FIBER OPTIC DEPLOYMENT
IMN-029-3(150)54--0E-78

LETTING DATE 08/19/2015

POTTAWATTAMIE Co.

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM

POTTAWATTAMIE COUNTY

FIBER OPTIC DEPLOYMENT

I-29/80 In Council Bluffs - West Systems Interchange to South Expressway
South Expressway - IA-92/US 275 to City of Council Bluffs Fleet Maintenance Garage and Downtown

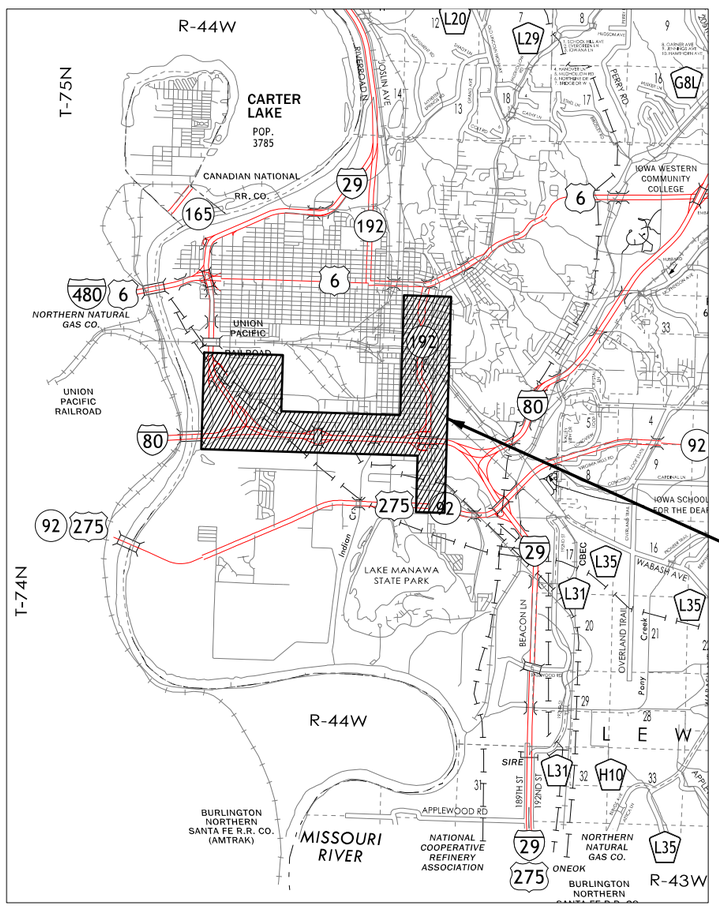
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

NO MILEAGE SUMMARY

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



LOCATION MAP SCALE
0 1 2 3
Miles

REVISIONS

TOTAL
1

PROJECT IDENTIFICATION NUMBER
04-78-029-150-03
PROJECT NUMBER
IMN-029-3(150)54--0E-78

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheet
A.01	Title Page
A.02	Location Map
A.03	Legend Sheet
C Sheets	Quantities and General Information
C.01	Project Description and Quantities
C.02	Estimate Reference Information
C.03	General Notes and Utility Contacts
C.04	Listing of Work
C.05	Listing of Work
C.06	Network Architecture
C.07	Network Architecture
J Sheets	Traffic Control Notes
J.01	Traffic Control Plan and Coordinated Operations
N Sheets	ITS Plan
N.01-N.22	Plan Sheets
U Sheets	Detail Sheets
U.01	Fiber Vault Tracer Wire Detail
U.02	Listing of Fiber Work and Splice Legend
U.03-U.23	Splice Diagrams

