

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-20-3.49

CITY OF WESTLAKE CUYAHOGA COUNTY

PROJECT DESCRIPTION

PROJECT IMPROVEMENTS INVOLVE REPLACEMENT OF THE STONE ARCH CULVERT WITH A PRECAST FOUR-SIDED REINFORCED CONCRETE 16'x10' BOX CULVERT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.27 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET NO. 9.

2019 SPECIFICATIONS

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

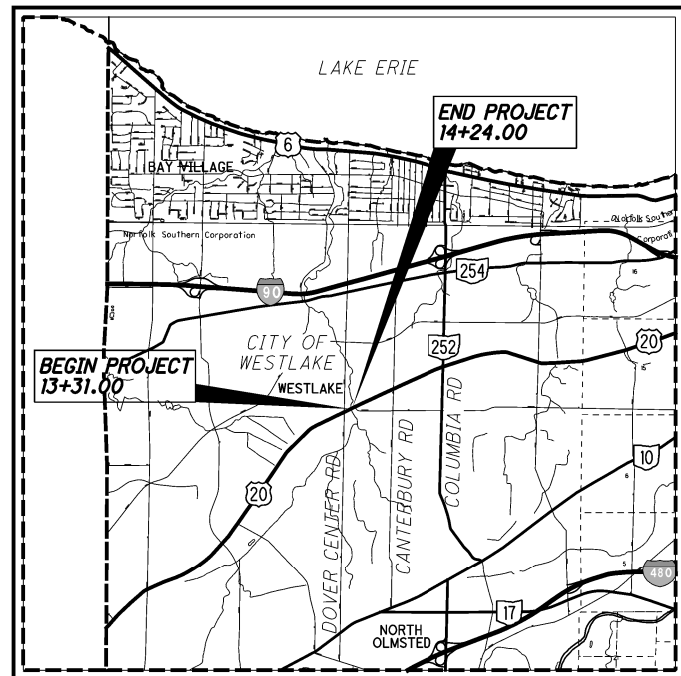
PLAN CERTIFIED AS TO COMPLETENESS AND QUALITY

[Signature] 01/26/22
SIGNATURE DATE

RIBWAY ENGINEERING GROUP, INC. PROJECT MANAGER
FIRM TITLE

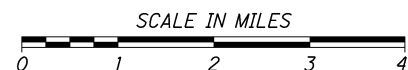
APPROVED _____
DATE 9/27/22 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 41°26'60" LONGITUDE: 81°55'15"



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

DESIGN DESIGNATION

CURRENT ADT (2021)	13,000
DESIGN YEAR ADT (2041)	13,000
DESIGN HOURLY VOLUME (2041)	1,200
DIRECTIONAL DISTRIBUTION	59%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	40 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION	14 URBAN-PRINCIPAL ARTERIAL
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

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

PLAN PREPARED BY:
RIBWAY ENGINEERING GROUP, INC.
300 E. BROAD ST. SUITE 500
COLUMBUS, OHIO 43215
PH. NO. (614) 221-6009
FAX NO. (614) 221-9089

INDEX OF SHEETS:

TITLE SHEET	1
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ENGINEERS SEAL:

[Signature]
SIGNED: _____
DATE: 1/29/22

ENGINEERS SEAL:

[Signature]
SIGNED: _____
DATE: 1/26/22

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-2.1	1/21/22	TC-41.20	10/18/13	800 12/1/23	WATERWAY PERMIT 06/30/21
BP-2.5	1/21/22	TC-42.20	10/18/13	821 4/20/18	
BP-4.1	7/19/13	TC-52.10	10/18/13	832 7/15/22	
BP-5.1	1/21/22	TC-52.20	1/15/21	921 4/20/12	ASBESTOS SURVEY 10/01/20
DM-1.1	7/17/20	MT-95.41	1/17/20		
DM-1.2	7/16/21	MT-101.60	1/17/20		
DM-4.4	1/15/16	MT-101.70	1/17/20		
F-1.1	7/19/13	MT-110.10	7/19/13		
RM-4.2	04/17/20				

FEDERAL PROJECT NO. NON-FEDERAL

PID NO. 104269

CONSTRUCTION PROJECT NO.

