



LOCATION MAP

LATITUDE: 39 °13'29" LONGITUDE: -84°26'24"



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

DESIGN DESIGNATION

	US42 SOUTH OF COLUMBIA AVE	US42 NORTH OF COLUMBIA AVE
CURRENT ADT (2025)	11,500	16,000
DESIGN YEAR ADT (2045)	11,500	17,500
DESIGN HOURLY VOLUME (2045)	1,300	2,100
DIRECTIONAL DISTRIBUTION	61%	55%
TRUCKS (24 HOUR B&C)	3%	2%
DESIGN SPEED	25 MPH	25 MPH
LEGAL SPEED	25 MPH	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL
NHS PROJECT	NO	NO

DESIGN EXCEPTIONS

NONE REQUIRED

Still needs to be vetted for minimum lane width of 12'....due to US42 being on the National Trucking Network. Turning movements will not drive the need for a design exception. A WB-62 must simply be able to safely traverse through the US42 through lanes of each intersection.

ADA DESIGN WAIVERS

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

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

PLAN PREPARED BY:


CRAWFORD, MURPHY & TILLY, INC.

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

INDEX OF SHEETS:

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Provide turning templates for any bump outs as applicable so as to compare existing conditions with proposed.

Using a WB-62 as the design vehicle.

this is not considered a standard drawing, any details would need to be in the plans

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM US 42 10.07 READING RD

HAMILTON, WARREN COUNTY

CITY OF READING

project is not in Warren Co

REVIEW COMPLETE

PM	Katherine S. DeStefano, P.E.	11/12/2025
BRIDGES		
CONSTRUCT	Chris Tuminello, P.E.	09/23/2025
	Grant Winterkorn, EIT	09/24/2025
DRAINAGE	Tami Brehm, P.E.	10/08/2025
ENVIRON		
GEOTECH	Casey Carriere, P.E.	10/07/2025
ITS		
MOT	Scott Kraus, P.E.,	11/11/2025
PAVEMENT	Jennifer Elston,	10/20/2025
ROADWAY	John Otis, P.E.	11/06/2025
R/W	James Zeller	10/21/2025
SURVEY		
TRAFFIC	Teri C. Scanlon, P.E.	10/21/2025
UTILITIES	Lucas W. Braun, P.E.	10/21/2025
OTHER	Alex Genbauffe, P.E.	10/23/2025
OTHER		

FEDERAL PROJECT NUMBER

E250756

RAILROAD INVOLVEMENT

N/A

There is a RR within the project limits

PROJECT DESCRIPTION

IMPLEMENT TARGET SPEED PILOT PROGRAM COUNTERMEASURES ON US-42 IN THE CITY OF READING INCLUDING A ROAD DIET, ENHANCED CROSSWALKS, RRFB'S, RAISED MEDIANS, IN AN EFFORT TO LOWER TRAVEL SPEEDS AND INCREASE VEHICULAR AND PEDESTRIAN SAFETY.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.03 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)*

* ROUTINE MAINTENANCE PROJECT

I really dont think this project qualifies for Routine Maintenance. Is it possible to get the Project EDA below 1.00 acre? If we can be confident in the value, 0.99 would mean that no BMP are needed. If we cannot get below 1.00, then I can check with CO what their thoughts are on if it is Routine Maintenance, but with the long sections of widening and diet, I dont think it will be approved as Routine Maintenance

2023 SPECIFICATIONS

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

Katie - Ellis currently does not have any RR agreement info or RR funding.

Current northern limit in Ellis does not match the limit shown in the plans.

MOT endorsement

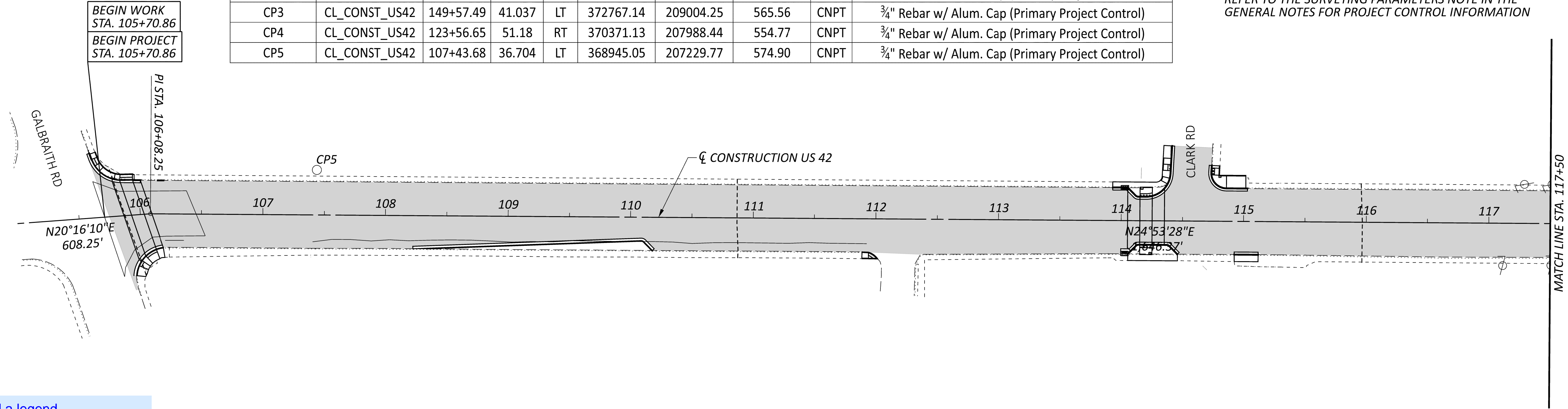
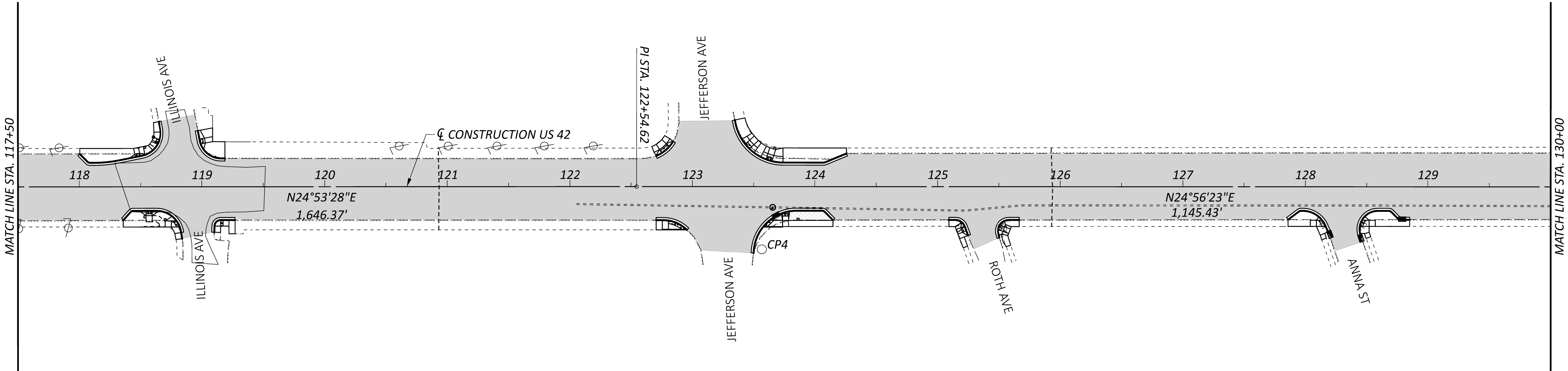
STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1/19/24	MT-95.31	7/18/25	TC-52.10	10/18/13		MDG -DWG 4.2	814	7/15/16	
BP-5.1	7/18/25	MT-95.32	7/18/25	TC-52.20	1/15/21			832	7/18/25	
BP-7.1	7/18/25	MT-95.60	4/19/19	TC-61.10	4/21/23					
CB-3	7/19/24	MT-95.61	4/19/19	TC-71.10	7/18/25			800		
		MT-97.12	7/18/25	TC-74.10	7/21/23					
DM-1.1	1/17/25	MT-101.90	7/17/20	TC-81.22	1/17/25					
DM-4.4	1/15/16	MT-110.10	7/19/13	TC-82.10	1/17/25					
				TC-83.10	1/17/20					
MH-3	7/19/24	TC-16.22	7/18/25	TC-83.20	7/18/25					
		TC-21.21	7/18/25	TC-85.10	1/19/24					
		TC-22.10	1/17/25	TC-85.20	4/21/23					
RM-3.1	7/20/18	TC-41.20	10/18/13	TC-87.10	7/18/25					
RM-5.1	7/18/14	TC-41.30	4/21/23							
		TC-41.40	10/18/13							
HL-20.11	7/18/25	TC-41.41	7/19/19							
		TC-42.20	10/18/13							

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

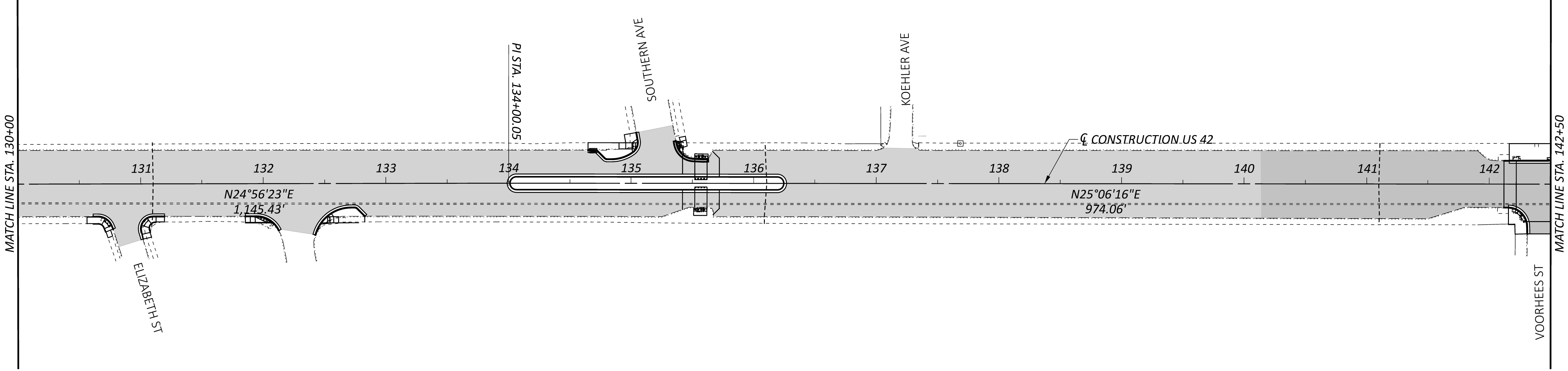
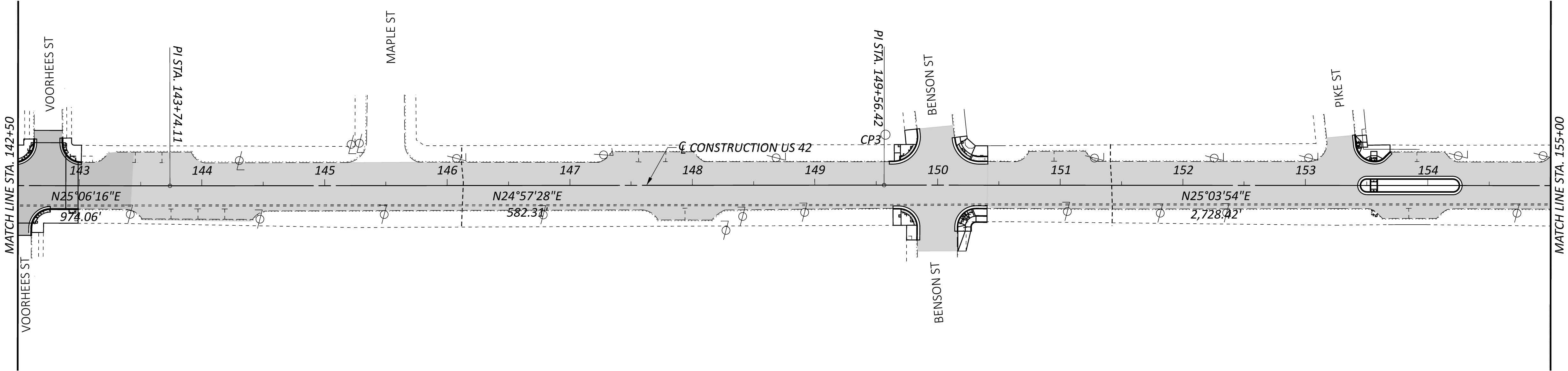
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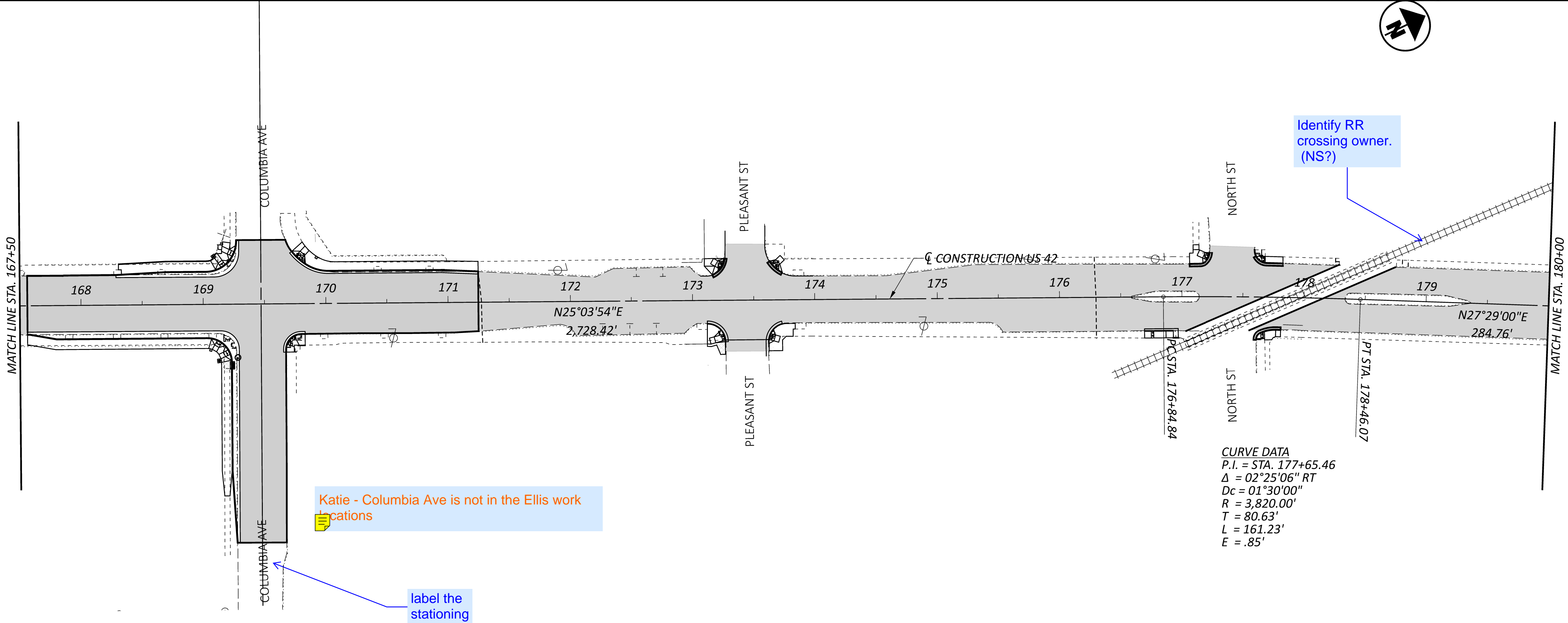
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



POINT NAME	ALIGNMENT	STATION	OFFSET	SIDE	NORTHING	EASTING	ELEVATION	TYPE	NOTE
CP100	CL_CONST_US42	166+69.62	41.397	RT	374283.12	209804.26	570.73	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)
CP1	CL_CONST_US42	208+93.09	33.421	LT	378062.98	211684.36	574.98	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)
CP2	CL_CONST_US42	189+10.39	79.58	LT	376340.83	210700.92	580.69	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)
CP3	CL_CONST_US42	149+57.49	41.037	LT	372767.14	209004.25	565.56	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)
CP4	CL_CONST_US42	123+56.65	51.18	RT	370371.13	207988.44	554.77	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)
CP5	CL_CONST_US42	107+43.68	36.704	LT	368945.05	207229.77	574.90	CNPT	¾" Rebar w/ Alum. Cap (Primary Project Control)

NOTE:
REFER TO THE SURVEYING PARAMETERS NOTE IN THE
GENERAL NOTES FOR PROJECT CONTROL INFORMATION

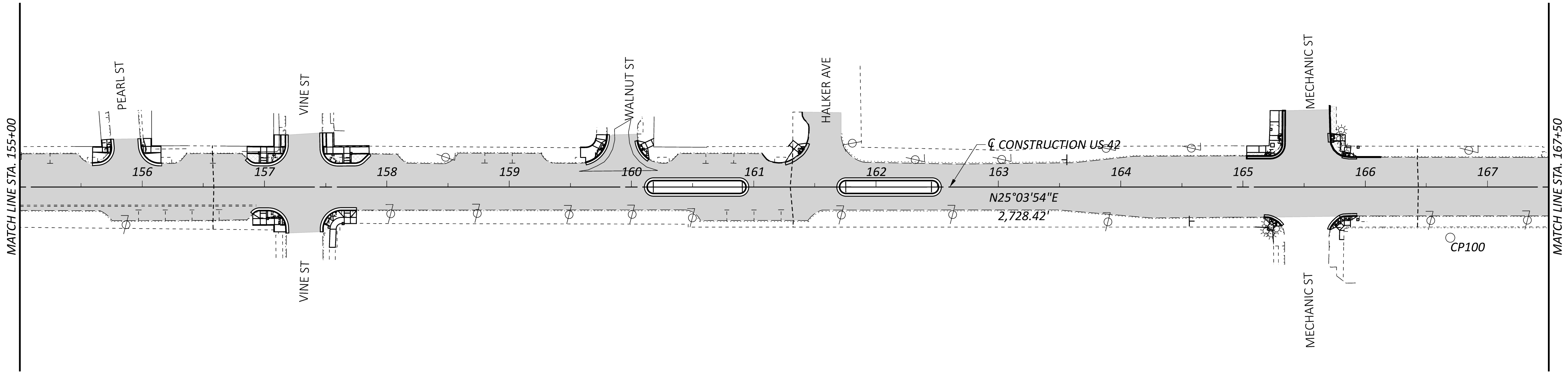




Katie - Columbia Ave is not in the Ellis work
cations

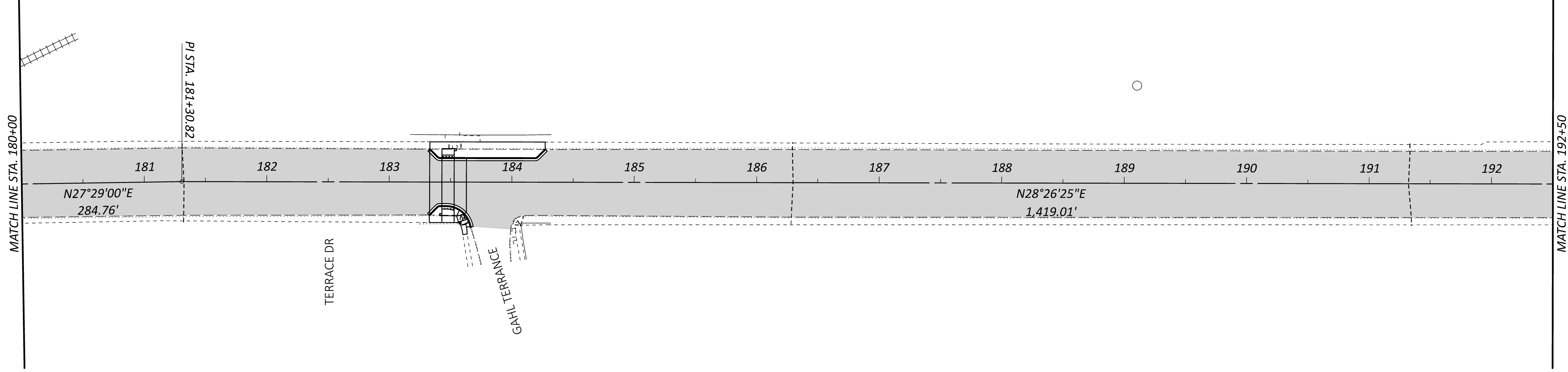
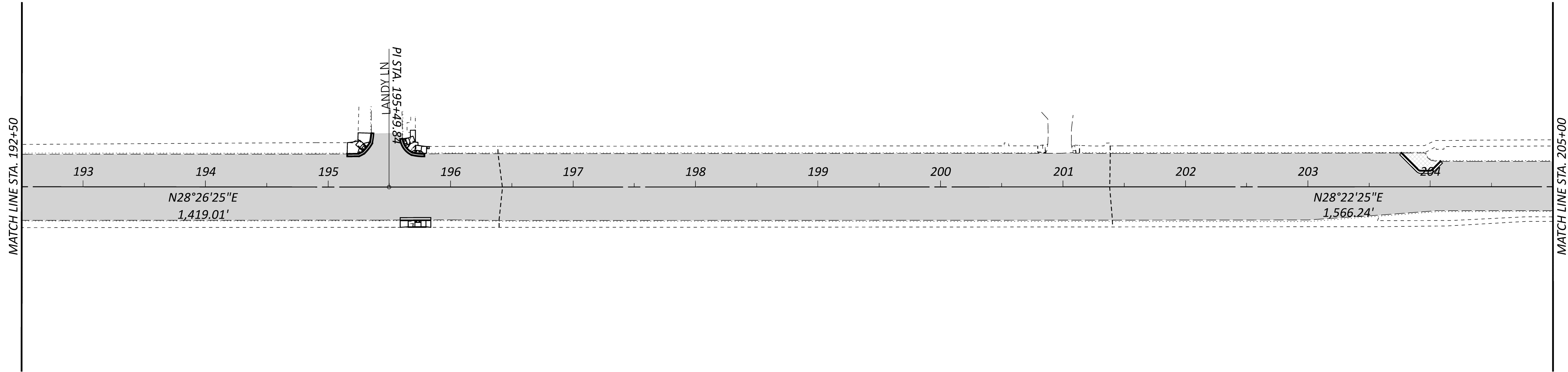
label the
stationing

CURVE DATA
P.I. = STA. 177+65.46
 $\Delta = 02^{\circ}25'06''$ RT
 $D_c = 01^{\circ}30'00''$
 $R = 3,820.00'$
 $T = 80.63'$
 $L = 161.23'$
 $E = .85'$



HAM US 42 10.07 READING RD

MODEL: 123369 GB104 PAPERSIZE: 34x22 (in.) DATE: 9/18/2025 TIME: 3:01:00 PM PLOTDRV: OHDDOT_PDF.pltcfg PENTBL: OHDDOT_Pen.tbl USER: jlockhart@cmtengr.com WORKSPACE: ODOT 2024 WORKSET: 123369 PRODUCT: OpenRoadsDesigner 24.00.00.2025
pw:\\cmtengr-pw.bentley.com;cmt-connect-projects\\Documents\\ODOT\\HAM-US42-10.07_12.37 MID 123369\\123369\\400-Engineering\\Roadway\\Sheets\\123369_GB104.dgn





DESIGN AGENCY

CMT

**CRAWFORD, MURPHY &
TILLY, INC.**

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SUITE 270
DAYTON, OHIO 45459
www.cmtgroup.com

DESIGNER

LDW

REVIEWER

JWL 09/18/2011

PROJECT ID

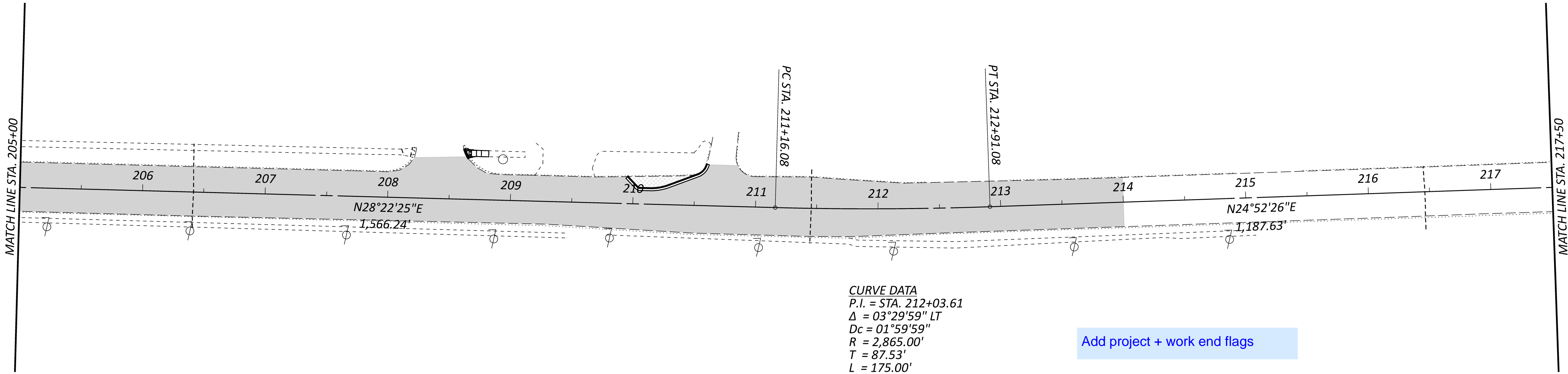
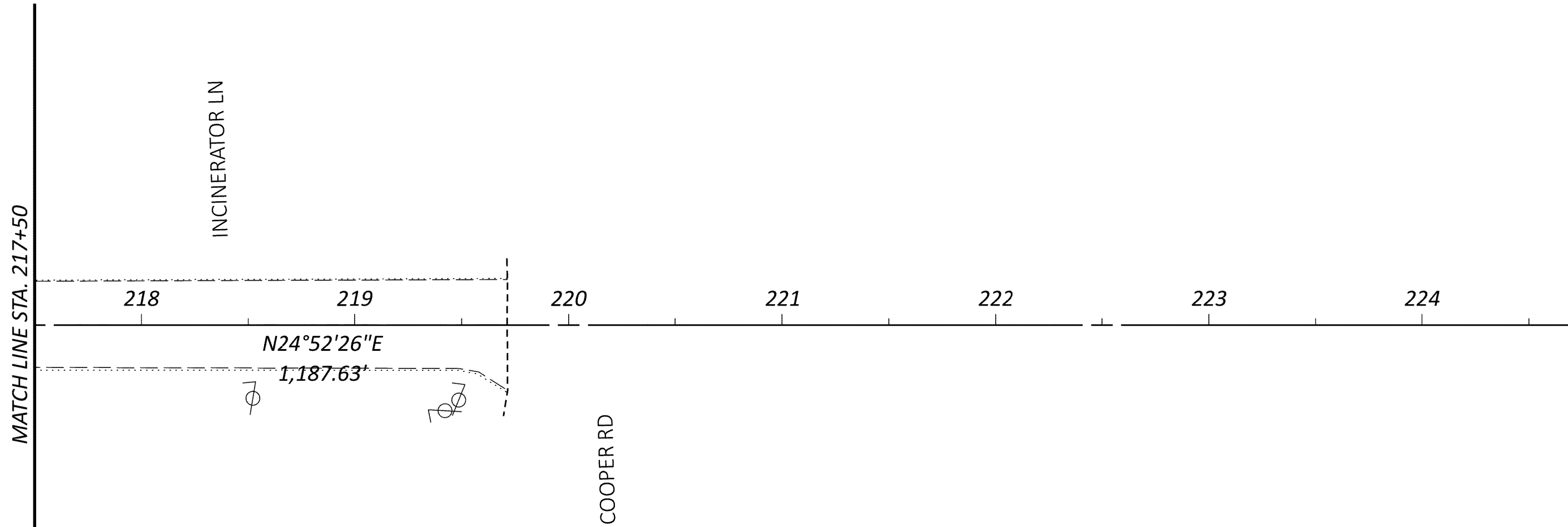
123369

SHEET **TOTAL**

P.5 **104**

SCHEMATIC PLAN
STA. 180+00 TO STA. 205+00





CURVE DATA
P.I. = STA. 212+03.61
 Δ = 03°29'59" LT
Dc = 01°59'59"
R = 2,865.00'
T = 87.53'
L = 175.00'
E = 1.34'

Add project + work end flags

Add a note stating to sawcut to sound pavement.

Same comment as right side.

SECTION 1- LT SIDE CURB EXTENSION
STA. 113+92.96 TO STA. 114+41.18
STA. 118+00.30 TO STA. 118+64.92
STA. 123+34.53 TO STA. 124+25.79
STA. 134+71.85 TO STA. 135+04.35
STA. 183+33.11 TO STA. 184+27.17
STA. 203+76.33 TO STA. 204+08.61

SECTION 1- RT SIDE CURB EXTENSION
STA. 108+22.55 TO STA. 110+17.98
STA. 114+05.50 TO STA. 114+46.00
STA. 118+35.60 TO STA. 118+84.05
STA. 123+49.70 TO STA. 124+14.83
STA. 127+85.91 TO STA. 128+18.57
STA. 128+45.59 TO STA. 128+85.00
STA. 132+42.34 TO STA. 132+82.72
STA. 183+32.76 TO STA. 183+66.19

standard walk
cross slope is
1.56%

What will replace pavement
removed under the new
concrete walk. Currently it
appears there is a void
between 1 and 2.

specify type of
pavement being
removed

Specify thickness and
material. Will need
separate sawing item
unless making APP.

typically this is
an item 253
which includes
sawcuts. it's
paid as CY.
buildup will
need provided

Separate
balloons

General Comment:
Thicknesses of
pavement items
need to be defined.

what is going
back?

existing
pavement to be
removed and
replaced with
embankment?

LEGEND

- ① ITEM 202 - PAVEMENT REMOVED
- ② ITEM 608 - 4" CONCRETE WALK
- ③ ITEM 609 - CURB, TYPE 4-C
- ④ ITEM 442 - FULL DEPTH PAVEMENT REPAIR
- ⑤ ITEM 421 - MICROSURFACING, SURFACE COURSE
- ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"
ITEM 407 - NON-TRACKING TACK COAT
ITEM 441 - ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (449), PG 64-22
- ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)
- ⑧ ITEM 304 - AGGREGATE BASE
- ⑨ ITEM 441 - ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (449), (PG 64-22)
- ⑩ ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (449)
- ⑪ ITEM 407 - NON-TRACKING TACK COAT
- ⑫ ITEM 609 - CURB, TYPE 6
- Ⓐ EXISTING PAVEMENT — Define as asphalt, composite?
- Ⓑ EXISTING CURB
- Ⓒ EXISTING WALK

DESIGN AGENCY

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DESIGNER

LDW

REVIEWER

JWL 09/18/25

PROJECT ID

123369

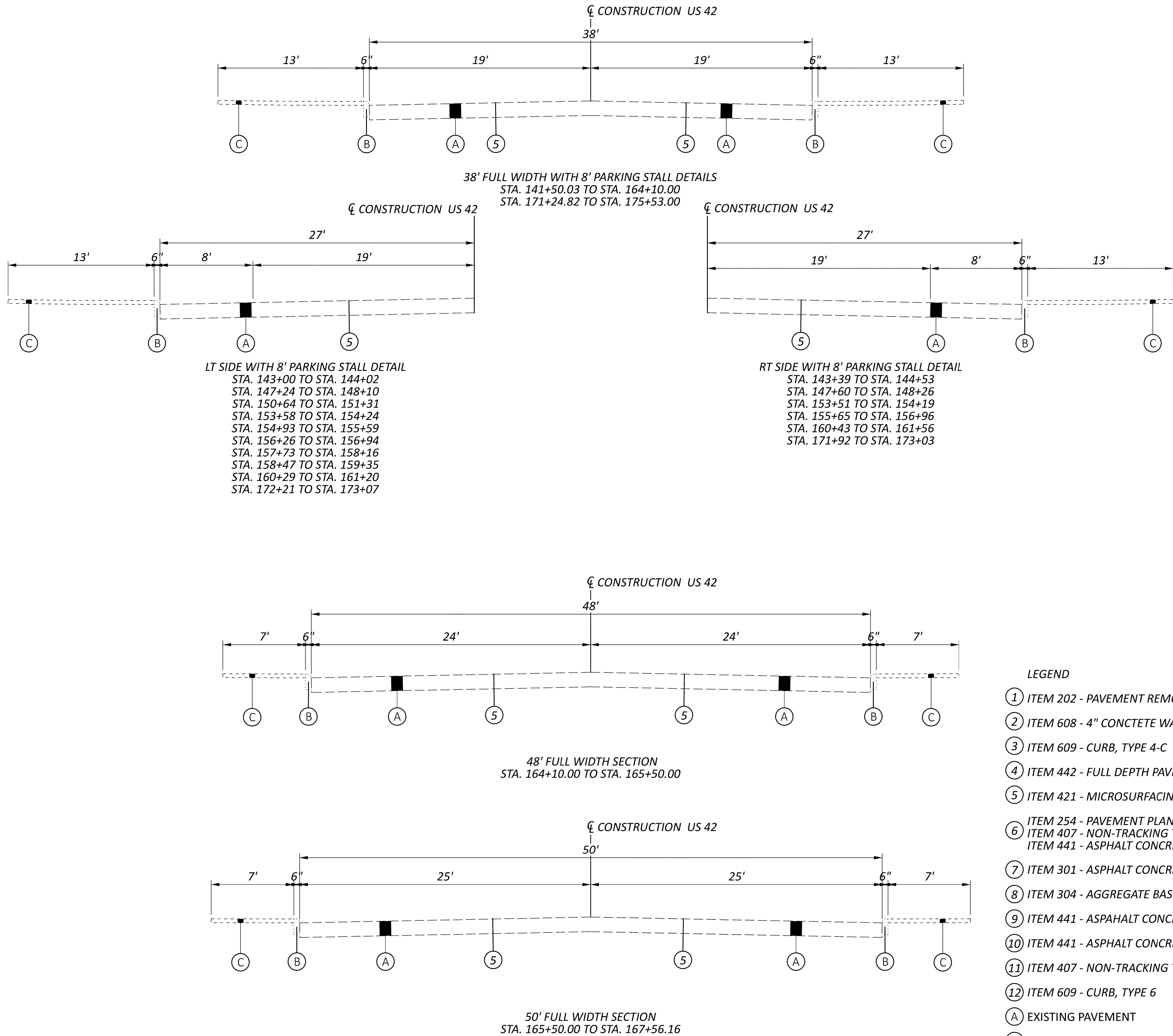
SHEET

P.7

TOTAL

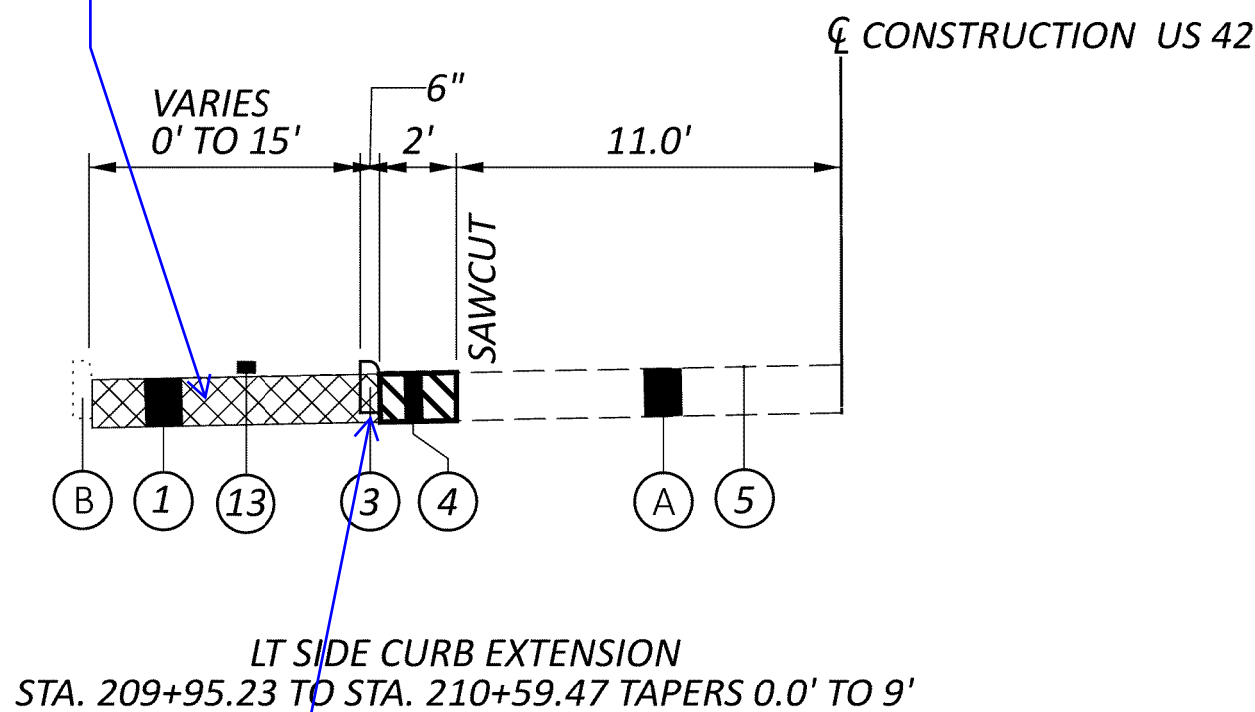
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TYPICAL SECTIONS



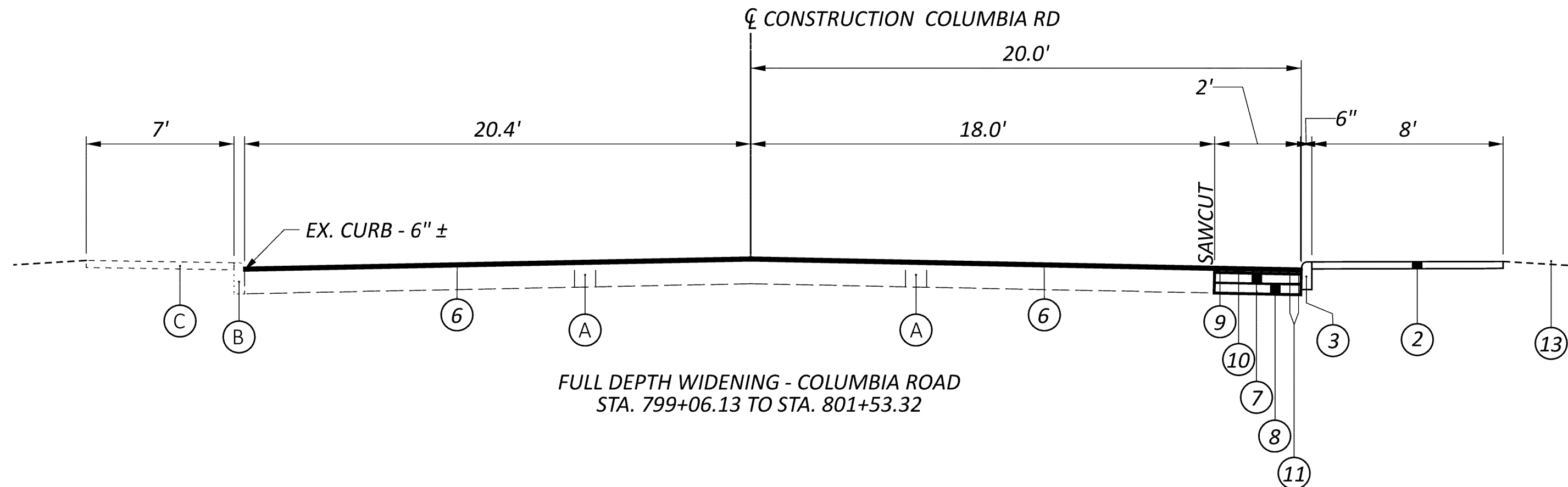
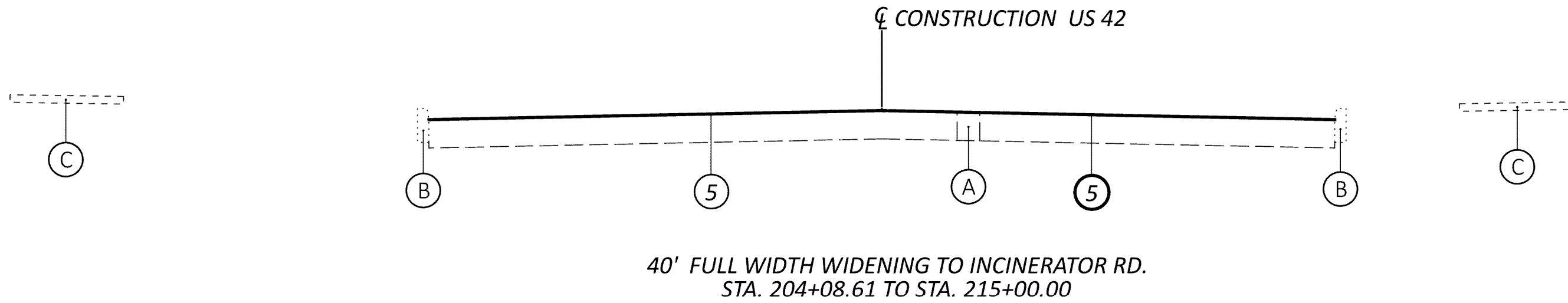
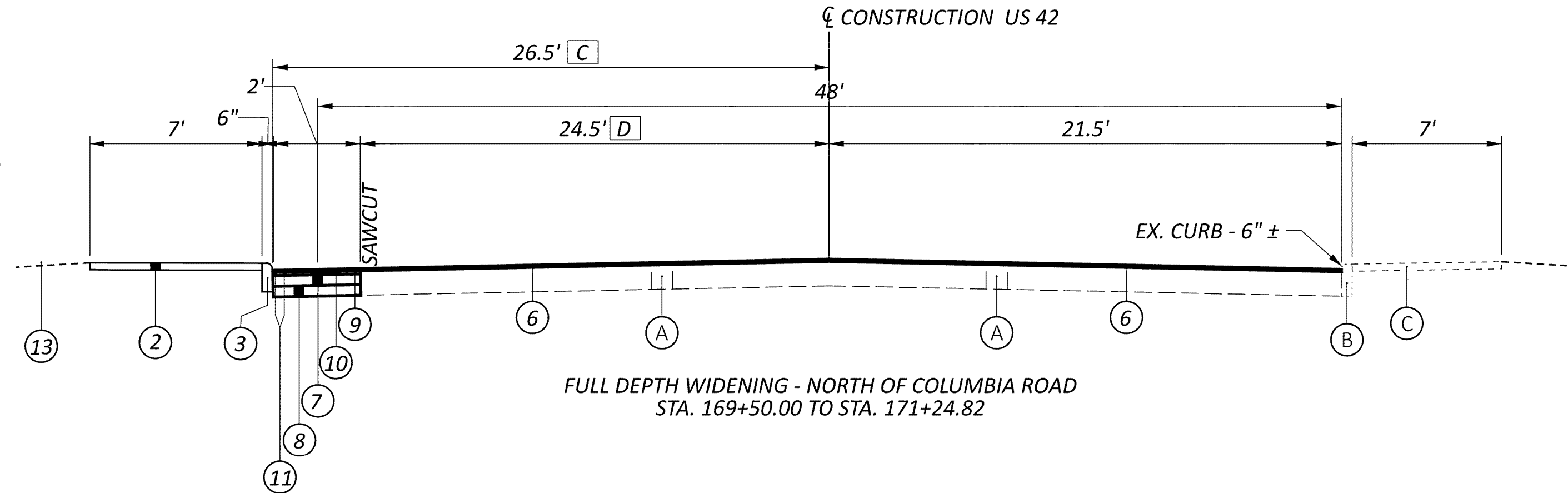
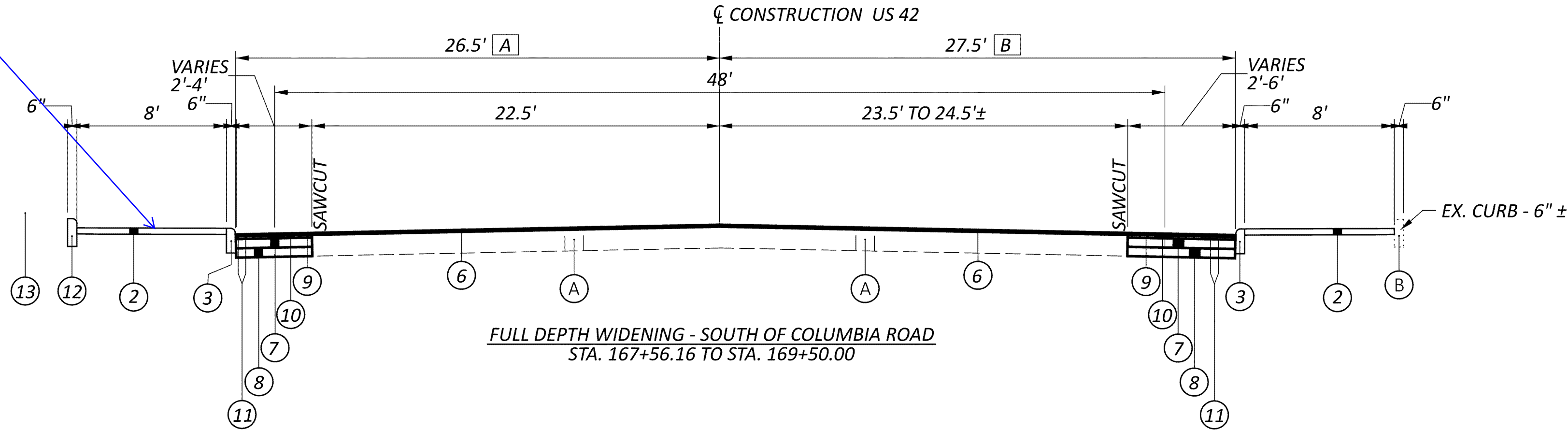
- A** 24.5' +/- STA. 167+56.16 TO STA. 168+28.70
VARIES FROM 24.48' TO 26.50' FROM STA. 168+28.70 TO 168+69.99
- B** 23.5' +/- STA. 167+56.16 TO STA. 167+58.06
VARIES FROM 23.50' TO 27.50' FROM STA. 167+58.06 TO 167+80

- C** VARIES FROM 26.50' TO 25.05' FROM STA. 170+95.31 TO STA. 171+24.82
- D** VARIES FROM 24.50' TO 23.05' FROM STA. 170+95.31 TO STA. 171+24.82



typically would have aggregate beneath the curb for this type of work.
typical comment.

1.56% is ODOT standard. Must meet ADA compliance.
Typical comment.



State thicknesses for proposed pavement

- LEGEND
- ① ITEM 202 - PAVEMENT REMOVED
 - ② ITEM 608 - 4" CONCTETE WALK
 - ③ ITEM 609 - CURB, TYPE 4-C
 - ④ ITEM 442 - FULL DEPTH PAVEMENT REPAIR
 - ⑤ ITEM 421 - MICROSURFACING, SURFACE COURSE
 - ⑥ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"
ITEM 407 - NON-TRACKING TACK COAT
ITEM 441 - ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (449), PG 64-22
 - ⑦ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)
 - ⑧ ITEM 304 - AGGREGATE BASE
 - ⑨ ITEM 441 - ASPAHLT CONCRETE, SURFACE COURSE, TYPE 1 (449), (PG 64-22)
 - ⑩ ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (449)
 - ⑪ ITEM 407 - NON-TRACKING TACK COAT
 - ⑫ ITEM 609 - CURB, TYPE 6
 - ⑬ ITEM 659 - SEEDING AND MULCHING
 - A** EXISTING PAVEMENT
 - B** EXISTING CURB
 - C** EXISTING WALK

ROUNDING

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

UTILITIES

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

UTILITY OWNER INFORMATION TO BE ADDED IN STAGE 2

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.

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 9:00 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.

SURVEYING PARAMETERS - OHIO COUNTY COORDINATE SYSTEM (OCCS)

HAM-US.42-10.07-12.37 PID#123369
PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET ____ OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.
USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL:
POSITIONING METHOD: ODOT RTN, LEICA RTK
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING:
ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18A

HORIZONTAL POSITIONING:
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS-80
COORDINATE SYSTEM: HAMILTON COUNTY (OCCS)
MAP PROJECTION: LAMBERT CONFORMAL CONIC
CENTRAL LATITUDE: N 39° 06' 00"
CENTRAL LONGITUDE: E 275° 24' 00"

FALSE NORTHING: 100000
FALSE EASTING: 50000
PROJECTION SCALE FACTOR: 1.000026

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.
CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. EXCEPT AS INDICATED ON SHEET ____, USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CLEARING AND GRUBBING

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

18" _____

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. ____ FOR ADDITIONAL INFORMATION.
ITEM 204 - PROOF ROLLING _____ HOUR.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION

FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE. PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR

REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES. ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 _____ CU. YDS. THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF _____ INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

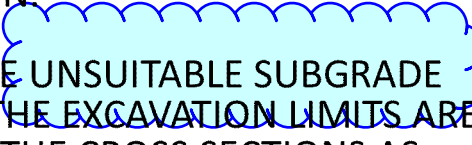
PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST _____ EACH
659, TOPSOIL _____ CY
659, SEEDING AND MULCHING _____ SY
659, REPAIR SEEDING AND MULCHING _____ SY
659, INTER-SEEDING _____ SY
659, COMMERCIAL FERTILIZER _____ TON
659, LIME _____ ACRES
659, WATER _____ MGAL
659, MOWING _____ MSF

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.



undercut not detailed in Typical Sections. Pay item needed

May want to modify the plan note to be similar to this one.

SUBGRADE IMPROVEMENT

NO LOCATIONS HAVE BEEN IDENTIFIED FOR REQUIRING SUBGRADE IMPROVEMENT BASED ON COMPLETION OF SOIL BORINGS. IF UNSUITABLE SOILS ARE ENCOUNTERED AS IDENTIFIED BY THE ENGINEER, THE UNSUITABLE SOIL SHALL BE EXCAVATED AND PAID FOR BY ITEM 204 EXCAVATION OF SUBGRADE, A LAYER OF ITEM 204 GEOTEXTILE FABRIC SHALL BE PLACED, AND THE SUBGRADE SHALL BE REPLACED USING ITEM 204 GRANULAR MATERIAL, TYPE B.

THE FOLLOWING QUANTITIES ARE PROVIDED FOR EXCAVATION AND REPLACEMENT OF UNSUITABLE SUBGRADE. THESE ITEMS SHALL NOT BE PERFORMED UNLESS DIRECTED BY THE CITY.

ITEM 204 - EXCAVATION OF SUBGRADE 300 CY
ITEM 204 - GRANULAR MATERIAL, TYPE B 300 CY
ITEM 204 - GEOTEXTILE FABRIC 930 SY

NOTE TO REVIEWER - MOT NOTES TO BE ADDED WITH STAGE 2 DESIGN.

A sequence of construction may be helpful to describe plan intent/requirement, including but not limited to the below listed consideration:

Consider temporary markings to implement the road diet - this should allow the contractor to have work area. This could follow the existing markings, except 11' through lanes provided to give 10' lane for contractor. Typical MOT section(s) might be helpful.

Consider identifying which curb ramps/sidewalks can be constructed at the same time. The project will need to maintain 1 sidewalk on either side at all times. Consider identifying the pedestrian detour by map or described in name; signing does not need to be shown if it follows MT-110.10.

Consider how the median curb will be constructed. Maybe this occurs by left lane closure before installing the road diet? If road width doesn't allow this, maybe a directional detour is possible to construct the median curb approximately half at a time. City of Reading will need to have input/concurrence if a block by block detour during working hours is used.

Curb Ramp Locations Requiring ADA Width Checks and Potential RW

- 1. STA. 111+98.48, 29.24' RT. - SE corner of US42 & Sherman Ave.
- 2. STA. 128+15.41, 29.65' RT. - SE corner of US42 & Anna St.
- 4. STA. 130+74.21, 30.53' RT. - SE corner of US42 & Elizabeth St.
- 5. STA. 132+04.65, 29.28' RT. - SE corner of US42 & JRS Access Rd.
- 6. STA. 153+56.22, 19.52' RT. – NE corner of US42 & Southern Ave.
- 7. STA. 177+62.12, 30.75' LT. – NW corner of US42 & North St.
- 8. STA. 183+62.96, 27.97' RT. – SE corner of US42 & Gahl Terrace St.
- 9. STA. 195+73.39, 26.84' RT. – NE corner of US42 & Landy Ln.

