

IOWA COMMUNICATIONS NETWORK

MANCHESTER IOWA DOT HWY 13 RELOCATION
 FIBER INSTALLATION
 DELAWARE COUNTY, MANCHESTER, IOWA
 ALONG HWY 13 FROM 189TH ST TO 400TH ST.



509 SOUTH GILBERT STREET
 IOWA CITY, IA 52240
 PHONE: (319) 338-7557
 STATE OF IOWA, DEPARTMENT OF LABOR
 REGULATION NO. 00527328

PROJECT INFORMATION

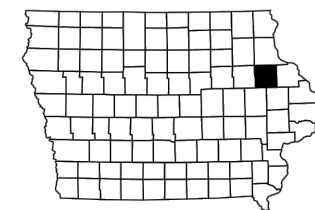
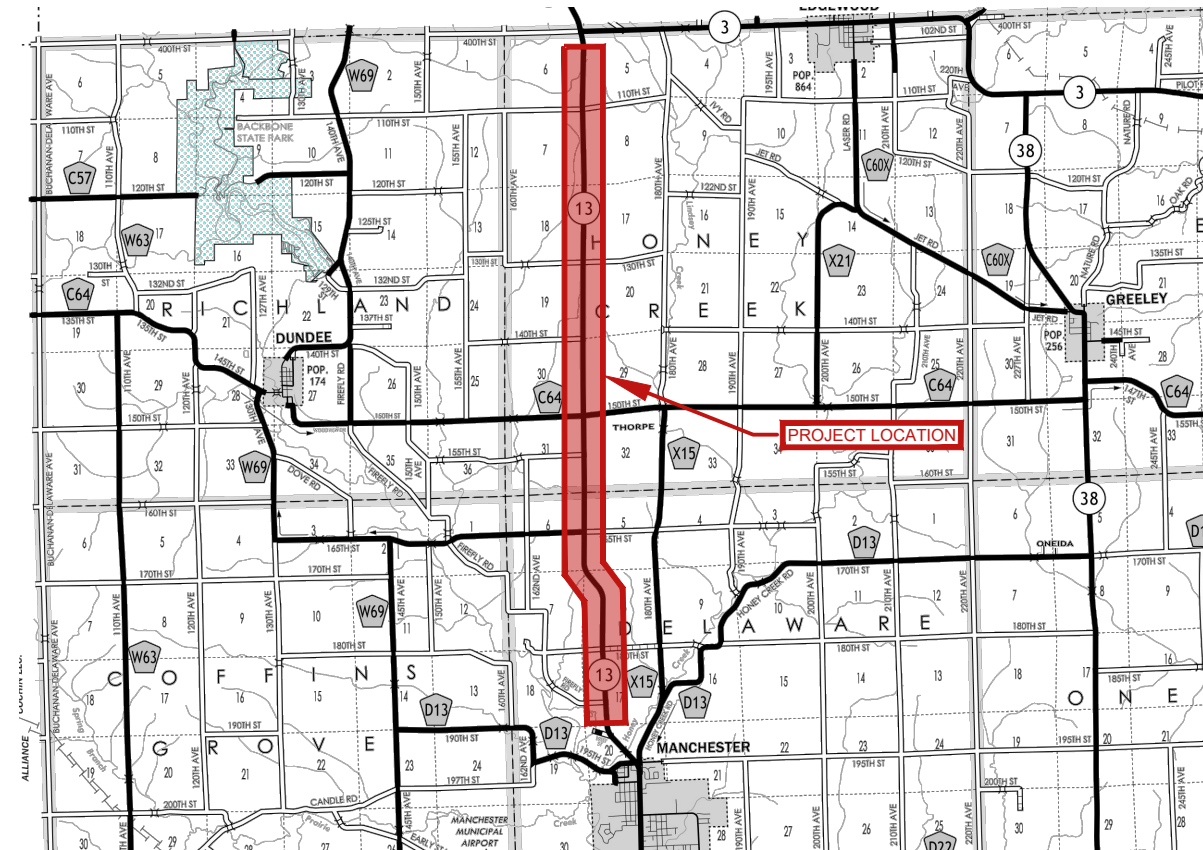
SCOPE OF WORK:
 THE ICN IS RELOCATING ALONG HWY 13 FROM FIREFLY RD TO HWY 3 IN MANCHESTER, IA. IT WILL INVOLVE APPROXIMATELY 8471' OF NEW CABLE INSTALLATION IN NEW 1 1/2" CONDUIT AND 38265' OF NEW CABLE INSTALLATION DIRECT BURY. CONTRACTOR IS REQUIRED TO COORDINATE WITH ICN ON THE CUT OVER OF EXISTING CABLES FOR LINK 0106-8fa WITH ICN. CREWS WILL BE REQUIRED FOR CABLE PULLING DURING CUTOVER; AFTER HOURS 22:00 TO 6:00.

CONTACT PERSON:
 TIM FLICKINGER
 IOWA COMMUNICATIONS NETWORK (ICN)
 PHONE: (515) 725-4699
 timothy.flickinger@icn.state.ia.us

NICK FREERKS
 HBK ENGINEERING
 509 S. GILBERT STREET
 IOWA CITY, IA 52240
 PHONE: (319) 338-7557
 nfreerks@hbkengeering.com

NOTE:
 TELECOM MINIMUM DEPTH IS 48" WHEN CROSSING ROADS.

LOCATION MAP



INDEX OF SHEETS

SHEET	TITLE
1	TITLE SHEET
2	ENGINEER GENERAL NOTES AND LEGEND
3	ICN GENERAL NOTES
4	MATERIALS
CIVIL	
5-36	PLAN SHEETS
37-93	CROSS SECTIONS
94-101	DETAIL SHEETS

PROJECT NOTES

- IOWA DOT CONSTRUCTION PLAN INCLUDED BY REFERENCE: NHSX-013-2(42)-3H-28
- ROCK IS ANTICIPATED ON THIS PROJECT FOR TWO SEGMENTS WHICH SHOULD BE INCLUDED IN THE CONTRACTOR'S QUOTE. IF ADDITIONAL ROCK IS DISCOVERED, ICN SHOULD IMMEDIATELY BE NOTIFIED OF THE LOCATION AND EXTENT OF ROCK. IT WILL ONLY BE CONSIDERED A ROCK BORE PER THE FOLLOWING DEFINITION: DEFINED BY ICN WHERE AN ALL-TERRAIN HORIZONTAL DIRECTIONAL DRILLING MACHINE WITH DUAL DRILL PIPE, BITS, HOUSINGS, AND BACK-REAMERS, DESIGNED SPECIFICALLY FOR ROCK APPLICATIONS ARE REQUIRED TO COMPLETE THE BORING OPERATION. EXPERIENCE OPERATORS ARE ALSO REQUIRED. THE ICN EXPECTS THAT THE BIDDER OWNS AND IS ABLE TO OPERATE THE DESCRIBED EQUIPMENT. PRE-RIPPING ROCK ON PLOWABLE SEGMENTS WILL BE ALLOWED ALONG WITH THE INSTALLATION OF CONDUIT ON THE SEGMENT INVOLVED.
- CONTRACTOR TO PROVIDE FIELD SURVEY OF IOWA DOT ROW TO ASSURE OFFSETS ARE MAINTAINED AND NEW RUNNING LINE IS WITHIN DOT ROW. CONTACT AND COORDINATE WITH DOT FOR THE STAKING OF ROW TRANSITION POINTS.
- IOWA DOT CLEARING AND GRUBBING PROJECT NHSN-013-2(048)-2R-28 IS SCHEDULED TO BE COMPLETED BY SPRING 2024; PLANS INCLUDED BY REFERENCE. COORDINATE WITH DOT ON CLEARING AND GRUBBING ACTIVITIES AND ANY FENCE REMOVALS REQUIRED FOR ACCESS. DOT IS ACQUIRING ADDITIONAL ROW.
- IOWA DOT PROJECT LETTING AS OF JUNE 2023 IS 3/19/24 WITH THE CONTRACTOR START DATE OF 7-1-24, ALLOWING TIME FOR UTILITY RELOCATIONS. ICN NEEDS TO BE RELOCATED PRIOR TO 7-1-24.
- CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS FOR APPROVAL FOR THE HANDHOLES AND FIBER OPTIC CABLE PRIOR TO ORDERING.

UTILITY CONTACTS

COMPANY	CONTACT NAME	PHONE	PHONE
ALLIANT ENERGY (ANE)	FIELD ENGINEER	(800) 255-4268	LOCATEIPL@ALLIANTENERGY.COM
MEDIACOM (AT6)	BRIAN KADNER	(845) 544-9656	BKADNER@MEDIACOMCC.COM
IOWA REGIONAL UTILITY ASSOC (CIW3)	SANDY SPANGENBURG	(319) 824-5920	CIWAGC@GCMUNI.NET
IOWA COMMUNICATIONS NETWORK (ICN)	DOUG EBELSHEISER	(515) 725-4742	DOUGEBELSHEISER@ICN.STATE.IA.US
MAQUOKETA VALLEY RURAL ELECTRI (MQV)	NIK SCHULTE	(319) 820-0266	NSCHULTE@MVEC.COM
MAQUOKETA VALLEY ELECTRIC COOP (MVLINK)	NIK SCHULTE	(319) 820-0266	NSCHULTE@MVEC.COM
BLACK HILL ENGY MANCHESTER (PN9)	BRIAN MCWILLIAMS	(563) 927-1017	BRIAN.MCWILLIAMS@BLACKHILLSCORP.COM
IOWA DEPARTMENT OF TRANSPORTAT (W13)	DOUG LICKTEIG	(319) 432-2370	DOUGLAS.LICKTEIG@DOT.IOWA.GOV
WINDSTREAM COMMUNICATIONS (WINIA)	LOCATE DESK	(800) 289-1901	LOCATE.DESK@WINDSTREAM.COM

NOTE:
 CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.



MANCHESTER – DOT HWY 13 RELOCATION
 FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
 400 EAST 14TH STREET
 GRIMES STATE OFFICE BUILDING
 DES MOINES, IOWA 50319
 ICN © 2021, COPY WITH PERMISSION

MATERIALS

ICN PROVIDED MATERIALS			
CATEGORY	ITEM DESCRIPTION	UNIT	QTY
LOCATE FACILITIES	TRIVIEW TEST STATION	EA	4
LOCATE FACILITIES	TRIVIEW LOCATE WARNING MARKER	EA	43
LOCATE FACILITIES	ICN SNAP AROUND	EA	10
SPLICE CLOSURE	*450A SPLICE CLOSURE	EA	4
SPLICE TRAY	*A TRAY 12-POS	EA	4
SHIELD BOND CONNECTOR	*SHIELD BOND CONNECTOR	EA	8
SEALING KIT	*FOSC CLOSURE SEALING KIT	EA	4

CONTRACTOR SUPPLIED MATERIALS			
CATEGORY	ITEM DESCRIPTION	UNIT	QTY
DUCT	1.25" ORANGE HDPE DUCT	LFT	8471
FIBER CABLE	12F ARMORED SM CABLE**	LFT	49,800
HANDHOLES	24X36X36 TIER 15 HH W/LID	EA	7
LOCATE FACILITIES	6 AWG BARE SOLID COPPER GROUND WIRE	LFT	40
LOCATE FACILITIES	12 AWG HDPE ORANGE SOLID COPPER WIRE	LFT	400
LOCATE FACILITIES	1/2" X 6" GROUND ROD	EA	4
LOCATE FACILITIES	1/2" GROUND ROD CLAMP	EA	4

**CABLE LENGTH BASED ON LINEAR ROUTE +5% OVERAGE + COILS. CONTRACTOR TO CONFIRM

NOTE ON HDPE CONDUIT AND SPLICES:

- HDPE SHALL BE ORANGE SMOOTH WALL SDR 13.5
- DUCT SPLICES SHALL BE MADE OF THE FOLLOWING (IN ORDER OF PREFERENCE.)
 - ELECTROFUSION
 - CRIMP ON
 - CLAMP ON / BOLT ON (SPLIT COUPLINGS)
 - PUSH ON
- ALL SPLICES SHALL BE AIR AND WATER TIGHT**
- DUCT SPLICES SHALL BE OF A TYPE MADE SPECIFICALLY FOR JOINING HDPE CONDUIT
- ALL DUCT SPLICES SHALL BE MADE IN SUCH MANNER AS TO ALLOW CONTINUOUS PULLING OF CABLE THROUGH DUCT.

NOTE ON OSP FIBER CABLE

Single Mode, Single Armor, Gel Free, Loose Tube OSP cable (12-strand minimum, refer to Materials)
Tensile Strength: 600 lb short term
Attenuation: 0.35/0.25 dB at 1310/1440 nm

NOTE ON HANDHOLE(S):

Polymer Concrete (Quazite, New Basis, Martin, e.g.) 24"x36"x30" Tier 15
Hybrid Polymer Concrete - Fiberglass (Oldcastle FRP, e.g.) 24"x36"x30" Tier 15

*NOTE ON CONTRACTOR PROVIDED MATERIAL(S):

Contractor shall supply all other materials required for proper installation, including but not limited to: HDPE, Duct Splices, Grounding and Tracer Wires, Rock, Wire Mesh, etc.

ANY EXCEPTIONS MUST BE AGREED UPON IN WRITING PRIOR TO CONSTRUCTION.

LISTING OF HANDHOLE WORK				
HANDHOLE LABEL	HANDHOLE TYPE	ROUTE	STATION	12 SM ARMORED FIBER COIL
HH1	24" X 36" X 36"	HWY 13	0+00	75
HH2	24" X 36" X 36"	HWY 13	18+00	100
HH3	24" X 36" X 36"	HWY 13	154+46	150
HH4	24" X 36" X 36"	HWY 13	182+65	100
HH5	24" X 36" X 36"	HWY 13	191+22	100
HH6	24" X 36" X 36"	HWY 13	314+10	150
HH7	24" X 36" X 36"	HWY 13	467+37	75
TOTAL				750

NOTE:

- CONDUIT AND CABLE LENGTHS PROVIDED IN THE "LISTING OF CONDUIT & FIBER WORK" TABLE (AND ANY OTHER TABLES), ARE ONLY LINEAR CONDUIT LENGTHS. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY TRUE CONDUIT LENGTHS AND REQUIRED CABLE LENGTH REQUIREMENTS, INCLUDING ANY SLACK COILS.
- CONDUIT AND CABLE LENGTHS SHOWN ON PLANS ARE LINEAR MEASUREMENTS ONLY AND DO NOT ACCOUNT FOR VERTICAL GRADE CHANGES.
- HH3 AND HH6 LOCATIONS BASED ON END OF CABLE REEL SPLICE LOCATIONS BASED ON 15,000' TO 20,000' CABLE REELS. LOCATIONS MAY BE ADJUSTED UPON APPROVAL OF ICN BASED ON REEL SIZES CONTRACTOR SUPPLIES.

LISTING CONDUIT AND FIBER WORK					
RUN	FROM	TO	PLOW	BORE (1 1/4" CONDUIT)	12 SM ARMORED FIBER, UNDERGROUND
1	HH1	HH2	0	1800	1800
2	HH2	HH3	12197	1449	13646
3	HH3	HH4	2544	274	2818
4*	HH4	HH5	0	857	857
5	HH5	HH6	10261	2027	12288
6**	HH6	HH7	13263	2064	15327
TOTAL			38265	8471	46736

NOTE: THIS TABLE SHOWS APPROXIMATE LENGTHS IN ROUTING ONLY AND DOES NOT INCLUDE ANY COILS OR SLACK FOR FINER CABLES, TRACER WIRE, PULL ROPE, ETC. CONTRACTOR SHALL VERIFY NECESSARY QUANTITIES INCLUDING COILS.

*ROCK BORE

**POTENTIAL 25' OF ROCK BORE

ESTIMATE OF QUANTITIES				
ITEM NO.	ITEM	UNIT	PLANNED TOTAL	AS-BUILT TOTAL
1	MOBILIZATION	LS	1	
2	INSTALL 24" X 36" X 36" HANDHOLE	EA	7	
3	1.25" CONDUIT BORED	LF	7614	
4	1.25" CONDUIT ROCK BORE	LF	857	
5	DIRECT BURY CABLE	LF	38265	
6	48 SM ARMORED FIBER (TOTAL)	LF	47286	
7	48 SM ARMORED FIBER (RUNNING LINE)	LF	46736	
8	48 SM ARMORED FIBER (COIL)	LF	550	
9	TYCO 450B SPLICE ENCLOSURE	EA	4	
10	CONSTRUCTION ROW SURVEY	LS	1	

NOTE: CONDUIT INSTALLATION METHOD SHALL BE BORED UNDER ANY ROADWAYS, DRIVEWAYS, AND PAVED SURFACES. THE METHOD BETWEEN PLOW VERSUS BORE FOR CONDUIT INSTALLATION IS AT THE CONTRACTORS DISCRETION.

LISTING ROUTE OVERVIEW & FIBER WORK					
SEGMENT	FROM	TO	PLOW	BORE (1 1/4" CONDUIT)	12 SM ARMORED FIBER, UNDERGROUND
1	HH1	HH2		1800	1800
2	HH2	ICN STA. 32+64	1464		1464
3	ICN STA. 32+64	ICN STA. 37+21		457	457
4	ICN STA. 37+21	ICN STA. 45+13	792		792
5	ICN STA. 45+13	ICN STA. 47+00		187	187
6	ICN STA. 47+00	ICN STA. 52+96	596		596
7	ICN STA. 52+96	ICN STA. 57+65		469	469
8	ICN STA. 57+65	ICN STA. 94+61	3696		3696
9	ICN STA. 94+61	ICN STA. 95+97		136	136
10	ICN STA. 95+97	ICN STA. 130+33	3436		3436
11	ICN STA. 130+33	ICN STA. 132+33		200	200
12	ICN STA. 132+33	HH3	2213		2213
13	HH3	ICN STA. 164+97	1051		1051
14	ICN STA. 164+97	ICN STA. 167+71		274	274
15	ICN STA. 167+71	HH4	1493		1493
16*	HH4	HH5		857	857
17	HH5	ICN STA. 200+25	903		903
18	ICN STA. 200+25	ICN STA. 201+75		150	150
19	ICN STA. 201+75	ICN STA. 211+15	940		940
20	ICN STA. 211+15	ICN STA. 212+75		160	160
21	ICN STA. 212+75	ICN STA. 229+98	1723		1723
22	ICN STA. 229+98	ICN STA. 231+19		121	121
23	ICN STA. 231+19	ICN STA. 259+15	2796		2796
24	ICN STA. 259+15	ICN STA. 265+69		654	654
25	ICN STA. 265+69	ICN STA. 272+56	687		687
26	ICN STA. 272+56	ICN STA. 278+37		581	581
27	ICN STA. 278+37	ICN STA. 302+59	2422		2422
28	ICN STA. 302+59	ICN STA. 306+20		361	361
29	ICN STA. 306+20	HH6	790		790
30	HH6	ICN STA. 318+25	415		415
31	ICN STA. 318+25	ICN STA. 320+00		175	175
32	ICN STA. 320+00	ICN STA. 325+47	547		547
33	ICN STA. 325+47	ICN STA. 329+70		423	423
34**	ICN STA. 329+70	ICN STA. 376+73	4703		4703
35	ICN STA. 376+73	ICN STA. 380+78		405	405
36	ICN STA. 380+78	ICN STA. 391+00	1022		1022
37	ICN STA. 391+00	ICN STA. 394+28		328	328
38	ICN STA. 394+28	ICN STA. 424+50	3022		3022
39	ICN STA. 424+50	ICN STA. 426+00		150	150
40	ICN STA. 426+00	ICN STA. 461+54	3554		3554
41	ICN STA. 461+54	HH7		583	583
TOTAL			38265	8471	46736

NOTE: THIS TABLE SHOWS APPROXIMATE LENGTHS IN ROUTING ONLY AND DOES NOT INCLUDE ANY COILS OR SLACK FOR FIBER CABLES, TRACER WIRE, PULL ROPE, ETC. CONTRACTOR SHALL VERIFY NECESSARY QUANTITIES INCLUDING COILS.

*ROCK BORE

**POTENTIAL 25' OF ROCK BORE



MANCHESTER – DOT HWY 13 RELOCATION			
FIBER INSTALLATION			
1	FOR 60% REVIEW	09/25/2023	
2	FOR 90% REVIEW	10/12/2023	
3	FOR PERMIT PLANS	10/24/2023	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
4			

ALL CONDUIT AND HANDHOLE INSTALLATIONS, REMOVALS, MODIFICATIONS, AND TEMPORARY WORK SHALL BE DONE ACCORDING TO THE FOLLOWING NON-INCLUSIVE CONDITIONS:

SECTION 1.0 SCOPE OF WORK

1.01 INSTALLATION DESCRIPTION:

INSTALL CONDUIT AND ALL RELATED APPURTENANCES FOR FIBER OPTIC CABLE INSTALLATION. SEE PLANS FOR EXACT LOCATION, LENGTHS, QUANTITIES, AND DIMENSIONS OF PROPOSE IMPROVEMENTS.

1.02 SEE SHEET 4 FOR LOCATION OF ENGINEER'S ESTIMATE OF MATERIALS.

1.03 THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, EQUIPMENT, LABOR, INSTALLATION, RESTORATION, UTILITY RELOCATION CHARGES, JOB SITE DELIVERY COSTS AND INCIDENTALS TO COMPLETE THE DESCRIBED OR ILLUSTRATED WORK, UNDER THIS CONTRACT.

1.04 ANY CHANGE-ORDER REQUEST MUST BE PRESENTED IN WRITING TO THE OWNER'S REPRESENTATIVE AND APPROVED PRIOR TO PROCEEDING WITH THE REQUESTED CHANGE. DOCUMENTATION CONCERNING ANY AND ALL CHANGE ORDERS WILL BE REDUCED TO FORMAL RECORD, FILED WITH THE OWNER'S REPRESENTATIVE, AND BE MADE AVAILABLE FOR FUTURE REFERENCE.

1.05 THE CONTRACTOR SHALL PROVIDE A MINIMUM 48 HOUR ADVANCED NOTICE TO HBK ENGINEERING (319-338-7557) TO SCHEDULE A PRE-CONSTRUCTION WALK THROUGH WITH A HBK ENGINEERING REPRESENTATIVE. THIS WALK THROUGH MUST BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE LIMITS OF THIS PROJECT.