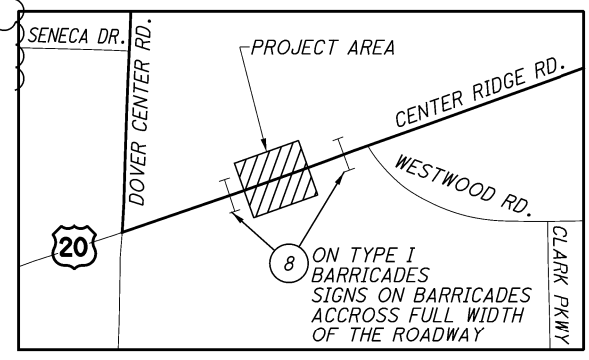
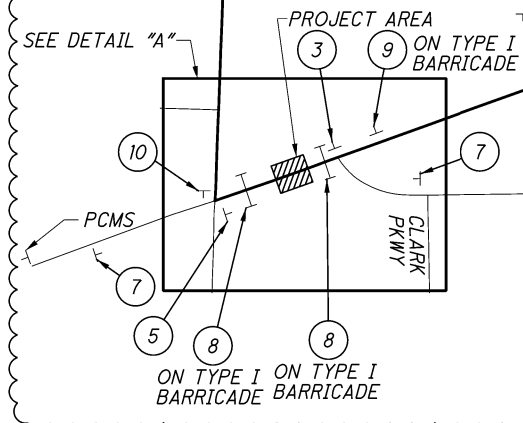
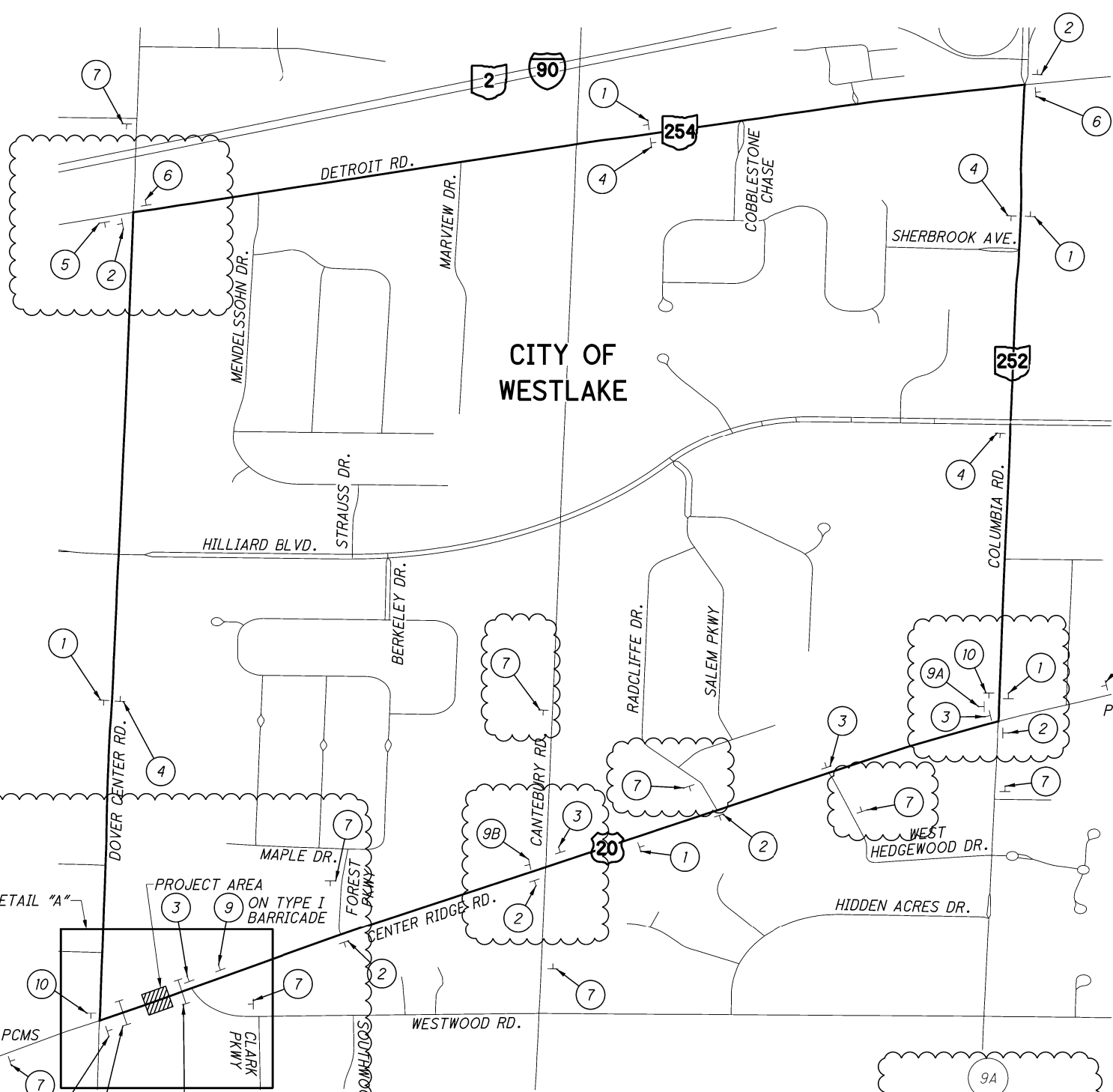
RAILROAD INVOLVEMENT NONE

