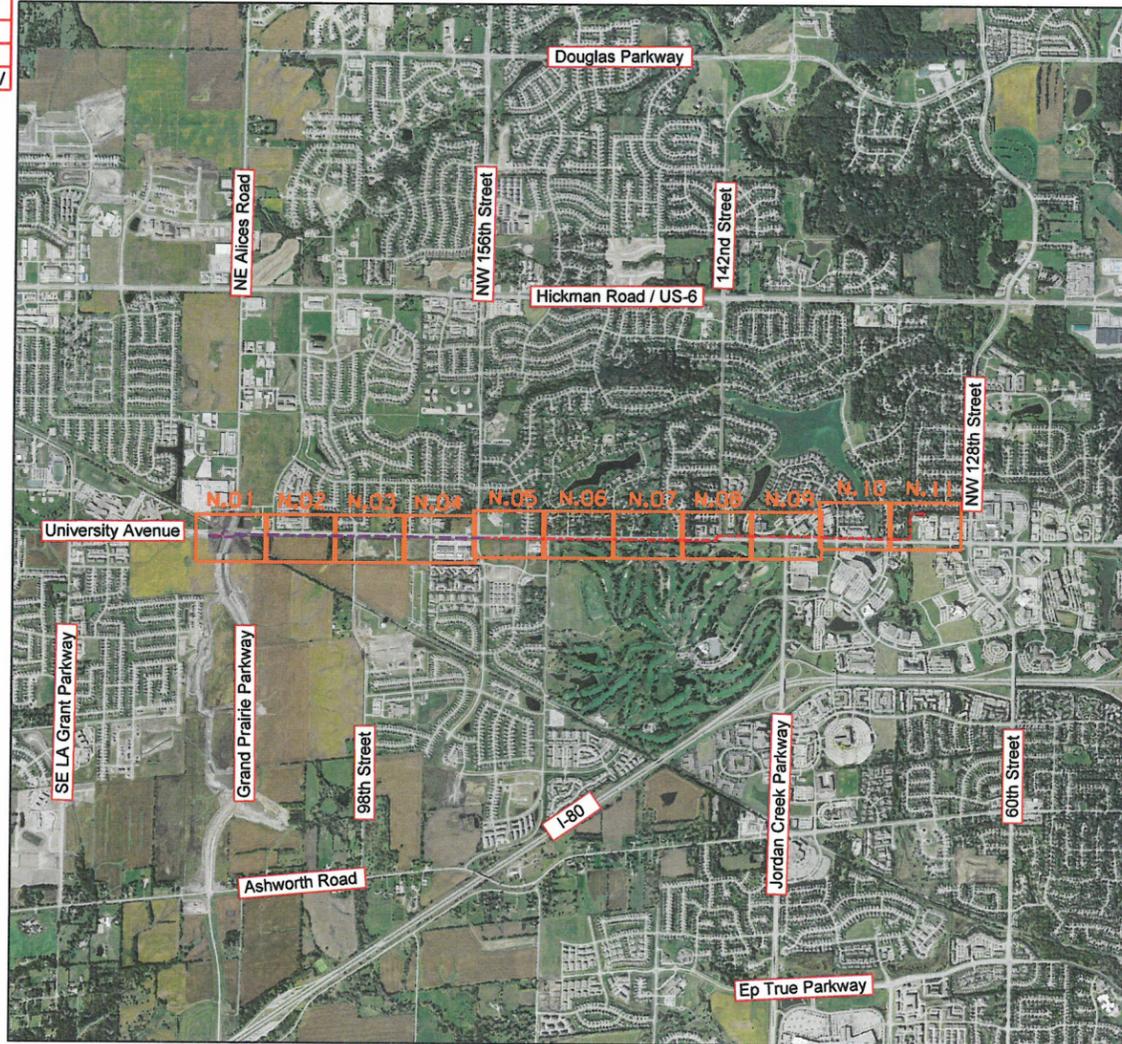
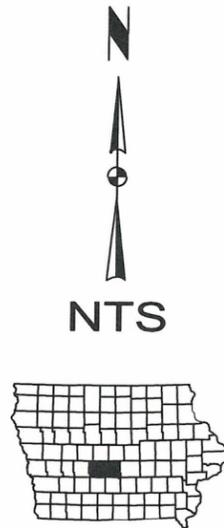




DALLAS-POLK COUNTIES, IOWA  
 IOWA COMMUNICATIONS NETWORK  
 IOWA LOTTERY HEADQUARTERS  
 13001 UNIVERSITY AVENUE,  
 CLIVE, IOWA

PROJECT COORDINATION CONTACTS			
NAME	AGENCY	PHONE	EMAIL
TIM FLICKINGER	ICN	515-725-4699	TIMOTHY.FLICKINGER@IOWA.GOV
JIM DEWITT	CITY OF CLIVE	515-223-6231	JDEWITT@CITYOFCLIVE.COM
TIM ROYER	CITY OF WAUKEE	515-978-7928	TROYER@WAUKEE.ORG
BRIAN HEMESATH	CITY OF WEST DES MOINES	515-222-3620	BRIAN.HEMESATH@WDM.IOWA.GOV



SHT. NO.	SHEET INDEX
A SHEETS A.01 A.02	TITLE SHEETS TITLE PAGE LEGEND AND SYMBOL INFORMATION SHEET
C SHEETS C.01 C.02 C.03	QUANTITIES AND GENERAL INFORMATION ESTIMATE OF QUANTITIES, PROJECT DESCRIPTION, AND LISTING OF FIBER WORK GENERAL NOTES UTILITY CONTACTS
N SHEETS N.01 - N.11	FIBER PLANS FIBER DESIGN
ATTACHMENTS	IOWA LOTTERY BUILDING ENTRY DETAILS ICN TYPICAL DETAILS FOR: - HANDHOLES - TRI-VIEW LOCATE PEDESTAL - HIDEOUT LOCATE PEDESTAL

PERMITS REQUIRED	
SHT. NO.	PERMIT
N.01-N.03	CITY OF WAUKEE
N.03-N.08	CITY OF WEST DES MOINES
N.08-N.11	CITY OF CLIVE



**PRIOR TO CONSTRUCTION:**

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.

LICENSED PROFESSIONAL ENGINEER

GREGORY T. SEIB

23179

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.

*Gregory T. Seib* 9-13-2016

Signature Date

Gregory T. Seib

Printed or Typed Name

23179

License Number

My license renewal date is December 31, 2016

Pages or sheets covered by this seal: A.01-A.02, C.01-C.03, N.01-N.11

# LEGEND AND SYMBOLS

SPLICE-W/LOC. STATION	
SPLICE-NO LOC. STATION	
FIBER CHANGE (BID & CONST. ISSUE)	
CASING PIPE (PVC OR STEEL)	
(GALV. IRON PIPE) G.I.P.	
RIGHT-OF-WAY LINE(phantom linetype)	
CENTER LINE(center linetype)	
FENCE LINE	
PROPERTY LINE	
EDGE OF GRAVEL	
EDGE OF PAVEMENT	
EDGE OF CONCRETE	
CITY, COUNTY OR STATE BOUNDARY	
SECTION LINE	
TEMP. EASEMENT	
BACK OF CURB	
CONCRETE SIDEWALK	
GAS LINE	
STORM SEWER	
SANITARY SEWER	
TELEPHONE LINE	
WATER LINE	
UNDERGROUND ELECTRIC	
SUBSURFACE DRAIN TILE	
OVERHEAD ELEC.	

ROUTE MARKERS	
POLE	
POLE W/ANCHOR	
TILE INTAKE	
MILE POST MARKER	
CULVERT	
BRIDGE	
TREE & VEGETATION	
STREET SIGN	
FIRE HYDRANT	
STREET LIGHT	
MANHOLES	
REMOVE & REPLACE	
FLOW LINE	
CUT & REPLACE	
DITCH LINE	
UTILITY PEDESTAL	
WATER METER	
GAS METER	
GAS MARKER	
TELEPHONE MARKER	
R/W MARKER	
DRAIN	
RAILROAD SIGNAL/SIGN	
GROUND	
GROUND ROD	
MAILBOX	

ICN CABLE SEQUENCE NUMBER (SEQ.#12345)

SECTION MARKER

## UNIQUE SYMBOLS FOR THIS PROJECT

EXISTING	PROPOSED	DESCRIPTIONS
		ICN Bored Conduit
		Existing Conduit
		Handhole
		Locate Point

## ABBREVIATIONS

ICN	Iowa Communications Network
NEC	National Electric Code
TCP	Traffic Control Plan
ROW	Right of Way
HH	Handhole
DOT	Department of Transportation
NTS	Not to Scale



NOTE: THE PLAN LOCATIONS OF UNDERGROUND AND AERIAL UTILITIES, WHEN SHOWN, ARE APPROXIMATE ONLY. IN ADDITION, A PORTION OF UTILITY INFORMATION MAY NOT HAVE BEEN PROVIDED. ALL UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING UTILITIES AND LOCATOR SERVICES AND SCHEDULING THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL ALSO CONTACT ANY AND ALL UTILITIES AND LOCAL GOVERNMENT AGENCIES NOT PARTICIPATING IN LOCATION SERVICES.

## LEGEND AND SYMBOL INFORMATION SHEET

### ESTIMATE OF QUANTITIES

Item No.	Item	Unit	Planned Total	As-Built Total
1	TRAFFIC CONTROL	LS	1	
2	MOBILIZATION	LS	1	
3	INSTALL HANDHOLE, 24" x 36" x 30"	EACH	9	
4	2" HDPE CONDUIT, BORED	LINEAR FT	10,608	
6	36 SM DIELECTRIC FIBER	LINEAR FT	901	
7	36 SM DIELECTRIC FIBER (COIL)	LINEAR FT	150	
6	72 SM ARMORED FIBER	LINEAR FT	15,909	
7	72 SM ARMORED FIBER (COIL)	LINEAR FT	2,125	
8	ICN HIDEOUT LOCATE PEDESTAL	EACH	1	
9	ICN TRI-VIEW LOCATE PEDESTAL	EACH	2	
10	ICN ROUTE MARKER - WARNING	EACH	7	
11	#12 TRACER WIRE	LINEAR FT	901	
12	GROUND ROD	EACH	3	
13	TYCO 450B SPLICE CLOSURE	EACH	3	

### PROJECT DESCRIPTION

**PROJECT SUMMARY**

ICN FIBER OPTIC INSTALLATION PROJECT IN DALLAS AND POLK COUNTIES.  
 ICN PROVIDING NEW FIBER OPTIC TO THE IOWA LOTTERY HEADQUARTERS.

THIS PROJECT INVOLVES INSTALLING A 72 STRAND FIBER CONNECTION FROM AN EXISTING HANDHOLE NEAR ALICES ROAD AND UNIVERSITY AVENUE, WAUKEE, IA TO THE IOWA LOTTERY HEADQUARTERS AT 13001 UNIVERSITY AVENUE, CLIVE, IA. APPROXIMATELY 10,400 FEET OF UNDERGROUND CONDUIT WILL BE INSTALLED, WHICH WILL CONSIST OF DIRECTIONAL BORING (1) 2" HDPE CONDUIT. FIBER SPLICING AND DATA TRAFFIC CUTOVERS WILL BE COMPLETED UNDER A SEPARATE CONTRACT.

### LISTING OF CONDUIT & FIBER WORK

Conduit Run	Location		Length	2" HDPE Conduit, Bored	36 SM Dielectric Fiber	72 SM Armored Fiber
	From	To				
1A	SPLICE CABINET (Sta. 0+00)	CITY OF WAUKEE MANHOLE (Sta. 1+60)	160	-	-	160
1B	CITY OF WAUKEE MANHOLE (Sta. 1+60)	HH 1-1E (Sta. 4+45)	285	285	-	285
1C	HH 1-1E (Sta. 4+45)	HH 1-2E (Sta. 10+36)	591	-	-	591
1D	HH 1-2E (Sta. 10+36)	HH 3-1E (Sta. 36+00)	2567	-	-	2567
3A	HH 3-1E (Sta. 36+00)	HH 5-1E (Sta. 64+84)	2884	-	-	2884
5A	HH 5-1E (Sta. 64+84)	HH 5-2 (Sta. 65+04)	20	20	-	20
5B	HH 5-2 (Sta. 65+04)	HH 5-3 (Sta. 74+52)	948	948	-	948
5C	HH 5-3 (Sta. 74+52)	HH 7-1 (Sta. 96+49)	2197	2197	-	2197
7A	HH 7-1 (Sta. 96+49)	HH 8-1 (Sta. 115+81)	1932	1932	-	1932
8A	HH 8-1 (Sta. 115+81)	HH 8-2 (Sta. 116+67)	86	86	-	86
8B	HH 8-2 (Sta. 116+67)	HH 8-3 (Sta. 123+76)	709	709	-	709
8C	HH 8-3 (Sta. 123+76)	HH 9-1 (Sta. 131+43)	767	767	-	767
9A	HH 9-1 (Sta. 131+43)	HH 10-1 (Sta. 143+29)	1186	1186	-	1186
10A	HH 10-1 (Sta. 143+29)	HH 11-1 (Sta. 159+06)	1577	1577	-	1577
11A	HH 11-1 (Sta. 159+06)	BUILDING ENTRANCE (Sta. 168+07)	901	901	901	-
			<b>Totals</b>	<b>10,608</b>	<b>901</b>	<b>15,909</b>

### LISTING OF HANDHOLE WORK

Handhole Label	Handhole Type	Route	ICN Station	Splice Closure	Hideout Locate Pedestal	Tri-View Locate Pedestal	36 SM Dielectric Fiber Coil	72 SM Armored Fiber Coil
SPLICE CABINET	EXISTING	University Ave	0+00	-	-	-	-	25
CITY OF WAUKEE MANHOLE	EXISTING	University Ave	1+60	-	-	-	-	150
HH 1-1E	EXISTING	University Ave	4+45	1	-	1	-	150
HH 1-2E	EXISTING	University Ave	10+36	-	-	-	-	150
HH 3-1E	EXISTING	University Ave	36+00	-	-	-	-	150
HH 5-1E	EXISTING	University Ave	64+84	-	-	-	-	150
HH 5-2	24" x 36" x 30"	University Ave	65+04	1	-	1	-	150
HH 5-3	24" x 36" x 30"	University Ave	74+52	-	-	-	-	150
HH 7-1	24" x 36" x 30"	University Ave	96+49	-	-	-	-	150
HH 8-1	24" x 36" x 30"	University Ave	115+81	-	-	-	-	150
HH 8-2	24" x 36" x 30"	University Ave	116+67	-	-	-	-	150
HH 8-3	24" x 36" x 30"	University Ave	123+76	-	-	-	-	150
HH 9-1	24" x 36" x 30"	University Ave	131+43	-	-	-	-	150
HH 10-1	24" x 36" x 30"	University Ave	143+29	-	-	-	-	150
HH 11-1	24" x 36" x 30"	University Ave	159+06	1	1	-	150	150
			<b>Total</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>150</b>	<b>2125</b>

## ESTIMATE OF QUANTITIES, PROJECT DESCRIPTION, AND LISTING OF WORK

### GENERAL NOTES

#### MISC.

1. AERIAL PHOTOGRAPHY SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY NOT MATCH EXISTING CONDITIONS.
2. ALL EXISTING IOWA COMMUNICATIONS NETWORK FIBER SHALL BE KEPT IN OPERATION. CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING COMMUNICATION CABLES DURING CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE RIGHT-OF-WAY, WHERE SHOWN ON PLANS, IS APPROXIMATE ONLY. RIGHT-OF-WAY SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

#### UTILITIES

4. THE PLAN LOCATIONS OF UNDERGROUND AND AERIAL UTILITIES, WHEN SHOWN, ARE APPROXIMATE ONLY. IN ADDITION, A PORTION OF UTILITY INFORMATION MAY NOT HAVE BEEN PROVIDED. ALL UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING UTILITIES AND LOCATOR SERVICES AND SCHEDULING THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL ALSO CONTACT ANY AND ALL UTILITIES AND LOCAL GOVERNMENT AGENCIES NOT PARTICIPATING IN LOCATION SERVICES.
5. THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITIES EXCEPT AS SPECIFICALLY DEFINED WITHIN THE SCOPE OF WORK FOR THIS CONTRACT. WHERE WORK AFFECTS OR IS AFFECTED BY THE EXISTING UTILITIES, THE WORK SHALL BE COORDINATED WITH THE UTILITY COMPANY AND/OR OWNER. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH IOWA COMMUNICATIONS NETWORK.
6. UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE CONTRACTOR OF THE STARTING CONSTRUCTION DATE.