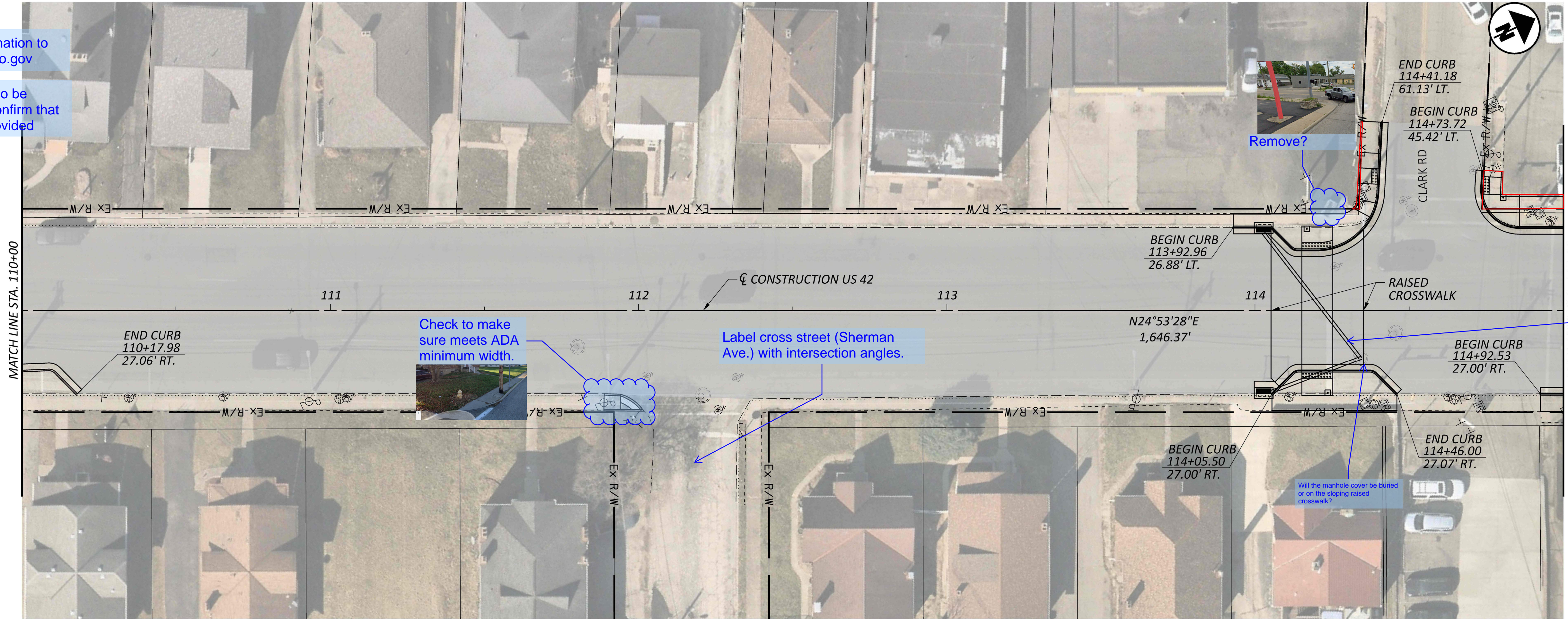
All potential RW take locations need to be reviewed to confirm whether these locations meet the conditions of the City of Reading's RW Agreement.

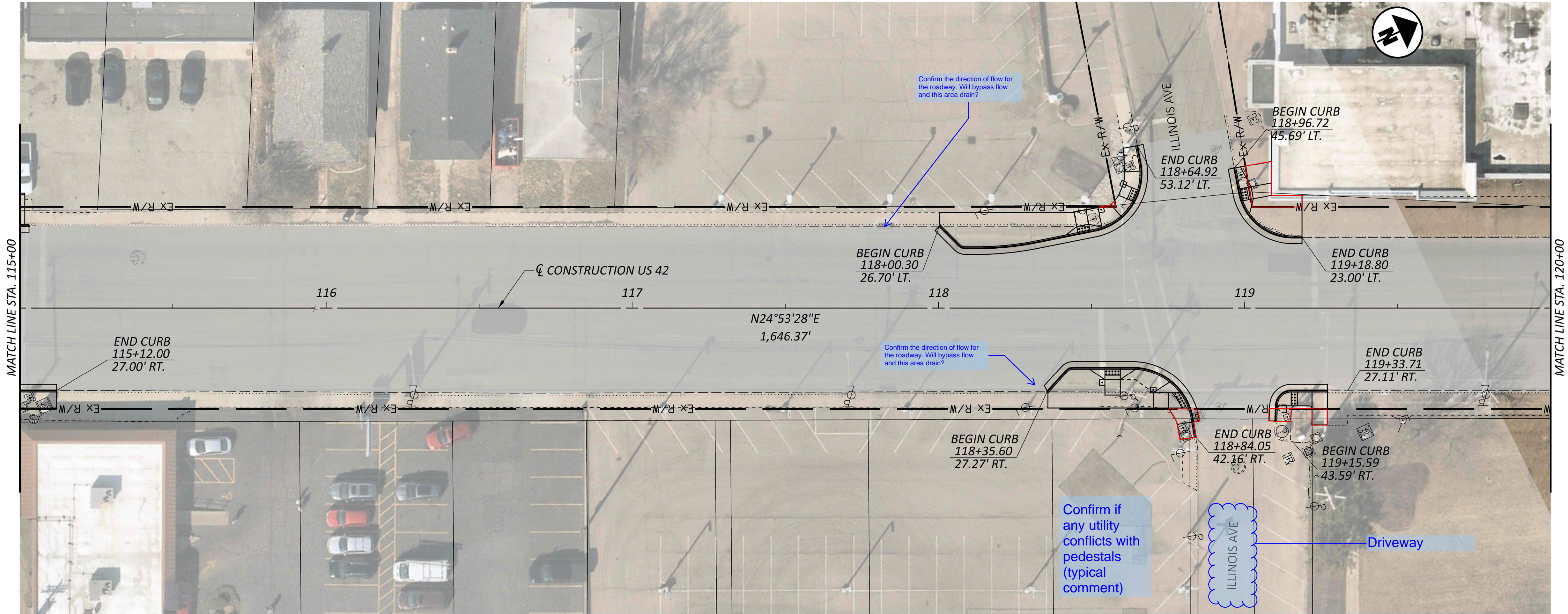
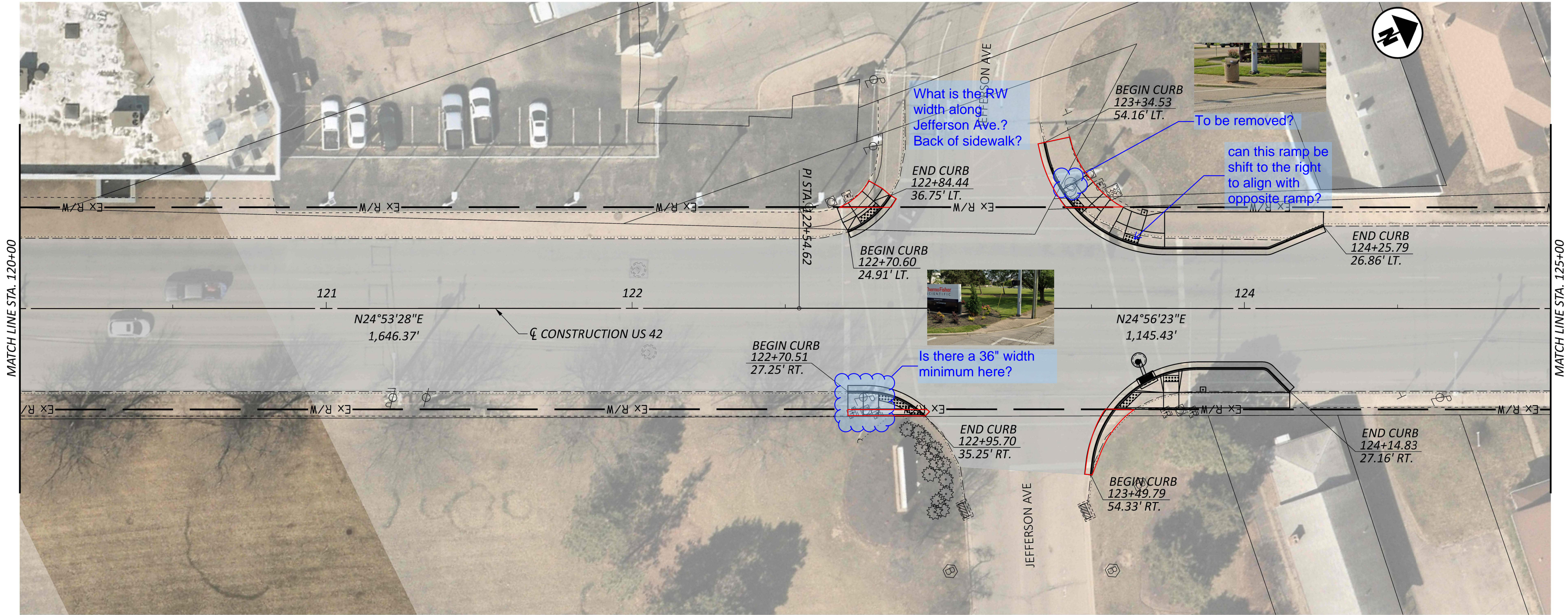
Show legend for differing shaded pavement treatments.



Provide utility coordination to
lucas.braun@dot.ohio.gov

If any utilities need to be
relocated, please confirm that
sufficient R/W is provided







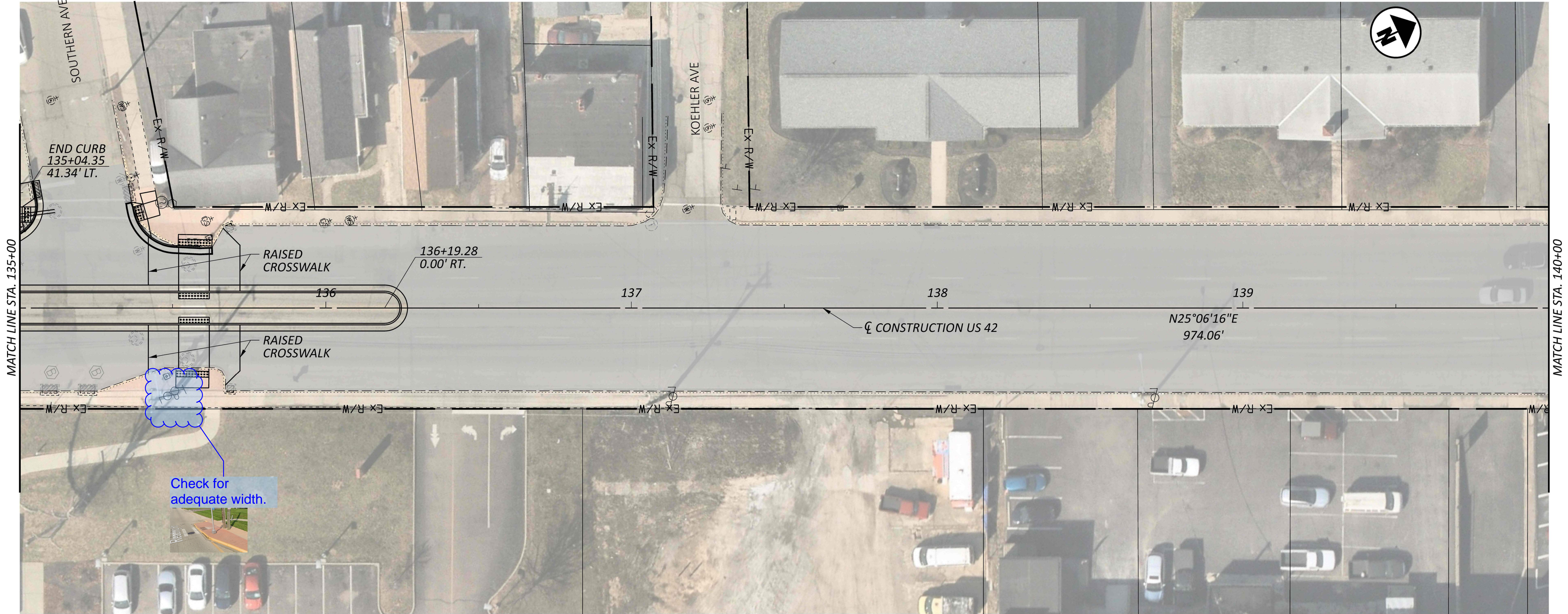
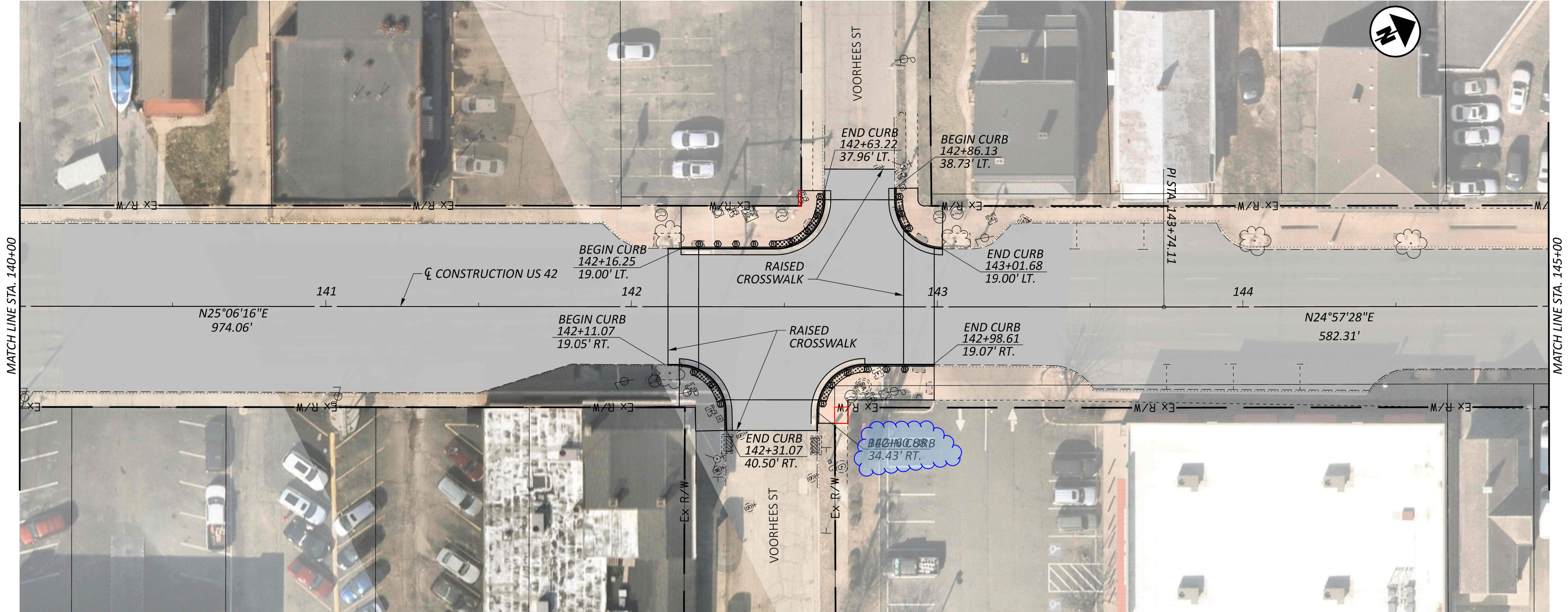
Check for adequate width.

Check for adequate width



Ideally, the catch basins should be 10' from the curb ramps

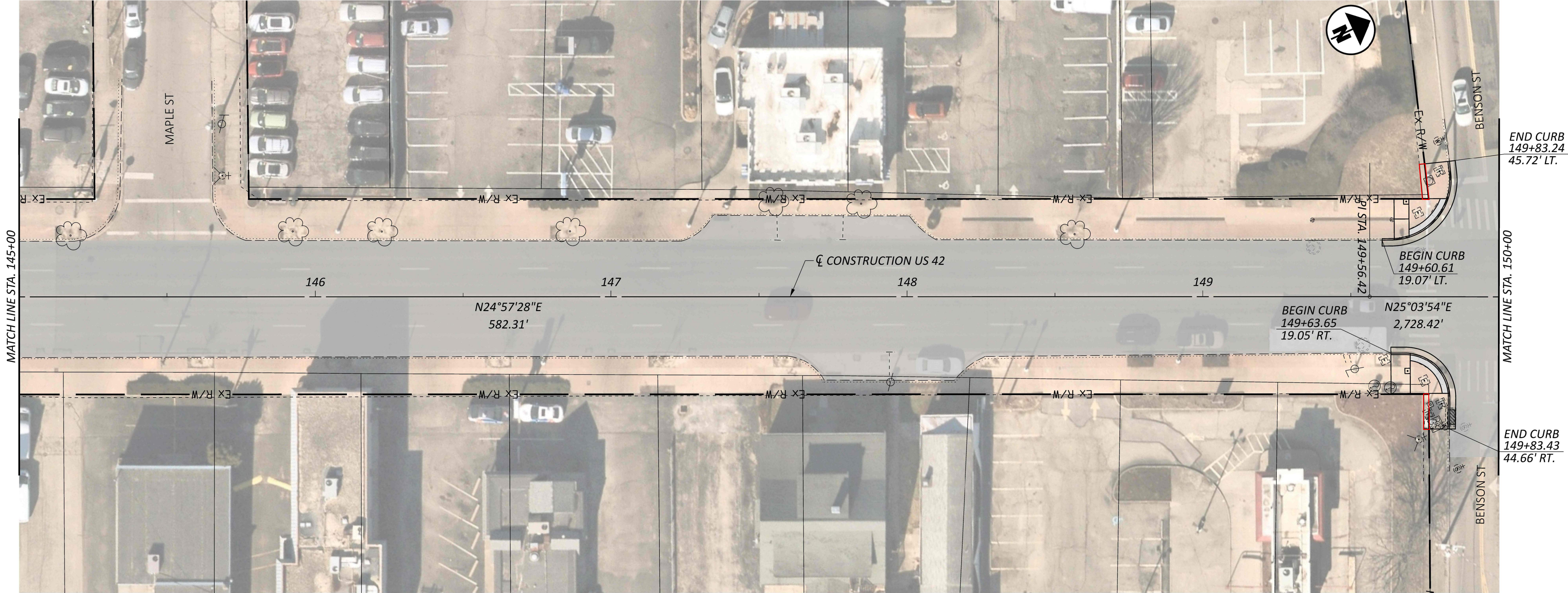
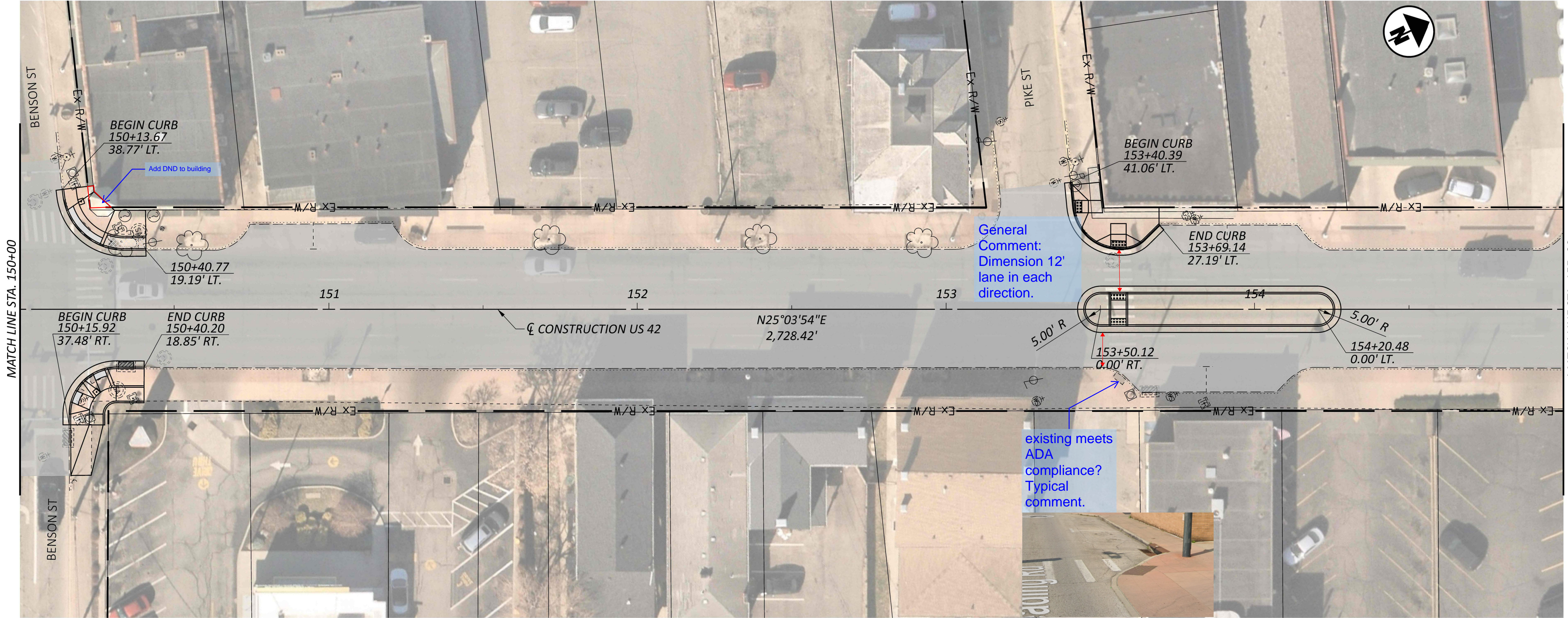
Confirm the direction of flow for the roadway. Is a catch basin needed? Typical comment



HAM US 42 10.07 READING RD

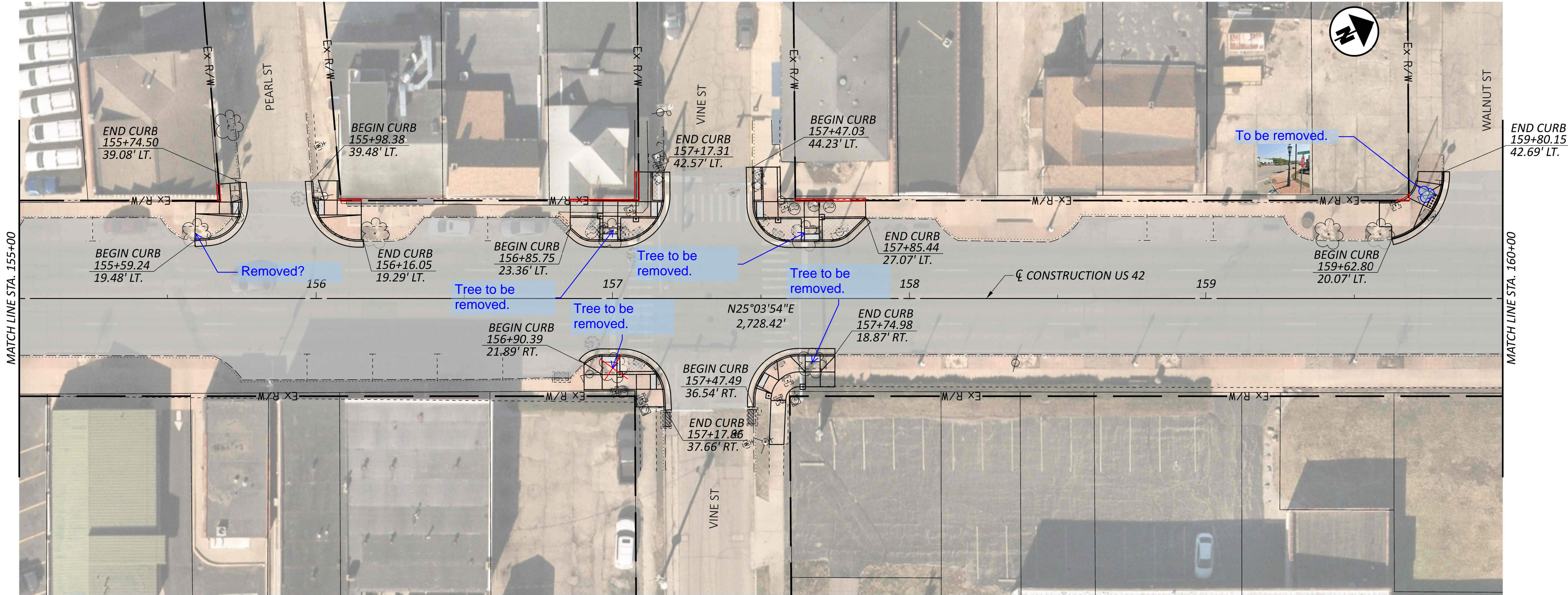
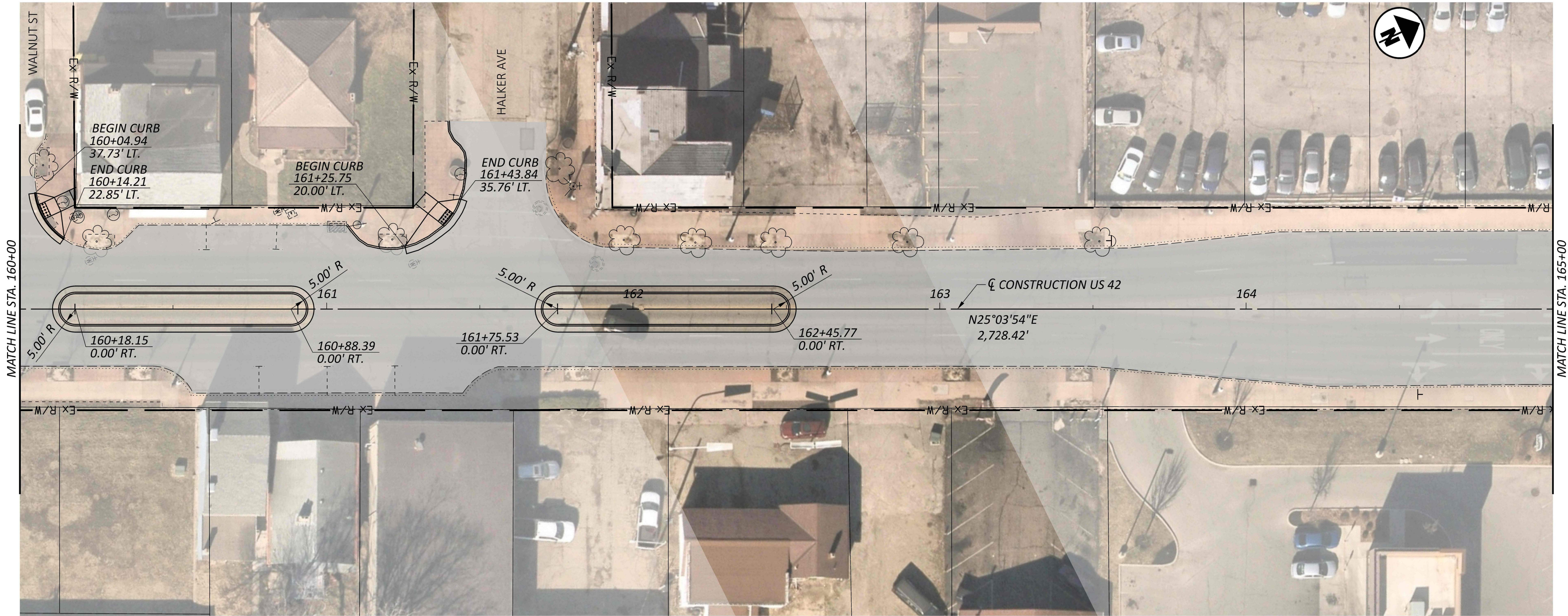
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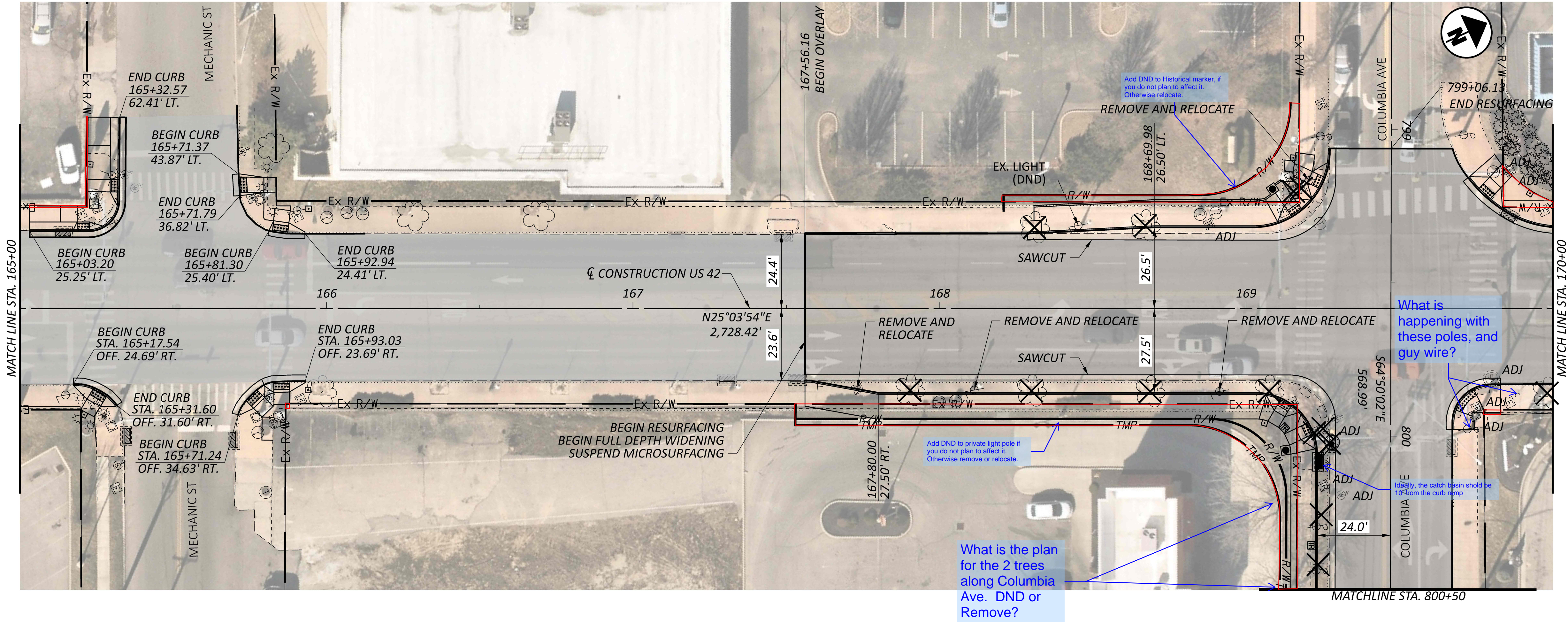
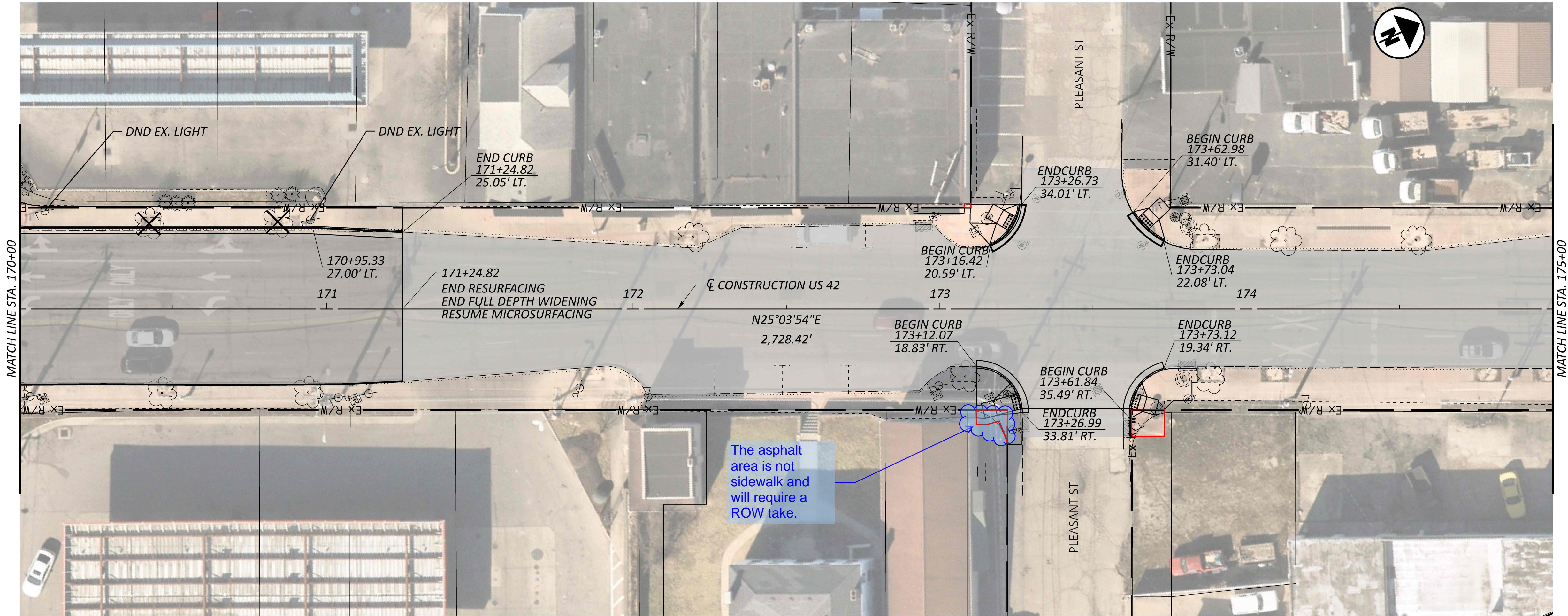
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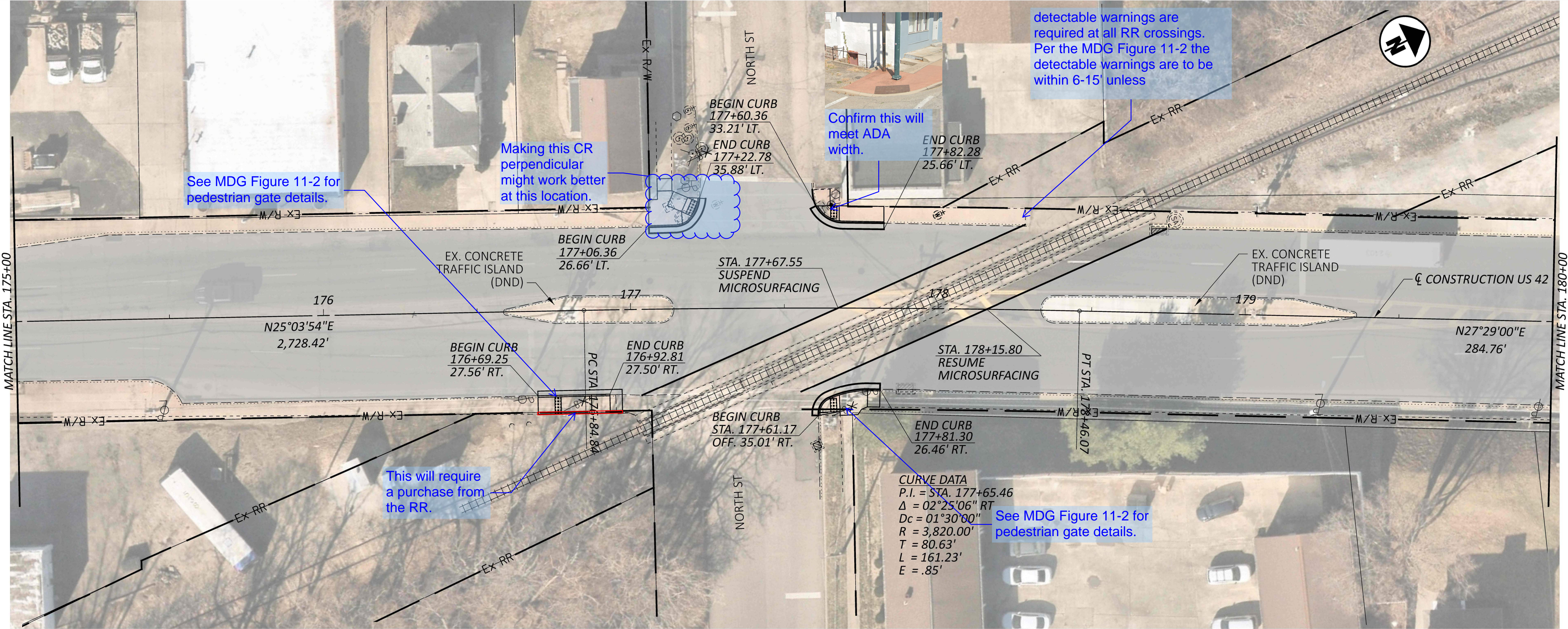
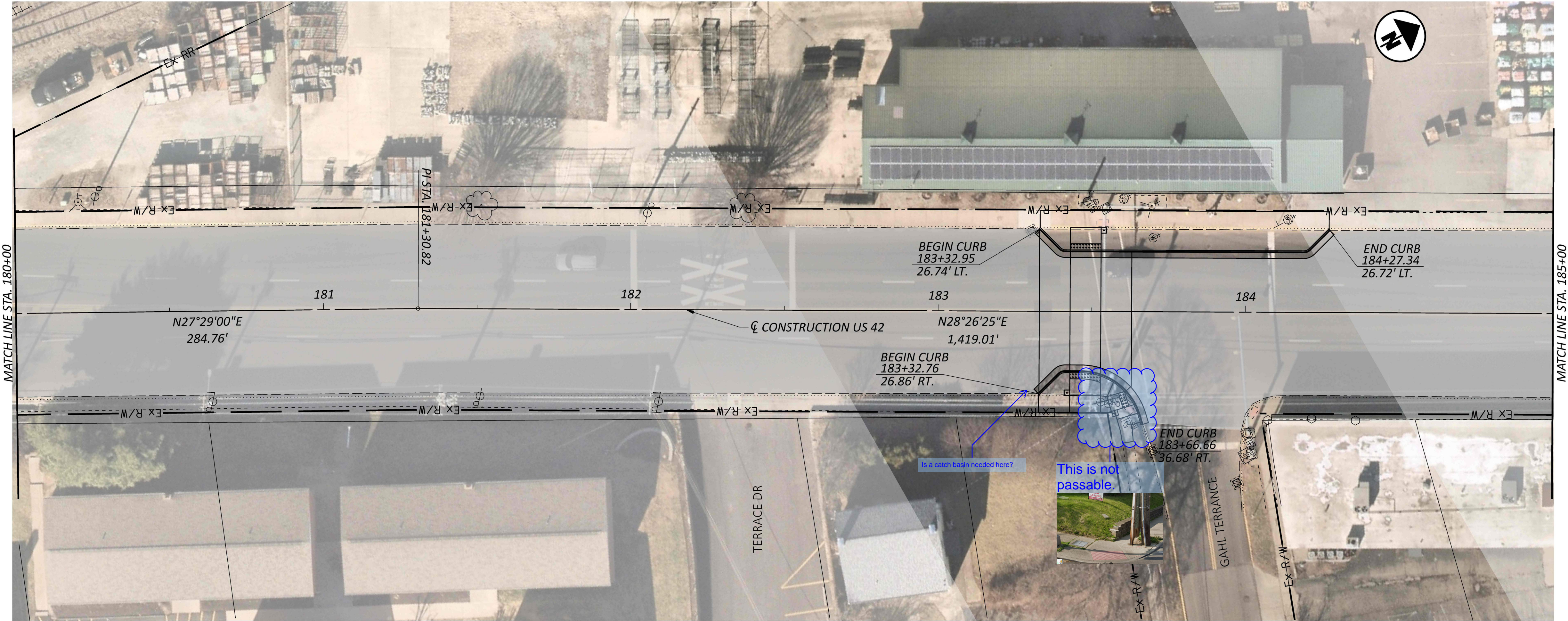


HAM US 42 10.07 READING RD

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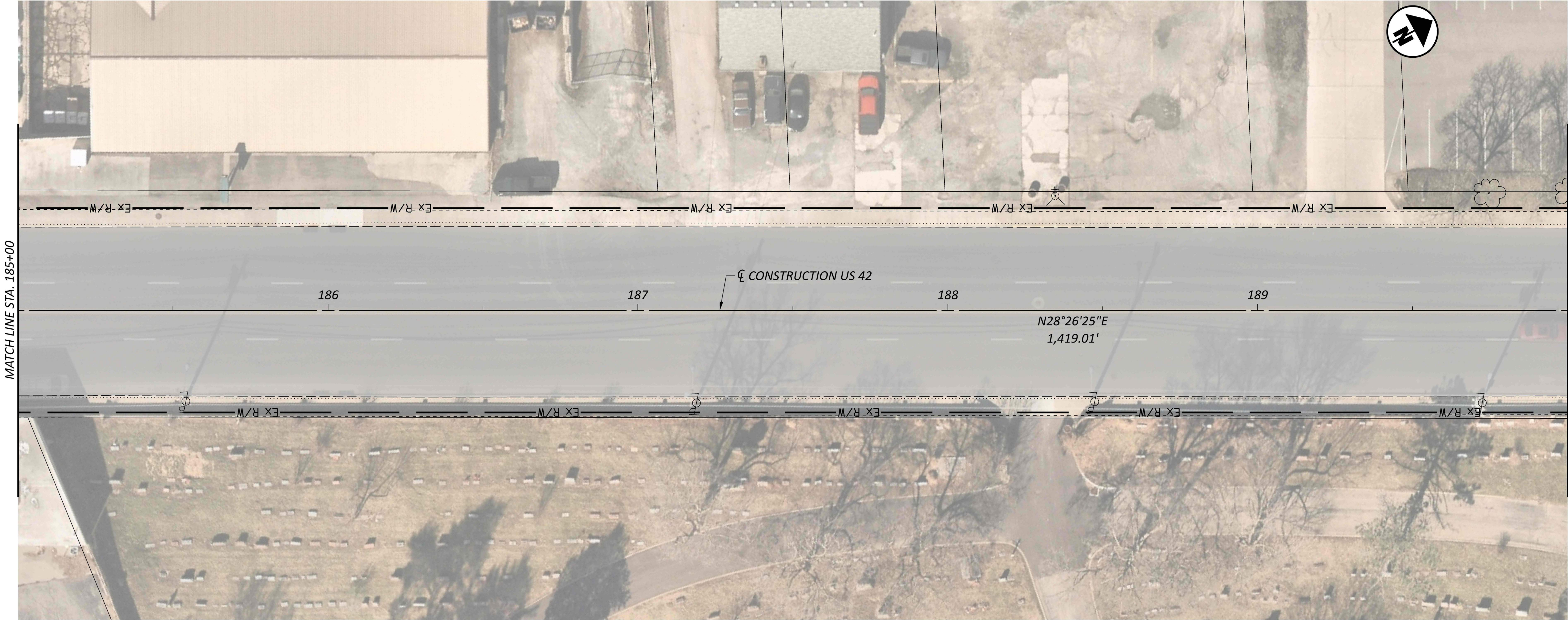
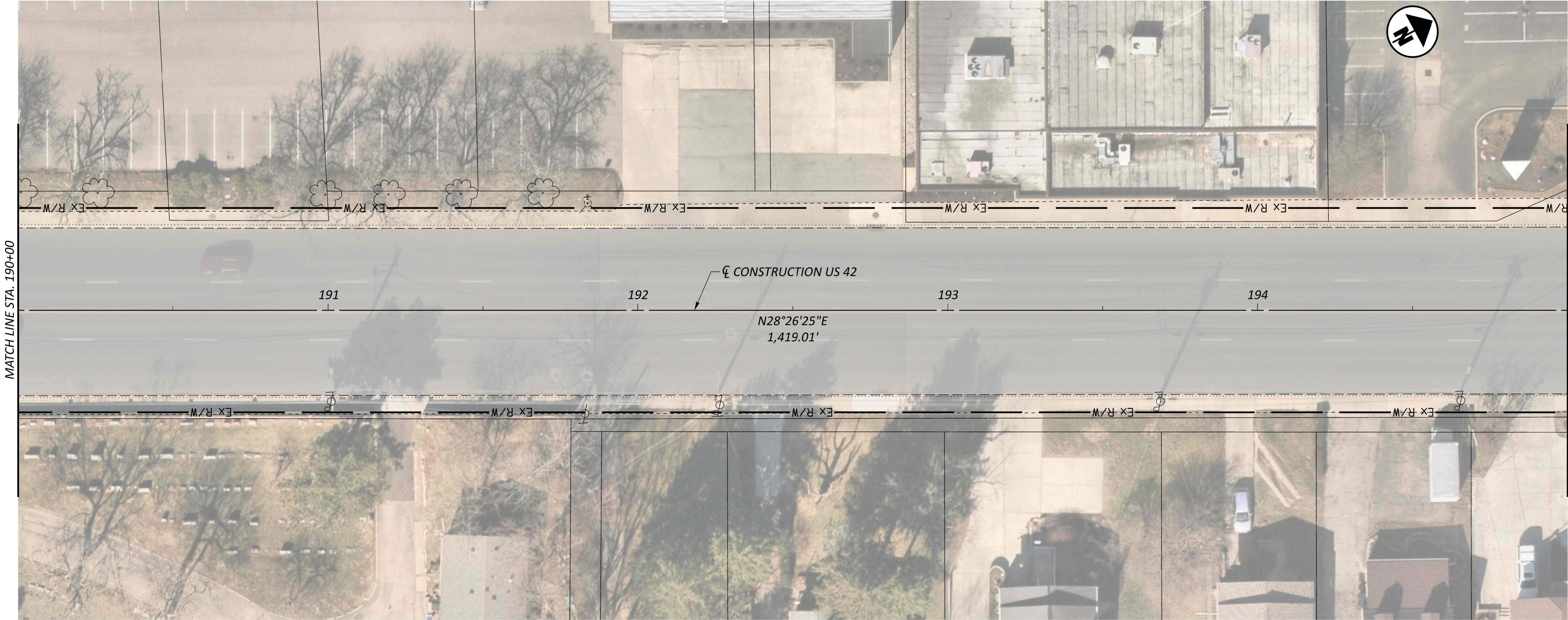





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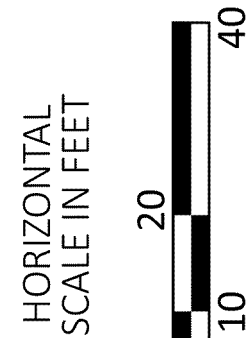
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DESIGN AGENCY	
	CHAWFORD, MURPHY & 1771 WASHINGTON VILLAGE DR DAYTON, OHIO 45489 PH 937.761.1288 www.cmtengr.com
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LDW	
REVIEWER	
JWL 09/18/25	
PROJECT ID	
123369	
SHEET	TOTAL
P.20	104

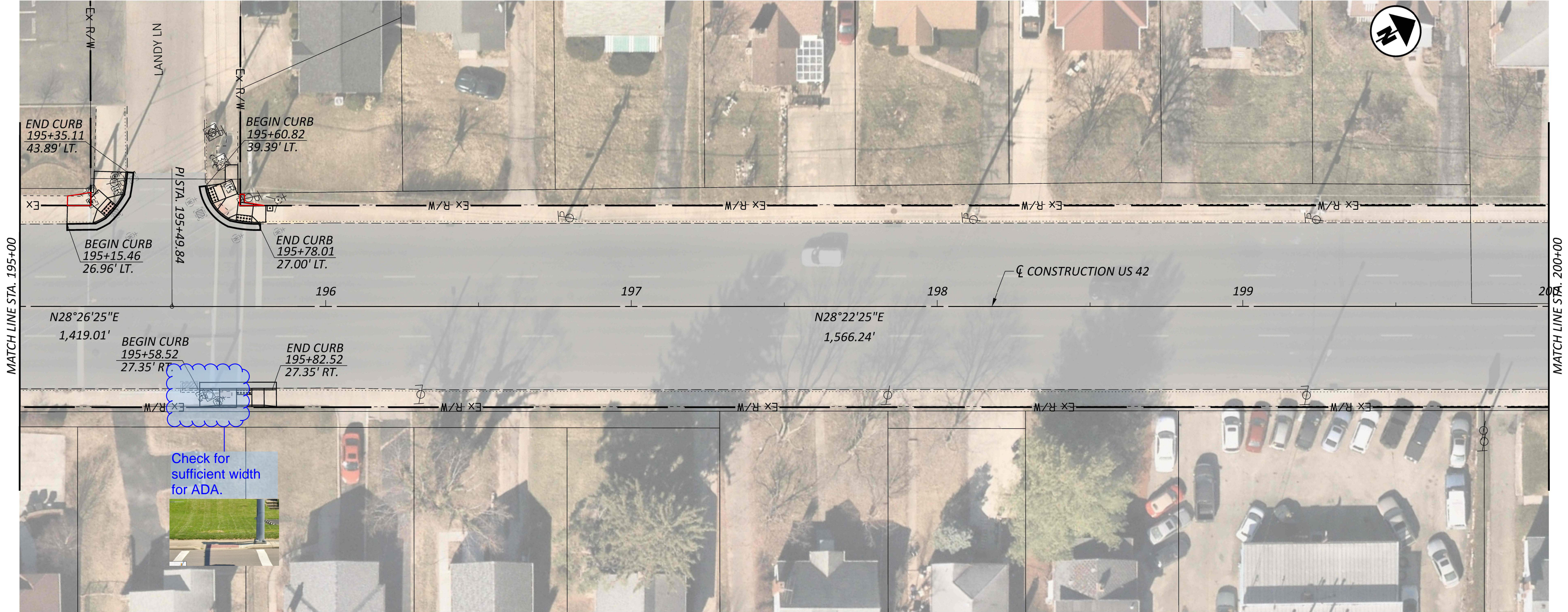
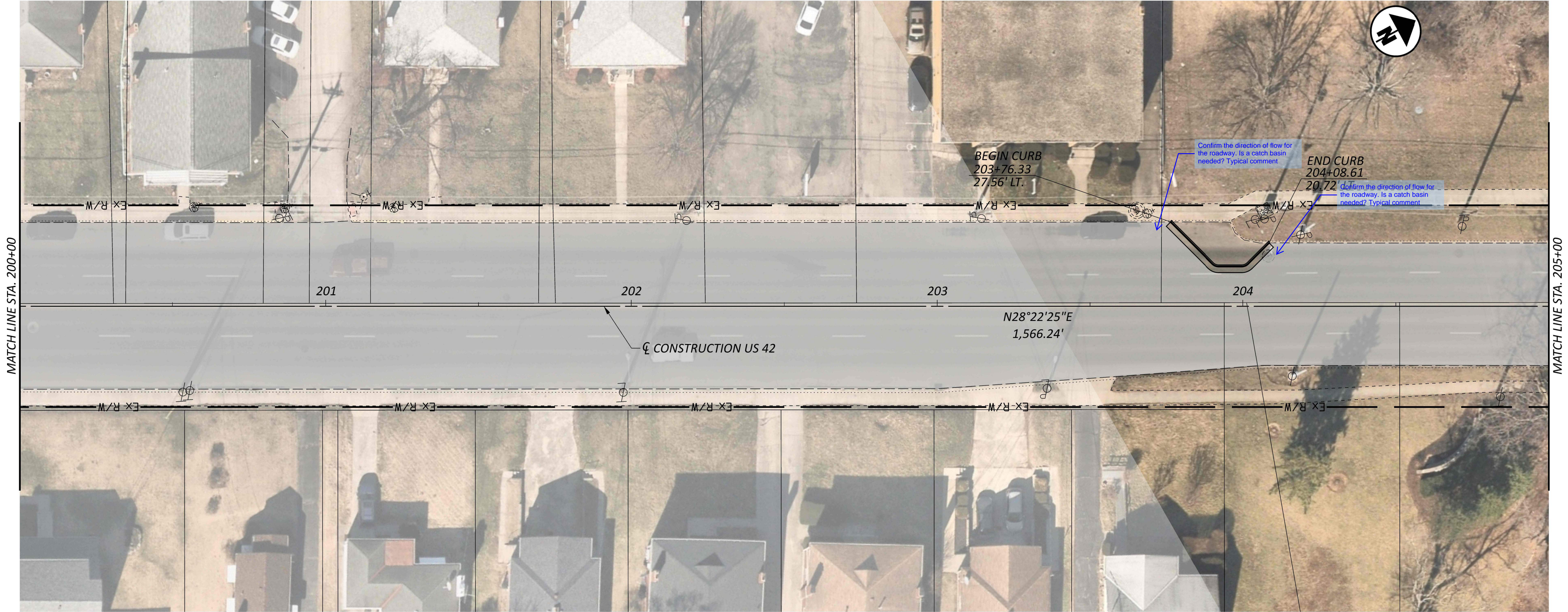
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STA. 185+00 TO STA. STA. 195+00



