (CWD), 10,000 POUNDS
AS PER D-72**

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE, AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR. ALL EXISTING CASTINGS NOT SCHEDULED FOR RE-USE SHALL BE STORED IN AN AREA DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER FOR COLLECTION BY CWD. THE CONTRACTOR SHALL COORDINATE WITH CWD TO ARRANGE COLLECTION OF ALL CASTINGS STORED IN THE DESIGNATED LOCATION.

ITEM 638 - FIRE HYDRANT REMOVED, AS PER PLAN

THE CONTRACTOR SHALL REMOVE EXISTING HYDRANTS, PERFORM ALL WORK NECESSARY AT THE LOCATIONS SHOWN ON THE CONTRACT DRAWINGS, OR WHERE ORDERED; PLUG OR CAP EXISTING MAINS, TEES OR CROSSES; DELIVER THE REMOVED MATERIAL TO HARVARD YARDS; EXCAVATE, PROVIDE SHEETING AND SHORING, BACKFILL, SEEDING AND SODDING, SIDEWALK REPLACEMENT AND PAVING (BOTH TEMPORARY AND PERMANENT), AND ALL OTHER WORK AS REQUIRED. THE UNIT PRICE STIPULATED TO THE PAID FOR EACH ITEM 638 - "FIRE HYDRANT REMOVED, AS PER PLAN" SHALL INCLUDE REMOVAL AND DELIVERY OF EXISTING HYDRANTS, REMOVING EXISTING BRANCH PIPE, REMOVING EXISTING VALVES AND/OR VALVE BOXES AND FOR PLUGGING/CAPPING EXISTING MAINS, TEES OR CROSSES.

ITEM 638 - FURNISHING AND SETTING 6" HYDRANT, COMPLETE

WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL HYDRANTS, HYDRANT BRANCH PIPE AND FITTINGS, TAPPING, VALVES, VALVE BOXES AND COVERS, CAULKING MATERIAL, LABOR, TOOLS, AND EQUIPMENT FOR AND SHALL PROPERLY CONNECT AT THE LOCAITON SHOWN ON THE CONTRACT DRAWINGS, 6" HYDRANTS, COMPLETE, AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT.

HYDRANTS

THE 6" HYDRANT DETAILS SHOWN IN THE PLANS IS A CITY OF CLEVELAND STANDARD. IN ADDITION TO THE 6" HYDRANT DETAILS IN THE PLANS, THE CITY OF CLEVELAND HAS APPROVED THREE ADDITIONAL 6" HYDRANT DETAILS ON FILE AT 1201 LAKESIDE AVENUE, CLEVELAND, OHIO 44114. THE DRAWING NOS. ARE D525, D526, AND D530.

SETTING

(A) GENERAL LOCATION: THE HYDRANT SHALL BE LOCATED IN A MANNER TO PROVIDE COMPLETE ACCESSIBILITY, AND IN SUCH MANNER THAT THE POSSIBILITY OF DAMAGE FROM VEHICLES OR INJURY TO PEDESTRIANS WILL BE MINIMIZED.

(B) LOCATION REGARDING CURB LINES: WHEN PLACED BEHIND CURB THE HYDRANT BARREL SHALL BE SET SO THAT NO PORTION OF THE HYDRANT WILL BE LESS THAN TWO (2) FEET FROM THE FACE OF THE CURB EXCEPT BY CONSENT OF THE ENGINEER.

(C) LOCATION REGARDING SIDEWALK: WHEN SET IN THE LAWN SPACE BETWEEN THE CURB AND THE SIDEWALK, OR BETWEEN THE SIDEWALK AND THE PROPERTY LINE, NO PORTION OF THE HYDRANT OR NOZZLE CAP SHALL BE WITHIN 6 INCHES OF THE SIDEWALK.

(D) POSITION OF NOZZLE: THE HYDRANT SHALL STAND PLUMB WITH THE NOZZLES POINTING TOWARD THE ROAD AT AN ANGLE OF FORTY-FIVE DEGREES THEREFROM. WHERE HYDRANT BRANCH PIPING IS PARALLEL WITH OR NOT AT RIGHT ANGLES TO THE CURB, THE CONTRACTOR SHALL RELEASE SWIVEL HEAD BOLTS AND ADJUST THE HYDRANT NOZZLES TO FACE THE ROAD AT THE PROPER ANGLE. A HYDRANT WITHOUT SWIVEL HEADS WILL BE ADJUSTED BY THE CITY WHERE NECESSARY TO CORRECT THE ANGLE OF NOZZLES. THE ELEVATION SHALL CONFORM TO THE ESTABLISHED GRADE WITH TOPS OF FROST CASING AT LEAST FOUR (4) INCHES ABOVE THE GRADE.

(E) CONNECTION TO MAIN: THE HYDRANT SHALL BE CONNECTED TO THE MAIN PIPE WITH A BRANCH CONTROLLED BY THE INDEPENDENT GATE VALVES OF THE SAME SIZE AS THE HYDRANT, EXCEPT AS OTHERWISE DIRECTED.

(F) DRAINAGE AT HYDRANT: DRAINAGE SHALL BE PROVIDED AT THE BASE OF THE HYDRANT BY FILLING AROUND THE ELBOW WITH COARSE GRAVEL OR CRUSHED STONE TO AT LEAST SIX (6) INCHES ABOVE THE WASTE OPENING. WHEREVER A HYDRANT IS SET IN ROCK, CLAY, OR OTHER IMPERVIOUS SOIL, THE TRENCH SHALL BE WIDENED AND DEEPENED ON EACH SIDE OF THE HYDRANT BASE AND THE SPACE SHALL BE FILLED COMPACTLY WITH COARSE GRAVEL OR BROKEN STONE MIXED WITH COARSE SAND OF SUFFICIENT QUANTITY TO ABSORB ALL WATER TO BE DRAINED FROM THE HYDRANT WHEN THE VALVE IS CLOSED.

(G) ANCHORAGE FOR HYDRANT: THE HYDRANT SHALL BE SET ON A STONE SLAB OR A SIMILAR FOUNDATION AND THE BASE OF THE HYDRANT AND THE HYDRANT TEE SHALL BE WELL BRACED AGAINST UNEXCAVATED EARTH AT THE END OF THE TRENCH WITH CONCRETE BACKING, OR IT SHALL BE TIED TO THE PIPE WITH SUITABLE RODS OR CLAMPS, TIED WITH MECHANICAL JOINT FITTING OR AS DIRECTED BY THE ENGINEER.

(H) CLEANING: THE HYDRANT SHALL BE THOROUGHLY CLEANED OF DIRT OR FOREIGN MATTER BEFORE SETTING.

PAYMENT

(A) THE UNIT PRICE STIPULATED TO BE PAID FOR EACH ITEM 638 - "FURNISHING AND SETTING 6" HYDRANT, COMPLETE" SHALL INCLUDE FURNISHING HYDRANT, HYDRANT BRANCH PIPE AND FITTINGS, TAPPING, VALVES, VALVE BOXES AND COVERS, SETTING, TESTING, PAINTING, EXCAVATING, SHEETING AND SHORING, BACKFILLING, AND THE FURNISHING OF ALL LABOR, MATERIALS, TOOLS AND APPLIANCES NECESSARY TO COMPLETE THE WORK AS SPECIFIED OR SHOWN.

UNDERPASS OBSTRUCTION

WHEN OBSTRUCTIONS ARE ENCOUNTERED DURING WATERLINE INSTALLATION THAT ARE NOT SHOWN ON THE PLANS OR THAT CANNOT BE AVOIDED BY DEFLECTING THE NEW WATERLINE, THE FOLLOWING CONTINGENCY QUANTITIES (PAYMENT TO BE COMPLETE IN PLACE) WILL BE USED AS DIRECTED BY THE ENGINEER:

**ITEM SPECIAL - 8" WATERMAIN LOWERING (UNDERPASS) 1 EACH
PER STD - L04, COMPLETE IN PLACE**

**ITEM SPECIAL - 8" WATERMAIN LOWERING (UNDERPASS) 1 EACH
PER STD - L05, COMPLETE IN PLACE**

**ITEM SPECIAL - 12" WATERMAIN LOWERING (UNDERPASS) 3 EACH
PER STD - L04, COMPLETE IN PLACE**

**ITEM SPECIAL - 12" WATERMAIN LOWERING (UNDERPASS) 1 EACH
PER STD - L05, COMPLETE IN PLACE**

ITEM 638 - SERVICE BOX ADJUSTED TO GRADE, AS PER E-12

ALL EXISTING WATER SERVICE BOXES LOCATED WITHIN THE LIMITS OF DISTURBANCE SHALL BE ADJUSTED TO GRADE, REGARDLESS OF WEATHER OR NOT THE BOX LOCATION IS IDENTIFIED ON THE PLANS. THE FOLLOWING CONTINGENCY QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR USE IN PERFORMING THIS WORK:

**ITEM 638 - SERVICE BOX ADJUSTED TO GRADE, 5 EACH
AS PER E-12**

ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO GRADE, AS PER D-39/E-12

IN ADDITION TO THE QUANTITIES TABULATED ON SHEETS 136-153, THE FOLLOWING CONTINGENCY QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

**ITEM 611 - VAULT/MANHOLE RECONSTRUCTED TO 3 EACH
GRADE, AS PER D-39/E-12**

ITEM SPECIAL - PAVEMENT BASE REPAIR, AS PER PLAN

REPAIR PAVEMENT BASE OVER WATER MAIN TRENCH BACKFILL PER FULL DEPTH PAVEMENT REPAIR DETAIL ON SHEET 11 (6" AGGREGATE BASE, 9" CONCRETE, AND ITEM 301 AS NEEDED). PAYMENT IS FOR ALL LABOR, EQUIPMENT AND MATERIALS TO INSTALL.

ABANDON EXISTING WATER MAIN

THIS ITEM SHALL INCLUDE PLUGGING EXPOSED WATER MAIN ENDS, WHETHER OR NOT SUCH WORK IS EXPRESSLY SHOWN IN THE PLANS.

THE WORK SHALL INCLUDE EXCAVATION, BACKFILL, TRAFFIC MAINTENANCE, DISPOSAL OF MATERIALS, CAPPING EXPOSED PIPE END, CURB, SIDEWALK, PAVEMENT REMOVAL AND REPLACEMENT (BOTH TEMPORARY AND PERMANENT, AND SITE RESTORATION NECESSARY TO PERFORM THE WORK.

PAYMENT FOR ABANDONMENT OF EXISTING WATER MAINS SHALL BE INCLUDED IN THE VARIOUS WATER WORK BID ITEMS.

WATER WORK NOTES

EAST 105th STREET

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TEMPORARY WATER MAINS AND SERVICE CONNECTIONS

A. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL TEMPORARY WATER MAINS AS SPECIFIED AND OF SUCH SIZE AS TO PROVIDE A SUFFICIENT WATER SUPPLY FOR FIRE PROTECTION. THE FAILURE OF THE CONTRACTOR TO INSTALL TEMPORARY MAINS OF SUFFICIENT SIZE MAY MAKE THE CONTRACTOR LIABLE WHERE CONFLAGRATION DUE TO LACK OF WATER FOR FIRE PROTECTION MAY GIVE RISE TO ACTIONABLE CLAIMS FOR DAMAGES CHARGEABLE TO THE CONTRACTOR BY REASON OF SAID FAILURE.

B. THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, TOOLS, MATERIAL AND EQUIPMENT FOR TEMPORARY WATER MAINS AND SERVICE CONNECTIONS WHERE SERVICE CONNECTIONS ARE ENCOUNTERED ON THE MAINS TO BE CLEANED AND LINED. THE CONTRACTOR SHALL PROVIDE, INSTALL AND REMOVE TEMPORARY WATER MAINS AND TEMPORARY CONNECTIONS TO ALL PREMISES AND SERVICES IN A MANNER SUCH THAT WATER SERVICE CONTINUES UNINTERRUPTED. TEMPORARY WATER MAINS SHALL BE PLACED ON ONE OR BOTH SIDES OF THE STREET SO AS TO PROVIDE SERVICE ONLY TO THOSE CONNECTIONS ON THE SIDE OF THE STREET ON WHICH THE PARTICULAR TEMPORARY MAIN IS LOCATED. THE TEMPORARY MAINS SHALL NOT OBSTRUCT ANY STREETS, SIDEWALKS OR DRIVEWAYS.

C. THE TEMPORARY WATER MAIN FOR ORDINARY SIZE SERVICE CONNECTIONS (1" OR LESS) SHALL BE A MINIMUM OF 4" INSIDE DIAMETER PIPE AND FITTINGS WITH SUPPLEMENTAL 2" CONNECTIONS FROM EXISTING FIRE HYDRANTS OR TAPS ON ADJACENT EXISTING WATER MAINS. THE TEMPORARY WATER MAIN FOR SERVICE CONNECTIONS LARGER THAN 1" SHALL BE A MINIMUM OF 4" INSIDE DIAMETER PIPE FITTINGS WITH SUPPLEMENTAL 2" CONNECTIONS FROM ADJACENT EXISTING FIRE HYDRANTS OR TAPS ON ADJACENT EXISTING WATER MAINS. MINIMUM SIZE REQUIREMENTS FOR TEMPORARY BYPASS WATERLINES SHALL IN ADDITION INCLUDE A 4" MINIMUM INSIDE DIAMETER PIPE ON AT LEAST ONE SIDE OF ANY STREET WHERE A WATER MAIN IS BEING REHABILITATED BY CLEANING AND LINING OR IS TAKEN OUT OF SERVICE BECAUSE OF ANY WORK BEING PERFORMED UNDER THIS CONTRACT. IF THE CITY IS OF THE OPINION THAT THE SIZE OF THE TEMPORARY WATER MAIN TO BE FURNISHED AT ANY POINT IS NOT SUFFICIENT THE CITY MAY ORDER 6" INSIDE DIAMETER OR 8" INSIDE DIAMETER SIZE BE USED. WHERE TRAFFIC OR OTHER CONDITIONS WARRANT, THE CITY MAY ALSO ORDER THAT ONLY GALVANIZED STEEL BYPASS PIPE AND FITTINGS BE USED. THIS MATERIAL REQUIREMENT, WHEN ORDERED, IS NOT COUPLED TO THE SIZING REQUIREMENTS, THE CITY MAY REQUIRE SUCH MATERIAL ON ANY SIZE BYPASS PIPE. THE CONTRACTOR IS HEREWITH NOTIFIED THAT NO EXTRA ALLOWANCE OR PAYMENT WILL BE MADE BASED ON LENGTH, SIZE OR MATERIAL OF TEMPORARY BYPASS PIPE WHERE ADDITIONAL LENGTHS, INCREASED SIZES OR ALTERNATE MATERIALS ARE REQUIRED OR ORDERED TO PROVIDE ACCEPTABLE AND RELIABLE SERVICE AS DETERMINED BY THE CITY. THE COMPLIANCE WITH SUCH ORDERS BY THE CONTRACTOR SHALL NOT RELIEVE OR RELEASE THE CONTRACTOR FROM THE RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY WATER SERVICE.

D. THE CONTRACTOR SHALL PROVIDE ENOUGH ISOLATION VALVES IN THE TEMPORARY WATER MAIN SYSTEM SUCH THAT PIPE SEGMENTS ON EACH SIDE OF THE STREET OF EACH STREET BLOCK CAN BE ISOLATED. IN NO CASE SHALL SEGMENTS OF PIPE BETWEEN VALVES BE LONGER THAN 1000 FEET.

E. MINIMUM FLOWS THAT SHALL BE AVAILABLE FROM TEMPORARY BYPASS WATERLINES, 4" IN DIAMETER OR LARGER, SHALL BE:

1. ON RESIDENTIAL DEAD END AND SIDE STREETS WHICH MUST BE OR ARE SUPPLIED FROM THE EXISTING WATERLINE BEING CLEANED AND LINED, A MINIMUM OF 600 GALLONS PER MINUTE (GPM) AT A 20 POUND PER SQUARE INCH (PSI) RESIDUAL PRESSURE AT ANY POINT ALONG SAID TEMPORARY BYPASS WATERLINE.

2. ON RESIDENTIAL MAIN OR THROUGH STREETS CONNECTING TWO (2) OR MORE DEAD END OR SIDE STREETS WHICH MUST BE OR ARE SUPPLIED FROM THE EXISTING WATERLINE BEING CLEANED AND LINED, A MINIMUM OF 1500 GPM AT A 20 PSI RESIDUAL PRESSURE AT ANY POINT ALONG SAID TEMPORARY BYPASS WATERLINE. WHEN THE VALVE IS CLOSED.

3. ON A STREET IN COMMERCIAL, INDUSTRIAL OR MULTI-FAMILY COMPLEX AREAS, WHICH MUST BE OR ARE SUPPLIED FROM THE EXISTING WATERLINE BEING CLEANED AND LINED, A MINIMUM OF 1500 GPM AT 30 PSI RESIDUAL PRESSURE AT ANY POINT ALONG SAID TEMPORARY BYPASS WATERLINE.

F. THE CONTRACTOR SHALL GUARANTEE THE AVAILABILITY OF WATER AT A SUFFICIENT PRESSURE AND QUANTITY TO SUPPLY THE TEMPORARY BYPASS LINES. UPON REQUEST OF THE CONTRACTOR, TESTS FOR WATER AVAILABILITY WILL BE MADE BY THE CITY, BOTH AS TO SYSTEM SUPPLY AND ADEQUACY OF TEMPORARY BYPASS WATERLINES AND SERVICE CONNECTION SUPPLY. THE CONTRACTOR WILL BE NOTIFIED OF THE TIME OF EACH TEST AND SHALL WITNESS THE TEST WHEN POSSIBLE. FAILURE OF THE CONTRACTOR TO WITNESS SAID TEST SHALL BE CONSIDERED AS ACCEPTANCE OF THE FINDINGS. ANY RETESTING SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

G. THE TEMPORARY WATER MAIN PIPE AND ALL APPURTENANCES SHALL BE FURNISHED AND RETAINED BY THE CONTRACTOR. THE TEMPORARY WATER MAIN PIPE AND APPURTENANCES FURNISHED SHALL BE CLEAN AND IN SUCH CONDITION THAT IT MAY BE TESTED, FLUSHED AND SUBJECTED TO AND PRODUCE SATISFACTORY WATER SAMPLES AS REQUIRED BY THE CITY. ALL CONNECTING AND RECONNECTING OF SERVICE CONNECTIONS SHALL BE MADE BY THE CONTRACTOR UNDER THE SUPERVISION OF THE CITY. THE CONTRACTOR SHALL SUBMIT FOR THE CITY'S APPROVAL A PLAN OF THE PROPOSED BYPASS TO MAINTAIN CONTINUOUS AND ADEQUATE TEMPORARY SERVICE. THE DIAGRAM SHALL SHOW WHERE THE TEMPORARY VALVES WILL BE PLACED. NO WORK SHALL COMMENCE UNTIL A BYPASS PLAN HAS BEEN APPROVED BY THE CITY.

H. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY WATER MAINS AND APPURTENANCES, INCLUDING THE FURNISHING, INSTALLING, REMOVING AND RELOCATING OF TEES, PLUGS, CAPS, OUTLETS, VALVES, RISERS, CLAMPS AND BLOCKING. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER MAIN PROTECTION WHERE TEMPORARY MAINS OR SERVICES CROSS SIDEWALKS, DRIVEWAY OR ROADWAYS. ALL LINES CROSSING STREETS SHALL BE TRENCHED ACROSS TO ALLOW BYPASS PIPE TO LIE FLUSH WITH THE PAVEMENT SURFACE. NO RAMPING WILL BE ALLOWED. THE CONTRACTOR SHALL PROVIDE SUPPLEMENTARY CONNECTIONS WHERE VALVES WITH NIPPLES HAVE BEEN REMOVED, WHERE ADJACENT WATER MAINS CONNECT, OR WHERE ORDERED BY THE CITY.

I. THE CONTRACTOR SHALL FURNISH NECESSARY HOSES, VALVES, PIPE AND FITTINGS FOR WATER SERVICE CONNECTIONS. THE CONTRACTOR SHALL ONLY CONNECT TO AN OUTSIDE HOUSE BIB OR SILL COCK, UNLESS OTHERWISE APPROVED BY THE CITY. ALL CONNECTIONS TO OUTSIDE HOSE BIB OR SILL COCK SHALL BE SUPPLIED WITH Y CONNECTORS.

J. THE CONTRACTOR SHALL MAKE A REASONABLE EFFORT TO SHUT OFF CONNECTIONS AT THE SERVICE STOP BOX WHERE POSSIBLE. IF SERVICE STOP BOX IS NOT AVAILABLE, THE CONTRACTOR SHALL SHUT OFF THE CONNECTIONS INSIDE THE RESIDENCE OR BUILDING AND SHALL CLEAR SERVICE CONNECTIONS USING INTERNAL PLUMBING.

K. THE SIZE OF THE TEMPORARY CONNECTION SHALL BE OF AT LEAST THE SAME SIZE AS THE PERMANENT CONNECTION THAT HAS GONE TO THE BUILDING UNLESS THE CONNECTION IS LARGER THAN THE BYPASS PIPING. IF THE PERMANENT CONNECTION IS LARGER THAN THE BYPASS PIPING, THEN THE TEMPORARY CONNECTION WILL BE OF THE SAME SIZE AS THE BYPASS PIPING.

L. THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, TOOLS, MATERIALS AND EQUIPMENT TO PROVIDE, INSTALL AND REMOVE 4" TEMPORARY FIRE HYDRANT OUTLET ASSEMBLIES ON THE TEMPORARY WATER MAINS. THE 4" TEMPORARY FIRE HYDRANT OUTLET ASSEMBLY SHALL BE COMPLETE AND COMPLY WITH STANDARD ARRANGEMENT SK-1203A WHICH IS MADE A PART OF THESE SPECIFICATIONS AND ENCLOSED HEREIN AND ALSO ON FILE IN THE WATER ENGINEERING SECTION OF THE DIVISION OF WATER, FIFTH FLOOR, PUBLIC UTILITIES BUILDING, 1201 LAKESIDE AVENUE, CLEVELAND, OHIO 44114. THE CONTRACTOR SHALL PROVIDE PROTECTION IN STREETS, SIDEWALKS AND DRIVEWAYS. THE TEMPORARY HYDRANTS SHALL HAVE OPERATING NUTS OF THE SLOTTED TYPE, NO PENTAGON NUTS SHALL BE USED.

THE CONTRACTOR SHALL BE REQUIRED TO INSTALL 4" TEMPORARY FIRE HYDRANT OUTLET ASSEMBLIES AT EACH LOCATION WHERE A PERMANENT FIRE HYDRANT IS TAKEN OUT OF SERVICE OR USED FOR A TEMPORARY WATER MAIN CONNECTION UNLESS SPECIFICALLY WAIVED BY THE DIRECTOR WITH THE CONCURRENCE OF CHIEF OF THE DIVISION OF FIRE, DEPARTMENT OF PUBLIC SAFETY, 1645 SUPERIOR AVENUE, CLEVELAND, OHIO OR THE SUBURBAN FIRE CHIEF. THE CONTRACTOR SHALL ALSO PROVIDE ADDITIONAL HYDRANTS WHERE SO ORDERED BY THE CITY.

M. THE TEMPORARY WATER MAIN SHALL BE FLUSHED AND SUCCESSFULLY SAMPLED BEFORE BEING PLACED INTO SERVICE. REFER TO THE SECTION IN THESE SPECIFICATIONS ON FLUSHING AND SAMPLING.

N. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGES AND MAINTAIN TEMPORARY WATER SERVICE WHEN FREEZING WATER IS POSSIBLE. THE CONTRACTOR SHALL INSURE THAT NO TEMPORARY CONNECTIONS FREEZE UP AND THAT NO ICE FORMS ON ROADWAYS, SIDEWALKS OR OTHER ACCESS AREAS.

O. WHERE IN THE COURSE OF INSTALLING OR REMOVING TEMPORARY WATER LINES AND SERVICE CONNECTIONS ANY PORTION OF THE PERMANENT SERVICE CONNECTION IS DISTURBED OR DAMAGED, IT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE CITY IN AMPLE TIME TO ASSESS THE EXTENT OF WORK REQUIRED AND INSPECT THE REPAIR OR REPLACEMENT TO AVOID UNNECESSARY DELAY IN RESTORING THE SERVICE CONNECTION. THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, TOOLS AND EQUIPMENT AND SHALL DO ALL EXCAVATING, BACKFILLING AND RE-PAVING AS MAY BE REQUIRED. THE CITY WILL MAKE NO SPECIFIC OR SEPARATE PAYMENT OR ALLOWANCE FOR SUCH WORK.

P. THE CONTRACTOR IS RESPONSIBLE FOR TAKING NECESSARY SAFETY PRECAUTIONS WHEN HE OR SHE REMOVES METERS DURING CONSTRUCTION.

Q. PAYMENT FOR ALL WORK REQUIRED AS SPECIFIED SHALL BE INCLUDED IN THE BID ITEMS FOR TEMPORARY WATER MAINS AND SERVICE CONNECTIONS:

ITEM 638 - SPECIAL - TEMPORARY BY-PASS 4" DUCTILE IRON PIPE WITH RESTRAINED MECHANICAL JOINTS AND FITTINGS, ANSI CLASS 52 12,500 FT

ITEM 638 - SPECIAL - TEMPORARY SERVICE CONNECTION 42 EACH

ITEM SPECIAL - PLUG EXISTING WATER SERVICE CONNECTION

WORK INCLUDED

EXISTING MAINS:

ON EXISTING MAINS TO REMAIN IN SERVICE, WHERE INDICATED ON CONTRACT DRAWINGS OR WHERE ORDERED, THE CONTRACTOR SHALL PLUG THE WATER SERVICE CONNECTION AT THE MAIN, AND SO ALL NECESSARY EXCAVATION, SHEETING AND SHORING, BACKFILLING, SEEDING AND SODDING, AND REPAVING REQUIRED THEREFOR.

1. CONNECTION 1" & SMALLER: THE LEAD/GALVANIZED PIPE OR COPPER TUBING SHALL BE CUT AS CLOSE AS POSSIBLE TO THE CORPORATION FITTING WITH THE ENDS EITHER CRIMPED OR FILLED WITH CONCRETE. THE ABANDONED CONNECTION MATERIAL SHALL BE REMOVED FROM THE EXCAVATION.

A. CORPORATION WITH A SHUTOFF VALVE: THE CONTRACTOR SHALL TURN THE CORPORATION SHUTOFF VALVE TO THE OFF POSITION. ANY CORPORATION SHUTOFF VALVE THAT IS LEAKING, SWEATING, OR WILL NOT CLOSE TIGHT SHALL BE PLUGGED AS A FERRULE TYPE CONNECTION.

B. FERRULE TYPE (NON-THREADED TAPER PRESSURE FITTING): THE CONTRACTOR SHALL REMOVE THE FERRULE AND INSTALL AN 18-8 STAINLESS STEEL TWO-SECTION, DOUBLE RANGE, REPAIR CLAMP CENTERED OVER THE OPENING DRILLED FOR THE CONNECTION.

2. CONNECTIONS 1-1/2" TO 2": THE CONTRACTOR SHALL REMOVE THE EXISTING TAPPING SLEEVE, SADDLE AND VALVE AND INSTALL AN 18-8 STAINLESS STEEL TWO-SECTION, DOUBLE RANGE, REPAIR CLAMP CENTERED OVER THE OPENING DRILLED FOR THE CONNECTION. ALL LEAD TYPE FITTINGS SHALL BE CUT OUT OF THE MAINS BY SLEEVE-IN A DUCTILE IRON SPOOL PIECE CONNECTING TO EXISTING MAIN WITH RESTRAINED MECHANICAL JOINT SOLID SLEEVES (SHORT PATTERN) OR WITH APPROVED COMPRESSION COUPLINGS.

3. CONNECTIONS 3" AND LARGER: THE CONTRACTOR SHALL CUT OUT THE EXISTING TAPPING SLEEVE, SADDLE AND VALVE BY SLEEVE-IN A DUCTILE IRON SPOOL PIECE CONNECTING TO EXISTING MAIN WITH RESTRAINED MECHANICAL JOINT SOLID SLEEVES (SHORT PATTERN) OR WITH APPROVED COMPRESSION COUPLINGS.

ITEM SPECIAL - FILTER ALLOWANCE

THIS ITEM SHALL BE USED TO REIMBURSE THE CONTRACTOR FOR THE PURCHASE OF POUR-THROUGH PITCHER FILTERS FOR ALL HOMES WITH EXISTING LEAD CONNECTIONS AND ALL COSTS ASSOCIATED WITH RESIDENT EDUCATION. POUR-THROUGH PITCHER FILTERS SHALL BE NSF/ANSI 53 CERTIFIED. EACH HOME WITH EXISTING LEAD CONNECTIONS SHALL BE PROVIDED WITH A 90-DAY SUPPLY OF POUR-THROUGH PITCHER FILTERS. ANY CUSTOMER THAT HAD A LEAD CITY-SIDE CONNECTION SHALL BE PROVIDED WITH FLUSHING INSTRUCTIONS, THE COST OF WHICH SHALL BE INCLUDED IN THIS ITEM. BUSINESSES AND LARGER FACILITIES SHALL BE PROVIDED WITH EDUCATIONAL MATERIALS ON LEAD WHICH IS ALSO INCLUDED IN THIS ITEM.

ITEM SPECIAL - FILTER ALLOWANCE

4,500 DOLLARS

CONFLICT IN SPECIFICATIONS

WHEN THERE IS A CONFLICT IN THE CLEVELAND DEPARTMENT OF WATER D-SPECIFICATIONS AND THE ENGINEERING AND CONSTRUCTION D-SPECIFICATIONS, THE ENGINEERING AND CONSTRUCTION D-SPECIFICATIONS SUPERSEDES THE CLEVELAND DEPARTMENT OF WATER D-SPECIFICATIONS.

CHLORINATION PITS

THE PLANS REFERENCE EXPECTED LOCATIONS OF CHLORINATION PITS NEEDED FOR THE INSTALLATION OF THE NEW WATER LINE. ANY ADDITIONAL CHLORINATION PITS DEEMED NECESSARY FOR WATER LINE INSTALLATION BY THE CONTRACTOR OR CITY SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE WATER LINE. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL CHLORINATION PITS.

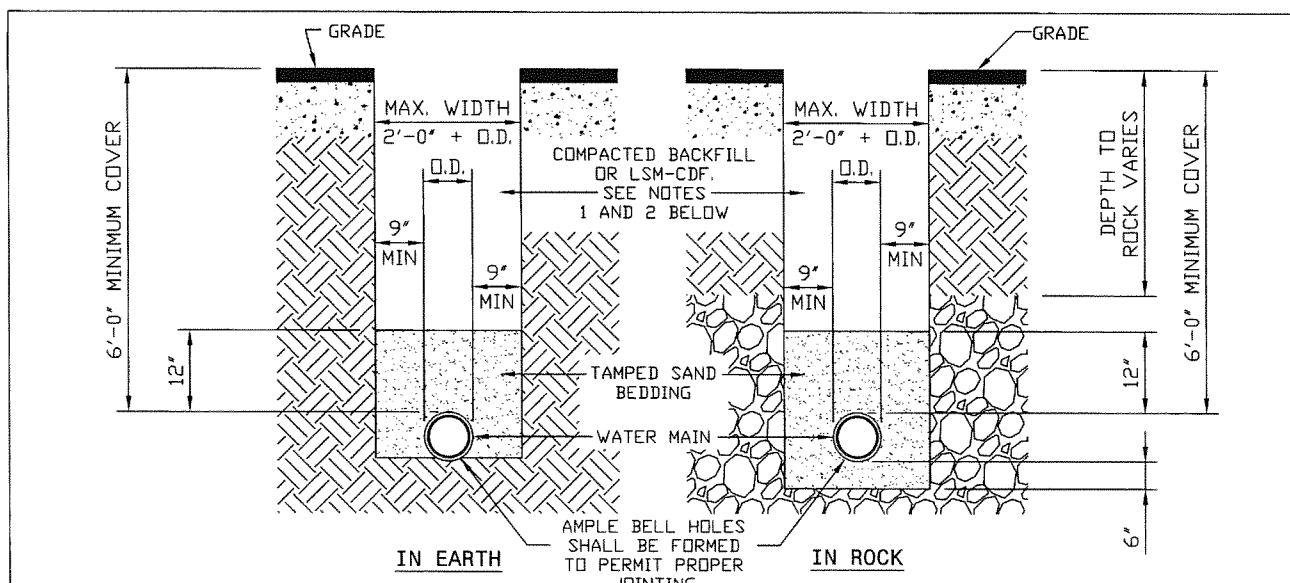
WATER WORK NOTES

EAST 105th STREET

131
243

CALCULATED
B.A.K.
CHECKED
D.P.B.

PID NO.
-



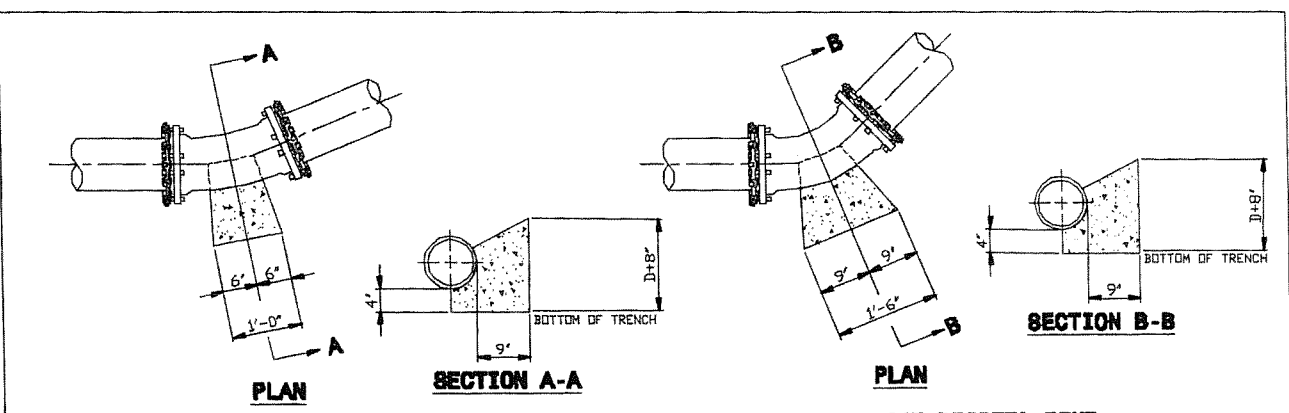
WATER MAIN TRENCH DETAILS

- NOT TO SCALE -

- NOTES:
- 1) PREMIUM BACKFILL CONSISTING OF LOW STRENGTH MORTAR - CONTROLLED DENSITY FILL (LSM-CDF) 'FLOWABLE FILL' IS REQUIRED;
 - 2) UNDER ALL EXISTING OR FUTURE PAVEMENTS, SIDEWALKS AND DRIVES WITHIN THE CITY OF CLEVELAND CORPORATION LIMITS, AS SPECIFIED IN LOCAL MUNICIPALITIES SERVED BY CWD (SEE LOCAL REQUIREMENTS)
 - 3) WHEN PREMIUM BACKFILL IS REQUIRED BY THE LOCAL MUNICIPALITY FOR CASES OTHER THAN THOSE LISTED IN NOTE 1 ABOVE, IT SHALL BE LIMESTONE GRADED PER ODOT 304.02 OR ODOT 411. NO SLAG IS PERMITTED.
 - 4) CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THE SAND BEDDING, SO AS TO AVOID SCRAPING OF THE EXTERIOR COATING, INJURING THE PIPE, DISTORTING OR MOVING THE PIPE WHEN COMPACTING THE SAME. THE SAND BEDDING SHALL BE TAMPED IN SIX (6) INCH LAYERS, SIMULTANEOUSLY ON EACH SIDE OF THE PIPE, AND THOROUGHLY COMPACTED SO AS TO PROVIDE A SOLID BACKING AGAINST THE EXTERNAL SURFACE OF THE PIPE.
 - 5) MINIMUM COMPACTION FOR ALL SAND BEDDING, BACKFILL AND PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.
 - 6) PAVEMENT, SIDEWALK OR DRIVES TO BE INSTALLED IN ACCORDANCE WITH LOCAL MUNICIPALITY'S SPECIFICATIONS.

STD-001

DATE: 6-21-2012



TYPICAL THRUST BLOCK DETAIL FOR HORIZONTAL DEFLECTION FOR PIPE UP TO 16" DIAMETER

- NOT TO SCALE -
D = PIPE DIAMETER

- NOTE 1: ALL DIMENSIONS SHOWN HEREON ARE MINIMUM; THRUST BLOCK SHALL BE POURED TO UNDISTURBED EARTH.
- NOTE 2: ALL CONCRETE FOR THRUST BLOCKS SHALL BE CLASS 'C' HAVING 4,000 PSI 28 DAY COMPRESSIVE STRENGTH.
- NOTE 3: DO NOT COVER BOLTS WITH CONCRETE ON MECHANICAL JOINTS.
- NOTE 4: USE FORMS WHEN POURING CONCRETE TO MAINTAIN SHAPE AND DIMENSIONS OF THRUST BLOCKS.

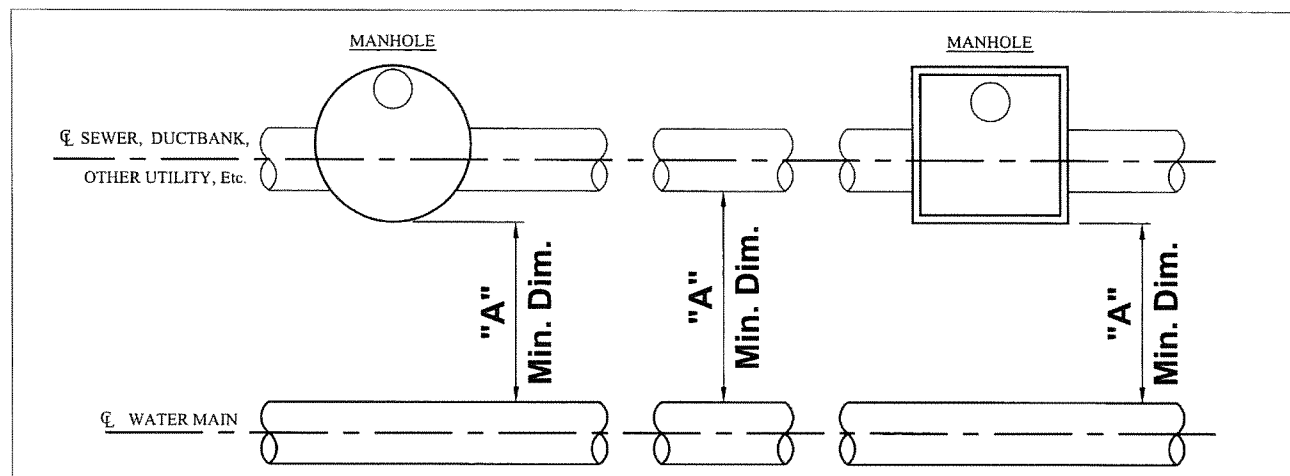
(22-1/2 DEGREE) BEND

(45 DEGREE) BEND

TEE AND TAPPING SLEEVES

STD-006

DATE: 1-15-98 BY: RSK



PLAN VIEW

- SEE STD-018 FOR PROFILE VIEW -

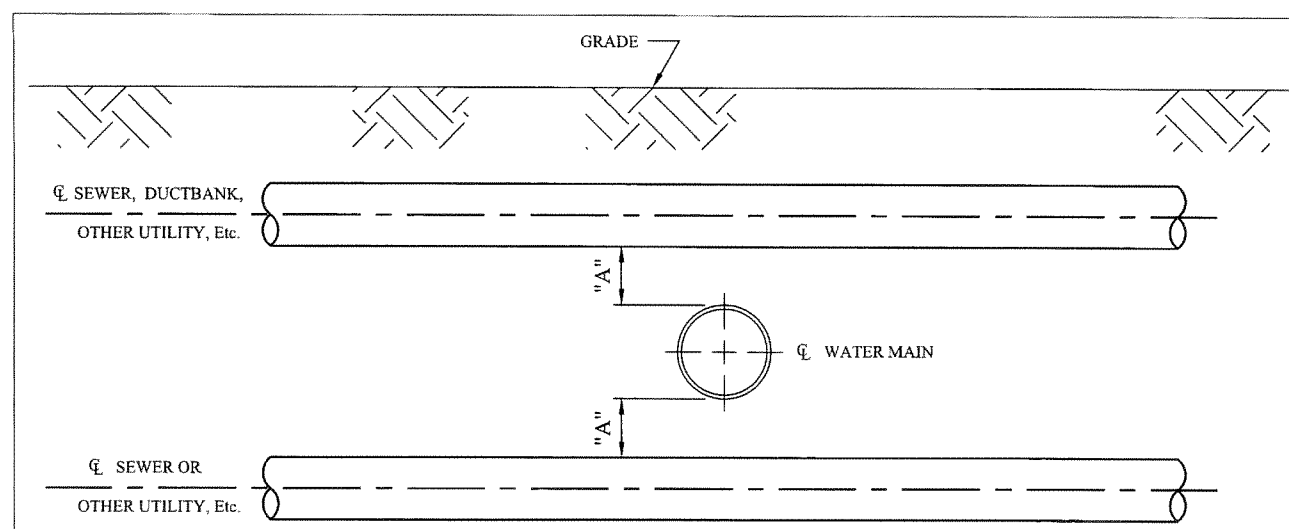
HORIZONTAL CLEARANCE	STORM SEWER	SANITARY SEWER	GAS, DUCTBANK, OTHER UTILITY, Etc.
"A"	10'-0" MIN.	10'-0" MIN.	5'-0" MIN.

HORIZONTAL CLEARANCE FOR UTILITIES

NOT TO SCALE

STD-017

DATE: 7-02-2014 BY: MTA



PROFILE VIEW

- SEE STD-017 FOR PLAN VIEW -

VERTICAL CLEARANCE	SANITARY SEWER LESS THAN 24"	SANITARY SEWER 24" & LARGER	STORM SEWER, DUCTBANK, GAS, OTHER UTILITY LESS THAN 24"	STORM SEWER, DUCTBANK, GAS, OTHER UTILITY 24" & LARGER	REMARKS
"A"	18" Min.	18" Min.	18" Min.	18" Min.	IF CANNOT ACHIEVE MIN. CLEARANCE WATER MAIN TO BE LOWERED

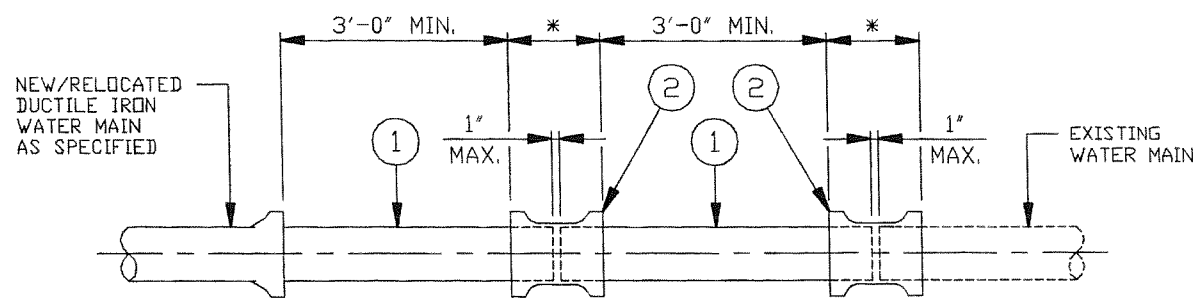
VERTICAL CLEARANCE FOR UTILITIES

NOT TO SCALE

STD-018

DATE: 7-02-2014 BY: MTA

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 water work notes and details.dwg
PLOT DATE: 5/7/19



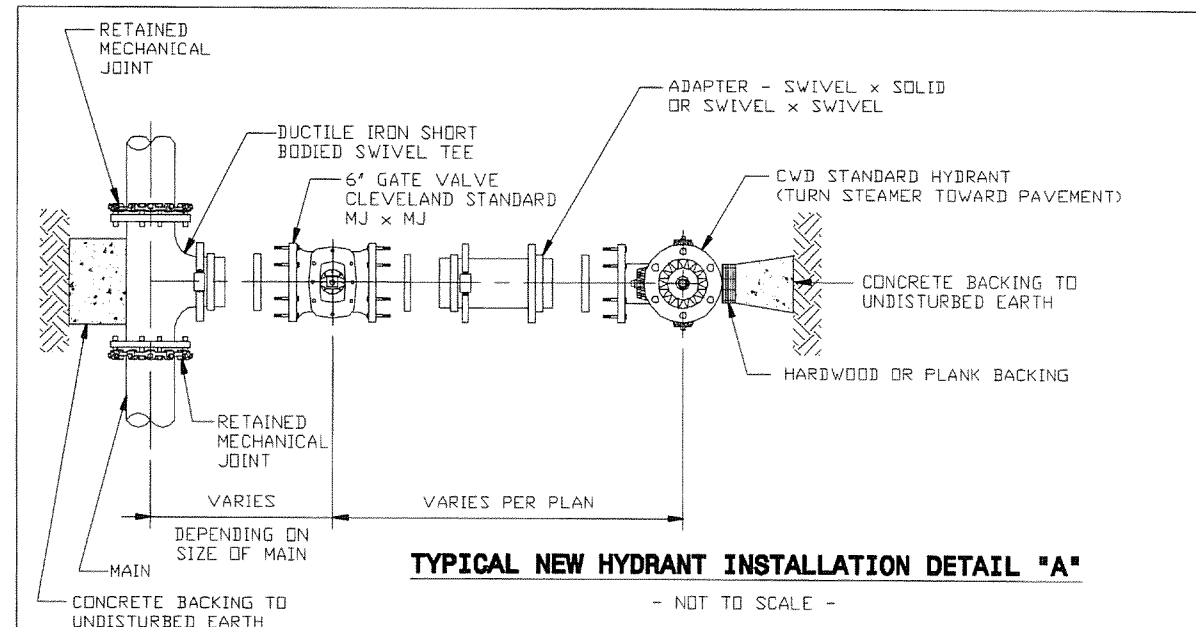
SLEEVE-IN INSTALLATION DETAIL

- NOT TO SCALE -

- 1) PLAIN END x PLAIN END DUCTILE IRON PIPE AS SPECIFIED (CUT TO SUIT).
- 2) *CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250 OR COMPRESSION COUPLINGS.
 COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE. EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWO (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS.
 MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536).
 THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No's 38, 138 OR 162 (TRANSITION TYPE), OR SMITH-BLAIR 441 STRAIGHT AND TRANSITION COUPLINGS.
- 3) ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE 'RETAINED' TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASUREMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS 'C', METHOD 'B'.

STD-007

DATE: 10-1-97 BY: RSK



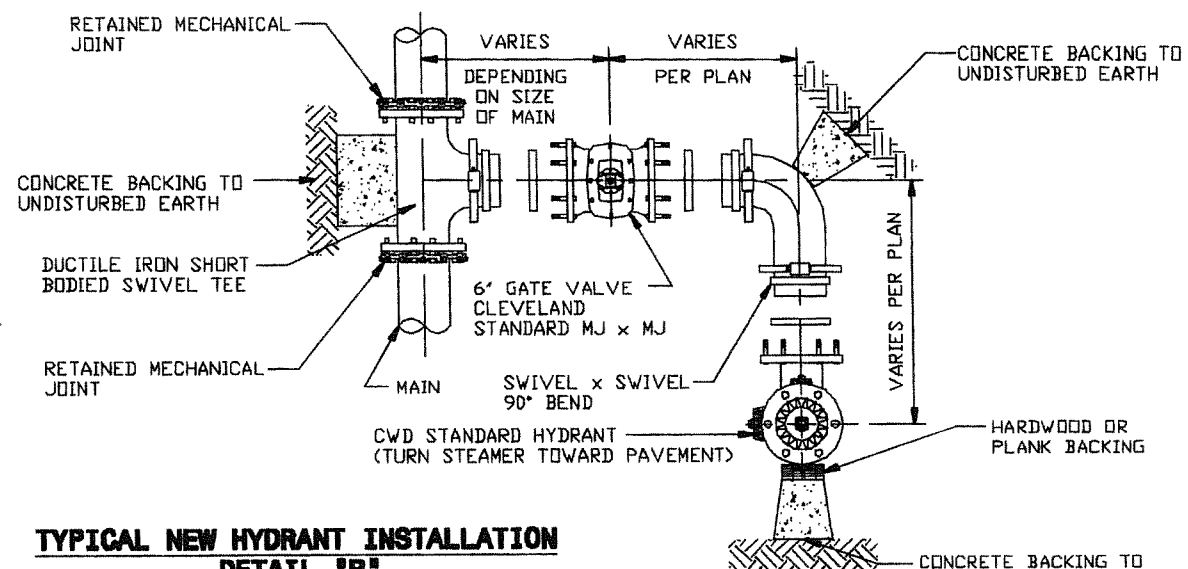
TYPICAL NEW HYDRANT INSTALLATION DETAIL 'A'

- NOT TO SCALE -

NOTE: IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS 'C' METHOD 'B'.
 ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

STD-H09

DATE: 3-4-2002 BY: RSK



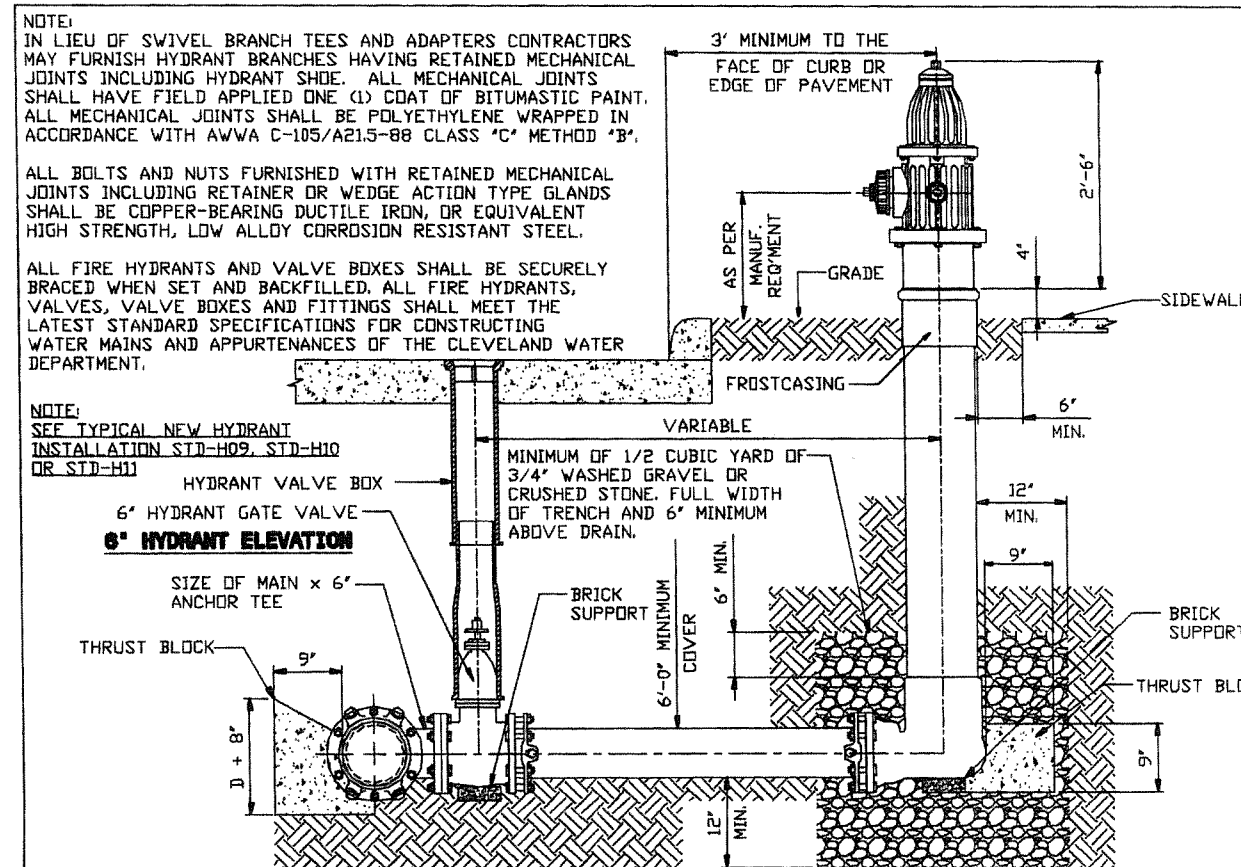
TYPICAL NEW HYDRANT INSTALLATION DETAIL 'B'

- NOT TO SCALE -

NOTE: IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS 'C' METHOD 'B'.
 ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

STD-H10

DATE: 10-1-97 BY: RSK



NOTE: IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS 'C' METHOD 'B'.
 ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.
 ALL FIRE HYDRANTS AND VALVE BOXES SHALL BE SECURELY BRACED WHEN SET AND BACKFILLED. ALL FIRE HYDRANTS, VALVES, VALVE BOXES AND FITTINGS SHALL MEET THE LATEST STANDARD SPECIFICATIONS FOR CONSTRUCTING WATER MAINS AND APPURTENANCES OF THE CLEVELAND WATER DEPARTMENT.

NOTE: SEE TYPICAL NEW HYDRANT INSTALLATION STD-H09, STD-H10 OR STD-H11

STD-H13

DATE: 2-23-2005 BY: RSK

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 water work notes and details.dwg
 PLOT DATE: 5/7/19

CALCULATED B.A.K.
 CHECKED D.P.B.
 PID NO. 1
WATER WORK DETAILS
EAST 105th STREET
 133
 243

*CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250 OR COMPRESSION COUPLINGS.

COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE. EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWO (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS.

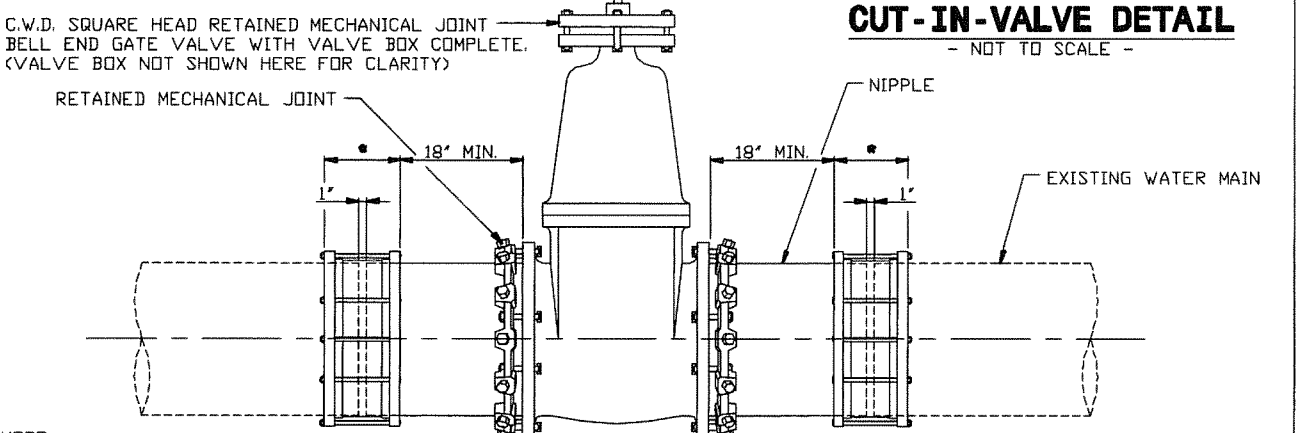
MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536).

THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No's 38, 138 OR 162 (TRANSITION TYPE), OR SMITH-BLAIR 441 STRAIGHT AND TRANSITION COUPLINGS.

ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE 'RETAINED' TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS 'C', METHOD 'B'.

THE DIVISION OF WATER WILL DETERMINE THE FIELD LOCATION OF THE CUT-IN-VALVE ASSEMBLY. THE DIVISION OF WATER WILL ALSO SET THE TIME OF INSTALLATION OF THE CUT-IN-VALVE ASSEMBLY.

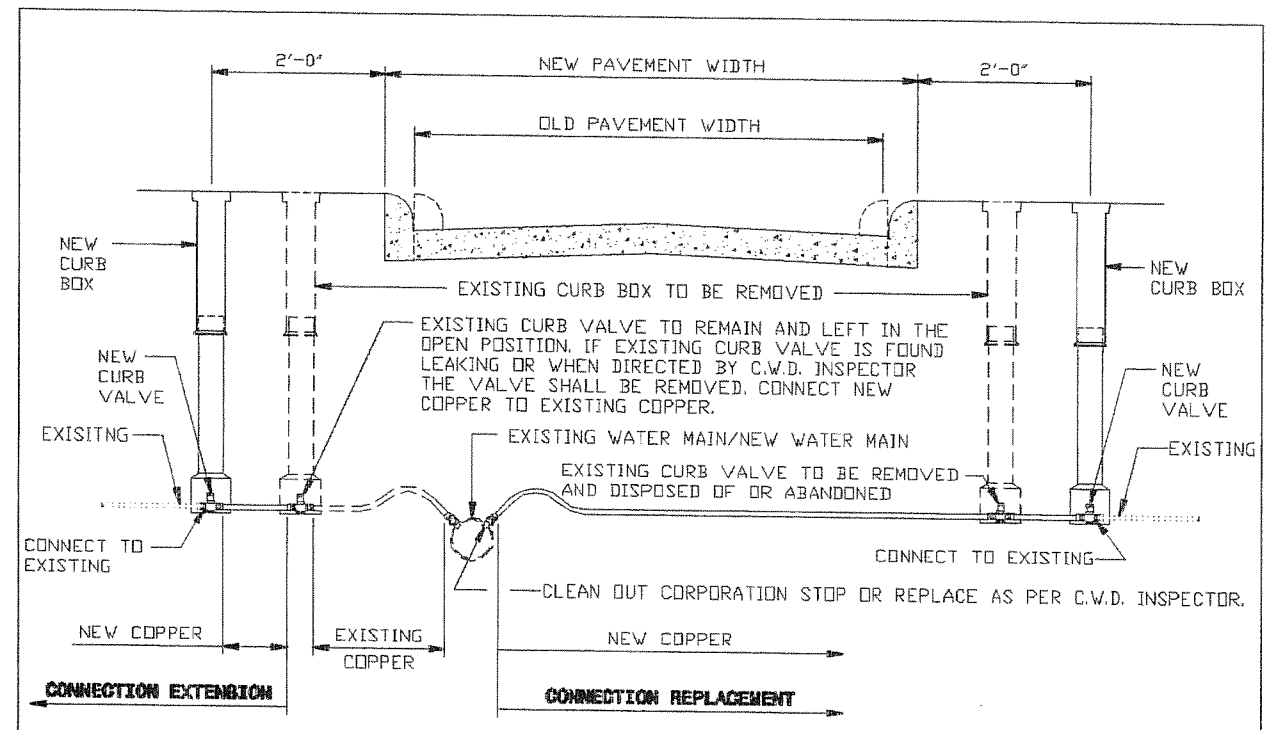
THE CONTRACTOR SHALL DO ALL PIPE CUTTING AND INSTALLATION. HOWEVER, THE INSTALLATION OF THE CUT-IN-VALVE ASSEMBLY SHALL BE DONE UNDER THE SUPERVISION OF THE DIVISION OF WATER.



NOTE: BEFORE CUTTING EXISTING WATER MAIN, THE NIPPLES SHALL BE CONNECTED TO THE MECHANICAL JOINT BELL END GATE VALVE. AFTER CUTTING PIPE, FINAL CONNECTIONS SHALL BE MADE WITH COUPLINGS/SOLID SLEEVES AS SPECIFIED.

STD-005

DATE: 10-1-97 BY: RSK



NOTE: IF EXISTING SERVICE CONNECTION IS FOUND TO BE GALVANIZED OR LEAD REPLACE FROM CORPORATION STOP TO CURB VALVE.

WATER SERVICE CONNECTION EXTENSION OR REPLACEMENT FOR 1" & SMALLER

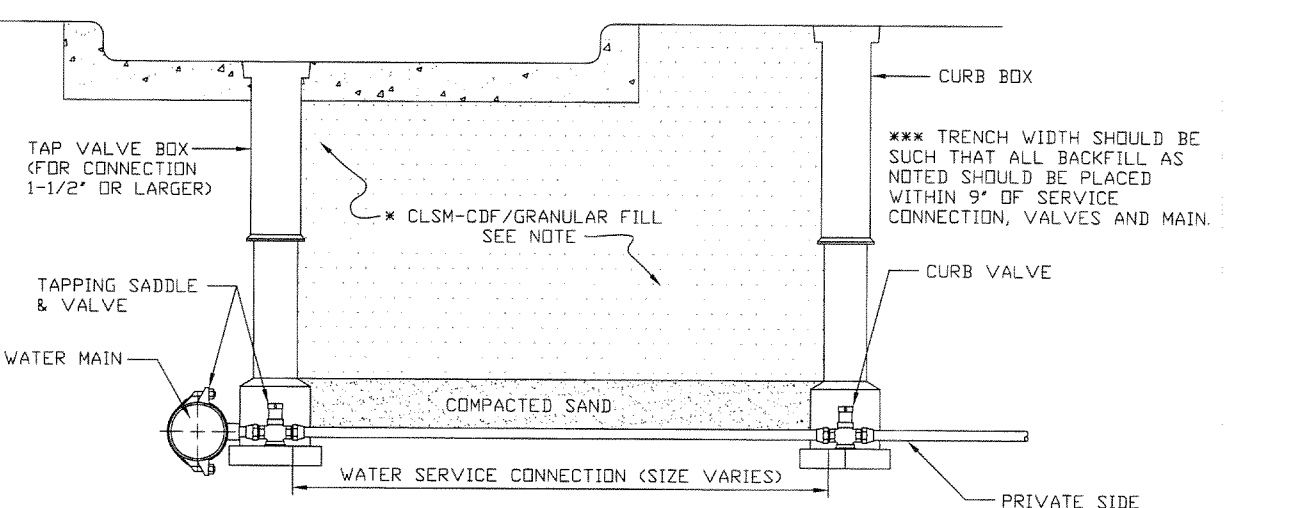
- NOT TO SCALE -

STD-C01

DATE: 5-11-98 BY: RSK

** CLEVELAND REQUIRED MIX DESIGN -
CEMENT - 50 LBS. PER CUBIC YARD
SAND - 2850 LBS. PER CUBIC YARD
WATER - 50 GALLONS PER CUBIC YARD
RHEOCELL 30MB - 3 OZ. PER CUBIC YARD

* CONTROLLED LOW STRENGTH MATERIAL-
CONTROLLED DENSITY FILL (CLSM-CDF)
"FLOWABLE FILL" IS REQUIRED WITHIN THE
CITY OF CLEVELAND CORPORATION LIMITS
AND PERMITTED IN ALL COMMUNITIES
SERVICED BY CWD. CHECK LOCAL REQUIREMENTS.



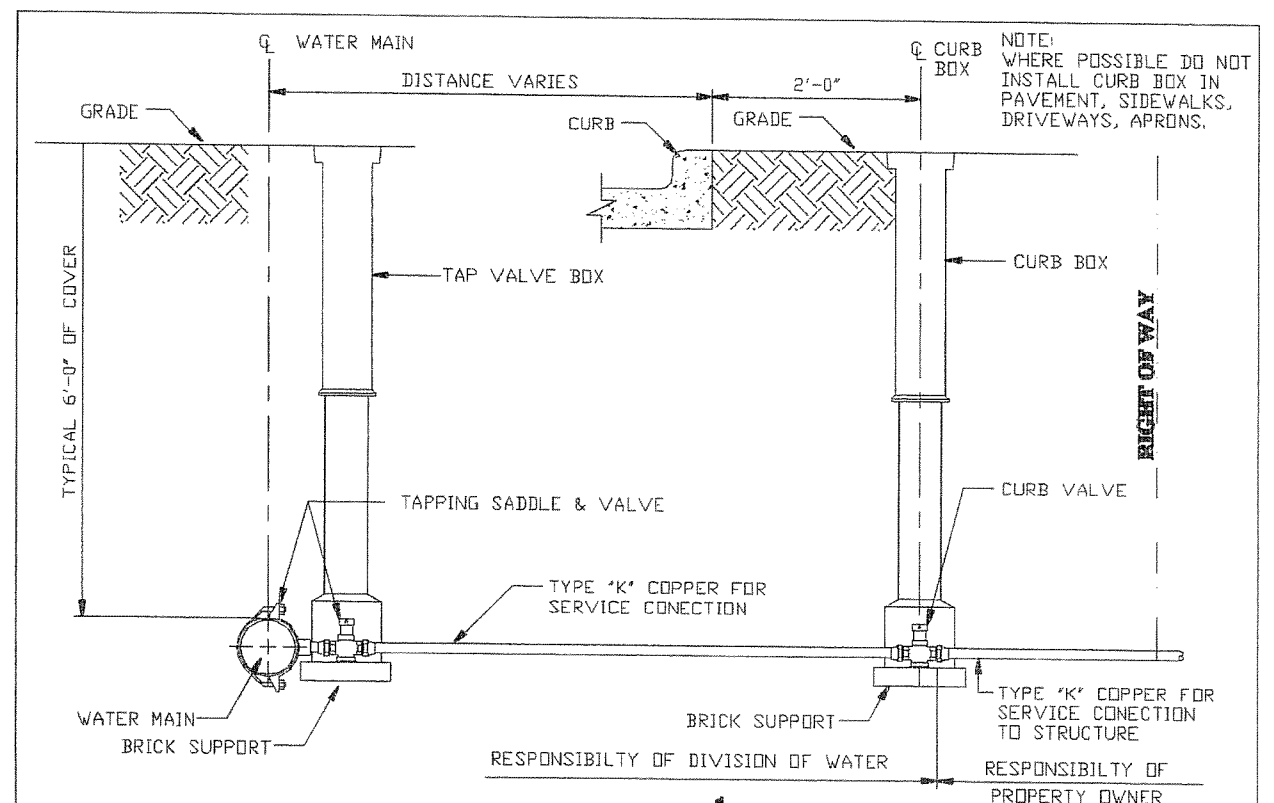
SERVICE CONNECTION BACKFILL DETAIL

- NOT TO SCALE -

NOTES:
1) CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THE SAND BEDDING BACKFILL, SO AS TO AVOID SCRAPING OF THE EXTERIOR COATING, INJURING THE PIPE, DISTORTING OR MOVING THE PIPE WHEN COMPACTING THE SAME. THE SAND BEDDING BACKFILL SHALL BE TAMPED IN SIX (6) INCH LAYERS, SIMULTANEOUSLY ON EACH SIDE OF THE PIPE, AND THOROUGHLY COMPACTED SO AS TO PROVIDE A SOLID BACKING AGAINST THE EXTERNAL SURFACE OF THE PIPE.
2) MINIMUM COMPACTION FOR ALL SAND BEDDING BACKFILL, BACKFILL AND PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.

STD-023

DATE: 10-7-2008 BY: RSK



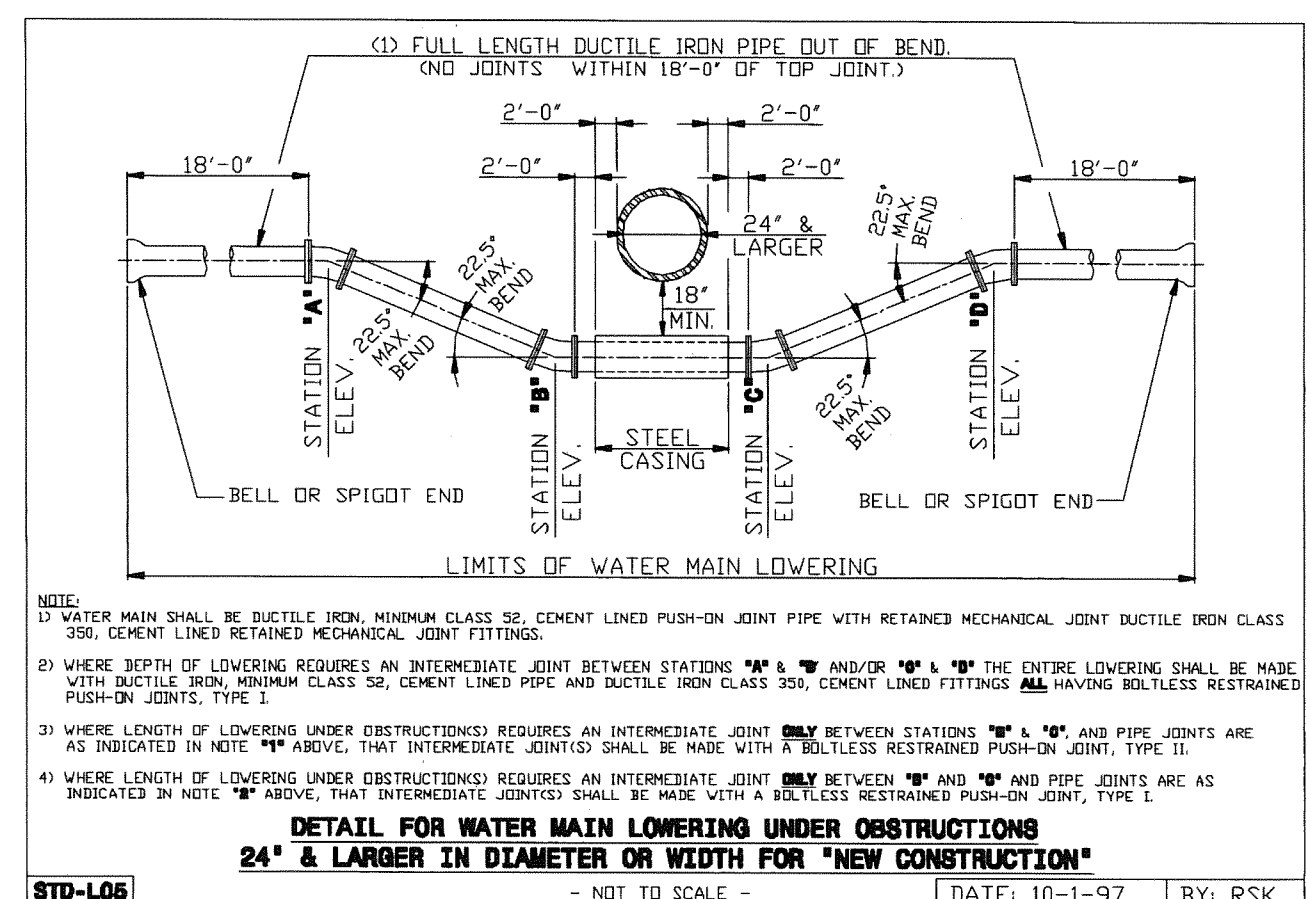
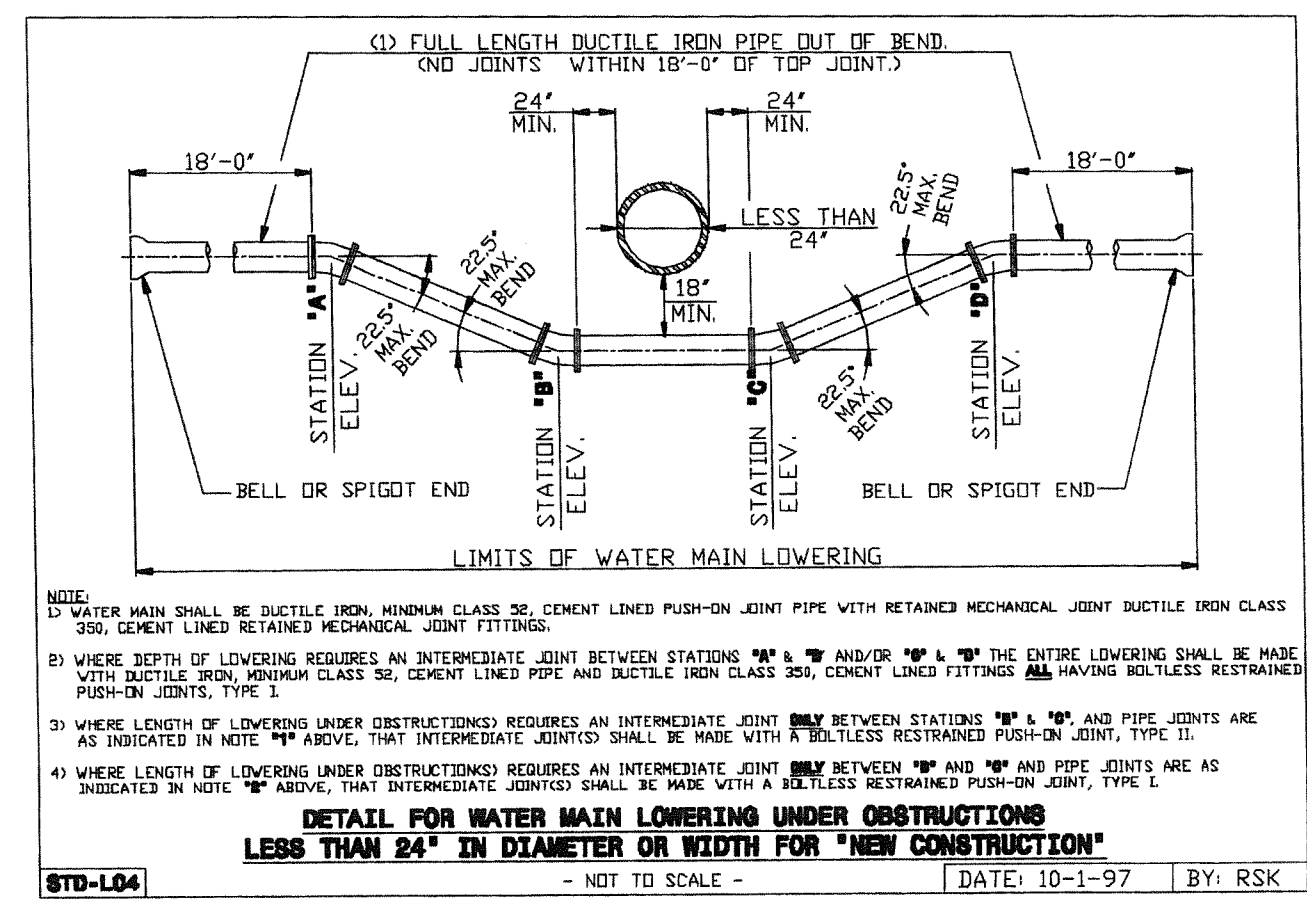
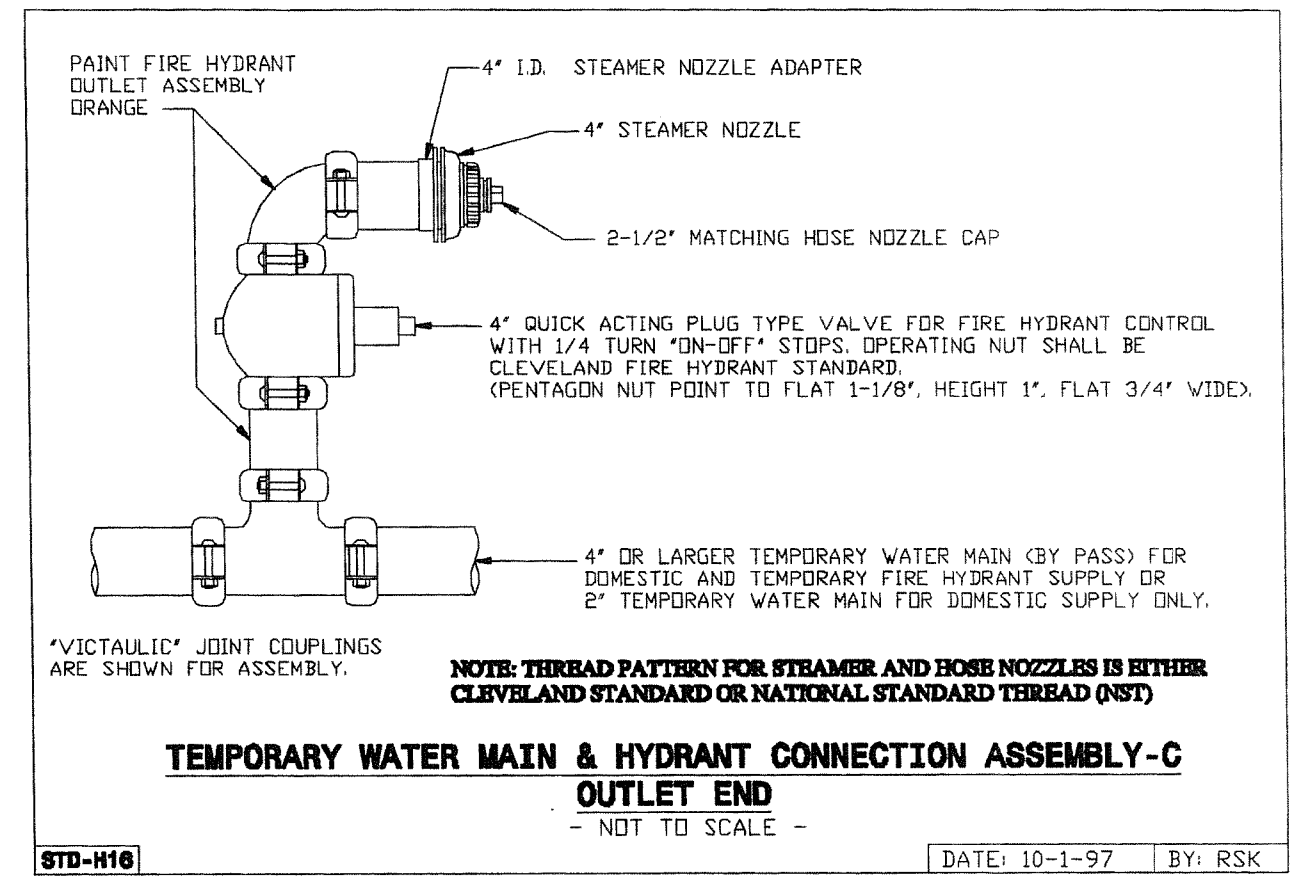
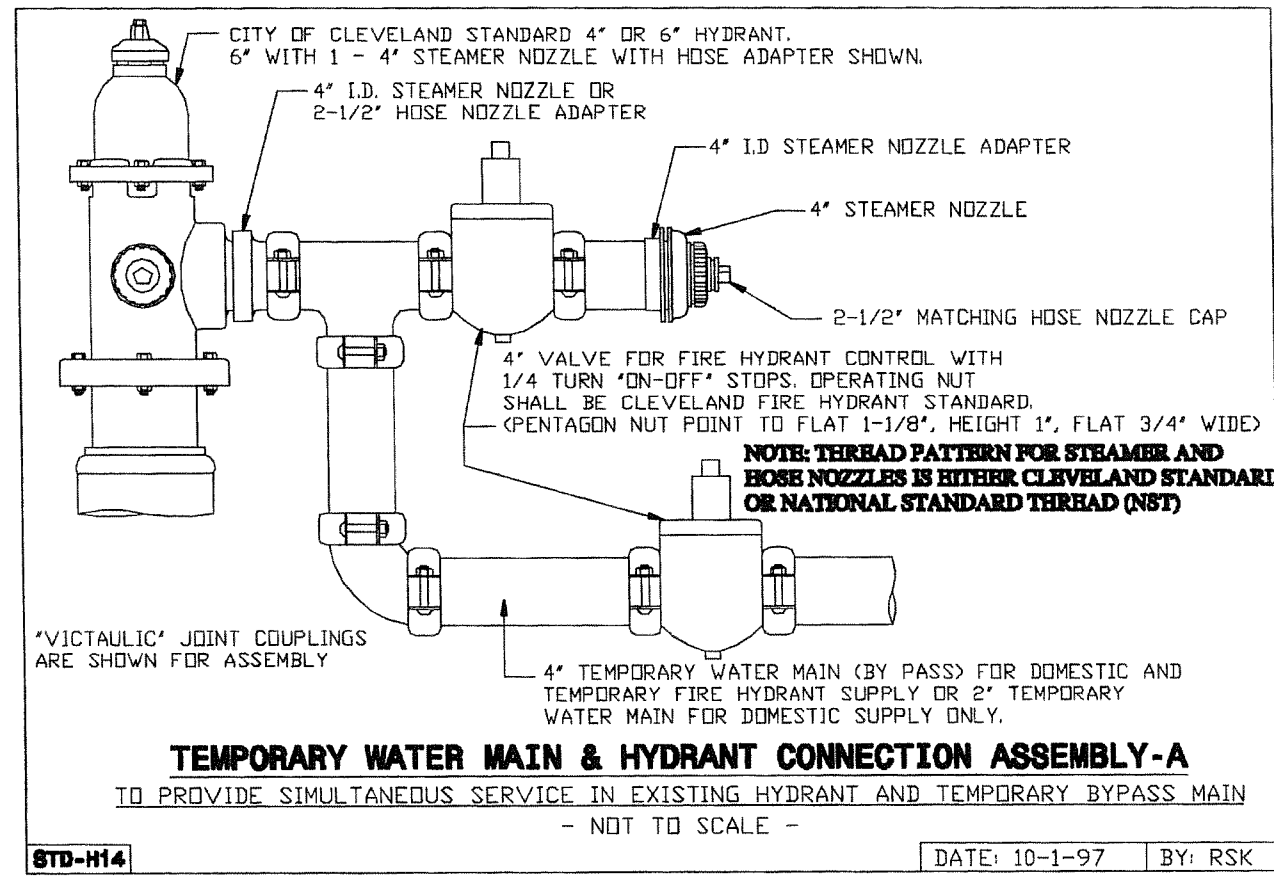
NEW WATER SERVICE CONNECTION FOR 1 1/2" & 2"

