

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 10/28/2019

Re: PUCO Case No. 19-1977-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT#002-171H, at Gilchrist Road in Summit County, Ohio.

On January 2, 2019, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to install lights and gates at Gilchrist Road (DOT#002-171H) in Summit County, Ohio. The crossing was surveyed, on November 8, 2018, and was found to warrant the upgrade. The electric utility provider for this crossing is Ohio Edison-First Energy Corp.

The project will be paid for with 90% federal funding and 10% railroad funding and is actual cost. The plans and estimates for the project in the amount of \$268,843.32 have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in nine months.** Staff requests that the following language be incorporated in the Finding & Order:

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- **Any ancillary work to make the warning devices function as designed and visible to the roadway user, and**
- **MUTCD compliance, including minor roadway work if necessary.**

Please serve the following parties of record:

Wheeling & Lake Erie Railway Company
Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, Ohio 44613

Ohio Rail Development Commission
Cathy Stout
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

City of Akron
Jim Hall
Public Works Bureau Manager
166 South High Street Suite 103
Akron, OH 44308

Ohio Edison-First
Energy Corp.

**OHIO RAIL DEVELOPMENT COMMISSION
INTER-OFFICE COMMUNICATION**

TO: Randall Schumacher, Supervisor, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: James Tucker, Project Manager, ORDC J.T.
SUBJECT: Summit County, Gilchrist Road, Wheeling & Lake Erie
DOT#002171H, PID#109479
DATE: October 17, 2019

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on November 8, 2018. The Diagnostic Team recommended that the crossing be upgraded to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above for nine months. This construction authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- Any ancillary work to make warning devices function as designed and visible to the roadway user, and
- MUTCD compliance – including minor roadway work if necessary.

Thank you for your assistance with these matters.

Attachment: Diagnostic Review
Plan & Estimate
Letter Agreement
PE Authorization

c: Jill Henry, PUCO
Heather Hamilton, ORDC
ORDC Project Manager (file)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Mark Policinski, Chair

October 17, 2019

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, Ohio 44613

RE: Summit County, Gilchrist Rd.
DOT#002-171H, PID #109479

Dear Mr. Andrews:

The bid process for the referenced project is acceptable. The Wheeling & Lake Erie Railway (WLE) may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan stamped June 7, 2019 and estimate dated September 26, 2019. This authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Reimbursement of eligible actual cost is limited to \$268,843.32. This cost shall be split as follows.

Warning Devices: 90% ORDC=\$241,958.99
10% Wheeling=\$26,884.33

Additional costs must be approved in writing by the Ohio Rail Development Commission (ORDC) prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

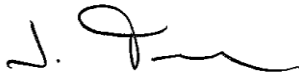
This authorization is contingent upon WLE accepting the following instructions:

1. WLE's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to James Tucker, ORDC, email James.tucker@dot.ohio.gov and to the Public Utilities Commission of Ohio at Jill.henry@puco.ohio.gov. WLE's project foreman will also notify the same of any stops and re-starts of the work activity and of the date work was completed for the project.
2. WLE will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by WLE. **If it is known that there are utilities that need to be relocated, WLE needs to start that coordination work as soon as possible to avoid project delays.**

3. WLE's project foremen will notify James Tucker at James.tucker@dot.ohio.gov (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. Open cut of roadways is not permitted except in unusual circumstances and must be coordinated with the local highway authority and preapproved by ORDC.
5. WLE will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
6. WLE will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.
7. This installation will include any ancillary work to make the warning devices function as designed and meet MUTCD.

Thank you for your assistance with these matters.

Sincerely,

A handwritten signature in black ink, appearing to be 'J. Tucker', with a stylized flourish at the end.

James Tucker
Project Manager

C: Randall Schumacher, Rail Division Supervisor, PUCO
Jill Henry, Grade Crossing Planner, PUCO
Heather Hamilton, ORDC
ORDC (file)

WHEELING & LAKE ERIE RAILWAY COMPANY

Tim Andrews
Signal & Communication Supervisor
Tel. 330-767-7255

tandrews@wlerwy.com

100 East First Street
Brewster, OH 44613
Fax: 330-767-3213

September 26, 2019

Ohio Rail Development Commission
Mr. Jim Tucker
1980 West Broad Street, Room 2B
Columbus, OH 43223

Re: Estimate for Railroad Crossing Warning System at Gilchrist Rd DOT 002-171-H

Dear Mr. Tucker,

I am providing this revised estimate for the crossing package and installation at Gilchrist Rd. Award of the material package will be the result of a competitive bid; copies of the submitted quotes will be forwarded to your office when they are completed. Installation will be performed under our continuing construction agreement with CTC LLC.

Engineering Services/Labor, CTC	\$43,728.60
CTC-Materials	\$154,828.25
Fill Materials, transport, hauling	\$5,500.00
Preliminary Installation Services, Crosier	\$48,658.47
Electric Service, Emery	\$3,950.00
Electric Utility fees	\$3,500.00
WLE Direct Signal & MOW Labor	\$7,500.00
Galvanized gate foundations	\$1,178.00
TOTAL:	\$268,843.32

Please contact me if additional details are required.

Respectfully,



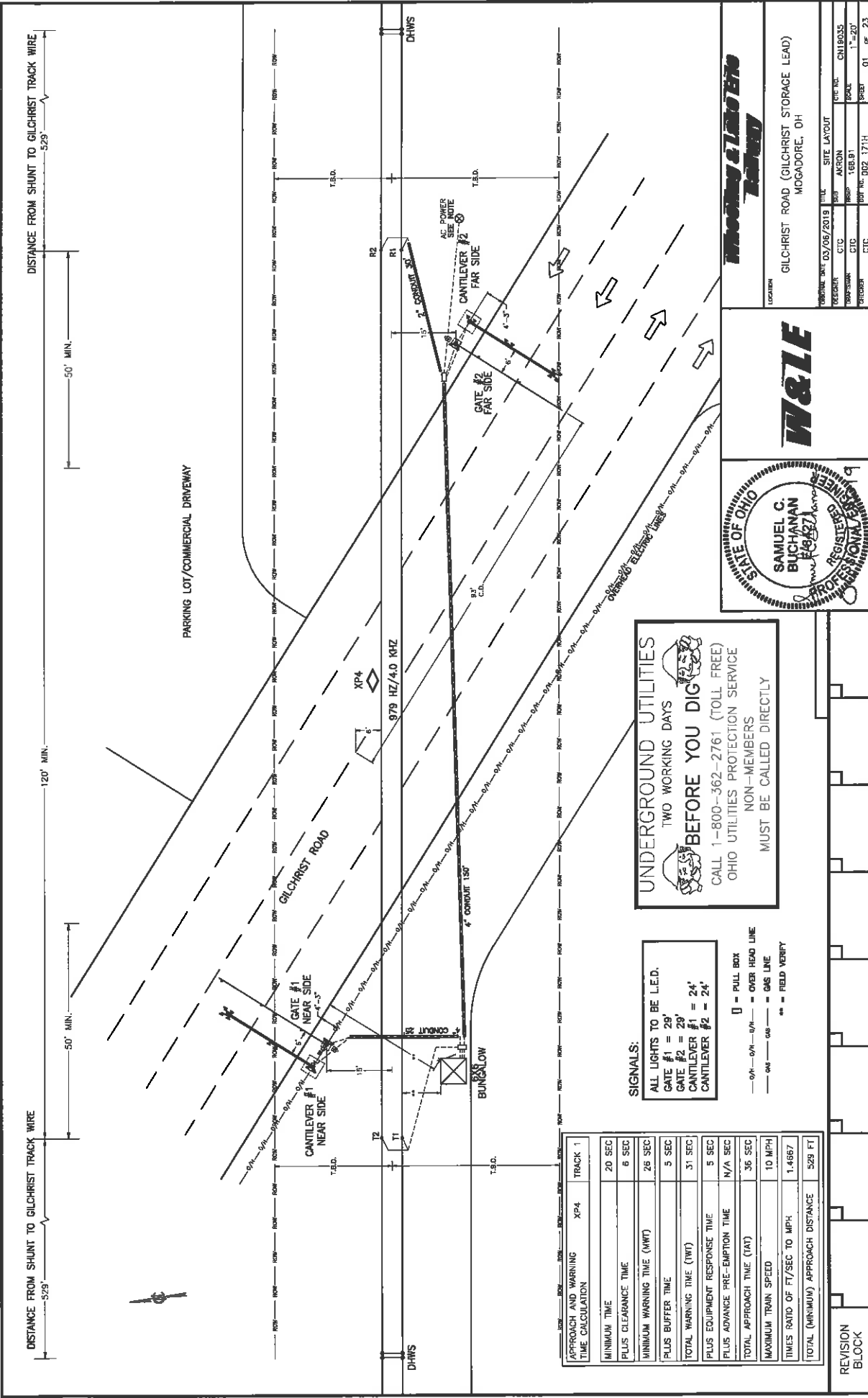
Tim Andrews

Notes: Direct purchase from Fabricated Metals, 60' galvanized gate foundation, \$589.00 ea.

Total Materials Estimate =	\$134,026.53
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W&LE/ABC House Materials				
DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
Bungalow, Alum. 6 X6 w/Heater P/N 91000564 D-1, PTMW	1	EA	\$9,477.00	\$9,477.00
Wrench, AAR terminal - 11", P/N 032619-9X, Siemens	1	EA	\$43.63	\$43.63
Sensor, Hermetic Door Switch, P/N 70168986, Allied Electric	2	EA	\$4.99	\$9.98
Actuator, Hermetic Door Switch, P/N 70168991, Allied Electric	2	EA	\$1.99	\$3.98
Decal, Danger 240V (5"X3.5"), P/N 3XDU5, Grainger	1	EA	\$2.94	\$2.94
Decal, MUTCD Emergency Notification, 30"X18", Eagle Traffic	1	EA	\$68.00	\$68.00
Wire, Case, #16AWG 1000' spool, Blue, P/N 152-11-3002, Okonite	2.0	FT	\$198.00	\$396.00
Wire, Case, #10AWG 1000' spool, Blue, P/N 152-11-3038. Okonite	1.0	FT	\$407.00	\$407.00
Wire, Case, #6AWG, Green, P/N N6GNM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG, Black, P/N N6BM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG. Red, P/N N6RD, Reynolds	100	FT	\$0.35	\$35.00
MDA-II With Current Sensors DTMF Radio and GFD, P/N NAS-WLE, NAS	1	EA	\$6,431.00	\$6,431.00
MDSA-1X Surge arrestor panel, P/N 250204-100, Alstom	1	EA	\$474.00	\$474.00
XP4 Chassis P/N 16-220000433, GE - AS SHOWN ON PRINTS	1	EA	\$27,450.00	\$27,450.00
XIP-20 w/Lamp Resistor, P/N 227561-000, Alstom	2	EA	\$602.00	\$1,204.00
Cable, XIP 8 ft (cable #1) (need 1 for XP4 Assy) P/N 075046-001, Alstom	2	EA	\$104.00	\$208.00
Cable, XIP 8 ft (cable #2) (need 1 for XP4 Assy) P/N 075047-001, Alstom	2	EA	\$104.00	\$208.00
Relay, 500 Ohm, 6PT, Nuetral relay, plug-in, P/N A62-0262, Alstom	3	EA	\$1,257.00	\$3,771.00
Plugboard, Kit (1E/3E test posts) P/N 59686-019-02, Alstom	3	EA	\$125.00	\$375.00
Wrench, 3E test tool, P/N P03-0320, Alstom	1	EA	\$51.10	\$51.10
Extractor Tool, Terminal clip, P/N 032619-25, Siemens	1	EA	\$1.18	\$1.18
Relay, 8-pin KRPA style, 10A/240V, P/N 70198711, Allied	1	EA	\$18.62	\$18.62
Relay, 8-pin KRPA style, 10A/12VDC, P/N 70199265, Allied	2	EA	\$16.00	\$32.00
Socket, 8-pin KRPA style, P/N 70199343, Allied	3	EA	\$5.75	\$17.25
Spring, Hold down for KRPA style relay, P/N 70198576, Allied	3	EA	\$0.50	\$1.50
Battery Charger, ETC-12V 40AMP, P/N 520740, Railway Equipment	2	EA	\$590.00	\$1,180.00
Battery, NiCad 340 A.H., P/N SPL-340, Saft	9	EA	\$312.00	\$2,808.00
Battery, NiCad 420 A.H., P/N SPL-420, Saft	10	EA	\$395.00	\$3,950.00
Terminal, Battery, 3-PT, P/N 225481-000, J&A Industries	4	EA	\$25.00	\$100.00
Battery Tray 12'x27", Holds (3) Batteries, P/N 027002-001, J&A	4	EA	\$48.00	\$192.00
Nema Plug, Locking, 15 Amp/240V, P/N L6-15P, Reynolds	2	EA	\$15.50	\$31.00
Power Indicator, 2 Eye/4 Wire w/wago conn, P/N LC2-001WB-WG4, Velcorp Gems	1	EA	\$140.00	\$140.00
SO Cord, 14 AWG/4 Conductor, P/N SJ00W-14-4-BLK-250R, Graybar	100	FT	\$0.75	\$75.00
Tie-wrap, 11 1/2", PKG 100, Black, P/N LTS11-0, Vantex	1	EA	\$20.25	\$20.25
Tie-wrap, mounting, PKG 100, P/N TYM, Vantex	1	EA	\$28.00	\$28.00
Loom, Spiral Wrap 100', Black, P/N SW38-0, Vantex	1	EA	\$49.00	\$49.00
Panduit, Wire Duct, 2"X3"X6' Gray, P/N G2X3LG6, Graybar	3	EA	\$4.75	\$14.25
Panduit, Cover, 6' Gray, P/N C2LG6, Graybar	3	EA	\$1.25	\$3.75
Terminal, 2X6 W/ Flat nut/washer, P/N 220-0101, Rebel	10	EA	\$10.45	\$104.50
Terminal, Block, 2 3/8" center - 2 post w/hardware, P/N 220-0301, Rebel	8	EA	\$4.00	\$32.00
Terminal, 4-post, Block Kit, w/ 14-24 AAR Hardware, P/N B2700A2C1WH, Erico	19	EA	\$21.25	\$403.75
RailSurge Plane Strip Busbar (36"), P/N B2700HC36, Erico	2	EA	\$37.00	\$74.00
Connector, 2 3/8", strap style, P/N 220-0507, Rebel	8	EA	\$0.75	\$6.00
Arrestor, Air Gap, With Cover, P/N 4000-44585-001X, Siemens	23	EA	\$25.00	\$575.00
Equalizer, Air Gap, with Cover/Hardware , P/N 4000-44700-001X, Siemens	2	EA	\$24.00	\$48.00
Binding Nut, P/N 13073-000, Rebel	200	EA	\$0.25	\$50.00
Clamp Nut, P/N 13079-000, Rebel	200	EA	\$0.20	\$40.00
Insulated Nut, 1 3/16" , P/N 023408-1X, Safetran	25	EA	\$4.00	\$100.00
Washer, P/N 013074-000, Rebel	200	EA	\$0.10	\$20.00
Gold Test Nut, P/N 13296-001, Rebel	100	EA	\$0.75	\$75.00
1' Test Link, Flat, P/N 32257-002, Rebel	100	EA	\$1.75	\$175.00
Terminal Ring, HD, 1/4", insulated, #14 - #16, P/N NC-10HDB, Vantex	150	EA	\$0.95	\$142.50
Terminal, Ring, 1/4" insulated, #6, Blue, P/N T6-14N, Vantex	25	EA	\$0.75	\$18.75
			TOTAL:	\$61,211.93