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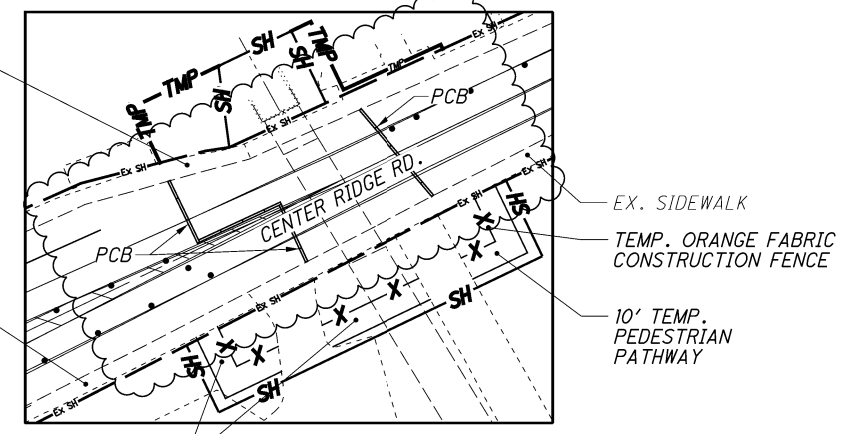
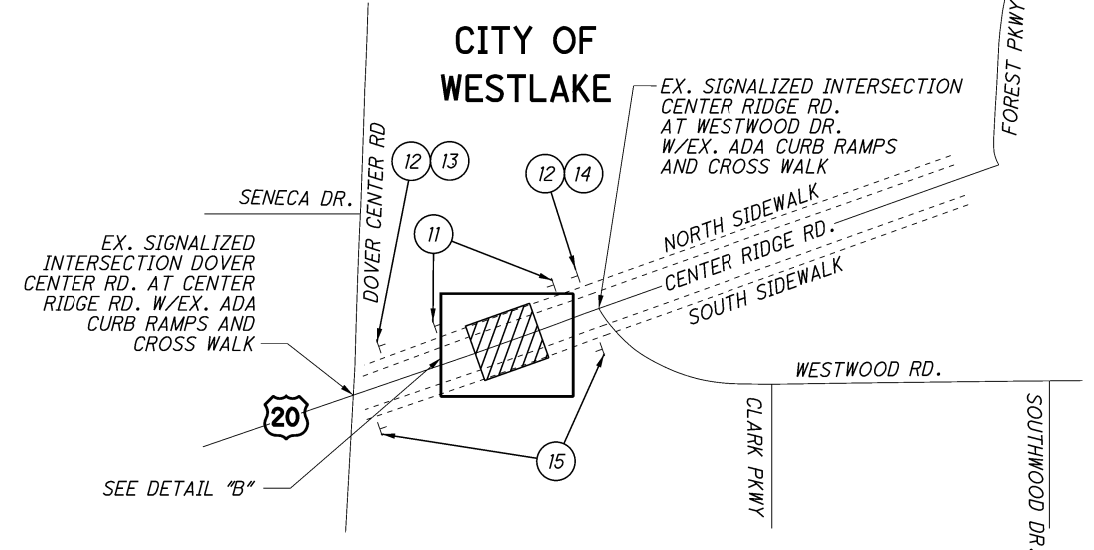
1/46

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- NOTES:
1. ALL DETOUR SIGNING AS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 614 - DETOUR SIGNING.
 2. THE PEDESTRIAN PATHWAY SHOWN ON THIS SHEET SHALL BE PAVED USING A 4" AGGREGATE BASE. PAYMENT FOR THE GRAVEL PATHWAY SHALL BE PAID FOR UNDER ITEM 304 - AGGREGATE BASE.
 3. SEE SHEET 15 FOR TEMPORARY ORANGE PLASTIC CONSTRUCTION FENCE. (TF-1)



**MAINTENANCE OF TRAFFIC
DETOUR MAPS AND LEGEND**

CUY-20-3.49

1 DETOUR M4-8-24	2 DETOUR M4-8-24	3 DETOUR M4-8-24	4 DETOUR M4-8-24	5 DETOUR M4-8-24	6 DETOUR M4-8-24	7 DETOUR AHEAD M20-2-36
20 MI-5-30-3	20 MI-5-30-3	20 MI-5-30-3	20 MI-5-30-3	20 MI-5-30-3	20 MI-5-30-3	8 ROAD CLOSED R11-3-60
M3-4-24 M6-3-21	M3-4-24 M6-1-21	M3-4-24 M6-1-21	M3-2-24 M6-3-21	M3-2-24 M6-1-21	M3-2-24 M6-1-21	9A ROAD CLOSED 1.0 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60
9B ROAD CLOSED 0.5 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60	9 ROAD CLOSED 300 FT. AHEAD LOCAL TRAFFIC ONLY R11-3A-60	10 DETOUR ENDS M20-2-36	11 SIDEWALK CLOSED R9-9-30	12 SIDEWALK CLOSED AHEAD SPEC.	13 DETOUR M4-9bR	14 DETOUR M4-9bL
					15 DETOUR SPEC.	