- NOT TO SCALE -

STD-C10

DATE: 6-21-2000 BY: RSK

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 water work notes and details.dwg
PLOT DATE: 5/7/19



DRAWING NAME: P:\19281 East 105th\AutoCAD Drawing Files\19281 water work notes and details.dwg
PLOT DATE: 5/7/19

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202		611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL		
			FROM	TO		PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH	VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY	
154	W-1	E 105th ST.	89+60	90+84		124									124							96	
154	WV-1	E 105th ST.	89+60																	1			
154	W-2	E 105th ST.	90+84	90+84		40						40										31	
154	W-3	E 105th ST.	90+84	91+40		56									56							44	
154	WV-2	E 105th ST.	90+84				1												1				
154	WH-1	E 105th ST.	91+12																		1		
154	W-4	E 105th ST.	91+40	91+40		22							22									17	
154-155	W-5	E 105th ST.	91+40	94+12		271									271							211	
154	WVA-1	E 105th ST.	91+40						1														
154	WH-2	E 105th ST.	91+58							1													
154	WCP-1	E 105th ST.	92+31																				
154	WCP-2	E 105th ST.	92+61																				
154	WCP-3	E 105th ST.	93+24																				
155	WCP-4	E 105th ST.	93+70																				
155	W-6	E 105th ST.	94+11	94+12		22									22							17	
155	WVA-2	E 105th ST.	94+11						1														
155	W-7	E 105th ST.	94+12	97+85		373									373							290	
155	WV-3	E 105th ST.	94+12				1														1		
155	WH-3	E 105th ST.	94+20							1											1		
155	WCP-5	E 105th ST.	94+39																				
155	WCP-6	E 105th ST.	95+49																				
155	WCP-7	E 105th ST.	95+98																				
155	WCP-8	E 105th ST.	96+72																				
155	WH-4	E 105th ST.	97+23							1											1		
155	WCP-9	E 105th ST.	97+36																				
155	WCL-1	E 105th ST.	97+65																				
155	W-8	E 105th ST.	97+85	97+85		12						12										9	
155-156	W-9	E 105th ST.	97+85	99+95		210									210							163	
155	WMA-1	E 105th ST.	97+85					1															
155	WV-4	E 105th ST.	97+85				1												1				
155	WMA-2	E 105th ST.	98+19					1															
155	WCS-1	E 105th ST.	98+19																				
156	WCP-10	E 105th ST.	98+60																				
156	WCS-2	E 105th ST.	99+01																				
156	WCP-11	E 105th ST.	99+15																				
156	WV-5	E 105th ST.	99+65				1														1		
156	WH-5	WADE PARK	99+76							1													
156	WH-6	WADE PARK	99+77																		1		
156	WV-6	WADE PARK	99+89				1																
156	WV-7	WADE PARK	99+89				1																
156	W-10	WADE PARK	99+90	99+95											38							30	
156	W-11	WADE PARK	99+90	99+95											47							37	
156-158	W-12	E 105th ST.	99+95	108+38		843									843							656	
156	WV-8	WADE PARK	99+95																		1		
156	WV-9	WADE PARK	99+95																		1		
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
156,168	WL-1	WADE PARK	202+02	202+36	RT																		
SUBTOTAL THIS SHEET						1973	6	2	2	4		0	52	22	1984	0	2	0	5	4	1601		

CALCULATED B.A.K. CHECKED D.P.B.	PID NO.	-
	WATER WORK SUBSUMMARY	
EAST 105TH STREET		
136 243		

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13			8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE								
154	W-1	E 105th ST.	89+60	90+84																				
154	WV-1	E 105th ST.	89+60																					
154	W-2	E 105th ST.	90+84	90+84																				
154	W-3	E 105th ST.	90+84	91+40																				
154	WV-2	E 105th ST.	90+84																					
154	WH-1	E 105th ST.	91+12																					
154	W-4	E 105th ST.	91+40	91+40																				
154-155	W-5	E 105th ST.	91+40	94+12																				
154	WVA-1	E 105th ST.	91+40																					
154	WH-2	E 105th ST.	91+58																					
154	WCP-1	E 105th ST.	92+31			1																		
154	WCP-2	E 105th ST.	92+61			1																		
154	WCP-3	E 105th ST.	93+24			1																		
155	WCP-4	E 105th ST.	93+70			1																		
155	W-6	E 105th ST.	94+11	94+12																				
155	WVA-2	E 105th ST.	94+11																					
155	W-7	E 105th ST.	94+12	97+85																				
155	WV-3	E 105th ST.	94+12																					
155	WH-3	E 105th ST.	94+20																					
155	WCP-5	E 105th ST.	94+39			1																		
155	WCP-6	E 105th ST.	95+49			1																		
155	WCP-7	E 105th ST.	95+98			1																		
155	WCP-8	E 105th ST.	96+72			1																		
155	WH-4	E 105th ST.	97+23																					
155	WCP-9	E 105th ST.	97+36			1																		
155	WCL-1	E 105th ST.	97+65																					
155	W-8	E 105th ST.	97+85	97+85																				
155-156	W-9	E 105th ST.	97+85	99+95																				
155	WMA-1	E 105th ST.	97+85																					
155	WV-4	E 105th ST.	97+85																					
155	WMA-2	E 105th ST.	98+19																					
155	WCS-1	E 105th ST.	98+19																					
156	WCP-10	E 105th ST.	98+60			1																		
156	WCS-2	E 105th ST.	99+01																					
156	WCP-11	E 105th ST.	99+15			1																		
156	WV-5	E 105th ST.	99+65																					
156	WH-5	WADE PARK	99+76																					
156	WH-6	WADE PARK	99+77																					
156	WV-6	WADE PARK	99+89																					
156	WV-7	WADE PARK	99+89																					
156	W-10	WADE PARK	99+90	99+95																				
156	W-11	WADE PARK	99+90	99+95																				
156-158	W-12	E 105th ST.	99+95	108+38																				
156	WV-8	WADE PARK	99+95																					
156	WV-9	WADE PARK	99+95																					
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																								
156,168	WL-1	WADE PARK	202+02	202+36	RT																			
SUBTOTAL THIS SHEET																								
						11	0	1	0	0	2			0	0	1								

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL				
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY					
156	WV-10	WADE PARK	99+95		LT																	1			
156	WV-11	WADE PARK	99+90		RT																		1		
156	WV-12	E 105th ST.	100+35		LT		1																1		
156	WCS-3	E 105th ST.	100+64		LT																				
156	WMA-3	E 105th ST.	100+74		RT			1																	
156	WCL-2	E 105th ST.	100+74		RT																				
156	WMA-4	E 105th ST.	100+78		LT			1																	
156	WCS-4	E 105th ST.	100+78		LT																				
156	WCP-12	E 105th ST.	101+11		LT																				
156	WCL-3	E 105th ST.	101+19		RT																				
156	WCS-5	E 105th ST.	101+54		LT																				
156	WCL-4	E 105th ST.	101+70		RT																				
156	WMA-5	E 105th ST.	101+99		LT			1																	
156	WCS-6	E 105th ST.	101+99		LT																				
156	WCL-5	E 105th ST.	102+20		RT																				
156	WH-7	E 105th ST.	102+56		LT					1														1	
156	WCS-7	E 105th ST.	102+61		LT																				
156	WMA-6	E 105th ST.	102+66		RT			1																	
156	WCL-6	E 105th ST.	102+66		RT																				
156	WCP-13	E 105th ST.	102+91		LT																				
157	WCL-7	E 105th ST.	103+12		RT																				
157	WCP-14	E 105th ST.	103+41		LT																				
157	WCL-8	E 105th ST.	103+58		RT																				
157	WMA-7	E 105th ST.	103+91		LT			1																	
157	WCS-8	E 105th ST.	103+91		LT																				
157	WCL-9	E 105th ST.	104+23		RT																				
157	WCL-10	E 105th ST.	104+69		RT																				
157	WMA-8	E 105th ST.	104+86		LT			1																	
157	WCS-9	E 105th ST.	104+87		LT																				
157	WCL-11	E 105th ST.	105+18		RT																				
157	WCS-10	E 105th ST.	105+23		LT																				
157	WH-8	E 105th ST.	105+32		LT					1														1	
157	WCS-11	E 105th ST.	105+70		LT																				
157	WCP-15	E 105th ST.	105+82		RT																				
157	WCL-12	E 105th ST.	106+10		RT																				
157	WCS-12	E 105th ST.	106+28		LT																				
157	WCP-16	E 105th ST.	106+78		LT																				
157	WCL-13	E 105th ST.	106+84		RT																				
157	WCP-17	E 105th ST.	107+23		LT																				
157	WCL-14	E 105th ST.	107+48		RT																				
158	WCP-18	E 105th ST.	107+63		LT																				
158	WVA-3	E 105th ST.	107+78		RT				1																
158	WCP-19	E 105th ST.	107+98		LT																				
158	WCP-20	E 105th ST.	107+99		LT																				
158	WVA-4	ASHBURY	108+06		RT				1																
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																									
158,168	WL-2	ASHBURY	350+02	350+23	RT																				
158	WL-3	E 105th ST.	108+70	108+97	LT																				
158,168	WL-4	E 105th ST.	109+44	109+64	LT																				
SUBTOTAL THIS SHEET						0	1	6	2	2		0	0	0	0	0	0	0	0	0	3	2	0		

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO.
 -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL		
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE															
156	WV-10	WADE PARK	99+95		LT																								
156	WV-11	WADE PARK	99+90		RT																								
156	WV-12	E 105th ST.	100+35		LT																								
156	WCS-3	E 105th ST.	100+64		LT			1																					
156	WMA-3	E 105th ST.	100+74		RT					1																			
156	WCL-2	E 105th ST.	100+74		RT																								
156	WMA-4	E 105th ST.	100+78		LT																								
156	WCS-4	E 105th ST.	100+78		LT																								
156	WCP-12	E 105th ST.	101+11		LT	1																							
156	WCL-3	E 105th ST.	101+19		RT																								
156	WCS-5	E 105th ST.	101+54		LT			1																					
156	WCL-4	E 105th ST.	101+70		RT					1																			
156	WMA-5	E 105th ST.	101+99		LT																								
156	WCS-6	E 105th ST.	101+99		LT			1																					
156	WCL-5	E 105th ST.	102+20		RT					1																			
156	WH-7	E 105th ST.	102+56		LT																								
156	WCS-7	E 105th ST.	102+61		LT			1																					
156	WMA-6	E 105th ST.	102+66		RT																								
156	WCL-6	E 105th ST.	102+66		RT																								
156	WCP-13	E 105th ST.	102+91		LT	1																							
157	WCL-7	E 105th ST.	103+12		RT																								
157	WCP-14	E 105th ST.	103+41		LT	1																							
157	WCL-8	E 105th ST.	103+58		RT																								
157	WMA-7	E 105th ST.	103+91		LT																								
157	WCS-8	E 105th ST.	103+91		LT																								
157	WCL-9	E 105th ST.	104+23		RT																								
157	WCL-10	E 105th ST.	104+69		RT																								
157	WMA-8	E 105th ST.	104+86		LT																								
157	WCS-9	E 105th ST.	104+87		LT																								
157	WCL-11	E 105th ST.	105+18		RT																								
157	WCS-10	E 105th ST.	105+23		LT			1																					
157	WH-8	E 105th ST.	105+32		LT																								
157	WCS-11	E 105th ST.	105+70		LT			1																					
157	WCP-15	E 105th ST.	105+82		RT	1																							
157	WCL-12	E 105th ST.	106+10		RT																								
157	WCS-12	E 105th ST.	106+28		LT																								
157	WCP-16	E 105th ST.	106+78		LT	1																							
157	WCL-13	E 105th ST.	106+84		RT																								
157	WCP-17	E 105th ST.	107+23		LT	1																							
157	WCL-14	E 105th ST.	107+48		RT																								
158	WCP-18	E 105th ST.	107+63		LT	1																							
158	WVA-3	E 105th ST.	107+78		RT																								
158	WCP-19	E 105th ST.	107+98		LT	1																							
158	WCP-20	E 105th ST.	107+99		LT	1																							
158	WVA-4	ASHBURY	108+06		RT																								
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																													
158,168	WL-2	ASHBURY	350+02	350+23	RT																								
158	WL-3	E 105th ST.	108+70	108+97	LT																								
158,168	WL-4	E 105th ST.	109+44	109+64	LT																								
SUBTOTAL THIS SHEET																													
						9		7		13		1		0		2													

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY		
FROM	TO																					
158	WH-9	ASHBURY	108+07		LT					1										1		
158	WV-13	ASHBURY	108+08		LT		1															
158	WV-14	ASHBURY	108+11		LT															1		
158	W-13	ASHBURY	108+13	108+38	LT&RT										54						42	
158	WV-15	ASHBURY	108+19		RT															1		
158	WV-16	ASHBURY	108+37		LT															1		
158	W-14	ASHBURY	108+38	108+45	LT										33						26	
158	W-15	E 105th ST.	108+38	109+54	LT	118									118						92	
158	WV-17	ASHBURY	108+38		LT															1		
158	WV-18	ASHBURY	108+40		LT		1															
158	WV-19	ASHBURY	108+45		LT															1		
158	WMA-9	E 105th ST.	108+65		RT			1														
158	WVA-5	E 105th ST.	108+73		RT				1													
158	WCP-21	E 105th ST.	109+07		LT																	
158	W-16	LEE	109+54	109+57	LT&RT								66								51	
158-159	W-17	E 105th ST.	109+54	114+11	LT	457									457						355	
158	WV-20	LEE	109+54		RT															1		
158	WV-21	LEE	109+56		RT		1															
158	WV-22	LEE	109+57		RT															1		
158	WCP-22	E 105th ST.	109+83		LT																	
158	WV-23	E 105th ST.	109+93		LT		1															
158	WV-24	E 105th ST.	110+20		LT		1															
158	WCP-23	E 105th ST.	110+57		LT																	
158	WCP-24	E 105th ST.	110+74		RT																	
158	WH-10	E 105th ST.	111+09		LT					1												
158	WCP-25	E 105th ST.	111+16		RT																	
158	WCP-26	E 105th ST.	111+27		LT																	
158	WCP-27	E 105th ST.	111+43		LT																	
158	WCP-28	E 105th ST.	111+69		RT																	
158	WCP-29	E 105th ST.	111+76		LT																	
158	WCP-30	E 105th ST.	112+24		RT																	
158	WCP-31	E 105th ST.	112+25		RT																	
158	WCP-32	E 105th ST.	112+35		LT																	
159	WCP-33	E 105th ST.	112+82		LT																	
159	WCP-34	E 105th ST.	112+88		RT																	
159	WCP-35	E 105th ST.	112+89		RT																	
159	WCP-36	E 105th ST.	113+38		RT																	
159	WCP-37	E 105th ST.	113+43		LT																	
159	WCP-38	E 105th ST.	113+54		LT																	
159	WV-25	E 105th ST.	113+93		LT		1															
159	WCP-39	E 105th ST.	114+08		LT																	
159	W-18	ORVILLE	114+11	114+15	LT&RT								48								37	
159-160	W-19	E 105th ST.	114+11	117+74	LT	90									365						284	
159	WV-26	ORVILLE	114+11		LT															1		
159	WV-27	ORVILLE	114+11		RT															1		
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																						
158,168	WL-5	LEE	399+97	400+49	RT																	
159	WL-6	E 105th ST.	114+01	114+21	LT																	
SUBTOTAL THIS SHEET						665	6	1	1	2		0	0	114	1027		0	0	4	7	2	887

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO.
 -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13			8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE														
158	WH-9	ASHBURY	108+07		LT																									
158	WV-13	ASHBURY	108+08		LT																									
158	WV-14	ASHBURY	108+11		LT																									
158	W-13	ASHBURY	108+13	108+38	LT&RT																									
158	WV-15	ASHBURY	108+19		RT																									
158	WV-16	ASHBURY	108+37		LT																									
158	W-14	ASHBURY	108+38	108+45	LT																									
158	W-15	E 105th ST.	108+38	109+54	LT																									
158	WV-17	ASHBURY	108+38		LT																									
158	WV-18	ASHBURY	108+40		LT																									
158	WV-19	ASHBURY	108+45		LT																									
158	WMA-9	E 105th ST.	108+65		RT																									
158	WVA-5	E 105th ST.	108+73		RT																									
158	WCP-21	E 105th ST.	109+07		LT	1																								
158	W-16	LEE	109+54	109+57	LT&RT																									
158-159	W-17	E 105th ST.	109+54	114+11	LT																									
158	WV-20	LEE	109+54		RT																									
158	WV-21	LEE	109+56		RT																									
158	WV-22	LEE	109+57		RT																									
158	WCP-22	E 105th ST.	109+83		LT	1																								
158	WV-23	E 105th ST.	109+93		LT																									
158	WV-24	E 105th ST.	110+20		LT																									
158	WCP-23	E 105th ST.	110+57		LT	1																								
158	WCP-24	E 105th ST.	110+74		RT	1																								
158	WH-10	E 105th ST.	111+09		LT																									
158	WCP-25	E 105th ST.	111+16		RT	1																								
158	WCP-26	E 105th ST.	111+27		LT	1																								
158	WCP-27	E 105th ST.	111+43		LT	1																								
158	WCP-28	E 105th ST.	111+69		RT	1																								
158	WCP-29	E 105th ST.	111+76		LT	1																								
158	WCP-30	E 105th ST.	112+24		RT	1																								
158	WCP-31	E 105th ST.	112+25		RT	1																								
158	WCP-32	E 105th ST.	112+35		LT	1																								
159	WCP-33	E 105th ST.	112+82		LT	1																								
159	WCP-34	E 105th ST.	112+88		RT	1																								
159	WCP-35	E 105th ST.	112+89		RT	1																								
159	WCP-36	E 105th ST.	113+38		RT	1																								
159	WCP-37	E 105th ST.	113+43		LT	1																								
159	WCP-38	E 105th ST.	113+54		LT	1																								
159	WV-25	E 105th ST.	113+93		LT																									
159	WCP-39	E 105th ST.	114+08		LT	1																								
159	W-18	ORVILLE	114+11	114+15	LT&RT																									
159-160	W-19	E 105th ST.	114+11	117+74	LT																									
159	WV-26	ORVILLE	114+11		LT																									
159	WV-27	ORVILLE	114+11		RT																									
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																														
158,168	WL-5	LEE	399+97	400+49	RT																	1								
159	WL-6	E 105th ST.	114+01	114+21	LT																									
SUBTOTAL THIS SHEET																								1		1		0		
						19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY		
159	WV-28	ORVILLE	114+15		RT		1															
159	WH-11	E 105th ST.	114+54		LT					1											1	
159	WCP-40	E 105th ST.	114+63		LT																	
159	WCP-41	E 105th ST.	114+67		RT																	
159	WCP-42	E 105th ST.	115+06		RT																	
159	WCS-13	E 105th ST.	115+31		LT																	
159	WMA-10	E 105th ST.	115+53		RT			1														
159	WCL-15	E 105th ST.	115+53		RT																	
159	WCP-43	E 105th ST.	115+87		RT																	
159	WCP-44	E 105th ST.	116+31		RT																	
159	WCP-45	E 105th ST.	116+57		RT																	
159	WCP-46	E 105th ST.	117+01		RT																	
160	WCP-47	E 105th ST.	117+57		LT																	
160	WV-29	E 105th ST.	117+60		LT		1													1		
160	WH-12	CHURCHILL	117+67		RT					1											1	
160	W-20	CHURCHILL	117+74	117+77	LT&RT							54										42
160	W-21	E 105th ST.	117+74	118+24	LT									45								35
160	WV-30	CHURCHILL	117+74		LT															1		
160	WV-31	CHURCHILL	117+74		RT															1		
160	WV-32	CHURCHILL	117+77		RT		1															
160	WVA-6	E 105th ST.	118+06		RT				1													
160	W-22	CHURCHILL	118+18	118+19	LT	31							31									24
160	WV-33	CHURCHILL	118+18		LT		1															
160	W-23	E 105th ST.	118+24	121+13	LT	60																229
160	WV-34	CHURCHILL	118+19		LT															1		
160	WV-35	CHURCHILL	118+19		LT															1		
160	WCP-48	E 105th ST.	118+46		RT																	
160	WV-36	E 105th ST.	118+47		LT																1	
160	WCP-49	E 105th ST.	118+74		LT																	
160	WCL-16	E 105th ST.	118+89		RT																	
160	WCP-50	E 105th ST.	119+14		RT																	
160	WCP-51	E 105th ST.	119+21		LT																	
160	WCP-52	E 105th ST.	119+51		RT																	
160	WCP-53	E 105th ST.	119+53		LT																	
160	WH-13	E 105th ST.	119+58		LT																	
160	WH-14	E 105th ST.	119+83		LT					1											1	
160	WCP-54	E 105th ST.	120+00		RT																	
160	WVA-7	E 105th ST.	120+66		RT				1													
160	WVA-8	E 105th ST.	120+76		RT				1													
160	WV-37	E 105th ST.	120+84		LT		1														1	
160	WVA-9	E 105th ST.	121+01		RT				1													
160	WV-38	SUPERIOR	121+08		LT		1															
160	W-24	SUPERIOR	121+10	121+13	LT	24														24		19
160	WV-39	SUPERIOR	121+10		LT																	
160	W-25	SUPERIOR	121+13	121+16	LT&RT	36															1	28
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																						
160	WL-7	E 105th ST.	117+64	117+84	LT																	
160	WL-8	E 105th ST.	121+03	121+63	LT																	
160,169	WL-9	SUPERIOR	599+76	600+25	RT																	
SUBTOTAL THIS SHEET						151	6	1	4	3		0	0	85	400		0	0	4	4	3	377

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO.
 -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL		
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE												
159	WV-28	ORVILLE	114+15		RT																					
159	WH-11	E 105th ST.	114+54		LT																					
159	WCP-40	E 105th ST.	114+63		LT	1																				
159	WCP-41	E 105th ST.	114+67		RT	1																				
159	WCP-42	E 105th ST.	115+06		RT	1																				
159	WCS-13	E 105th ST.	115+31		LT			1																		
159	WMA-10	E 105th ST.	115+53		RT																					
159	WCL-15	E 105th ST.	115+53		RT							1														
159	WCP-43	E 105th ST.	115+87		RT	1																				
159	WCP-44	E 105th ST.	116+31		RT	1																				
159	WCP-45	E 105th ST.	116+57		RT	1																				
159	WCP-46	E 105th ST.	117+01		RT	1																				
160	WCP-47	E 105th ST.	117+57		LT	1																				
160	WV-29	E 105th ST.	117+60		LT																					
160	WH-12	CHURCHILL	117+67		RT																					
160	W-20	CHURCHILL	117+74	117+77	LT&RT																					
160	W-21	E 105th ST.	117+74	118+24	LT																					
160	WV-30	CHURCHILL	117+74		LT																					
160	WV-31	CHURCHILL	117+74		RT																					
160	WV-32	CHURCHILL	117+77		RT																					
160	WVA-6	E 105th ST.	118+06		RT																					
160	W-22	CHURCHILL	118+18	118+19	LT																					
160	WV-33	CHURCHILL	118+18		LT																					
160	W-23	E 105th ST.	118+24	121+13	LT																					
160	WV-34	CHURCHILL	118+19		LT																					
160	WV-35	CHURCHILL	118+19		LT																					
160	WCP-48	E 105th ST.	118+46		RT	1																				
160	WV-36	E 105th ST.	118+47		LT																					
160	WCP-49	E 105th ST.	118+74		LT	1																				
160	WCL-16	E 105th ST.	118+89		RT				1																	
160	WCP-50	E 105th ST.	119+14		RT	1																				
160	WCP-51	E 105th ST.	119+21		LT	1																				
160	WCP-52	E 105th ST.	119+51		RT	1																				
160	WCP-53	E 105th ST.	119+53		LT	1																				
160	WH-13	E 105th ST.	119+58		LT																					
160	WH-14	E 105th ST.	119+83		LT																					
160	WCP-54	E 105th ST.	120+00		RT	1																				
160	WVA-7	E 105th ST.	120+66		RT																					
160	WVA-8	E 105th ST.	120+76		RT																					
160	WV-37	E 105th ST.	120+84		LT																					
160	WVA-9	E 105th ST.	121+01		RT																					
160	WV-38	SUPERIOR	121+08		LT																					
160	W-24	SUPERIOR	121+10	121+13	LT																					
160	WV-39	SUPERIOR	121+10		LT																					
160	W-25	SUPERIOR	121+13	121+16	LT&RT																					
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																										
160	WL-7	E 105th ST.	117+64	117+84	LT																					
160	WL-8	E 105th ST.	121+03	121+63	LT																					
160,169	WL-9	SUPERIOR	599+76	600+25	RT																					
SUBTOTAL THIS SHEET																										
						15		1		1		0		1		0				0		1		2		

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	
			FROM	TO		PIPE REMOVED, 24" AND UNDER	VALVE BOX REMOVED	VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12	VALVE BOX ADJUSTED TO GRADE, AS PER E-12	FIRE HYDRANT REMOVED, AS PER E-12		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17	PAVEMENT BASE REPAIR, AS PER PLAN
			FT			EACH	EACH	EACH	EACH		FT	FT	FT	FT		EACH	EACH	EACH	EACH	EACH	EACH	SY
160-161	W-26	E 105th ST.	121+13	124+00	LT	287															223	
160	WV-40	SUPERIOR	121+16		RT		1													1		
160	WVA-10	SUPERIOR	121+42		LT				1													
160	WMA-12	E 105th ST.	121+50		LT			1														
160	WV-41	E 105th ST.	121+64		LT		1													1		
160	WMA-11	E 105th ST.	121+71		RT			1														
160	WVA-11	E 105th ST.	121+72		RT				1													
160	WH-15	E 105th ST.	121+78		LT					1											1	
160	WVA-12	E 105th ST.	121+80		RT				1													
161	WVA-13	E 105th ST.	122+74		LT				1													
161	WMA-13	E 105th ST.	122+79		LT			1														
161	WV-42	E 105th ST.	122+79		LT		1													1		
161	WVA-14	E 105th ST.	122+85		LT				1													
161	WCP-55	E 105th ST.	123+51		RT																	
161	WCP-56	E 105th ST.	123+70		LT																	
161	WCP-57	E 105th ST.	123+82		RT																	
161	W-27	E 105th ST.	124+00	124+00	LT	23															18	
161	W-28	E 105th ST.	124+00	124+75	LT	75															58	
161	WV-43	E 105th ST.	124+00		LT		1															
161	WCP-58	E 105th ST.	124+25		RT																	
161	WV-44	E 105th ST.	124+44		LT																1	
161	WV-45	HATHAWAY	124+63		RT		1															
161	WH-16	E 105th ST.	124+64		LT					1											1	
161	W-29	HATHAWAY	124+66	124+75	LT&RT								63								49	
161-162	W-30	E 105th ST.	124+75	127+70	LT	235															226	
161	WV-46	HATHAWAY	124+75		LT															1		
161	WV-47	HATHAWAY	124+75		RT															1		
161	WCP-59	E 105th ST.	125+75		RT																	
161	WCP-60	E 105th ST.	126+09		RT																	
161	WH-17	E 105th ST.	126+78		LT					1											1	
161	WCP-61	E 105th ST.	127+11		LT																	
162	WV-48	E 105th ST.	127+52		LT																1	
162	WV-49	OLIVET	127+66		LT		1															
162	W-31	OLIVET	127+67	127+67	LT	30															23	
162	W-32	E 105th ST.	127+70	127+77	LT	29															23	
162	WV-50	OLIVET	127+67		LT																1	
162	WV-51	OLIVET	127+67		LT																1	
162	WVA-15	E 105th ST.	127+73		RT																	
162	W-33	OLIVET	127+96	128+03	LT&RT	58															45	
162	W-34	E 105th ST.	127+77	130+26	LT	223															173	
162	WV-52	OLIVET	127+96		LT																1	
162	WV-53	OLIVET	128+00		RT																1	
162	WV-54	OLIVET	128+00		RT		1															
162	WH-18	OLIVET	128+06		RT																1	
162	WH-19	OLIVET	128+08		RT					1												
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																						
161	WL-10	E 105th ST.	124+66	124+84	LT																	
161	WL-11	E 105th ST.	125+98	126+22	LT																	
162	WL-12	E 105th ST.	127+58	128+04	LT																	
SUBTOTAL THIS SHEET						960	7	3	6	4			23	0	151	905	1	0	6	5	4	839

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE										
160-161	W-26	E 105th ST.	121+13	124+00	LT																			
160	WV-40	SUPERIOR	121+16		RT																			
160	WVA-10	SUPERIOR	121+42		LT																			
160	WMA-12	E 105th ST.	121+50		LT																			
160	WV-41	E 105th ST.	121+64		LT																			
160	WMA-11	E 105th ST.	121+71		RT																			
160	WVA-11	E 105th ST.	121+72		RT																			
160	WH-15	E 105th ST.	121+78		LT																			
160	WVA-12	E 105th ST.	121+80		RT																			
161	WVA-13	E 105th ST.	122+74		LT																			
161	WMA-13	E 105th ST.	122+79		LT																			
161	WV-42	E 105th ST.	122+79		LT																			
161	WVA-14	E 105th ST.	122+85		LT																			
161	WCP-55	E 105th ST.	123+51		RT	1																		
161	WCP-56	E 105th ST.	123+70		LT	1																		
161	WCP-57	E 105th ST.	123+82		RT	1																		
161	W-27	E 105th ST.	124+00	124+00	LT																			
161	W-28	E 105th ST.	124+00	124+75	LT																			
161	WV-43	E 105th ST.	124+00		LT																			
161	WCP-58	E 105th ST.	124+25		RT	1																		
161	WV-44	E 105th ST.	124+44		LT																			
161	WV-45	HATHAWAY	124+63		RT																			
161	WH-16	E 105th ST.	124+64		LT																			
161	W-29	HATHAWAY	124+66	124+75	LT&RT																			
161-162	W-30	E 105th ST.	124+75	127+70	LT																			
161	WV-46	HATHAWAY	124+75		LT																			
161	WV-47	HATHAWAY	124+75		RT																			
161	WCP-59	E 105th ST.	125+75		RT	1																		
161	WCP-60	E 105th ST.	126+09		RT	1																		
161	WH-17	E 105th ST.	126+78		LT																			
161	WCP-61	E 105th ST.	127+11		LT	1																		
162	WV-48	E 105th ST.	127+52		LT																			
162	WV-49	OLIVET	127+66		LT																			
162	W-31	OLIVET	127+67	127+67	LT																			
162	W-32	E 105th ST.	127+70	127+77	LT																			
162	WV-50	OLIVET	127+67		LT																			
162	WV-51	OLIVET	127+67		LT																			
162	WVA-15	E 105th ST.	127+73		RT																			
162	W-33	OLIVET	127+96	128+03	LT&RT																			
162	W-34	E 105th ST.	127+77	130+26	LT																			
162	WV-52	OLIVET	127+96		LT																			
162	WV-53	OLIVET	128+00		RT																			
162	WV-54	OLIVET	128+00		RT																			
162	WH-18	OLIVET	128+06		RT																			
162	WH-19	OLIVET	128+08		RT																			
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																								
161	WL-10	E 105th ST.	124+66	124+84	LT																	1		
161	WL-11	E 105th ST.	125+98	126+22	LT																	1		
162	WL-12	E 105th ST.	127+58	128+04	LT																	1		
SUBTOTAL THIS SHEET						7		0	0	0	0	0	0	0	0	3	0							

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL		
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY			
			FROM	TO																			
162	WV-55	E 105th ST.	128+13		LT																		
162	WCP-62	E 105th ST.	128+59		LT																		
162	WCP-63	E 105th ST.	128+93		LT																		
162	WCP-64	E 105th ST.	129+26		LT																		
162	WCS-14	E 105th ST.	129+62		LT																		
162	WVA-16	E 105th ST.	129+70		RT				1														
162	WCL-17	E 105th ST.	129+71		RT																		
162	WMA-14	E 105th ST.	129+74		RT			1															
162	WV-56	E 105th ST.	130+13		LT																1		
162	W-35	HAMPDEN	130+23	130+26	LT									31								24	
162	WV-57	HAMPDEN	130+23		LT		1																
162	W-36	E 105th ST.	130+26	130+34	LT	8									8							6	
162	W-37	HAMPDEN	130+26	130+39	LT&RT	45								45								35	
162-163	W-38	E 105th ST.	130+26	132+81	LT	247									247							192	
162	WV-58	HAMPDEN	130+26		LT																1		
162	WV-59	HAMPDEN	130+26		LT																1		
162	WV-60	HAMPDEN	130+35		LT																1		
162	WV-61	HAMPDEN	130+69		RT				1												1		
162	WV-62	E 105th ST.	130+66		LT																1		
162	WCP-65	E 105th ST.	130+99		LT																		
162	WCP-66	E 105th ST.	131+18		RT																		
162	WCS-15	E 105th ST.	131+53		LT																		
162	WH-20	E 105th ST.	131+68		LT																		
162	WCP-67	E 105th ST.	131+68		RT					1											1		
162	WCP-68	E 105th ST.	131+69		RT																		
162	WCP-69	E 105th ST.	131+88		LT																		
162	WCP-70	E 105th ST.	132+21		RT																		
163	WCP-71	E 105th ST.	132+53		RT																		
163	WCP-72	E 105th ST.	132+59		LT																		
163	WV-63	WESTCHESTER	132+70		LT																1		
163	WV-64	WESTCHESTER	132+76		LT																		
163	WCP-73	E 105th ST.	132+76		RT				1														
163	W-39	WESTCHESTER	132+77	132+81	LT																		
163	WV-65	WESTCHESTER	132+78		LT				1														
163	W-40	E 105th ST.	132+81	133+09	LT	28									28							22	
163	WV-66	WESTCHESTER	132+81		LT																1		
163	WV-67	WESTCHESTER	132+81		LT																1		
163	W-41	WESTCHESTER	133+09	133+13	LT									33								26	
163	W-42	E 105th ST.	133+09	134+55	LT	146									146							114	
163	WV-68	WESTCHESTER	133+09		LT																1		
163	WV-69	WESTCHESTER	133+09		LT																1		
163	WV-70	E 105th ST.	133+20		LT																		
163	WV-71	E 105th ST.	133+31		LT																		
163	WCP-74	E 105th ST.	133+35		LT				1														
163	WCP-75	E 105th ST.	133+61		RT																		
163	WMA-15	E 105th ST.	133+71		LT																		
163	WCS-16	E 105th ST.	133+71		LT					1													
163	WCP-76	E 105th ST.	133+88		LT																		
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
162	WL-13	E 105th ST.	130+17	130+43	LT																		
163	WL-14	E 105th ST.	132+73	133+17	LT																		
SUBTOTAL THIS SHEET						474	4	2	2	2			0	0	141	429		0	0	8	5	1	443

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
B.A.K.
CHECKED
D.P.B.

PID NO.
-

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL	
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION		RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13		RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13		RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13		RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13		RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13		8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE		12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE		12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	
162	WV-55	E 105th ST.	128+13		LT																		
162	WCP-62	E 105th ST.	128+59		LT	1																	
162	WCP-63	E 105th ST.	128+93		LT	1																	
162	WCP-64	E 105th ST.	129+26		LT	1																	
162	WCS-14	E 105th ST.	129+62		LT			1															
162	WVA-16	E 105th ST.	129+70		RT																		
162	WCL-17	E 105th ST.	129+71		RT				1														
162	WMA-14	E 105th ST.	129+74		RT																		
162	WV-56	E 105th ST.	130+13		LT																		
162	W-35	HAMPDEN	130+23	130+26	LT																		
162	WV-57	HAMPDEN	130+23		LT																		
162	W-36	E 105th ST.	130+26	130+34	LT																		
162	W-37	HAMPDEN	130+26	130+39	LT&RT																		
162-163	W-38	E 105th ST.	130+26	132+81	LT																		
162	WV-58	HAMPDEN	130+26		LT																		
162	WV-59	HAMPDEN	130+26		LT																		
162	WV-60	HAMPDEN	130+35		LT																		
162	WV-61	HAMPDEN	130+69		RT																		
162	WV-62	E 105th ST.	130+66		LT																		
162	WCP-65	E 105th ST.	130+99		LT	1																	
162	WCP-66	E 105th ST.	131+18		RT	1																	
162	WCS-15	E 105th ST.	131+53		LT			1															
162	WH-20	E 105th ST.	131+68		LT																		
162	WCP-67	E 105th ST.	131+68		RT	1																	
162	WCP-68	E 105th ST.	131+69		RT	1																	
162	WCP-69	E 105th ST.	131+88		LT	1																	
162	WCP-70	E 105th ST.	132+21		RT	1																	
163	WCP-71	E 105th ST.	132+53		RT	1																	
163	WCP-72	E 105th ST.	132+59		LT	1																	
163	WV-63	WESTCHESTER	132+70		LT																		
163	WV-64	WESTCHESTER	132+76		LT																		
163	WCP-73	E 105th ST.	132+76		RT	1																	
163	W-39	WESTCHESTER	132+77	132+81	LT																		
163	WV-65	WESTCHESTER	132+78		LT																		
163	W-40	E 105th ST.	132+81	133+09	LT																		
163	WV-66	WESTCHESTER	132+81		LT																		
163	WV-67	WESTCHESTER	132+81		LT																		
163	W-41	WESTCHESTER	133+09	133+13	LT																		
163	W-42	E 105th ST.	133+09	134+55	LT																		
163	WV-68	WESTCHESTER	133+09		LT																		
163	WV-69	WESTCHESTER	133+09		LT																		
163	WV-70	E 105th ST.	133+20		LT																		
163	WV-71	E 105th ST.	133+31		LT																		
163	WCP-74	E 105th ST.	133+35		LT	1																	
163	WCP-75	E 105th ST.	133+61		RT	1																	
163	WMA-15	E 105th ST.	133+71		LT																		
163	WCS-16	E 105th ST.	133+71		LT			1															
163	WCP-76	E 105th ST.	133+88		LT	1																	
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
162	WL-13	E 105th ST.	130+17	130+43	LT																	1	
163	WL-14	E 105th ST.	132+73	133+17	LT																	1	
SUBTOTAL THIS SHEET						15		3		1		0		0		0		0		2		0	

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL		
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY			
163	WCP-77	E 105th ST.	134+17		LT																		
163	W-43	TACOMA	134+55	134+55	LT&RT	48							48									37	
163	W-44	E 105th ST.	134+55	135+95	LT	140								140								109	
163	WV-72	TACOMA	134+54		LT																		
163	WV-73	TACOMA	134+54		RT																1		
163	WV-74	TACOMA	134+53		RT		1														1		
163	WV-75	E 105th ST.	134+74		LT																1		
163	WCP-78	E 105th ST.	134+87		LT																		
163	WMA-16	E 105th ST.	135+09		RT			1															
163	WCL-18	E 105th ST.	135+09		RT																		
163	WCP-79	E 105th ST.	135+26		LT																		
163	WCP-80	E 105th ST.	135+55		RT																		
163	W-45	SOUTH BLVD.	135+96	136+02	LT								37									29	
163	W-46	E 105th ST.	135+95	136+98	LT	103								103								80	
163	WV-76	SOUTH BLVD.	135+95		LT																1		
163	WV-77	SOUTH BLVD.	135+95		LT																1		
163	WCP-81	E 105th ST.	135+98		RT																		
163	WVA-17	E 105th ST.	136+00		RT				1														
163	WVA-18	E 105th ST.	136+09		RT				1														
163	WV-78	E 105th ST.	136+10		LT																1		
163	WCP-82	E 105th ST.	136+36		RT																		
163	WCP-83	E 105th ST.	136+41		LT																		
163	WCP-84	E 105th ST.	136+75		RT																		
163	WCP-85	E 105th ST.	136+81		LT																		
163	WV-79	GRANTWOOD	136+86		LT																1		
163	W-47	GRANTWOOD	136+93	136+98	LT&RT								63									49	
163	WV-80	GRANTWOOD	136+93		RT		1																
163-164	W-48	E 105th ST.	136+98	138+58	LT	160								160								124	
163	WV-81	GRANTWOOD	136+98		LT																1		
163	WV-82	GRANTWOOD	136+98		RT		1														1		
163	WCP-86	E 105th ST.	137+18		LT																		
163	WCS-17	E 105th ST.	137+24		LT																		
163	WH-21	E 105th ST.	137+40		LT					1												1	
164	WCS-18	E 105th ST.	137+57		LT																		
164	WCS-19	E 105th ST.	138+16		LT																		
164	WV-83	E 105th ST.	138+45		LT																1		
164	WH-22	E 105th ST.	138+56		LT					1											1		
164	W-49	NORTH BLVD.	138+58	138+61	LT								36									28	
164	W-50	E 105th ST.	138+58	138+71	LT	23								23								18	
164	WV-84	NORTH BLVD.	138+58		LT																1		
164	WV-85	NORTH BLVD.	138+58		LT																1		
164	WV-86	NORTH BLVD.	138+61		LT		1																
164	WMA-17	E 105th ST.	138+86		RT			1															
164	WVA-19	E 105th ST.	138+88		LT				1														
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
163	WL-15	E 105th ST.	134+43	134+66	LT																		
163	WL-16	E 105th ST.	135+85	136+06	LT																		
163,170	WL-17	GRANTWOOD	1000+05	1000+35	RT																		
164	WL-18	E 105th ST.	138+50	138+67	LT																		
SUBTOTAL THIS SHEET						474	4	2	3	2			0	0	184	426		0	0	8	4	2	474

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
B.A.K.
CHECKED
D.P.B.

PID NO.
-

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL			
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE													
163	WCP-77	E 105th ST.	134+17		LT	1																					
163	W-43	TACOMA	134+55	134+55	LT&RT																						
163	W-44	E 105th ST.	134+55	135+95	LT																						
163	WV-72	TACOMA	134+54		LT																						
163	WV-73	TACOMA	134+54		RT																						
163	WV-74	TACOMA	134+53		RT																						
163	WV-75	E 105th ST.	134+74		LT																						
163	WCP-78	E 105th ST.	134+87		LT	1																					
163	WMA-16	E 105th ST.	135+09		RT																						
163	WCL-18	E 105th ST.	135+09		RT				1																		
163	WCP-79	E 105th ST.	135+26		LT	1																					
163	WCP-80	E 105th ST.	135+55		RT	1																					
163	W-45	SOUTH BLVD.	135+96	136+02	LT																						
163	W-46	E 105th ST.	135+95	136+98	LT																						
163	WV-76	SOUTH BLVD.	135+95		LT																						
163	WV-77	SOUTH BLVD.	135+95		LT																						
163	WCP-81	E 105th ST.	135+98		RT	1																					
163	WVA-17	E 105th ST.	136+00		RT																						
163	WVA-18	E 105th ST.	136+09		RT																						
163	WV-78	E 105th ST.	136+10		LT																						
163	WCP-82	E 105th ST.	136+36		RT	1																					
163	WCP-83	E 105th ST.	136+41		LT	1																					
163	WCP-84	E 105th ST.	136+75		RT	1																					
163	WCP-85	E 105th ST.	136+81		LT	1																					
163	WV-79	GRANTWOOD	136+86		LT																						
163	W-47	GRANTWOOD	136+93	136+98	LT&RT																						
163	WV-80	GRANTWOOD	136+93		RT																						
163-164	W-48	E 105th ST.	136+98	138+58	LT																						
163	WV-81	GRANTWOOD	136+98		LT																						
163	WV-82	GRANTWOOD	136+98		RT																						
163	WCP-86	E 105th ST.	137+18		LT	1																					
163	WCS-17	E 105th ST.	137+24		LT				1																		
163	WH-21	E 105th ST.	137+40		LT																						
164	WCS-18	E 105th ST.	137+57		LT				1																		
164	WCS-19	E 105th ST.	138+16		LT				1																		
164	WV-83	E 105th ST.	138+45		LT																						
164	WH-22	E 105th ST.	138+56		LT																						
164	W-49	NORTH BLVD.	138+58	138+61	LT																						
164	W-50	E 105th ST.	138+58	138+71	LT																						
164	WV-84	NORTH BLVD.	138+58		LT																						
164	WV-85	NORTH BLVD.	138+58		LT																						
164	WV-86	NORTH BLVD.	138+61		LT																						
164	WMA-17	E 105th ST.	138+86		RT																						
164	WVA-19	E 105th ST.	138+88		LT																						
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																											
163	WL-15	E 105th ST.	134+43	134+66	LT																						
163	WL-16	E 105th ST.	135+85	136+06	LT																						
163,170	WL-17	GRANTWOOD	1000+05	1000+35	RT																						
164	WL-18	E 105th ST.	138+50	138+67	LT																						
SUBTOTAL THIS SHEET						10		3	1	0	0	0			1	3	0										

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.
 PID NO. -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL		
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY			
164	WH-23	E 105th ST.	140+20		LT					1											1		
164	WVA-20	E 105th ST.	140+27		LT				1														
164	WVA-21	DREXEL	140+46		RT				1														
164	WVA-22	DREXEL	140+50		RT				1														
164	WVA-23	OSTEND	140+96		LT				1														
164	WVA-24	E 105th ST.	141+12		LT				1														
164	WCP-87	E 105th ST.	141+17		RT																		
164	WCP-88	E 105th ST.	141+52		RT																		
164	WCP-89	E 105th ST.	141+58		LT																		
164	WCP-90	E 105th ST.	141+93		RT																		
164	WCL-19	E 105th ST.	142+33		RT																		
165	WCP-91	E 105th ST.	142+62		RT																		
165	WH-24	E 105th ST.	142+65		LT					1													
165	WH-25	E 105th ST.	142+68		LT																1		
165	WCP-92	E 105th ST.	143+19		LT																		
165	WVA-25	E 105th ST.	143+32		LT				1														
165	WVA-26	PASADENA	143+90		RT				1														
165	WVA-27	E 105th ST.	144+32		LT				1														
165	WCP-93	E 105th ST.	145+65		LT																		
165	WCL-20	E 105th ST.	145+71		RT																		
165	WVA-28	E 105th ST.	146+03		LT				1														
165	WVA-29	PARKGATE	146+38		LT				1														
165	WH-26	E 105th ST.	146+69		LT					1													
165	WH-27	E 105th ST.	146+72		LT																1		
165	WVA-30	MASSIE	146+90		RT				1														
165	WVA-31	E 105th ST.	147+21		LT				1														
165	WCP-94	E 105th ST.	147+30		LT																		
166	WCP-95	E 105th ST.	147+71		RT																		
166	WCP-96	E 105th ST.	147+95		LT																		
166	WCP-97	E 105th ST.	148+36		LT																		
166	WVA-32	E 105th ST.	148+73		LT				1														
166	WH-28	E 105th ST.	149+69		LT					1													
166	WH-29	E 105th ST.	149+72		LT																1		
166	WVA-33	MORISON	149+90		RT				1														
166	WCS-20	E 105th ST.	150+19		LT																		
166	WVA-34	E 105th ST.	150+24		LT				1														
166	WCP-98	E 105th ST.	150+58		RT																		
166	WCP-99	E 105th ST.	150+96		LT																		
166	WCP-100	E 105th ST.	151+19		RT																		
166	WVA-35	E 105th ST.	151+41		LT				1														
166	WCP-101	E 105th ST.	151+56		RT																		
166	WVA-36	ADAMS	151+77		LT				1														
166	WCP-102	E 105th ST.	152+28		LT																		
167	WCP-103	E 105th ST.	152+66		LT																		
167	W-51	E 105th ST.	152+72	152+92	LT	20									20							16	
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
SUBTOTAL THIS SHEET						20	0	0	17	4		0	0	0	20	0	0	0	0	4	16		

WATER WORK SUBSUMMARY

EAST 105TH STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO.
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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL		SPECIAL			
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION EACH	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13 EACH	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13 EACH	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13 EACH	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13 EACH	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13 EACH	8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE EACH	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE EACH	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE EACH									
164	WH-23	E 105th ST.	140+20		LT																		
164	WVA-20	E 105th ST.	140+27		LT																		
164	WVA-21	DREXEL	140+46		RT																		
164	WVA-22	DREXEL	140+50		RT																		
164	WVA-23	OSTEND	140+96		LT																		
164	WVA-24	E 105th ST.	141+12		LT																		
164	WCP-87	E 105th ST.	141+17		RT	1																	
164	WCP-88	E 105th ST.	141+52		RT	1																	
164	WCP-89	E 105th ST.	141+58		LT	1																	
164	WCP-90	E 105th ST.	141+93		RT	1																	
164	WCL-19	E 105th ST.	142+33		RT				1														
165	WCP-91	E 105th ST.	142+62		RT	1																	
165	WH-24	E 105th ST.	142+65		LT																		
165	WH-25	E 105th ST.	142+68		LT																		
165	WCP-92	E 105th ST.	143+19		LT	1																	
165	WVA-25	E 105th ST.	143+32		LT																		
165	WVA-26	PASADENA	143+90		RT																		
165	WVA-27	E 105th ST.	144+32		LT																		
165	WCP-93	E 105th ST.	145+65		LT	1																	
165	WCL-20	E 105th ST.	145+71		RT				1														
165	WVA-28	E 105th ST.	146+03		LT																		
165	WVA-29	PARKGATE	146+38		LT																		
165	WH-26	E 105th ST.	146+69		LT																		
165	WH-27	E 105th ST.	146+72		LT																		
165	WVA-30	MASSIE	146+90		RT																		
165	WVA-31	E 105th ST.	147+21		LT																		
165	WCP-94	E 105th ST.	147+30		LT	1																	
166	WCP-95	E 105th ST.	147+71		RT	1																	
166	WCP-96	E 105th ST.	147+95		LT	1																	
166	WCP-97	E 105th ST.	148+36		LT	1																	
166	WVA-32	E 105th ST.	148+73		LT																		
166	WH-28	E 105th ST.	149+69		LT																		
166	WH-29	E 105th ST.	149+72		LT																		
166	WVA-33	MORISON	149+90		RT																		
166	WCS-20	E 105th ST.	150+19		LT				1														
166	WVA-34	E 105th ST.	150+24		LT																		
166	WCP-98	E 105th ST.	150+58		RT	1																	
166	WCP-99	E 105th ST.	150+96		LT	1																	
166	WCP-100	E 105th ST.	151+19		RT	1																	
166	WVA-35	E 105th ST.	151+41		LT																		
166	WCP-101	E 105th ST.	151+56		RT	1																	
166	WVA-36	ADAMS	151+77		LT																		
166	WCP-102	E 105th ST.	152+28		LT	1																	
167	WCP-103	E 105th ST.	152+66		LT	1																	
167	W-51	E 105th ST.	152+72	152+92	LT																		
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
SUBTOTAL THIS SHEET							17		1	2	0	0	0		0	0	0						

CALCULATED		B.A.K.	
CHECKED		D.P.B.	
PID NO.		-	
WATER WORK SUBSUMMARY			
EAST 105TH STREET			
151		243	

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202	202	611	638	638		638	638	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL				
			PIPE REMOVED, 24" AND UNDER FT	VALVE BOX REMOVED EACH		VAULT/MANHOLE ADJUSTED TO GRADE, AS PER D-39, E-12 EACH	VALVE BOX ADJUSTED TO GRADE, AS PER E-12 EACH	FIRE HYDRANT REMOVED, AS PER E-12 EACH		4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	8" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT	12" WATER MAIN DUCTILE IRON PIPE WITH PUSH-ON JOINTS AND RETAINED MECHANICAL AND RETAINED MECHANICAL JOINT FITTINGS, ANSI CL. 52, AS PER E-1 FT		4" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	6" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	8" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	12" GATE VALVE WITH VALVE BOX, COMPLETE, AS PER E-4 EACH	FURNISHING AND SETTING 6" HYDRANT, COMPLETE, AS PER E-17 EACH	PAVEMENT BASE REPAIR, AS PER PLAN SY					
			FROM	TO																					
167	WV-87	E 105th ST.	152+72		LT		1												1						
167	WVA-37	E 105th ST.	152+73		RT				1																
167	WVA-38	AMOR	152+82		RT				1																
167	WV-88	E 105th ST.	152+91		RT		1																		
167	W-52	AMOR	152+92	152+92	LT&RT	58							32	26				1			45				
167	W-53	E 105th ST.	152+92	154+30	LT	146								146							114				
167	WCP-104	E 105th ST.	153+18		LT																				
167	WV-89	E 105th ST.	153+23		LT		1													1					
167	WMA-18	E 105th ST.	153+33		RT			1																	
167	WH-30	E 105th ST.	153+40		LT					1															
167	WVA-39	E 105th ST.	153+44		RT				1																
167	WH-31	E 105th ST.	153+45		LT															1					
167	WCS-21	E 105th ST.	153+77		LT																				
167	WCP-105	E 105th ST.	153+79		RT																				
167	WCS-22	E 105th ST.	153+85		LT																				
167	WCP-106	E 105th ST.	154+10		LT																				
167	WV-90	E 105th ST.	154+22		LT														1						
167	W-54	KEMPTON	154+38	154+38	LT	34							34								26				
167	W-55	E 105th ST.	154+30	154+77	LT	35								35							27				
167	WV-91	KEMPTON	154+38		LT														1						
167	WV-92	KEMPTON	154+38		LT		1												1						
167	W-56	GREENLAWN	154+73	154+73	LT&RT	47							47								37				
167	WV-93	GREENLAWN	154+73		RT		1																		
167	W-57	E 105th ST.	154+77	155+18	LT	45															35				
167	WV-94	GREENLAWN	154+73		LT															1					
167	WV-95	GREENLAWN	154+73		RT														1						
167	WCP-107	GREENLAWN	154+73		RT																				
167	WV-96	E 105th ST.	155+00		LT															1					
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																									
167	WL-19	E 105th ST.	152+77	153+07	LT																				
167	WL-20	E 105th ST.	154+24	154+86	LT																				
SUBTOTAL THIS SHEET						365	5	1	3	1			0	0	113	252		0	0	5	4	1	284		
SUBTOTAL SHEET 136						1973	6	2	2	4			0	52	22	1984		0	2	0	5	4	4	1601	
SUBTOTAL SHEET 138						0	1	6	2	2			0	0	0	0	0	0	0	0	0	3	2	0	0
SUBTOTAL SHEET 140						665	6	1	1	2			0	0	114	1027		0	0	4	7	2	2	887	
SUBTOTAL SHEET 142						151	6	1	4	3			0	0	85	400		0	0	4	4	3	3	377	
SUBTOTAL SHEET 144						960	7	3	6	4			23	0	151	905		1	0	6	5	4	4	839	
SUBTOTAL SHEET 146						474	4	2	2	2			0	0	141	429		0	0	8	5	1	1	443	
SUBTOTAL SHEET 148						474	4	2	3	2			0	0	184	426		0	0	8	4	2	2	474	
SUBTOTAL SHEET 150						20	0	0	17	4			0	0	0	20		0	0	0	0	0	4	16	16
TOTALS CARRIED TO GENERAL SUMMARY						5082	39	18	40	24			23	52	810	5443		1	2	35	37	23	4	4922	

WATER WORK SUBSUMMARY

EAST 105TH STREET

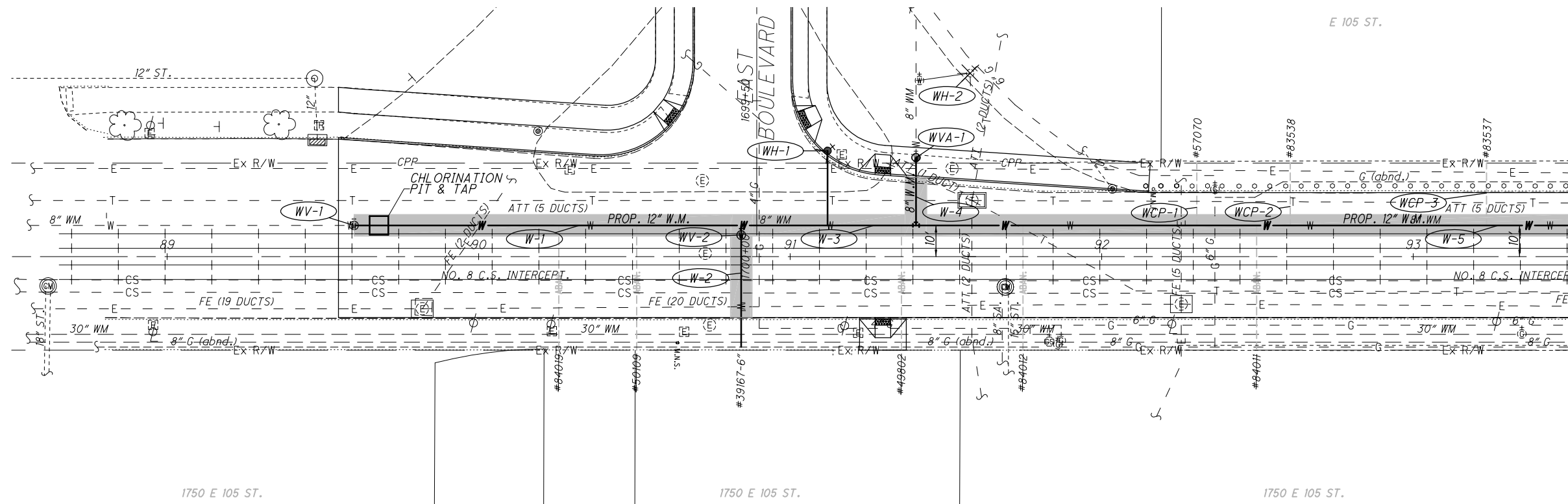
CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO.
 -

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	SPECIAL			SPECIAL			SPECIAL			SPECIAL			SPECIAL					
			FROM	TO		PLUG EXISTING WATER SERVICE CONNECTION	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 1.5" WATER SERVICE CONNECTION, LONG SIDE COMPLETE, AS PER E-13	RETAP AND RECONNECT 2" WATER SERVICE CONNECTION, SHORT SIDE COMPLETE, AS PER E-13			8" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L04, COMPLETE IN PLACE	12" WATERMAIN LOWERING (UNDERPASS) PER STD-L05, COMPLETE IN PLACE							
167	WV-87	E 105th ST.	152+72		LT																		
167	WVA-37	E 105th ST.	152+73		RT																		
167	WVA-38	AMOR	152+82		RT																		
167	WV-88	E 105th ST.	152+91		RT																		
167	W-52	AMOR	152+92	152+92	LT&RT																		
167	W-53	E 105th ST.	152+92	154+30	LT																		
167	WCP-104	E 105th ST.	153+18		LT	1																	
167	WV-89	E 105th ST.	153+23		LT																		
167	WMA-18	E 105th ST.	153+33		RT																		
167	WH-30	E 105th ST.	153+40		LT																		
167	WVA-39	E 105th ST.	153+44		RT																		
167	WH-31	E 105th ST.	153+45		LT																		
167	WCS-21	E 105th ST.	153+77		LT			1															
167	WCP-105	E 105th ST.	153+79		RT	1																	
167	WCS-22	E 105th ST.	153+85		LT			1															
167	WCP-106	E 105th ST.	154+10		LT	1																	
167	WV-90	E 105th ST.	154+22		LT																		
167	W-54	KEMPTON	154+38	154+38	LT																		
167	W-55	E 105th ST.	154+30	154+77	LT																		
167	WV-91	KEMPTON	154+38		LT																		
167	WV-92	KEMPTON	154+38		LT																		
167	W-56	GREENLAWN	154+73	154+73	LT&RT																		
167	WV-93	GREENLAWN	154+73		RT																		
167	W-57	E 105th ST.	154+77	155+18	LT																		
167	WV-94	GREENLAWN	154+73		LT																		
167	WV-95	GREENLAWN	154+73		RT																		
167	WCP-107	GREENLAWN	154+73		RT	1																	
167	WV-96	E 105th ST.	155+00		LT																		
NOTE: ALL ABOVE STATIONS FROM E 105th ST. CENTERLINE																							
167	WL-19	E 105th ST.	152+77	153+07	LT															1			
167	WL-20	E 105th ST.	154+24	154+86	LT															1			
SUBTOTAL THIS SHEET						4		2	0	0	0	0	0	0	0	2	0						
SUBTOTAL SHEET 137						11		0	1	0	0	0	2	0	0	1							
SUBTOTAL SHEET 139						9		7	13	1	0	0	2	0	2	1							
SUBTOTAL SHEET 141						19		0	0	0	0	0	0	1	1	0							
SUBTOTAL SHEET 143						15		1	1	0	1	0	0	0	1	2							
SUBTOTAL SHEET 145						7		0	0	0	0	0	0	0	3	0							
SUBTOTAL SHEET 147						15		3	1	0	0	0	0	0	2	0							
SUBTOTAL SHEET 149						10		3	1	0	0	0	0	1	3	0							
SUBTOTAL SHEET 151						17		1	2	0	0	0	0	0	0	0							
TOTALS CARRIED TO GENERAL SUMMARY						107		17	19	1	1	4	2	14	4								

WATER WORK SUBSUMMARY	CALCULATED B.A.K. CHECKED D.P.B.
EAST 105TH STREET	PID NO. _____ _____
153	243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



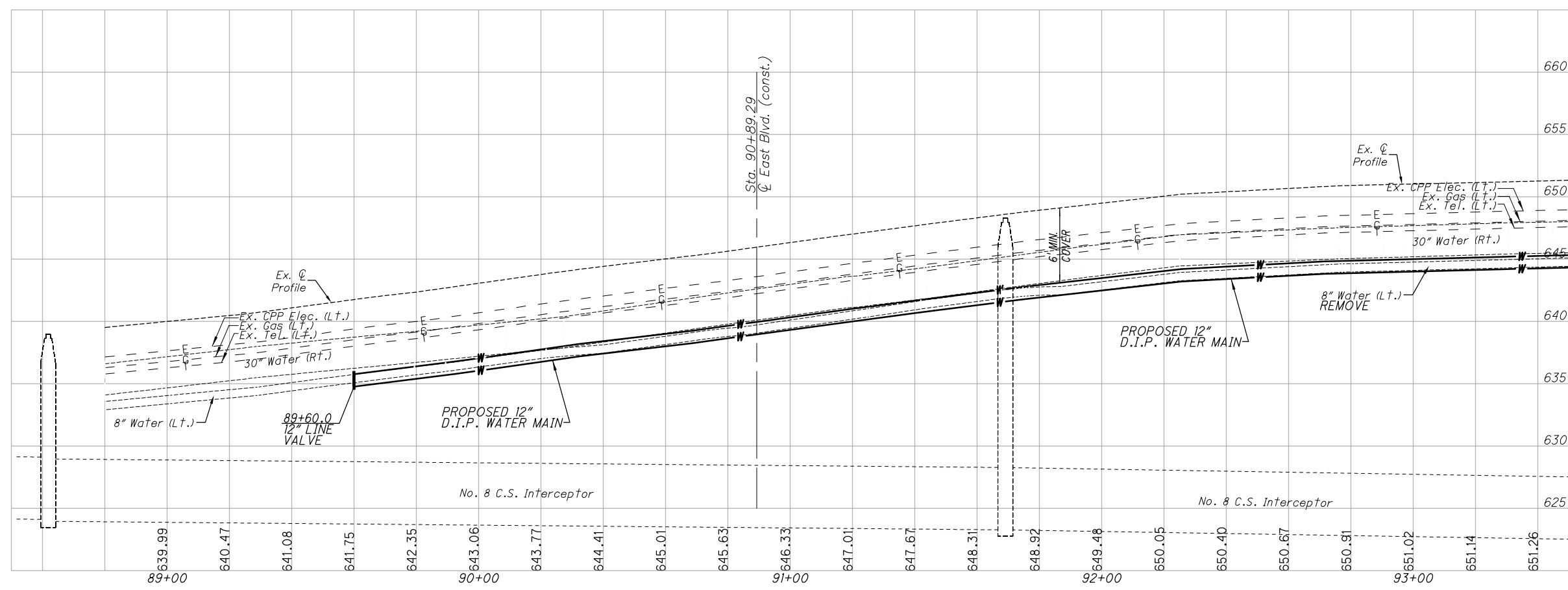
- SYMBOL LEGEND**
- Fire Hydrant
 - Water Meter
 - Water Meter Manhole
 - Water Valve
 - Water Serv. Stop Box
 - Existing Structure
 - ADJUSTED TO GRADE
 - PROP. FIRE HYDRANT
 - PROP. YARD HYDRANT
 - PROP. WATER METER
 - PROP. WATER METER MANHOLE
 - PROP. WATER VALVE
 - PROP. WATER SERV. STOP BOX
 - PROP. WATER TEE
 - PROP. WATER BEND
 - PROP. CHLORINATION PIT
 - PROP. WATER MAIN TRENCH

- WATER WORK LEGEND**
- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
 - (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
 - (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
 - (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
 - (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

- NOTES:**
1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. REFER TO PLAN FOR C/L OFFSET DISTANCE.
 2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
 3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 90+63.82, 27.63' RT.
 MAG NAIL SET
 ELEVATION: 645.22



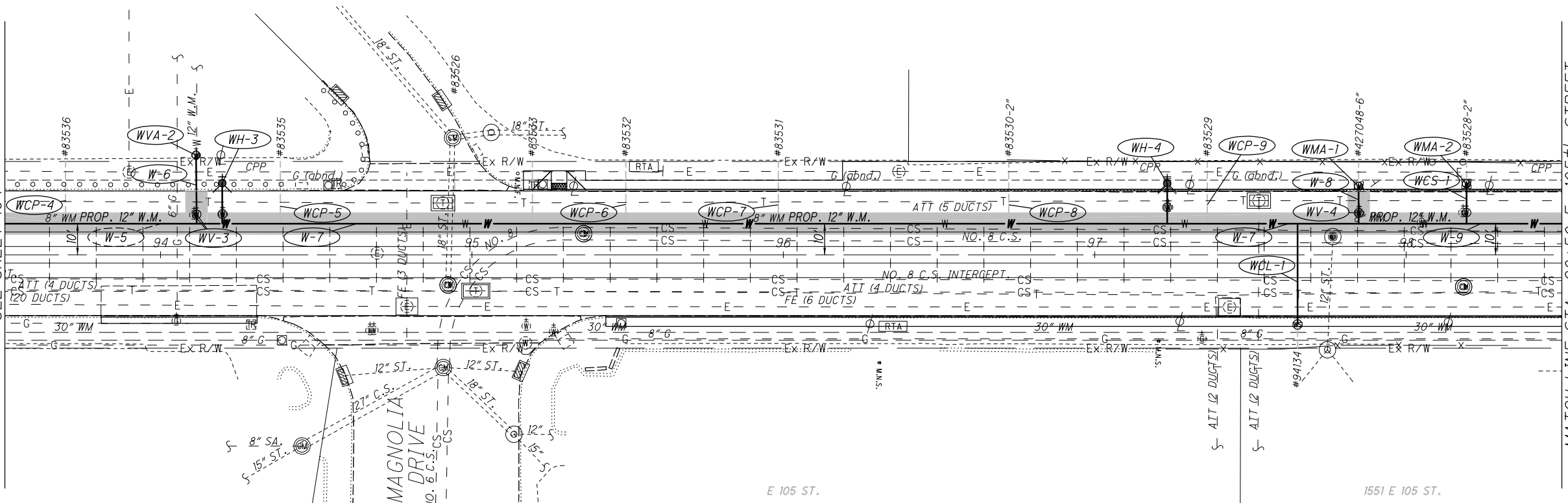
WATER WORK PLAN AND PROFILE BEGIN TO STA. 93+50

EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B. PID NO. 154 243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19

MATCH LINE STA. 93+50 E. 105th STREET
 SEE SHEET 154



- SYMBOL LEGEND**
- Fire Hydrant
 - Water Meter
 - Water Meter Manhole
 - Water Valve
 - Water Serv. Stop Box
- Existing Structure
 ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
 PROP. YARD HYDRANT
 PROP. WATER METER
 PROP. WATER METER MANHOLE
 PROP. WATER VALVE
 PROP. WATER SERV. STOP BOX
 PROP. WATER TEE
 PROP. WATER BEND
 PROP. CHLORINATION PIT
 PROP. WATER MAIN TRENCH

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO. _____

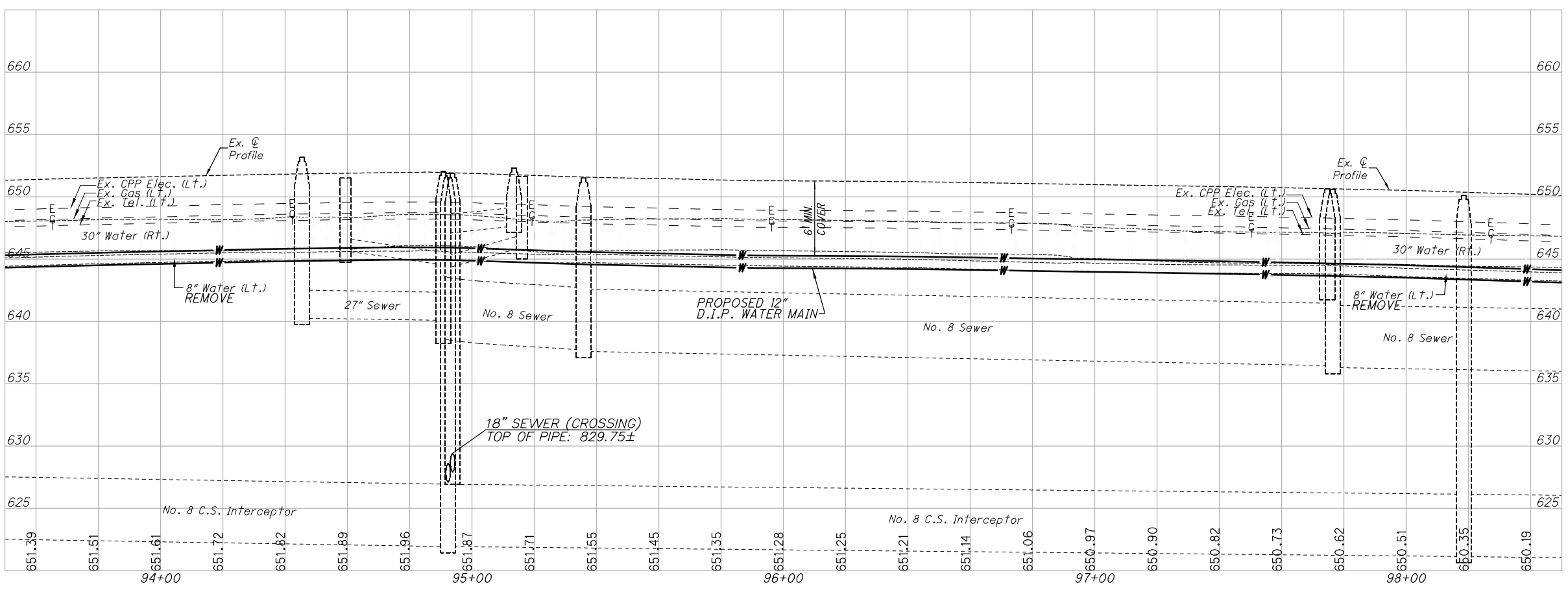
0 20 40
 HORIZONTAL SCALE
 IN FEET

- WATER WORK LEGEND**
- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
 - (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
 - (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
 - (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
 - (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

- NOTES:**
1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. REFER TO PLAN FOR C/L OFFSET DISTANCE.
 2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
 3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

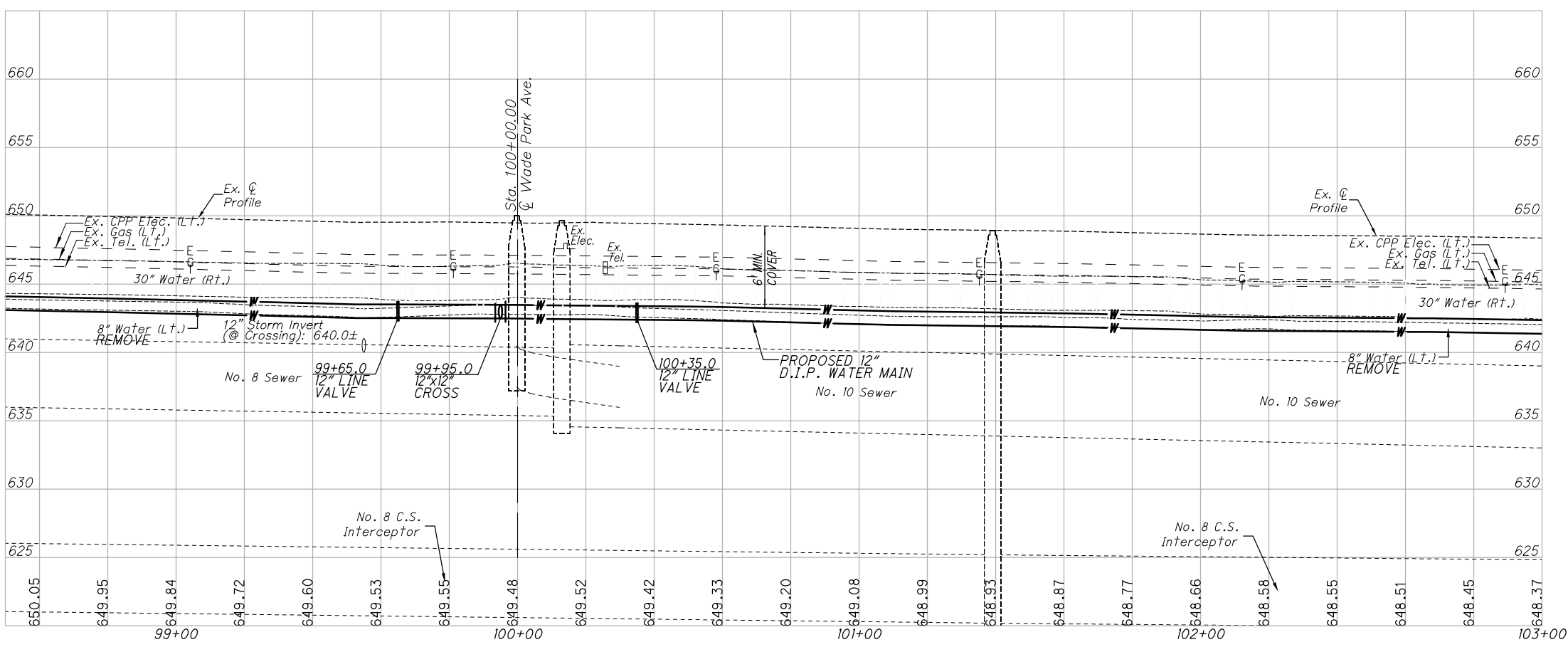
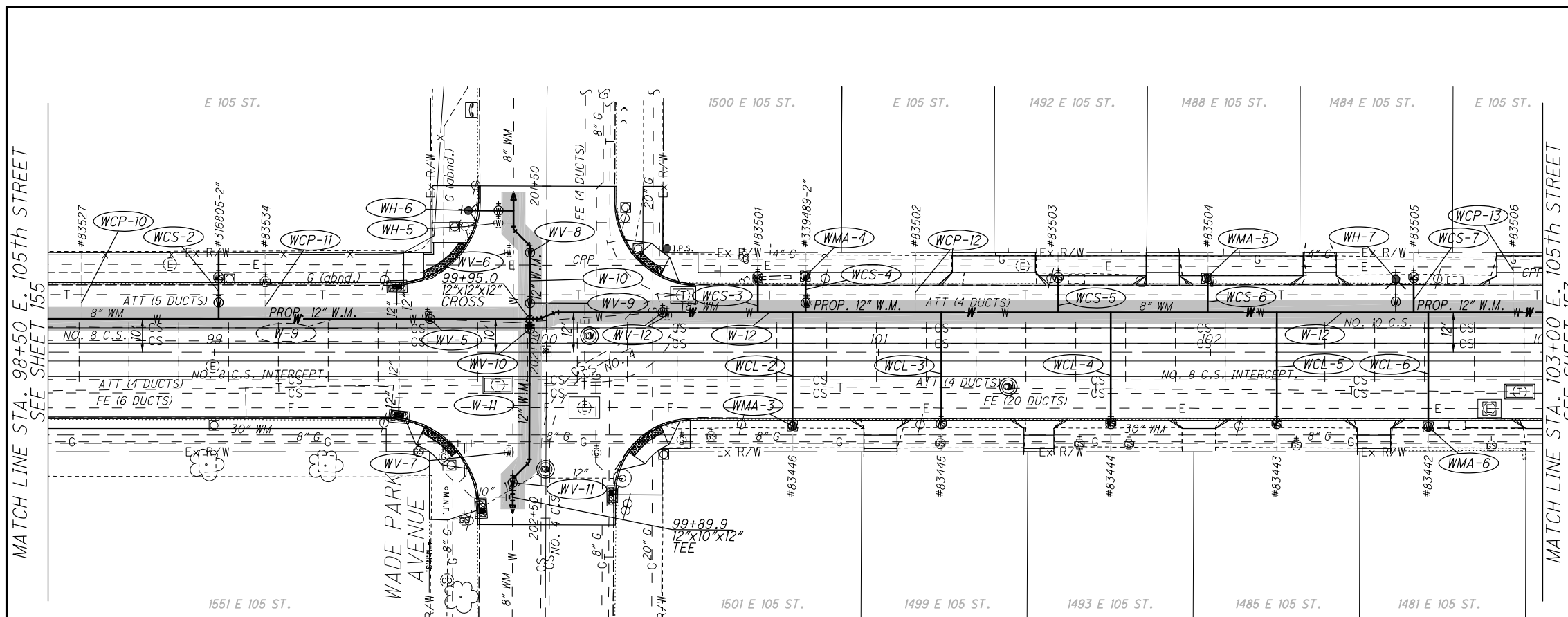
BENCH MARK:
 EAST 105th STREET @
 STA. 96+30.81, 34.65' RT.
 MAG NAIL SET
 ELEVATION: 653.15



**WATER WORK PLAN AND PROFILE
 STA. 93+50 TO STA. 98+50**

EAST 105th STREET

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
- (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
- (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
- (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. REFER TO PLAN FOR C/L OFFSET DISTANCE.
2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 99+64.87, 57.62' RT.
 MAG NAIL SET
 ELEVATION: 650.98

WATER WORK PLAN AND PROFILE STA. 98+50 TO STA. 103+00

EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B.