W&LE/ABC Field Materials				
DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
Cable, 7/C#6, Armored, 206-11-6247, Okonite	600	FT	\$8.11	\$4,866.00
Cable, 7C#14, Armored, 206-11-6887, Okonite	300	FT	\$2.99	\$897.00
Cable, 3C#6, Armored, #206-11-6243, Okonite	200	FT	\$6.00	\$1,200.00
Wire, Track, 2C/#6, Twist, Solid, 113-12-3933, Okonite	300	FT	\$2.50	\$750.00
Bootleg Kit - Complete (IE. Sleeves, Heat shrink, Rubber tape, electrical tape)	1	EA	\$500.00	\$500.00
Bond Wire, 7 1/2" XS Style, P/N SBS24883, Erico	100	EA	\$5.50	\$550.00
Connector, Track, Web of Rail, P/N SBTBBU4A, Erico	100	EA	\$4.95	\$495.00
Wheel, grinding, P/N SB22122, Erico	3	EA	\$36.00	\$108.00
5/8" X 8' Copper Ground Rod P/N 615880. Erico	8	EA	\$9.75	\$78.00
5/8" Ground Rod Weld, P/N SBNT1161G, Erico	8	EA	\$4.95	\$39.60
Wire, Ground, #6AWG, Bare Copper, Graybar	100	FT	\$0.75	\$75.00
FSS-IA, Tunable NBS. P/N 250850-000, GE	2	EA	\$900.00	\$1,800.00
Shunt Enclosure, Orange, P/N 500-400-100-09-Orange, G&B	2	EA	\$395.00	\$790.00
24' Cantilever, Single Mast - NO FOUNDATION , Progress Rail	2	EA	\$17,000.00	\$34,000.00
Mast, Gate, 18'X5" w/pigtail (single-sided Jct Box), P/N 715-324-2-GS, WCH	2	EA	\$595.00	\$1,190.00
Jct box, Gate, 5" single hole w/24 terminals, P/N 2149-A-139, WCH	2	EA	\$475.00	\$950.00
Gate, Model 3597, P/N 3597-131-P-H-M1, WCH- WLE P/N	2	EA	\$3,800.00	\$7,600.00
Crossarm Assy, 5" Mtg., 1 Way, WCH	2	EA	\$395.00	\$790.00
Lights, 12" LED, P/N 433121680XLTC-00, Arms	20	EA	\$75.00	\$1,500.00
Counterweight Package, WCH	2	EA	\$3,300.00	\$6,600.00
Sign, Crossbuck, No brackets/hardware, P/N 070-0065, Rebel Railway	2	EA	\$90.00	\$180.00
12" Sign Kit, Brackets/extensions/Ubolts/hardware, Rebel Railway	4	EA	\$90.00	\$360.00
Wind Bracket, 36", Tusk style, P/N 2010-001-01, RDG	2	EA	\$145.00	\$290.00
Bell, Electronic, 5" Base, P/N EB-3-360-5, GSI	2	EA	\$175.00	\$350.00
Gate Keeper, 2-Way, w/Hardware & Buffer Spring, P/N SK-1000-2W, GSI	2	EA	\$1,300.00	\$2,600.00
E-Z Gate (Vertical stripe) LED gate w/lamp kit, P/N 9298-6154, Railway Equip	2	EA	\$649.00	\$1,298.00
Sleeve, 4' Aluminum, P/N 92958, Railway Equipment	2	EA	\$45.00	\$90.00
Wrench, Torque (KIT), P/N 2590-K-9, WCH	1	EA	\$210.00	\$210.00
Sign, Emergency, ENS, 15"X9" Blue, Eagle Traffic	2	EA	\$45.00	\$90.00
Field cable Tag Kit.	1	EA	\$500.00	\$500.00
Schedule 40 2" & 4" PVC Conduit Kit (House - Pull Box)	1	LOT	\$1,500.00	\$1,500.00
Duct seal, 5lb, P/N 31-605, Graybar	4	EA	\$42.00	\$168.00
Lock, Barrel Style	8	EA	\$50.00	\$400.00
			TOTAL:	\$72,814.60



DISTANCE FROM SHUNT TO GILCHRIST TRACK WIRE 529'

50' MIN.

120' MIN.

50' MIN.

PARKING LOT/COMMERCIAL DRIVEWAY

GILCHRIST ROAD

GATE #1 NEAR SIDE

CANTILEVER #1 NEAR SIDE

GATE #2 FAR SIDE

CANTILEVER #2 FAR SIDE

BUNGALOW

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

CONDUIT 30"

CONDUIT 150"

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2761 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

SIGNALS:
ALL LIGHTS TO BE L.E.D.
GATE #1 = 29'
GATE #2 = 29'
CANTILEVER #1 = 24'
CANTILEVER #2 = 24'

□ = PULL BOX
— OH — GAS — OVER HEAD LINE
— GAS — FIELD VERIFY

APPROACH AND WARNING TIME CALCULATION	XP4	TRACK 1
MINIMUM TIME	20 SEC	20 SEC
PLUS CLEARANCE TIME	6 SEC	6 SEC
MINIMUM WARNING TIME (WWT)	26 SEC	26 SEC
PLUS BUFFER TIME	5 SEC	5 SEC
TOTAL WARNING TIME (TWT)	31 SEC	31 SEC
PLUS EQUIPMENT RESPONSE TIME	5 SEC	5 SEC
PLUS ADVANCE PRE-EMPTION TIME	N/A SEC	N/A SEC
TOTAL APPROACH TIME (TAT)	36 SEC	36 SEC
MAXIMUM TRAIN SPEED	10 MPH	10 MPH
TIMES RATIO OF FT/SEC TO MPH	1.4667	1.4667
TOTAL (MINIMUM) APPROACH DISTANCE	529 FT	529 FT

REVISION BLOCK

W&L E

STATE OF OHIO
SAMUEL C. BUCHANAN
REGISTERED PROFESSIONAL ENGINEER
#16427

LOCATION
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MORGANTHAU, OH

DATE	03/06/2019	TITLE	SITE LAYOUT
DESIGNED BY	CTC	AKRON	
CHECKED BY	CTC	AKRON	
DATE	03/06/2019	SCALE	1"=50'
SHEET	01	SHEET	01 OF 23

CROSSING SIGNAL ALIGNMENT

LEGEND

- | | |
|-----|--|
| (A) | CANT #2 FRONT MAST AND FRONT TIP LIGHTS |
| (B) | GATE #2 BACK MAST LIGHTS AND CANT #2 BACK TIP LIGHTS |
| (C) | CANT #1 FRONT MAST AND FRONT TIP LIGHTS |
| (D) | GATE #1 BACK MAST LIGHTS AND CANT #1 BACK TIP LIGHTS |
| (E) | GATE #2 SIDE LIGHTS |

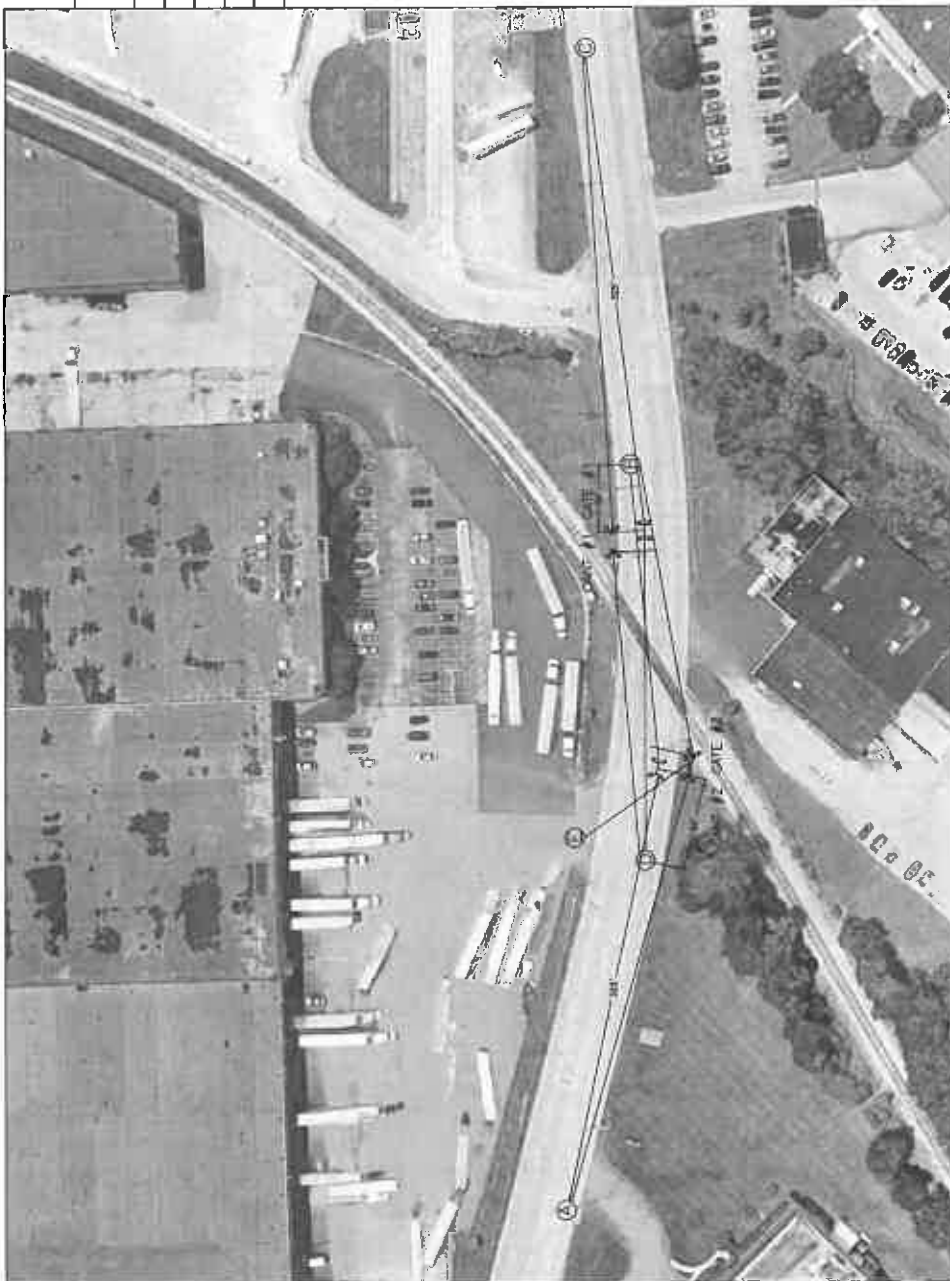
ALIGNMENT

FRONT LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5 FT. 8 IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE, BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO CENTER OF APPROACH LANE IN APPROACH TO SIGNAL AT SELECTED ALIGNMENT DISTANCE, MAINTAINING VERTICAL ALIGNMENT. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

BACK LIGHTS
UNITS VERTICALLY TO ALIGN AXIS OF BEAM 5 FT. 8 IN. ABOVE PAVEMENT AT A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK AND IN CENTER OF APPROACH TRAVEL WAY.



