LETTING DATE
11/17/2026

HMA RESURFACING
STP-S-C091(141)--5E-91

WARREN COUNTY

IOWA DOT

Transportation Development Division

PLANS OF PROPOSED IMPROVEMENT ON THE

FARM-TO-MARKET SYSTEM
WARREN COUNTY

HMA RESURFACING

On G16, from State Highway 65/69 to Carlisle City Limits

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

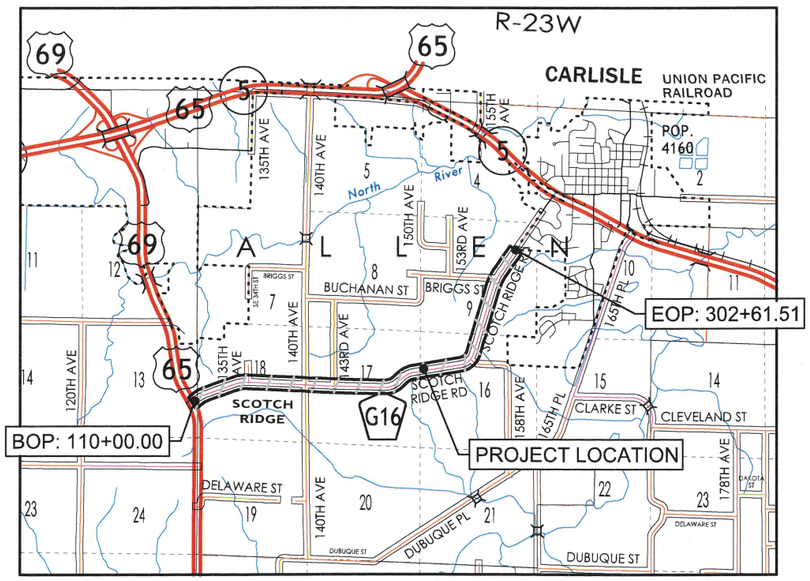
Value Engineering Saves. Refer to Article 1105.13 of the Specifications.

Refer to Sheet C.2 for List of Standard Road Plans

FOR LIST OF UTILITY CONTACTS, REFER TO SHEET A.2

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Legend Sheet
B Sheets	**Typical Cross Sections and Details**
B.1 - 2	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1	General Notes
C.2	Estimated Quantities & Reference Notes
C.3 - 6	Tabulations
D Sheets	**Mainline Plan and Plan Sheets**
D.1 - 8	Scotch Ridge Road
G Sheets	**Survey Sheets**
G.1	Reference Ties, Bench Marks & Horizontal Control
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan and Staging Notes
J.2 - 4	Traffic Control and Staging Layout



LOCATION MAP
NOT TO SCALE



IOWA STATE MAP
NOT TO SCALE

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811
Know what's below. Call before you dig.

REVISIONS

	TOTAL
	23
PROJECT IDENTIFICATION NUMBER	
IOWA DOT PROJECT NUMBER	
STP-S-C091(141)--5E-91	

MILEAGE SUMMARY

DIV.	LOCATION	LIN. FT.	MILES
1	Scotch Ridge Road STA. 110+00.00 to 302+61.51	19,261.51	3.65

SCOTCH RIDGE ROAD
DESIGN DATA RURAL

2024	AADT	1,290	V.P.D.
20 --	AADT	--	V.P.D.
20 --	DHV	--	V.P.H.
TRUCKS		--	%
Total Design ESALs		--	

BRIAN ARNOLD, DISTRICT 1, CHAIR — DATE 8/11/26

AARON DEKOCK, DISTRICT 2 — DATE 8/11/26

TRAVIS DEWITT, DISTRICT 3, VICE CHAIR — DATE 8/11/26

STEPHANIE ERICKSON, DISTRICT 4 — DATE

CRYSTAL MCINTYRE, DISTRICT 5 — DATE 8/11/2026

BOARD OF SUPERVISORS

WARREN COUNTY

WARREN COUNTY ENGINEER — DATE 8/10/26

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER — JOEY L. RILEY 28650 — IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature — Date 8/7/2026

JOEY L. RILEY, P.E.
Printed or Typed Name

My license renewal date is December 31, 2027

Pages or sheets covered by this seal: ALL SHEETS

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TITLE SHEET

P:\2025002543\04-Drawings\Dgn\Plans\SHT 2025002543_A01.dgn

DRAWING NO.
A.1

GENERAL LEGEND

EXISTING	PROPOSED	
SAN	SAN	SANITARY SEWER MAIN
SAN	SAN	SANITARY SEWER SERVICE
SAN	SAN	SANITARY SEWER FORCE MAIN
ST S	ST S	STORM SEWER MAIN OR CULVERT
ST S	ST S	SECONDARY STORM SEWER SERVICE
		SUBDRAIN/TILE
		WATER MAIN
		WATER SERVICE
		UNDERGROUND ELECTRIC
		OVERHEAD ELECTRIC
		UNDERGROUND TELEPHONE
		UNDERGROUND FIBER OPTIC
TV		UNDERGROUND CABLE TV
		GAS MAIN OR SERVICE
949	949	CONTOUR LINES INTERMEDIATE
950	950	CONTOUR LINES INDEX
		PROPERTY LINE / LOT LINE
		RIGHT OF WAY LINE
		SECTION LINE
		TEMPORARY EASEMENT
		PERMANENT EASEMENT
		GUARD RAIL
		FIELD FENCE
		ROAD CENTERLINE
		CONSTRUCTION LIMITS
		AG LINE
		WATERWAY FLOWLINE

UTILITY QUALITY SERVICE LEVELS:

UTILITY QUALITY LEVELS ARE BASED ON THE CI/ASCE 38-02 STANDARD.

UTILITY QUALITY LEVEL A:

PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES.

UTILITY QUALITY LEVEL B:

INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

UTILITY QUALITY LEVEL C:

INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D:

INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

EXAMPLES:

8"SS(A)	SANITARY SEWER MAIN - QUALITY SERVICE LEVEL A
8"SS(B)	SANITARY SEWER MAIN - QUALITY SERVICE LEVEL B
8"SS(C)	SANITARY SEWER MAIN - QUALITY SERVICE LEVEL C
8"SS(D)	SANITARY SEWER MAIN - QUALITY SERVICE LEVEL D

EXISTING UTILITIES NOTE:

THESE EXISTING UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGING THEM. NO CLAIMS WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OF DELAY CAUSED BY SUCH WORK. PAYMENT WILL BE ALLOWED FOR UNCHARTED UTILITIES PER THE SPECIFICATIONS.

EXISTING	PROPOSED	
S		SANITARY SEWER MANHOLE
C	C	SANITARY SEWER CLEANOUT
A	A	AIR RELEASE MANHOLE/DRAIN MANHOLE
D		STORM SEWER MANHOLE
C	C	STORM SEWER CLEANOUT
		STORM SEWER INTAKE
		STORM SEWER BEEHIVE INTAKE
		FLARED END SECTION
		FIRE HYDRANT
WV	WV	WATER VALVE
VM	VM	WATER VALVE MANHOLE
		CURB STOP
WM	WM	WATER METER MANHOLE
YH	YH	YARD HYDRANT
E	E	ELECTRIC MANHOLE / VAULT
E	E	ELECTRIC PEDESTAL / TRANSFORMER
		OUTDOOR ELECTRIC POWER OUTLET
		POWER POLE
STL	STL	POWER POLE w/ STREET LIGHT
		STREET LIGHT POLE
		GUY WIRE
		FLOODLIGHT
		FIBER OPTIC MARKER
TS	TS	TRAFFIC SIGNAL
TB	TB	TRAFFIC SIGNAL BOX
TM	TM	TRAFFIC SIGNAL MANHOLE / VAULT
RR	RR	RAILROAD CROSSING SIGNAL
T	T	TELEPHONE MANHOLE / VAULT
T	T	TELEPHONE PEDESTAL
TV	TV	CABLE TV MANHOLE / VAULT
TV	TV	CABLE TV PEDESTAL
GV	GV	GAS VALVE
IHH		IRRIGATION HANDHOLE
B	B	BOLLARD (BUMPER POST)
		ROADWAY SIGN
MB	MB	MAILBOX
W	W	WELL
12"	12"	DECIDUOUS TREE
12"	12"	EVERGREEN TREE
36"	36"	SHRUB OR BUSH
		TREE OR SHRUB LINE
12"		STUMP
MW	MW	MONITORING WELL
00	00	SOIL BORINGS
FP		FLAG POLE
SD		SATELLITE DISH
		SLOPE INDICATORS
1		CONTROL POINT
00		BENCH MARK
A		SECTION CORNER
		IRON PIN SET
		IRON PIN FOUND

ABBREVIATIONS

T/S	TOP OF SLAB	TOP	TOP OF SLOPE
BC	BACK OF CURB	BOT	BOTTOM OF SLOPE
TC	TOP OF CURB	EP	EDGE OF PAVING
FG	FORM GRADE	BOP	BEGINNING OF PROJECT
FL	FLOWLINE	EOP	END OF PROJECT
CL	CENTERLINE	UAC	USE AS CONSTRUCTED
C	CUT		
F	FILL		

SHADING/HATCHING

	PROPOSED ADA SIDEWALK		PROPOSED NON-ADA SIDEWALK
	PROPOSED SIDEWALK RAMP		HMA PAVEMENT
	PROPOSED SIDEWALK TURNING SPACE		PCC CURB AND GUTTER
	PROPOSED HMA DRIVEWAY		DELINEATES RESTRICTED AREAS
	PROPOSED GRANULAR SHOULDER		PROPOSED PAVEMENT PATCH SHADING

UTILITY LEGEND

W(B), W(D)
Warren Water District
Matt Van Wyk
515-962-1200
Mvanwyk@warrenwaterdistrict.com

G(B)
OneOK
Bryan Ferguson
Bryan.Ferguson@oneok.com

T(B), T(D)
Lumen
Christine Porter
319-290-3942
Christine.Porter@lumen.com

Kinetic
Liza Zingula
lisa.zingula@gokinetic.com

G(B)
Flint Hills Resources
Naomi Gardner
319-252-0064
Naomi.gardner@fhr.com

FO(D)
Aureon
Jeff Klocko
515-830-0445
Jeff.Klocko@aureon.com

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

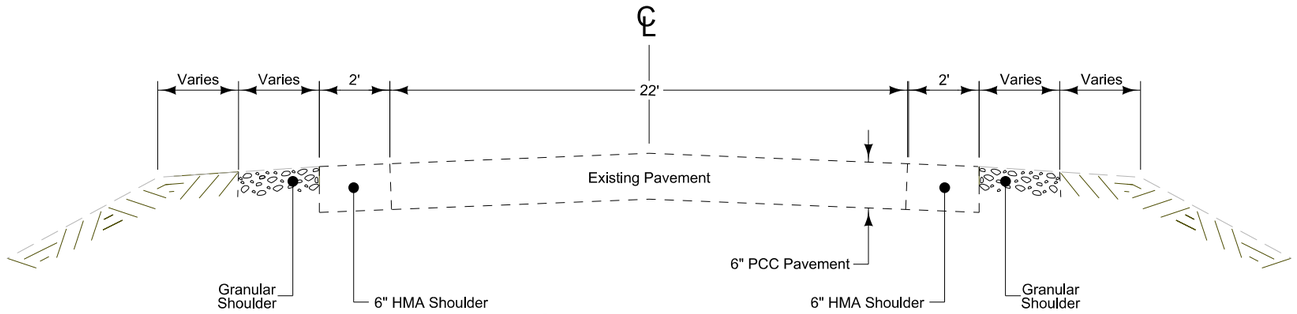
WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

LEGEND SHEET

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_A02.dgn

DRAWING NO.
A.2

ASSUMED THICKNESS (BASED ON AS-BUILTS)	
STATION TO STATION	
110+00.00	302+61.51



Scotch Ridge Road
Existing Cross Section

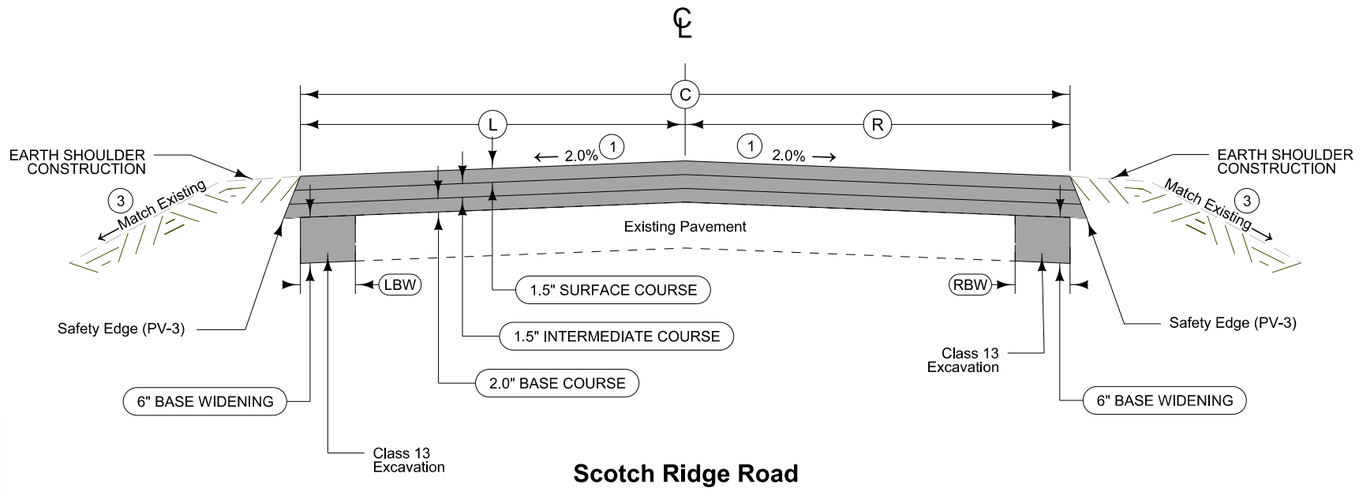
HMA Overlay

3R_WidenOverlay_ 04-19-11						
STATION TO STATION		(C) Feet	(L) Feet	(R) Feet	(LBW) Feet	(RBW) Feet
110+00.00	302+61.51	28	14	14	3	3

(1) Match existing cross slope.