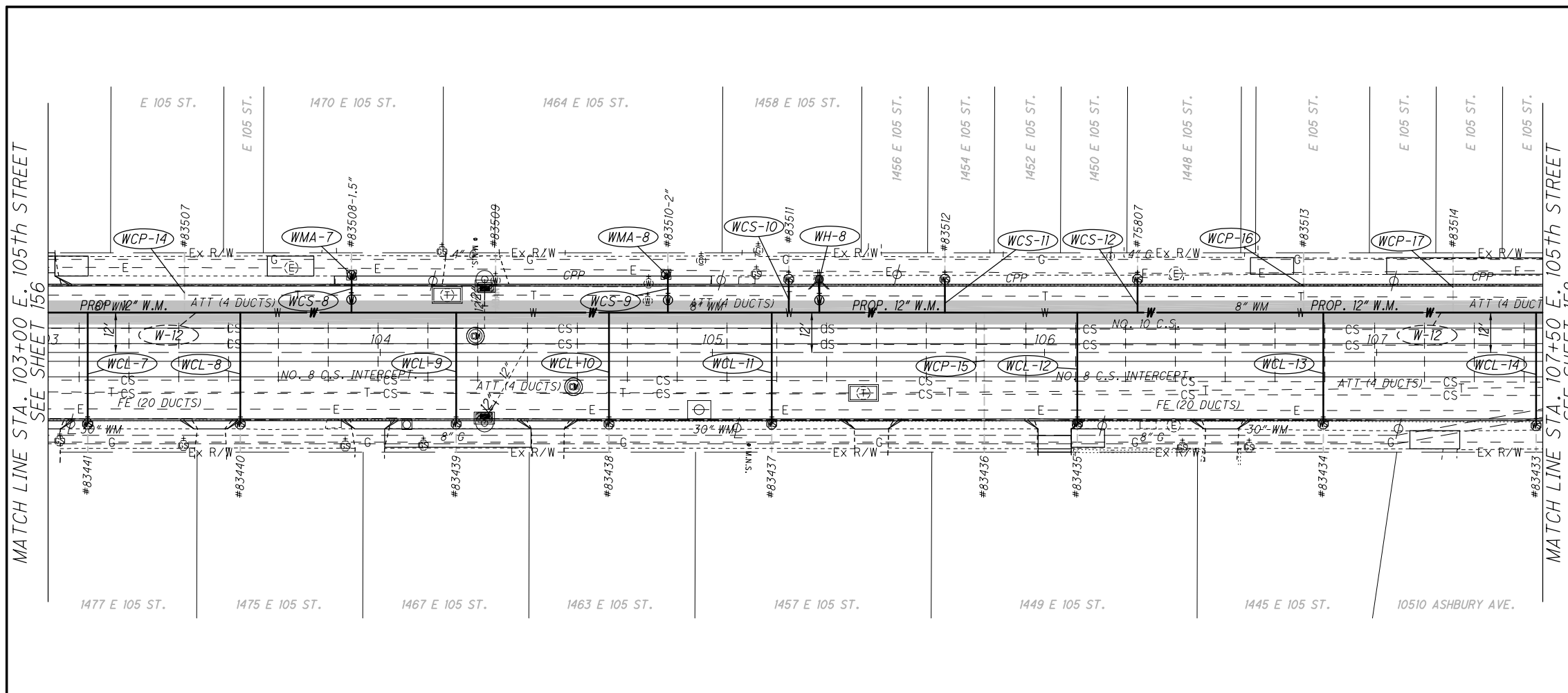
PID NO. _____

20
10
HORIZONTAL SCALE IN FEET

N

156
243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- WMA-00** WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- WVA-00** WATER GATE VALVE BOX ADJUSTED TO GRADE
- WH-00** WATER HYDRANT REMOVED AND/OR INSTALLED
- W-00** WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WV-00** WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WCP-00** PLUG EXISTING WATER SERVICE CONNECTION
- WCS-00** WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WCL-00** WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WL-00** WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

- PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. REFER TO PLAN FOR C/L OFFSET DISTANCE.
- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

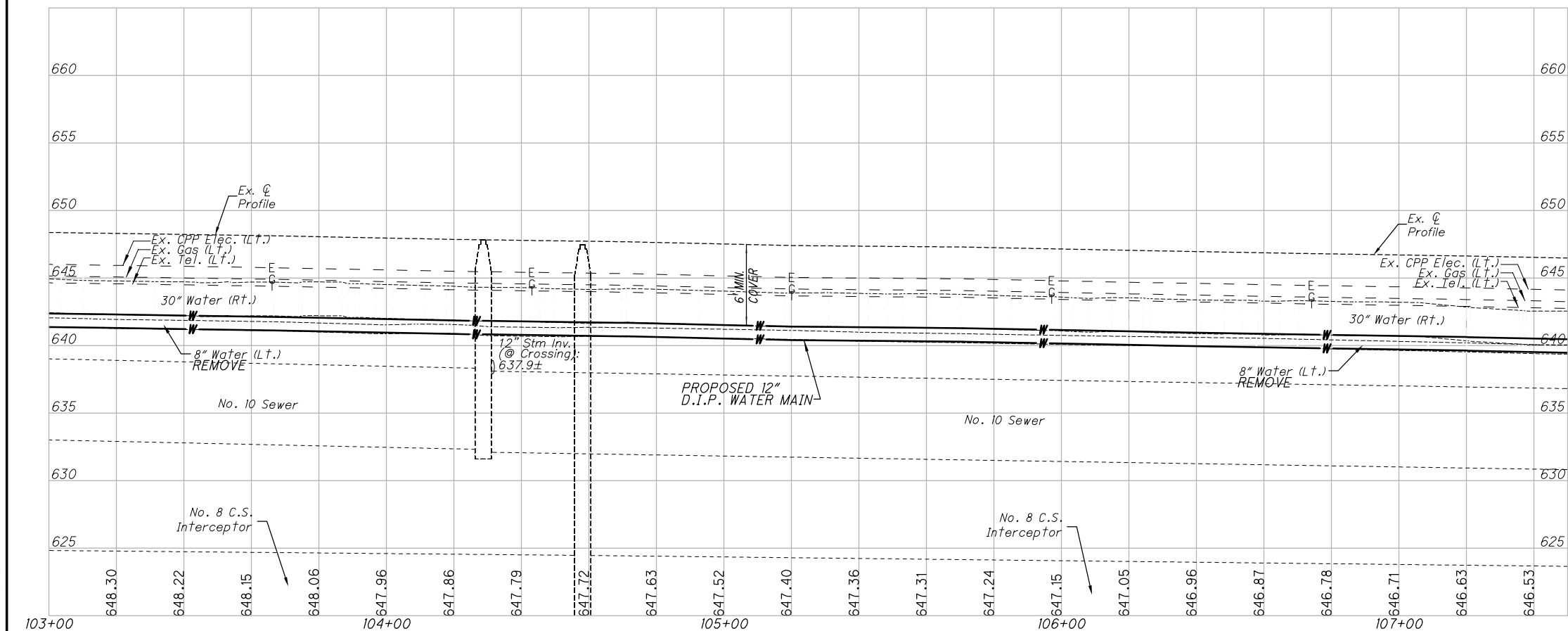
FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @ STA. 105+10.98, 27.77' RT. MAG NAIL SET
 ELEVATION: 647.12

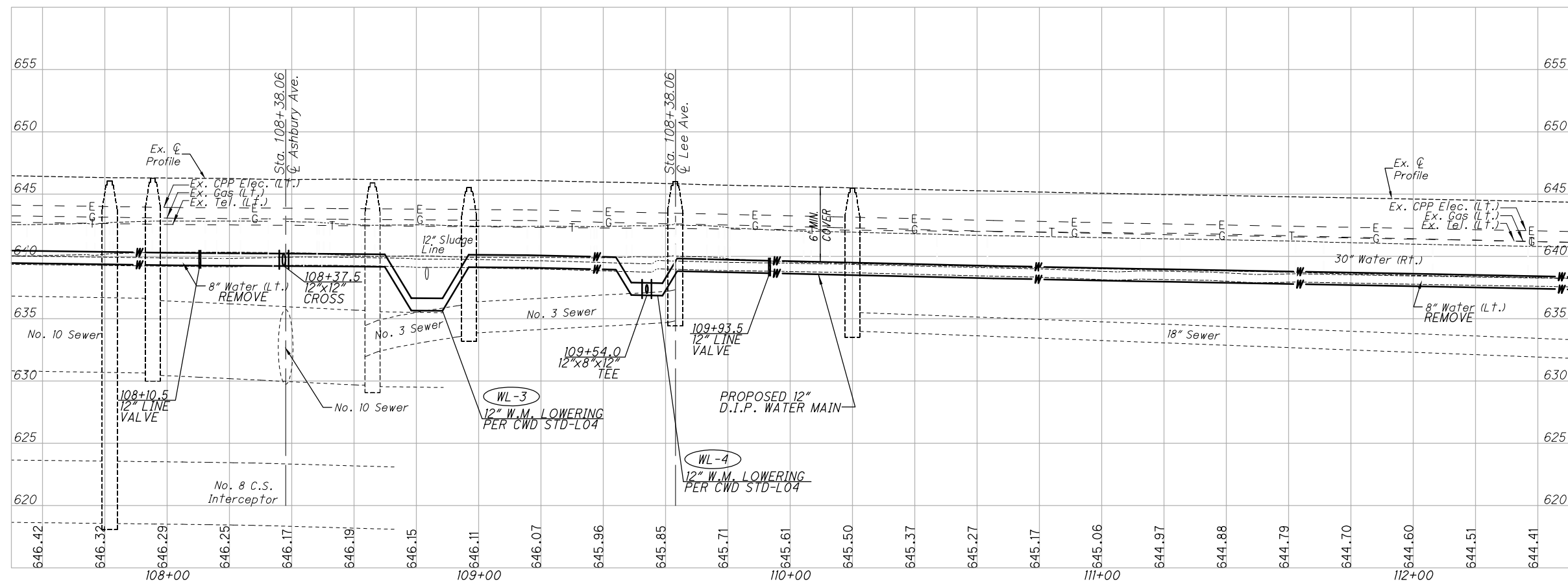
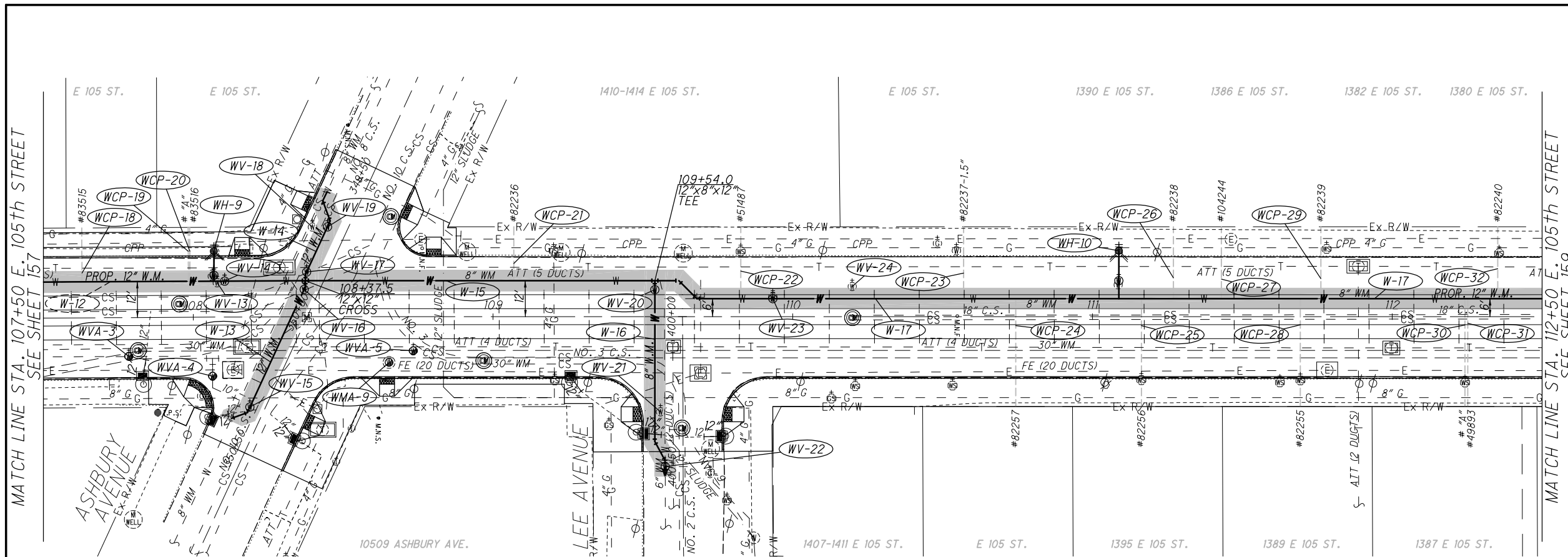
WATER WORK PLAN AND PROFILE STA. 103+00 TO STA. 107+50

EAST 105th STREET

157
243



DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
- (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
- (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
- (WSC-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. REFER TO PLAN FOR C/L OFFSET DISTANCE.
2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.
4. THE REPAIR OF THE WATERMAIN TRENCH OUTSIDE OF THE ASPHALT PAVING LIMITS IS INCIDENTAL OF THE WATERLINE CONSTRUCTION. SEE SHEET 12 FOR TRENCH REPAIR DETAIL.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:

EAST 105th STREET @ STA. 108+61.82, 33.79' RT. MAG NAIL SET
 ELEVATION: 646.38

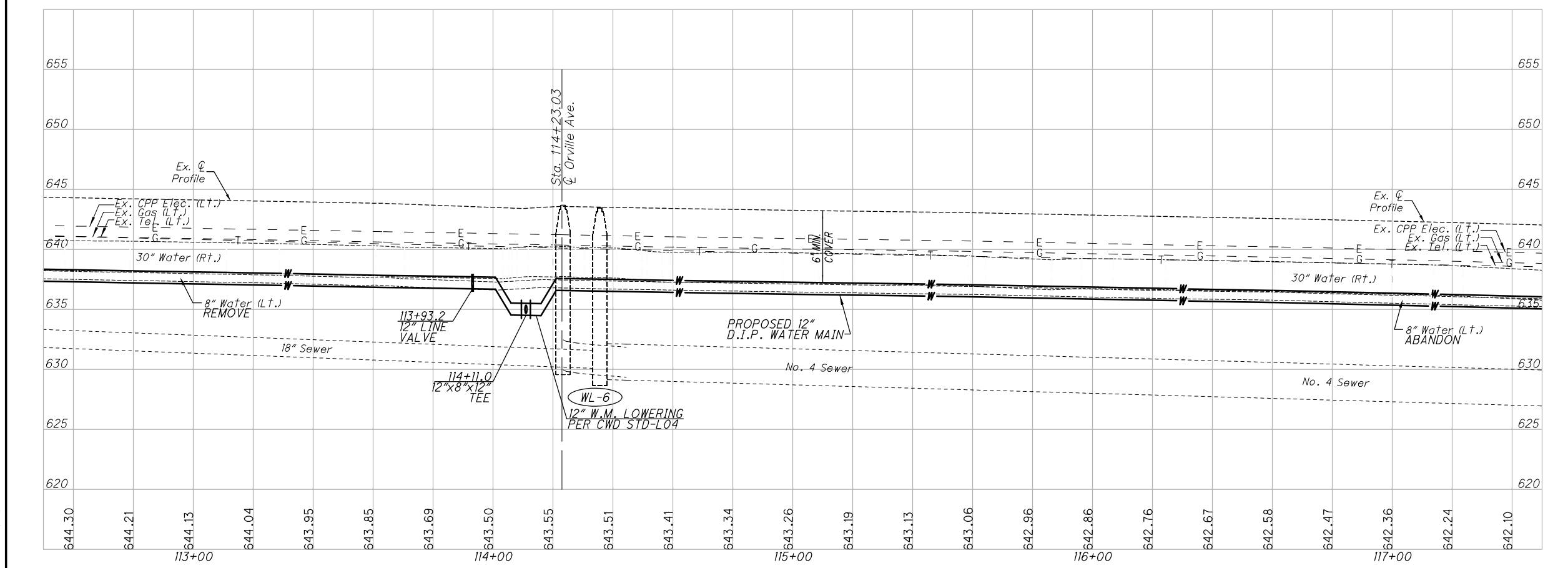
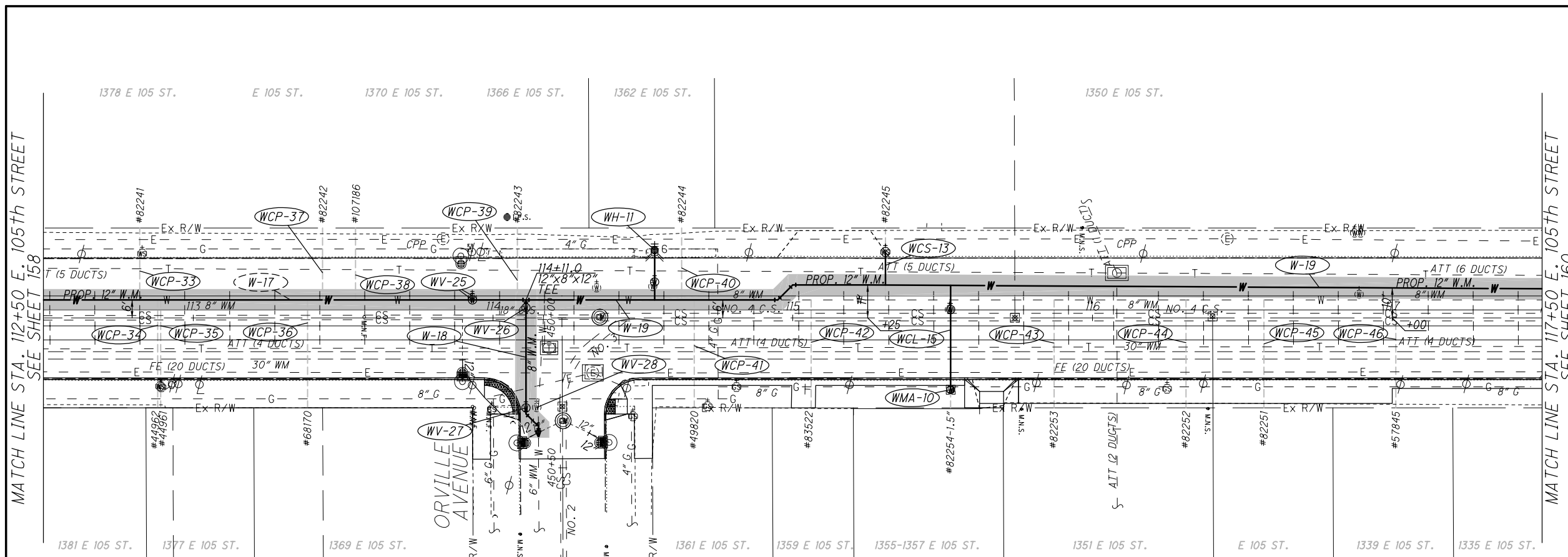
WATER WORK PLAN AND PROFILE STA. 107+50 TO STA. 112+50

EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B. PID NO. _____

SCALE: 1" = 40' HORIZONTAL SCALE IN FEET

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- WMA-00 WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- WVA-00 WATER GATE VALVE BOX ADJUSTED TO GRADE
- WH-00 WATER HYDRANT REMOVED AND/OR INSTALLED
- W-00 WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WV-00 WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WCP-00 PLUG EXISTING WATER SERVICE CONNECTION
- WCS-00 WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WCL-00 WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WL-00 WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 89+60 TO STA. 114+95. PROPOSED WATERLINE TO BE PLACED IN NEW LOCATION STA. 114+95 TO STA. 120+60. REFER TO PLAN FOR C/L OFFSET DISTANCE.
2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

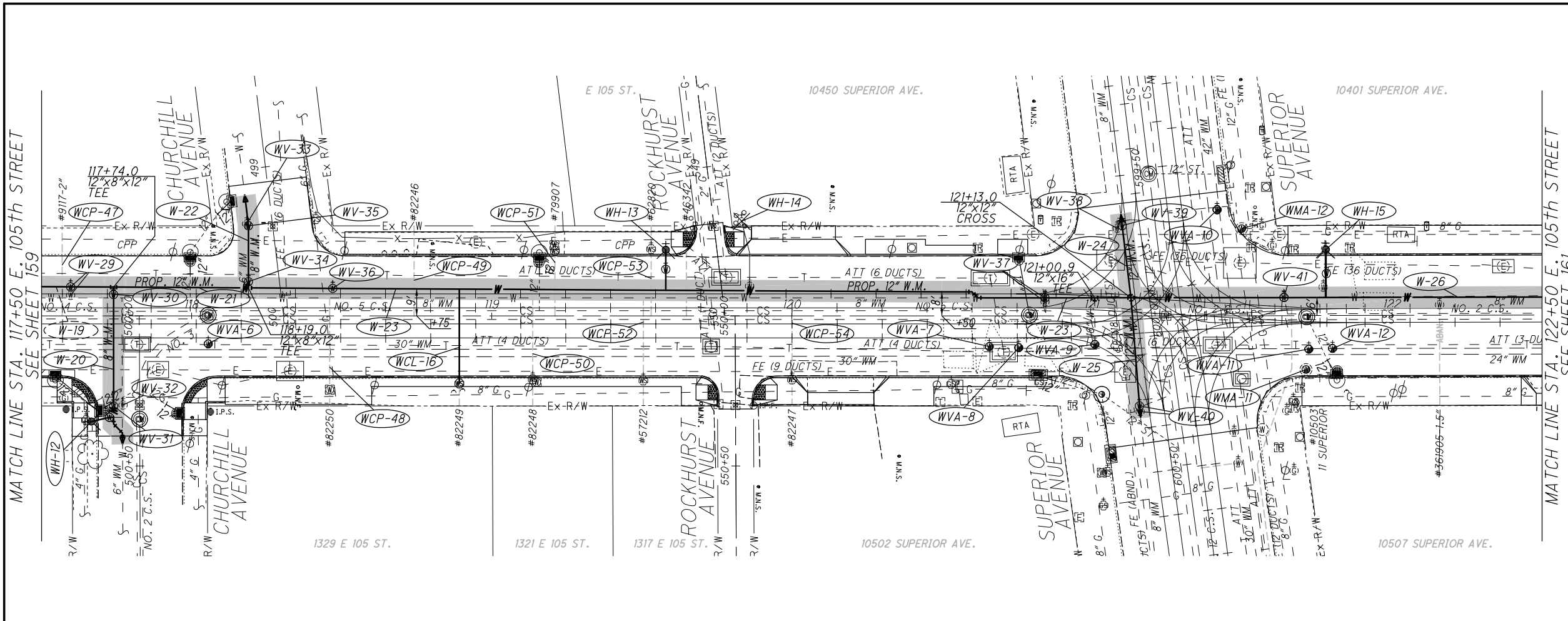
BENCH MARK:
 EAST 105th STREET @
 STA. 115+76.36, 30.42' RT.
 MAG NAIL SET
 ELEVATION: 643.89

WATER WORK PLAN AND PROFILE STA. 112+50 TO STA. 117+50

EAST 105th STREET

159
243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/78/19



- SYMBOL LEGEND**
- Fire Hydrant
 - Water Meter
 - Water Meter Manhole
 - Water Valve
 - Water Serv. Stop Box
 - Existing Structure
 - ADJUSTED TO GRADE
 - PROP. FIRE HYDRANT
 - PROP. YARD HYDRANT
 - PROP. WATER METER
 - PROP. WATER METER MANHOLE
 - PROP. WATER VALVE
 - PROP. WATER SERV. STOP BOX
 - PROP. WATER TEE
 - PROP. WATER BEND
 - PROP. CHLORINATION PIT
 - PROP. WATER MAIN TRENCH

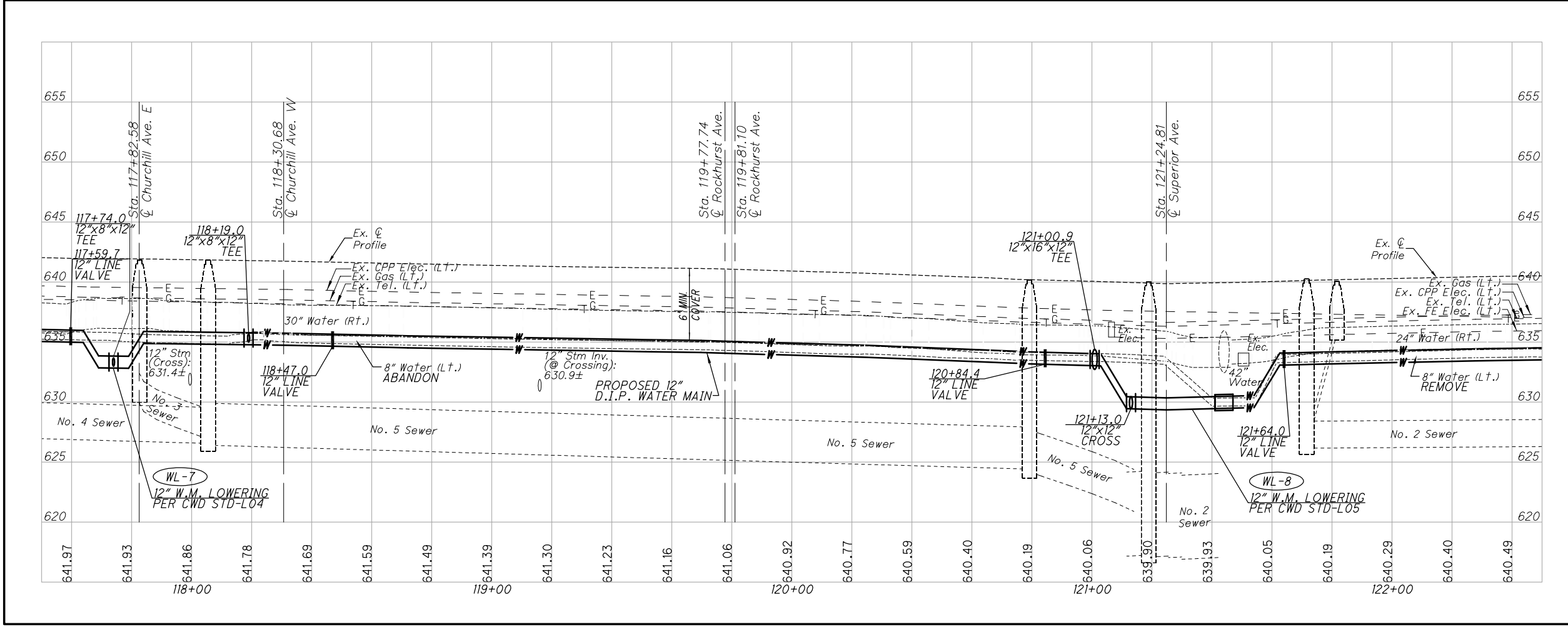
- WATER WORK LEGEND**
- WMA-00 WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
 - WVA-00 WATER GATE VALVE BOX ADJUSTED TO GRADE
 - WH-00 WATER HYDRANT REMOVED AND/OR INSTALLED
 - W-00 WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - WV-00 WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - WCP-00 PLUG EXISTING WATER SERVICE CONNECTION
 - WCS-00 WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - WCL-00 WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - WL-00 WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

- PROPOSED WATERLINE TO BE PLACED IN NEW LOCATION STA. 114+95 TO STA. 120+60. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 120+60 TO STA. 120+85 AND STA. 121+64 TO STA. 138+68. REFER TO PLAN FOR C/L OFFSET DISTANCE.
- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @ STA. 120+13.56, 43.06' LT. MAG NAIL SET
 ELEVATION: 640.94



WATER WORK PLAN AND PROFILE STA. 117+50 TO STA. 122+50

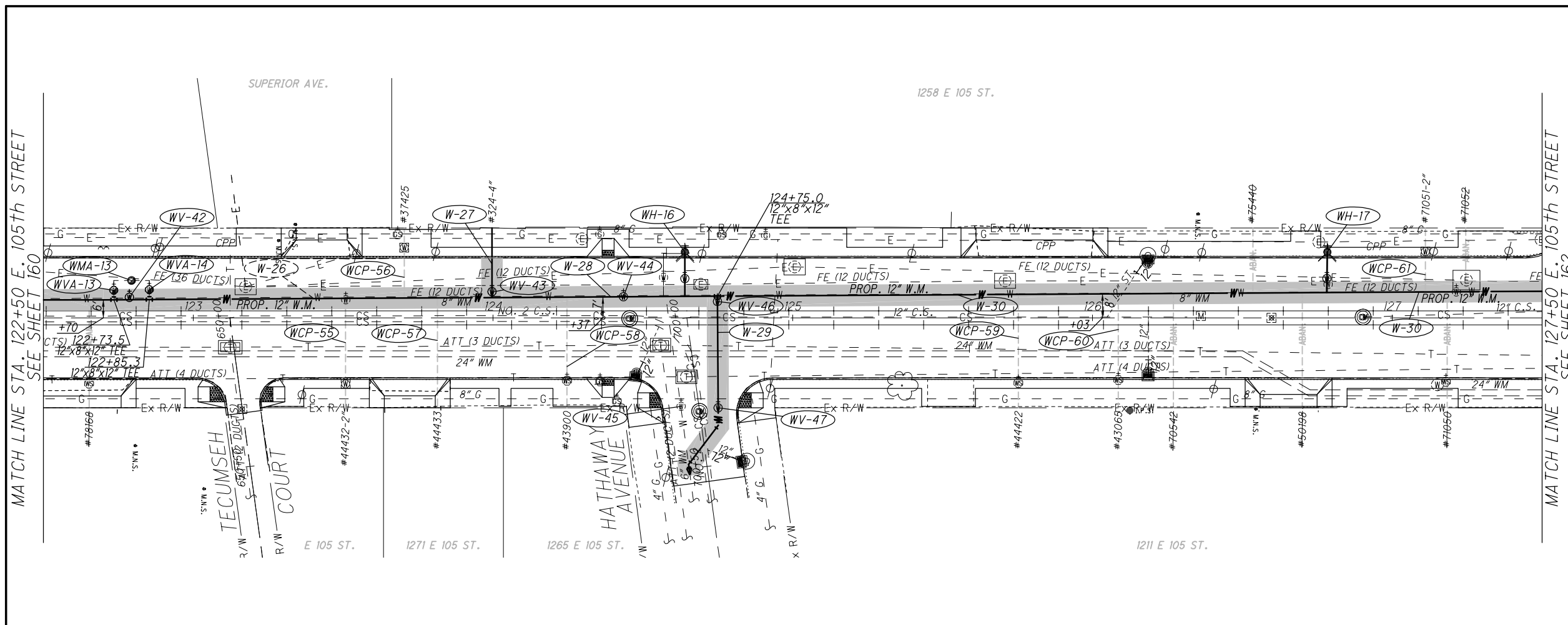
EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B.

PID NO. _____

160
243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

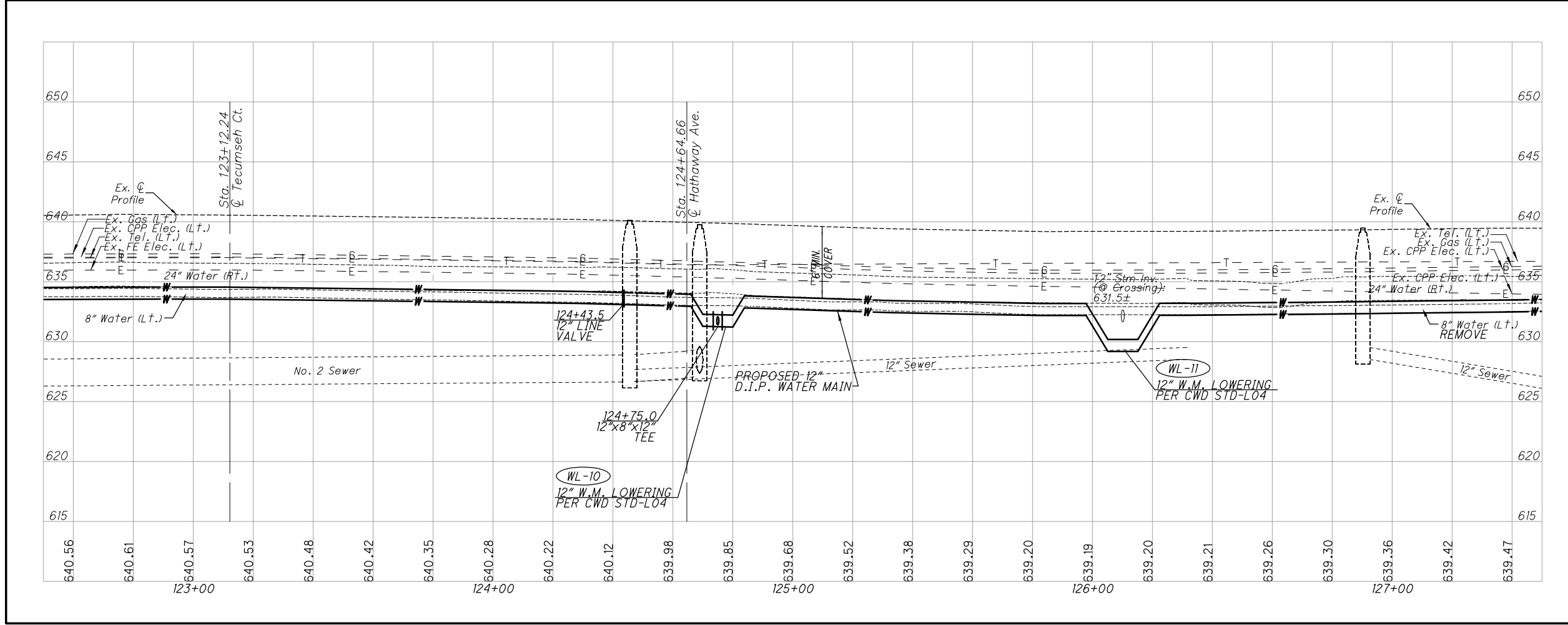
- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
- (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
- (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
- (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

CALCULATED B.A.K. CHECKED D.P.B.

PID NO. _____

0 10 20 HORIZONTAL SCALE IN FEET

161
243



NOTES:

- PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 121+64 TO STA. 138+68. REFER TO PLAN FOR C/L OFFSET DISTANCE.
- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

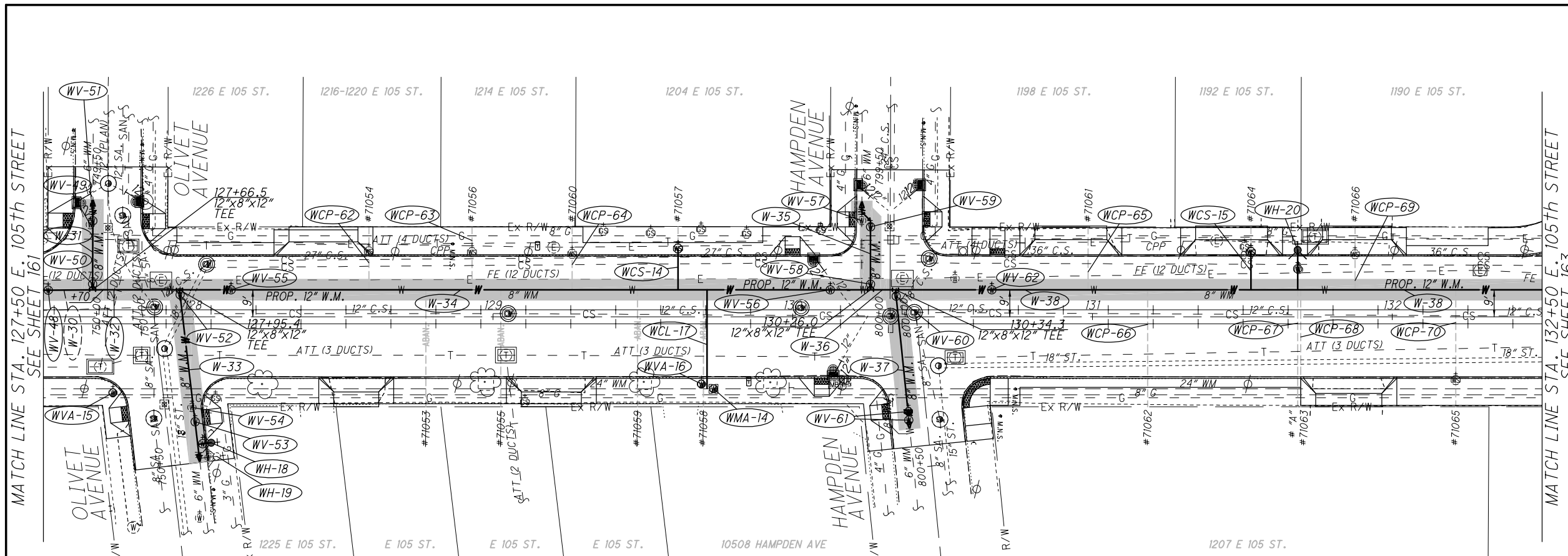
FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @ STA. 126+54.52, 30.42' RT. MAG NAIL SET
 ELEVATION: 639.19

WATER WORK PLAN AND PROFILE STA. 122+50 TO STA. 127+50

EAST 105th STREET

DRAWING NAME: P:\18281 East 105th AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box

Existing Structure
 ADJUSTED TO GRADE

PROP. FIRE HYDRANT
 PROP. YARD HYDRANT
 PROP. WATER METER
 PROP. WATER METER MANHOLE
 PROP. WATER VALVE
 PROP. WATER SERV. STOP BOX
 PROP. WATER TEE
 PROP. WATER BEND
 PROP. CHLORINATION PIT
 PROP. WATER MAIN TRENCH

WATER WORK LEGEND

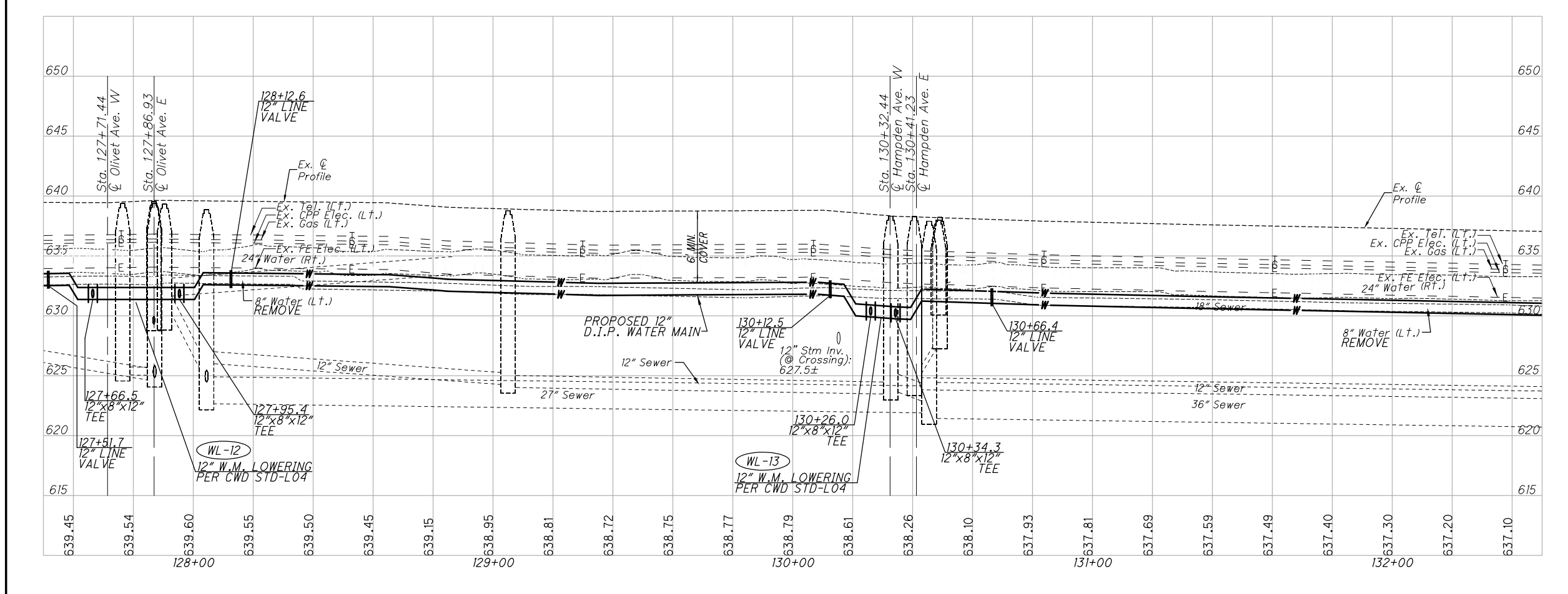
- WMA-00 WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- WVA-00 WATER GATE VALVE BOX ADJUSTED TO GRADE
- WH-00 WATER HYDRANT REMOVED AND/OR INSTALLED
- W-00 WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WV-00 WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WCP-00 PLUG EXISTING WATER SERVICE CONNECTION
- WCS-00 WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WCL-00 WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WL-00 WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

- PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 121+64 TO STA. 138+68. REFER TO PLAN FOR C/L OFFSET DISTANCE.
- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 130+69.24, 33.07' RT.
 MAG NAIL SET
 ELEVATION: 638.65

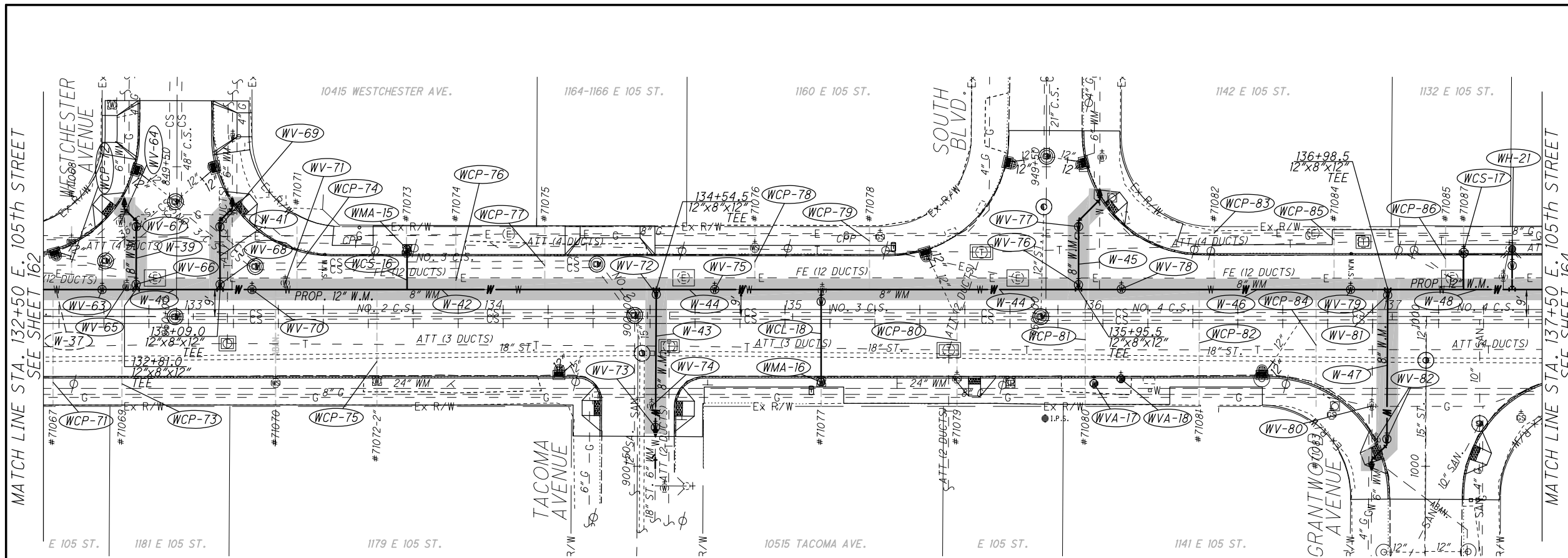


WATER WORK PLAN AND PROFILE STA. 127+50 TO STA. 132+50

EAST 105th STREET

CALCULATED B.A.K. CHECKED D.P.B. PID NO. 162 243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

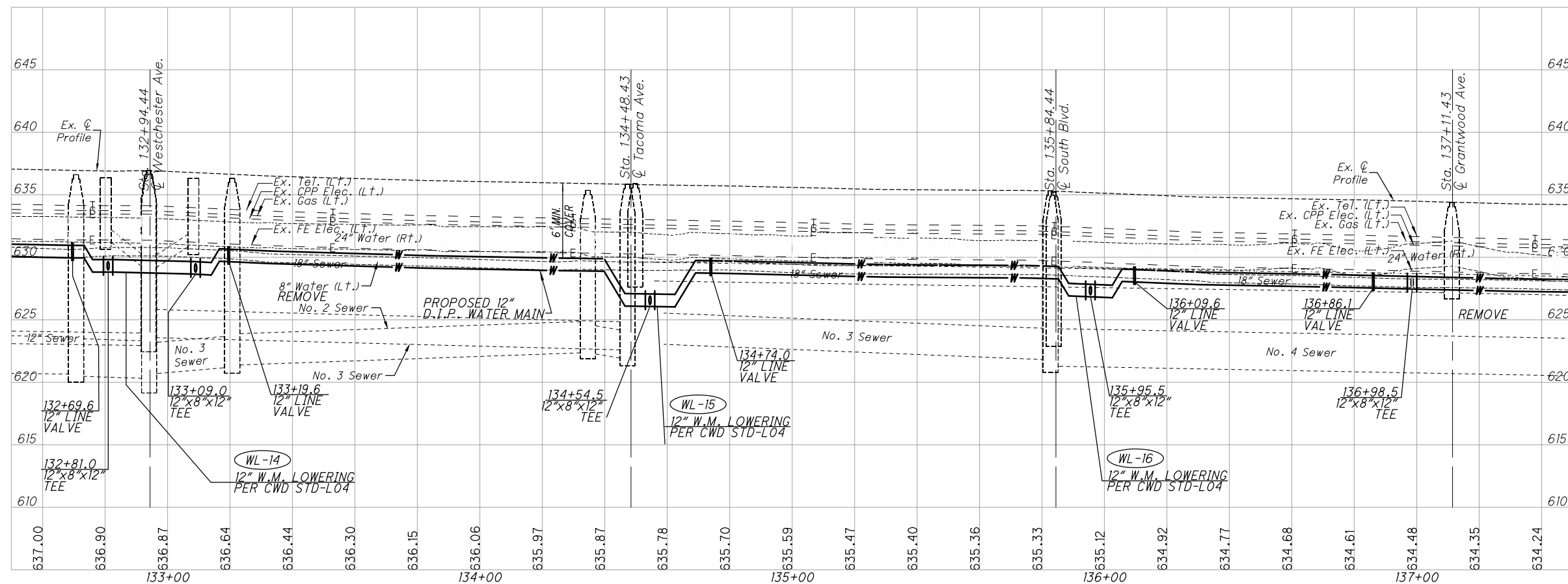
WATER WORK LEGEND

- WMA-00 WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- WVA-00 WATER GATE VALVE BOX ADJUSTED TO GRADE
- WH-00 WATER HYDRANT REMOVED AND/OR INSTALLED
- W-00 WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WV-00 WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- WCP-00 PLUG EXISTING WATER SERVICE CONNECTION
- WCS-00 WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WCL-00 WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- WL-00 WATER MAIN LOWERING (SEE PLAN FOR SIZE)

WATER WORK PLAN AND PROFILE STA. 132+50 TO STA. 137+50

EAST 105th STREET

163
243



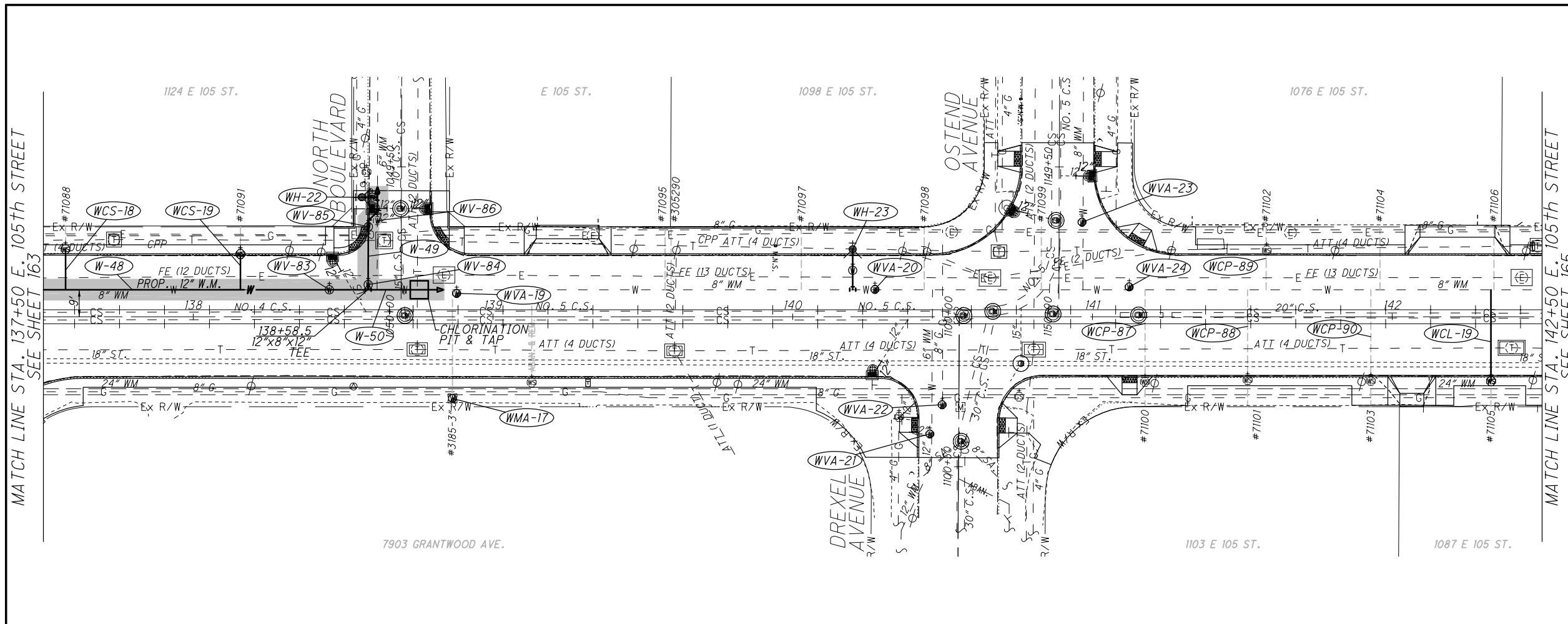
NOTES:

- PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 121+64 TO STA. 138+68. REFER TO PLAN FOR C/L OFFSET DISTANCE.
- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @ STA. 135+84.17, 34.00' RT.
 1/2" IRON PIN SET
 ELEVATION: 634.79

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



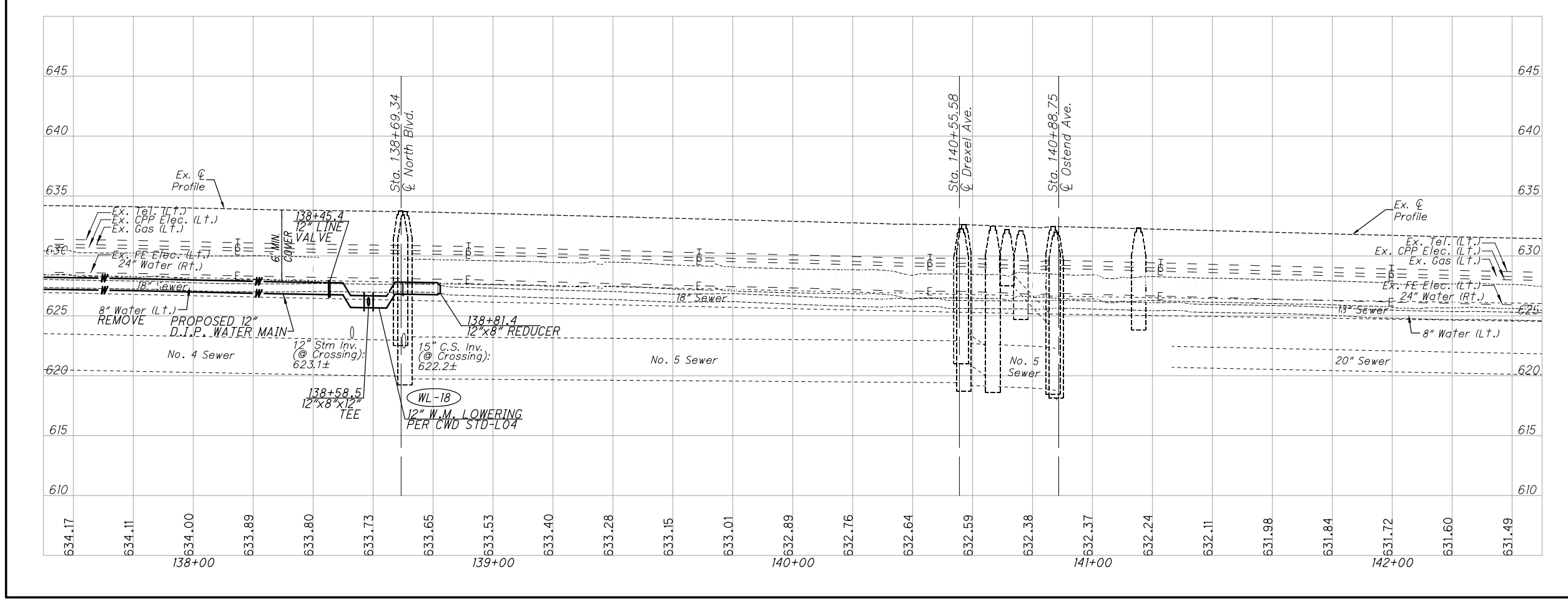
- SYMBOL LEGEND**
- Fire Hydrant
 - Water Meter
 - Water Meter Manhole
 - Water Valve
 - Water Serv. Stop Box
- Existing Structure
 ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
 - PROP. YARD HYDRANT
 - PROP. WATER METER
 - PROP. WATER METER MANHOLE
 - PROP. WATER VALVE
 - PROP. WATER SERV. STOP BOX
 - PROP. WATER TEE
 - PROP. WATER BEND
 - PROP. CHLORINATION PIT
 - PROP. WATER MAIN TRENCH

- WATER WORK LEGEND**
- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
 - (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
 - (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
 - (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
 - (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1\"/>

- NOTES:**
1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 121+64 TO STA. 138+68. REFER TO PLAN FOR C/L OFFSET DISTANCE.
 2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24\"/>

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 139+94.23, 23.65' LT.
 MAG NAIL SET
 ELEVATION: 632.69

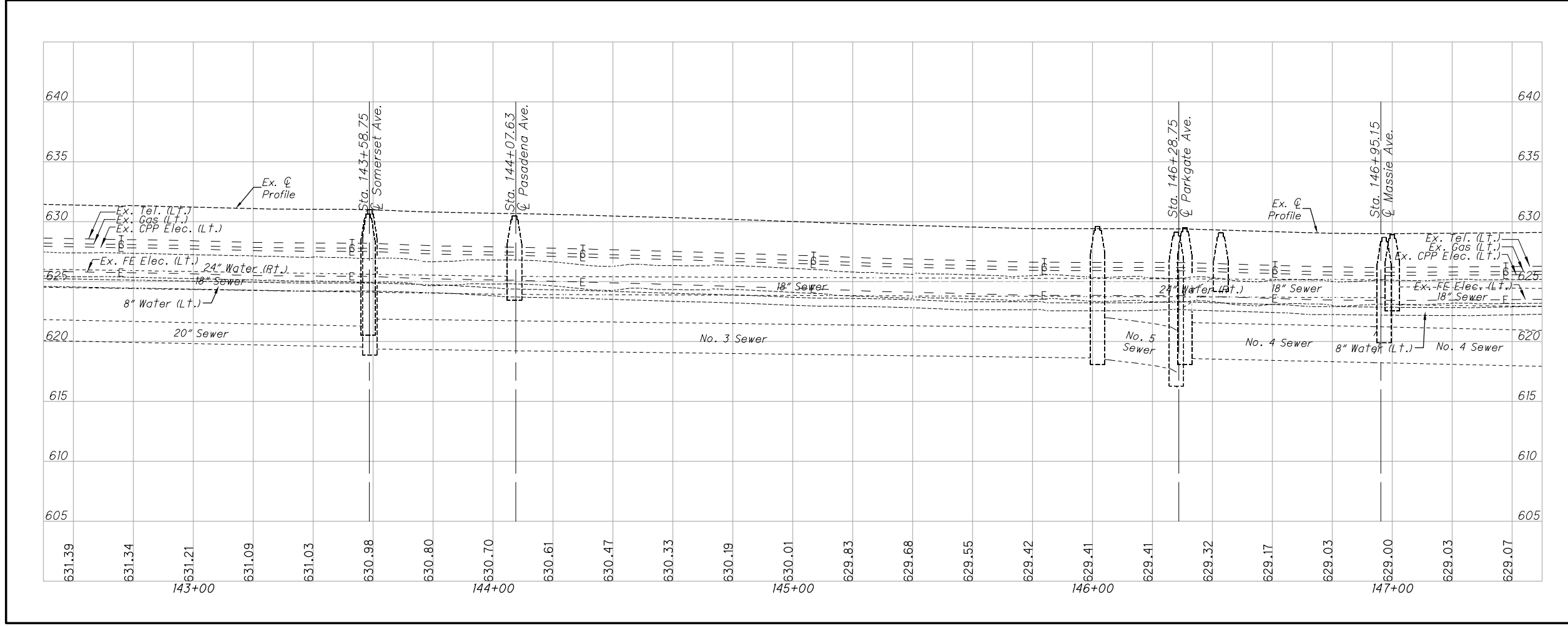
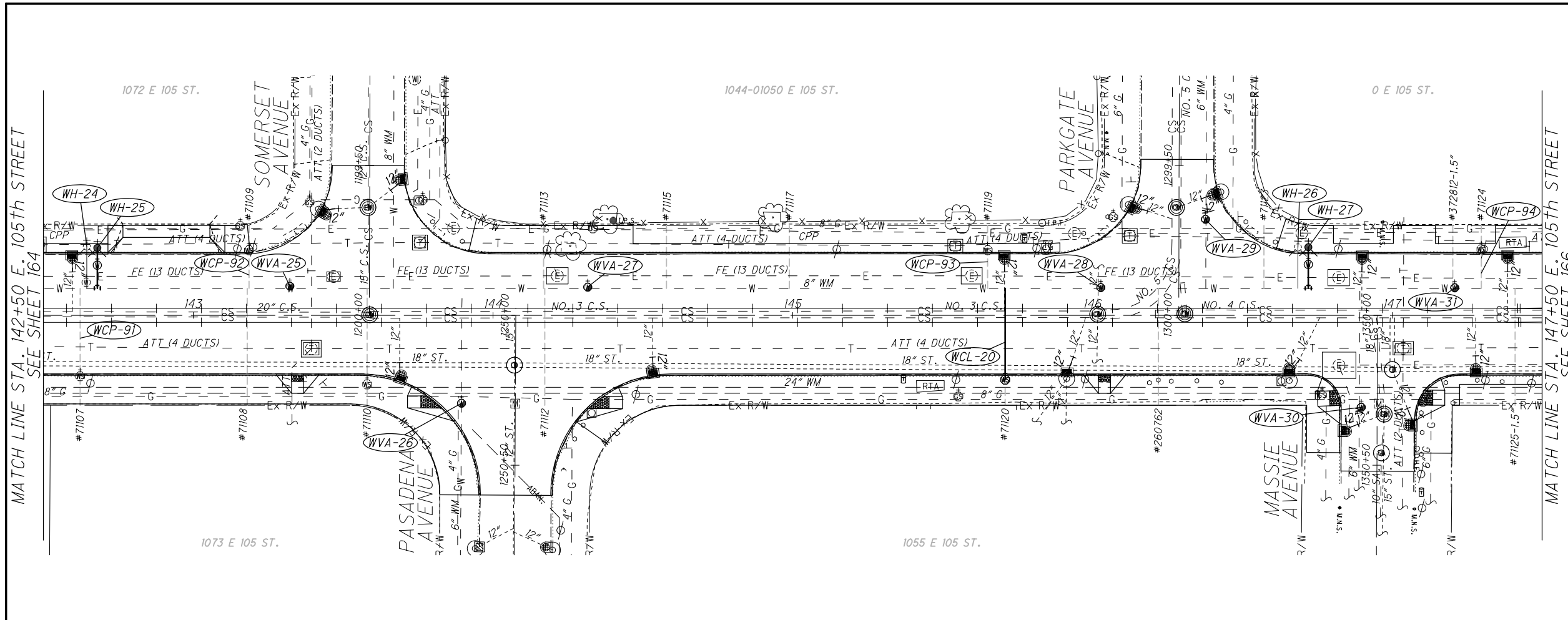


**WATER WORK PLAN AND PROFILE
 STA. 137+50 TO STA. 142+50**

EAST 105th STREET

CALCULATED: B.A.K. CHECKED: D.P.B. PID NO. 164 243

DRAWING NAME: P:\18281 East 105th\AutoCAD Drawing Files\18281 waterwork plan and profile.dwg
 PLOT DATE: 5/8/19



- SYMBOL LEGEND**
- Fire Hydrant
 - Water Meter
 - Water Meter Manhole
 - Water Valve
 - Water Serv. Stop Box
 - Existing Structure
 - ADJUSTED TO GRADE
 - PROP. FIRE HYDRANT
 - PROP. YARD HYDRANT
 - PROP. WATER METER
 - PROP. WATER METER MANHOLE
 - PROP. WATER VALVE
 - PROP. WATER SERV. STOP BOX
 - PROP. WATER TEE
 - PROP. WATER BEND
 - PROP. CHLORINATION PIT
 - PROP. WATER MAIN TRENCH

- WATER WORK LEGEND**
- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
 - (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
 - (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
 - (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
 - (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
 - (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
 - (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

1. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
2. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

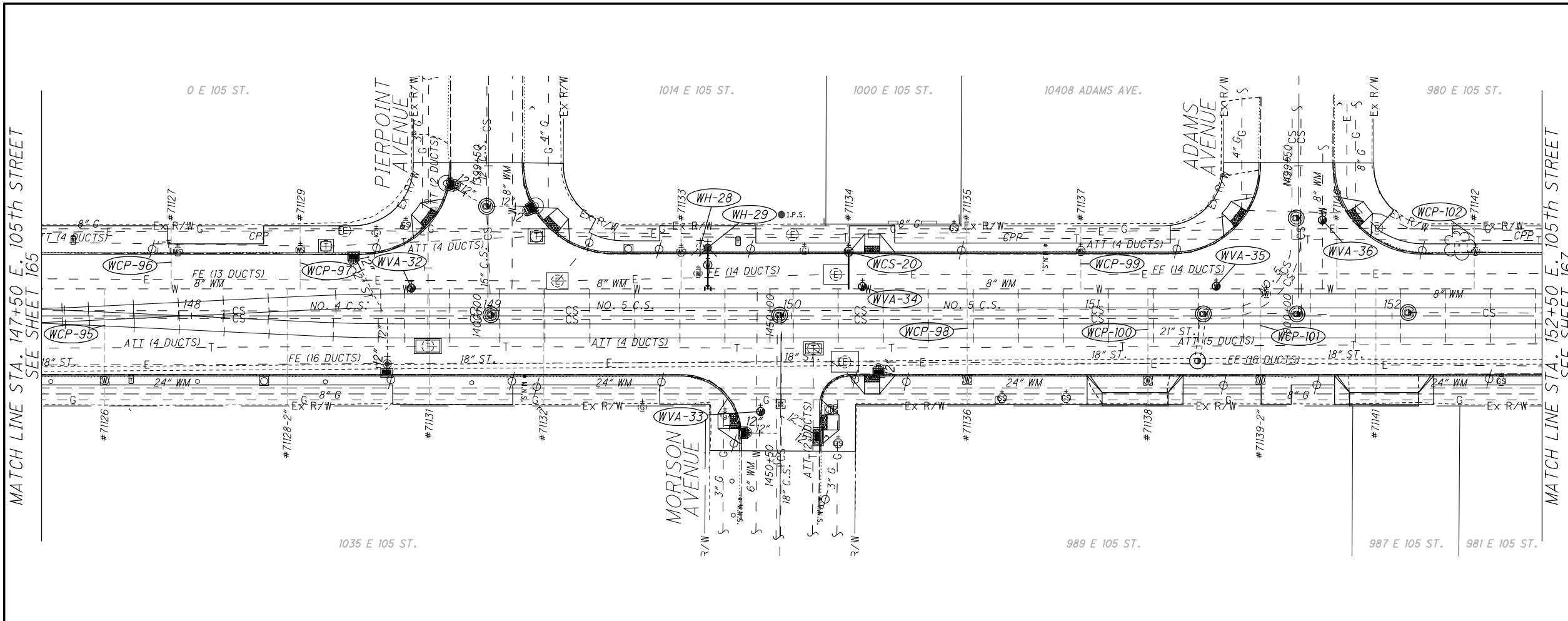
FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 144+40.10, 31.62' LT.
 1/2" IRON PIN SET
 ELEVATION: 630.50

**WATER WORK PLAN AND PROFILE
 STA. 142+50 TO STA. 147+50**

EAST 105th STREET

165
243



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box

Existing Structure
 ADJUSTED TO GRADE

PROP. FIRE HYDRANT
 PROP. YARD HYDRANT
 PROP. WATER METER
 PROP. WATER METER MANHOLE
 PROP. WATER VALVE
 PROP. WATER SERV. STOP BOX
 PROP. WATER TEE
 PROP. WATER BEND
 PROP. CHLORINATION PIT
 PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
- (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
- (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
- (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 149+96.53, 33.73' LT.
 1/2" IRON PIN SET
 ELEVATION: 629.45

**WATER WORK PLAN AND PROFILE
 STA. 147+50 TO STA. 152+50**

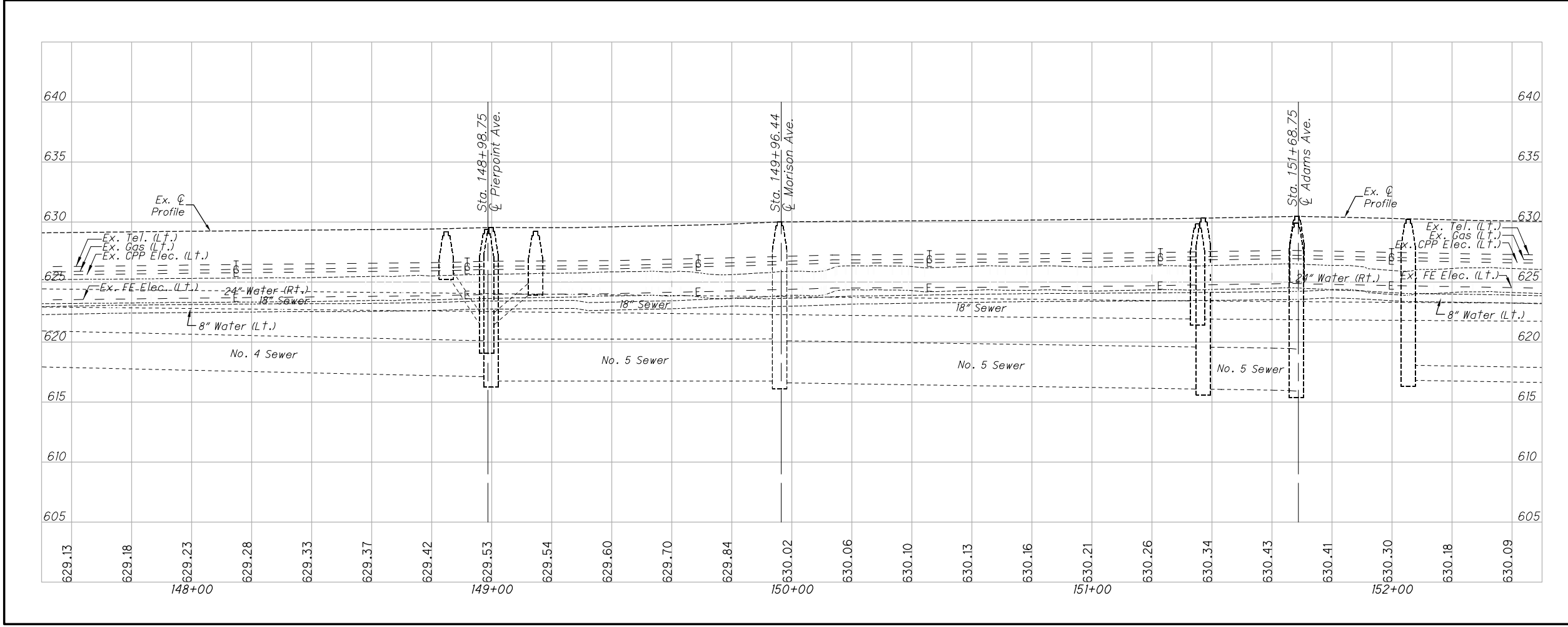
EAST 105th STREET

CALCULATED
 B.A.K.
 CHECKED
 D.P.B.

PID NO. _____

0 10 20
 HORIZONTAL SCALE
 IN FEET

166
 243

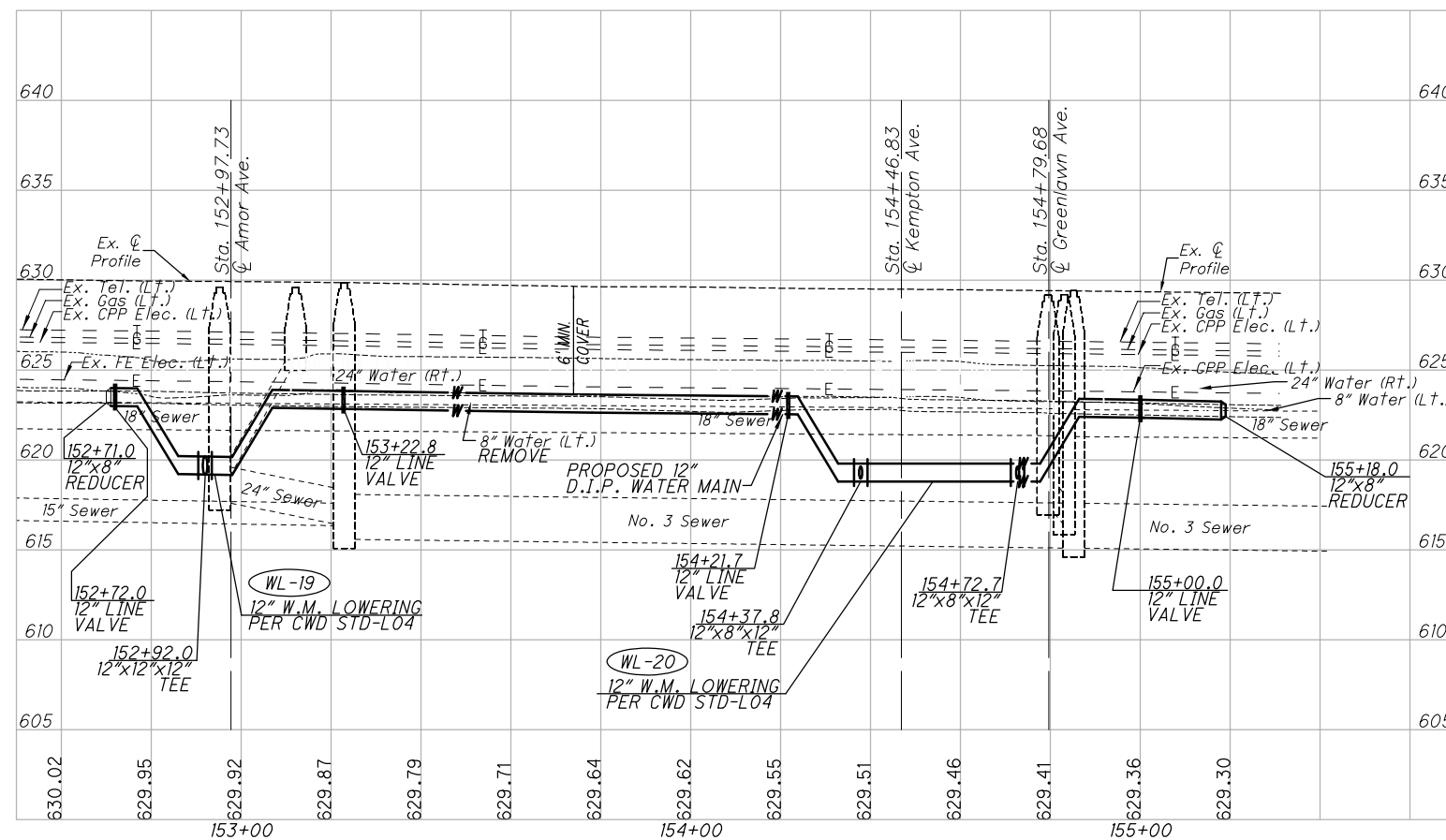
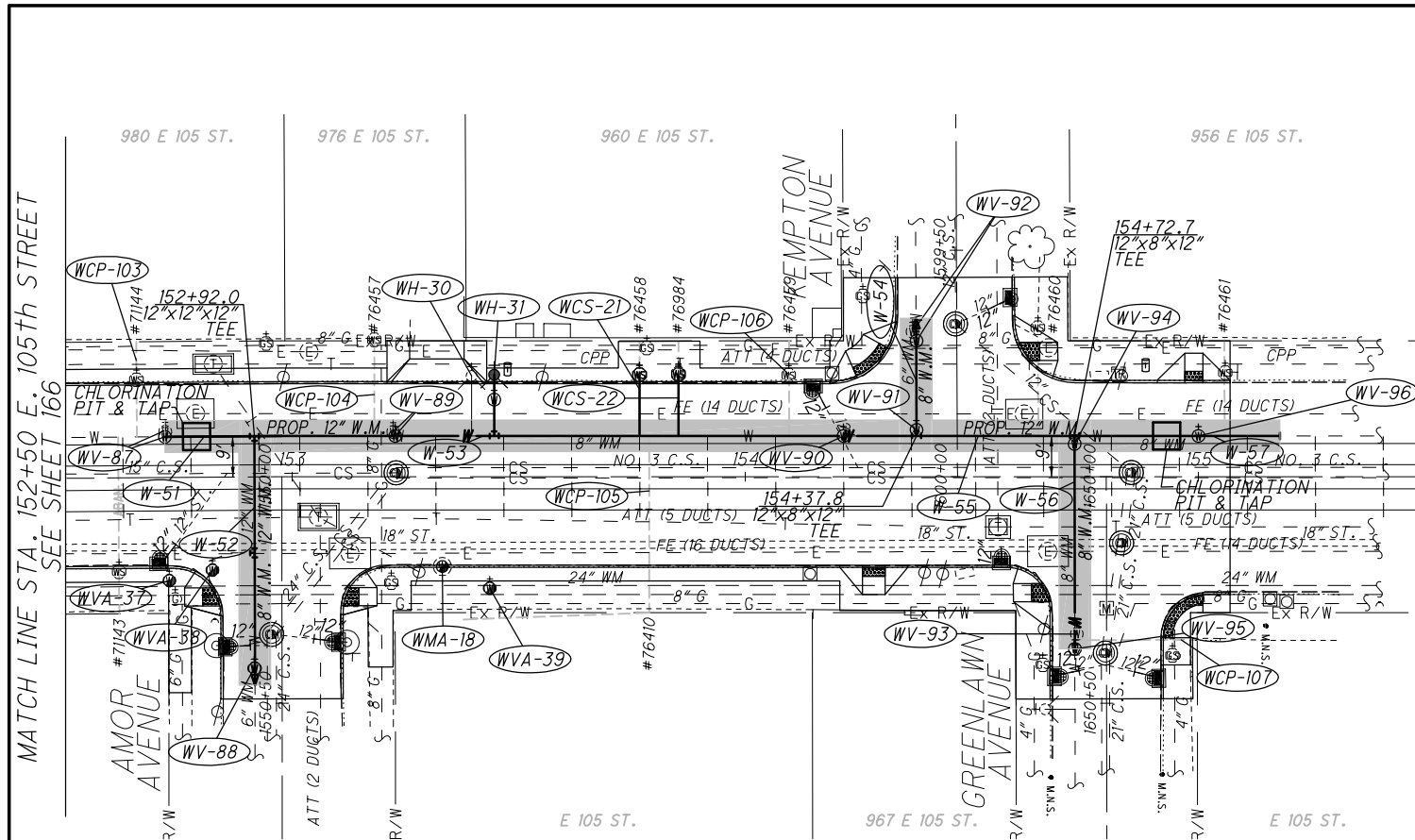


NOTES:

- CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
- GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.

FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:
 EAST 105th STREET @
 STA. 149+96.53, 33.73' LT.
 1/2" IRON PIN SET
 ELEVATION: 629.45



SYMBOL LEGEND

- Fire Hydrant
- Water Meter
- Water Meter Manhole
- Water Valve
- Water Serv. Stop Box
- Existing Structure
- ADJUSTED TO GRADE
- PROP. FIRE HYDRANT
- PROP. YARD HYDRANT
- PROP. WATER METER
- PROP. WATER METER MANHOLE
- PROP. WATER VALVE
- PROP. WATER SERV. STOP BOX
- PROP. WATER TEE
- PROP. WATER BEND
- PROP. CHLORINATION PIT
- PROP. WATER MAIN TRENCH

WATER WORK LEGEND

- (WMA-00) WATER METER VAULT/MANHOLE ADJUSTED TO GRADE
- (WVA-00) WATER GATE VALVE BOX ADJUSTED TO GRADE
- (WH-00) WATER HYDRANT REMOVED AND/OR INSTALLED
- (W-00) WATER MAIN REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WV-00) WATER GATE VALVE REMOVED AND/OR INSTALLED (SEE PLAN FOR SIZE)
- (WCP-00) PLUG EXISTING WATER SERVICE CONNECTION
- (WCS-00) WATER SERVICE CONNECTION, SHORT SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WCL-00) WATER SERVICE CONNECTION, LONG SIDE COMPLETE (1" DIA. UNLESS NOTED)
- (WL-00) WATER MAIN LOWERING (SEE PLAN FOR SIZE)

NOTES:

1. PROPOSED WATERLINE TO BE PLACED IN SAME LOCATION AS EXISTING WATERLINE STA. 152+72 TO STA. 155+00. REFER TO PLAN FOR C/L OFFSET DISTANCE.
 2. CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT OR MATERIALS DIRECTLY OVER EXISTING WATER MAINS 24" DIA. OR HIGHER.
 3. GAS AND STORM/SANITARY CONNECTIONS ARE NOT SHOWN IN PLAN OR PROFILE. WATER CONNECTIONS ARE NOT SHOWN IN PROFILE. EXACT DEPTHS OF SAME CANNOT BE DETERMINED FROM PLANS PROVIDED. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE PRIOR TO CONSTRUCTION. ALL UNDERGROUND INFORMATION SHOWN WAS TAKEN FROM PLANS PROVIDED BY THEIR RESPECTIVE UTILITY COMPANIES.
 4. THE REPAIR OF THE WATERMAIN TRENCH OUTSIDE OF THE ASPHALT PAVING LIMITS IS INCIDENTAL OF THE WATERLINE CONSTRUCTION. SEE SHEET 12 FOR TRENCH REPAIR DETAIL.
- FOR WATER WORK QUANTITIES SEE SHEETS 136-153.