AMERICA'S BEST TEACHERS

WILEY

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

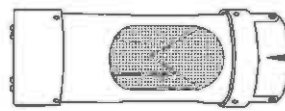
ORIGINATOR	CROSSING SIGNAL ALIGNMENT
SUB	PIC NO.
AACRON	SCALE
NUMP	168.91
CTC	CTC
DAY 17 JAN	
DBF NO. 002	171H
ORIGINATOR	SHEET
	02 OF 23

REVISION
BLOCK

SITE LAYOUT NOTES

- CROSSING IS LOCATED: LATITUDE 41.0615472
LONGITUDE -81.4242589

ELECTRONIC CROSSING BELL
GSI MODEL EB-3-360-5



THIS SIDE FACING
ROADWAY



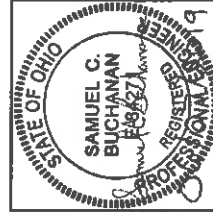
Whoddy & Laidley
INC.

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

PROJECT DATA		SITE LAYOUT NOTES	
DATE	03/06/2019	FILE	FILE NO.
DESIGNER	CTC	DRAW	AKRON
DATE	03/06/2019	SCALE	180:1
PROJECT	CTC	DATE	03/06/2019
PROJECT	CTC	DATE	03/06/2019

CHANGE FROM TYPICAL

REVISION
BLOCK

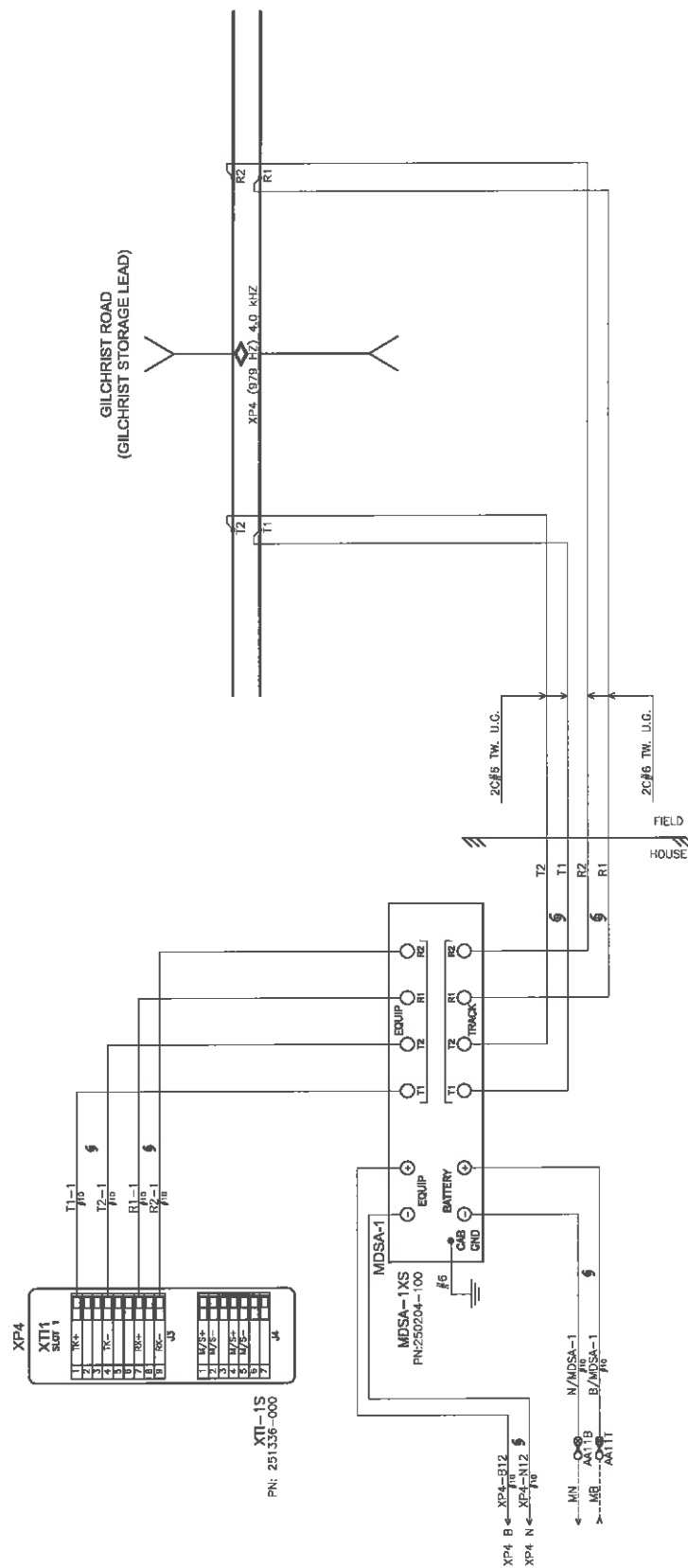


GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOCADORE, OH

ORDER DATE	03/06/2019	TITLE	XP4/MO CIRCUITS
VENDOR	CTC	SUB	AKRON
DESCRIPTION	CTC	ISS#	186.91
CYCLES	CTC	DOT NO.	J02 171H
		QTY	04 OF 23

NOTE: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

[illegible]



Whitney & Lake Elio

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

REVISION
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GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

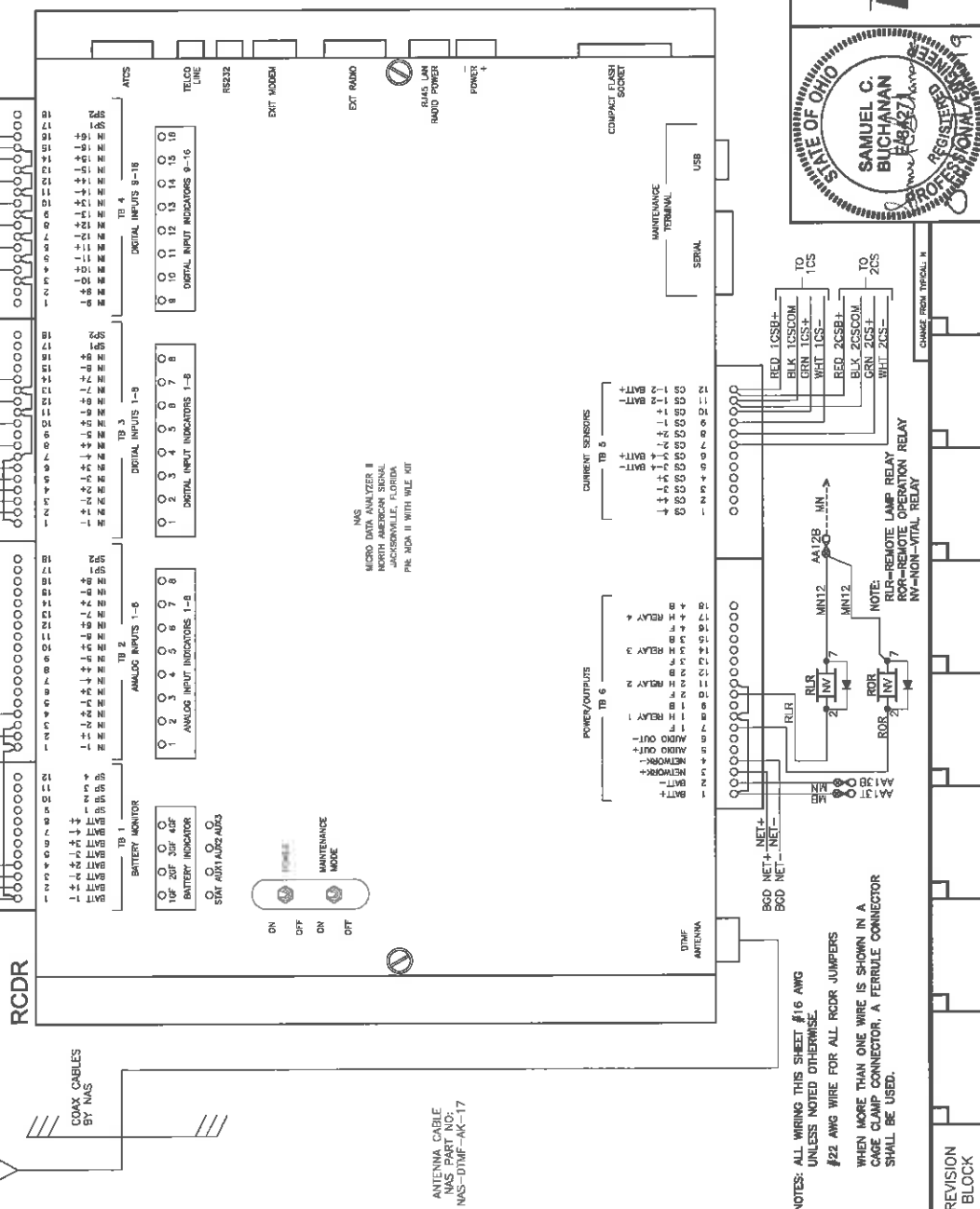
WZL

UNIFORM DATE	03/06/2019	FILE	ENTRANCE GATE CONTROL CIRCUIT		
DESIGNER	CTC	SIZE	A3	QTC NO.	CN19035
DRAWN BY	CTC	GROUP	16B.91	SINGLE	N.I.S.
CHECKED	CTC	DOF NO.	002 171H	SHEET	07 OF 23

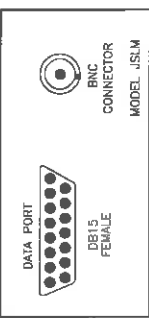


Professional Engineer Seal

REVISION
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VHF ACTIVATION CODES:
LIGHTS ON = 1711[#]
LIGHTS OFF = 1711*
GATES DOWN = 1711[#]
GATES UP = 1711*

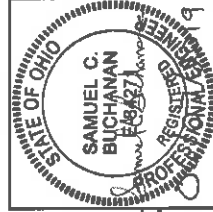


DTMF RADIO
FRONT VIEW

NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

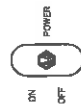
#22 AWG WIRE FOR ALL RCDR JUMPERS

WHEN MORE THAN ONE WIRE IS SHOWN IN A CAGE CLAMP CONNECTOR, A FERRULE CONNECTOR SHALL BE USED.

REVISION
BLOCK

**Wheeling & Lake Erie
Railway**

ORIGINAL DATE	03/06/2019	TITLE	RECORDED
CASSELLER	CIC	SUB	AKRON
COASTMAN	CIC	PROP	10B.91
CHECKER	CIC	BOOK NO.	002 171H
		SHEET	08 OF 23
		CIC NO.	CN19035
		SCALE	N.T.S.