HAM US 42 10.07 READING RD

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DESIGN AGENCY

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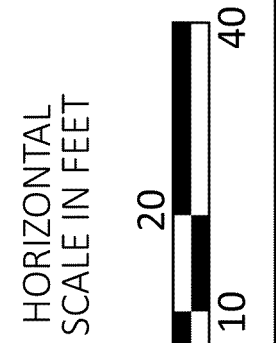
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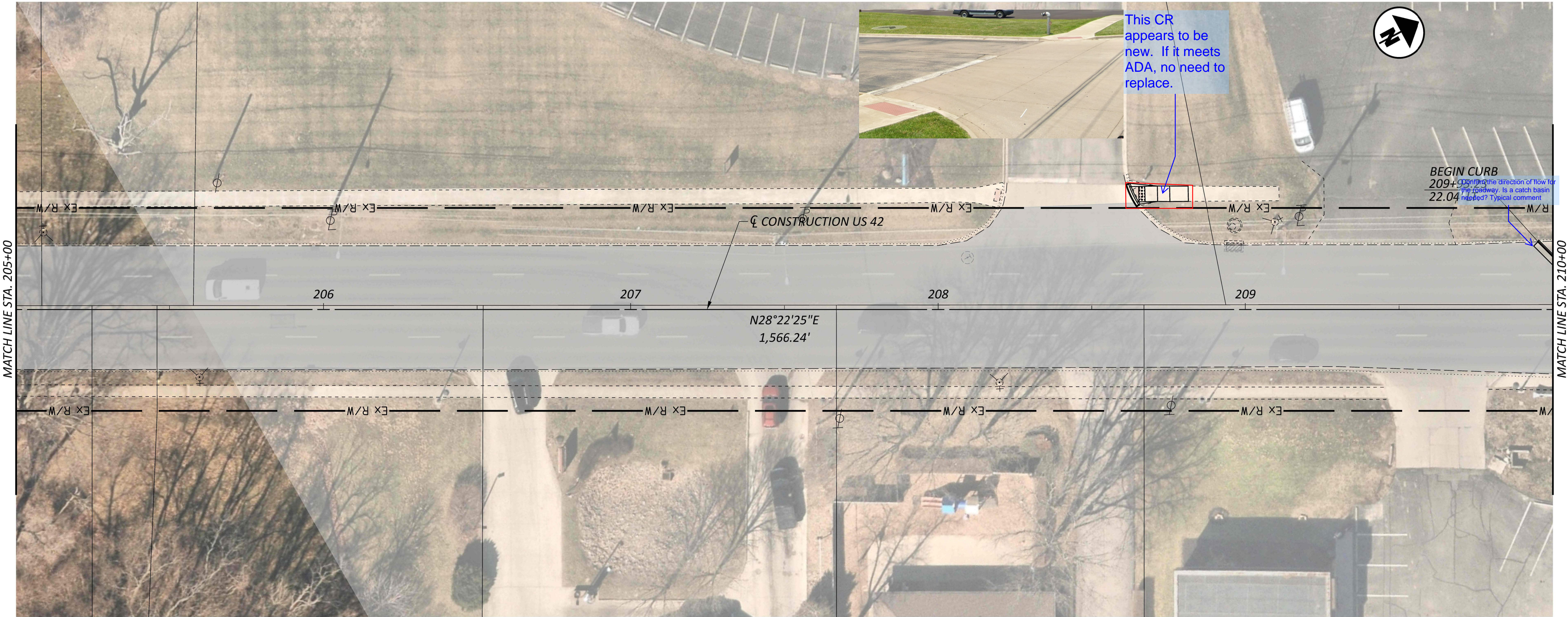
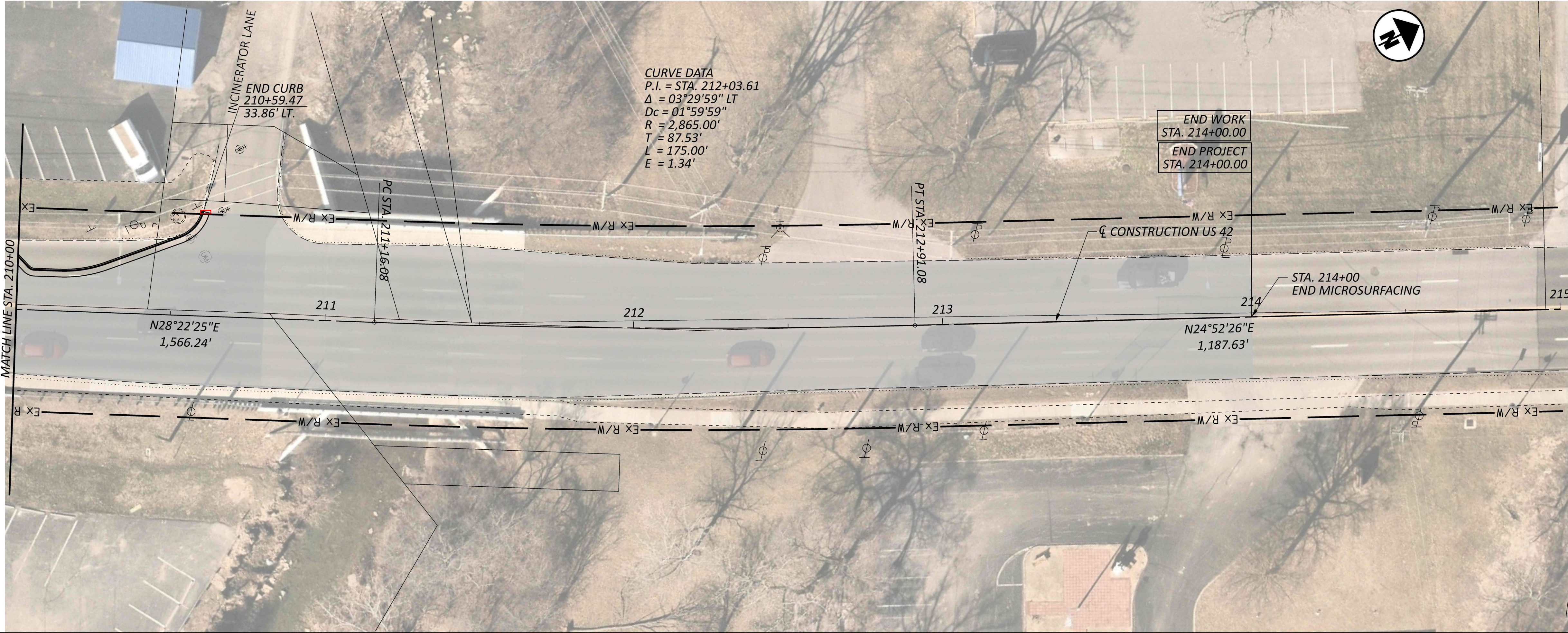
P.21

TOTAL

104

PLAN SHEET
STA. 115+00 TO STA. 125+00



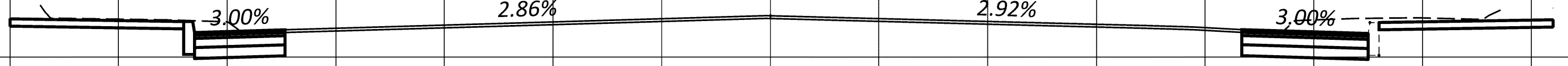
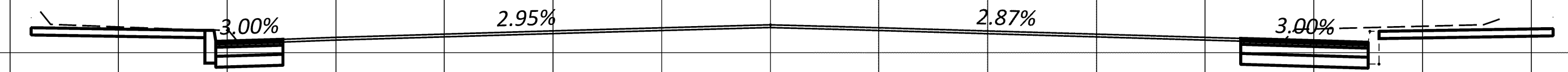
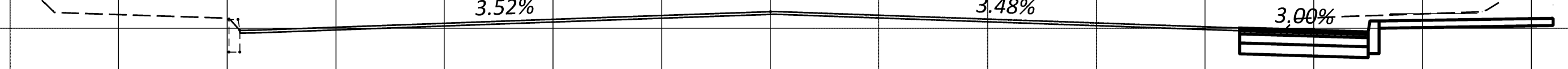
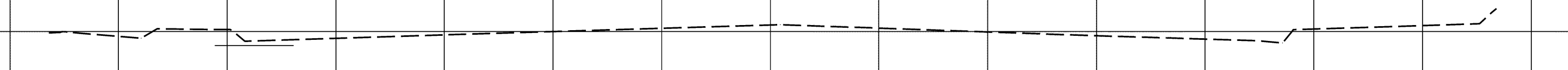


Reference sheet
number for Matchline



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END WIDTH	SQ. YDS.																	CUT	FILL	CUT	FILL			
		580																	580	22	0	40	0	
		575																	575					
		570																	570					
		565																	565					
		560	60	50	40	30	20	10	0	10	20	30	40	50	60	560								
		580																	580	21	0	32	0	
		575																	575					
		570																	570					
		565																	565					
		560	60	50	40	30	20	10	0	10	20	30	40	50	60	560								
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		575																	575					
		570																	570					
		565																	565					
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SHEET TOTAL		555	60	50	40	30	20	10	0	10	20	30	40	50	60	555	SHEET TOTALS				SHEET P.24	TOTAL 104		

CROSS SECTIONS

STA. 167+50 TO STA. 169+00 -READING RD

DESIGN AGENCY

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CROSS SECTIONS
STA. 169+50 TO STA. 171+00 -READING RD

DESIGN AGENCY  CMT CRAWFORD, MURPHY & ASSOCIATES, LLC 7111 WASHINGTON VILLAGE DR SUITE 270 CRAWFORD, IN 45508 PH (937) 761-2183 www.cmtengr.com	
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PROJECT ID	
123369	
SHEET	TOTAL
P.25	104

HAM US 42 10.07 READING RD

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SEEDING																						END AREA		VOLUME		CROSS SECTIONS STA. 799+00 TO STA. 801+00 - COLUMBIA RD	
END	SO.																					CUT	FILL	CUT	FILL		
WIDTH	YDS.																										
		580																									
		575																				11	0				
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		565																						21	0		
		560	60	50	40	30	20	10	572.74 801+00.00 572.74 0	10	20	30	40	50	60	560											
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		575																				12	0				
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		565																						25	0		
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		575																									
		570																									
		565																									
		560	60	50	40	30	20	10		10	20	30	40	50	60	560											
SHEET TOTAL																						SHEET TOTALS					

DESIGN AGENCY

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PH 60377012183
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LDW

REVIEWER

JWL 09/18/25

PROJECT ID

123369

SHEET

P.27

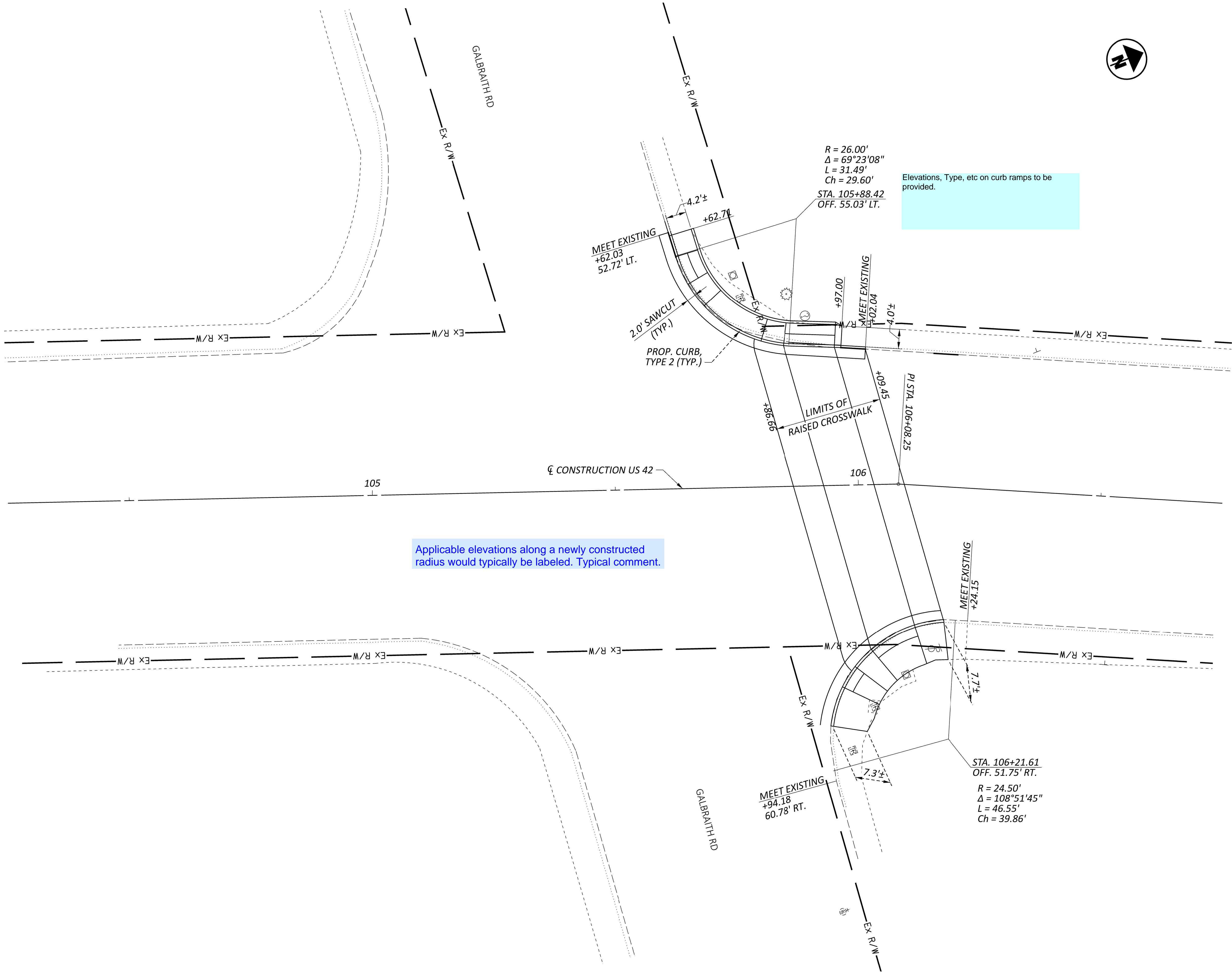
TOTAL

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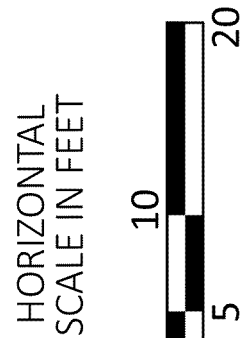
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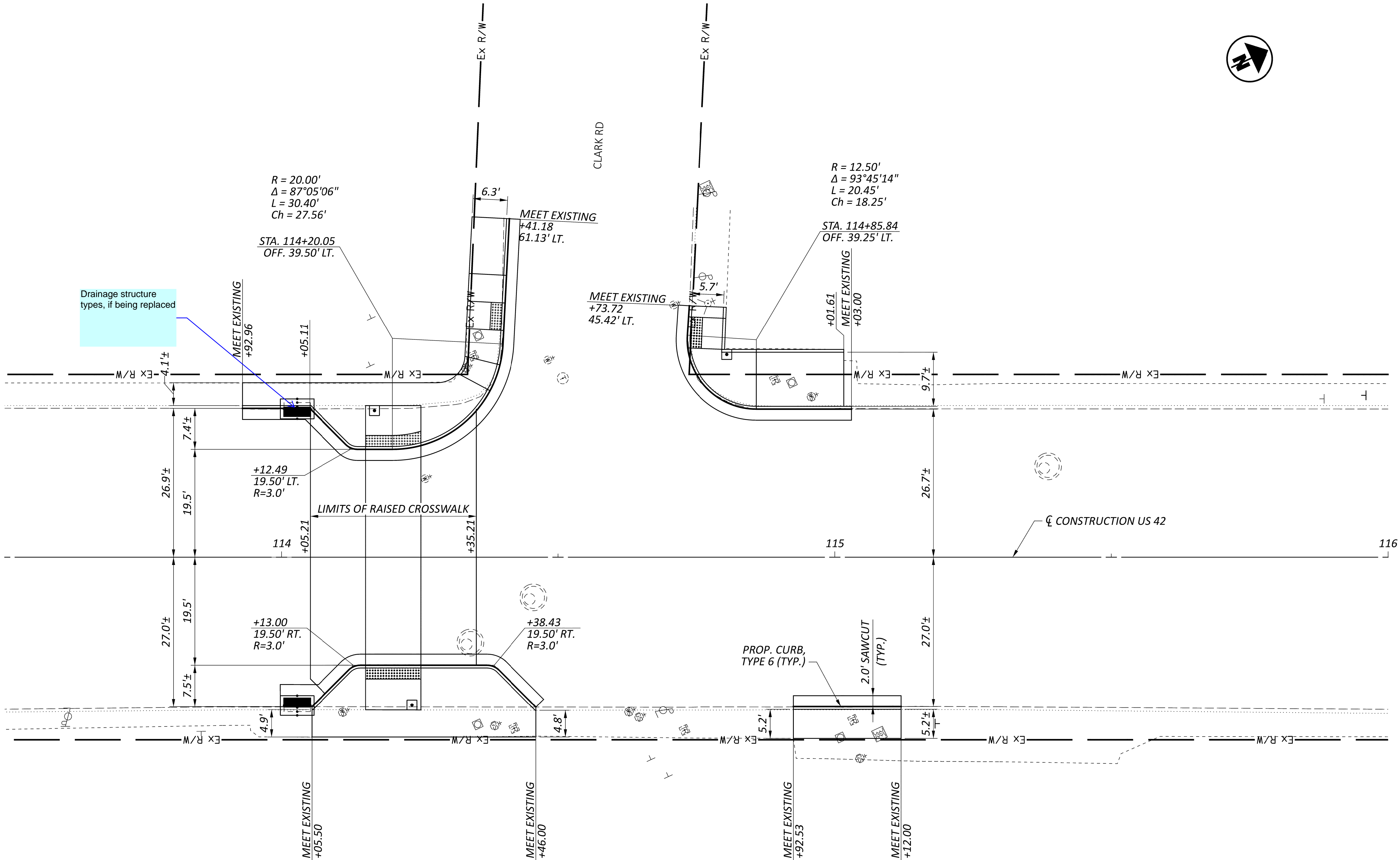


INTERSECTION DETAILS
READING RD. AT GALBRAITH RD



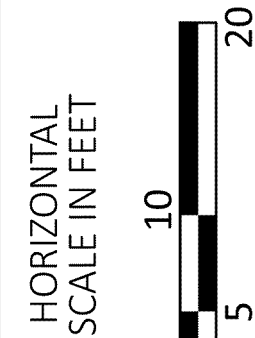
DESIGN AGENCY
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CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45489
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DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	09/18/25
123369	
SHEET	TOTAL
P.29	105



INTERSECTION DETAILS
READING RD. AT CLARK RD

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DESIGNER	
LDW	
REVIEWER	
JWL 09/18/25	
PROJECT ID	
123369	
SHEET	TOTAL
P.30	104



HAM US 42 10.07 READING RD



HORIZONTAL
SCALE IN FEET

A horizontal scale bar with a black and white alternating pattern. It has markings at 5, 10, and 20 feet.

CMT
CRAWFORD, MURPHY &
TILLY, INC.
7777 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.cmtengr.com

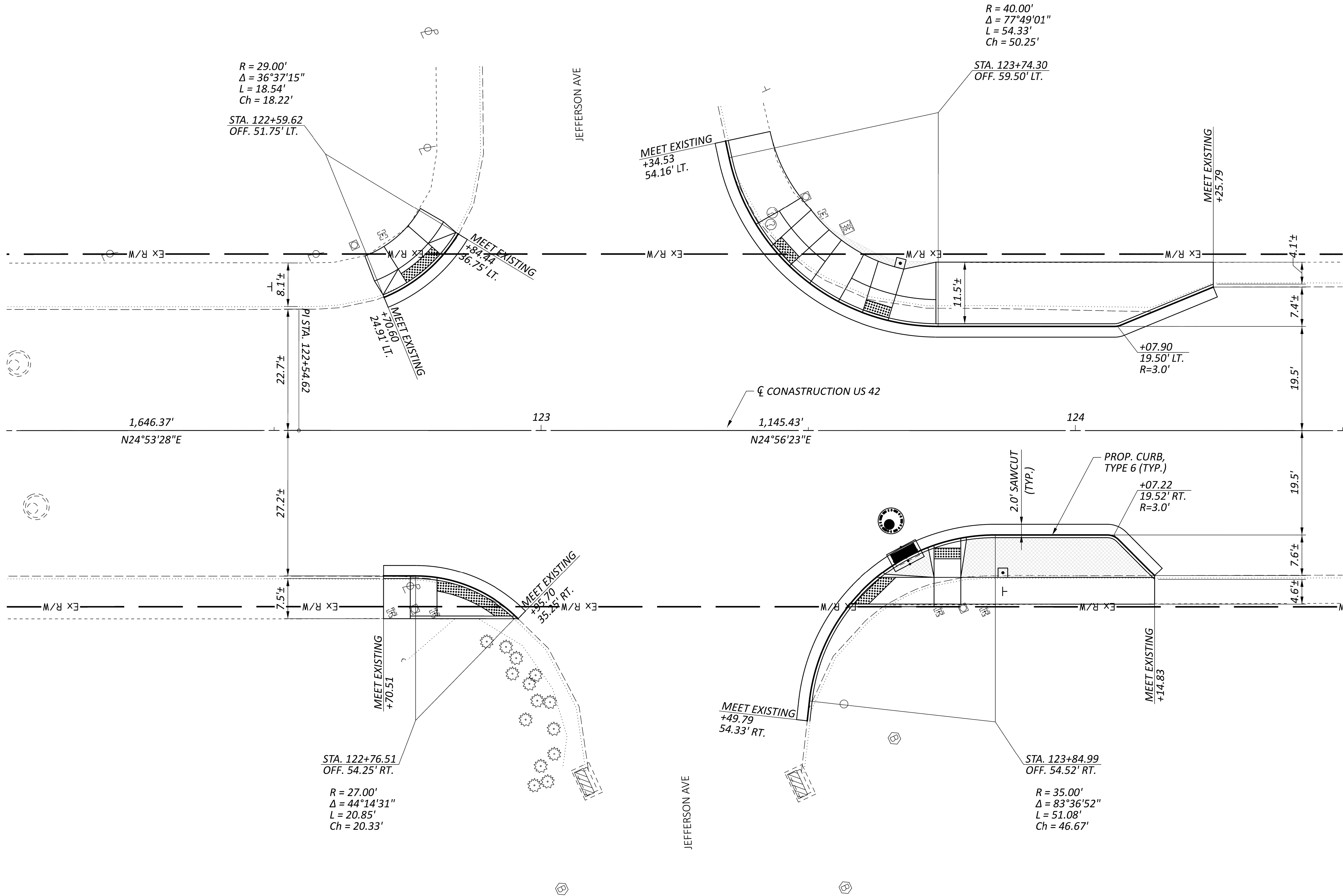
LDW

JWL 09/18/25

123369

TOTAL

104



INTERSECTION DETAILS
READING RD. AT JEFFERSON AVE

DESIGN AGENCY



CHAWFORD, MURPHY &
1771 WASHINGTON VILLAGE DR
DAYTON, OHIO 45419
PH (937) 761-1288
www.cmtinc.com

DESIGNER

LDW

REVIEWER

JWL 09/18/25

PROJECT ID

123369

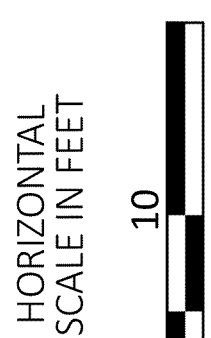
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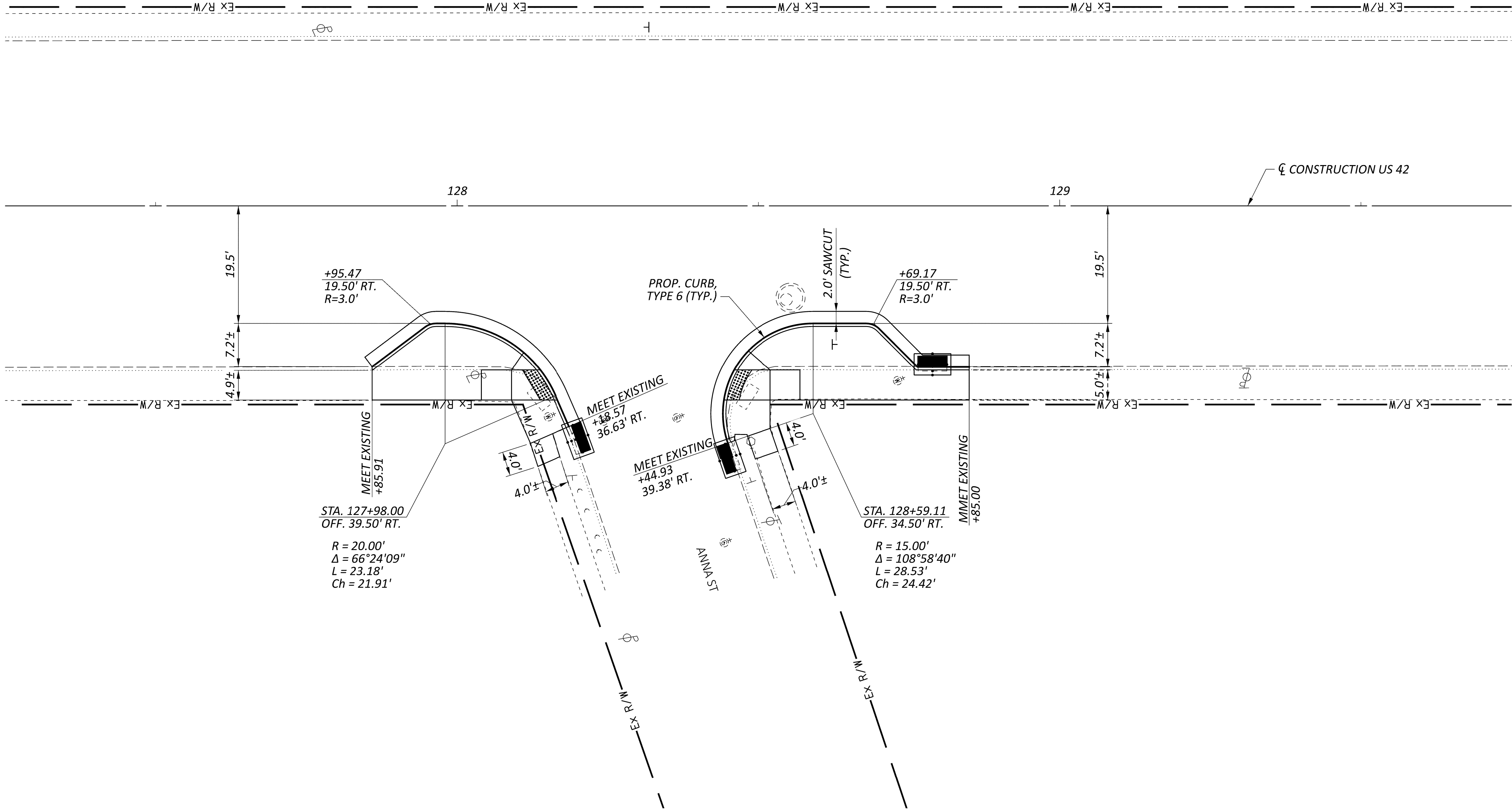
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TOTAL

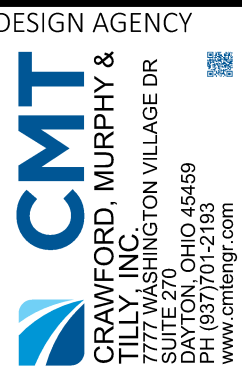
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HORIZONTAL
SCALE IN FEET

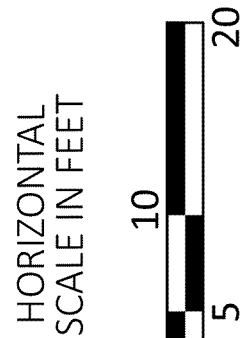




INTERSECTION DETAILS
READING RD. AT ANNA ST



DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	123369
SHEET	P.33
TOTAL	104



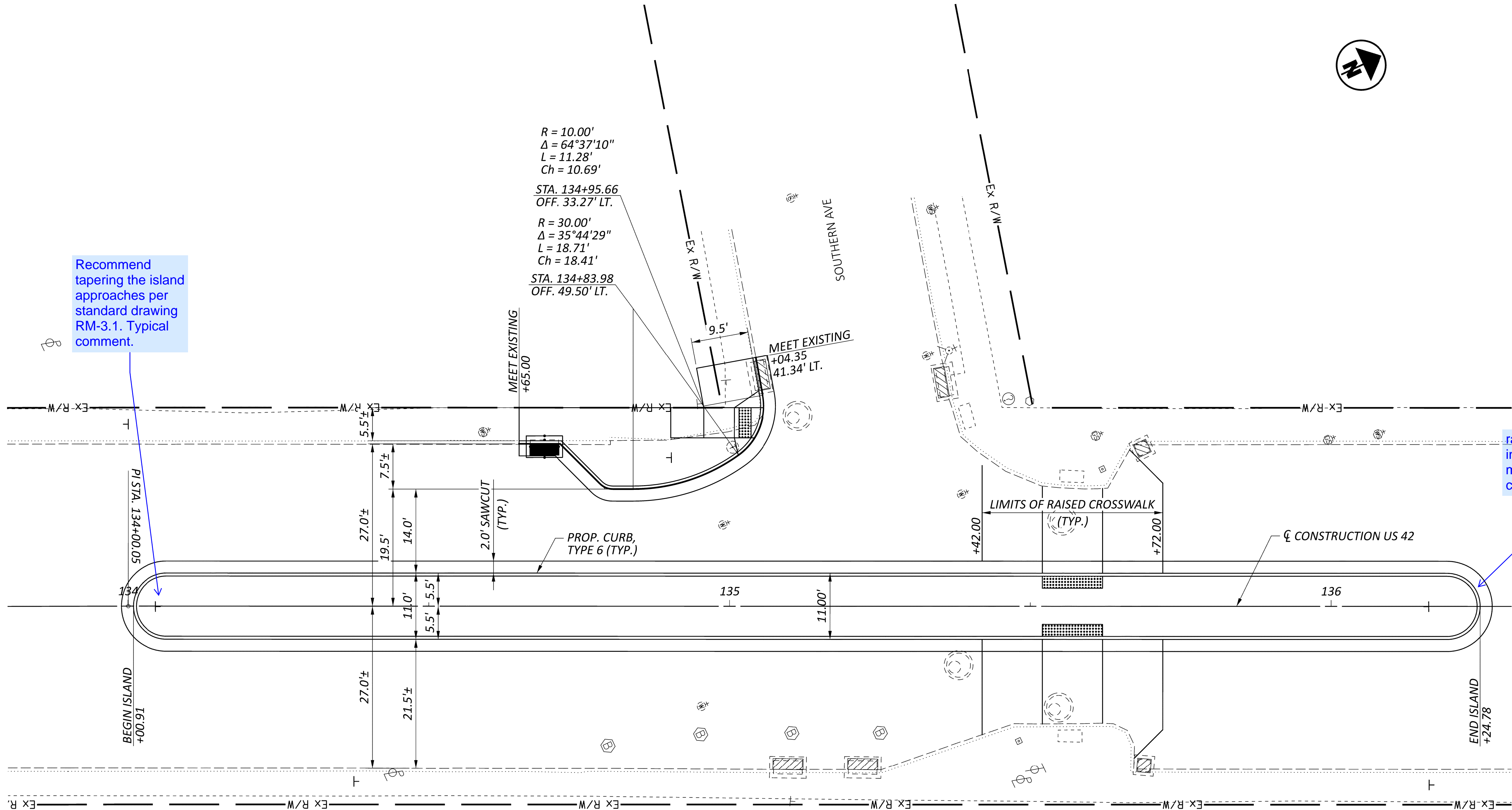
HAM US 42 10.07 READING RD



HORIZONTAL
SCALE IN FEET

A horizontal scale bar with a black and white alternating pattern. It has markings at 0, 5, 10, and 20 feet.

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DESIGNER LDW	
REVIEWER JWL 09/18/25	
PROJECT ID 123369	
SHEET	TOTAL
P.34	104



Recommend tapering the island approaches per standard drawing RM-3.1. Typical comment.

radius information missing. typical comment

INTERSECTION DETAILS
READING RD. AT SOUTHERN AVE

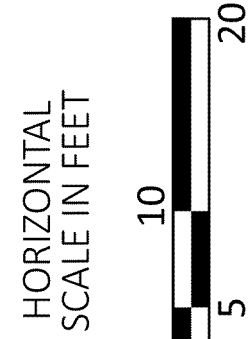
DESIGN AGENCY
CMT
CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45419
PH (937) 761-2183
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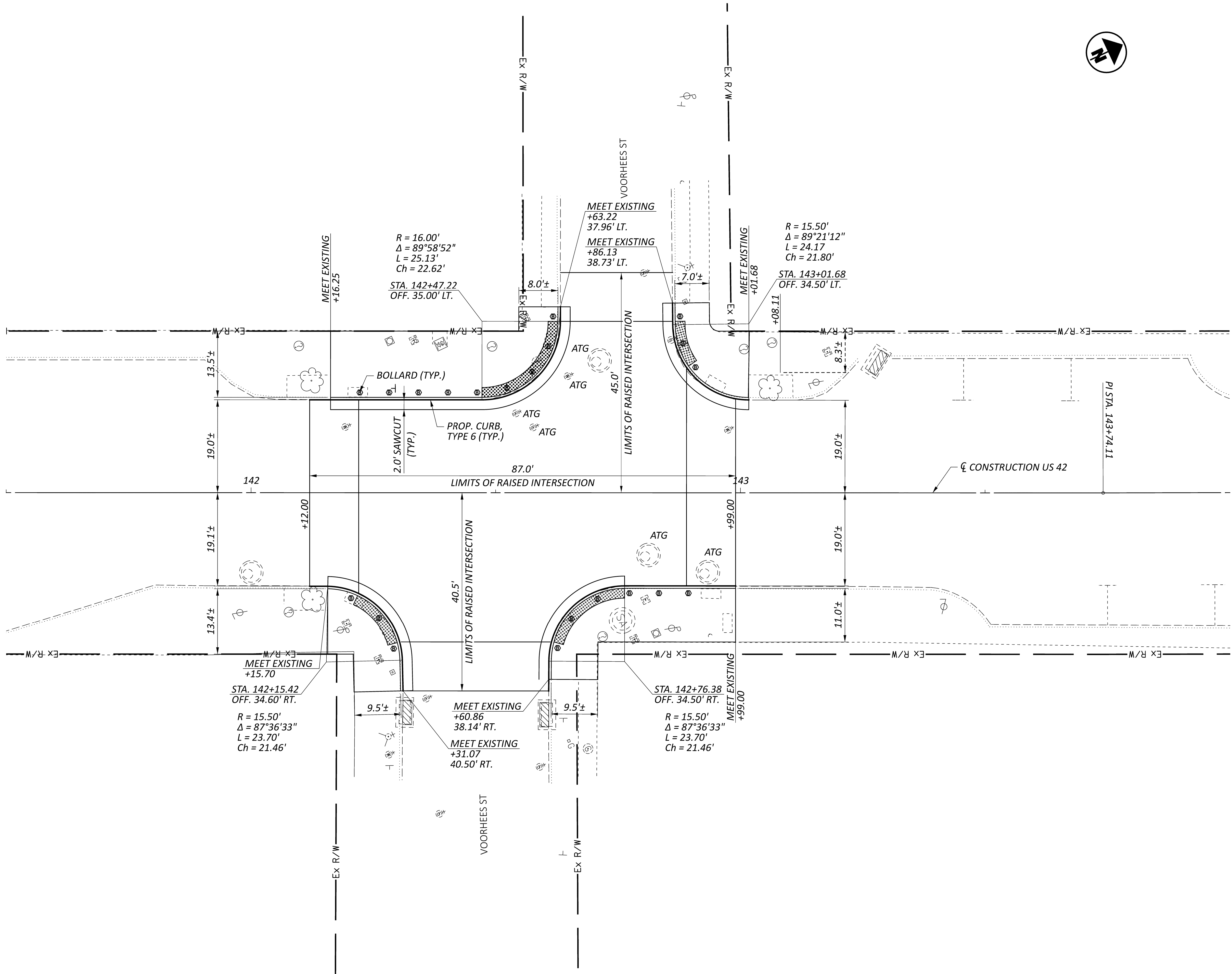
DESIGNER
LDW

REVIEWER
JWL 09/18/25

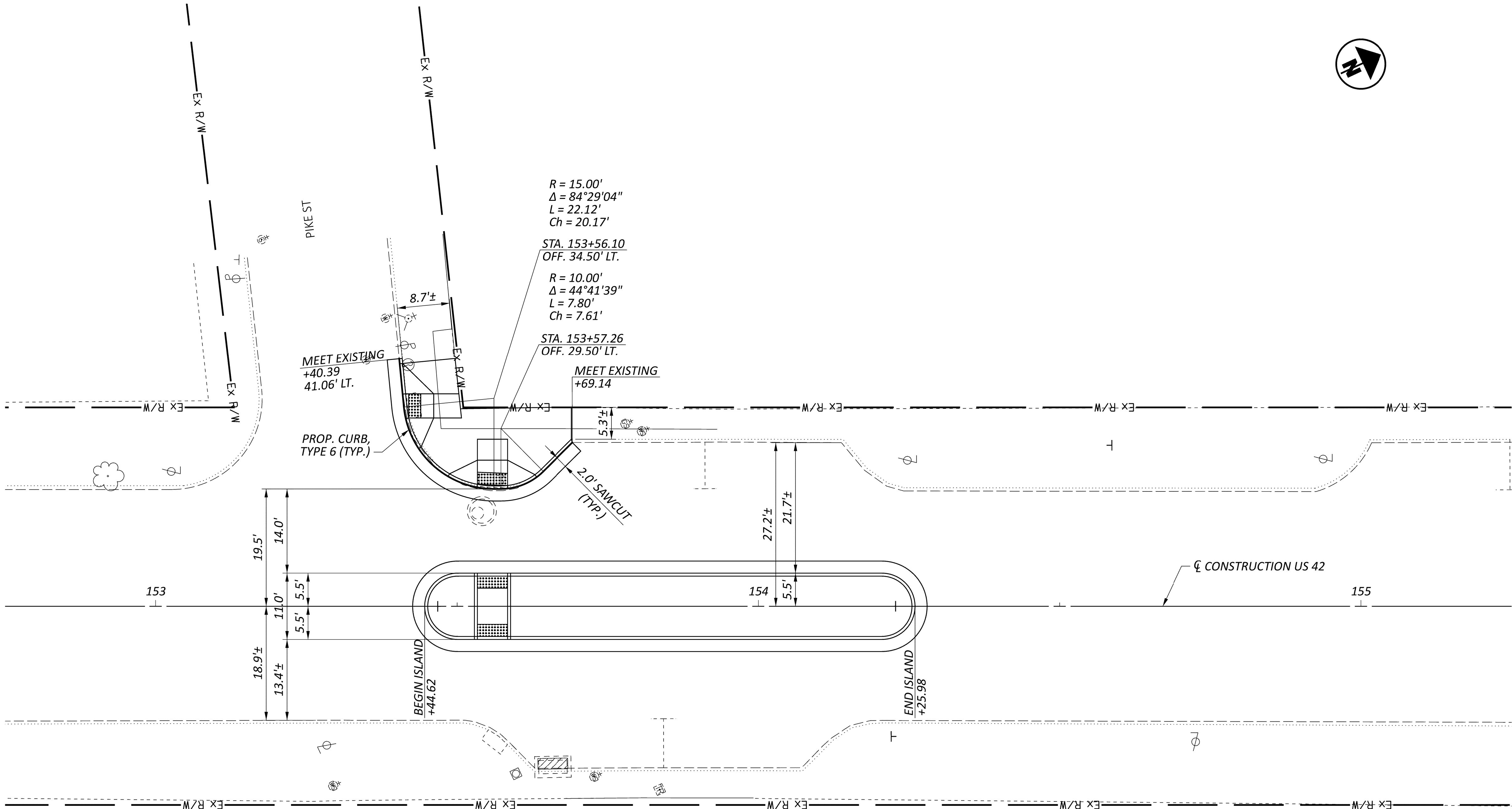
PROJECT ID
123369

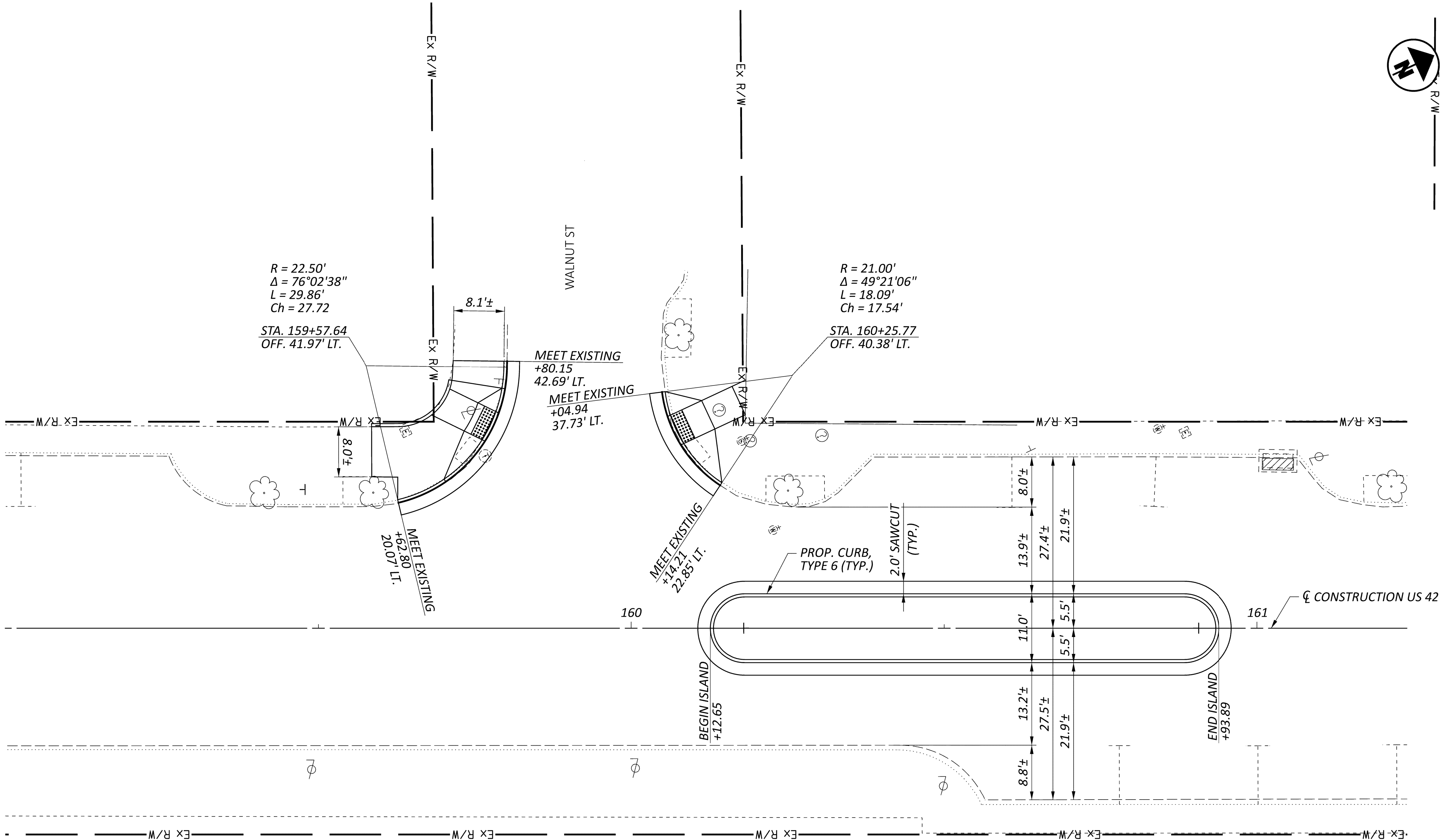
SHEET TOTAL
P.35 104





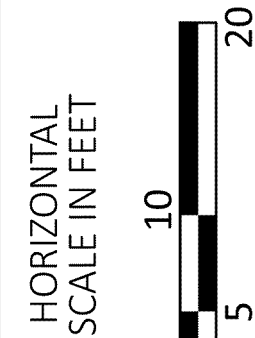
INTERSECTION DETAILS
READING RD. AT VOORHEES ST





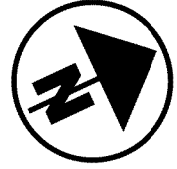
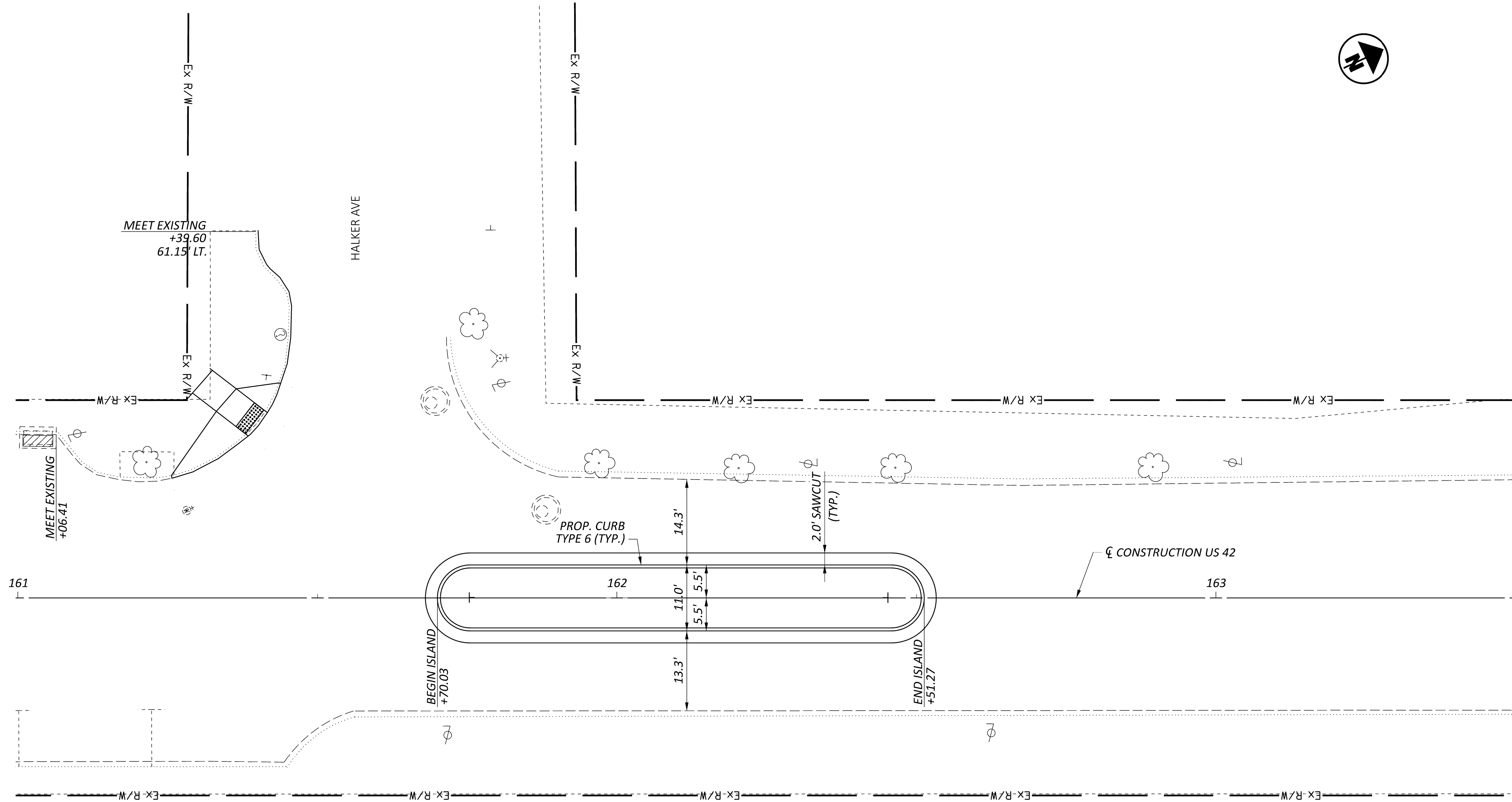
INTERSECTION DETAILS
READING RD. AT WALNUT ST

 CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45489 PH (937) 761-2183 www.cmtengr.com	
DESIGN AGENCY	
DESIGNER	
LDW	
REVIEWER	
JWL 09/18/25	
PROJECT ID	
123369	
SHEET	TOTAL
P.38	104



HAM US 42 10.07 READING RD

MODEL: 123659_G1114 PAPER SIZE: 34x22 (in) DATE: 9/18/2025 TIME: 3:13:03 PM PLTDRVR: OHDOT_PDF.plt CFG: PENTBL: OHDOT_Pent.tbl USER: jloclhart@cmtengr.com WORKSPACE: ODOT 2024 WORKSET: 123369 PRODUCT: OpenRoads Designer 24.00.00.205
pw:\cmtengr-pw.bentley.com:cmt-connect-projects\Documents\ODOT\IHAM-US42-10-07_12.37 PID 123369\123369\400-Engineering\Roadway\Sheets\123369_G1114.dgn




DESIGN AGENCY  CMT CRAWFORD, MURPHY & TILLY, INC. 7777 WASHINGTON VILLAGE DR SUITE 270 FORT WORTH, TX 76116 PH (817) 700-4549 www.cmtengr.com	
DESIGNER	
LDW	
REVIEWER	
JWL 09/18/2	
PROJECT ID	
123369	
SHEET	TOTAL
P.39	104

LDW	
REVIEWER JWL 09/18/2	
PROJECT ID 123369	
SHEET P.39	TOTAL 104

SHEET	TOTAL
P.39	104

INTERSECTION DETAILS
READING RD. AT HALKER AVE

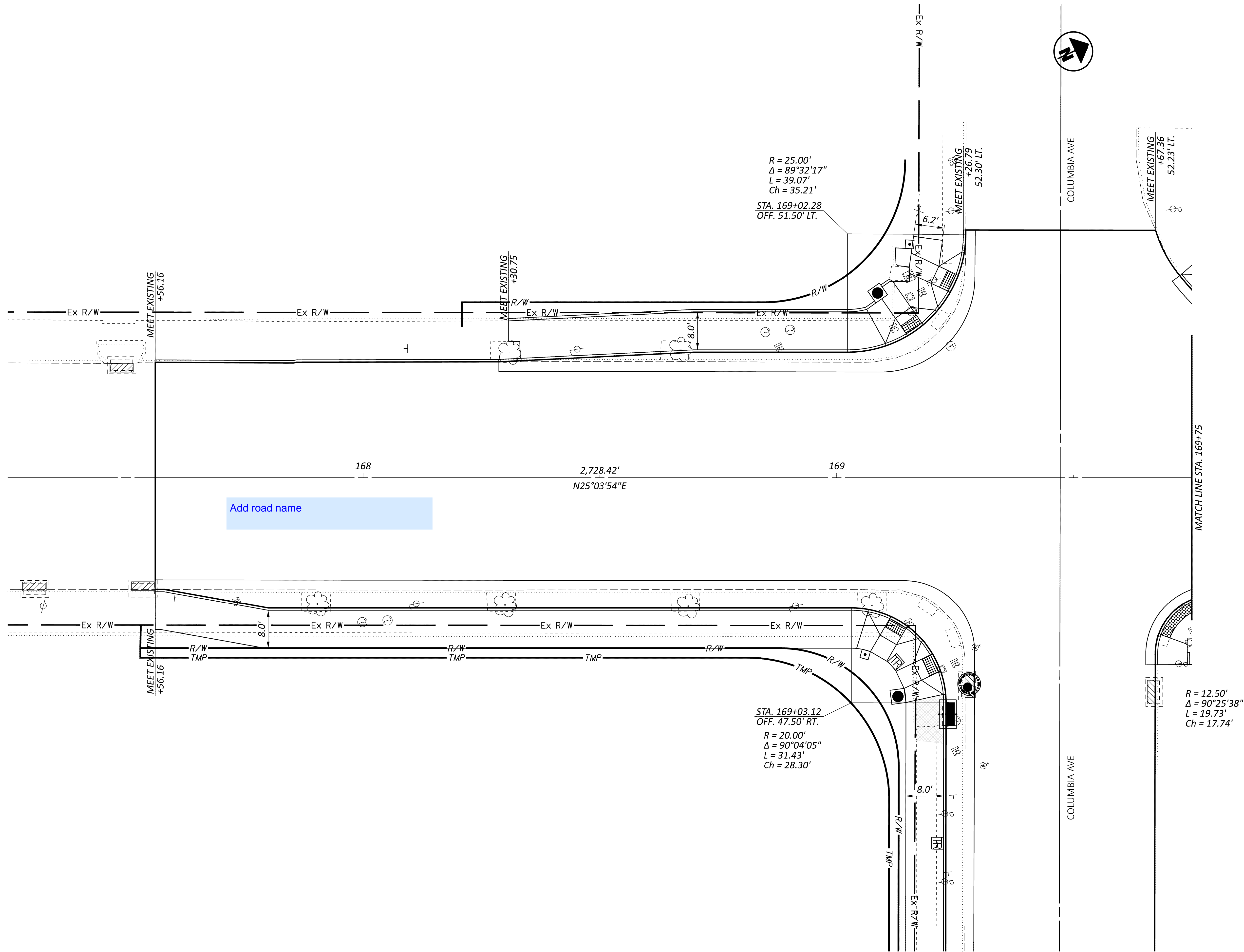
HORIZONTAL
SCALE IN FEET



A horizontal scale bar with a black background and white markings. The scale is marked from 0 to 20 feet in increments of 5 feet. The markings are as follows: a vertical line at 0, a vertical line at 5, a vertical line at 10, a vertical line at 15, and a vertical line at 20. The numbers 0, 5, 10, 15, and 20 are placed below the corresponding vertical lines. The text 'HORIZONTAL SCALE IN FEET' is written vertically to the left of the scale bar.