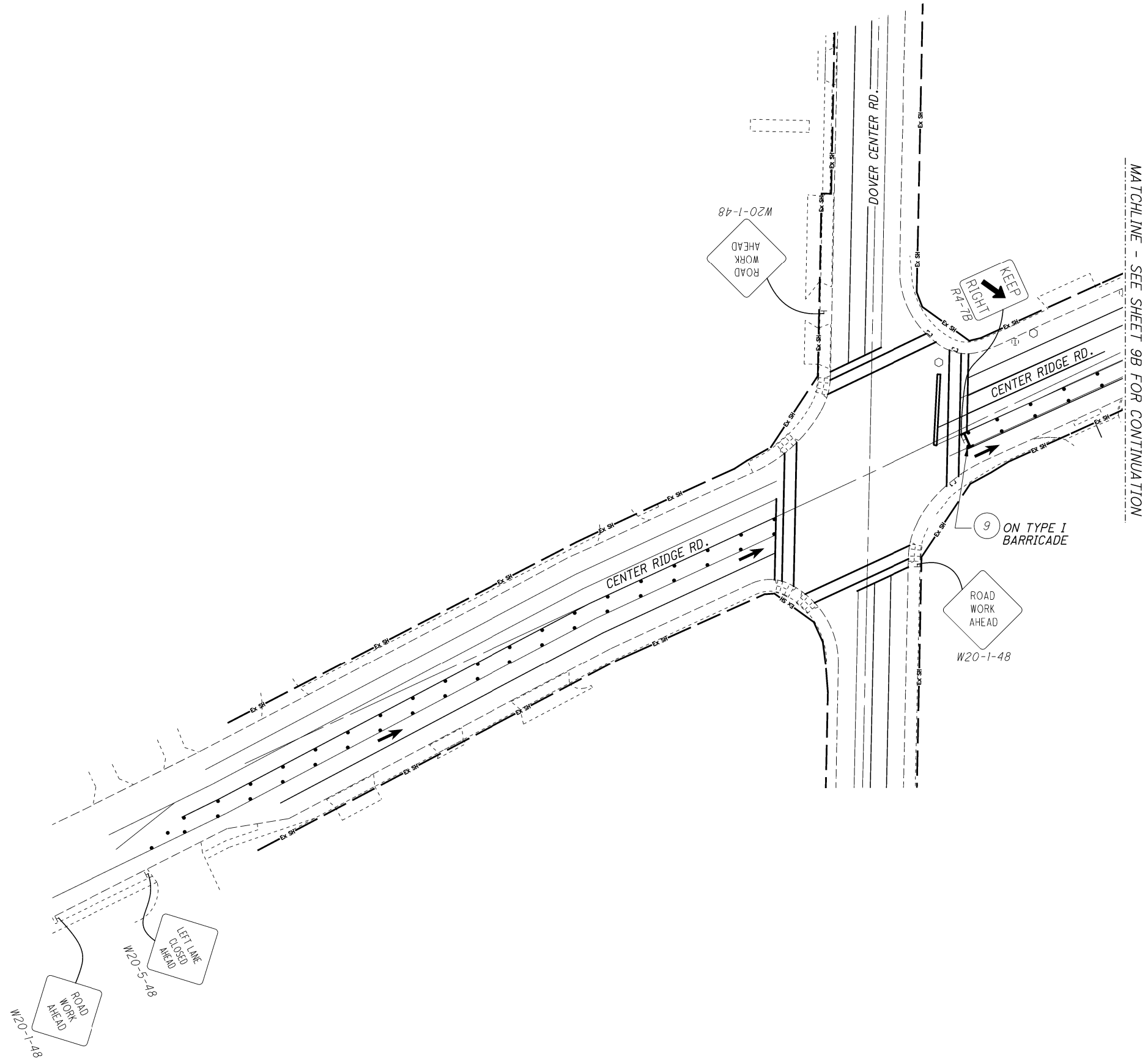


CALCULATED LI CHECKED JC

MAINTENANCE OF TRAFFIC
DETOUR MAPS AND LEGEND

CUY-20-3.49

9
46



- NOTES:
1. ALL DETOUR SIGNING AS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 614 - DETOUR SIGNING.
 2. REFER TO SHEET 9 FOR ADDITIONAL SIGN INFORMATION.

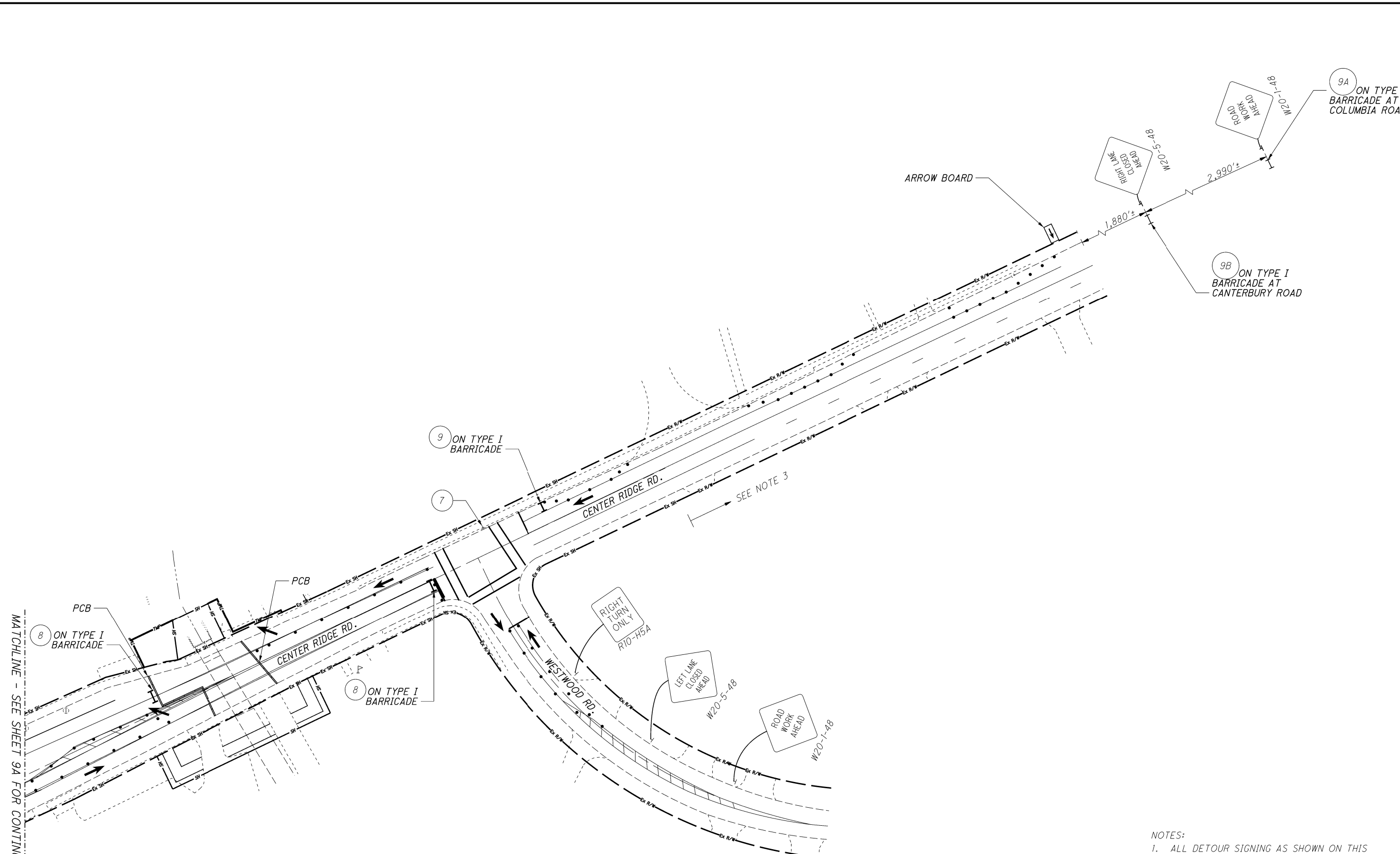
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CHECKED	JC