(2) Painted edge lines should be painted 12' offset from centerline.

(3) Match existing, not to excede 3:1.



Scotch Ridge Road
HMA Paving

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

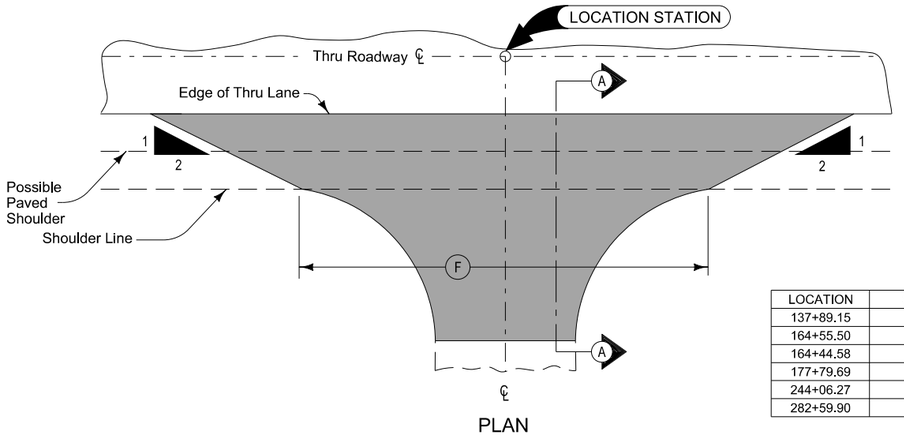
ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TYPICAL SECTIONS AND DETAILS

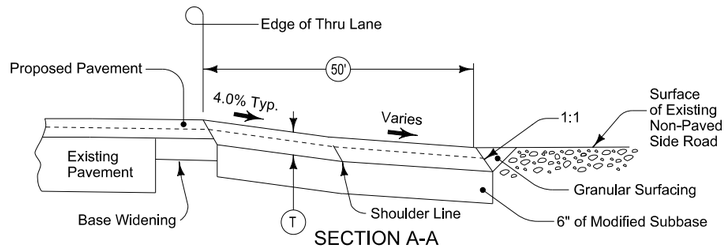
P:\2025002543\04-Drawings\Dgn\TYPICAL SECTIONS_2025002543.dgn

DRAWING NO.
B.1



PLAN

LOCATION	SIDE	ROADWAY
137+89.15	Lt.	135TH AVE
164+55.50	Lt.	140TH AVE
164+44.58	Rt.	140TH AVE
177+79.69	Lt.	143RD AVE
244+06.27	Rt.	CARTER ST
282+59.90	Lt.	BRIGGS ST



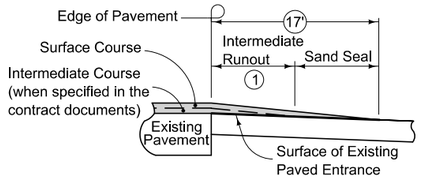
SECTION A-A

Special shaping of existing surface prior to placement of fillet or fillet extension may be required by the Engineer and is incidental to other work on the project.

Pavement quantities included with mainline quantities.

Total thickness of sideroad pavement to be eight (8) inches. Surface course of 1.5 inches. Intermediate course of 2.5 inches. Base course of 4 inches.

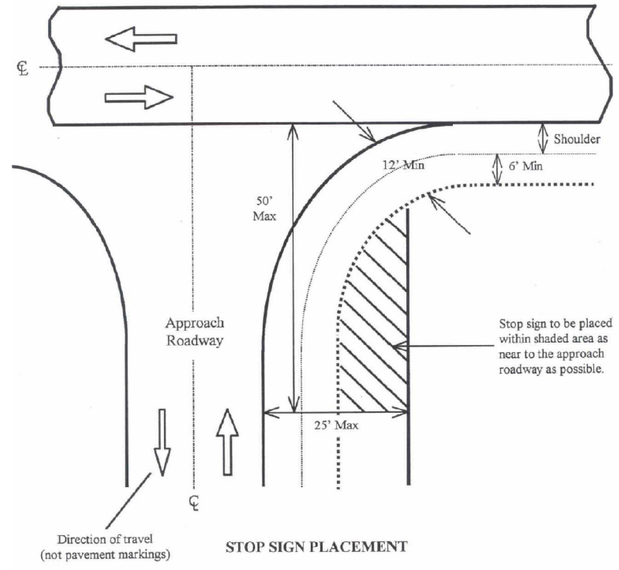
FILLET EXTENSION FOR NON-PAVED SIDE ROADS



(1) The ratio of the Intermediate Course runout length to the total runout length is the same as the ratio of the Intermediate Course resurfacing thickness to the total resurfacing thickness.

WEDGE SHAPED FILLET

CASE "A"
WITH SHOULDER



STOP SIGN PLACEMENT PER THE IOWA DOT TRAFFIC AND SAFETY MANUAL (2A-8)

7149
MODIFIED

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TYPICAL SECTIONS AND DETAILS

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_B01.dgn

DRAWING NO.
B.2

GENERAL

1. All construction is subject to observation by the ENGINEER and/or OWNER. The CONTRACTOR shall notify the ENGINEER, OWNER, and utility companies one (1) week prior to start of construction.

2. All construction methods, procedures and materials proposed to be used for this project shall comply with the most recent edition of the Iowa DOT Supplemental Specifications. Any alternative proposed to be used by the CONTRACTOR shall be approved by the OWNER and ENGINEER prior to construction.

3. If archaeological remains are uncovered on the project, the CONTRACTOR shall notify the ENGINEER immediately.

4. In the event of a discrepancy between the quantity estimates and the detailed plans, the detailed plans shall govern.

5. The CONTRACTOR shall obtain any and all permits from the OWNER, if applicable, prior to any construction work within the public right-of-way.

SITE CLEANUP

1. The CONTRACTOR shall clean all surfaces prior to opening the project to the public. Pickup broom or street sweeper that creates a minimal amount of dust shall be used for cleaning. All costs for cleaning shall be incidental to the contract.

UTILITIES

1. The locations of buried underground facilities are approximate, the ENGINEER does not warrant, either expressly or by implication, the accuracy of the locations shown. Exact location and elevations of all utilities shall be determined by CONTRACTOR at the time of construction. It shall be the duty of the CONTRACTOR to ascertain whether any additional facilities other than those shown in the drawings may be present. The ENGINEER makes no guarantee that the utilities shown comprise all utilities in the area.

2. The CONTRACTOR shall notify all utility companies of the actual starting date of construction. The CONTRACTOR is responsible for coordinating with each company the actual utility location in the field and which utility lines must be adjusted. The CONTRACTOR shall use caution in working near all utility lines. Utilities damaged due to the operations of the CONTRACTOR shall be replaced at CONTRACTOR's expense and at no expense to the OWNER.

3. The CONTRACTOR shall provide temporary support for existing utility lines that are encountered during construction until backfilling is complete.

4. All costs for staging construction for utility installation, providing temporary support for utilities with assistance from the affected utility company, and coordinating with utilities, including delays, shall be incidental to the contract.

CLEARING, GRUBBING, GRADING, AND EMBANKMENT

1. All light poles, utilities, mailboxes, and trees shall be protected unless noted otherwise.

2. It shall be the CONTRACTOR's responsibility to provide waste areas or disposal sites for excess material (excavated material, broken concrete, vegetation, or pavements) which is not desirable to be incorporated into the work involved in this project. No payment for overhaul or dumping fees will be allowed for material hauled to these sites. Any waste materials disposed of on private property, a waiver shall be obtained to hold the OWNER harmless. No material will be placed within the right-of-way, unless specifically stated in the plans or approved by the ENGINEER. Any holes or trenches that are open at the end of the day's work must be fenced with safety fence (incidental).

3. The CONTRACTOR shall maintain the streets, sidewalks, and all other public right-of-way in a clean, safe, and usable condition. All spills of soil, rock, or construction debris shall be removed from any publicly owned property during construction and upon completion of the project. All adjacent property, private or public, shall be maintained in a clean, safe, and usable condition.

4. The CONTRACTOR shall confine their grading operations to the construction limits as shown on the plans unless authorized by the ENGINEER to do otherwise. The CONTRACTOR shall compensate property owners for any damage which they cause outside the authorized limits. The CONTRACTOR shall take all necessary precautions to preserve and protect any fences and trees, within the construction limits, which may be required to remain by the OWNER, the CONTRACTOR shall not disturb desirable grass areas and desirable trees outside the construction limits. The CONTRACTOR shall access the site in a manner that does not damage existing paved surfaces, sidewalks, and trails that are not designated to be replaced. Any damage to these surfaces shall be repaired at the CONTRACTOR's expense as approved by the ENGINEER.

5. If the CONTRACTOR fails to control erosion, pollution and/or siltation, the OWNER reserves the right to employ outside assistance to provide the necessary corrective measures. Such incurred costs plus engineering costs will be charged to the CONTRACTOR, and appropriate deductions will be made from the CONTRACTOR's monthly progress estimate. This shall be considered incidental to the contract.

6. The CONTRACTOR will not be permitted to park or service vehicles and equipment or use construction site for storage of materials. Storage, parking, and service area(s) will be subject to the approval of the ENGINEER and OWNER.

STREETS AND RELATED WORK

1. The CONTRACTOR shall control all fugitive dust during the concrete joint sawing process. The CONTRACTOR shall ensure that all corners of fixtures, intakes, etc. are controlled with an appropriate joint.

2. Estimated quantity for new concrete pavement includes all integral curbs, all street returns, and special areas of repairs to connecting pavements

3. Special care shall be taken when forming at intersections so that the profiles and elevations shown on the cross sections, street return profile sheets, and staking diagram sheets are obtained. Short lengths of forms or flexible forms may be necessary at these locations. The CONTRACTOR shall notify the ENGINEER prior to any paving work if positive drainage is in question. The intent of the drawings is to ensure positive drainage in all situations. If positive drainage does not occur at specific locations, the CONTRACTOR shall repair, including the removal and replacement of pavement, to achieve positive drainage. The CONTRACTOR will be required to pay all costs associated with the needed repair.

4. Remove the existing pavement to the nearest existing joint or as directed by the ENGINEER and OWNER. The CONTRACTOR shall double saw cut all edges at no additional cost to the OWNER.

5. Exercise care when performing any saw cutting or pavement removal. Protect the adjacent street from damage. Remove and replace any damaged areas which are not indicated for removal at no cost to the OWNER.

PROJECT CONTACTS

OWNER	ENGINEER
Warren County	McClure
Tim Hill, PE	Joey Riley, PE
301 N. Buxton, Suite 211	1535 SW Market St, Suite 200
Indianola, IA 50125	Ankeny, IA 50023
(515) 690-9290	(515) 512-1361

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

GENERAL NOTES

P:\2025\02543\04-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

DRAWING NO.
C.1

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	358
2	2212-0475095	CLEANING AND PEPARATION OF BASE	MILE	3.6
3	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	17
4	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	1
5	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	2,081
6	2213-8201060	BASE WIDENING, 6 IN. HOT MIX ASPHALT MIXTURE	SY	12,484
7	2214-5145150	PAVEMENT SCARIFICATION, NOMINAL THICKNESS	SY	1,940
8	2303-1031500	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 1/2 IN. MIX	TON	7,614
9	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX	TON	5,654
10	2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SUFRACE COURSE, 1/2 IN. MIX, NO SPECIAL FRICTION REQUIREMENT	TON	5,546
11	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	1,129
12	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1
13	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	545
14	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH	1
15	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EACH	1
16	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	1
17	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	1
18	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1
19	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	437
20	2528-2518000	SAFETY CLOSURE	EACH	1
21	2528-8445110	TRAFFIC CONTROL	LS	1
22	2528-8445113	FLAGGERS	EACH	120
23	2528-8445115	PILOT CARS	EACH	25
24	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	15
25	2533-4980005	MOBILIZATION	LS	1
26	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	272.3
27	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)	GAL	458.9
28	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA	38.1