#### CONDUIT

7. THE CONTRACTOR SHALL BORE ALL CROSSINGS BENEATH ROADWAYS, STREETS, OTHER PAVED SURFACES, RAILROAD, OR OTHER STRUCTURE. DEPTH OF ALL BORES SHALL BE A MINIMUM OF 48 INCHES UNLESS OTHERWISE SPECIFIED IN PLANS.
8. ALL CONDUIT SHALL BE HDPE CONDUIT.
9. THE MINIMUM BENDING RADIUS OF HDPE CONDUIT SHALL BE THE CONDUIT MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM BENDING RADIUS.

#### CONSTRUCTION

10. ANY AND ALL IMPROVEMENTS SUCH AS ASPHALT OR CONCRETE PAVEMENTS, CURBS, GUTTERS, WALKS, DRAINAGE DITCHES, CULVERTS, DRAIN TILES, EMBANKMENTS, SHRUBS, TREES, GRASS, SOD, ETC., IF DAMAGED, SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS (OR BETTER) AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE IOWA COMMUNICATIONS NETWORK.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY EXISTING CONDUIT, CONDUCTORS, OR OTHER FACILITIES DAMAGED DURING CONSTRUCTION. ALL EXISTING INFRASTRUCTURE REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE REPLACED IN KIND BY THE CONTRACTOR, WITH NO ADDITIONAL COMPENSATION.
12. MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE SECTIONS INCLUDING BUT NOT LIMITED TO ARTICLES 2523 AND 2525, OF THE IOWA DEPARTMENT OF TRANSPORTATION ENGLISH STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015 PLUS CURRENT SUPPLEMENT SPECIFICATIONS AND SPECIAL PROVISIONS.

### GENERAL NOTES

#### CONSTRUCTION (CONTINUED)

13. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREA(S) WILL BE SUBJECT TO THE APPROVAL OF THE RESIDENT CONSTRUCTION ENGINEER.
14. THE TOP SIX (6) INCHES OF THE DISTURBED AREAS SHALL BE FREE OF ROCK AND DEBRIS AND SHALL BE FOR THE ESTABLISHMENT OF VEGETATION, SUBJECT TO THE APPROVAL OF THE ENGINEER.
15. THE CONTRACTOR IS EXPECTED TO HAVE MATERIALS, EQUIPMENT, AND LABOR AVAILABLE ON A DAILY BASIS TO INSTALL AND MAINTAIN EROSION CONTROL FEATURES ON THE PROJECT. THIS MAY INVOLVE SEEDING, SILT FENCE, ROCK DITCH CHECKS, SILT BASINS, OR SILT DIKES.
16. NO OPEN HOLES OR MOUNDS OF DIRT SHALL BE LEFT UNPROTECTED DURING NON-WORKING HOURS.

#### FIBER

17. CONTRACTOR SHALL PLACE TAGS ON ALL FIBER OPTIC CABLE IDENTIFYING THE OWNER AND DIRECTION OF THE CABLE AT EACH TERMINATION POINT AND IN EVERY HANDHOLE AND SPLICE VAULT. TAGS SHALL CLEARLY IDENTIFY WHERE EACH INDIVIDUAL CABLE RUN ORIGINATED AND WHERE IT ENDS (HANDHOLE TO HANDHOLE, HANDHOLE TO CABINET, HANDHOLE TO BUILDING, ETC.) FOR FIBER INSTALLATIONS WITH JOINT DEPARTMENT OF TRANSPORTATION/OTHER AGENCY (OR ENTITY) USE WHERE THE FIBER WILL BE OWNED BY THE OTHER AGENCY (OR ENTITY), INSTALL TYPICAL IDENTIFIERS AND/OR MARKINGS FOR THAT FIBER.
18. IN THE EVENT IT IS SUSPECTED THAT CABLE DAMAGE HAS OCCURRED PRIOR TO FINAL ACCEPTANCE, CONTRACTOR SHALL PERFORM OTDR TESTING OF ALL FIBER STRANDS WITHIN SEVENTY TWO (72) HOURS AFTER NOTIFICATION AND SUBMIT A COPY OF THE OTDR TEST TO THE ENGINEER UPON COMPLETION.
19. CONTRACTOR SHALL REPLACE OR REPAIR, AS DIRECTED BY THE ENGINEER, ANY DAMAGE OCCURRING BEFORE FINAL ACCEPTANCE AT NO ADDITIONAL COST TO THE IOWA COMMUNICATIONS NETWORK. THE CONTRACTOR WILL NOT BE GRANTED AN EXTENSION OF TIME FOR DELAYS CAUSED BY REPLACING OR REPAIRING THE INSTALLED CABLE.
20. CONTRACTOR SHALL REPAIR OR REPLACE ANY DEFECT IN THE INSTALLED CABLE AT NO ADDITIONAL COST TO THE IOWA COMMUNICATIONS NETWORK. CONSIDER A DEFECT TO BE ANY CONDITION RESULTING IN A NEGATIVE OR ADVERSE EFFECT ON CURRENT OR FUTURE OPERATIONS OF THE COMPLETED FIBER OPTIC COMMUNICATION SYSTEM AS DETERMINED BY THE ENGINEER.
21. ANY EXISTING WIRING THAT IS DAMAGED DURING FIBER OPTIC CABLE INSTALLTION SHALL BE REPLACED OR REPAIRED, AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE IOWA COMMUNICATIONS NETWORK.
22. CONTRACTOR SHALL INSTALL WARNING TAPE OVER ALL PLOWED CONDUIT AND DIRECT BURIED FIBER CABLES.
23. WARNING MARKERS FOR FIBER OPTIC CABLE SHOULD TYPICALLY BE PLACED:
  - AT EVERY CHANGE OF DIRECTION OF FIBER CABLE ROUTE.
  - AT INTERSECTIONS OR ROAD CROSSINGS (EACH SIDE).
  - AT BEGINNING AND END OF BORES WHEN TRANSITIONING FROM DIRECT BURIED
  - APPROXIMATELY EVERY 1 / 4 MILE ALONG FIBER ROUTE OR MORE IF REQUIRED BY LOCAL ROW ENTITY (PLACED AT EDGE OF ROW).
  - AT HANDHOLES

#### ICN STANDARDS:

CONTRACTOR SHALL ADHERE TO ICN STANDARD INSTALLATION DRAWING TYPICALS, PROJECT DETAILS, AND STANDARDS WITHIN THE SCOPE OF WORK BID DOCUMENT.

### GENERAL NOTES

#### CITY OF WEST DES MOINES

24. PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE MUTCD. SUBMIT LANE CLOSURE LAYOUTS AND TRAFFIC CONTROL PLANS TO THE CITY OF WEST DES MOINES PUBLIC WORKS (TRAFFIC DIVISION 222-3480) AT LEAST 48 HOURS PRIOR TO CLOSING ANY TRAFFIC LANES.
  25. OBTAIN A WEST DES MOINES STREET EXCAVATION PERMIT (PUBLIC WORKS 222-3480) PRIOR TO PERFORMING ANY EXCAVATION OR TUNNELING WORK ON OR UNDER CITY STREETS, ROW OR PUBLIC PLACES IN ACCORDANCE WITH ARTICLE 7-1B OF THE WEST DES MOINES CITY CODE.
  26. CONTACT THE CITY OF WEST DES MOINES PUBLIC WORKS SEWER DIVISION (515-222-3480) AT LEAST 48 HOURS PRIOR TO STARTING ANY UTILITY WORK FOR CITY SANITARY AND STORM SEWER LOCATE INFORMATION.
  27. CONTACT THE WEST DES MOINES WATER TREATMENT PLANT (515-222-3465) AT LEAST 48 HOURS PRIOR TO STARTING ANY UTILITY WORK.
- SEE CITY OF W. DES MOINES WEBSITE FOR UTILITY INSTALLATION REQUIREMENTS. "GUIDELINES FOR PLACEMENT OF UTILITIES" INCLUDED AS REFERENCE.

### GENERAL NOTES

ENGLISH

ICN

DESIGN TEAM Olsson Associates

DALLAS - POLK

COUNTY

OSP LOG NUMBER

77163405 CLIVE IOWA LOTTERY DIVERSITY

SHEET NUMBER

C.02

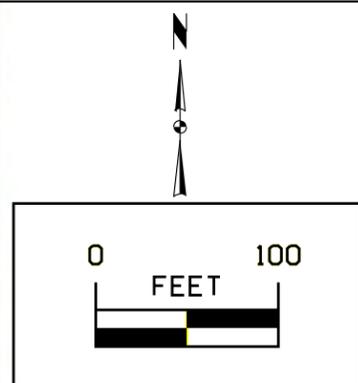
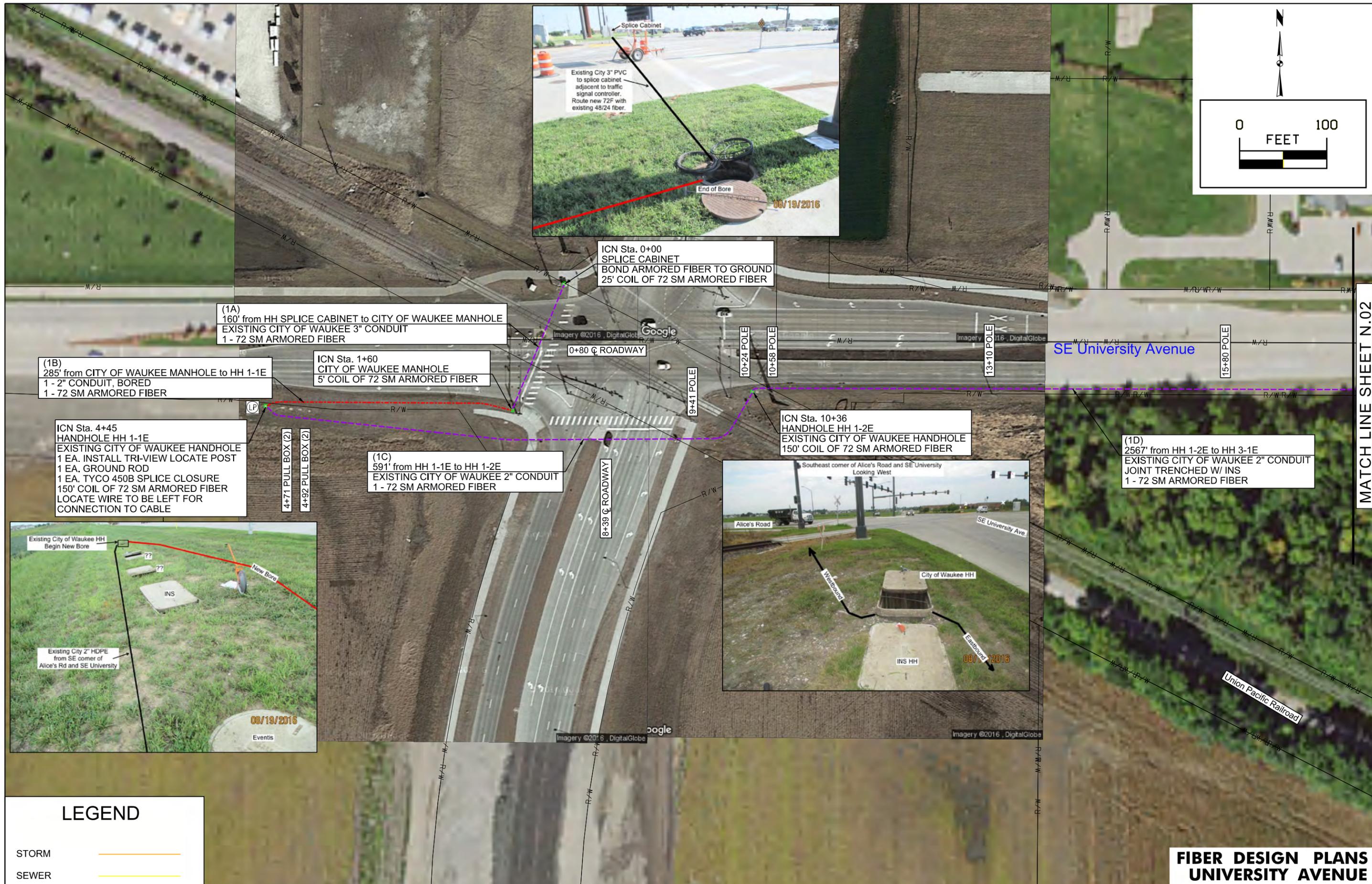
## UTILITY CONTACTS

Company	Name	Street	City, State, Zip	Phone
CENTURYLINK	TIM WHITE	925 HIGH STREET	DES MOINES, IA 50309	515-286-6606
CITY OF CLIVE	JIM DEWITT	2123 NW 111TH STREET	CLIVE, IA 50325	515-223-6231
CITY OF CLIVE PUBLIC WORKS	JEFF MAY	2123 NW 111TH STREET	CLIVE, IA 50325	515-278-1312
CITY OF WAUKEE	TIM ROYER	805 UNIVERSITY AVENUE	WAUKEE, IA 50263	515-978-7920
CITY OF WEST DES MOINES	BRIAN HEMESATH	4200 MILLS CIVIC PARKWAY, SUITE 2D PO BOX 65320	WEST DES MOINES, IA 50265	515-222-3480
DIRECTTV				877-916-5137
EXEDE SATELLITE INTERNET				855-627-2553
HICKORY TECH		114 1ST AVENUE	ROCK RAPIDS, IA 51246	844-362-1884
IOWA COMMUNICATIONS NETWORK (LOCAL FIBER OPTICS)	TIM FLICKINGER	400 E 14TH STREET, GRIMES STATE OFFICE BLDG	DES MOINES, IA, 50319	515-725-4699
IOWA DEPARTMENT OF TRANSPORTATION (UTILITY RELOCATION COORDINATOR)	JEFFRY N. MCCOLLOUGH			515-239-1373
IOWA NETWORK SERVICES		7760 OFFICE PLAZA DRIVE SOUTH	WEST DES MOINES, IA 50266	515-830-0110
MEDIACOM		2205 INGERSOLL AVENUE	DES MOINES, IA, 50312	1-866-755-2225
MIDAMERICAN ENERGY			DES MOINES, IA, 50306	888-427-5632
PRAIRIE INET				800-894-3868
WEST DES MOINES WATER WORKS	DIANA WILSON	4200 MILLS CIVIC PARKWAY, SUITE 1D	WEST DES MOINES, IA 50265	515-222-3510
WINDSTREAM		3620 SW 61ST STREET SUITE 300	DES MOINES, IA 50321	515-558-8516

NOTE 1: THIS LIST IS NOT ALL-INCLUSIVE. CONTRACTOR IS RESPONSIBLE TO REQUEST LOCATES OF ALL UTILITIES, AND COORDINATE IF NEEDED, PRIOR TO COMMENCING WORK. 72 HOUR ADVANCE NOTICE IS REQUIRED TO NOTIFY ALL UTILITY COMPANIES.