NORTH AMERICAN SIGNAL
JACKSONVILLE, FLORIDA



NAS CONTROLLER SOFTWARE CONFIGURATION MANAGEMENT TABLE			
APPLICATION	FILE NAME	DATE	DESCRIPTION
GFD EXEC	XXX	XX/XX/XXXX	GFD MODULE EXECUTIVE

ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.
#22 AWG WIRE FOR ALL RCOR JUMPERS
WHEN MORE THAN ONE WIRE IS SHOWN IN
IN CAGE CLAMP CONNECTOR, A FERRULE
CONNECTOR SHALL BE USED.
NV =NON-VITAL REALY

CHANGE FROM TYPICAL IN

SW1 CURRENT 1/10 MA

POSITION	1	2	3	4	5	5	7	8
CLOSED								
OPEN								

(2 MA)

SWITCH VALUES CLOSED
POSITION (BINARY)

$$W_1 = 1$$
$$w_2 = 2$$
$$4 \quad 8 \quad 4 \quad 2 \quad 1$$
$$W5 = 16$$

MS = 32
M7 = 64

WB = 128

SW1 CURRENT 1/10 MA

POSITION	1	2	3	4	5	6	7	8
CLOSED								
OPEN								

(12 HOURS)

SWITCH VALUES CLOSED
POSITION (BINARY)

SW1 = 1

$$SW2 = 4$$

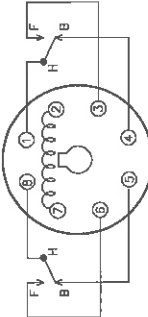
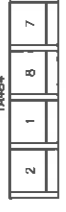
4	SW4
1	1

$$SW5 = 16$$

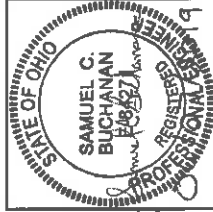
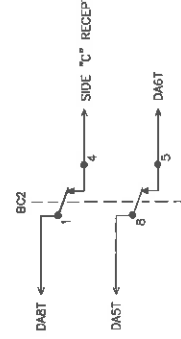
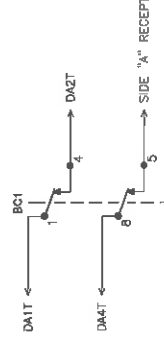
546 = 32

SWB RMS

DAYTON



BC1, BC2, ROR, RLR

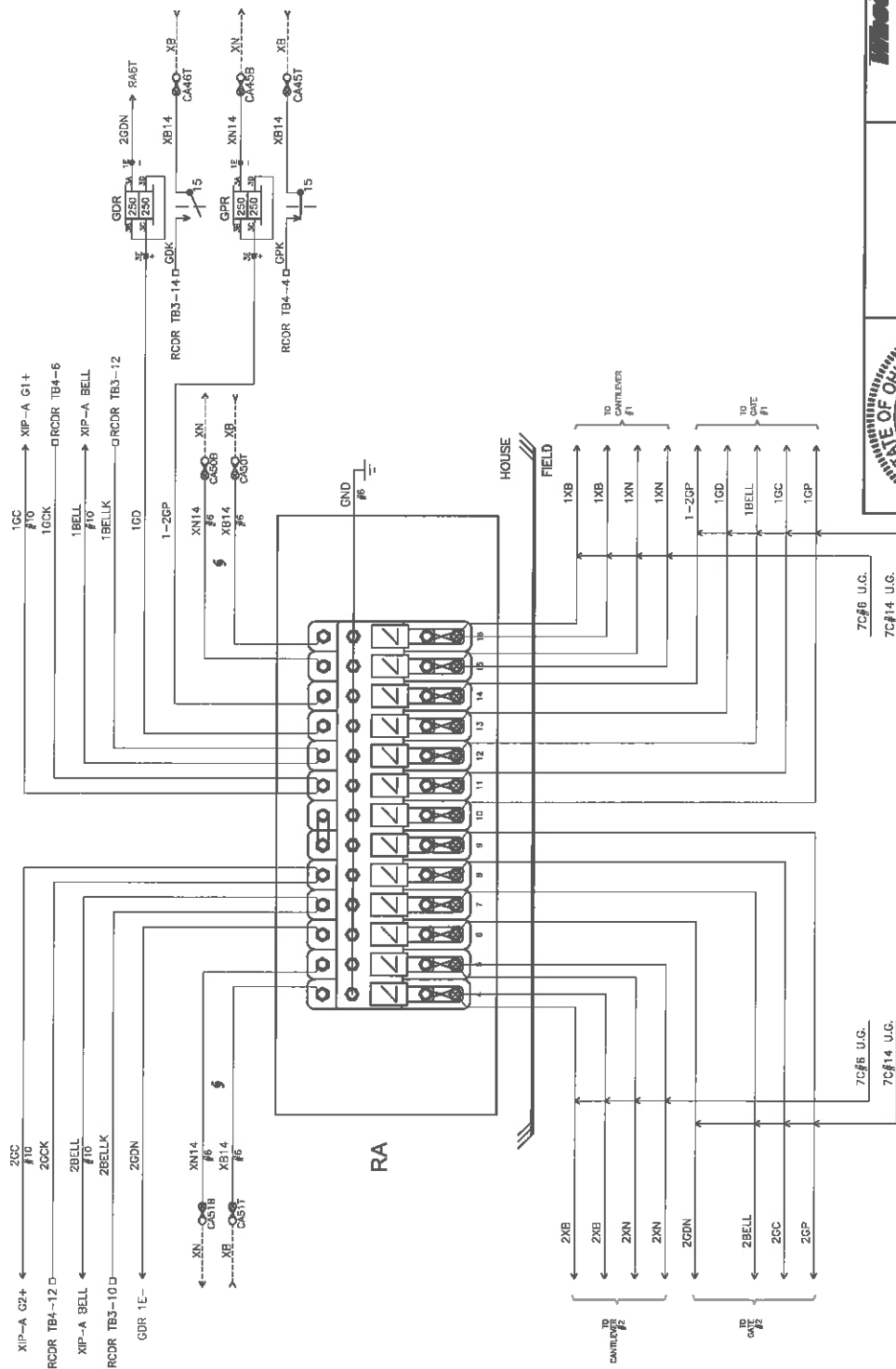
**W87**

THE FUTURE

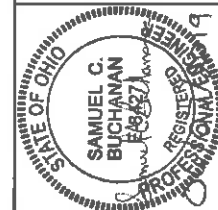
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

ORIGINAL DATE	TITLE	BGD
03/06/2019		
DISPOSAL	CYC	KRON
TRANSFER	CYC	TRB 81
TRANSFER	CYC	SER NO. 002 171H
		SERIAL 038 no 23
		CN19035 N.T.S.

REVISION
BLOCK



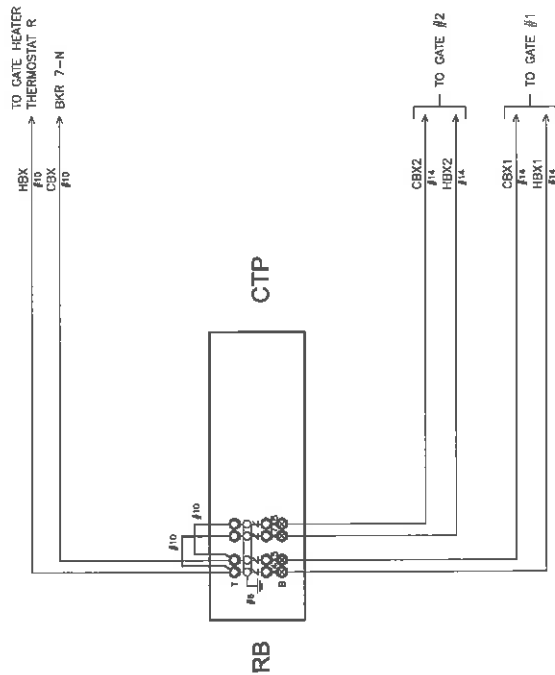
NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

**W87E**

Whodunnit & Laido Bitch

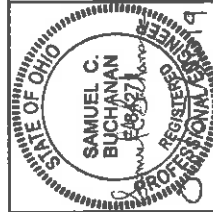
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

ORIGINAL DATE	03/06/2019	TITLE	ARRESTOR PANEL
DESCRIPTION	CYC	R008	AKRON
PROF/ISSUED	CYC	R009*	SCALE
CHECKER	CYC	D07 NO.	002 171H
		SHEET	10 OF 23
			N.T.S.
			CN19035



LEGEND:

○ - INSULATED NUT



W&L

WHEELABRATOR
RAILWAY

LOCATION
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOCADORE, OH

DATE	03/05/2013	FILE	CTP
DESIGNER	CTC	SUB	AMERON
DRAWN	CTC	NO. OF SHEETS	188-971
CHECKED	CTC	NO. OF SHEETS	11
			OF 23

REVISION
BLOCK

CHANGE FROM PREVIOUS

TO MAST MOUNTED FLASHERS
(SHEET 13 FOR DETAILS)

11L2-2 11L1-2

11L2-2 11L1-2

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FROM CANTILEVER JCT. BOX
(SHEET 14 FOR DETAILS)

11L2-1 11L1-1

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11L2-1 11L1-1

CONTACT	CLOSED	FUNCTION	TENSION
1B	75-90 DEG.	POWER DOWN	18-28 OZ.
1F	0-70 DEG.	SNUB DOWN	18-28 OZ.
2	0-86 DEG.	POWER UP	18-28 OZ.
3	0-10 DEG.	GATE DOWN	16-24 OZ.
4	82-90 DEG.	GATE CLEAR	16-24 OZ.
5	10-90 DEG.	BELL	16-24 OZ.
6	SPARE	SPARE	16-24 OZ.
7	0-2 DEG.	SNUB	16-24 OZ.

LEGEND:

○ = INSULATED NUT

NOTES:

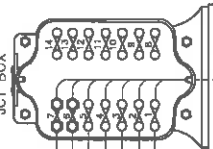
* BELL TO BE ELECTRONIC.

—X— = INTERNAL GATE WIRES THAT SHARE ELECTRICAL CONNECTIONS WITH OTHER WIRES THAT ARE ASSIGNED THE SAME NUMBER.

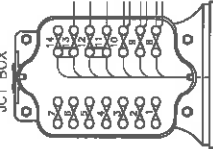
REFER TO SHEET 13 FOR GATE ARM LIGHT WIRING

ADD BOLD STRAPS AND JUMPERS AS SHOWN.

GATE #1 JCT. BOX

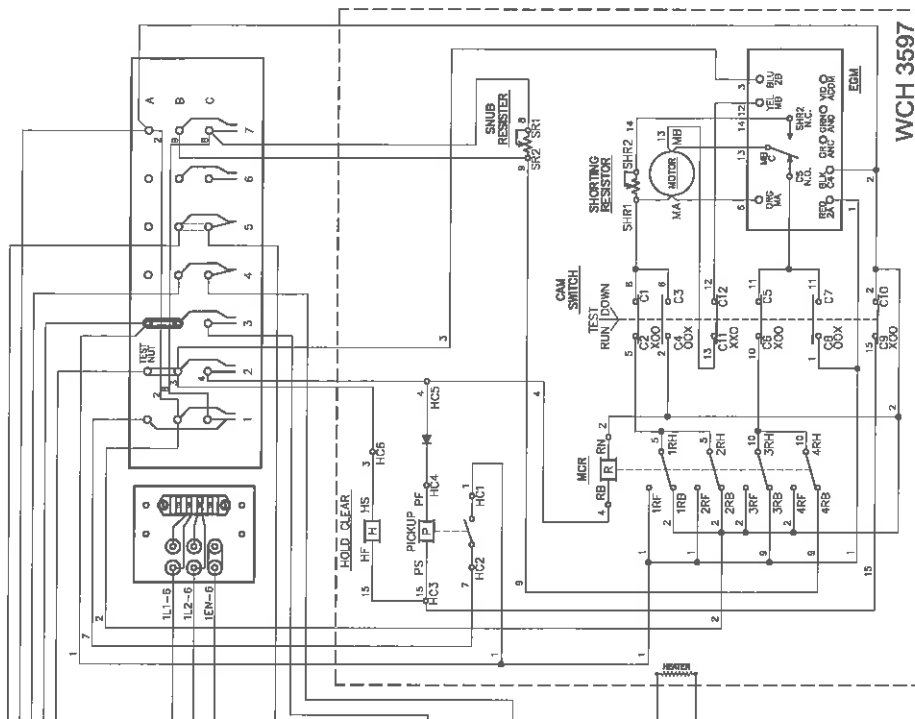


GATE #1 JCT. BOX



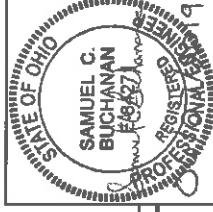
WCH Junction box base
(Double sided)
P/N: 2149-A-112-E

CABLES TO HOUSE ← CABLES TO CANTILEVER #1 JCT. BOX



GATE #1

WCH 3597



W&L E

Wach & Lathrop
INC.