LICENSED PROFESSIONAL ENGINEER JUSTIN P. PETERSEN 20842 IOWA

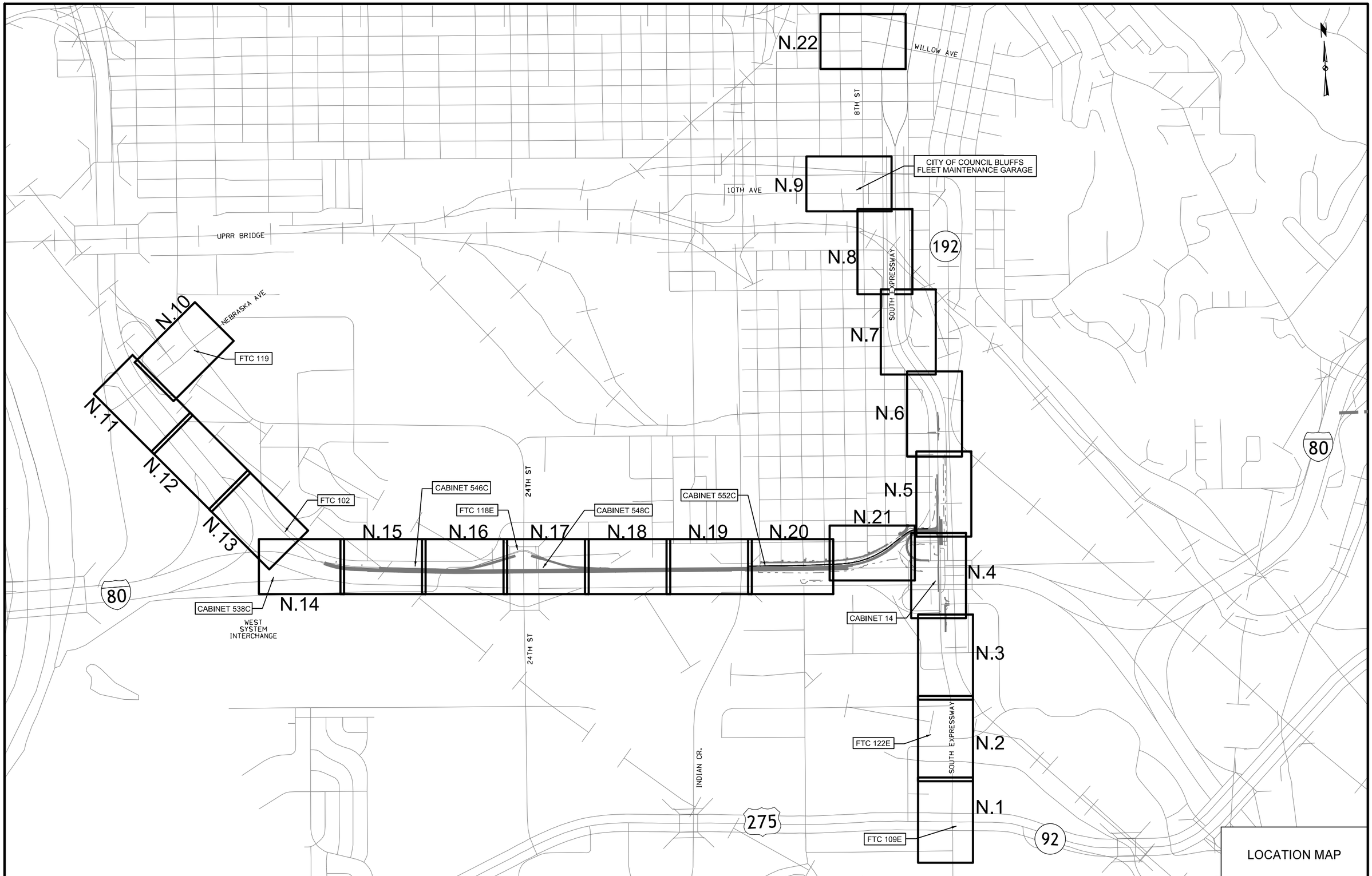
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Justin P. Petersen 7-17-2015
Signature Date
Justin P. Petersen
Printed or Typed Name
My license renewal date is December 31, 20 15
Pages or sheets covered by this seal: N.01-N.09

LICENSED PROFESSIONAL ENGINEER MARK D. POHLMANN 17009 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.