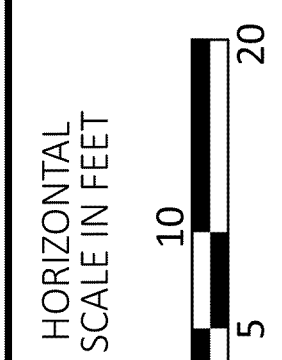
HAM US 42 10.07 READING RD

MODEL: 123369_G1115 PAPER SIZE: 34x22 (in.) DATE: 9/18/2025 TIME: 3:13:20 PM PLTDRV: OHDOT_PDF.plt CFG: PENTBL: OHDOT_Pent.tbl USER: jloclhart@cmtengr.com WORKSPACE: ODOT 2024 WORKSET: 123369_PRODUCT: OpenRoadsDesigner 24.00.00.205
pw://cmtengr-pw.bentley.com:cmr-connect-projects/Documents\\ODOT\\VAM-US42-10.07_12.37 PID 123369\\123369\\400-Engineering\\Roadway\\Sheets\\123369_G1115.dgn



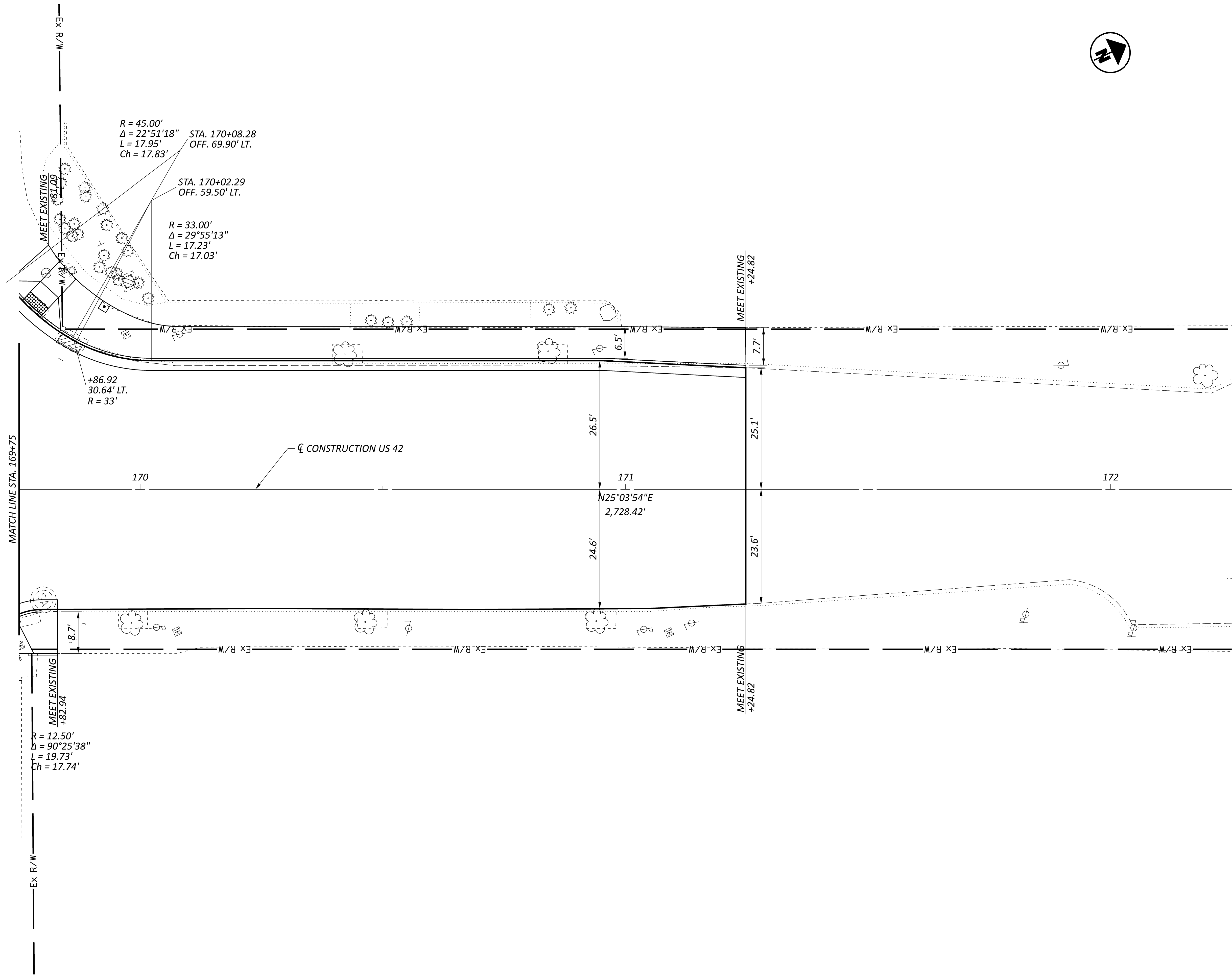
DESIGN AGENCY  CMT CRAWFORD, MURPHY & TILLY, INC. 5177 WASHINGTON VILLAGE DR DAYTON, OH 45489 PH (937) 701-2183 www.cmtgroup.com	
DESIGNER LDW	
REVIEWER JWL 09/18/25	
PROJECT ID 123369	
SHEET	TOTAL
P.40	104

INTERSECTION DETAILS
READING RD. AT COLUMBIA AVE



HAM US 42 10.07 READING RD

MODEL: 123369_G1116 PAPER SIZE: 34x22 (in.) DATE: 9/18/2025 TIME: 11:50:58 PM PLOTTER: OHDOT_PDF.plt USER: jlochart@mtengr.com WORKSPACE: ODOT 2024 WORKSET: 123369_PRODUCT: OpenRoads Designer 24.00.00.205
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DESIGN AGENCY

CMT
CRAWFORD, MURPHY &
TILLY, INC.
7777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45459
PH (937) 761-2183
www.cmtengr.com

DESIGNER

LDW

REVIEWER

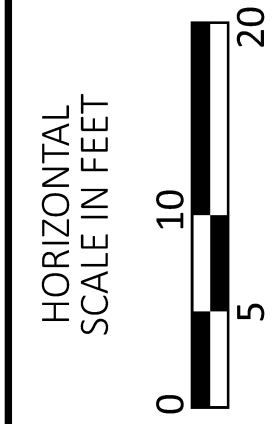
JWL 09/18/2011

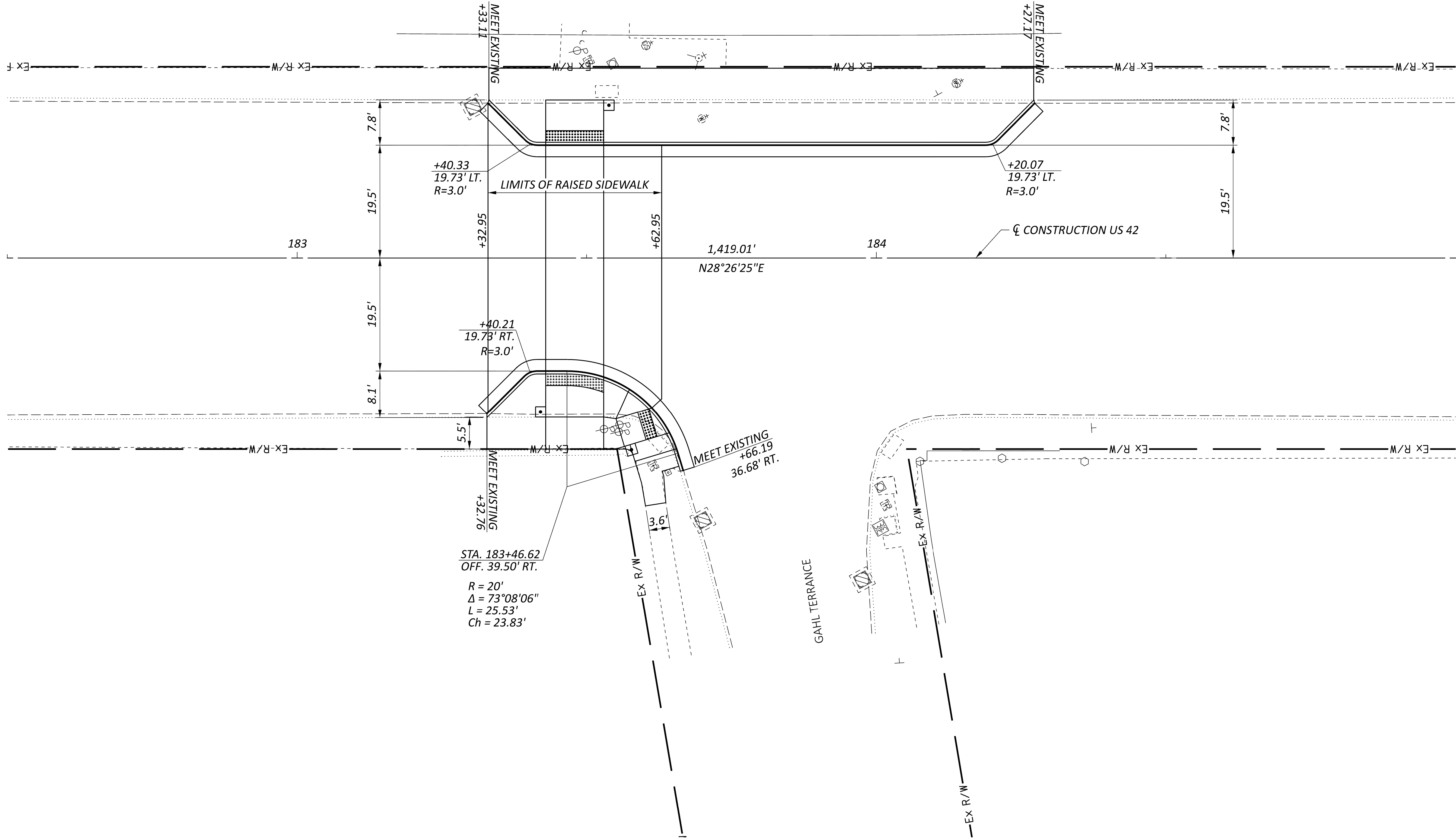
PROJECT ID

123369

SHEET	TOTAL
P.41	104

INTERSECTION DETAILS
READING RD.





INTERSECTION DETAILS
READING AT GAHL TERRANCE



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1777 WASHINGTON VILLAGE DR
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DESIGN AGENCY

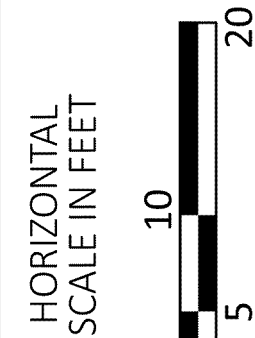
DESIGNER
LDW

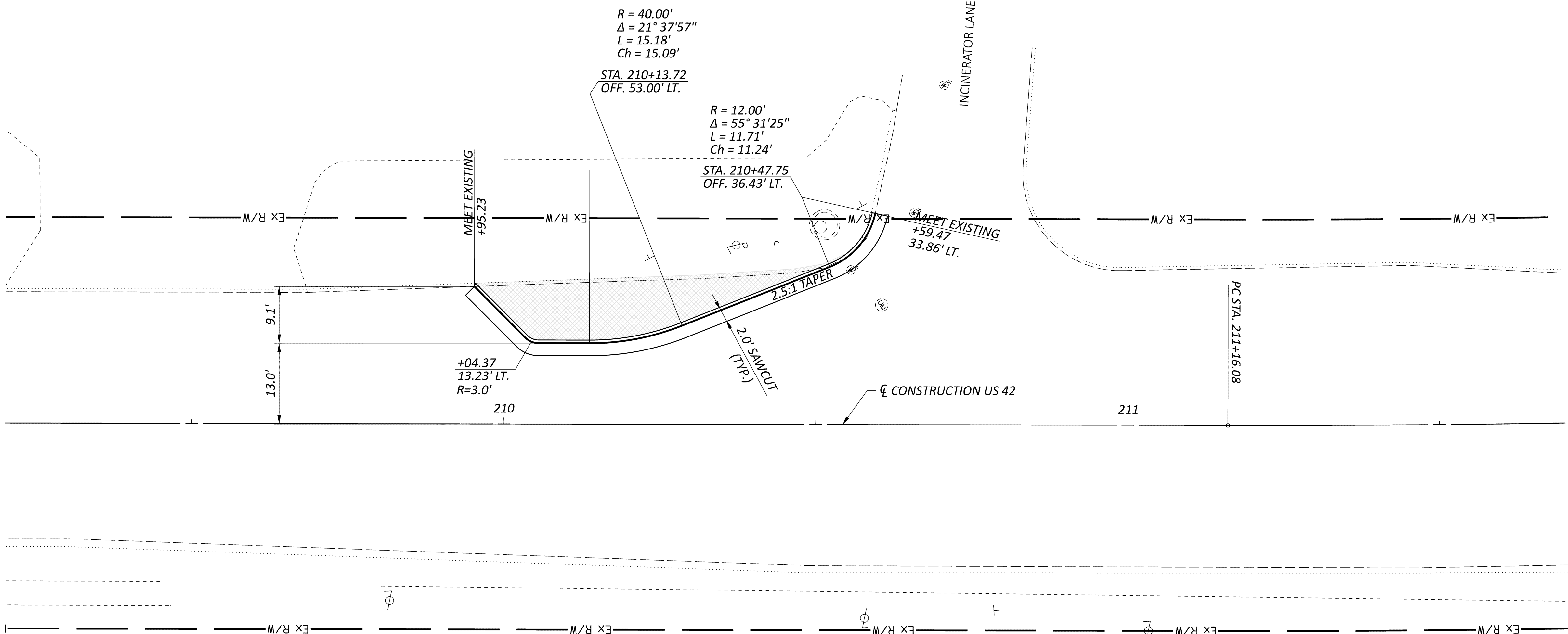
REVIEWER
JWL 09/18/25

PROJECT ID
123369

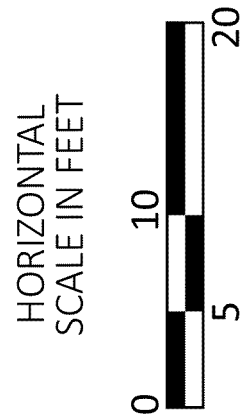
SHEET
P.42

TOTAL
104

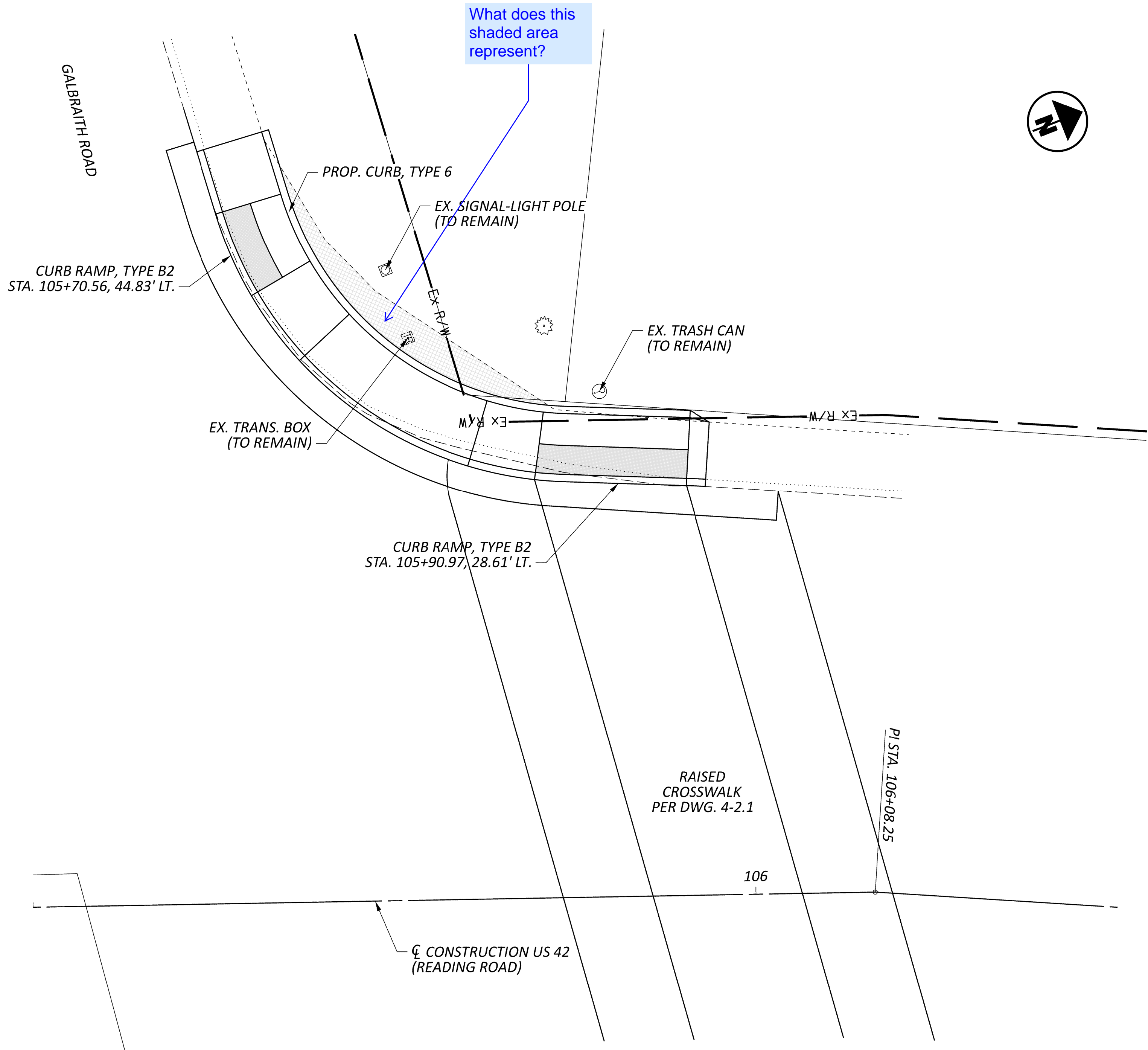




INTERSECTION DETAILS
READING RD. AT INCINERATOR LN



DESIGN AGENCY	
 CMT CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45489 PH (937) 761-2183 www.cmtengr.com	
DESIGNER	LDW
REVIEWER	JWL 09/18/25
PROJECT ID	123369
SHEET	P.44
TOTAL	104



Curb ramps details are to provide elevations, slopes (running/cross/flare), and widths. Also clearly show the limits of the curb ramp for pay item purposes including depicting ramps and landings. Typical comment.

Check the curb ramp counter slope for ADA compliance as well. See BP-7.1 for details. Typical comment.

CURB RAMP DETAILS
READING RD. AT GALBRAITH ROAD (NW)

DESIGN AGENCY

2LMN

DESIGNER

DEY

REVIEWER

AMT 09/18/25

PROJECT ID

123369

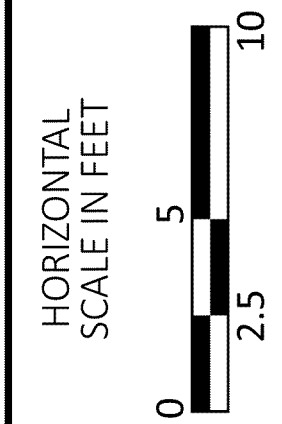
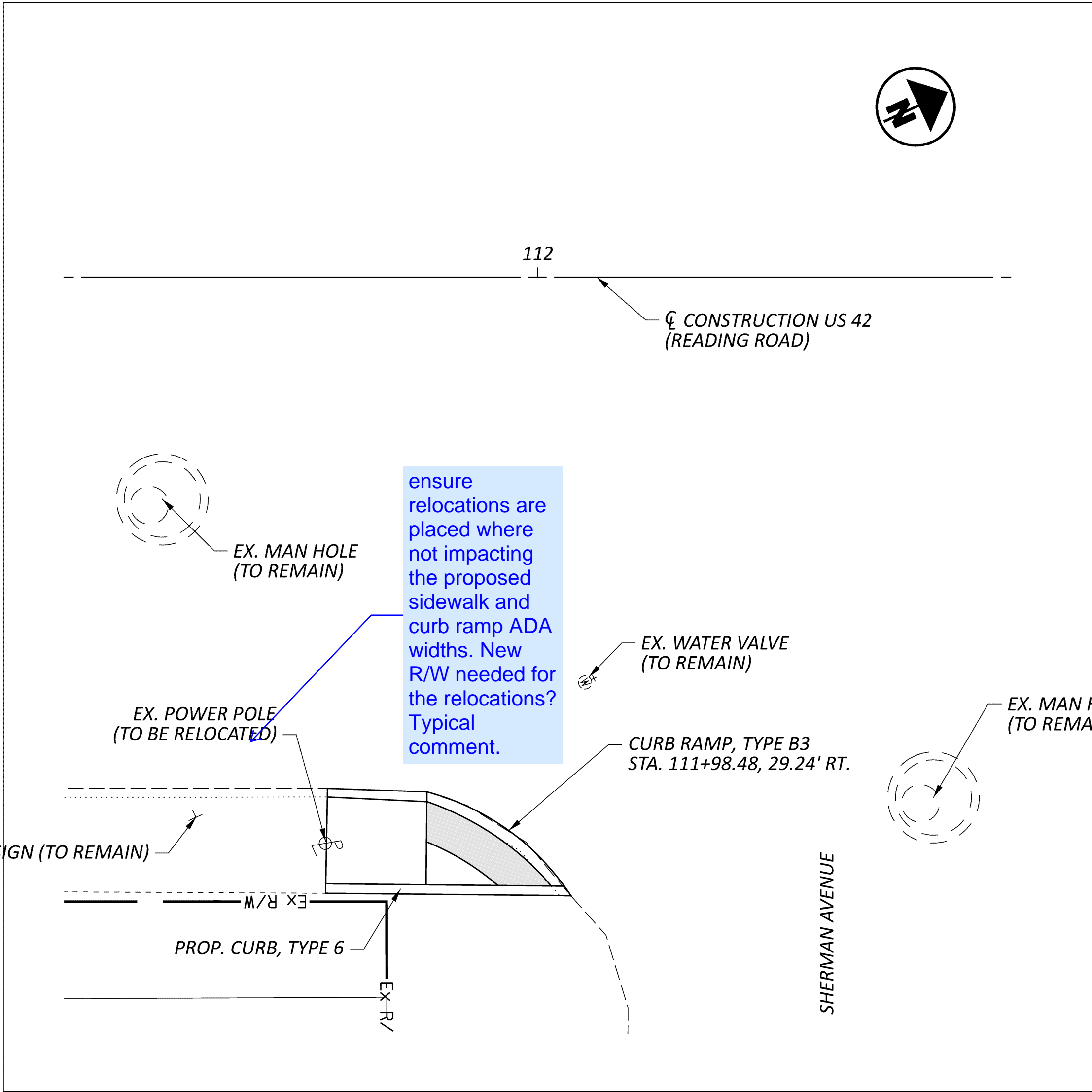
SHEET

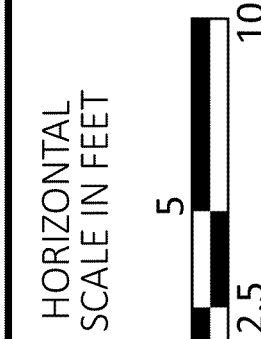
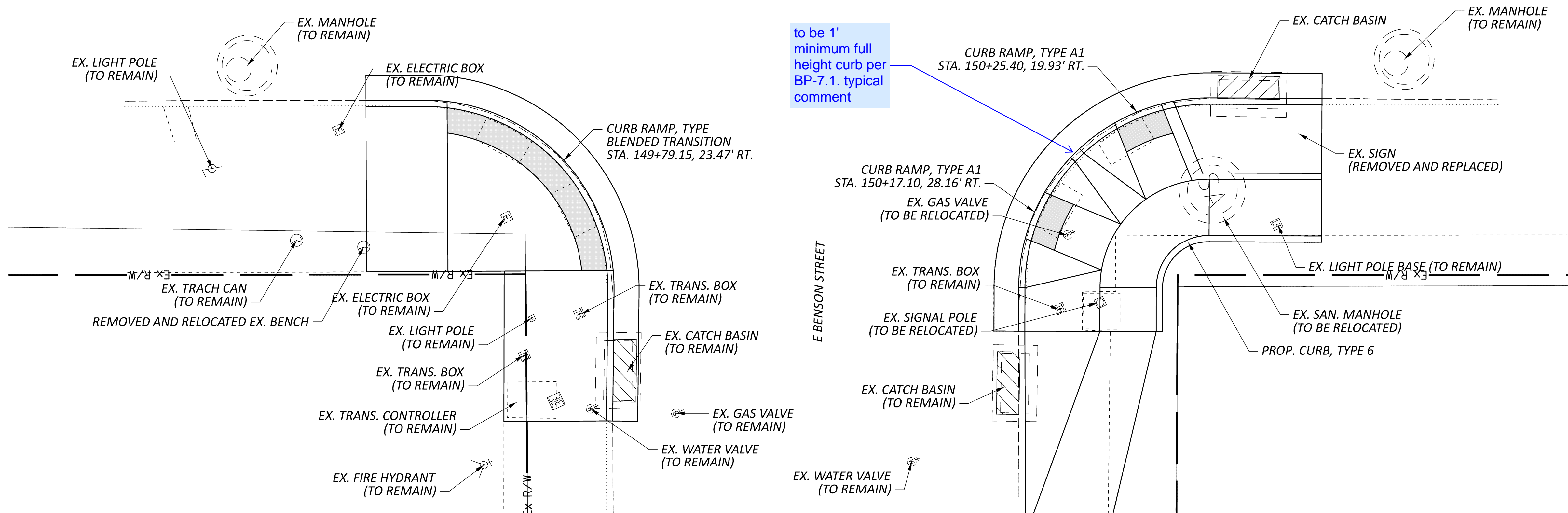
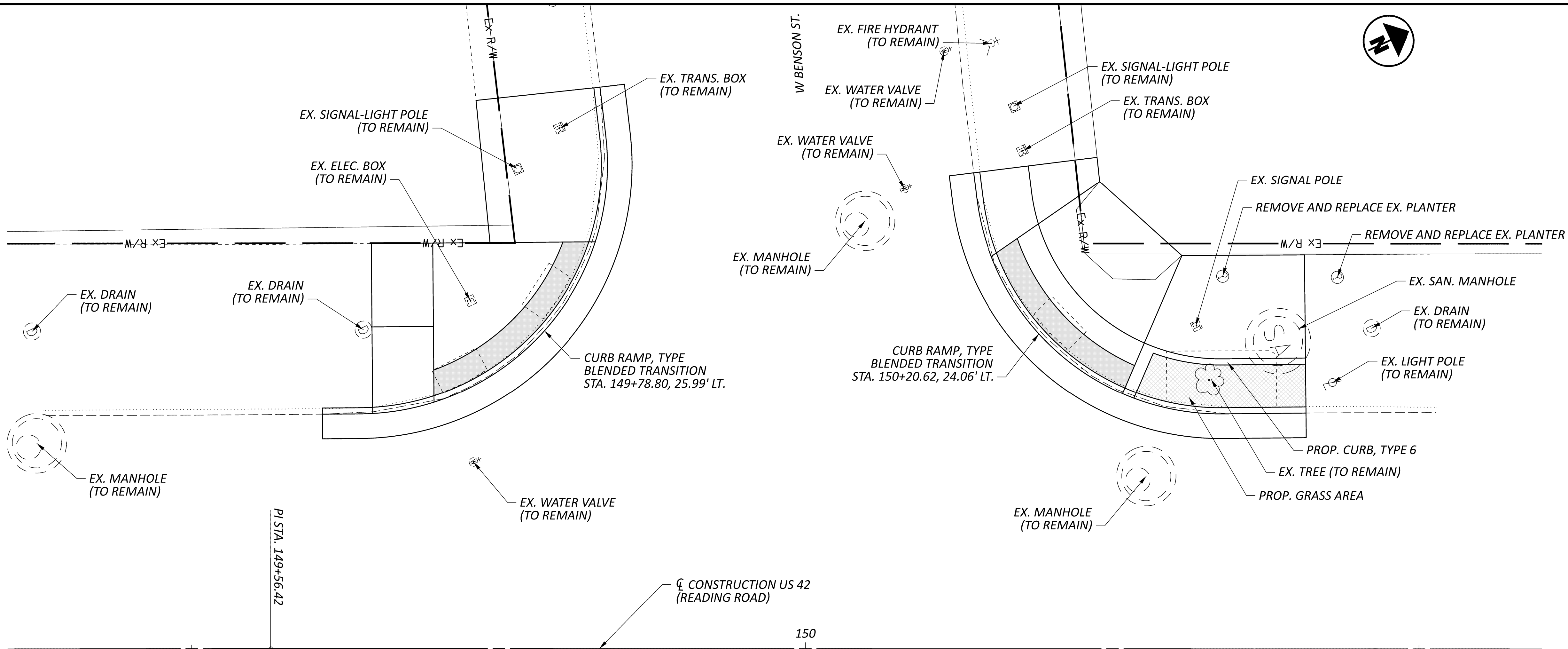
P.45

TOTAL

104

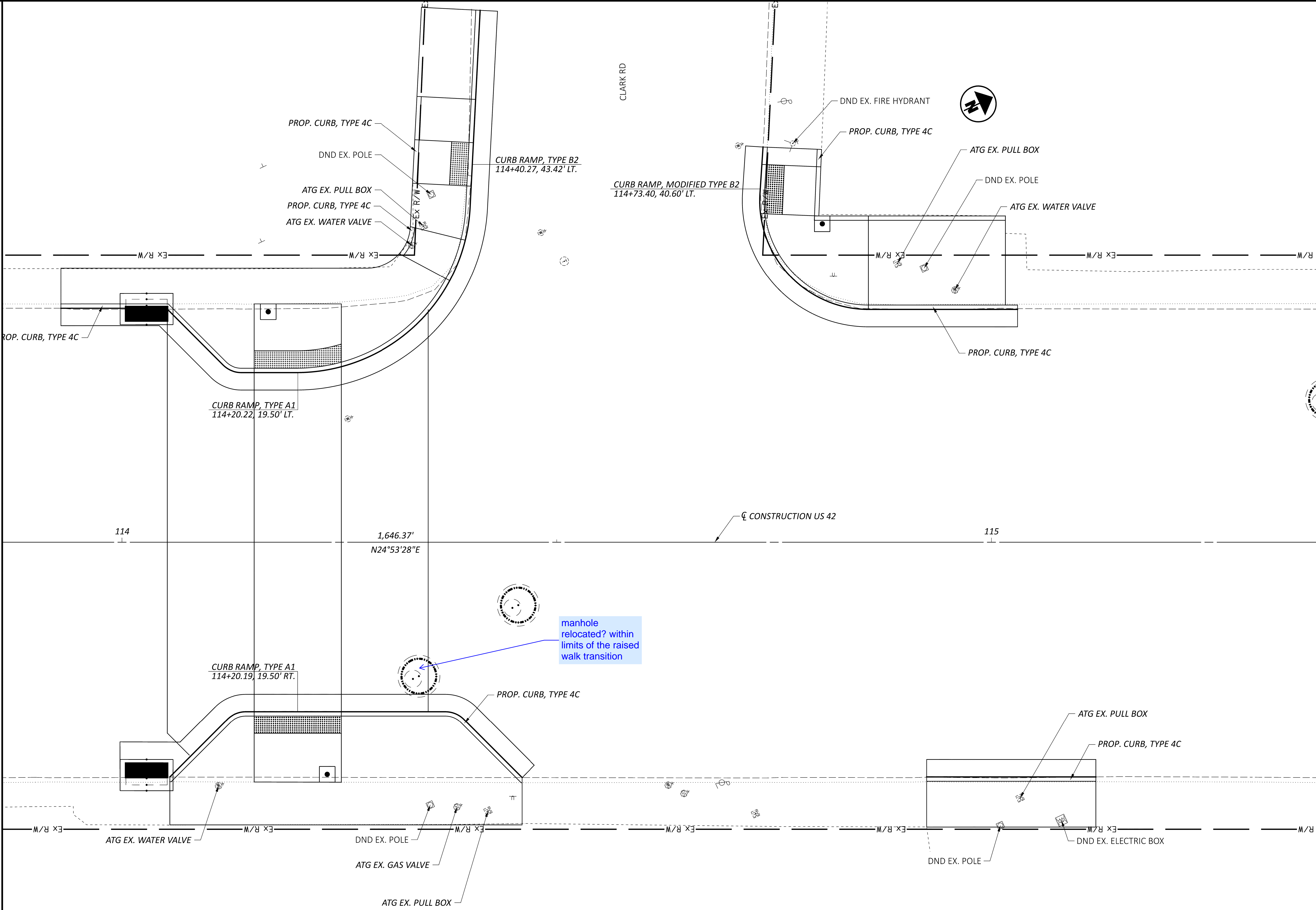




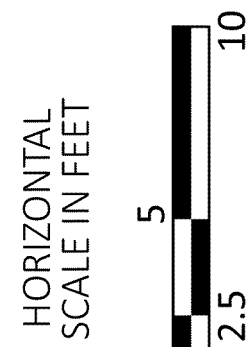


CURB RAMP DETAILS
READING RD. AT BENSON STREET

DESIGN AGENCY	2LMN
DESIGNER	KAZ
REVIEWER	AMT
PROJECT ID	09/18/25
SHEET	123369
TOTAL	P.47 104

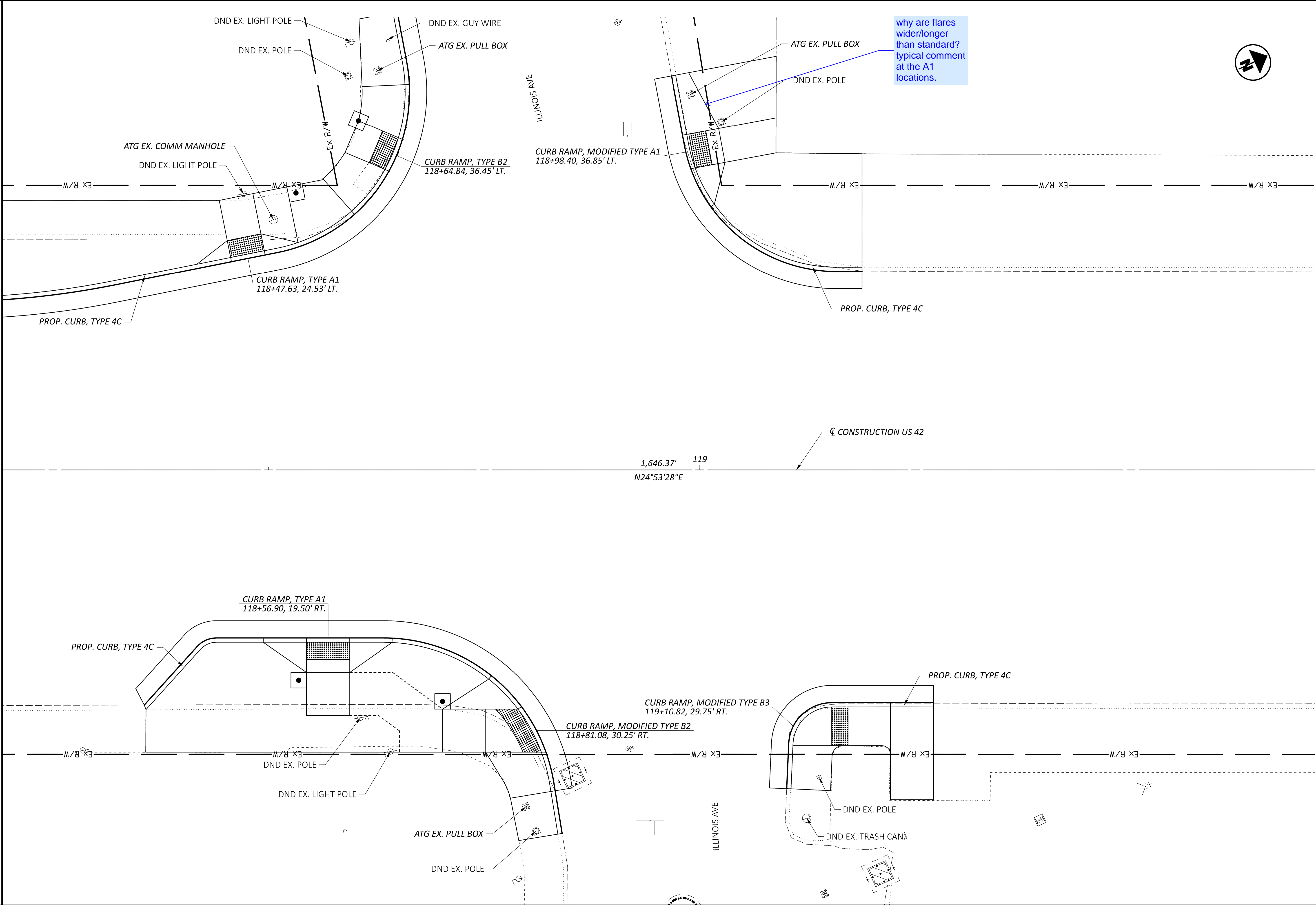


CURB RAMP DETAILS
READING RD. AT CLARK RD



DESIGN AGENCY
CMT
CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45489
PH (937) 761-2188
www.cmtinc.com

DESIGNER	LDW
REVIEWER	JWL 09/18/25
PROJECT ID	123369
SHEET	P.48
TOTAL	104



HORIZONTAL
SCALE IN FEET

0

2.5

5

10

CURB RAMP DETAILS

READING RD. AT ILLINOIS AVE

DESIGN AGENCY

CMT

CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45419
PH (937) 761-2183
www.cmtengr.com

DESIGNER

LDW

REVIEWER

JWL 09/18/25

PROJECT ID

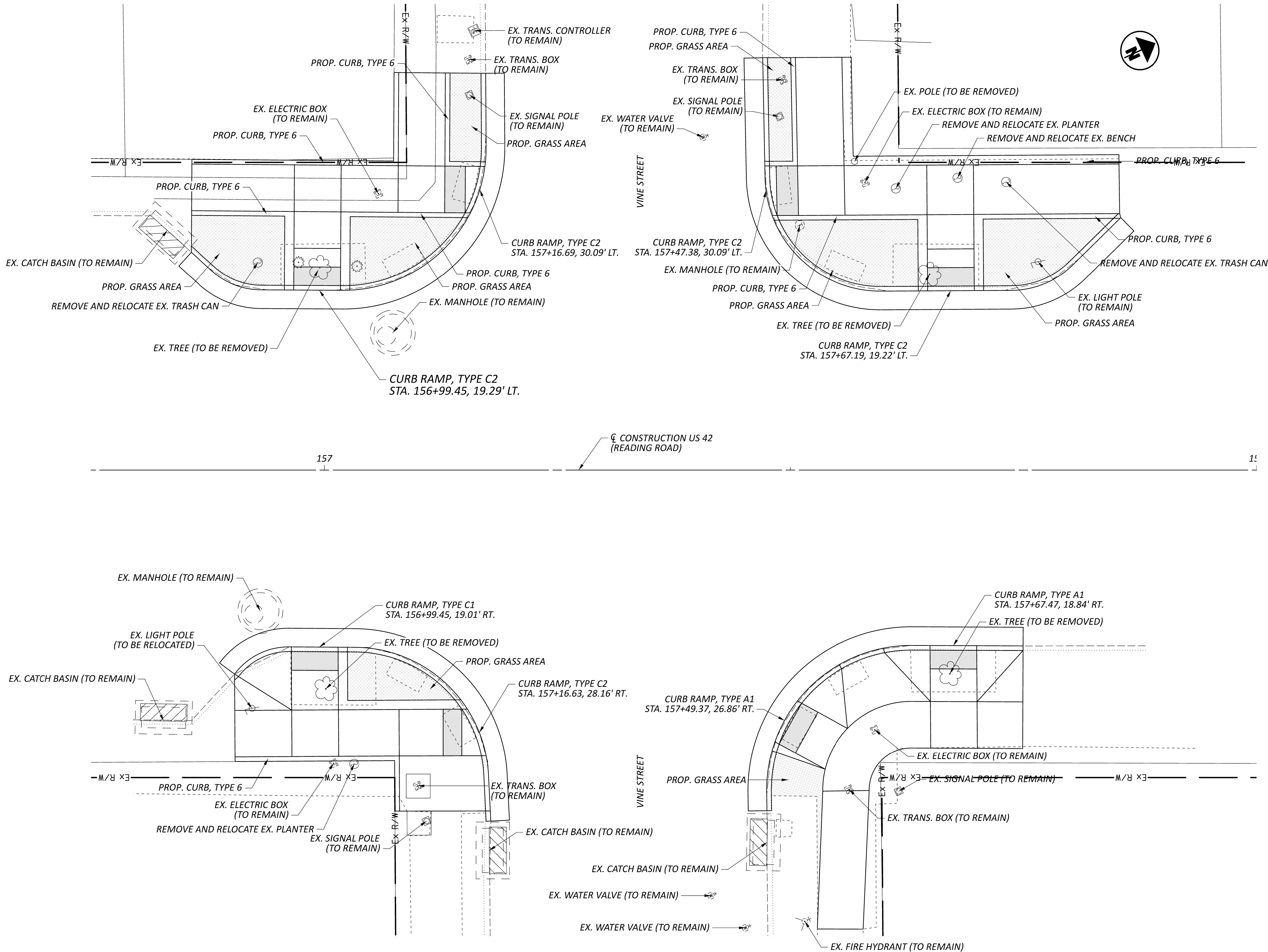
123369

SHEET

P.49

TOTAL

104



HORIZONTAL
SCALE IN FEET

0 2.5 5 10

CURB RAMP DETAILS
READING RD. AT VINE ST.

DESIGN AGENCY

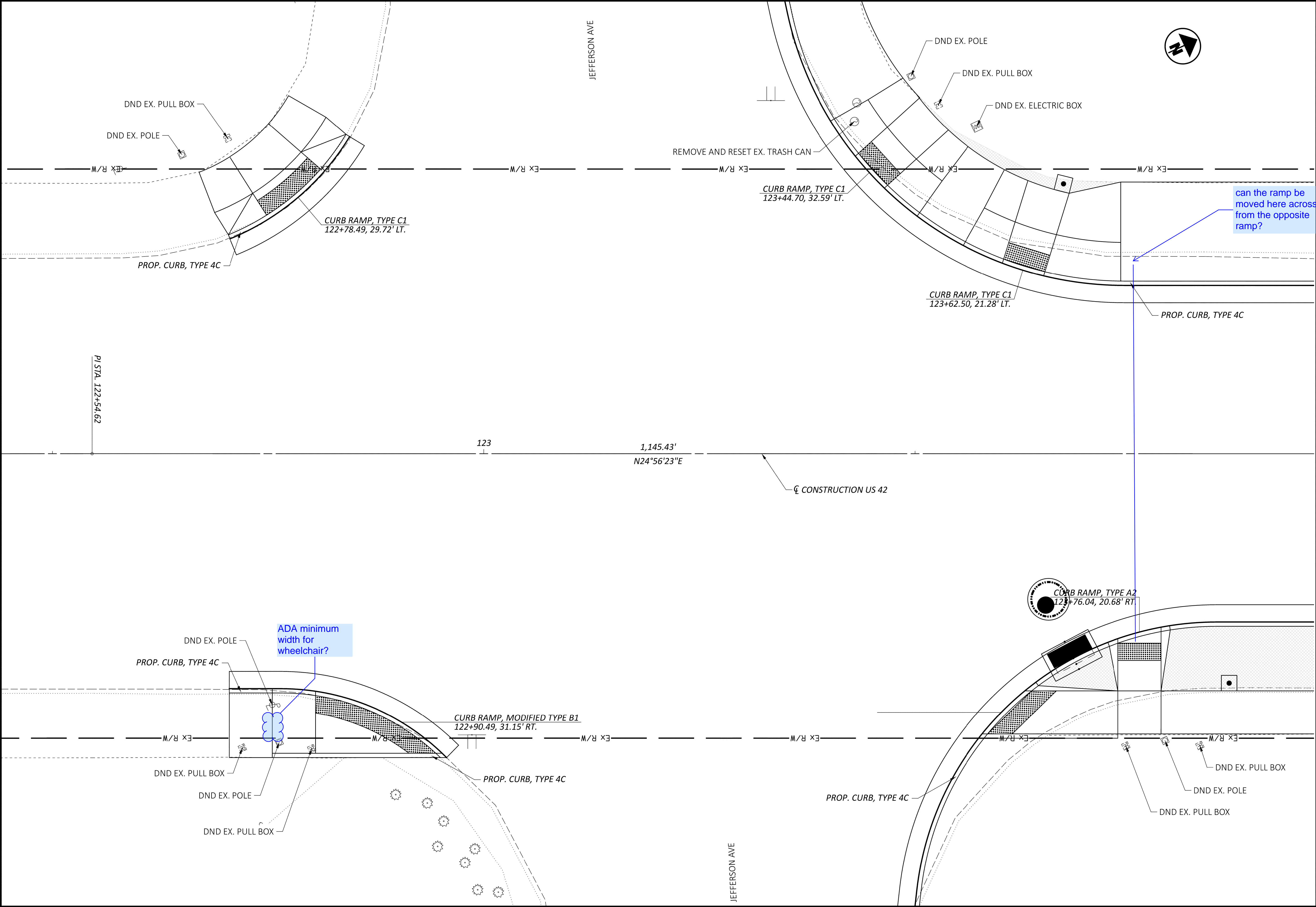
2LMN

DESIGNER
XXX

REVIEWER
AMT 09/18/25

PROJECT ID
123369

SHEET TOTAL
P.50 104



HORIZONTAL
SCALE IN FEET

0

2.5

5

10

CURB RAMP DETAILS

READING RD. AT JEFFERSON AVE

DESIGN AGENCY

CMT

CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45419
PH 60377612183
www.cmtengr.com

DESIGNER

LDW

REVIEWER

JWL 09/18/25

PROJECT ID

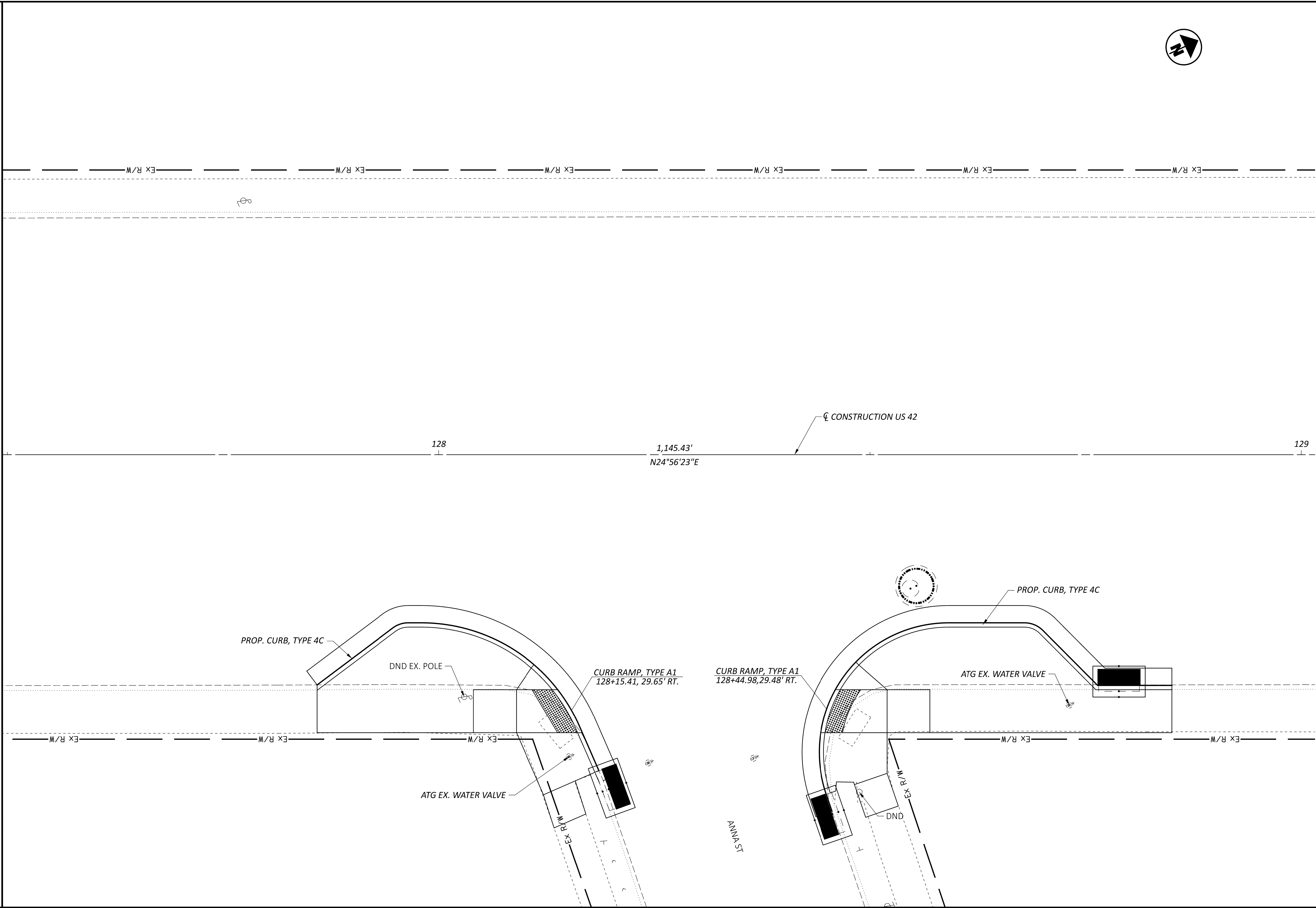
123369

SHEET


P.51

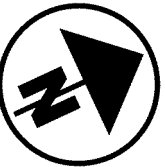
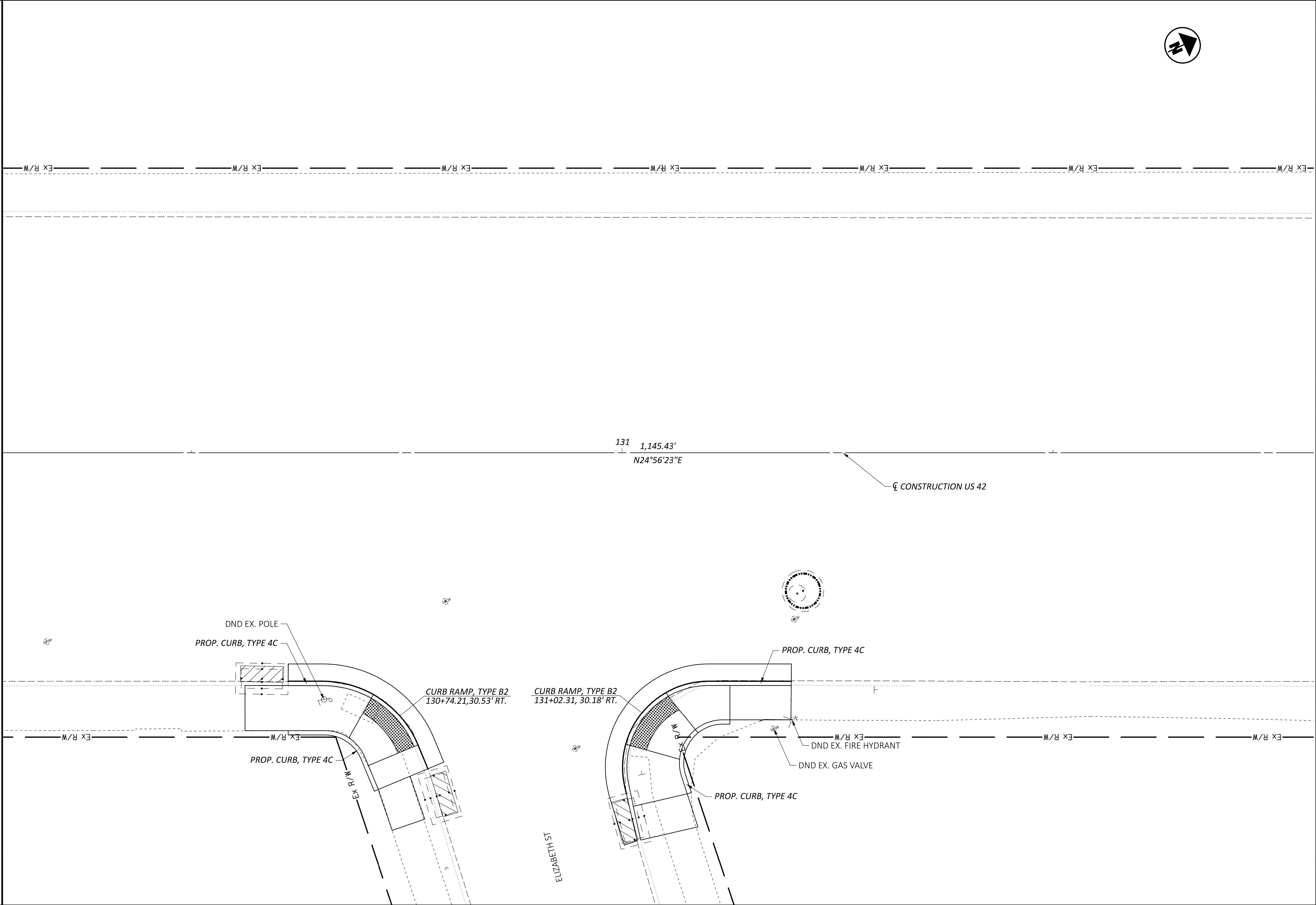
TOTAL