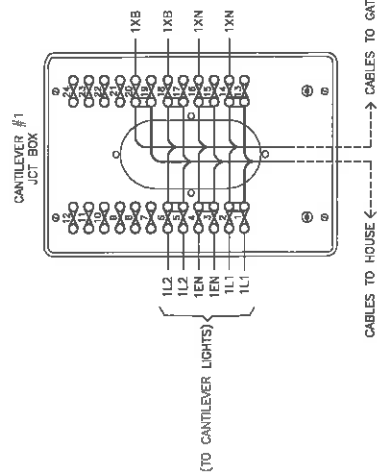
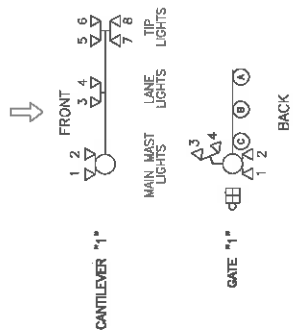
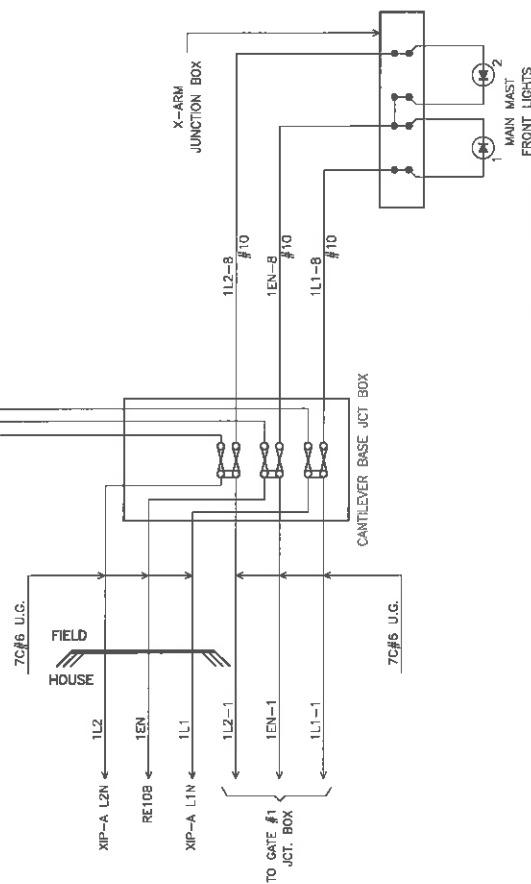
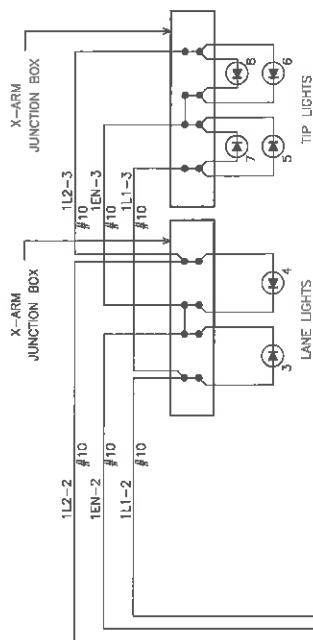
LOCATION: GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

DATE: 03/06/2019	FILE: GATE #1 MECHANISM (NEAR SIDE)
DESIGNER: CTC	CHK: ANRON
PROJECT: CTR	NO: 10081
PROJECT: CTC	NO: 002 171H
PROJECT: CTC	NO: 12 OF 23

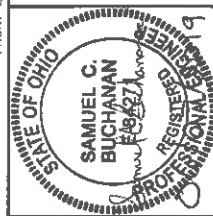
REVISION BLOCK



CANTILEVER #1



 IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

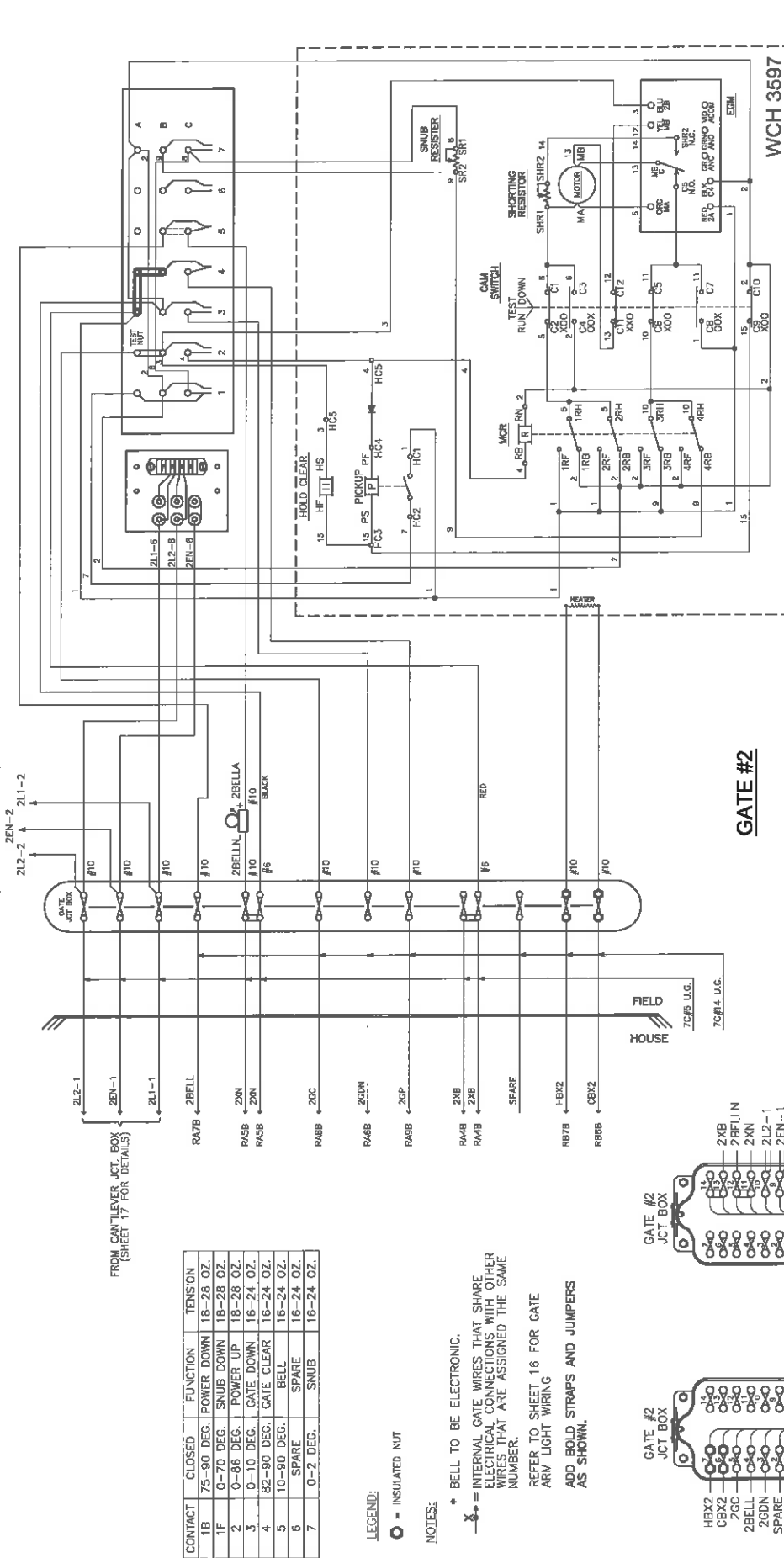


МОНГОЛЫН УЛАСЫН

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

PROB. DATE	03/05/2019	FILE	GATE #1	MECHANISM	WEAR SIDE
WHEELER	CTC	350	AKRON	CTC NO.	CN19035
SPRINGER	CTC	TRAP	188.91	SOIL	N.T.S.
WHEELER	CTC	DOT NO.	002 171H	SHEET	14 OF 23

[illegible]



CONTACT	CLOSED	FUNCTION	TENSION
1B	75-90 DEG.	POWER DOWN	18-28 OZ.
1F	0-70 DEG.	SNUB DOWN	18-28 OZ.
2	0-88 DEG.	POWER UP	18-28 OZ.
3	0-10 DEG.	GATE DOWN	16-24 OZ.
4	82-90 DEG.	GATE CLEAR	16-24 OZ.
5	10-80 DEG.	BELL	16-24 OZ.
6	SPARE	SPARE	16-24 OZ.
7	0-2 DEG.	SNUB	16-24 OZ.

LEGEND:

 - INSULATED NUT

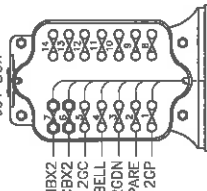
NOTES:

♣ BELL TO BE ELECTRONIC.

X = INTERNAL GATE WIRES THAT SHARE ELECTRICAL CONNECTIONS WITH OTHER WIRES THAT ARE ASSIGNED THE SAME NUMBER.

REFER TO SHEET 16 FOR GATE
ARM LIGHT WIRING

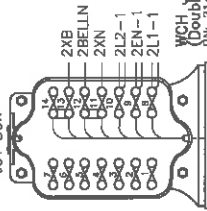
ADD BOLD STRAPS AND JUMPERS
AS SHOWN.

GATE #2
JECT BOX

CABLES TO HOUSE ←

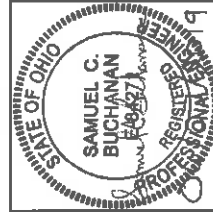
→ CABLES TO CANTILEVER #2 JCT. BOX

GATE #2
JCT BOX



WCH Junction box base
(Double sided)
PN: 2149-A-112-E

GATE #2

**WILEY**

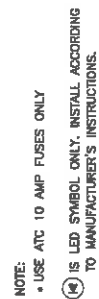
Whodunnit & Take Five

LOCATION

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOCADORE, OH

ORIGINAL ONE	03/06/2019	FILE	GATE #2 MECHANISM (FAR SIDE)
POUCHER	CTC	SUB	AKRON
POUCHER	CTC	REP	168.91
POUCHER	CTC	TOP NO.	002 171H
POUCHER	CTC	SHEET	15 OF 23

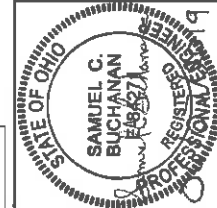
REVISION BLOCK



NOTE:
• USE ATC 10 AMP FUSES ONLY

⑭ IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

CHANGE FROM TYPICAL: Y

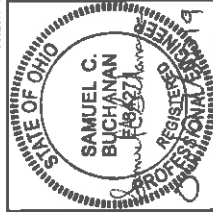
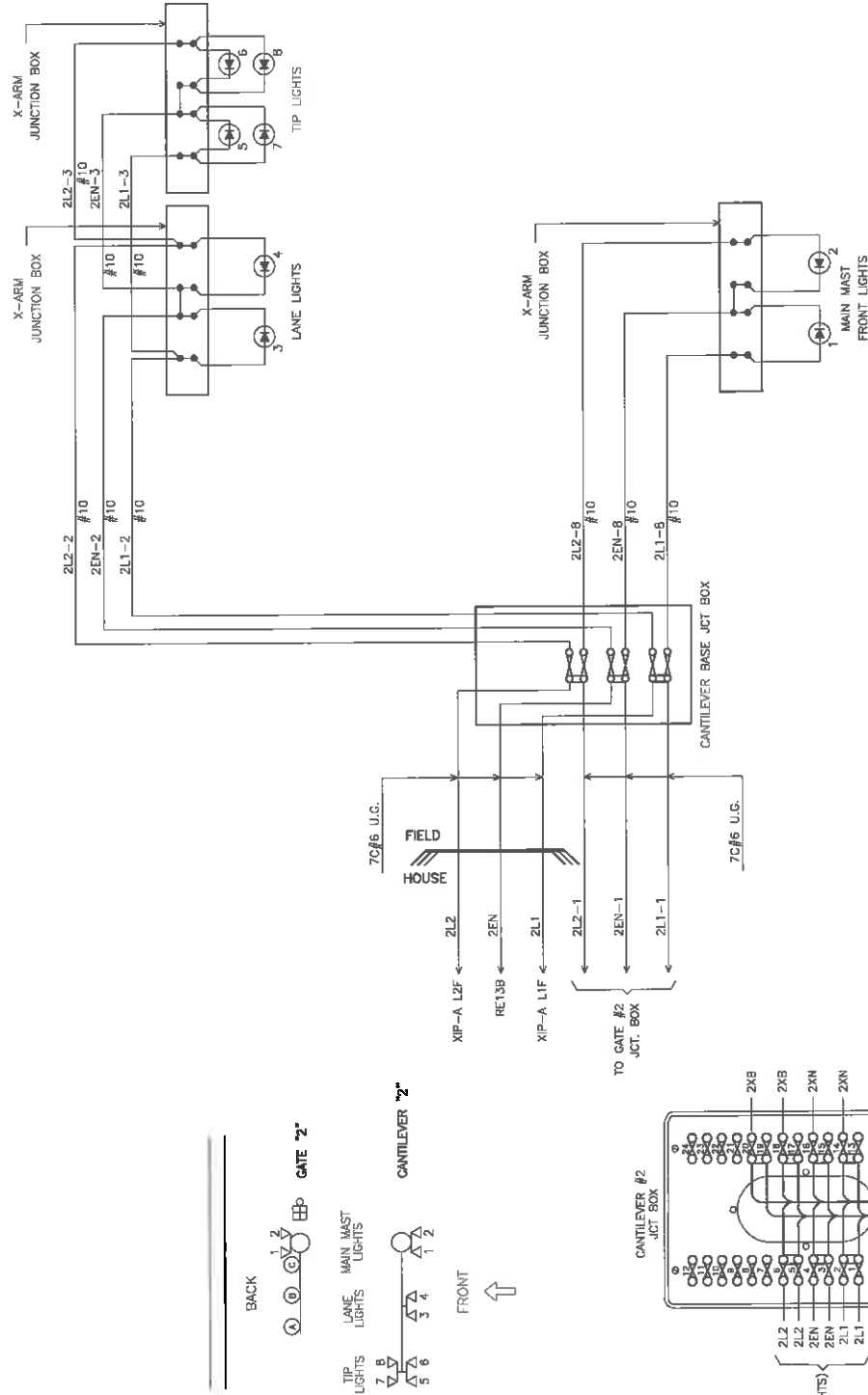
REVISION
BLOCK**WILEY**

АВТО

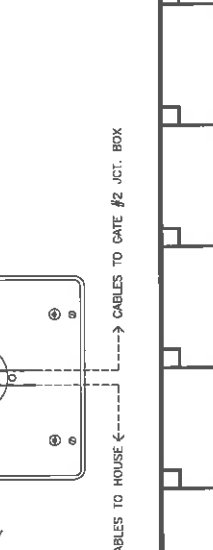
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOCADORE, OH

ISSUANCE DATE	03/06/2019	TITLE	GATE #2 LIGHTS (FAR SIDE)
ISSUER	CTC	SUP	AKRON
ORIGINATOR	CTC	REQD	16B.91
PROJECT	CTC	DOC No.	002 171H
			SHEET 16 OF 23

CANTILEVER #2



IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.