Mark D. Pohlmann 07/17/15
Signature Date
Mark D. Pohlmann
Printed or Typed Name
My license renewal date is December 31, 20 15
Pages or sheets covered by this seal: A.01-A.03, C.01-C.07, N.10-N.22, U.01-U.23



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER A.02

6:24:22 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150A01.sht

STANDARD SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- SB Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- G Grave
- CV Cave
- SH Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Earth Dam or Dike (Proposed)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Proposed Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Proposed Intake
- Existing Utility Access (Manhole)
- Proposed Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)

- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Luminaire
- Traffic Signal
- Traffic Signal with Luminaire
- TP Telephone Pedestal
- TVP Television Pedestal
- Telephone Pole
- Telephone Pole (Second Company)
- Telephone Pole (Third Company)
- Telephone Pole (Fourth Company)
- Telephone Pole (Fifth Company)
- Power Pole
- Power Pole (Second Company)
- Power Pole (Third Company)
- Power Pole (Fourth Company)
- Power Pole (Fifth Company)
- Electrical Highline Tower (Metal or Concrete)
- Telephone Riser Pole
- Power Riser Pole
- Telegraph Pole
- Satellite TV Dish
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- EB Electric Box
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box

- FO Existing Fiber Optics (Central Scott)
- FO2 Existing Fiber Optics (Mcleod USA)
- FO3 Existing Fiber Optics (Qwest)
- FO4 Existing Fiber Optics (ATT)
- FO6 Existing Fiber Optics (MediaCom)
- FO8 Existing Fiber Optics (Bettendorf)
- FO9 Existing Fiber Optics (IowaDOT)
- E Existing Power Line (MidAmerican)
- E2 Existing Power Line (MidAmerican)
- E3 Existing Power Line (MidAmerican)
- E4 Existing Power Line (MidAmerican)
- E5 Existing Power Line (IowaDOT)
- G Existing Gas Line (MidAmerican)
- G-HP Existing High Pressure Gas Line (MidAmerican)
- San. Existing Sanitary Sewer Line (Bettendorf)
- San.2 Existing Sanitary Sewer Line (Davenport)
- T Existing Telephone Line (Qwest)
- TV Existing Cable Television Line (MediaCom)
- TV2 Existing Cable Television Line (MediaCom)
- W Existing Water Line (IA American)

ABBREVIATIONS

AC	ALTERNATING CURRENT
DOT	DEPARTMENT OF TRANSPORTATION
FTC	FIBER TERMINATION CABINET
ITS	INTELLIGENT TRANSPORTATION SYSTEMS
NEC	NATIONAL ELECTRICAL CODE
OTDR	OPTICAL TIME DOMAIN REFLECTOMETER
RWIS	ROAD WEATHER INFORMATION STATION
TCP	TRAFFIC CONTROL PLAN
SOST	STANDARD OVERHEAD SIGN TRUSS

CONVENTIONAL SIGNS

- Station / Reference Point — Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Linear Removal
- Abandon Pipe
- Clearing & Grubbing Area
- Pavement Removal
- Bridge Removal by Others

RIGHT OF WAY LEGEND

- Proposed Right of Way
- Existing Right of Way
- Existing and Proposed Right of Way
- Easement and Existing Right of Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- Property Line
- A/C Access Control