1.06 THE ENGINEER WILL NOT BE RESPONSIBLE NOR ASSUME ANY LIABILITY FOR NEGLIGENT ACTS OR ERRORS OF OMISSIONS OF ANY CONTRACTOR, ANY SUBCONTRACTOR, OR ANY OF THE CONTRACTOR'S OR SUBCONTRACTORS' AGENTS OR EMPLOYEES OR ANY OTHER PERSONS (EXCEPT ENGINEER'S OWN EMPLOYEES) AT THE PROJECT SITE OR OTHERWISE PERFORMING ANY OF THE WORK OF THE PROJECT. ANY CONTRACTOR OR SUBCONTRACTOR, AS WELL AS THE ENGINEER, WILL BE RESPONSIBLE FOR HIS OWN SAFETY PROGRAM. NEITHER THE PROFESSIONAL ACTIVITIES OF THE ENGINEER, NOR THE PRESENCE OF THE ENGINEER OR HIS OR HER EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE ANY CONTRACTOR OF HIS OR HER OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE ENGINEER AND HIS OR HER PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH ANY HEALTH OR SAFETY PRECAUTIONS.

SECTION 2.0 MATERIALS

2.01 ALL MATERIALS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL BE IN CONFORMANCE WITH STANDARD RECOMMENDATIONS OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).

2.02 ALL TRENCHED CONDUIT, ELBOWS, AND COUPLINGS SHALL BE HDPE UNLESS OTHERWISE NOTED. ALL BORED CONDUIT AND COUPLINGS SHALL BE HDPE SDR-13 UNLESS OTHERWISE NOTED.

2.03 JOB SITE MATERIAL WILL BE DELIVERED TO AND MAINTAINED AT THE STREET WORK AREAS IN A WELL MANAGED MANNER, TO MINIMIZE CONGESTION OR INCONVENIENCE TO OTHER WORKERS, OR CONTRACTORS WORKING UNDER ALTERNATE PERMITS.

SECTION 3.0 GENERAL NOTES

3.01 CONTRACTOR IS ADVISED TO READ ALL NOTES ON DRAWINGS, CAREFULLY.

3.02 THE CONTRACTOR SHALL VERIFY EXISTING STREET RIGHTS OF WAY TO THE EXTENT NECESSARY TO VERIFY PROPOSED WORK REMAINS WITHIN THESE RIGHTS OF WAY AND DOES NOT INFRINGE ON PRIVATE PROPERTY NOT OWNED BY THE OWNER.

3.03 SCALE FOR DRAWINGS IS FOR GENERAL INFORMATION ONLY. LOCATIONS AND DIMENSIONS SHALL BE TAKEN AS SHOWN AND THE DRAWINGS SHALL NOT BE SCALED.

3.04 CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL PUBLIC AND PRIVATE UTILITIES AS WELL AS CITY AND STATE AGENCIES.

3.05 INSTALL CONDUIT MINIMUM OF 10'-0" BELOW ALL WATERWAYS AND CULVERT CROSSINGS. CONTRACTOR TO VERIFY CULVERT DEPTH PRIOR TO CONDUIT INSTALLATION.

3.06 NUMEROUS ELEVATION CHANGES. TOPOGRAPHY LINES SHOWN ON DRAWING FOR REFERENCE ONLY.

3.07 DUE TO EXISTING FORESTED AREAS, SOME TREE REMOVAL AND TRIMMING REQUIRED FOR CONDUIT OR HANDHOLE INSTALLATION WITHIN THE RIGHT-OF-WAY.

3.08 RIGHT OF WAY LOCATIONS ARE APPROXIMATE. FIBER INSTALLATION 6'-0" MINIMUM OFF RIGHT-OF-WAY.

SECTION 4.0 SAFETY

4.01 CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT UTILITIES, PEDESTRIANS, WORKERS AND VEHICULAR TRAFFIC. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCES, BARRICADES, ETC. AS REQUIRED TO PROTECT ADJACENT PROPERTY AND THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

4.02 THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BARRICADES, SIGNAGE, WARNING LIGHTS AND OTHER DEVICES AND KEEP ALL TRAFFIC CONTROL OPERATIONAL 24 HOURS A DAY AT ALL OPEN TRENCH LOCATIONS AND AT LOCATIONS WHICH DO NOT HAVE A FINISHED SURFACE OR ROAD PLATES.

4.03 THE CONTRACTOR SHALL COORDINATE INGRESS AND EGRESS TO ADJACENT PROPERTIES AND/OR CONSTRUCTION AFFECTED BY THE PROPOSED WORK.

SECTION 5.0 EXISTING UTILITIES

5.01 EXISTING CONDITIONS, STRUCTURES, UTILITIES AND SURFACE FEATURES SHOWN WERE OBTAINED FROM UTILITY ATLASES AND FROM DRAWINGS FURNISHED BY THE VARIOUS UTILITIES AND ARE ASSUMED TO BE ACCURATE AND CORRECT. THE CONTRACTOR SHALL PERFORM HIS OWN SURVEY AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS OF EXISTING STRUCTURES PRIOR TO STARTING ANY WORK.

5.02 FOR BORED INSTALLATIONS, THE CONTRACTOR SHALL PERFORM TEST HOLES AT ALL UTILITY CROSSINGS TO VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION, AND TO LOCATE ANY POSSIBLE OBSTRUCTIONS. ALL TEST HOLES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

5.03 FOR TRENCHED INSTALLATIONS, THE CONTRACTOR SHALL PERFORM TEST HOLES PER PLAN OR AS DEEMED NECESSARY TO VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION, AND TO LOCATE ANY POSSIBLE OBSTRUCTIONS. ALL TEST HOLES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

5.04 THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL OVERHEAD OBSTRUCTIONS PRIOR TO THE COMMENCEMENT OF WORK.

5.05 EXISTING UTILITIES ARE SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL CONTACT IOWA ONE CALL AT 1(800)-292-8989 A MINIMUM OF 48 HOURS (EXCLUDING WEEKENDS AND GOVERNMENT HOLIDAYS) PRIOR TO COMMENCEMENT OF ANY PAVEMENT CUTS OR EXCAVATION TO REQUEST LOCATING AND MARKING OF EXISTING UTILITIES PRIOR TO PERFORMING ANY EXCAVATION WORK IN OR AROUND ANY UTILITY.

5.06 ALL EXCAVATION WORK NEAR AND AROUND EXISTING STRUCTURES AND UTILITIES SHALL BE BY HAND METHOD.

5.07 ALL DISCREPANCIES SHOULD BE REPORTED TO ENGINEER OF RECORD AT HBK ENGINEERING (319-338-7557). ANY QUESTIONS OR COMMENTS THE CONTRACTOR MAY HAVE ARE TO BE DISCUSSED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.

5.08 FURTHER, THE CONTRACTOR SHALL RECORD THE LOCATION AND ELEVATION OF ALL UTILITIES ENCOUNTERED, AND INSTALLATION OF NEW WORK, AS THE WORK PROGRESSES AND SHALL PREPARE RECORD DRAWINGS (RED-LINES) BASED ON HIS RECORDS. AS PART OF THE RECORD DRAWINGS, CONTRACTOR SHALL ALSO PROVIDE HORIZONTAL AND VERTICAL CONFIGURATION OF CONDUITS WHERE MULTIPLE CONDUITS ARE INSTALLED. THESE RECORDS TO BE SUPPLIED TO HBK ENGINEERING, LLC AT COMPLETION OF WORK.

5.09 AT SEWER DRAINS FROM HOMES OR OTHER BUILDINGS, IF THERE IS INTERFERENCE, REPLACE INKIND. IN ALL CASES WHERE SEWER WORK IS DONE, A PERMIT SHOULD BE OBTAINED AND A SEWER INSPECTOR SHOULD BE PRESENT DURING THE WORK.

5.10 CONTRACTOR SHALL SUPPORT ALL WATER MAINS IN EXCESS OF 12" IN DIAMETER WITH A PERMANENT TYPE OF STRUCTURE UNLESS OTHERWISE NOTIFIED BY THE WATER DEPARTMENT, AND IS INCLUDED IN COST FOR DOING THE WORK. AT NO TIME DURING CONSTRUCTION SHALL WATER MAINS GO UNSUPPORTED FOR A SPAN GREATER THAN 8'-0".

5.11 CONTRACTOR RESPONSIBLE FOR OBTAINING AND PROVIDING REVIEW AND DESIGN OF ANY AND ALL TEMPORARY UTILITY SUPPORT SYSTEMS PRIOR TO CONSTRUCTION.

5.12 CONTRACTOR SHALL NOTIFY ALLIANT IN SITUATIONS WHERE STEEL PIPE CONDUCTOR IS NICKED DURING EXCAVATION. ALLIANT WILL EVALUATE THE EXTENT OF THE DAMAGE SO AS TO DETERMINE WHETHER REPAIR IS REQUIRED PRIOR TO BACKFILL AND GRADE SURFACE RESTORATION.

SECTION 6.0 WORK

6.01 NO STORAGE OF EQUIPMENT OR MATERIALS IN THE ROADWAY IS PERMITTED UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE CITY, STATE, AND/OR GOVERNING BODY.

6.02 THE CONTRACTOR SHALL MARK ALL OPENINGS ON THE SURFACE PRIOR TO THE COMMENCEMENT OF EXCAVATION. ALL OPENINGS ON PAVED SURFACES SHALL BE SAW CUT PRIOR TO REMOVAL OF PAVEMENT.

6.03 CONTRACTOR RESPONSIBLE FOR OBTAINING AND PROVIDING REVIEW AND DESIGN OF ANY AND ALL SHORING SYSTEMS PRIOR TO CONSTRUCTION.

6.04 CONTRACTOR SHALL ASSUME ALL ELECTRICAL CABLES ARE ENERGIZED AND SHALL BE SUPPORTED SO AS NOT TO STRESS ANY PORTION OF THE CABLE.

6.05 CONTRACTOR SHALL PROVIDE APPROPRIATE ENGINEERED DE-WATERING MEASURES, IF NECESSARY, TO ENSURE GROUNDWATER TABLE REMAINS AT A DEPTH BELOW THE BASE OF THE EXCAVATION AT ALL TIMES DURING EXCAVATION, INSTALLATION AND BACKFILLING OPERATIONS.

6.06 THE ENGINEER SHALL BE NOTIFIED FOR RESOLUTION OF SITUATIONS WHERE CONDUIT DEPTH BELOW GRADE DEVIATES BY MORE THAN 3" AS CURRENTLY SHOWN ON PLAN/PROFILE DRAWINGS.

6.07 THE ENGINEER SHALL ALSO BE NOTIFIED FOR DISPOSITION OF SITUATIONS WHERE THE CONDUIT CANNOT MAINTAIN SEPARATIONS PER PLAN.

SECTION 7.0 RESTORATION

7.01 THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM ALL RESTORATION WORK IN THE CONTRACTOR'S NAME. ALL PAVING SHALL BE COMPLETED WITHIN 15 WORKING DAYS AFTER EXCAVATION IS BACKFILLED UNLESS OTHERWISE ARRANGED IN ADVANCE WITH GOVERNING AGENCY.

7.02 CONTRACTOR SHALL BREAK OUT SIDEWALK, DRIVEWAY, CURB AND GUTTER, PAVEMENT AND RESTORE TO PERMANENT CONDITION. CONTRACTOR TO CONFORM CONCRETE TO COLOR, FINISH, AND TEXTURE OF EXISTING SIDEWALKS, CURB AND GUTTER.

7.03 THE CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF THE AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR TO PAY ALL FEES AND OBTAIN ALL PERMITS FOR RESTORATION.

7.04 THE CONTRACTOR IS TO RESTORE ALL DAMAGED STRUCTURES AND UTILITIES TO THE SATISFACTION OF THE FACILITY OWNER, IN THE EVENT THAT DAMAGE OCCURS.

LEGEND

IDOT PURCHASED ROW	
EXISTING ROW LINE	
EXISTING FIBER OPTIC LINE	
EXISTING OVERHEAD LINE	
EXISTING STORM DRAIN	
EXISTING ELECTRIC (BURIED)	
EXISTING GAS LINE	
EXISTING STORM SEWER	
EXISTING SANITARY SEWER	
EXISTING WATER LINE	
EXISTING ICN FIBER	
EXISTING ICN (AERIAL)	
EXISTING ICN CONDUIT	
TO BE ABANDONED	
PROPOSED AERIAL	
PROPOSED ICN CONDUIT BORE	
PROPOSED ICN FIBER PLOW	
CENTERLINE OF ROAD	
EXISTING WATERWAY BOUNDARY	
PROPOSED ICN HANDHOLE	
PROPOSED TRI-VIEW LOCATE	
EXISTING ICN HANDHOLE	
EXISTING STORM CULVERT LOCATION	
EXISTING STORM MANHOLE	
EXISTING STORM INLET	
EXISTING SANITARY MANHOLE	
EXISTING SANITARY CLEAN OUT	
EXISTING FIBER OPTIC MANHOLE	
EXISTING FIBER OPTIC HANDHOLE	
EXISTING COMMUNICATIONS MANHOLE	
EXISTING COMMUNICATIONS HANDHOLE	
EXISTING COMMUNICATIONS PEDESTAL	
EXISTING ELECTRIC MANHOLE	
EXISTING ELECTRIC TRANSFORMER	
EXISTING ELECTRIC PEDESTAL	
EXISTING ELECTRIC HANDHOLE	
EXISTING UTILITY POLE	
EXISTING GUY ANCHOR	
EXISTING LIGHT POLE	
EXISTING WATER MANHOLE	
EXISTING WATER VALVE	
EXISTING MONITORING WELL	
EXISTING FIRE HYDRANT	
EXISTING NATURAL GAS MANHOLE	
EXISTING NATURAL GAS VALVE	
EXISTING TREE	



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION

ICN GENERAL NOTES

STANDARD INSTALLATION REQUIREMENTS:

GENERAL REQUIREMENTS:

1. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES.
2. PROVIDE THE OWNERS OF ANY NATURAL GAS UTILITY 48 HOURS ADVANCE NOTICE THAT WORK IS SCHEDULED IN THE VICINITY OF THEIR LINES/MAINS SO THAT THEY CAN PROVIDE STANDBY AND PROTECT SERVICES.
3. MAINTAIN PROOF OF NOTIFICATION TO AND RECEIPT OF NOTIFICATION BY THE GAS UTILITY.
4. PERMITS AND COORDINATION
 - 4.1. SECURE ALL NECESSARY STATE AND LOCAL (CITY, COUNTY, ETC.) PERMITS, PUBLIC OR PRIVATE EASEMENTS, FACILITY PERMITS, USAGE PERMITS, AND ANY OTHER PERMIT REQUIRED BY AN AUTHORITY HAVING JURISDICTION (AHJ). ALL CONTRACTORS AND SUBCONTRACTORS MUST BE LICENSED AND BONDED WITH THE CITY OF CLEAR LAKE.
 - 4.2. ICN WILL OBTAIN AND PROVIDE COPIES OF IDOT PERMITS.
 - 4.3. IF PERMITS ARE REQUIRED TO BE IN THE NAME OF THE OWNER RATHER THAN THE CONTRACTOR, THE CONTRACTOR SHALL PREPARE THE PERMIT FOR THE OWNER'S SIGNATURE.
 - 4.4. COORDINATE INSTALLATION WITH ALL OWNERS AND AHJ OVER THE ROUTE, THE FIBER, RIGHT-OF-WAY AND BUILDINGS IN WHICH END POINTS WILL BE LOCATED.
 - 4.5. FAILURE TO COORDINATE WITH THE AHJ AND TO OBTAIN ALL NECESSARY PERMITS IS AT THE PERIL OF THE CONTRACTOR.
 - 4.6. RIGHT-OF-WAY PERMIT FEES ARE AN AUTHORIZED EXTRA ABOVE THE QUOTED BID PRICE. EXCAVATION PERMITS SHALL BE BY THE CONTRACTOR.
 - 4.7. ENSURE ALL FACILITIES ARE PLACED WITHIN THE PUBLIC RIGHT-OF-WAY.
5. ENSURE THAT PERSONNEL WORKING IN THE ROW ARE EQUIPPED WITH AND USE PROPER SAFETY EQUIPMENT AND ATTIRE.
6. ALL TOOLS AND TEST EQUIPMENT REQUIRED TO DO A PROJECT SHALL BE PROVIDED BY THE CONTRACTOR OR ITS SUBCONTRACTOR(S). SECURITY OF TOOLS AND TEST EQUIPMENT SHALL BE THE RESPONSIBILITY OF EACH WORKER. THE ICN SHALL NOT BE RESPONSIBLE FOR THE SECURITY OF ANY PROPERTY LEFT ON ICN'S PROPERTY OR ON PROPERTY CONTROLLED BY THE ICN OR THE STATE OF IOWA.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTRUCTING ITS EMPLOYEES IN SAFETY MEASURES CONSIDERED APPROPRIATE FOR THE JOB. IN ADDITION, THE CONTRACTOR SHALL NOT PERMIT PLACING OR USE OF TOOLS OR MATERIALS IN TRAFFIC LANES OR OTHER LOCATIONS. THE TOOLS OR MATERIALS SHALL NOT BE PLACED IN SUCH A MANNER SO AS TO CREATE SAFETY HAZARDS TO STATE EMPLOYEES, CONTRACTING AGENCY EMPLOYEES, THE PUBLIC OR THEMSELVES.
8. EXCAVATIONS AND TRENCHES: THE ICN REQUIRES ALL OPEN EXCAVATIONS OR TRENCHES TO BE MONITORED AND ATTENDED TO DURING CONSTRUCTION PER. THE ICN REQUIRES ALL OPEN EXCAVATIONS AND TRENCHES BACKFILLED THE SAME DAY. IF THE CONTRACTOR IS REQUIRED TO LEAVE AN EXCAVATION OR TRENCH OPEN, THEN THE CONTRACTOR SHALL PROPERLY FENCE AND/OR COVER THE EXCAVATION FOR SAFETY. CONTRACTOR SHALL FOLLOW ALL OSHA REQUIREMENTS FOR EXCAVATION AND TRENCH SAFETY.
9. CONTRACTOR AND ITS EMPLOYEES SHALL COMPLY WITH ALL OSHA REGULATIONS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS.
10. CONTRACTOR SHALL COMPLY WITH ALL IOWA ONE CALL REQUIREMENTS AS PROVIDED BY IOWA CODE, CHAPTER 480.
11. PROVIDE ALL LABOR AND SUPERVISION FOR THE PROJECT.
12. PROVIDE AND INSTALL MATERIALS NEEDED TO RESULT IN A FULLY FUNCTIONAL SYSTEM MEETING ICN STANDARDS, WHETHER OR NOT THE MATERIALS OR METHODS ARE SPECIFICALLY MENTIONED IN THIS DOCUMENT. SEE THE LIST OF ICN-FURNISHED MATERIALS.
13. INSTALL CABLE ROUTE MARKERS FURNISHED BY ICN. WHERE POSSIBLE, INSTALL MARKERS ADJACENT TO POLES, BUILDINGS OR IN OTHER PROTECTED AREAS.
14. A COPY OF THIS SCOPE OF WORK AND THE ENGINEERING PLAN FOR THIS PROJECT SHALL BE ON SITE AND AVAILABLE ANY TIME WORK IS BEING PERFORMED. FAILURE TO HAVE THE REQUIRED DOCUMENTS ON SITE MAY RESULT IN ICN REQUIRING THE CONTRACTOR TO STOP WORKING UNTIL THE REQUIRED DOCUMENTS ARE ON-SITE.
15. SUBCONTRACTORS SHALL MEET THE SAME QUALIFICATIONS STATED FOR CONTRACTORS. CONTRACTOR SHALL OBTAIN APPROVAL OF THE CONTRACTING AGENCY'S PROJECT MANAGER PRIOR TO USING A SUBCONTRACTOR ON ANY PROJECT.
16. RESTORE ALL DAMAGE TO PRIVATE PROPERTY, RIGHT-OF-WAY, ICN PROPERTY, AND ANY OTHER PROPERTY DAMAGED IN THE COURSE OF THE WORK.
 - 16.1. ANY DISRUPTION OF GRASS IN AN INDIVIDUAL'S YARD OR IN A PRIVATE MAINTAINED AREA OF THE PUBLIC RIGHT OF WAY (THE AREA BETWEEN THE SIDEWALK AND THE STREET CURB) MUST BE RESTORED THROUGH RE-SODDING. ANY DISRUPTION OF THE GRASS IN THE MEDIAN WAY OR AN UNIMPROVED SHOULDER MUST BE RESTORED EITHER THROUGH RE-SODDING OR RE-SEEDING AS REQUIRED BY THE ROW OWNER.
 - 16.2. AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 - 16.3. DIRT SHALL BE MECHANICALLY COMPACTED AROUND HANDHOLES AND PITS.
 - 16.4. LAWNS SHALL BE SODDED WITH LIKE GRASS.
 - 16.5. CONTRACTOR IS RESPONSIBLE FOR WATERING THE SOD UNTIL IT HAS KNITTED TO THE GROUND BENEATH.
 - 16.6. ALL DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION AREAS INCLUDING BUT NOT LIMITED TO: CONSTRUCTION MATERIALS, TRASH, LARGE OBJECTS OR STONES WITHIN BACKFILLED AREAS, ETC.

DUCT INSTALLATION REQUIREMENTS

1. HDPE DUCT SHALL BE NO LESS THAN 36-42 INCHES DEEP.
2. DUCT SHALL BE INSTALLED IN THE PUBLIC RIGHT-OF-WAY.
3. WHEN CROSSING A HIGHWAY IN DOT RIGHT-OF-WAY, DUCT SHALL BE NO LESS THAN 48 INCHES BELOW GRADE UNDER THE ROADWAY AND SHOULDERS. HDPE MAY BE USED UNDER THE ROADWAY AND SHOULDERS IF INSTALLED AT A MINIMUM DEPTH OF 48".
4. SHOULD IT BE NECESSARY TO CROSS PRIVATE PROPERTY, THE CONTRACTOR MAY APPLY TO THE ICN FOR AN EXCEPTION, AND REQUEST PERMISSION TO SECURE AN EASEMENT. THE EASEMENT IS REQUIRED TO BE IN THE NAME OF ICN AND THE CONTRACTOR SHALL HAVE THE EASEMENT PREPARED BY A LAND SURVEYOR LICENSED IN THE STATE OF IOWA. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES UNLESS PREVIOUSLY AUTHORIZED BY THE ICN.
5. AT THE CONCLUSION OF THE PROJECT, PROVIDE AND LEAVE A PULL ROPE IN ALL DUCTS, CONDUITS AND PATHWAYS, INCLUDING INDOOR, OUTDOOR, NEW AND EXISTING.
6. DIRT SHALL BE MECHANICALLY COMPACTED AT ALL DUCT SPLICES, BORE PITS AND AROUND HANDHOLES.
7. GROUND SHALL BE RESTORED TO THE CONDITION FOUND PRIOR TO CONSTRUCTION AND DEBRIS REMOVED PRIOR TO SODDING OR SEEDING.
8. ALL CONDUITS SHALL BE PLUGGED VIA DUCT SEAL OR OTHER METHOD UPON COMPLETION OF CABLE INSTALLATION.
9. IF SCHEDULE 40 PVC CONDUIT IS UTILIZED, ALL ANGLES (45, 90 DEGREE OR OTHER) REQUIRE FITTINGS TO LONG SWEEP TO ACCOMMODATE MINIMUM CABLE BEND RADIUS.
10. THE ICN REQUIRES PICTURES BY THE CONTRACTOR AND/OR ON-SITE INSPECTION BY ICN STAFF PRIOR TO COMPLETION OF THE PROJECT WHERE PIPE AND FITTINGS ARE NOT EXPOSED; I.E. UNDERGROUND, BEHIND A WALL, ETC.