BENCH MARK:

EAST 105th STREET @
 STA. 155+14.86, 32.87' RT.
 MAG NAIL SET
 ELEVATION: 629.25

WATER WORK PLAN AND PROFILE STA. 152+50 TO END

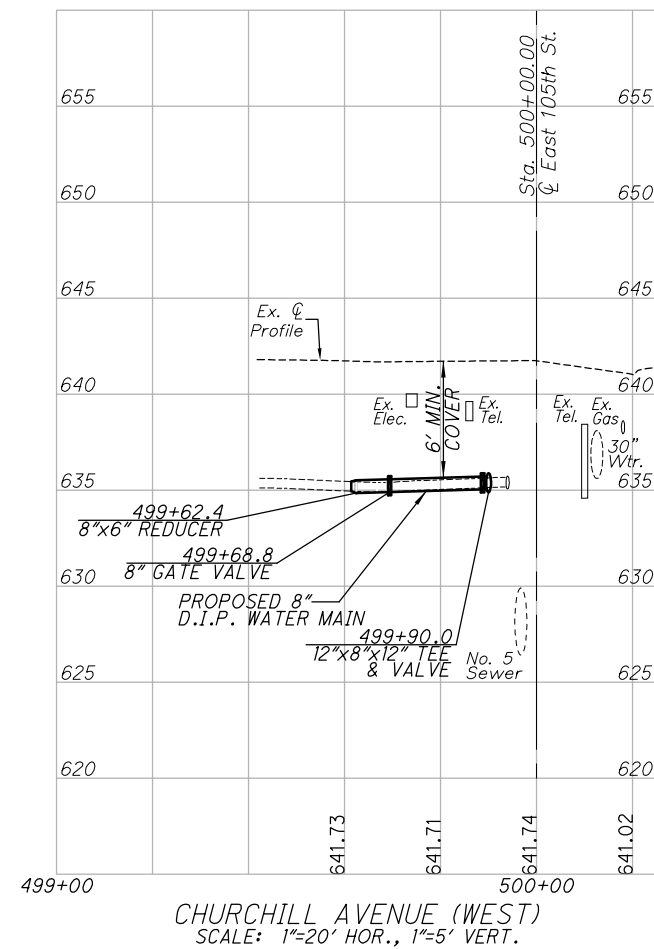
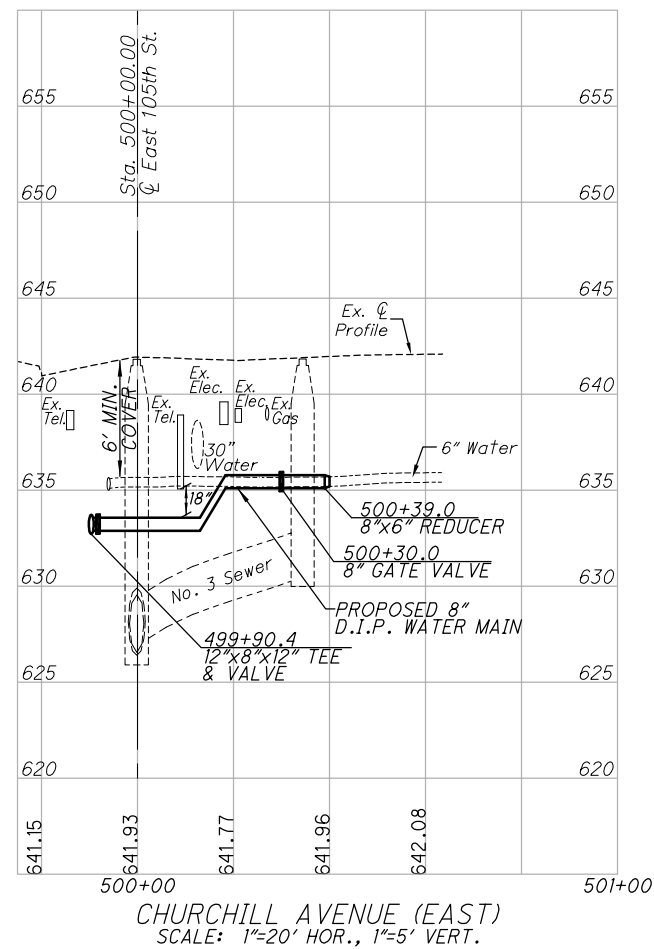
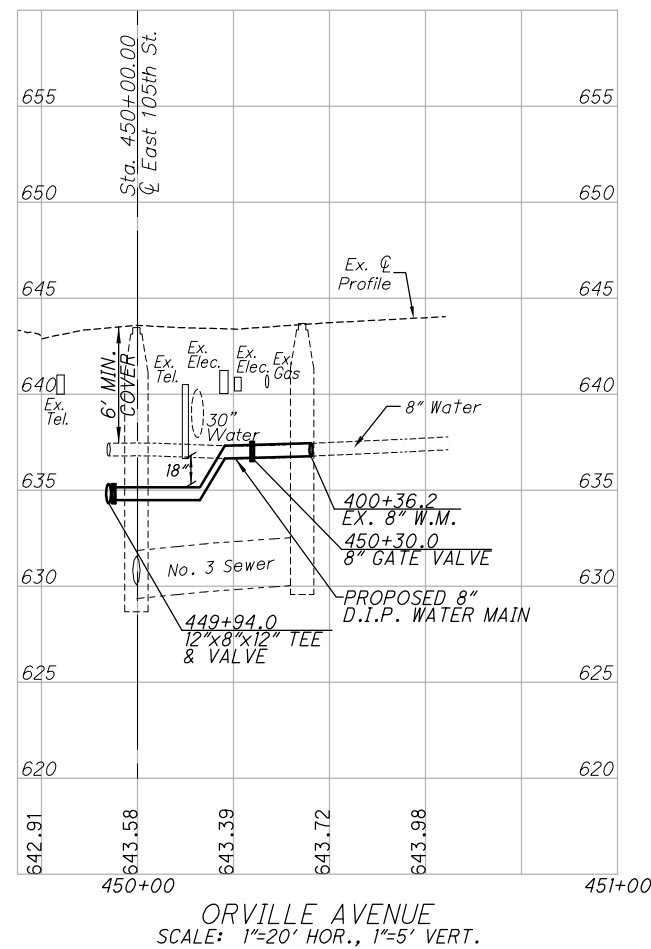
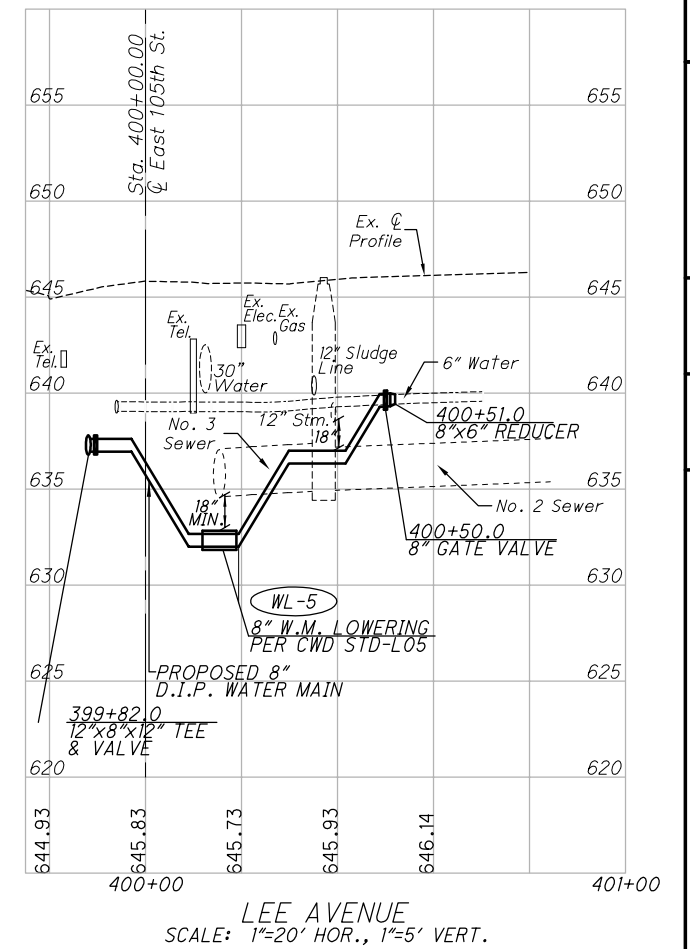
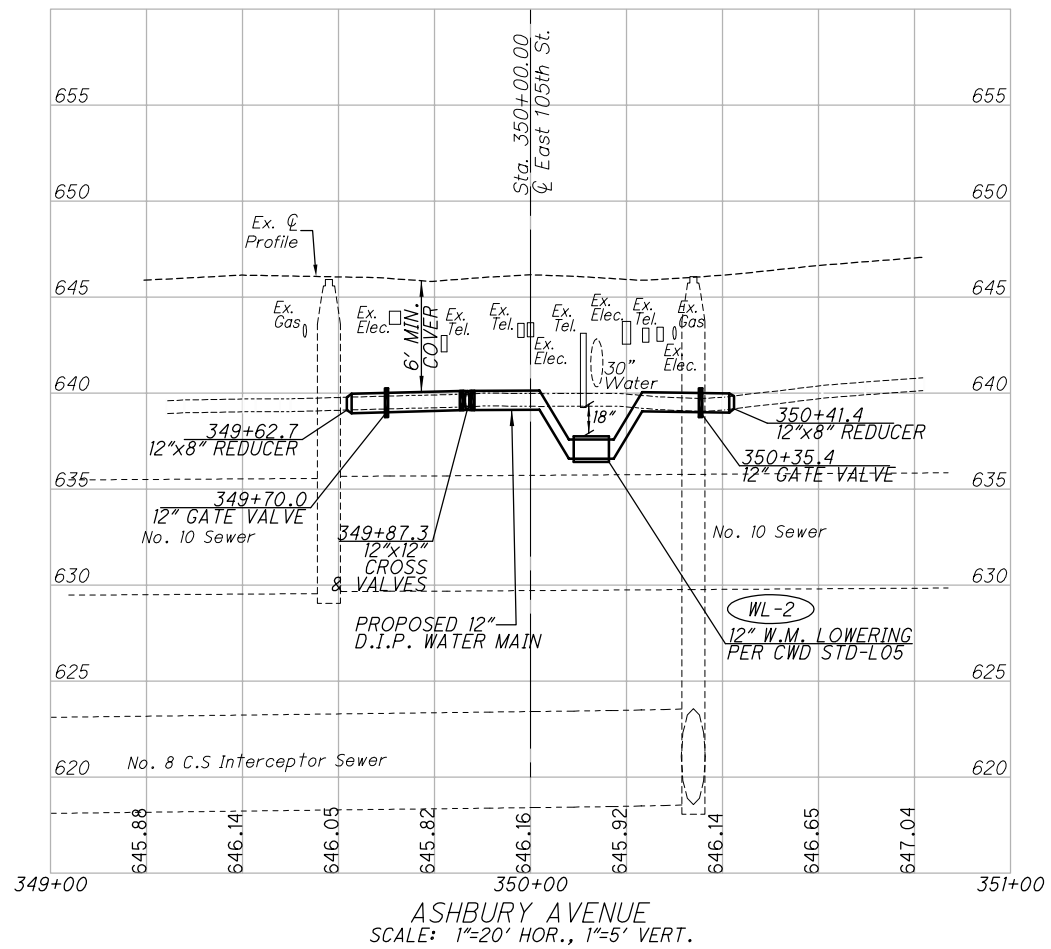
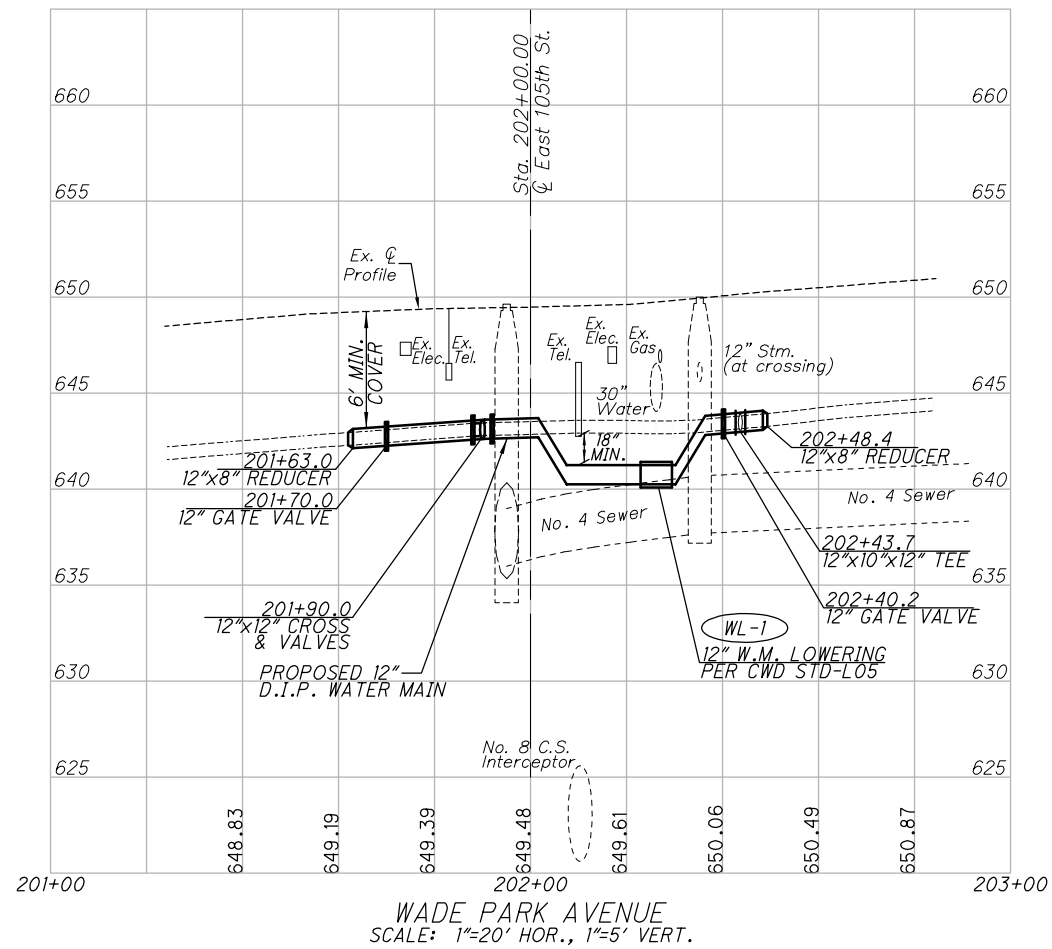
EAST 105th STREET

CALCULATED: B.A.K. CHECKED: D.P.B.

PID NO. _____

167
243

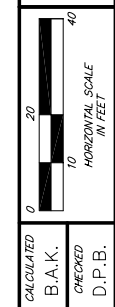
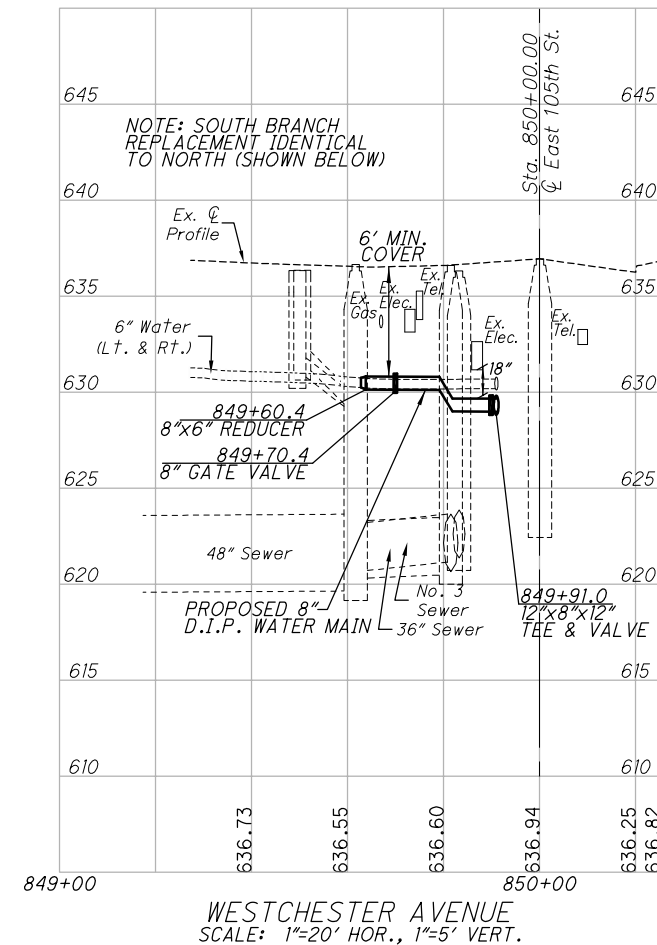
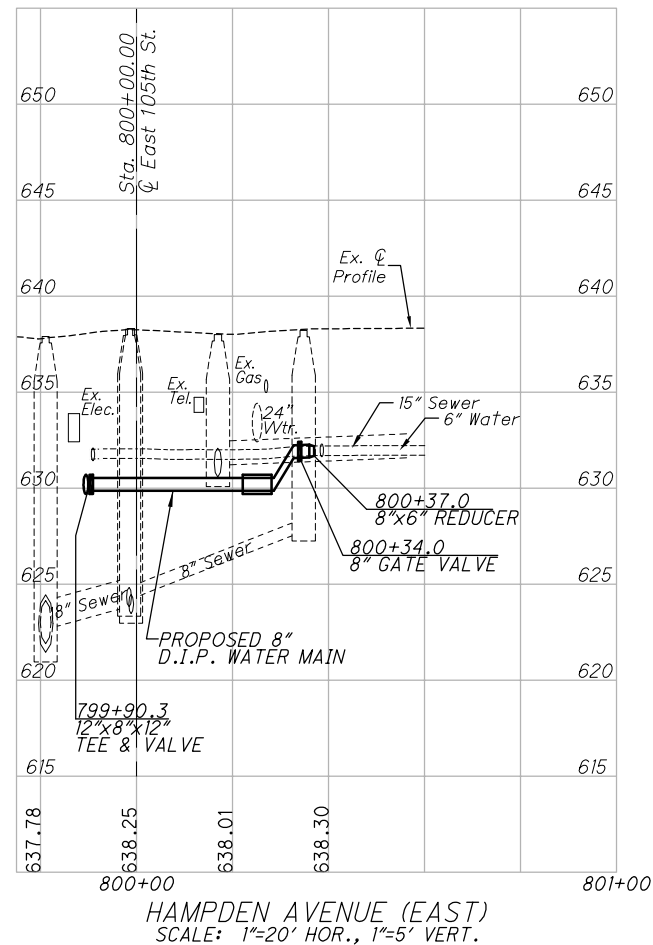
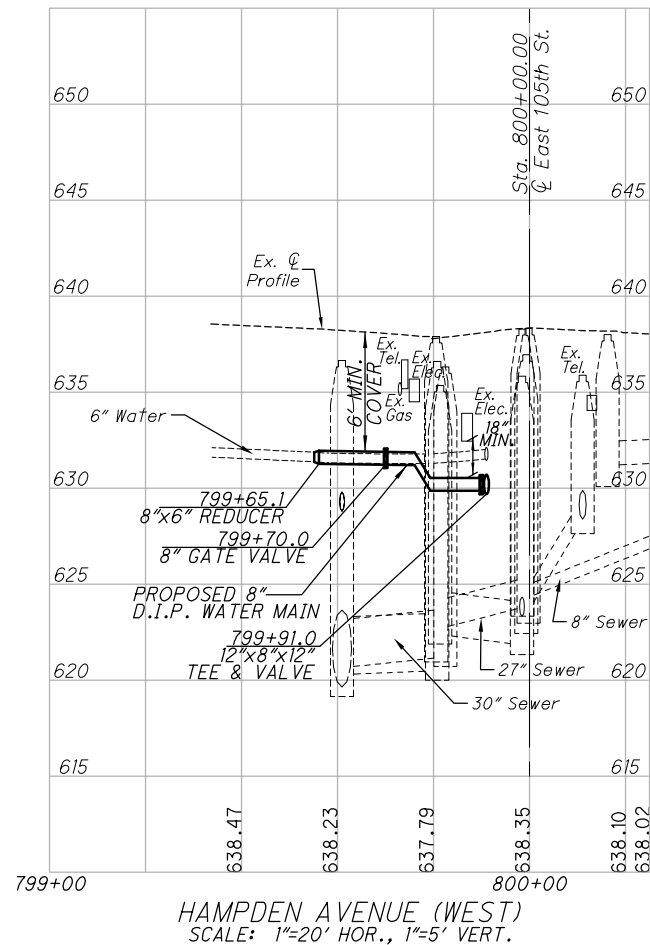
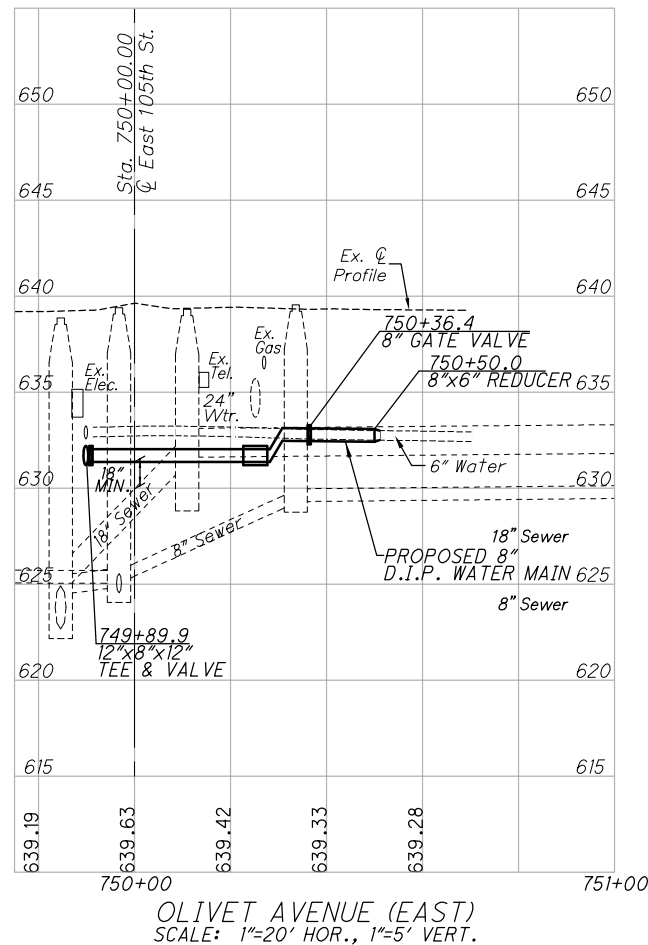
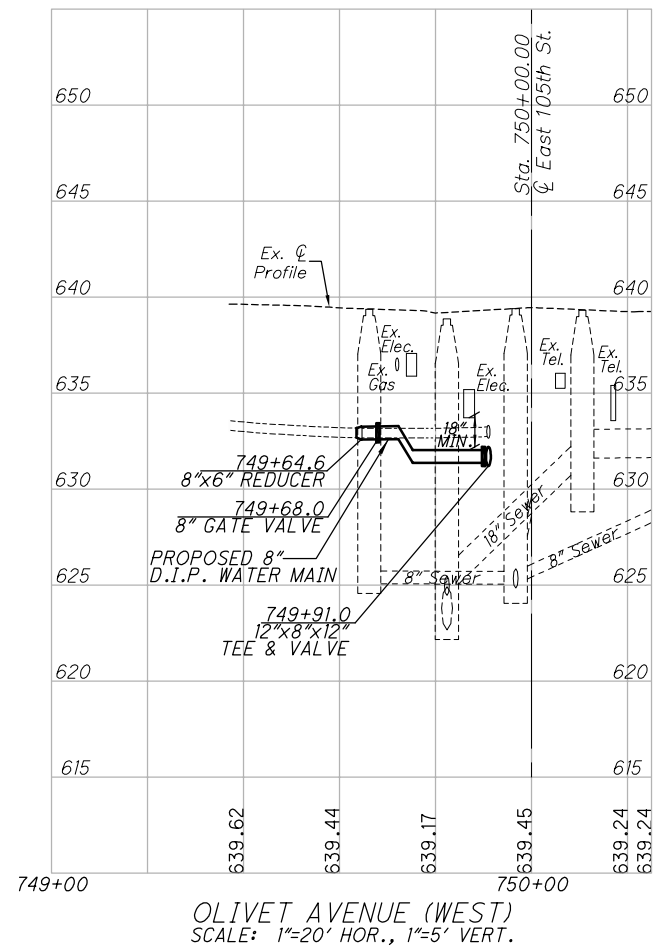
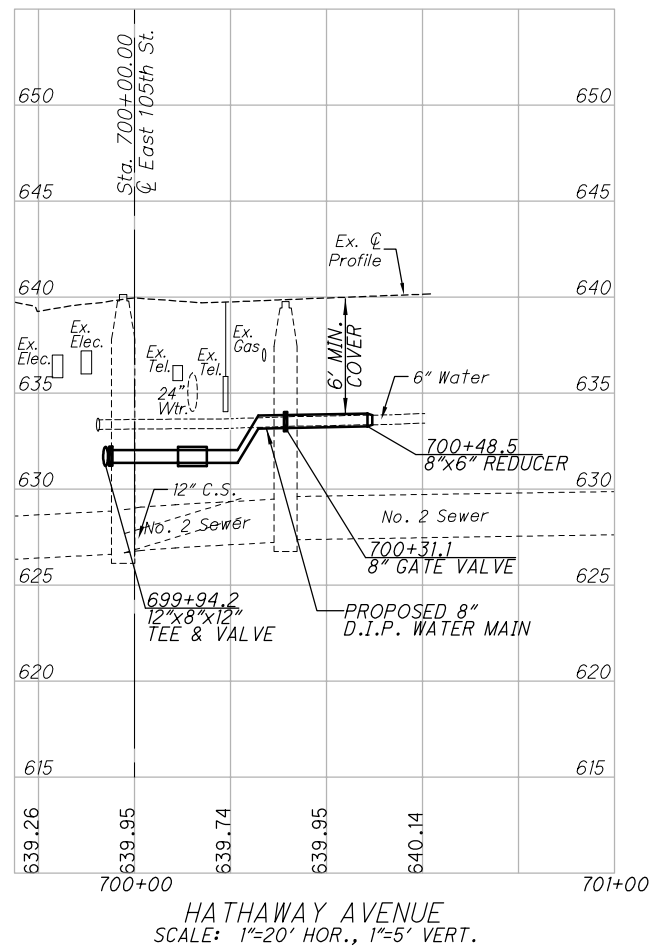
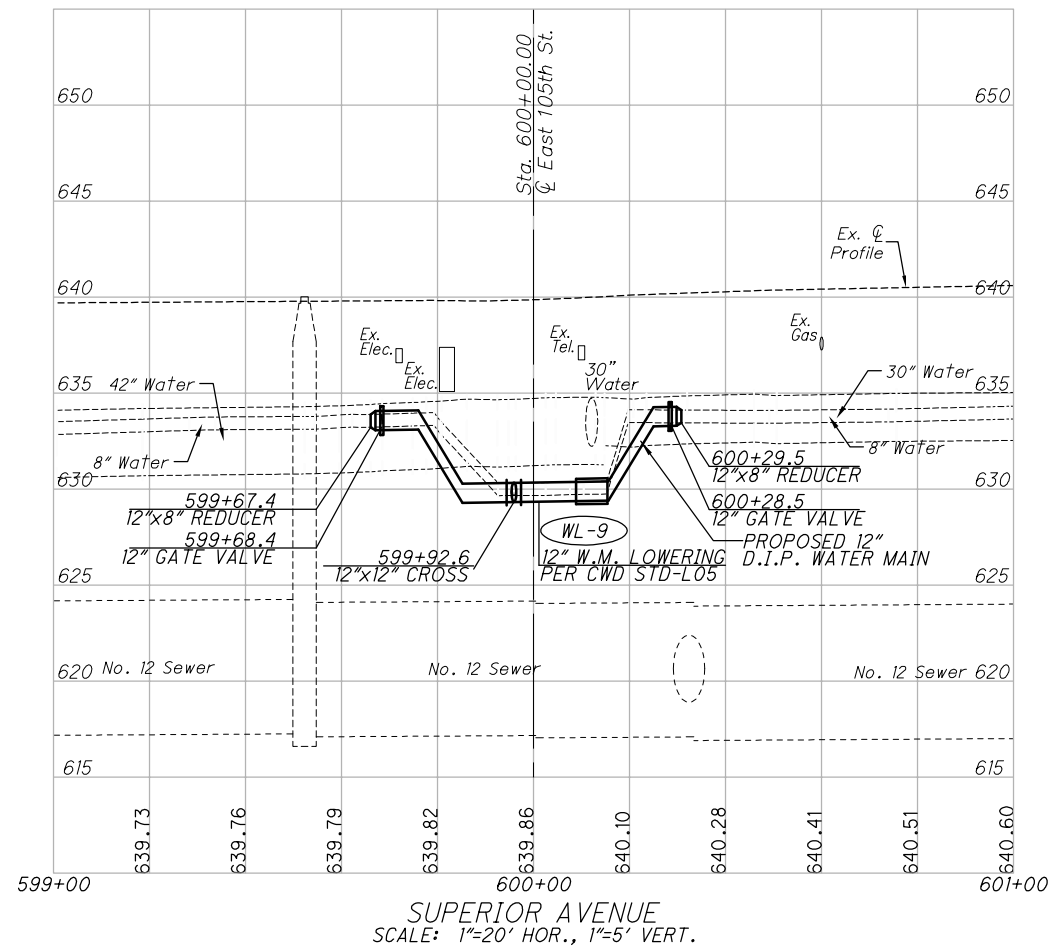
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 PLOT DATE: 5/8/19



PID NO. 1

**WATER WORK PROFILES
(INTERSECTING STREETS)**

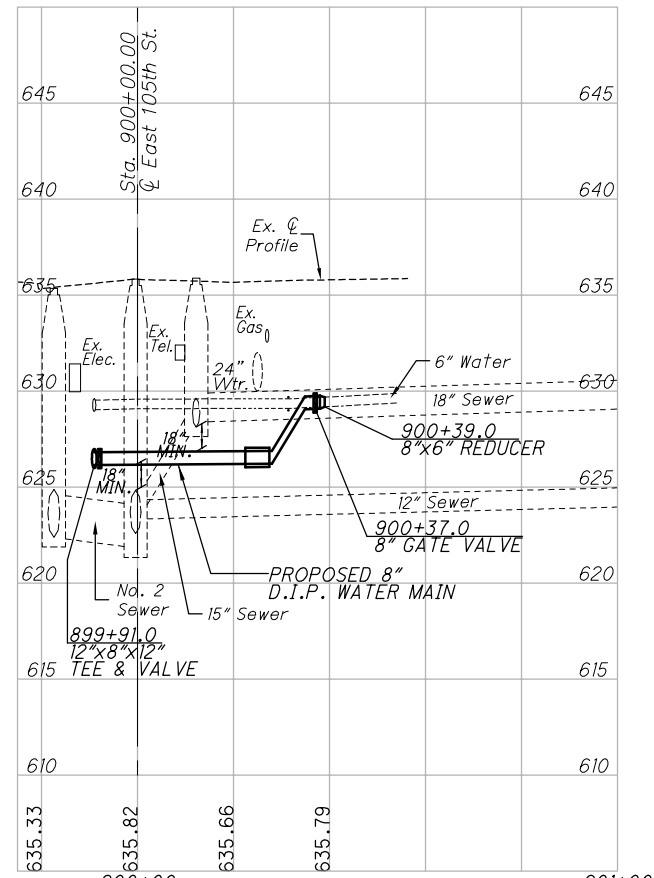
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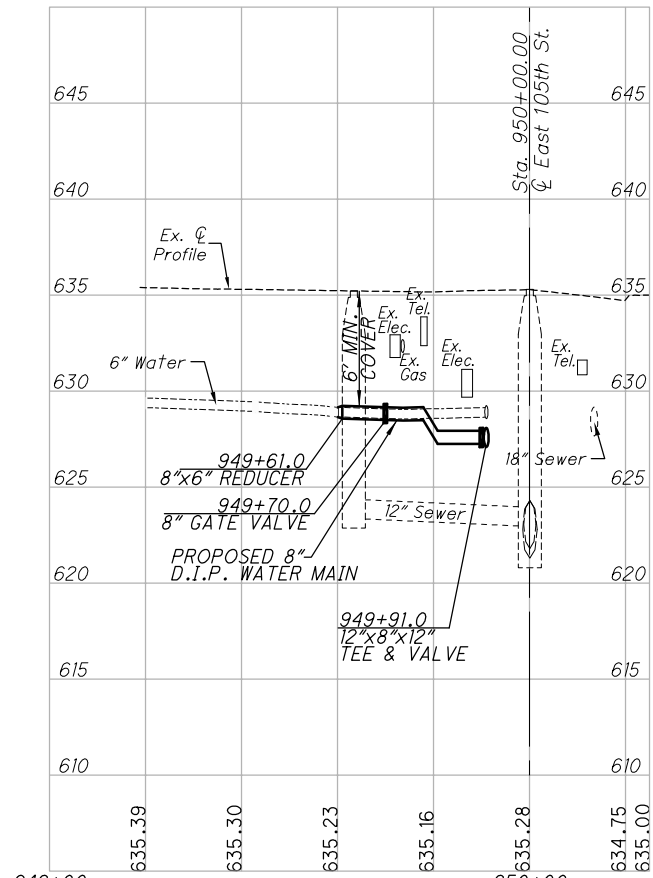
**WATER WORK PROFILES
 (INTERSECTING STREETS)**

EAST 105TH STREET

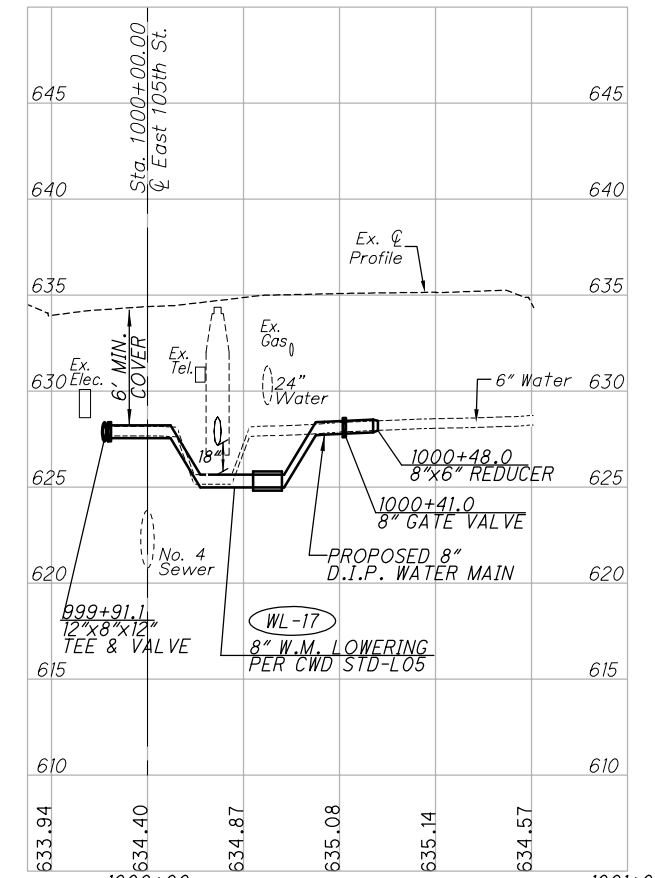
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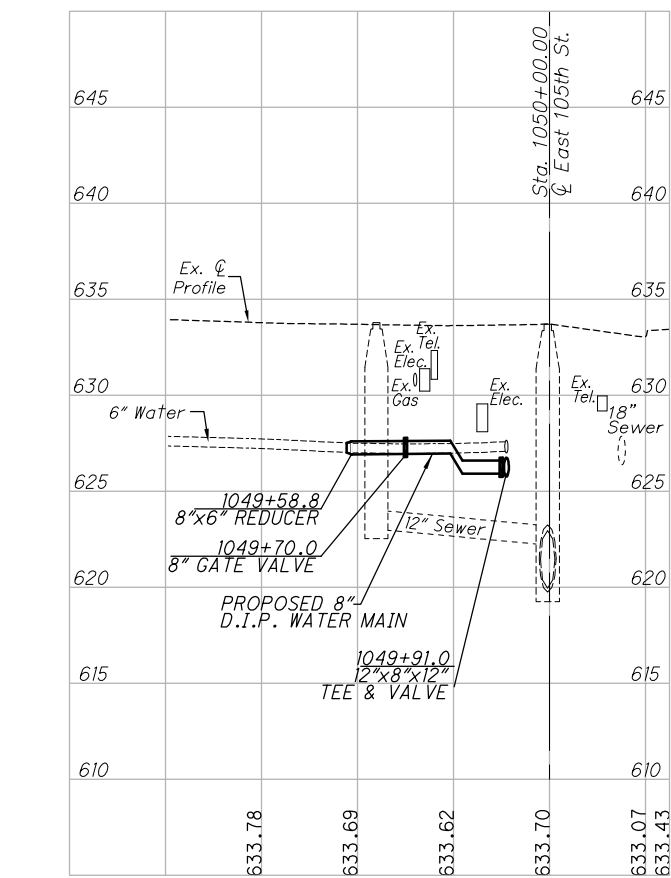
TACOMA AVENUE
 SCALE: 1"=20' HOR., 1"=5' VERT.



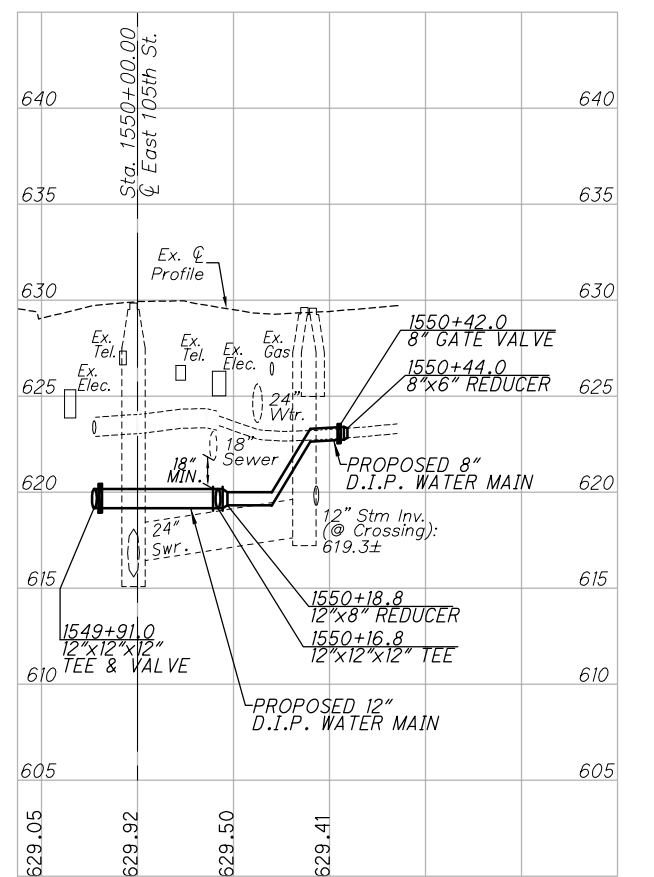
SOUTH BLVD.
 SCALE: 1"=20' HOR., 1"=5' VERT.



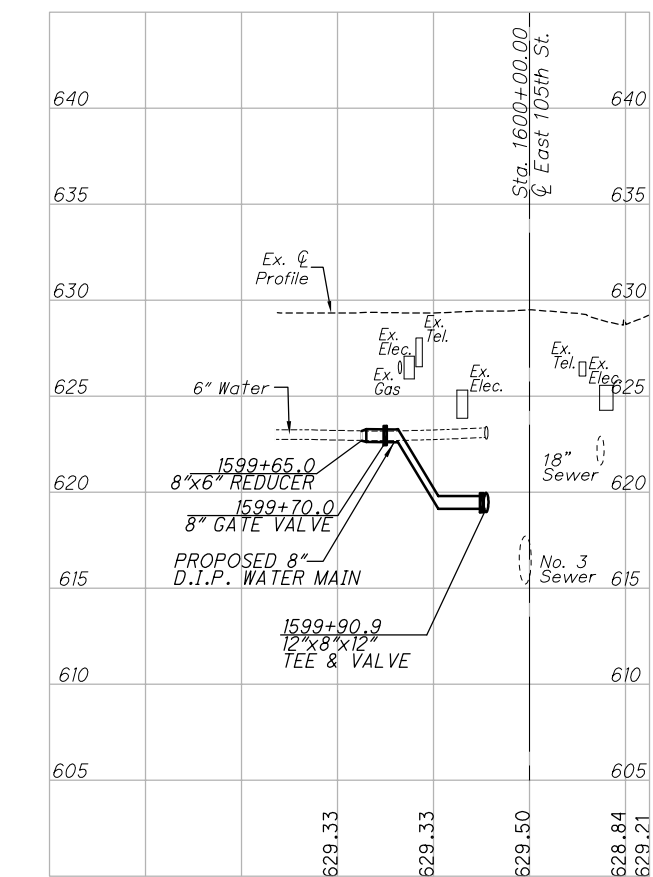
GRANTWOOD AVE.
 SCALE: 1"=20' HOR., 1"=5' VERT.



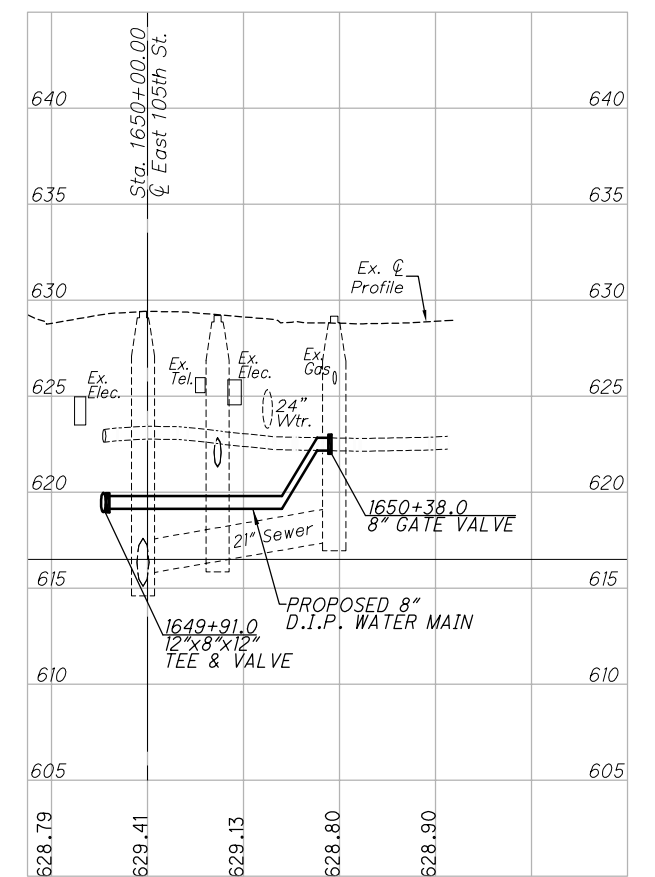
NORTH BLVD.
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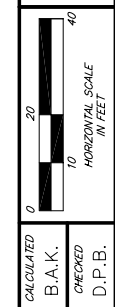
AMOR AVE.
 SCALE: 1"=20' HOR., 1"=5' VERT.



KEMPTON AVE.
 SCALE: 1"=20' HOR., 1"=5' VERT.



GREENLAWN AVE.
 SCALE: 1"=20' HOR., 1"=5' VERT.



**WATER WORK PROFILES
 (INTERSECTING STREETS)**

EAST 105TH STREET

ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN
ITEM 609 - CURB RESET, GRANITE, AS PER PLAN

THE EXISTING GRANITE CURB ALONG THE CORRIDOR SHALL BE REMOVED, STORED, AND RESET AS SHOWN ON THE DETAIL ON THIS SHEET, AS PRESCRIBED ON SHEETS 173-187, AND AS SPECIFIED IN 609.03 EXCEPT AS MODIFIED HEREIN.

THE PROCESS FOR REMOVING, STORING, AND RESETTING SHALL BE AS FOLLOWS:

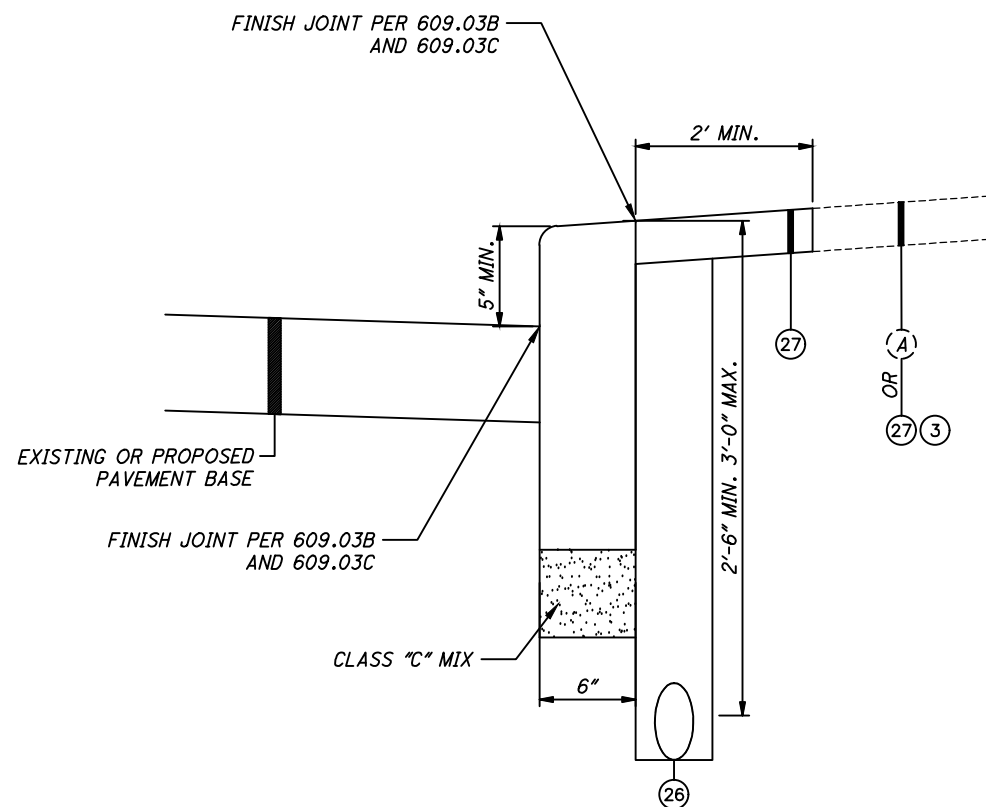
THE CONTRACTOR SHALL TAKE EXTREME CARE DURING THE REMOVAL, CLEANING, STORAGE, AND RESETTING OF THE EXISTING GRANITE CURB TO AVOID DAMAGE. THE REMOVAL SHALL TAKE PLACE UNDER THE SUPERVISION OF THE ENGINEER WHO WILL INSPECT THE EXISTING GRANITE CURB AND DEEM IT ACCEPTABLE FOR REUSE OR UNACCEPTABLE FOR REUSE AND THEREFORE TO BE DISPOSED OF. ALL GRANITE CURB DEEMED ACCEPTABLE FOR REUSE SHALL BE SEPARATED ACCORDING TO FULL HEIGHT CURB AND DROP CURB AND SHALL BE STACKED ON PALLETS FOR STORAGE. AT THE COMPLETION OF THE REMOVAL PROCESS, THE CONTRACTOR SHALL PROVIDE, IN WRITING, AN INVENTORY OF THE FULL HEIGHT AND DROP HEIGHT GRANITE CURB AVAILABLE FOR REUSE. PAYMENT WILL BE MADE FOR THE REMOVAL OF ALL EXISTING GRANITE CURB, BE IT DEEMED ACCEPTABLE OR UNACCEPTABLE FOR REUSE, PER THE UNIT PRICE BID FOR ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN.

LENGTHS OF EXISTING GRANITE CURB TO BE REMOVED FOR REUSE ARE SHOWN ON THE EXISTING GRANITE CURB INVENTORY SHEETS AND QUANTIFIED IN THE GRANITE CURB REMOVAL SUBSUMMARY. THE QUANTITY OF EXISTING GRANITE CURB IS SEPARATED INTO AN EXISTING DROP GRANITE CURB AND EXISTING FULL HEIGHT GRANITE CURB QUANTITY.

ANY EXISTING GRANITE CURB DEEMED ACCEPTABLE FOR REUSE BY THE ENGINEER AND DAMAGED DUE TO THE NEGLIGENCE OF THE CONTRACTOR AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH NEW GRANITE CURB AT THE CONTRACTOR'S EXPENSE. THE CURB REMOVED AND STORED SHALL BE SAW CUT TO REMOVE DEFECTIVE PORTIONS OF GRANITE CURB. THE DEFECTIVE PORTIONS SHALL BE DISPOSED OF BY THE CONTRACTOR.

THE LENGTHS AND LOCATIONS FOR FULL HEIGHT AND DROP GRANITE CURB TO BE RESET ARE QUANTIFIED ON THE GRANITE CURB RESETTING SUBSUMMARY AND SHOWN ON THE GRANITE CURB RESETTING PLANS. ONCE THE CONTRACTOR HAS PREPARED AN INVENTORY OF THE AVAILABLE GRANITE CURB, THE ENGINEER WILL PRIORITIZE LOCATIONS FOR RESETTING THE GRANITE CURB IF THE AMOUNT AVAILABLE DOES NOT MATCH THE AMOUNT QUANTIFIED ON THE GRANITE CURB RESETTING SUBSUMMARY. THE CONTRACTOR WILL RESET THE GRANITE CURB PER THE DETAILS ON THIS SHEET. PAYMENT WILL BE MADE PER THE UNIT PRICE BID FOR ITEM 609 - CURB RESET, GRANITE, AS PER PLAN PER FOOT OF ACTUAL GRANITE CURB RESET COMPLETE IN PLACE AND INCLUDES MATERIALS AND LABOR REQUIRED FOR SAW CUTTING AT DROP CURBS, AT CURB RAMPS AND AT DRIVEWAYS. THE TOP OF GRANITE CURB ELEVATIONS RESET SHALL BE SET AT THE ELEVATIONS INDICATED ON THE PAVEMENT ELEVATION TABLE. ANY GRANITE CURB LEFTOVER AFTER INSTALLATION AS DIRECTED BY THE ENGINEER SHALL BE RETURNED TO THE CITY OF CLEVELAND.

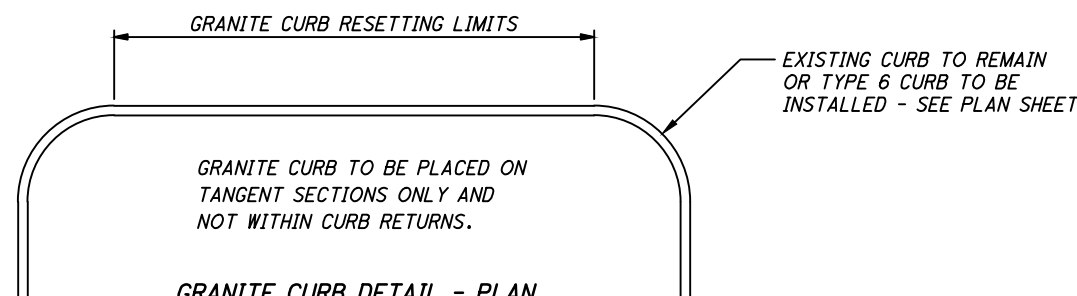
FOR ANY AND ALL LOCATIONS SHOWN ON THE GRANITE CURB RESETTING PLAN WHERE RESET GRANITE CURB HAS BEEN PROPOSED BUT THERE IS NOT ENOUGH MATERIAL AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL PLACE ITEM 609 - CURB, TYPE 6, AS PER PLAN, AS PER D-23 & D-24 COMPLETE IN PLACE. PAYMENT WILL BE MADE AT THE UNIT PRICE BID INCLUDING SAWCUTTING, DISPOSAL OF WASTE MATERIAL AND STORAGE OF SALVAGED MATERIAL.



GRANITE CURB DETAIL
NOT TO SCALE

NOTES:

- FOR EXISTING AND PROPOSED LEGENDS, SEE SHEET 8.



GRANITE CURB DETAIL - PLAN
NOT TO SCALE

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SHEET NO.	STATION		SIDE	ITEM 202			
				CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN	AVAILABLE DROP GRANITE CURB	EXISTING MID-BLOCK CONCRETE CURB	AVAILABLE FULL HEIGHT GRANITE CURB
FROM	TO	FT	FT	FT	FT		
85	SUPERIOR AVENUE	MATCH LINE	LT				
85	121+63	125+50	LT	387			364
85	123+29	123+52	LT		23		
85	SUPERIOR AVENUE	TECUMSEH COURT	RT				
85	121+69	123+01	RT	132			97
85	122+45	122+80	RT		35		
85	TECUMSEH COURT	HATHAWAY COURT	RT				
85	123+30	124+46	RT	116			89
85	123+59	123+86	RT		27		
85	HATHAWAY COURT	MATCH LINE	RT				
85	124+93	125+50	RT	57			51
85	125+44	125+50	RT		6		
86	MATCH LINE	OLIVET AVENUE	LT				
86	125+50	127+45	LT	195			157
86	125+62	126+00	LT		38		
86	MATCH LINE	OLIVET AVENUE	RT				
86	125+50	127+67	RT	217			134
86	125+50	125+61	RT		11		
86	126+50	126+85	RT		35		
86	127+26	127+63	RT		37		
86	OLIVET AVENUE	HAMPDEN AVENUE	LT				
86	127+95	130+13	LT	218			187
86	128+31	128+62	LT		31		
86	OLIVET AVENUE	HAMPDEN AVENUE	RT				
86	128+13	130+22	RT	209			167
86	128+45	128+64	RT		19		
86	129+08	129+31	RT		23		
87	HAMPDEN AVENUE	WESTCHESTER AVENUE	LT				
87	130+51	132+42	LT	191			114
87	130+78	131+09	LT		31		
87	131+35	131+58	LT		23		
87	131+76	131+99	LT		23		
87	HAMPDEN AVENUE	TACOMA AVENUE	RT				
87	130+66	134+28	RT	362			244
87	131+74	131+96	RT		22		
87	132+53	132+97	RT		44		
87	133+57	133+82	RT		25		
87	133+88	134+15	RT		27		
SUBTOTAL COLUMN 1				2084	480		1604

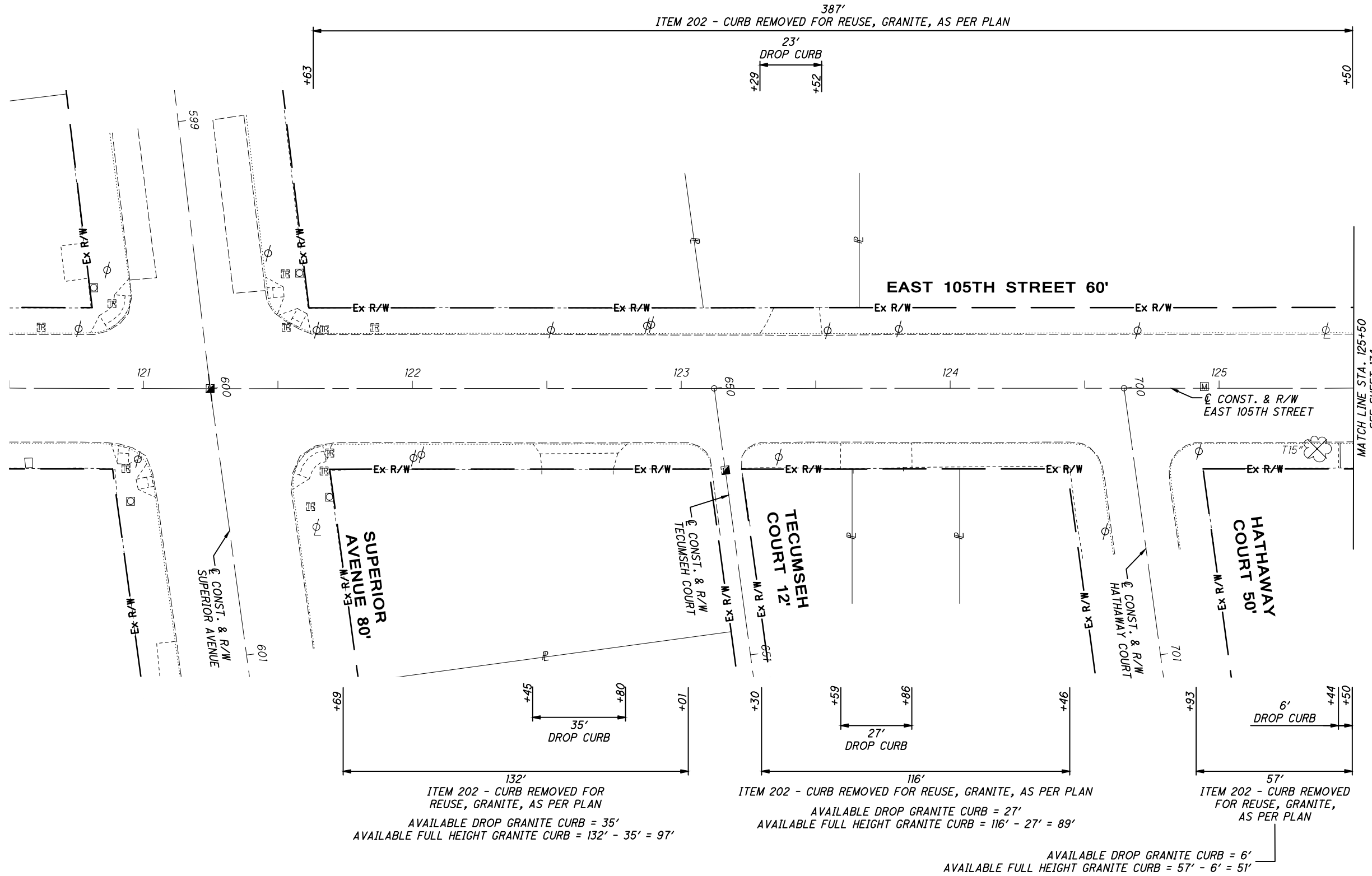
SHEET NO.	STATION		SIDE	ITEM 202			
				CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN	AVAILABLE DROP GRANITE CURB	EXISTING MID-BLOCK CONCRETE CURB	AVAILABLE FULL HEIGHT GRANITE CURB
FROM	TO	FT	FT	FT	FT		
87	WESTCHESTER AVENUE	SOUTH BOULEVARD	LT				
87	133+46	135+32	LT	186			88
87	133+91	134+15	LT		24		
87	134+27	134+51	LT		24		
87	134+82	135+32	LT		50		
87	TACOMA AVENUE	MATCH LINE	RT				
87	134+71	135+50	RT	79			79
88	MATCH LINE	GRANTWOOD AVENUE	RT				
88	135+50	136+59	RT	109		14	59
88	135+54	135+68	RT		23		
88	135+90	136+13	RT			13	
88	136+13	136+26	RT				
88	SOUTH BOULEVARD	NORTH BOULEVARD	LT				
88	136+37	138+49	LT	212			212
88	GRANTWOOD AVENUE	DREXEL AVENUE	RT				
88	137+63	140+29	RT	266			266
88	NORTH BOULEVARD	OSTEND AVENUE	LT				
88	138+93	140+46	LT	153			127
88	139+12	139+38	LT		26		
89	DREXEL AVENUE	PASADENA AVENUE	RT				
89	140+83	143+56	RT	273		14	227
89	141+00	141+14	RT		18		
89	141+94	142+12	RT			14	
89	143+28	143+42	RT				
89	OSTEND AVENUE	SOMERSET AVENUE	LT				
89	141+28	143+17	LT	189			120
89	142+05	142+38	LT		33		
89	142+73	143+09	LT		36		
89	SOMERSET AVENUE	MATCH LINE	LT				
89	143+98	145+50	LT	152			133
89	144+28	144+47	LT		19		
SUBTOTAL COLUMN 2				1619	253	55	1311

SHEET NO.	STATION		SIDE	ITEM 202			
				CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN	AVAILABLE DROP GRANITE CURB	EXISTING MID-BLOCK CONCRETE CURB	AVAILABLE FULL HEIGHT GRANITE CURB
FROM	TO	FT	FT	FT	FT		
89	PASADENA AVENUE	MATCH LINE	RT				
89	144+59	145+50	RT	91			42
89	144+54	144+75	RT		21		
89	145+12	145+40	RT		28		
90	MATCH LINE	MASSIE AVENUE	RT				
90	145+50	146+72	RT	122			77
90	145+99	146+10	RT			11	
90	146+11	146+32	RT		21		
90	146+45	146+58	RT			13	
90	MATCH LINE	PARKGATE AVENUE	LT				
90	145+50	145+86	LT	36			36
90	PARKGATE AVENUE	PIERPOINT AVENUE	LT				
90	146+70	148+57	LT	187			187
90	MASSIE AVENUE	MORISON AVENUE	RT				
90	147+22	149+63	RT	241			228
90	148+78	148+91	RT		13		
90	PIERPOINT AVENUE	MATCH LINE	LT				
90	149+40	150+50	LT	110			91
90	149+68	149+87	LT			19	
90	MORISON AVENUE	MATCH LINE	RT				
90	150+19	150+50	RT	31			31
91	MATCH LINE	ADAMS AVENUE	LT				
91	150+50	151+27	LT	77			77
91	MATCH LINE	AMOR AVENUE	RT				
91	150+50	152+74	RT	224			173
91	150+98	151+26	RT		28		
91	151+86	152+09	RT		23		
91	ADAMS AVENUE	KEMPTON AVENUE	LT				
91	152+10	154+19	LT	209			195
91	153+24	153+38	LT		14		
91	AMOR AVENUE	GREENLAWN AVENUE	RT				
91	153+21	154+58	RT	137			122
91	153+31	153+36	RT			5	
91	154+44	154+54	RT			10	
91	KEMPTON AVENUE	END	LT				
91	154+73	155+02	LT	29			29
SUBTOTAL THIS COLUMN				1494	148	58	1288
SUBTOTAL COLUMN 2				1619	253	55	1311
SUBTOTAL COLUMN 1				2084	480	0	1604
TOTALS CARRIED TO GENERAL SUMMARY				5197	881	113	4203

CALCULATED
 MGW
 CHECKED
 JTS
EXISTING GRANITE CURB SUBSUMMARY
EAST 105TH STREET
 172
 243

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AVAILABLE DROP GRANITE CURB = 23'
 AVAILABLE FULL HEIGHT GRANITE CURB = 387' - 23' = 364'



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

CALCULATED
MGW
CHECKED
JTS

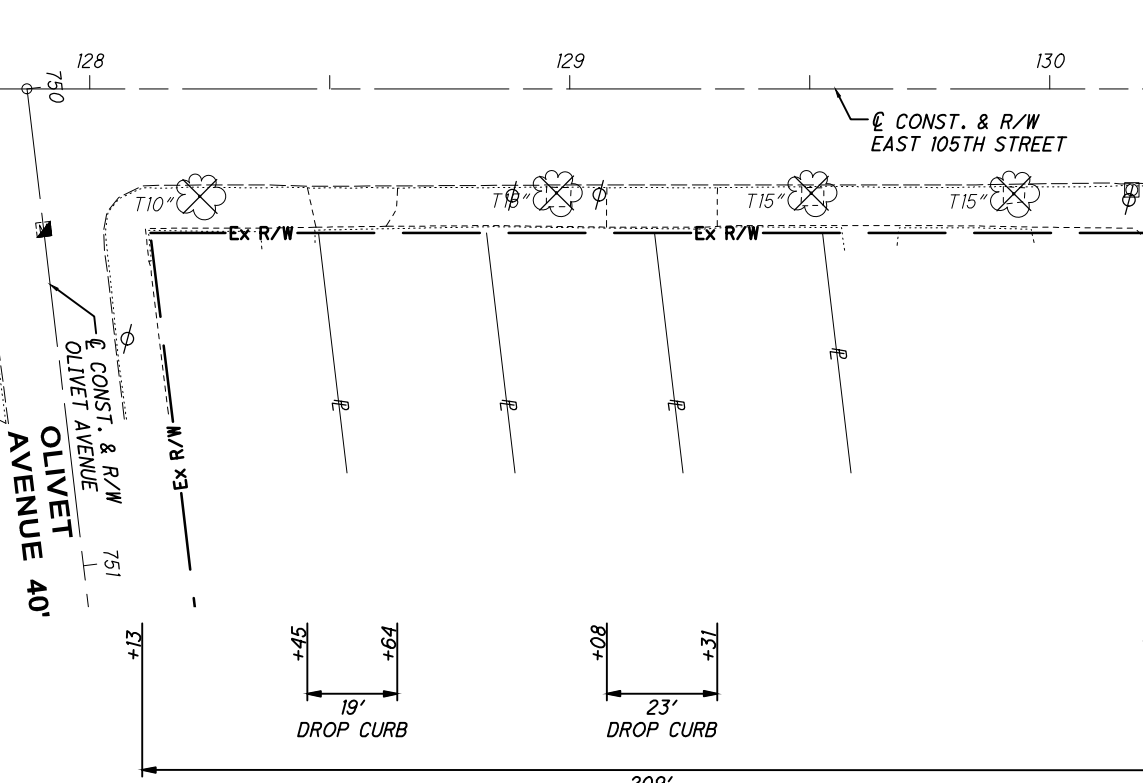
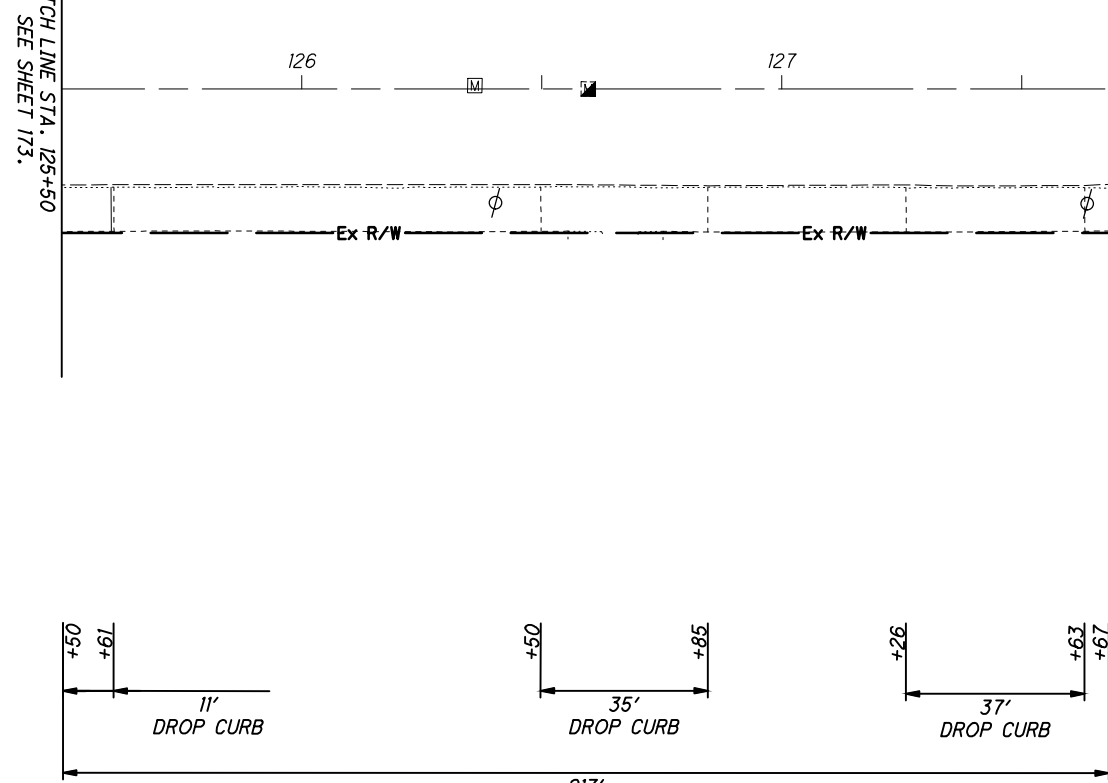
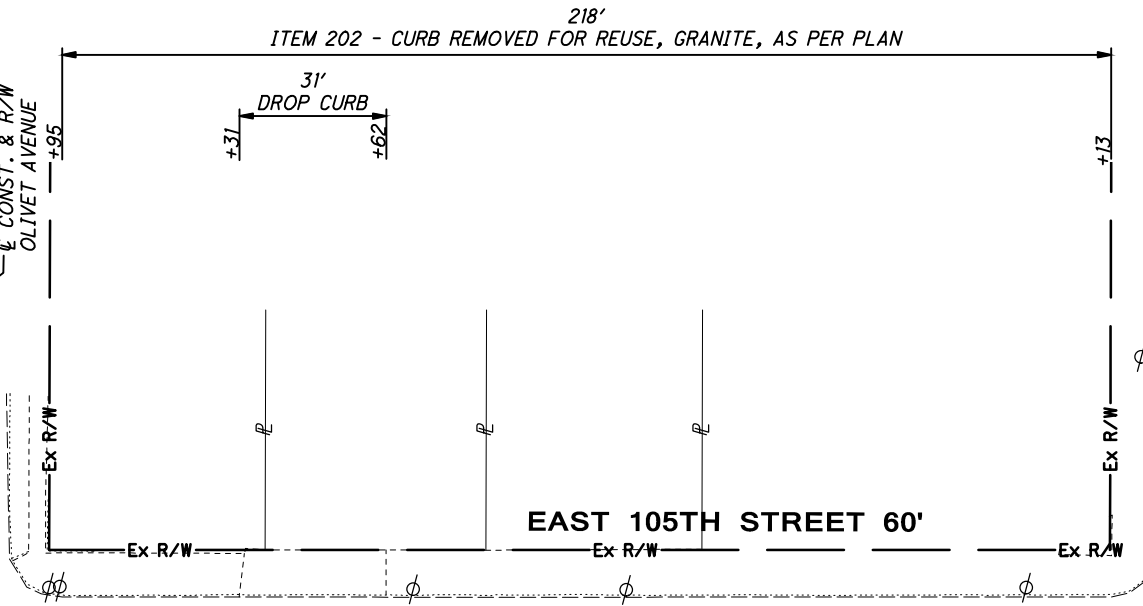
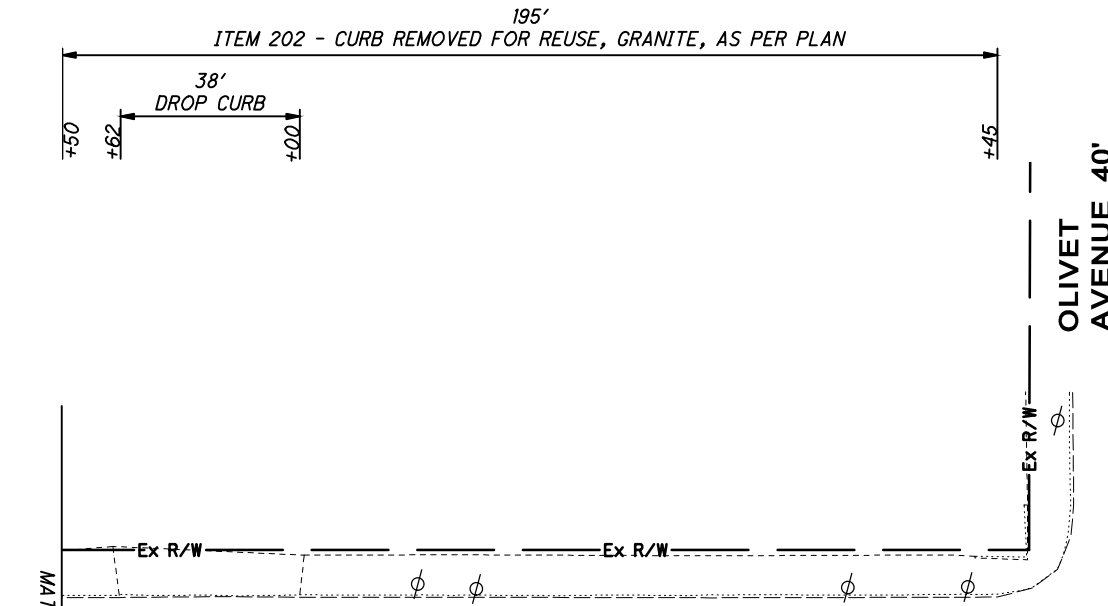
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HORIZONTAL
SCALE IN FEET

EXISTING GRANITE CURB INVENTORY
 BEGIN TO STA. 125+50

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AVAILABLE DROP GRANITE CURB = 38'
 AVAILABLE FULL HEIGHT GRANITE CURB = 195' - 38' = 157'

AVAILABLE DROP GRANITE CURB = 31'
 AVAILABLE FULL HEIGHT GRANITE CURB = 218' - 31' = 187'



ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN
 AVAILABLE DROP GRANITE CURB = 11' + 35' + 37' = 83'
 AVAILABLE FULL HEIGHT GRANITE CURB = 217' - 83' = 134'

ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN
 AVAILABLE DROP GRANITE CURB = 19' + 23' = 42'
 AVAILABLE FULL HEIGHT GRANITE CURB = 209' - 42' = 167'

MATCH LINE STA. 125+50
 SEE SHEET 173.

MATCH LINE STA. 130+50
 SEE SHEET 175.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

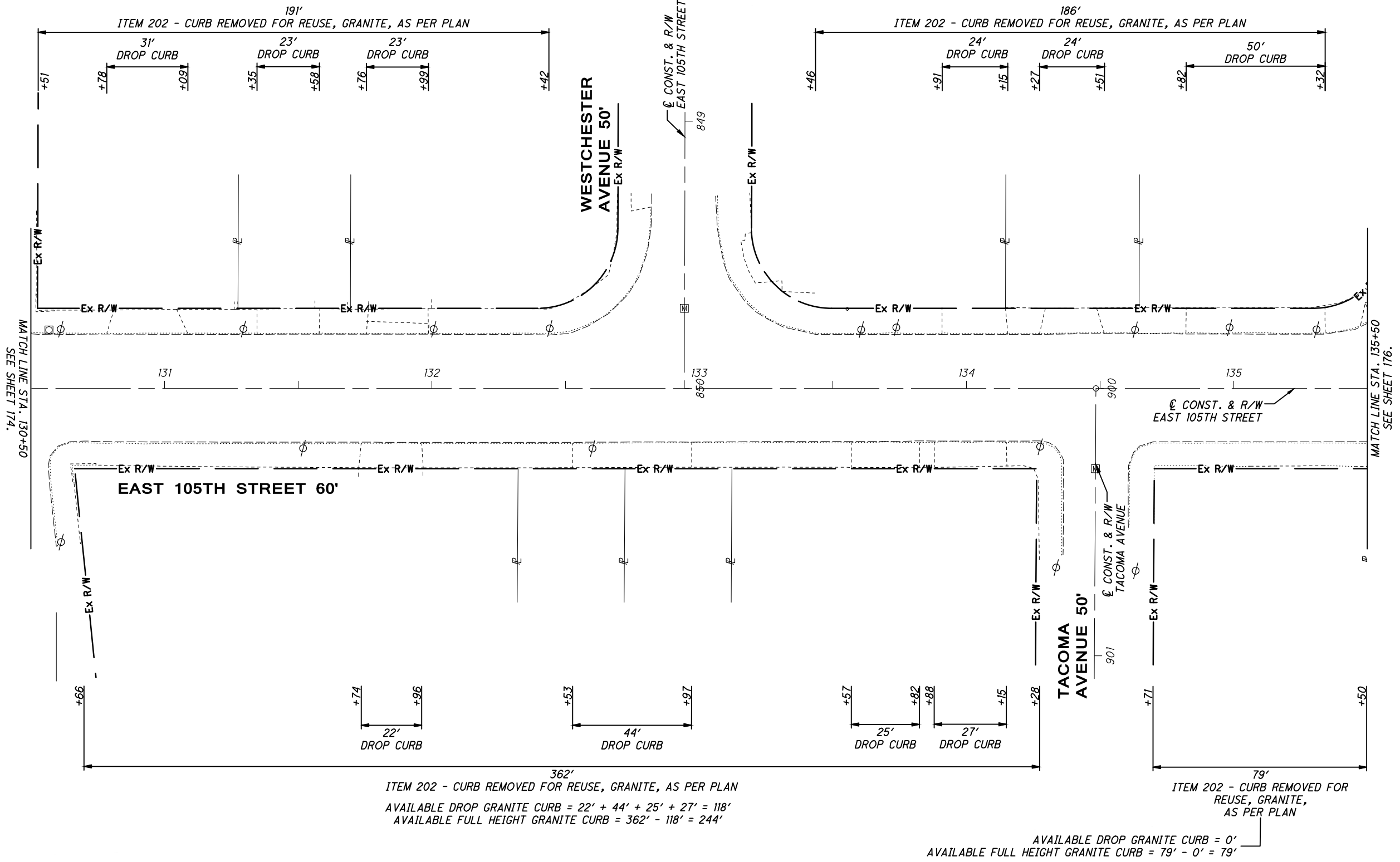


EXISTING GRANITE CURB INVENTORY
STA. 125+50 TO STA. 130+50

EAST 105TH STREET

AVAILABLE DROP GRANITE CURB = 31' + 23' + 23' = 77'
 AVAILABLE FULL HEIGHT GRANITE CURB = 191' - 77' = 114'

AVAILABLE DROP GRANITE CURB = 24' + 24' + 50' = 98'
 AVAILABLE FULL HEIGHT GRANITE CURB = 186' - 98' = 88'



ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN
 AVAILABLE DROP GRANITE CURB = 22' + 44' + 25' + 27' = 118'
 AVAILABLE FULL HEIGHT GRANITE CURB = 362' - 118' = 244'

AVAILABLE DROP GRANITE CURB = 0'
 AVAILABLE FULL HEIGHT GRANITE CURB = 79' - 0' = 79'

MATCH LINE STA. 130+50
 SEE SHEET 174.

MATCH LINE STA. 135+50
 SEE SHEET 176.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

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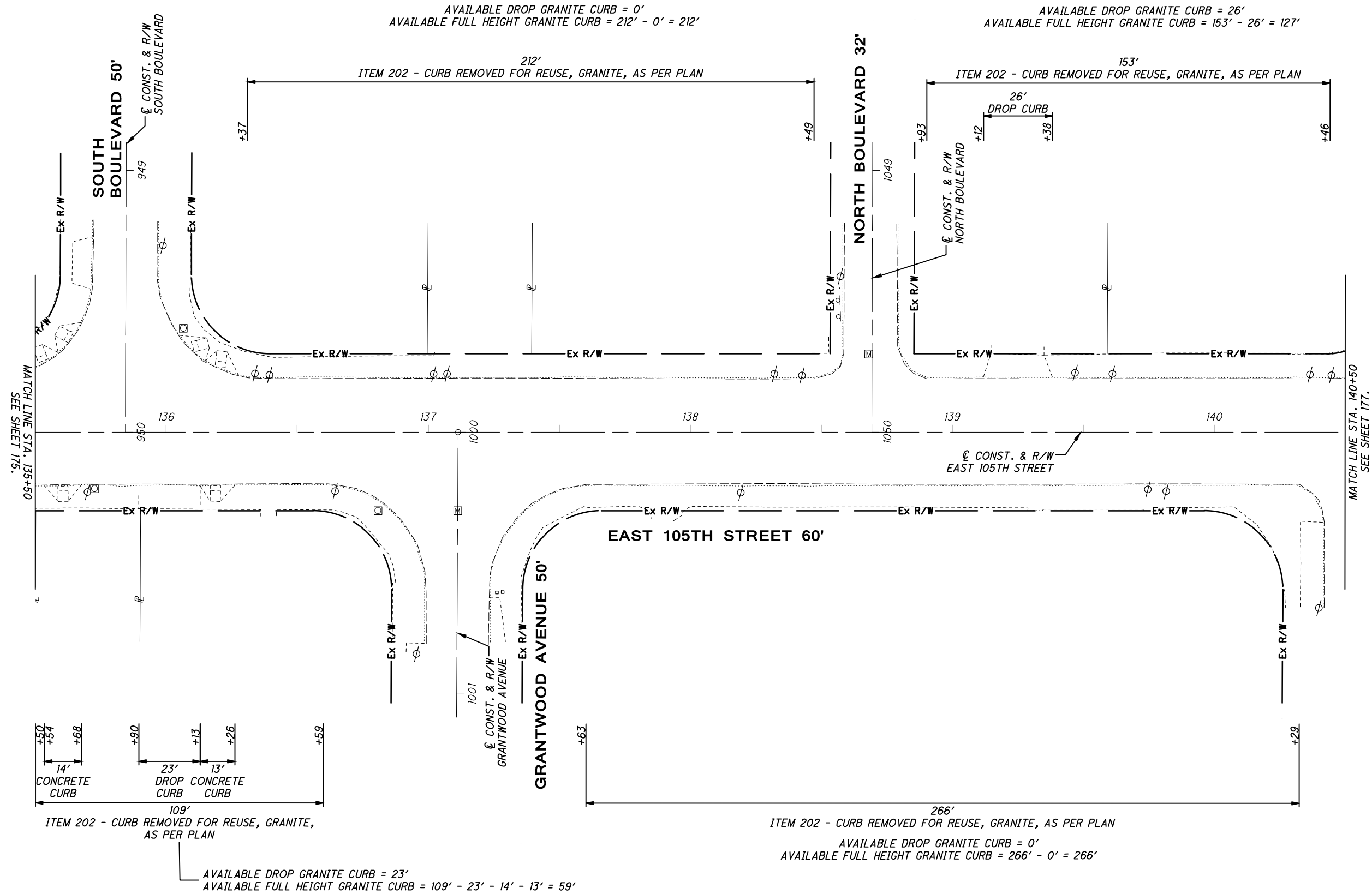


CALCULATED
 KJM
 CHECKED
 JTS

**EXISTING GRANITE CURB INVENTORY
 STA. 130+50 TO STA. 135+50**

EAST 105TH STREET

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AVAILABLE DROP GRANITE CURB = 0'
AVAILABLE FULL HEIGHT GRANITE CURB = 212' - 0' = 212'

AVAILABLE DROP GRANITE CURB = 26'
AVAILABLE FULL HEIGHT GRANITE CURB = 153' - 26' = 127'

ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN

AVAILABLE DROP GRANITE CURB = 23'
AVAILABLE FULL HEIGHT GRANITE CURB = 109' - 23' - 14' - 13' = 59'

ITEM 202 - CURB REMOVED FOR REUSE, GRANITE, AS PER PLAN

AVAILABLE DROP GRANITE CURB = 0'
AVAILABLE FULL HEIGHT GRANITE CURB = 266' - 0' = 266'

MATCH LINE STA. 135+50
SEE SHEET 175.