NOTE 2: NEW INSTALLATION RUNNING LINE MAY BE ADJUSTED BASED ON UTILITY LOCATES OF EXISTING FACILITIES.

## UTILITY CONTACTS

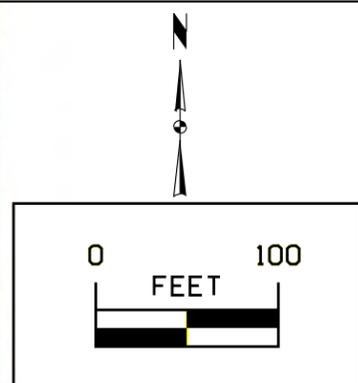
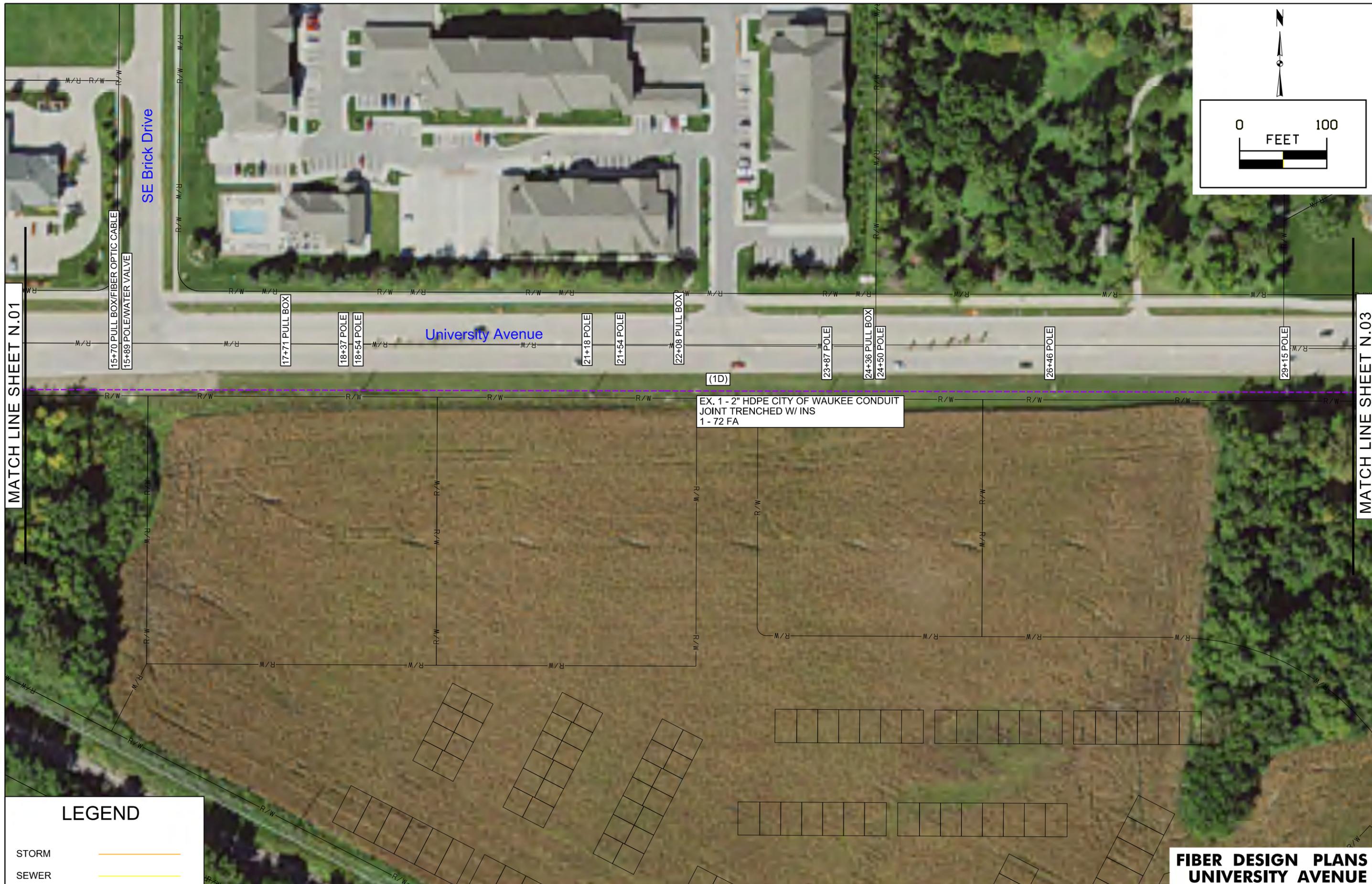


MATCH LINE SHEET N.02

**LEGEND**

- STORM ———
- SEWER ———

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



MATCH LINE SHEET N.01

MATCH LINE SHEET N.03

15+70 PULL BOX/FIBER OPTIC CABLE  
15+89 POLE/WATER VALVE

17+71 PULL BOX

18+37 POLE

18+54 POLE

21+18 POLE

21+54 POLE

22+08 PULL BOX

23+87 POLE

24+36 PULL BOX

24+50 POLE

26+46 POLE

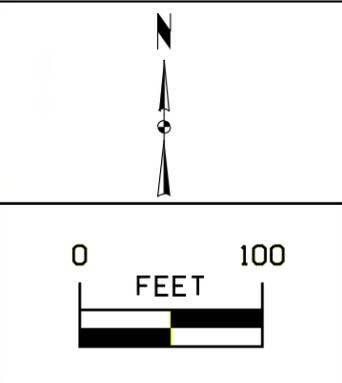
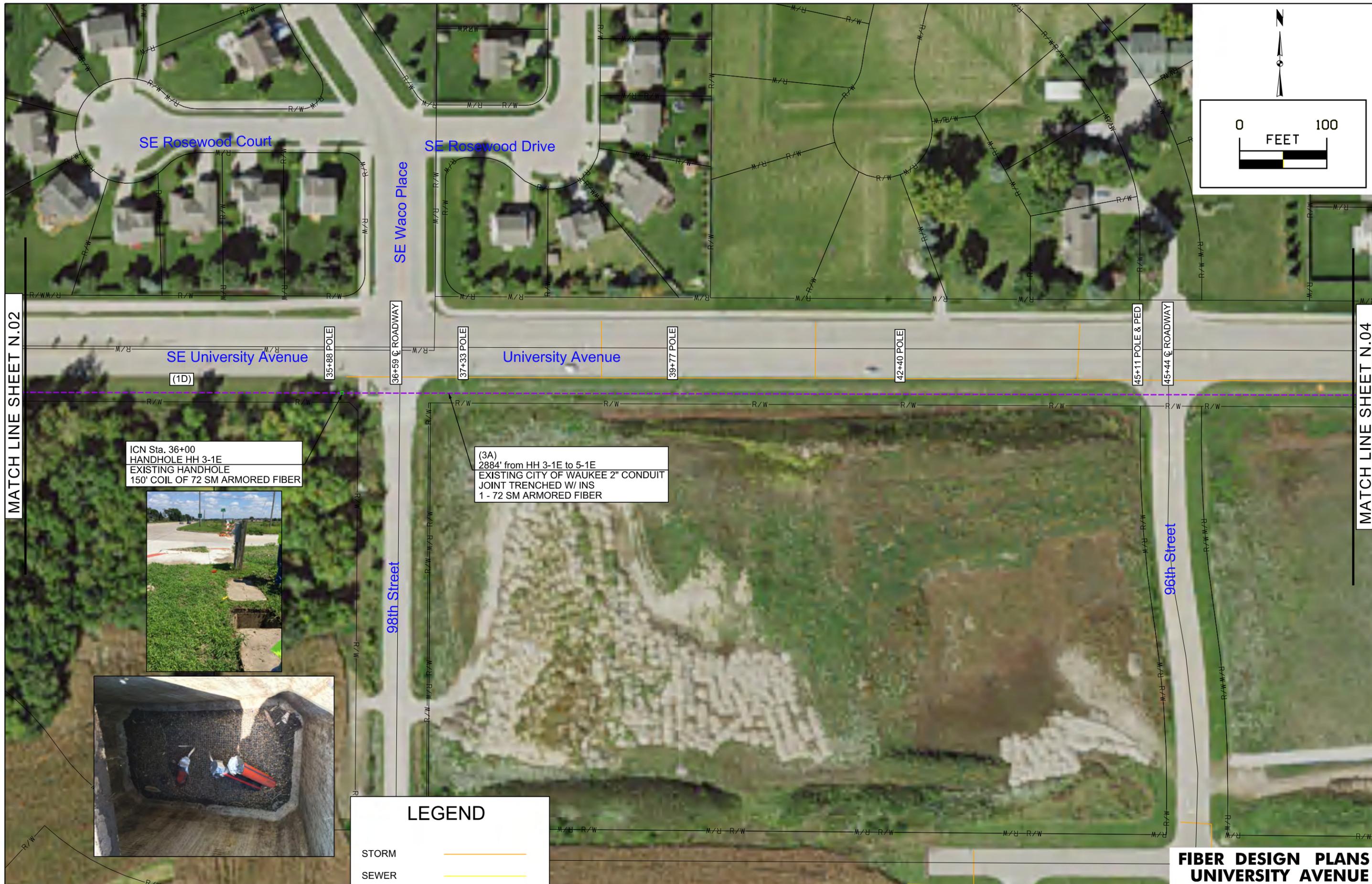
29+15 POLE

(1D)

EX. 1 - 2" HDPE CITY OF WAUKEE CONDUIT  
JOINT TRENCHED W/ INS  
1 - 72 FA

LEGEND	
STORM	
SEWER	

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



ICN Sta. 36+00  
HANDHOLE HH 3-1E  
EXISTING HANDHOLE  
150' COIL OF 72 SM ARMORED FIBER

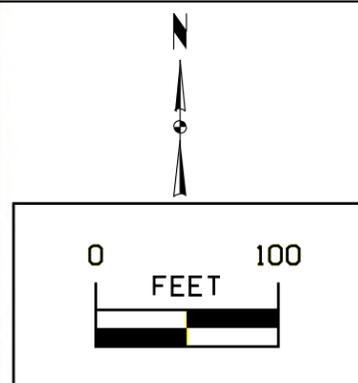
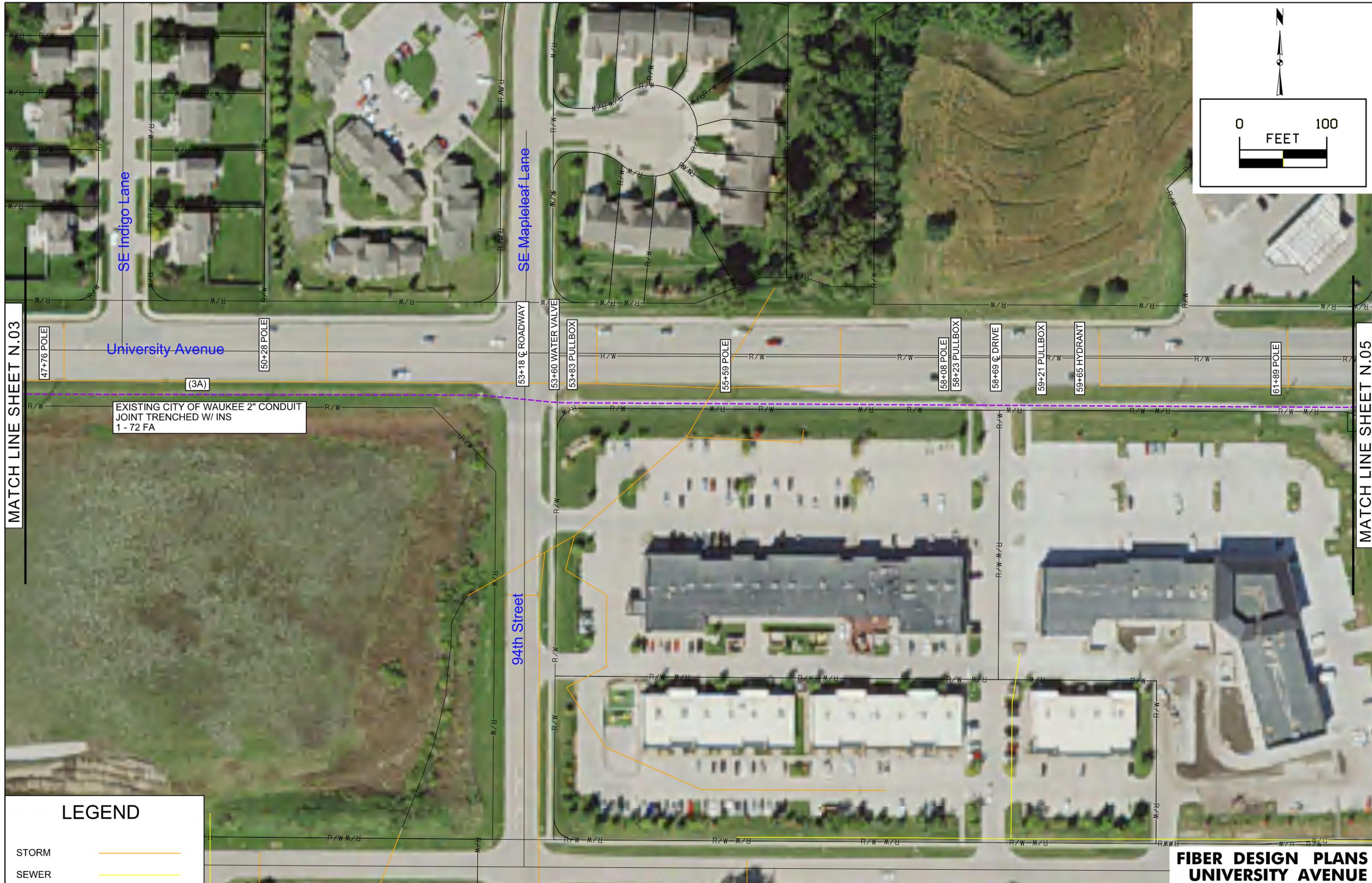