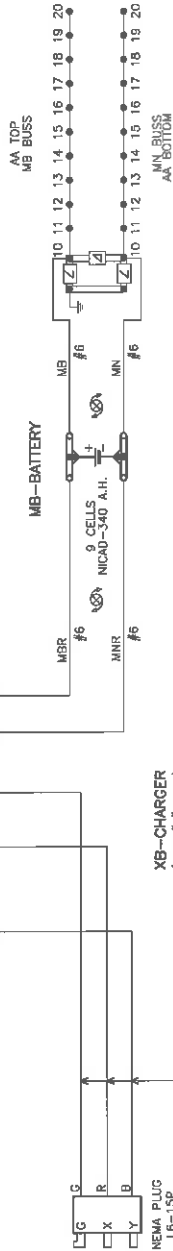
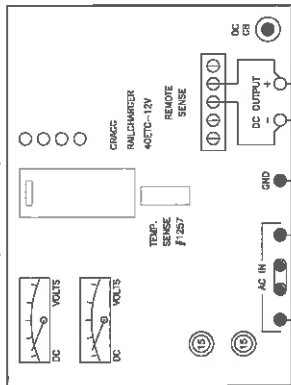
REVISION	DATE	BY	CHKD	APP'D
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3	03/08/2019	CTC	ARON	CTC
4	03/08/2019	CTC	ARON	CTC
5	03/08/2019	CTC	ARON	CTC
6	03/08/2019	CTC	ARON	CTC
7	03/08/2019	CTC	ARON	CTC
8	03/08/2019	CTC	ARON	CTC
9	03/08/2019	CTC	ARON	CTC
10	03/08/2019	CTC	ARON	CTC
11	03/08/2019	CTC	ARON	CTC
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13	03/08/2019	CTC	ARON	CTC
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16	03/08/2019	CTC	ARON	CTC
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73	03/08/2019	CTC	ARON	CTC
74	03/08/2019	CTC	ARON	CTC
75	03/08/2019	CTC	ARON	CTC
76	03/08/2019	CTC	ARON	CTC
77	03/08/2019	CTC	ARON	CTC
78	03/08/2019	CTC	ARON	CTC
79	03/08/2019	CTC	ARON	CTC
80	03/08/2019	CTC	ARON	CTC
81	03/08/2019	CTC	ARON	CTC
82	03/08/2019	CTC	ARON	CTC
83	03/08/2019	CTC	ARON	CTC
84	03/08/2019	CTC	ARON	CTC
85	03/08/2019	CTC	ARON	CTC
86	03/08/2019	CTC	ARON	CTC
87	03/08/2019	CTC	ARON	CTC
88	03/08/2019	CTC	ARON	CTC
89	03/08/2019	CTC	ARON	CTC
90	03/08/2019	CTC	ARON	CTC
91	03/08/2019	CTC	ARON	CTC
92	03/08/2019	CTC	ARON	CTC
93	03/08/2019	CTC	ARON	CTC
94	03/08/2019	CTC	ARON	CTC
95	03/08/2019	CTC	ARON	CTC
96	03/08/2019	CTC	ARON	CTC
97	03/08/2019	CTC	ARON	CTC
98	03/08/2019	CTC	ARON	CTC
99	03/08/2019	CTC	ARON	CTC
100	03/08/2019	CTC	ARON	CTC

W&L E

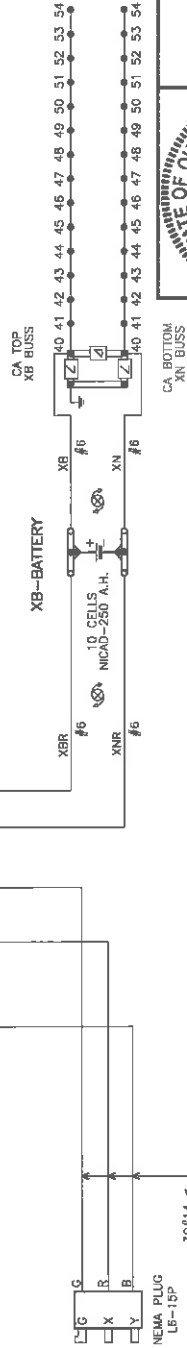
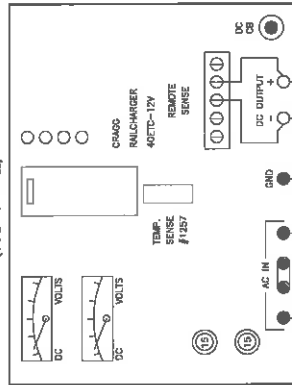
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOCADORE, OH

PROJECT NO. 002 171H
SHEET 17 OF 23

MB-CHARGER (SIDE "A" WALL)



XB-CHARGER (SIDE "C" WALL)

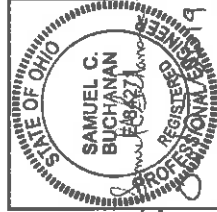


BATTERY BUSS DETAILS

20	VI01 J3-5
19	VI01 J3-2
18	VI01 J3-11
17	PO DB3T
16	BGD B1
15	SPARE
14	RCDR TB1-3
13	RCDR TB8-2
12	RCDR TB1-1
11	RCDR TB1-7
10	MDSA-1 B-
9	MN BATT-
8	MN BUSS (BOTTOM)
7	AA
6	MN BUSS (TOP)
5	MN BATT+
4	MN BUSS (BOTTOM)
3	AA
2	MN BUSS (TOP)
1	MN BATT+

BATTERY BUSS DETAILS

54	SPARE
53	BGD B2
52	XR 15
51	RAAT
50	RA16T
49	XIP-A N
48	XIP-A B
47	GPR 25
46	GPR 12
45	GPR 15
44	CCS8T
43	FD COM
42	RCDR TB1-2
41	XIP-A LIB-B
40	XN BATT+
39	XN BUSS (TOP)
38	CA
37	XN BUSS (BOTTOM)
36	CA
35	XN BUSS (TOP)
34	CA
33	XN BUSS (BOTTOM)
32	CA
31	XN BUSS (TOP)
30	CA
29	XN BUSS (BOTTOM)
28	CA
27	XN BUSS (TOP)
26	CA
25	XN BUSS (BOTTOM)
24	CA
23	XN BUSS (TOP)
22	CA
21	XN BUSS (BOTTOM)
20	CA
19	XN BUSS (TOP)
18	CA
17	XN BUSS (BOTTOM)
16	CA
15	XN BUSS (TOP)
14	CA
13	XN BUSS (BOTTOM)
12	CA
11	XN BUSS (TOP)
10	CA
9	XN BUSS (BOTTOM)
8	CA
7	XN BUSS (TOP)
6	CA
5	XN BUSS (BOTTOM)
4	CA
3	XN BUSS (TOP)
2	CA
1	XN BUSS (BOTTOM)



W&L E

Wheeler & Lane Etc.
Electric

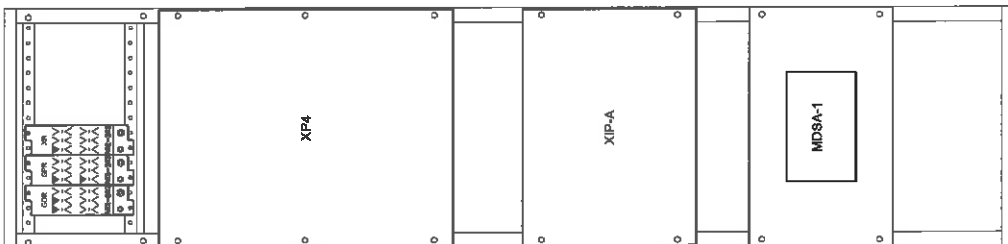
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

CHANGE FROM TYPICAL Y

REVISION
BLOCK

REVISION	DATE	BY	APP'D	DESCRIPTION
1	03/06/2019	WLB	AKRON	BATTERY CHARGERS
2		CTC	105.91	1"-2"
3		CTC	105.91	1"-2"
4		CTC	105.91	1"-2"
5		CTC	105.91	1"-2"
6		CTC	105.91	1"-2"
7		CTC	105.91	1"-2"
8		CTC	105.91	1"-2"
9		CTC	105.91	1"-2"
10		CTC	105.91	1"-2"
11		CTC	105.91	1"-2"
12		CTC	105.91	1"-2"
13		CTC	105.91	1"-2"
14		CTC	105.91	1"-2"
15		CTC	105.91	1"-2"
16		CTC	105.91	1"-2"
17		CTC	105.91	1"-2"
18		CTC	105.91	1"-2"
19		CTC	105.91	1"-2"
20		CTC	105.91	1"-2"
21		CTC	105.91	1"-2"
22		CTC	105.91	1"-2"
23		CTC	105.91	1"-2"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



LF

LE

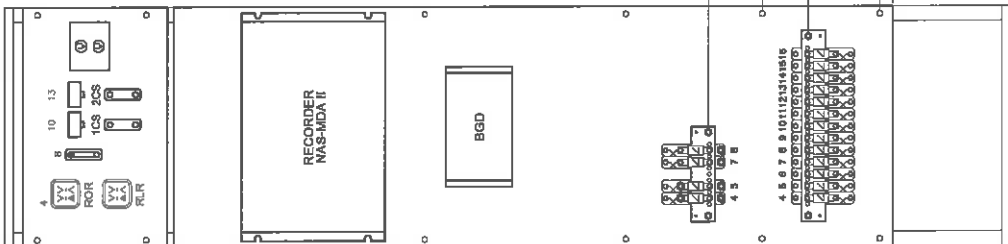
LD

LC

LB

LA

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



RE

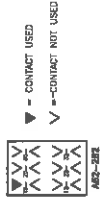
RC

RB

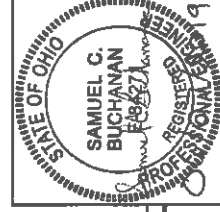
RA

SIDE 'B' FRONT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



RELAY CROSS	REFERENCE
452-262	452000



W&LE

Wheeler & Leary Inc.

LOCATION

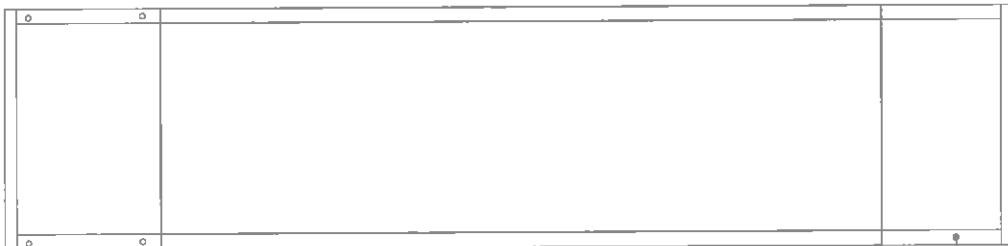
GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MORGANTHAU, OH

DATE	03/05/2018	TIME	11:11	VIEW	RACK FRONT VIEW
DESIGNED	CTC	BY	AKRON	DATE	01/19/2018
DRAWN	CTC	DATE	10/01/18	SCALE	1"=2'
CHECKED	CTC	DATE	10/01/18	SHEET	20 OF 23

REVISION
BLOCK

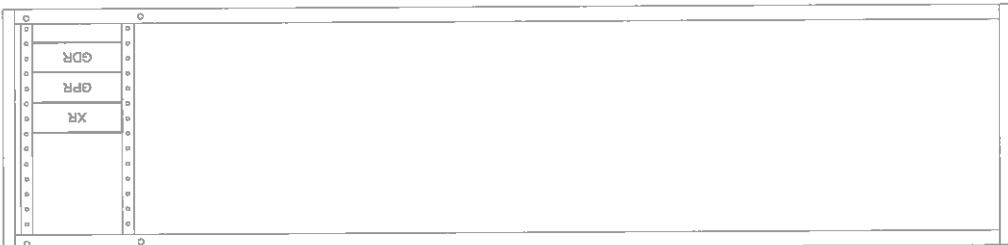
BACK OF RIGHT SIDE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



BACK OF LEFT SIDE

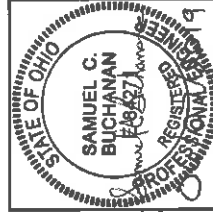
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