104

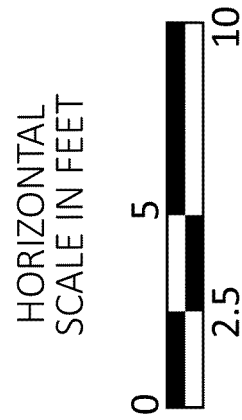



CURB RAMP DETAILS
READING RD. AT ANNA ST

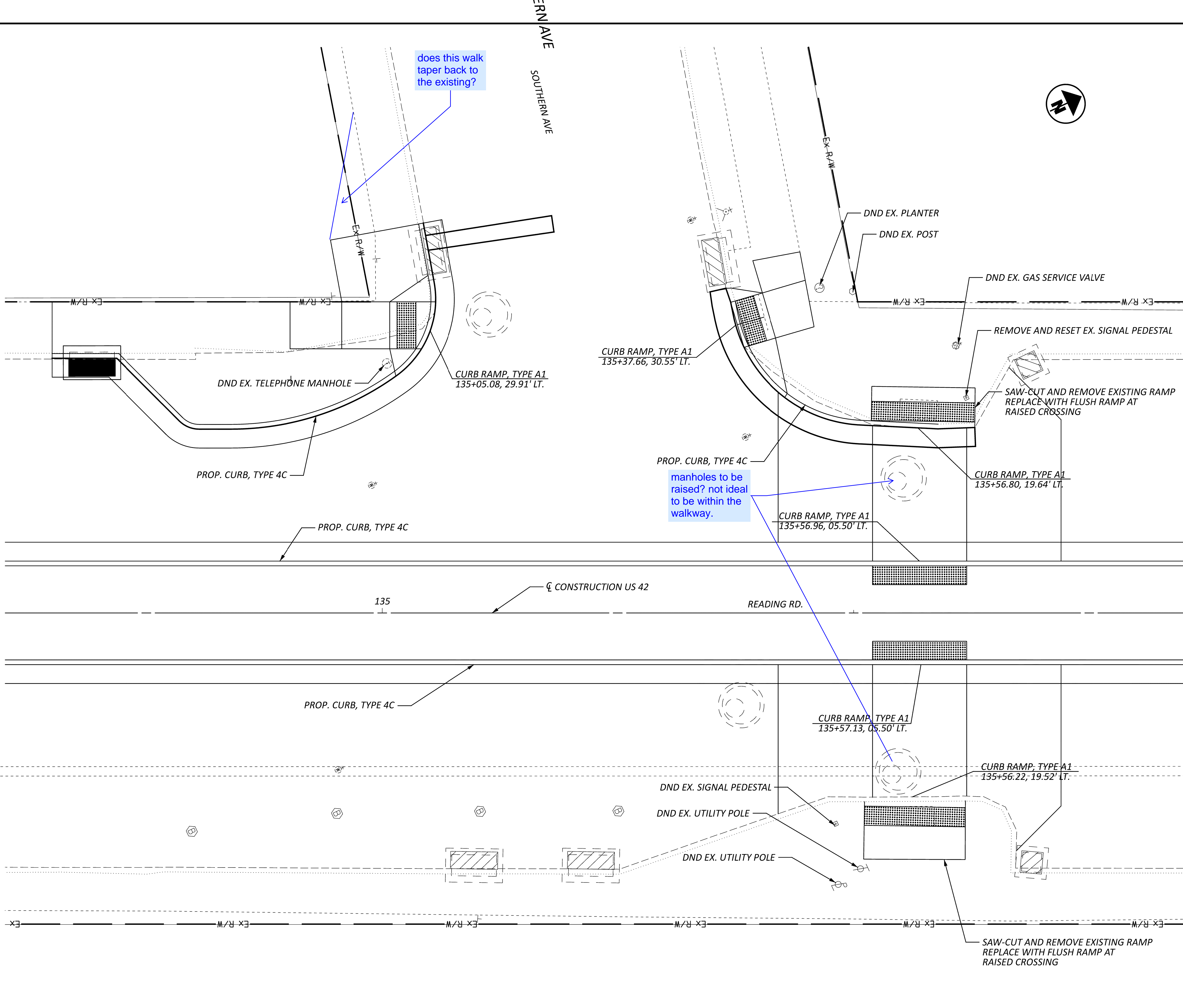
DESIGN AGENCY	
 CMT CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45489 PH (937) 761-2188 www.cmtengr.com	
DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	123369
SHEET	P.52
TOTAL	104



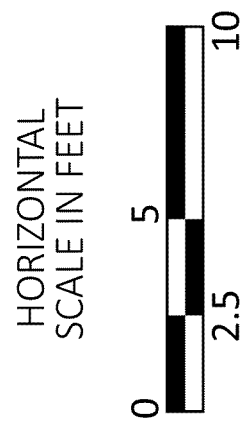
CURB RAMP DETAILS
READING RD. AT ELIZABETH ST



DESIGN AGENCY	
 CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45489 PH (937) 701-2183 www.cmtengr.com	
DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	09/18/25
SHEET	123369
P.53	TOTAL 104



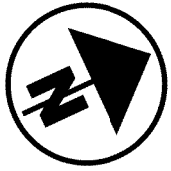
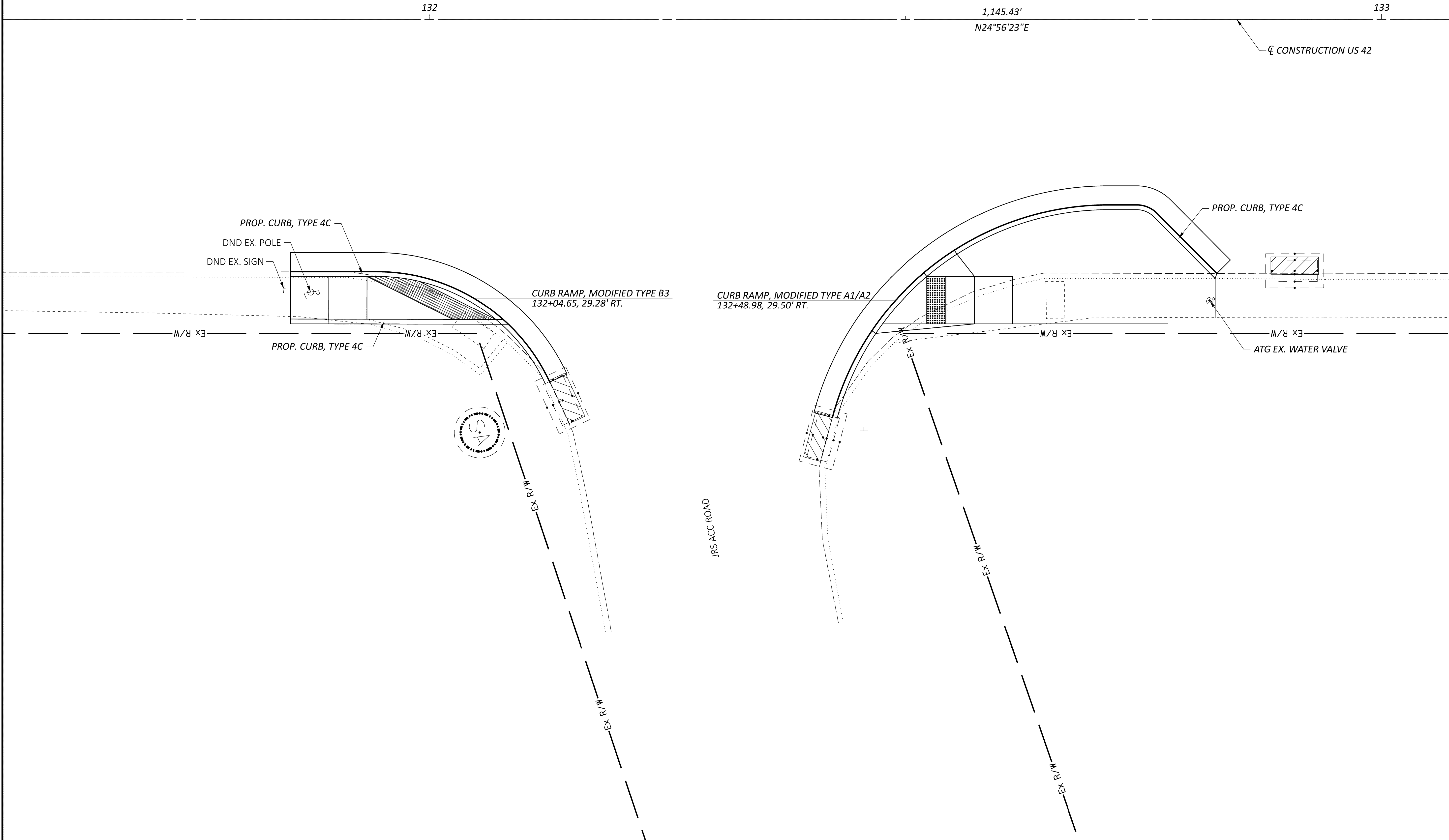
CURB RAMP DETAILS
READING RD. AT SOUTHERN AVE.



DESIGN AGENCY TOOLE DESIGN	
DESIGNER XXX	
REVIEWER XXX	09/18/25
PROJECT ID 123369	
SHEET P.54	TOTAL 104

HAM US 42 10.07 READING RD

MODEL: 123369_GM106 PAPER SIZE: 34x22 (in.) DATE: 9/18/2025 TIME: 3:18:30 PM PLOTTER: OHDOT_PDF.plt USER: jlockhart@cmtegr.com WORKSPACE: ODOT 2024 WORKSET: 123369 PRODUCT: OpenRoads Designer 24.00.00.205
 pw://cmtegr-pw.bentley.com:connect-projects/Documents/ODOT/HAM-US2-10.07_12.37 PID 123369/123369/400-Engineering/Roadway/Sheets/123369_GM106.dgn



CURB RAMP DETAILS
READING RD. AT JRS ACCESS RD

HORIZONTAL
SCALE IN FEET

0 5 10
2.5

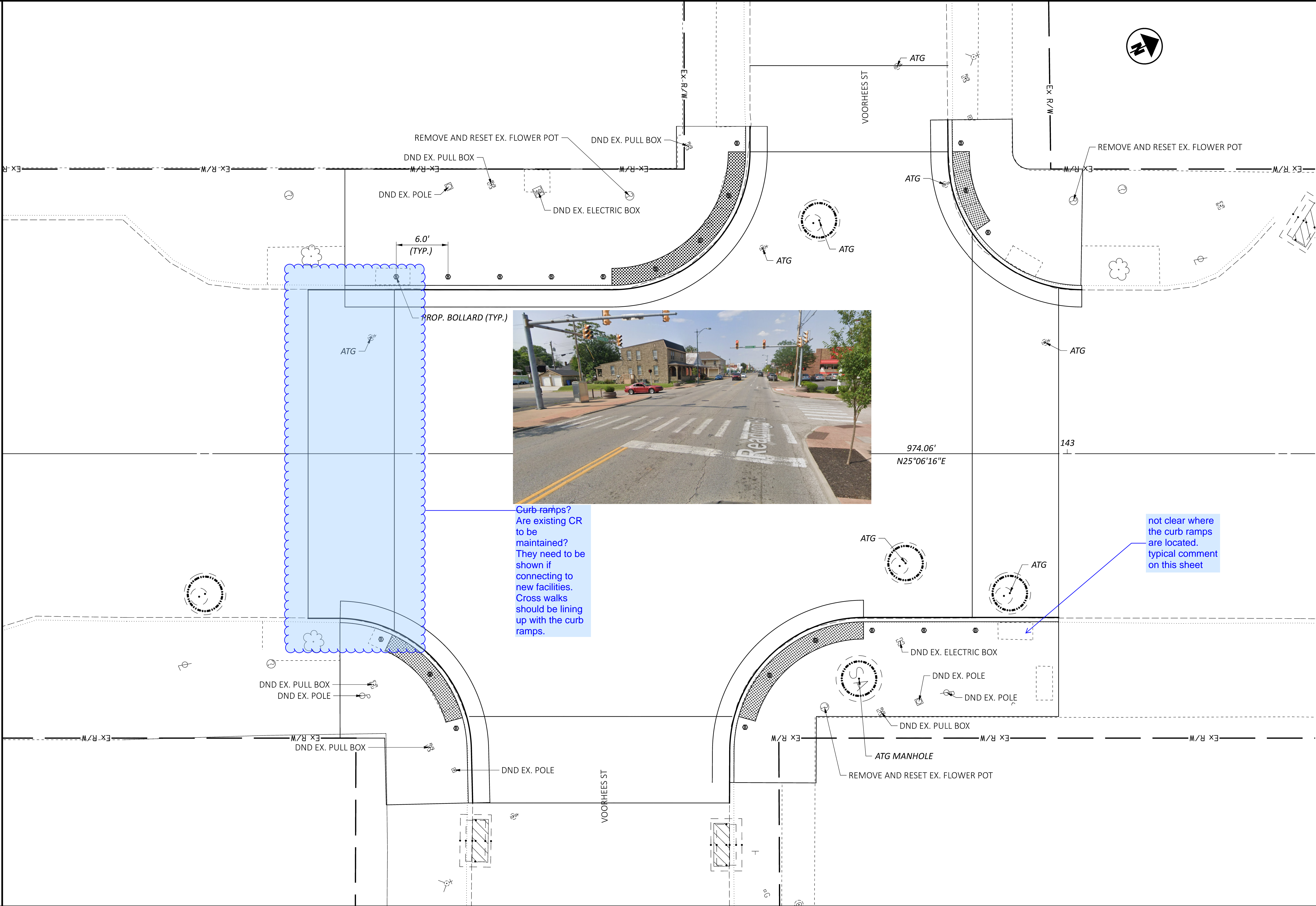
DESIGN AGENCY

CMT
 CRAWFORD, MURPHY &
 TILLY, INC.
 SUITE 200 WASHINGTON VILLAGE DR
 DAYTON, OHIO 45459
 PH (937)701-2193
 www.cmtinc.com

DESIGNER **LDW**
 REVIEWER **JWL** 09/18/25

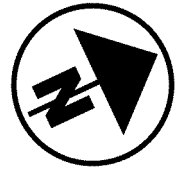
PROJECT ID
123369

SHEET	TOTAL
P.55	104

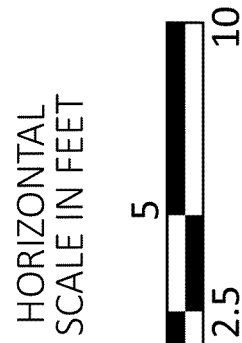


Curb ramps?
Are existing CR
to be
maintained?
They need to be
shown if
connecting to
new facilities.
Cross walks
should be lining
up with the curb
ramps.

not clear where
the curb ramps
are located.
typical comment
on this sheet



CURB RAMP DETAILS
READING RD. AT VOORHEES ST



DESIGN AGENCY



DESIGNER

LDW

REVIEWER

JWL 09/18/25

PROJECT ID

123369

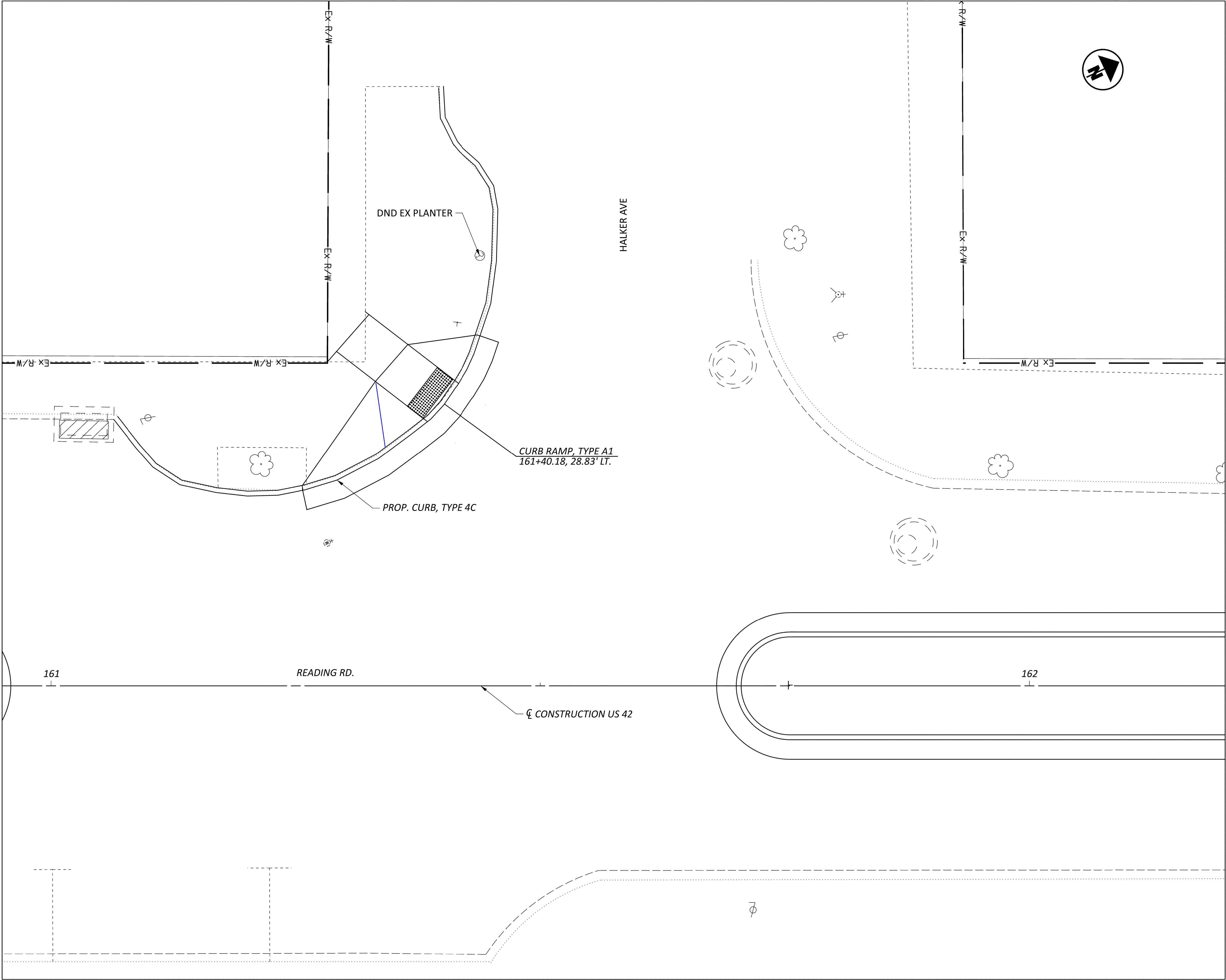
SHEET

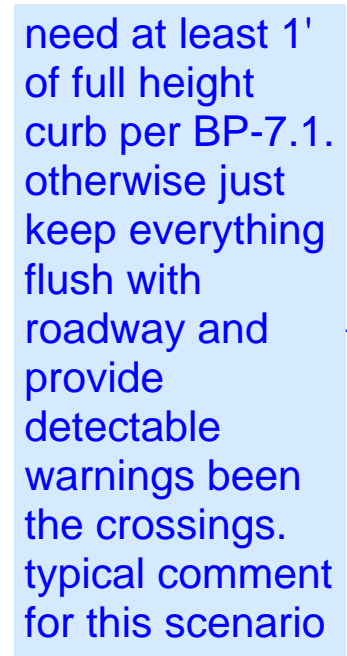
P.56

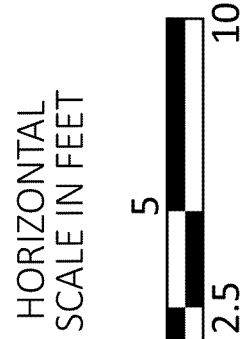
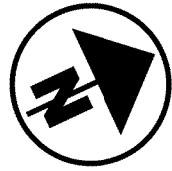
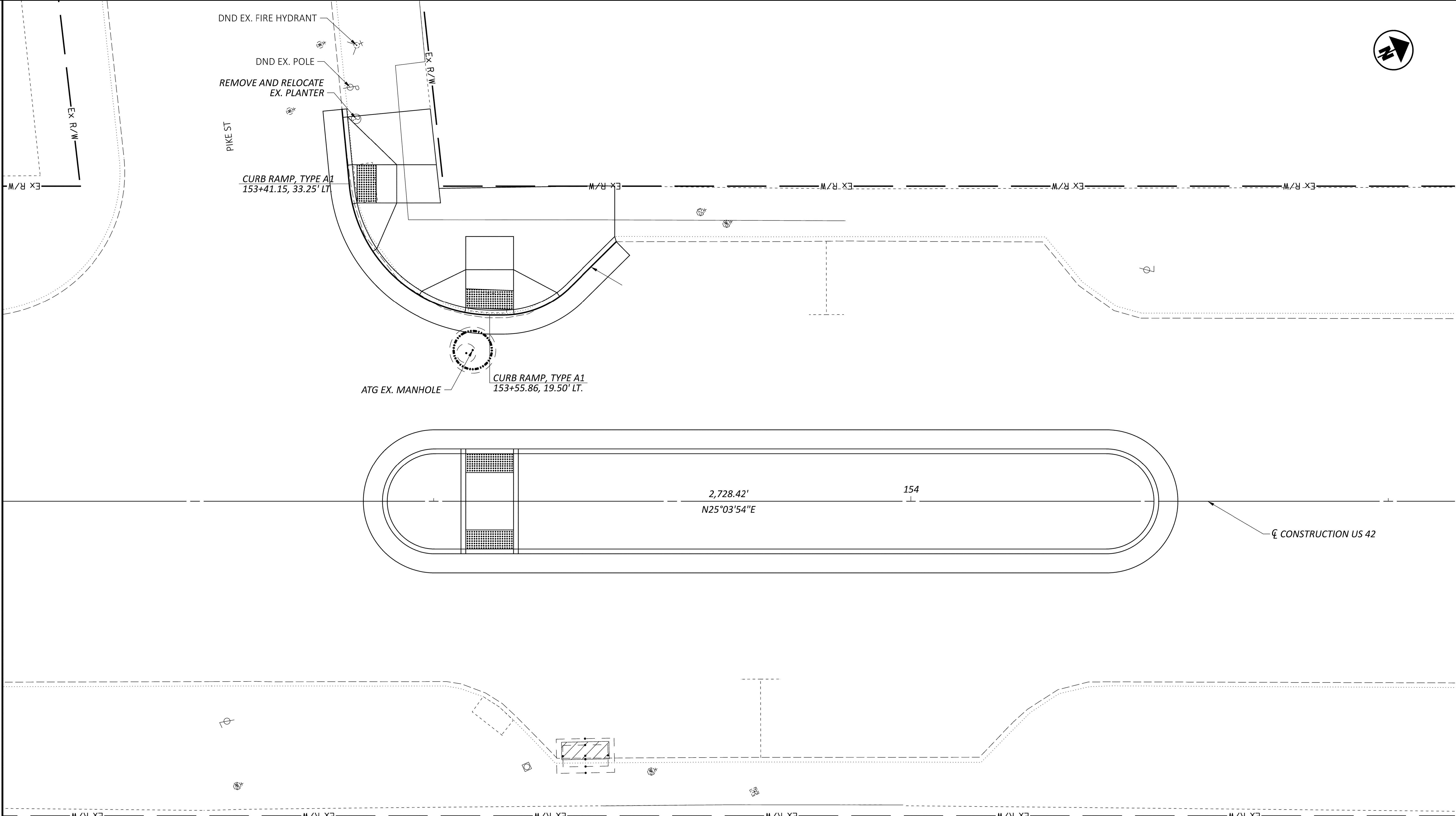
TOTAL

104





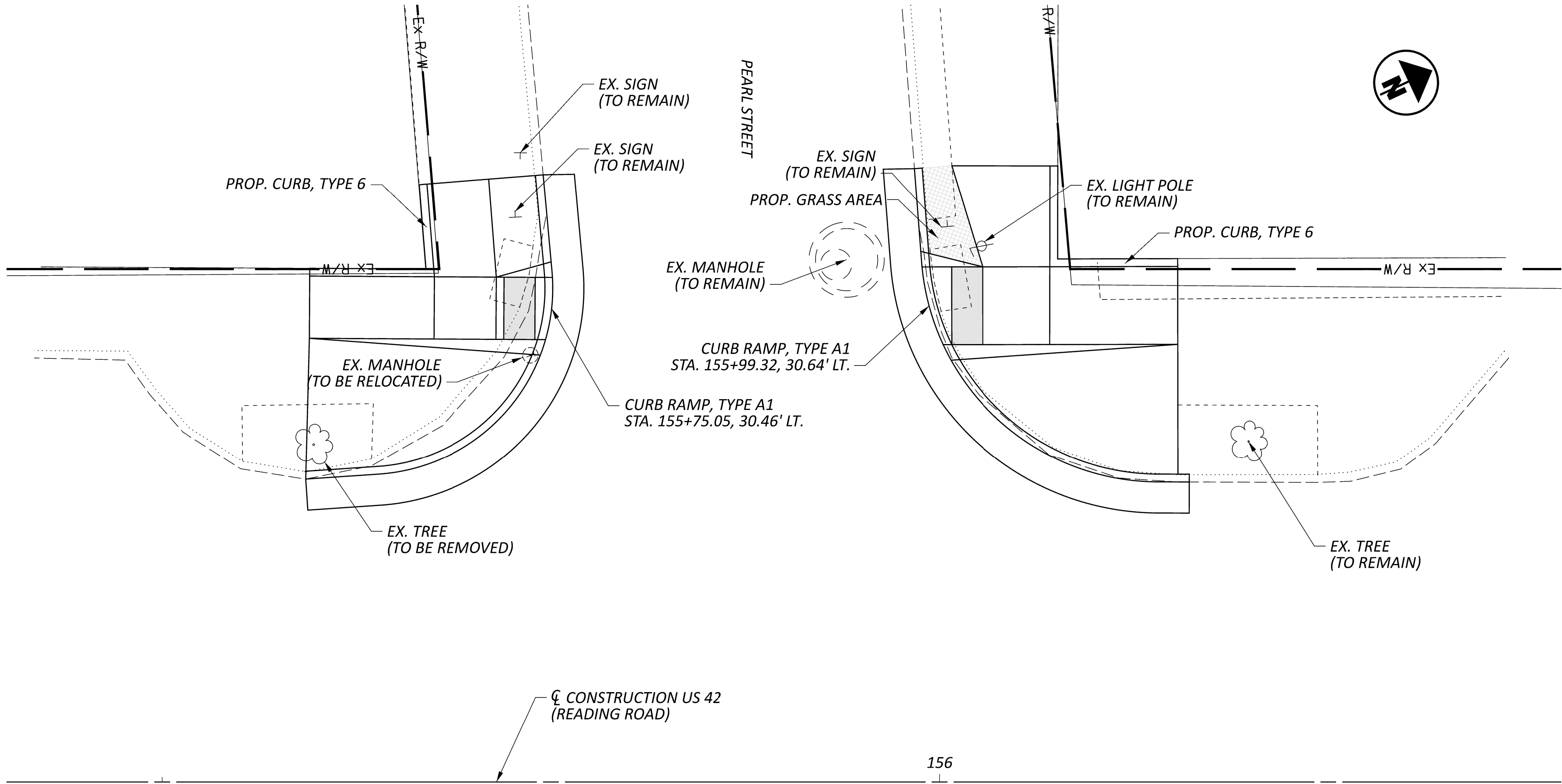




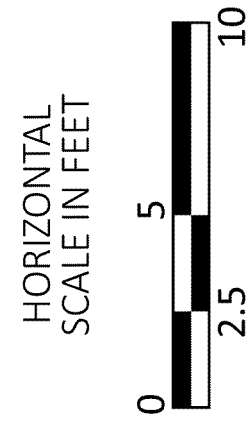
CURB RAMP DETAILS
READING RD. AT PIKE ST

DESIGN AGENCY
CMT
CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45489
PH (937) 761-1288
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DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	123369
SHEET	P.60
TOTAL	104



CURB RAMP DETAILS
READING RD. AT PEARL STREET



DESIGN AGENCY

DESIGNER

KAZ

REVIEWER

AMT 09/18/25

PROJECT ID

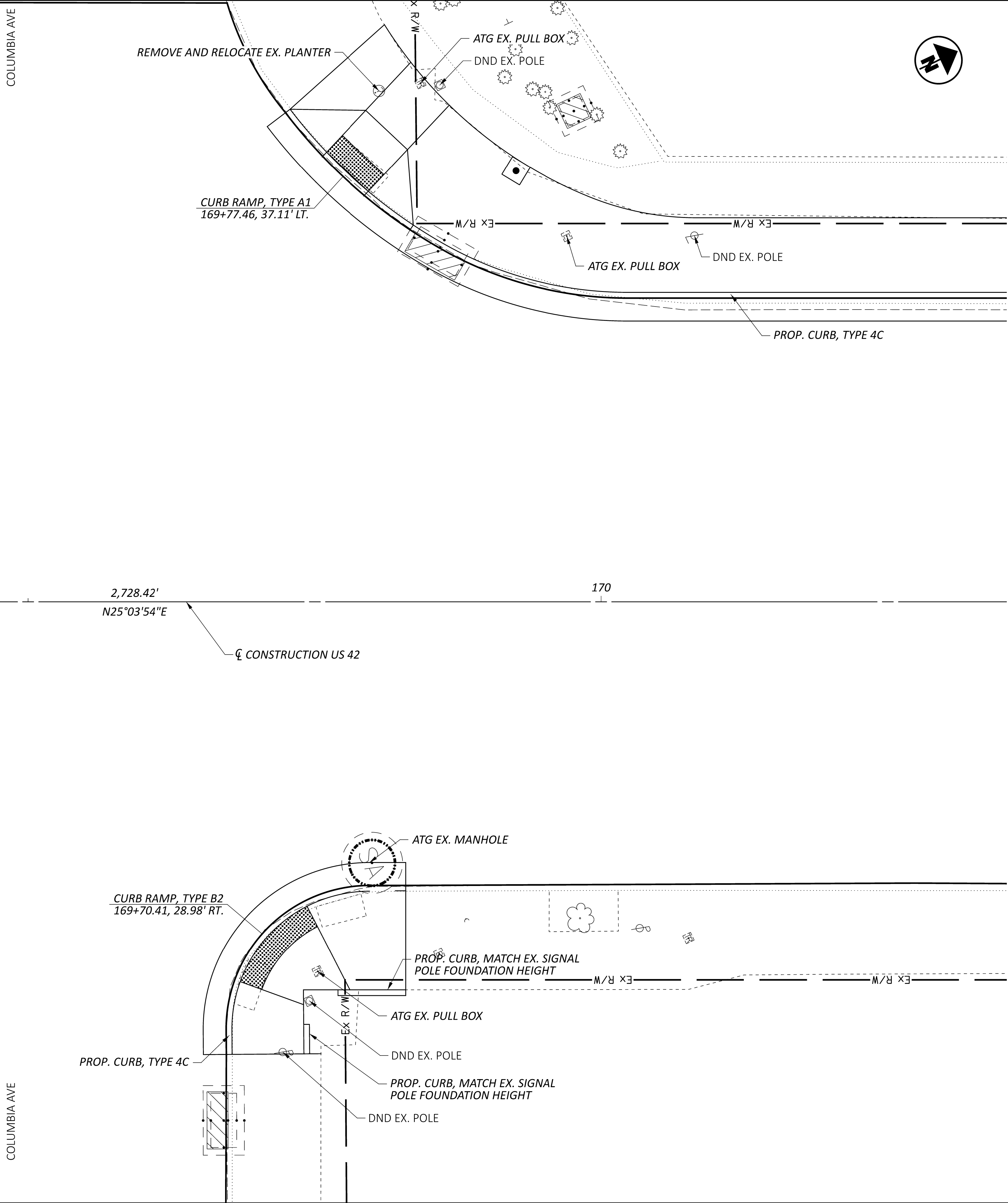
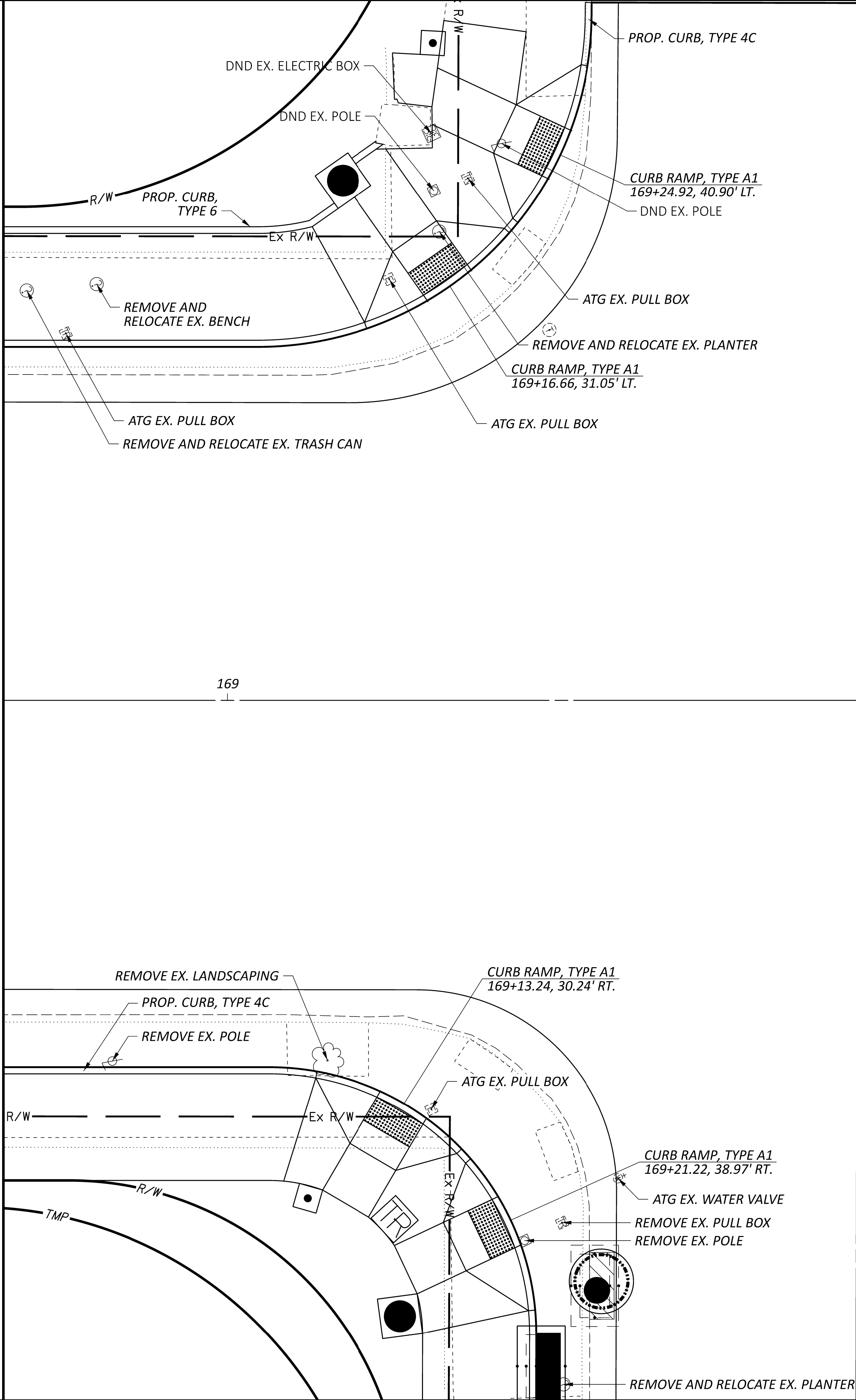
123369

SHEET

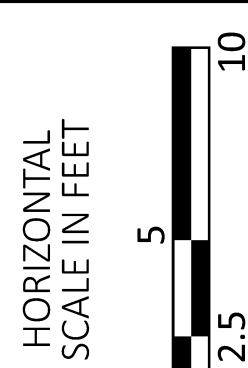
P.61

TOTAL

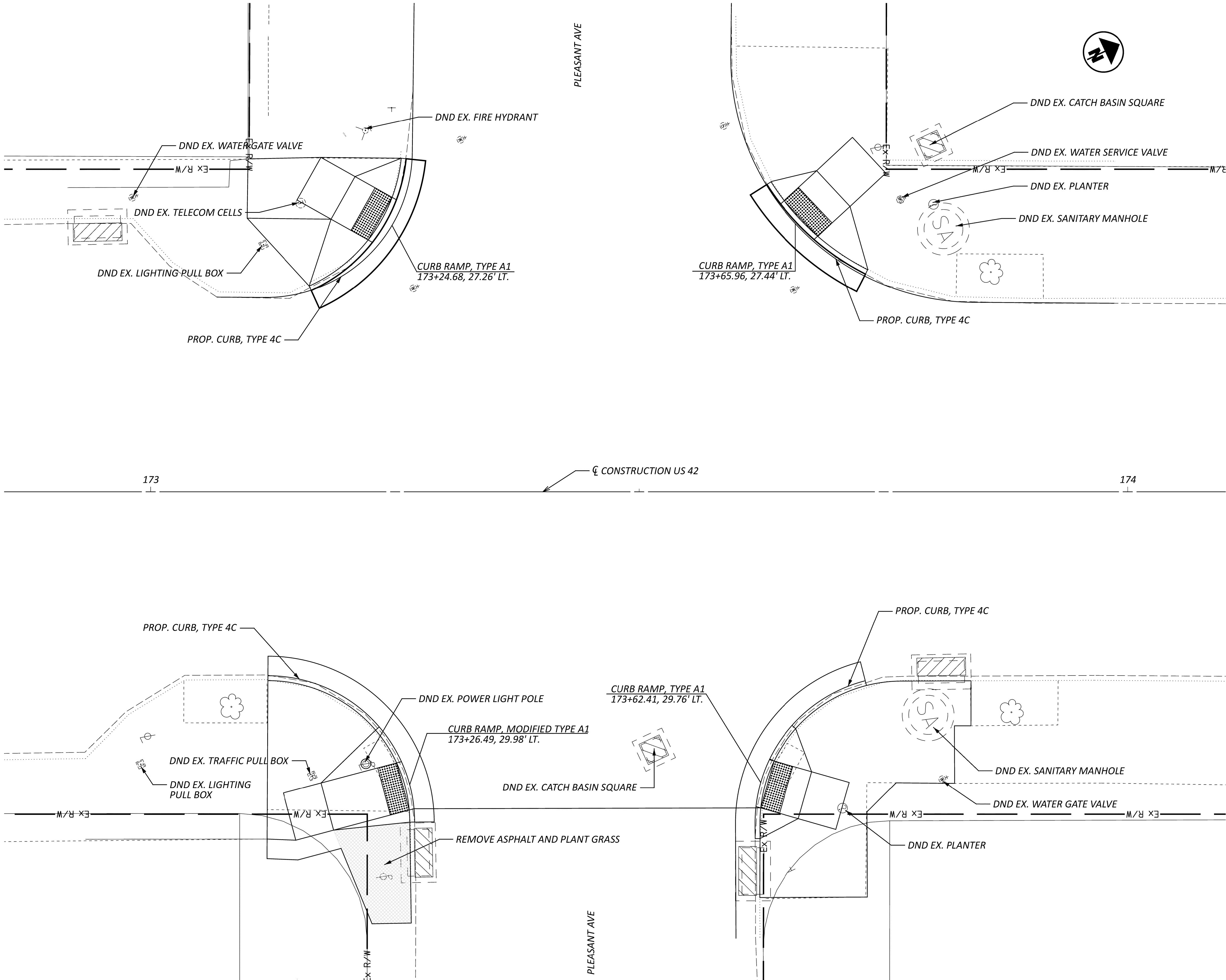
104



CURB RAMP DETAILS
READING RD. AT COLUMBIA AVE



DESIGN AGENCY	
 CMT CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45419 PH 60377012183 www.cmteng.com	
DESIGNER	
LDW	
REVIEWER	
JWL 09/18/25	
PROJECT ID	
123369	
SHEET	
P.62	TOTAL 104



CURB RAMP DETAILS
READING RD. AT PLEASANT AVE.

HORIZONTAL
SCALE IN FEET

0 2.5 5 10

DESIGN AGENCY

TOOLE
DESIGN

DESIGNER

XXX

REVIEWER

XXX 09/18/25

PROJECT ID

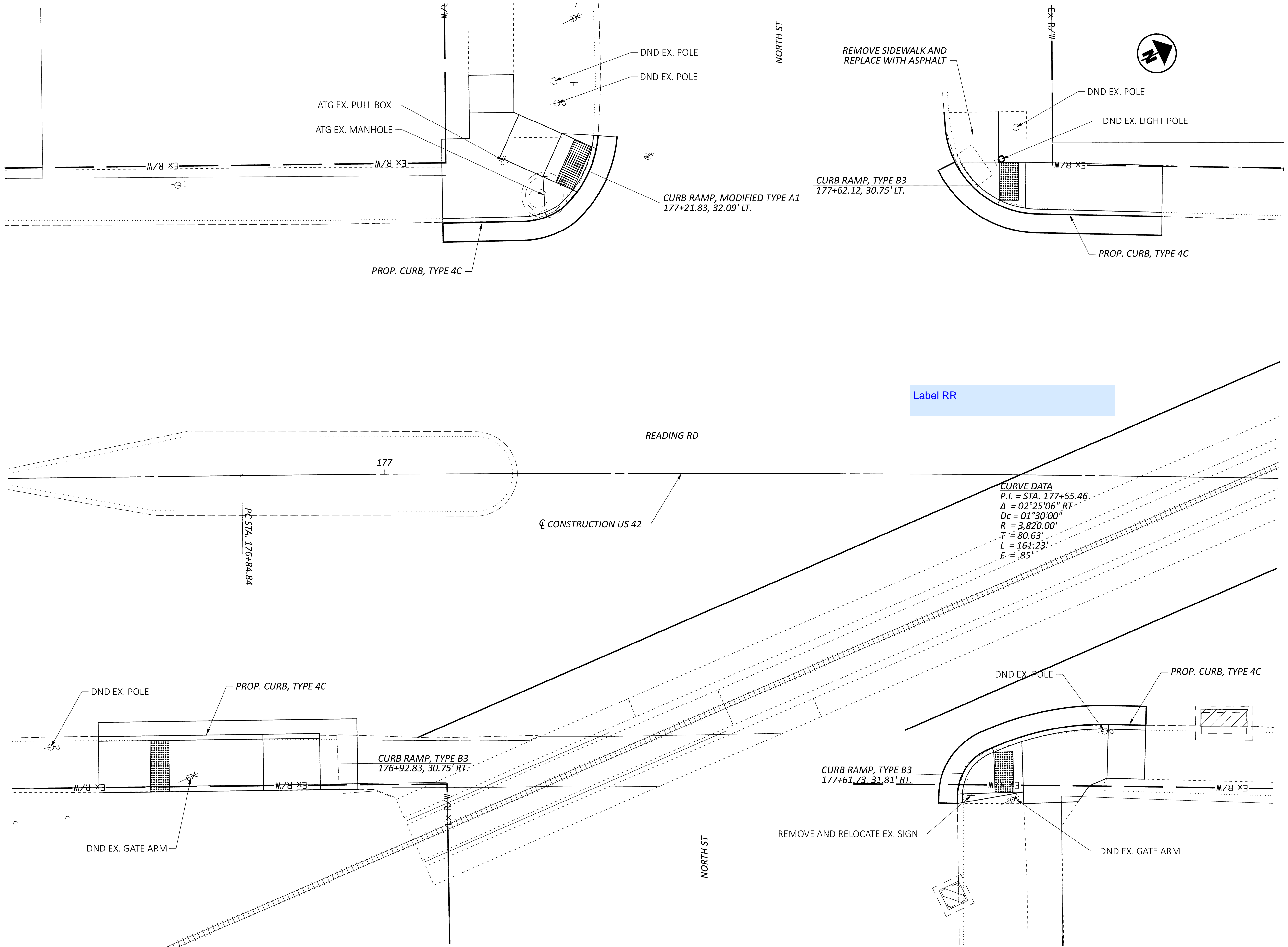
123369

SHEET

P.63

TOTAL

104



HORIZONTAL
SCALE IN FEET

0

2.5

5

10

CURB RAMP DETAILS

READING RD. AT NORTH ST.

DESIGN AGENCY

TOOLE
DESIGN

DESIGNER

XXX

REVIEWER

XXX 09/18/25

PROJECT ID

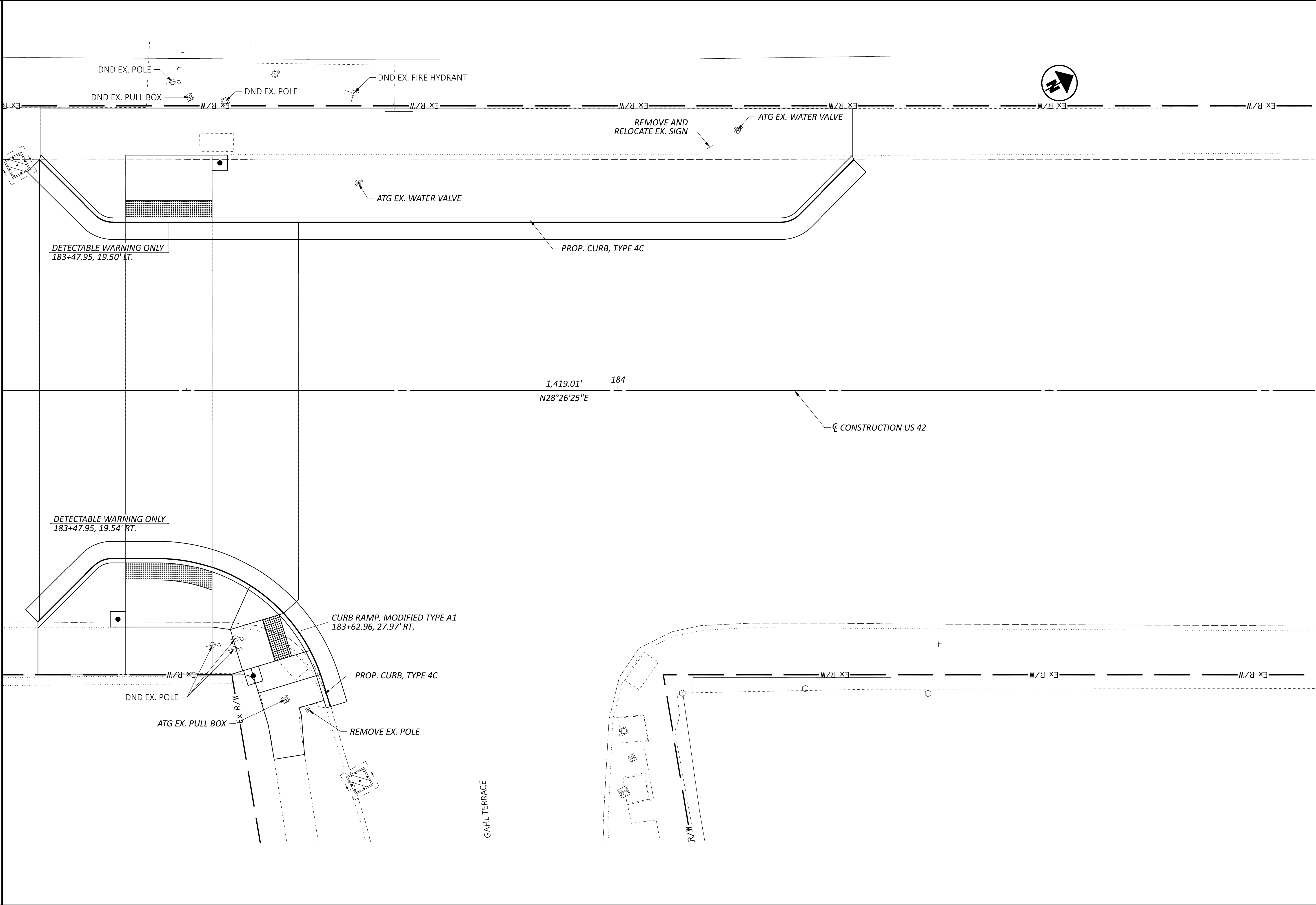
123369

SHEET

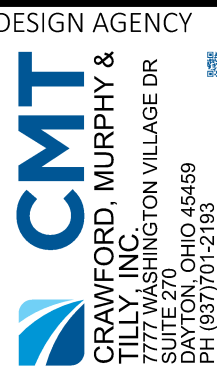
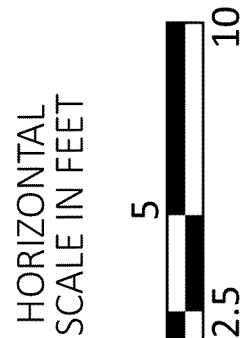
P.64

TOTAL

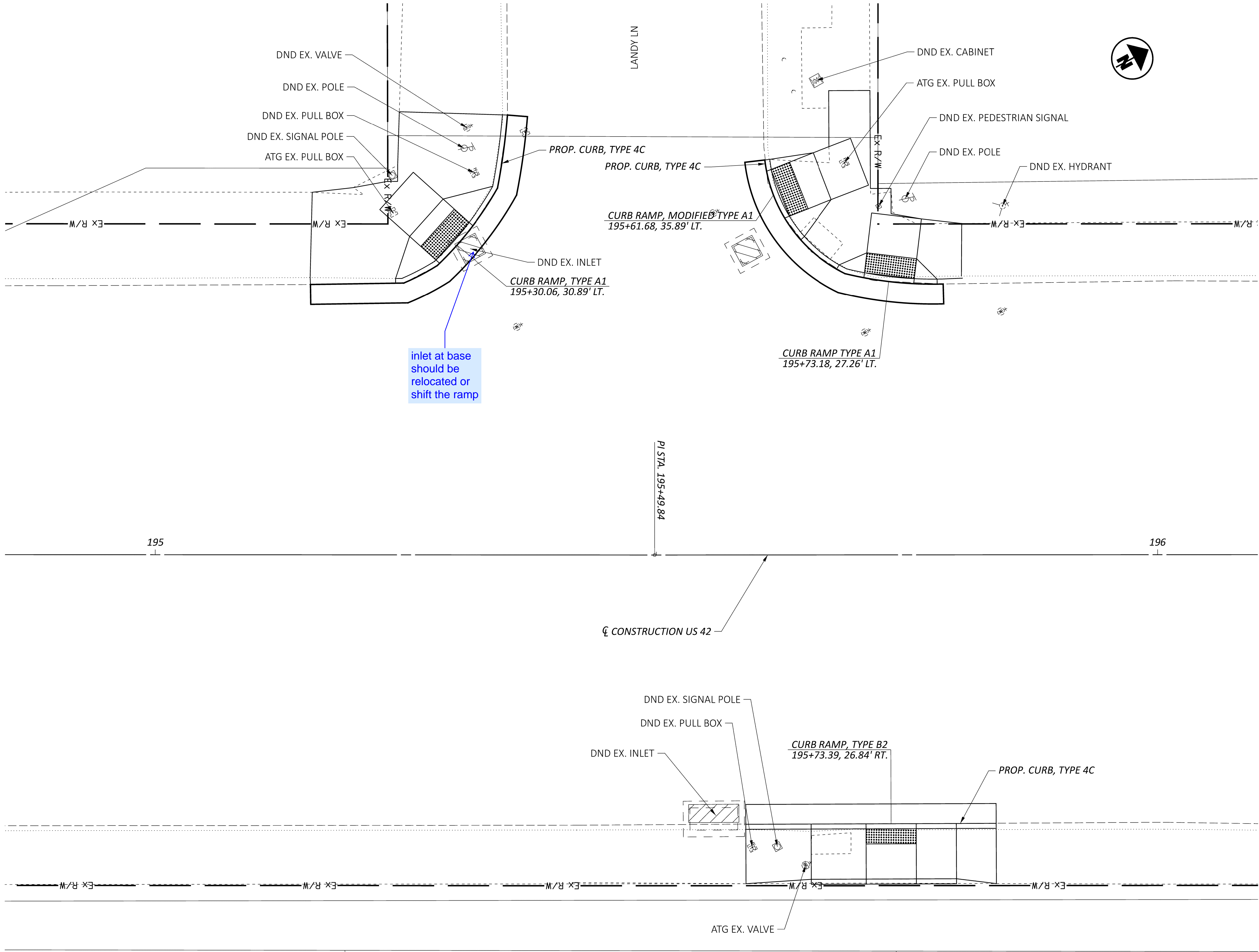
104



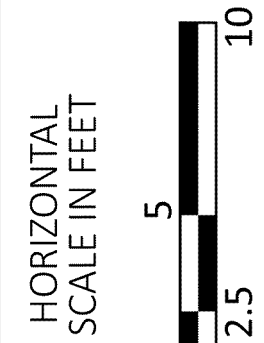
CURB RAMP DETAILS
READING RD. AT GAHL TERRACE



DESIGNER	LDW
REVIEWER	JWL
PROJECT ID	09/18/25
123369	
SHEET	TOTAL
P.65	104

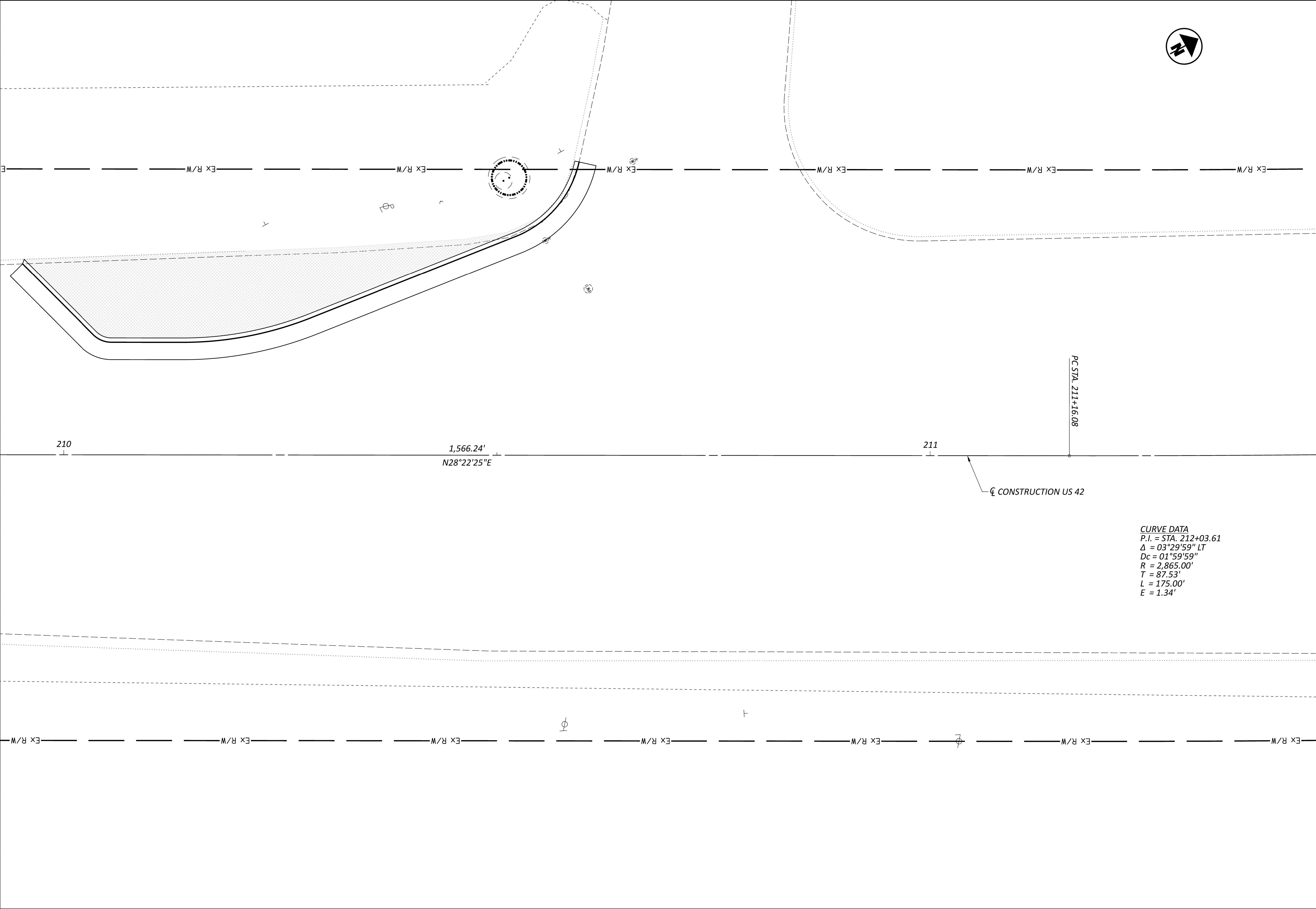


CURB RAMP DETAILS
READING RD. AT LANDY LN.