HANDHOLE REQUIREMENTS

1. INSTALL HANDHOLES SO THAT THE LID IS LEVEL AND FLUSH WITH THE SURROUNDING NATURAL GRADE. THE LID SHALL NOT EXTEND ABOVE THE SURROUNDING NATURAL GRADE.
2. PROVIDE ¼" OPENING HARDWARE CLOTH TYPE SCREEN WIRE BELOW THE HANDHOLE.
3. PROVIDE 5-6 INCHES OF ¾" CRUSHED ROCK BELOW THE HANDHOLE. ROCK SHALL BE COMPACTED. GRAVEL SHALL EXTEND A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE WALLS OF THE HANDHOLE. DO NOT USE PEA GRAVEL OR OTHER ROUND STONE.
4. DO NOT PLACE GRAVEL INSIDE HANDHOLE ABOVE THE HARDWARE CLOTH.
5. CONDUIT SHALL EXTEND A MINIMUM OF 6" ABOVE THE HARDWARE CLOTH/GRAVEL.
6. FAILURE OF THE CONTRACTOR TO INSTALL HANDHOLES AS SPECIFIED WILL CAUSE THE CONTRACTOR TO RETURN AND RE-INSTALL THE HANDHOLE ACCORDING TO THIS SPECIFICATION BEFORE PAYMENT FOR THE PROJECT IS MADE.
7. HANDHOLE INSTALLATIONS SHALL FOLLOW ICN STANDARD TYPICAL INSTALLATION; SEE TYPICAL DRAWING.

FIBER INSTALLATION REQUIREMENTS

1. INSTALL FIBER ACCORDING TO INDUSTRY "BEST PRACTICES".
2. THE CONTRACTOR SHALL NOT VIOLATE THE MANUFACTURER'S MINIMUM INSTALLATION BEND RADIUS WHEN THE CABLE IS UNDER TENSION, OR THE MINIMUM INSTALLED BEND RADIUS.
3. TO PREVENT EXCEEDING THE MANUFACTURER'S MAXIMUM PULLING TENSION DURING INSTALLATION OF THE FIBER OPTIC CABLE, THE CONTRACTOR SHALL USE A "BREAK-AWAY" PULLING SWIVEL WHEN INSTALLING CABLE.
4. THE "BREAK-AWAY" FUNCTION SHALL ACTIVATE AT OR BELOW THE MAXIMUM PULLING TENSION SPECIFIED BY THE CABLE MANUFACTURER.
5. THE CONTRACTOR SHALL TEST ALL STRANDS OF THE FIBER, ON THE REEL, PRIOR TO BEGINNING FIBER INSTALLATION. CONFIRM THAT ALL STRANDS MEET MANUFACTURER'S LOSS SPECIFICATIONS.
6. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
7. SLACK LOOPS IN HANDHOLES SHALL BE COILED, INSTALLED, AND SECURED TO AVOID DAMAGE TO THE COIL AND NOT INTERFERE WITH LIDS.
8. SLACK LOOPS AT SPLICES SHALL BE COILED TO MATCH THE EXISTING FIBER CABLE TAILS AND ALLOWANCE FOR SPLICE PREPARATION.
9. ICN FIBER IN ALL HANDHOLES SHALL BE LABELED WITH ICN WRAP AROUND CABLE TAGS OR OTHER LABELED CABLE TAGS.

BUILDING ENTRY REQUIREMENTS

1. WEATHER-SEAL ALL PENETRATIONS.
2. USE MORTAR OR SIMILAR CEMENT TO SEAL PENETRATION OF BRICK OR CEMENT BLOCK.
3. FIRESTOP PENETRATIONS OF ANY FIRE-RATED FLOOR, WALL OR CEILING.
4. REPLACE THE FIRESTOP MATERIAL IN ANY EXISTING FIRESTOPPED PENETRATION USED BY THE CONTRACTOR.
5. ALL OUTDOOR CONDUITS, OF ANY LENGTH, SHALL BE GALVANIZED IRON PIPE (GIP). EMT, PVC AND PLASTIC ARE PROHIBITED.
6. IMMEDIATELY UPON INSTALLATION, SEAL THE ENDS OF ALL DUCTS WITH DUCT SEAL OR EXPANSION FOAM TO PREVENT SILTATION OR FILLING WITH MOISTURE. THIS APPLIES TO BOTH NEW AND EXISTING DUCTS.
7. AT THE CONCLUSION OF THE PROJECT, ENSURE THAT A PULL ROPE IS LEFT IN ALL PATHWAYS, BOTH INSIDE AND OUTSIDE, NEW AND EXISTING.

LOCATE FACILITY REQUIREMENTS

1. TRACER WIRE SHALL BE CONTINUOUS.
2. SPLICES IN THE TRACER WIRE ARE NOT ALLOWED. IF TRACER WIRE IS ACCIDENTALLY SEVERED, REQUEST PERMISSION FROM ICN TO SPLICE.
3. SPLICE ONLY IN HANDHOLES.
4. USE EITHER AN EPOXY SPLICE KIT, SCOTCH 3M 3832 OR A MOLEX PERMASEAL BUTT SPLICE. 10-12 GA. SPLICE MATERIALS SHALL BE DESIGNED FOR UNDERGROUND APPLICATIONS.
5. LEAVE THE WIRE SPLICE VISIBLE IN THE HANDHOLE.
6. ROUTE A GROUND WIRE FROM THE GROUND INSIDE THE BUILDING, THROUGH THE ENTRY TO THE TII 163 TERMINAL.
7. SECURE ALL RISER CONDUITS WITH 3 EACH TWO-HOLE CONDUIT STRAPS.
8. WIRE THE PEDESTAL/TERMINAL SO THAT LOCATES MAY BE PERFORMED IN ANY DIRECTION AND FROM THE FAR END.
9. DO NOT LEAVE ANY EXPOSED TRACER WIRE OR GROUND WIRE.
10. PERMANENTLY GROUND THE TRACER WIRE AT THE HANDHOLE ON THE FURNISHED GROUND ROD.
11. AT THE CONCLUSION OF THE PROJECT LEAVE THE TRACER WIRE SHIELD SHORTED TO GROUND IN THE LOCATE TERMINAL.
12. USE TRACER WIRE THAT IS RATED FOR DIRECT BURIAL WHERE REQUIRED. TRACER WIRE SHALL BE #12 AWG, SOLID HF CCS 30 MIL HDPE HIGH FLEX TRACER WIRE: EITHER SOLID COPPER OR COPPER CLAD STEEL.
13. LABEL ALL WIRES IN THE LOCATE TERMINAL/PEDESTAL/TRIVIEW. (I.E. "GROUND", "FACING DMACC", "FACING NORTH" ETC.)
14. FAILURE TO LABEL THE LOCATE WIRES WILL CAUSE THE CONTRACTOR TO RETURN AND PROPERLY LABEL THE WIRES BEFORE PAYMENT FOR THE PROJECT IS MADE.
15. BOND TRACER WIRE(S) WITHIN SPLICE ENCLOSURES UTILIZING A 3M 4460-D\FO SHIELD BONDING KIT.
16. ROUTE TRACER WIRE(S) OUT OF SPLICE ENCLOSURE THROUGH A SINGLE PORT UTILIZING A FOSC CLOSURE SEALING KIT.
17. AT SPLICE LOCATIONS WITH NO LOCATE PEDESTAL, TRACER WIRES SHALL BE BONDED TOGETHER, WITHIN THE SPLICE ENCLOSURE.
18. AT EACH END OF ANY TRACER WIRE, USE APPROPRIATE-SIZED RING TERMINAL (CRIMP) CONNECTORS USING APPROPRIATE CRIMP TOOL; OR CREATE A WIRE EYELET AS PER TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL DETAIL.

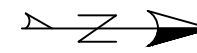
DELIVERABLES/ACCEPTANCE:


1. CONTRACTOR SHALL PROVIDE CONSTRUCTION REDLINE AS-BUILTS WITH:
 - 1.1. OFFSETS TO FIXED OBJECTS TO THE CABLE/CONDUIT RUNNING LINE, HANDHOLES AND NEW FACILITIES.
 - 1.2. METER MARKS OF CABLE INSTALLATIONS AT HANDHOLE ENTRY/EXIT, SPLICE LOCATIONS, BUILDING ENTRIES, ETC.
 - 1.3. DEPTHS OF CABLE AND/OR CONDUIT INSTALLATION.
 - 1.4. ONE ORIGINAL SET OF AS-BUILT DRAWINGS MUST BE PROVIDED WITHIN TWO (2) WEEKS AFTER COMPLETION OF CONSTRUCTION FOR THE ICN MANAGEMENT RECORDS. REDLINE AS-BUILT DRAWINGS MUST BE COMPLETE.
2. CONTRACTOR SHALL PROVIDE SPLICING REDLINE OF ALL SPLICING COMPLETED AND VALIDATION THAT THE SPLICE PLAN WAS FOLLOWED.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE FIBER UNTIL ACCEPTANCE BY THE ICN. ACCEPTANCE INCLUDES:
 - 3.1. SUBMISSION OF CONSTRUCTION AND SPLICING RED LINE DRAWINGS BY CONTRACTOR.
 - 3.2. ASSIGNMENT OF LINK NUMBER BY THE ICN (IF APPLICABLE).
 - 3.3. SUBMISSION OF FINAL AS BUILT DRAWING BY THE ICN TO THE ICN NETWORK MAINTENANCE PROVIDER.
 - 3.4. SUBMISSION TO IOWA ONE CALL AND THE ICN NETWORK MAINTENANCE PROVIDER'S CONTRACT LOCATER.
 - 3.5. THE MEASUREMENTS IN THE STATEMENT OF WORK ARE ESTIMATES AND NEED TO BE VERIFIED BY THE CONTRACTOR.
4. ONLY WRITTEN MODIFICATIONS TO THIS SCOPE OF WORK ARE BINDING - VERBAL CHANGES TO THIS SCOPE OF WORK BY ANY PERSON OR PERSONS ARE NOT BINDING, UNLESS CONFIRMED IN WRITING.
5. FINAL PAYMENT WILL NOT BE PROCESSED UNTIL ALL DELIVERABLES ARE RECEIVED AND ACCEPTED.



MANCHESTER – DOT HWY 13 RELOCATION			
FIBER INSTALLATION			
1	FOR 60% REVIEW	09/25/2023	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	FOR 90% REVIEW	10/12/2023	
3	FOR PERMIT PLANS	10/24/2023	
4			

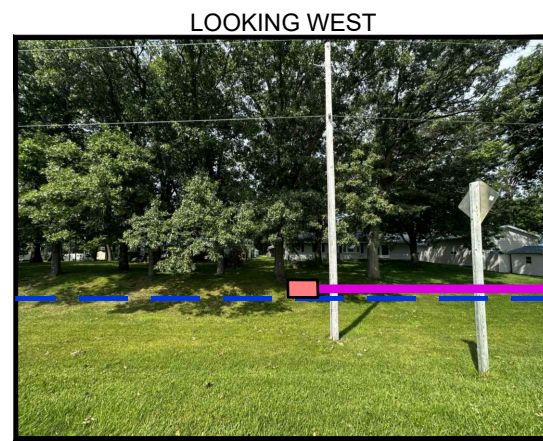
OVERALL SHEET LAYOUT



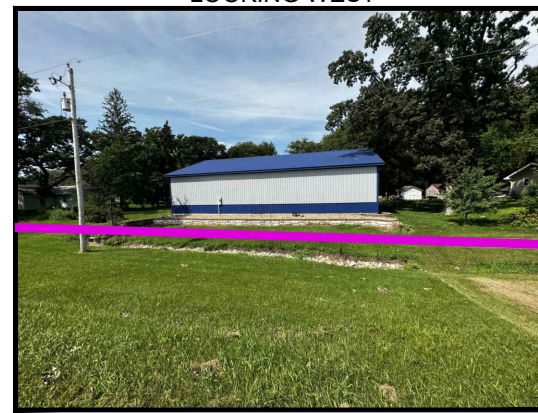
MANCHESTER – DOT HWY 13 RELOCATION			hbk 
FIBER INSTALLATION			
1	FOR 60% REVIEW	09/25/2023	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	FOR 90% REVIEW	10/12/2023	
3	FOR PERMIT PLANS	10/24/2023	
4			



- ① PULL NEW LINK 0106 12 F/A SM THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② ICN STA. 0+00/ DOT STA. 1053+01 PROPOSED 24"x36"x36" ICN HANDHOLE - HH1. PLACE OVER EXISTING ICN DIRECT BURIED CABLE LINK 0106-8fA - PROTECT WITH SPLIT CONDUIT UNDERNEATH NEW HH. NEW LINK 0106 12 F/A SM 75' COIL FOR SPLICE LSXXX - TYCO 450A. INSTALL LOCATE PEDESTAL NEXT TO HH AND STUB DUCT FROM BASE OF PEDESTAL TO BOTTOM OF HH.
- ③ EXPOSE 75' OF EXISTING ICN DIRECT BURIED FIBER CABLE LINK 0106-8fA FROM HH1 TO THE NORTH FOR THE CUTOVER
- ④ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ⑤ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑥ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



HH1 - ICN STA. 0+00
LOOKING WEST



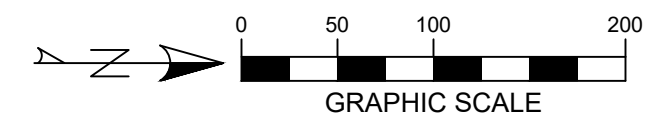
ICN STA. 7+50
LOOKING WEST



ICN STA. 9+50



ICN STA. 10+00



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH1	0+00	HH2	18+00	1800
TOTAL				1800

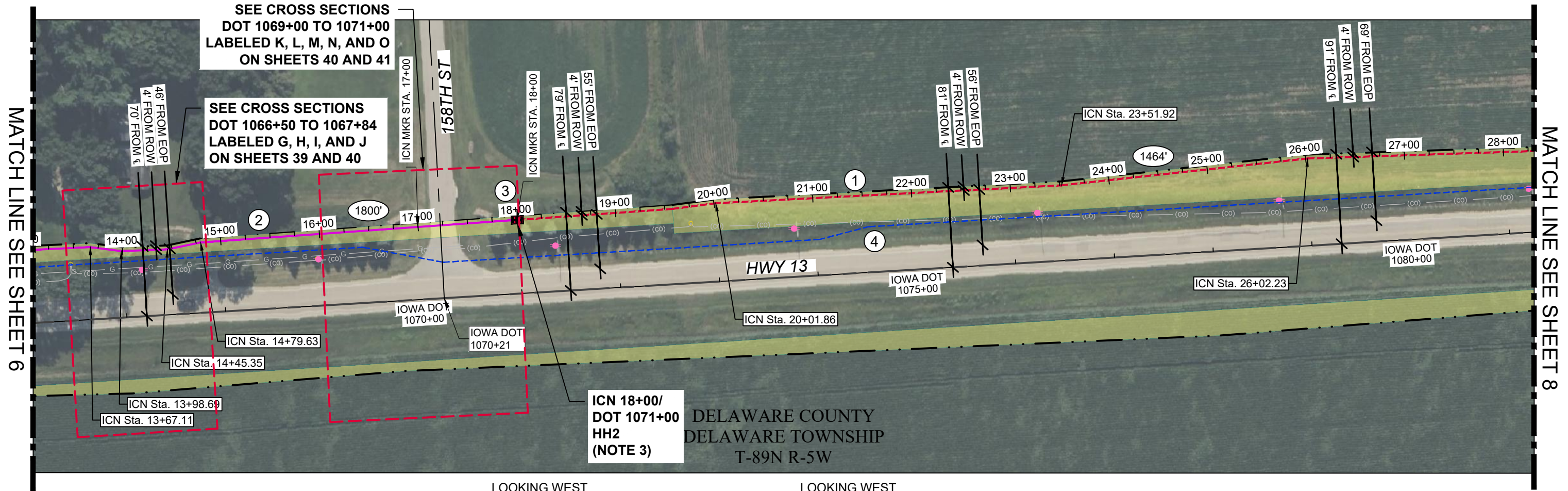
* LENGTH DOES NOT INCLUDE SLACKCOILS



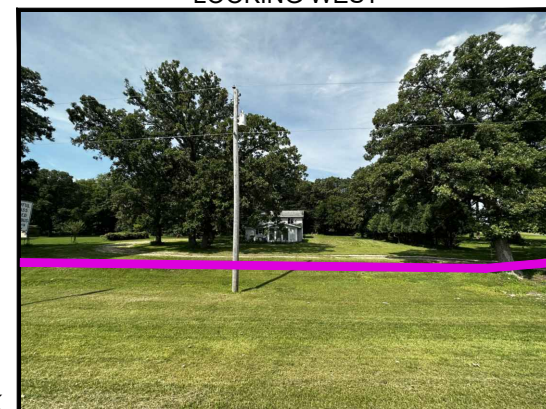
MANCHESTER - DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

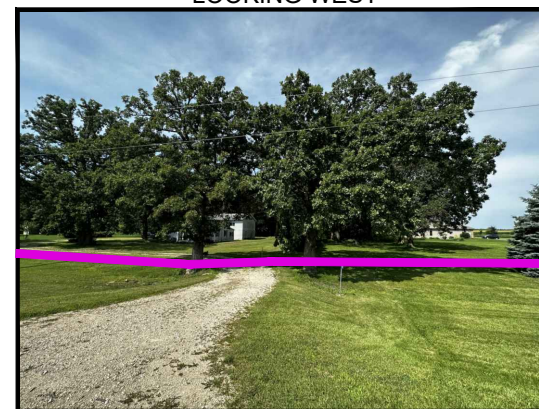
hbk icn
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ ICN STA. 18+00/ DOT STA. 1071+00 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH2. LINK 0106 100' SLACK COIL 12 F/A.
- ④ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ⑤ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑥ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 14+50
LOOKING WEST



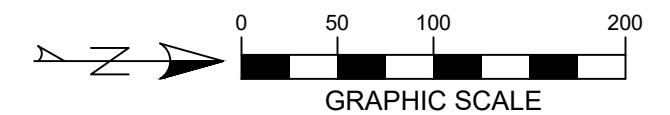
ICN STA. 15+00
LOOKING WEST



ICN STA. 17+00



HH2 - ICN STA. 18+00

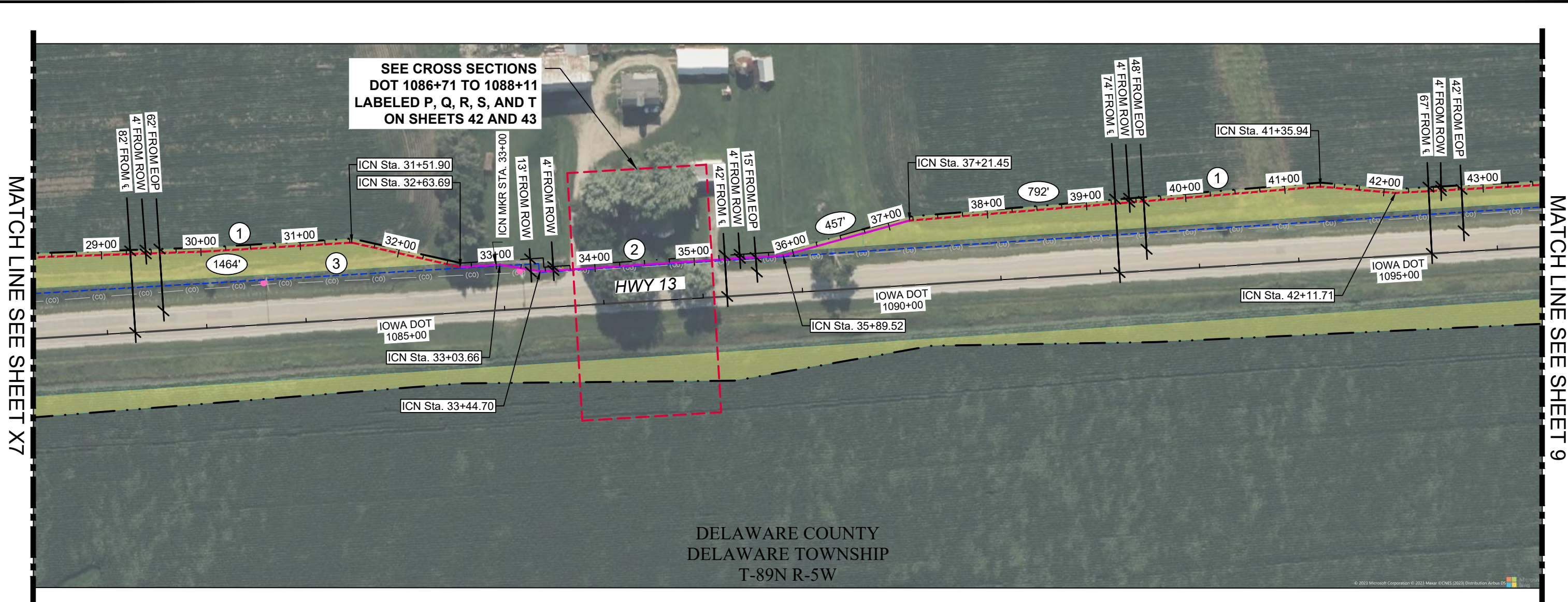


LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH1	0+00	HH2	18+00	1800
HH2	18+00	HH3	154+46	13646
TOTAL				15446