(3A)  
2884' from HH 3-1E to 5-1E  
EXISTING CITY OF WAUKEE 2" CONDUIT  
JOINT TRENCHED W/ INS  
1 - 72 SM ARMORED FIBER



LEGEND	
STORM	
SEWER	

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



MATCH LINE SHEET N.03

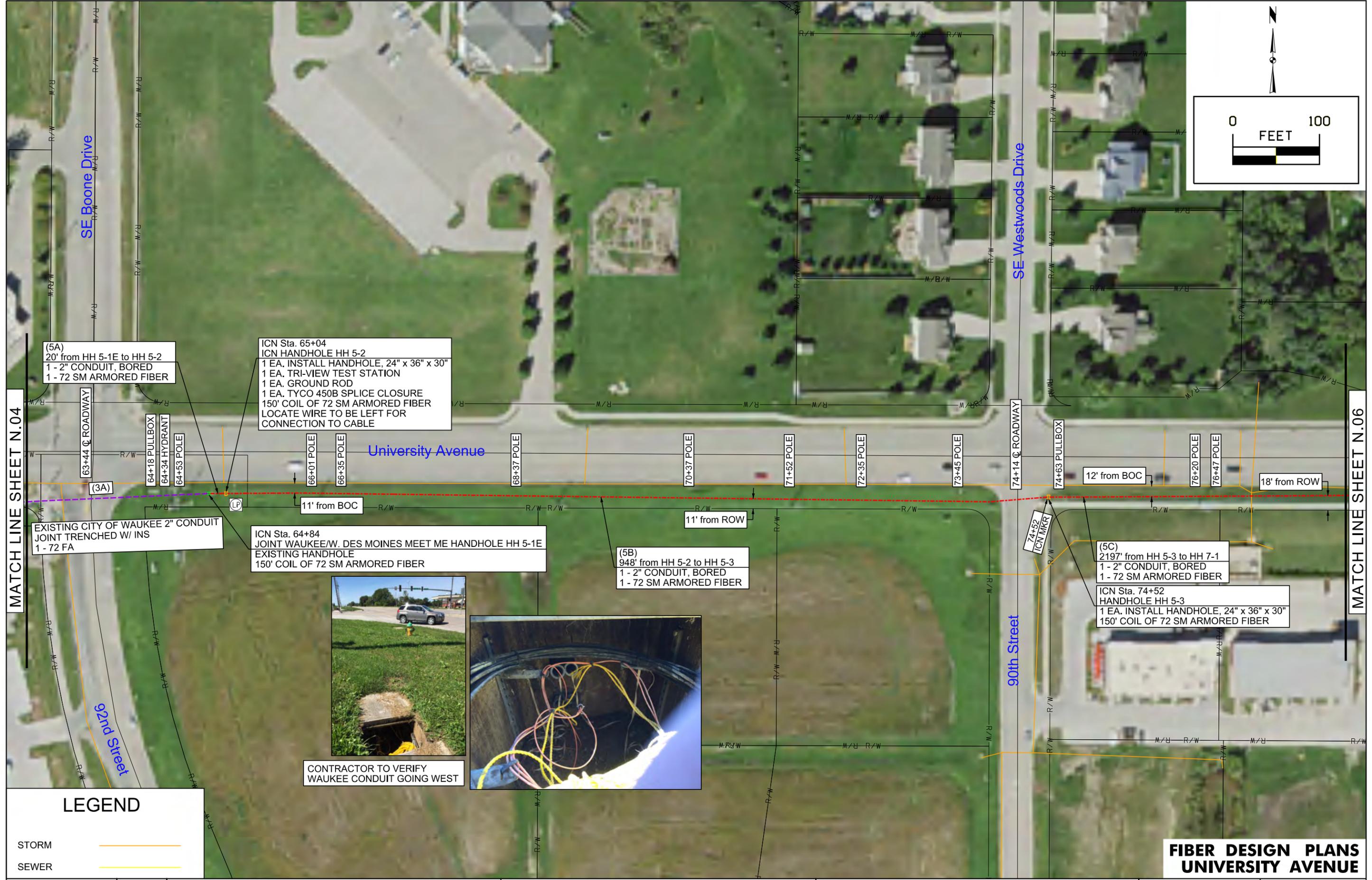
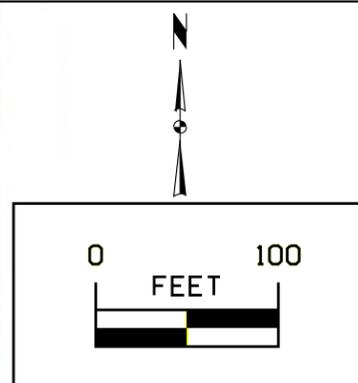
MATCH LINE SHEET N.05

EXISTING CITY OF WAUKEE 2" CONDUIT  
JOINT TRENCHED W/ INS  
1 - 72 FA

**LEGEND**

- STORM
- SEWER

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



MATCH LINE SHEET N.04

MATCH LINE SHEET N.06

(5A)  
20' from HH 5-1E to HH 5-2  
1 - 2" CONDUIT, BORED  
1 - 72 SM ARMORED FIBER

ICN Sta. 65+04  
ICN HANDHOLE HH 5-2  
1 EA. INSTALL HANDHOLE, 24" x 36" x 30"  
1 EA. TRI-VIEW TEST STATION  
1 EA. GROUND ROD  
1 EA. TYCO 450B SPLICE CLOSURE  
150' COIL OF 72 SM ARMORED FIBER  
LOCATE WIRE TO BE LEFT FOR CONNECTION TO CABLE

(3A)  
EXISTING CITY OF WAUKEE 2" CONDUIT  
JOINT TRENCHED W/ INS  
1 - 72 FA

ICN Sta. 64+84  
JOINT WAUKEE/W. DES MOINES MEET ME HANDHOLE HH 5-1E  
EXISTING HANDHOLE  
150' COIL OF 72 SM ARMORED FIBER

(5B)  
948' from HH 5-2 to HH 5-3  
1 - 2" CONDUIT, BORED  
1 - 72 SM ARMORED FIBER

(5C)  
2197' from HH 5-3 to HH 7-1  
1 - 2" CONDUIT, BORED  
1 - 72 SM ARMORED FIBER

ICN Sta. 74+52  
HANDHOLE HH 5-3  
1 EA. INSTALL HANDHOLE, 24" x 36" x 30"  
150' COIL OF 72 SM ARMORED FIBER

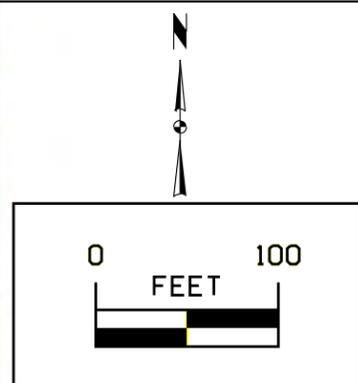


CONTRACTOR TO VERIFY WAUKEE CONDUIT GOING WEST

**LEGEND**

- STORM —
- SEWER —

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



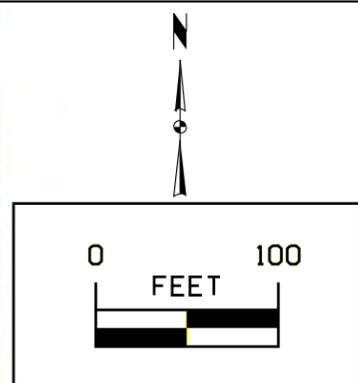
MATCH LINE SHEET N.05

MATCH LINE SHEET N.07

**LEGEND**

- STORM
- SEWER

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



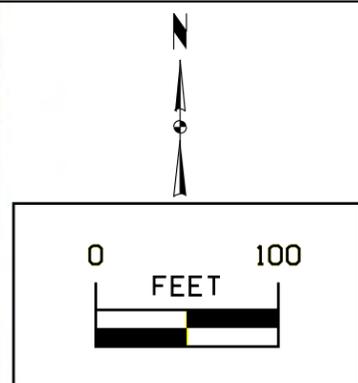
ICN Sta. 96+49  
HANDHOLE HH 7-1  
1 EA. INSTALL HANDHOLE, 24" x 36" x 30"  
150' COIL OF 72 SM ARMORED FIBER

(7A)  
1932' from HH 7-1 to HH 8-1  
1 - 2" CONDUIT, BORED  
1 - 72 SM ARMORED FIBER

**LEGEND**

- STORM ———
- SEWER ———

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



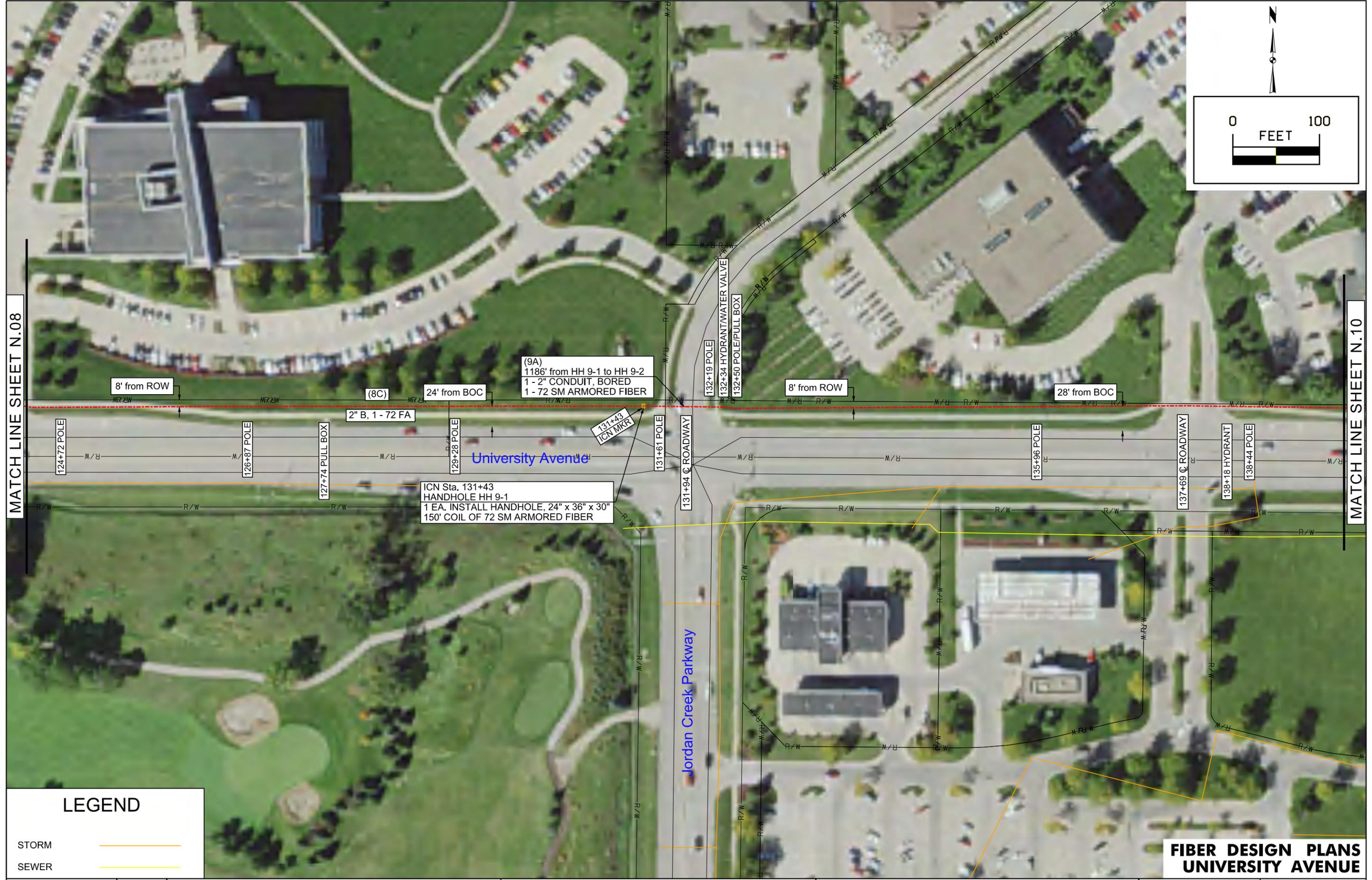
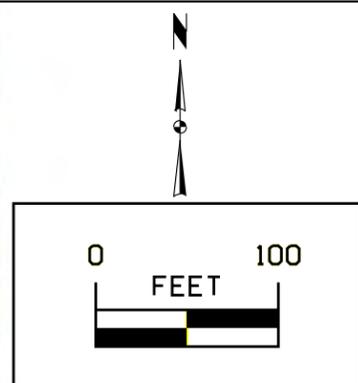
MATCH LINE SHEET N.07

MATCH LINE SHEET N.09

**LEGEND**

- STORM
- SEWER

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**

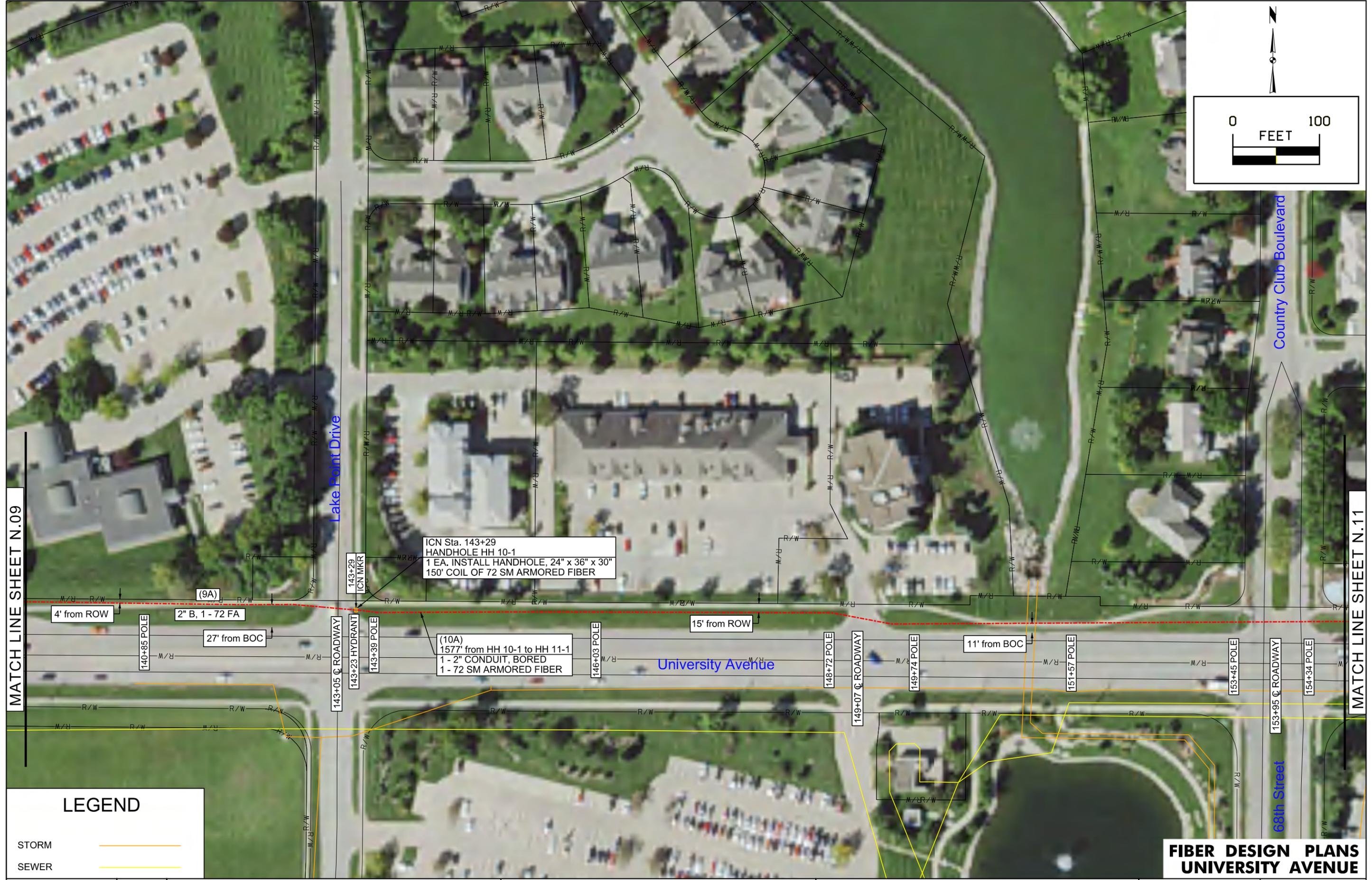
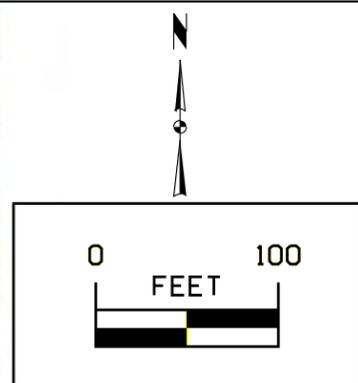


MATCH LINE SHEET N.08

MATCH LINE SHEET N.10

LEGEND	
STORM	
SEWER	

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**

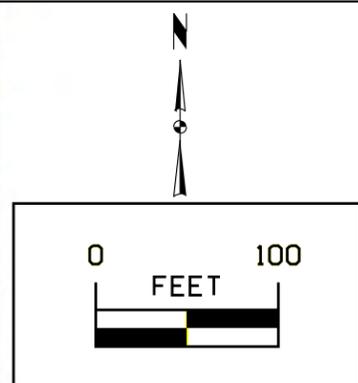


MATCH LINE SHEET N.09

MATCH LINE SHEET N.11

LEGEND	
STORM	
SEWER	

**FIBER DESIGN PLANS  
UNIVERSITY AVENUE**



ICN Sta. 168+07  
 BUILDING ENTRANCE  
 LEAVE 25' COIL OF 36 SM DIELECTRIC  
 FIBER FOR SPLICING AT FDP  
 (INSTALLED BY SPLICER)  
 GROUND FIBER AT BUILDING  
 GROUND. COORINATE WITH ICN AND  
 BUILDING OWNER.  
 SEE ATTACHED SHEETS FOR  
 BUILDING ENTRANCE DETAILS.