0 20 40 80
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC
PLAN - CENTER RIDGE RD.**

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- NOTES:
1. ALL DETOUR SIGNING AS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 614 - DETOUR SIGNING.
 2. REFER TO SHEET 9 FOR ADDITIONAL SIGN INFORMATION.
 3. NO SURVEY WAS PERFORMED EAST OF THIS LOCATION. INFORMATION PROVIDED IS FOR MOT BIDDING PURPOSES

CALCULATED LI CHECKED JC

0 20 40 80
HORIZONTAL SCALE IN FEET

9A ON TYPE I BARRICADE AT COLUMBIA ROAD

9B ON TYPE I BARRICADE AT CANTERBURY ROAD

MAINTENANCE OF TRAFFIC
PLAN - CENTER RIDGE AND WESTWOOD ROAD

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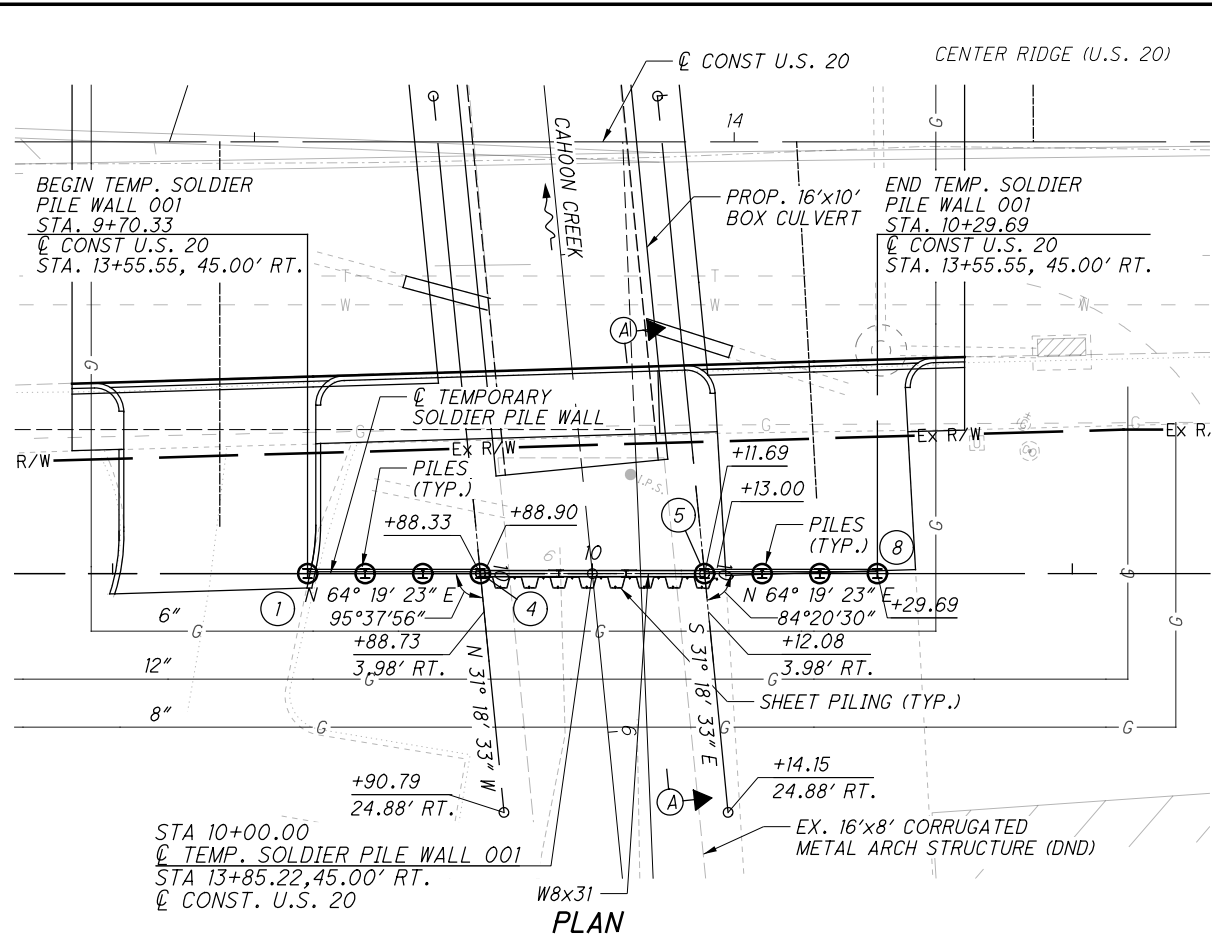
SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
5	7	8	9	12	13	22	24	30			EXT	TOTAL				SHEET NO.
WATER WORK																
							1			511	53010	1	CY	CLASS QC1 CONCRETE, MISC.: (CONCRETE BLOCKING, VALVE SUPPORTS, AND CONCRETE ENCASEMENT)		
							72			638	06200	72	FT	POLYETHYLENE ENCASEMENT (INCL. PREMIUM BACKFILL)		
							72			SPECIAL	63820174	72	FT	12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (CLEVELAND)		
							1			SPECIAL	63820598	1	EACH	12" CUTTING IN SLEEVE, VALVE WITH VALVE BOX (CLEVELAND)		
							4			638	98000	4	EACH	WATER WORK, MISC.: 12" -45 DEGREE BEND		
							2			638	98000	2	EACH	WATER WORK, MISC.:CONNECT TO EXISTING WATERMAIN		
						1				638	98000	1	EACH	WATER WORK, MISC.:TAP AND RECONNECTION 1" COPPER WATER SERVICE CONNECTION SHORT SIDE COMPLETE		
						1				638	98000	1	EACH	WATER WORK, MISC.:TAP AND RECONNECTION 1" COPPER WATER SERVICE CONNECTION LONG SIDE COMPLETE		
							1			638	98100	LS		WATER WORK, MISC.: TEST AND CHLORINATE WATER MAIN		
							1			638	98100	LS		WATER WORK, MISC.:CLEVELAND WATER DEPARTMENT FEES		
TRAFFIC CONTROL																
										630	02100	12.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
										630	80100	1	SF	SIGN, FLAT SHEET		
										630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
										630	86010	1	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION		
										644	00200	0.04	MILE	LANE LINE, 4"		
										644	00300	0.06	MILE	CENTER LINE		
										644	00700	13	FT	TRANSVERSE/DIAGONAL LINE		
										644	30030	0.1	MILE	REMOVAL OF PAVEMENT MARKING		
STRUCTURE 20 FOOT SPAN AND UNDER (CUY-020-03.49)																
								1		202	11000	LS		STRUCTURE REMOVED		
								1		202	98000	LS		REMOVAL MISC.: (PORTION OF EX. METAL CULVERT AND FOOTING FOUNDATION)		
								1		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	6	
								272		503	22200	272	CY	UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE		
								12,274		509	10000	12,274	LB	EPOXY COATED REINFORCING STEEL		
								16		510	10000	16	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		
								19		511	46010	19	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		
								50		511	46510	50	CY	CLASS QC1 CONCRETE, FOOTING		
								16		511	53010	16	CY	CLASS QC1 CONCRETE, MISC.: CULVERT CONNECTION DETAIL	29	
								51		512	10050	51	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)		
								356		512	33000	356	SY	TYPE 2 WATERPROOFING		
								27		516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER		
								25		518	21200	25	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC (TYPE A)		
								68		611	96457	68	FT	16' X 10' CONDUIT, TYPE A, 706.05, AS PER PLAN	28,29,33,34	
								4		611	96485	4	FT	18' X 10' CONDUIT, TYPE A, 706.05, AS PER PLAN	28,29,33,34	
								448		613	41250	448	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1)		
MAINTENANCE OF TRAFFIC																
	50									410	12000	50	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B		
										607	98000	100	FT	FENCE, MISC.: TEMPORARY ORANGE PLASTIC CONSTRUCTION FENCE	8	
										608	98000	1,350	SF	WALKWAY, MISC.: TEMPORARY AGGREGATE WALK (T=4")	8	
										614	11110	32	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
										614	12420	LS		DETOUR SIGNING	9	
										614	12500	5	EACH	REPLACEMENT SIGN		
	50									614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
										614	18601	8	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8	
										622	41100	150	FT	PORTABLE BARRIER, UNANCHORED		
	300									630	97800	300	SF	SIGNING, MISC.:ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	7	
INCIDENTALS																
										108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS		
										614	11000	LS		MAINTAINING TRAFFIC		
										619	16011	12	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	5	
										623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
										624	10000	LS		MOBILIZATION		
										SPECIAL	61415000	7,500	DLR	CALENDAR DAYS OF CONTRACT TIME FOR OPENING TO TRAFFIC (UNIT PRICE FIELD SHOULD REFLECT NUMBER OF DAYS BID)		