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	2123-7450000	SHOULDER CONSTRUCTION, EARTH Refer to the B-Sheets for location and details. Earth shoulder construction will be measured along the HMA roadway excluding sideroads and driveways.
2	2212-0475095	CLEANING AND PEPARATION OF BASE Quantity is computed once per project and based on a pavement width of 22 feet for length of HMA paving. All bituminous material shall be removed from all joints and cracks prior to HMA paving.
3	2212-5070310	PATCHES, FULL-DEPTH REPAIR
4	2212-5070330	PATCHES BY COUNT (REPAIR) Refer to Tabulation 102-06C and the D-Sheets for locations and details. Refer to the J-Sheets for Traffic Control information. Refer to Iowa DOT Standard Road Plan PR-102 for additional information.
5	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING Refer to B-Sheet typicals and Tabulation 106-5 on C-Sheets for details and locations. Quantity is the required excavation for base widening based on 6-inches deep and 3-feet wide. This also includes the removal of the existing HMA shoulder. The existing shoulder is an average width of 1.5-feet and an assumed depth of 6-inches (quantitied as 5,630 square yards).
6	2213-8201060	BASE WIDENING, 6 IN. HOT MIX ASPHALT MIXTURE Refer to B-Sheet typicals and Tabulation 106-5 on C-Sheets for details and locations. Price bid for this item shall include all costs associated with providing Quality Management-Asphalt (QM-A), including Certified Plant Inspection. Do not construct base widening through the paved driveways.
7	2214-5145150	PAVEMENT SCARIFICATION, NOMINAL THICKNESS Refer to B and D Sheets as well as Tabulation 100-25 on C-Sheets for details and locations. Refer to Iowa DOT Standard Road Plan PR-202 for additional information.
8	2303-1031500	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 1/2 IN. MIX Refer to B-Sheets, Tabulation 100-25 on C-Sheets, and D-Sheets for details and locations. Quantities are based on a density of 145 pcf and include the safety edge. Use PG 58-28S Asphalt Binder. Price bid for this item shall include all costs associated with providing Quality Management-Asphalt (QM-A), including Certified Plant Inspection. This material shall be used for fillet extensions for non-paved side roads. Refer to detail 7149 on B-Sheets for side road fillet extension details. An additional 5% was added to the quantities as shown in Tabulation 100-25 to account for any irregularities.
9	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX Refer to B-Sheets, Tabulation 100-25 on C-Sheets, and D-Sheets for details and locations. Quantities are based on a density of 147 pcf and include the safety edge. Use PG 58-28S Asphalt Binder. Price bid for this item shall include all costs associated with providing Quality Management-Asphalt (QM-A), including Certified Plant Inspection. This material shall be used for fillet extension for non-paved side roads and wedge shaped fillets. Refer to the details on the B-Sheets for additional information. An additional 5% was added to the quantities as shown in Tabulation 100-25 to account for any irregularities.
10	2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SUFRACE COURSE, 1/2 IN. MIX, NO SPECIAL FRICTION REQUIREMENT Refer to B-Sheets, Tabulation 100-25 on C-Sheets, and D-Sheets for details and locations. Quantities are based on a density of 147 pcf and include the safety edge. Use PG 58-28S Asphalt Binder. Price bid for this item shall include all costs associated with providing Quality Management-Asphalt (QM-A), including Certified Plant Inspection. This material shall be used for fillet extension for non-paved side roads and wedge shaped fillets. Refer to the details on the B-Sheets for additional information. An additional 5% was added to the quantities as shown in Tabulation 100-25 to account for any irregularities.
11	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC Quantities are based on 6.0% of surface, intermediate, and base mix. An additional 5% was added to the quantities as shown in Tabulation 100-25 to account for any irregularities.
12	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES Contractor shall deliver sample to Iowa DOT District 5 Materials Office.
13	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE Refer to Tabulation 102-03 on the C-Sheets for locations and details. Quantity is based on a density of 140 pcf. An additional 5% was added to the quantities as shown in Tabulation 102-03 to account for any irregularities.
14	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN Refer to the D-Sheets for locations and details. Refer to the B-Sheets and coordinate with the Engineer for location of new sign. New post, mounting hardware, and breakaway footing shall be considered incidental to this bid item. Existing sign assembly uses a two post mounting, it is expected when sign is reinstalled that two posts are used. Measurement and payment is per each sign assembly removed, salvaged, and reinstalled. Bid item includes all materials, labor, and equipment needed to remove and reinstall sign.
15	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY Refer to the D-Sheets for locations and details. Removed signs, hardware, post, and existing footings are to become property of the contractor. Measurement and payment is per each sign assembly removed.
16	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION See Sheet G.1 for additional information. Contractor shall locate and restore all land survey control monuments located in the project area. Updated corner certificates and monument preservation certificates shall be submitted to Warren County upon completion of the project. Refer to Senate File 2276 for more information.
17	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY See Sheet G.1 for additional information. Any restaking needed shall be paid by the Contractor at no expense to the County.
18	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY See Sheet G.1 for additional information. Any restaking needed shall be paid by the Contractor at no expense to the County.
19	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED Refer to Tabulation 108-22 on C-Sheets for details and locations. Paint edge lines 12' offset from centerline. Location of painted edge lines and rumble strips should be placed per page three of PV-12.
20	2528-2518000	SAFETY CLOSURE Refer to the J-Sheets for locations and details. Refer to Iowa DOT Standard Road Plan TC-252 for additional information.
21	2528-8445110	TRAFFIC CONTROL Refer to Traffic Control Plan on J.1 for details.
22	2528-8445113	FLAGGERS Refer to Traffic Control Plan on J.1 for details.
23	2528-8445115	PILOT CARS Refer to Traffic Control Plan on J.1 for details.
24	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS) Refer to Traffic Control Plan on J.1 for details.
25	2533-4980005	MOBILIZATION --
26	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE Refer to Tabulation 112-10 on the C-Sheets for locations and details. Refer to IDOT Standard Road Plan PV-012 for additional information. Install Sinusoidal Shoulder rumble Strips. Location of painted edge lines and rumble strips should be placed per page three of PV-12.
27	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS) Refer to Tabulation 112-10 on the C-Sheets for locations and details. Refer to IDOT Standard Road Plan PV-012 for additional information.
28	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE Refer to Tabulation 112-10 on the C-Sheets for locations and details. Refer to IDOT Standard Road Plan PV-013 for additional information. Per Designer Information within PV-013, fog seal is not recommeded for use on the cenerline rumble strips.

STANDARDS

105_04
4 / 16 / 24

The following Standards apply to construction work on this project.

Number	Date	Title
PM-110	10/15/2024	LINE TYPES
PM-120	10/15/2024	STOP LINES AND ISLANDS
PR-102	10/21/2025	FULL DEPTH PCC PATCH WITHOUT DOWELS
PR-202	10/21/2014	NOTCHES FOR RESURFACING (WITH OR WITHOUT RUNOUT)
PV-3	10/15/2024	SAFETY EDGE
PV-12	10/20/2026	SHOULDER RUMBLE STRIPS
PV-13	10/20/2026	CENTERLINE RUMBLE STRIPS
PV-202	4/21/2020	HOT MIX ASPHALT RESURFACING
PV-203	4/21/2020	HMA BASE WIDENING
TC-212	4/18/2023	SPOT LOCATION LANE CLOSURE WITH FLAGGERS
TC-214	4/18/2023	LANE CLOSURE WITH FLAGGERS FOR USE WITH PILOT CAR
TC-252	10/20/2026	ROUTES CLOSED TO TRAFFIC
TC-282	10/15/2019	UNEVEN LANES
TC-284	10/15/2019	NO CENTERLINE MARKINGS ON NON-PRIMARY ROADWAYS
TC-415	4/18/2023	SHORT TERM LANE CLOSURE WITH TMA
TC-420	10/16/2018	LANE CLOSURE AT RAMPS

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

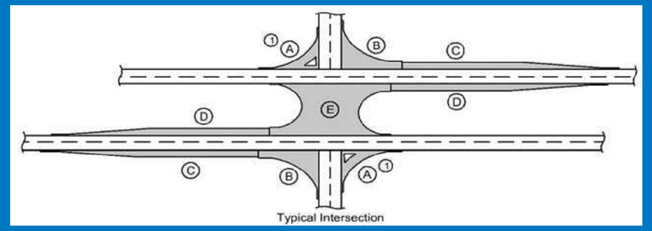
ESTIMATED QUANTITIES & REFERENCE NOTES

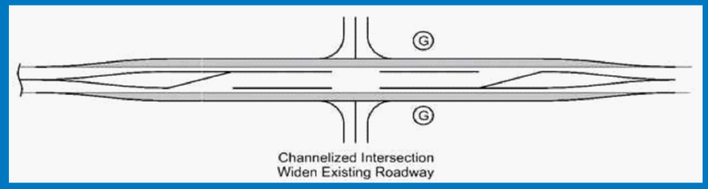
P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

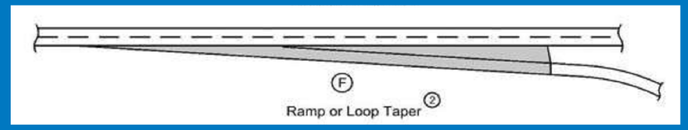
DRAWING NO.
C.2

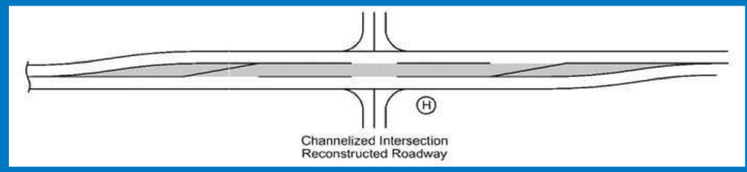
100_25
4 / 15 / 25

HMA PAVEMENT









(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
(2) Refer to PV-410, PV-411, PV-412, and PV-414.
(3) Quantity includes Pavement Header.
(4) Quantity includes Safety Edge

Line No.	Road Identification	Direction of Travel	Station From	Station To	Width (FT)	Length (FT)	Area (SY)	Area A(1) (SY) (3)	Area B (SY) (3)	Area C (SY) (3)	Area D (SY) (3)	Area E(2) (SY) (3)	Area F (SY) (3)	Area G (SY) (3)	Area H (SY) (3)	HMA Pavement Surface (TONS) (4)	HMA Pavement Surface (SY)	HMA Pavement Intermediate (TONS) (4)	HMA Pavement Intermediate (SY)	HMA Pavement Base (TONS) (4)	HMA Pavement Base (SY)	Binder Surface (TONS)	Binder Intermediate (TONS)	Binder Base (TONS)	Polymer Grid (SY)	Special Backfill (TONS)	Modified Subbase (CY)	Granular Subbase (SY)	Pavement Scarification (SY)	Hot-In-Place Recycling (SY)	Asphalt Rejuvenating Agent 0.175 GAL/SY/IN HIR (Tons)	Remarks
1	Scotch Ridge Rd	Both	110+00.00	110+50.00	Varies	50.0		651.7								54.0		54.2		71.5		3.2	3.3	4.3					411.4			Suface Notch (N3)
2	Scotch Ridge Rd	Both	110+50.00	112+13.16	Varies	163.2		677.7								56.4		57.0		75.8		3.4	3.4	4.6								
3	Scotch Ridge Rd	Both	112+13.16	300+11.52	28	18798.4	58483.8									4873.2		4948.1		6607.1		292.4	296.9	396.4								
4	Scotch Ridge Rd	Both	300+11.52	302+61.51	28	250.0	777.7									64.8		65.8		87.9		3.9	3.9	5.3					305.6			Surface Notch (N3)
5	135th Ave	Both	137+89.15						85.4							7.1		11.8		18.6		0.4	0.7	1.1			17.0					
6	140th Ave	Both	164+44.58						258.6							21.4		35.6		56.2		1.3	2.1	3.4			48.4					
7	140th Ave	Both	164+55.50						329.6							27.3		45.4		71.7		1.6	2.7	4.3			62.0					
8	143rd Ave	Both	177+79.69						199.2							16.5		27.5		43.3		1.0	1.6	2.6			62.0					
9	152nd Ln	Both	231+08.01						268.8							22.2		37.0		58.5		1.3	2.2	3.5					66.7			Surface Notch (N3)
10	NE 78th Ave	Both	244+06.27						220.4							18.2		30.4		47.9		1.1	1.8	2.9			41.5					
11	Briggs St	Both	282+59.90						238.4							19.7		32.9		51.9		1.2	2.0	3.1			44.8					
12	Blazing Star Drive	Both	301+11.05						280.7							23.2		38.7		61.1		1.4	2.3	3.7					68.4			Surface Notch (N3)
TOTALS:																5204		5384		7251		312	323	435			276		852			
													5% for Irregularities:			5464		5654		7614		328	339	457								

106_05
6 / 13 / 23

AREAS FOR PAVEMENT OR BASE WIDENING



(1) Bid Item
(2) Estimated for two applications to achieve lifts and one application of 0.10 Gal/SY adjacent to existing pavement. Priming of subgrade or finished base is not required.

Line No.	Station From	Station To	Side	Pavement Type	Length (LF)	Width (LF)	Thickness (IN)	HMA Unit Wt. (lbs/cf)	HMA Base Widening (1) (TONS)	HMA Base Widening (1) (SY)	PCC Base Widening (1) (SY)	PCC Pavement Widening (1) (SY)	Tack Coat Unit Wt. (gal/sy)	Tack Coat Lifts (GAL)	Tack Coat Vertical Edge (GAL)	Tack Coat (2) (GAL)	Asphalt Binder (TON)	Class 13 Excavation Widening (1) (CY)	Special Backfill Unit Weight (lbs-cf)	Special Backfill (1) (TONS)	Remarks
1	110+30.46	116+46.32	LT	HMA	548.6	3	6	145		227.6								37.9			
2	112+12.92	224+13.92	RT	HMA	11193.2	3	6	145		3731.3								621.9			
3	116+67.37	121+87.18	LT	HMA	520.8	3	6	145		173.4								28.9			
4	122+10.90	133+75.12	LT	HMA	1166.4	3	6	145		387.8								64.6			
5	134+04.81	207+94.87	LT	HMA	7382.8	3	6	145		2461.0								410.2			
6	208+33.23	212+94.15	LT	HMA	463.2	3	6	145		153.5								25.6			
7	213+21.60	216+52.52	LT	HMA	335.9	3	6	145		111.6								18.6			
8	216+90.63	229+95.40	LT	HMA	1304.8	3	6	145		434.7								72.5			
9	224+32.27	225+00.33	RT	HMA	68.1	3	6	145		22.8								3.8			
10	225+24.75	230+10.58	RT	HMA	485.9	3	6	145		157.8								26.3			
11	230+20.11	278+98.88	LT	HMA	4863.8	3	6	145		1620.1								270.0			
12	232+04.67	253+65.87	RT	HMA	2176.9	3	6	145		721.4								120.2			
13	254+39.43	298+50.66	RT	HMA	4406.8	3	6	145		1468.2								244.7			
14	279+59.83	298+39.84	LT	HMA	1883.7	3	6	145		625.1								104.2			
15	298+71.71	302+61.51	LT	HMA	389.8	3	6	145		129.8								21.6			
16	298+80.19	300+12.50	RT	HMA	117.9	3	6	145		42.9								7.2			
17	302+09.34	302+61.51	RT	HMA	5.2	3	6	145		14.9								2.5			
TOTALS:										12484								2081			