Iowa Lottery Headquarters  
 13001 University Avenue

29' from BOC

39' from ROW

(11A)  
 901' from HH 11-1 to BUILDING ENTRANCE  
 1 - 2" CONDUIT, BORED  
 1 - 36 SM DIELECTRIC  
 1 - #12 TRACER WIRE

SEE DETAILED ENGR PRINTS 1-7  
 FOR ENTRANCE TO LOTTERY  
 (Sta. 0+00 ON PRINTS = Sta. 159+06 ON N.11)

159+17 UTILITY

15' from ROW

(10A)

20' from BOC

2" B, 1 - 72 FA

157+09 POLE

158+91 PULL BOX

ICN Sta. 159+06  
 HANDHOLE HH 11-1  
 1 EA. INSTALL HANDHOLE, 24" x 36" x 30"  
 1 EA. INSTALL HIDEOUT LOCATE POST  
 1 EA. TYCO 450B SPLICE CLOSURE  
 1 EA. GROUND ROD  
 150' COIL OF 72 SM ARMORED FIBER (WEST)  
 150' COIL OF 36 SM DIELECTRIC FIBER (NORTH)

University Avenue

MATCH LINE SHEET N.10

LEGEND

- STORM —
- SEWER —

FIBER DESIGN PLANS  
 UNIVERSITY AVENUE

Iowa Lottery Fiber Route  
13001 University Ave.  
Clive, Iowa 50325

Section 31  
T-79N R-25W

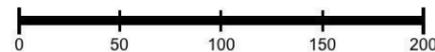


- 5+58 PIRT
- 5+09 Curve running line slightly west. Bore pit shall be on the WEST side of the slope so it can not be seen from parking lot.
- 4+98 Irrigation Valve
- Proposed running line 27 feet west of parking lot
- 4+46 Irrigation Valve

Contractor may adjust running line to avoid trees and utilities.

- Proposed running line 3-5 feet west of telephone ped and transformer.
- 3+03 Power transformer
- 2+83 Tel Ped

New HH 0+00  
24x36x30  
HH 18" north of walk  
(1) ICN 72F/A west  
(1) ICN 36F/D Lottery  
100 ft slack on both cables  
#12 Tracer to Lottery  
Pull Rope north & west  
Ground Rod  
Top of HH shall be FLUSH or slightly below the surrounding natural grade.



NOTE: HH 0+00 is 71 feet east of the driveway Center Line

- 0+01 TriView by bush
- 0+00 New ICN HH
- Irrigation Valve
- Windstream



0+00 LOTTERY = 159+06 ON UNIVERSITY AVENUE PRINTS

**IOWA COMMUNICATIONS NETWORK**  
STATE OFFICE BUILDING 400  
EAST 14TH STREET  
DES MOINES, IOWA 50319  
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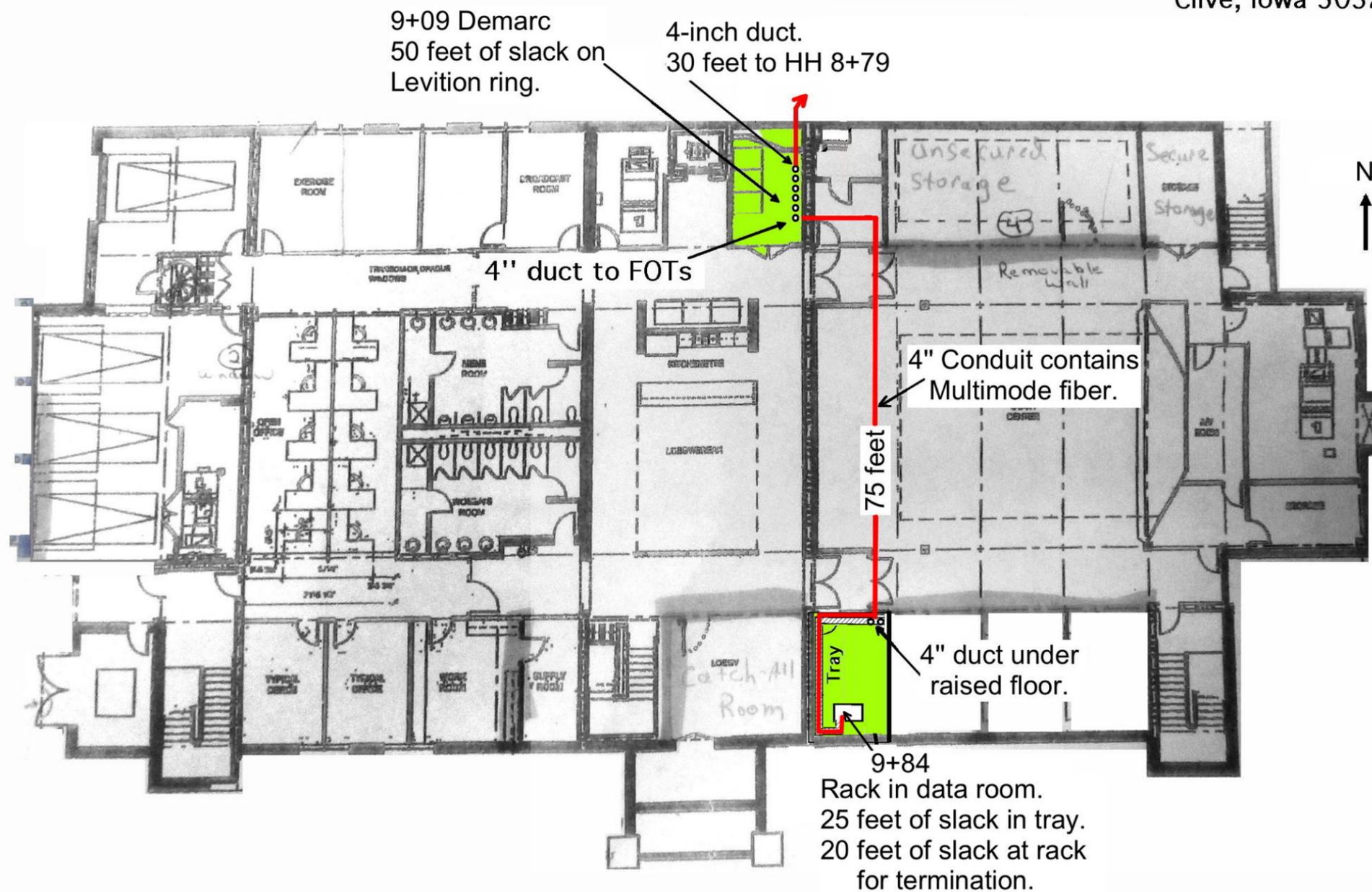
**Project Name:** Iowa Lottery Diversity  
**Address:** 13001 University Avenue  
**OSP Number:** 77163405 / Detailed Entry Prints

1	Preliminary Drawing	6-23-16	5	
2			6	
3			7	
4			8	

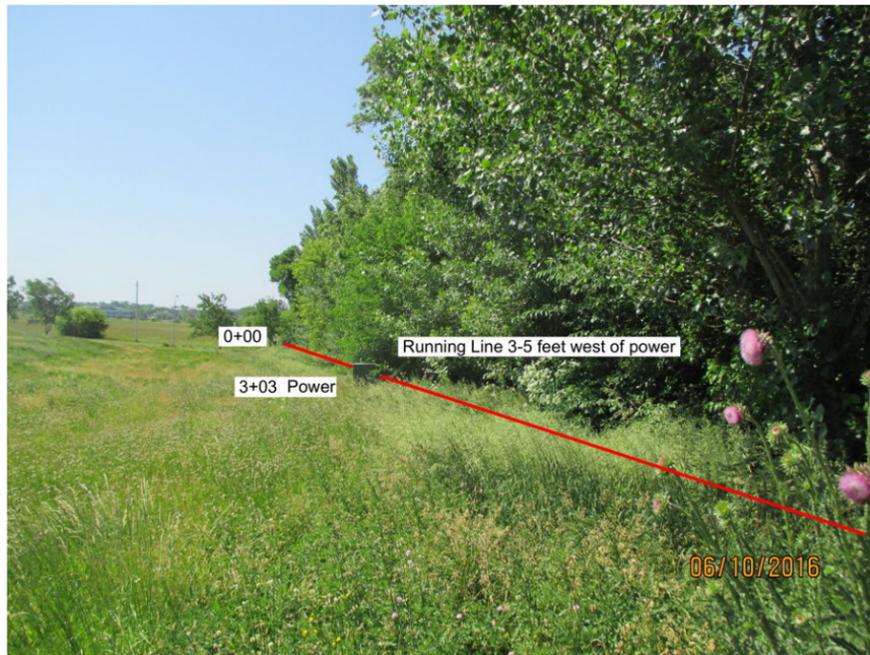
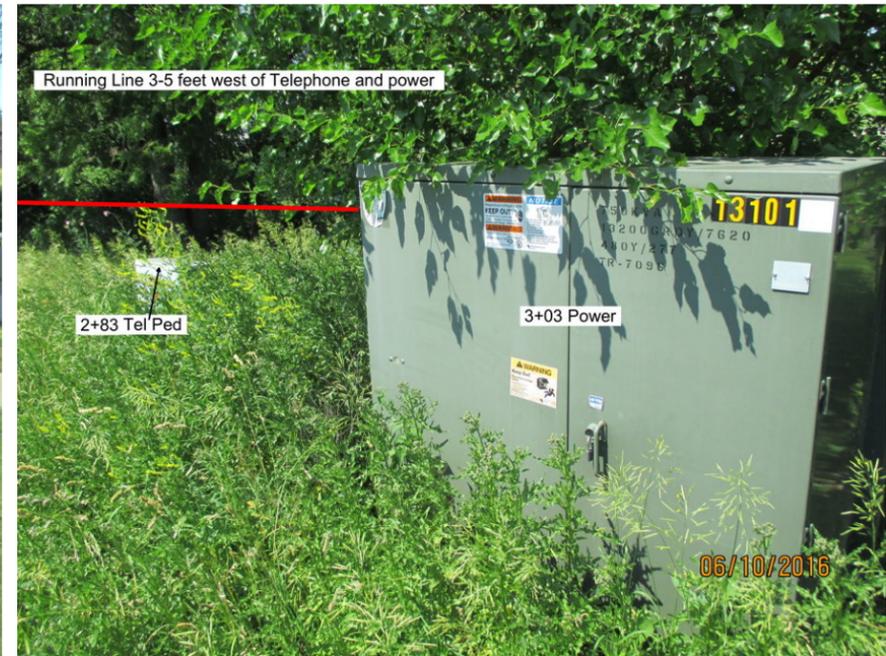
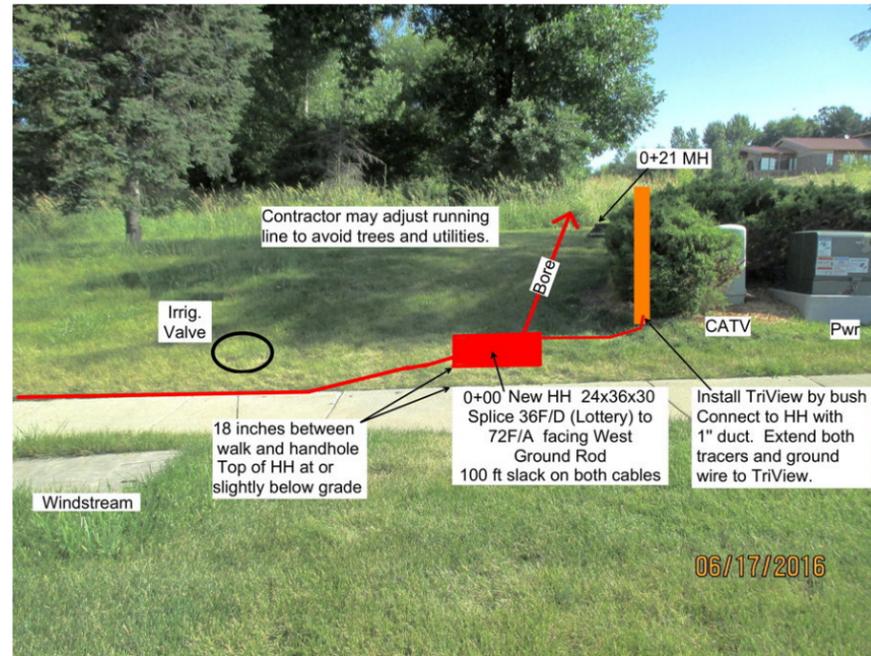
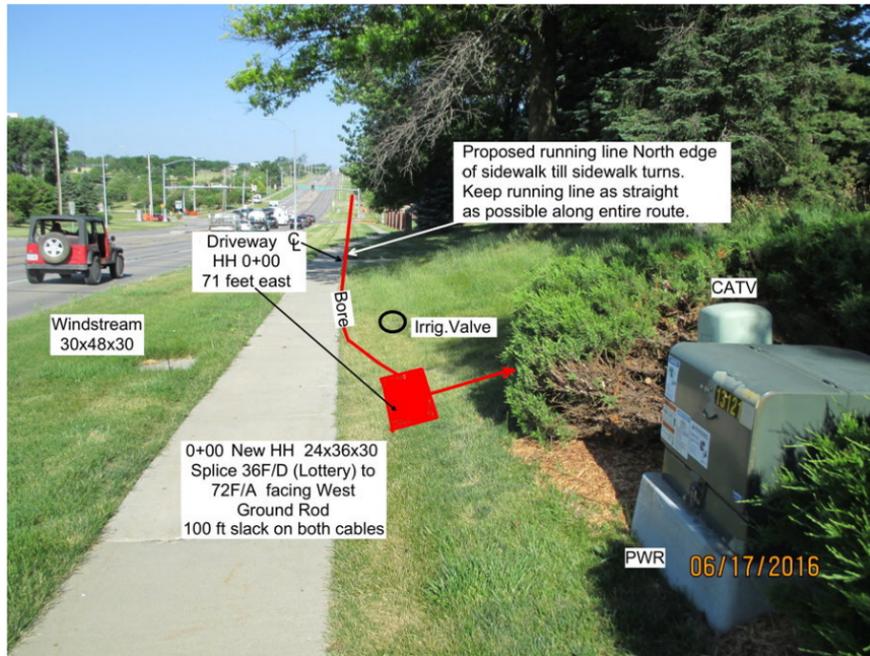