GENERAL SUMMARY

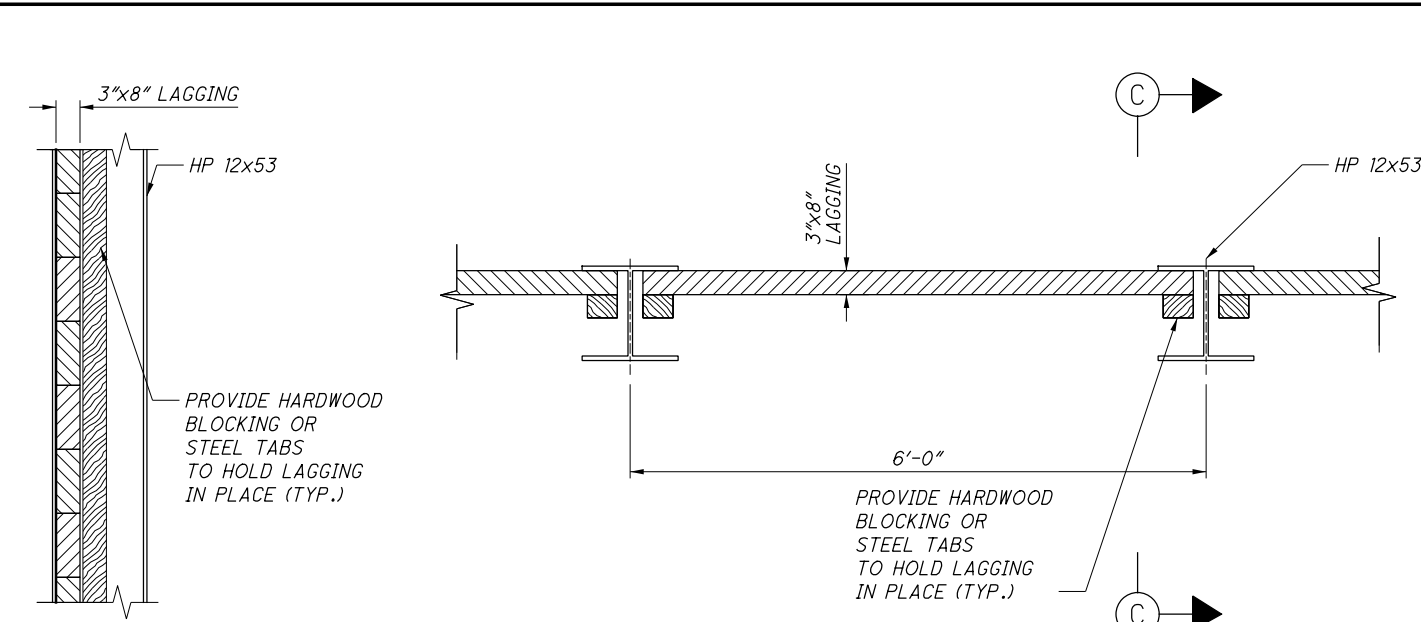
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ESTIMATED QUANTITIES					
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET NO.
202	11000	LS		STRUCTURE REMOVED	
202	98000	LS		REMOVAL MISC: PORTIONS OF EX. METAL CULVERT AND FOUNDATION	6/9
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	8/9
503	22200	272	CY	UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE	
509	10000	12,274	LB	EPOXY COATED REINFORCING STEEL	9/9
510	10000	16	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	46010	19	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46510	50	CY	CLASS QC1 CONCRETE, FOOTING	
511	53010	16	CY	CLASS QC1 CONCRETE, MISC.: CULVERT CONNECTION DETAIL	6/9
512	10050	51	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	33000	356	SY	TYPE 2 WATERPROOFING	
516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	25	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC (TYPE A)	
611	96457	68	FT	16' x 10' CONDUIT TYPE A, 706.05, AS PER PLAN	
611	96485	4	FT	18' x 10' CONDUIT TYPE A, 706.05, AS PER PLAN	6/9
613	41250	448	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1)	