DESIGN AGENCY
TOOLE
DESIGN

DESIGNER	XXX
REVIEWER	XXX
PROJECT ID	09/18/25
SHEET	123369
TOTAL	104



CURB RAMP DETAILS
READING RD. AT INCINERATOR LN

DESIGN AGENCY
CMT
CHAWFORD, MURPHY &
1777 WASHINGTON VILLAGE DR
DAYTON, OHIO 45489
PH (937) 761-1288
www.cmtengr.com

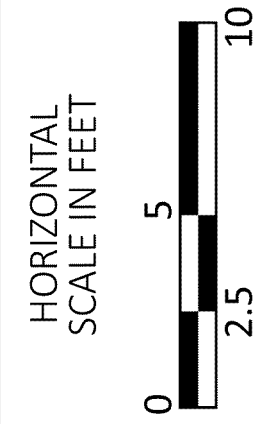
DESIGNER
LDW

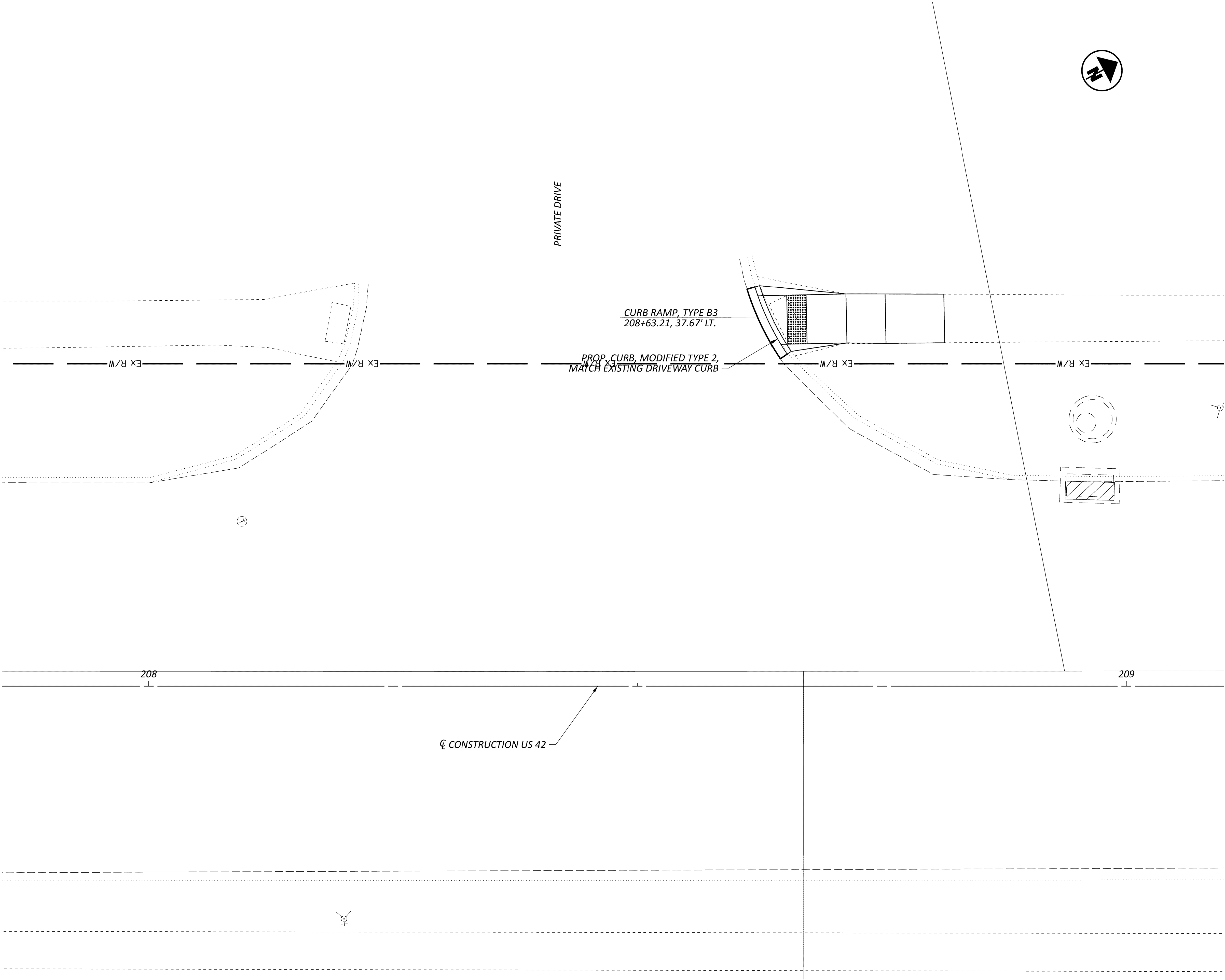
REVIEWER
JWL 09/18/25

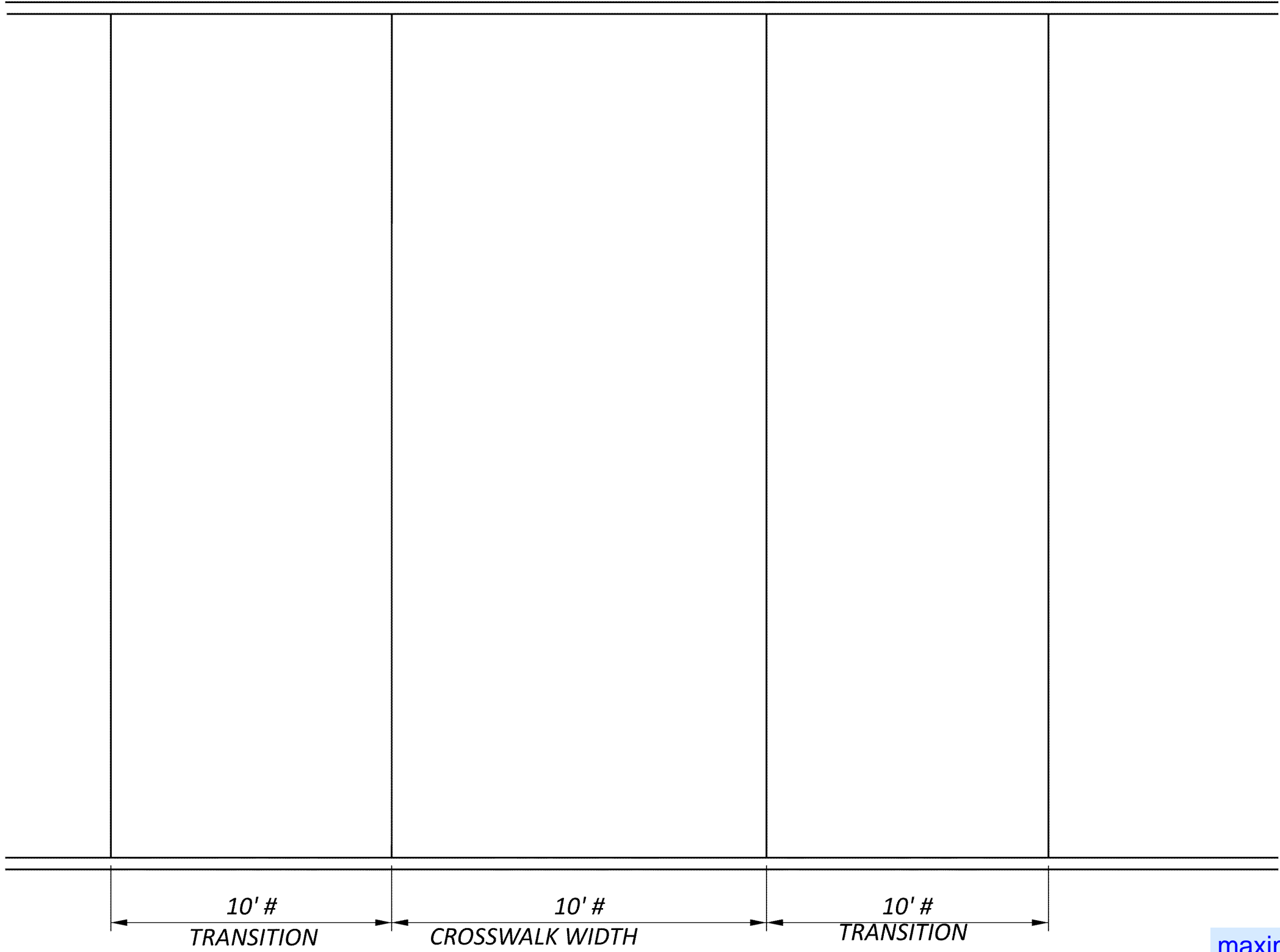
PROJECT ID
123369

SHEET
P.69

TOTAL
104

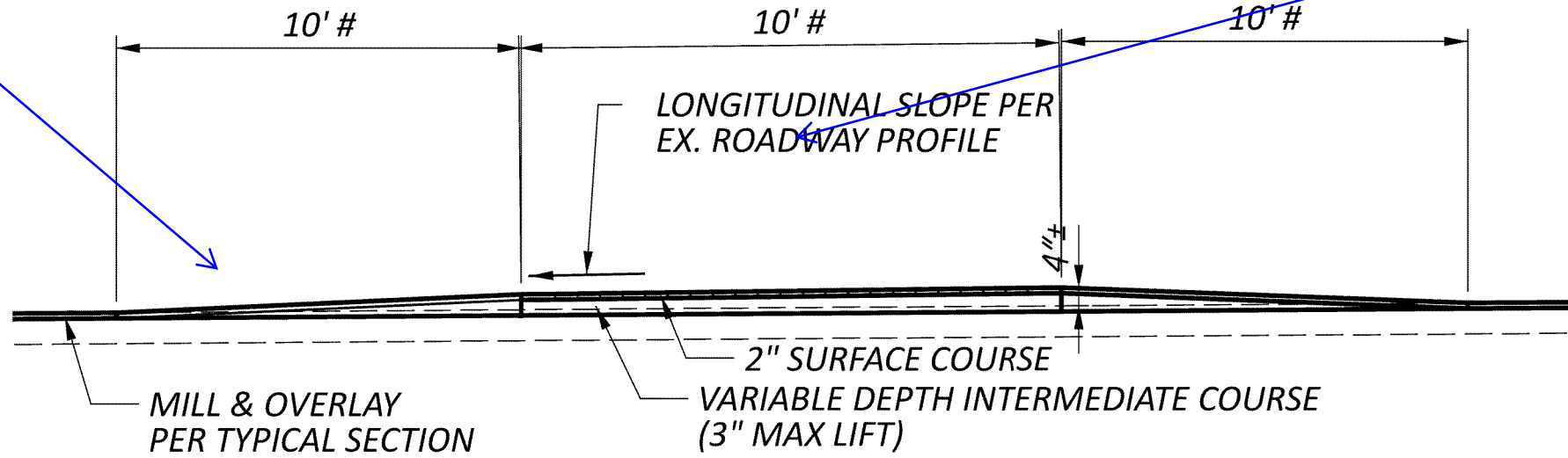






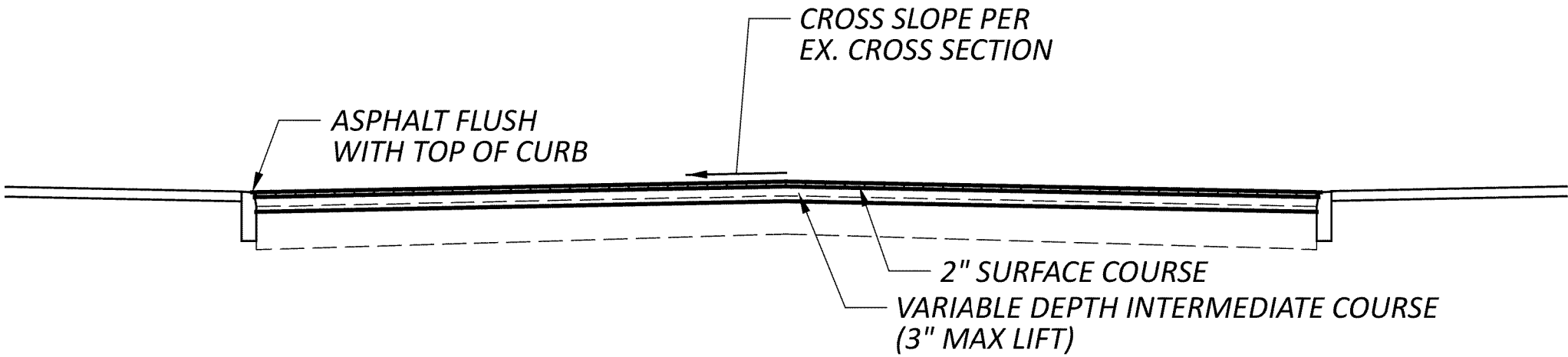
RAISED CROSSWALK DETAIL - PLAN

confirm grade breaks meet the targeted speed. What is the targeted speed?

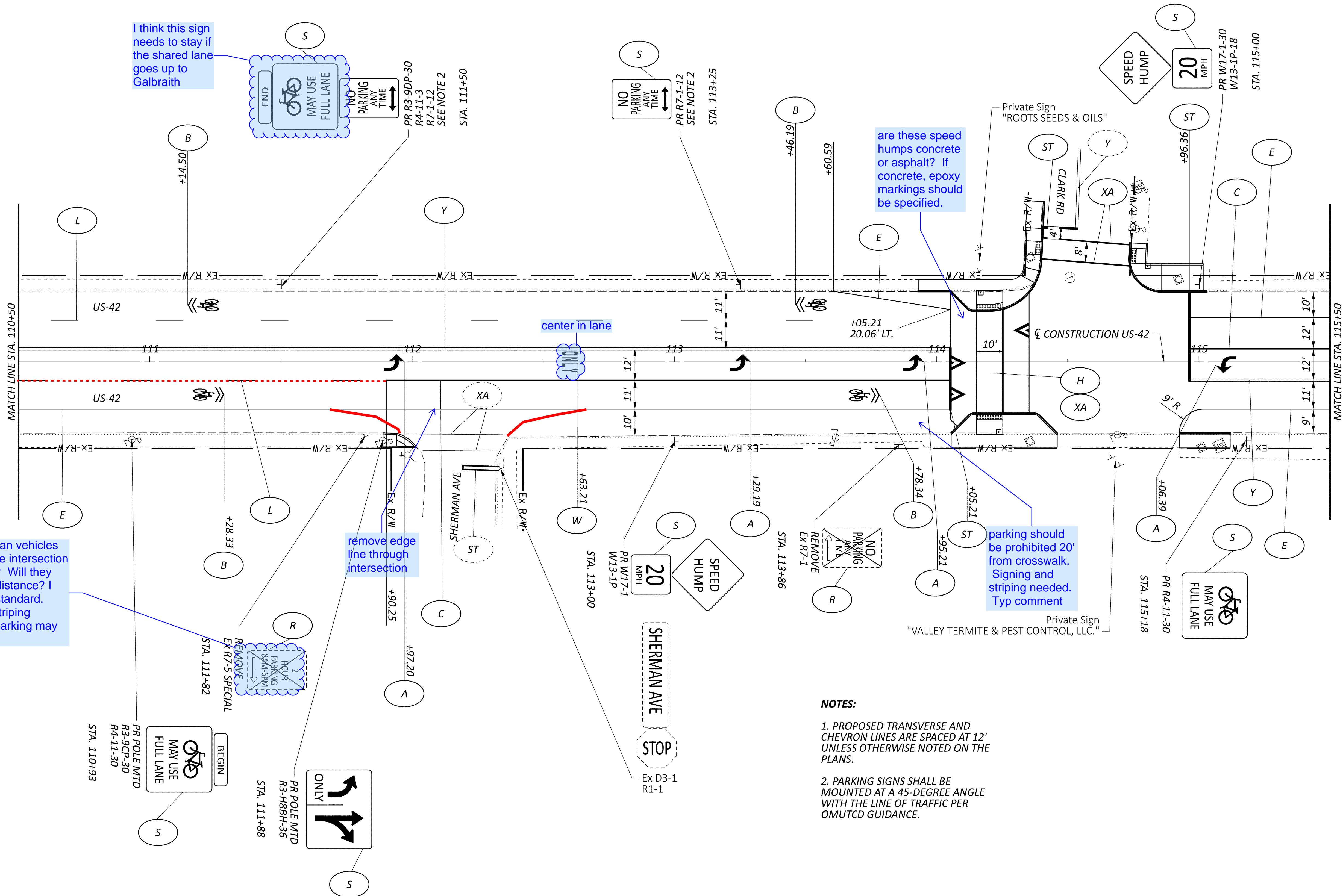


RAISED CROSSWALK DETAIL - PROFILE

maximum slopes to follow ADA requirements. See MDG drawing 4.2 note 6 for requirements. Each raised cross walk to have it's own specifically designed detail.



RAISED CROSSWALK DETAIL - CROSS SECTION

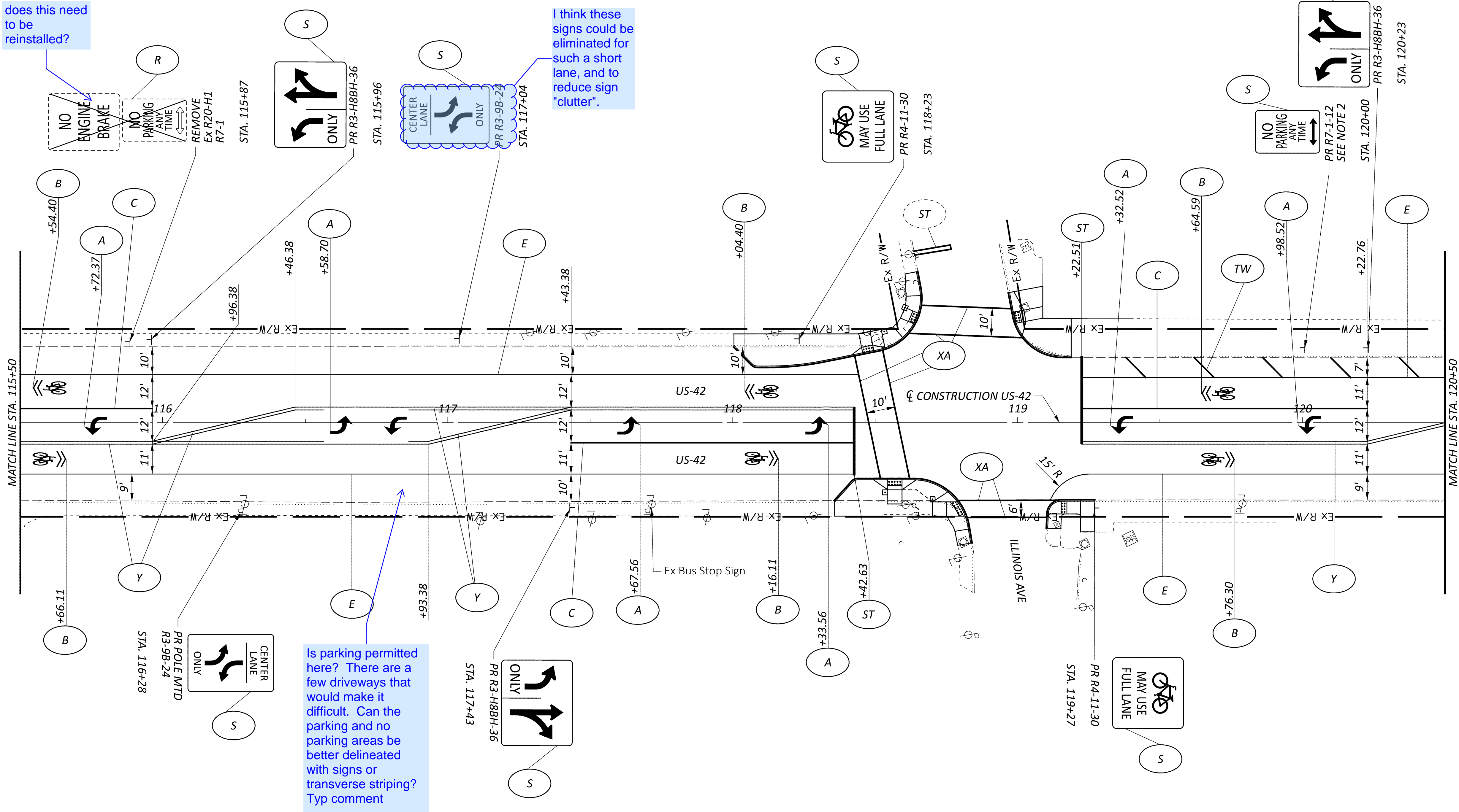


NOTES:

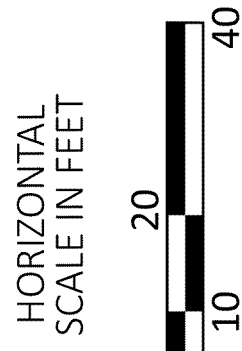
1. PROPOSED TRANSVERSE AND CHEVRON LINES ARE SPACED AT 12' UNLESS OTHERWISE NOTED ON THE PLANS.
2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.

NOTES:

1. PROPOSED TRANSVERSE AND CHEVRON LINES ARE SPACED AT 12' UNLESS OTHERWISE NOTED ON THE PLANS.
2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.



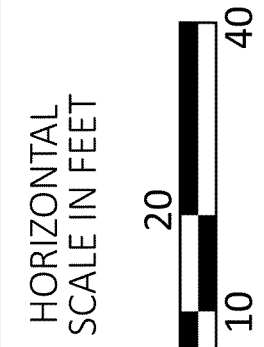
TRAFFIC CONTROL
STA. 115+50 TO STA. 120+50



HAM US 42 10.07 READING RD




TRAFFIC CONTROL
STA. 125+50 TO STA. 130+50



1. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.



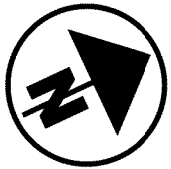
HORIZONTAL
SCALE IN FEET



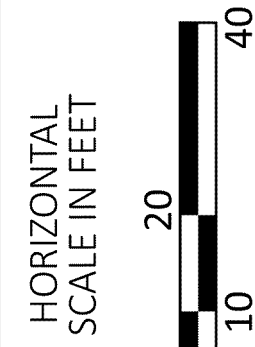
A horizontal scale bar with markings at 0, 10, 20, and 40 feet. The bar is divided into segments: a black segment from 0 to 10, a white segment from 10 to 20, a black segment from 20 to 30, and a white segment from 30 to 40.

TRAFFIC CONTROL
STA. 130+50 TO STA. 135+50

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pww:\cmtengr-pw.bentley.com\cm-connect-projects\Documents\ODOT\WAM-US42-10.07_12.37 PID 123369\123369-400-Engineering\Traffic\Sheets\123369_TP107.dgn



TRAFFIC CONTROL
STA. 135+50 TO STA. 140+50



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DESIGN AGENCY

CMT
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 TILLY, INC.**
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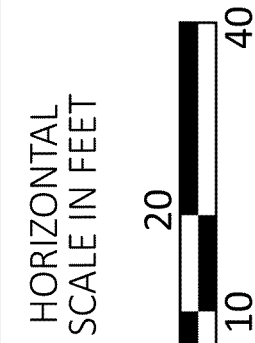
DESIGNER
GSH

REVIEWER
SAK 09/18/2

PROJECT ID
123369

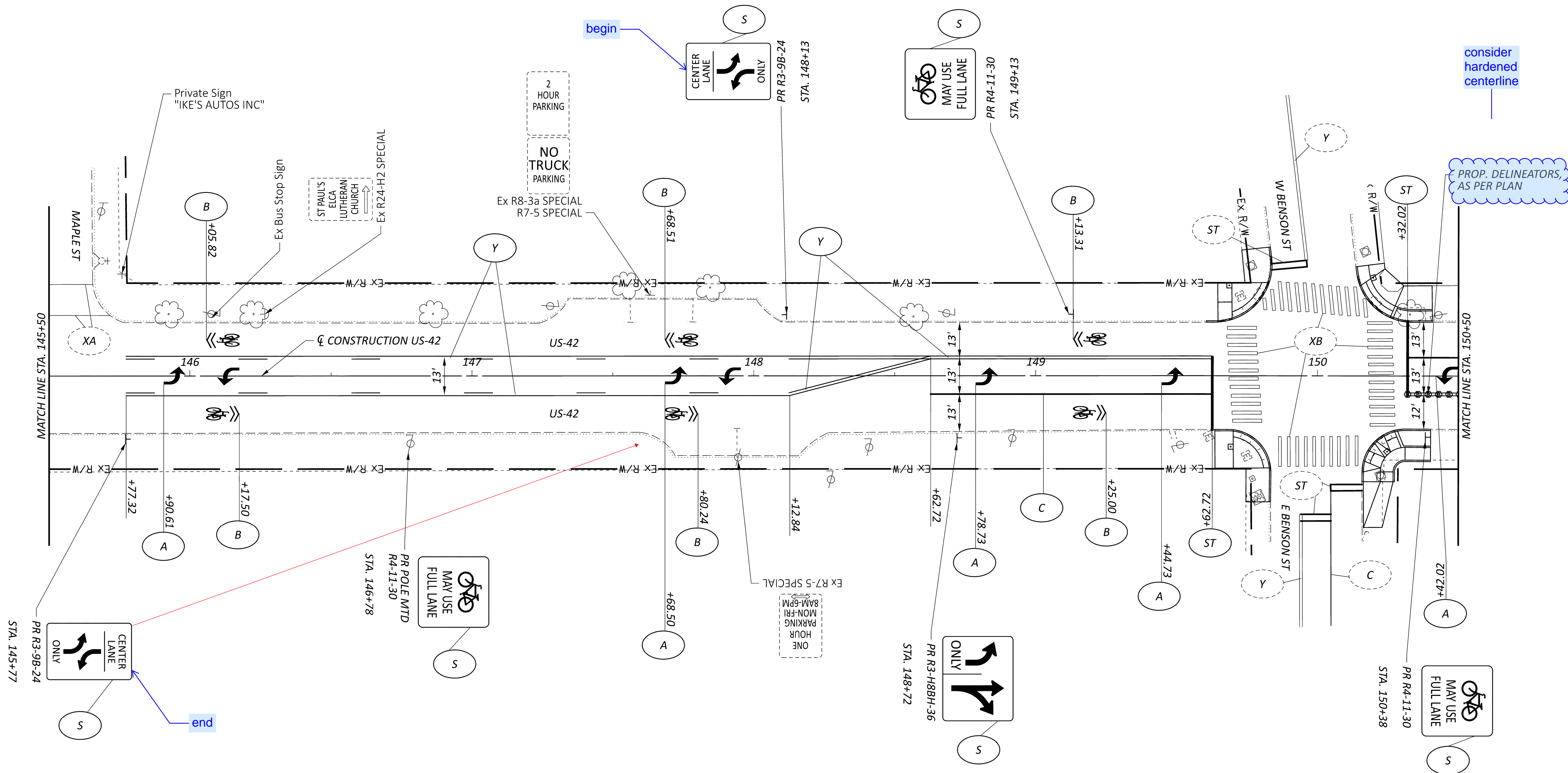
SHEET **TOTAL**
P.77 **104**

TRAFFIC CONTROL
STA. 140+50 TO STA. 145+50



HAM US 42 10.07 READING RD

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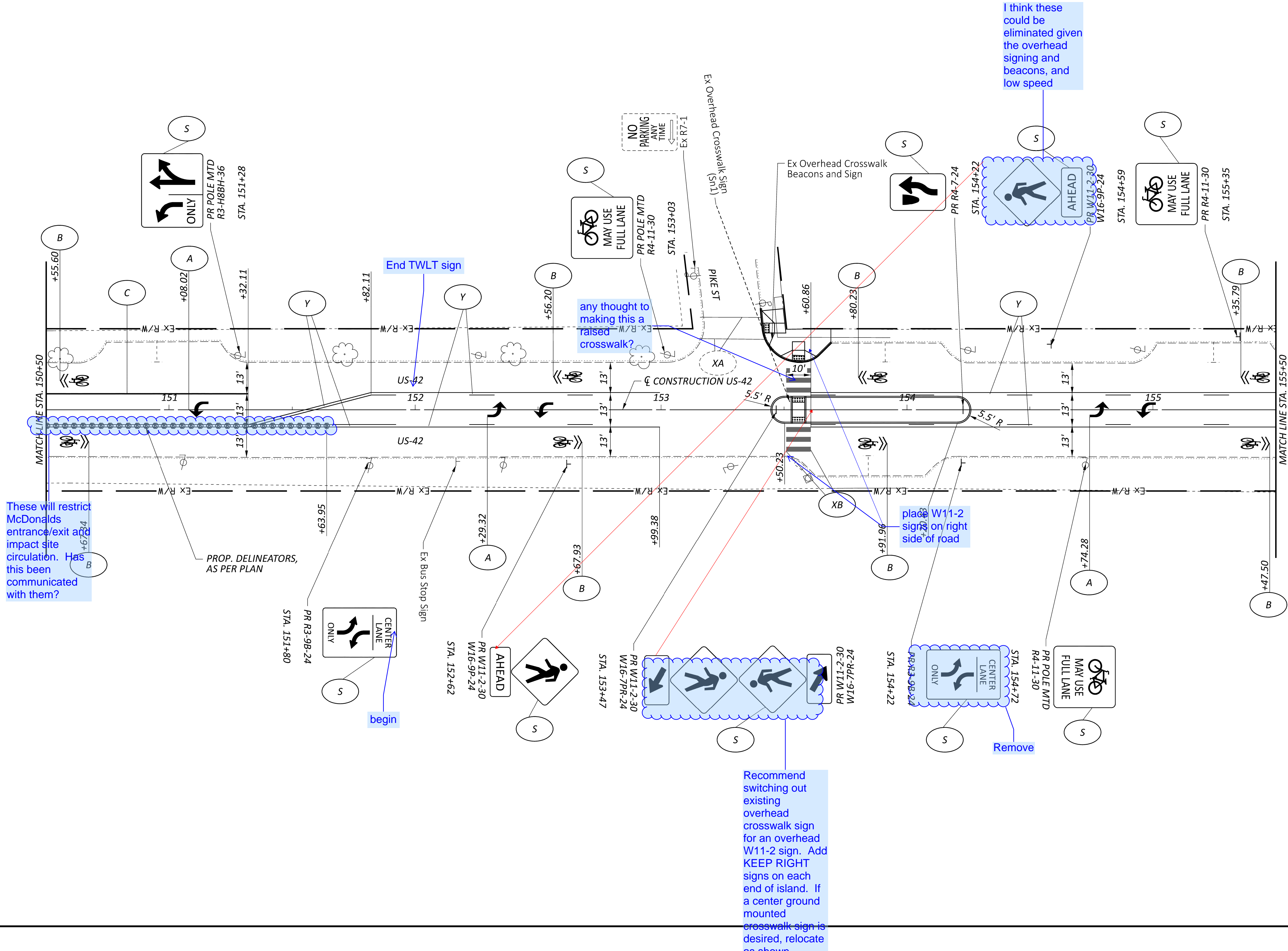
 DESIGN AGENCY CMT CRAWFORD, MURPHY & TILLY, INC. 7777 WASHINGTON VILLAGE DR SUITE 270 OHIO 45459 PH (937) 701-2193 www.cmtengr.com	
DESIGNER	
GSH	
REVIEWER	
SAK 09/18/2	
PROJECT ID	
123369	
SHEET	TOTAL
P.78	104

GSH	
REVIEWER	
SAK 09/18/2	
PROJECT ID	
123369	
SHEET	TOTAL
P.78	104

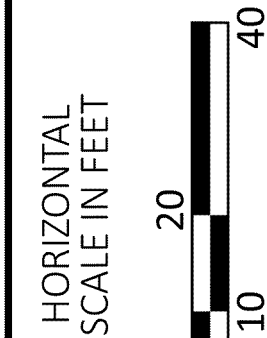
TRAFFIC CONTROL
STA. 145+50 TO STA. 150+50

HORIZONTAL
SCALE IN FEET

A horizontal scale bar with a black background and white markings. The scale is marked from 0 to 40 feet in increments of 10. The numbers 0, 10, 20, and 40 are written in black. The bar is divided into four equal segments by white vertical lines.

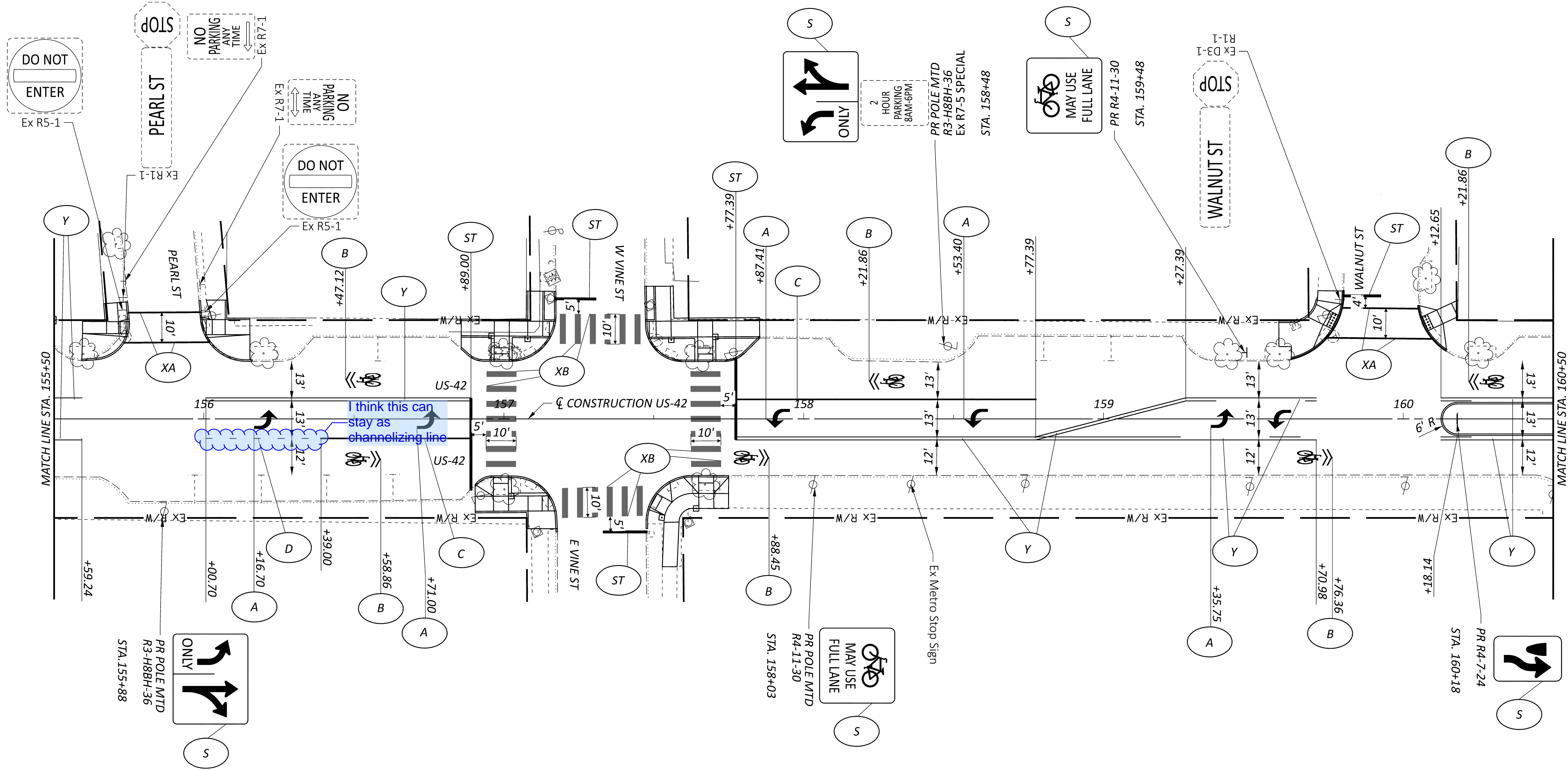


TRAFFIC CONTROL
STA. 150+50 TO STA. 155+50

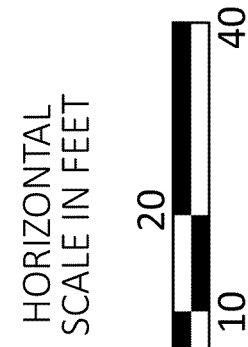
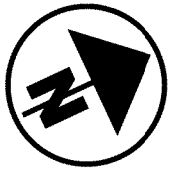


NOTES:

1. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.

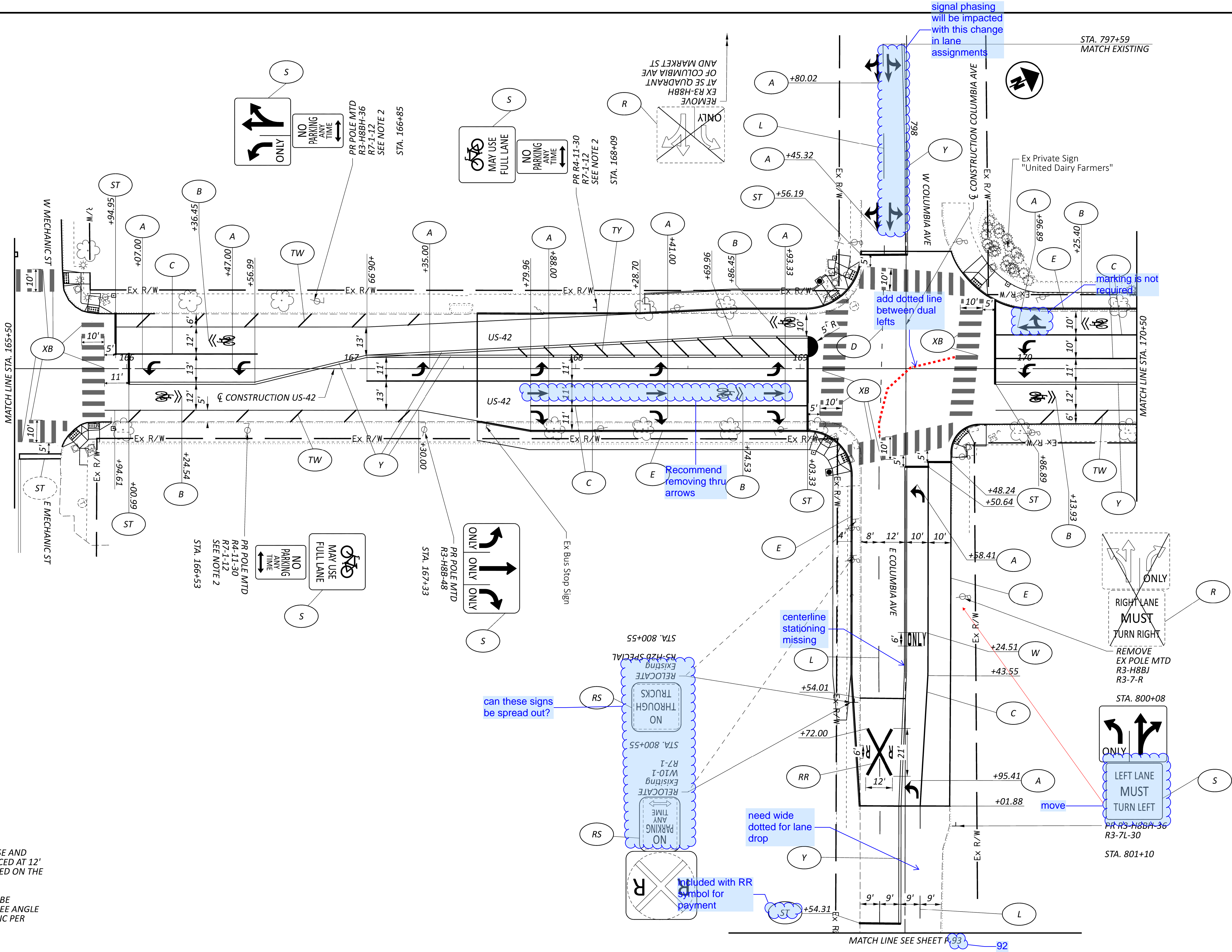


2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.



NOTES:

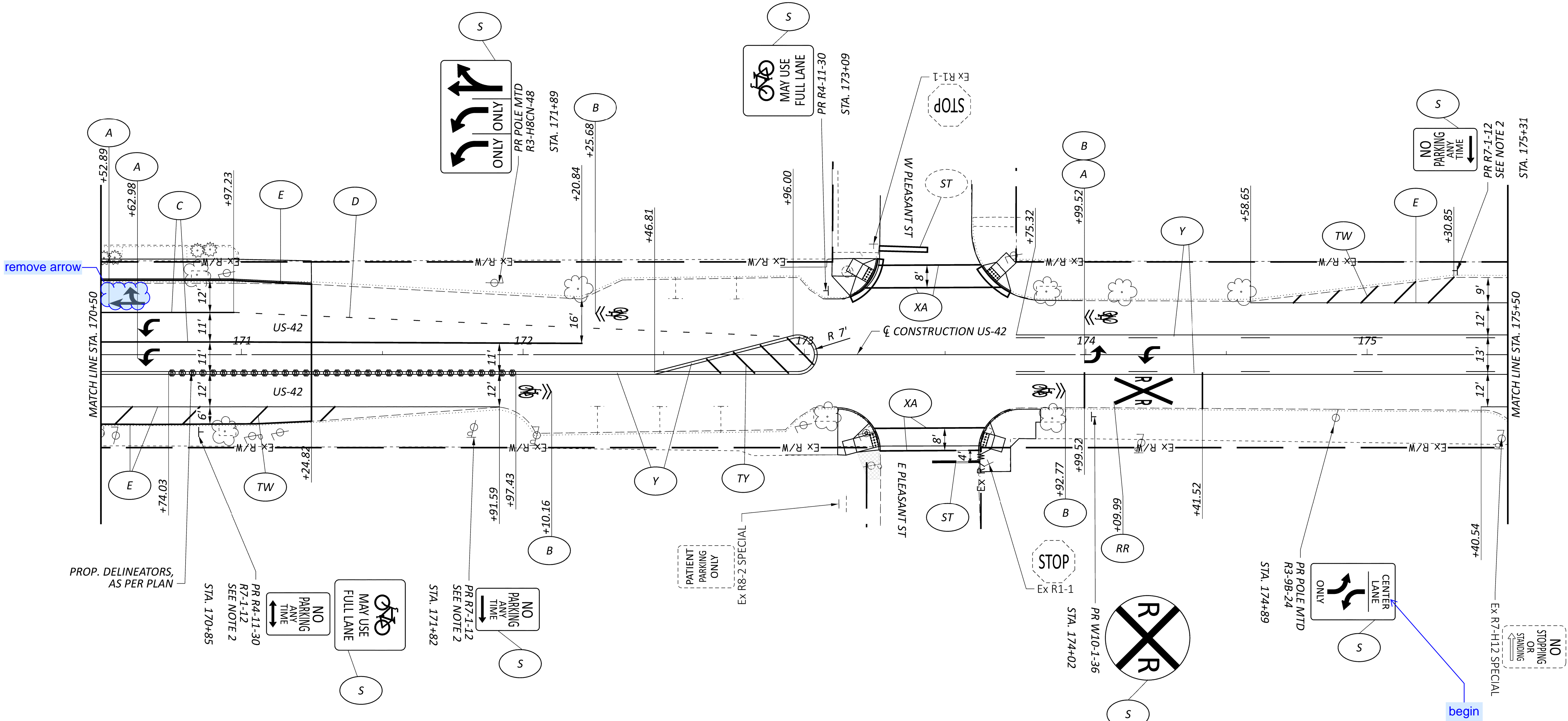
1. PROPOSED TRANSVERSE AND CHEVRON LINES ARE SPACED AT 12' UNLESS OTHERWISE NOTED ON THE PLANS.
2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.



TRAFFIC CONTROL
STA. 165+50 TO STA. 170+50

NOTES:

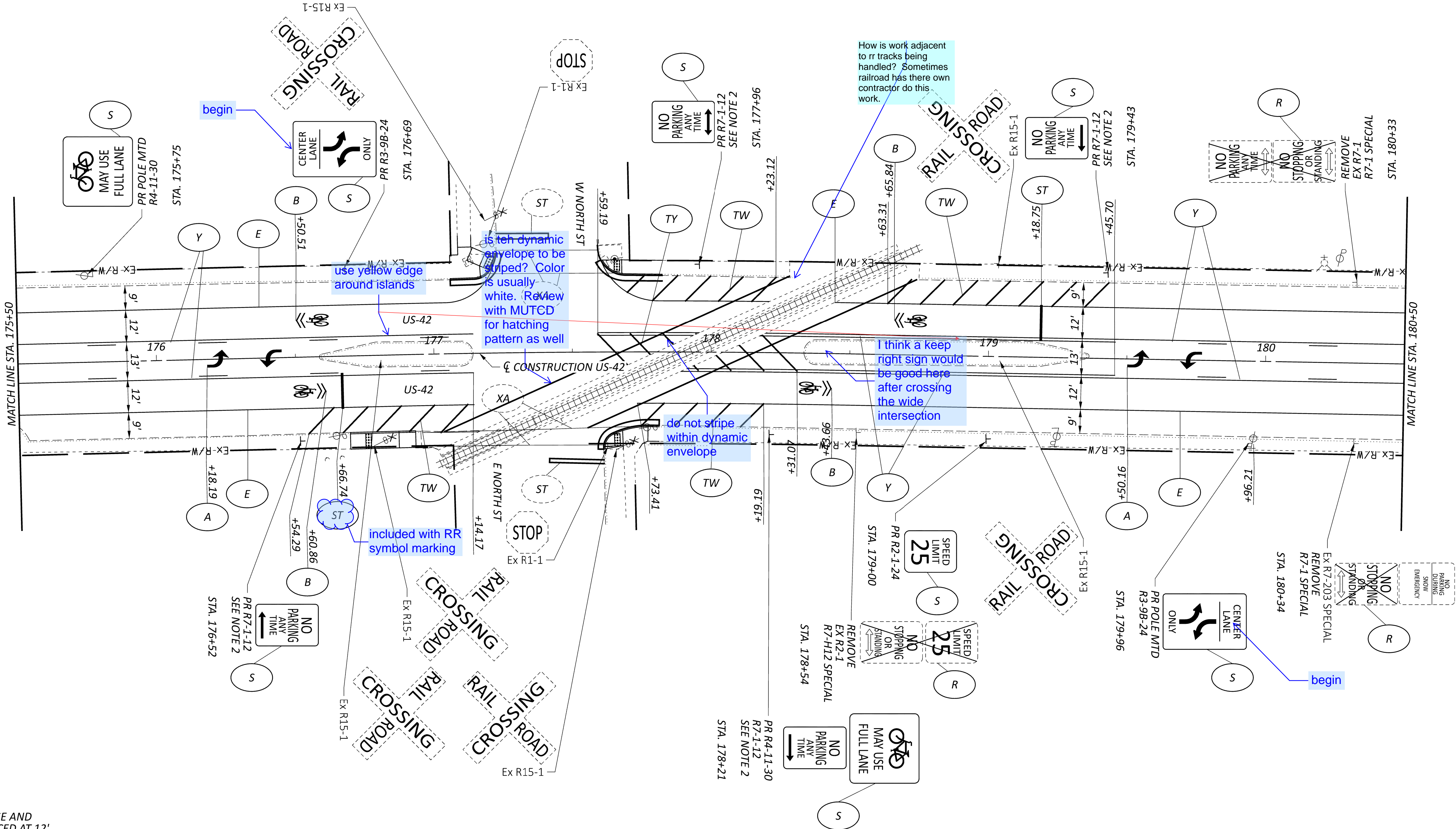
1. PROPOSED TRANSVERSE AND CHEVRON LINES ARE SPACED AT 12' UNLESS OTHERWISE NOTED ON THE PLANS.
2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER ODOTCD GUIDANCE.



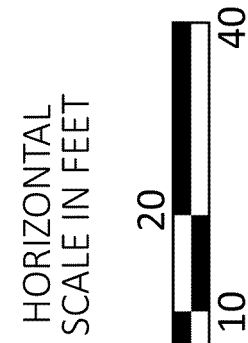
NOTES:

1. PROPOSED TRANSVERSE AND CHEVRON LINES ARE SPACED AT 12' UNLESS OTHERWISE NOTED ON THE PLANS.

2. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER ODOT GUIDANCE.