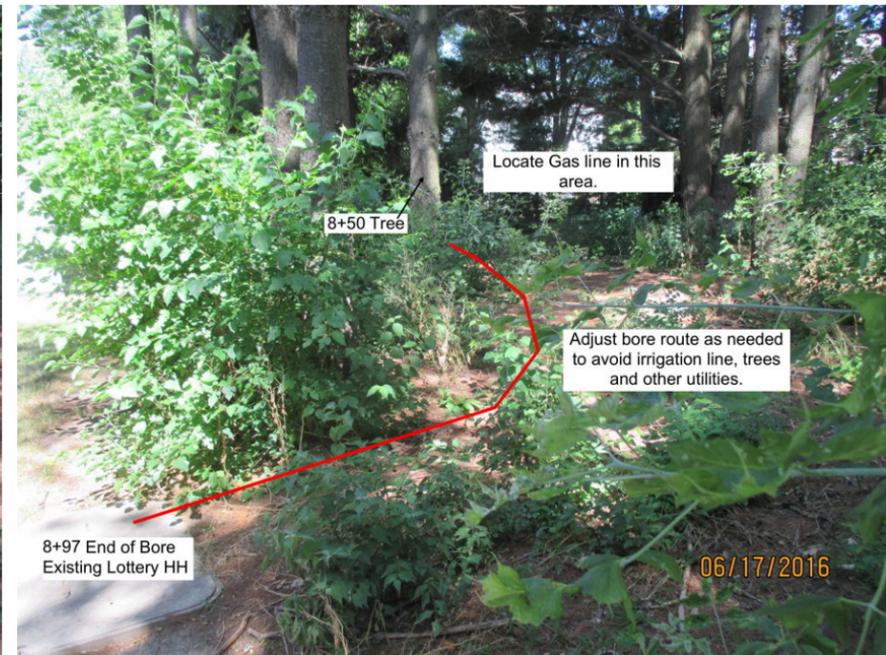
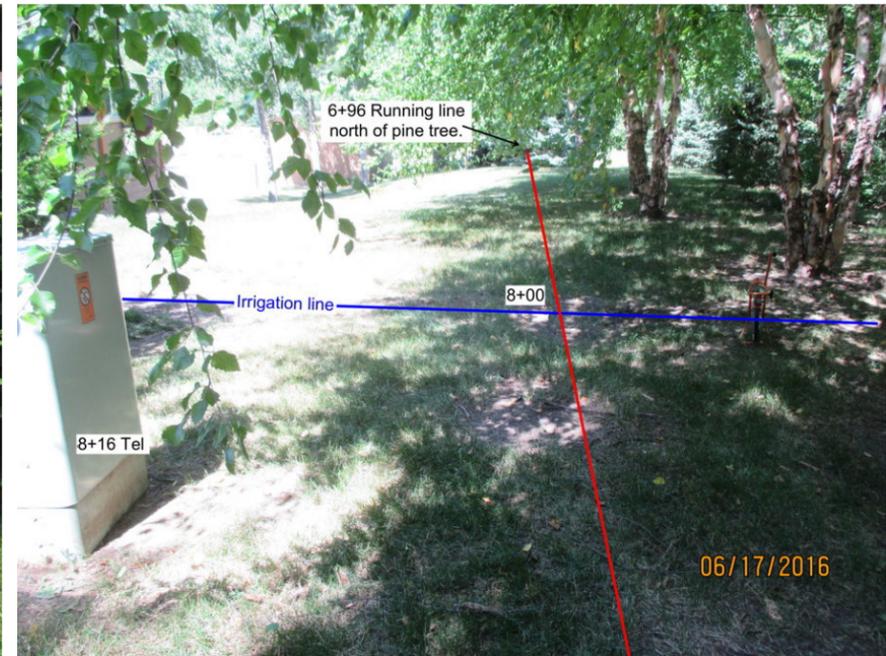
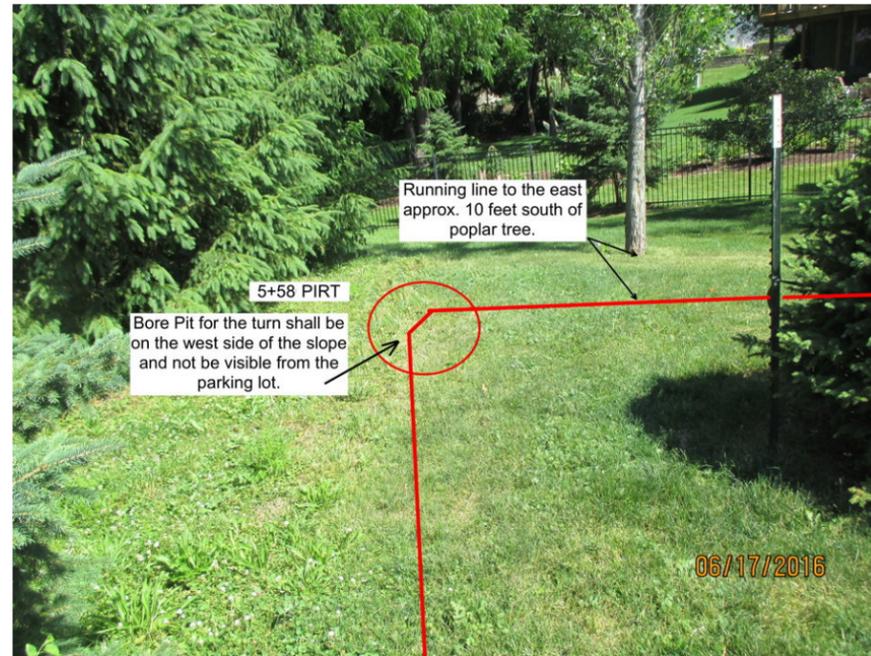
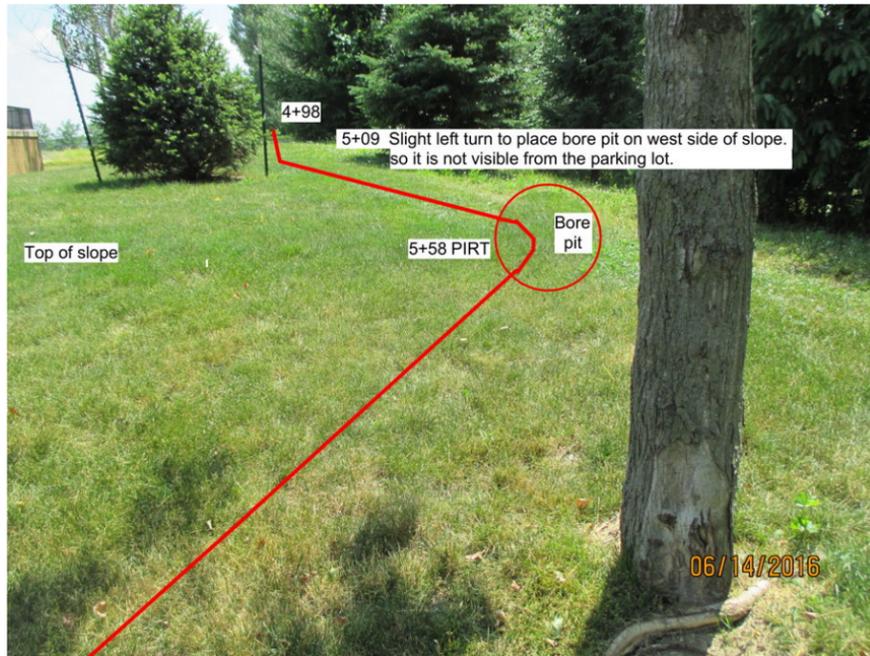
# Lottery Demarc and FOTs Room

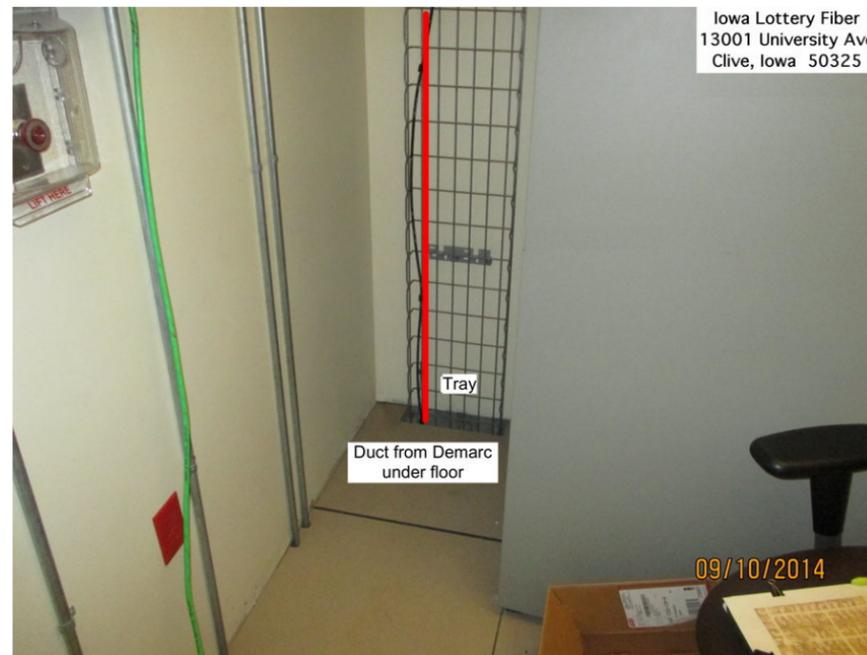
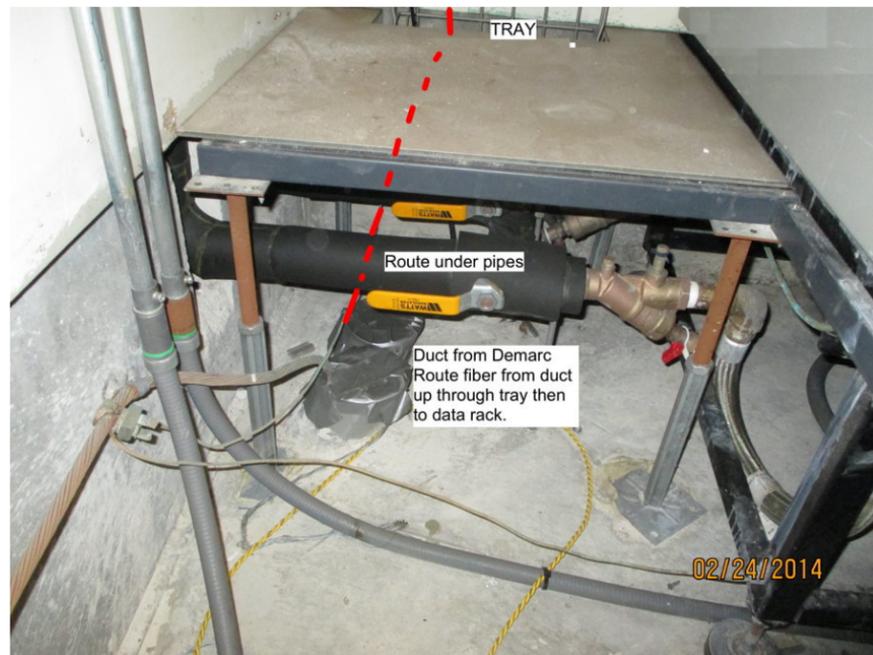
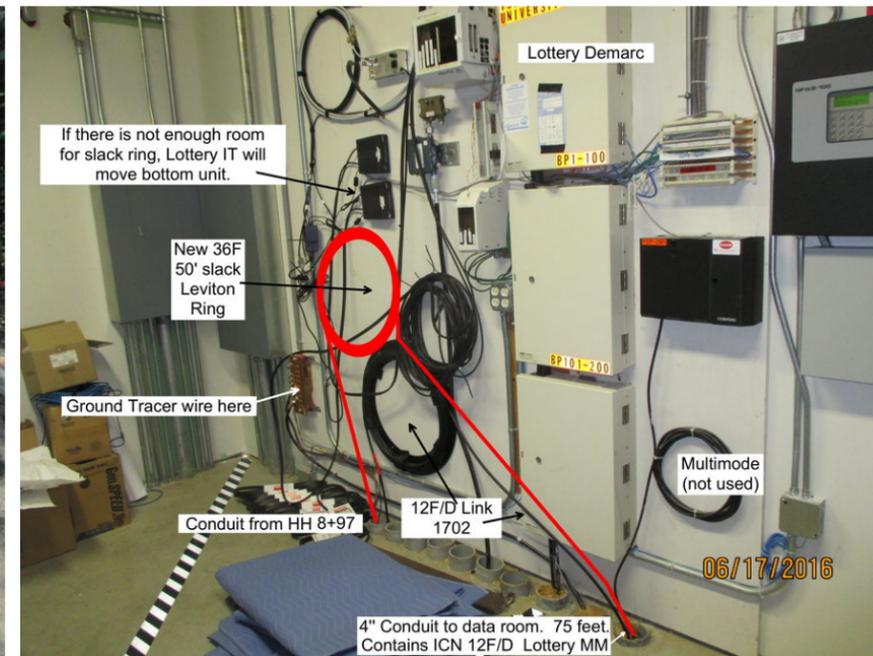
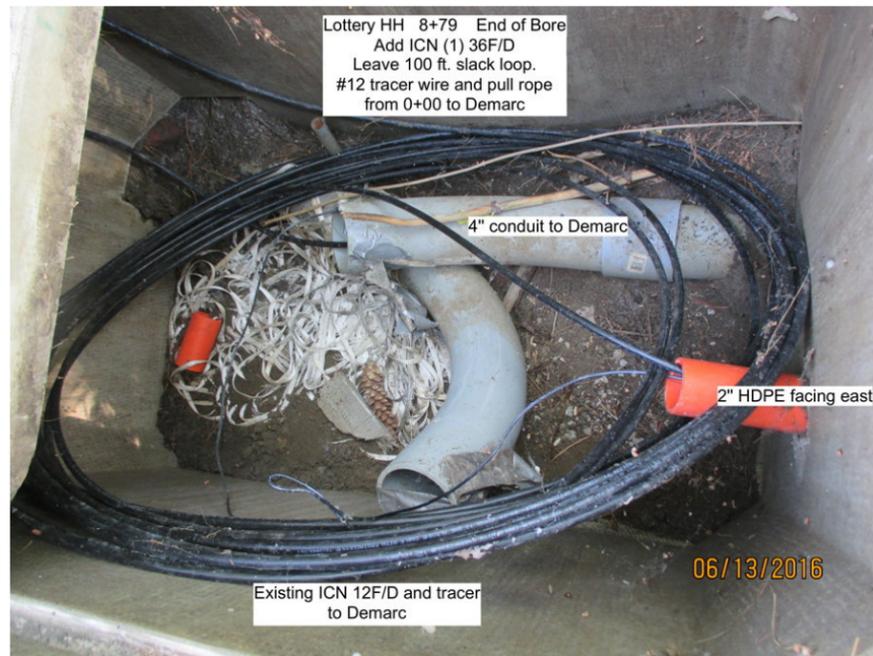
Iowa Lottery  
13001 University Ave.  
Clive, Iowa 50325