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TABULATIONS

P:\2025\02543\04-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

DRAWING NO.
C.3

102_03
MODIFIED

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210.
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Culvert Aprons (3) (No.)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing HMA (TON)	Driveway Surfacing Granular (TON)	Remarks
1	113+43.86	LT	Type C					30									Granular	59.8		20	
2	116+58.42	LT	Type C					12									HMA	29.2	4		
3	116+83.67	LT	Type C					13.5									Granular	31.7		10	
4	118+53.63	RT	Type D					12									Granular	30.8		10	
5	120+32.03	LT	Type C					10									Granular	15.9		10	
6	121+77.73	LT	Type C					8.5									Granular	16.4		10	
7	121+98.25	LT	Type C					11.5									HMA	33.2	5		
8	126+47.99	LT	Type C					26									Granular	54.1		20	
9	127+63.25	RT	Type C					35									Granular	69.1		20	
10	129+30.73	LT	Type C					26									Granular	54.1		20	
11	130+61.52	LT	Type C					12									Granular	30.8		10	
12	130+67.89	RT	Type C					44.5									Granular	94.9		30	
13	131+40.23	RT	Type C					60.5									Granular	121.5		30	
14	131+74.19	LT	Type C					15									Granular	35.3		10	
15	133+00.72	LT	Type C					12.5									HMA	33.5	5		
16	136+66.59	LT	Type C					11									Granular	28.7		10	
17	145+74.63	RT	Type D					12									Granular	30.7		10	
18	149+22.27	LT	Type D					16									Granular	37.4		10	
19	155+99.78	LT	Type D					22									Granular	47.4		10	
20	157+58.93	RT	Type D					18									Granular	40.7		10	
21	174+59.63	LT	Type C					20									Granular	44.1		10	
22	177+68.33	RT	Type D					19									Granular	42.4		10	
23	183+75.66	LT	Type C					10									Granular	27.4		10	
24	184+77.88	RT	Type D					14									Granular	34.1		10	
25	190+69.97	RT	Type C					22									Granular	47.4		10	
26	195+27.99	RT	Type C					18									Granular	40.8		10	
27	195+30.14	LT	Type D					17									Granular	39.1		10	
28	204+66.40	RT	Type D					32									Granular	62.8		20	
29	207+98.62	RT	Type C					15									Granular	35.1		10	
30	208+17.29	LT	Type C					11.6									HMA	35.0	5		
31	209+83.63	LT	Type C					13									Granular	32.4		10	
32	213+09.63	LT	Type C					14									HMA	39.7	5		
33	216+74.42	LT	Type C					11.7									HMA	33.9	5		
34	219+40.17	LT	Type C					10									Granular	27.4		10	
35	221+31.77	LT	Type C					13									Granular	32.4		10	
36	221+35.93	RT	Type C					16									Granular	37.4		10	
37	224+21.70	RT	Type C					12.4									HMA	30.0	4		
38	225+09.51	RT	Type C					19.8									HMA	41.8	6		
39	230+07.63	LT	Type C					11.4									HMA	31.8	4		
40	233+21.06	LT	Type C					17									Granular	39.1		10	
41	254+00.44	RT	Type C					51.6									HMA	119.6	16		
42	256+60.01	LT	Type D					26									Granular	54.1		20	
43	259+99.55	RT	Type D					15									Granular	35.8		10	
44	267+71.73	LT	Type C					17									Granular	39.1		11	
45	267+91.51	RT	Type D					22									Granular	47.4		10	
46	276+62.97	LT	Type C					14									Granular	34.1		10	
47	277+63.33	RT	Type D					18									Granular	40.8		10	
48	279+30.59	LT	Type C					26									HMA	70.0	10		
49	285+86.18	LT	Type D					15									Granular	35.6		10	
50	286+64.57	LT	Type C					14									Granular	33.9		10	
51	295+39.38	RT	Type C					18									Granular	40.8		10	
52	295+68.82	LT	Type C					12									Granular	30.8		10	
53	298+54.19	LT	Type C					13									HMA	37.4	5		
54	298+66.73	RT	Type C					12									HMA	29.6	4		
55	300+91.34	LT	Type D					25									Granular	52.40		10	
																	Total:		78	520	
																	5% for Irregularities:		82	545	

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TABULATIONS

P:\2025\02\25430\4-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

DRAWING NO.
C.4

108_22
10 / 21 / 25

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch w ide continuous line.
*BCY4 - Place on the same side of the roadw ay to match existing markings near the project.
**NPY4 - Estimating purposes only. No Passing Zone Lines w ill be located in the field.
***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.

BCY4 : Broken Centerline (Yellow) @ 0.17
BCY6 : Broken Centerline (Yellow) @ 0.25
BLC6 : Broken Line Contrast (White/Black) @0.50
BLW4 : Broken Lane Line (White) @ 0.17
BLW6 : Broken Lane Line (White) @ 0.25
CBW6 : Crossw alk Bar (White) @ 10.00
CHW8 : Channelizing Line (White) @1.33
CHW10 : Channelizing Line (White) @ 1.67
CHY8 : Channelizing Line (Yellow) @ 1.33
CHY10 : Channelizing Line (Yellow) @ 1.67
CLW6 : Crossw alk Line (White) @2.00
DCY4 : Double Centerline (Yellow) @ 1.34
DCY6 : Double Centerline (Yellow) @ 2.00
DDY4 : Double Dotted Line (Yellow) @ 0.44
DDY6 : Double Dotted Line (Yellow) @ 0.67
DLW4 : Dotted Line (White) @ 0.22
DLW6 : Dotted Line (White) @ 0.33
DLY4 : Dotted Line (Yellow) @ 0.22
DLY6 : Dotted Line (Yellow) @ 0.33
ELW4 : Edge Line Right (White) @ 0.67
ELW6 : Edge Line Right (White) @ 1.00
ELY4 : Edge Line Left (Yellow) @ 0.67
ELY6 : Edge Line Left (Yellow) @ 1.00
LDW8 : Lane Drop (White) @ 0.33
LDW10 : Lane Drop (White) @ 0.42
MNY6 : Median Nose (Yellow) @ 1.00
NPY4 : No Passing Zone Line (Yellow) @ 0.84
NPY6 : No Passing Zone Line (Yellow) @ 1.25
RLW4 : Ramp Edge Line Right (White) @ 0.67
RLW6 : Ramp Edge Line Right (White) @ 1.00
RLY4 : Ramp Edge Line Left (Yellow) @ 0.67
RLY6 : Ramp Edge Line Left (Yellow) @ 1.00
SLW2 : Stop Line (White) @ 4.00
SLW4 : Solid Lane Line (White) @ 0.67
SLW6 : Solid Lane Line (White) @ 1.00
SPW4 : Sloped Curb 4" (White) @ 2.16
SPW6 : Sloped Curb 6" (White) @ 2.28
SPY4 : Sloped Curb 4" (Yellow) @ 2.16
SPY6 : Standard Curb 6" (Yellow) @ 2.28
STW6 : Sloped Curb 6" (Yellow) @ 2.03
STY6 : Standard Curb 6" (Yellow) @ 2.03
YLW2 : Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	Groove Qty. (STA)	BCY4* Factored (STA)	NPY4 Factored (STA)	DCY4 Factored (STA)	ELW4 Factored (STA)	Remarks
1	G16/Scotch Ridge Road	110+05.16	163+88.17	EB	ELW4			X	NO					36.07	
2	G16/Scotch Ridge Road	110+11.44	116+21.85	Both	DCY4		X		NO				8.18		
3	G16/Scotch Ridge Road	110+28.34	137+54.15	WB	ELW4	X			NO					18.26	
4	G16/Scotch Ridge Road	116+21.85	121+59.68	Both	NPY4		X		NO			4.52			
5	G16/Scotch Ridge Road	121+59.68	122+64.60	Both	DCY4		X		NO				1.41		
6	G16/Scotch Ridge Road	122+64.60	129+50.00	Both	NPY4		X		NO			5.76			
7	G16/Scotch Ridge Road	129+50.00	135+46.26	Both	DCY4		X		NO				7.99		
8	G16/Scotch Ridge Road	135+46.26	142+76.12	Both	NPY4		X		NO			6.13			
9	G16/Scotch Ridge Road	138+24.15	163+78.00	WB	ELW4	X			NO					17.11	
10	G16/Scotch Ridge Road	142+76.12	154+74.39	Both	BCY4		X		NO		2.04				
11	G16/Scotch Ridge Road	154+74.39	163+34.38	Both	NPY4		X		NO			7.22			
12	G16/Scotch Ridge Road	163+34.38	170+99.37	Both	DCY4		X		NO				10.25		
13	G16/Scotch Ridge Road	165+00.98	229+93.67	EB	ELW4			X	NO					43.50	
14	G16/Scotch Ridge Road	165+12.38	177+28.89	WB	ELW4	X			NO					8.15	
15	G16/Scotch Ridge Road	170+99.37	174+92.91	Both	NPY4		X		NO			3.31			
16	G16/Scotch Ridge Road	174+92.91	178+55.02	Both	DCY4		X		NO				4.85		
17	G16/Scotch Ridge Road	178+31.19	282+19.55	WB	ELW4	X			NO					69.60	
18	G16/Scotch Ridge Road	178+55.02	186+84.35	Both	NPY4		X		NO			6.97			
19	G16/Scotch Ridge Road	186+84.35	194+45.53	Both	BCY4		X		NO		1.29				
20	G16/Scotch Ridge Road	194+45.53	201+52.85	Both	NPY4		X		NO			5.94			
21	G16/Scotch Ridge Road	201+52.85	219+58.23	Both	DCY4		X		NO				24.19		
22	G16/Scotch Ridge Road	219+58.23	224+32.65	Both	NPY4		X		NO			3.99			
23	G16/Scotch Ridge Road	224+32.65	228+85.44	Both	DCY4		X		NO				6.07		
24	G16/Scotch Ridge Road	228+84.44	233+21.92	Both	NPY4		X		NO			3.67			
25	G16/Scotch Ridge Road	232+20.74	243+64.45	EB	ELW4			X	NO					7.66	
26	G16/Scotch Ridge Road	233+21.92	255+59.50	Both	DCY4		X		NO				29.98		
27	G16/Scotch Ridge Road	244+52.23	300+10.53	EB	ELW4			X	NO					37.24	
28	G16/Scotch Ridge Road	255+59.50	260+46.18	Both	NPY4		X		NO			4.09			
29	G16/Scotch Ridge Road	260+46.18	264+53.95	Both	DCY4		X		NO				5.46		
30	G16/Scotch Ridge Road	264+53.95	267+01.59	Both	NPY4		X		NO			2.08			
31	G16/Scotch Ridge Road	267+01.59	268+87.74	Both	BCY4		X		NO		0.32				
32	G16/Scotch Ridge Road	268+87.74	271+72.78	Both	NPY4		X		NO			2.39			
33	G16/Scotch Ridge Road	271+72.78	276+77.49	Both	DCY4		X		NO				6.76		
34	G16/Scotch Ridge Road	276+77.49	282+25.00	Both	NPY4		X		NO			4.60			
35	G16/Scotch Ridge Road	282+25.00	289+97.27	Both	NPY4		X		NO			6.49			
36	G16/Scotch Ridge Road	283+27.10	302+61.51	WB	ELW4	X			NO					12.96	
37	G16/Scotch Ridge Road	289+97.27	290+77.14	Both	DCY4		X		NO				1.07		
38	G16/Scotch Ridge Road	290+77.14	298+37.50	Both	NPY4		X		NO			6.39			
39	G16/Scotch Ridge Road	298+37.50	299+25.00	Both	BCY4		X		NO		0.15				
40	G16/Scotch Ridge Road	299+25.00	302+61.51	Both	NPY4		X		NO			2.83			
41	G16/Scotch Ridge Road	302+24.25	302+61.51	EB	ELW4			X	NO					0.25	
TOTALS:											3.80	76.37	106.22	250.81	

102_06C
4 / 4 / 24

FULL-DEPTH PATCHES

Line No.	County	Station	Reference Location Sign	Lane	Length (FT)	Width (FT)	Patch Thickness (IN)	Patch Repair or Finish	PCC Patch Type	PCC Patch Quantity (SY)	HMA Patches (SY)	Composite HMA (TON)	Subbase Patches (PR-140) (SY)	Subbase Patch with 'EF' Joint (PR-101) (SY)	Patch Subdrain PR-101 or PR-140 (No.)	CD' Joints (No.)	CT' Joints (No.)	EF' Joints Pr-101 (No.)	Anchor Lugs Removal (No.)	Remarks
1	Warren County	110+23.63		WB	15	16.5	6			17.2										Replace Stop Sign Island

101_10
1 / 17 / 24

PAINTED ISLANDS

Refer to PM-110, 560-5, and 108-22.

Offsets are located from mainline.

Line No.	Road Identification	Point A Station	Point A Offset (FT)	Point B Station	Point B Offset (FT)	Point C Station	Point C Offset (FT)	Remarks
1	G16/ScotchRidge Road	110+16.65	-14.5	110+21.87	-32.7	110+40.04	-14.5	

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

(STATE) Certificate of Authority #.: X-XXXXXXXXX
Expires: MONTH, DAY YEAR

REVISIONS

PROJECT INFO
2025002543

ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

WARREN COUNTY
G16 REHABILITAION
STP-S-C091(141)-5E-91

TABULATIONS

P:\2025\02543\04-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

DRAWING NO.
C.5

112_10
4 / 15 / 25

MILLED RUMBLE STRIPS

* Calculated at 18" width for Shoulder.
** For use with penetrating Engineered Fog Seal. Calculated at 2" wider than rumble strips