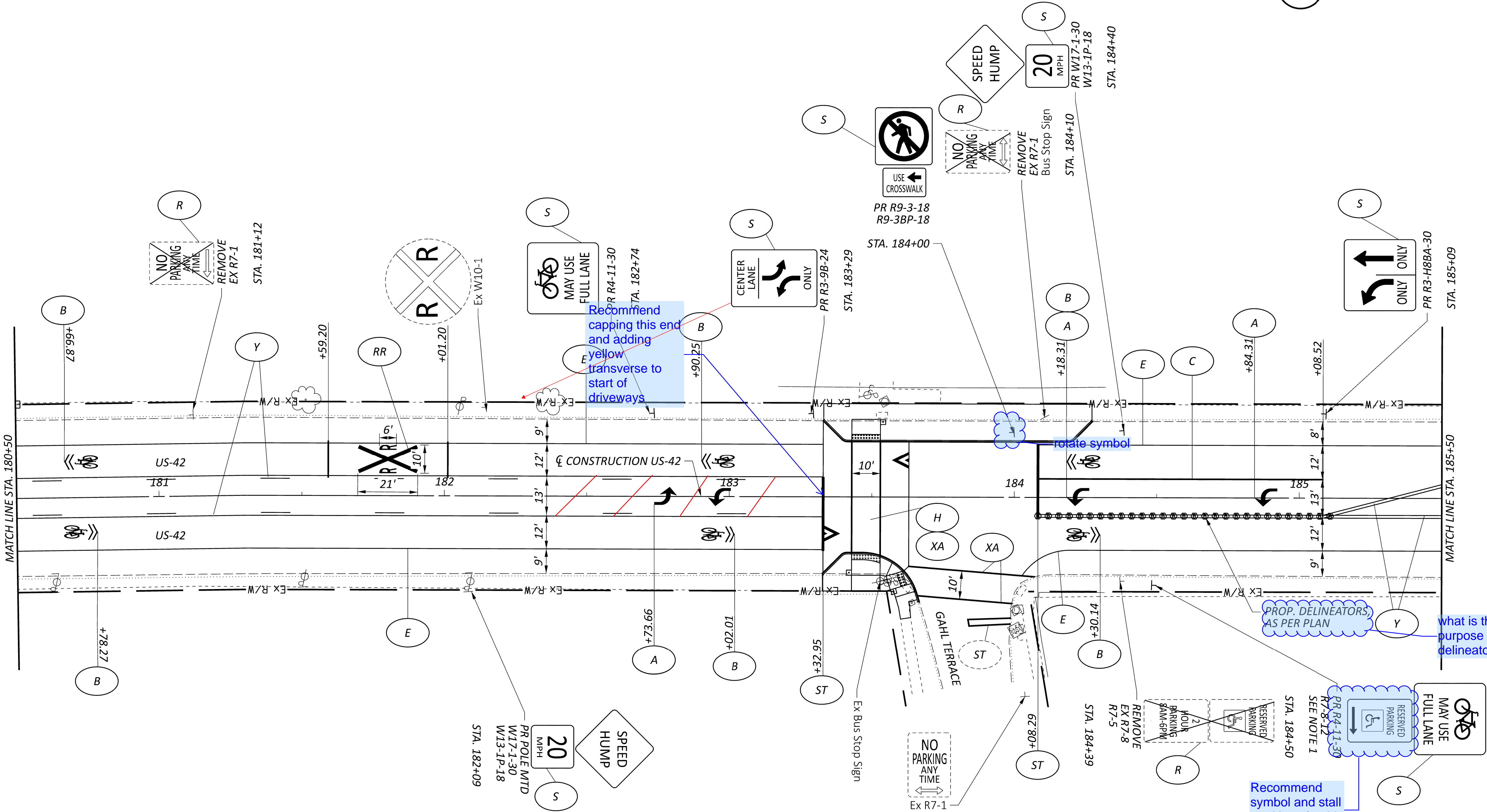


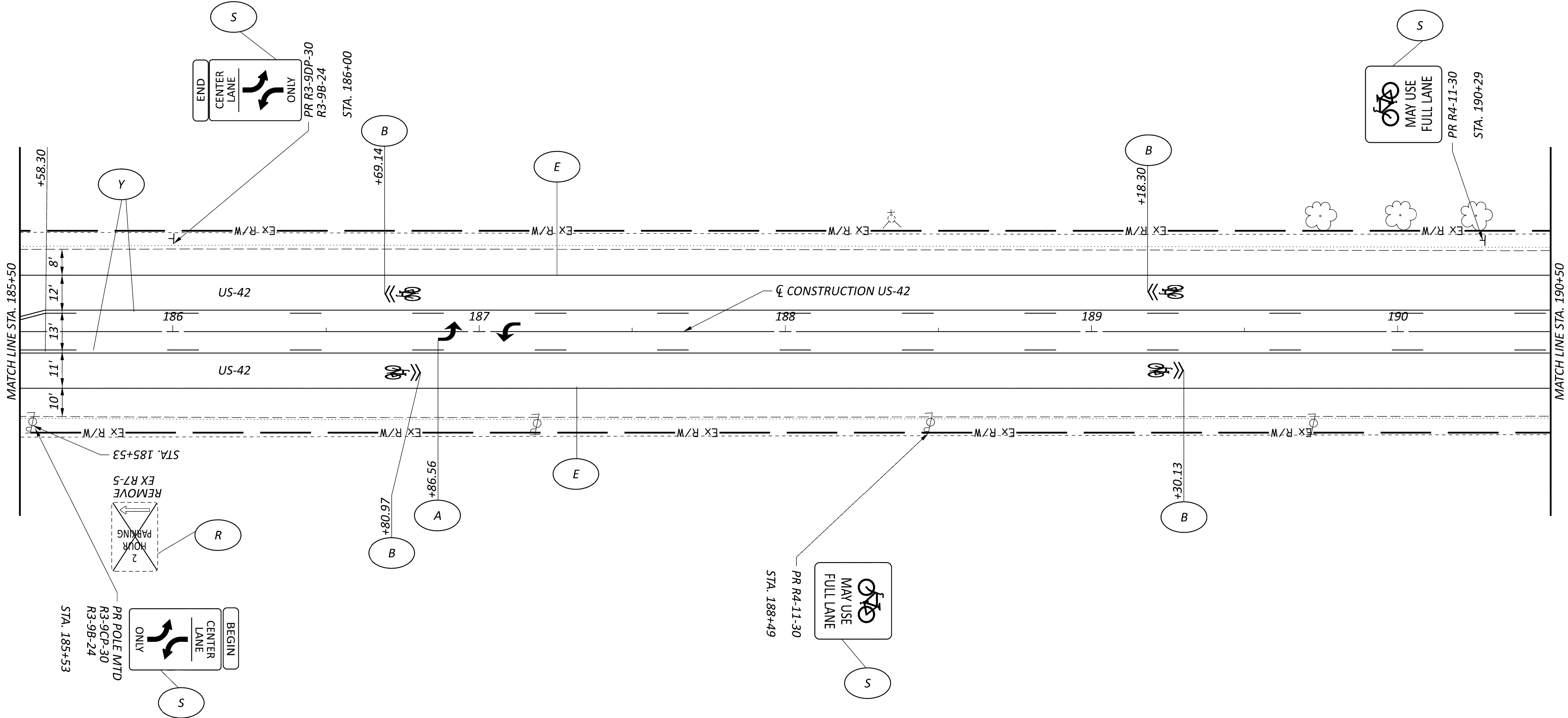
TRAFFIC CONTROL
STA. 175+50 TO STA. 180+50



NOTES:

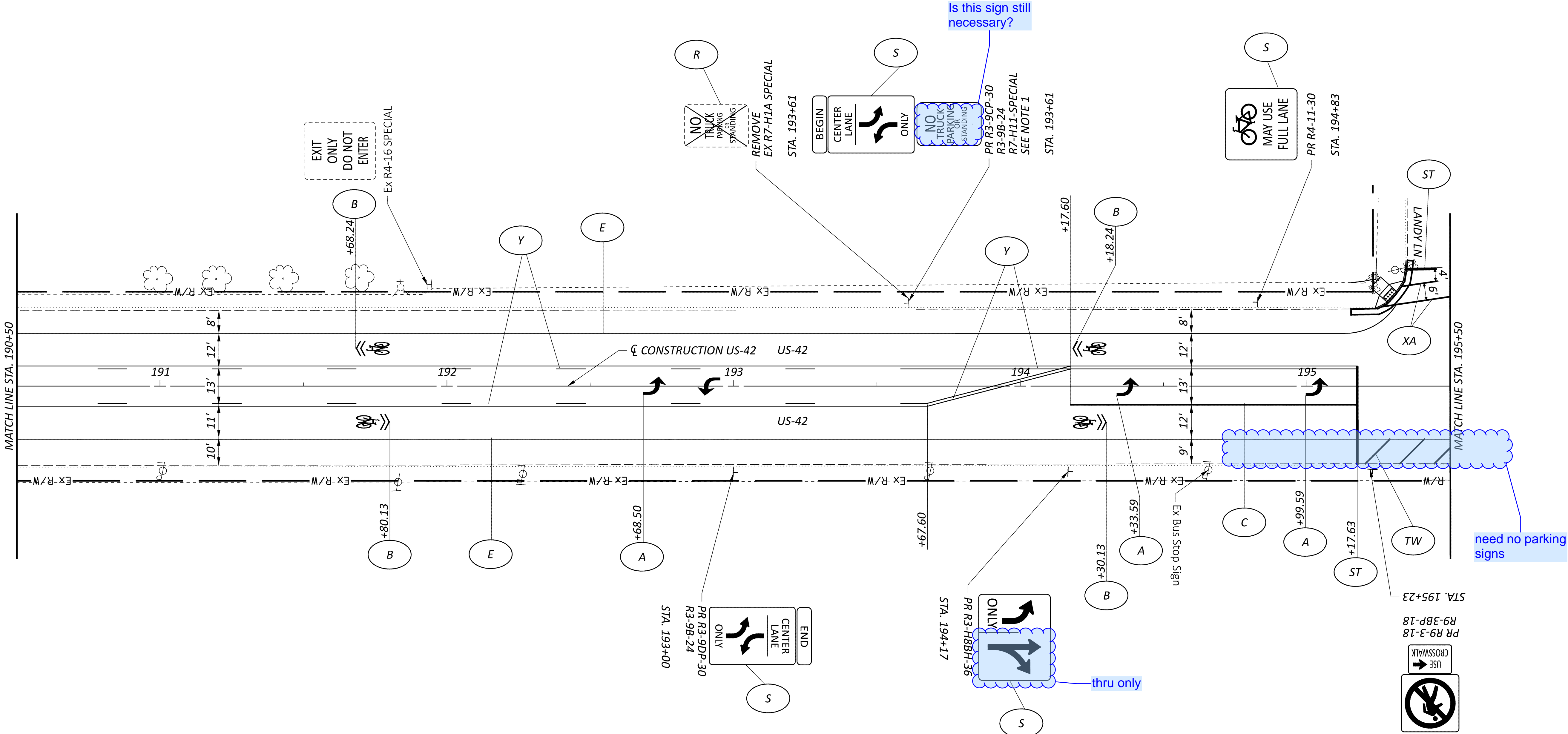
1. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.

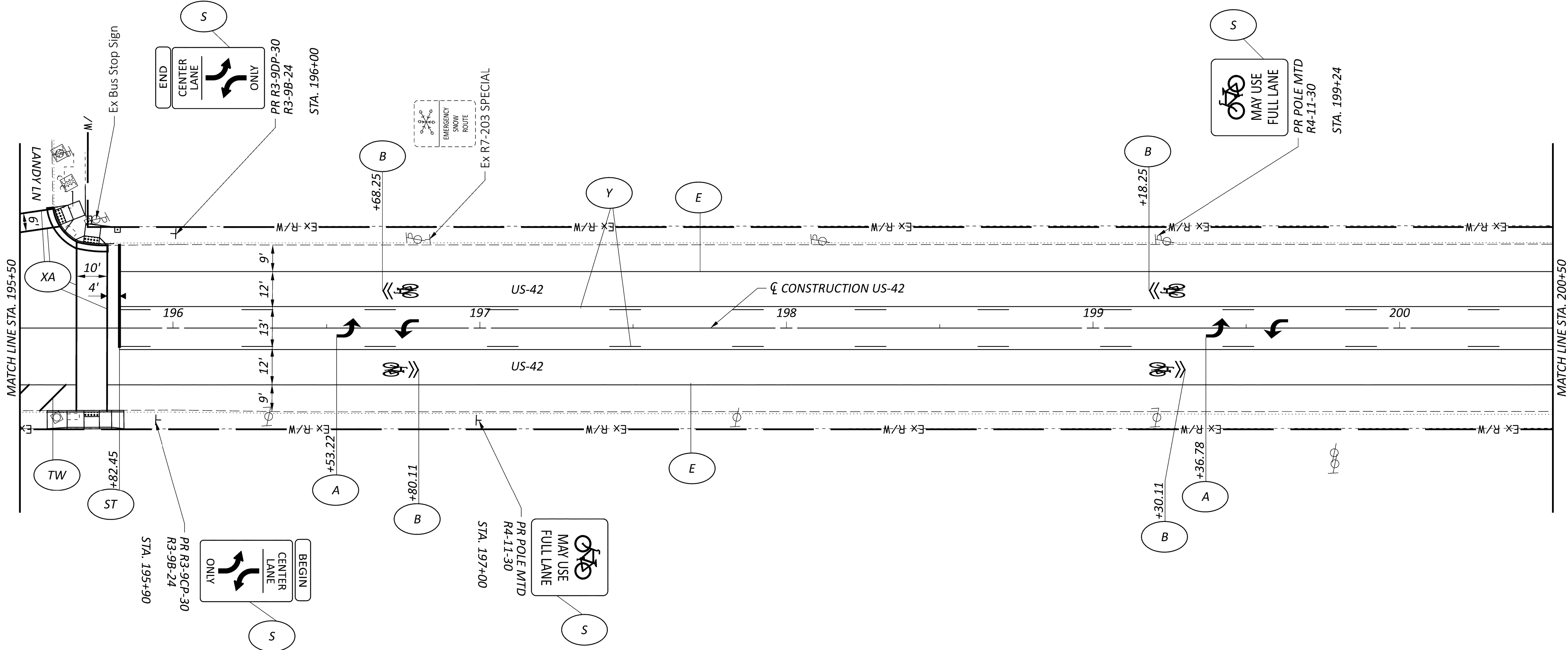




NOTES:

1. PARKING SIGNS SHALL BE MOUNTED AT A 45-DEGREE ANGLE WITH THE LINE OF TRAFFIC PER OMUTCD GUIDANCE.



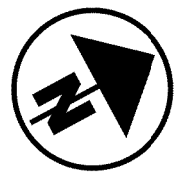
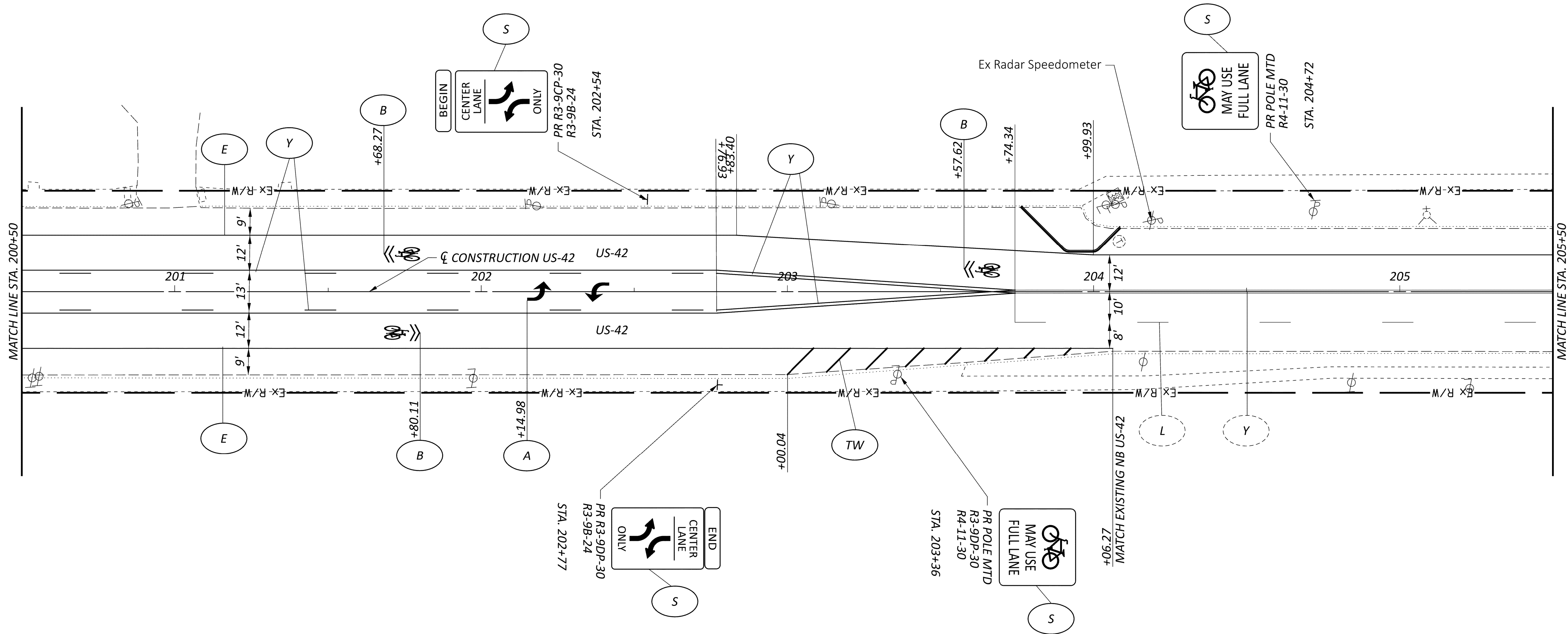


HAM US 42 10.07 READING RD

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pw://cmtegr-pw.bentley.com:cmtegr-projects/Documents/ODOT/VAM-US42-10.07_12.37 PID 123369/123369/400-Engineering/Traffic/Sheets/123369_TP120.dgn

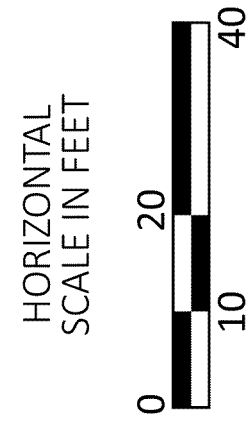
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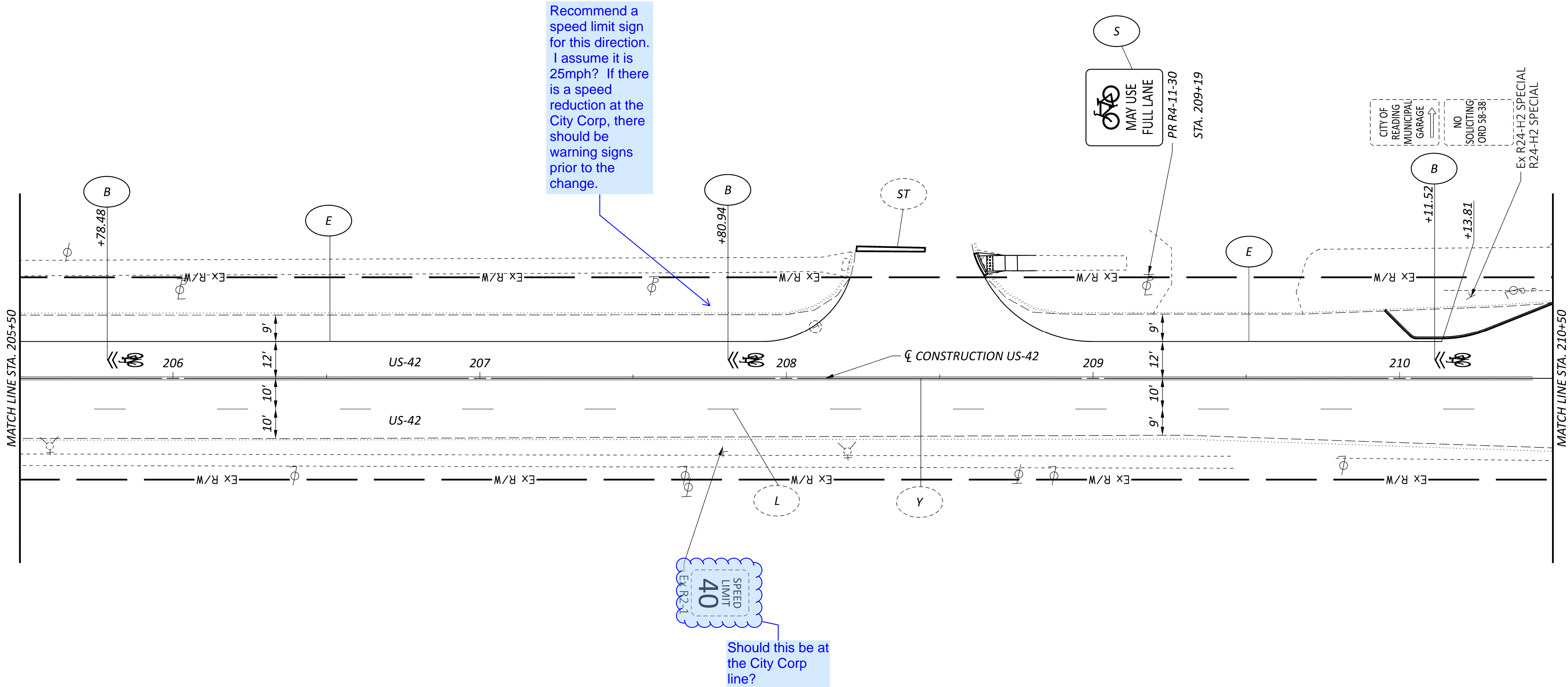
1. PROPOSED TRANSVERSE AND
CHEVRON LINES ARE SPACED AT
12' UNLESS OTHERWISE NOTED ON
THE PLANS.

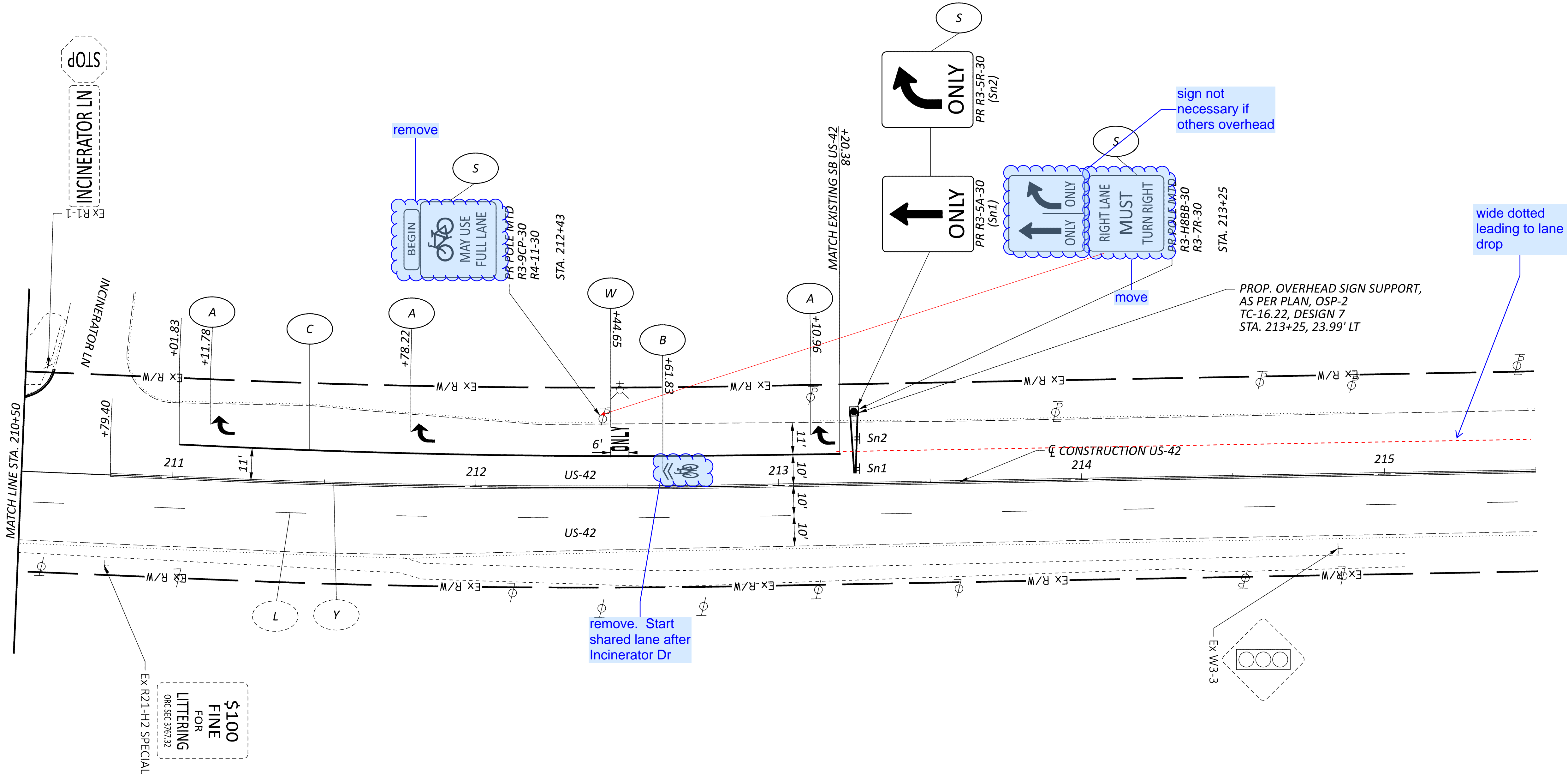


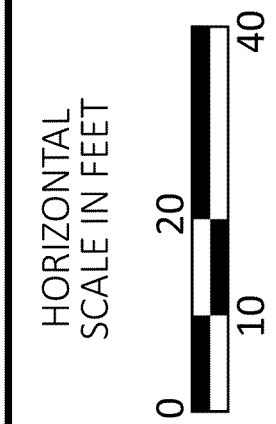
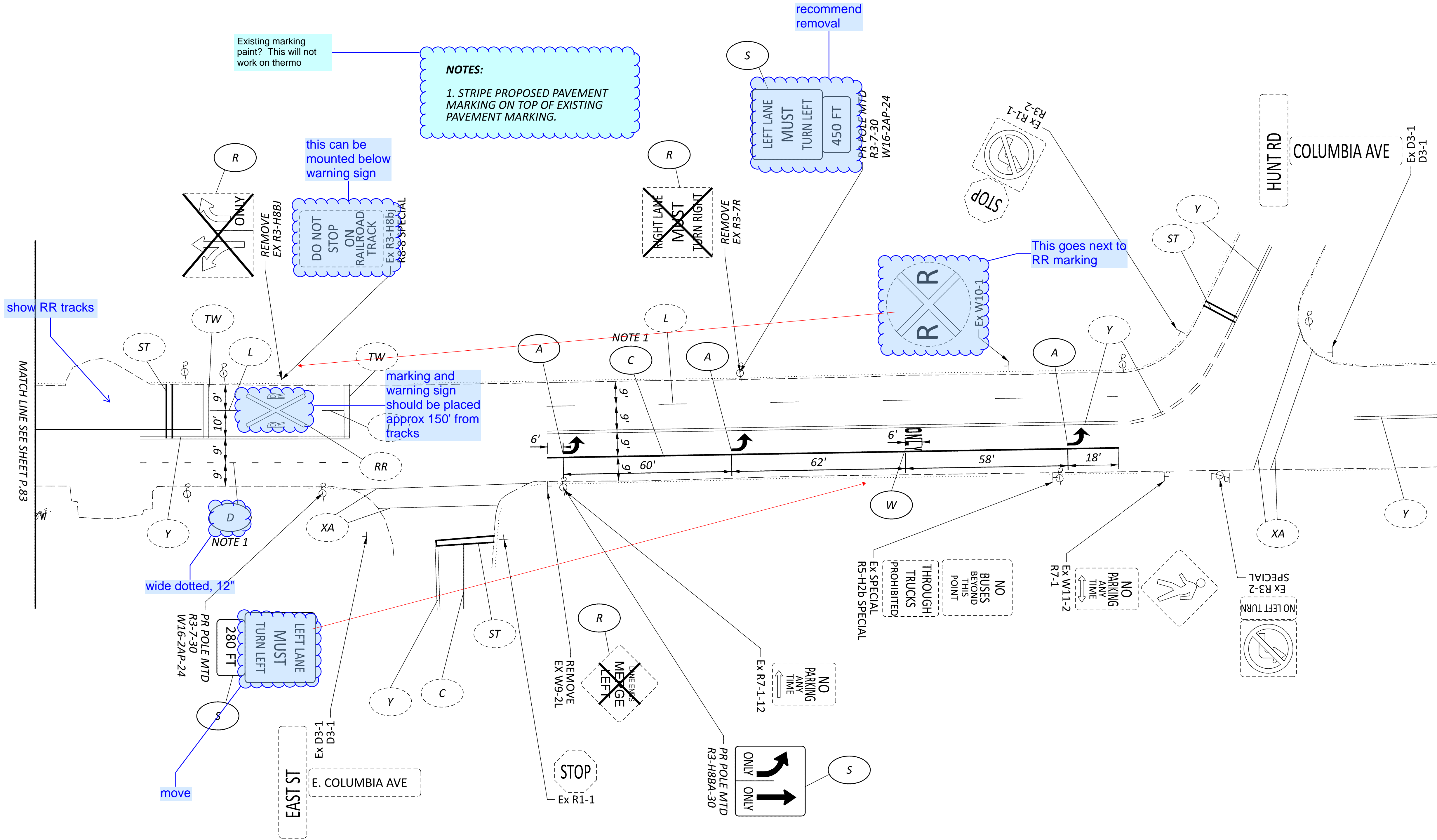
DESIGN AGENCY  CMT CRAWFORD, MURPHY & TILLY, INC. 7777 WASHINGTON VILLAGE DR SUITE 270 WILSONVILLE, OR 97158 PH (503) 700-4549 www.cmtengr.com	
DESIGNER	GSH
REVIEWER	SAK 09/18/2
PROJECT ID	123369
SHEET	TOTAL
P.89	104

TRAFFIC CONTROL
STA. 200+50 TO STA. 205+50









TRAFFIC CONTROL
COLUMBIA AVE (RAILROAD TRACKS TO HUNT RD)

DESIGN AGENCY	
 CHAWFORD, MURPHY & 1777 WASHINGTON VILLAGE DR DAYTON, OHIO 45419 PH (937) 761-2183 www.cmtengr.com	
DESIGNER	GSH
REVIEWER	SAK
PROJECT ID	09/18/25
SHEET	123369
P.92	TOTAL 104

GENERAL REQUIREMENTS

THE PURPOSE OF THIS SPECIFICATION AND THE ASSOCIATED PLANS IS TO PERFORM TRAFFIC SIGNAL EQUIPMENT ADJUSTMENTS AT NINE (9) EXISTING TRAFFIC SIGNAL LOCATIONS AT THE US ROUTE 42 (READING ROAD) CORRIDOR IN THE CITY OF READING, OHIO. THESE PLANS AND SPECIFICATIONS ARE TO RESULT IN THE COMPLETE INSTALLATION OF FULLY FUNCTIONAL TRAFFIC SIGNALS UTILIZING SIGNAL SUPPORTS (MAST ARMS) AND SHALL OPERATE ACCORDING TO THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

THE 2023 OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATION, LATEST REVISION, SHALL GOVERN THIS PROJECT EXCEPT WHEN OTHERWISE NOTED. ITEMS LISTED SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATION MANUAL, TO THE ODOT OFFICE OF ROADWAY ENGINEERING STANDARD CONSTRUCTION DRAWINGS, AND TO ANY SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIFIC REQUIREMENTS NOTED.

BIDDERS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE OHIO REVISED CODE AND ADMINISTRATIVE CODE.

POWER SUPPLY FOR TRAFFIC SIGNALS (COLUMBIA AVE)

ELECTRIC POWER AT THE US-42 AND COLUMBIA AVE SHALL BE OBTAINED FROM THE EXISTING POWER SOURCE. POWER SUPPLIED SHALL BE 120 VOLTS.

120/240v?

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

City

City. Revise all instances throughout these notes

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDON, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC

SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND THE CITY OF READING WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITES SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 620 DELINEATOR, POST GROUND MOUNTED, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 620, THE CONTRACTOR SHALL INSTALL DELINEATORS MOUNTED ON SEPARATORS AT LOCATIONS NOTED IN THE PLANS.

state colors to be provided, here or on the plan sheet legend

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH LOCATION REQUIRING ITEM 620 DELINATOR, POST GROUND MOUNTED, AS PER PLAN INSTALLATION, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 630 OVERHEAD SIGN SUPPORT, TYPE TC-16.22, (BY DESIGN), AS PER PLAN

IN ADDITION TO PROVISIONS OF THE ODOT C&MS, FURNISH AND INSTALL OVERHEAD SIGN SUPPORT AS SPECIFIED IN THE PLANS.

OVERHEAD SIGN SUPPORTS HAVE BEEN DESIGNED FOLLOWING ODOT SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN SHOP DRAWINGS FROM THE OVERHEAD SIGN SUPPORT MANUFACTURER VERIFYING THE SUPPORT MEETS THE INTENT OF THE PLANS. THE SHOP DRAWINGS SHALL HAVE AN OHIO PE STAMP AND BE PROVIDED TO THE ENGINEER PRIOR TO ORDERING. NO OVERHEAD SIGN SUPPORTS SHALL BE ORDERED PRIOR TO SUBMITTING THE SHOP DRAWING INFORMATION.

THE SUPPORT SHALL BE A ROUND TAPERED OVERHEAD SIGN SUPPORT CONSISTENT WITH THE ODOT STANDARD CONSTRUCTION DRAWING AND ITEM 630.06B OF THE ODOT CMS. POLES CONSISTING OF STRAIGHT SECTIONS WITH A TAPERED EFFECT ACCOMPLISHED BY THE USE OF REDUCERS SHALL NOT BE PERMITTED. POLES SHALL BE ROUND IN SHAPE. OCTAGON SHAPED POLES ARE NOT PERMITTED.

a detail showing this should be provided. This can be done with the elevation views for each structure

THE HORIZONTAL MAST ARM SHALL BE CURVED EXTENDING 6 FEET FROM THE VERTICAL SUPPORT AS SHOWN IN THE OVERHEAD SIGN SUPPORT DETAIL UNLESS OTHERWISE NOTED. THE CURVE OF THE MAST ARM SHALL HAVE A 3-6' RISE ABOVE THE POINT OF ATTACHMENT TO THE OVERHEAD SIGN SUPPORT. THE POLE HEIGHT SHALL BE NOTED IN THE SIGN ATTACHMENT CHART.

PAYMENT FOR ITEM 630 OVERHEAD SIGN SUPPORT, TC-16.22, (BY DESIGN), AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL DOCUMENTATION, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

IN ADDITION TO ITEM 630, SIGNS SHALL RIGIDLY ATTACHED TO THE MAST ARM INSTEAD OF BEING SUSPENDED FROM THE MAST ARM. THE SIGN SUPPORT ASSEMBLY SHALL COMPLY WITH ITEM 630.06 AND BE FULLY ADJUSTABLE TO ENABLE ORIENTATION OF SIGN FACES PERPENDICULAR TO THE APPROACH LANES. THIS ITEM SHALL INCLUDE ALL NECESSARY HARDWARE FASTENERS THAT ARE CORROSION RESISTANT, AND ACCESSORIES.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN IN PLACE.

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

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY. THE FLASHING UNIT SHALL BE SOLAR POWERED, PEDESTRIAN ACTIVATED, AND 2-SIDED WITH TWO LED ARRAY BASED YELLOW INDICATIONS ON EACH SIDE. 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).

GENERAL REQUIREMENTS
EACH RRFB SHALL CONSIST OF TWO RAPIDLY FLASHED RECTANGULAR-SHAPED YELLOW INDICATIONS HAVING LED ARRAY BASED LIGHT SOURCE.

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.).

edit note to add that there are to be audible with spoken message. (Accessible can mean different things to different contractors. Note that the spoken message for RRFB is different than the message for ped signals. May want to add that to the new pushbutton sign per the MUTCD

EACH RRFB SHALL CONTAIN A PEDESTRIAN INDICATION LIGHT VISIBLE TO THE PEDESTRIAN IN THE DIRECTION OF TRAVEL.

FUNCTIONAL REQUIREMENTS
EACH RRFB SHALL UTILIZE SOLAR POWER.

EACH RRFB SHALL BE ACTIVATED BY ADA COMPLIANT ACCESSIBLE PEDESTRIAN 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:

- 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. TO MINIMIZE EXCESSIVE GLARE DURING NIGHTTIME CONDITIONS, AN AUTOMATIC SIGNAL DIMMING DEVICE SHALL BE USED TO REDUCE THE BRILLIANCE OF THE RRFB INDICATIONS.
G. AN LED PEDESTRIAN 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.
H. THE PEDESTRIAN CONFIRMATION LIGHT SHALL HAVE A MINIMUM AREA OF 0.5 SQUARE INCHES AND BE CONSPICUOUS TO PEDESTRIANS AT ALL DISTANCES FROM THE BEGINNING OF THE CONTROLLED CROSSWALK TO A POINT 10 FEET FROM THE END OF THE CONTROLLED CROSSWALK DURING BOTH DAY AND NIGHT.

- SIGNS
A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.
B. ACCESSIBLE PEDESTRIAN PUSHBUTTONS SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON FOR WARNING LIGHTS / WAIT FOR GAP IN TRAFFIC". 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. ENSURE THE SIGN MEETS THE REQUIREMENTS OF C&MS 630.

- 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.

- 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. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS TOTAL OUTPUT.
B. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES- 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.
C. FASTENERS USED SHALL BE ANTI-VANDAL.

- 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.

- ACCESSIBLE PEDESTRIAN 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.

- 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 DEPARTMENT 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.: SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY.

ITEM 644 REMOVAL OF PAVEMENT MARKING

THE MAJORITY OF EXISTING PAVEMENT MARKINGS ON US-42 AND SIDE STREETS WITHIN THE PROJECT LIMITS ARE TO BE REMOVED AND REPLACED WITH PROPOSED PAVEMENT MARKINGS. THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS AS SHOWN IN THE PLANS. THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR PAVEMENT MARKINGS REMOVED WITHIN PROJECT LIMITS:

some markings are removed by each. Add a quantity for this work

ITEM 644 REMOVAL OF PAVEMENT MARKING – 8 MILE

ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PUSHBUTTON AND SIGN

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.26, THE CONTRACTOR SHALL FILL OR PLUG HOLES LEFT BEHIND ON THE SIGNAL OR PEDESTAL SUPPORT DUE TO REMOVING THE PUSHBUTTON AND ASSOCIATED SIGN.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID, PER EACH ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PUSHBUTTON AND SIGN, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM FOR EACH REMOVED PUSHBUTTON AND SIGN.

and disposal? Does the City want to salvage any equipment?

ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PEDESTRIAN SIGNAL HEAD

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.26, THE CONTRACTOR SHALL FILL OR PLUG HOLES LEFT BEHIND ON THE SIGNAL OR PEDESTAL SUPPORT DUE TO REMOVING THE PEDESTRIAN SIGNAL HEAD.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID, PER EACH ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PUSHBUTTON AND SIGN, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM FOR EACH REMOVED PUSHBUTTON AND SIGN.

pedestrian signal head

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN (COLUMBIA AVE)

A PORTION OF THE TRAFFIC SIGNAL INSTALLATION AT THE US-42 AND COLUMBIA AVE INTERSECTION, INCLUDING SIGNAL HEADS, CABLE, SIGNAL SUPPORTS (SW AND SE QUADRANTS), PULL BOXES, PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, SIGNS, ETC. SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. POWER SERVICES SHALL BE REMOVED IN ACCORDANCE WITH C&MS 625.21.F. REMOVED ITEMS SHALL BE STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF READING IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

- ITEMS TO BE STORED:
- PUSHBUTTON (4)
 - PUSHBUTTON SIGN (4)
 - PED SIGNAL HEAD (8)
 - VEH SIGNAL HEAD (8)
 - OVERHEAD SIGN (10)
 - POWER SERVICE (1)
 - SIGNAL SUPPORT (2)

what is salvaged with this?

THE CONTRACTOR SHALL CONTACT CITY OF READING TO DETERMINE A LOCATION AND TIME TO DELIVER THE EQUIPMENT.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF READING 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.

ITEMS NOT SPECIFIED FOR STORAGE SHALL BE DISPOSED OF BY THE CONTRACTOR.

ITEM 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE ACCESSIBLE PEDESTRIAN PUSHBUTTON SHALL MEET THE CURRENT REQUIREMENTS OF THE MUTCD AND THE ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY (PROWAG) REQUIREMENTS. PUSHBUTTONS SHALL BE INSTALLED SUCH THAT ITS FACE IS PARALLEL TO THE CROSSWALK IT IS SERVING.

spoken message?

THIS LINE ITEM SHALL INCLUDE AN APS AUDIBLE BEACON WIRED TO THE ACCESSIBLE PEDESTRIAN PUSHBUTTON. THE AUDIBLE BEACON SHALL BE MOUNTED ON TOP OF THE PEDESTRIAN HEAD FOR THE CORRESPONDING PEDESTRIAN CROSSING.

Specify color of pushbutton

PAYMENT FOR ITEM 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE ACCESSIBLE PEDESTRIAN PUSHBUTTON FURNISHED AND INSTALLED, INCLUDING ALL LABOR, AUDIBLE BEACON, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE

I think that all pushbuttons need to have audible messages to be accessible.

ITEM 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, AUDIBLE

IN ADDITION TO ITEM 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, THIS ITEM SHALL INCLUDE THE FOLLOWING FEATURES:

1. THE AUDIBLE MESSAGE SHALL ALERT VISUALLY IMPAIRED PEDESTRIANS OF THE WALK AND FLASH DON'T WALK INDICATIONS USING SPEECH MESSAGES INSTEAD OF AUDIBLE TONES. SAMPLE MESSAGE WORDING: "READING ROAD. WALK SIGN. ON TO CROSS READING ROAD." THE SPEECH MESSAGE MAY BE ACCESSED BY AN EXTENDED BUTTON PRESS.

I think the speech should activate with a normal button

2. THE APS DEVICE IS TONEABLE THE PHASE TO REST IN WALK AND THE AUDIBLE WALK MESSAGE BE ACTIVE DURING A PUSH PROGRAMMED TIME PERIOD AND THEN REVERT BACK TO THE LOCATOR TONE.

what is this time period?

PAYMENT FOR IT3M 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, AUDIBLE SHALL BE MADE FOR THE NUMBER OF COMPLETE PUSHBUTTONS FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

Crossing the main street should always be button activated with a speech message

SIGNAL SUPPORT AND PEDESTAL FOUNDATION ELEVATIONS

ELEVATIONS SHOWN IN THE PLANS FOR STRAIN POLE AND PEDESTAL FOUNDATIONS ARE FOR COMPUTATIONAL PURPOSES ONLY. THE ACTUAL ELEVATION OF THE FOUNDATION SHALL BE IN ACCORDANCE WITH TRAFFIC SCD TC-21.21 PROVIDED THE EXISTING SLOPE IS LESS THAN 6:1.

AT LOCATIONS WHERE THE EXISTING SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF FOUNDATION, AS SHOWN IN SCD TC-21.21 SHALL APPLY TO THE LOW SIDE OF THE SLOPE. THE TOP OF THE FOUNDATION SHALL BE SET 2 INCHES ABOVE THE EXISTING SURFACE ON THE HIGH SIDE OF THE SLOPE. THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP.

AT LOCATIONS WHERE THE FOUNDATION IS LOCATED ADJACENT TO A SIDEWALK, THE BURIED DEPTH OF FOUNDATION, AS SHOWN IN SCD TC-21.21 SHALL APPLY TO THE LOWEST ELEVATION ABOVE THE GROUND. THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP.

THE TOP OF FOUNDATION SHALL BE EQUAL TO THE ELEVATION OF THE PROPOSED SIDEWALK OR RAMP ADJACENT TO THE FOUNDATION. NOTE THAT THE ELEVATION MAY DIFFER DEPENDING UPON ELEVATION OF THE SIDEWALK OR RAMP ADJACENT TO THE FOUNDATION.

SIGNAL, PEDESTAL AND OVERHEAD SIGN SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL, PEDESTAL, AND OVERHEAD SIGN SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD. THEN, THE CONTRACTOR SHALL MEET THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORTS.

DUE TO THE FURTHER POSSIBILITY OF CONFLICT WITH EXISTING OR PROPOSED UNDERGROUND OBSTRUCTIONS (INCLUDING THE POSSIBILITY OF UNRECORDED OBSTRUCTIONS) WHICH COULD AFFECT THE LOCATION OF THE FOUNDATION FOR THIS ITEM, AND CONSEQUENTLY, THE DESIGN OF THE SUPPORT AND/OR ARMS, THE CONTRACTOR SHALL NOT PLACE FINAL ORDERS FOR THE ITEM UNTIL THE FOUNDATIONS HAVE BEEN INSTALLED, AT FINAL GRADE, AND THE CONTRACTOR HAS RECEIVED, FROM ENGINEER, WRITTEN NOTICE TO PROCEED WITH THE ORDERS FOR THE ITEM.

IF ANY FOUNDATION LOCATIONS MUST BE ADJUSTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND MAINTAINING AGENCY, WHO WILL DETERMINE THE REVISED LOCATION AND IF NEEDED, THE SUPPORT DESIGN. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DETERMINING THE REVISED DESIGN. THE ENGINEER WILL INFORM THE CONTRACTOR OF ANY CHANGES NECESSARY AND AUTHORIZE THE CONTRACTOR TO ORDER THE SUPPORT.

THE CONTRACTOR SHALL, WHEN DEVELOPING THE PROGRESS SCHEDULE, AND THOSE OF 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 ORDERING, MANUFACTURING, DELIVERY, AND INSTALLATION OF THE SUPPORT ITEMS AFTER THE FOUNDATIONS ARE IN PLACE.

NO PAYMENTS FOR DELIVERED MATERIALS FOR THE FOUNDATION OR SUPPORT ITEMS SHALL BE MADE UNTIL THE FOUNDATIONS ARE IN PLACE, AND IF CHANGES IN THE DESIGN OF THIS ITEM ARE REQUIRED, NO PAYMENT SHALL BE MADE FOR THE ITEMS MANUFACTURED TO THE ORIGINAL DESIGN.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

ITEM 632 POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER C&MS ITEM 632 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER-OPERATED BYPASS.

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS ITEM 632 - POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE ILLUMINATING MAY REQUIRE FOR THE POWER

SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPlice POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE CITY OF READING.

THE COST FOR ALL NECESSARY ITEMS AND ASSOCIATED LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 632 - POWER SERVICE, AS PER PLAN

ITEM 632 REUSE OF TRAFFIC CONTROL ITEM: PULLBOX

EXISTING PULLBOXES THAT ARE NOTED AS BEING REUSED IN THE PLANS ARE EXPECTED TO BE DISTURBED DUE TO NEW CABLE OR CONDUIT INSTALLATION, OR READJUSTED DUE TO PROPOSED SIDEWALK. IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.27 THE FOLLOWING SHALL BE THE REMOVAL OF

1. REUSED PULLBOXES SHALL BE CLEAR OF DEBRIS AND UNUSED EQUIPMENT PRIOR TO OPERATING THE SIGNAL.

2. AT LOCATIONS WHERE THE PULLBOX HAS BEEN READJUSTED AS NOTED IN THE PLANS, THE CONTRACTOR SHALL REUSE THE EXISTING PULLBOX BY REGRADING AND/OR ROTATING THE PULL BOX WHEN NECESSARY, SUCH THAT THE TOP OF PULL BOX ELEVATION EQUALS THE ELEVATION OF THE SURROUNDING SIDEWALK.

COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN UNIT PRICE BID OF EACH ITEM 632 REUSE TRAFFIC CONTROL ITEM: PULLBOX.

ITEM 632 REUSE OF VEHICULAR SIGNAL HEAD

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.06 AND 632.27, THIS LINE ITEM SHALL CONSISTS OF RELOCATING AN EXISTING VEHICULAR SIGNAL HEAD TO THE PROPOSED LOCATION AT THE EXISTING SIGNAL ARM SUPPORT NOTED IN THE PLANS.

AT LOCATIONS WHERE VEHICULAR SIGNAL HEAD IS RELOCATED CLOSER TO THE VERTICAL SUPPORT, THE EXISTING SIGNAL SUPPORT IS EXPECTED TO ACCOMMODATE THE NEW LOAD DUE TO SHORTER RESULTING MOMENT ARM.

EXISTING VEHICULAR SIGNAL HEAD RELOCATED ON THE SAME SIGNAL SUPPORT SHALL REUSE THE EXISTING CABLE.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH REUSED VEHICULAR SIGNAL HEAD AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY FOR INSTALLING REUSED VEHICULAR SIGNAL HEAD.

ITEM 633 CONTROLLER ITEM, MISC.: REPROGRAMMING OF EXISTING CONTROLLERS

THIS ITEM WILL COVER ANY REPROGRAMMING OR PHASING MODIFICATIONS REQUIRED FOR EXISTING CONTROLLERS WHICH ARE TO REMAIN IN SERVICE. THE REPROGRAMMING EFFORT SHALL INCLUDE PROGRAMMING OF PEDESTRIAN AND VEHICULAR PHASES, AND UPLOADING PROPOSED SIGNAL TIMING CHANGES AS SHOWN IN THE PLANS.

CONTROLLER REPROGRAMMING WILL BE MEASURED PER EXISTING CONTROLLER PROGRAMMED OR MODIFIED. PAYMENT WILL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO COMPLETE THE WORK TO HAVE THE INTERSECTION OPERATE AS INTENDED.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE 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: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/ INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

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 CURRENT 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 COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE 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 THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

Is any of this being supplied by the contractor? If not, remove.

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GSB

REVIEWER

SAK 09/18/25

PROJECT ID

123369

SHEET

P.94

TOTAL

104

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 No.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/	PED SIGNAL
1/	BLACK/	GREEN BALL/	NO.1 WALK
2/	WHITE/	AC NEUTRAL/	AC NEUTRAL
3/	RED/	RED BALL/	NO.1 DW/FDW
4/	GREEN/	EQUIPMENT GROUND/	EQUIPMENT GROUND
5/	ORANGE/	YELLOW BALL/	NO.2 DW FDW
6/	BLUE/GRN	ARROW/	NO.2 WALK
7/	WHITE W/ BLK STRIPE	YELLOW ARROW/	NOT USED

6. POWER 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.

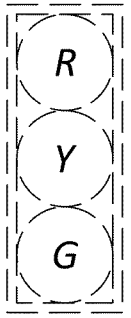
B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

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.

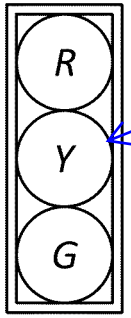
7. PAYMENT – ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

SIGNAL HEADS



EX. SIGNAL HEAD

4A, 4B, 8A, 8B



REUSED SIGNAL HEAD (SEE NOTE 1)

2A, 2B, 6A, 6B



EX. PEDESTRIAN SIGNAL HEAD

P2, P5, P6



PR. PEDESTRIAN SIGNAL HEAD

P1, P3, P4

It looks like all heads are mounted on green, do not have backplates and are yellow in color. This may be a typical comment for all signals

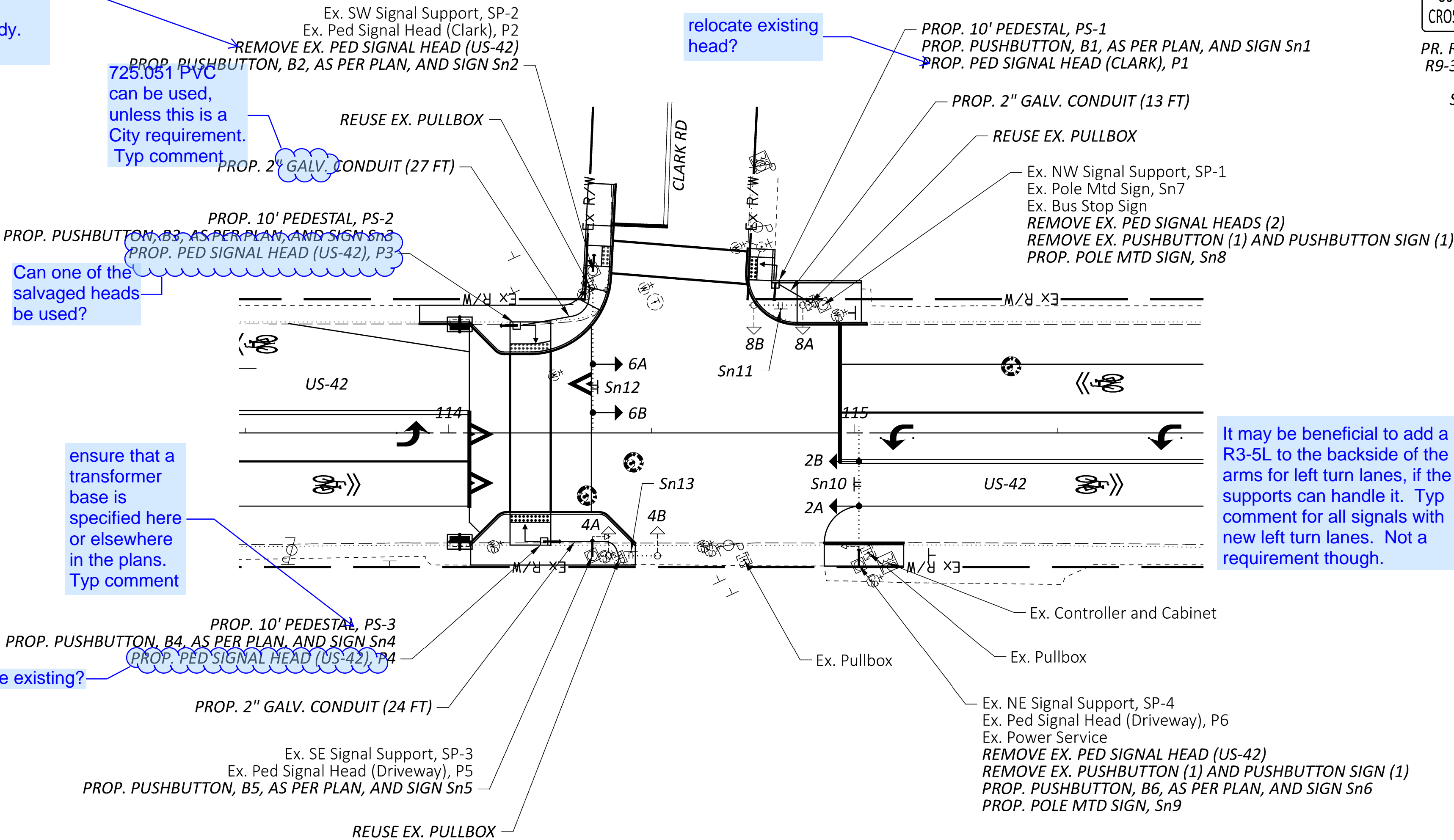
For existing heads not impacted by project, why is new head proposed? They look like type D2 countdown already. Typ comment

725.081 PVC can be used, unless this is a City requirement. Typ comment

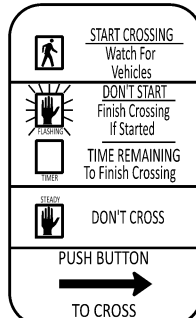
Can one of the salvaged heads be used?

ensure that a transformer base is specified here or elsewhere in the plans. Typ comment

Reuse existing?