UNIQUE SYMBOLS FOR THIS PROJECT

- EXISTING IOWA DOT CONDUIT (AERIAL)
- EXISTING IOWA DOT CONDUIT (TOPO)
- EXISTING CITY OF COUNCIL BLUFFS CONDUIT
- PROPOSED IOWA DOT CONDUIT BY OTHERS (AERIAL)
- PROPOSED IOWA DOT CONDUIT BY OTHERS (TOPO)
- EXISTING CITY OF COUNCIL BLUFFS HANDHOLE (AERIAL)
- EXISTING IOWA DOT HANDHOLE (AERIAL)
- EXISTING IOWA DOT HANDHOLE, BRIDGE MOUNTED JUNCTION BOX
- EXISTING IOWA DOT HANDHOLE, TYPE I ITS
- EXISTING IOWA DOT HANDHOLE, TYPE FOR27
- EXISTING IOWA DOT HANDHOLE, TYPE FIBER VAULT
- PROPOSED IOWA DOT HANDHOLE BY OTHERS, TYPE I ITS
- PROPOSED IOWA DOT HANDHOLE BY OTHERS, TYPE FOR27
- PROPOSED IOWA DOT HANDHOLE BY OTHERS, TYPE FIBER VAULT
- (1) CONDUIT RUN NUMBER
- EXISTING ITS POLE
- PROPOSED ITS POLE BY OTHERS
- PROPOSED RWIS STATION BY OTHERS
- EXISTING ITS CAMERA
- PROPOSED ITS CAMERA BY OTHERS
- EXISTING ITS SENSOR
- PROPOSED ITS SENSOR BY OTHERS
- EXISTING ITS DEVICE CABINET, POLE MOUNT
- EXISTING ITS DEVICE CABINET, PEDESTAL MOUNT
- PROPOSED ITS DEVICE CABINET, PEDESTAL MOUNT BY OTHERS
- EXISTING FIBER TERMINATION CABINET
- EXISTING TRAFFIC SIGNAL CABINET

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

LEGEND AND SYMBOL INFORMATION

100-1D
10-18-05

PROJECT DESCRIPTION

Fiber Optic Deployment Project in Pottawattamie County, Iowa.

This Fiber Optic Deployment project in Pottawattamie County is located along the north side of the I-29/I-80 corridor in Council Bluffs from approximately Station 7430+00 to Station 7555+00 and along South Expressway from US 275 to the City of Council Bluffs Fleet Maintenance Garage on 10th Avenue and to 8th Street and Willow Avenue. This project involves furnishing, installing and testing fiber optic cables, splice closures, fiber splices, fiber terminations, fiber equipment and all ancillary items to provide fully functioning fiber optic communication networks for various agencies including the Iowa Department of Transportation, the City of Council Bluffs, Pottawattamie County and the Iowa Communications Network, and for the ITS central and field devices including traffic signals, cameras, sensors, dynamic message signs and other devices as shown on the plans. The fiber optic cable shall be furnished and installed in existing conduit, handholes and cabinets or new conduit and handholes installed by other projects that are under construction either prior to or at the same time as this project. Included with this work shall be coordination with other projects identified on sheet J.01 and completion of all fiber splices, terminations and testing at splice closures, existing Iowa Department of Transportation fiber termination cabinets and device cabinets to make the fiber optic cable networks fully functional.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-416	04-17-12	Partial Lane Closure on Ramps