* LENGTH DOES NOT INCLUDE SLACKCOILS

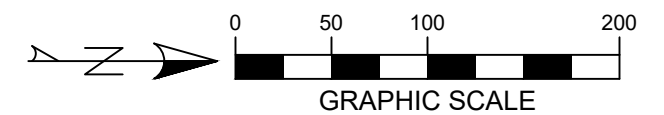
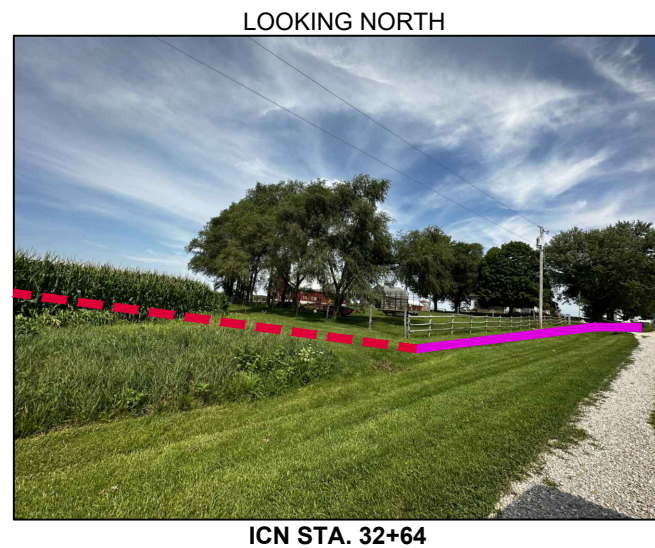


MANCHESTER - DOT HWY 13 RELOCATION FIBER INSTALLATION		 IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION	
1	FOR 60% REVIEW		09/25/2023
2	FOR 90% REVIEW		10/12/2023
3	FOR PERMIT PLANS		10/24/2023



DELAWARE COUNTY
DELAWARE TOWNSHIP
T-89N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

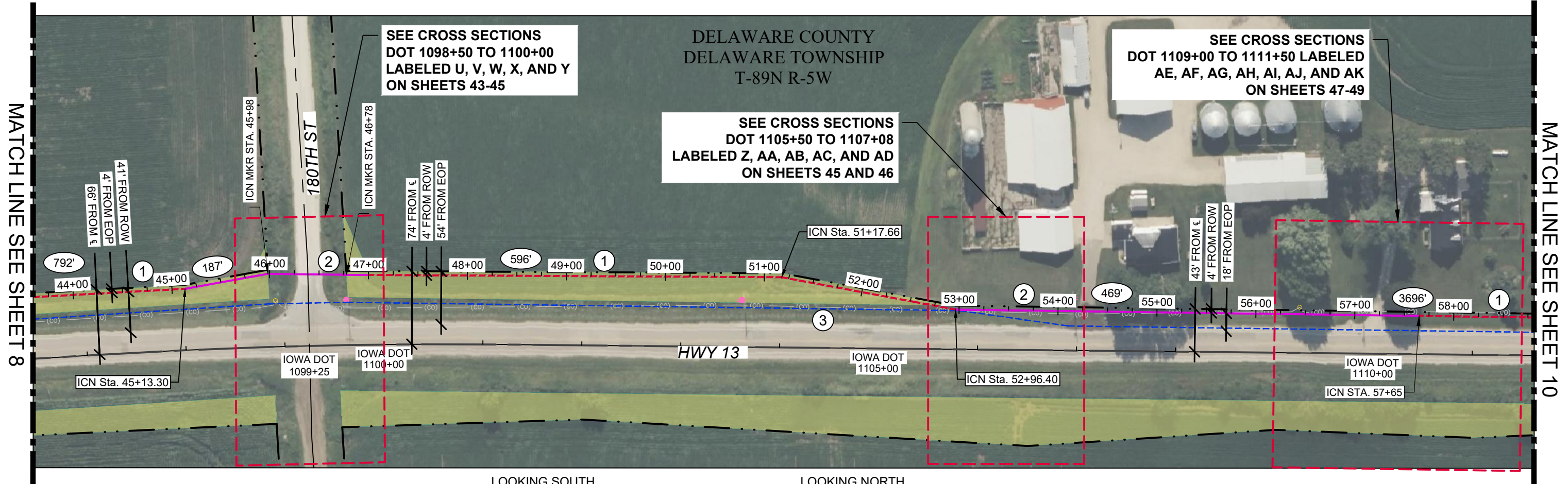
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



SEE CROSS SECTIONS
DOT 1098+50 TO 1100+00
LABELED U, V, W, X, AND Y
ON SHEETS 43-45

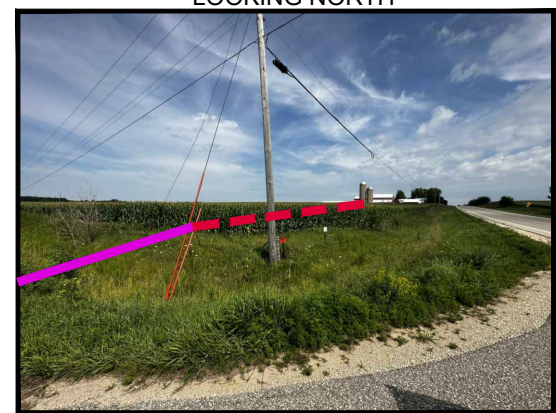
SEE CROSS SECTIONS
DOT 1105+50 TO 1107+08
LABELED Z, AA, AB, AC, AND AD
ON SHEETS 45 AND 46

SEE CROSS SECTIONS
DOT 1109+00 TO 1111+50 LABELED
AE, AF, AG, AH, AI, AJ, AND AK
ON SHEETS 47-49

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 58+50



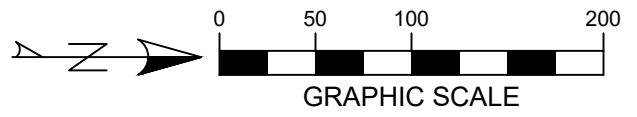
ICN STA. 46+50



ICN STA. 53+00



ICN STA. 56+50



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

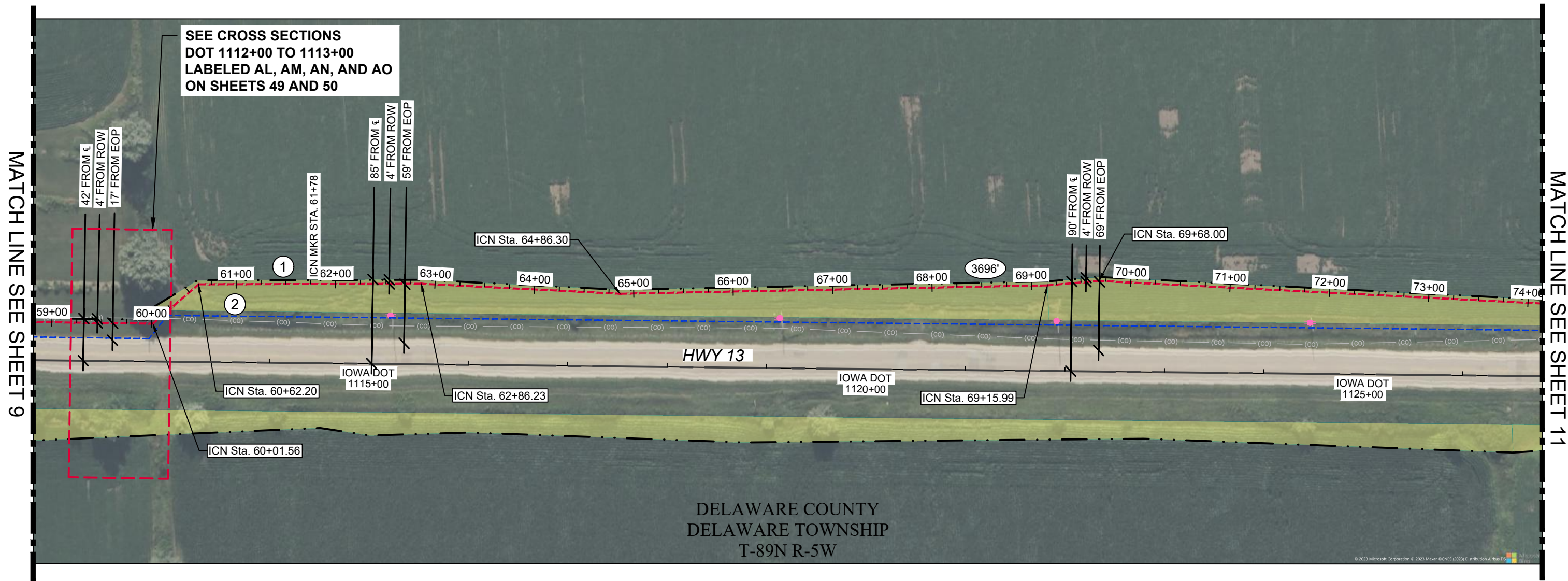
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

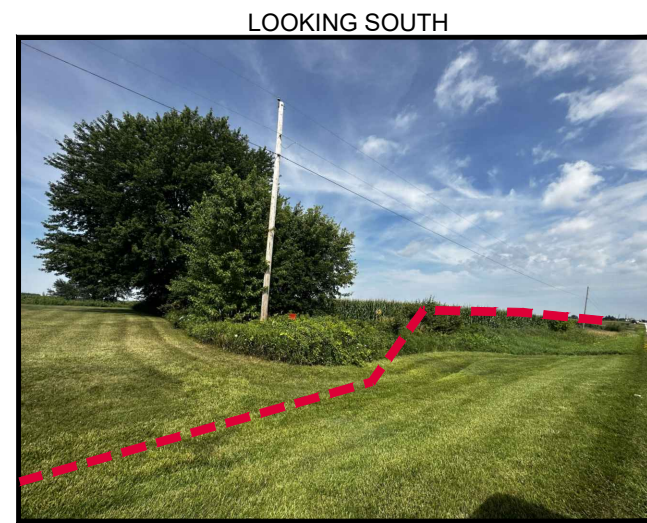
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION

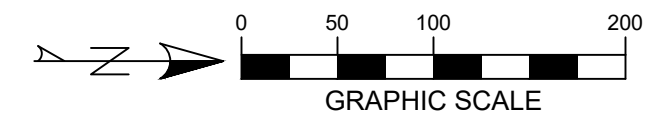


DELAWARE COUNTY
DELAWARE TOWNSHIP
T-89N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 60+02



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

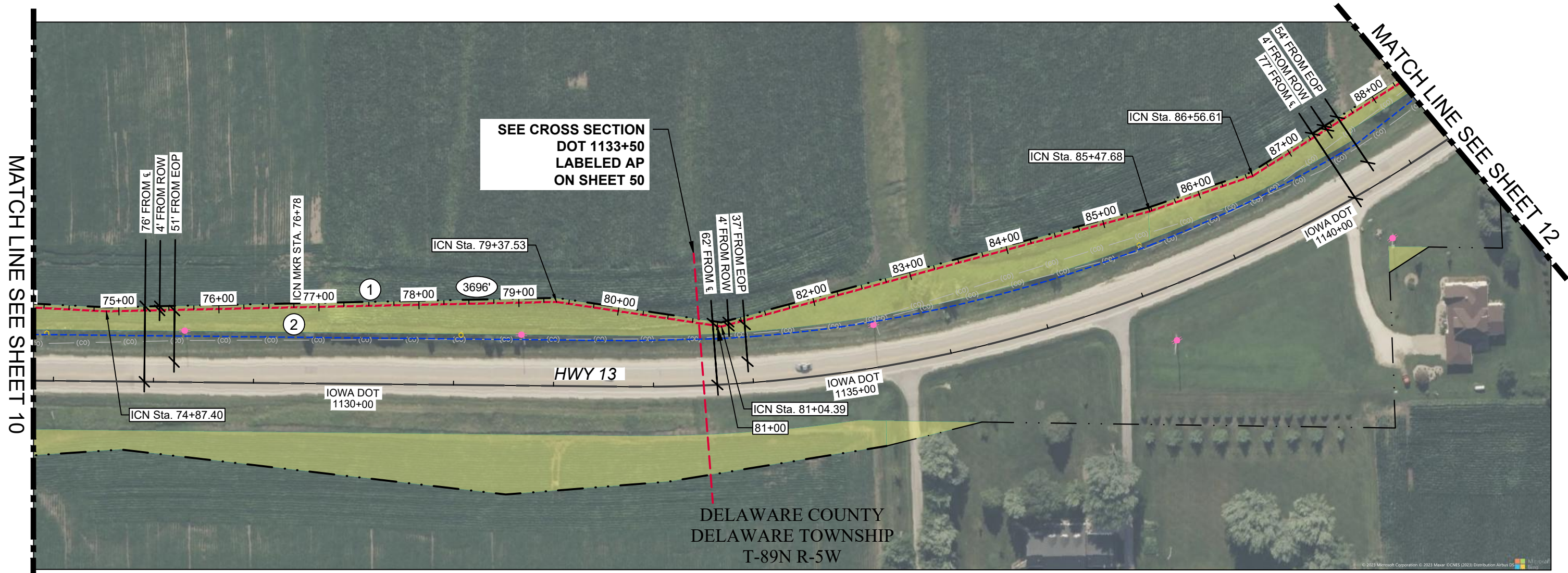
* LENGTH DOES NOT INCLUDE SLACKCOILS



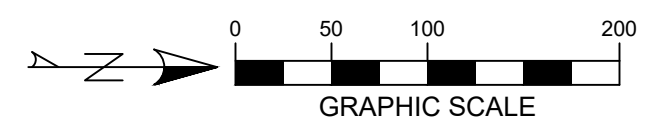
MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

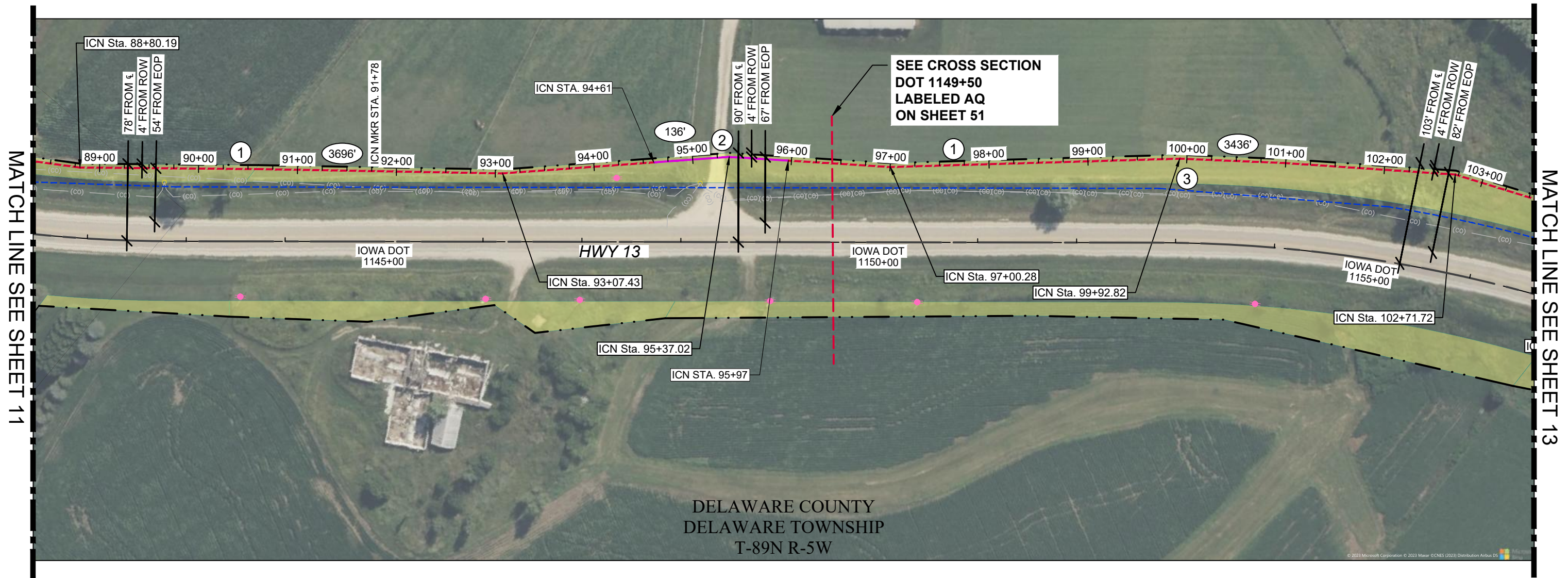
* LENGTH DOES NOT INCLUDE SLACKCOILS



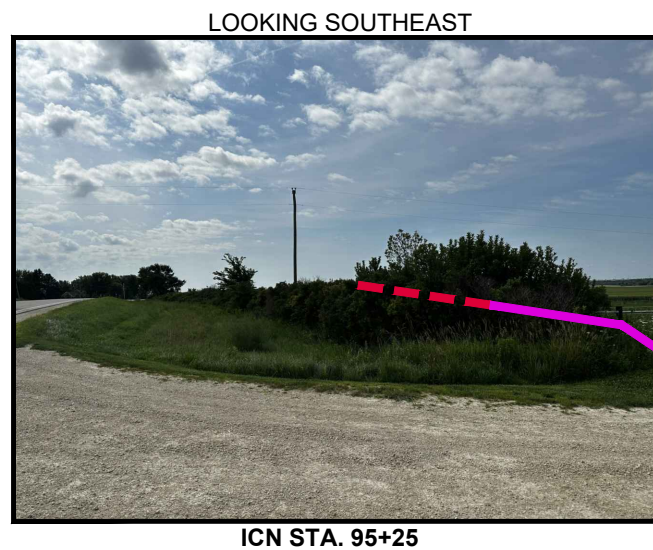
MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

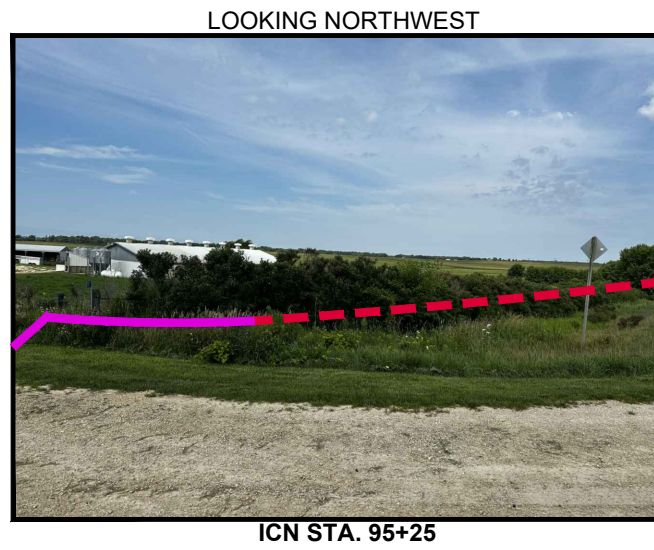
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



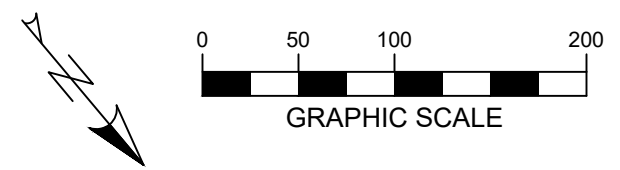
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 95+25



ICN STA. 95+25



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

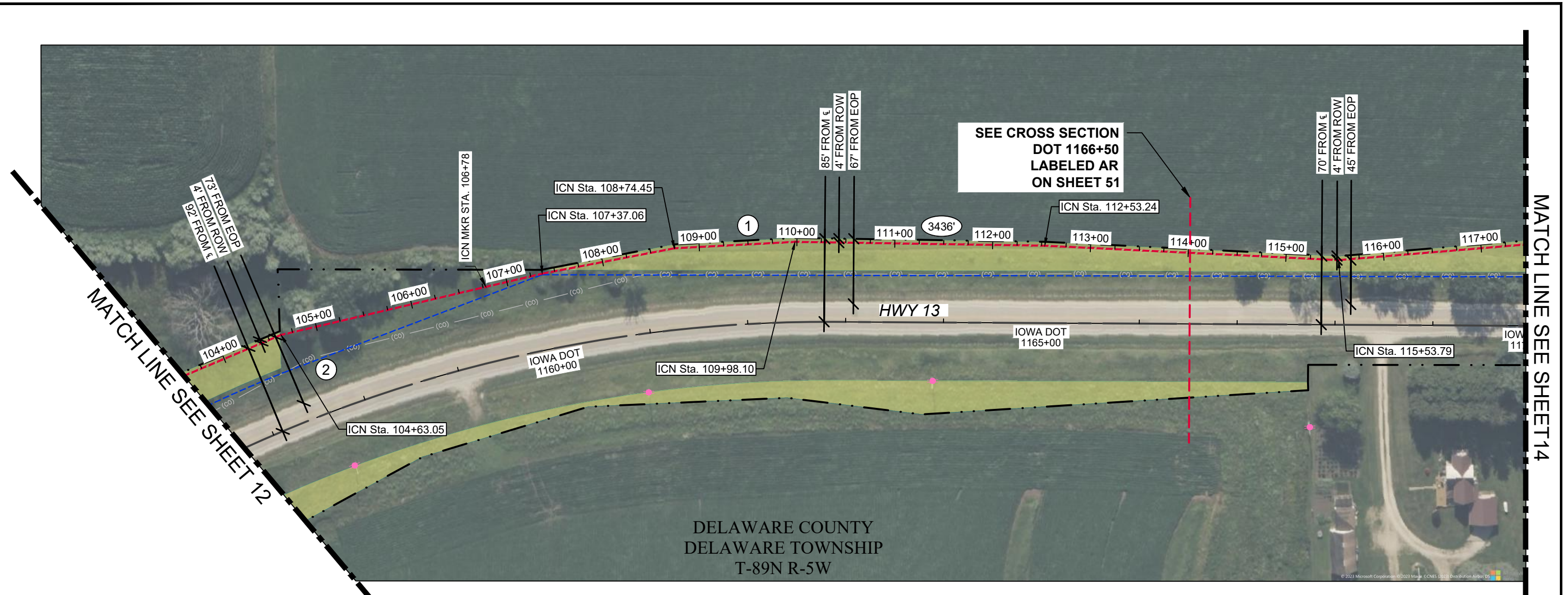
* LENGTH DOES NOT INCLUDE SLACKCOILS



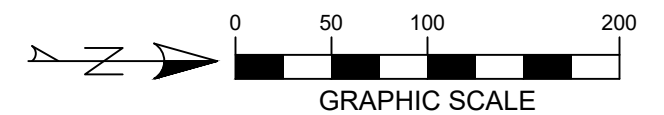
MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