MATCH LINE STA. 140+50
SEE SHEET 177.

CROSS REFERENCES

SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN



EXISTING GRANITE CURB INVENTORY
STA. 135+50 TO STA. 140+50

EAST 105TH STREET

176
243

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EAST 105TH STREET

EXISTING GRANITE CURB INVENTORY

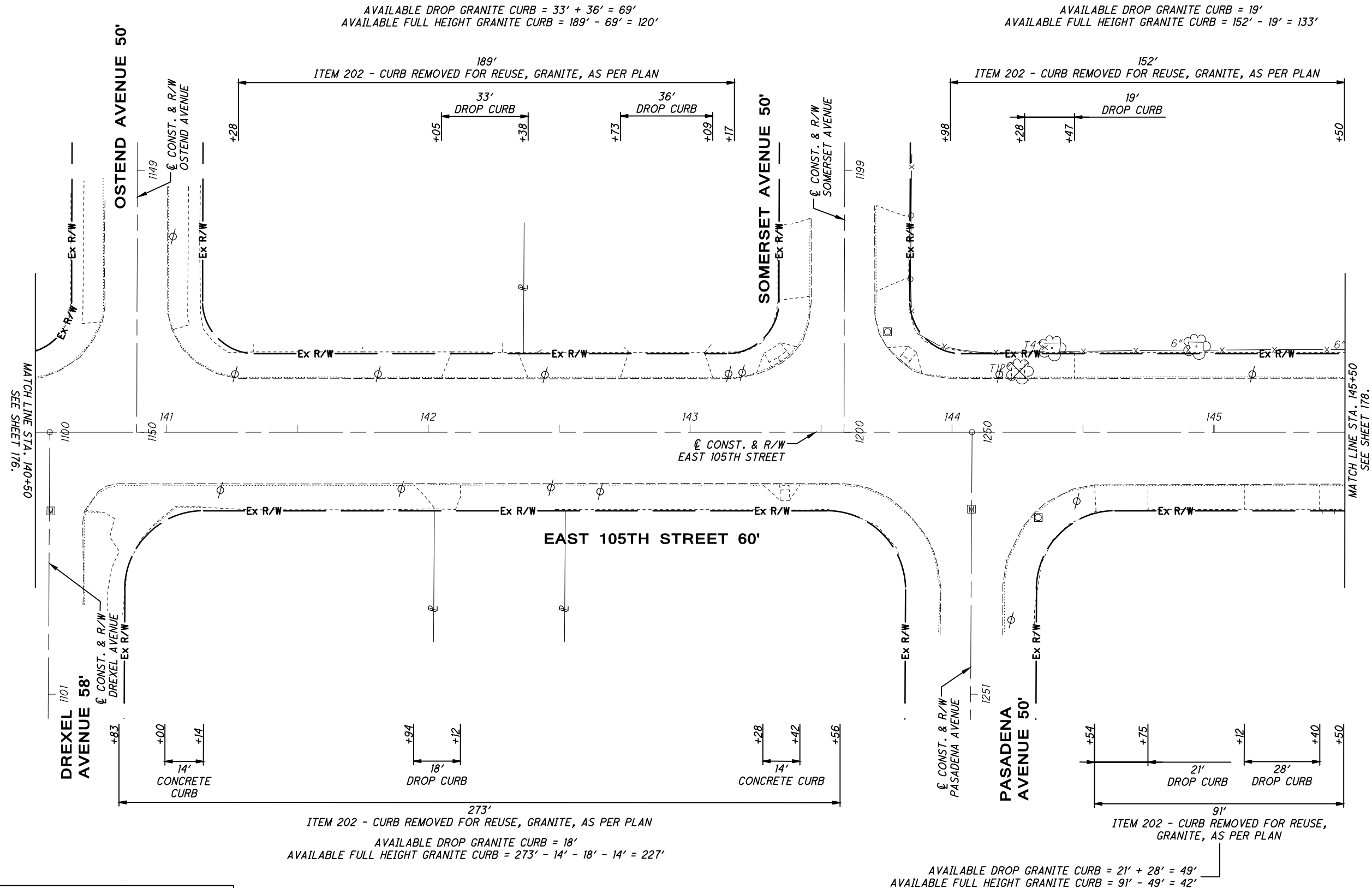
STA. 140+50 TO STA. 145+50

CALCULATED: _____

MGW: _____

CHECKED: JTS

HORIZONTAL SCALE IN FEET



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN



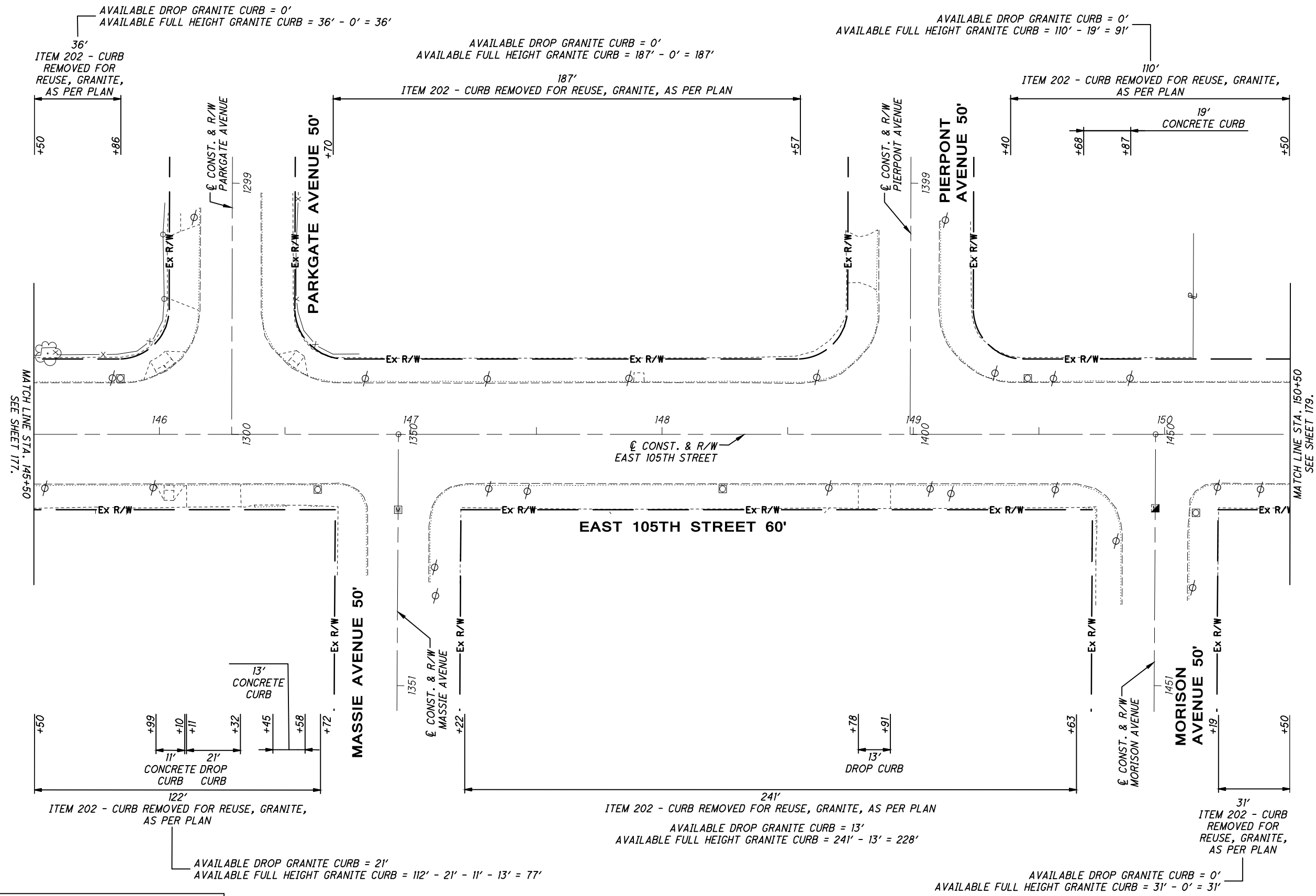
CALCULATED
MGW
CHECKED
JTS

0 20 40
HORIZONTAL
SCALE IN FEET

EXISTING GRANITE CURB INVENTORY
STA. 145+50 TO STA. 150+50

EAST 105TH STREET

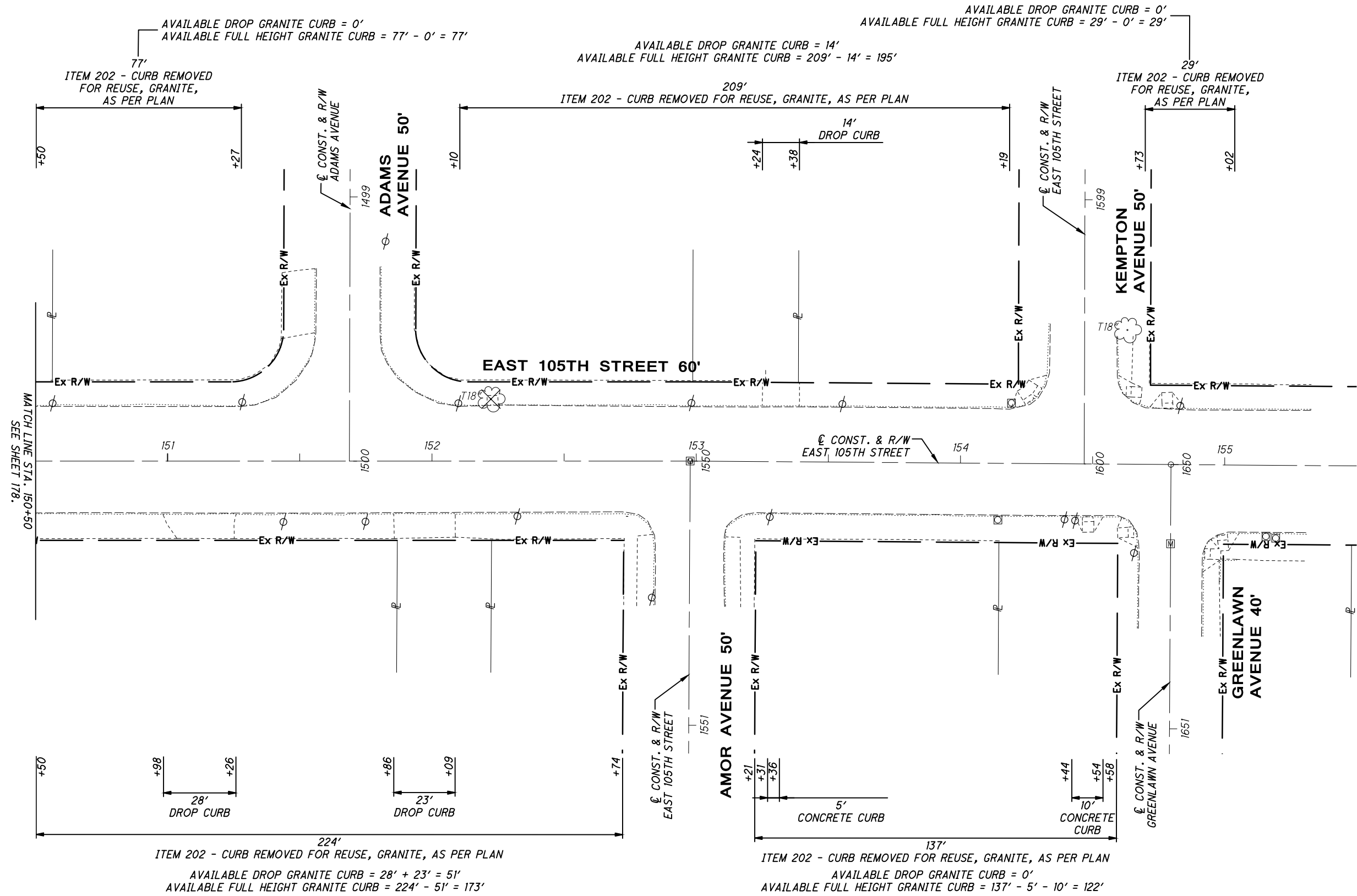
178
243



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN



EXISTING GRANITE CURB INVENTORY
STA. 150+50 TO END

EAST 105TH STREET

179
243

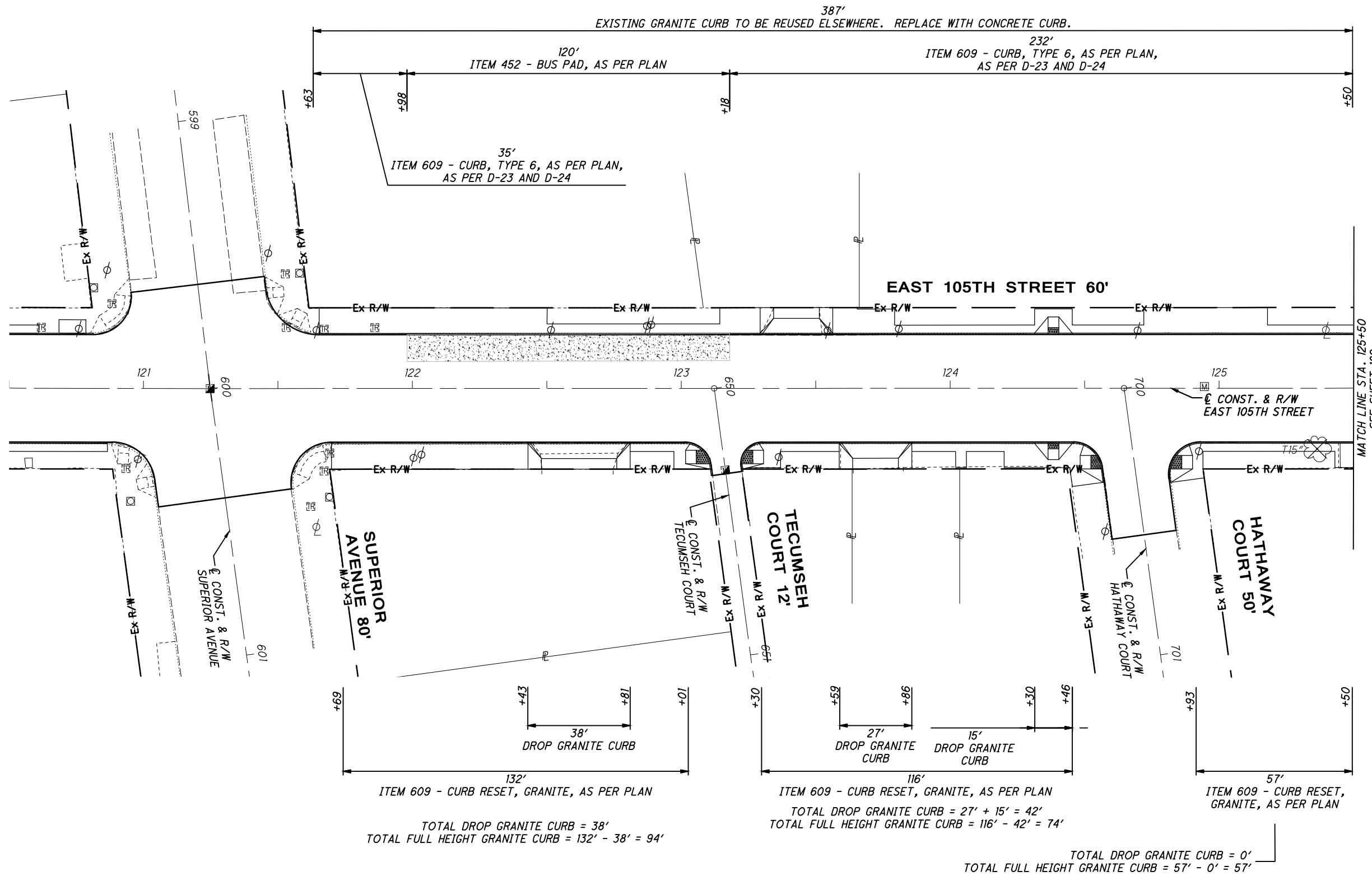
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SHEET NO.	STATION		SIDE	FULL HEIGHT GRANITE CURB	DROP GRANITE CURB	ITEM 609 CURB RESET, GRANITE, AS PER PLAN
				A-B	B	A
				FT	FT	FT
	FROM	TO				
141	SUPERIOR AVENUE	MATCH LINE	LT			
141	121+63	125+50	LT	CONCRETE CURB		
141	SUPERIOR AVENUE	TECUMSEH COURT	RT			
141	121+69	123+01	RT	94		132
141	122+43	122+81	RT		38	
141	TECUMSEH COURT	HATHAWAY AVENUE	RT			
141	123+30	124+46	RT	73		116
141	123+59	123+86	RT		27	
141	124+30	124+46	RT		16	
141	HATHAWAY AVENUE	MATCH LINE	RT			
141	124+93	125+50	RT	57		57
142	MATCH LINE	OLIVET AVENUE	LT			
142	125+50	127+45	LT	CONCRETE CURB		
142	MATCH LINE	OLIVET AVENUE	RT			
142	125+50	127+67	RT	188		217
142	126+51	126+80	RT		29	
142	OLIVET AVENUE	HAMPDEN AVENUE	LT			
142	127+95	130+13	LT	170		218
142	128+27	128+60	LT		33	
142	129+92	130+07	LT		15	
142	OLIVET AVENUE	HAMPDEN AVENUE	RT			
142	128+13	130+22	RT	138		209
142	128+42	128+67	RT		25	
142	129+04	129+35	RT		31	
142	130+02	130+17	RT		15	
143	HAMPDEN AVENUE	WESTCHESTER AVENUE	LT			
143	130+51	132+42	LT	75		191
143	130+61	130+76	LT		15	
143	130+76	131+10	LT		34	
143	131+29	131+63	LT		34	
143	131+72	132+05	LT		33	
143	HAMPDEN AVENUE	TACOMA AVENUE	RT			
143	130+76	134+28	RT	320		352
143	131+69	132+01	RT		32	
143	WESTCHESTER AVENUE	SOUTH BOULEVARD	LT			
143	133+46	135+32	LT	156		186
143	134+24	134+54	LT		30	
143	TACOMA AVENUE	MATCH LINE	RT			
143	134+71	135+50	RT	79		79
144	MATCH LINE	GRANTWOOD AVENUE	RT			
144	135+50	136+59	RT	79		109
144	135+53	135+68	RT		15	
144	136+12	136+27	RT		15	
144	SOUTH BOULEVARD	NORTH BOULEVARD	LT			
144	136+37	138+49	LT	212		212
SUBTOTAL COLUMN 1				1641	437	2078

SHEET NO.	STATION		SIDE	FULL HEIGHT GRANITE CURB	DROP GRANITE CURB	ITEM 609 CURB RESET, GRANITE, AS PER PLAN
				A-B	B	A
				FT	FT	FT
	FROM	TO				
144	GRANTWOOD AVENUE	DREXEL AVENUE	RT			
144	137+63	140+29	RT	266		266
144	NORTH BOULEVARD	OSTEND AVENUE	LT			
144	138+93	140+46	LT	124		153
144	139+10	139+39	LT		29	
145	DREXEL AVENUE	PASADENA AVENUE	RT			
145	140+83	143+56	RT	227		273
145	141+05	141+20	RT		15	
145	141+99	142+15	RT		16	
145	143+28	143+43	RT		15	
145	OSTEND AVENUE	SOMERSET AVENUE	LT			
145	141+28	143+17	LT	115		189
145	142+04	142+39	LT		35	
145	142+72	143+11	LT		39	
145	SOMERSET AVENUE	MATCH LINE	LT			
145	143+98	145+50	LT	152		152
145	PASADENA AVENUE	MATCH LINE	RT			
145	144+59	145+50	RT	0		0
146	MATCH LINE	MASSIE AVENUE	RT			
146	145+50	146+72	RT	78		93
146	145+97	146+12	RT		15	
146	MATCH LINE	PARKGATE AVENUE	LT			
146	145+50	145+86	LT	36		36
146	PARKGATE AVENUE	PIERPONT AVENUE	LT			
146	146+70	148+57	LT	67		67
146	MASSIE AVENUE	MORISON AVENUE	RT			
146	147+22	149+63	RT	241		241
146	PIERPONT AVENUE	MATCH LINE	LT			
146	149+40	150+50	LT	110		110
146	MORISON AVENUE	MATCH LINE	RT			
146	150+19	150+50	RT	31		31
147	MATCH LINE	ADAMS AVENUE	LT			
147	150+50	151+27	LT	77		77
147	MATCH LINE	AMOR AVENUE	RT			
147	150+50	152+74	RT	159		224
147	150+98	151+30	RT		32	
147	151+81	152+14	RT		33	
147	ADAMS AVENUE	KEMPTON AVENUE	LT			
147	152+10	154+19	LT	191		209
147	153+23	153+41	LT		18	
147	AMOR AVENUE	GREENLAWN AVENUE	RT			
147	153+21	154+58	RT	122		137
147	154+40	154+55	RT		15	
147	KEMPTON AVENUE	END	LT			
147	154+73	155+91	LT	18		39
147	155+91	155+07	LT		16	
147	155+02	155+07	RT		5	
SUBTOTAL THIS COLUMN				1996	247	2297
SUBTOTAL COLUMN 1				1641	437	2078
TOTALS CARRIED TO GENERAL SUMMARY				3637	684	4375

CALCULATED
 MGW
 CHECKED
 JTS
GRANITE CURB RESETTING SUBSUMMARY
EAST 105TH STREET
 180
 243

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

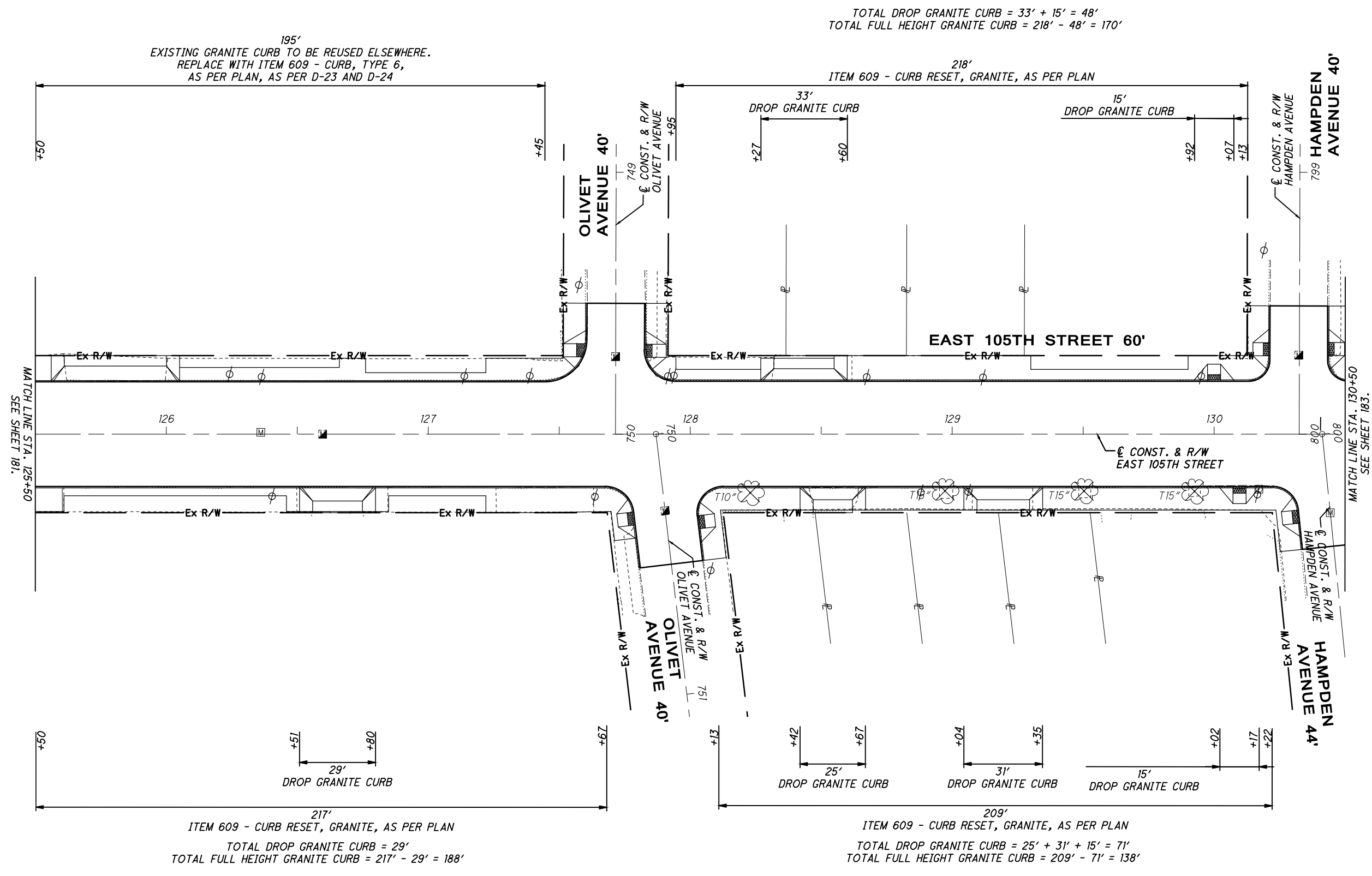


GRANITE CURB RESETTING PLAN
BEGIN TO STA. 125+50

EAST 105TH STREET

181
243

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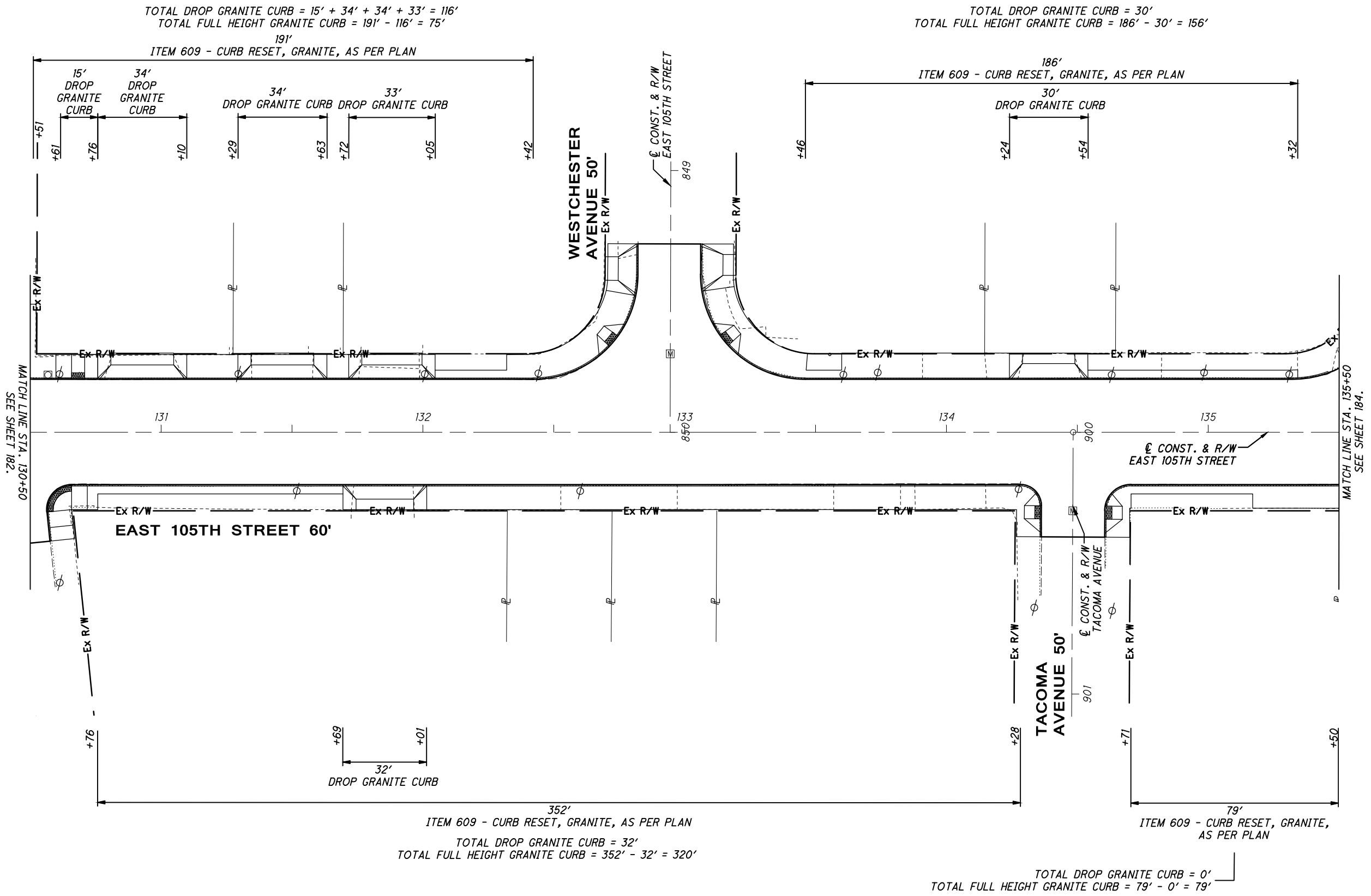
CALCULATED
MGW
CHECKED
JTS

GRANITE CURB RESETTING PLAN
STA. 125+50 TO STA. 130+50

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

EAST 105TH STREET

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MATCH LINE STA. 130+50
SEE SHEET 182.

MATCH LINE STA. 135+50
SEE SHEET 184.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

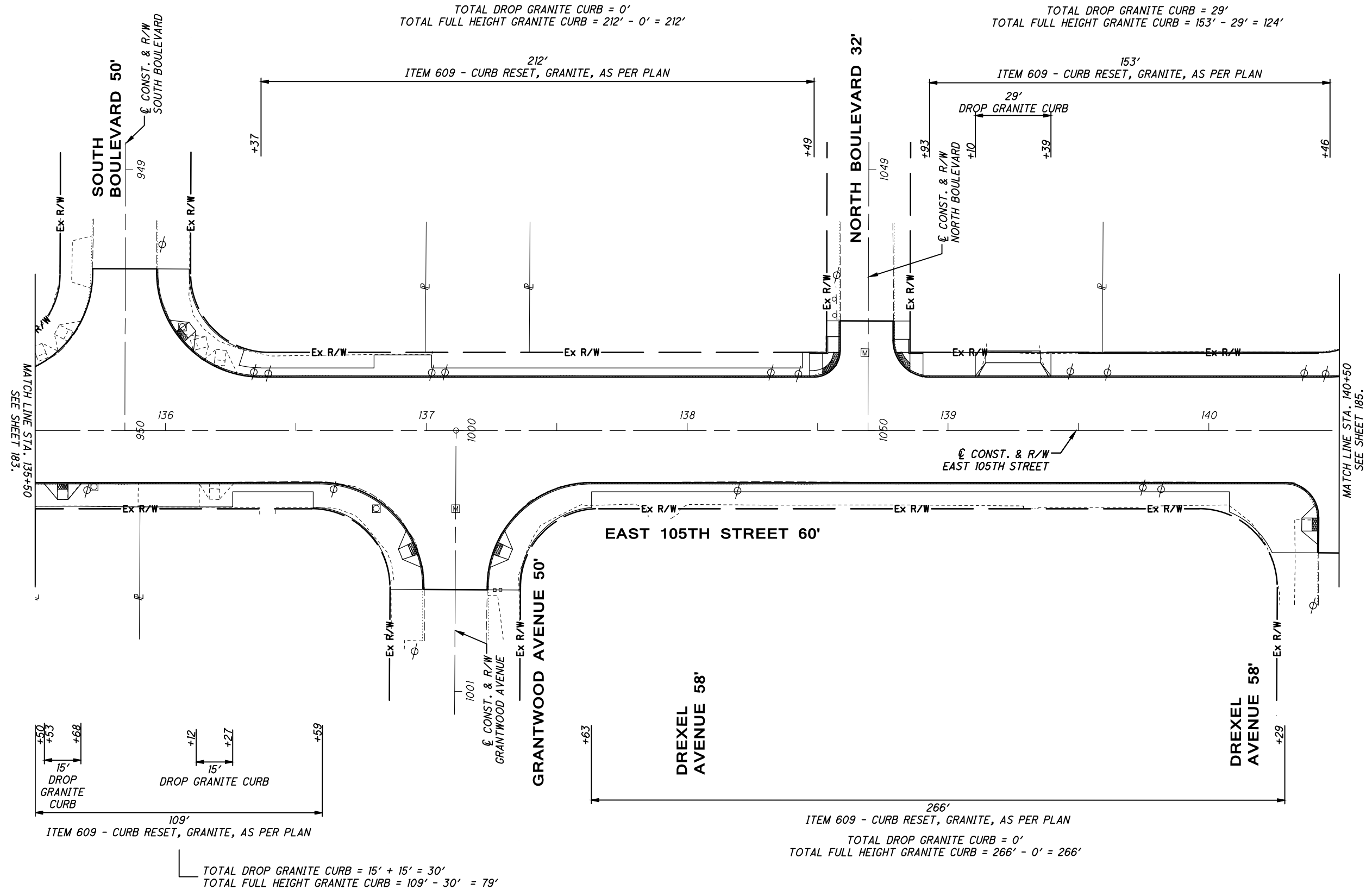


CALCULATED
MGW
CHECKED
JTS

**GRANITE CURB RESETTING PLAN
STA. 130+50 TO STA. 135+50**

EAST 105TH STREET

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TOTAL DROP GRANITE CURB = 0'
TOTAL FULL HEIGHT GRANITE CURB = 212' - 0' = 212'

TOTAL DROP GRANITE CURB = 29'
TOTAL FULL HEIGHT GRANITE CURB = 153' - 29' = 124'

ITEM 609 - CURB RESET, GRANITE, AS PER PLAN

ITEM 609 - CURB RESET, GRANITE, AS PER PLAN
TOTAL DROP GRANITE CURB = 0'
TOTAL FULL HEIGHT GRANITE CURB = 266' - 0' = 266'

TOTAL DROP GRANITE CURB = 15' + 15' = 30'
TOTAL FULL HEIGHT GRANITE CURB = 109' - 30' = 79'

MATCH LINE STA. 135+50
SEE SHEET 183.

MATCH LINE STA. 140+50
SEE SHEET 185.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

CALCULATED
MGW
CHECKED
JTS

40
HORIZONTAL
SCALE IN FEET

GRANITE CURB RESETTING PLAN
STA. 135+50 TO STA. 140+50

EAST 105TH STREET

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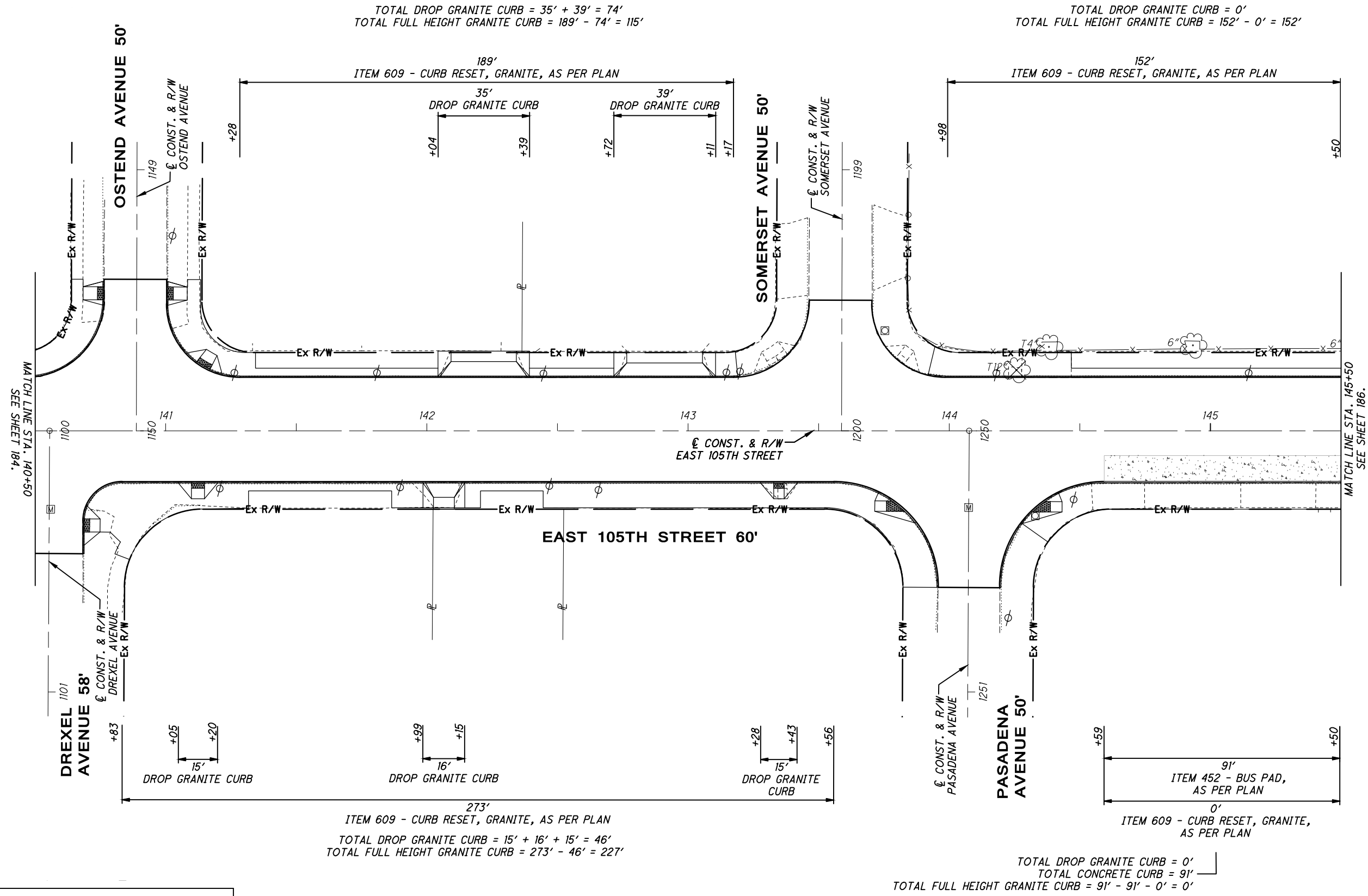




 CALCULATED: _____

 MGW: _____

 CHECKED: JTS



TOTAL DROP GRANITE CURB = 35' + 39' = 74'
 TOTAL FULL HEIGHT GRANITE CURB = 189' - 74' = 115'

TOTAL DROP GRANITE CURB = 0'
 TOTAL FULL HEIGHT GRANITE CURB = 152' - 0' = 152'

ITEM 609 - CURB RESET, GRANITE, AS PER PLAN
 TOTAL DROP GRANITE CURB = 15' + 16' + 15' = 46'
 TOTAL FULL HEIGHT GRANITE CURB = 273' - 46' = 227'

TOTAL DROP GRANITE CURB = 0'
 TOTAL CONCRETE CURB = 91'
 TOTAL FULL HEIGHT GRANITE CURB = 91' - 91' - 0' = 0'

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

GRANITE CURB RESETTING PLAN
STA. 140+50 TO STA. 145+50

EAST 105TH STREET



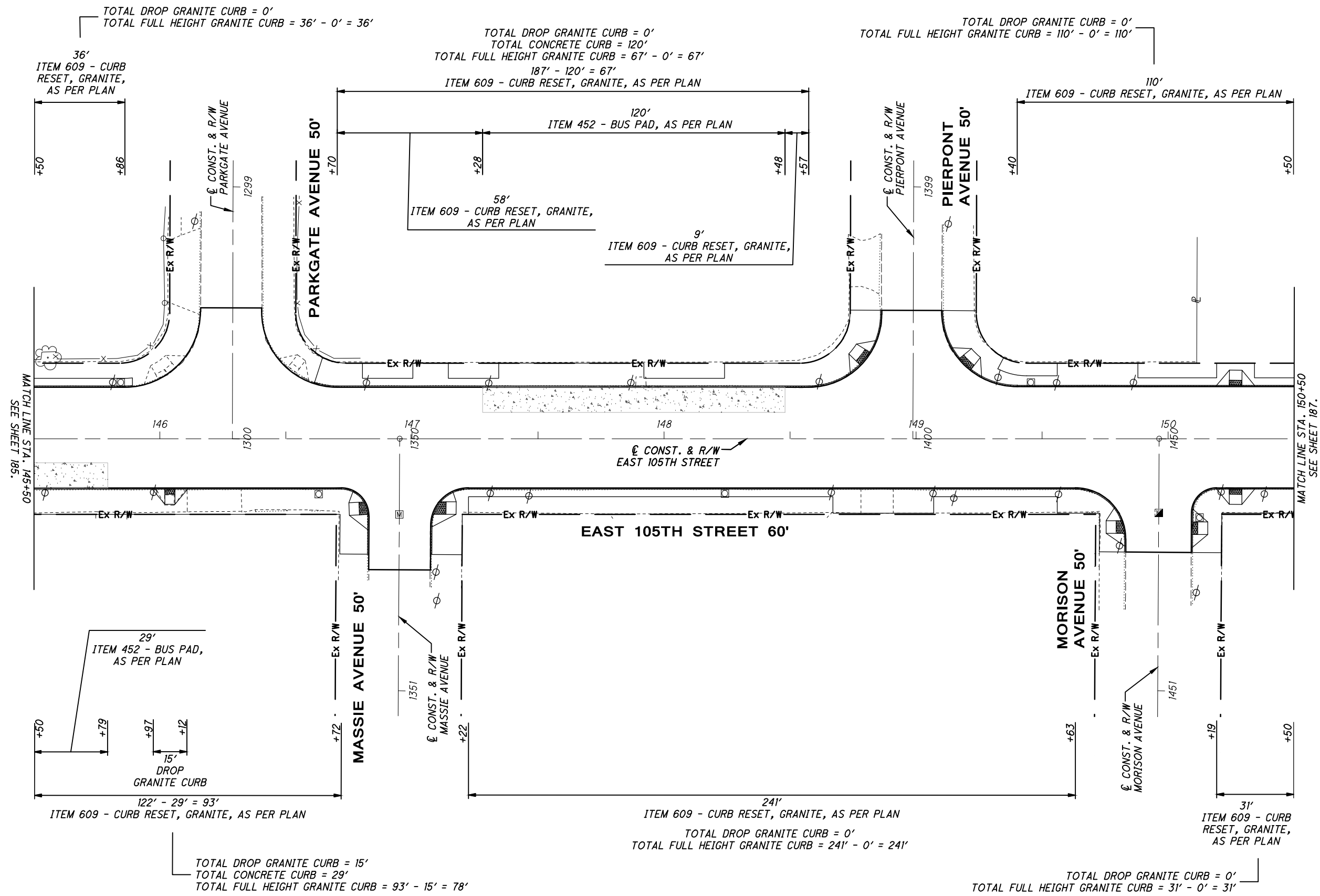
0 20 40
 TO HORIZONTAL
 SCALE IN FEET

CALCULATED
 MGW
 CHECKED
 JTS

GRANITE CURB RESETTING PLAN
STA. 145+50 TO STA. 150+50

EAST 105TH STREET

186
 243



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

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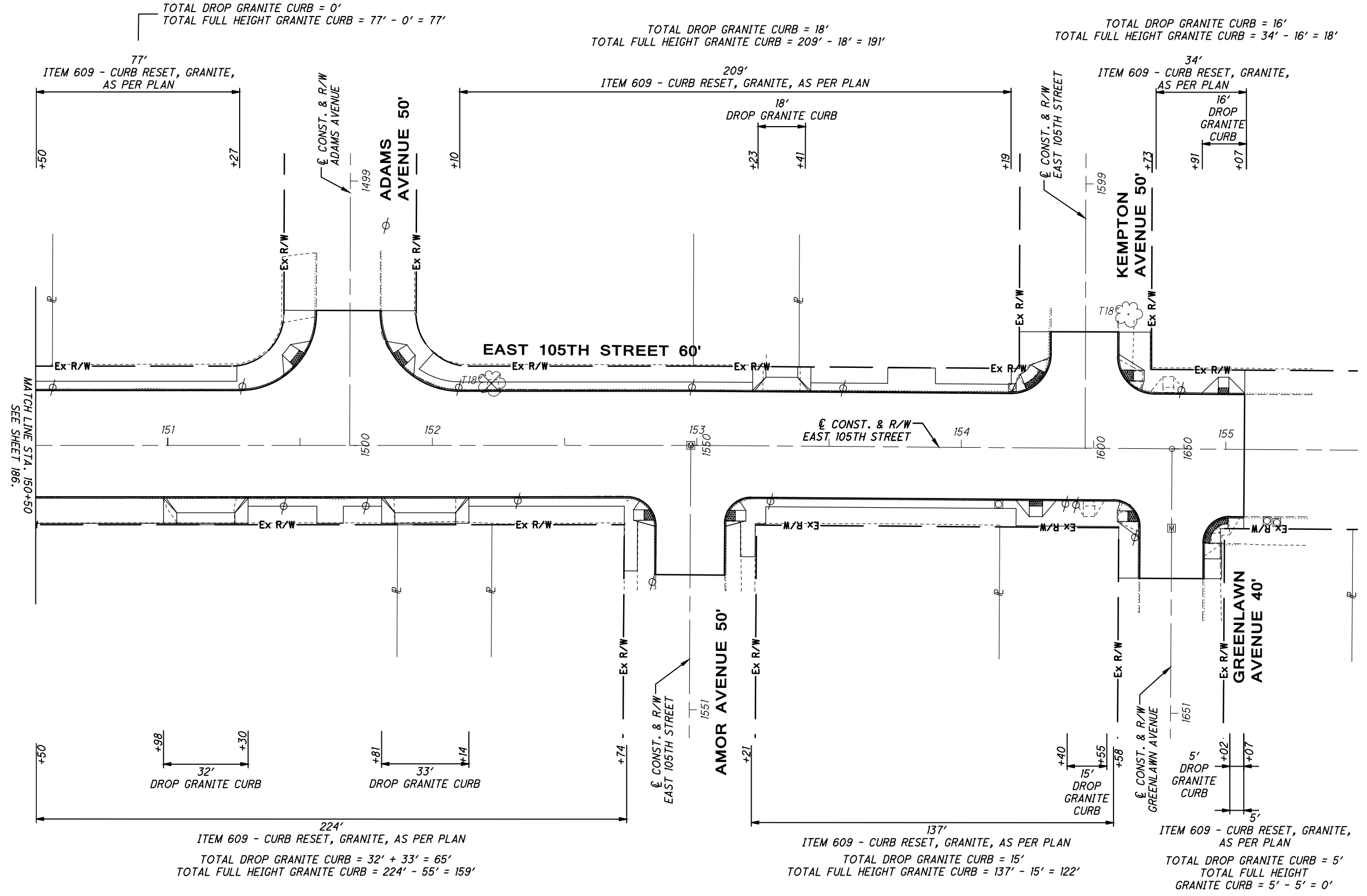


CALCULATED
MGW
CHECKED
JTS

GRANITE CURB RESETTING PLAN
STA. 150+50 TO END

EAST 105TH STREET

187
243



MATCH LINE STA. 150+50
SEE SHEET 186.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
97 - 103	PAVEMENT ELEVATION TABLE
171	GRANITE CURB RESETTING NOTES AND DETAILS
172	EXISTING GRANITE CURB SUBSUMMARY
180	GRANITE CURB RESETTING SUBSUMMARY
181 - 187	GRANITE CURB RESETTING PLAN

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644
			EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID		BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING		
			FROM	TO		MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH
EW	210	EAST 105TH STREET	101+91	107+10	LT	0.10															
EW	210	EAST 105TH STREET	103+01	105+50	RT	0.05															
EW	210	EAST 105TH STREET	110+60	118+06	LT	0.14															
EW	210	EAST 105TH STREET	111+70	112+94	RT	0.04															
EW	210	EAST 105TH STREET	114+49	117+60	RT	0.06															
EW	211	EAST 105TH STREET	118+51	119+60	LT	0.02															
EW	211	EAST 105TH STREET	123+70	127+45	LT	0.07															
EW	211	EAST 105TH STREET	124+93	127+67	RT	0.05															
EW	211	EAST 105TH STREET	127+95	129+98	LT	0.04															
EW	211	EAST 105TH STREET	128+13	129+95	RT	0.03															
EW	211	EAST 105TH STREET	130+73	134+28	RT	0.07															
EW	211	EAST 105TH STREET	130+79	132+42	LT	0.04															
EW	211	EAST 105TH STREET	133+46	135+43	LT	0.04															
EW	211	EAST 105TH STREET	134+71	136+59	RT	0.04															
EW	211	EAST 105TH STREET	136+37	138+49	LT	0.04															
EW	211	EAST 105TH STREET	137+63	140+29	RT	0.05															
EW	212	EAST 105TH STREET	138+93	140+29	LT	0.03															
EW	212	EAST 105TH STREET	141+20	143+56	RT	0.04															
EW	212	EAST 105TH STREET	141+22	143+17	LT	0.04															
EW	212	EAST 105TH STREET	143+98	145+91	LT	0.04															
EW	212	EAST 105TH STREET	144+59	146+72	RT	0.04															
EW	212	EAST 105TH STREET	146+70	148+57	LT	0.04															
EW	212	EAST 105TH STREET	147+22	149+63	RT	0.05															
EW	212	EAST 105TH STREET	149+39	151+27	LT	0.04															
EW	212	EAST 105TH STREET	150+35	152+74	RT	0.05															
EW	212	EAST 105TH STREET	152+10	154+19	LT	0.04															
EW	212	EAST 105TH STREET	153+21	154+18	RT	0.02															
EW	212	EAST 105TH STREET	155+09	156+38	LT	0.02															
BL	210	EAST 105TH STREET	103+01	105+50	RT		0.05														
BL	210	EAST 105TH STREET	111+70	112+97	RT		0.02														
BL	210	EAST 105TH STREET	114+49	116+57	RT		0.04														
BL	211	EAST 105TH STREET	124+93	126+67	RT		0.03														
BL	211	EAST 105TH STREET	128+13	128+95	RT		0.02														
BL	211	EAST 105TH STREET	130+73	134+28	RT		0.07														
BL	211	EAST 105TH STREET	134+71	135+47	RT		0.01														
BL	166-167	EAST 105TH STREET	137+63	139+29	RT		0.03														
BL	212	EAST 105TH STREET	141+20	142+56	RT		0.03														
BL	212	EAST 105TH STREET	144+59	145+72	RT		0.02														
BL	212	EAST 105TH STREET	147+22	149+63	RT		0.05														
BL	212	EAST 105TH STREET	150+35	151+74	RT		0.03														
BLD6	210	EAST 105TH STREET	101+41	103+01	RT			0.03													
BLD6	210	EAST 105TH STREET	105+50	106+60	RT			0.02													
BLD6	210	EAST 105TH STREET	110+10	111+70	RT			0.03													
BLD6	210	EAST 105TH STREET	112+94	113+94	RT			0.02													
BLD6	165-166	EAST 105TH STREET	116+57	119+10	RT			0.05													
BLD6	211	EAST 105TH STREET	123+30	124+93	RT			0.03													
BLD6	211	EAST 105TH STREET	126+67	127+67	RT			0.02													
BLD6	211	EAST 105TH STREET	128+95	129+95	RT			0.02													
BLD6	211	EAST 105TH STREET	135+67	136+59	RT			0.02													
BLD6	212	EAST 105TH STREET	139+29	140+29	RT			0.02													
SUBTOTAL THIS SHEET (CARRIED TO SHEET 194)						1.30	0.39	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0

PAVEMENT MARKING SUBSUMMARY

EAST 105TH STREET

CALCULATED
MGW
CHECKED
JTS

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644
			FROM	TO		EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID	BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING
						MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH
BLD6	212	EAST 105TH STREET	142+56	143+56	RT			0.02													
BLD6	212	EAST 105TH STREET	145+72	146+72	RT			0.02													
BLD6	212	EAST 105TH STREET	151+74	152+74	RT			0.02													
BLD6	212	EAST 105TH STREET	153+21	154+17	RT			0.02													
CL	209	EAST 105TH STREET	89+06	90+50	LT				0.05												
CL	209	EAST BLVD	1698+14	1699+40	RT				0.02												
CL	209	EAST 105TH STREET	91+38	94+31	LT				0.07												
CL	209	EAST 105TH STREET	95+43	99+52	LT/RT				0.08												
CL	210	EAST 105TH STREET	100+46	107+91	LT/RT				0.20												
CL	210	EAST 105TH STREET	108+90	109+35	RT				0.01												
CL	210	EAST 105TH STREET	109+91	113+94	LT/RT				0.11												
CL	210	EAST 105TH STREET	114+49	117+57	CL				0.06												
CL	211	EAST 105TH STREET	118+48	120+59	LT/RT				0.06												
CL	211	EAST 105TH STREET	121+90	124+31	LT/RT				0.07												
CL	211	EAST 105TH STREET	124+93	127+45	CL				0.05												
CL	211	EAST 105TH STREET	128+13	129+95	CL				0.03												
CL	211	EAST 105TH STREET	130+79	132+42	CL				0.03												
CL	211	EAST 105TH STREET	133+46	134+28	CL				0.02												
CL	211	EAST 105TH STREET	134+71	135+45	CL				0.01												
CL	211	EAST 105TH STREET	136+37	136+59	CL				0.01												
CL	211	EAST 105TH STREET	137+63	138+49	CL				0.02												
CL	212	EAST 105TH STREET	138+93	140+29	CL				0.03												
CL	212	EAST 105TH STREET	141+21	143+17	CL				0.04												
CL	212	EAST 105TH STREET	144+59	145+91	CL				0.02												
CL	212	EAST 105TH STREET	147+22	148+57	CL				0.03												
CL	212	EAST 105TH STREET	150+35	151+27	CL				0.02												
CL	212	EAST 105TH STREET	152+10	152+74	CL				0.01												
CL	212	EAST 105TH STREET	153+21	154+18	CL				0.02												
CL	212	EAST 105TH STREET	155+09	156+42	CL				0.03												
CLD	209	EAST BLVD	1697+61	1698+14	RT					0.01											
CLD	210	EAST 105TH STREET	109+35	109+91	RT					0.01											
CLD	210	EAST 105TH STREET	117+57	118+48	LT/RT					0.03											
CLD	211	EAST 105TH STREET	124+46	124+93	LT/RT					0.02											
CLD	211	EAST 105TH STREET	135+65	136+37	CL					0.01											
CLD	211	EAST 105TH STREET	136+59	137+63	CL					0.02											
CLD	212	EAST 105TH STREET	140+29	141+07	CL					0.01											
CLD	212	EAST 105TH STREET	143+17	144+59	CL					0.03											
CLD	212	EAST 105TH STREET	146+11	147+22	CL					0.02											
CLD	212	EAST 105TH STREET	148+57	150+19	CL					0.03											
CH	209	EAST 105TH STREET	91+38	94+31	RT						293										
CH	209	EAST 105TH STREET	95+43	97+00	LT						157										
CH	209	EAST 105TH STREET	97+50	99+52	RT						202										
CH	210	EAST 105TH STREET	100+46	101+41	LT						95										
CH	210	EAST 105TH STREET	107+10	107+91	RT						81										
CH	210	EAST 105TH STREET	108+90	110+10	LT						120										
CH	211	EAST 105TH STREET	119+60	120+79	RT						119										
CH	211	EAST 105TH STREET	121+70	123+20	LT						150										
CHD	209	EAST 105TH STREET	85+21	90+50	RT							529									
SL	209	EAST BLVD	1699+40		RT								16								
SUBTOTAL THIS SHEET (CARRIED TO SHEET 194)						0	0	0.08	1.10	0.19	1217	529	16	0	0	0	0	0	0	0	0

PAVEMENT MARKING SUBSUMMARY

EAST 105TH STREET

CALCULATED
MGW
CHECKED
JTS

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644																		
			EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID		BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	FROM	TO	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH		
SL	209	EAST 105TH STREET	94+31		RT																																		
SL	209	EAST 105TH STREET	95+43		LT																																		
SL	210	EAST 105TH STREET	99+52		RT																																		
SL	210	WADE PARK AVE	201+61		RT																																		
SL	210	WADE PARK AVE	202+39		LT																																		
SL	210	EAST 105TH STREET	100+46		LT																																		
SL	210	EAST 105TH STREET	107+91		RT																																		
SL	210	ASHBURY AVE	349+49		RT																																		
SL	210	ASHBURY AVE	350+46		LT																																		
SL	210	EAST 105TH STREET	108+90		LT																																		
SL	210	ORVILLE AVE	450+41		LT/RT																																		
SL	211	EAST 105TH STREET	120+59		LT/RT																																		
SL	211	EAST 105TH STREET	120+79		RT																																		
SL	211	SUPERIOR AVE	600+40		LT/RT																																		
SL	211	EAST 105TH STREET	121+70		LT																																		
SL	211	EAST 105TH STREET	121+90		LT/RT																																		
SL	211	OLIVET AVE	750+45		LT/RT																																		
SL	211	EAST 105TH STREET	129+95		RT																																		
SL	211	HAMPDEN AVE	799+57		LT/RT																																		
SL	211	EAST 105TH STREET	130+79		LT																																		
SL	211	TACOMA AVE	900+41		LT/RT																																		
SL	211	SOUTH BLVD	949+53		LT/RT																																		
SL	212	OSTEND AVE	1149+37		LT/RT																																		
SL	212	PASADENA AVE	1250+36		LT/RT																																		
SL	212	PARKGATE AVE	1299+63		LT/RT																																		
SL	212	MORISON AVE	1450+46		LT/RT																																		
SL	212	ADAMS AVE	1499+57		RT																																		
SL	212	EAST 105TH STREET	154+18		RT																																		
SL	212	KEMPTON AVE	1599+63		RT																																		
SL	212	GREENLAWN AVE	1650+44		LT/RT																																		
SL	212	EAST 105TH STREET	155+09		LT																																		
CW	209	EAST BLVD	1699+51		1699+62	LT/RT																																	
CW	209	EAST 105TH STREET	91+22		91+38	LT/RT																																	
CW	209	EAST 105TH STREET	94+41		94+53	LT/RT																																	
CW	209	EAST 105TH STREET	95+23		95+34	LT/RT																																	
CW	210	EAST 105TH STREET	99+61		99+70	LT/RT																																	
CW	210	WADE PARK AVE	201+66		201+75	LT/RT																																	
CW	210	WADE PARK AVE	202+24		202+34	LT/RT																																	
CW	210	EAST 105TH STREET	100+29		100+38	LT/RT																																	
CW	210	EAST 105TH STREET	107+97		108+20	LT/RT																																	
CW	210	ASHBURY AVE	349+50		349+70	LT/RT																																	
CW	210	ASHBURY AVE	350+28		350+42	LT/RT																																	
CW	210	EAST 105TH STREET	108+62		108+84	LT/RT																																	
CW	210	LEE AVE	400+28		400+38	LT/RT																																	
CW	210	EAST 105TH STREET	113+94		114+09	LT/RT																																	
CW	210	ORVILLE AVE	450+25		450+34	LT/RT																																	
CW	210	CHURCHILL AVE	500+19		500+29	LT/RT																																	
CW	211	CHURCHILL AVE	499+69		499+80	LT/RT																																	
CW	211	ROCKHURST AVE	549+69		549+79	LT/RT																																	
CW	211	ROCKHURST AVE	550+21		550+30	LT/RT																																	
SUBTOTAL THIS SHEET (CARRIED TO SHEET 194)						0	0	0	0	0	0	0	0	691	1441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED: MGW
 CHECKED: JTS
PAVEMENT MARKING SUBSUMMARY
EAST 105TH STREET
 190
 243

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	
			EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID		BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING			
			FROM	TO		MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH	
CW	211	EAST 105TH STREET	120+87	120+98	LT/RT																	
CW	211	SUPERIOR AVE	599+63	599+73	LT/RT																	
CW	211	SUPERIOR AVE	600+25	600+35	LT/RT																	
CW	211	EAST 105TH STREET	121+52	121+66	LT/RT																	
CW	211	TECUMSEH CT	650+20	650+31	LT/RT																	
CW	211	EAST 105TH STREET	124+31	124+46	LT/RT																	
CW	211	HATHAWAY AVE	700+21	700+34	LT/RT																	
CW	211	OLIVET AVE	749+64	749+73	LT/RT																	
CW	211	OLIVET AVE	750+27	750+40	LT/RT																	
CW	211	EAST 105TH STREET	129+95	130+14	LT/RT																	
CW	211	HAMPDEN AVE	799+63	799+73	LT/RT																	
CW	211	HAMPDEN AVE	800+21	800+36	LT/RT																	
CW	211	EAST 105TH STREET	130+56	130+73	LT/RT																	
CW	211	WESTCHESTER AVE	849+60	849+70	LT/RT																	
CW	211	TACOMA AVE	900+26	900+36	LT/RT																	
CW	211	EAST 105TH STREET	135+42	135+68	LT/RT																	
CW	211	SOUTH BLVD	949+59	949+72	LT/RT																	
CW	211	GRANTWOOD AVE	1000+40	1000+50	LT/RT																	
CW	212	NORTH BLVD	1049+70	1049+80	LT/RT																	
CW	212	DREXEL AVE	1100+31	1100+41	LT/RT																	
CW	212	OSTEND AVE	1149+42	1149+52	LT/RT																	
CW	212	EAST 105TH STREET	141+05	141+23	LT/RT																	
CW	212	SOMERSET AVE	1199+67	1199+78	LT/RT																	
CW	212	PASADENA AVE	1250+21	1250+32	LT/RT																	
CW	212	EAST 105TH STREET	145+91	146+11	LT/RT																	
CW	212	PARKGATE AVE	1299+68	1299+77	LT/RT																	
CW	212	MASSIE AVE	1350+23	1350+33	LT/RT																	
CW	212	PIERPOINT AVE	1399+63	1399+75	LT/RT																	
CW	212	MORISON AVE	1450+30	1450+40	LT/RT																	
CW	212	EAST 105TH STREET	150+19	150+35	LT/RT																	
CW	212	ADAMS AVE	1499+63	1499+73	LT/RT																	
CW	212	AMOR AVE	1550+21	1550+31	LT/RT																	
CW	212	EAST 105TH STREET	154+24	154+34	LT/RT																	
CW	212	KEMPTON AVE	1599+69	1599+79	LT/RT																	
CW	212	GREENLAWN AVE	1650+20	1650+38	LT/RT																	
CW	212	EAST 105TH STREET	154+94	155+04	LT/RT																	
CWL	209	EAST 105TH STREET	91+22	91+38	LT/RT																	176
CWL	210	EAST 105TH STREET	113+94	114+09	LT/RT																	155
CWL	211	EAST 105TH STREET	124+31	124+46	LT/RT																	150
CWL	211	EAST 105TH STREET	135+42	135+68	LT/RT																	240
CWL	212	EAST 105TH STREET	141+05	141+23	LT/RT																	160
CWL	212	EAST 105TH STREET	145+91	146+11	LT/RT																	220
CWL	212	EAST 105TH STREET	150+19	150+35	LT/RT																	150
TW	210	EAST 105TH STREET	101+91	103+01	LT																	37
TW	210	EAST 105TH STREET	105+50	107+10	LT																	43
TW	210	EAST 105TH STREET	110+60	111+71	LT																	37
TW	210	EAST 105TH STREET	113+74	114+49	LT																	66
TW	210	EAST 105TH STREET	117+40	118+06	LT																	73
TW	211	EAST 105TH STREET	118+51	119+60	LT																	54
SUBTOTAL THIS SHEET (CARRIED TO SHEET 194)						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PAVEMENT MARKING SUBSUMMARY

EAST 105TH STREET

CALCULATED
MGW
CHECKED
JTS

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644
			EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID		BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING		
			FROM	TO		MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH
TW	211	EAST 105TH STREET	123+70	124+80	LT											37					
TW	211	EAST 105TH STREET	127+25	127+45	LT											36					
TW	211	EAST 105TH STREET	127+95	128+15	LT											36					
TW	211	EAST 105TH STREET	129+75	129+95	LT											29					
TW	211	EAST 105TH STREET	130+79	131+07	LT											32					
TW	211	EAST 105TH STREET	132+22	132+42	LT											37					
TW	211	EAST 105TH STREET	133+46	133+66	LT											37					
TW	211	EAST 105TH STREET	135+22	135+42	LT											30					
TW	211	EAST 105TH STREET	136+37	136+57	LT											38					
TW	212	EAST 105TH STREET	138+29	138+49	LT											38					
TW	212	EAST 105TH STREET	138+93	139+13	LT											36					
TW	212	EAST 105TH STREET	140+09	140+29	LT											36					
TW	212	EAST 105TH STREET	141+23	141+52	LT											34					
TW	212	EAST 105TH STREET	142+67	143+17	LT											60					
TW	212	EAST 105TH STREET	143+98	144+18	LT											38					
TW	212	EAST 105TH STREET	145+70	145+91	LT											30					
TW	212	EAST 105TH STREET	146+70	146+90	LT											38					
TW	212	EAST 105TH STREET	148+37	148+57	LT											38					
TW	212	EAST 105TH STREET	149+39	150+64	LT											116					
TW	212	EAST 105TH STREET	151+07	151+27	LT											38					
TW	212	EAST 105TH STREET	152+10	152+30	LT											38					
TW	212	EAST 105TH STREET	153+21	154+18	RT											36					
TW	212	EAST 105TH STREET	153+99	154+19	LT											38					
TW	212	EAST 105TH STREET	155+09	156+38	LT											32					
TY	209	EAST 105TH STREET	89+06	90+50	LT															92	
TY	209	EAST 105TH STREET	91+38	92+15	LT															11	
TY	210	EAST 105TH STREET	101+41	103+01	LT/RT															55	
TY	210	EAST 105TH STREET	105+50	107+10	LT/RT															65	
TY	210	EAST 105TH STREET	110+10	111+70	LT/RT															46	
TY	211	EAST 105TH STREET	118+50	119+60	LT/RT															38	
TY	211	EAST 105TH STREET	123+20	124+31	LT/RT															27	
IY	209	EAST 105TH STREET	90+50		LT															57	
IY	211	EAST 105TH STREET	118+50		LT/RT															9	
A	209	EAST 105TH STREET	91+71		CL																1
A	209	EAST 105TH STREET	92+31		CL																1
A	209	EAST 105TH STREET	92+91		CL																1
A	209	EAST 105TH STREET	93+51		CL																1
A	209	EAST 105TH STREET	94+11		CL																1
A	209	EAST 105TH STREET	95+62		CL																1
A	209	EAST 105TH STREET	96+12		CL																1
A	209	EAST 105TH STREET	96+62		CL																1
A	209	EAST 105TH STREET	97+83		CL																1
A	210	EAST 105TH STREET	98+33		CL																1
A	210	EAST 105TH STREET	98+83		CL																1
A	210	EAST 105TH STREET	99+33		CL																1
A	210	EAST 105TH STREET	100+65		CL																1
A	210	EAST 105TH STREET	101+25		CL																1
A	210	EAST 105TH STREET	107+20		CL																1
A	210	EAST 105TH STREET	107+80		CL																1
SUBTOTAL THIS SHEET (CARRIED TO SHEET 194)						0	0	0	0	0	0	0	0	0	0	958	333	66	16	0	0

CALCULATED MGW	CHECKED JTS	PAVEMENT MARKING SUBSUMMARY	EAST 105TH STREET	192
				243

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REF. NO.	SHEET NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644																	
			EDGE LINE, 4"	BIKE LANE LINE, 4", SOLID		BIKE LANE LINE, 4", DOTTED	CENTER LINE, SOLID DOUBLE	CENTER LINE, DOTTED	CHANNELIZING LINE, 8"	CHANNELIZING LINE, 8", DOTTED	STOP LINE	CROSSWALK LINE	CROSSWALK LINE, LADDER STYLE	TRANSVERSE/DIAGONAL LINE, WHITE	TRANSVERSE/DIAGONAL LINE, YELLOW	ISLAND MARKING	LANE ARROW	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH			
			FROM	TO																																		
211		EAST 105TH STREET	129+85		LT																														1			
211		EAST 105TH STREET	132+33		LT																														1			
211		EAST 105TH STREET	134+19		LT																														1			
211		EAST 105TH STREET	135+23		LT																														1			
211		EAST 105TH STREET	136+50		LT																														1			
212		EAST 105TH STREET	138+39		LT																														1			
212		EAST 105TH STREET	140+20		LT																														1			
212		EAST 105TH STREET	143+08		LT																														1			
212		EAST 105TH STREET	145+77		LT																														1			
212		EAST 105TH STREET	148+48		LT																														1			
212		EAST 105TH STREET	149+54		LT																														1			
212		EAST 105TH STREET	151+18		LT																														1			
212		EAST 105TH STREET	152+50		RT																														1			
212		EAST 105TH STREET	152+64		LT																														1			
212		EAST 105TH STREET	153+50		RT																														1			
212		EAST 105TH STREET	154+09		LT																														1			
SUBTOTALS THIS SHEET						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16		
SUBTOTALS SHEET 188						1.30	0.39	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUBTOTALS SHEET 189						0	0	0.08	1.10	0.19	1217	529	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTALS SHEET 190						0	0	0	0	0	0	0	0	691	1441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTALS SHEET 191						0	0	0	0	0	0	0	0	0	2643	1252	310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTALS SHEET 192						0	0	0	0	0	0	0	0	0	0	0	958	333	66	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTALS SHEET 193						0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	15	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS CARRIED TO GENERAL SUMMARY						1.30	0.39	0.34	1.10	0.19	1217	529	707	4084	1252	1268	333	66	24	15	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

CALCULATED	MGW
	CHECKED
JTS	

PAVEMENT MARKING SUBSUMMARY

EAST 105TH STREET

194
243

C:\pwworkingmp\pw\42715858\301519GS001.dwg 08-May-19 12:42 PM

REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW	CHECKED JTS	
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH			EACH
R-1	205	EAST 105TH STREET	88+96		RT											1		1						
R-2	205	EAST 105TH STREET	88+99		LT											1		1						
R-3	205	EAST 105TH STREET	89+17		LT											2		1						
R-4	205	EAST 105TH STREET	88+79		LT											2		1						
R-5	205	EAST 105TH STREET	89+98		RT														1					
R-6	205	EAST 105TH STREET	90+30		LT															2				
R-7	205	EAST 105TH STREET	90+35		LT											2		1						
R-8	205	EAST 105TH STREET	91+16		LT															1				
R-9	205	EAST 105TH STREET	91+29		LT											2		1						
R-10	205	EAST 105TH STREET	91+41		LT											4		1						
R-11	205	EAST 105TH STREET	92+22		RT															1				
R-12	205	EAST 105TH STREET	95+33		LT															1				
R-13	205	EAST 105TH STREET	95+48		RT															1				
R-14	205	EAST 105TH STREET	95+61		LT												1	1						
R-15	205	EAST 105TH STREET	96+20		LT															2				
R-16	205	EAST 105TH STREET	96+28		RT															1	1			
R-17	205	EAST 105TH STREET	97+90		LT											2		1						
R-18	205	EAST 105TH STREET	98+14		RT															2				
R-19	205	EAST 105TH STREET	99+00		RT															1				
R-20	205	EAST 105TH STREET	99+05		LT															1				
R-21	205	EAST 105TH STREET	99+51		RT																1			
R-22	205	EAST 105TH STREET	99+77		RT															2				
R-23	205	EAST 105TH STREET	99+79		LT															1				
R-24	205	EAST 105TH STREET	100+24		LT															2				
R-25	205	EAST 105TH STREET	100+24		RT															1				
R-26	205	EAST 105TH STREET	100+52		LT																1			
R-27	205	EAST 105TH STREET	100+59		RT												1	1			2			
R-28	205	EAST 105TH STREET	100+84		LT																1			
R-29	205	EAST 105TH STREET	101+52		LT																2			
R-30	205	EAST 105TH STREET	102+09		RT																2			
R-31	205	EAST 105TH STREET	102+68		LT																1			
R-32	205	EAST 105TH STREET	103+07		RT																1			
R-33	205	EAST 105TH STREET	104+08		RT																1			
R-34	205	EAST 105TH STREET	105+03		LT																1			
R-35	205	EAST 105TH STREET	105+56		LT																1			
R-36	205	EAST 105TH STREET	106+17		RT																1			
R-37	205	EAST 105TH STREET	107+05		LT																2			
R-38	205	EAST 105TH STREET	107+07		RT																2			
R-39	205	EAST 105TH STREET	107+72		RT																1			
R-40	205	EAST 105TH STREET	107+93		RT																1			
R-41	205	EAST 105TH STREET	107+98		RT																1			
R-42	206	EAST 105TH STREET	108+24		LT																3			
R-43	206	EAST 105TH STREET	108+42		RT																2			
R-44	206	EAST 105TH STREET	108+44		LT																2			
R-45	206	EAST 105TH STREET	108+74		RT																1			
R-46	206	EAST 105TH STREET	108+89		LT																1			
R-47	206	EAST 105TH STREET	109+30		LT												1	1						
R-48	206	EAST 105TH STREET	109+32		RT																4			
R-49	206	EAST 105TH STREET	110+03		RT																1			
R-50	206	EAST 105TH STREET	110+10		LT																3			
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	0	0	0	0	0	0	16	4	12	56	2	0	0	195	243

SIGNING SUBSUMMARY

EAST 105TH STREET

C:\pwworkingmp\pw\42715858\301519GS001.dwg 08-May-19 12:42 PM

REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW	CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
R-51	206	EAST 105TH STREET	111+04		RT															1			
R-52	206	EAST 105TH STREET	113+93		RT															2			
R-53	206	EAST 105TH STREET	114+05		RT																		
R-54	206	EAST 105TH STREET	114+45		RT															1			
R-55	206	EAST 105TH STREET	114+85		LT															1	1		
R-56	206	EAST 105TH STREET	115+04		RT																		
R-57	206	EAST 105TH STREET	115+19		RT															1	1		
R-58	206	EAST 105TH STREET	116+17		LT																1		
R-59	206	EAST 105TH STREET	117+03		RT																1		
R-60	206	EAST 105TH STREET	117+67		RT															1	1		
R-61	206	EAST 105TH STREET	117+94		LT																2		
R-62	206	EAST 105TH STREET	117+99		RT																1		
R-63	206	EAST 105TH STREET	118+10		RT																2		
R-64	206	EAST 105TH STREET	118+12		LT																		
R-65	206	EAST 105TH STREET	119+11		LT																2		
R-66	206	EAST 105TH STREET	119+12		RT																2		
R-67	206	EAST 105TH STREET	119+68		RT																1		
R-68	206	EAST 105TH STREET	120+40		LT																1		
R-69	206	EAST 105TH STREET	120+48		RT																1		
R-70	206	EAST 105TH STREET	120+78		RT																1	1	
R-71	206	EAST 105TH STREET	120+98		RT																2		
R-72	206	EAST 105TH STREET	121+64		LT																2		
R-73	206	EAST 105TH STREET	122+00		RT																1		
R-74	206	EAST 105TH STREET	122+08		LT																1	1	
R-75	206	EAST 105TH STREET	122+87		LT																1		
R-76	206	EAST 105TH STREET	123+36		RT																3		
R-77	206	EAST 105TH STREET	123+81		LT																2		
R-78	206	EAST 105TH STREET	124+36		RT																5	1	
R-79	206	EAST 105TH STREET	124+58		LT																2	1	
R-80	206	EAST 105TH STREET	124+58		RT																2		
R-81	206	EAST 105TH STREET	124+70		LT																2		
R-82	206	EAST 105TH STREET	124+92		RT																4		
R-83	206	EAST 105TH STREET	125+40		LT																1		
R-84	206	EAST 105TH STREET	126+36		LT																1		
R-85	206	EAST 105TH STREET	126+40		RT																1		
R-86	206	EAST 105TH STREET	127+39		LT																1		
R-87	206	EAST 105TH STREET	127+64		RT																4		
R-88	206	EAST 105TH STREET	127+92		LT																1		
R-89	206	EAST 105TH STREET	127+94		LT																3		
R-90	207	EAST 105TH STREET	128+04		RT																4	1	
R-91	207	EAST 105TH STREET	128+67		LT																1		
R-92	207	EAST 105TH STREET	129+06		RT																1		
R-93	207	EAST 105TH STREET	129+99		RT																1	1	
R-94	207	EAST 105TH STREET	130+17		RT																5		
R-95	207	EAST 105TH STREET	130+19		LT																1	1	
R-96	207	EAST 105TH STREET	130+57		LT																2		
R-97	207	EAST 105TH STREET	130+61		LT																3		
R-98	207	EAST 105TH STREET	130+78		LT																1	1	
R-99	207	EAST 105TH STREET	131+30		LT																2		
R-100	207	EAST 105TH STREET	132+44		LT																4		
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	0	0	0	0	0	0	17	5	13	72	1	0	0	