SIDE 'B' BACK

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



W&L

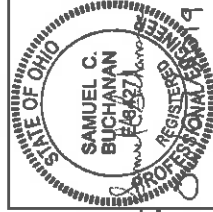
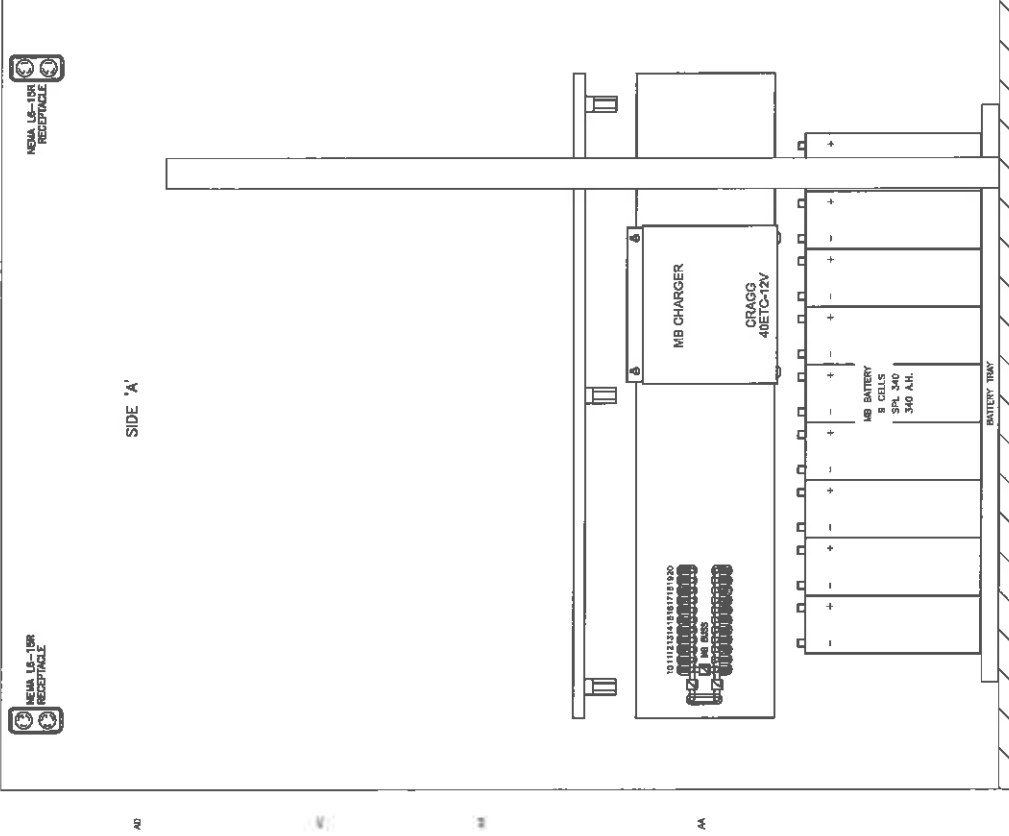
W&L

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

LOCATION	GILCHRIST ROAD (GILCHRIST STORAGE LEAD) MOGADORE, OH		
REVISION	DATE	BY	APP
1	03/06/2019	W&L	W&L
2	03/06/2019	W&L	W&L
3	03/06/2019	W&L	W&L
4	03/06/2019	W&L	W&L
5	03/06/2019	W&L	W&L
6	03/06/2019	W&L	W&L
7	03/06/2019	W&L	W&L
8	03/06/2019	W&L	W&L
9	03/06/2019	W&L	W&L
10	03/06/2019	W&L	W&L
11	03/06/2019	W&L	W&L
12	03/06/2019	W&L	W&L
13	03/06/2019	W&L	W&L
14	03/06/2019	W&L	W&L
15	03/06/2019	W&L	W&L
16	03/06/2019	W&L	W&L
17	03/06/2019	W&L	W&L
18	03/06/2019	W&L	W&L
19	03/06/2019	W&L	W&L
20	03/06/2019	W&L	W&L

REVISION
BLOCK

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

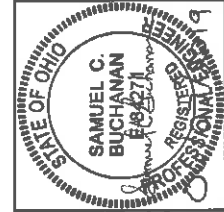
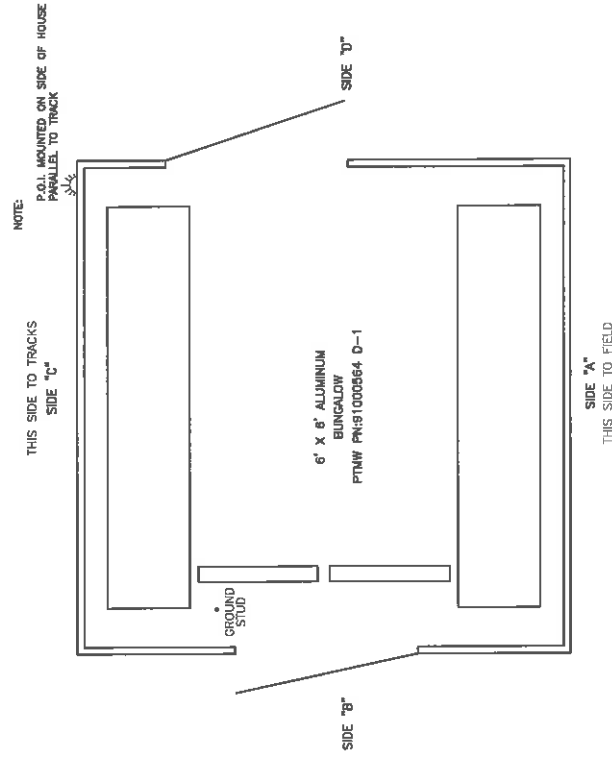
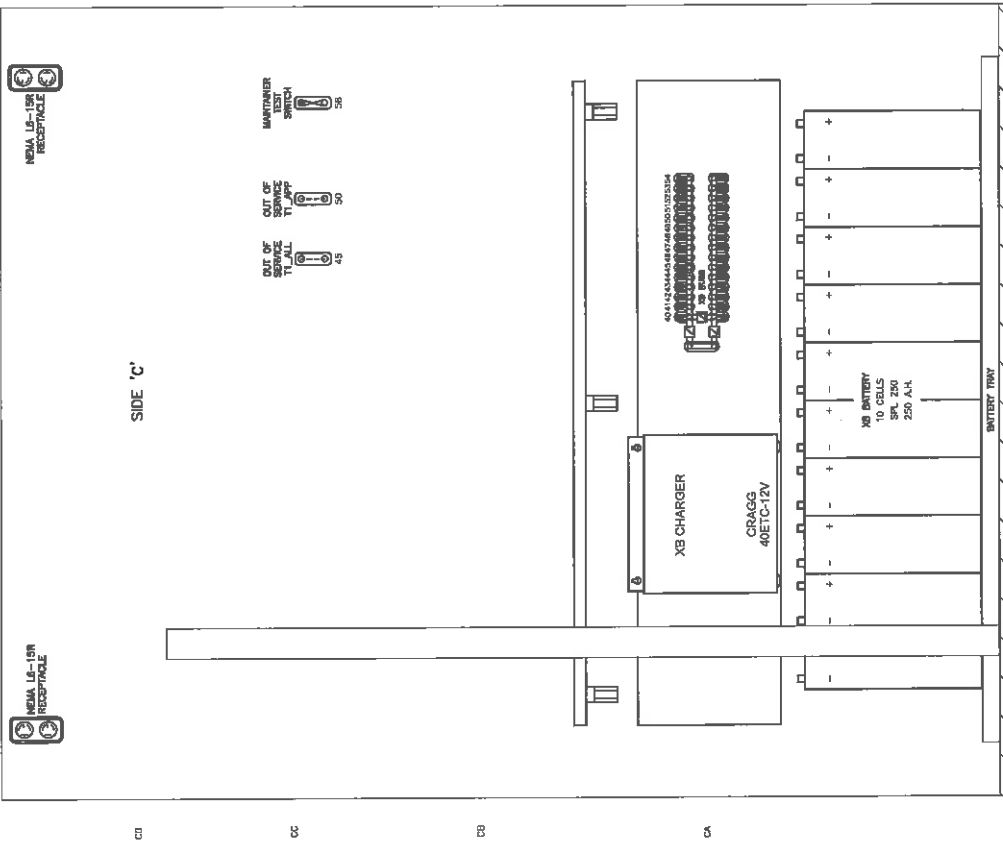


W&L E

Whodunnit & Lab Etc
Realty

LOCATION		GILCHRIST ROAD (GILCHRIST STORAGE LEAD)				MOGADORE, OH	
DATE		03/06/2019		TITLE	SIDE "A"		
DESIGNER	CTC	FILE	AKRON	DWG NO.	CN19035		
DRAWN	CTC	REVISION	168.91	SCALE	1"=2'		
CHECKED	CTC	POST NO.	002 171H	SHEET	22	OF 23	

REVISION
BLOCK



1

GILCHRIST ROAD (GILCHRIST STORAGE LEAD)
MOGADORE, OH

ORIGINAL DATE	03/06/2019	MILL	SIZE	"C"
DESIGNER	CTC	SUB	AKRON	THE NL
DRAWN	CTC	PROJ	16B.91	SCALE
CHECKER	CTC	DWG NO.	002	171H
			25	OF 23



OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

Mike DeWine, Governor • Mark Policinski, ORDC Chairman

January 22, 2019

Mr. Tim Andrews
Wheeling & Lake Erie
100 East First St.
Brewster Oh, 44613

RE: Summit County, Gilchrist Rd, DOT# 002171H, PID# 109479

Dear Mr. Andrews:

A diagnostic review was held at the above grade crossing on November 8, 2018. The crossing has been recommended to receive upgrades to the flashing lights and roadway gates. Wheeling & Lake Erie (WE) is authorized to proceed with the site plans and cost estimates (PE) or bid package for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

The diagnostic review form is attached. Please note any recommendations (page 3), if any, made by the team with regard to requirements for this location. Any minor roadway work necessary for MUTCD compliance should be incorporated into the PE and such costs will flow through the railroad reimbursement process.

The Project Manager for this project is James Tucker. James can be reached at (614) 398-6897, or james.tucker@dot.ohio.gov, if you have any questions.

Sincerely,

Project Manager

C: Randall Schumacher, Supervisor, Rail Division, PUCO
Jill Henry, Grade Crossing Planner, PUCO
Heather Hamilton, ORDC
ORDC (file)

Attachment: 1 (diagnostic review form)



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

January 2, 2019

Wheeling & Lake Erie Railroad
Mr. Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, Ohio 44613

Subject: Grade Crossing Warning Device Improvements
Summit County, Gilchrist Road, DOT# 002171H, PID 109479

Dear Mr. Andrews:

A diagnostic review was conducted at the subject grade crossing on 11/8/2018. As a result of the review, the crossing will be upgraded with active warning devices.

The project shall be completed in compliance with Agreements No. 0001-A, dated September 17, 1990, entered into by the State of Ohio and Wheeling & Lake Erie Railroad (WE) and incorporated as if fully rewritten herein. The construction shall also meet the general terms and conditions under the Fixing America's Surface Transportation Act and subsequent amendments and the State of Ohio's Federally Funded Warning Device Program.

Preliminary engineering (PE) and construction costs shall be borne ninety percent (90%) by ORDC and ten percent (10%) by WE. Reimbursable costs will be limited by the ORDC based on approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to WE and may be amended by the ORDC based on revised estimates and bid tabulations.

This Letter Agreement and the approved plans constitute the scope of the projects. WE shall notify ORDC in writing of any changes in the scope of work which are not in the approved plans and estimates and secure approval in writing of same before the work is performed.

PE will not be commenced by WE prior to ORDC issuing a PE authorization. PE will be submitted by WE to ORDC within ninety (90) days or other time specified by ORDC in the PE authorization. Construction will not be commenced by WE prior to ORDC issuing a construction authorization. Construction will be completed by WE within nine (9) months or other time specified in the time specified by ORDC in the construction authorization.

Please indicate your acceptance of the terms and conditions of this Letter Agreement by signing and returning one (1) copy to me at the address listed above and retain a copy for your files. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be a duplicate original, but all of which taken together shall be deemed to constitute a single Agreement.

Sincerely,

Matthew Dietrich
Executive Director



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

Wheeling & Lake Erie Railroad:







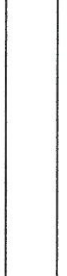

By: 

Title: S&C Supervisor

Date: 1-4-19

SUM Gilchrist Rd. WE PID 109479 DOT#002171H

GILCHRIST ROAD, (DOT #002171H), MOGADORE, CITY OF AKRON, SUMMIT COUNTY, WHEELING & LAKE ERIE RAILWAY
November 8, 2018

Name	Title	Organization	Phone Number	Email	Signature
1. James Tucker	Project Manager	ORDC	(614) 398-6897	james.tucker@dot.ohio.gov	
2. Cathy Stout	Safety Program Manager	ORDC	(614) 273-4783	catherine.stout@dot.ohio.gov	
3. Heather Hamilton	Safety Coordinator	ORDC	(614) 273-4783	heather.hamilton@dot.ohio.gov	
4. Kevin Lesh	PUCO Inspector	PUCO	(330) 612-1655	Lionel.Lesh@puc.ohio.gov	
5. Tim Andrews	Signal & Communications Supervisor	Wheeling & Lake Erie Railway	(330) 417-5541	tandrews@wlerwy.com	
6. Jim Hall	Public Works Bureau Manager	Akron Public Works	(330) 283-5774	jhall@akronohio.gov	
7. Jim Stout PUCO			614-466-0435		
8. SAKs Bureau PUC			614 466 1150		
9.					
10.					