* LENGTH DOES NOT INCLUDE SLACKCOILS

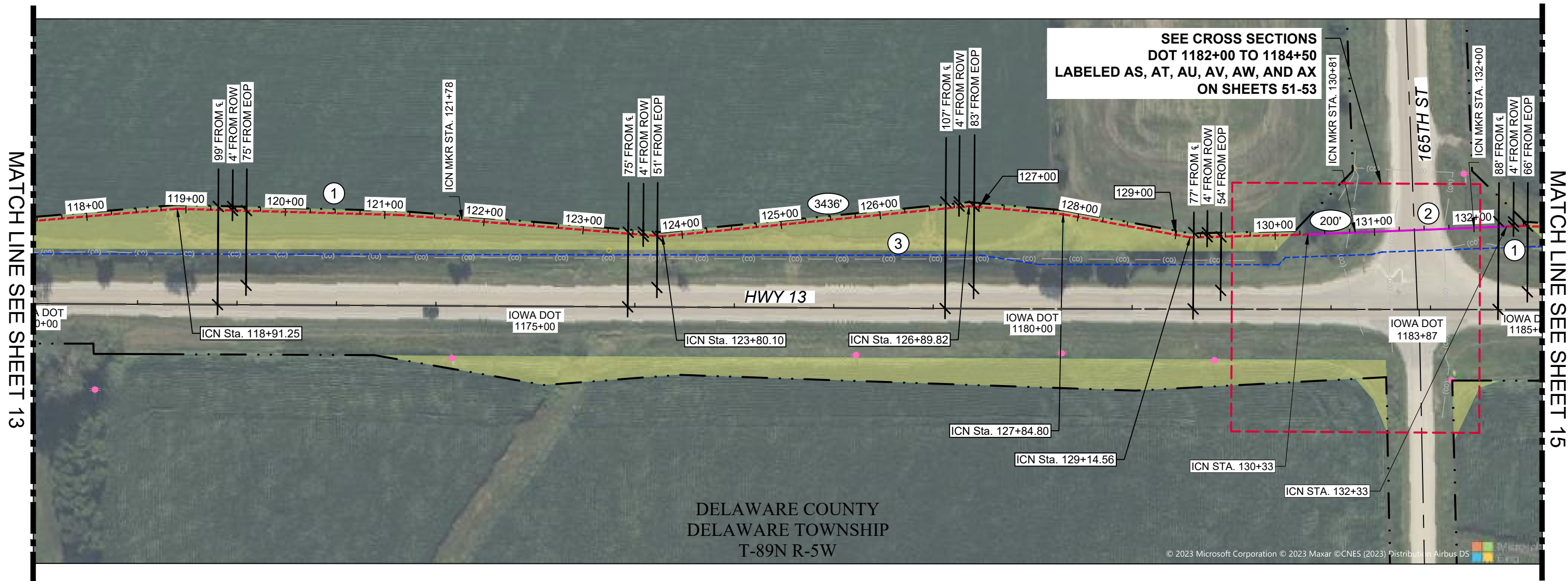


MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbK **icn**

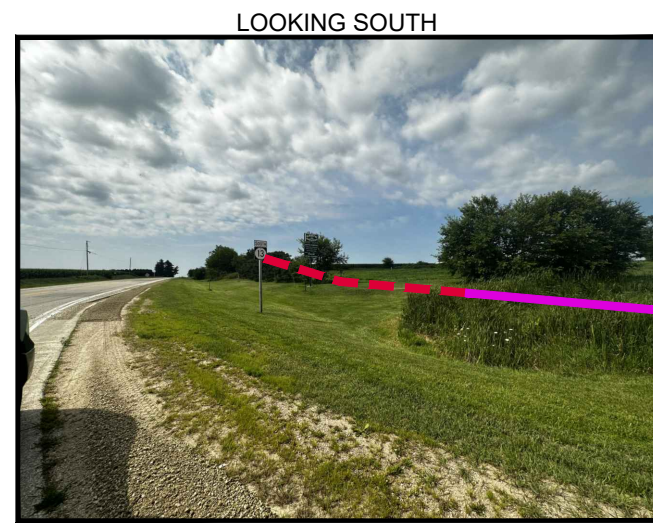
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



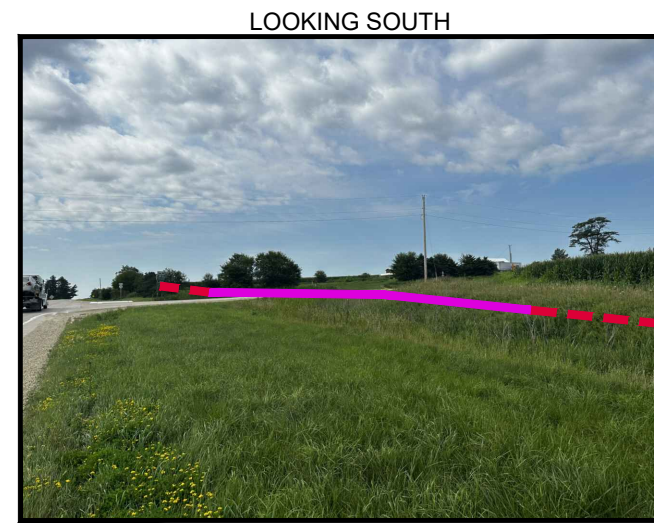
DELAWARE COUNTY
DELAWARE TOWNSHIP
T-89N R-5W

© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS

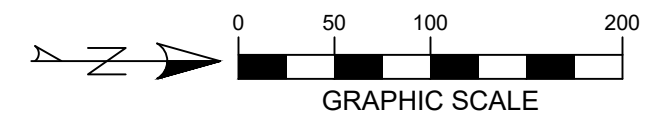
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 130+75



ICN STA. 132+50

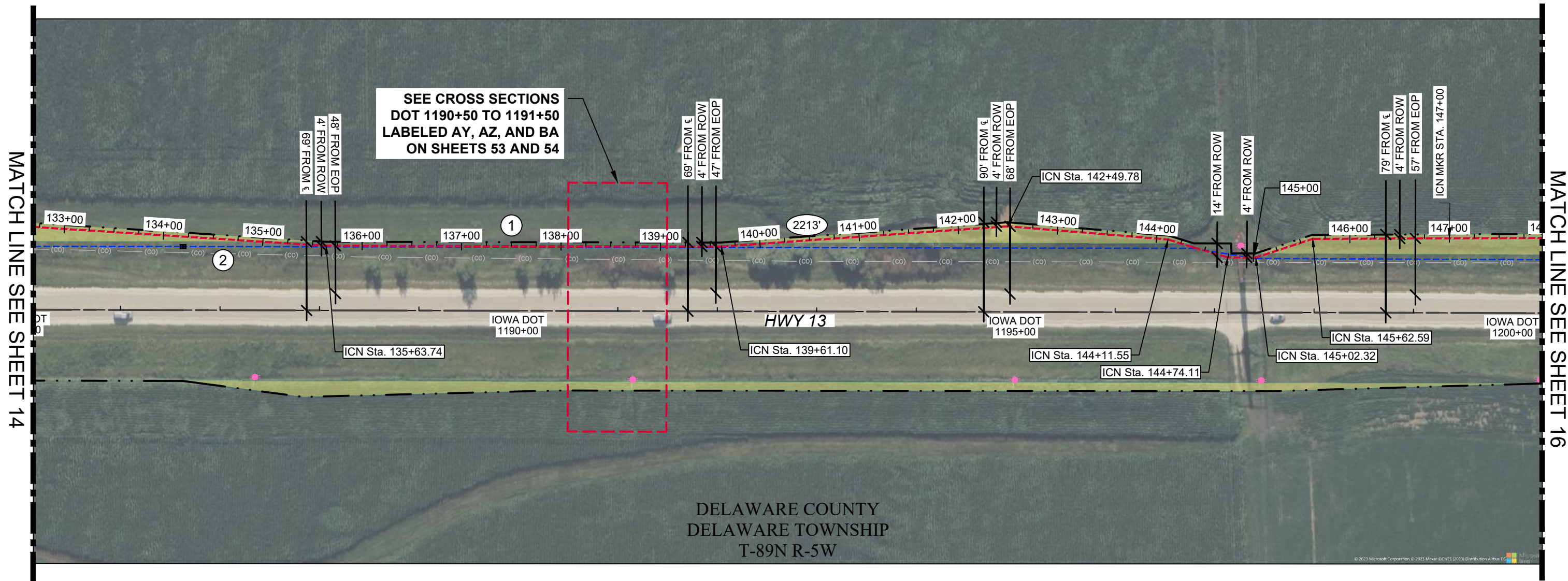


LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

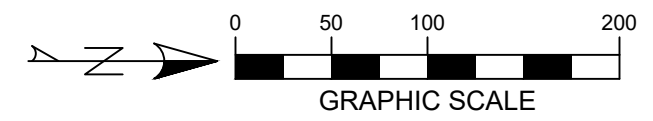
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION FIBER INSTALLATION			<p>IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION</p>
1	FOR 60% REVIEW	09/25/2023	
2	FOR 90% REVIEW	10/12/2023	
3	FOR PERMIT PLANS	10/24/2023	
4			



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
TOTAL				13646

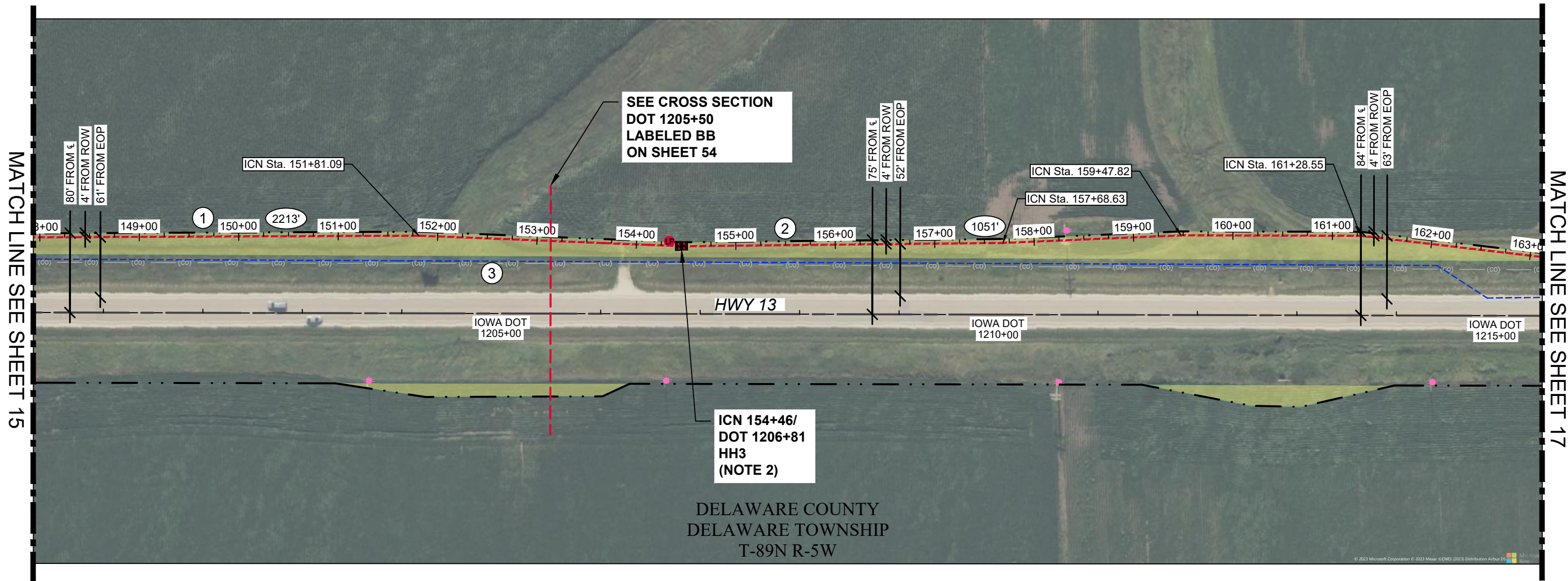
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbk icn
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 17

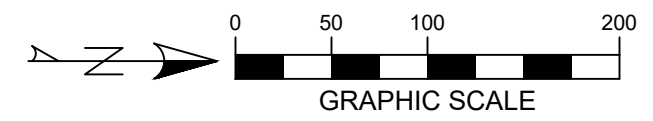
DELAWARE COUNTY
DELAWARE TOWNSHIP
T-89N R-5W

LOOKING WEST



ICN STA. 155+64

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② ICN STA. 155+64/ DOT STA. 1206+81 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH3. LINK 0106 12F/A FOR BUTT SPLICE LSXXX - TYCO 450A. END OF FIBER REELS LOCATION: 2-75' COILS FOR SPLICING. INSTALL LOCATE PEDESTAL NEXT TO HH AND STUB DUCT FROM BASE OF PEDESTAL TO BOTTOM OF HH.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	18+00	HH3	154+46	13646
HH3	154+46	HH4	182+65	2819
TOTAL				16465

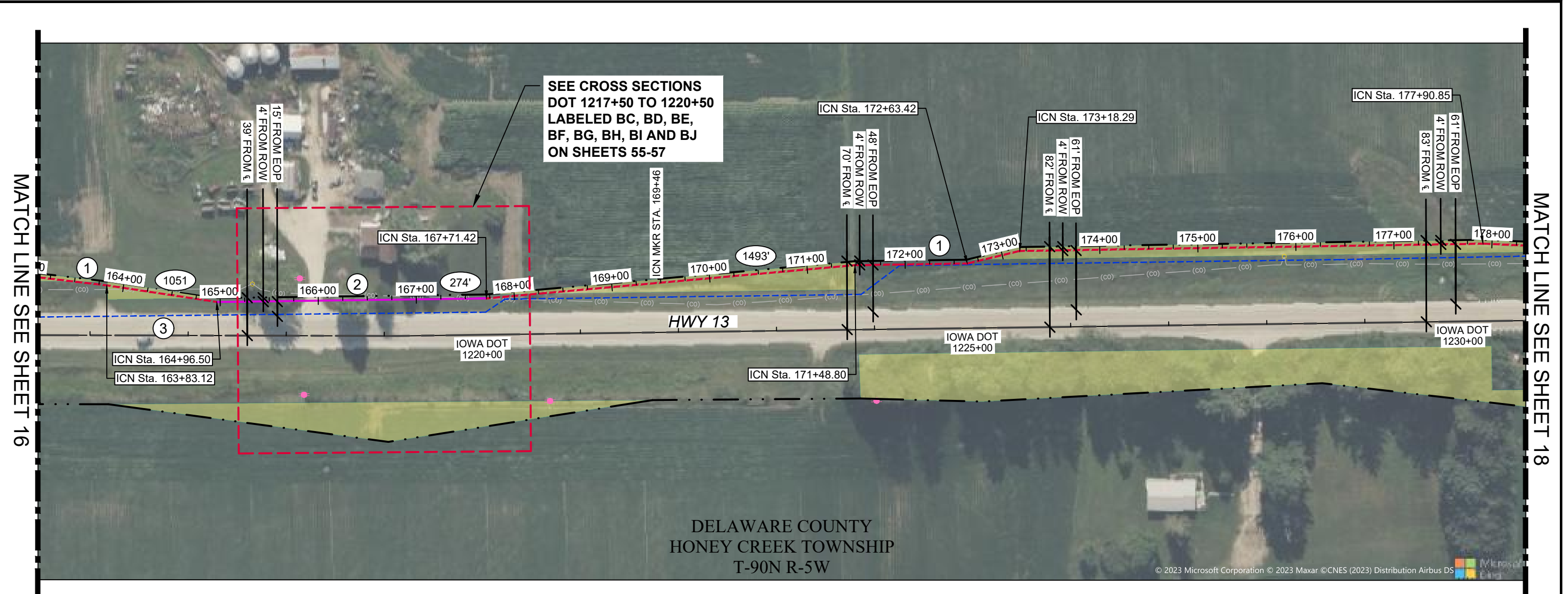
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

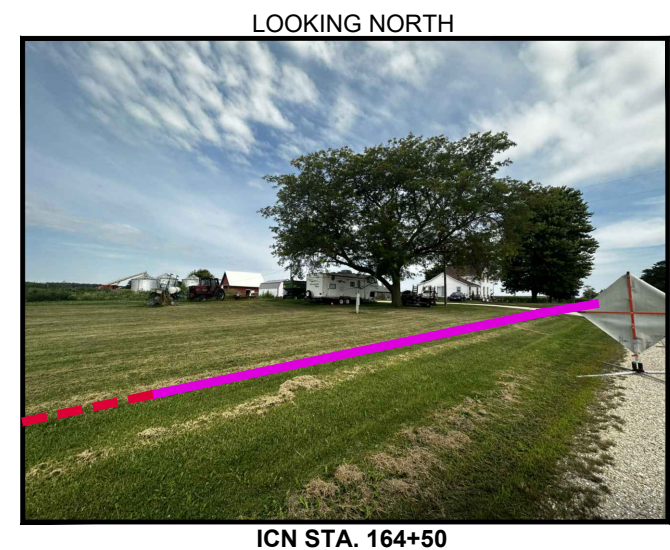
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

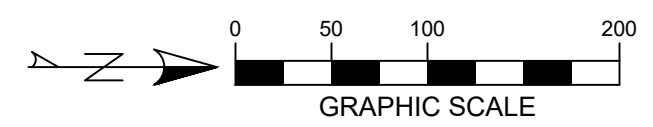
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 164+50



ICN STA. 168+25



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH3	154+46	HH4	182+65	2819
TOTAL				2819

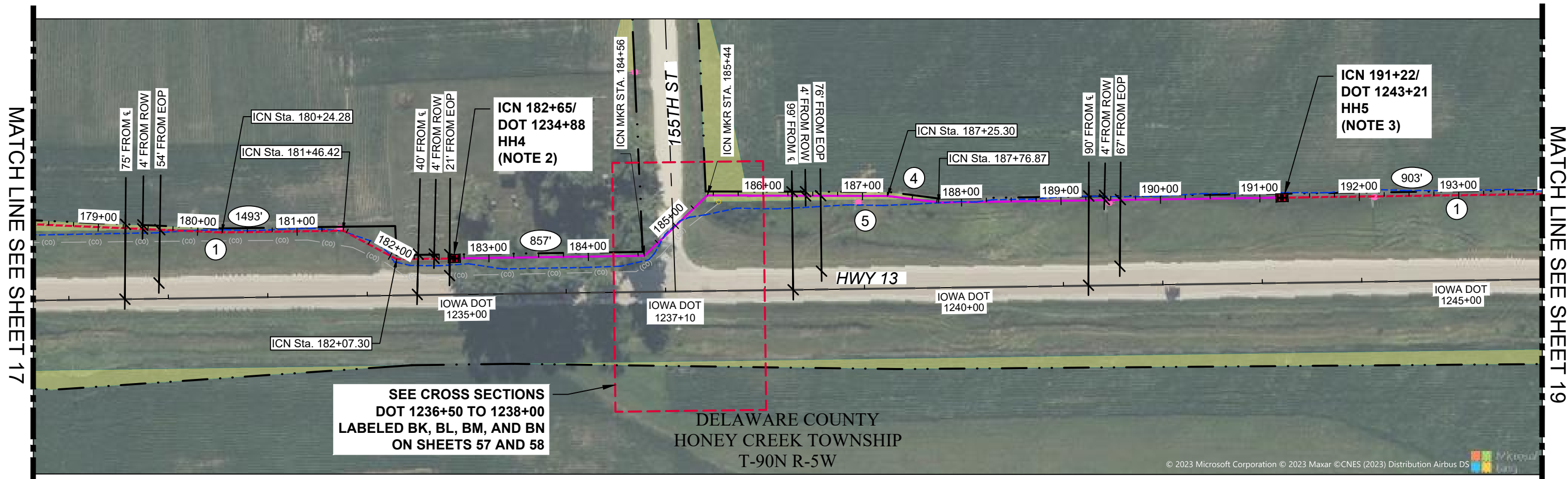
* LENGTH DOES NOT INCLUDE SLACKCOILS



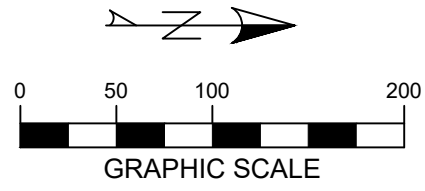
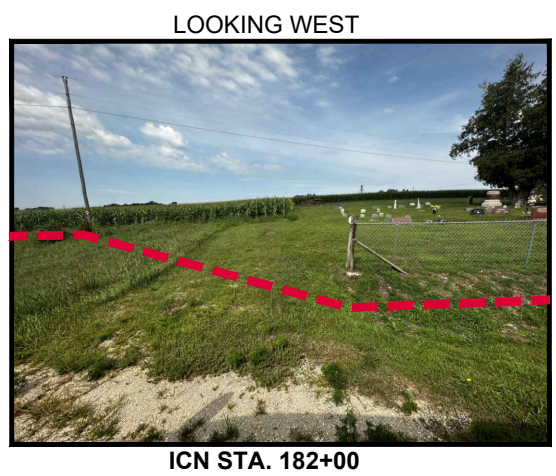
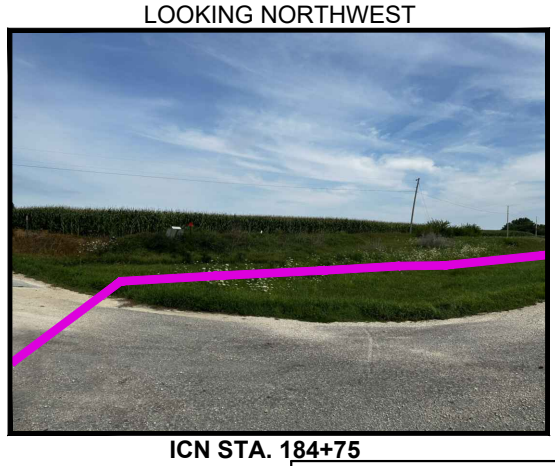
MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② ICN STA. 182+65/ DOT STA. 1234+88 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH4. LINK 0106 100' SLACK COIL 12 F/A. INSTALL MARKER POST.
- ③ ICN STA. 191+22/ DOT STA. 1243+21 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH5. LINK 0106 100' SLACK COIL 12 F/A. INSTALL MARKER POST.
- ④ ICN STA. 182+65 TO ICN STA. 191+22 PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. ROCK FOUND IN AREA AT DEPTHS OF 2" TO 2'. CONTRACTOR TO ROCK BORE THIS SECTION. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION
- ⑤ EXISTING ICN LINK 0106-8FA. PROTECT IN PLACE.
- ⑥ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑦ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH3	154+46	HH4	182+65	2819
HH4	182+65	HH5	191+22	857
HH5	191+22	HH6	314+10	12288
TOTAL				2819