Line No.	Road Identification	Station From	Station To	Shoulder Pavement Type	Rumble Strip Lane	Rumble Strip Type	Fog Seal Type	L (IN)	PCC Length (STA)	HMA Length (STA)	Fog Seal* Shoulder (GAL)	Fog Seal (SY)**	Effective Shoulder Width PCC (FT)	Effective Shoulder Width HMA (FT)	Effective Shoulder Width Granular \ Earth (FT)	Remarks
1	Scotch Ridge Rd	110+50.00	112+12.92	HMA	EB	Shoulder		12		1.6	2.7	21.1		3		
2	Scotch Ridge Rd	112+12.92	116+73.04	HMA	EB	Shoulder		12		4.6	7.8	59.6		3		
3	Scotch Ridge Rd	119+03.07	125+82.89	HMA	EB	Shoulder		12		6.8	11.5	88.1		3		
4	Scotch Ridge Rd	128+13.00	129+27.98	HMA	EB	Shoulder		12		1.1	1.9	14.9		3		
5	Scotch Ridge Rd	131+84.48	143+94.04	HMA	EB	Shoulder		12		12.1	20.4	156.8		3		
6	Scotch Ridge Rd	146+24.04	155+78.67	HMA	EB	Shoulder		12		9.5	16.1	123.7		3		
7	Scotch Ridge Rd	158+08.67	162+62.46	HMA	EB	Shoulder		12		4.5	7.6	58.8		3		
8	Scotch Ridge Rd	164+92.49	188+89.70	HMA	EB	Shoulder		12		24.0	40.4	310.7		3		
9	Scotch Ridge Rd	191+19.70	193+47.81	HMA	EB	Shoulder		12		2.3	3.8	29.6		3		
10	Scotch Ridge Rd	195+77.73	205+88.26	HMA	EB	Shoulder		12		10.1	17.0	131.0		3		
11	Scotch Ridge Rd	205+15.22	206+21.12	HMA	EB	Shoulder		12		1.1	1.8	13.7		3		
12	Scotch Ridge Rd	208+48.03	219+55.46	HMA	EB	Shoulder		12		11.1	18.7	143.6		3		
13	Scotch Ridge Rd	221+85.46	222+41.79	HMA	EB	Shoulder		12		0.6	0.9	7.3		3		
14	Scotch Ridge Rd	225+61.25	229+23.45	HMA	EB	Shoulder		12		3.6	6.1	47.0		3		
15	Scotch Ridge Rd	231+54.93	242+31.96	HMA	EB	Shoulder		12		10.8	18.1	139.6		3		
16	Scotch Ridge Rd	244+58.00	252+21.64	HMA	EB	Shoulder		12		7.6	12.9	99.0		3		
17	Scotch Ridge Rd	254+52.63	258+19.39	HMA	EB	Shoulder		12		3.7	6.2	47.5		3		
18	Scotch Ridge Rd	260+49.39	266+12.00	HMA	EB	Shoulder		12		5.6	9.5	72.9		3		
19	Scotch Ridge Rd	268+41.59	275+83.06	HMA	EB	Shoulder		12		7.4	12.5	96.1		3		
20	Scotch Ridge Rd	278+13.23	296+87.02	HMA	EB	Shoulder		12		18.7	31.6	242.9		3		
21	Scotch Ridge Rd	299+14.92	299+35.34	HMA	EB	Shoulder		12		0.2	0.3	2.6		3		
22	Scotch Ridge Rd	111+80.12	112+97.27	HMA	WB	Shoulder		12		1.2	2.0	15.2		3		
23	Scotch Ridge Rd	115+25.17	116+18.59	HMA	WB	Shoulder		12		0.9	1.6	12.1		3		
24	Scotch Ridge Rd	118+47.54	119+81.63	HMA	WB	Shoulder		12		1.3	2.3	17.4		3		
25	Scotch Ridge Rd	123+65.07	125+97.94	HMA	WB	Shoulder		12		2.3	3.9	30.2		3		
26	Scotch Ridge Rd	128+27.94	128+79.59	HMA	WB	Shoulder		12		0.5	0.9	6.7		3		
27	Scotch Ridge Rd	139+68.75	163+98.85	HMA	WB	Shoulder		12		24.3	41.0	315.0		3		
28	Scotch Ridge Rd	166+28.85	174+09.68	HMA	WB	Shoulder		12		7.8	13.2	101.2		3		
29	Scotch Ridge Rd	176+39.68	177+29.69	HMA	WB	Shoulder		12		0.9	1.5	11.7		3		
30	Scotch Ridge Rd	179+59.69	207+67.34	HMA	WB	Shoulder		12		28.1	47.3	364.0		3		
31	Scotch Ridge Rd	209+97.34	212+59.59	HMA	WB	Shoulder		12		2.6	4.4	34.0		3		
32	Scotch Ridge Rd	214+89.59	216+24.37	HMA	WB	Shoulder		12		1.3	2.3	17.5		3		
33	Scotch Ridge Rd	218+54.37	218+90.22	HMA	WB	Shoulder		12		0.4	0.6	4.6		3		
34	Scotch Ridge Rd	223+11.72	229+57.68	HMA	WB	Shoulder		12		6.5	10.9	83.7		3		
35	Scotch Ridge Rd	231+87.68	232+71.01	HMA	WB	Shoulder		12		0.8	1.4	10.8		3		
36	Scotch Ridge Rd	235+01.01	256+09.96	HMA	WB	Shoulder		12		21.1	35.5	273.4		3		
37	Scotch Ridge Rd	258+39.96	267+22.45	HMA	WB	Shoulder		12		8.8	14.9	114.4		3		
38	Scotch Ridge Rd	269+52.45	276+13.02	HMA	WB	Shoulder		12		6.6	11.1	85.6		3		
39	Scotch Ridge Rd	278+43.02	278+80.54	HMA	WB	Shoulder		12		0.4	0.6	4.9		3		
40	Scotch Ridge Rd	281+10.54	282+10.86	HMA	WB	Shoulder		12		1.0	1.7	13.0		3		
41	Scotch Ridge Rd	284+40.86	285+36.13	HMA	WB	Shoulder		12		1.0	1.6	12.3		3		
42	Scotch Ridge Rd	288+44.62	295+18.87	HMA	WB	Shoulder		12		6.7	11.4	87.4		3		
43	Scotch Ridge Rd	297+48.87	298+04.24	HMA	WB	Shoulder		12		0.6	0.9	7.2		3		
44	Scotch Ridge Rd	300+34.24	300+41.44	HMA	WB	Shoulder		12		0.1	0.1	0.9		3		
TOTALS:										**272.3**	**458.9**	**3530.0**				
45	Scotch Ridge Rd	131+55.14	137+10.41	HMA	CL	CL		12		5.55						
46	Scotch Ridge Rd	201+18.78	216+81.84	HMA	CL	CL		12		15.63						
47	Scotch Ridge Rd	238+99.02	246+97.64	HMA	CL	CL		12		7.99						
48	Scotch Ridge Rd	277+80.15	286+77.61	HMA	CL	CL		12		8.97						
TOTALS:										**38.1**						

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

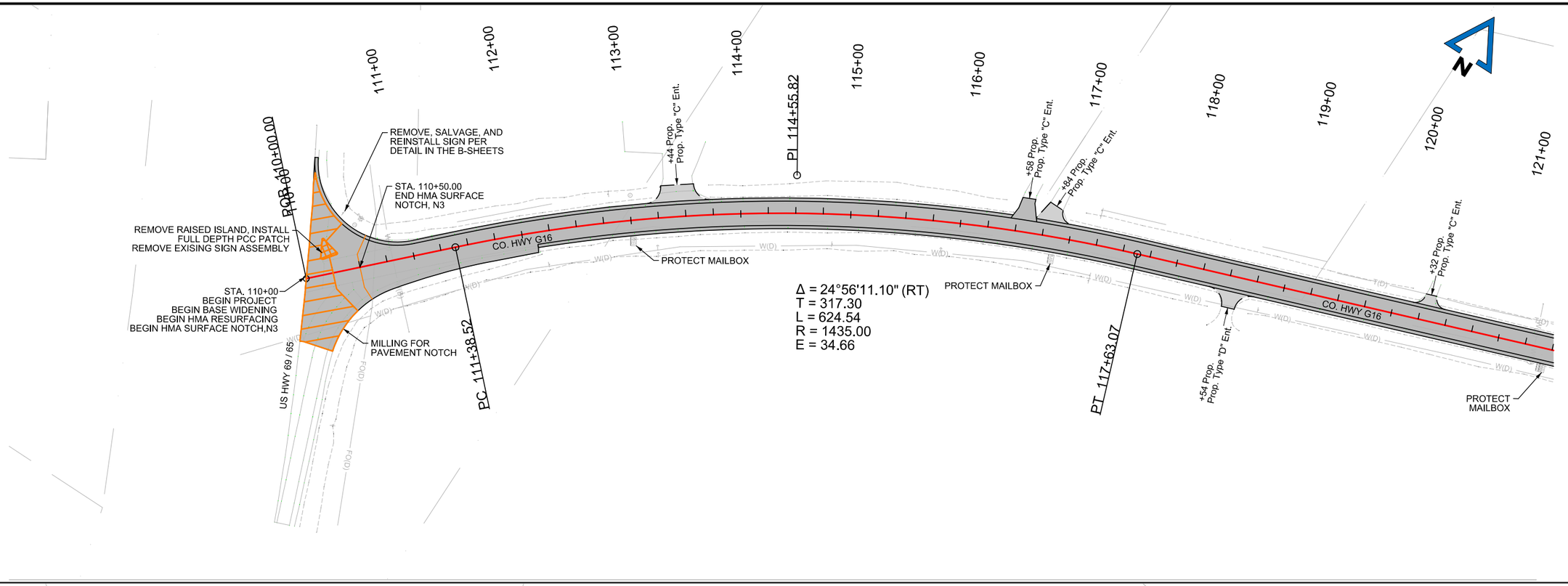
ENGINEER JLR | DRAWN BY BOS | CHECKED BY ATS

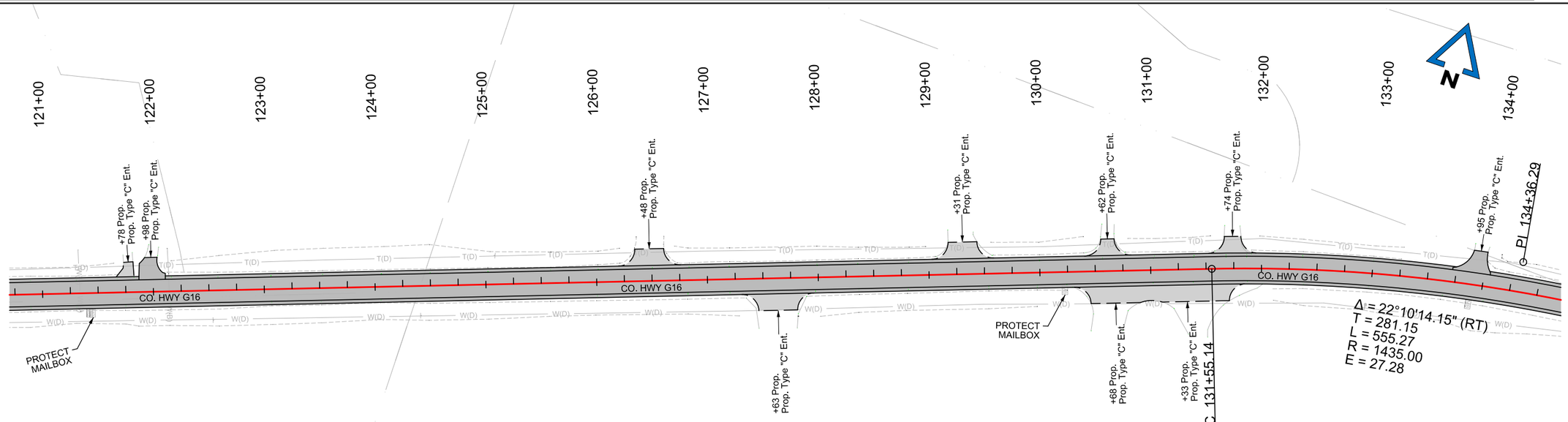
WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TABULATIONS

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_C01.dgn

DRAWING NO.
C.6





McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

PROJECT NUMBER
2025002543

50 25 0 50

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_001_2nd.dgn

DRAWING NO.
D.1

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

PROJECT NUMBER
2025002543

50 25 0 50

REVISIONS

PROJECT INFO
2025002543

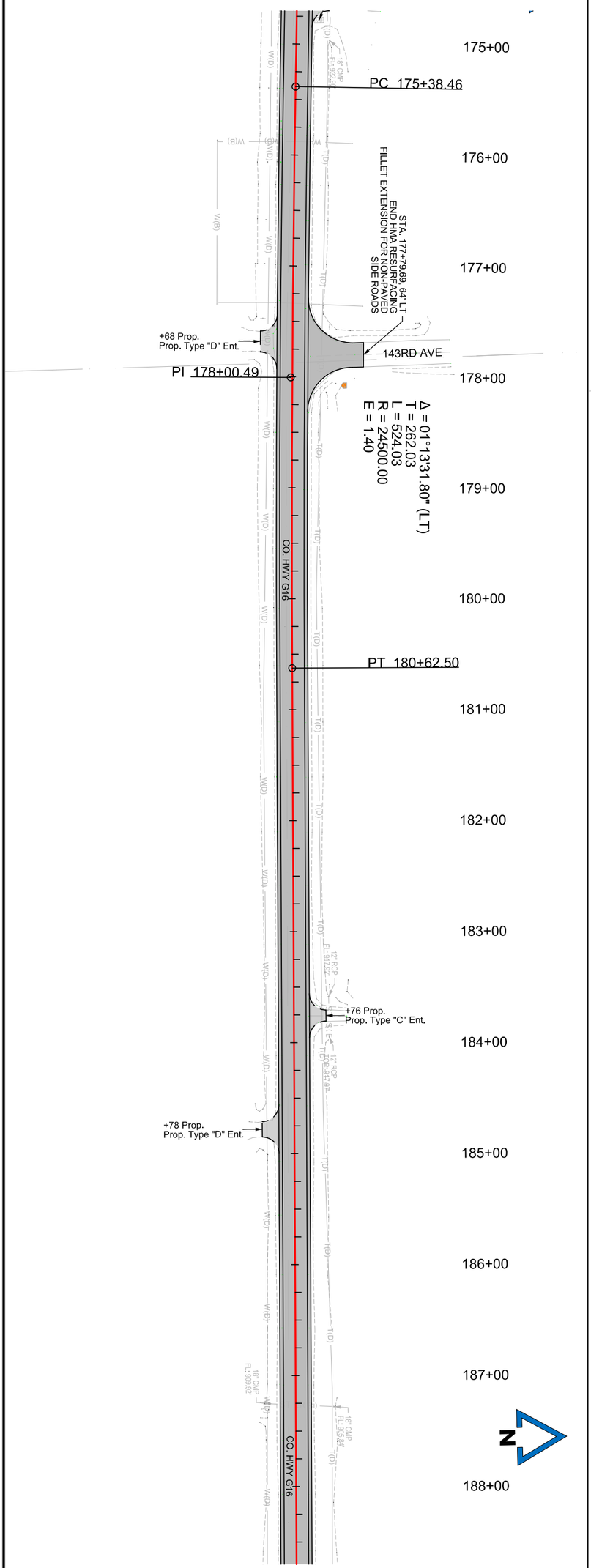
ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