100-1A
07-15-97

ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2528-8445110	TRAFFIC CONTROL	LUMP SUM	1	
2	2533-4980005	MOBILIZATION	LUMP SUM	1	
3	2599-9999005	6 DUPLEX SC CONNECTOR ADAPTER PANEL	EACH	7	
4	2599-9999005	FIBER OPTIC 12 SPLICE TRAY	EACH	9	
5	2599-9999005	FIBER OPTIC 24 SPLICE TRAY	EACH	19	
6	2599-9999005	FIBER OPTIC SPLICE (WITH PROTECTOR SLEEVES)	EACH	508	
7	2599-9999005	FIBER OPTIC SPLICE CLOSURE (WITH STORAGE BASKETS)	EACH	11	
8	2599-9999005	LOCATE BOX	EACH	5	
9	2599-9999005	REMOVE EXISTING FIBER INTERCONNECT CABINET	EACH	3	
10	2599-9999005	REMOVE EXISTING SPLICE CLOSURE	EACH	2	
11	2599-9999005	SINGLE PANEL HOUSING (HOLDS 1 CONNECTOR PANEL WITH SPLICE ORGANIZER)	EACH	7	
12	2599-9999005	UPS/SC FACTORY TERMINATED FIBER CONNECTOR AND PIGTAILS	EACH	84	
13	2599-9999009	12 SM FIBER	LF	4112	
14	2599-9999009	144 SM FIBER	LF	14555	
15	2599-9999009	96 SM FIBER	LF	12371	
16	2599-9999009	REINSTALL EXISTING 12 SM FIBER	LF	326	
17	2599-9999009	REINSTALL EXISTING 96 SM FIBER	LF	1606	
18	2599-9999009	REMOVE EXISTING 12 SM FIBER	LF	4169	
19	2599-9999009	REMOVE EXISTING 96 SM FIBER	LF	1278	
20	2599-9999009	TRACER WIRE	LF	7738	
21	2599-9999010	FIBER OPTIC ACCEPTANCE TESTING	LUMP SUM	1	

Project Description, Quantities
and Standard Road Plans

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2528-8445110	TRAFFIC CONTROL
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
2	2533-4980005	MOBILIZATION
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
3	2599-9999005	6 DUPLEX SC CONNECTOR ADAPTER PANEL
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
4	2599-9999005	FIBER OPTIC 12 SPLICE TRAY
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
5	2599-9999005	FIBER OPTIC 24 SPLICE TRAY
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
6	2599-9999005	FIBER OPTIC SPLICE (WITH PROTECTOR SLEEVES)
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
7	2599-9999005	FIBER OPTIC SPLICE CLOSURE (WITH STORAGE BASKETS)
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
8	2599-9999005	LOCATE BOX
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
9	2599-9999005	REMOVE EXISTING FIBER INTERCONNECT CABINET
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
10	2599-9999005	REMOVE EXISTING SPLICE CLOSURE
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
11	2599-9999005	SINGLE PANEL HOUSING (HOLDS 1 CONNECTOR PANEL WITH SPLICE ORGANIZER)
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
12	2599-9999005	UPS/SC FACTORY TERMINATED FIBER CONNECTOR AND PIGTAILS
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
		Bid item includes splice and protector sleeve for each connector and pigtail.
-	-	-
13	2599-9999009	12 SM FIBER
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
14	2599-9999009	144 SM FIBER
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
15	2599-9999009	96 SM FIBER
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
16	2599-9999009	REINSTALL EXISTING 12 SM FIBER
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
17	2599-9999009	REINSTALL EXISTING 96 SM FIBER
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
18	2599-9999009	REMOVE EXISTING 12 SM FIBER
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
19	2599-9999009	REMOVE EXISTING 96 SM FIBER
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-
20	2599-9999009	TRACER WIRE
		MATERIALS, METHOD OF MEASUREMENT, and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC
		DEPLOYMENT.
-	-	-
21	2599-9999010	FIBER OPTIC ACCEPTANCE TESTING
		METHOD OF MEASUREMENT and BASIS OF PAYMENT refer to the Special Provisions for ITS FIBER OPTIC DEPLOYMENT.
-	-	-

GENERAL NOTES

MISC

1. AERIAL PHOTOGRAPHY SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY NOT MATCH EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR FIELD VERIFYING ACTUAL LOCATIONS OF ALL EXISTING CONDUITS, HANDHOLES, AND CABINETS.

2. NEW CONDUITS, HANDHOLES AND CABINETS WILL BE INSTALLED BY OTHER PROJECTS FOR THE CONTRACTOR TO USE ON THIS PROJECT. THE LOCATIONS OF THE NEW INFRASTRUCTURE SHOWN ON THE PLANS ARE APPROXIMATE. IT IS EXPECTED THAT THE NEW INFRASTRUCTURE WILL BE INSTALLED PRIOR TO THE FIBER OPTIC INSTALLATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECTS IDENTIFIED ON SHEET J.01 AND PERFORM ALL WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

3. ALL EXISTING ITS DEVICES SHALL BE KEPT IN OPERATIONS UNTIL THE FINAL FIBER CUT-OVER. MAINTAIN AND PROTECT ALL EXISTING POWER AND COMMUNICATION CABLES AND DEVICES DURING CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.