SIGNING SUBSUMMARY

EAST 105TH STREET

C:\pwworkingmp\pw\42715858\301519GS001.dwg 08-May-19 12:42 PM

REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW	CHECKED JTS	
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH			EACH
R-101	207	EAST 105TH STREET	133+86		RT											1		1						
R-102	207	EAST 105TH STREET	134+28		RT														4					
R-103	207	EAST 105TH STREET	134+63		LT														1					
R-104	207	EAST 105TH STREET	134+63		RT											3		1						
R-105	207	EAST 105TH STREET	134+72		RT											3		1						
R-106	207	EAST 105TH STREET	135+31		LT															4				
R-107	207	EAST 105TH STREET	135+35		RT													1	1					
R-108	207	EAST 105TH STREET	135+70		RT															1				
R-109	207	EAST 105TH STREET	136+07		LT															3				
R-110	207	EAST 105TH STREET	136+34		LT															2				
R-111	207	EAST 105TH STREET	136+65		RT															2				
R-112	207	EAST 105TH STREET	136+81		RT															2				
R-113	207	EAST 105TH STREET	138+19		RT															1				
R-114	207	EAST 105TH STREET	138+43		LT															4				
R-115	207	EAST 105TH STREET	139+75		RT															1				
R-116	207	EAST 105TH STREET	139+82		RT															1				
R-117	207	EAST 105TH STREET	140+27		RT											2		1						
R-118	207	EAST 105TH STREET	140+37		LT															2				
R-119	207	EAST 105TH STREET	140+45		LT															5				
R-120	207	EAST 105TH STREET	140+72		RT											3		1						
R-121	207	EAST 105TH STREET	140+74		LT											1		1						
R-122	207	EAST 105TH STREET	141+05		LT											1		1						
R-123	207	EAST 105TH STREET	141+21		RT															4				
R-124	207	EAST 105TH STREET	141+26		LT															3				
R-125	207	EAST 105TH STREET	141+45		LT													1	1					
R-126	207	EAST 105TH STREET	141+90		RT															1				
R-127	207	EAST 105TH STREET	142+45		LT															2				
R-128	207	EAST 105TH STREET	142+66		RT															1				
R-129	207	EAST 105TH STREET	143+15		LT															2				
R-130	207	EAST 105TH STREET	143+20		LT															3				
R-131	207	EAST 105TH STREET	143+43		RT											1		1						
R-132	207	EAST 105TH STREET	143+75		LT															3				
R-133	207	EAST 105TH STREET	144+25		RT											2		1						
R-134	207	EAST 105TH STREET	144+33		RT															4				
R-135	207	EAST 105TH STREET	144+48		RT															2				
R-136	207	EAST 105TH STREET	145+15		LT															1				
R-137	207	EAST 105TH STREET	145+55		RT															2	1			
R-138	207	EAST 105TH STREET	146+13		LT											2		1						
R-139	207	EAST 105TH STREET	146+49		LT											4		1						
R-140	207	EAST 105TH STREET	146+63		RT															1				
R-141	207	EAST 105TH STREET	146+82		LT															1				
R-142	207	EAST 105TH STREET	147+10		RT															1				
R-143	207	EAST 105TH STREET	147+30		LT															3				
R-144	207	EAST 105TH STREET	147+31		RT															6				
R-145	207	EAST 105TH STREET	147+46		LT													1	1					
R-146	208	EAST 105TH STREET	148+62		LT															5				
R-147	208	EAST 105TH STREET	148+66		RT															2				
R-148	208	EAST 105TH STREET	149+33		LT															2				
R-149	208	EAST 105TH STREET	149+79		RT											1		1						
R-150	208	EAST 105TH STREET	149+81		RT															1				
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	0	0	0	0	0	0	24	3	15	83	1	0	0	197	243

SIGNING SUBSUMMARY

EAST 105TH STREET

C:\pwworkingmp\pw\42715858\301519GS001.dwg 08-May-19 12:42 PM

REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW	CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
R-151	208	EAST 105TH STREET	150+12		RT															2			
R-152	208	EAST 105TH STREET	150+21		RT															2			
R-153	208	EAST 105TH STREET	150+38		RT															2			
R-154	208	EAST 105TH STREET	151+28		LT															2			
R-155	208	EAST 105TH STREET	151+52		LT											2		1					
R-156	208	EAST 105TH STREET	151+75		RT															2			
R-157	208	EAST 105TH STREET	152+10		LT															2			
R-158	208	EAST 105TH STREET	152+32		RT															1			
R-159	208	EAST 105TH STREET	153+13		RT											1		1					
R-160	208	EAST 105TH STREET	153+28		RT															5			
R-161	208	EAST 105TH STREET	153+55		LT															1			
R-162	208	EAST 105TH STREET	154+19		LT															2			
R-163	208	EAST 105TH STREET	155+44		RT															1			
R-164	208	EAST 105TH STREET	154+66		RT															3			
R-165	208	EAST 105TH STREET	154+83		LT															3			
R-166	208	EAST 105TH STREET	155+09		LT													1	1				
R-167	208	EAST 105TH STREET	155+16		RT															5			
	213	EAST 105TH STREET	88+95	R3-H8cg	LT	48"	X	30"					1	10.0									
	213	EAST 105TH STREET	88+95	R7-1	RT	12"	X	18"					1	1.5									
	213	EAST 105TH STREET	89+18	R2-1	LT	24"	X	30"		14.5				5.0									
				R7-1	LT	12"	X	18"						1.5									
	213	EAST 105TH STREET	90+23	R2-1	RT	24"	X	30"					1	5.0									
	213	EAST BOULEVARD	1697+75	R7-1	LT	12"	X	18"		12.0				1.5									
	213	EAST BOULEVARD	1698+40	W11-1	LT	30"	X	30"		15.0				6.3									
				W16-1P	LT	18"	X	24"						3.0									
	213	EAST BOULEVARD	1699+39	R1-1	RT	36"	X	36"		15.0		1		9.0									
				R7-1	RT	12"	X	18"						1.5									
	213	EAST BOULEVARD	1699+40	R5-4	LT	24"	X	30"		14.5				5.0									
				R7-1	LT	12"	X	18"						1.5									
	213	EAST BOULEVARD	1699+46	D3-1	RT	36"	X	10"		12.5					1								
				D3-1	RT	36"	X	10"						1									
	213	EAST 105TH STREET	91+42	R7-1	RT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	91+47	R7-1	LT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	92+15	R4-H11	RT	24"	X	30"		13.0				5.0									
	213	EAST 105TH STREET	93+05	R3-7	RT	30"	X	30"		14.5				6.3									
				R7-1	RT	12"	X	18"						1.5									
	213	EAST 105TH STREET	93+95	R3-7	RT	30"	X	30"		13.0				6.3									
	213	EAST 105TH STREET	94+20	R7-1	RT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	94+31	R7-1	LT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	95+43	R7-107	RT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	95+54	R7-107	LT	12"	X	18"		12.0				1.5									
	213	EAST 105TH STREET	95+61	RTA	LT					12.0													
	213	EAST 105TH STREET	96+28	RTA	RT								1										
	213	EAST 105TH STREET	96+63	R7-107	RT	12"	X	18"		12.0				1.5									
				R7-1	RT	12"	X	18"						1.5									
	213	EAST 105TH STREET	96+70	R7-107	LT	12"	X	18"		12.0				1.5									
				R7-1	LT	12"	X	18"						1.5									
	213	EAST 105TH STREET	97+00	R3-H8bh	RT	36"	X	30"		13.0				7.5									
	213	EAST 105TH STREET	97+30	R2-1	LT	24"	X	30"					1	5.0									
	213	EAST 105TH STREET	97+50	R3-H8bh	LT	36"	X	30"		13.0				7.5									
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	258.0	0	1	5	104.9	2	3	1	3	33	0	0	0	

SIGNING SUBSUMMARY

EAST 105TH STREET

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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
214		EAST 105TH STREET	98+32	R7-107	RT	12"	X	18"															
				R7-1	RT	12"	X	18"															
214		EAST 105TH STREET	99+41	R7-107	RT	12"	X	18"		12.0													
214		EAST 105TH STREET	99+51	RTA	RT								1										
214		EAST 105TH STREET	99+51	R7-1	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	99+79	R7-1 MOD	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	100+24	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	100+52	RTA	LT					12.0													
214		EAST 105TH STREET	100+59	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	100+84	R7-107	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	101+52	R7-107	LT	12"	X	18"					1	1.5									
				R7-1	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	101+91	R3-H8bh	LT	36"	X	30"		13.0				7.5									
214		EAST 105TH STREET	102+09	R2-1	RT	24"	X	30"					1	5.0									
214		EAST 105TH STREET	103+04	R7-1	LT	12"	X	18"		13.5				1.5									
				R7-5	LT	12"	X	18"						1.5									
214		EAST 105TH STREET	103+07	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	105+07	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	105+56	R7-1	LT	12"	X	18"					1	1.5									
				R7-5	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	106+60	R3-H8bh	RT	36"	X	30"		13.0				7.5									
214		EAST 105TH STREET	106+77	R7-107	RT	12"	X	18"		13.5				1.5									
				R7-1	RT	12"	X	18"						1.5									
214		EAST 105TH STREET	107+05	R2-1	LT	24"	X	30"					1	5.0									
				R7-1	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	107+72	RTA	RT					12.0													
214		EAST 105TH STREET	107+93	R7-107	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	107+98	R5-4	RT	24"	X	30"					1	5.0									
214		EAST 105TH STREET	108+44	R12-1	LT	24"	X	30"					1	5.0									
				R7-1	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	108+74	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	108+89	RTA	LT					12.0													
214		EAST 105TH STREET	109+30	R7-107	LT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	109+32	R6-1	RT	36"	X	12"					1	3.0									
				R6-1	RT	36"	X	12"					1	3.0									
				D3-1	RT	36"	X	10"					1	2.5	1								
				D3-1	RT	36"	X	10"					1	2.5	1								
				R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	110+03	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	110+60	R3-H8bh	LT	36"	X	30"		16.0				7.5									
				R7-107	LT	12"	X	18"						1.5									
				R7-1	LT	12"	X	18"						1.5									
214		EAST 105TH STREET	111+04	R2-1	RT	24"	X	30"					1	5.0									
214		EAST 105TH STREET	111+70	R7-1	LT	12"	X	18"		12.0				1.5									
214		EAST 105TH STREET	111+89	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	112+93	R7-1	RT	12"	X	18"					1	1.5									
214		EAST 105TH STREET	113+74	R7-1	LT	12"	X	18"		12.0				1.5									
214		EAST 105TH STREET	113+93	R7-1	RT	12"	X	18"					1	1.5									
				W11-2	RT	30"	X	30"					1	6.3									
				W16-7P	RT	24"	X	12"					1	2.0									
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	154.5	0	0	33	114.8	2	0	0	0	0	0	0	0	

SIGNING SUBSUMMARY

EAST 105TH STREET

C:\pwworkingmp\pww\42715858\301519GS001.dwg_08-May-19 12:42 PM

REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
	214	ORVILLE AVENUE	450+41	R5-1	LT	30"	X	30"				1		6.3								
				R1-1	LT	36"	X	36"				1		9.0								
				R6-1	LT	36"	X	12"			17.0			3.0								
				R6-1	LT	36"	X	12"						3.0								
	214	EAST 105TH STREET	114+10	W11-2	LT	30"	X	30"		14.0				6.3								
				W16-7P	LT	24"	X	12"						2.0								
	214	EAST 105TH STREET	114+45	D3-1	RT	36"	X	10"					1		1							
				D3-1	RT	36"	X	10"					1		1							
				R7-107	RT	12"	X	18"					1		1.5							
	214	EAST 105TH STREET	114+49	R7-1	LT	12"	X	18"		12.0				1.5								
	214	EAST 105TH STREET	115+04	RTA	RT					12.0												
	214	EAST 105TH STREET	115+19	R7-1	RT	12"	X	18"					1		1.5							
				R7-107	RT	12"	X	18"					1		1.5							
	214	EAST 105TH STREET	116+37	R7-1	RT	12"	X	18"					1		1.5							
	214	EAST 105TH STREET	117+03	R2-1	RT	24"	X	30"					1		5.0							
	214	EAST 105TH STREET	117+25	R7-1	RT	12"	X	18"					1		1.5							
	214	EAST 105TH STREET	117+40	R7-1	LT	12"	X	18"		12.0				1.5								
	214	EAST 105TH STREET	117+94	D3-1	LT	36"	X	10"					1			1						
				D3-1	LT	36"	X	10"					1			1						
	214	CHURCHILL AVENUE	500+38	R7-1	RT	12"	X	18"		12.0				1.5								
	214	CHURCHILL AVENUE	500+43	R1-1	LT	30"	X	30"		13.0		1		6.3								
	215	EAST 105TH STREET	118+10	R7-1	RT	12"	X	18"					1		1.5							
				D3-1	RT	36"	X	10"					1			1						
				D3-1	RT	36"	X	10"					1			1						
	215	CHURCHILL AVENUE	499+62	R1-1	RT	30"	X	30"		14.5		1		6.3								
				R7-1	RT	12"	X	18"						1.5								
	215	EAST 105TH STREET	119+11	R2-1	LT	24"	X	30"					1		5.0							
				R7-1	LT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	119+12	R7-203	RT	18"	X	24"					1		3.0							
				R3-H8bh	RT	36"	X	30"					1		7.5							
	215	EAST 105TH STREET	119+59	R7-107	RT	12"	X	18"		13.5				1.5								
				R7-1	RT	12"	X	18"						1.5								
	215	EAST 105TH STREET	120+00	R7-107	RT	12"	X	18"		14.0				1.5								
				D3-1	RT	36"	X	10"								1						
				D3-1	RT	36"	X	10"								1						
	215	EAST 105TH STREET	120+33	R7-1	LT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	120+71	R7-107	RT	12"	X	18"		12.0				1.5								
	215	EAST 105TH STREET	120+78	RTA	RT					12.0												
	215	EAST 105TH STREET	120+98	M3-2	RT	24"	X	12"					1		2.0							
				M1-4	RT	24"	X	24"					1		4.0							
	215	EAST 105TH STREET	121+97	R7-107	LT	12"	X	18"		12.0				1.5								
	215	EAST 105TH STREET	122+00	R7-1	RT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	122+08	RTA	LT					12.0												
	215	EAST 105TH STREET	122+95	R7-1	RT	12"	X	18"		12.0				1.5								
	215	EAST 105TH STREET	123+18	R7-107	LT	12"	X	18"		13.5				1.5								
				R7-1	LT	12"	X	18"						1.5								
	215	EAST 105TH STREET	123+36	D3-1	RT	36"	X	10"					1			1						
				D3-1	RT	36"	X	10"					1			1						
				R7-1	RT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	123+81	R3-H8bh	LT	36"	X	30"					1		7.5							
				R7-1	LT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	124+58	R7-1	RT	12"	X	18"					1		1.5							
	215	EAST 105TH STREET	124+80	R7-1	LT	12"	X	18"		12.0				1.5								
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	202.5	17.0	4	27	113.7	10	0	0	0	0	0	0	0

SIGNING SUBSUMMARY

EAST 105TH STREET

CALCULATED
MGW
CHECKED
JTS

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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
	215	EAST 105TH STREET	124+92	D3-1	RT	36"	X	10"					1		1								
				D3-1	RT	36"	X	10"					1		1								
				R6-1	RT	36"	X	12"					1	3.0									
				R6-1	RT	36"	X	12"					1	3.0									
				R7-1	RT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	126+40	R2-1	RT	24"	X	30"					1	5.0									
	215	EAST 105TH STREET		R7-1	RT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	127+25	R7-1	LT	12"	X	18"		12.0				1.5									
	215	EAST 105TH STREET	127+64	D3-1	RT	36"	X	10"					1		1								
				D3-1	RT	36"	X	10"					1		1								
				R7-1	RT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	127+92	D3-1	LT	36"	X	10"					1		1								
				D3-1	LT	36"	X	10"					1		1								
	215	OLIVET AVENUE	750+46	R5-1	LT	30"	X	30"		17.0	1		6.3										
				R1-1	LT	36"	X	36"			1		9.0										
				R6-1	LT	36"	X	12"					3.0										
				R6-1	LT	36"	X	12"					3.0										
	215	EAST 105TH STREET	128+13	R7-1	RT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	128+15	R7-1	LT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	128+88	R7-107	RT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	129+75	R7-1	LT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	129+99	RTA	RT					12.0													
	215	EAST 105TH STREET	130+17	D3-1	RT	36"	X	10"					1		1								
				D3-1	RT	36"	X	10"					1		1								
				R6-1	RT	36"	X	12"					1	3.0									
				R6-1	RT	36"	X	12"					1	3.0									
				R7-107	RT	12"	X	18"					1	1.5									
	215	HAMPDEN AVENUE	799+57	R5-1	RT	30"	X	30"		17.0	1		6.3										
				R1-1	RT	36"	X	36"			1		9.0										
				R6-1	RT	36"	X	12"					3.0										
				R6-1	RT	36"	X	12"					3.0										
	215	EAST 105TH STREET	130+61	D3-1	LT	36"	X	10"					1		1								
				D3-1	LT	36"	X	10"					1		1								
				R7-107	LT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	130+73	R7-1	RT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	130+78	RTA	LT					12.0													
	215	EAST 105TH STREET	131+30	R2-1	LT	24"	X	30"					1	5.0									
				R7-107	LT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	132+22	R7-1	LT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	132+44	D3-1	LT	36"	X	10"					1		1								
				D3-1	LT	36"	X	10"					1		1								
				R6-1	LT	36"	X	12"					1	3.0									
				R6-1	LT	36"	X	12"					1	3.0									
	215	EAST 105TH STREET	132+60	R7-1	RT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	133+61	R7-1	LT	12"	X	18"					1	1.5									
	215	EAST 105TH STREET	134+28	D3-1	RT	36"	X	10"					1		1								
				D3-1	RT	36"	X	10"					1		1								
				R6-1	RT	36"	X	12"					1	3.0									
				R6-1	RT	36"	X	12"					1	3.0									
				R7-1	RT	12"	X	18"					1	1.5									
	215	TACOMA AVENUE	900+42	R5-1	LT	30"	X	30"		15.0	1		6.3										
				R1-1	LT	36"	X	36"			1		9.0										
				R7-1	LT	12"	X	18"					1.5										
	215	EAST 105TH STREET	134+71	R7-107	RT	12"	X	18"		12.0			1.5										
	215	EAST 105TH STREET	135+22	R7-1	LT	12"	X	18"		12.0			1.5										
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	135.0	34.0	6	34	120.4	14	0	0	0	0	0	0	0	

SIGNING SUBSUMMARY

EAST 105TH STREET

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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW	CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
215		EAST 105TH STREET	135+31	D3-1	LT	36"	X	10"					1		1									
				D3-1	LT	36"	X	10"					1		1									
215		EAST 105TH STREET	135+35	RTA	RT					12.0														
215		SOUTH BOULEVARD	949+53	R5-1	RT	30"	X	30"			17.0		1		6.3									
				R1-1	RT	36"	X	36"					1		9.0									
				R6-1	RT	36"	X	12"							3.0									
				R6-1	RT	36"	X	12"							3.0									
215		EAST 105TH STREET	135+70	R7-107	RT	12"	X	18"					1		1.5									
215		EAST 105TH STREET	136+57	R7-1	LT	12"	X	18"		12.0					1.5									
215		EAST 105TH STREET	136+65	D3-1	RT	36"	X	10"					1		1									
				D3-1	RT	36"	X	10"					1		1									
				R6-1	RT	36"	X	12"					1		3.0									
				R6-1	RT	36"	X	12"					1		3.0									
				R7-1	RT	12"	X	18"					1		1.5									
215		EAST 105TH STREET	137+63	R7-1	RT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	138+19	R7-203	RT	18"	X	24"					1		3.0									
216		EAST 105TH STREET	138+32	R7-1	LT	12"	X	18"					1		1.5									
216		EAST 105TH STREET	138+43	D3-1	LT	36"	X	10"					1		1									
				D3-1	LT	36"	X	10"					1		1									
				R6-1	LT	36"	X	12"					1		3.0									
				R6-1	LT	36"	X	12"					1		3.0									
216		EAST 105TH STREET	139+11	R7-1	LT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	139+75	R7-1	RT	12"	X	18"					1		1.5									
216		EAST 105TH STREET	140+09	R7-1	LT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	140+45	D3-1	LT	36"	X	10"					1		1									
				D3-1	LT	36"	X	10"					1		1									
216		EAST 105TH STREET	140+72	D3-1	RT	36"	X	10"			16.0				1									
				D3-1	RT	36"	X	10"							1									
				R6-1	RT	36"	X	12"							3.0									
				R6-1	RT	36"	X	12"							3.0									
216		OSTEND AVENUE	1149+36	R5-1	RT	30"	X	30"			17.0		1		6.3									
				R1-1	RT	36"	X	36"					1		9.0									
				R6-1	RT	36"	X	12"							3.0									
				R6-1	RT	36"	X	12"							3.0									
216		EAST 105TH STREET	141+21	R7-1	RT	12"	X	18"					1		1.5									
216		EAST 105TH STREET	141+52	R7-1	LT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	141+90	R2-1	RT	24"	X	30"					1		5.0									
216		EAST 105TH STREET	142+67	R7-1	LT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	143+20	D3-1	LT	36"	X	10"					1		1									
				D3-1	LT	36"	X	10"					1		1									
				R6-1	LT	36"	X	12"					1		3.0									
				R6-1	LT	36"	X	12"					1		3.0									
216		EAST 105TH STREET	143+56	R7-1	RT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	144+18	R7-1	LT	12"	X	18"					1		1.5									
216		PASADENA AVENUE	1250+37	R5-1	LT	30"	X	30"			17.0		1		6.3									
				R1-1	LT	36"	X	36"					1		9.0									
				R6-1	LT	36"	X	12"							3.0									
				R6-1	LT	36"	X	12"							3.0									
216		EAST 105TH STREET	144+48	D3-1	RT	36"	X	10"					1		1									
				D3-1	RT	36"	X	10"					1		1									
216		EAST 105TH STREET	144+59	R7-107	RT	12"	X	18"		12.0					1.5									
216		EAST 105TH STREET	145+15	R2-1	LT	24"	X	30"					1		5.0									
216		EAST 105TH STREET	145+70	R7-1	LT	12"	X	18"		12.0					1.5									
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	120.0	67.0	6	27	123.4	14	0	0	0	0	0	0	0		

SIGNING SUBSUMMARY

EAST 105TH STREET

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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
	216	EAST 105TH STREET	145+79	R7-1	RT	12"	X	18"															
				R7-107	RT	12"	X	18"															
	216	EAST 105TH STREET	145+81	D3-1	LT	36"	X	10"					1		1								
				D3-1	LT	36"	X	10"					1		1								
	216	PARKGATE AVENUE	1299+62	R5-1	RT	30"	X	30"			18.5	1		6.3									
				R1-1	RT	36"	X	36"				1		9.0									
				R6-1	RT	36"	X	12"						3.0									
				R6-1	RT	36"	X	12"						3.0									
				R7-1	RT	12"	X	18"						1.5									
	216	EAST 105TH STREET	146+90	R7-1	LT	12"	X	18"		12.0				1.5									
	216	MASSIE AVENUE	1350+53	R7-1	LT	12"	X	18"					1	1.5									
	216	EAST 105TH STREET	147+30	R7-107	LT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	147+31	D3-1	RT	36"	X	10"						1		1							
				D3-1	RT	36"	X	10"						1		1							
				R6-1	RT	36"	X	12"						1	3.0								
				R6-1	RT	36"	X	12"						1	3.0								
				R7-1	RT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	148+62	D3-1	LT	36"	X	10"						1		1							
				D3-1	LT	36"	X	10"						1		1							
				R6-1	LT	36"	X	12"						1	3.0								
				R6-1	LT	36"	X	12"						1	3.0								
				R7-107	LT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	148+66	R2-1	RT	24"	X	30"						1	5.0								
	216	EAST 105TH STREET	149+33	R7-1	LT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	149+57	R7-1	RT	12"	X	18"						1	1.5								
	216	MORISON AVENUE	1450+43	R7-1	RT	12"	X	18"						1	1.5								
	216	MORISON AVENUE	1450+46	R5-1	LT	30"	X	30"			17.0	1		6.3									
				R1-1	LT	36"	X	36"				1		9.0									
				R6-1	LT	36"	X	12"						3.0									
				R6-1	LT	36"	X	12"						3.0									
	216	EAST 105TH STREET	150+21	D3-1	RT	36"	X	10"						1		1							
				D3-1	RT	36"	X	10"						1		1							
				W11-2	RT	30"	X	30"						1	6.3								
				W16-7P	RT	24"	X	12"						1	2.0								
	216	EAST 105TH STREET	150+35	W11-2	LT	30"	X	30"			14.0			6.3	1								
				W16-7P	LT	24"	X	12"						2.0									
	216	EAST 105TH STREET	150+38	R7-1	RT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	150+64	R7-1	LT	12"	X	18"		12.0				1.5									
	216	EAST 105TH STREET	151+07	R7-1	LT	12"	X	18"		12.0				1.5									
	216	EAST 105TH STREET	151+28	D3-1	LT	36"	X	10"						1		1							
				D3-1	LT	36"	X	10"						1		1							
	216	ADAMS AVENUE	1455+57	R1-1	RT	30"	X	30"		14.5		1		6.3									
				R7-1	RT	12"	X	18"						1.5									
	216	EAST 105TH STREET	152+30	R7-1	LT	12"	X	18"		12.0				1.5									
	216	EAST 105TH STREET	152+32	R7-1	RT	12"	X	18"						1	1.5								
	216	AMOR AVENUE	1550+52	R12-1	RT	24"	X	30"						1	5.0								
	216	EAST 105TH STREET	153+28	D3-1	RT	36"	X	10"						1		1							
				D3-1	RT	36"	X	10"						1		1							
				R6-1	RT	36"	X	12"						1	3.0								
				R6-1	RT	36"	X	12"						1	3.0								
				R7-1	RT	12"	X	18"						1	1.5								
	216	EAST 105TH STREET	153+99	R7-1	LT	12"	X	18"		12.0				1.5									
SUBTOTALS THIS SHEET (CARRIED TO SHEET 204)									0	102.0	35.5	5	32	122.0	13	0	0	0	0	0	0	0	

SIGNING SUBSUMMARY

EAST 105TH STREET

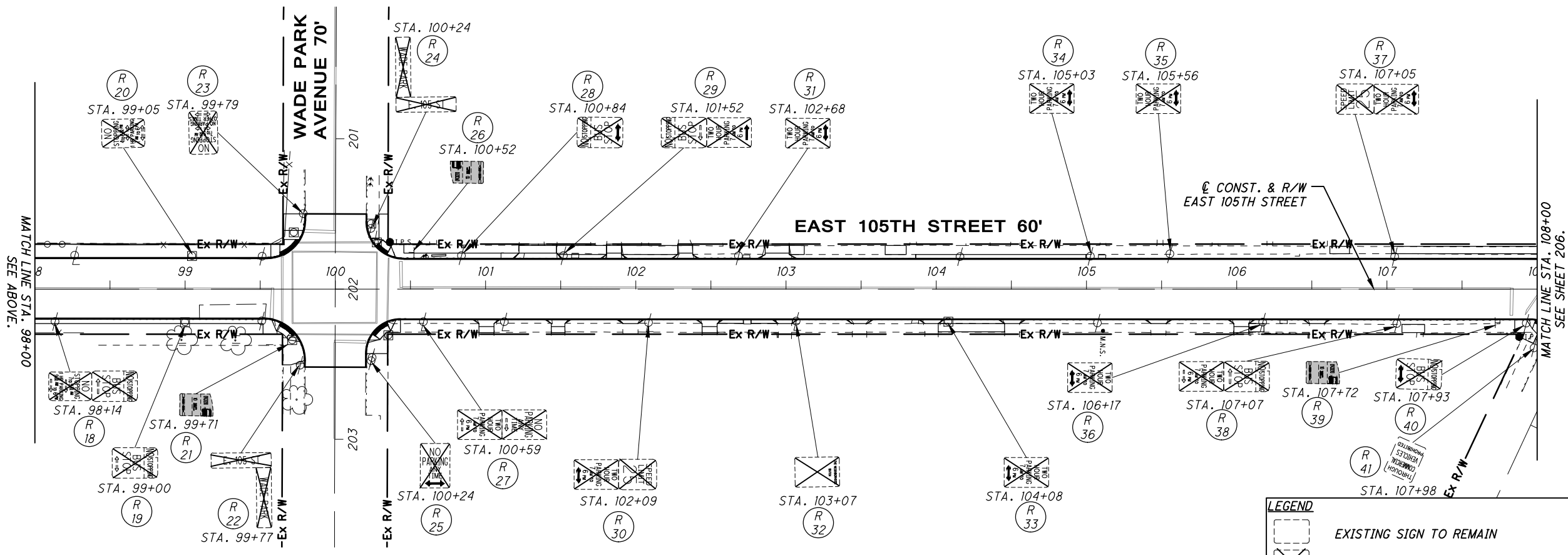
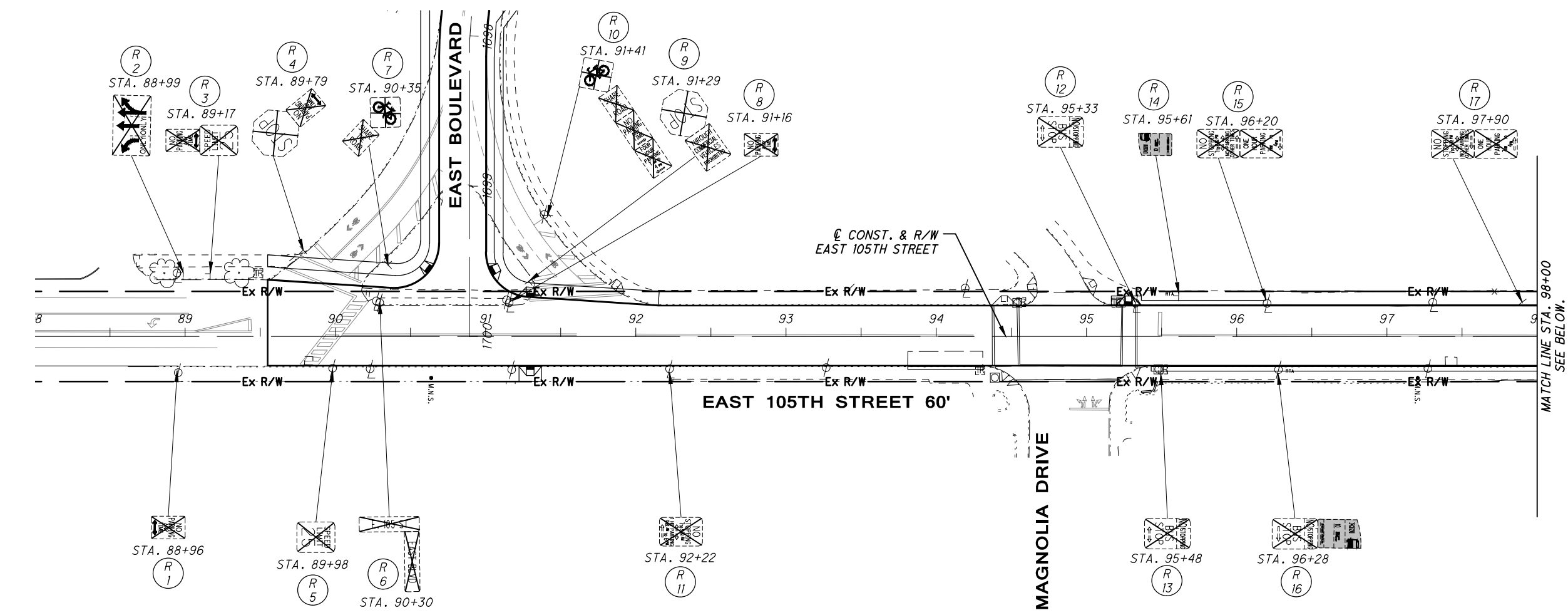
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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIDE	SIZE			625	630	630	630	630	630	630	630	630	630	630	630	630	632	CALCULATED MGW CHECKED JTS
						L	X	H	EACH	FT	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
	216	GREENLAWN AVENUE	1650+34	R5-1	RT	30"	X	30"				1	1	6.3									
				R6-1	RT	36"	X	12"					1	3.0									
				R6-1	RT	36"	X	12"					1	3.0									
	216	EAST 105TH STREET	154+83	R7-107	LT	12"	X	18"					1	1.5									
	216	EAST 105TH STREET	155+09	RTA	LT					12													
	216	EAST 105TH STREET	159+00	W4-2	LT	36"	X	36"		13.5				9.0									
	216	EAST 105TH STREET	160+00	W9-1	LT	36"	X	36"		13.5				9.0									
PP-1	213	EAST 105TH STREET	91+18	W11-2	RT	30"	X	30"	1					6.3							1	1	
				W11-2	RT	30"	X	30"						6.3									
				W16-7P	RT	24"	X	12"						2.0									
				W16-7P	RT	24"	X	12"						2.0									
PP-2	213	EAST 105TH STREET	91+40	W11-2	LT	30"	X	30"	1					6.3							1	1	
				W11-2	LT	30"	X	30"						6.3									
				W16-7P	LT	24"	X	12"						2.0									
				W16-7P	LT	24"	X	12"						2.0									
PP-3	215	EAST 105TH STREET	124+29	W11-2	RT	30"	X	30"	1					6.3							1	1	
				W11-2	RT	30"	X	30"						6.3									
				W16-7P	RT	24"	X	12"						2.0									
				W16-7P	RT	24"	X	12"						2.0									
PP-4	215	EAST 105TH STREET	124+46	R7-1	RT	12"	X	18"						1.5									
				W11-2	LT	30"	X	30"	1					6.3							1	1	
				W11-2	LT	30"	X	30"						6.3									
				W16-7P	LT	24"	X	12"						2.0									
				W16-7P	LT	24"	X	12"						2.0									
PP-5	215	EAST 105TH STREET	135+51		RT				SEE SIGNAL SUBSUMMARY FOR PAY ITEM														
PP-6	215	EAST 105TH STREET	135+58		LT				SEE SIGNAL SUBSUMMARY FOR PAY ITEM														
PP-7	216	EAST 105TH STREET	141+03	W11-2	RT	30"	X	30"	1					6.3							1	1	
				W11-2	RT	30"	X	30"						6.3									
				W16-7P	RT	24"	X	12"						2.0									
				W16-7P	RT	24"	X	12"						2.0									
PP-8	216	EAST 105TH STREET	141+26	W11-2	LT	30"	X	30"	1					6.3							1	1	
				W11-2	LT	30"	X	30"						6.3									
				W16-7P	LT	24"	X	12"						2.0									
				W16-7P	LT	24"	X	12"						2.0									
PP-9	216	EAST 105TH STREET	145+98		RT				SEE SIGNAL SUBSUMMARY FOR PAY ITEM														
PP-10	216	EAST 105TH STREET	145+95		LT				SEE SIGNAL SUBSUMMARY FOR PAY ITEM														
SUBTOTALS THIS SHEET									6	39.0	0	1	4	132.9	0	0	0	0	0	0	6	6	
SUBTOTALS SHEET 195									0	0	0	0	0	0	0	16	4	12	56	2	0	0	
SUBTOTALS SHEET 196									0	0	0	0	0	0	0	17	5	13	72	1	0	0	
SUBTOTALS SHEET 197									0	0	0	0	0	0	0	24	3	15	83	1	0	0	
SUBTOTALS SHEET 198									0	258.0	0	1	5	104.9	2	3	1	3	33	0	0	0	
SUBTOTALS SHEET 199									0	154.5	0	0	33	114.8	2	0	0	0	0	0	0	0	
SUBTOTALS SHEET 200									0	202.5	17.0	4	27	113.7	10	0	0	0	0	0	0	0	
SUBTOTALS SHEET 201									0	135.0	34.0	6	34	120.4	14	0	0	0	0	0	0	0	
SUBTOTALS SHEET 202									0	120.0	67.0	6	27	123.4	14	0	0	0	0	0	0	0	
SUBTOTALS SHEET 203									0	102.0	35.5	5	32	122.0	13	0	0	0	0	0	0	0	
TOTALS CARRIED TO GENERAL SUMMARY									6	1011.0	153.5	23	162	832.1	55	60	13	43	244	4	6	6	

SIGNING SUBSUMMARY

EAST 105TH STREET


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LEGEND

- EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED AND DISPOSED
- EXISTING SIGN TO BE REMOVED, STORED, REERECTED

FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.



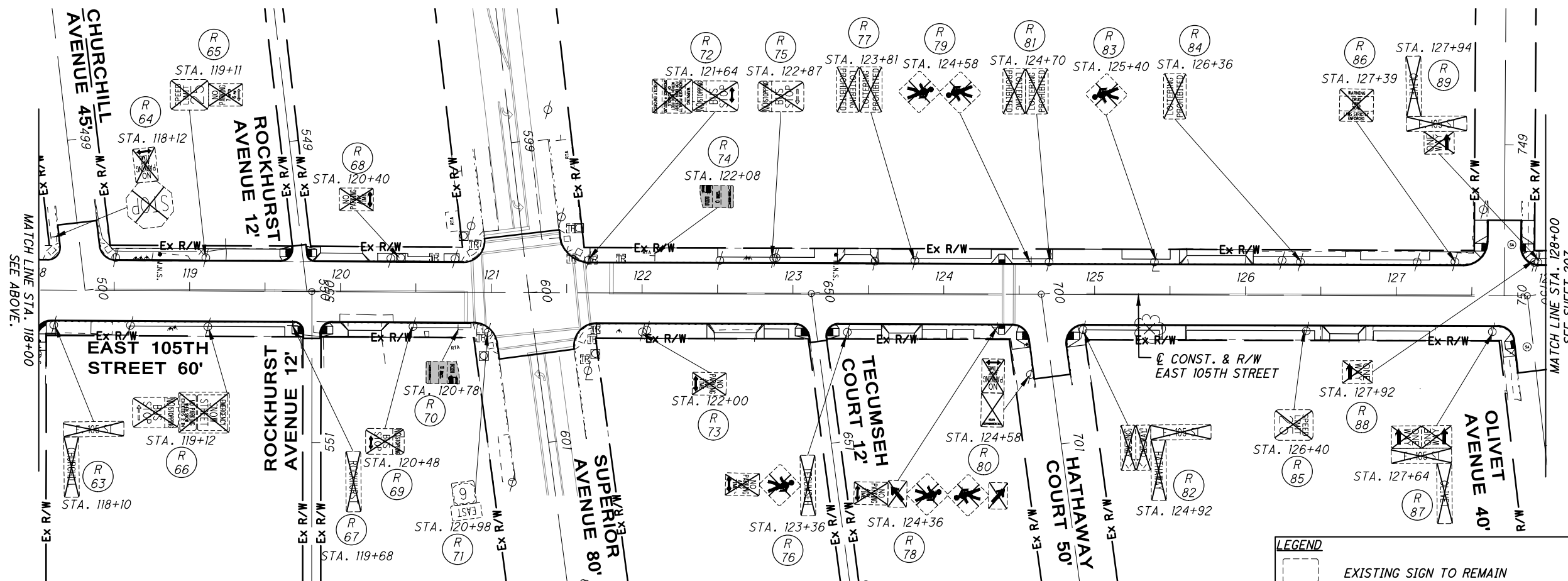
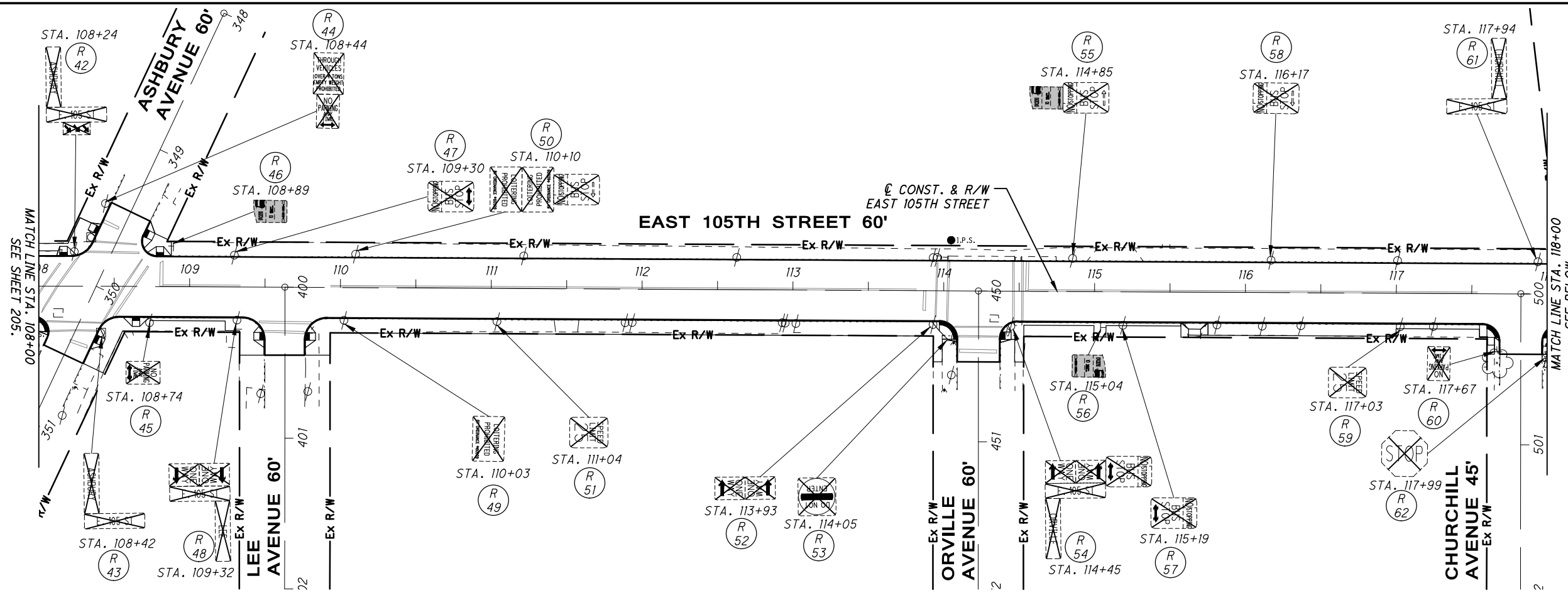
0 20 40 80
HORIZONTAL SCALE IN FEET

CALCULATED MGW
CHECKED JTS




EXISTING SIGNING AND PAVEMENT MARKING PLAN
EAST 105TH STREET
BEGIN TO STA. 108+00

205
243

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LEGEND

-  EXISTING SIGN TO REMAIN
-  EXISTING SIGN TO BE REMOVED AND DISPOSED
-  EXISTING SIGN TO BE REMOVED, STORED, REERECTED

FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.

EXISTING SIGNING AND PAVEMENT MARKING PLAN

EAST 105TH STREET

STA. 108+00 TO STA. 128+00

SCALE IN FEET

HORIZONTAL

20

40

80

0

CALCULATED

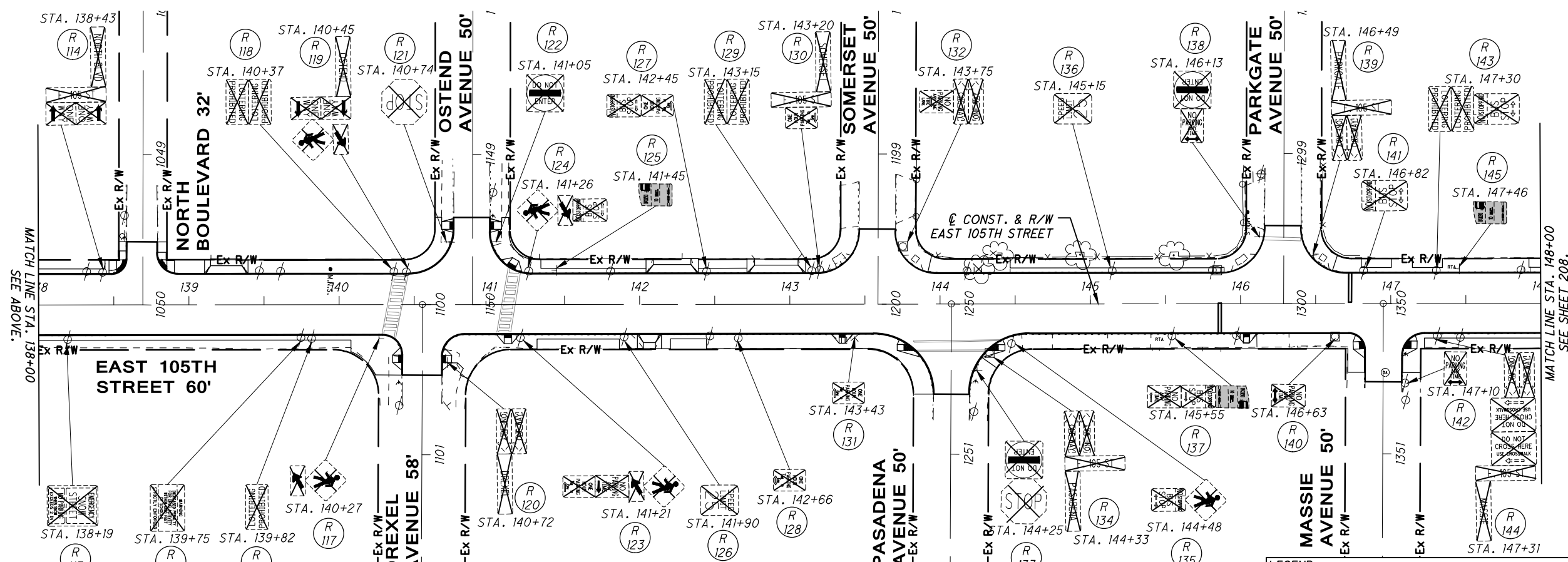
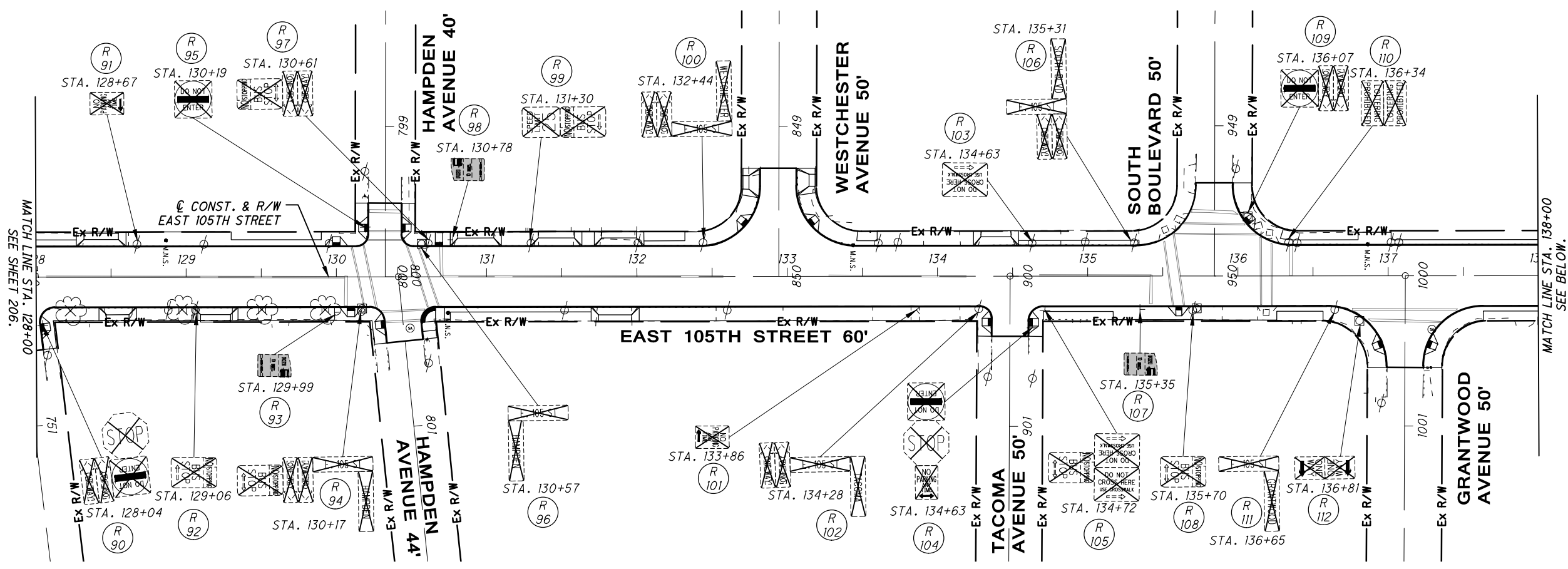
MGW

CHECKED




JTS

206

243



LEGEND

-  EXISTING SIGN TO REMAIN
-  EXISTING SIGN TO BE REMOVED AND DISPOSED
-  EXISTING SIGN TO BE REMOVED, STORED, REERECTED

FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.



EXISTING SIGNING AND PAVEMENT MARKING PLAN

EAST 105TH STREET

STA. 128+00 TO STA. 148+00

CALCULATED
MGW

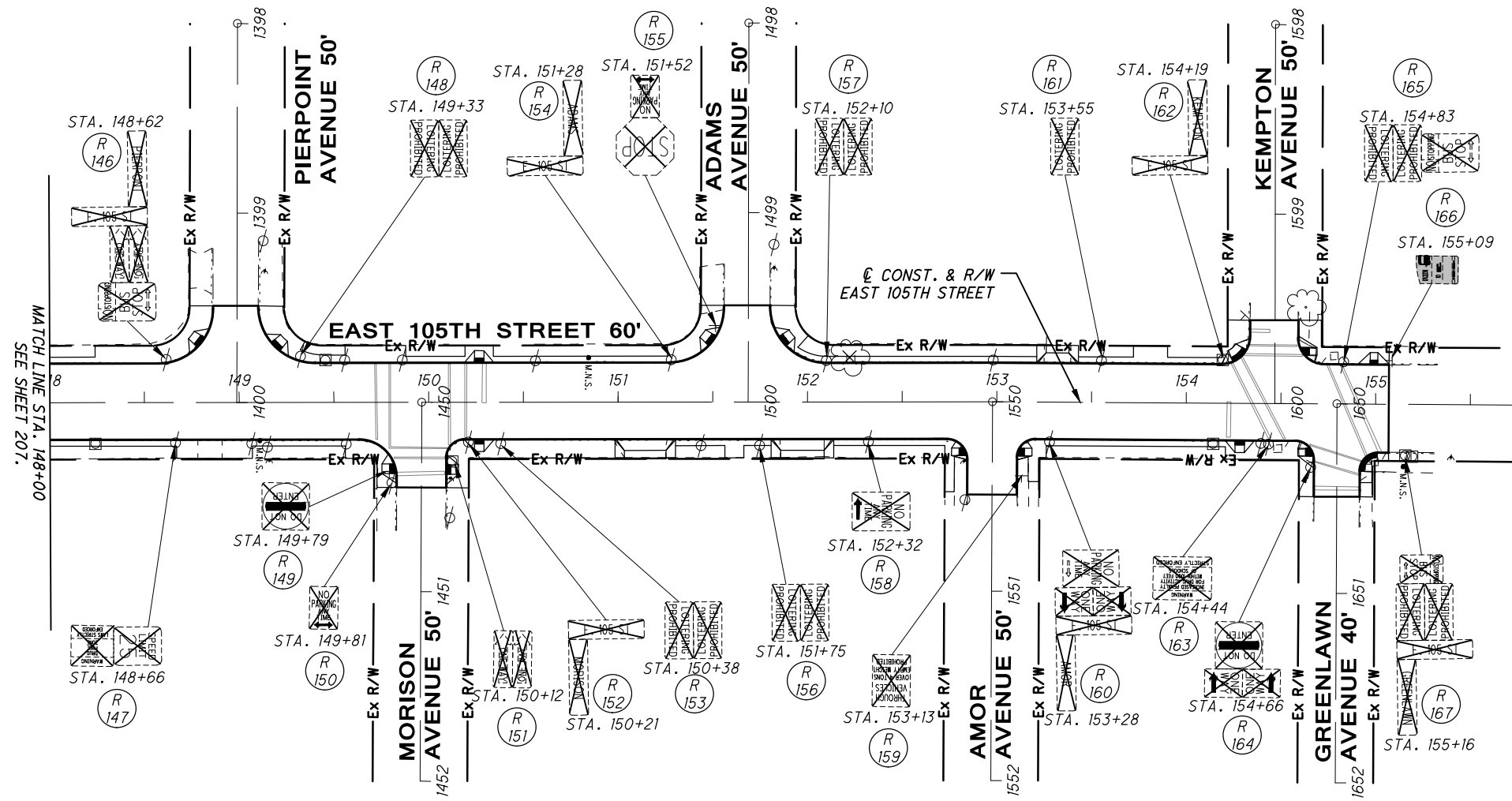
CHECKED
JTS




HORIZONTAL
SCALE IN FEET

207

243



LEGEND

-  EXISTING SIGN TO REMAIN
-  EXISTING SIGN TO BE REMOVED AND DISPOSED
-  EXISTING SIGN TO BE REMOVED, STORED, REERECTED

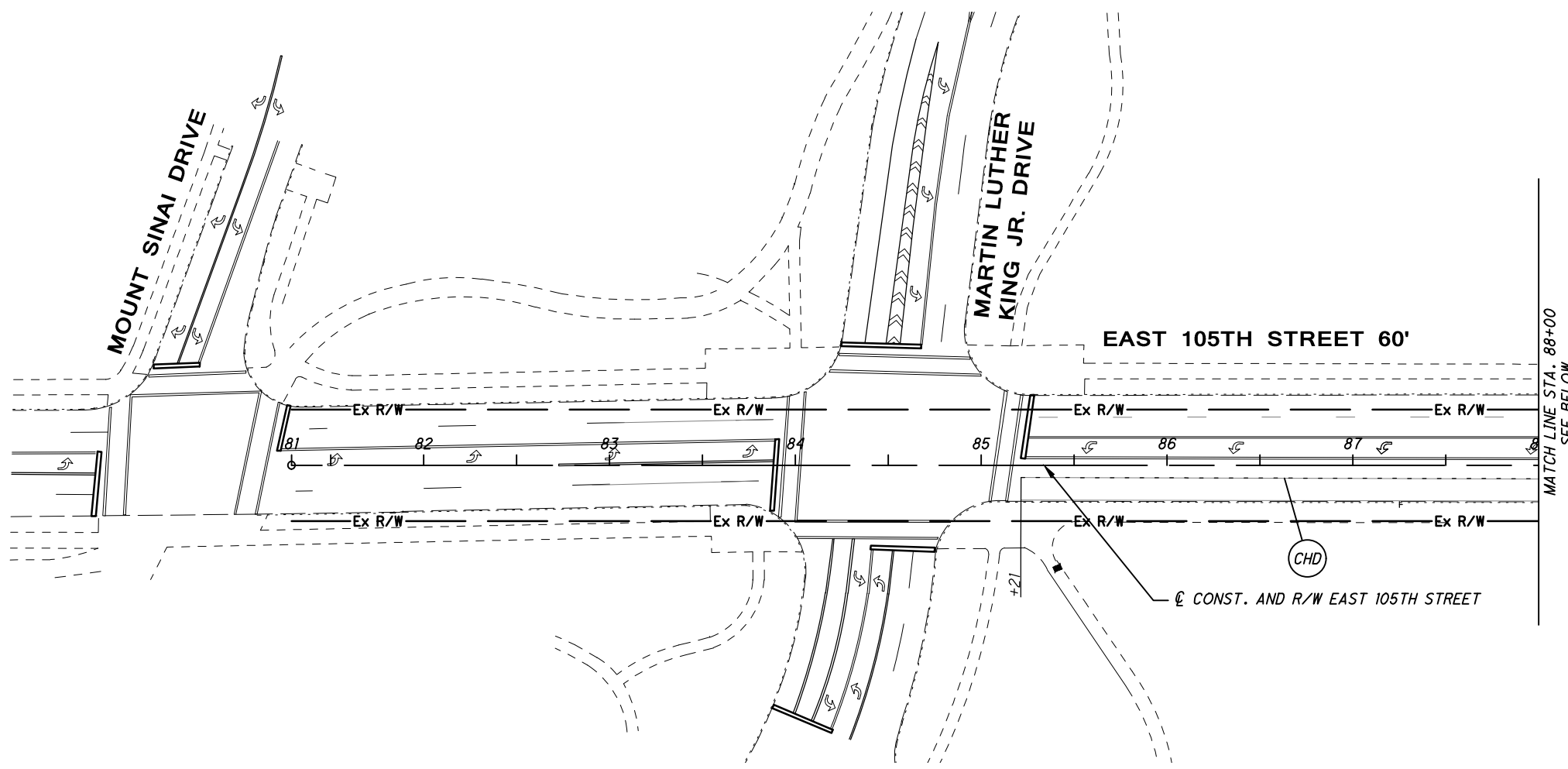
FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.

CALCULATED
MGW
CHECKED
JTS

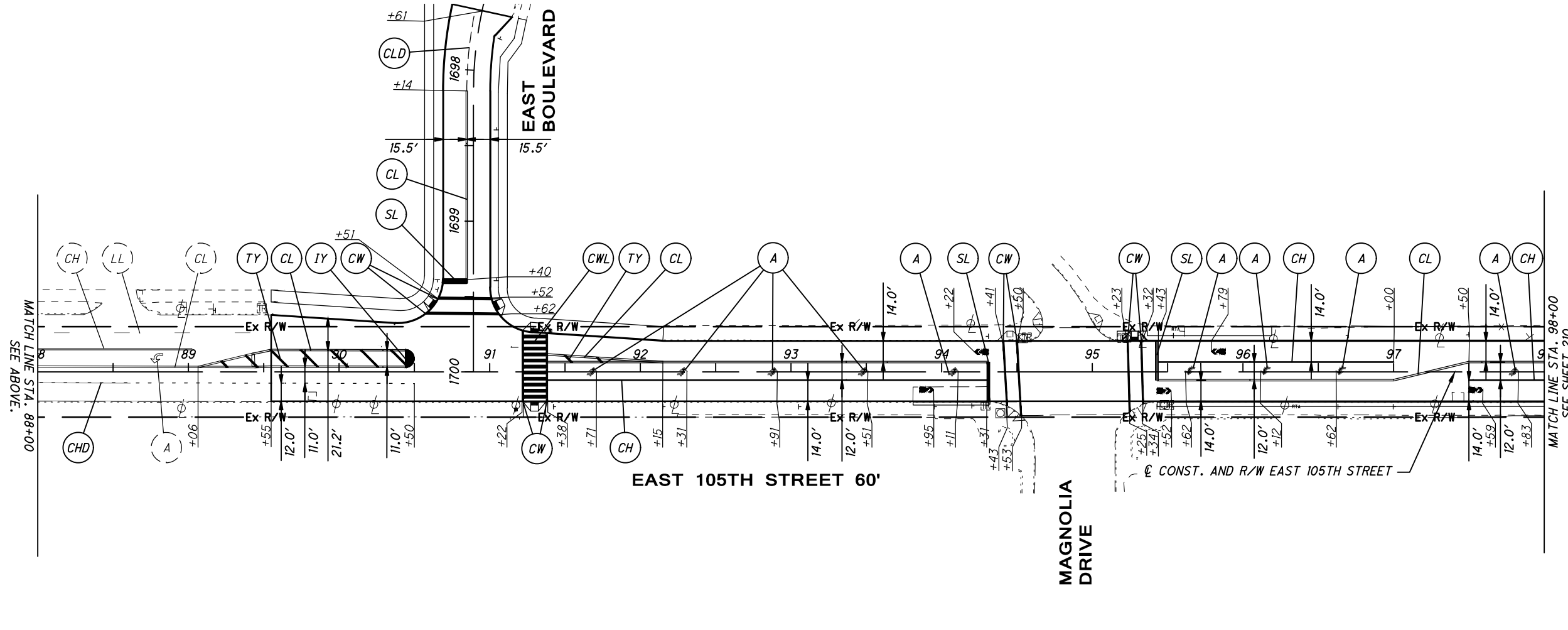
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HORIZONTAL
SCALE IN FEET

EXISTING SIGNING AND PAVEMENT MARKING PLAN
STA. 148+00 TO END

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MATCH LINE STA. 88+00
SEE BELOW.



MATCH LINE STA. 88+00
SEE ABOVE.

MATCH LINE STA. 98+00
SEE SHEET 210.

PAVEMENT MARKING LEGEND

- BL** BIKE LANE LINE, 4" WIDE
- BLDG** BIKE LANE LINE DOTTED, 2' LONG, 6' GAPS
- CH** CHANNEL LINE, 8" WIDE
- CHD** CHANNEL LINE DOTTED, 3' LONG, 9' GAPS
- CL** CENTER LINE
- CLD** CENTER LINE DOTTED, 2' LONG, 4' GAPS
- CW** CROSSWALK, 12" WIDE
- CWL** CROSSWALK-LADDER STYLE, WITH 2' TRANSVERSE LINES, 2' GAPS
- EW** EDGE LINE WHITE
- IY** ISLAND MARKING YELLOW
- SL** STOP LINE
- TW** TRANSVERSE LINE WHITE, 24" WIDE
- TY** TRANSVERSE LINE YELLOW, 24" WIDE
- A** LANE ARROW
- BIKE LANE SYMBOL
- SHARED LANE SYMBOL

FOR MARKING QUANTITIES,
SEE SHEETS 188 - 194.

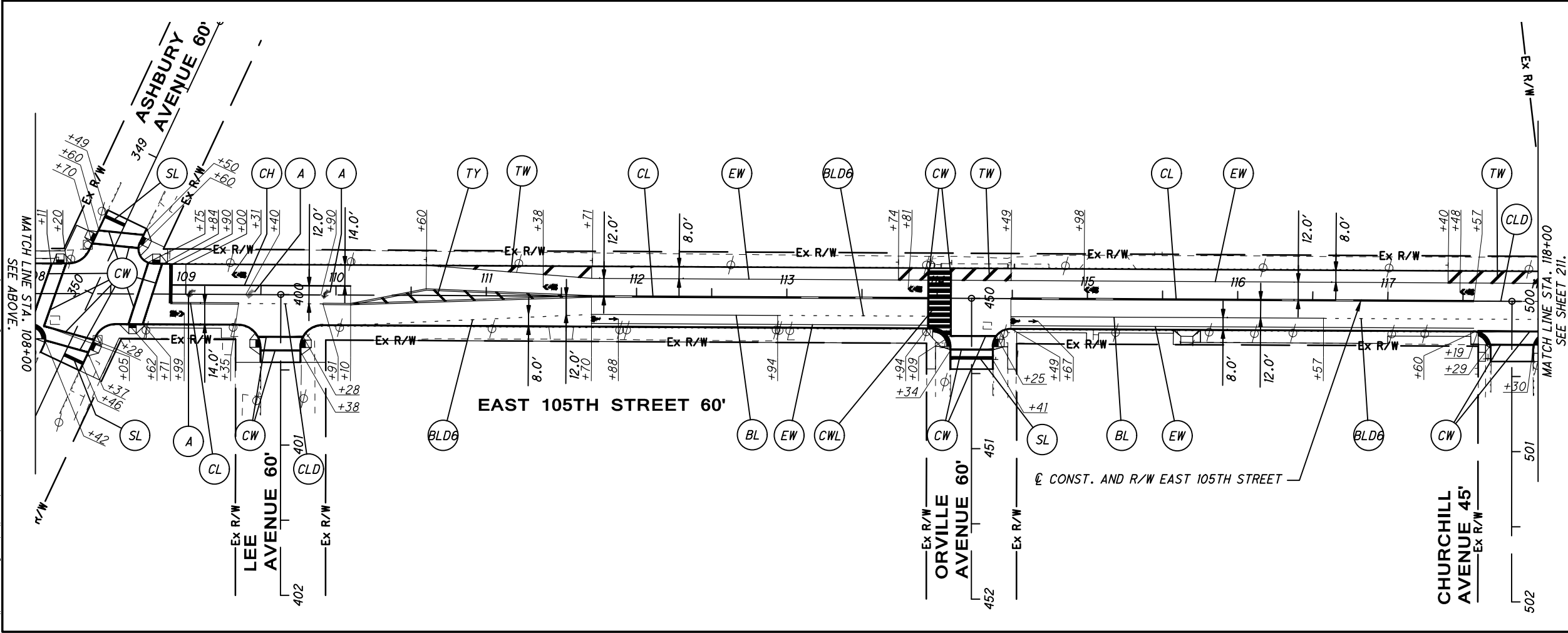
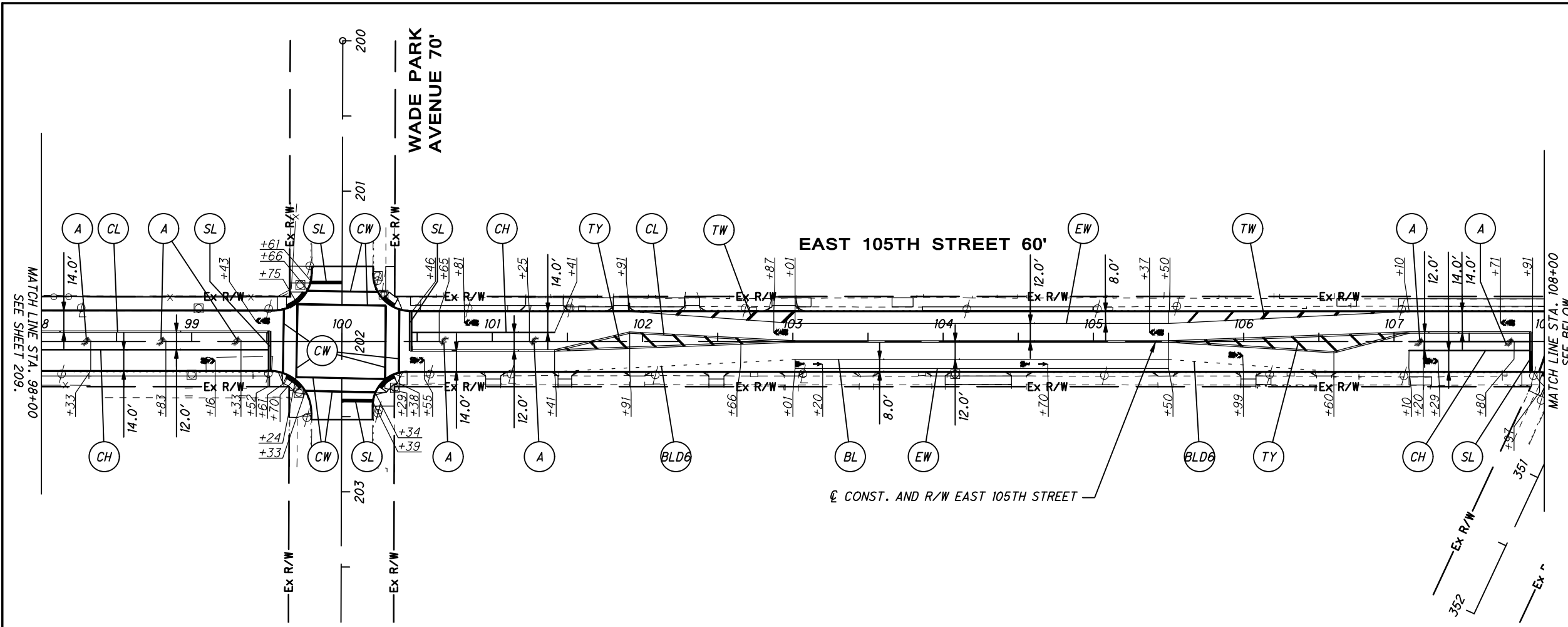
CALCULATED
MGW
CHECKED
JTS

0 40 80
HORIZONTAL
SCALE IN FEET

PROPOSED PAVEMENT MARKING PLAN
BEGIN TO STA. 98+00

EAST 105TH STREET

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PAVEMENT MARKING LEGEND

- BIKE LANE LINE, 4" WIDE
- BIKE LANE LINE DOTTED, 2' LONG, 6' GAPS
- CHANNEL LINE, 8" WIDE
- CHANNEL LINE DOTTED, 3' LONG, 9' GAPS
- CENTER LINE
- CENTER LINE DOTTED, 2' LONG, 4' GAPS
- CROSSWALK, 12" WIDE
- CROSSWALK-LADDER STYLE, WITH 2' TRANSVERSE LINES, 2' GAPS
- EDGE LINE WHITE
- ISLAND MARKING YELLOW
- STOP LINE
- TRANSVERSE LINE WHITE, 24" WIDE
- TRANSVERSE LINE YELLOW, 24" WIDE
- LANE ARROW
- BIKE LANE SYMBOL
- SHARED LANE SYMBOL

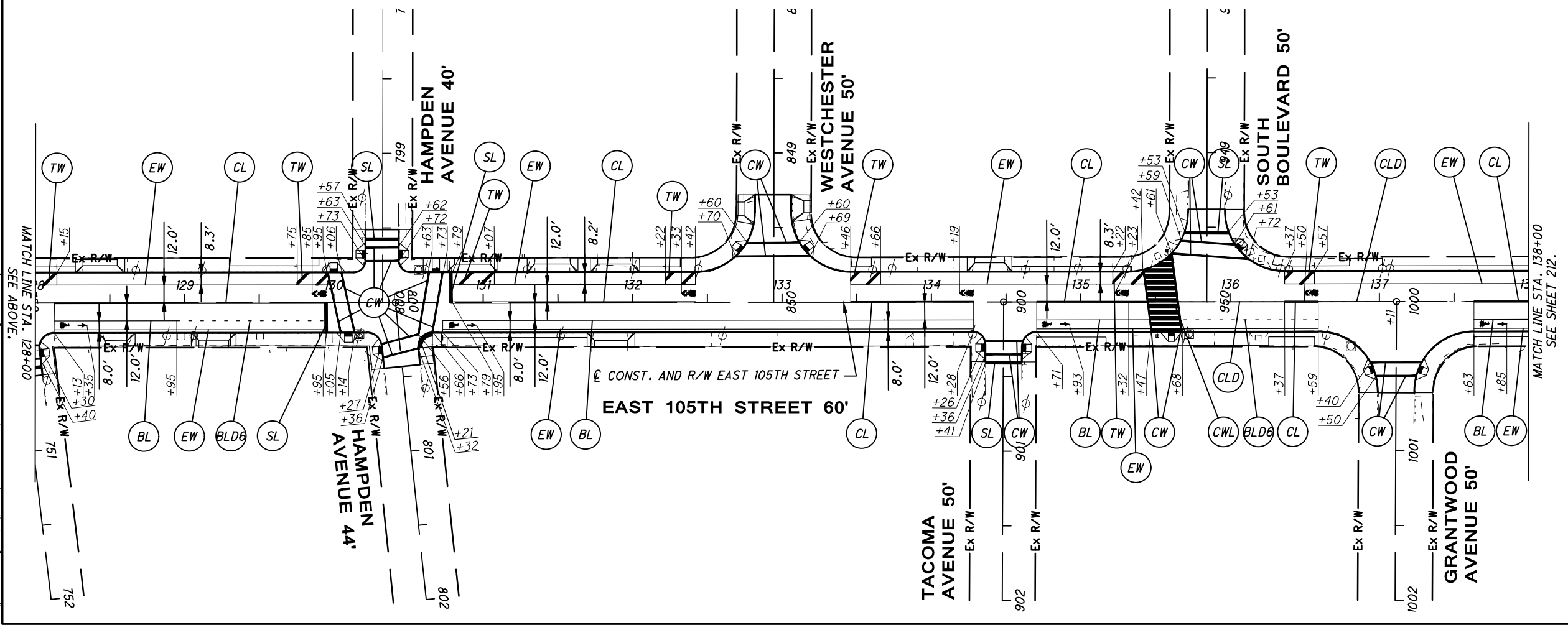
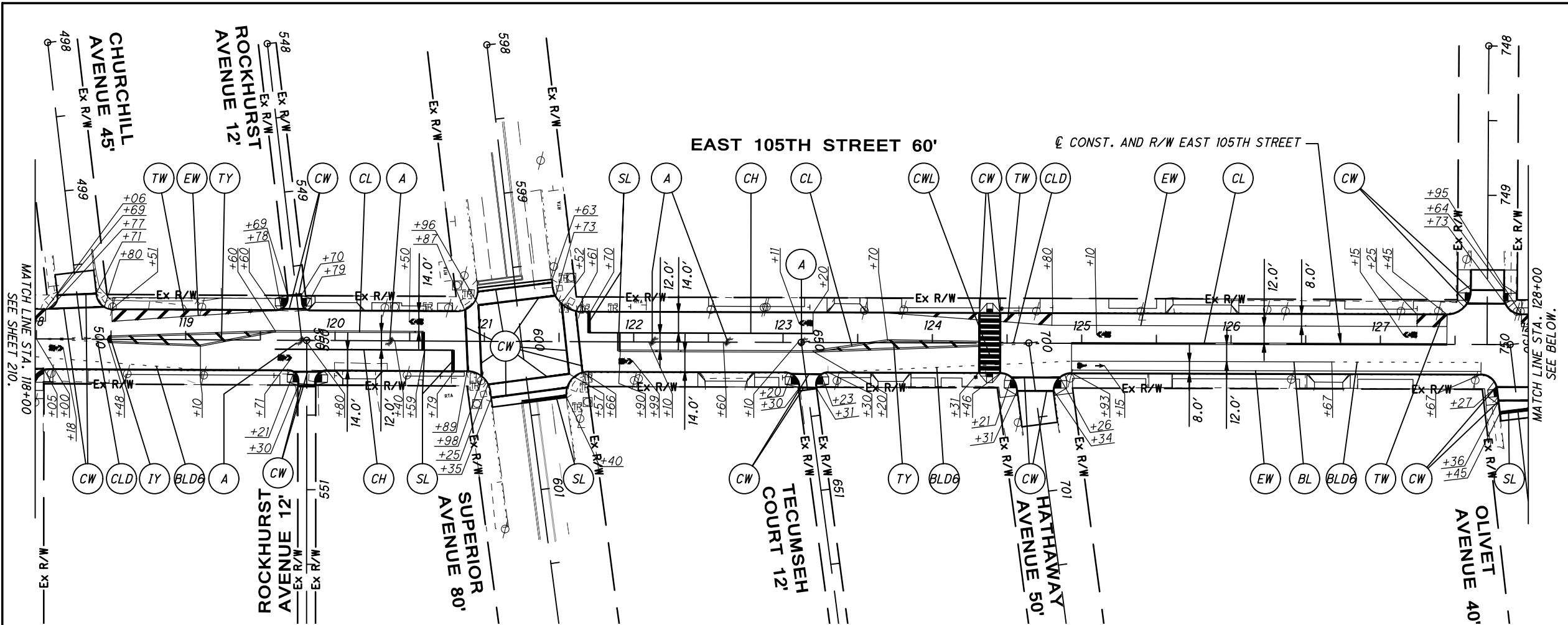
FOR MARKING QUANTITIES, SEE SHEETS 188 - 194.



PROPOSED PAVEMENT MARKING PLAN
STA. 98+00 TO STA. 118+00

EAST 105TH STREET

210
243



PAVEMENT MARKING LEGEND

- BIKE LANE LINE, 4" WIDE
- BIKE LANE LINE DOTTED, 2' LONG, 6' GAPS
- CHANNEL LINE, 8" WIDE
- CHANNEL LINE DOTTED, 3' LONG, 9' GAPS
- CENTER LINE
- CENTER LINE DOTTED, 2' LONG, 4' GAPS
- CROSSWALK, 12" WIDE
- CROSSWALK-LADDER STYLE, WITH 2' TRANSVERSE LINES, 2' GAPS
- EDGE LINE WHITE
- ISLAND MARKING YELLOW
- STOP LINE
- TRANSVERSE LINE WHITE, 24" WIDE
- TRANSVERSE LINE YELLOW, 24" WIDE
- LANE ARROW
- BIKE LANE SYMBOL
- SHARED LANE SYMBOL

FOR MARKING QUANTITIES, SEE SHEETS 188 - 194.