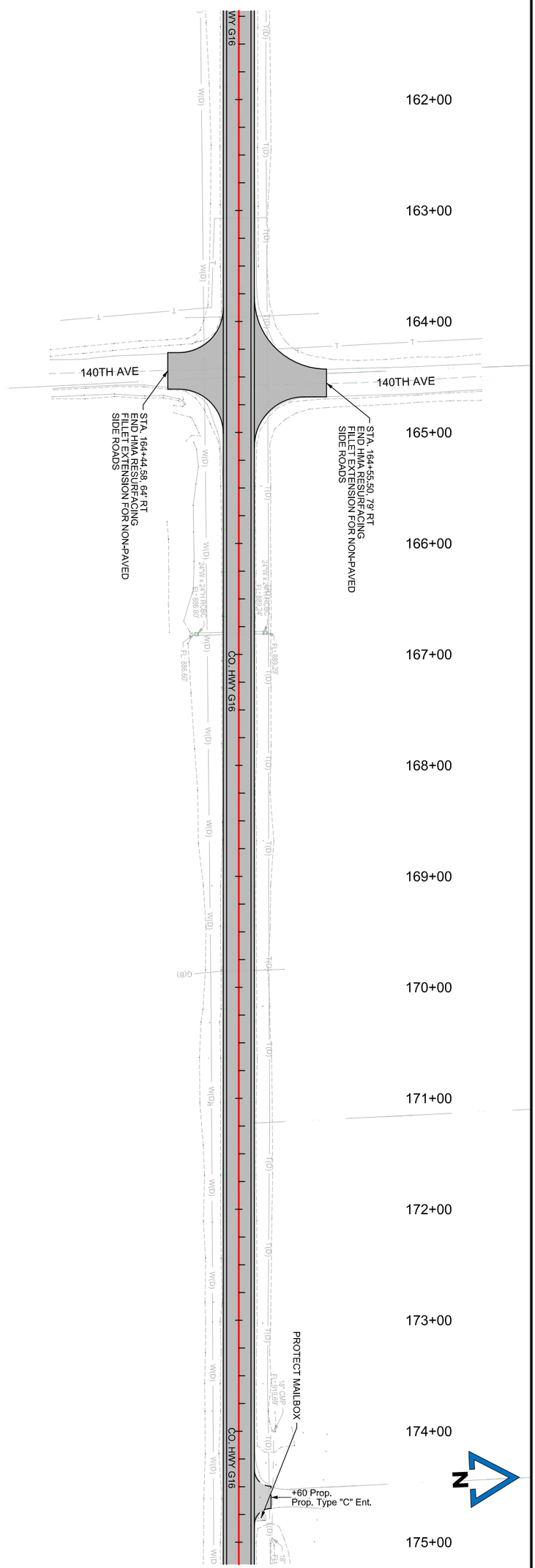
WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_001_2nd.dgn

DRAWING NO.
D.2





WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_D01_2nd.dgn

DRAWING NO. D.3

ENGINEER JLR | DRAWN BY BDS | CHECKED BY ATS

PROJECT INFO 2025002543

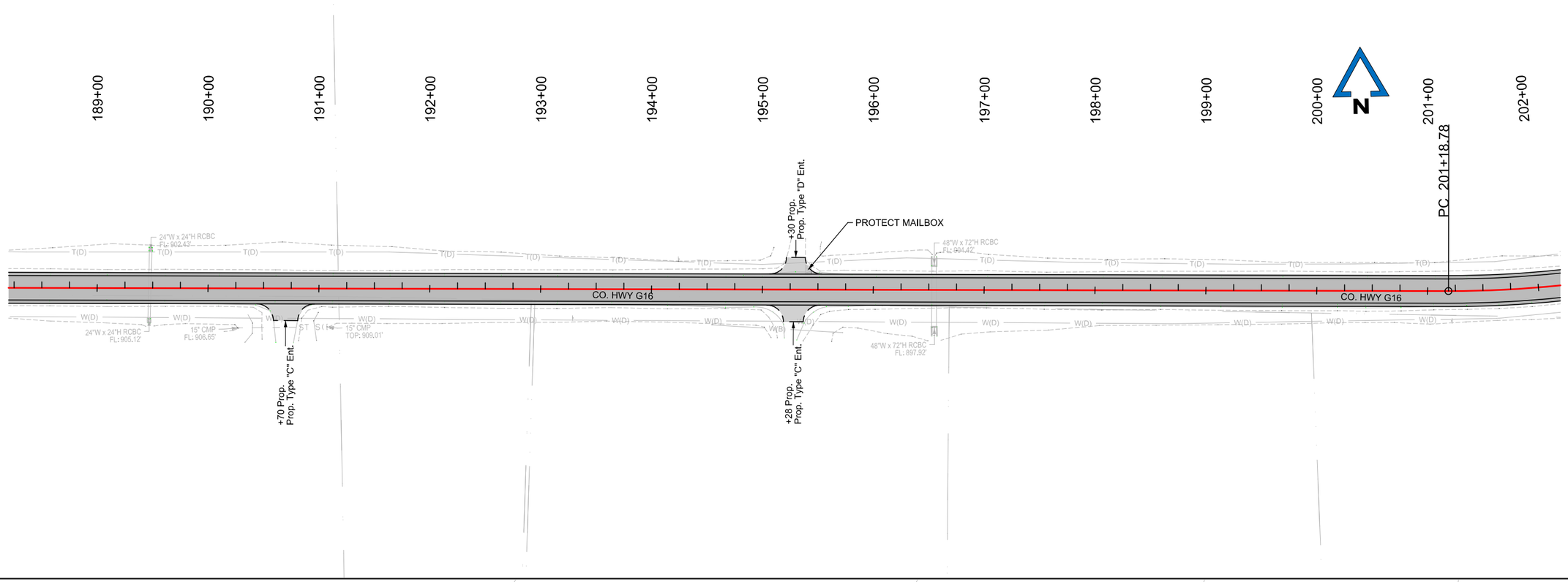
REVISIONS

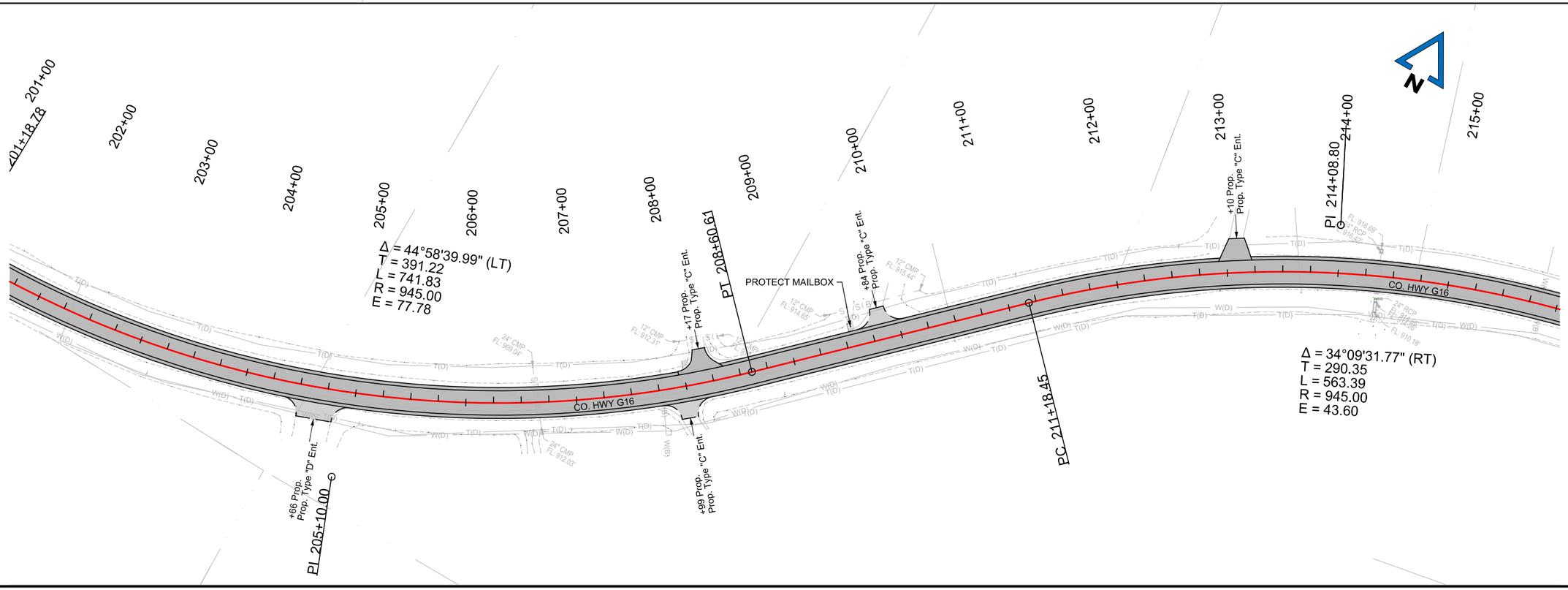
50 25 0 50

PROJECT NUMBER 2025002543

NOTICE: McClure Engineering Co. is not responsible for any liabilities, claims, damages, or losses (collectively, "Losses") which arise from any modifications, deletions, Specifications, and the engineering intent they convey, or for Losses arising from the failure to review and/or follow the engineers' or surveyors' recommendations to resolve any alleged errors, omissions, inconsistencies, ambiguities, or deficiencies contained within the Plans and Specifications.

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361
Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Corralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH





McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

PROJECT NUMBER
2025002543

50 25 0 50

REVISIONS

PROJECT INFO
2025002543

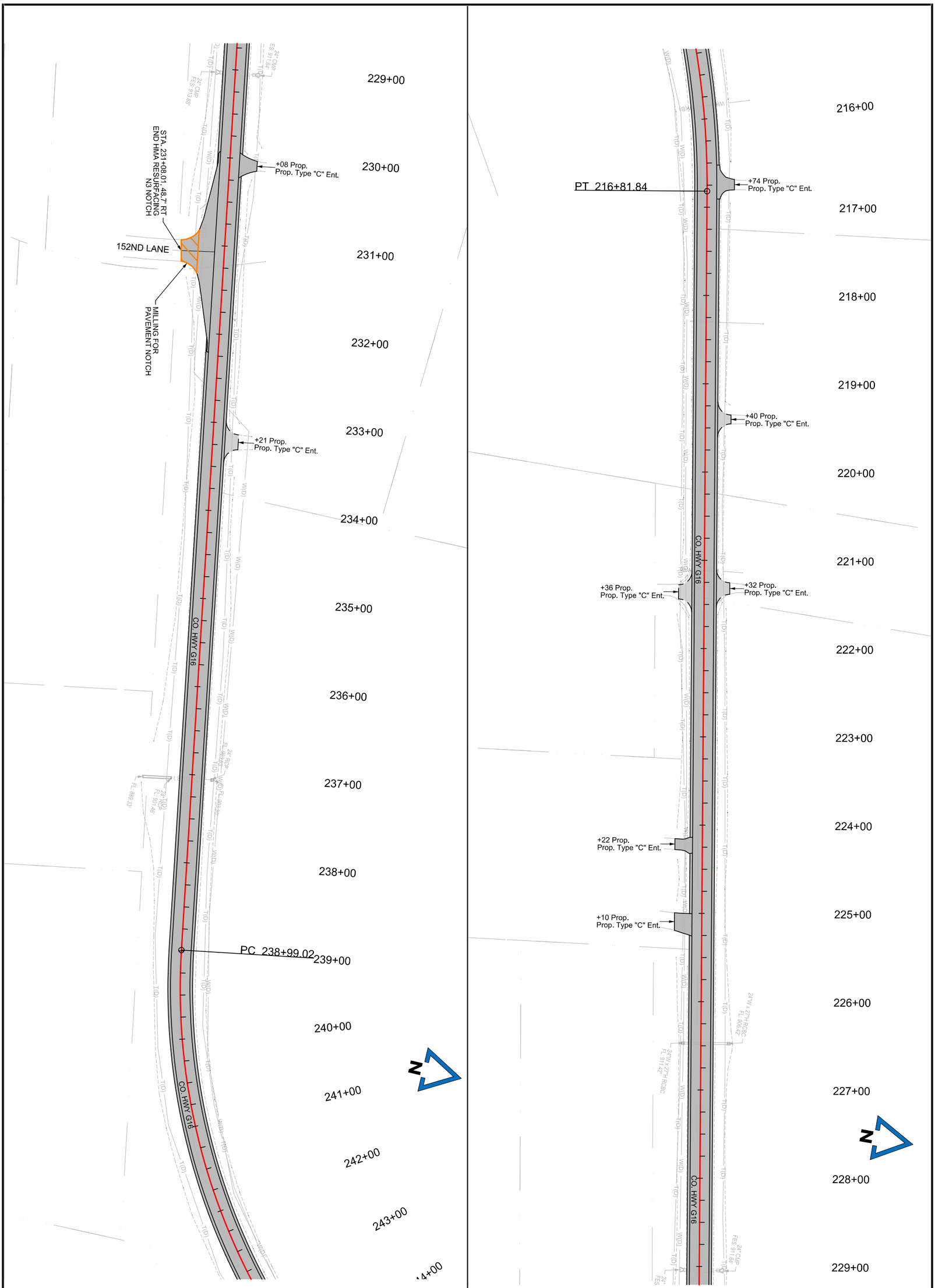
ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025\002543\04-Drawings\Dgn\Plans\SHT_2025002543_001_2nd.dgn