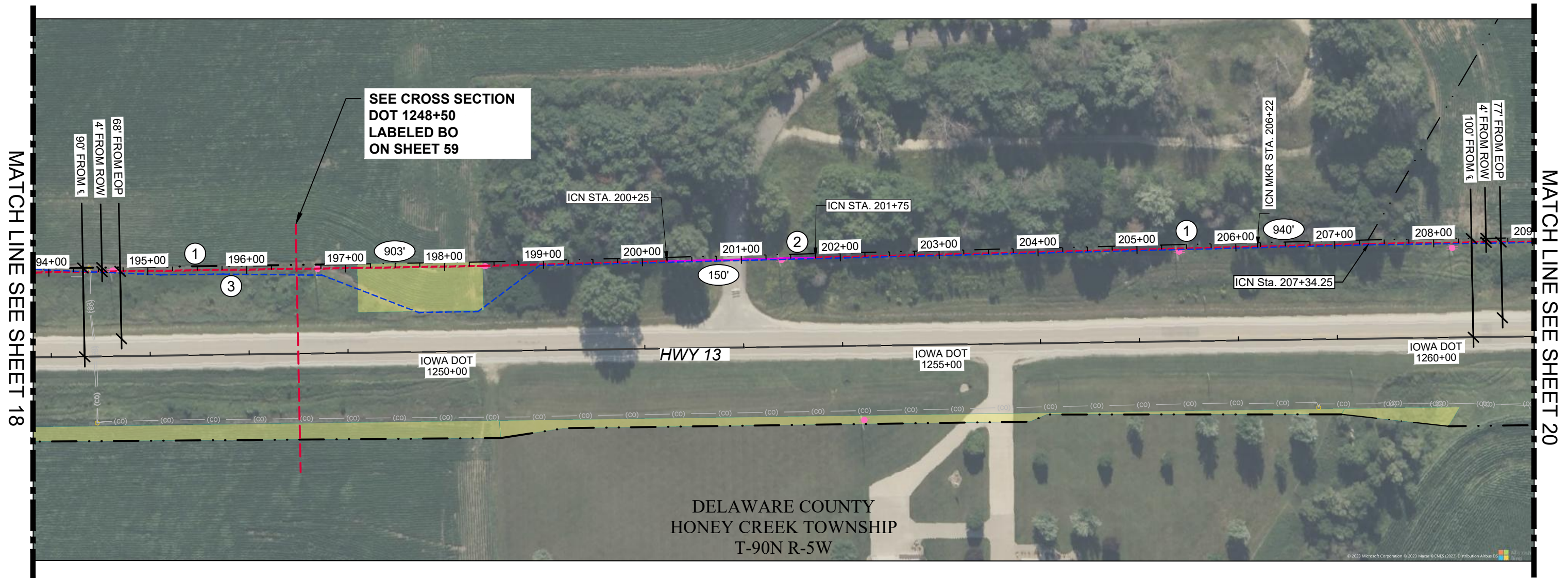
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

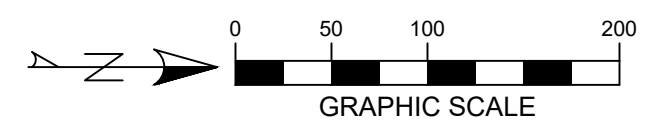
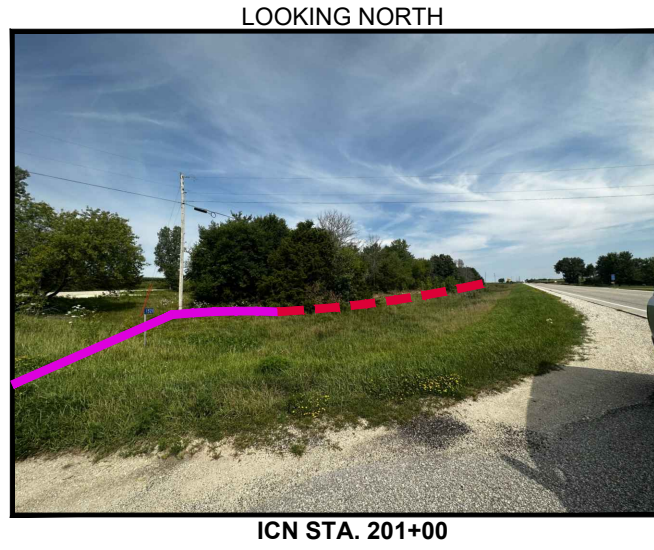
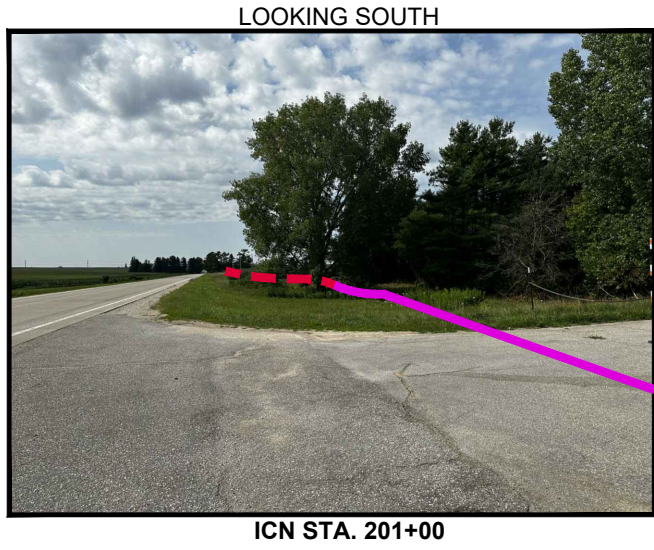
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbk icn
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

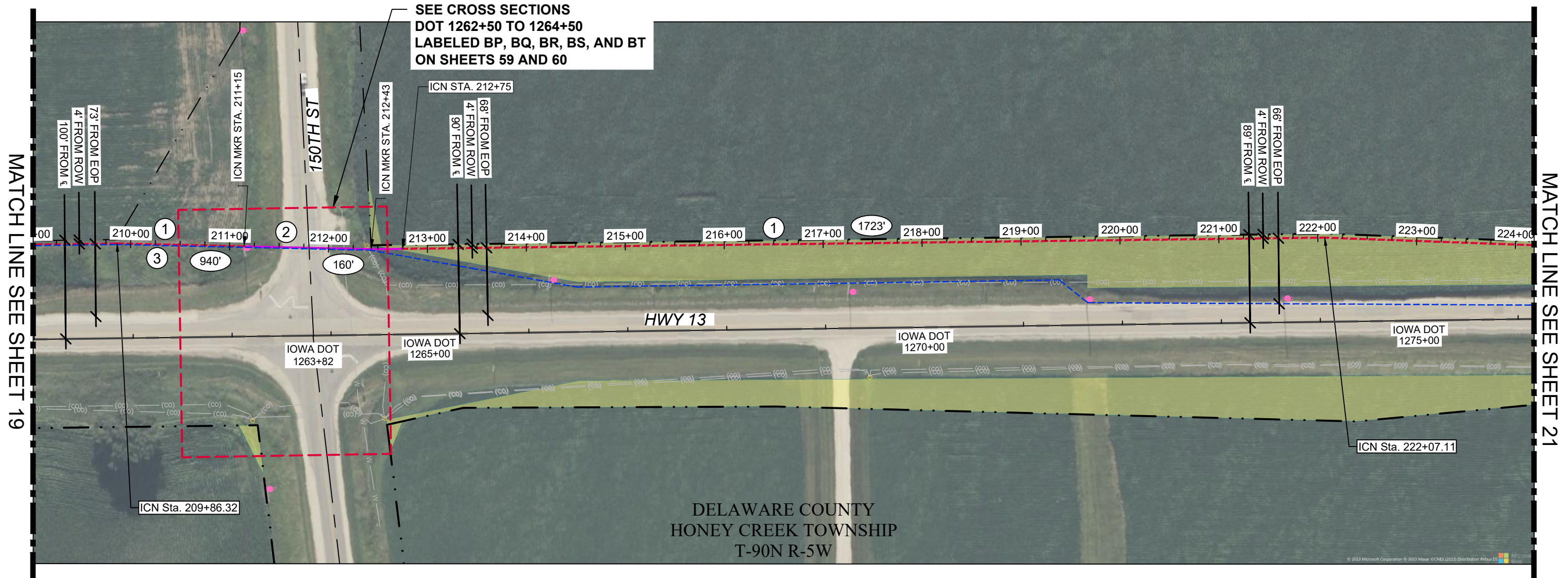
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

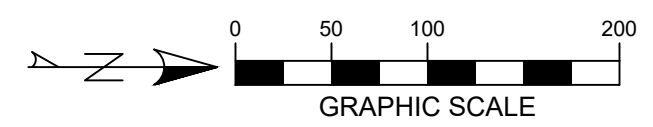
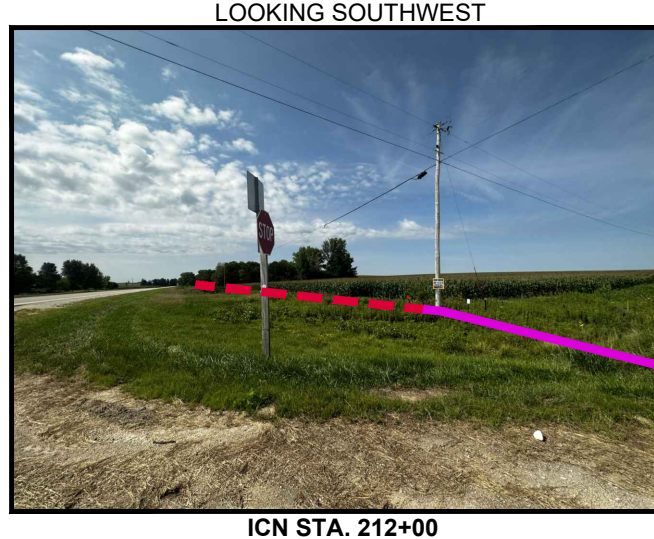
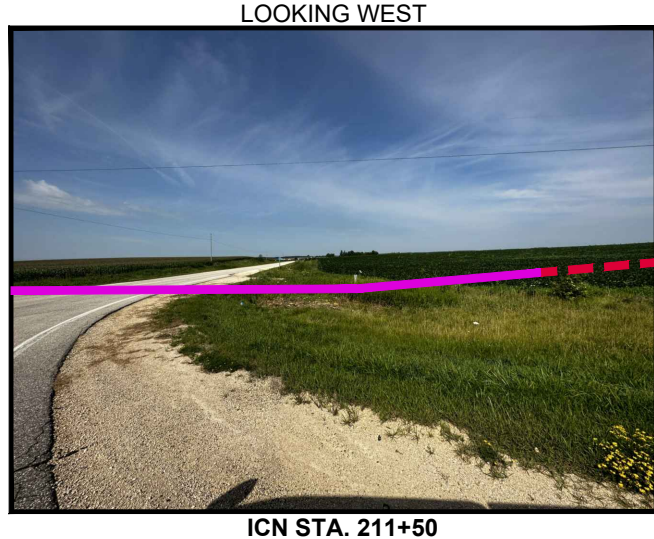
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	154+46	HH6	314+10	12288
TOTAL				12288

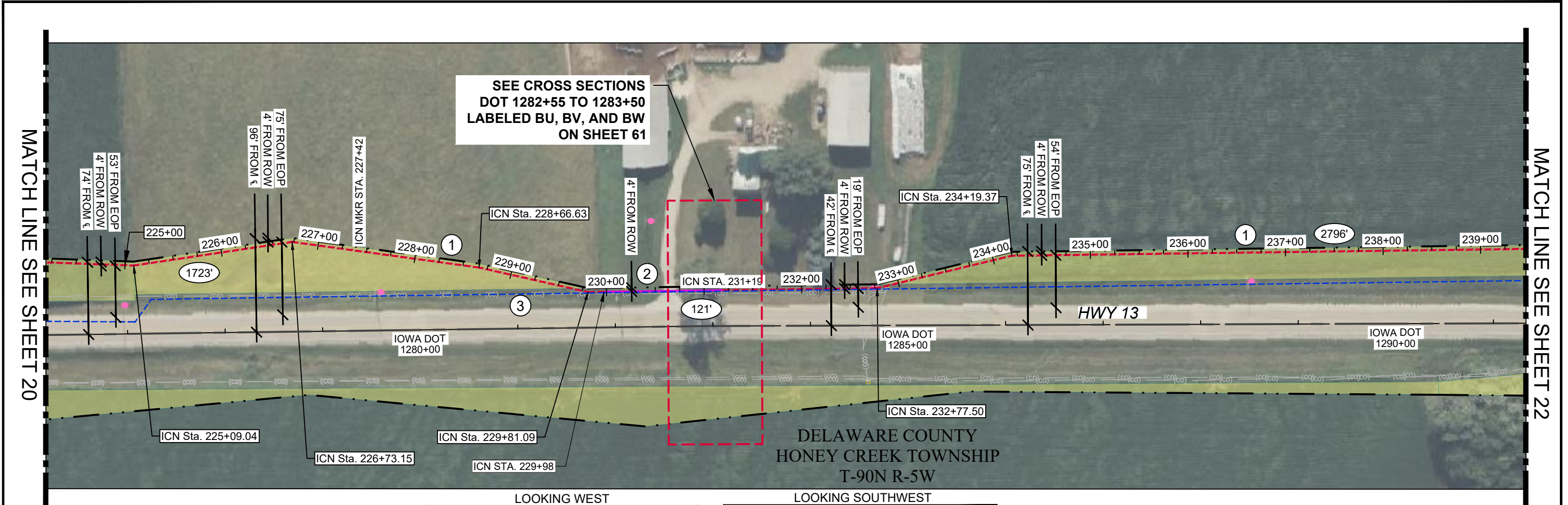
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



MATCH LINE SEE SHEET 20

MATCH LINE SEE SHEET 22

SEE CROSS SECTIONS
DOT 1282+55 TO 1283+50
LABELED BU, BV, AND BW
ON SHEET 61

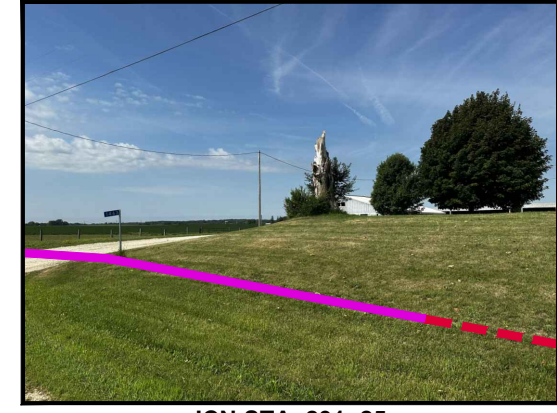
LOOKING WEST

LOOKING SOUTHWEST

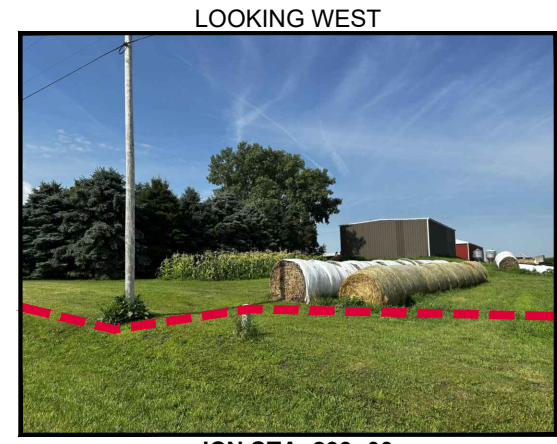
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



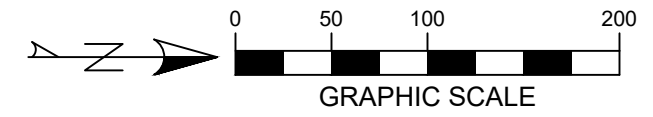
ICN STA. 230+00



ICN STA. 231+25



ICN STA. 233+00



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

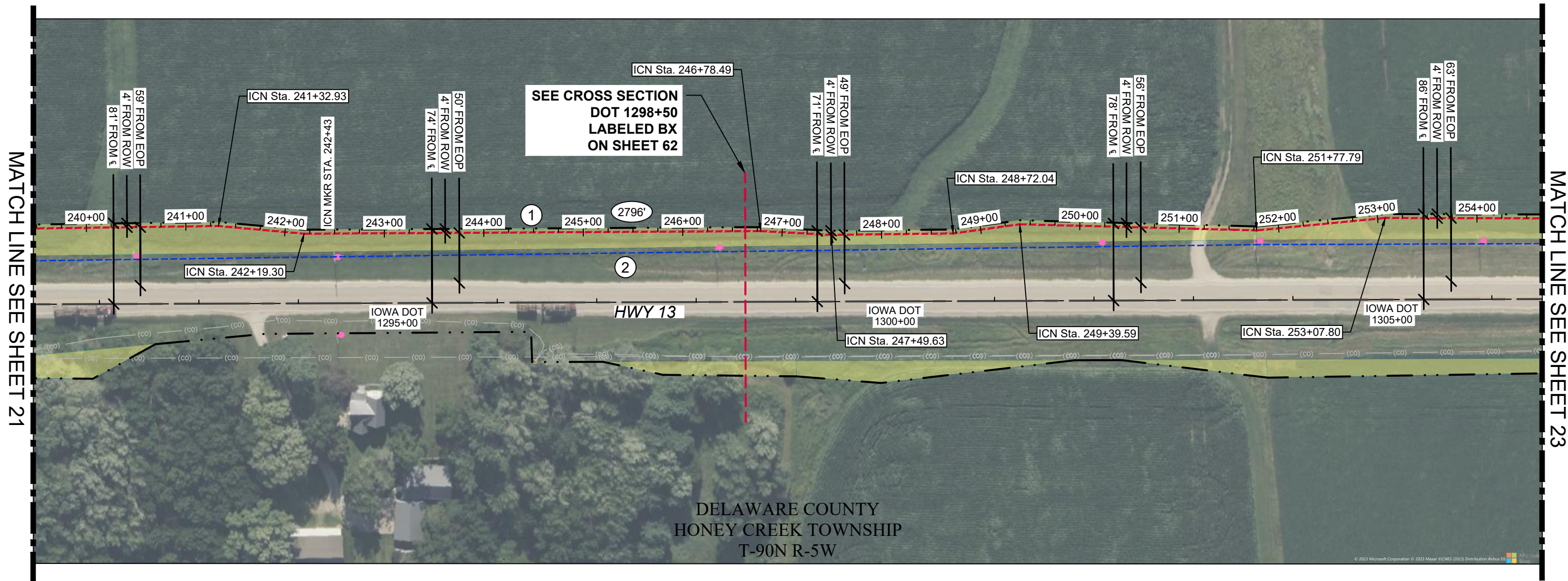
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

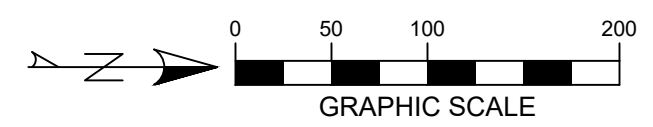
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

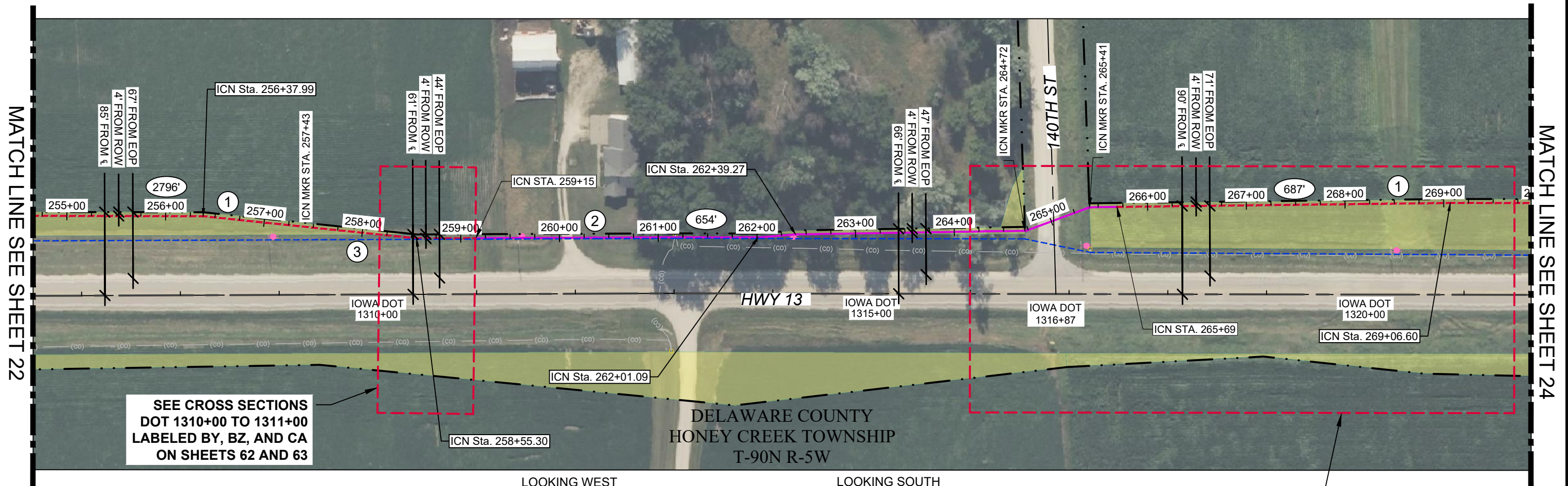
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



SEE CROSS SECTIONS
DOT 1310+00 TO 1311+00
LABELED BY, BZ, AND CA
ON SHEETS 62 AND 63

DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LOOKING WEST
ICN STA. 259+50