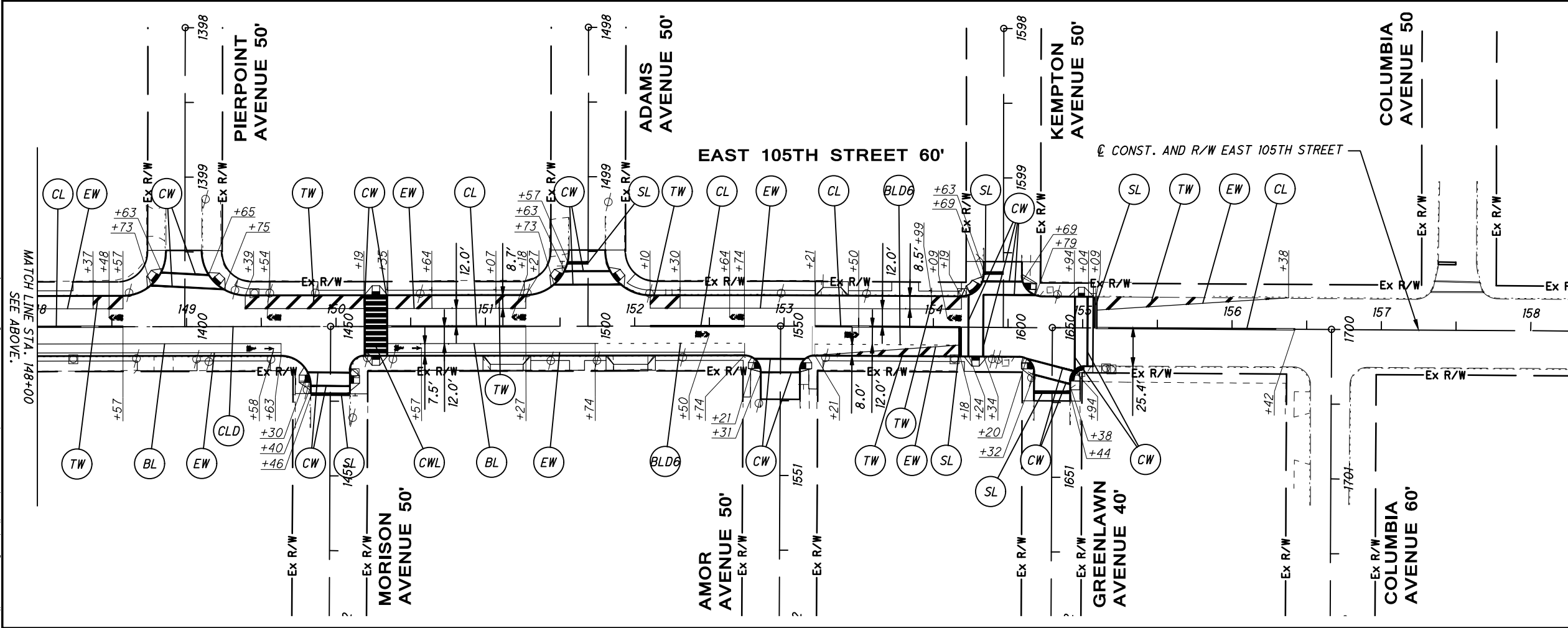
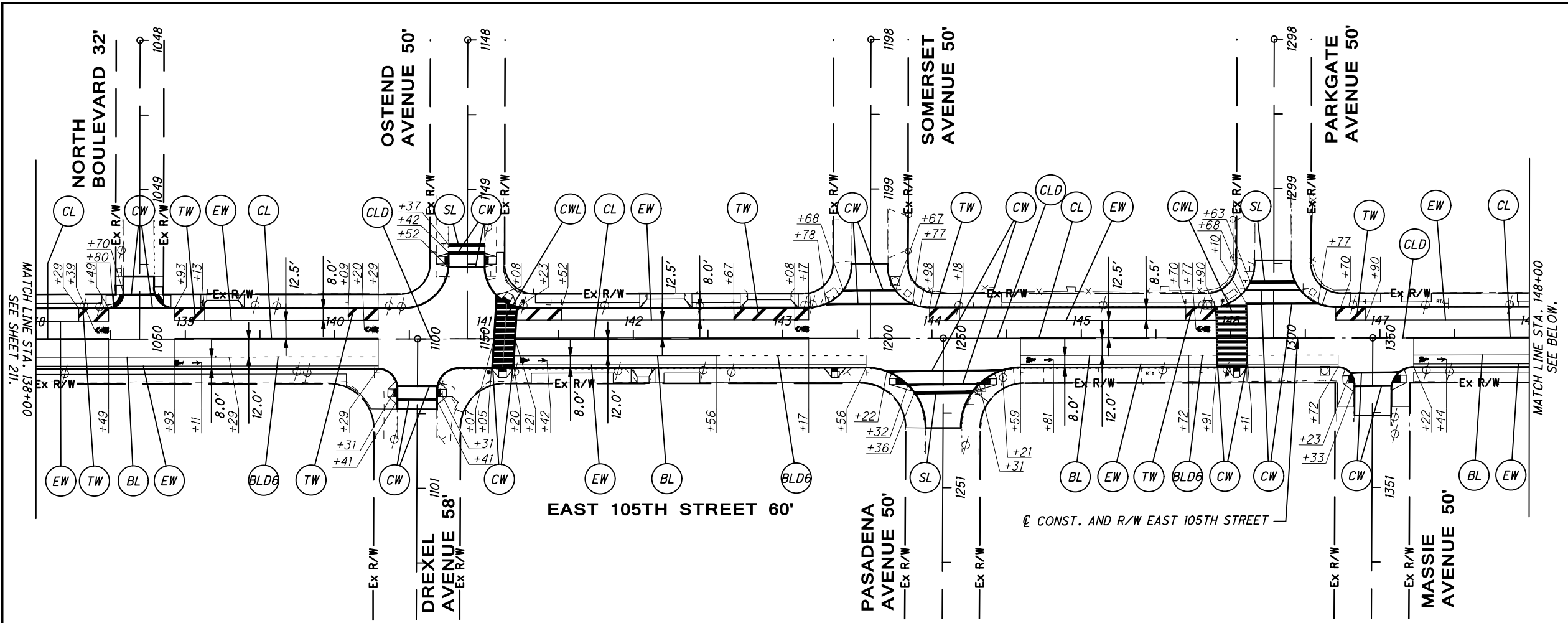
CALCULATED
MGW
CHECKED
JTS

HORIZONTAL SCALE IN FEET

PROPOSED PAVEMENT MARKING PLAN
STA. 118+00 TO STA. 138+00

EAST 105TH STREET

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PAVEMENT MARKING LEGEND

- BIKE LANE LINE, 4" WIDE
- BIKE LANE LINE DOTTED, 2' LONG, 6' GAPS
- CHANNEL LINE, 8" WIDE
- CHANNEL LINE DOTTED, 3' LONG, 9' GAPS
- CENTER LINE
- CENTER LINE DOTTED, 2' LONG, 4' GAPS
- CROSSWALK, 12" WIDE
- CROSSWALK-LADDER STYLE, WITH 2' TRANSVERSE LINES, 2' GAPS
- EDGE LINE WHITE
- ISLAND MARKING YELLOW
- STOP LINE
- TRANSVERSE LINE WHITE, 24" WIDE
- TRANSVERSE LINE YELLOW, 24" WIDE
- LANE ARROW
- BIKE LANE SYMBOL
- SHARED LANE SYMBOL

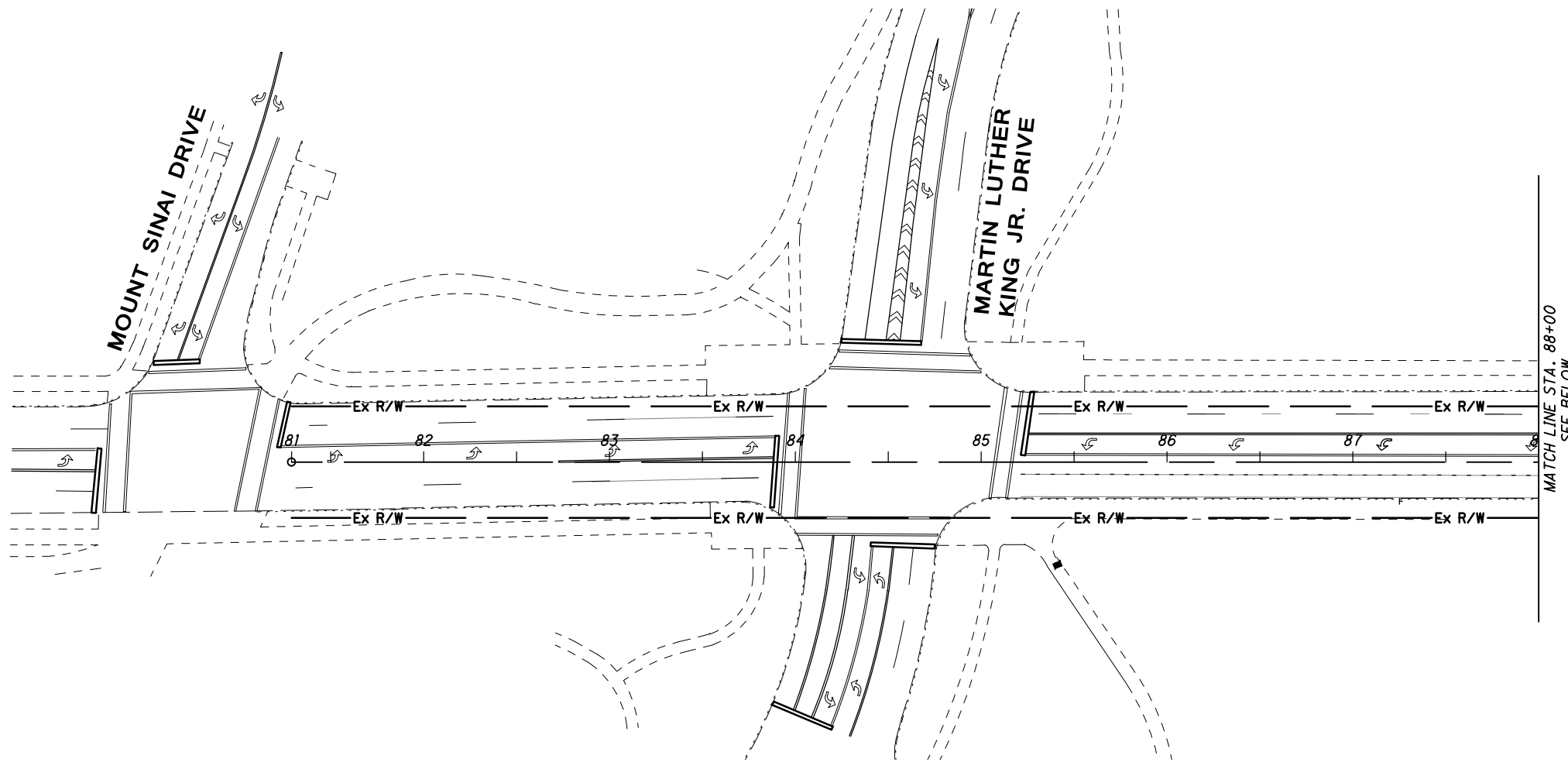
FOR MARKING QUANTITIES, SEE SHEETS 188 - 194.



PROPOSED PAVEMENT MARKING PLAN
STA. 138+00 TO END

EAST 105TH STREET

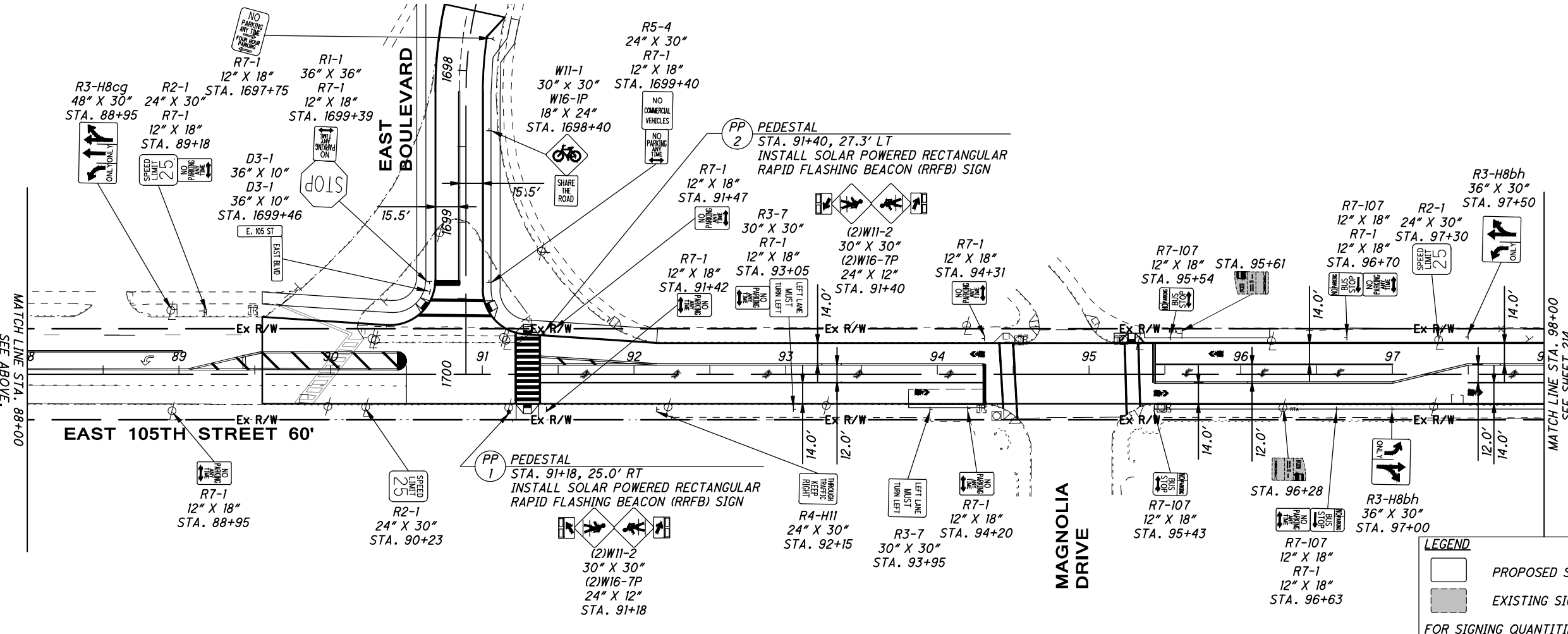
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CALCULATED
MGW
CHECKED
JTS

0 40 80
HORIZONTAL
SCALE IN FEET

**PROPOSED SIGNING PLAN
BEGIN TO STA. 98+00**



LEGEND

□ PROPOSED SIGN

■ EXISTING SIGN TO BE REMOVED, STORED, REERECTED

FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.

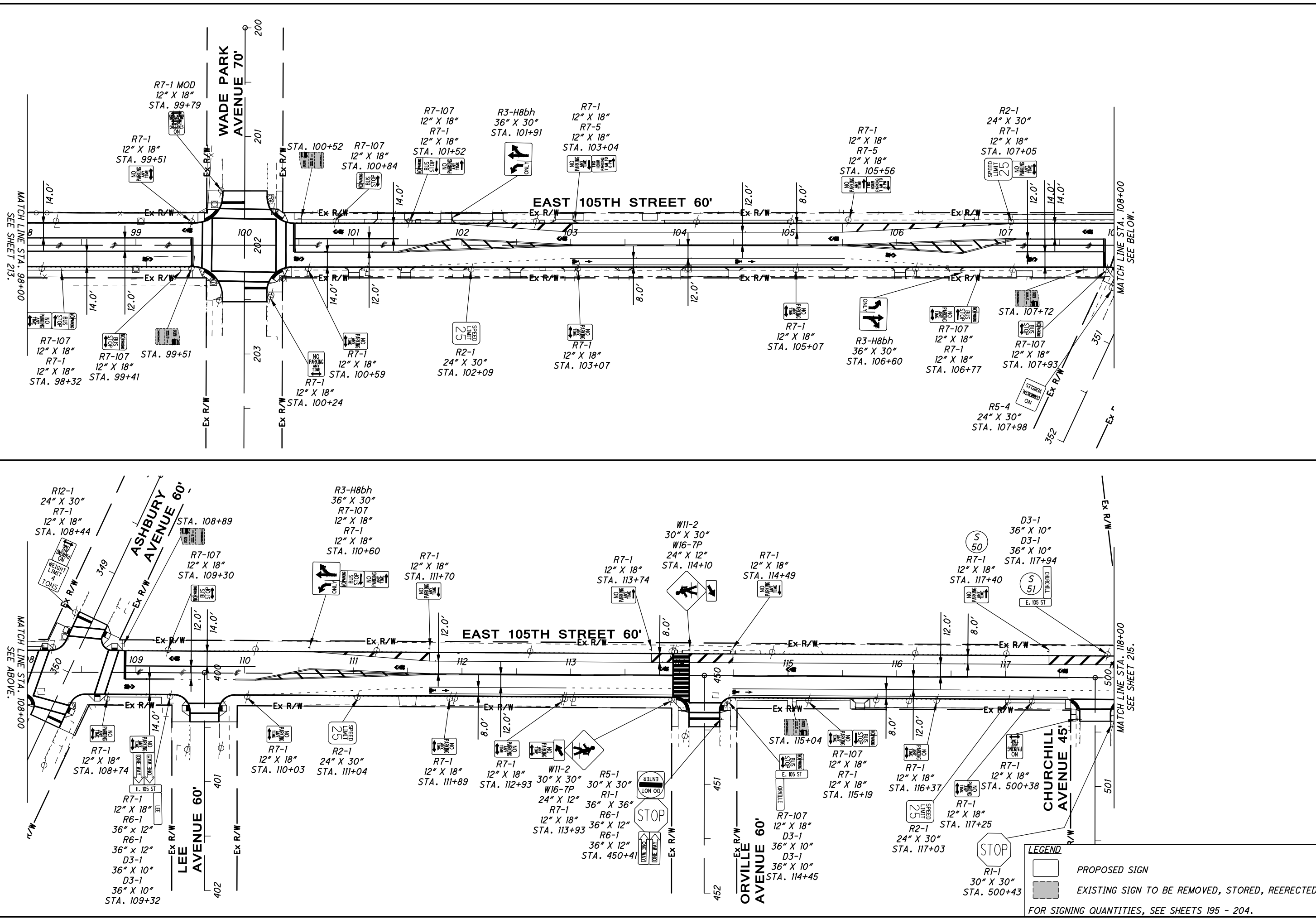


CALCULATED
MGW
CHECKED
JTS

PROPOSED SIGNING PLAN
STA. 98+00 TO STA. 118+00

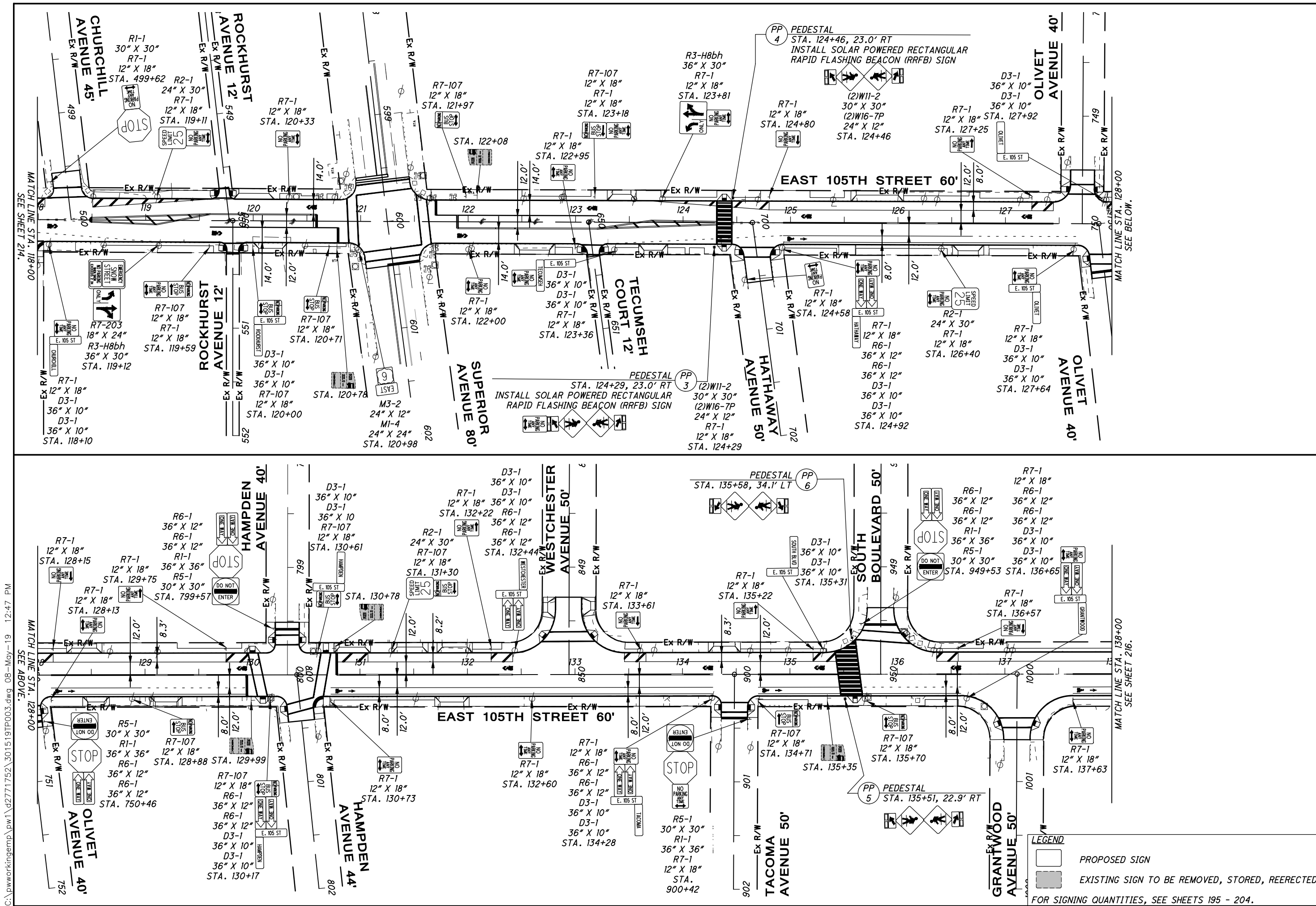
EAST 105TH STREET

214
243



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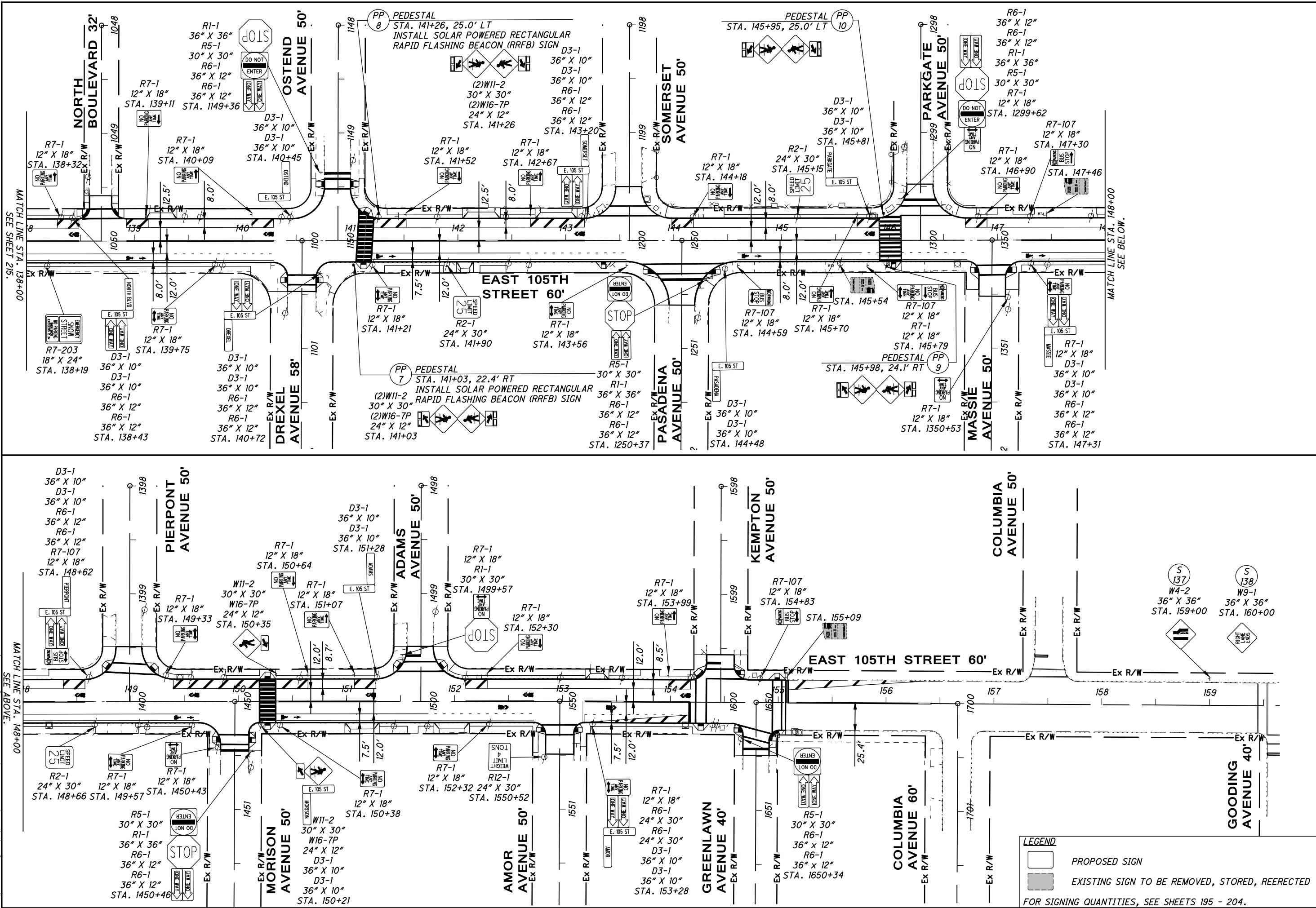


CALCULATED 0
 MGW 20
 CHECKED JTS
 HORIZONTAL SCALE IN FEET
 40
 80

PROPOSED SIGNING PLAN
STA. 118+00 TO STA. 138+00

EAST 105TH STREET
 215
 243

LEGEND
 [Symbol] PROPOSED SIGN
 [Symbol] EXISTING SIGN TO BE REMOVED, STORED, REERECTED
 FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.



CALCULATED 0 40 80
 MGW
 CHECKED JTS

PROPOSED SIGNING PLAN
 STA. 138+00 TO END

EAST 105TH STREET
 (216)
 (243)

LEGEND

- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED, STORED, REERECTED

FOR SIGNING QUANTITIES, SEE SHEETS 195 - 204.

TRAFFIC SIGNAL

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS A PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE TEN (10) DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS, AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS, CABINETS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS, MASTER CONTROL EQUIPMENT, AND CENTRAL OFFICE EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS AND ALL OTHER TRAFFIC CONTROL EQUIPMENT SHALL BE TURNED OVER TO THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE VARIOUS ITEMS MAKING UP THE SYSTEM.

ITEM 632 - POWER SERVICE, AS PER D-50

ELECTRIC POWER SHALL BE OBTAINED FROM ILLUMINATING COMPANY OR CLEVELAND PUBLIC POWER (CPP) AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

ILLUMINATING COMPANY
6896 MILLER ROAD, SUITE 110
BRECKSVILLE, OHIO 44141
ATTN: TED RADER
PHONE: (440) 546-8738

CITY OF CLEVELAND
DIVISION OF CLEVELAND PUBLIC POWER (MELP)
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: CHRIS HIRZEL
PHONE: (216) 664-4245 EXT. 115

THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNALS ARE ACCEPTED BY THE MAINTAINING AGENCY.

IN ADDITION TO THE REQUIREMENTS OF 632.24 AND 732.20, POWER SERVICE SHALL BE AS PER THE CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-50. ALL POWER CABLES SHALL BE RATED FOR 600 VOLTS AND CONSIST OF NO. 6 AWG COPPER. ALL CONNECTIONS OF POWER CABLE TO EQUIPMENT SHALL BE BY MEANS OF APPROVED SOLDERLESS TYPE CONNECTORS. THE SOLDERLESS CONNECTIONS ARE TO BE TAPED. POWER SERVICE SHALL ALSO INCLUDE 3" CONDUIT RISERS WHERE NECESSARY.

USE 3-CONDUCTOR NO.6 AWG FROM POWER COMPANY SPLICE TO METER. USE 2-CONDUCTOR NO.6 AWG FROM METER TO CONTROLLER CABINET.

THE CONTRACTOR SHALL MEET ON SITE WITH CPP OR THE ILLUMINATING COMPANY THREE (3) DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT CPP OR THE ILLUMINATING COMPANY TO MAKE THE NECESSARY ARRANGEMENTS.

VEHICULAR SIGNAL HEAD VERTICAL CLEARANCES

PRIOR TO ACCEPTANCE BY THE CITY, PROVIDE DOCUMENTATION TO THE PROJECT ENGINEER SHOWING THE ACTUAL MEASURED VERTICAL CLEARANCES OF ALL VEHICULAR SIGNAL HEADS.

SHOULD THE VERTICAL CLEARANCE OF ANY VEHICULAR SIGNAL HEAD BE LESS THAN THE ALLOWED MINIMUM, ADJUST EACH NON-CONFORMING SIGNAL HEAD UNTIL THE MINIMUM CLEARANCE CRITERION IS MET, AND RE-DOCUMENT THE MEASUREMENT.

THE COSTS ASSOCIATED WITH MEASURING THE VERTICAL CLEARANCES ARE INCIDENTAL TO THE PROJECT, AND ANY COSTS FOR ADJUSTMENTS WILL BE BORNE BY THE CONTRACTOR.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
 - a. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
 - b. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
 - c. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
 - d. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
 - e. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
 - f. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS

- a. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATABLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATABLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
- b. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
- c. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- d. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING

- a. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
 - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.a.I ABOVE.
 - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.a.I ABOVE.
 - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
- b. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH A MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE A MINIMUM SIZE 4 AWG.

4. GROUND ROD

- a. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
- b. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND.	NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1		BLACK	GREEN BALL	#1 WALK
2		WHITE	AC NEUTRAL	AC NEUTRAL
3		RED	RED BALL	#1 DW/FDW
4		GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5		ORANGE	YELLOW BALL	#2 DW/FDW
6		BLUE	GREEN ARROW	#2 WALK
7		WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

GROUNDING AND BONDING (CONTINUED)

6. POWER SERVICE AND DISCONNECT SWITCH.
 - a. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
 - b. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
 - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
 - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.
7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 625 - CONDUIT 2", 3" OR 4", 725.051, AS PER D-51

ALL CONDUIT INSTALLED UNDER PAVEMENT IN THIS PROJECT FOR TRAFFIC SIGNALS SHALL BE AS PER CITY OF CLEVELAND DETAILED SPECIFICATION, PART D, D-51, CONCRETE ENCASED. CONDUIT SHALL BE SCHEDULE 40 AND CONFORM TO OHIO DEPARTMENT OF TRANSPORTATION'S SPECIFICATION 625.12 AND 725.051.

ITEM 625 - GROUND ROD, AS PER D-58

IN ADDITION TO THE REQUIREMENTS OF 625.19 AND 725.16, GROUND RODS SHALL BE AS PER CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-58

ITEM 625 - PLASTIC CAUTION TAPE, AS PER D-61

IN ADDITION TO THE REQUIREMENTS OF 625.20 AND 725.22, PLASTIC CAUTION TAPE SHALL BE AS PER CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-61.

ITEM 625 - PULL BOX, MISC.: 17"x30", AS PER D-57
ITEM 625 - PULL BOX, MISC.: 24"x36", AS PER D-57

PULL BOXES PROVIDED SHALL BE AS PER THE CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-57.

ITEM 630 - SIGN, STREET NAME, AS PER PLAN

OVERHEAD MOUNTED STREET NAME SIGNS SUPPLIED UNDER THIS ITEM SHALL MEET THE REQUIREMENTS OF 630, WITH THE FOLLOWING EXCEPTIONS:

1. THE BACKGROUND COLOR OF THE SIGN SHALL BE BLUE.
2. TYPE G SHEETING SHALL BE USED FOR THE BACKGROUND, BORDER, AND LEGEND.
3. THE LEGEND SHALL BE FORMED FROM UPPER AND LOWER CASE LETTERS USING THE UNIVERSE 65 FONT, 12 INCHES HIGH FOR ONE LINE MESSAGES, AND 7 INCHES HIGH FOR TWO LINE MESSAGES.
4. THE BACKING MATERIAL SHALL BE A FLAT SHEET PLATE 20 INCHES HIGH FOR ONE LINE MESSAGES AND 24 INCHES HIGH FOR TWO LINE MESSAGES.
5. THE BORDER SHALL BE 1/4 INCH WIDE, INSET 1/2 INCH FROM THE EDGE OF THE PLATE.

PAYMENT FOR ITEM 630 - SIGN, FLAT SHEET, AS PER PLAN, WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT.

ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER D-63

IN ADDITION TO THE REQUIREMENTS OF 630, SIGN HANGER ASSEMBLY, MAST ARM SHALL BE AS PER CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-63. SIGNS MOUNTED ON PROPOSED TRAFFIC SIGNAL MAST ARMS SHALL BE RIGIDLY ATTACHED TO THE ARM AND CENTERED VERTICALLY ON THE ARM. THE CONTRACTOR MAY USE THE METHOD OF ATTACHMENT SHOWN IN STANDARD CONSTRUCTION DRAWING TC-16.21 OR ANOTHER METHOD OF RIGID ATTACHMENT AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL INSURE THE SIGN FACE IS MOUNTED PERPENDICULAR (90 DEGREES) TO THE DIRECTION OF TRAFFIC.

PAYMENT FOR ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER D-63 SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND ALL PARTS NECESSARY TO ERECT ONE INDIVIDUAL SIGN.

ITEM 632 - SIGNALIZATION, MISC.: FOUNDATION TEST HOLE

IF UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED THAT PRECLUDE THE USE OF THE STANDARD OR ALTERNATE FOUNDATION DESIGNS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH COMPLETE INFORMATION REGARDING THE OBSTRUCTION, INCLUDING TYPE (I.E. UTILITY), SIZE, DEPTH, AND LATERAL CLEARANCES TO THE SIDES OF THE FOUNDATION EXCAVATION. THE FOUNDATION HOLE SHALL BE COVERED WITH A STEEL PLATE UNTIL THE ENGINEER DETERMINES IF A NEW FOUNDATION LOCATION WILL BE REQUIRED. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL BACKFILL AND COMPACT THE HOLE AND SHALL RESTORE THE SURFACE TO THE SATISFACTION OF THE ENGINEER.

THE CONTRACTOR SHALL BE COMPENSATED FOR EACH FOUNDATION HOLE THAT MUST BE ABANDONED. PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER INCIDENTALS, INCLUDING BACKFILL, COMPACTING, AND SURFACE RESTORATION, SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ITEM 632 - SIGNALIZATION, MISC.: FOUNDATION TEST HOLE FOR THE NUMBER EXCAVATED AND BACKFILLED.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), YELLOW, BY SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN

SECTION 732.01 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- A. SIGNAL HEADS AND VISORS SHALL BE YELLOW AND BE CONSTRUCTED OF INJECTION MOLDED, UV STABILIZED, POLYCARBONATE PLASTIC AND SHALL MEET I.T.E. SPECIFICATIONS.
- B. GLASS LENSES SHALL BE USED.
- C. PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
- D. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- E. SIGNALS SHALL BE ATTACHED TO MAST ARMS USING RIGID MOUNTING FIXTURES AS SHOWN ON TC-85.20 OR ALTERNATE RIGID SIGNAL HEAD MOUNTING DEVICES AS SPECIFIED IN NOTE 5 ON TC-85.20.
- F. BACKPLATES SHALL BE BLACK WITH A 2-INCH WIDE YELLOW REFLECTIVE STRIP AROUND THE PERIMETER (SEE CMS 732.22).

PROVIDE THE CITY, IN WRITING, THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF THE LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS TO BE USED IN THE TRAFFIC SIGNAL HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES. THE CITY WILL MEASURE ITEM 632 - VEHICULAR SIGNAL HEAD, (LED) YELLOW, BY SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, CLOSURE CAPS, AND LED UNITS AS SPECIFIED.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.06, PEDESTRIAN PUSHBUTTONS SHALL BE BULLDOG PRESSURE ACTIVATED ADA COMPLIANT PEDESTRIAN PUSHBUTTON.

ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

SECTION 732.05 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- 1. PEDESTRIAN SIGNAL HOUSINGS MAY BE CONSTRUCTED OF INJECTION MOLDED, UV STABILIZED, POLYCARBONATE PLASTIC AND SHALL MEET I.T.E. SPECIFICATIONS.
- 2. VISORS SHALL BE CONSTRUCTED OF INJECTION MOLDED, UV STABILIZED, POLYCARBONATE PLASTIC AND SHALL MEET I.T.E. SPECIFICATIONS.
- 3. PLASTIC LENSES SHALL BE USED.
- 4. SIGNAL HEADS, VISORS, PIPE, SPACERS, AND FITTINGS SHALL BE BLACK IN COLOR. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING, IF POLYCARBONATE HEADS ARE FURNISHED.
- 5. PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM, IF POLYCARBONATE HEADS ARE FURNISHED.
- 6. SIGNALS SHALL BE ATTACHED TO POLES AS SHOWN ON TC-85.10, EXCEPT THAT THE USE OF BRACKET ARM HUB PLATES, POLE CLAMPS WITH THREADED HUBS, OR THE OPTIONAL 2 PIECE HINGED BRACKET ("CLAM SHELL") WILL NOT BE PERMITTED.
- 7. SIGNALS SHALL DISPLAY THE UPRaised PALM AND WALKING PERSON SYMBOLS, IN LIEU OF WORD MESSAGES.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MEASURED BY THE NUMBER OF EACH COMPLETE UNIT FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, CLOSURE CAPS, AND LAMPS AS SPECIFIED.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62

IN ADDITION TO THE REQUIREMENTS OF 632.26, REMOVAL OF TRAFFIC INSTALLATIONS SHALL BE AS PER THE CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-62. THE CONTRACTOR SHALL NOTIFY THE CITY OF CLEVELAND DIVISION OF TRAFFIC ENGINEERING AT (216) 664-3194, 48 HOURS BEFORE REMOVAL OF ANY EXISTING TRAFFIC SIGNAL EQUIPMENT. THE CITY SHALL RECEIVE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT, INCLUDING CONTROLLERS WITH CABINETS AND ACCESSORIES, SIGNAL HEADS, SPAN WIRE/MAST ARM MOUNTED SIGNS, EXCEPT SIGNAL POLES, MESSENGER WIRE, INTERCONNECT CABLE AND SIGNAL CABLES. THE ITEMS SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS. ALL REMOVALS SHALL BE PERFORMED IN THE PRESENCE OF A DESIGNATED REPRESENTATIVE OF THE CITY OF CLEVELAND. ITEMS SHALL BE SUITABLY PROTECTED UNTIL DELIVERED TO THE CITY OF CLEVELAND AT A DESIGNATED LOCATION. IN ACCORDANCE WITH 614.03, ITEMS SHALL NOT BE REMOVED UNTIL A NEW OR TEMPORARY SIGNAL INSTALLATION IS IN OPERATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE LOCAL AGENCY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

PAYMENT FOR ALL OF THE WORK STATED ABOVE SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62.

ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER D-48

DUE TO THE POSSIBILITY OF CONFLICT WITH EXISTING OR PROPOSED UNDERGROUND OBSTRUCTIONS (INCLUDING THE POSSIBILITY OF UNRECORDED OBSTRUCTIONS) WHICH COULD AFFECT THE LOCATION OF THE FOUNDATIONS FOR THESE ITEMS, AND CONSEQUENTLY, THE DESIGN OF THE VARIOUS SUPPORTS, AND/OR ARMS, THE CONTRACTOR SHALL NOT PLACE FINAL ORDERS FOR THESE ITEMS UNTIL THE FOUNDATIONS HAVE BEEN INSTALLED, AND THE CONTRACTOR HAS RECEIVED, FROM THE ENGINEER, WRITTEN NOTICE TO PROCEED WITH THE ORDERS FOR THESE ITEMS.

IF ANY FOUNDATION LOCATIONS MUST BE ADJUSTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, WHO WILL DETERMINE THE REVISED LOCATIONS AND IF ANY SUPPORT DESIGN CHANGES ARE NECESSARY, IN CONSULTATION WITH THE MAINTAINING AGENCY. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DETERMINING THE REVISED DESIGN. THE ENGINEER WILL SUBSEQUENTLY INFORM THE CONTRACTOR OF ANY CHANGES NECESSARY, AND AUTHORIZE THE CONTRACTOR TO ORDER THE SUPPORTS.

THE CONTRACTOR SHALL, WHEN DEVELOPING THEIR PROGRESS SCHEDULE, AND THOSE OF THEIR SUBCONTRACTORS, ENSURE THAT THE FOUNDATIONS ARE INSTALLED AT THE EARLIEST TIME AS IS FEASIBLE AND PRACTICAL, AND SHALL INCLUDE SUFFICIENT TIME IN THE PROGRESS SCHEDULE FOR THE ORDERING, MANUFACTURE, DELIVERY, AND INSTALLATION OF THESE ITEMS AFTER THE FOUNDATIONS ARE IN PLACE.

IN ADDITION TO THE REQUIREMENTS OF 632.14, SIGNAL SUPPORT FOUNDATIONS SHALL BE AS PER CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-48.

**ITEM 632 - SIGNAL SUPPORT, TYPE TC-81.21, (DESIGN NO.), AS PER D-64
ITEM 632 - PEDESTAL, 8' AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF SPECIFICATION 632.15 AND 730, SIGNAL SUPPORTS AND PEDESTALS SHALL BE AS PER THE CITY OF CLEVELAND DETAIL SPECIFICATIONS, PART D, D-64. SIGNAL SUPPORTS SHALL BE PAINTED IN ACCORDANCE WITH D-64.

EXTERIOR CABINET PAINTING
POWDER COATING - COLOR: DARK BRONZE (VALMONT F-283 CLEVELAND ORION BROWN OR APPROVED EQUAL).

ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS2, AS PER PLAN - AS PER D-60

TRAFFIC SIGNAL CONTROLLER

THE PURPOSE OF THIS SPECIFICATION IS TO DEFINE THE MINIMUM OPERATING REQUIREMENT AND CHARACTERISTICS FOR A SIEMENS M-60 TRAFFIC SIGNAL CONTROLLER AND CABINET. EXCEPTIONS TO THIS SPECIFICATION MUST BE INCLUDED WITH THE BID. UNACCEPTABLE EXCEPTIONS AND/OR SUBSTITUTIONS BY ANY BIDDER WILL RESULT IN REJECTION OF THAT BIDDER'S BID. FAILURE TO COMPLY WITH THIS PROVISION MAY BE CONSIDERED CAUSE FOR BETTER DECLARING THE CONTRACT IN DEFAULT.

GENERAL REQUIREMENTS

THE CONTROLLER SHALL MEET OR EXCEED ALL REQUIREMENTS SET FORTH BY THE INSTITUTE OF TRANSPORTATION ENGINEERS, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND ALL ADOPTED REVISIONS. ALL TRAFFIC SIGNAL CONTROLLERS SHALL BE SIEMENS M-60 AND PER CITY OF CLEVELAND D-60.

BASE MOUNTED CABINETS

THE CONTROLLER SHALL BE PROVIDED IN A BASE-MOUNTED CONTROL CABINET.

ALL NECESSARY INSTALLATION HARDWARE AND TEMPLATES SHALL BE PROVIDED.

MINIMUM OUTSIDE DIMENSIONS OF CABINET SHALL BE 25 INCHES (WIDTH) BY 16 INCHES (DEPTH) BY 48 INCHES (HEIGHT).

ALL CABINETS SHALL INCLUDE A 12" CABINET RISER.

A TELEPHONE MODEM SHALL BE COMPLETELY WIRED IN EACH CABINET IN ORDER TO REPORT CABINET FAILURES, DETECTOR FAILURES AND TRAFFIC COUNTS. THE CONTROLLER SHALL BE COMPLETELY COMPATIBLE WITH THE LATEST EDITION OF THE CITY OF CLEVELAND'S CLOSED LOOP SYSTEM SOFTWARE.

THE ITEMS SUPPLIED SHALL BE IN CONFORMANCE WITH THE ABOVE REFERENCE SPECIFICATION AND SHALL BE SUPPLEMENTED WITH THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS. PAYMENT FOR ACCEPTED MATERIALS WILL BE MADE AT THE UNIT BID PRICE OF EACH ITEM INSTALLED AND ACCEPTED.

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TRAFFIC SIGNAL NOTES

EAST 105TH STREET

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ITEM 614 - MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS, AS PER D-49

IN ADDITION TO THE REQUIREMENTS OF 614, MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS SHALL BE AS PER THE CITY OF CLEVELAND STANDARD SPECIFICATIONS, PART D, D-49.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. NEW SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.
2. EXISTING SIGNAL INSTALLATIONS OR DEVICES INSTALLED OR MODIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INITIAL INSTALLATION OR MODIFICATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES MAY BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE SIGNAL SHALL BE BACK IN SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE OR MALFUNCTION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION AT THESE LOCATIONS WITHIN HIS OR HER RESPONSIBILITY, WITHIN PERIODS AS OUTLINED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS BY THE STATE OR THE CITY OF CLEVELAND FOR POLICE SERVICE AND/OR MAINTENANCE SERVICES BY STATE AND/OR CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING, WHICH WILL BE OUT OF OPERATION, SHALL BE COVERED IN THE MANNER DESCRIBED IN SECTION 632.25.

ALL COST RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614-MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS, AS PER D-49.

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TRAFFIC SIGNAL NOTES

EAST 105TH STREET

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REF. NO.											ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
	221	223	227	231	232	233	237	238	239	240					
142	1	1	1		1	1				1	614	LS	-	MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS, AS PER D-49	219
143		481	550			495				513	625	2039	FT	CONDUIT, 3", 725.051, AS PER D-51	217
144		288	359			330				355	625	1332	FT	TRENCH	
145		6	7			8				7	625	28	EACH	PULL BOX, MISC.: 17"x30", AS PER D-57	217
146		1	1			1				1	625	4	EACH	PULL BOX, MISC.: 24"x36", AS PER D-57	217
147		6	8			8	2	2		8	625	34	EACH	GROUND ROD, AS PER D-58	217
148		288	359			330				355	625	1332	FT	PLASTIC CAUTION TAPE, AS PER D-61	217
149		6	6			5				6	630	23	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER D-65	217
150	4.0	19.0	19.0		4.0	12.0				12.0	630	70.0	SF	SIGN, FLAT SHEET	
151		4	4			3				4	630	15	EACH	SIGN, STREETNAME, AS PER PLAN	217
152							2	2			630	4	EACH	SIGNING, MISC.: (EL TEC) SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY	22
153	5	8	8			6				8	632	35	EACH	VEHICULAR SIGNAL HEAD, (LED), YELLOW, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	218
154	1										632	1	EACH	VEHICULAR SIGNAL HEAD, (LED), YELLOW, 5-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	218
155	8	8	8		8	8				8	632	48	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	218
156	6	8	8			6				8	632	36	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
157	8	8	8		8	8				8	632	48	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
158	4	4	4		4	4				4	632	24	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	218
159		4	4		8	2				4	632	22	EACH	DETECTOR LOOP	
160	378	493	634			418				627	632	2550	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	
161		1042	1310			858				1318	632	4528	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
162		714	809			429				852	632	2804	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
163		4	4			2				4	632	14	EACH	SIGNAL SUPPORT FOUNDATION, AS PER D-48	218
164		1	3			5	2	2		3	632	16	EACH	PEDESTAL FOUNDATION	
165		210	282		500	157				376	632	1525	FT	LOOP DETECTOR LEAD-IN CABLE	
166		61	59			126				80	632	326	FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG	
167		142	71			10				128	632	351	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 8 AWG	
168		1	1			1				1	632	4	EACH	POWER SERVICE, AS PER D-50	217
169		1	1			1				1	632	4	EACH	CONDUIT RISER, 3" DIAMETER	
170						1					632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 12 POLE, WITH MAST ARMS TC-81.21 DESIGN 11 AND DESIGN 2, AS PER D-64	218
171		1	4							2	632	7	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1, AS PER D-64	218
172		2									632	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2, AS PER D-64	218
173		1								1	632	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3, AS PER D-64	218
174						1				1	632	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4, AS PER D-64	218
175		1	3			5				3	632	12	EACH	PEDESTAL, 8", AS PER PLAN	218
176	1	1	1	1	1	1	1	1	1	1	632	10	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62	218
177		6	8			8				8	632	30	EACH	SIGNALIZATION, MISC.: FOUNDATION TEST HOLE	218
178		1	1			1				1	633	4	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN, AS PER D-60	218
179		1	1			1				1	633	4	EACH	CABINET FOUNDATION	
180		1	1			1				1	633	4	EACH	CONTROLLER WORK PAD	

CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL GENERAL SUMMARY

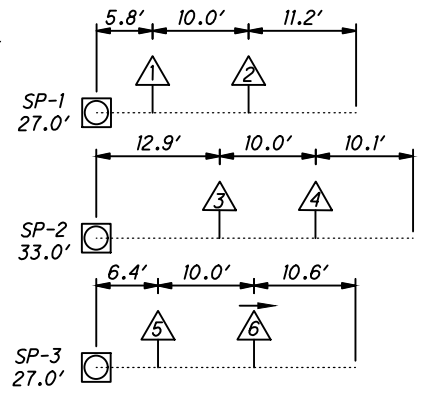
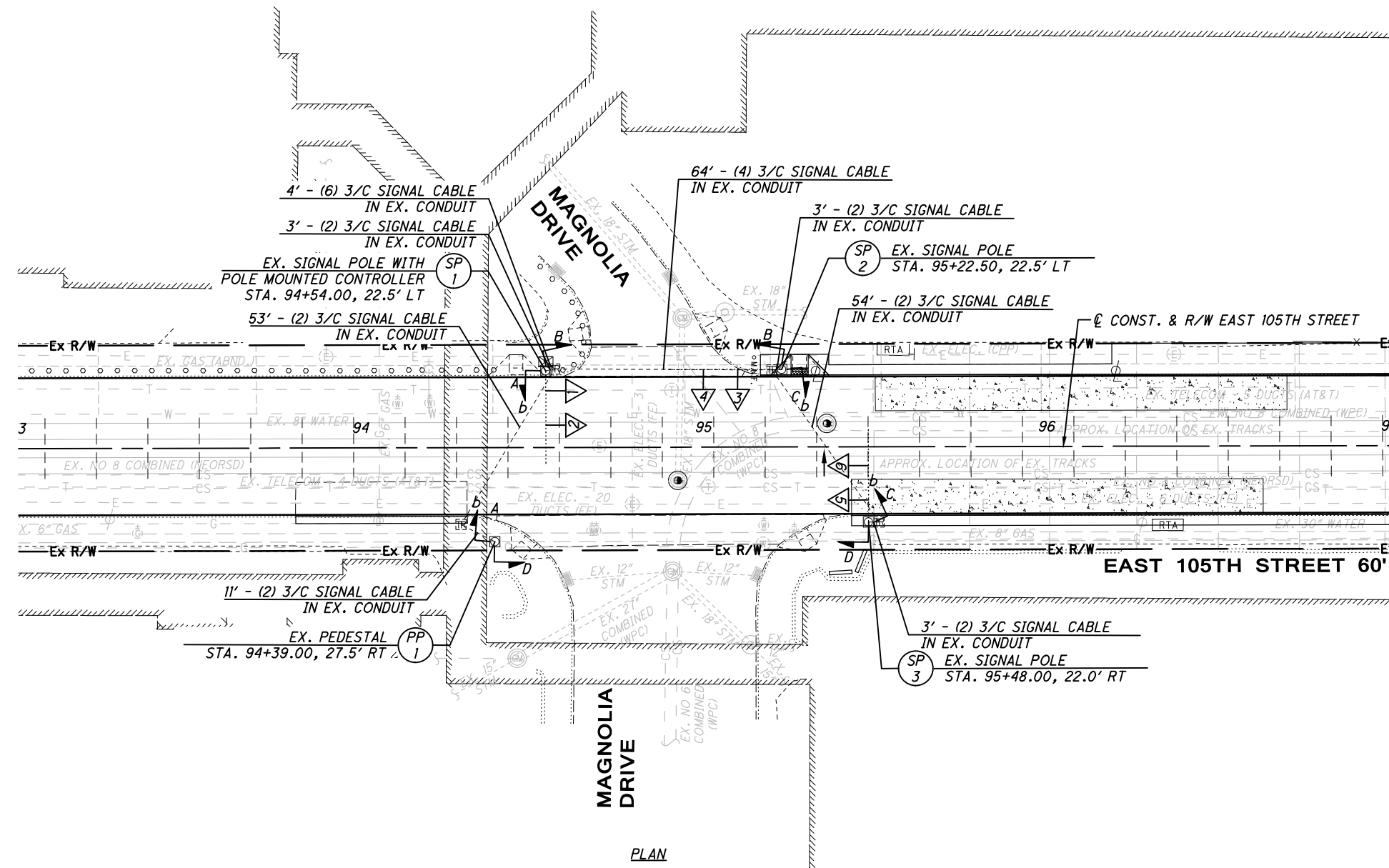
EAST 105TH STREET

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS, AS PER D-49										
		FROM	TO		614	630	632	632	632	632	632	632	632	632	632
					LS	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH
222		EAST 105TH ST. &	MAGNOLIA DR.		1										1
222	C-1	SIGNAL 1					1				1				
222	C-1	SIGNAL 2					1				1				
222	C-1	SIGNAL 3					1				1				
222	C-1	SIGNAL 4					1				1				
222	C-1	SIGNAL 5					1				1				
222	C-1	SIGNAL 6						1			1				
222	C-1	PED A-A				2.0				2		2	2	109	
222	C-1	PED B-B								2		2	2		
222	C-1	PED C-C				2.0				2		2	2	269	
222	C-1	PED D-D								2		2	2		
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY					1	4.0	5	1	8	6	8	4	378	1	

SIGNAL UPGRADE



0 20 40
HORIZONTAL SCALE IN FEET
CALCULATED GM CHECKED JTS



PLAN

EXISTING PEDESTRIAN SIGNALS

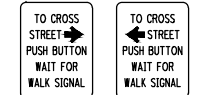


PROPOSED PEDESTRIAN SIGNALS



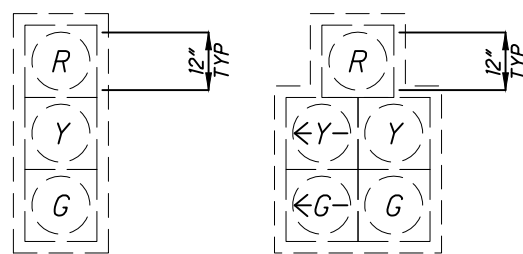
PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

PROPOSED SIGNS

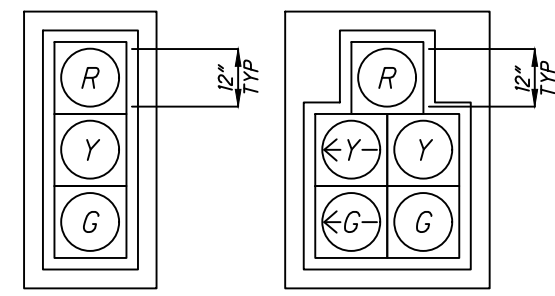


R10-4a-9
TO BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTONS ON PP-1, SP-1, SP-2, AND SP-3.

EXISTING TRAFFIC SIGNALS



PROPOSED TRAFFIC SIGNALS



1, 2, 3, 4, 5

6

LEGEND

- ◻ EXISTING SIGNAL POLE
- ◻ EXISTING POLE MOUNTED CONTROLLER
- ⬆️ VEHICULAR SIGNAL 3-SECTION
- ⬆️ VEHICULAR SIGNAL 5-SECTION
- ⬆️ PEDESTRIAN SIGNAL WITH PUSHBUTTON
- ⬆️ PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING CONDUIT

SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- 6 VEHICULAR SIGNALS
 - 8 PEDESTRIAN SIGNALS
- INSTALL THE FOLLOWING:
- NEW VEHICULAR SIGNALS W/ BACKPLATES
 - NEW PEDESTRIAN SIGNALS & WIRES
 - NEW PEDESTRIAN PUSHBUTTONS & WIRES

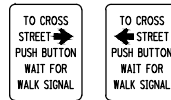
TRAFFIC SIGNAL PLAN
EAST 105TH STREET AND MAGNOLIA DRIVE

EAST 105TH STREET

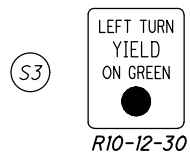
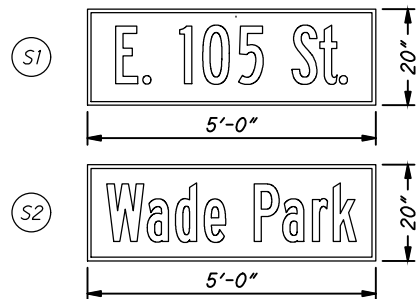
222
243

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PROPOSED SIGNS



R10-4a-9
TO BE MOUNTED ABOVE PEDESTRIAN
PUSHBUTTONS ON SP-1, SP-2, PP-1, AND SP-4.

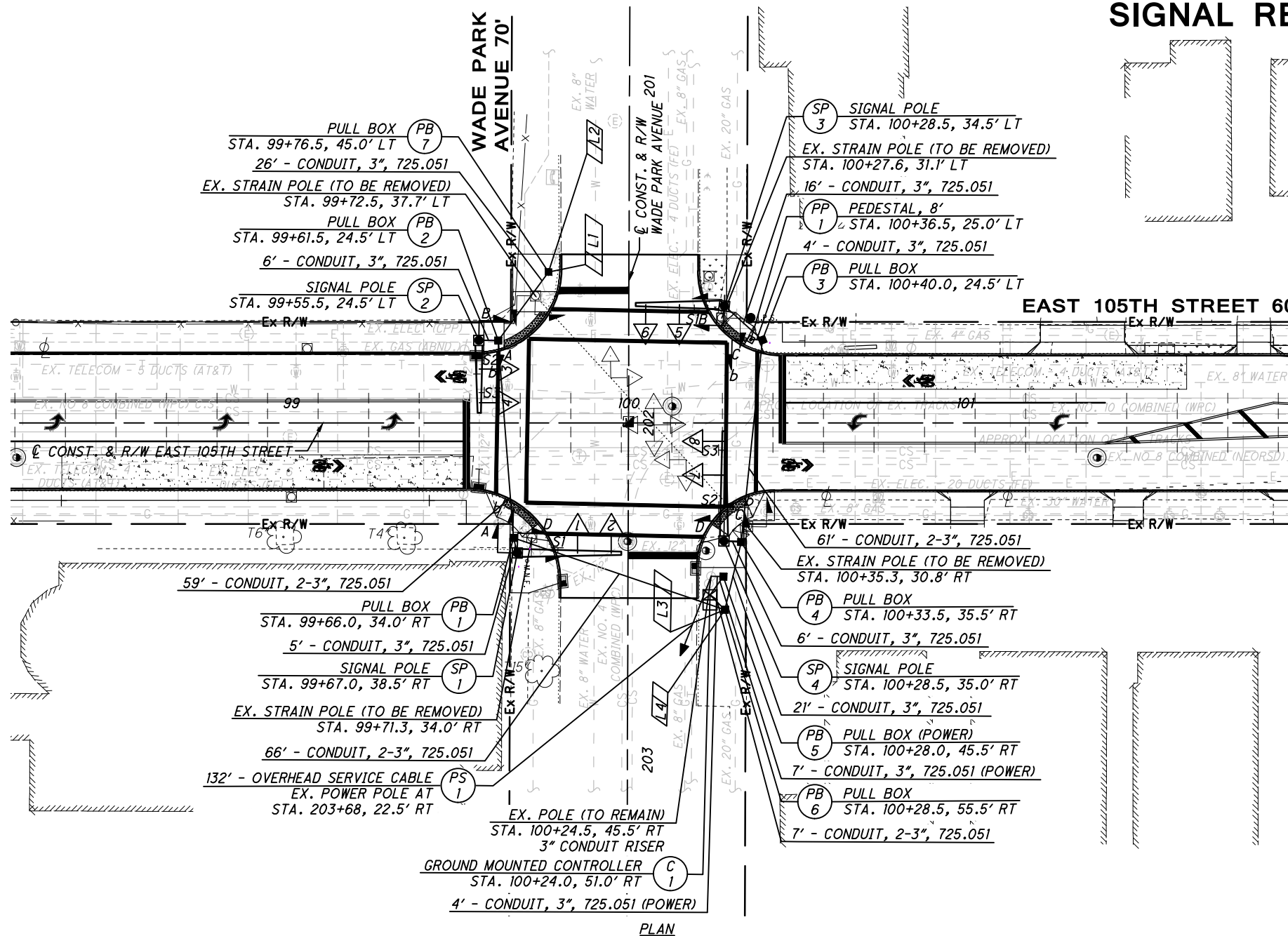
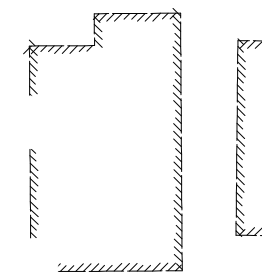


PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	99+66.0	RT	34.0	17 X 30
2	99+61.5	LT	24.5	17 X 30
3	100+40.0	LT	24.5	17 X 30
4	100+33.5	RT	34.5	17 X 30
5	100+28.0	RT	45.5	17 X 30
6	100+28.5	RT	55.5	24 X 36
7	99+76.5	LT	45.0	17 X 30

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE
- SIGNAL POLE
- PEDESTAL, 8'
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- PEDESTRIAN SIGNAL WITH PUSHBUTTON
- PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- CONDUIT
- LOOP DETECTOR (TO BE CENTERED ON LANE)

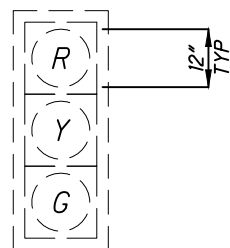
SIGNAL RECONSTRUCTION



EXISTING PEDESTRIAN SIGNALS



EXISTING TRAFFIC SIGNALS

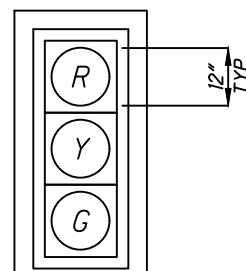


PROPOSED PEDESTRIAN SIGNALS

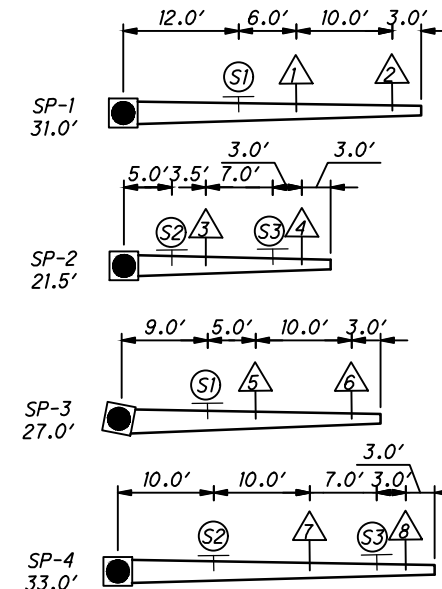


PEDESTRIAN HEADS
(LED, COUNTDOWN,
TYPE D2)

PROPOSED TRAFFIC SIGNALS



1, 2, 3, 4, 5, 6, 7, 8



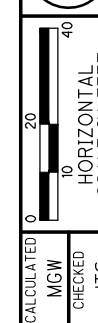
SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - 4 STRAIN POLES
 - MESSENGER WIRE
 - 8 VEHICULAR SIGNALS
 - 8 PEDESTRIAN SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

- INSTALL THE FOLLOWING:
- NEW VEHICULAR SIGNALS W/ BACKPLATES
 - NEW PEDESTRIAN SIGNALS & WIRES
 - NEW PEDESTRIAN PUSHBUTTONS & WIRES
 - NEW LOOP DETECTORS
 - NEW SIGNAL CONTROLLER
 - NEW PULL BOXES
 - NEW SIGNAL CABLES/CONDUIT

NOTES:

1. CONDUITS NOT UNDER ROADWAY SHALL BE 725.051. CONDUITS UNDER ROADWAY SHALL BE 725.051 CONCRETE ENCASED.



TRAFFIC SIGNAL PLAN
EAST 105TH STREET AND WADE PARK AVENUE

EAST 105TH STREET

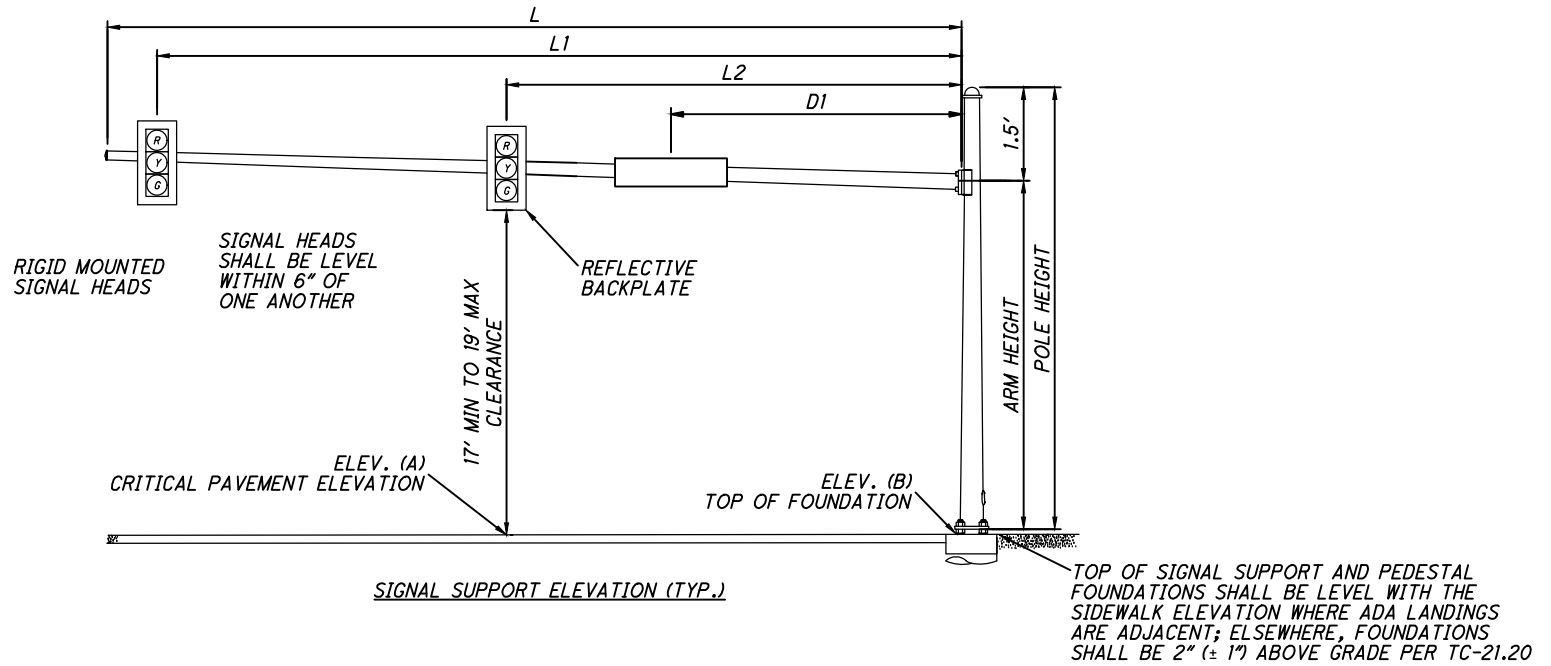
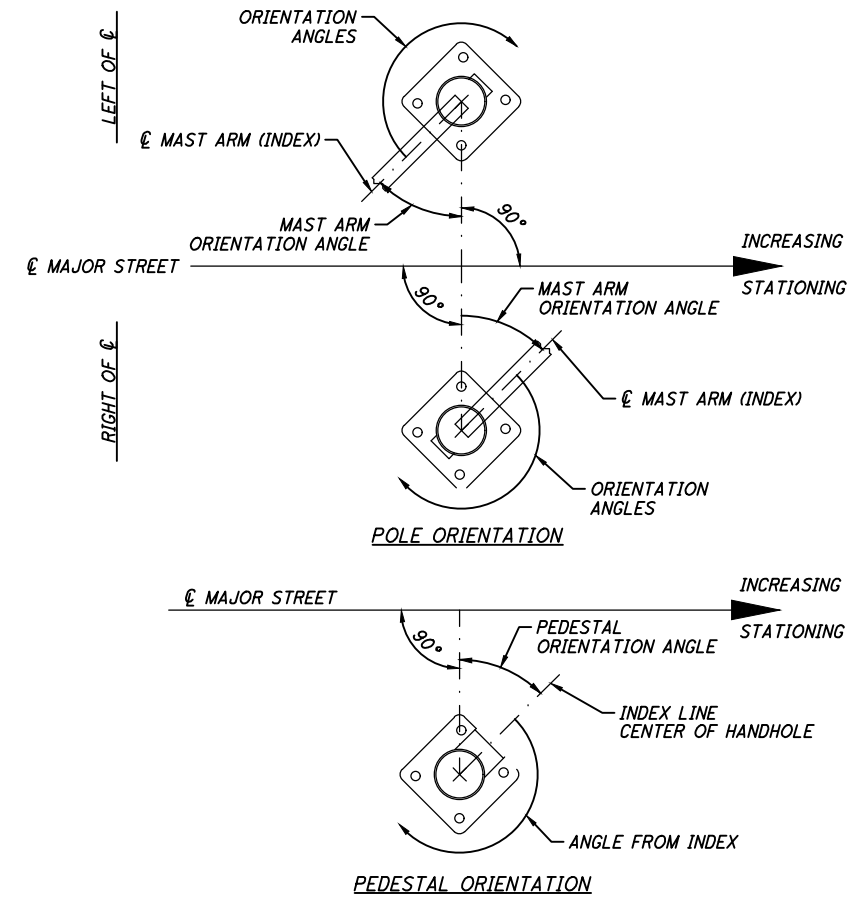
SIGNAL TIMING CHART
TO BE PROVIDED BY THE CITY OF CLEVELAND

PHASING DIAGRAM
TO BE PROVIDED BY THE CITY OF CLEVELAND

TRAFFIC SIGNAL DETECTOR CHART

LOOP OR CAMERA DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.*
L1	P	5' X 15'	PRESENCE	3	-	-	4	-
L2	ADD	5' X 10'	PRESENCE	-	-	-	4	-
L3	P	5' X 15'	PRESENCE	3	-	-	8	-
L4	ADD	5' X 10'	PRESENCE	-	-	-	8	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

* FOR 332/336 CABINET
** CONFIGURATIONS: POWERHEAD (P), QUADRUPLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10








MAST ARM TABLE

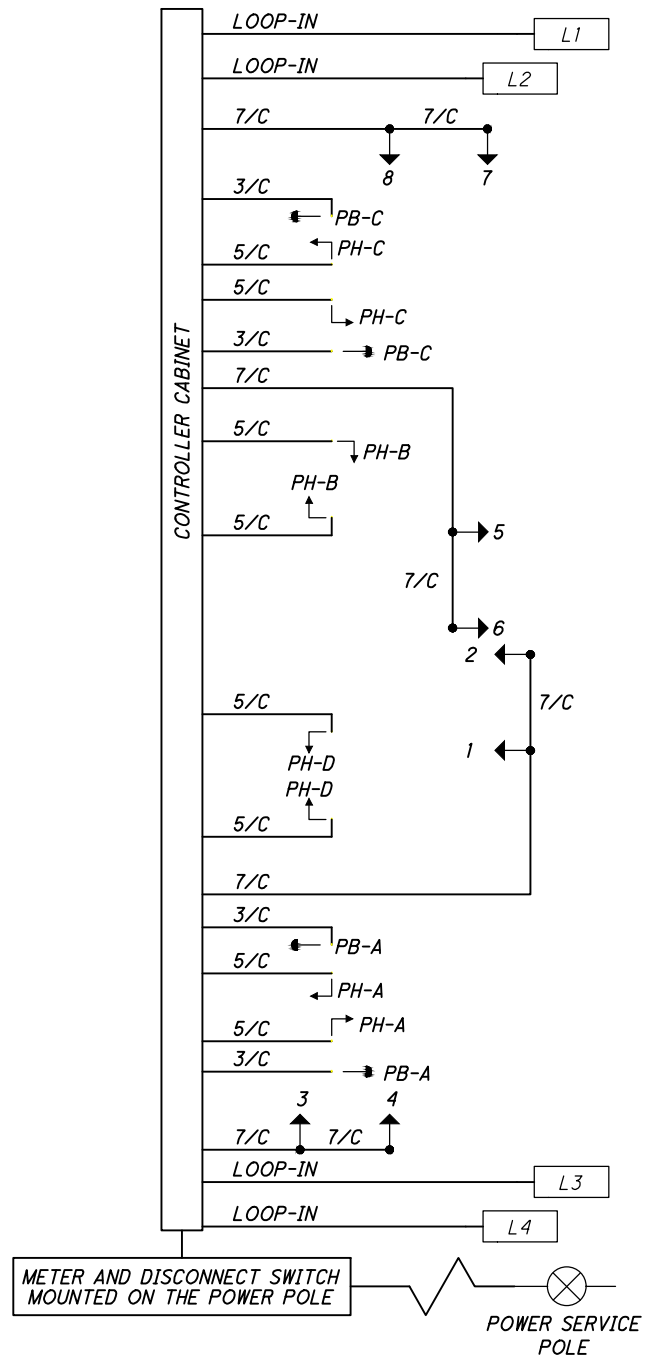
SUPPORT NO.	STATION	OFFSET	ELEVATION		POLE DESIGN NO.	POLE HEIGHT	ARM DESIGN NO.	SIGNAL SUPPORT DETAILS							ORIENTATION ANGLES FROM MAST ARM											
			A	B				ARM HEIGHT	L	L1	L2	L3	L4	D1	D2	D3	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	HANDHOLE	CABLE ENTRANCE 12" FROM TOP		
SP-1	99+67.0	38.5' RT	649.66	650.71	2	21.0	2	19.5	31.0	28.0	18.0	-	-	12.0	-	-	90	-	180/270	270	-	-	-	-	-	-
SP-2	99+55.5	24.5' LT	649.07	649.49	1	21.0	1	19.5	21.5	18.5	8.5	-	-	15.5	5.0	-	0	-	180/270	270	-	-	-	-	-	-
SP-3	100+28.5	34.5' LT	649.09	649.71	2	21.0	2	19.5	27.0	24.0	14	-	-	9.0	-	-	91	-	270	-	-	-	-	-	-	-
SP-4	100+28.5	35.0' RT	649.22	650.14	3	21.0	3	19.5	33.0	30.0	20	-	-	27.0	10.0	-	0	-	0/90	90	-	-	-	-	-	-
PP-1	100+36.5	25.0' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	300	-	-	-	-	-	-

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- LEGEND**
-  3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
 -  PEDESTRIAN SIGNAL HEAD
 -  PEDESTRIAN PUSH BUTTON
 -  LOOP DETECTORS
 -  POWER SOURCE

WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
7	R	φ2R	Y
	Y	φ2Y	
(NB)	G	φ2G	Y
	R	φ2R	
8	Y	φ2Y	Y
	G	φ2G	
(NB)	R	φ2R	Y
	Y	φ2Y	
1	R	φ4R	R
	Y	φ4Y	
(EB)	G	φ4G	R
	R	φ4R	
2	Y	φ4Y	R
	G	φ4G	
(EB)	R	φ4R	R
	Y	φ4Y	
3	R	φ6R	Y
	Y	φ6Y	
(SB)	G	φ6G	Y
	R	φ6R	
4	Y	φ6Y	Y
	G	φ6G	
(SB)	R	φ6R	Y
	Y	φ6Y	
5	R	φ8R	R
	Y	φ8Y	
(WB)	G	φ8G	R
	R	φ8R	
6	Y	φ8Y	R
	G	φ8G	
(WB)	R	φ8R	R
	Y	φ8Y	
(WB)	G	φ8G	R
	R	φ8R	
PEDESTRIAN MOVEMENTS			
PED A	W	φ4 PED/LS10G	OFF
(E-W)	DW	φ4 PED/LS10R	
PED B	W	φ6 PED/LS11G	OFF
(N-S)	DW	φ6 PED/LS11R	
PED C	W	φ8 PED/LS12G	OFF
(E-W)	DW	φ8 PED/LS12R	
PED D	W	φ2 PED/LS13G	OFF
(N-S)	DW	φ2 PED/LS13R	
LS = LOADSWITCH			

CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL DETAILS
EAST 105TH STREET AND WADE PARK AVENUE

EAST 105TH STREET

226
243

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REF. SHEET NO.	SHEET NO.	STATION TO STATION		SIDE	614	625	625	625	625	625	625	630	630	630	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	633	633	633	633
		FROM	TO		LS	FT	FT	EACH	EACH	EACH	FT	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	EACH	EACH	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
PS-1	228	348+87.0	(ASHBURY)	RT	1																																		
C-1	228	108+40.0		LT					1																														
SP-1	228	107+99.5		RT					1		1		1										1																
SP-2	228	108+11.0		LT					1		2	7.5	1										1																
SP-3	228	108+77.5		LT					1		1		1										1																
SP-4	228	108+56.5		RT					1		2	7.5	1										1																
PP-1	228	108+36.0		LT					1																														
PP-2	228	108+83.5		LT					1																														
PP-3	228	108+39.0		RT					1																														
	228	EX. POLE	PB-3	LT		4	4	1																															
	228	PB-3	C-1	LT		5	5																																
	228	C-1	PB-2	LT		30	15		1																														
	228	PB-2	PP-1	LT		8	8																																
	228	PB-2	SP-2	LT		25	25																																
	228	PB-2	PB-4	LT		106	53	1																															
	228	PB-4	SP-3	LT		6	6																																
	228	PB-4	PP-2	LT		13	13																																
	228	PB-4	PB-5	LT/RT		136	68	1																															
	228	PB-5	SP-4	RT		7	7																																
	228	PB-5	PB-6	RT		14	14	1																															
	228	PB-6	PP-3	RT		14	14																																
	228	PB-6	PB-1	RT		110	55	1																															
	228	PB-1	SP-1	RT		10	10																																
	228	PB-2	PB-8	LT		31	31	1																															
	228	PB-6	PB-7	RT		31	31	1																															
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	228	C-1	SIGNAL 3																																				
	228	C-1	SIGNAL 4																																				
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	228	C-1	SIGNAL 6																																				
	228	C-1	SIGNAL 7																																				
	228	C-1	SIGNAL 8																																				
	228	C-1	PED A-A									2.0			2		2	2																					
	228	C-1	PED B-B																																				
	228	C-1	PED C-C									2.0			2		2	2	2																				
	228	C-1	PED D-D																																				
	228	C-1	L1 & L2																																				
	228	C-1	L3 & L4																																				
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY					1	550	359	7	1	8	359	6	19.0	4	8	8	8	8	4	4	634	1310	809	4	3	282	59	71	1	1	4	3	1	8	1	1	1		

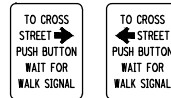
EAST 105TH STREET

TRAFFIC SIGNAL SUBSUMMARY
EAST 105TH STREET AND ASHBURY AVENUE

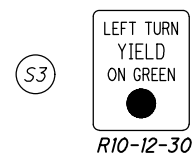
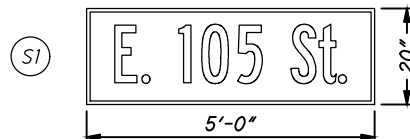
CALCULATED
MGW
CHECKED
JTS

227
243

PROPOSED SIGNS



R10-4a-9
TO BE MOUNTED ABOVE PEDESTRIAN
PUSHBUTTONS ON SP-1, SP-2, PP-2, AND SP-4.