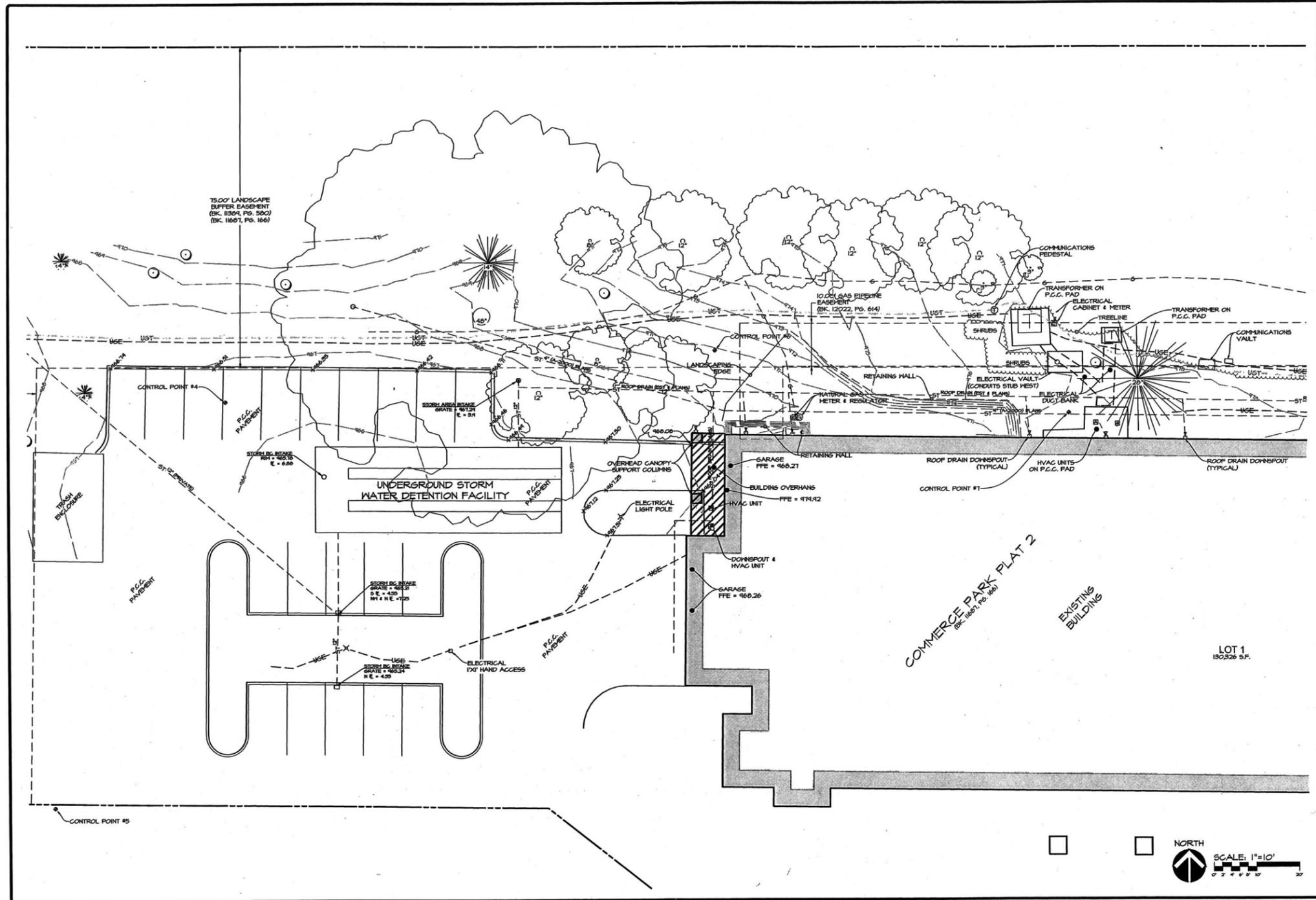


 <b>IOWA COMMUNICATIONS NETWORK</b> STATE OFFICE BUILDING 400 EAST 14TH STREET DES MOINES, IOWA 50319 ICN© 2015 COPY WITH PERMISSION	THIS DRAWING IS PROVIDED FOR GENERAL INFORMATION ONLY AND IS NOT TO BE USED TO DETERMINE PRECISE ICN PLACEMENT. CALL IOWA ONE CALL BEFORE ECAVATION. DIAL 811 OR 1-800-292-8989	<b>Project Name:</b> Iowa Lottery Diversity		1	Preliminary Drawing	6-23-16	5			
		<b>Address:</b> 13001 University Avenue		2				6		
		<b>OSP Number:</b> 77163405 / Detailed Entry Prints		3					7	
				4					8	
		SIZE: 11 17							Page 3 of 7	









**CEC**  
Civil Engineering Consultants, Inc.  
2400 86th Street, Unit 12, Des Moines, Iowa, 50322  
515.276.8884 · Fax: 515.276.7084 · mail@cecinc.com

DATE	REVISIONS	COMMENTS
JULY 01, 2014	1	
	2	
	3	
	4	
	5	
	6	

DATE OF SURVEY: JULY 02, 2014  
DESIGNED BY: JAG  
DRAWN BY: JAG

**IOWA LOTTERY AUTHORITY**  
CLIVE, IOWA  
TOPOGRAPHIC SURVEY - NE QUADRANT

SHEET  
**3**  
OF  
**3**  
E1214

**IOWA COMMUNICATIONS NETWORK**  
STATE OFFICE BUILDING 400  
EAST 14TH STREET  
DES MOINES, IOWA 50319  
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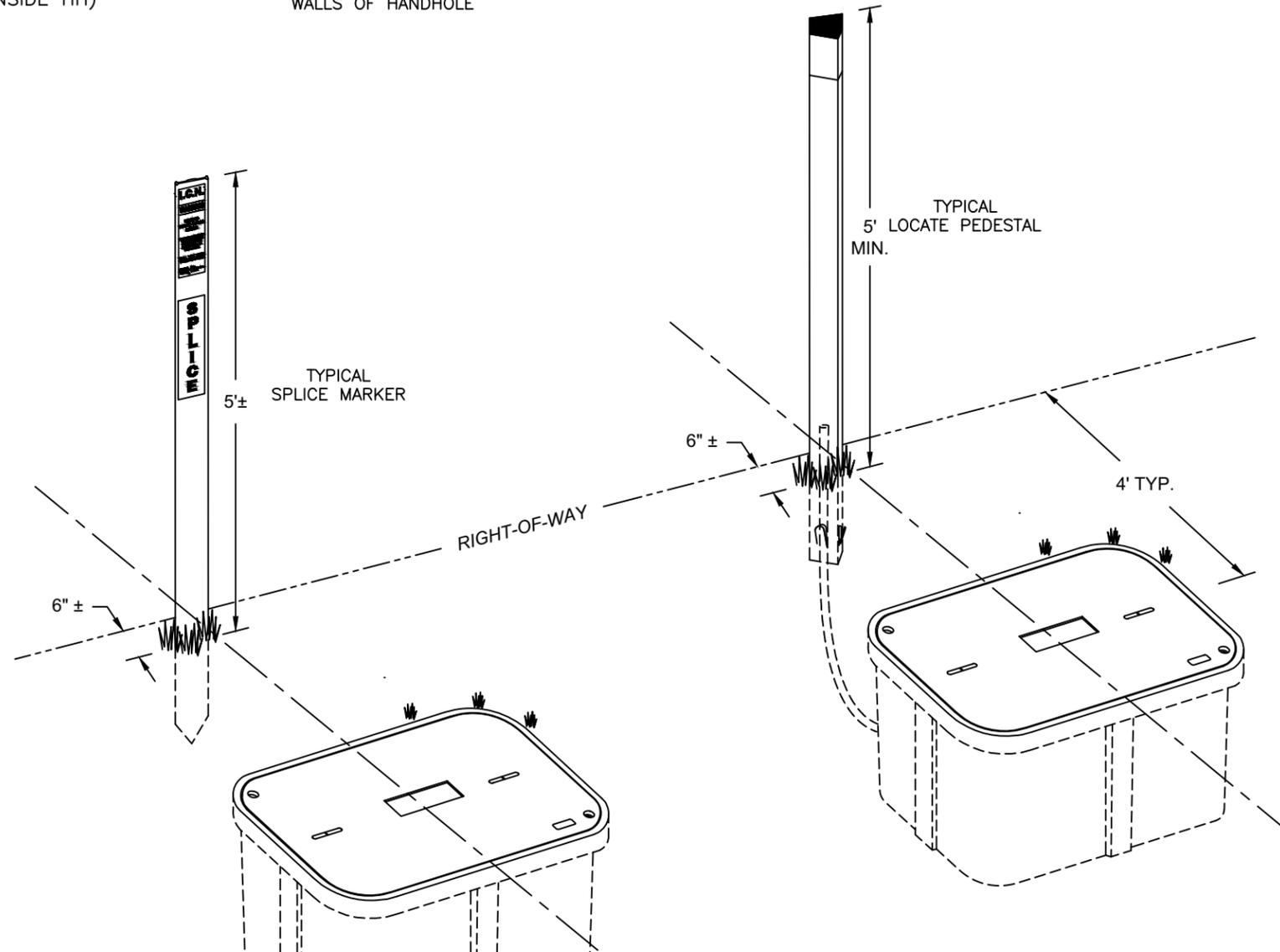
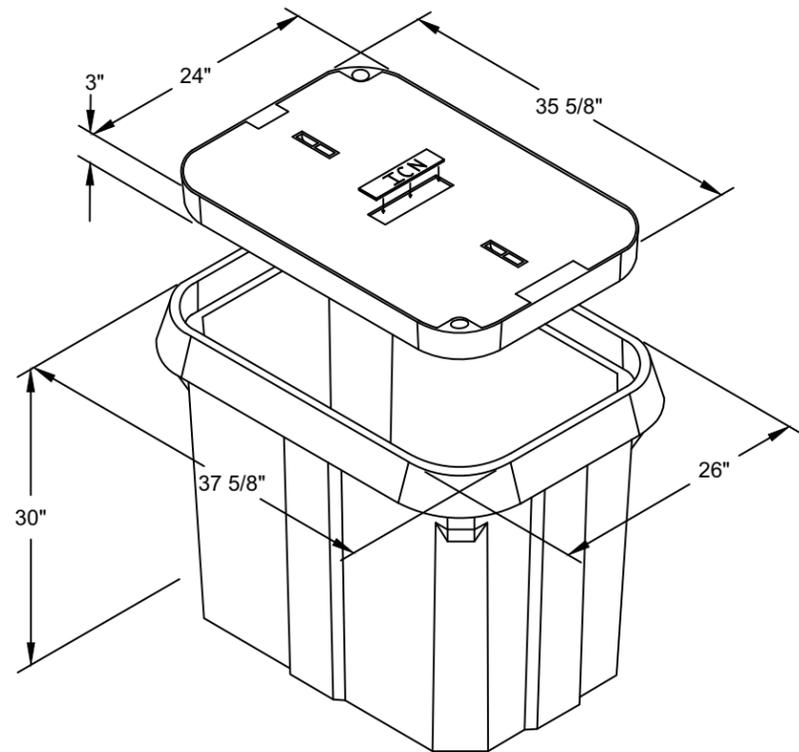
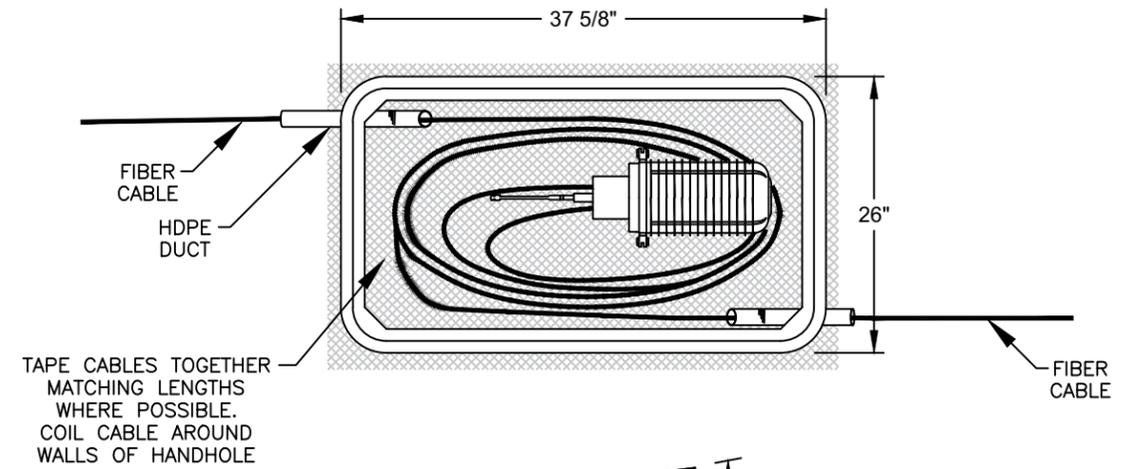
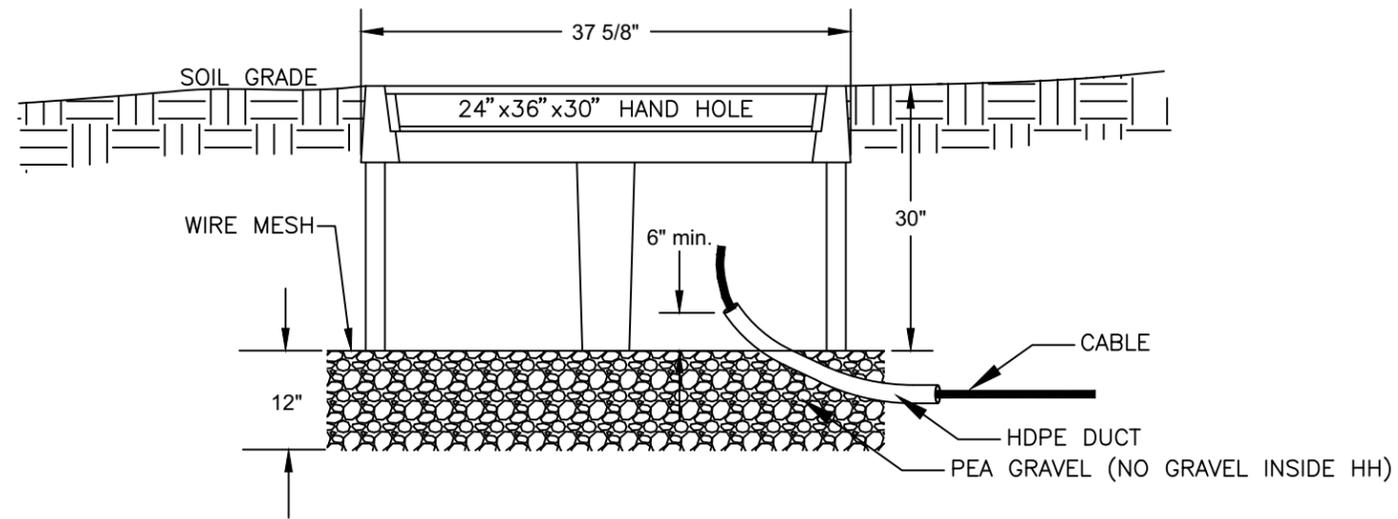
**Project Name:** Iowa Lottery Diversity  
**Address:** 13001 University Avenue  
**OSP Number:** 77163405 / Detailed Entry Prints

1	Preliminary Drawing	6-23-16	5	
2			6	
3			7	
4			8	

Page 7 of 7

# HANDHOLE PLACEMENT TYPICAL

24" X 36" X 30" NEW BASIS HAND HOLE



IOWA COMMUNICATIONS NETWORK

GRIMES STATE OFFICE BUILDING  
400 EAST 14TH STREET  
DES MOINES, IOWA 50319  
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CONSTRUCTION DETAIL  
HANDHOLE TYPICAL - NEW BASIS PC243630SN20  
24" x 36" x 30"