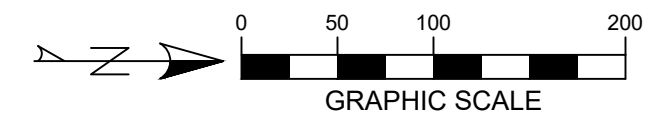


LOOKING SOUTH
ICN STA. 265+00



LOOKING NORTH
ICN STA. 265+00

SEE CROSS SECTIONS
DOT 1316+00 TO 1321+50
LABELED CB, CC, CD, CE, CF,
CG, CH, CI, CJ, CK, CL, AND CM
ON SHEETS 63-67



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

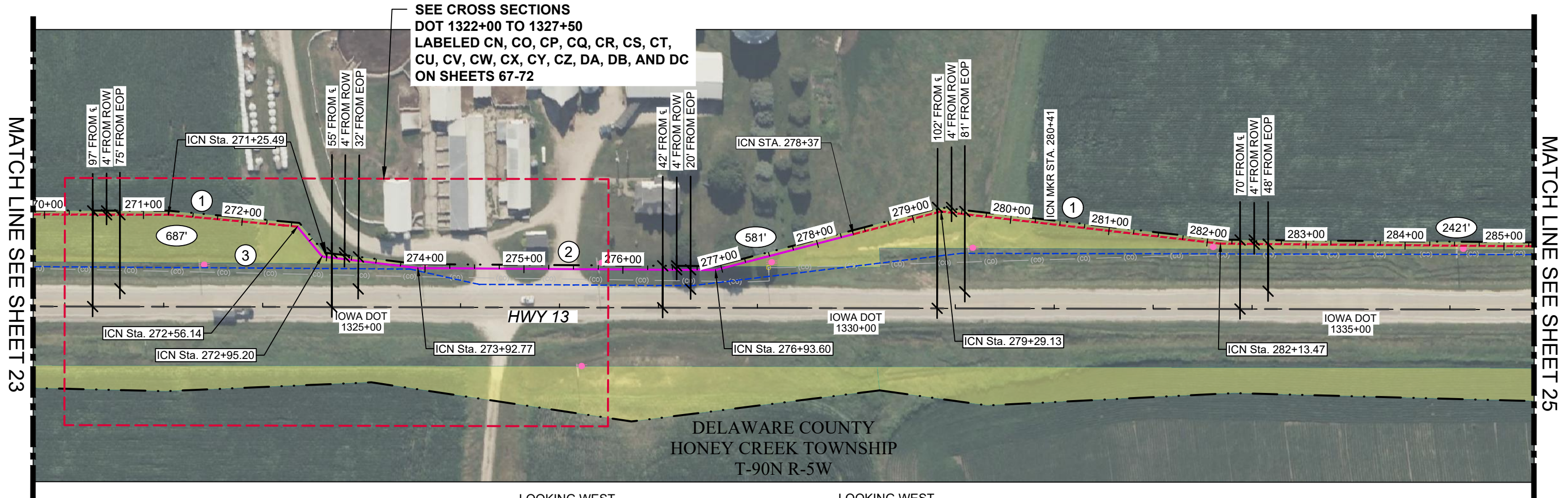
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION

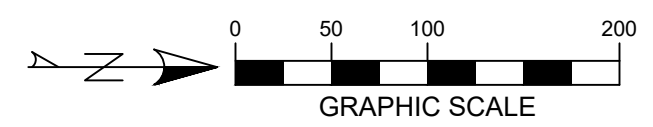
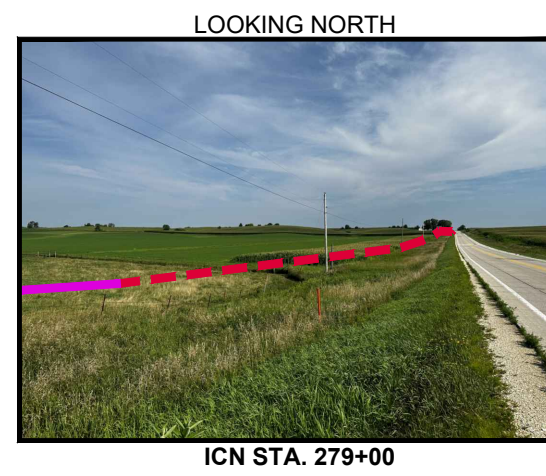
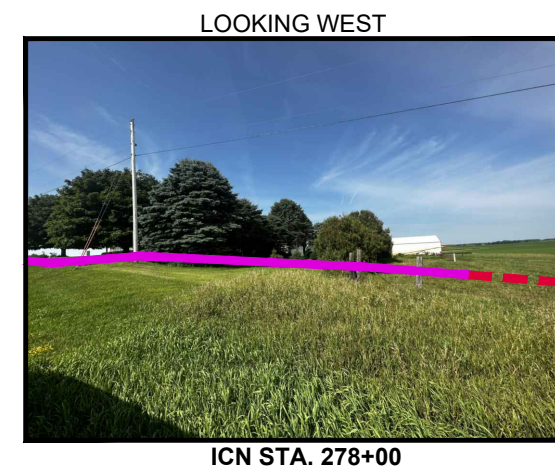
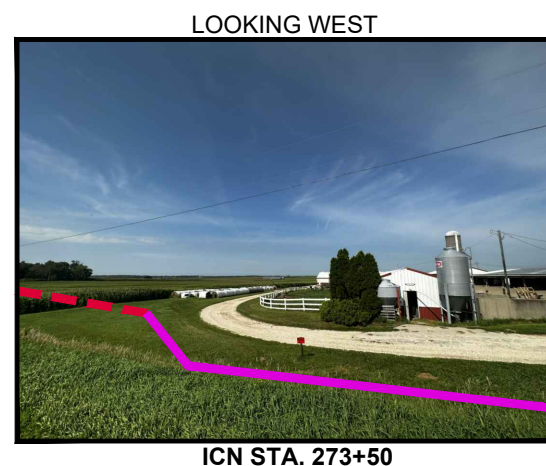


SEE CROSS SECTIONS
DOT 1322+00 TO 1327+50
LABELED CN, CO, CP, CQ, CR, CS, CT,
CU, CV, CW, CX, CY, CZ, DA, DB, AND DC
ON SHEETS 67-72

MATCH LINE SEE SHEET 23

MATCH LINE SEE SHEET 25

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

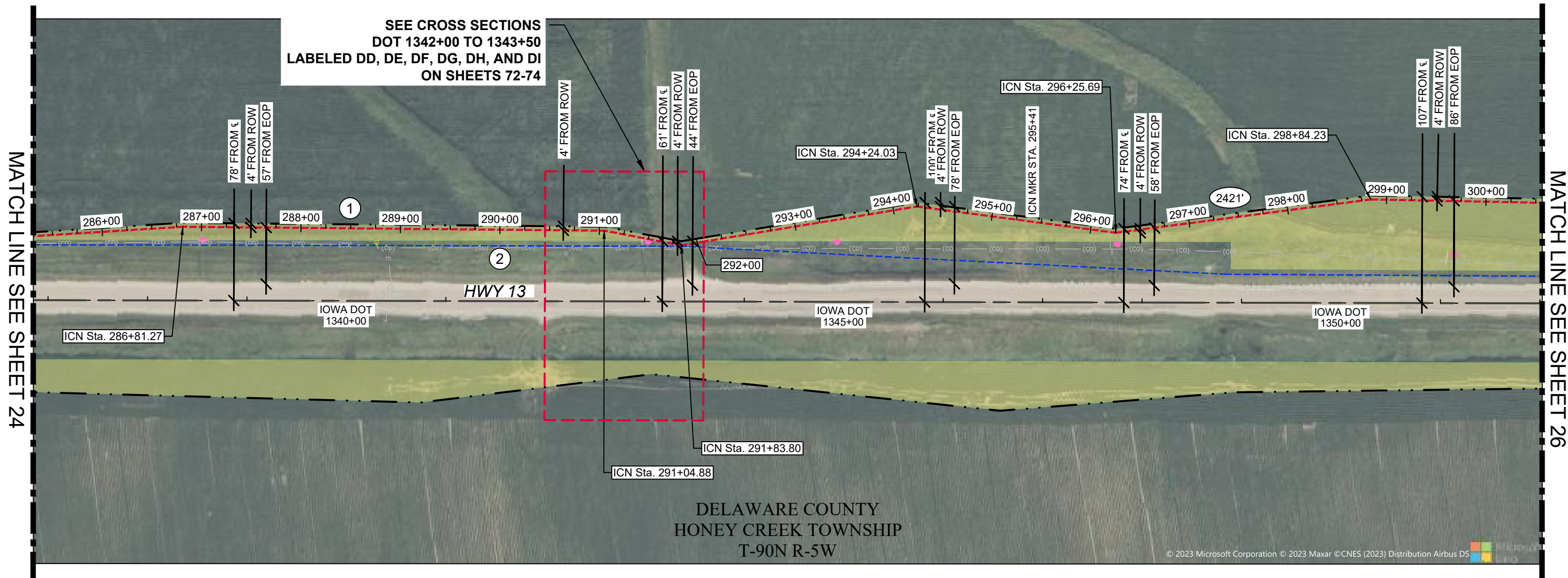
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

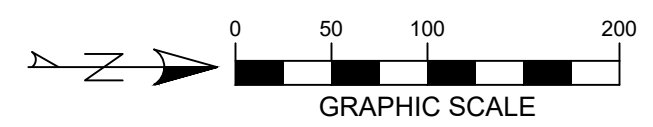
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
TOTAL				12288

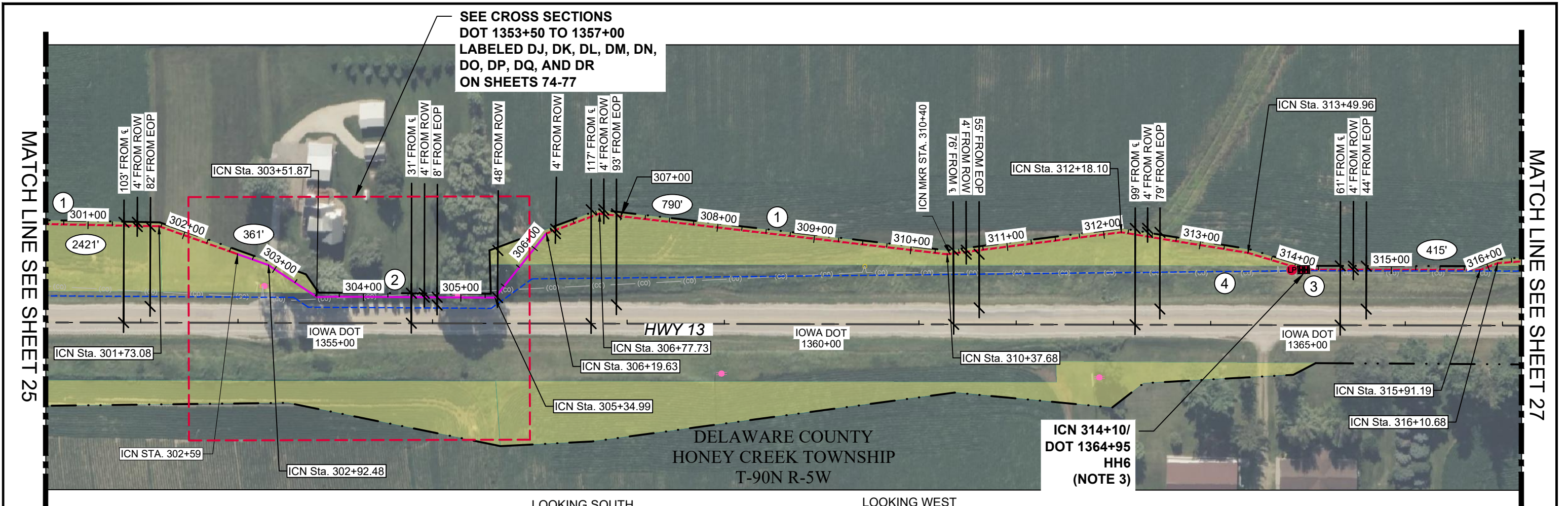
* LENGTH DOES NOT INCLUDE SLACKCOILS



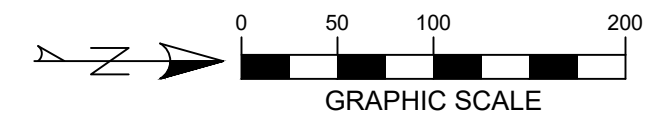
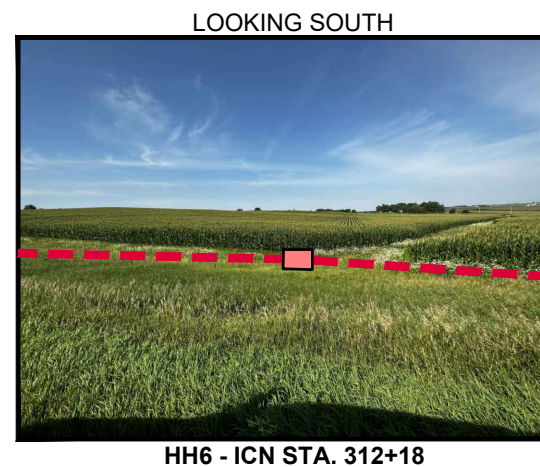
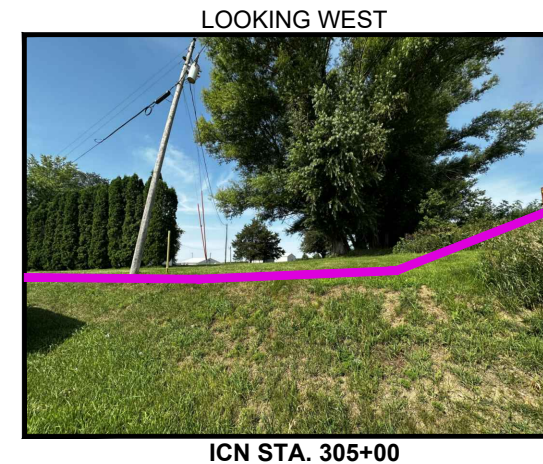
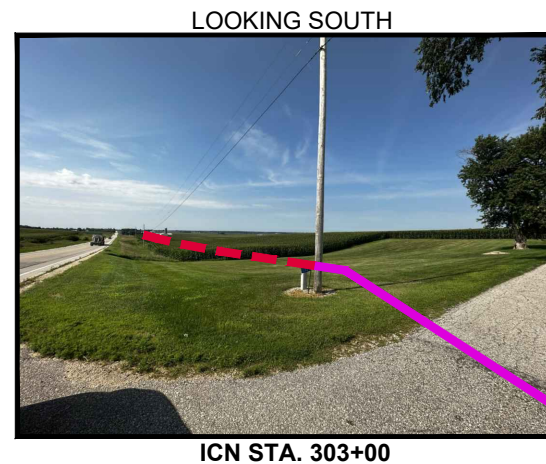
MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ ICN STA. 312+18/ DOT STA. 1364+95 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH6. LINK 0106 12F/A FOR BUTT SPLICE LSXXX - TYCO 450A. END OF FIBER REEL LOCATION: 2-75' COILS FOR SPLICING. INSTALL LOCATE PEDESTAL NEXT TO HH AND STUB DUCT FROM BASE OF PEDESTAL TO BOTTOM OF HH.
- ④ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ⑤ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑥ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	191+22	HH6	314+10	12288
HH6	314+10	HH7	467+37	15327
TOTAL				27615

* LENGTH DOES NOT INCLUDE SLACKCOILS

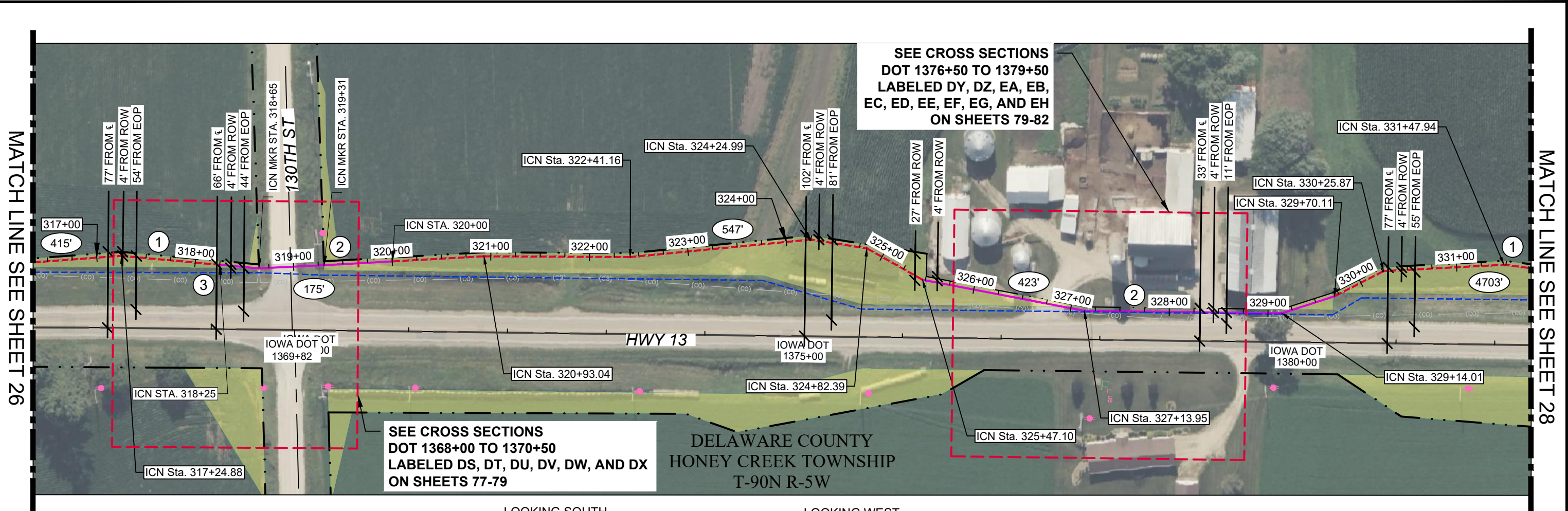


MANCHESTER - DOT HWY 13 RELOCATION
FIBER INSTALLATION

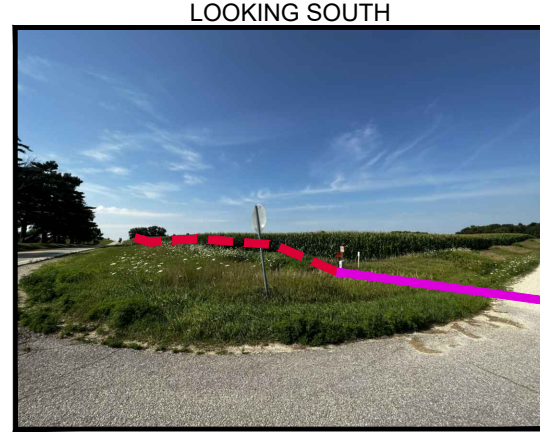
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbk **ICN**

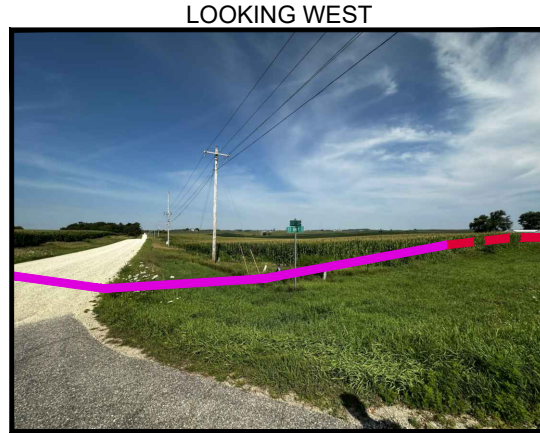
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 319+00
LOOKING SOUTH



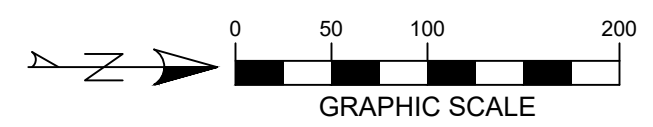
ICN STA. 319+00
LOOKING WEST



ICN STA. 326+50



ICN STA. 333+00



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

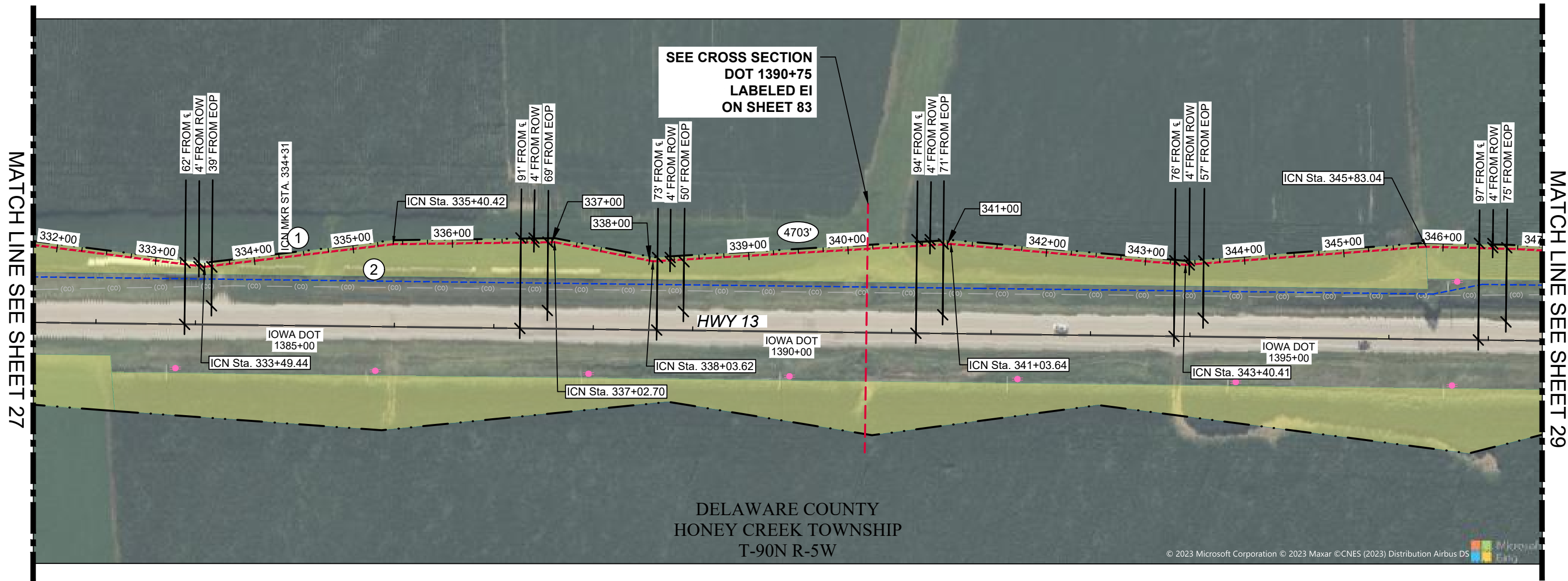
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

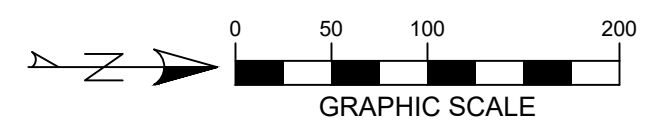
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