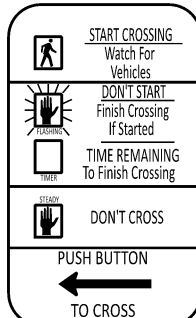


SIGNS



PR. R10-3E-9

Sn3, Sn4, Sn5, Sn6



PR. R10-3E-9

Sn1, Sn2



EX. SPECIAL SIGN

Sn7



PR. R9-3-18 R9-3BP-18

Sn8



PR. R9-3-18 R9-3BP-18

Sn9



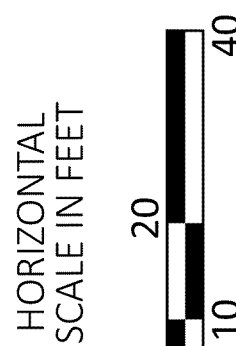
EX. D3-1

Sn11, Sn13



REUSED EX. D3-1

Sn10, Sn12



SIGNAL PLAN
US-42 AT CLARK RD

NOTES:

1. CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.

REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON	(2)
PUSHBUTTON SIGN	(2)
PED SIGNAL HEAD	(4)

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

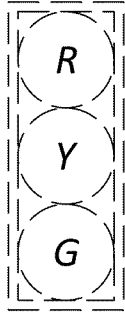
SHEET

P.96

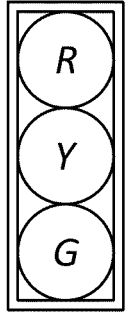
TOTAL

104

SIGNAL HEADS



EX. SIGNAL HEAD
4A, 4B,
8A, 8B



REUSED SIGNAL HEAD
(SEE NOTE 1)
2A, 2B,
6A, 6B

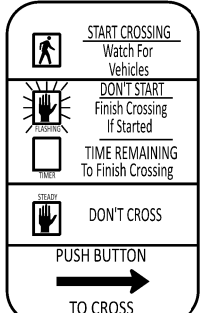


EX. PEDESTRIAN SIGNAL HEAD
P1, P2,
P5, P6

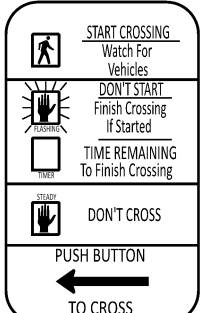


PR. PEDESTRIAN SIGNAL HEAD
P3, P4

SIGNS



PR. R10-3E-9
Sn1, Sn2,
Sn4, Sn5



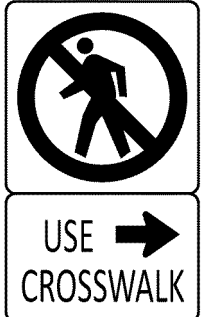
PR. R10-3E-9
Sn3, Sn6

READING RD

EX. D3-1
Sn10, Sn12



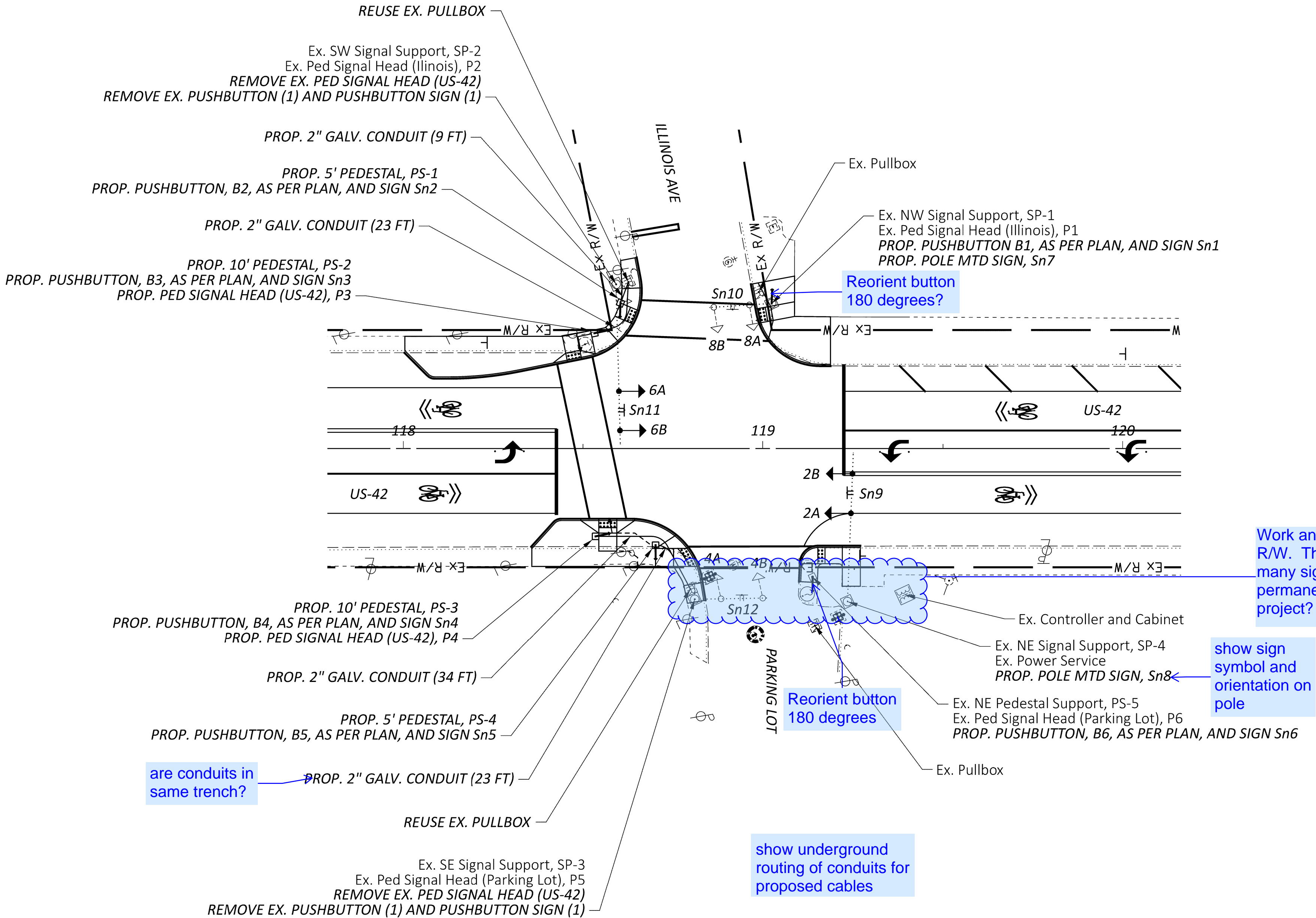
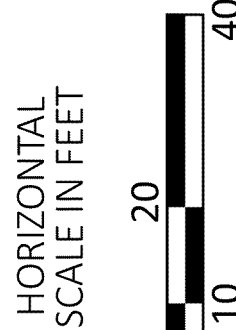
PR. R9-3-18
R9-3BP-18
Sn7



PR. R9-3-18
R9-3BP-18
Sn8

ILLINOIS AVE

REUSED EX. D3-1
Sn9, Sn11



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON	(2)
PUSHBUTTON SIGN	(2)
PED SIGNAL HEAD	(2)

- NOTES:
1. CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
 2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
 3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY. EXISTING SIGNAL PHASING SHALL BE RETAINED.

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

SIGNAL PLAN
US-42 AT ILLINOIS AVE

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

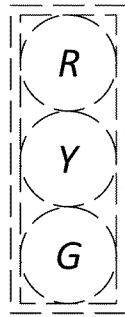
PROJECT ID

123369

SHEET TOTAL

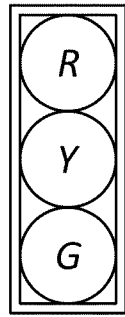
P.97 104

SIGNAL HEADS



EX. SIGNAL HEAD

4A, 4B, 6C, 8A, 8B



REUSED SIGNAL HEAD (SEE NOTE 1)

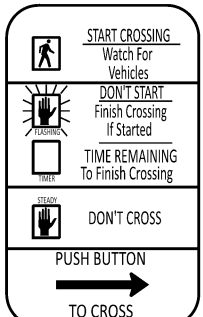
2A, 2B, 6A, 6B



EX. PEDESTRIAN SIGNAL HEAD

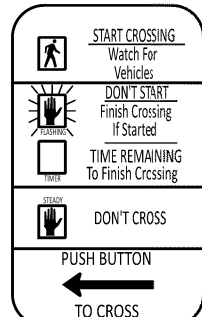
P1, P2, P3, P4
P5, P6, P7, P8

SIGNS



PR. R10-3E-9

Sn1, Sn3, Sn7



PR. R10-3E-9

Sn2, Sn4, Sn5, Sn6, Sn8

READING RD

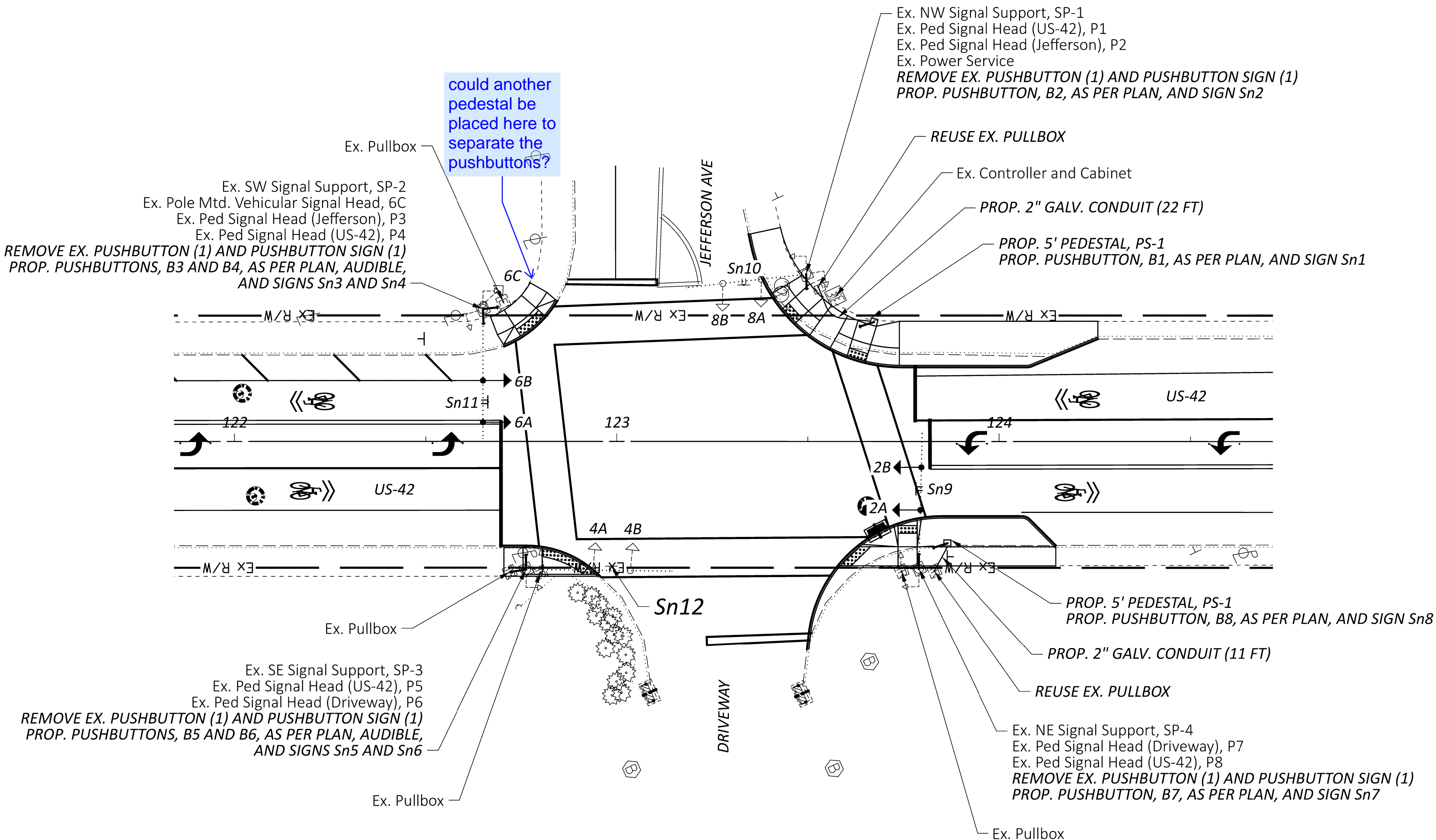
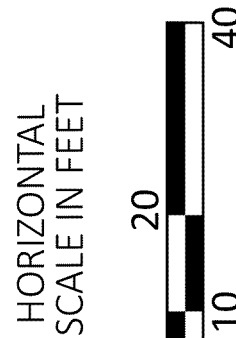
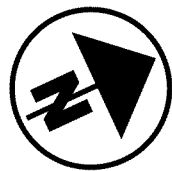
EX. D3-1

Sn10, Sn12

JEFFERSON AVE

REUSED EX. D3-1

Sn9, Sn11



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON (2)
PUSHBUTTON SIGN (2)

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

NOTES:

- CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
- EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
- SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.

SIGNAL PLAN
US-42 AND JEFFERSON AVE

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

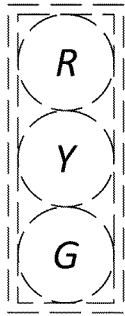
SHEET

P.98

TOTAL

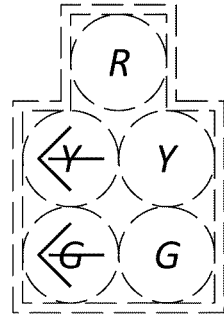
104

SIGNAL HEADS



EX. SIGNAL HEAD

4B, 8A



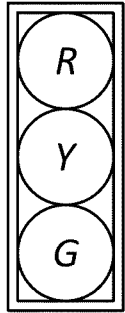
EX. SIGNAL HEAD

4A, 8B



EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P3, P4,
P5, P6, P7, P8

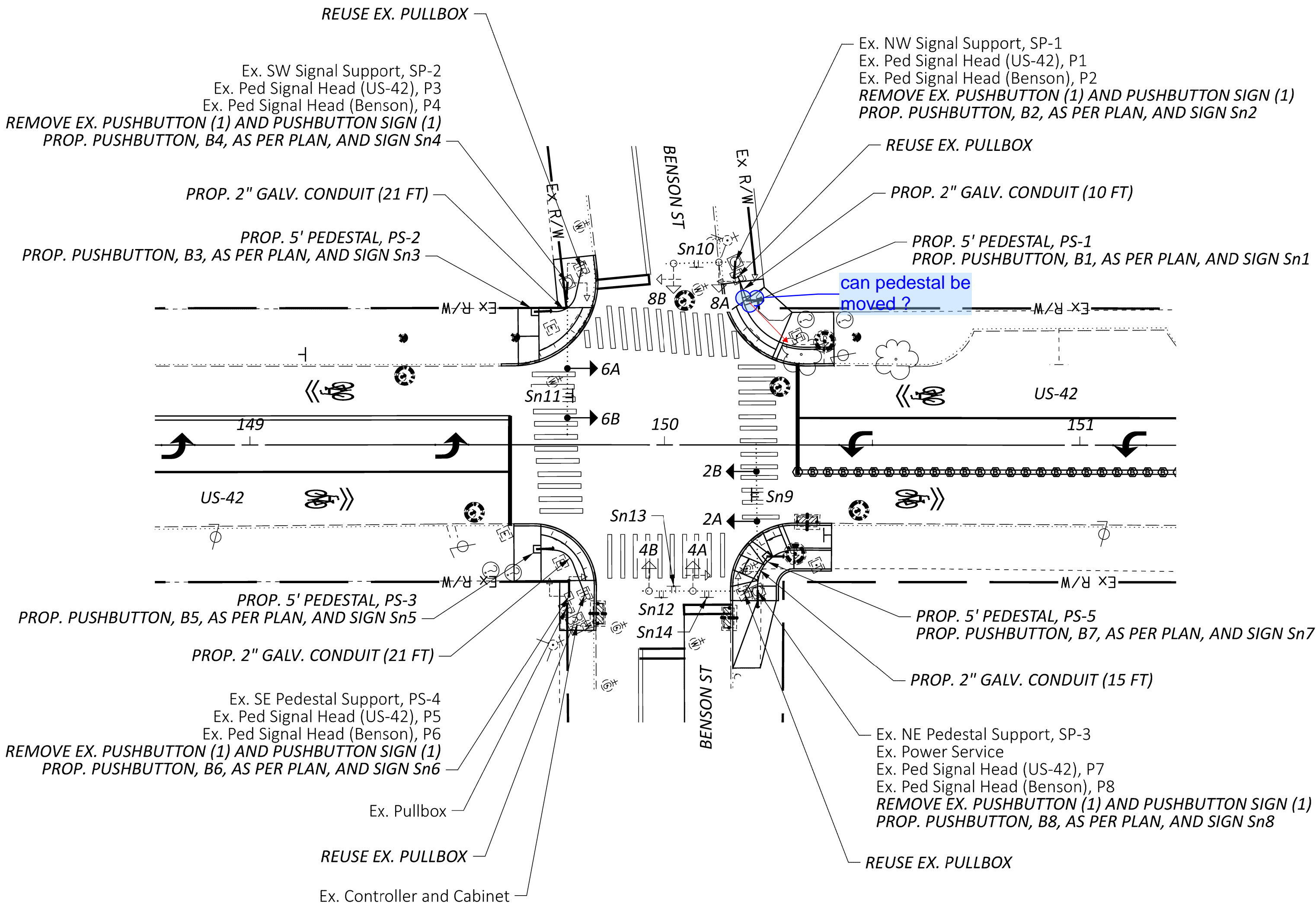


REUSED SIGNAL HEAD (SEE NOTE 1)

2A, 2B,
6A, 6B

NOTES:

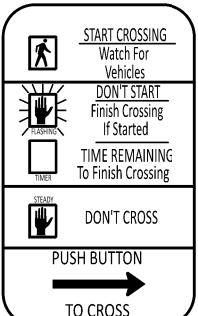
- CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
- EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
- SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

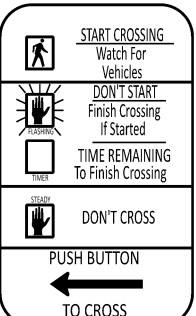
- | | |
|-----------------|-----|
| PUSHBUTTON | (4) |
| PUSHBUTTON SIGN | (4) |

SIGNS



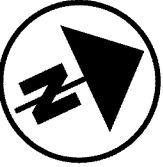
PR. R10-3E-9

Sn4, Sn5,
Sn7



PR. R10-3E-9

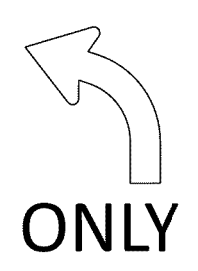
Sn1, Sn2,
Sn3, Sn6, Sn8



READING RD

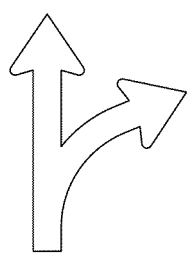
EX. D3-1

Sn10, Sn13



EX. R3-5L

Sn12



EX. R3-6R

Sn14

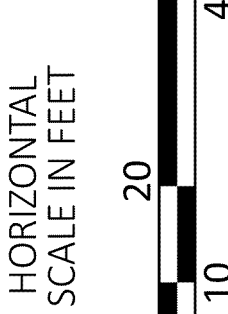
BENSON ST

REUSED EX. D3-1

Sn9, Sn11

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		



SIGNAL PLAN
US-42 AT BENSON ST

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

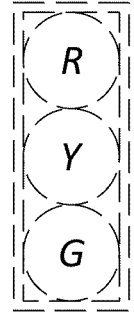
SHEET

P.99

TOTAL

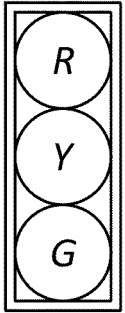
104

SIGNAL HEADS



EX. SIGNAL HEAD

4A, 4B, 8A, 8B



REUSED SIGNAL HEAD (SEE NOTE 1)

2A, 2B, 6A, 6B



EX. PEDESTRIAN SIGNAL HEAD

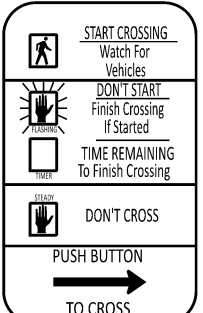
P2, P3, P6, P7, P8



PR. PEDESTRIAN SIGNAL HEAD

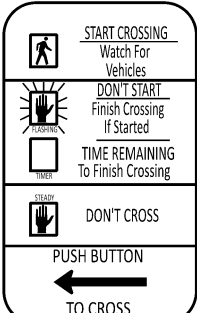
P1, P4, P5

SIGNS



PR. R10-3E-9

Sn1, Sn2, Sn8



PR. R10-3E-9

Sn3, Sn4, Sn5, Sn6, Sn7

READING RD

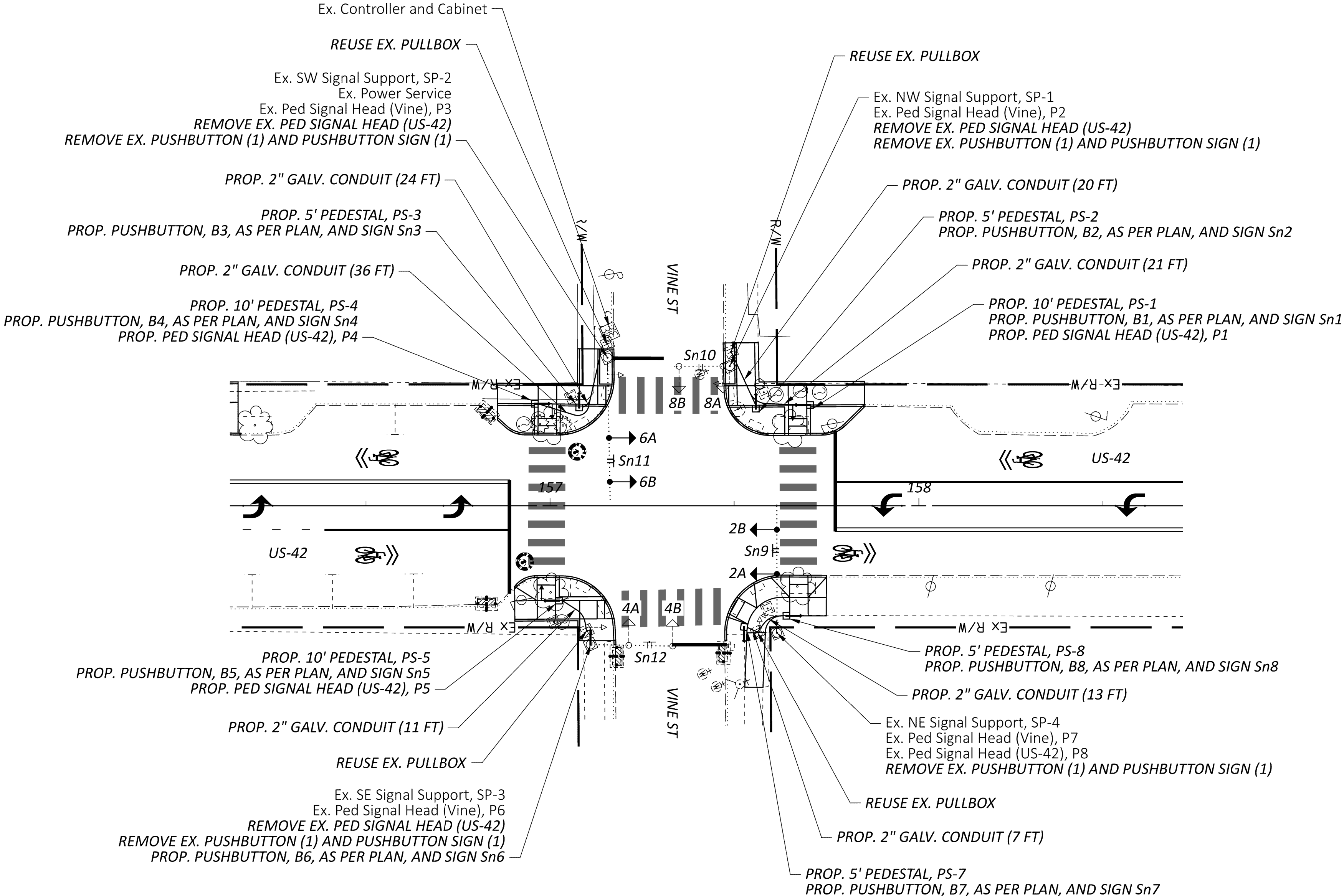
EX. D3-1

Sn10, Sn12

VINE ST

REUSED EX. D3-1

Sn9, Sn11



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON	(4)
PUSHBUTTON SIGN	(4)
PED SIGNAL HEAD	(3)

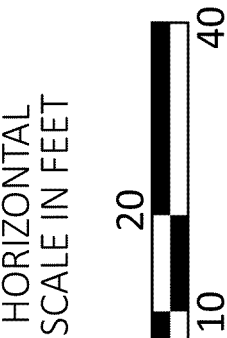
LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

NOTES:

1. CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.

SIGNAL PLAN
US-42 AT VINE ST



DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

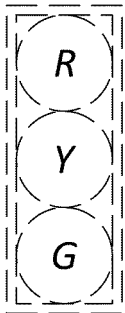
SHEET

P.100

TOTAL

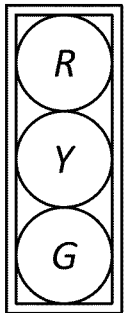
104

SIGNAL HEADS



EX. SIGNAL HEAD

4A, 4B, 8A, 8B



REUSED SIGNAL HEAD
(SEE NOTE 1)

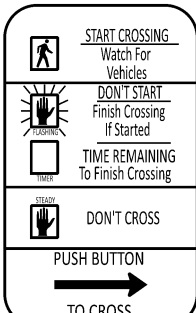
2A, 2B, 6A, 6B



EX. PEDESTRIAN SIGNAL HEAD

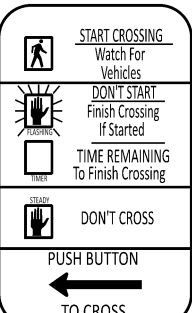
P1, P2, P3, P4, P5, P6, P7, P8

SIGNS



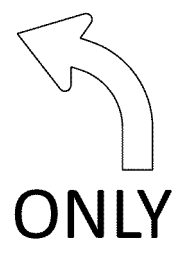
PR. R10-3E-9

Sn2, Sn7, Sn8



PR. R10-3E-9

Sn1, Sn3, Sn4, Sn5, Sn6



EX. R3-5L

Sn10, Sn13

READING RD

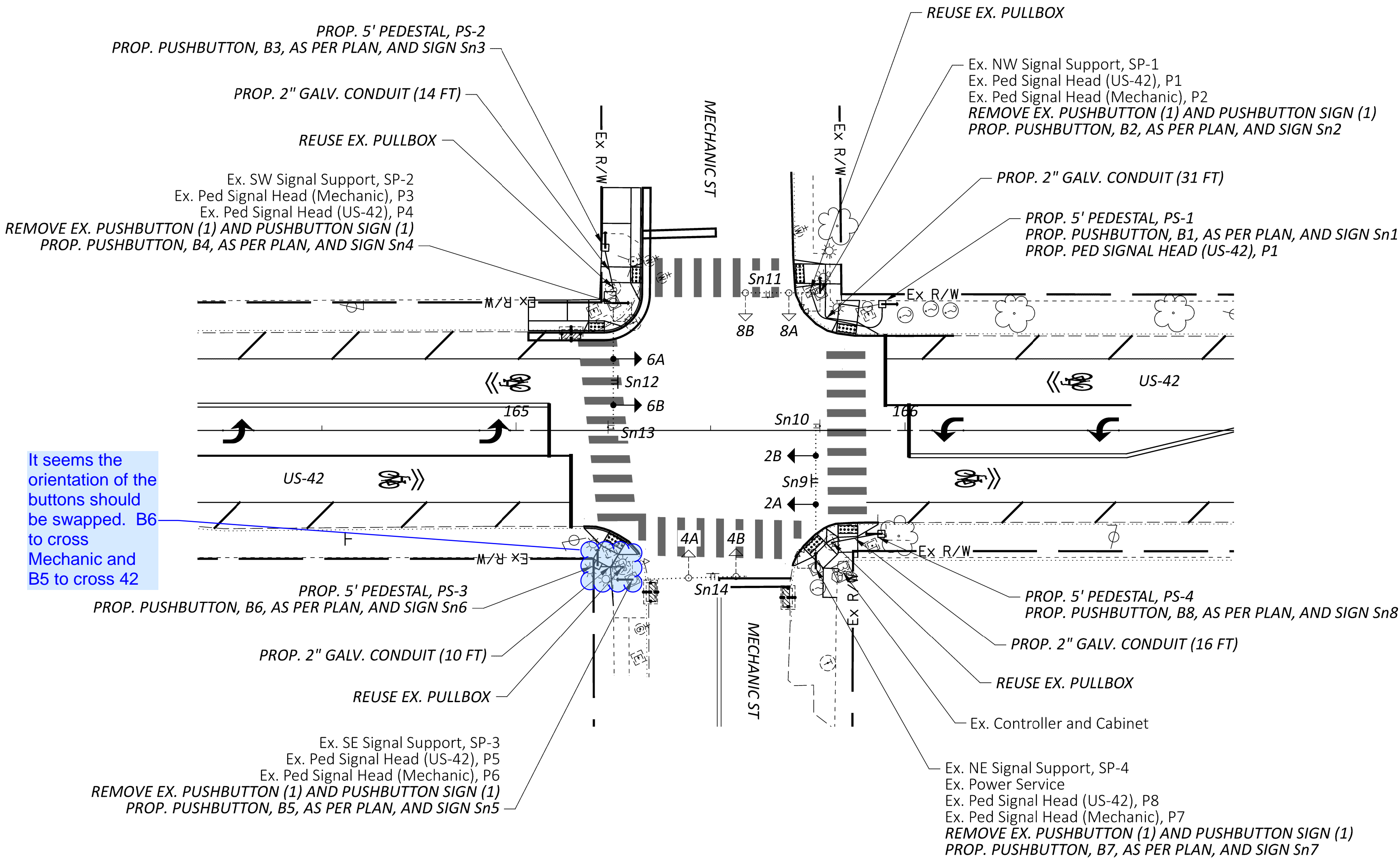
EX. D3-1

Sn11, Sn14

MECHANIC ST

REUSED EX. D3-1

Sn9, Sn12



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

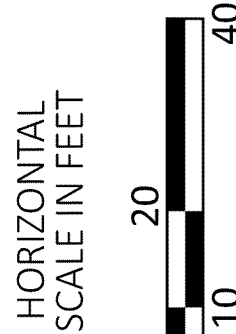
PUSHBUTTON (4)
PUSHBUTTON SIGN (4)

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

NOTES:

- CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
- EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
- SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.



SIGNAL PLAN
US-42 AT MECHANIC ST

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

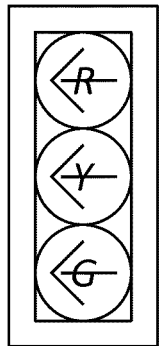
SHEET

P.101

TOTAL

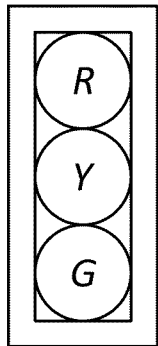
104

SIGNAL HEADS



PR. SIGNAL HEAD

1A, 1B, 5A



PR. SIGNAL HEAD

2A, 2B, 4A, 4B, 6A, 6B, 8A, 8B



EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P7, P8



PR. PEDESTRIAN SIGNAL HEAD

P3, P4, P5, P6

could the left turn lane utilize this space for positive offset and run concurrent with phase 1 and be permitted with phase 2? May require a new support for SP-4, but it could be justified for operational efficiency. (Could also place the dual left lane use signs on the backside of a longer mast arm.)

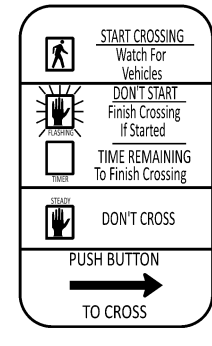
what is this pull box used for?

Show utilities and confirm if any utilities, aerial or underground, are in conflict

PULLBOX TABLE

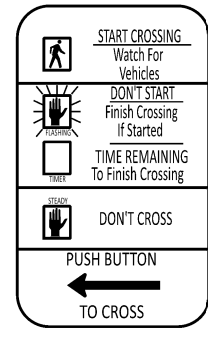
PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	-	LT	-	18
PB2	-	RT	-	18
-	-	-	-	-

SIGNS



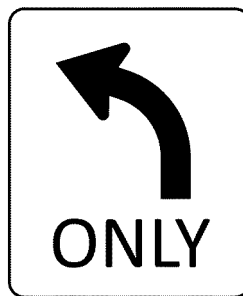
PR. R10-3E-9

Sn2, Sn3, Sn5, Sn7



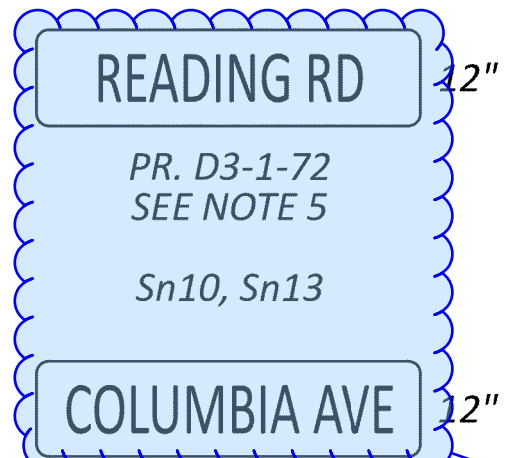
PR. R10-3E-9

Sn1, Sn4, Sn6, Sn8



PR. R3-5L-30

Sn12, Sn14



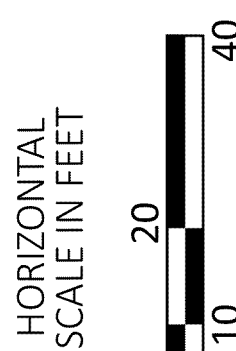
READING RD

PR. D3-1-72
SEE NOTE 5
Sn10, Sn13

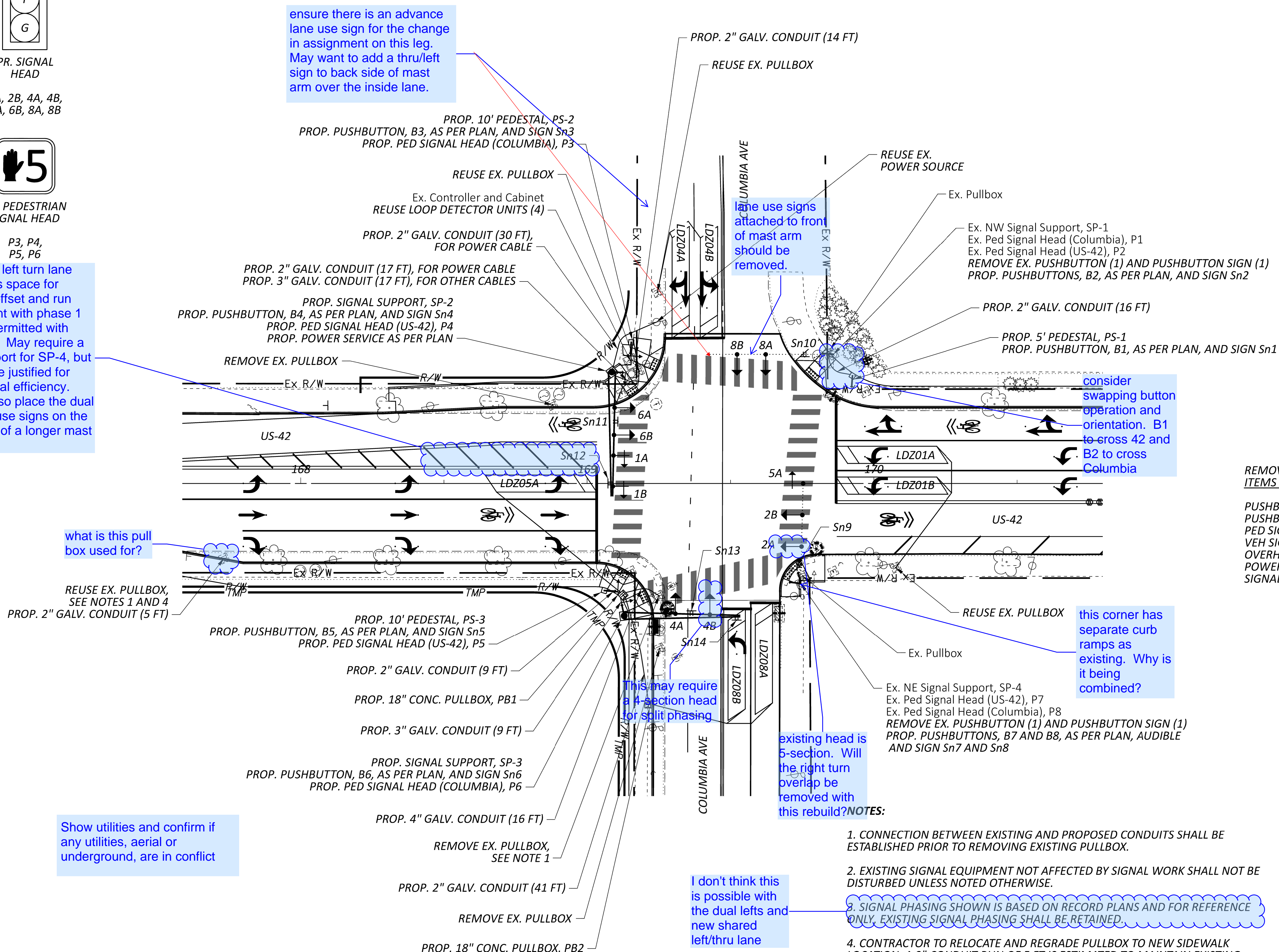
COLUMBIA AVE

PR. D3-1-72
SEE NOTE 5

proposed street name signs shall use upper/lower case lettering



SIGNAL PLAN
US-42 AT COLUMBIA AVE



REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON	(4)
PUSHBUTTON SIGN	(4)
PED SIGNAL HEAD	(8)
VEH SIGNAL HEAD	(8)
OVERHEAD SIGN	(10)
POWER SERVICE	(1)
SIGNAL SUPPORT	(2)

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		
DETECTOR LOOP		

1. CONNECTION BETWEEN EXISTING AND PROPOSED CONDUITS SHALL BE ESTABLISHED PRIOR TO REMOVING EXISTING PULLBOX.
2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY. EXISTING SIGNAL PHASING SHALL BE RETAINED.
4. CONTRACTOR TO RELOCATE AND REGRADE PULLBOX TO NEW SIDEWALK LOCATION. A 2" CONDUIT RUN OF 5 FT IS ESTIMATED TO MAINTAIN EXISTING CONNECTIONS.
5. SHOWN WIDTH OF STREET NAME SIGNS (D3-1) ARE FOR COMPUTATIONAL PURPOSES ONLY. ACTUAL DIMENSIONS SHALL MATCH EXISTING, BE DETERMINED BY MANUFACTURER, AND MEET ODOT STANDARDS.

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

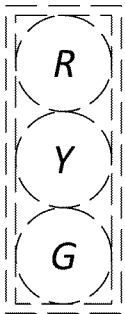
SHEET

P.102

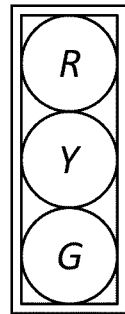
TOTAL

104

SIGNAL HEADS



EX. SIGNAL HEAD
8A, 8B



REUSED SIGNAL HEAD
(SEE NOTE 1)
2A, 2B,
6A, 6B



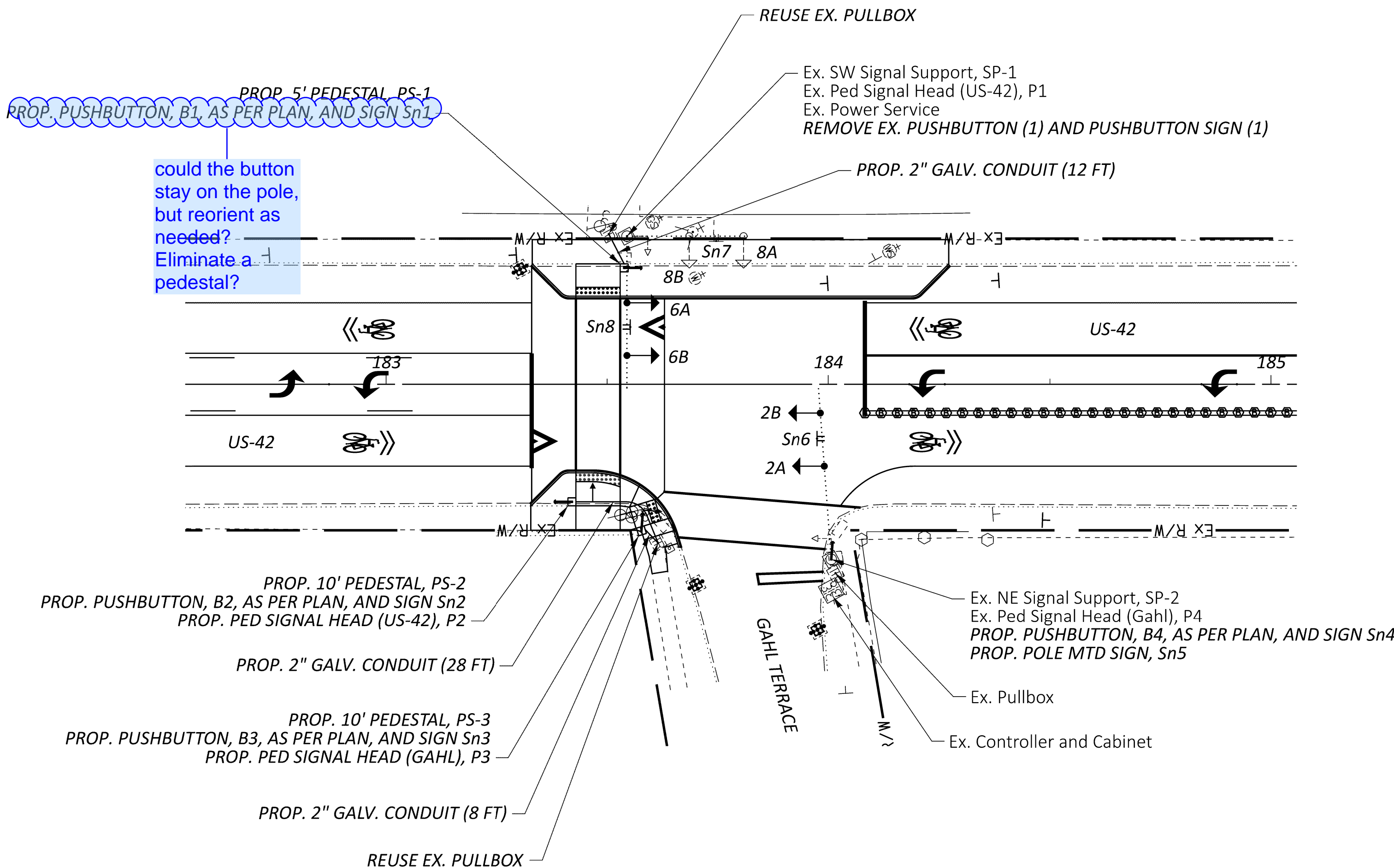
EX. PEDESTRIAN SIGNAL HEAD
P1, P4



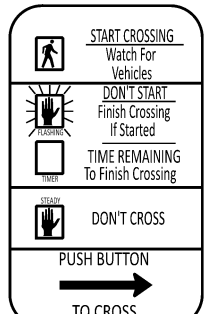
PR. PEDESTRIAN SIGNAL HEAD
P2, P3

NOTES:

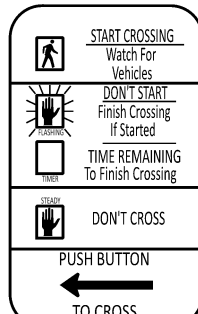
1. CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.



SIGNS



PR. R10-3E-9
Sn4



PR. R10-3E-9
Sn1, Sn2,
Sn3



PR. R9-3-18
R9-3BP-18
Sn5

READING RD

EX. D3-1
Sn7

GAHL TER

REUSED EX. D3-1
Sn6, Sn8

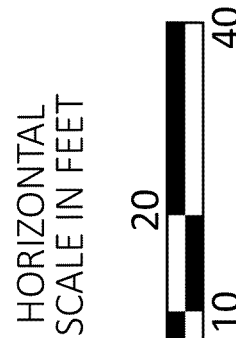
REMOVAL OF TRAFFIC SIGNAL ITEMS FOR STORAGE:

PUSHBUTTON	(2)
PUSHBUTTON SIGN	(2)
PED SIGNAL HEAD	(2)
PEDSTAL	(1)

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

SIGNAL PLAN
US-42 AT GAHL TERRACE



DESIGN AGENCY



DESIGNER

GSH

REVIEWER

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PROJECT ID

123369

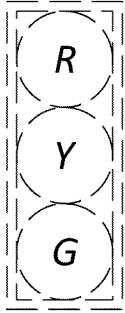
SHEET

P.103

TOTAL

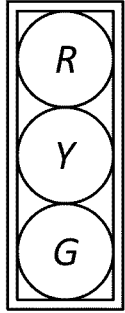
104

SIGNAL HEADS



EX. SIGNAL HEAD

4A, 4B



REUSED SIGNAL HEAD (SEE NOTE 1)

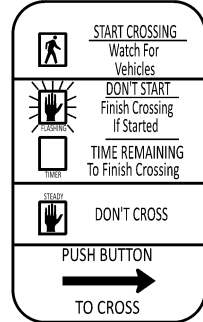
2A, 2B, 6A, 6B



EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P3, P4

SIGNS



PR. R10-3E-9

Sn1, Sn2, Sn3, Sn4



PR. R9-3-18

R9-3BP-18

Sn8

READING RD

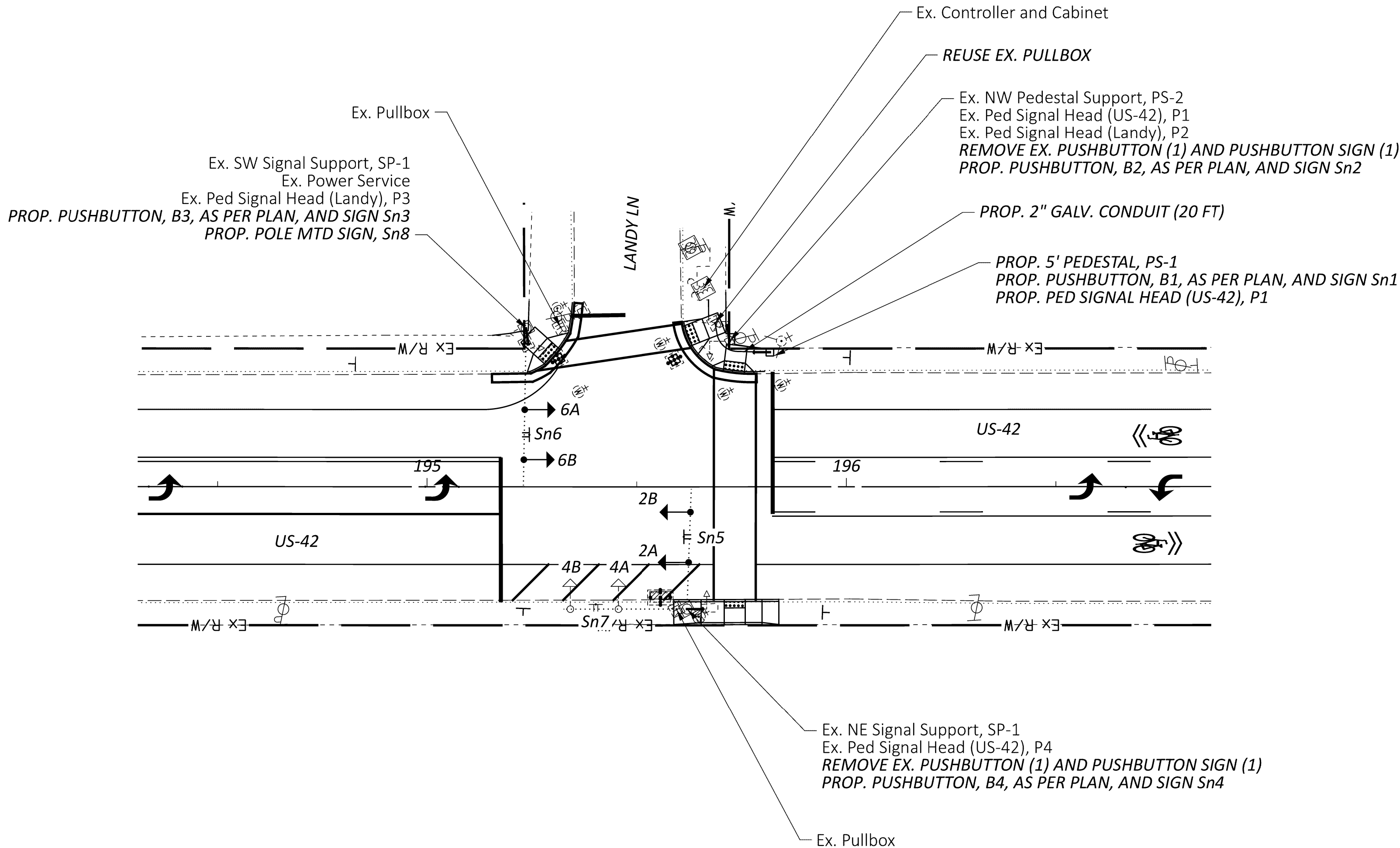
EX. D3-1

Sn7

LANDY LN

REUSED EX. D3-1

Sn5, Sn6



NOTES:

1. CONTRACTOR TO RELOCATE EXISTING SIGNAL HEADS TO BE CENTERED ABOVE THE CENTERLINE OR EDGE LINE.
2. EXISTING SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. SIGNAL PHASING SHOWN IS BASED ON RECORD PLANS AND FOR REFERENCE ONLY, EXISTING SIGNAL PHASING SHALL BE RETAINED.

LEGEND

	PR./REUSED	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER		
TRAFFIC PULL BOX		

SIGNAL PLAN
US-42 AT LANDY LN

DESIGN AGENCY



DESIGNER

GSH

REVIEWER

SAK 09/18/25

PROJECT ID

123369

SHEET

P.104

TOTAL

104

HORIZONTAL SCALE IN FEET