TYPICAL HANDHOLE

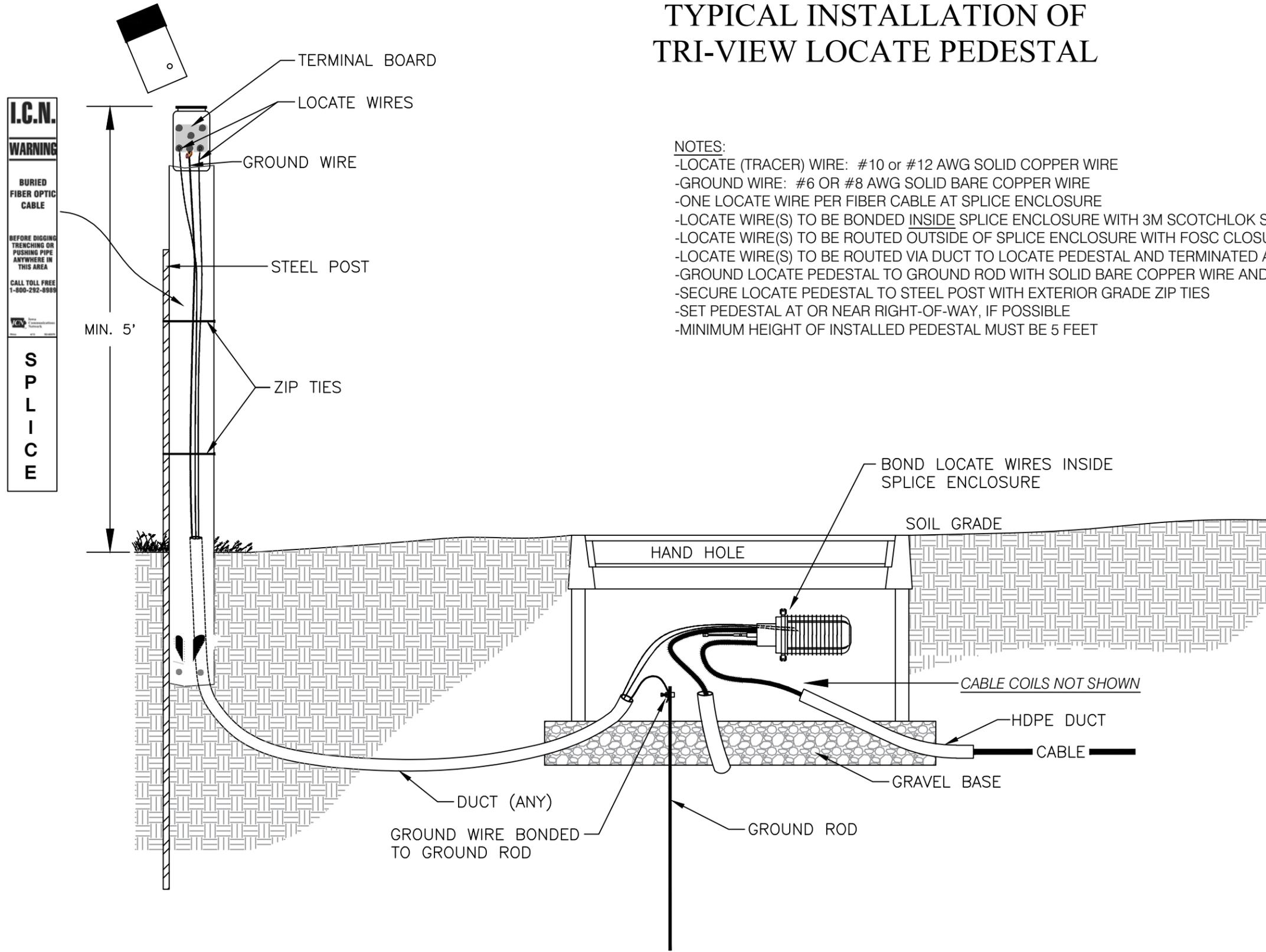
SCALE: NONE

SIZE: 11 x 17

1	REVISION	3-27-12	5
2	REVISION	7-16-14	6
3	REVISION	11-10-14	7
4	REVISION	8-21-15	8

O:\AutoCAD Standards\TYPICALS\TYPICAL-HH PLACEMENT.dwg

# TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL



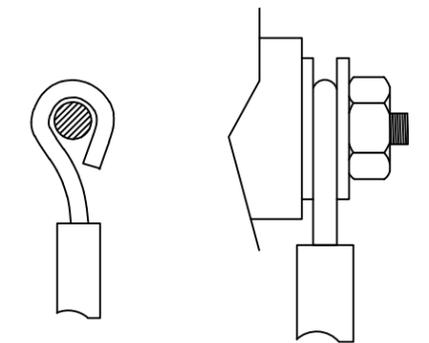
**NOTES:**

- LOCATE (TRACER) WIRE: #10 or #12 AWG SOLID COPPER WIRE
- GROUND WIRE: #6 OR #8 AWG SOLID BARE COPPER WIRE
- ONE LOCATE WIRE PER FIBER CABLE AT SPLICE ENCLOSURE
- LOCATE WIRE(S) TO BE BONDED INSIDE SPLICE ENCLOSURE WITH 3M SCOTCHLOK SHIELD BONDING KIT
- LOCATE WIRE(S) TO BE ROUTED OUTSIDE OF SPLICE ENCLOSURE WITH FOSC CLOSURE SEALING KIT
- LOCATE WIRE(S) TO BE ROUTED VIA DUCT TO LOCATE PEDESTAL AND TERMINATED AT TERMINAL BOARD
- GROUND LOCATE PEDESTAL TO GROUND ROD WITH SOLID BARE COPPER WIRE AND GROUND CLAMP
- SECURE LOCATE PEDESTAL TO STEEL POST WITH EXTERIOR GRADE ZIP TIES
- SET PEDESTAL AT OR NEAR RIGHT-OF-WAY, IF POSSIBLE
- MINIMUM HEIGHT OF INSTALLED PEDESTAL MUST BE 5 FEET

**TRACER WIRE TERMINATION DETAIL**

Termination of the locate wire at either a pedestal, puck, or in a splice case shall be made in the following fashion:

Strip off a minimum of 3/4" of insulation. Using a needle nose pliers bend a wire "eyelet" on the wire end in a clockwise manner. Use a flat washer on both sides of the wire eyelet when cinching it down on the stud. Flat washers shall be of appropriate size such that the hole matches the diameter of the stud and the outside diameter of the flat washer matches reasonably close to the eyelet diameter.



# TYPICAL INSTALLATION OF HIDE-OUT LOCATE STATION

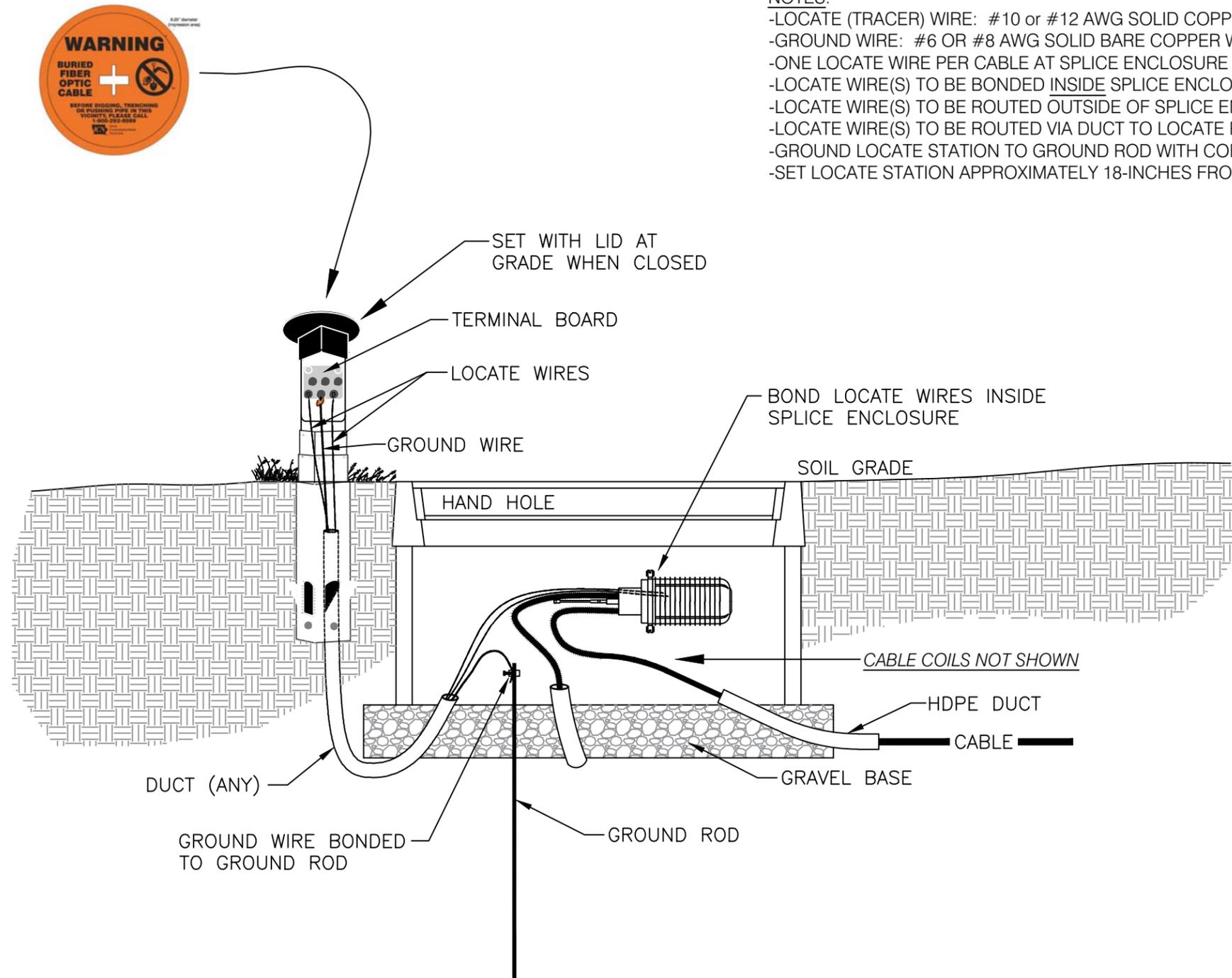
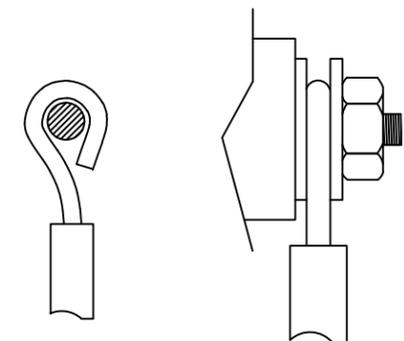
**NOTES:**

- LOCATE (TRACER) WIRE: #10 or #12 AWG SOLID COPPER WIRE
- GROUND WIRE: #6 OR #8 AWG SOLID BARE COPPER WIRE
- ONE LOCATE WIRE PER CABLE AT SPLICE ENCLOSURE
- LOCATE WIRE(S) TO BE BONDED INSIDE SPLICE ENCLOSURE WITH 3M SCOTCHLOK SHIELD BONDING KIT
- LOCATE WIRE(S) TO BE ROUTED OUTSIDE OF SPLICE ENCLOSURE WITH FOSC CLOSURE SEALING KIT
- LOCATE WIRE(S) TO BE ROUTED VIA DUCT TO LOCATE PEDESTAL AND TERMINATED AT TERMINAL BOARD
- GROUND LOCATE STATION TO GROUND ROD WITH COPPER WIRE AND GROUND CLAMP
- SET LOCATE STATION APPROXIMATELY 18-INCHES FROM THE HANDHOLE OR STRUCTURE

TRACER WIRE TERMINATION DETAIL

Termination of the locate wire at either a pedestal, puck, or in a splice case shall be made in the following fashion:

Strip off a minimum of 3/4" of insulation. Using a needle nose pliers bend a wire "eyelet" on the wire end in a clockwise manner. Use a flat washer on both sides of the wire eyelet when cinching it down on the stud. Flat washers shall be of appropriate size such that the hole matches the diameter of the stud and the outside diameter of the flat washer matches reasonably close to the eyelet diameter.



1	FOR CONSTRUCTION	11-3-14	5	REVISION	12-28-15
2	UPDATE	3-13-15	6		
3	REVISION	8-21-15	7		
4	REVISION	9-4-15	8		

Guidelines for Placement of Utilities  
West Des Moines, Iowa

**General**

1. Maintain at least five feet (5') of clearance from back of curb.
2. Do not place utilities beneath or on city streets, sidewalks, or trails except to cross.
3. Do not place utilities in the area between the ROW line and sidewalk or trail, if this area is less than 3 ft. wide.
4. For all utility handholes and above ground items maintain at least 5' distance from any existing tree on City ROW, property, or easements.
5. For all utility underground lines, handholes and above ground items maintain at least 3' distance from any City Survey Benchmark. Do not disturb City Survey Benchmarks.
6. Contact the City of West Des Moines Public Works Inspection Division (515-222-3480), at least 48 hours prior to starting any utility work location in the City.
7. Contact the City of West Des Moines Water Works Department (515-222-3480), at least 48 hours prior to starting any utility work location in the City.
8. Immediately upon completion; backfill, restore, sod, and repair any disturbed areas and damaged items caused by the utility work prior to utility work crews leaving each job site location in accordance to Article 7-1B-9 and Chapter 14 of the West Des Moines City Code.

**Sewers**

- 6a. Maintain at least one foot (1') of horizontal clearance from storm sewer pipes and structures. Maintain at least one foot (1') of vertical clearance from storm sewer pipes and structures.
- 6b. Maintain at least four feet (4') of horizontal clearance from sanitary sewer pipes and structures. Maintain one and one-half feet (1.5') of vertical clearance from sanitary sewer pipes and structures.
- 6c. Cross both storm and sanitary sewers at an angle between thirty and ninety degrees (30° - 90°).

Guidelines for Placement of Utilities  
West Des Moines, Iowa

- 6d. At least 48 hours prior to starting work at any utility work location contact the City of West Des Moines Public Works Sewer Division (515-222-3480) prior to starting any utility work for City sanitary and storm sewer locate information. It is noted the City Sewer system is not part of Iowa One Call, so the City Sewer division will need to be contacted directly for City Sewer locate information.

**Water**

- 7a. Maintain at least three feet (3') of horizontal clearance and two feet (2') vertical clearance from water mains.
- 7b. Do not cross above a fire hydrant branch within four feet (4') of a hydrant.
- 7c. Maintain at least eighteen inches (18") of horizontal clearance behind hydrants.
- 7d. Cross water mains at an angle between thirty and ninety degrees (30° - 90°).
- 7e. Notify the West Des Moines Water Treatment Plant (515-222-3465) at least 48 hours prior to starting any utility work within 50 feet of any water infrastructure, public or private. Visually verify the actual depth of water mains and services prior to crossing via trenchless construction methods.

**Traffic**

- 8a. Maintain 4 feet (4') of horizontal clearance from signal poles and traffic cabinets. Do not exceed 5 feet (5') deep within 10 feet.
- 8b. Maintain one foot (1') vertical clearance from signal conduit.
- 8c. Maintain 2 feet (2') horizontal clearance from fiber and interconnect lines and two feet (2') vertical clearance when crossing.
- 8d. Maintain one foot (1') horizontal clearance from handholes.
- 8e. Cross fiber optic and interconnect lines at an angle between thirty and ninety degrees (30° - 90°)
- 8f. Maintain one and one-half feet (1.5') horizontal clearance from traffic and street signs.

**Profile**

9. A Profile drawing must be prepared in advance of placing any utility more than seven feet (7') deep. This needs to be a scale drawing showing existing features above and below the proposed installation.