DRAWING NO.
D.4



WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_D01_2nd.dgn

DRAWING NO. D.5

ENGINEER JLR | DRAWN BY BDS | CHECKED BY ATS

PROJECT INFO 2025002543

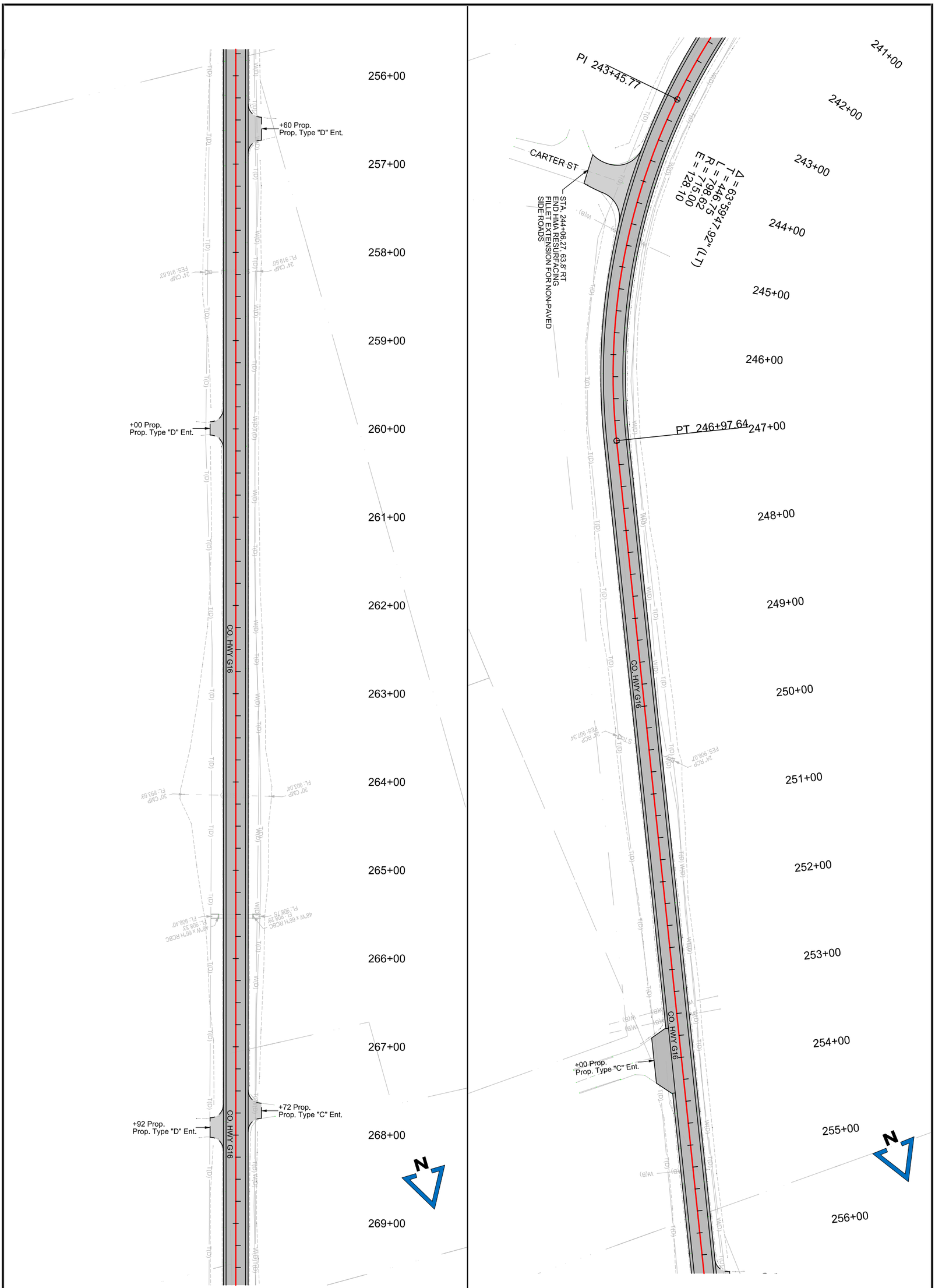
REVISIONS

50 25 0 50

PROJECT NUMBER 2025002543

NOTICE: McClure Engineering Co. is not responsible for any liability, claims, damages, or losses (collectively, "Losses") which arise from modifications to these Specifications, and the engineering intent they convey, or for Losses arising from the contractor's failure to survey and/or follow the engineers' or surveyors' instructions, or from any alleged errors, omissions, inconsistences, ambiguities, or inadequacies within the Plans and Specifications.

McClure
Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Corralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH



WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_D01_2nd.dgn

DRAWING NO. D.6

ENGINEER JLR | DRAWN BY BDS | CHECKED BY ATS

PROJECT INFO 2025002543

50 25 0 50

REVISIONS

PROJECT NUMBER 2025002543

NOTICE: McClure Engineering Co. is not responsible for any liabilities, losses, claims, damages, or lossess (collectively, "Losses") which arise from any modifications to these Plans and Specifications, and the engineering intent they convey, or for Losses arising from construction means, methods, and/or failure to follow the engineers' or surveyors' recommendations, or from any alleged errors, omissions, or inconsistencies, ambiguities, or conflicts in the Plans and Specifications.

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1561
Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Corralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

PROJECT NUMBER
2025002543

50 25 0 50

REVISIONS

PROJECT INFO
2025002543

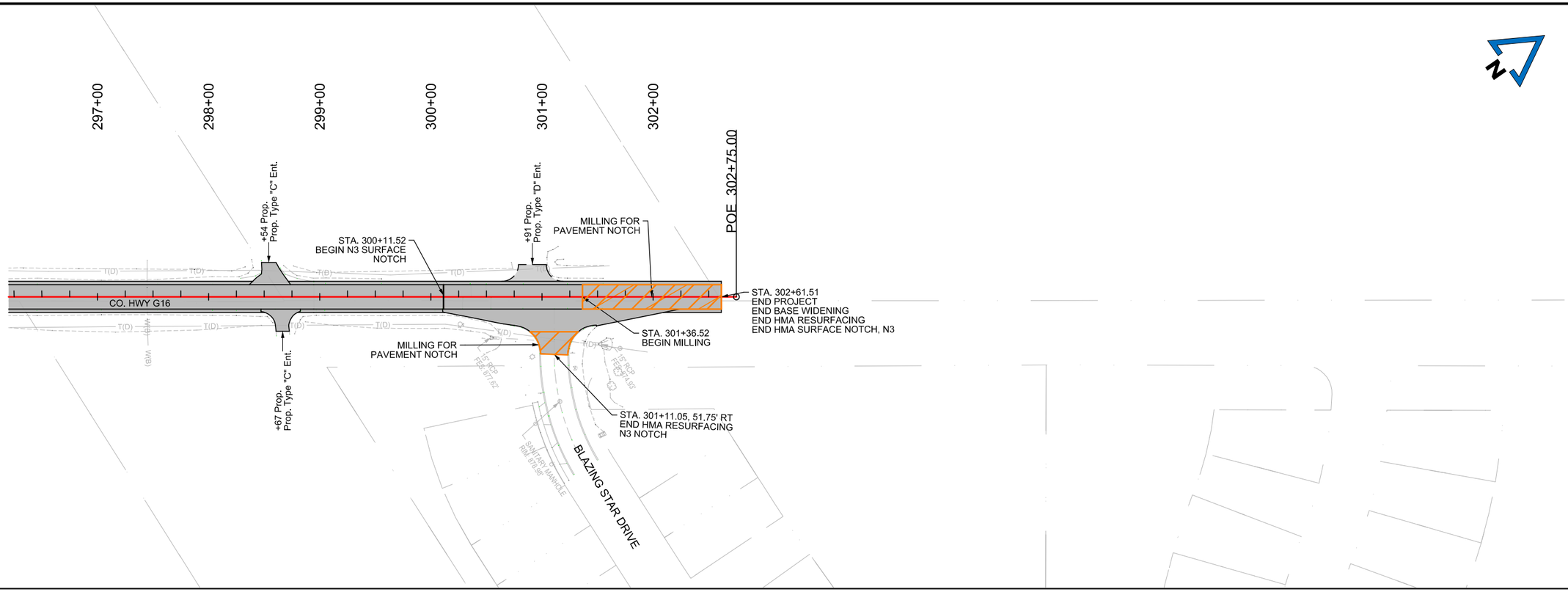
ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_D01_2nd.dgn

DRAWING NO.
D.7



McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

PROJECT NUMBER
2025002543

50 25 0 25

REVISIONS

PROJECT INFO
2025002543

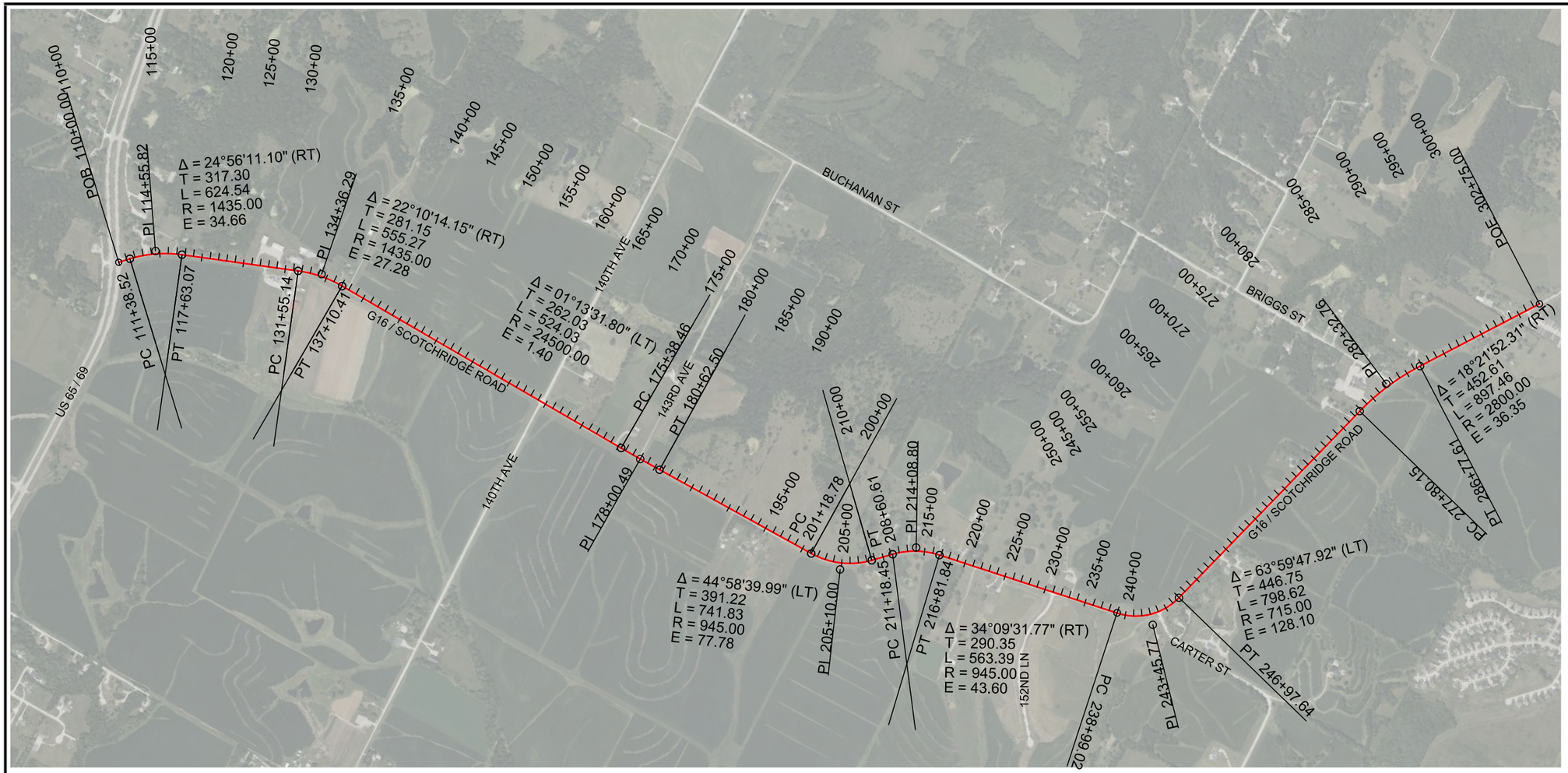
ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

SCOTCHRIDGE ROAD PLAN

P:\2025\2025431\04-Drawings\Dgn\Plans\SHT_2025002543_D01_2nd.dgn

DRAWING NO.
D.8



101_16
1 / 17 / 24

ALIGNMENT COORDINATES

Line No.	Name	Location	Point on Tangent Station	Point on Tangent Y Northing	Point on Tangent X Easting	Begin Spiral Station	Begin Spiral Y Northing	Begin Spiral X Easting	Begin Curve Station	Begin Curve Y Northing	Begin Curve X Easting	Simple Curve PI or Master PI Station	Simple Curve PI or Master PI Y Northing	Simple Curve PI or Master PI X Easting	End Curve Station	End Curve Y Northing	End Curve X Easting	End Spiral Station	End Spiral Y Northing	End Spiral X Easting
	G16	P.O.B.	110+00.00	7,445,333.493	18,543,208.764															
									111+38.52	18,543,307.262	18,543,307.262	114+55.82	7,445,653.991	18,543,532.880	117+63.07	7,445,761.169	18,543,831.527			
									131+55.14	7,446,231.391	18,545,141.780	134+36.29	7,446,326.361	18,545,406.408	137+10.41	7,446,314.447	18,545,687.309			
									175+38.47	7,446,152.236	18,549,511.921	178+00.49	7,446,141.132	18,549,773.712	180+62.50	7,446,135.631	18,550,035.679			
									201+18.78	7,446,092.456	18,552,091.510	205+10.00	7,446,084.242	18,552,482.641	208+60.61	7,446,354.895	18,552,765.125			
									211+18.45	7,446,533.272	18,552,951.299	214+08.80	7,446,734.142	18,553,160.950	216+81.84	7,446,782.642	18,553,447.219			
									238+99.02	7,447,153.002	18,555,633.242	243+45.77	7,447,227.628	18,556,073.717	246+97.64	7,447,656.231	18,556,199.760			
									277+80.15	7,450,613.520	18,557,069.437	282+32.76	7,451,047.745	18,557,197.134	286+77.61	7,451,419.623	18,557,455.134			
			296+57.84	7,452,225.000	18,558,013.887															
		P.O.E.	302+75.00	7,452,731.510	18,558,366.141															

CP #

HORIZONTAL CONTROL

Point Name	Northing	Easting	Elevation	Description
CP200	7458177.46	18555235.65	785.60	CP / 1/2IN RBR BLUE MEC CAP
119A	7453824.78	18559166.91	880.26	CP / CUT X
CP201	7448627.83	18556393.96	931.05	CP / 1/2IN RBR BLUE MEC CAP
CP202	7446199.30	18549786.47	928.04	CP / 1/2IN RBR BLUE MEC CAP
CP203	7445436.29	18543223.33	929.81	CP / 1/2IN RBR BLUE MEC CAP

HORIZONTAL DATUM: NAD83, Iowa RCS Zone 8, US Survey Feet
VERTICAL DATUM: NAVD88 relative to Geoid 18

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

700 350 0 700

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

REF. TIES, BENCHMARKS, & HORZ. CNTRL.

P:\2025002543\04-Drawings\Dgn\Plans\SHT_2025002543_G01.dgn

DRAWING NO.
G.1

© 2026 Microsoft Corporation © Maxar ©CNES (2026) Distribution Airbus DS © Mapbox

TEMPORARY TRAFFIC CONTROL

The CONTRACTOR shall employ sound practices of safety and traffic control. These methods and practices shall include, but not be limited to, the following:

1. All traffic control shall be provided in accordance with requirements set forth in the Manual on Uniform Traffic Control Devices (MUTCD) for streets and highways, as adopted by the Department per 761 of the Iowa Administrative Code (IAC), Chapter 130.