4. THE LOCATION OF THE PROPOSED SINGLE PANEL HOUSING IN THE EXISTING ITS CABINETS SHALL BE COORDINATED WITH THE ENGINEER.

UTILITIES

5. THE PLAN LOCATIONS OF UNDERGROUND AND AERIAL UTILITIES, WHEN SHOWN, ARE APPROXIMATE ONLY. NOT ALL UTILITY INFORMATION HAVE BEEN PROVIDED. ALL UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO CONDUIT AND HANDHOLE EXCAVATION. 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.

6. 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 THE DOT.

7. 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.

ELECTRICAL

8. ALL WIRING AND GROUNDING SYSTEMS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) THE LATEST EDITION.

9. ALL POWER SERVICE CIRCUITS SHALL BE 120 VOLTS AC.

10. PRIOR TO WORK WITH ANY CITY OF COUNCIL BLUFFS TRAFFIC SIGNAL EQUIPMENT (PULL BOXES, HANDHOLES, SIGNAL CABINETS, ETC...) CONTRACTOR SHALL CONTACT MR. MARK FRANZ AT 712-328-4645 AT LEAST 48 HOURS IN ADVANCE OF THE WORK.

FIBER

11. COILS OF FIBER CABLE SHALL BE PLACED IN EACH HANDHOLE AS SPECIFIED ON THE PLANS AND THE TABULATION (LISTING OF HANDHOLE WORK) ON SHEETS C.04 AND C.05.

12. 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.

13. PRIOR TO ANY FIBER TERMINATION WORK IN IOWA DOT FACILITIES OR EQUIPMENT, CONTRACTOR SHALL CONTACT MR. TONY TAYLOR AT 515-239-1902 AT LEAST 48 HOURS IN ADVANCE OF THE WORK.

14. ANY EXISTING PULL TAPE OR TRACER WIRE THAT IS USED AS A PULL ROPE FOR FIBER OPTIC CABLE INSTALLATION SHALL BE REPLACED IN KIND. THE COST OF ANY TRACER WIRE OR PULL TAPE REPLACEMENT SHALL BE SUBSIDIARY TO THE FIBER OPTIC CABLE INSTALLATION.

15. 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.

16. CONTRACTOR SHALL REPLACE OR REPAIR, AS DIRECTED BY THE ENGINEER, ANY DAMAGE OCCURRING BEFORE FINAL ACCEPTANCE AT NO ADDITIONAL COST TO THE IOWA DOT. THE CONTRACTOR WILL NOT BE GRANTED AN EXTENSION OF TIME FOR DELAYS CAUSED BY REPLACING OR REPAIRING THE INSTALLED CABLE.

17. CONTRACTOR SHALL REPAIR OR REPLACE ANY DEFECT IN THE INSTALLED CABLE AT NO ADDITIONAL COST TO THE IOWA DOT. 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.

18. ANY EXISTING WIRING OR EQUIPMENT THAT IS DAMAGED DURING FIBER OPTIC CABLE INSTALLATION SHALL BE REPLACED OR REPAIRED, AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE IOWA DOT.

CONSTRUCTION

19. 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 DOT.

20. 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.

21. 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 2012" PLUS CURRENT SUPPLEMENT SPECIFICATIONS AND SPECIAL PROVISIONS.

22. 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.

23. 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. 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.