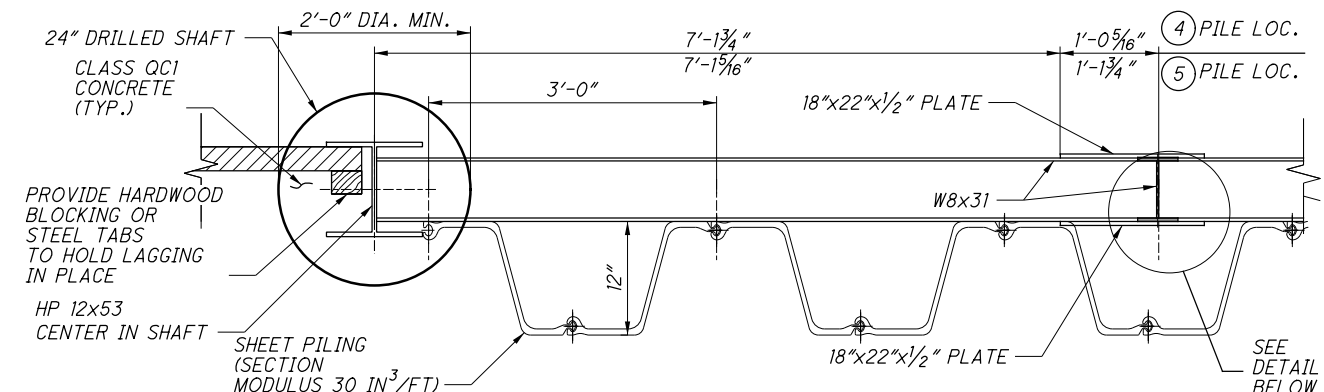


PLAN

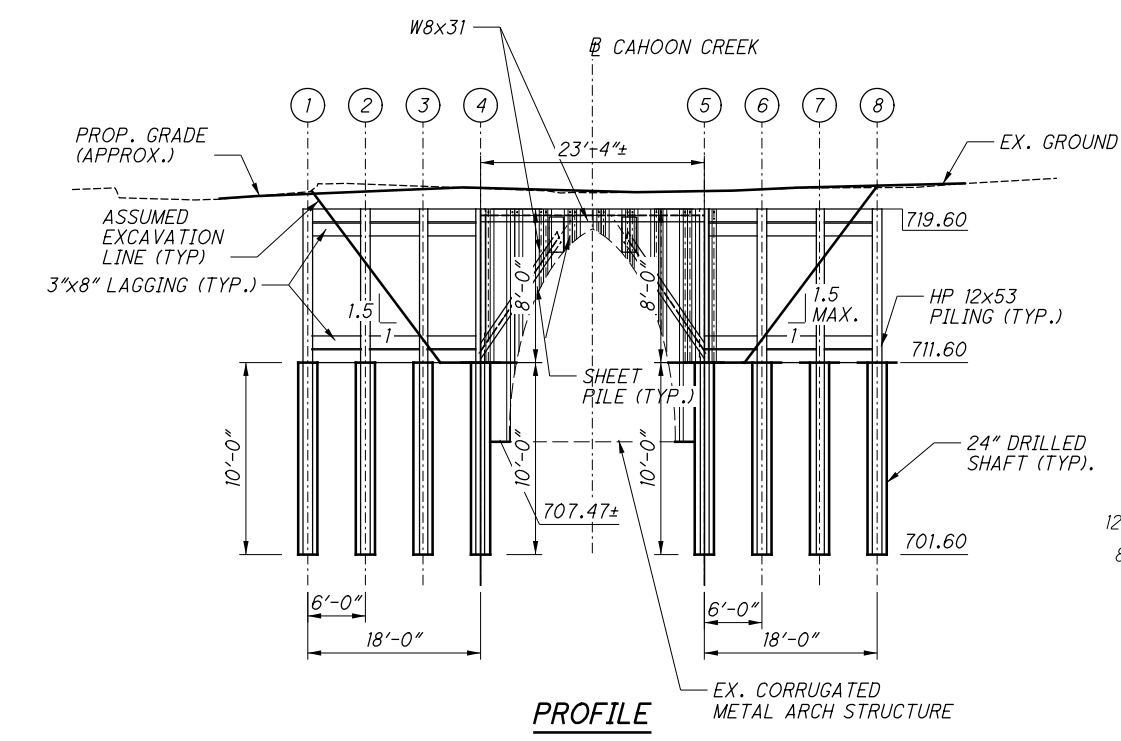


SECTION C-C

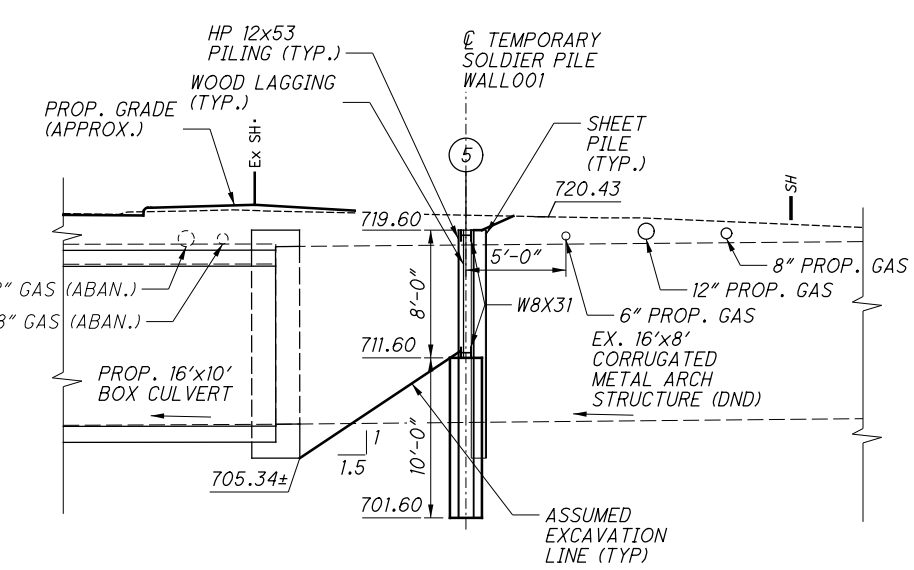
TEMPORARY SOLDIER PILE WALL DETAIL



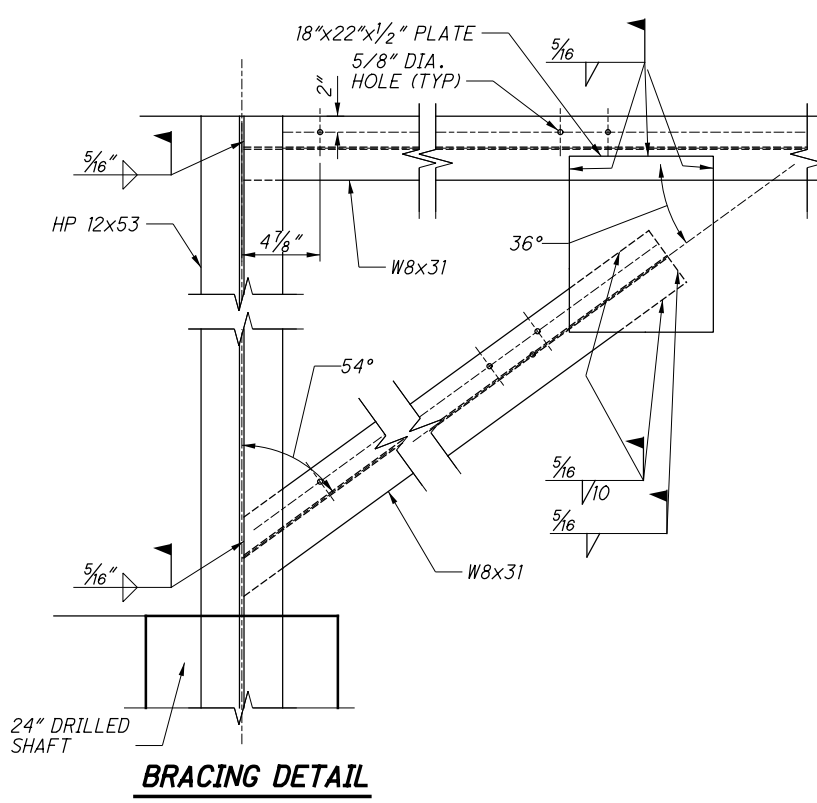
SHEET PILING DETAIL



PROFILE



VIEW A-A



BRACING DETAIL

- NOTES:**
1. ALL STEEL SHALL BE GRADE 50.
 2. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

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RESOURCE INTERNATIONAL, INC.
 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 Ri
 DATE 9/1/21
 REVIEWED PPM
 DRAWN CFR
 DESIGNED MMS
 CHECKED NCK
 STRUCTURE FILE NUMBER 1802799
 TEMPORARY SHORING PLAN
 CULVERT NO. CUY-020-0349
 OVER CAHOON CREEK
 CUY-020-03-49
 PID No. 104269
 8/9
 35/46