2. At the time of initial set up or at the time of major stage changes, 100 percent of each type of device (signs, cones, tubular markers, drums, barricades, vertical panels, changeable message signs, and pavement markings) shall be classified as acceptable by the requirements of the American Traffic Safety Services Association (ATSSA), "Quality Standard For Work Zone Traffic Control Devices -1992." Throughout the duration of the project, unacceptable devices or situations that are found on the job site as determined by before mentioned publication shall be replaced or the situation corrected within 12 hours of initial notification by the ENGINEER.

3. The CONTRACTOR shall coordinate traffic control with other projects in the area.

4. All traffic control devices shall be furnished, erected, maintained and removed by the CONTRACTOR. CONTRACTOR shall erect all warning signs on steel posts. Portable mountings for warning signs may be used for temporary installations of 3 days or less. All construction signs shall be diamond grade fluorescent orange or white V.I.P. sheeting or equivalent. (Iowa DOT Type VII sheeting). All traffic control signs shall be placed at a minimum of 2 feet clear of the outside edge of shoulder where possible. The proposed signing may be modified to meet field conditions, prevent obstructions and to accommodate construction scheduling upon approval of the project engineer. Long term or permanent traffic control signs that conflict with specific layouts shown on these plans are to be covered as directed by the ENGINEER. Sign washing shall be considered incidental to traffic control and required as directed by the ENGINEER.

5. The CONTRACTOR shall notify the ENGINEER, OWNER, local fire/rescue services, and law enforcement a minimum of seven (7) days prior to temporary road closures and changes to traffic patterns during construction. Install Portable Dynamic Message Signs (PDMS) to provide advance notice of construction a minimum of seven (7) days prior to start date.

6. The CONTRACTOR shall provide, prior to the start of construction, the name and 24-hour phone number of the CONTRACTOR's representative in charge of traffic control. The project site must be patrolled a minimum of two (2) times each 24-hour period to check and reinstall, if necessary, traffic control devices. All extra standard traffic control, signs, barricades, cones, etc. that are required will be delivered and installed at the project site within four (4) hours of notification, including weekends and holidays.

7. Proposed changes in the traffic control plan, private property access, or alternate signing details to coincide with the schedule of operations for any variations shall be submitted in writing and reviewed with the ENGINEER at least 24-hours before changes are made in the field.

8. It shall be the CONTRACTOR's responsibility for proper barricading and adequate protection of all open trenches and other excavations. Obstructions, such as material piles and equipment, shall be provided with warning signs, barricades, and lights. All barricades and obstructions shall be illuminated by means of warning lights from sunset to sunrise or when any other low light conditions exist. Material stored upon or alongside public streets shall be so placed, and the work shall at all times be constructed as to cause the minimum obstruction and inconvenience to the public and to local residents.

9. The CONTRACTOR shall provide temporary signage or cover existing signs to maintain safe traffic operation at intersections, lane closures, road closures, traffic signals, and other locations where normal traffic operation is changed due to project construction. This work shall be considered incidental to the contract unless otherwise noted in the plans. Damaged signs shall be replaced by the CONTRACTOR at no expense to the OWNER.

The CONTRACTOR shall maintain at least one (1) access to all businesses, industries, and adjacent farm fields during normal working hours by staging work accordingly. Coordinate construction at private property with the OWNER and the ENGINEER. The CONTRACTOR shall be responsible for maintaining access to individual properties during construction. The CONTRACTOR shall coordinate with area residents/property owners prior to changing access to adjacent properties. The project plans assume that vehicular access to adjacent properties is maintained at all times during construction. There may be residents who must access their property via vehicle, as they are unable to park elsewhere and walk to their property. The CONTRACTOR shall notify the ENGINEER a minimum of three (3) business days in advance for lane closure and shall receive approval before closing any lane to traffic. The CONTRACTOR shall notify the ENGINEER a minimum of seven (7) calendar days in advance for street closure and shall receive approval before closing any street to traffic.

CONSTRUCTION STAGING

The CONTRACTOR shall employ sound practices of safety and traffic control. These methods and practices shall include, but not be limited to, the following:

1. County Highway G16 shall remain open to traffic at all times and residents shall have access to their property at all times through the use of staged construction and Flaggers / Pilot Cars.

2. The CONTRACTOR shall utilize Iowa DOT Standard Road Plan TC-282 “Uneven Lanes,” at the completion of the working day.

3. The CONTRACTOR shall utilize Iowa DOT Standard Road Plan TC-214 “Lane Closure with Flaggers for Use with Pilot Car,” when completing paving operations along G16. Note that the length of construction zone is to be limited to 2.0 miles long.

4. Portable dynamic message signs shall be place south of Denver Trail on State Highway 65/69 Northbound seven (7) calendar days prior to construction beginning. Set portable dynamic message signs to read the following:

ONE_LANE		STARTING
TRAFFIC_		_MONDAY_
AHEAD		XX/XX/27

STAGE 1:

Temporary Traffic Control: Flagger, Pilot Car, Traffic Control Layout per Sheets J.2-J.4
Construction: Base Widening

1. CONTRACTOR to complete base widening of the entire project.
2. CONTRACTOR to utilize Iowa DOT Standard Road Plan TC-214 for installing base widening between Station 112+15.00 to Station 302+61.51.
3. CONTRACTOR to utilize traffic control laid out in Sheets J.2-J.4 to complete base widening between Station 110+00.00 to Station 112+15.00.
   a. Traffic Control on Sheets J.2-J.4 created using Iowa DOT Standard Road Plans TC-252, TC-415, and TC-420.
   b. Close northbound right lane following details on Sheets J.2-J.4.
   c. Allow right turning movement to Eastbound G16 following details on Sheets J.2-J.4.
   d. Close left turn lane along southbound 65/69 following details on Sheets J.2-J.4.
   e. CONTRACTOR to provide 72-hour notice to Iowa DOT District 1 Engineer, Benjamin Adey, prior to lane closure. Mobile Number (515) 236-4482.
   f. All lane closures of State Highway 65/69 may not occur between the hours of 6 AM – 9 AM.
   g. Signs relating to the detour must be taken down or covered at the end of the working day.

STAGE 2:

Temporary Traffic Control: Flagger, Pilot Car
Construction: HMA Paving

1. CONTRACTOR to complete HMA Paving from Station 112+15.00 to Station 302+61.51.
2. CONTRACTOR shall utilize Iowa DOT Standard Road Plans TC-214 and TC-282 during construction.

STAGE 3:

Temporary Traffic Control: Flagger, Traffic Control Layout per Sheets J.2-J.4
Construction: Milling and HMA Paving

1. CONTRACTOR to complete the milling and HMA paving at the intersection between County Highway G16 and State Highway 65/69 utilizing the Traffic Control laid out in Sheets J.2-J.4.
   a. Traffic Control on Sheets J.2-J.4 created using Iowa DOT Standard Road Plans TC-252, TC-415, and TC-420.
   b. Close northbound 65/69 right lane following details on Sheets J.2-J.4.
   c. Allow right turning movement to Eastbound G16 following details on Sheets J.2-J.4.
   d. Close down left turn lane along southbound 65/69 following details on Sheets J.2-J.4.
   e. CONTRACTOR to provide 72-hour notice to Iowa DOT District 1 Engineer, Benjamin Adey, prior to lane closure. Mobile Number (515) 236-4482.
   f. All lane closures of State Highway 65/69 may not occur between the hours of 6 AM – 9 AM.
   g. Signs relating to the detour must be taken down or covered at the end of the working day.
2. CONTRACTOR to complete the construction of the intersection using staged construction.

STAGE 4:

Temporary Traffic Control: Flagger and Pilot Car
Construction: Milled rumble strips and pavement markings

1. CONTRACTOR to utilize Iowa DOT Standard Road Plan TC-214 for installing milled rumble strips and pavement markings.

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

REVISIONS

PROJECT INFO
2025002543

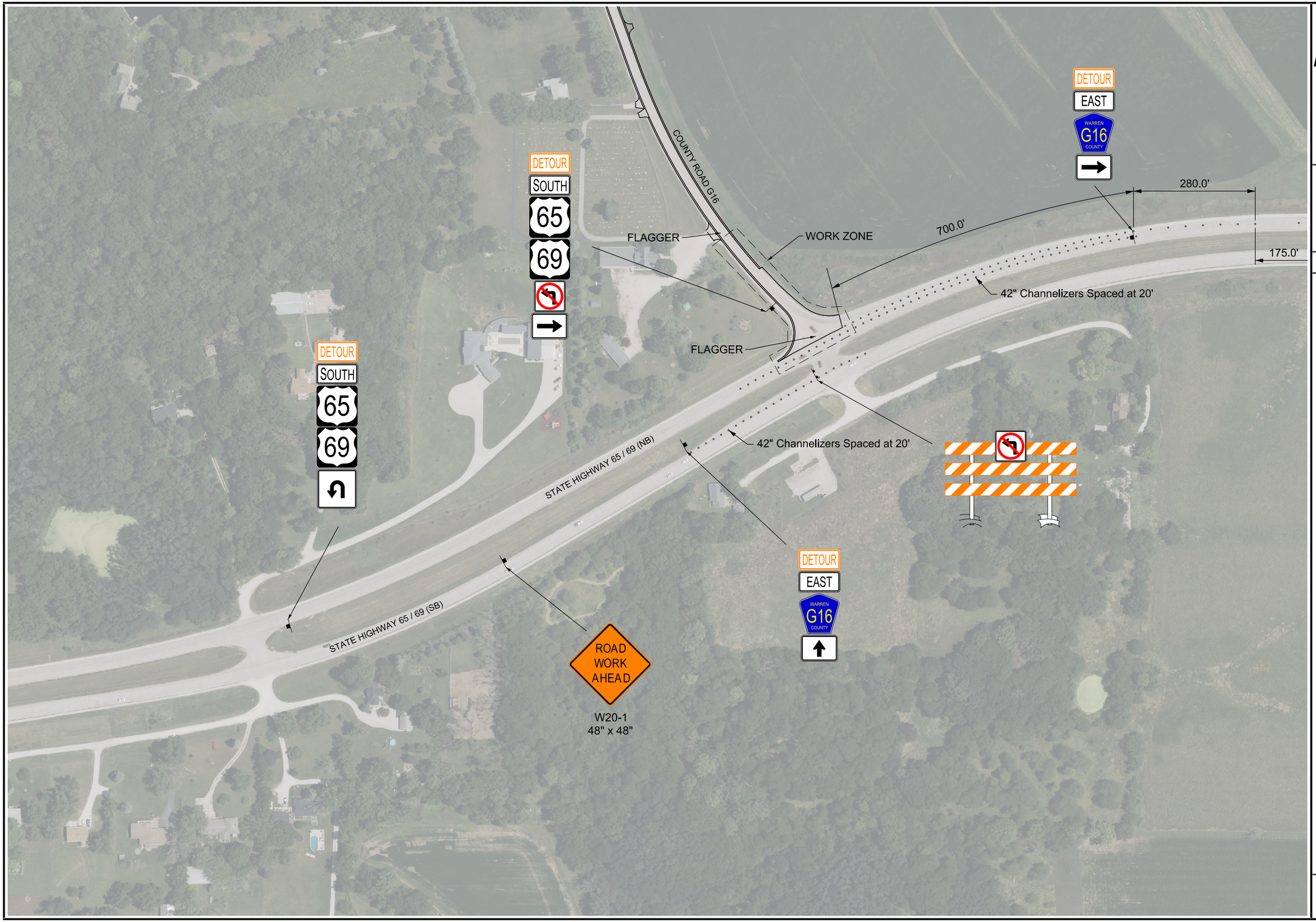
ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TRAFFIC CONTROL AND STAGING NOTES

P:\2025\002543\04-Drawings\Dgn\TYPICAL SECTIONS_2025002543.dgn

DRAWING NO.
J.1



McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA
Macon,MO | Columbia,MO
North Kansas City,MO
Lenexa, KS
Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

N

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TRAFFIC CONTROL AND STAGING LAYOUT

P:\2025002543\04-Drawings\Dgn\Plans\ShT_2025002543_J02.dgn

DRAWING NO.
J.2

© 2026 Microsoft Corporation © Maxar ©CNES (2026) Distribution Airbus DS © Mapbox



McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA

Macon,MO | Columbia,MO
North Kansas City,MO

Lenexa, KS

Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

N

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TRAFFIC CONTROL AND STAGING LAYOUT

P:\2025\002543\04-Drawings\Dgn\Plans\SHT_2025002543_J02.dgn

DRAWING NO.
J.3

© 2026 Microsoft Corporation © Maxar ©CNES (2026) Distribution Airbus DS © Mapbox

DELAWARE STREET

DENVER TRAIL

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

SPEED LIMIT 55

R2-1
48" x 60"

ROAD WORK AHEAD

W20-1
48" x 48"

STATE HIGHWAY 65 / 69 (NB)

STATE HIGHWAY 65 / 69 (SB)

1000.0'

1000.0'

1000.0'

RIGHT LANE CLOSED AHEAD

W20-5
48" x 48"

SPEED LIMIT 55

R2-1
48" x 60"

ROAD WORK AHEAD

W20-1
48" x 48"

McCLURE™
1535 SW MARKET ST, SUITE 200
ANKENY, IA
515.512.1361

Ankeny,IA | Carroll,IA | Clive,IA
Cedar Rapids,IA | Coralville,IA
Fort Dodge,IA | Sioux City,IA

Macon,MO | Columbia,MO
North Kansas City,MO

Lenexa, KS

Boston, MA | Portsmouth, NH

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistences, ambiguities, or conflicts contained within the Plans and Specifications.

N

REVISIONS

PROJECT INFO
2025002543

ENGINEER	DRAWN BY	CHECKED BY
JLR	BOS	ATS

WARREN COUNTY
G16 REHABILITATION
STP-S-C091(141)--5E-91

TRAFFIC CONTROL AND STAGING LAYOUT

P:\2025\02543\04-Drawings\Dgn\Plans\SHT_2025002543_J02.dgn

DRAWING NO.
J.4

© 2026 Microsoft Corporation © Maxar ©CNES (2026) Distribution Airbus DS © Mapbox