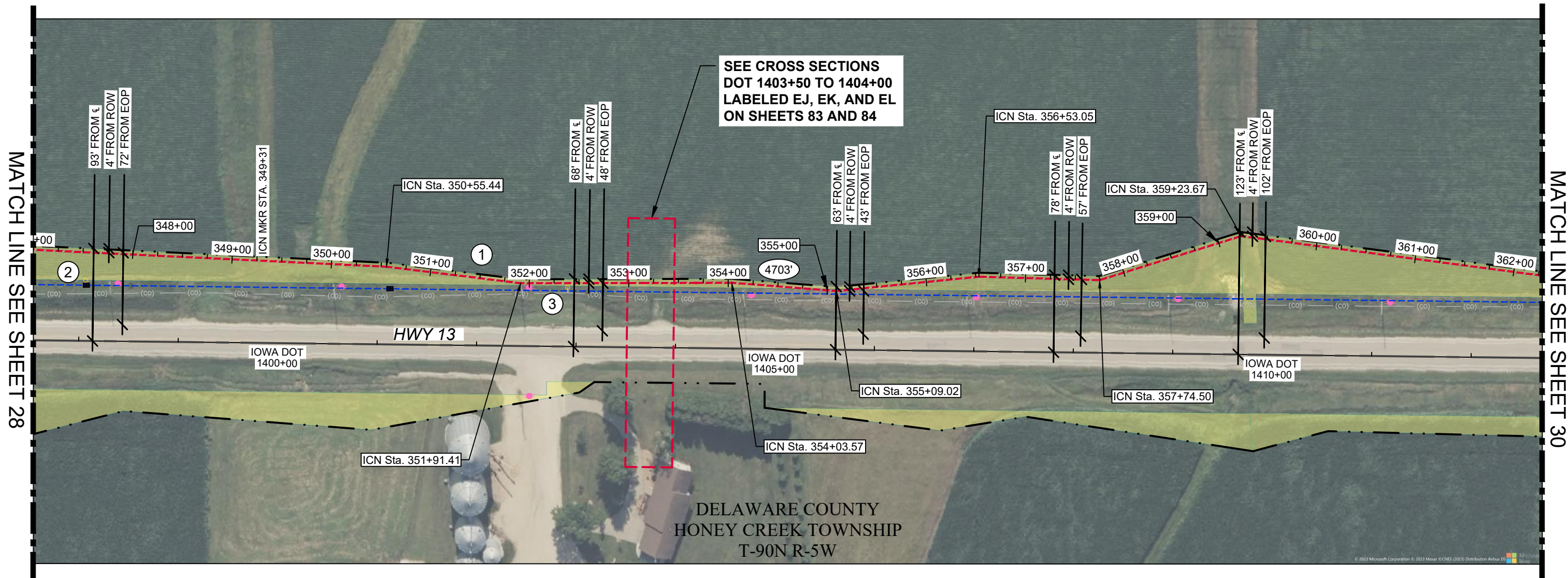
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbk icn
IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



MATCH LINE SEE SHEET 28

MATCH LINE SEE SHEET 30

DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

LOOKING SOUTH



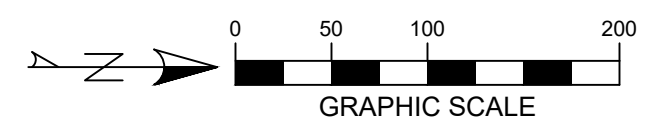
ICN STA. 351+25

LOOKING SOUTH



ICN STA. 360+50

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② ROCK FOUND AT 2' DEPTH NEAR EXISTING HANDHOLE. TO APPROXIMATELY 25' SOUTH. CONTRACTOR MAY NEED TO ROCK BORE IN THIS AREA.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

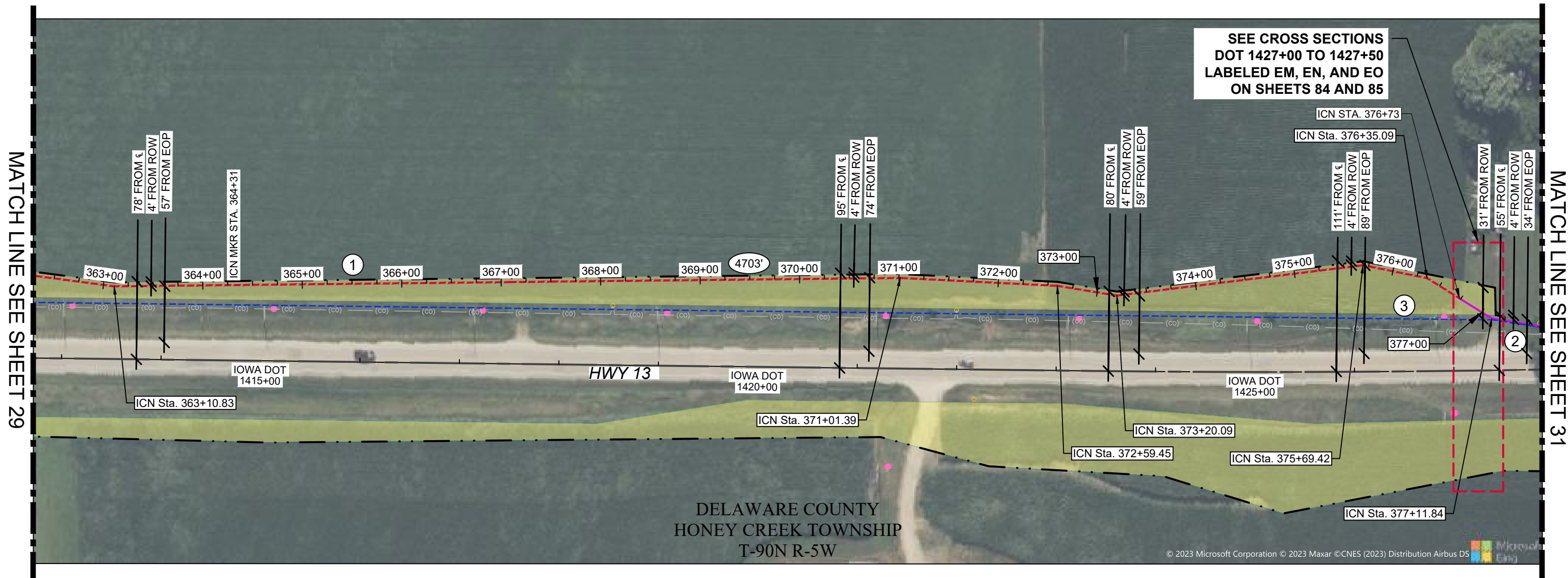
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



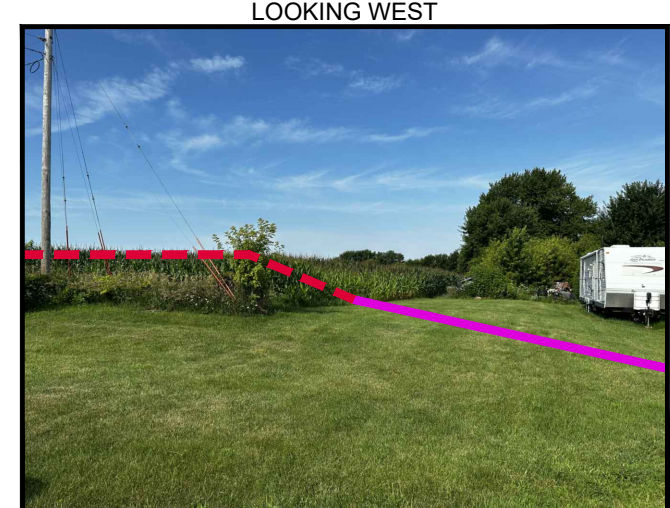
SEE CROSS SECTIONS
DOT 1427+00 TO 1427+50
LABELED EM, EN, AND EO
ON SHEETS 84 AND 85

MATCH LINE SEE SHEET 29

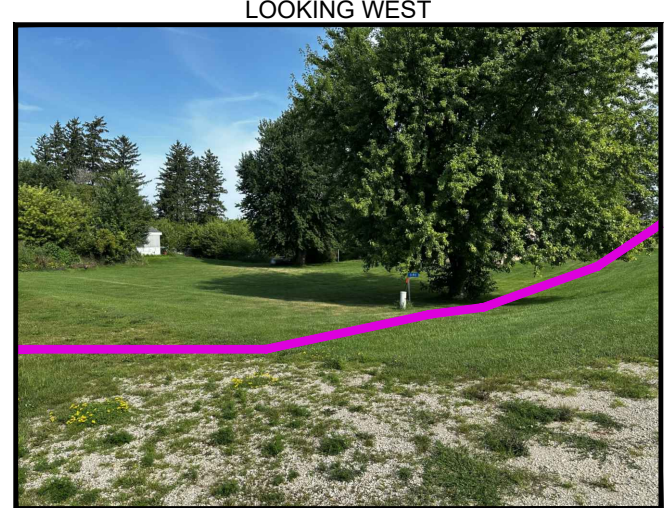
MATCH LINE SEE SHEET 31

DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

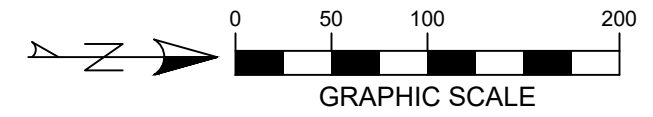
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fa. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 377+00



ICN STA. 377+25



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

* LENGTH DOES NOT INCLUDE SLACKCOILS

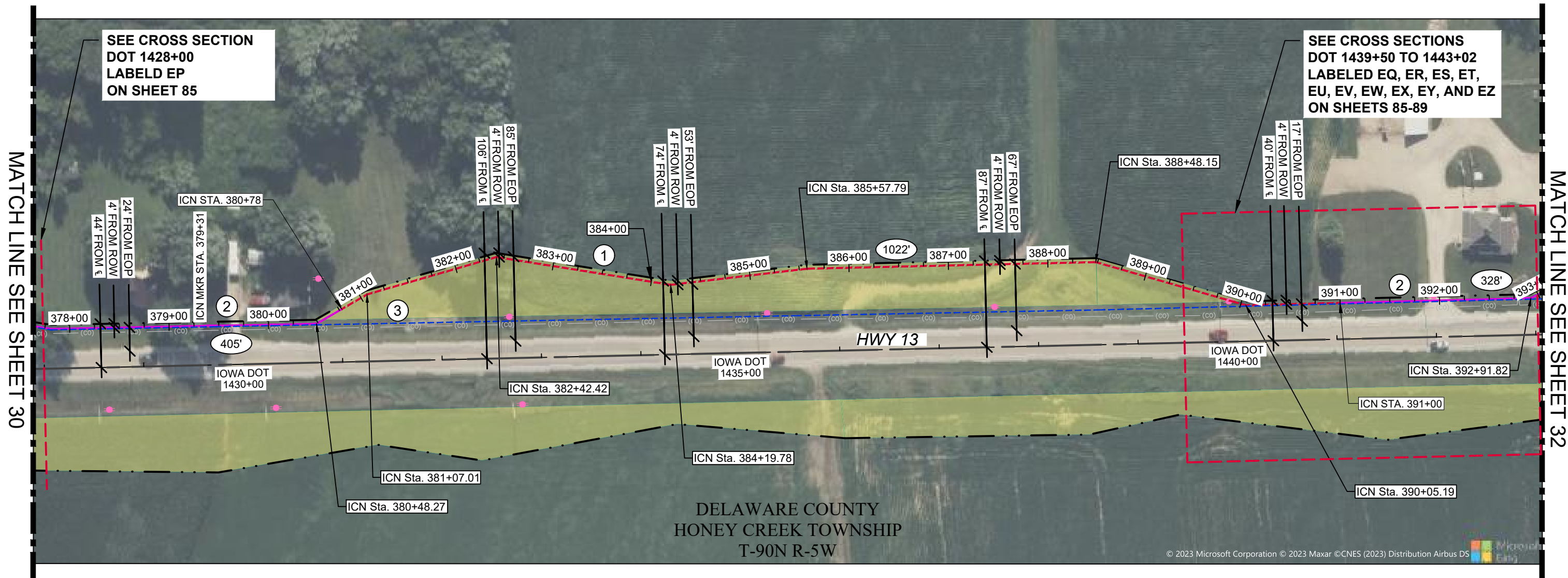


MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

hbK **icn**

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



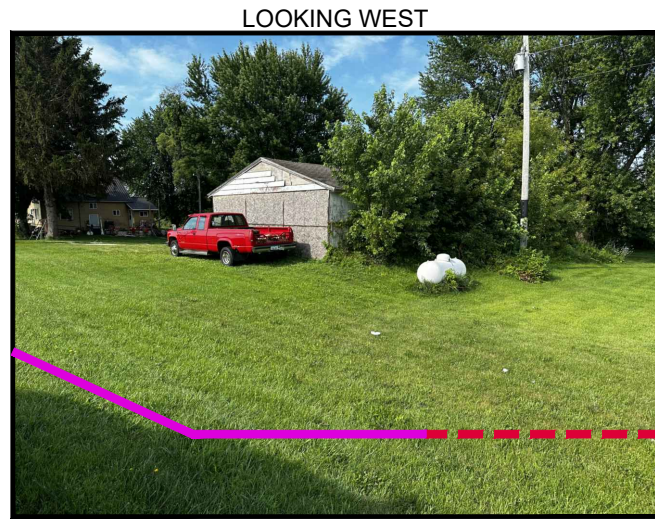
MATCH LINE SEE SHEET 30

MATCH LINE SEE SHEET 32

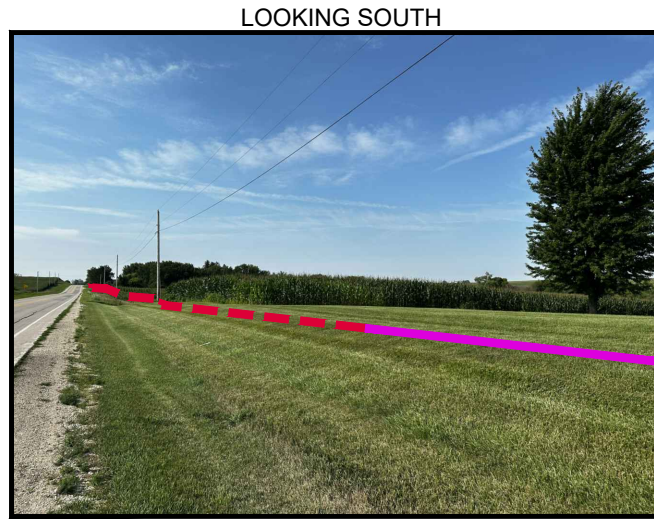
DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS

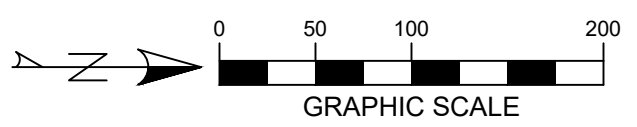
- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



ICN STA. 380+50



ICN STA. 392+50



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

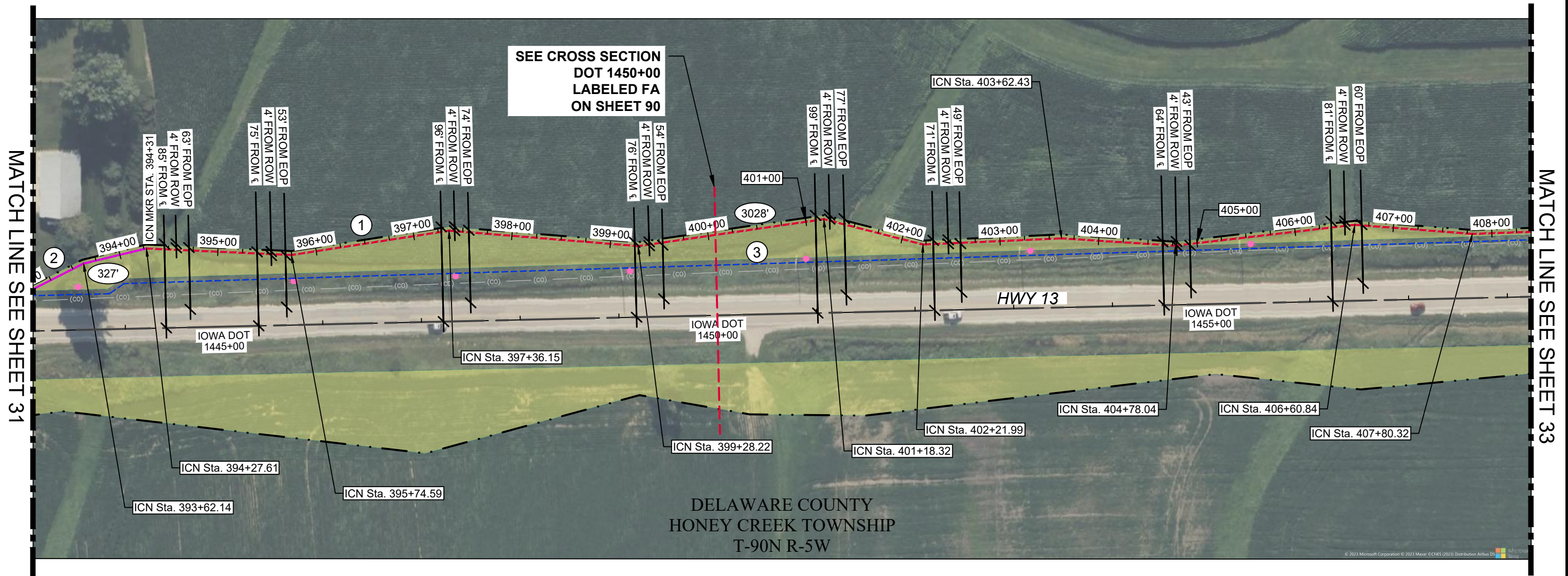
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



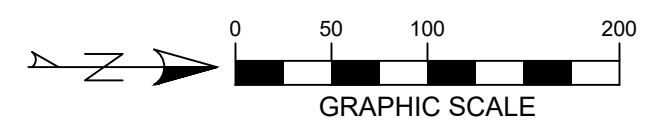
DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② PULL NEW LINK 0106 12 F/A THROUGH NEW 1 1/4" HDPE CONDUIT VIA BORE. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ③ EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".

LOOKING NORTHWEST



ICN STA. 393+50



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

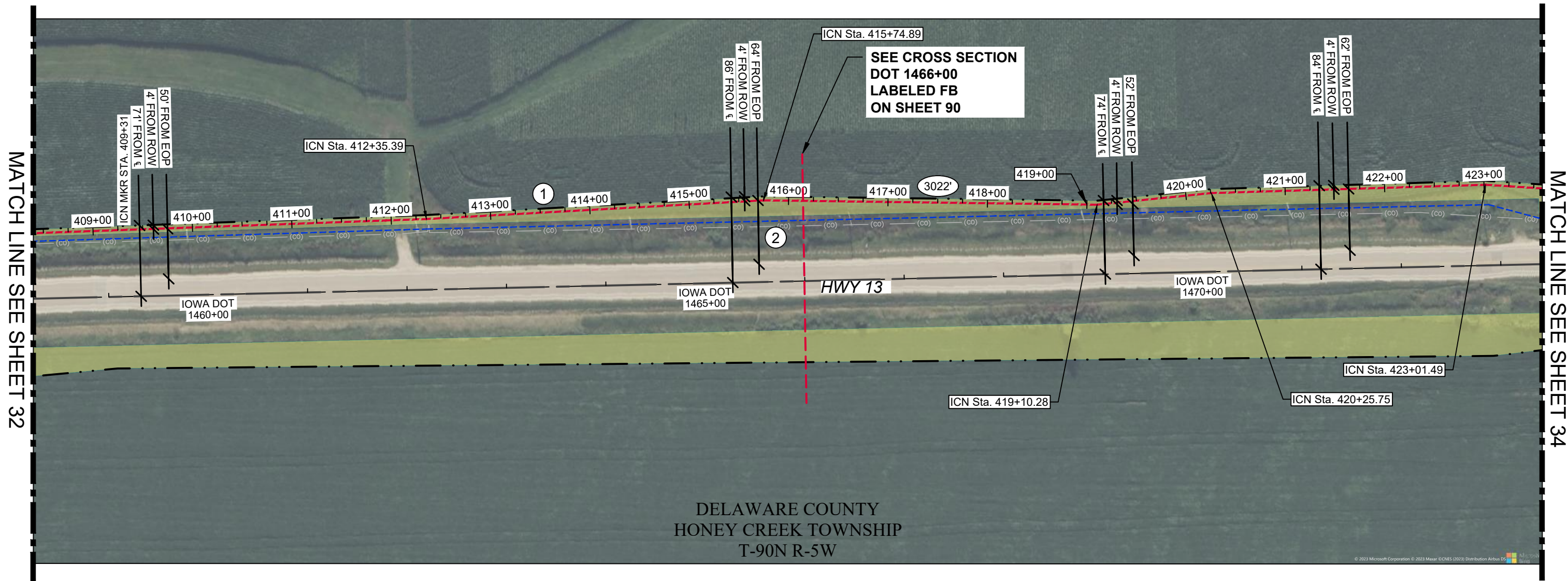
* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

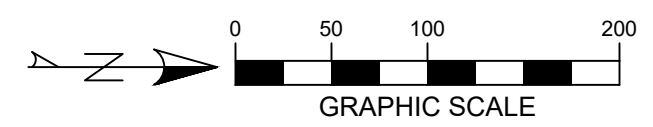
1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION



DELAWARE COUNTY
HONEY CREEK TOWNSHIP
T-90N R-5W

- ① NEW LINK 0106 12 F/A DIRECT BURIED VIA PLOW. CONTRACTOR MAY CONVENIENCE BORE AT COST OF PLOW. 36" MINIMUM BELOW GRADE OR PER CROSS SECTION CALL OUT FOR SPECIFIC DEPTHS.
- ② EXISTING ICN LINK 0106-8fA. PROTECT IN PLACE.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ INSTALL MARKER POST AT EACH HANDOLE LOCATION, EVERY 1,500', OR ON EITHER SIDE OF ROAD CROSSING AT ROW. SEE PROPOSED LOCATIONS "ICN MKR".



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	314+10	HH7	467+37	15327
TOTAL				15327

* LENGTH DOES NOT INCLUDE SLACKCOILS



MANCHESTER – DOT HWY 13 RELOCATION
FIBER INSTALLATION

1	FOR 60% REVIEW	09/25/2023
2	FOR 90% REVIEW	10/12/2023
3	FOR PERMIT PLANS	10/24/2023
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
ICN © 2021, COPY WITH PERMISSION