Crossing at a glance:
Ranking - 1436
0 incidents in previous 5 years

DIAGNOSTIC REVIEW

DOT# 002171H

Date: 11-8-18

On-Site Review Team

Include: Name - Title - Organization - Phone Number - Email

1. SEE FRONT PAGE for INFO
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Railroad and Roadway Data

Complete or update any Railroad and Roadway Data on supplemental forms.

Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? No Yes

If yes,

Improvement type _____ Lead Agency _____ Timeline/completion _____

Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name): OHIO Edison

Nearest Available Power Source: @ crossing

What other utilities are present? ☒ Gas ☒ Cable ☒ Telephone ☐ Fiber Optic Cable (add locations to sketch)
☐ Petroleum ☒ Water ☒ Sanitary Sewer
☐ Other _____

Is(are) there potential utility conflict(s)? ☐ No ☐ Yes ☒ Unknown

Comments:



Pedestrian & Bicycle Data

Regular pedestrian usage:	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Volumes:
Is sidewalk present in the approach?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Quadrants:
Does crossing surface accommodate pedestrians?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Both sides of roadway?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	If no, which side is paved?
Pedestrian generators in close proximity (e.g. schools, sports/entertainment venues)?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Comments:			
Regular bicycle usage:	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
<input type="checkbox"/> Roadway	<input type="checkbox"/> Dedicated Lane (on street)	<input type="checkbox"/> Dedicated Path (off street)	<input type="checkbox"/> Shared Use (pedestrian/bicycle) Path
<input type="checkbox"/> Bikes must use sidewalk			
Future plans/transportation plans for pedestrian or bicycle routes?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Comments:			

Sight Preview (REFER TO TABLES)

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1)	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Is stopping sight distance adequate? (See Table 2)	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes If no, which quadrant? _____
When considering recommendations for bicycle treatments:		
Bicycle sight distance adequate?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes If no, which quadrant? _____
When considering recommendations for pedestrian treatments:		
Pedestrian sight distance adequate?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes If no, which quadrant? _____

Potential Red Flags / Project Challenges

Traffic Signal Preemption (include traffic signal intersection name and LHA with jurisdiction over traffic signal, if known):
N/A
Crossing Consolidation or Closure:
N/A
Real Estate or ROW:
N/A
Culvert / Drainage / Ballast Conditions:
N/A
Roadway and/or Sidewalks:
N/A
Circuitry (e.g. reaches out to other crossings, specific needs, etc.):
N/A
Environmental:
N/A
Other:



Potential Closure

Is it the consensus of the Diagnostic Review Team that this is a potential closure project? ☒ No ☐ Yes

Explain reasons:

High Traffic Volume with Industry

Diagnostic Team Recommendations

☐ No improvements needed

Quadrants Needed

☒ Install/upgrade active devices

☐ Automatic Flashing Lights (AFLS)

☐ AFLS / Cants

☐ AFLS / Gates

☒ AFLS / Gates / Cants

☒ Bells / number

2

☐ Upgrade circuitry / type

☒ Sidelights

for drive @ 2851

☐ Guardrail Needed

☐ Install/Replace curb

☒ Bungalow placement & offset from rail & highway

Same Quad as existing

☐ Other (define)

Comments:

☐ Install/upgrade traffic signal preemption

Other (define):

Diagnostic Team Recommendations (cont.)

PEDESTRIAN/BICYCLE Treatments (additional, not included above)

☐ Crossing Surface (specify)

☐ Sidewalk (specify)

☐ Detectable warning surfaces

☐ LOOK Sign (R15-8)

☐ Stop lines

☐ Illumination

☐ Dynamic envelop markings

☐ Channelization

☐ Path delineation

☐ Fencing/barriers

☐ Other

Comments:

Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature/initial acknowledgement):

[Signature]
[Signature]
[Signature]

[Signature]
[Signature]

[Signature]

ORDC Crossing Data Form

Reason for Request: Formula
(e.g. formula, accident, constituent, etc.)

Date: ~~10/31/18~~ 11-8-18

Location Data

Street or Road Name: Gilchrist Road

County: Summit

Township:

US DOT No.: 002171H

City (in or near): Mogadore

Railroad Name: WE

RR Milepost: 0168.91

Safety Data (Obtain crash reports, if possible)

	Initial Information (from database)	Revised
Number & dates of vehicle crashes in previous 5 years:	0	
Number & dates of pedestrian/bicycle crashes in previous 5 years:	0	
Hazard Ranking: 1436	Date Run: 10/31/18	

Railroad Data

Type of Train: Freight Intercity Passenger Transit Shared Use Transit Commuter Tourist/Other

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	4	
<1 per day? Trains per week		
Day thru trains		
Night thru trains		
Switching	4	
Total number of tracks		
Number of main tracks	1	
Number of other tracks		
Maximum train speed	10	
Typical train speed	5-10	
Amtrak		
Are there other track(s) crossing this same roadway within 100ft of this crossing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
If yes, Crossing DOT# (if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		

Roadway Data

Local Highway Authority:	City of Akron	
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	2954/2017	8210 See Attachment
Highway Paved	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
Roadway Surface: Blacktop Gravel <u>Concrete</u> Other _____		
Roadway width (paved/travelled way): <u>52</u> ft		
Number of Highway Lanes	4	
Urban or Rural	Urban Major Collector	
Vehicle Speed: _____ MPH		35
School Bus Operation: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____ Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ 4% Amount (from FRA)		LHA verified/changed?
Shoulders: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is the Shoulder Surfaced? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, shoulder width: _____ ft.		
Is there existing guardrail along the roadway in crossing vicinity? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		
Crossing Angle 0-29° 30-59° <u>60-90°</u> Measured in _____ Quadrant?		
Quadrant _____ Curb & Gutter:	Quadrant _____ Curb & Gutter:	
<u>Functional</u> (Curb height = 4" or more)	<u>Functional</u> (Curb height = 4" or more)	
Non-functional (Curb height = less than 4")	Non-functional (Curb height = less than 4")	
None	None	

Existing Traffic Control Devices

Type of Warning Devices	Installed?	Quantity/Comments
HIGHWAY		
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>2</u>
'Stop' Signs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Dynamic Envelope Markings (condition?)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
'No Turn' Signs (highway/passive)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Barriers/fencing (pedestrian/bicycle)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
LOOK Sign	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Do Not Stop On Track Sign	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
RAILROAD		
Crossbucks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>2</u>
Crossbucks – assembly with Stop	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Crossbucks – assembly with Yield	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Cantilever Flashing Lights	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Number: <u>1</u> Length:
Side Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
LED or Incandescent Lights? Size?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>12" Incandescent</u>
Automatic Gates	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Number: <u>2</u> Length:
Bells	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Number: <u>1</u>
Sidewalk/Pedestrian Gate Arms	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
'No Turn' Signs (railroad/active)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>under flag order</u>
Circuitry: <input type="checkbox"/> Constant Warning Time <input checked="" type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other _____		
OTHER	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Railroad Data

If multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ No
 Can one train block the motorists' view of another train at crossing? ☐ Yes (Explain below) ☐ No
 Can one or more tracks be eliminated through the crossing? ☐ Yes ☐ No
 Comments:

Roadway Data

Is there a nearby intersection that could cause queuing over the crossing? ☒ No ☐ Yes
 If yes, Distance _____
 Is this intersection signalized? ☐ No ☐ Yes
 Are the signals currently interconnected with the existing crossing warning devices? ☐ No ☐ Yes
 Is there a 'Do not Stop on Track' sign? ☒ No ☐ Yes

Type of Development

<input type="checkbox"/> Open Space	<input type="checkbox"/> Institutional	Location of nearby schools: <u>LHA states that there are none nearby.</u>
<input checked="" type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Commercial	
<input type="checkbox"/> Residential		

Surface

Surface review form completed: ☒ Yes ☐ No

TABLE 1

Clearing Sight Distances

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

TABLE 2

Stopping Sight Distances

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.

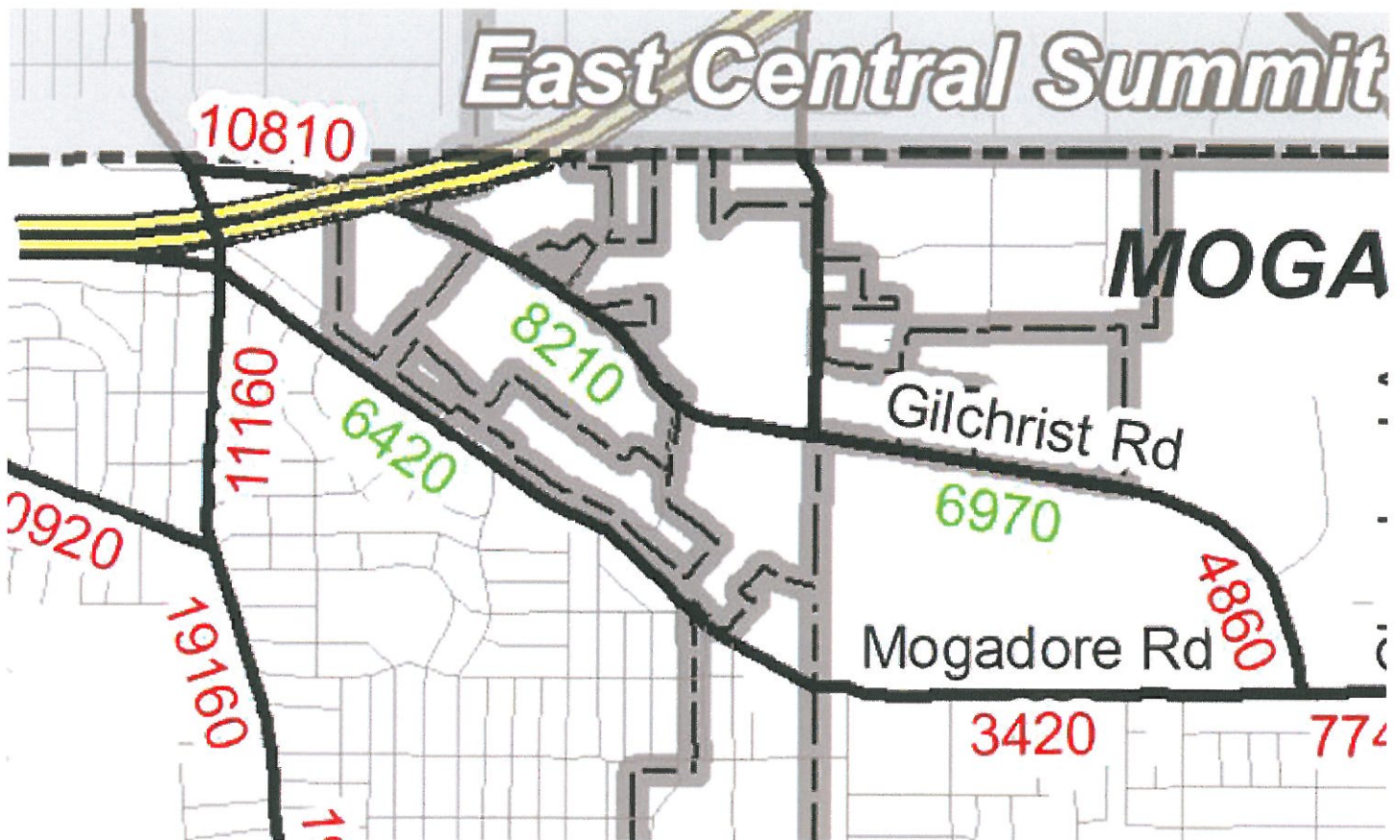
Tucker, Jim

From: Hall, Jim <JHall@akronohio.gov>
Sent: Friday, November 9, 2018 8:03 AM
To: Hamilton, Heather; Tim Andrews; Teodecki, Mike; Henry, Jill; Tucker, Jim; Stout, Catherine
Subject: RE: GILCHRIST ROAD, (DOT #002171H), MOGADORE, CITY OF AKRON, SUMMIT COUNTY, WHEELING & LAKE ERIE RAILWAY

Good morning all,

Here is what I could find for the traffic counts along Gilchrist Road from AMATS website: <http://amatsplanning.org/wp-content/uploads/2016-Average-Daily-Traffic.pdf>

We are still checking into the pavement markings – it did not appear to be any prior to the crossing replacement from google.



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10/28/2019 10:26:41 AM

in

Case No(s). 19-1977-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT#002-171H, at Gilchrist Road in Summit County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division