UTILITY CONTACTS

Company	Name	Street	City, State, Zip	Phone
IOWA DOT ITS	TONY TAYLOR	800 LINCOLN WAY	AMES, IA 50010	515-239-1902
IOWA COMMUNICATIONS NETWORK (ICN)	LARRY KLAWITTER	400 EAST 14TH STREET	DES MOINES, IA 50319	515-725-4741
BNSF RAIL ROAD	ALLEN BELL	4302 GIBSON ROAD	OMAHA, NE 68107	402-422-5249
UPRR	MIKE BLACKLEY	1400 DODGE STREET	OMAHA, NE 68179	402-544-2029
MCLEOD	MIKE SECORY	3630 109TH STREET	URBANDALE, IA 50322	515-309-1172
MCI/ VERIZON	STEVE BONCZKOWSKI	501 63RD STREET	DOWNERS GROVE, IL 60516	630-395-6414
BP OPERATIONS & LOGISTICS	BYRON CLARK	14633 US HIGHWAY 136	BURLINGTON JUNCTION, MO 64428	660-725-3386
AMOCO OIL COMPANY/BP PIPELINE	PHIL SMITH	829 ES OMAHA BRIDGE ROAD	COUNCIL BLUFFS, IA 51503	641-414-6600
CITY TRAFFIC SIGNALS	MARK FRANZ	1001 10TH AVENUE	COUNCIL BLUFFS, IA 51501	712-328-4645
CITY IT DIRECTOR	MARK HOWARD	209 PEARL STREET	COUNCIL BLUFFS, IA 51503	712-328-4639
CITY SANITARY SEWERS	DAVE VERMILLION	209 PEARL STREET	COUNCIL BLUFFS, IA 51503	712-328-4635
NUSTAR PIPELINE	DALE E. SMITH	7340 WEST 21ST STREET, SUITE 200	WICHITA, KANSAS 67205	1-800-559-0033
AT&T	LENNY VOHS	1425 OAK, 3RD FLOOR	KANSAS CITY, MO 64107	816-275-4014
IOWA NETWORK SERVICES, INC	JEFF KLOCKO	4201 CORPORATE DRIVE	WEST DES MOINES, IA 50266	515-830-0445
IOWA NETWORK SERVICES, INC	TOM OSHER	106 HALLAND AVENUE P.O. 338	STANTON, IA 51573	641-740-0282
US SPRINT	DAN HILLIARD	849 EQARL STREET	ST. PAUL, MN 55106	651-772-6714
COX COMMUNICATIONS	CHRIS MYRE	401 N. 117TH STREET, SUITE 101	OMAHA, NE 68154	402-934-0371
COUNCIL BLUFFS WATER WORKS	BRIAN CADY	2000 N. 25TH STREET P.O. BOX 309	COUNCIL BLUFFS, IA 51502	712-328-1006
MID AMERICAN ENERGY	TIM THEOBALD	3003 S. 11TH STREET	COUNCIL BLUFFS, IA 51501	712-366-5668
CENTURY LINK COMMUNICATIONS	ED KRIEGER	7404 N. 78TH STREET BUILDING A	OMAHA, NE 68122	402-572-5856
BLACK HILLS ENERGY	CHRIS DEWEY	1414 W. BROADWAY P.O. BOX 68	COUNCIL BLUFFS, IA 51501	712-325-3022