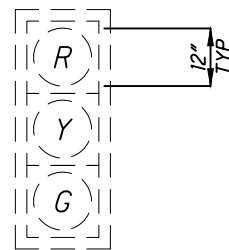


PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	107+93.0	RT	28.5	17 X 30
2	108+30.0	LT	38.5	24 X 36
3	108+42.0	LT	52.0	17 X 30
4	108+82.0	LT	36.0	17 X 30
5	180+61.0	RT	28.5	17 X 30
6	108+47.5	RT	29.5	17 X 30
7	108+32.0	RT	55.5	17 X 30
8	108+44.0	LT	66.0	17 X 30

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE
- SIGNAL POLE
- PEDESTAL, 8'
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- PEDESTRIAN SIGNAL WITH PUSHBUTTON
- PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- CONDUIT
- LOOP DETECTOR (TO BE CENTERED ON LANE)

EXISTING TRAFFIC SIGNALS

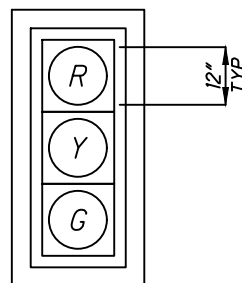


PROPOSED PEDESTRIAN SIGNALS



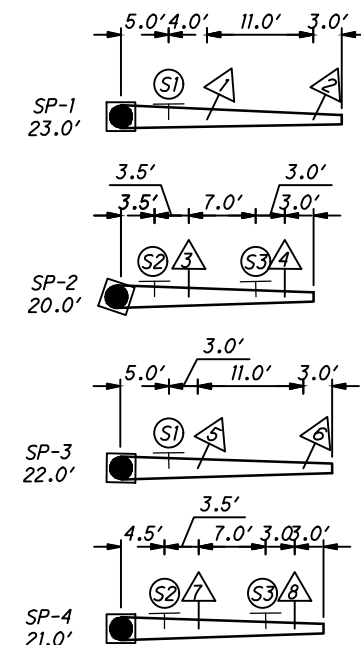
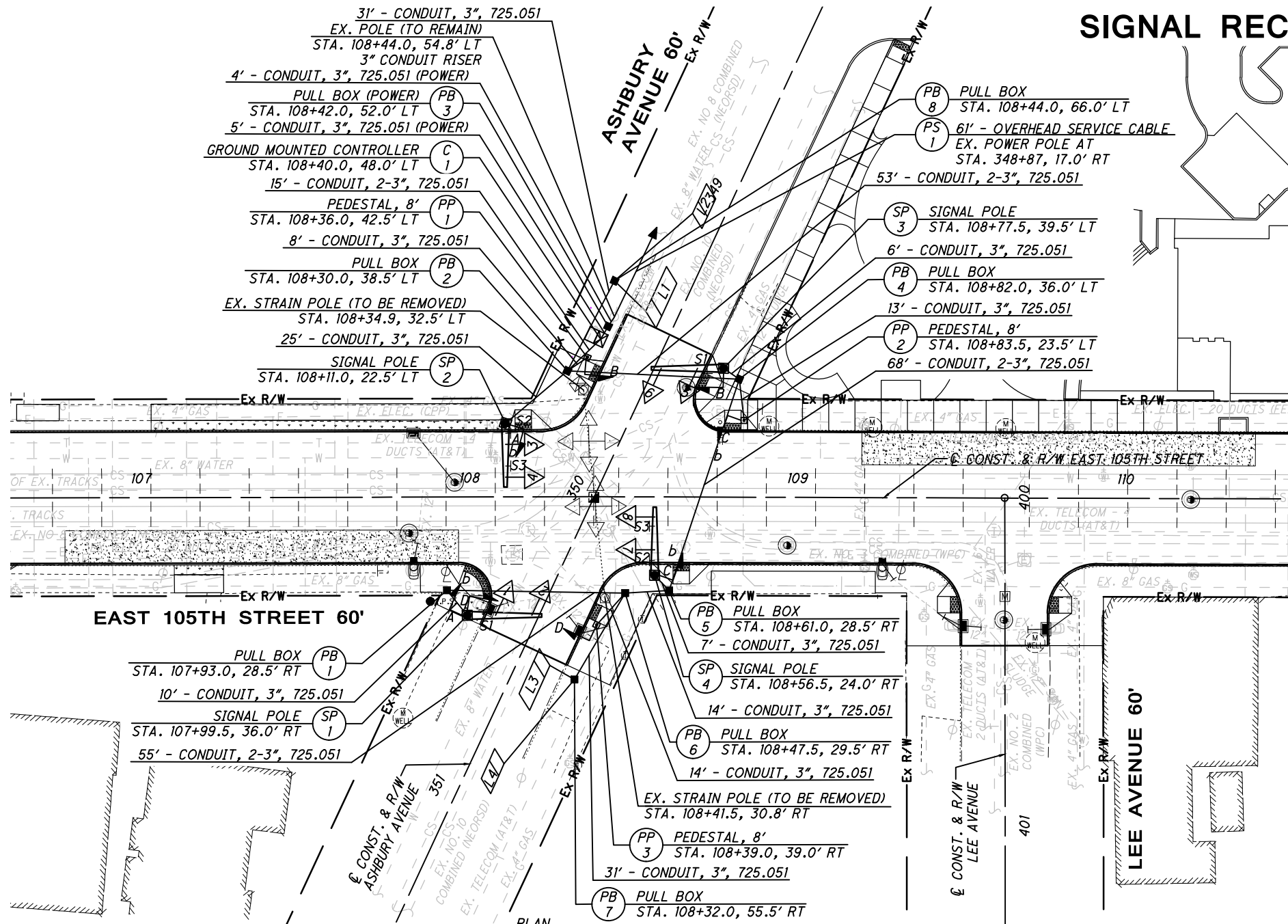
PEDESTRIAN HEADS
(LED, COUNTDOWN,
TYPE D2)

PROPOSED TRAFFIC SIGNALS



1, 2, 3, 4, 5, 6, 7, 8

SIGNAL RECONSTRUCTION



SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - 2 STRAIN POLES
 - MESSENGER WIRE
 - 8 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

- INSTALL THE FOLLOWING:
- NEW VEHICULAR SIGNALS W/ BACKPLATES
 - NEW PEDESTRIAN SIGNALS & WIRES
 - NEW PEDESTRIAN PUSHBUTTONS & WIRES
 - NEW LOOP DETECTORS
 - NEW SIGNAL CONTROLLER
 - NEW PULL BOXES
 - NEW SIGNAL CABLES/CONDUIT

NOTES:

1. CONDUITS NOT UNDER ROADWAY SHALL BE 725.051. CONDUITS UNDER ROADWAY SHALL BE 725.051 CONCRETE ENCASED.



TRAFFIC SIGNAL PLAN
EAST 105TH STREET AND ASHBURY AVENUE

EAST 105TH STREET

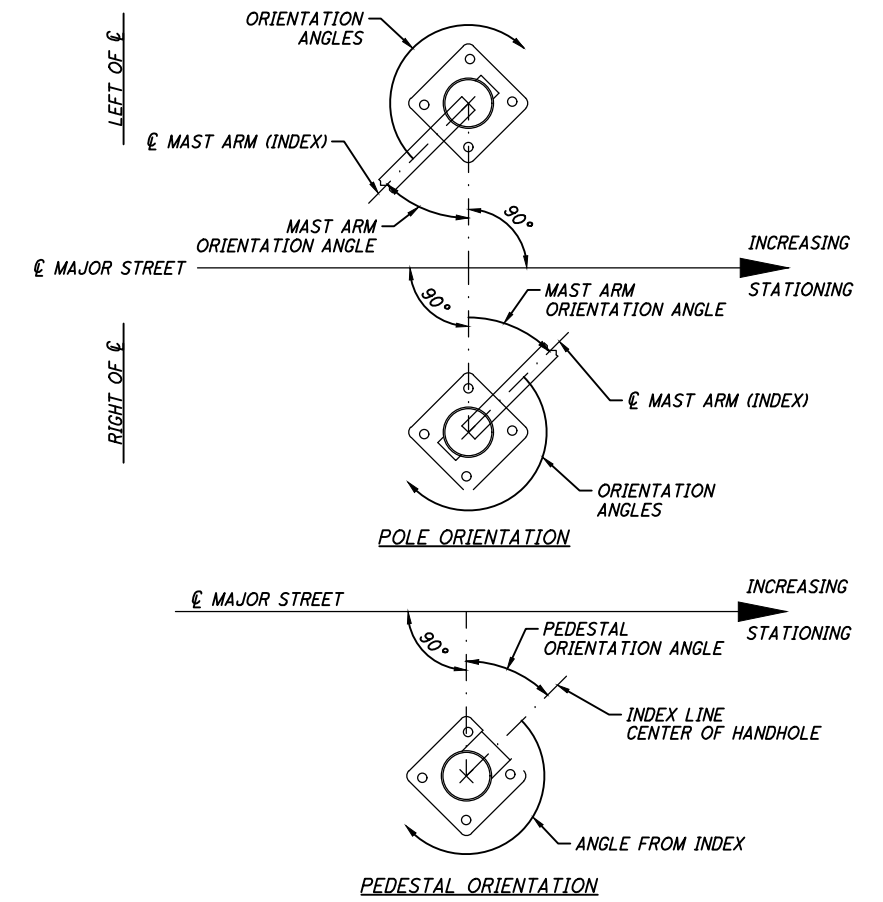
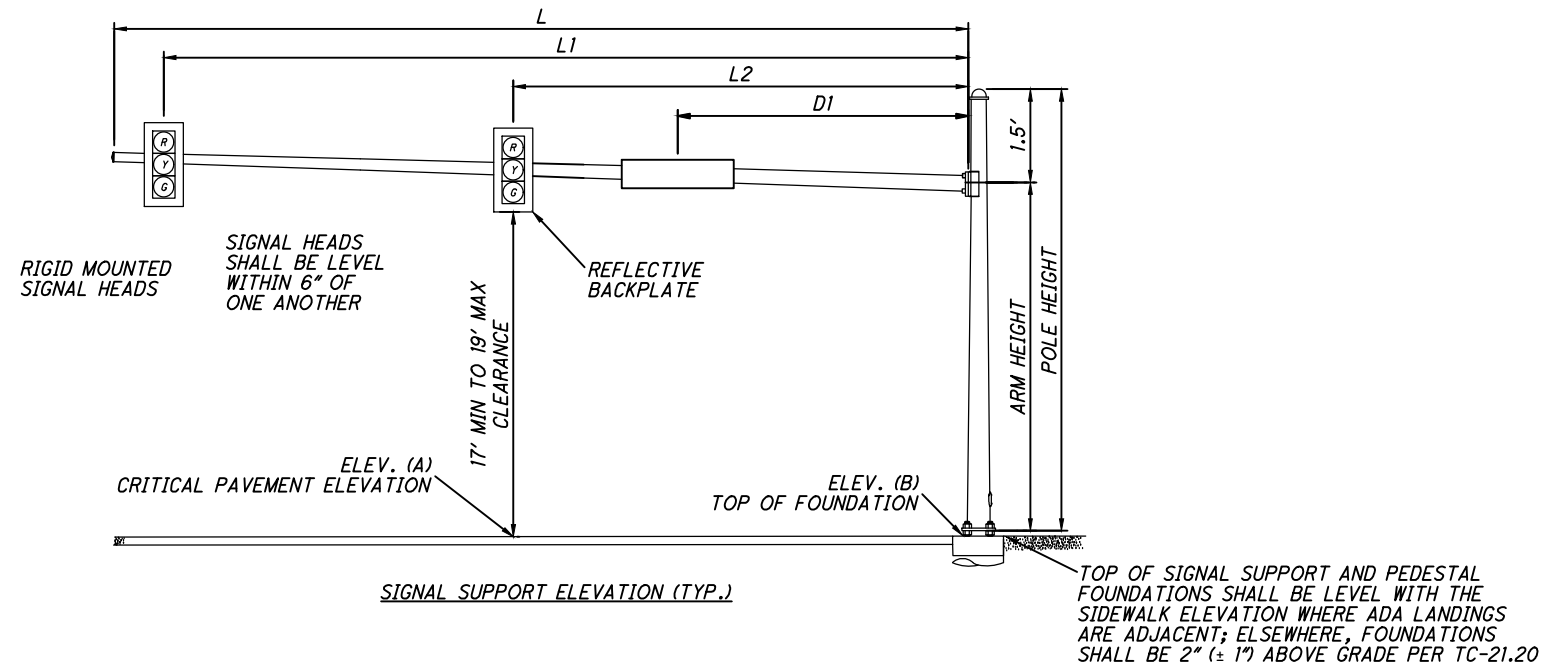
SIGNAL TIMING CHART
TO BE PROVIDED BY THE CITY OF CLEVELAND

PHASING DIAGRAM
TO BE PROVIDED BY THE CITY OF CLEVELAND

TRAFFIC SIGNAL DETECTOR CHART

LOOP OR CAMERA DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO. *
L1	P	5' X 15'	PRESENCE	3	-	-	4	-
L2	ADD	5' X 10'	PRESENCE	-	-	-	4	-
L3	P	5' X 15'	PRESENCE	3	-	-	8	-
L4	ADD	5' X 10'	PRESENCE	-	-	-	8	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

* FOR 332/336 CABINET
** CONFIGURATIONS: POWERHEAD (P), QUADRUPLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10



MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		POLE DESIGN NO.	POLE HEIGHT	ARM DESIGN NO.	ARM HEIGHT	SIGNAL SUPPORT DETAILS							ORIENTATION ANGLES FROM MAST ARM										
			A	B					L	L1	L2	L3	L4	D1	D2	D3	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	HANDHOLE	CABLE ENTRANCE 12" FROM TOP		
SP-1	107+99.5	36.0' RT	645.86	646.33	1	22.0	1	20.5	23.0	20.0	9.0	-	-	5.0	-	-	90	-	204/279	204	-	-	-	-	-	-
SP-2	108+11.0	22.5' LT	646.03	646.45	1	22.0	1	20.5	20.0	17.0	7.0	-	-	14.0	3.5	-	0	-	286	286	-	-	-	-	-	-
SP-3	108+77.5	39.5' LT	645.79	645.91	1	22.0	1	20.5	22.0	19.0	8.0	-	-	5.0	-	-	90	-	271	-	-	-	-	-	-	-
SP-4	108+56.5	24.0' RT	645.70	646.01	1	22.0	1	20.5	21.0	18.0	8.0	-	-	15.0	4.5	-	0	-	110	110	-	-	-	-	-	-
PP-1	108+36.0	42.5' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-
PP-2	108+83.5	23.5' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	290	-	-	-	-	-	-
PP-3	108+39.0	39.0' RT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-

CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL DETAILS
EAST 105TH STREET AND ASHBURY AVENUE

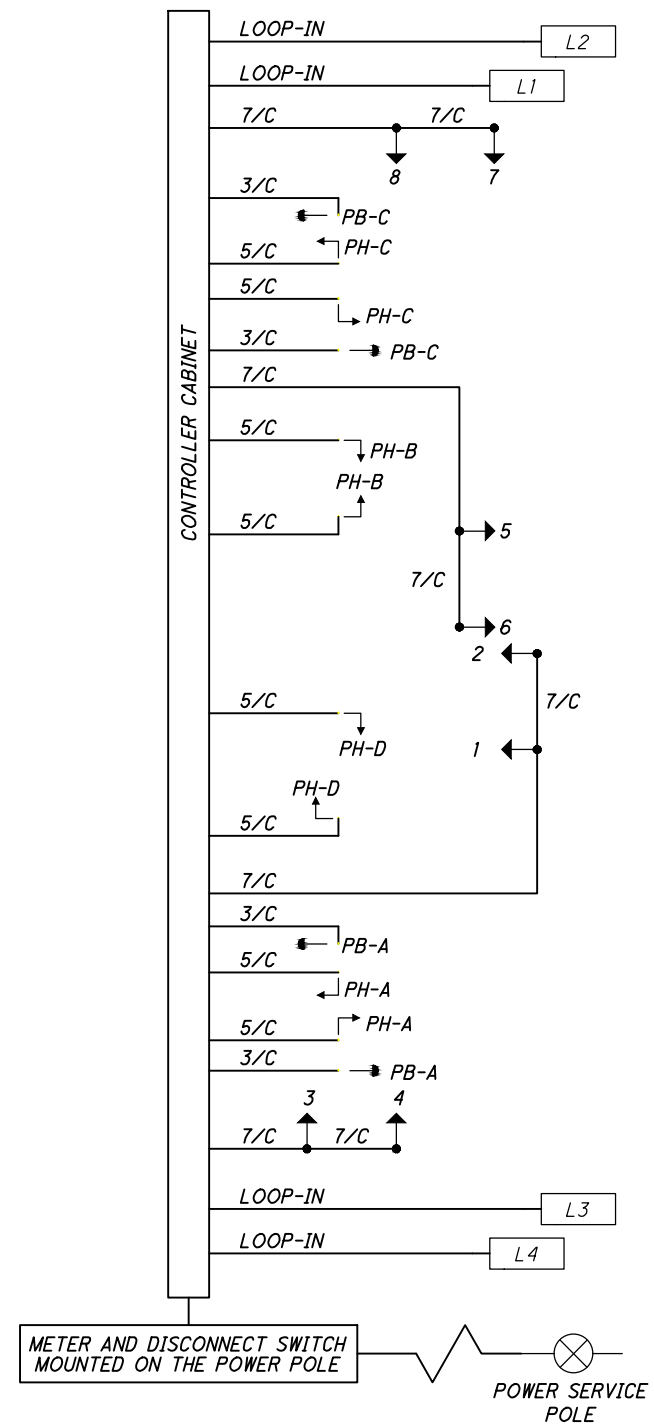
EAST 105TH STREET

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- LEGEND**
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
 - PEDESTRIAN SIGNAL HEAD
 - PEDESTRIAN PUSH BUTTON
 - LOOP DETECTORS
 - POWER SOURCE

WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
7	R	φ2R	Y
	Y	φ2Y	
	(NB) G	φ2G	
8	R	φ2R	Y
	Y	φ2Y	
	(NB) G	φ2G	
1	R	φ4R	R
	Y	φ4Y	
	(EB) G	φ4G	
2	R	φ4R	R
	Y	φ4Y	
	(EB) G	φ4G	
3	R	φ6R	Y
	Y	φ6Y	
	(SB) G	φ6G	
4	R	φ6R	Y
	Y	φ6Y	
	(SB) G	φ6G	
5	R	φ8R	R
	Y	φ8Y	
	(WB) G	φ8G	
6	R	φ8R	R
	Y	φ8Y	
	(WB) G	φ8G	
PEDESTRIAN MOVEMENTS			
PED A (E-W)	W	φ4 PED/LS10G	OFF
	DW	φ4 PED/LS10R	
PED B (N-S)	W	φ6 PED/LS11G	OFF
	DW	φ6 PED/LS11R	
PED C (E-W)	W	φ8 PED/LS12G	OFF
	DW	φ8 PED/LS12R	
PED D (N-S)	W	φ2 PED/LS13G	OFF
	DW	φ2 PED/LS13R	

LS = LOADSWITCH

SIGNAL REMOVAL



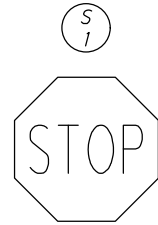
CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL PLAN EAST 105TH STREET AND ORVILLE AVENUE

EAST 105TH STREET

231
243

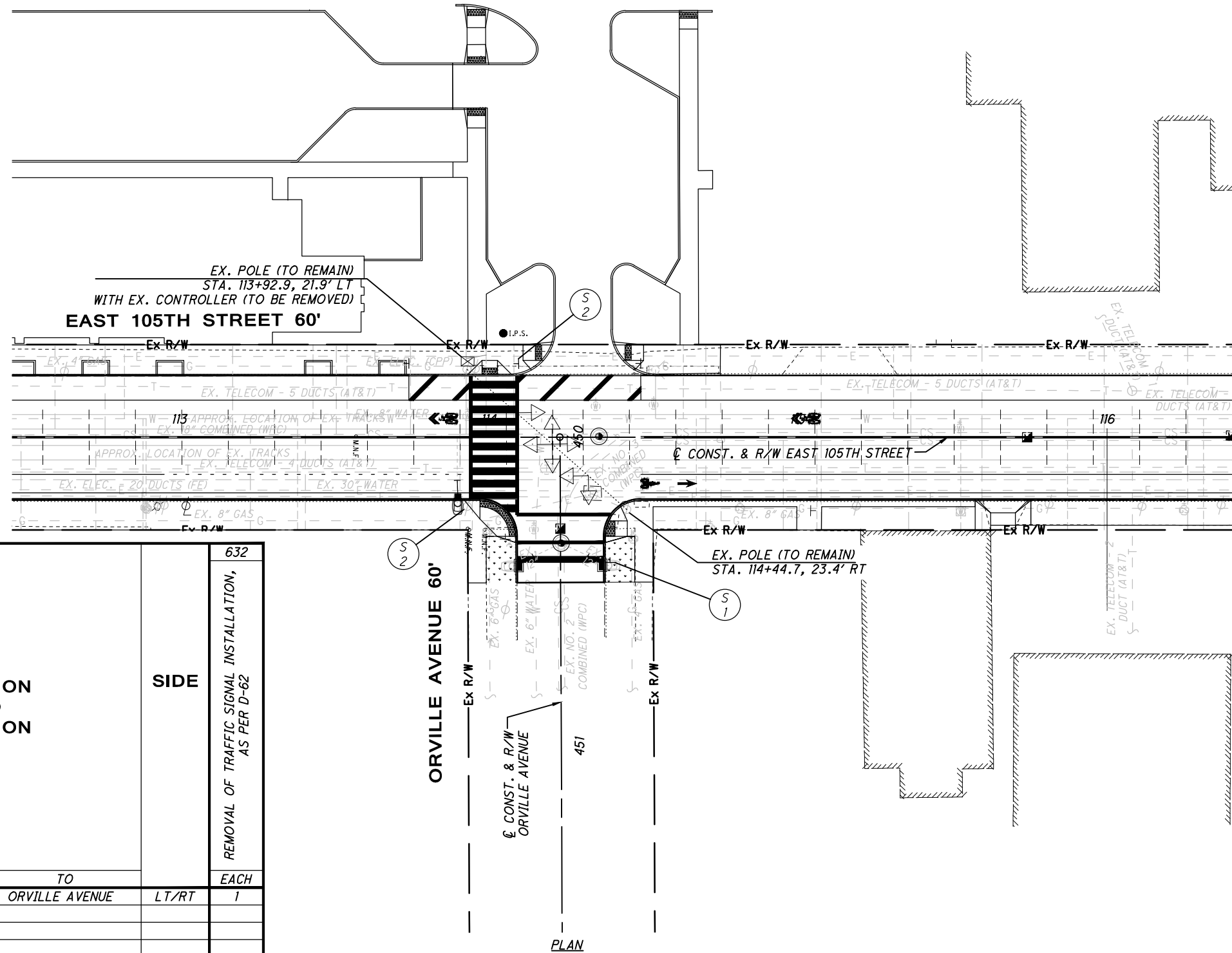
PROPOSED TRAFFIC SIGNS



(SEE SIGNING AND PAVEMENT MARKING PLANS)



(SEE SIGNING AND PAVEMENT MARKING PLANS)



REF. NO.	SHEET NO.	STATION TO STATION		SIDE	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62	632
		FROM	TO			
		EAST 105TH STREET & ORVILLE AVENUE		LT/RT	1	
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY						1

LEGEND

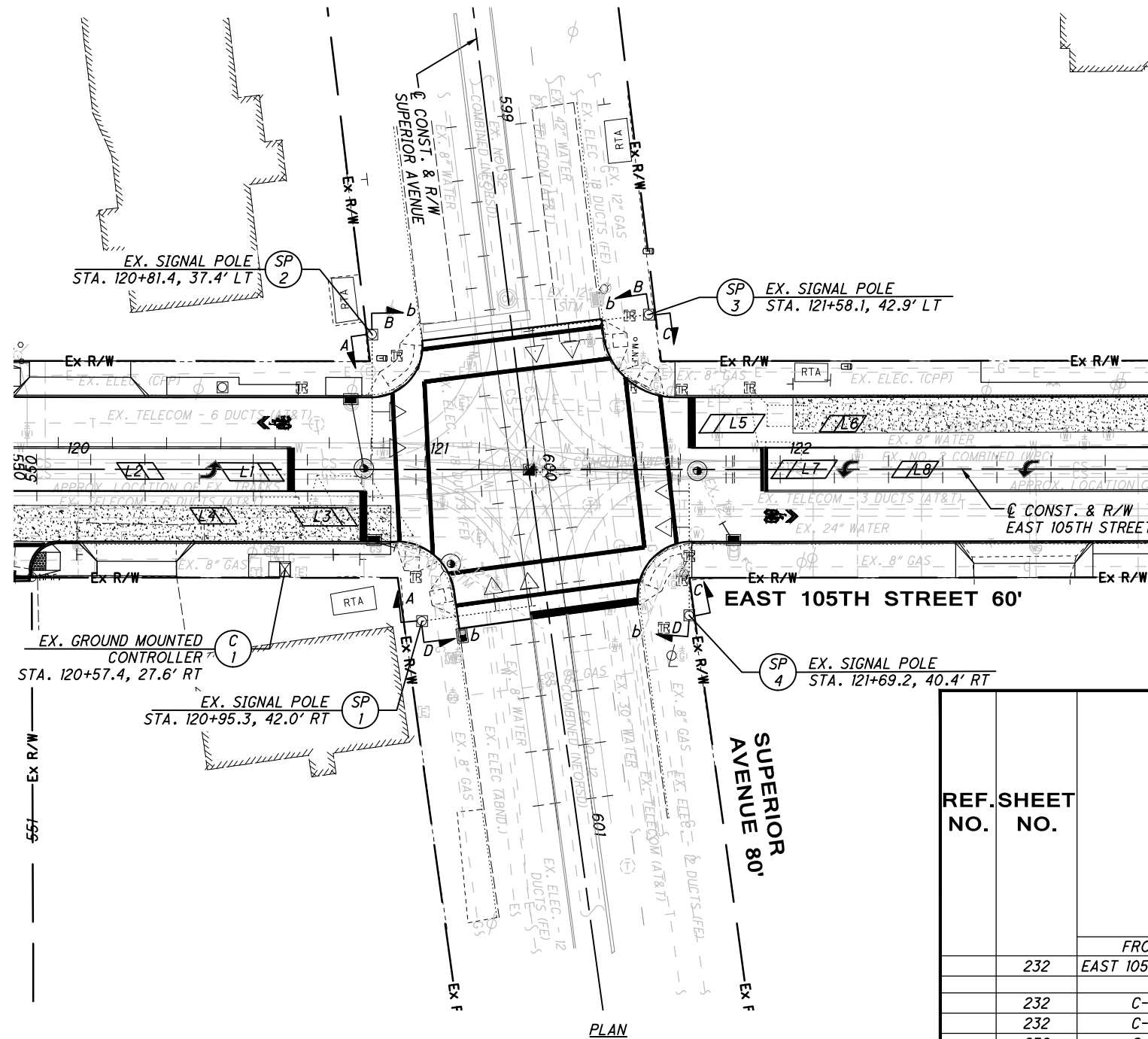
- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE

SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - MESSENGER WIRE
 - 7 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

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SIGNAL UPGRADE



TRAFFIC SIGNAL DETECTOR CHART

LOOP OR CAMERA DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.*
L1	P	5' X 15'	PRESENCE	3	-	-	8	-
L2	ADD	5' X 10'	PRESENCE	-	-	-	8	-
L3	P	5' X 15'	PRESENCE	3	-	-	8	-
L4	ADD	5' X 10'	PRESENCE	-	-	-	8	-
L5	P	5' X 15'	PRESENCE	3	-	-	4	-
L6	ADD	5' X 10'	PRESENCE	-	-	-	4	-
L7	P	5' X 15'	PRESENCE	3	-	-	4	-
L8	ADD	5' X 10'	PRESENCE	-	-	-	4	-

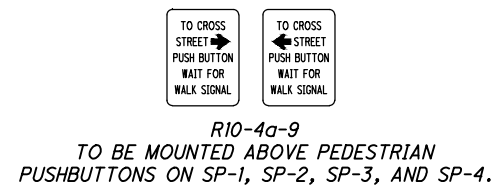
* FOR 332/336 CABINET
 ** CONFIGURATIONS: POWERHEAD (P), QUADRUPLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10

REF. SHEET NO.	STATION TO STATION	SIDE	614	630	632	632	632	632	632	632
			MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS, AS PER D-49	SIGN, FLAT SHEET	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	COVERING OF PEDESTRIAN SIGNAL HEAD	PEDESTRIAN PUSHBUTTON, AS PER PLAN	DETECTOR LOOP	LOOP DETECTOR LEAD-IN CABLE	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62
	FROM TO		LS	SF	EACH	EACH	EACH	EACH	FT	EACH
232	EAST 105TH ST. & SUPERIOR AVE.		1						500	1
232	C-1	PED A-A LT/RT			2	2				
232	C-1	PED B-B LT		2.0	2	2	2			
232	C-1	PED C-C LT/RT			2	2				
232	C-1	PED D-D RT		2.0	2	2	2			
232	CI	L1 & L2 RT							2	
232	CI	L3 & L4 RT							2	
232	CI	L5 & L6 LT							2	
232	CI	L7 & L8 LT							2	
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY			1	4.0	8	8	4	8	500	1

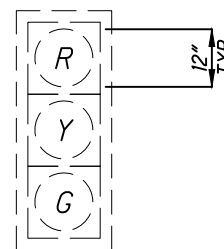
LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING SIGNAL POLE
- EXISTING GROUND MOUNTED CONTROLLER
- PEDESTRIAN SIGNAL WITH PUSHBUTTON
- PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- LOOP DETECTOR (TO BE CENTERED ON LANE)

PROPOSED SIGNS



EXISTING TRAFFIC SIGNALS



PROPOSED PEDESTRIAN SIGNALS



SUMMARY OF WORK

REMOVE THE FOLLOWING:
 - 8 PEDESTRIAN SIGNALS
 - 4 PEDESTRIAN PUSHBUTTONS

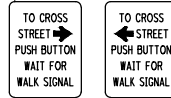
INSTALL THE FOLLOWING:
 - NEW PEDESTRIAN SIGNALS & WIRES
 - NEW PEDESTRIAN PUSHBUTTONS & WIRES
 - NEW LOOP DETECTORS

NOTE:
 CONTRACTOR TO VERIFY EXISTING CONDUIT, A QUANTITY OF 500' WAS ESTIMATED FOR THE LOOP DETECTOR LEAD-IN CABLE.

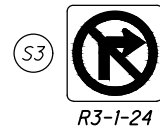
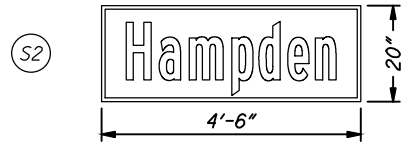
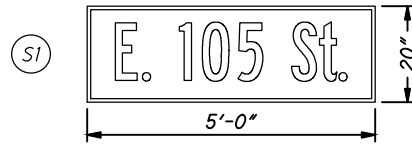
SIGNAL RECONSTRUCTION



PROPOSED SIGNS



R10-4a-9
TO BE MOUNTED ABOVE PEDESTRIAN
PUSHBUTTONS ON PP-1, PP-3, PP-5, AND SP-2.

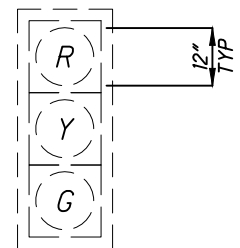


PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	130+22.0	RT	22.0	17 X 30
2	130+22.5	RT	29.0	17 X 30
3	130+27.5	RT	43.0	17 X 30
4	130+32.0	RT	40.0	17 X 30
5	130+14.5	LT	22.5	17 X 30
6	130+51.0	LT	23.0	17 X 30
7	130+60.5	RT	37.0	24 X 36
8	130+59.0	RT	40.5	17 X 30
9	130+16.0	LT	46.5	17 X 30

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE
- SIGNAL POLE
- PEDESTAL, 8'
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- PEDESTRIAN SIGNAL WITH PUSHBUTTON
- PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- CONDUIT
- LOOP DETECTOR (TO BE CENTERED ON LANE)

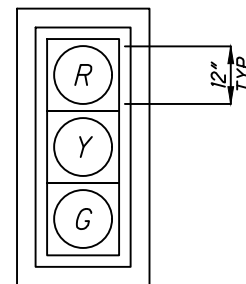
EXISTING TRAFFIC SIGNALS



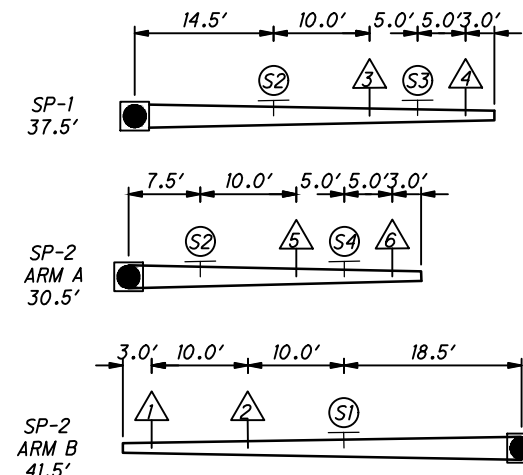
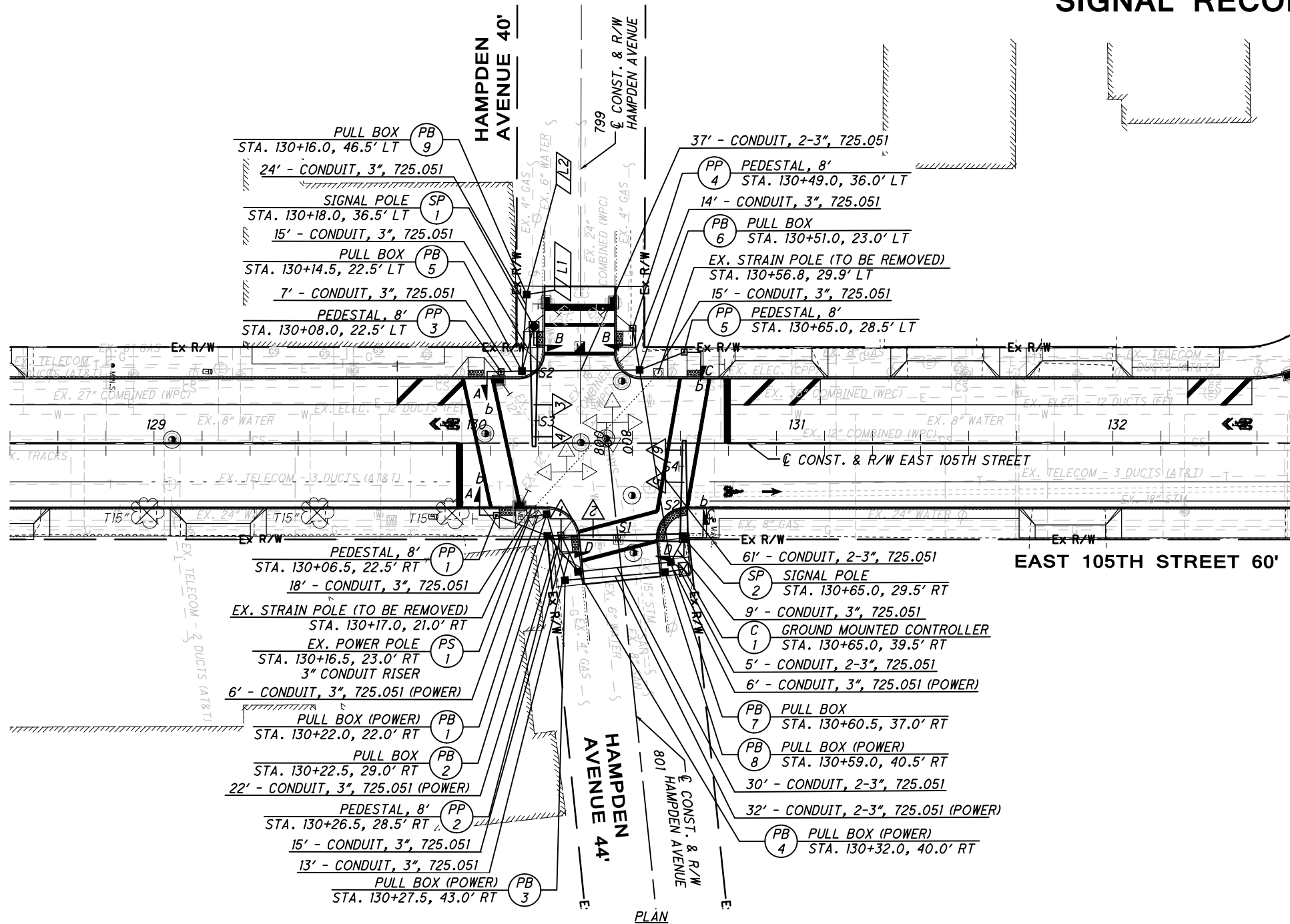
PROPOSED PEDESTRIAN SIGNALS



PROPOSED TRAFFIC SIGNALS



1, 2, 3, 4, 5, 6



SUMMARY OF WORK

- REMOVE THE FOLLOWING:**
- EXISTING POLE-MOUNTED CONTROLLER
 - 2 STRAIN POLES
 - MESSENGER WIRE
 - 7 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS
- INSTALL THE FOLLOWING:**
- NEW VEHICULAR SIGNALS W/ BACKPLATES
 - NEW PEDESTRIAN SIGNALS
 - NEW PEDESTRIAN PUSHBUTTONS
 - NEW LOOP DETECTORS
 - NEW SIGNAL CONTROLLER
 - NEW PULL BOXES
 - NEW SIGNAL CABLES/CONDUIT

NOTES:

1. CONDUITS NOT UNDER ROADWAY SHALL BE 725.051. CONDUITS UNDER ROADWAY SHALL BE 725.051 CONCRETE ENCASED.

TRAFFIC SIGNAL PLAN
EAST 105TH STREET AND HAMPDEN AVENUE

EAST 105TH STREET

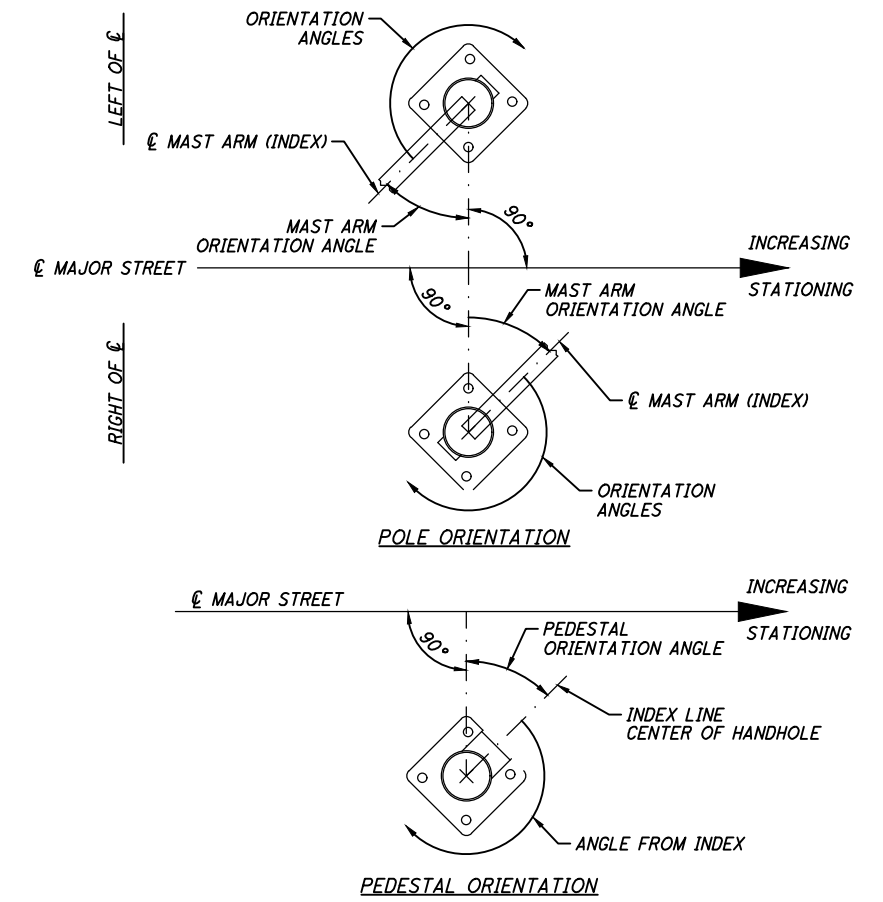
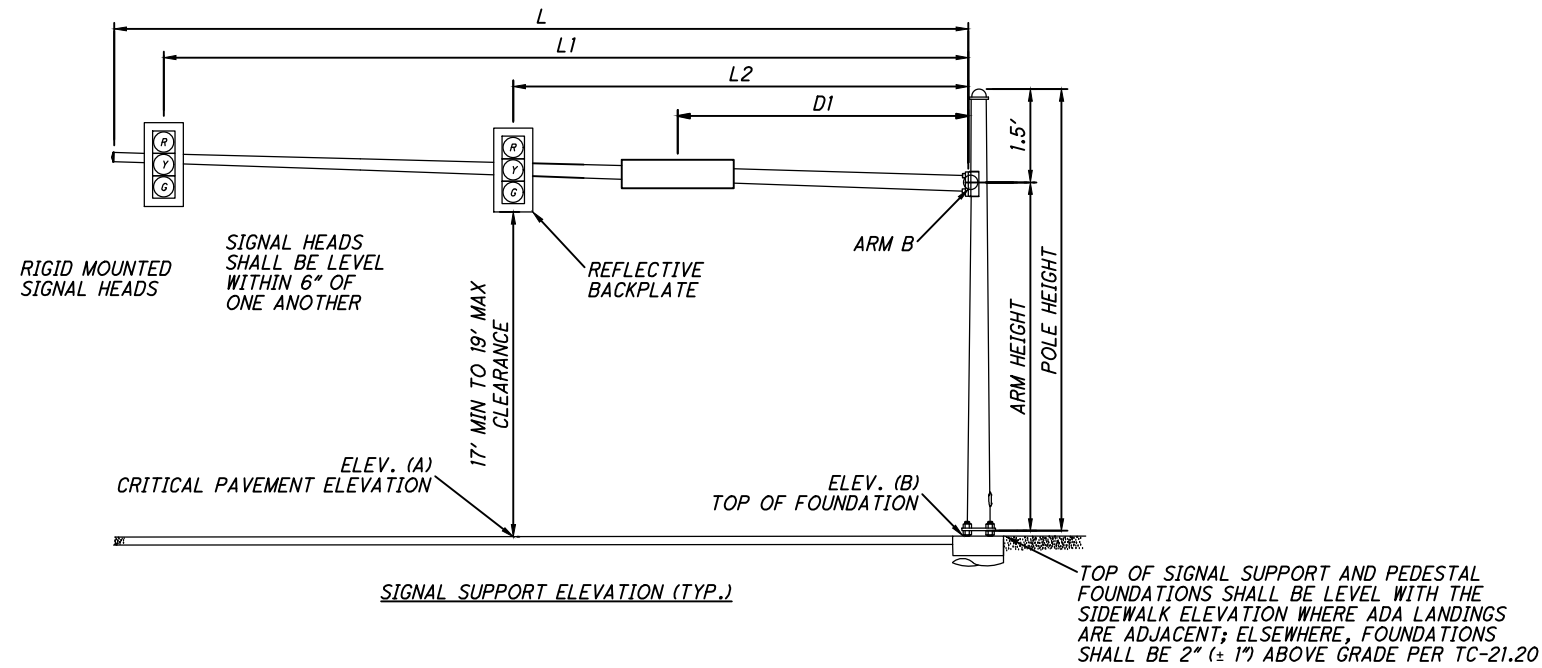
SIGNAL TIMING CHART
TO BE PROVIDED BY THE CITY OF CLEVELAND

PHASING DIAGRAM
TO BE PROVIDED BY THE CITY OF CLEVELAND

TRAFFIC SIGNAL DETECTOR CHART

LOOP OR CAMERA DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO. *
L1	P	5' X 15'	PRESENCE	3	-	-	4	-
L2	ADD	5' X 10'	PRESENCE	-	-	-	4	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

* FOR 332/336 CABINET
** CONFIGURATIONS: POWERHEAD (P), QUADRUPLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10



MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		POLE DESIGN NO.	POLE HEIGHT	ARM DESIGN NO.	ARM HEIGHT	SIGNAL SUPPORT DETAILS							ORIENTATION ANGLES FROM MAST ARM											
			A	B					L	L1	L2	L3	L4	D1	D2	D3	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	HANDHOLE	CABLE ENTRANCE 12" FROM TOP			
SP-1	130+18.0	36.5' LT	683.33	637.99	4	22.0	4	20.5	37.5	34.5	24.5	-	-	-	29.5	14.5	-	0	-	-	-	-	-	-	-	-	-
SP-2	130+65.0	29.5' RT	-	638.10	12	22.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARM A	-	-	637.75	-	-	-	2	20.5	30.5	27.5	17.5	-	-	-	22.5	7.5	-	0	-	90/180	0	-	-	-	-	-	-
ARM B	-	-	638.02	-	-	-	11	20.5	41.5	38.5	28.5	-	-	-	18.5	-	-	-	270	-	-	-	-	-	-	-	-
PP-1	130+06.5	22.5' RT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	TOP	270	-	-	-	-	-	-
PP-2	130+26.5	28.5' RT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-
PP-3	130+08.0	22.5' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	TOP	270	-	-	-	-	-	-
PP-4	130+49.0	36.0' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-
PP-5	130+65.0	28.5' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	TOP	180	-	-	-	-	-	-

CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL DETAILS
EAST 105TH STREET AND HAMPDEN AVENUE

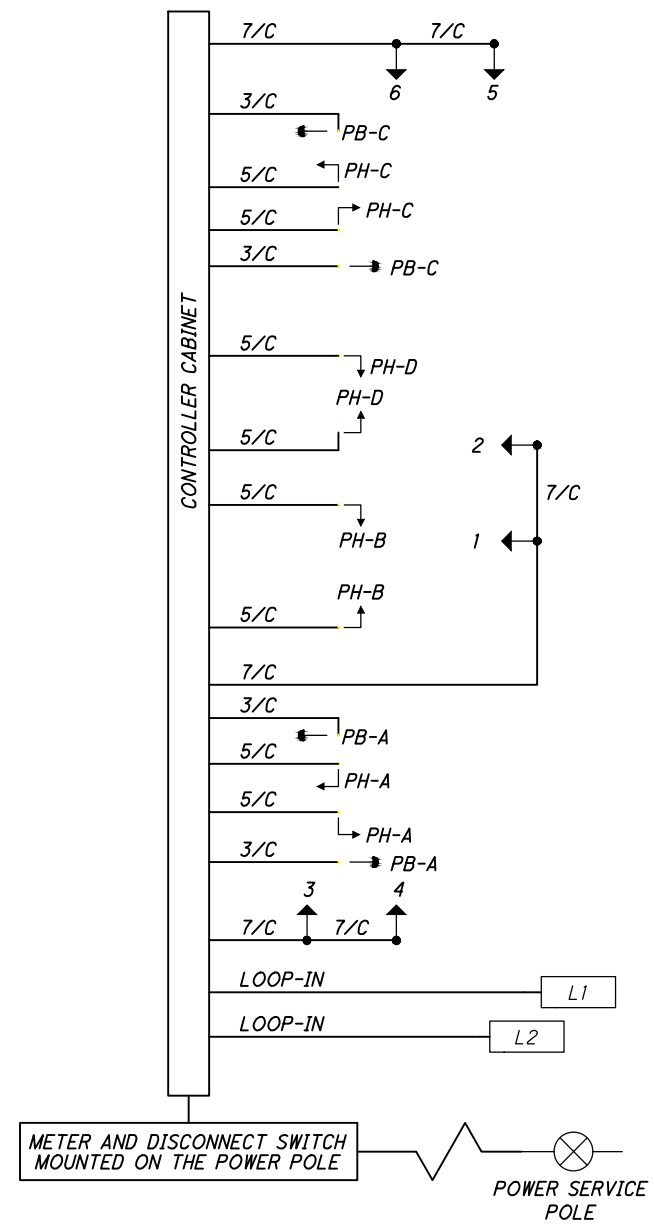
EAST 105TH STREET

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243

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- LEGEND**
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
 - PEDESTRIAN SIGNAL HEAD
 - PEDESTRIAN PUSH BUTTON
 - LOOP DETECTORS
 - POWER SOURCE

WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
5 (NB)	R	φ2R	Y
	Y	φ2Y	
	G	φ2G	
6 (NB)	R	φ2R	Y
	Y	φ2Y	
	G	φ2G	
1 (EB)	R	φ4R	R
	Y	φ4Y	
	G	φ4G	
2 (EB)	R	φ4R	R
	Y	φ4Y	
	G	φ4G	
3 (SB)	R	φ6R	Y
	Y	φ6Y	
	G	φ6G	
4 (SB)	R	φ6R	Y
	Y	φ6Y	
	G	φ6G	
PEDESTRIAN MOVEMENTS			
PED A (E-W)	W	φ4 PED/LS10G	OFF
	DW	φ4 PED/LS10R	
PED B (N-S)	W	φ6 PED/LS11G	OFF
	DW	φ6 PED/LS11R	
PED C (E-W)	W	φ8 PED/LS12G	OFF
	DW	φ8 PED/LS12R	
PED D (N-S)	W	φ2 PED/LS13G	OFF
	DW	φ2 PED/LS13R	

LS = LOADSWITCH

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SIGNAL REMOVAL



0 20 40
TO
HORIZONTAL
SCALE IN FEET

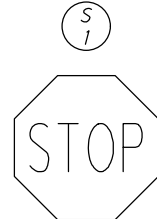
CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL PLAN
EAST 105TH STREET AND SOUTH BOULEVARD

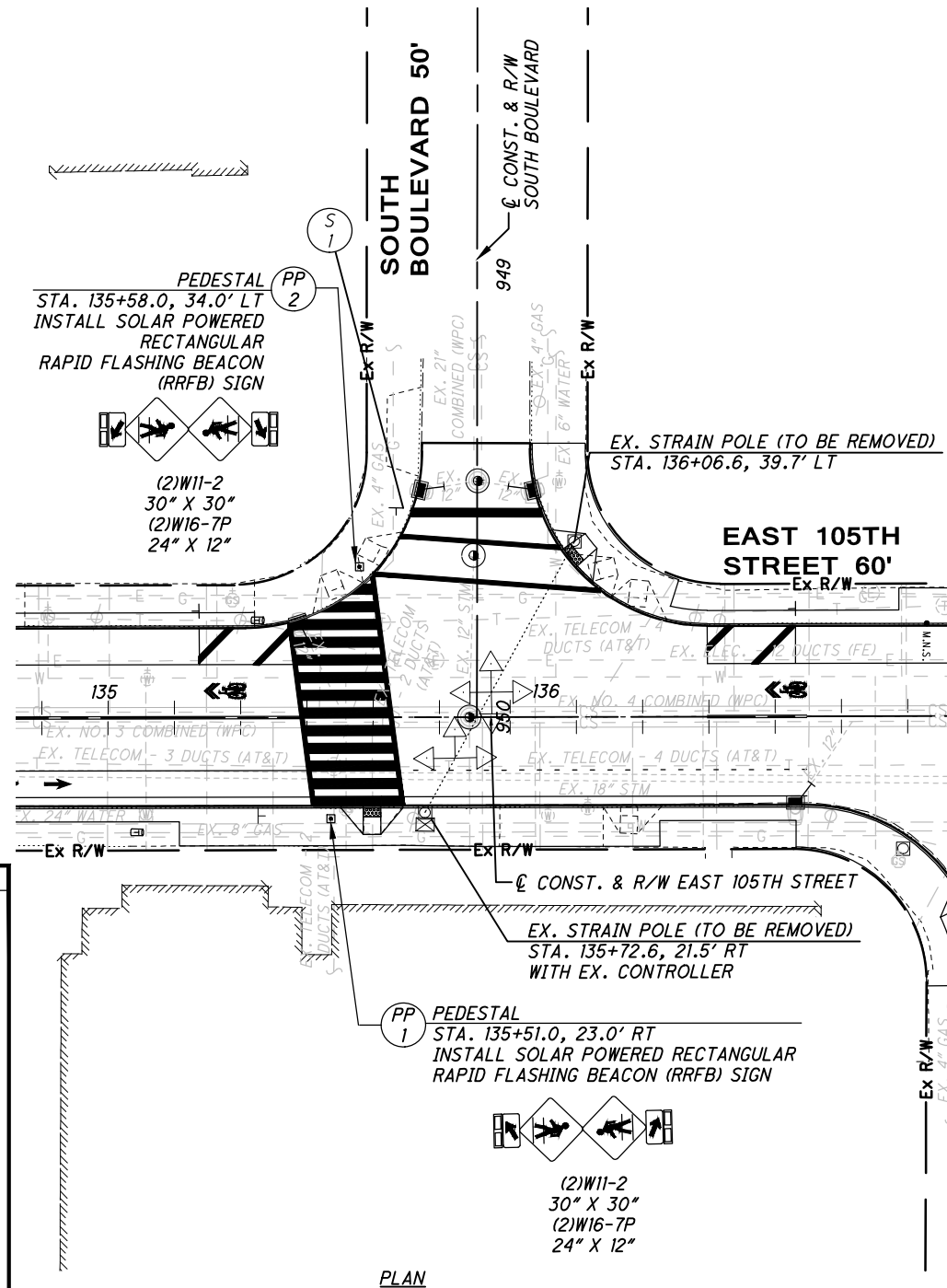
EAST 105TH STREET

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243

PROPOSED TRAFFIC SIGNS



(SEE SIGNING AND PAVEMENT MARKING PLANS)



PLAN

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	625	630	632	632
		FROM	TO					
		EAST 105TH STREET & SOUTH BOULEVARD		LT/RT				1
PP-1	237	135+51.0		RT	1	1	1	
PP-2	237	135+58.0		LT	1	1	1	
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY					2	2	2	1

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE

SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - 2 STRAIN POLES
 - MESSENGER WIRE
 - 7 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

SIGNAL REMOVAL



0 20 40
TO
HORIZONTAL
SCALE IN FEET

CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL PLAN EAST 105TH STREET AND PARKGATE AVENUE

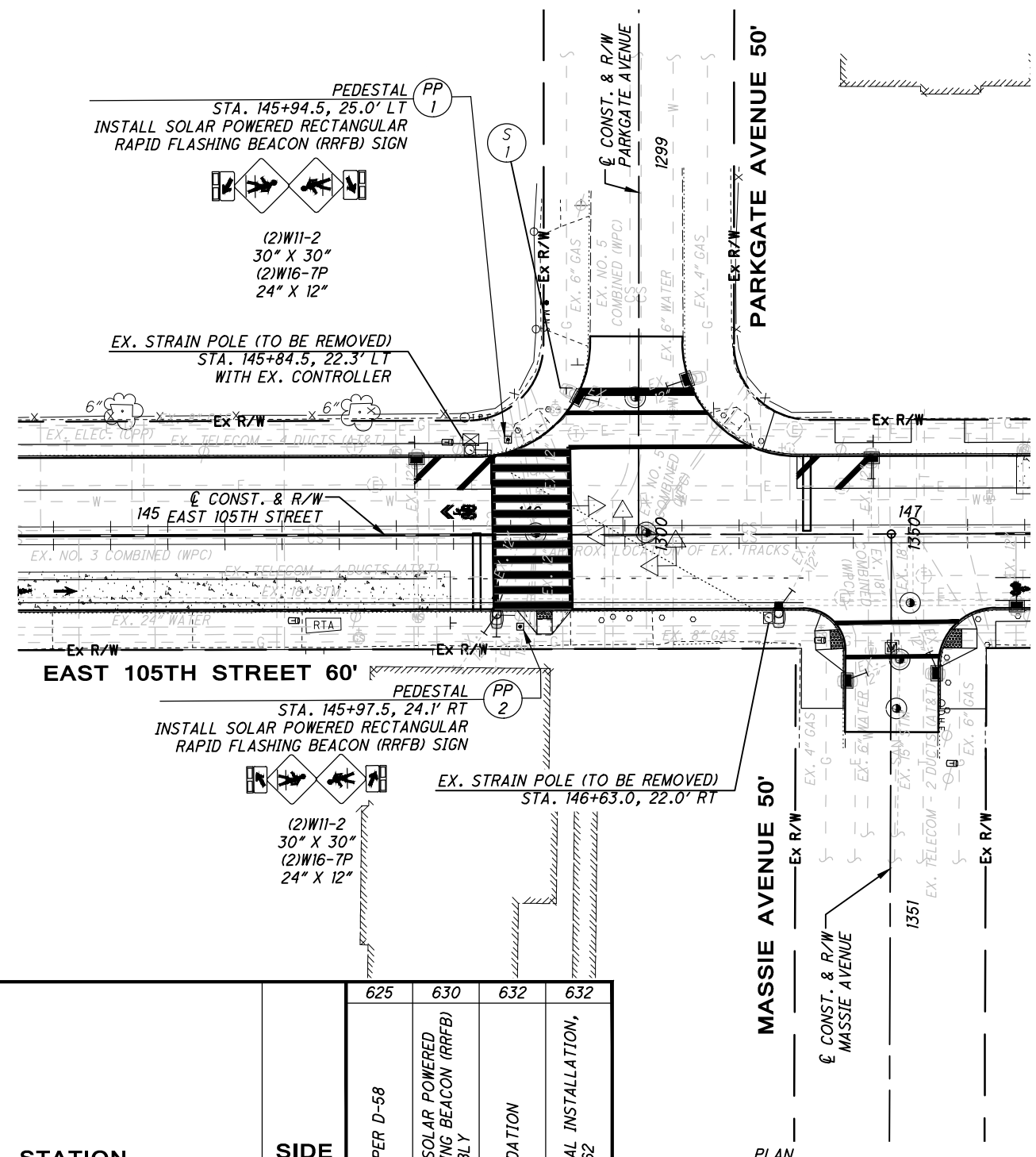
EAST 105TH STREET

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243

PROPOSED TRAFFIC SIGNS



(SEE SIGNING
AND
PAVEMENT MARKING PLANS)



REF. SHEET NO.	SHEET NO.	STATION TO STATION		SIDE	GENERAL SUMMARY			
		FROM	TO		EACH	EACH	EACH	EACH
		EAST 105TH STREET & PARKGATE AVENUE		LT/RT				1
PP-1	238	154+94.5		RT	1	1	1	
PP-2	238	145+97.5		LT	1	1	1	
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY					2	2	2	1

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE

SUMMARY OF WORK

- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - 2 STRAIN POLES
 - MESSENGER WIRE
 - 6 VEHICULAR SIGNALS
 - 2 PEDESTRIAN SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

SIGNAL REMOVAL



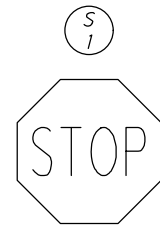
CALCULATED
MGW
CHECKED
JTS

TRAFFIC SIGNAL PLAN EAST 105TH STREET AND MORISON AVENUE

EAST 105TH STREET

239
243

PROPOSED TRAFFIC SIGNS



(SEE SIGNING AND PAVEMENT MARKING PLANS)

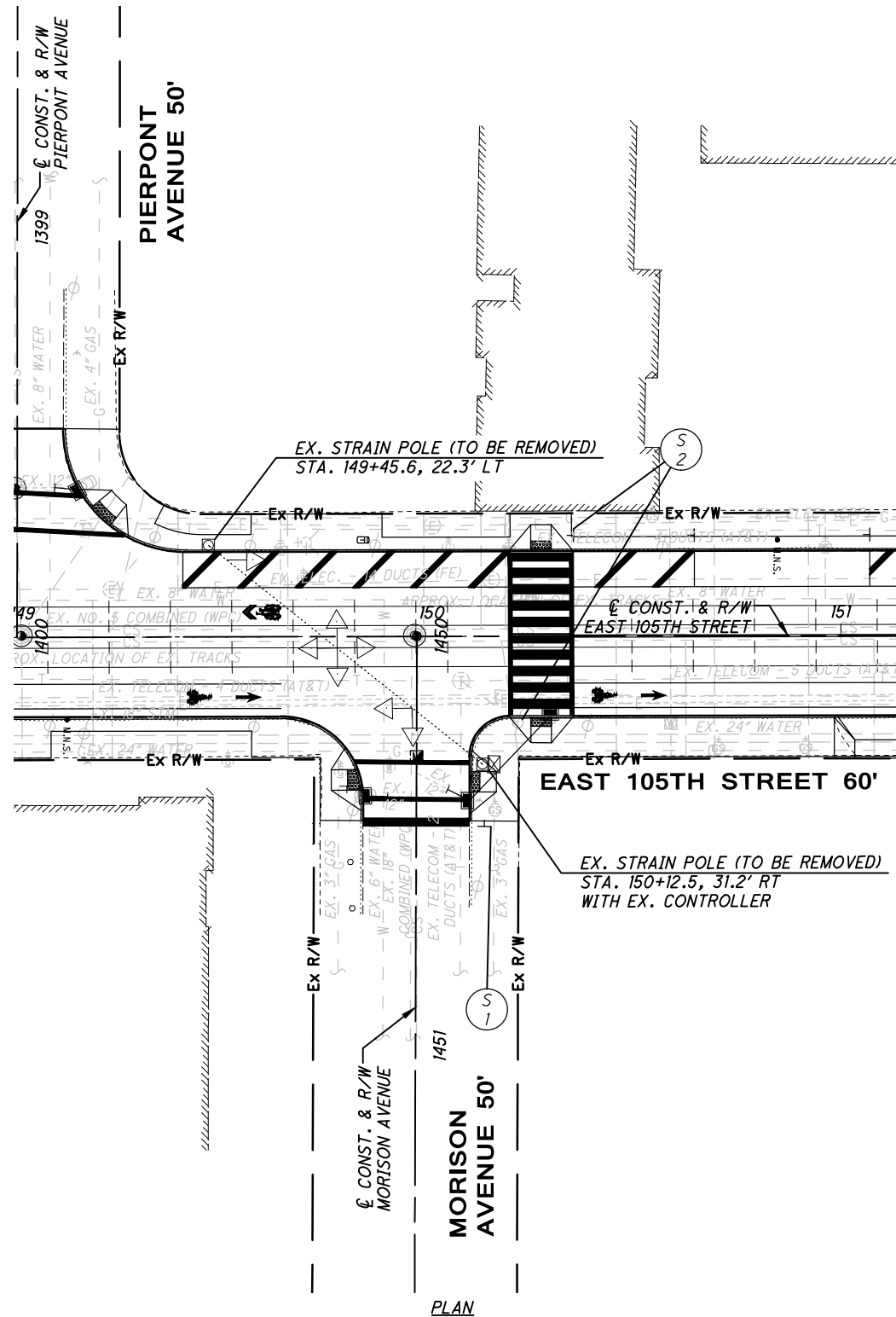


(SEE SIGNING AND PAVEMENT MARKING PLANS)

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	632
		FROM	TO		REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER D-62
		EAST 105TH STREET & MORISON AVENUE		LT/RT	1
TOTALS CARRIED TO TRAFFIC SIGNAL GENERAL SUMMARY					1

LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE



PLAN

SUMMARY OF WORK

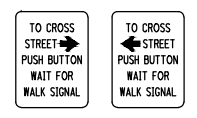
- REMOVE THE FOLLOWING:
- EXISTING POLE-MOUNTED CONTROLLER
 - 2 STRAIN POLES
 - MESSENGER WIRE
 - 7 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS

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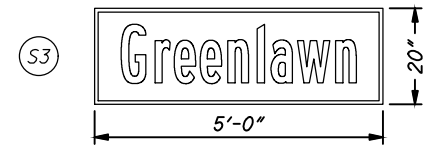
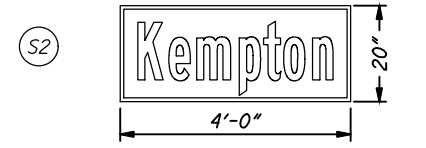
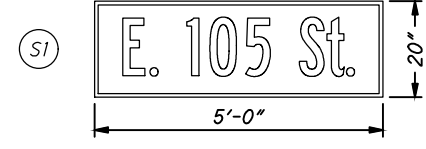
SIGNAL RECONSTRUCTION



PROPOSED SIGNS



R10-4a-9
TO BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTONS ON PP-2, SP-2, SP-3, AND SP-4.

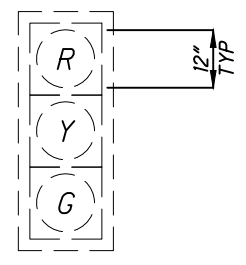


PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
1	154+61.5	RT	47.0	17 X 30
2	154+61.5	RT	28.5	17 X 30
3	154+35.5	RT	22.5	17 X 30
4	154+22.0	LT	23.0	17 X 30
5	154+70.0	LT	31.0	17 X 30
6	154+72.5	LT	23.0	24 X 36
7	154+98.0	RT	48.0	17 X 30
8	154+29.5	LT	56.0	17 X 30

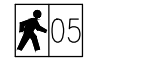
LEGEND

- EXISTING VEHICULAR SIGNAL 3-SECTION
- EXISTING PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- EXISTING SIGNAL POLE
- EXISTING POLE MOUNTED CONTROLLER
- EXISTING SPAN WIRE
- SIGNAL POLE
- PEDESTAL, 8'
- GROUND MOUNTED CONTROLLER
- PULL BOX
- VEHICULAR SIGNAL 3-SECTION
- PEDESTRIAN SIGNAL WITH PUSHBUTTON
- PEDESTRIAN SIGNAL WITHOUT PUSHBUTTON
- CONDUIT
- LOOP DETECTOR (TO BE CENTERED ON LANE)

EXISTING TRAFFIC SIGNALS

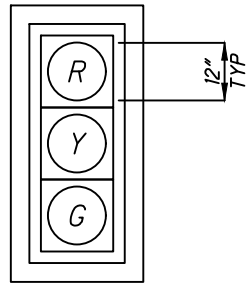


PROPOSED PEDESTRIAN SIGNALS

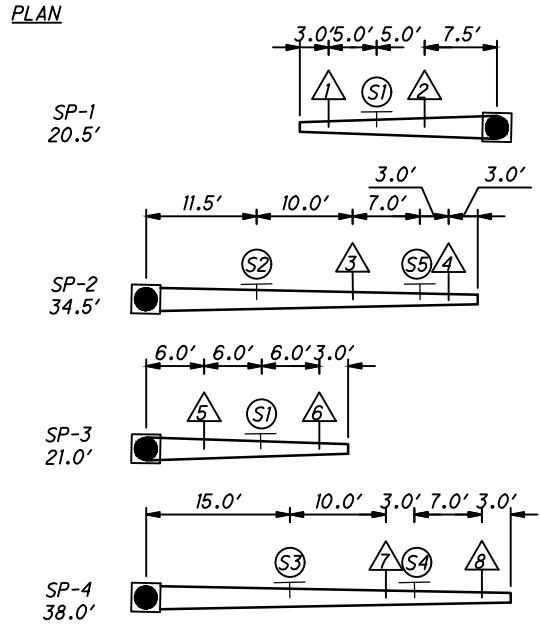
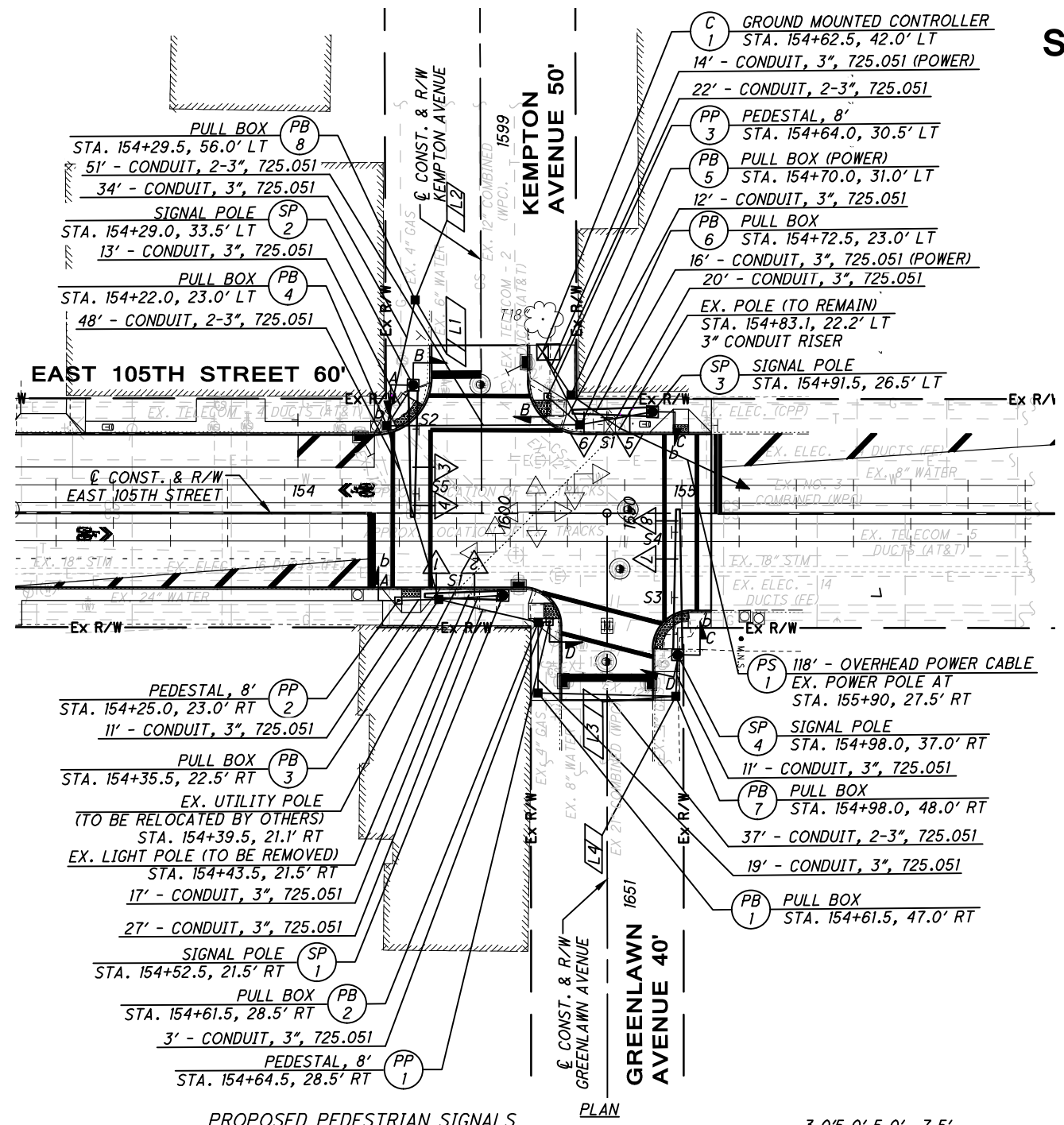


PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

PROPOSED TRAFFIC SIGNALS



1, 2, 3, 4, 5, 6, 7, 8



SUMMARY OF WORK

- REMOVE THE FOLLOWING:**
- EXISTING POLE-MOUNTED CONTROLLER
 - 1 LIGHT POLE
 - MESSENGER WIRE
 - 8 VEHICULAR SIGNALS
 - ALL SIGNAL CABLES
 - CONFLICTING SIGNS
- INSTALL THE FOLLOWING:**
- NEW VEHICULAR SIGNALS W/ BACKPLATES
 - NEW PEDESTRIAN SIGNALS & WIRES
 - NEW PEDESTRIAN PUSHBUTTONS & WIRES
 - NEW LOOP DETECTORS
 - NEW SIGNAL CONTROLLER
 - NEW PULL BOXES
 - NEW SIGNAL CABLES/CONDUIT

NOTES:

1. CONDUITS NOT UNDER ROADWAY SHALL BE 725.051. CONDUITS UNDER ROADWAY SHALL BE 725.051 CONCRETE ENCASED.

TRAFFIC SIGNAL PLAN
E. 105TH ST AND KEMPTON AVE/GREENLAWN AVE

EAST 105TH STREET

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SIGNAL TIMING CHART
TO BE PROVIDED BY THE CITY OF CLEVELAND

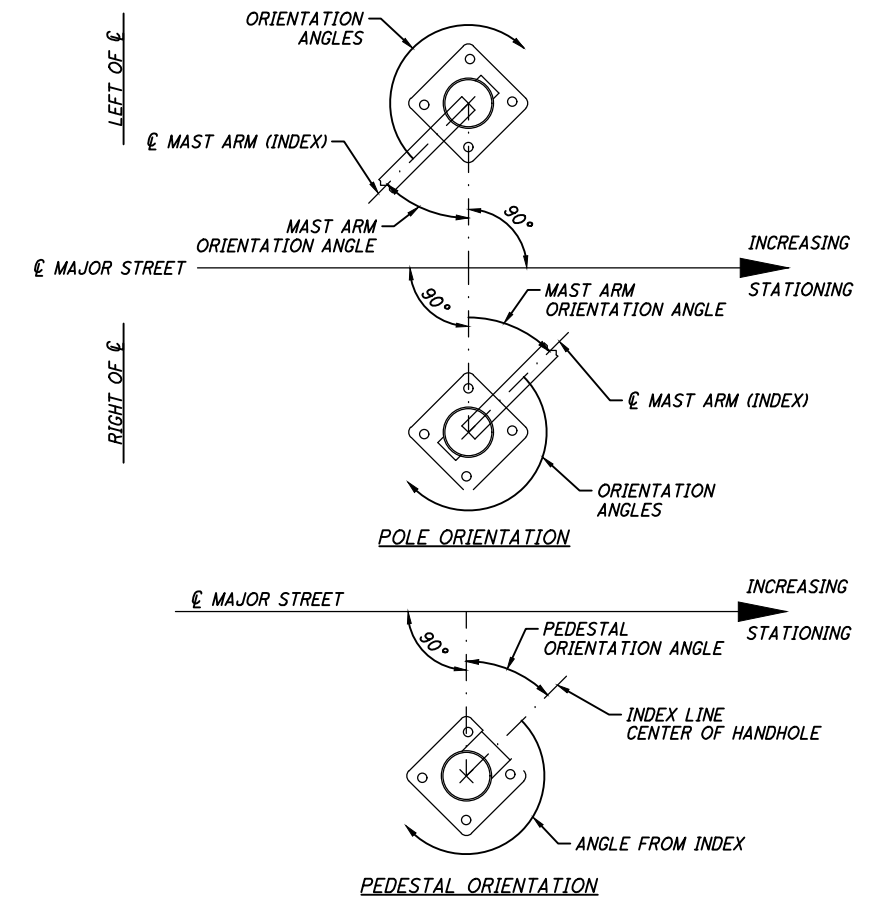
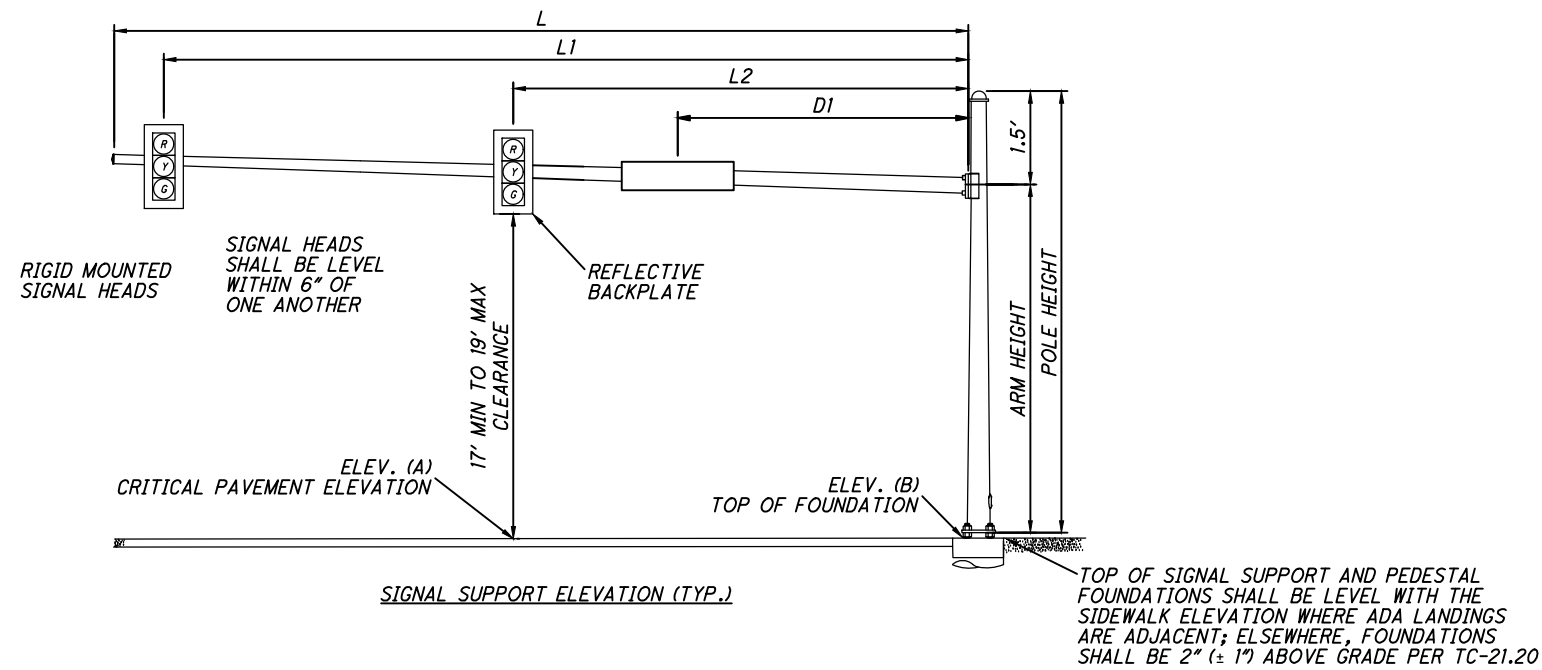
PHASING DIAGRAM
TO BE PROVIDED BY THE CITY OF CLEVELAND

TRAFFIC SIGNAL DETECTOR CHART

LOOP OR CAMERA DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO. *
L1	P	5' X 15'	PRESENCE	3	-	-	4	-
L2	ADD	5' X 10'	PRESENCE	-	-	-	4	-
L3	P	5' X 15'	PRESENCE	3	-	-	8	-
L4	ADD	5' X 10'	PRESENCE	-	-	-	8	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

* FOR 332/336 CABINET

** CONFIGURATIONS: POWERHEAD (P), QUADRUPLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10



MAST ARM TABLE

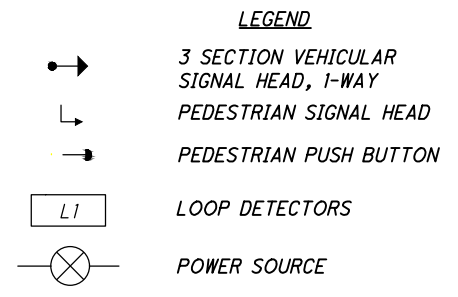
SUPPORT NO.	STATION	OFFSET	ELEVATION		POLE DESIGN NO.	POLE HEIGHT	ARM DESIGN NO.	ARM HEIGHT	SIGNAL SUPPORT DETAILS							ORIENTATION ANGLES FROM MAST ARM										
			A	B					L	L1	L2	L3	L4	D1	D2	D3	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	HANDHOLE	CABLE ENTRANCE 12" FROM TOP		
SP-1	154+52.5	21.5' RT	629.27	629.24	1	21.5	1	20.0	20.5	17.5	7.5	-	-	12.5	-	-	270	-	-	-	-	-	-	-	-	-
SP-2	154+29.0	33.5' LT	629.30	629.58	3	21.5	3	20.0	34.5	31.5	21.5	-	-	28.5	11.5	-	0	-	90/180	90	-	-	-	-	-	-
SP-3	154+91.5	26.5' LT	629.37	629.33	1	21.5	1	20.0	21.0	18.0	6.0	-	-	12.0	-	-	90	-	180	180	-	-	-	-	-	-
SP-4	154+98.0	37.0' RT	629.32	629.34	4	21.5	4	20.0	38.0	35.0	25.0	-	-	28.0	15.0	-	0	-	90/167	90	-	-	-	-	-	-
PP-1	154+64.5	28.5' RT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-
PP-2	154+25.0	23.0' RT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	270	-	-	-	-	-	-
PP-3	154+64.0	30.5' LT	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	TOP	-	-	-	-	-	-	-

CALCULATED
MGW
CHECKED
JTS

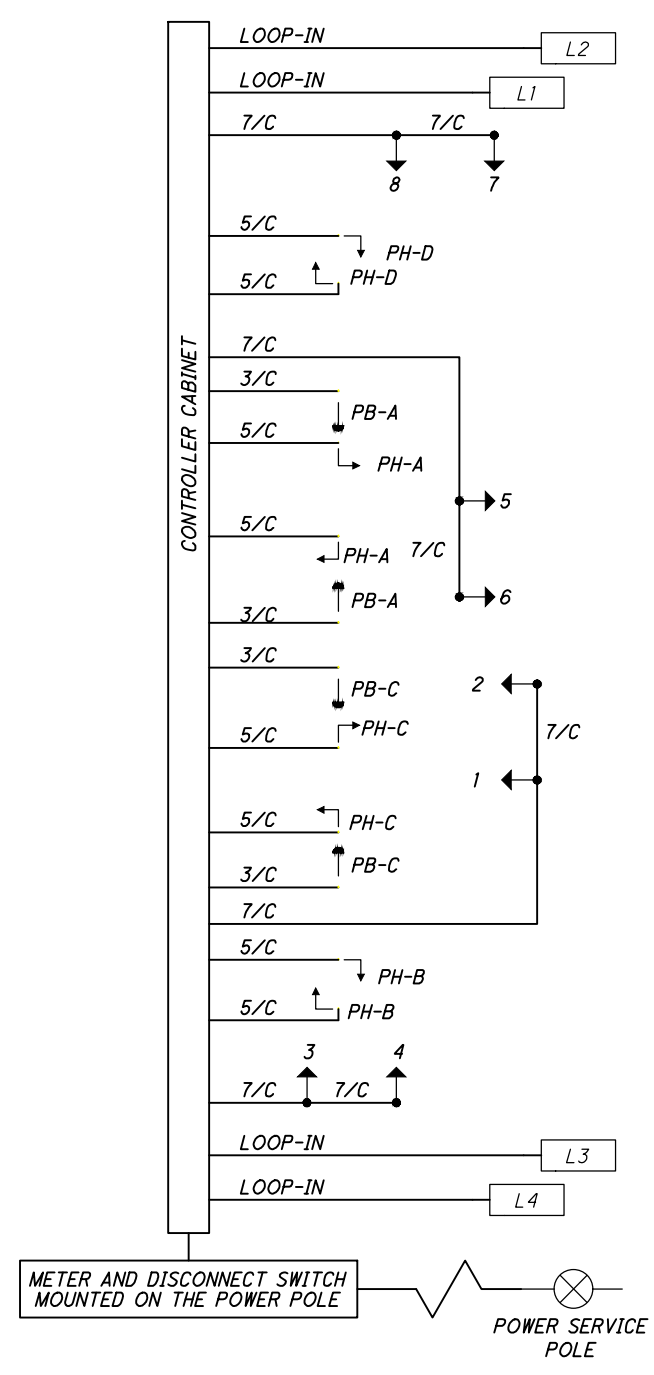
TRAFFIC SIGNAL DETAILS
EAST 105TH STREET AND KEMPTON AVE./GREENLAWN AVE.

EAST 105TH STREET

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
7 (NB)	R	φ2R	Y
	Y	φ2Y	
	G	φ2G	
8 (NB)	R	φ2R	Y
	Y	φ2Y	
	G	φ2G	
1 (EB)	R	φ4R	R
	Y	φ4Y	
	G	φ4G	
2 (EB)	R	φ4R	R
	Y	φ4Y	
	G	φ4G	
3 (SB)	R	φ6R	Y
	Y	φ6Y	
	G	φ6G	
4 (SB)	R	φ6R	Y
	Y	φ6Y	
	G	φ6G	
5 (WB)	R	φ8R	R
	Y	φ8Y	
	G	φ8G	
6 (WB)	R	φ8R	R
	Y	φ8Y	
	G	φ8G	
PEDESTRIAN MOVEMENTS			
PED A (E-W)	W	φ4 PED/LS10G	OFF
	DW	φ4 PED/LS10R	
PED B (N-S)	W	φ6 PED/LS11G	OFF
	DW	φ6 PED/LS11R	
PED C (E-W)	W	φ8 PED/LS12G	OFF
	DW	φ8 PED/LS12R	
PED D (N-S)	W	φ2 PED/LS13G	OFF
	DW	φ2 PED/LS13R	

LS = LOADSWITCH

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