72 HOUR ADVANCE NOTICE IS REQUIRED TO NOTIFY ALL UTILITY COMPANIES.

GENERAL NOTES AND UTILITY CONTACTS

Conduit Run	Location		Existing Conduit Length (ft)	Existing Fiber in Conduit	Existing Signal Cables in Conduit	Abandon Existing 12F	Remove Existing 12F	Remove Existing 96F	Reinstall 12F	Reinstall 96F	Install 12F	Install 96F	Install 144F	Install Tracer Wire
	From	To												
1A	HH 1-1E	HH 1-2E	128	X	X									
1B	HH 1-2E	FTC 109E	12	X										
1C	HH 1-2E	HH 1-3E	159	X	X									
1D	HH 1-4E	POLE 28C	25	X										
1E	HH 1-3E	POLE 28C	25											
1F	HH 1-3E	HH 1-5E	155	X	X									
1G	HH 1-5E	HH 2-3E	1566	X										
2A	HH 2-1E	RCE OFFICE	39	X										
2B	HH 2-1E	HH 2-2E	206	X										
2C	HH 2-2E	HH 2-3E	30	X										
2D	HH 2-3E	H 2-4E	101	X										
2E	HH 2-3E	FTC 122E	9	X										
2F	HH 2-3E	HH 3-1E	864	X										
2G	HH 2-4E	TSC 1E	6	X	X									
3A	HH 3-1E	HH 3-2E	262	X										
3B	HH 3-2E	HH 3-3E	514	X										
3C	HH 3-3E	HH 3-4E	22	X										
3D	HH 3-4E	TSC 2E	24	X		X								
3E	HH 3-4E	HH 3-5E	85		X	X								
3F	HH 3-5E	HH 3-6E	57		X	X								
3G	HH 3-6E	HH 3-7E	375			X								
3H	HH 3-7E	HH 4-1E	368			X								
3I	HH 3-3E	HH 4-7E	718					1						
3J	HH 3-3E	HH 3-8E	685							1	1	1		
3K	HH 3-8E	HH 4-13E	143								1			
3L	HH 3-8E	HH 4-12E	365							1		1		
4A	HH 4-1E	TSC 3E	7		X	X					1			
4B	HH 4-1E	HH 4-2E	129			X								
4C	HH 4-2E	HH 4-3E	328			X								
4D	HH 4-3E	HH 4-4E	678			X								
4E	HH 4-4E	HH 4-5E	22			X								
4F	HH 4-5E	HH 4-6E	203			X								
4G	HH 4-6E	HH 4-14E	28						1					
4H	HH 4-14E	HH 4-15E	90	X										
4I	HH 4-15E	TSC 4E	14	X										
4J	HH 4-1E	HH 4-13E	146		X						1			
4K	HH 4-7E	HH 4-8E	510					1						
4L	HH 4-8E	POLE 14	18	X										
4M	HH 4-11E	HH 4-12E	805									1		
4N	HH 4-11E	HH 4-10E	300									1		
4O	HH 4-9E	HH 4-10E	510										1	
4P	HH 4-9E	HH 21-3E	260										1	
4Q	HH 4-6E	HH 4-10E	163						1			1		
4R	HH 4-6E	HH 5-1E	525				1					1		1
4S	HH 4-14E	HH 4-16E	184				1							
4T	HH 4-4E	HH 4-16E	42				1							
4U	HH 4-8E	HH 4-12E	271							1				
5A	HH 5-1E	HH 5-2E	671				1					1		1
5B	HH 5-2E	HH 5-3E	330				1					1		1
5C	HH 5-3E	HH 6-1E	401				1					1		1
6A	HH 6-1E	HH 6-2E	88									1		1
6B	HH 6-2E	HH 6-3E	89				1					1		1
6C	HH 6-3E	HH 6-4E	257				1					1		1
6D	HH 6-4E	HH 6-5E	348				1					1		1
6E	HH 6-5E	HH 7-1E	822				1					1		1
6F	HH 6-1E	TSC 5E	60	X	X									
6G	TSC 5E	HH 6-2E	31		X		1							
7A	HH 7-1E	HH 7-2E	292				1					1		1
7B	HH 7-2E	HH 7-3E	72									1		1
7C	HH 7-3E	HH 7-4E	234									1		1
7D	HH 7-4E	HH 8-1E	1226									1		1
7E	HH 7-2E	TSC 6E	27		X		1							
7F	TSC 6E	HH 7-3E	47	X	X									
8A	HH 8-1E	HH 8-2E	607									1		1
8B	HH 8-2E	HH 8-3E	203									1		1
8C	HH 8-3E	HH 9-1E	803									1		1

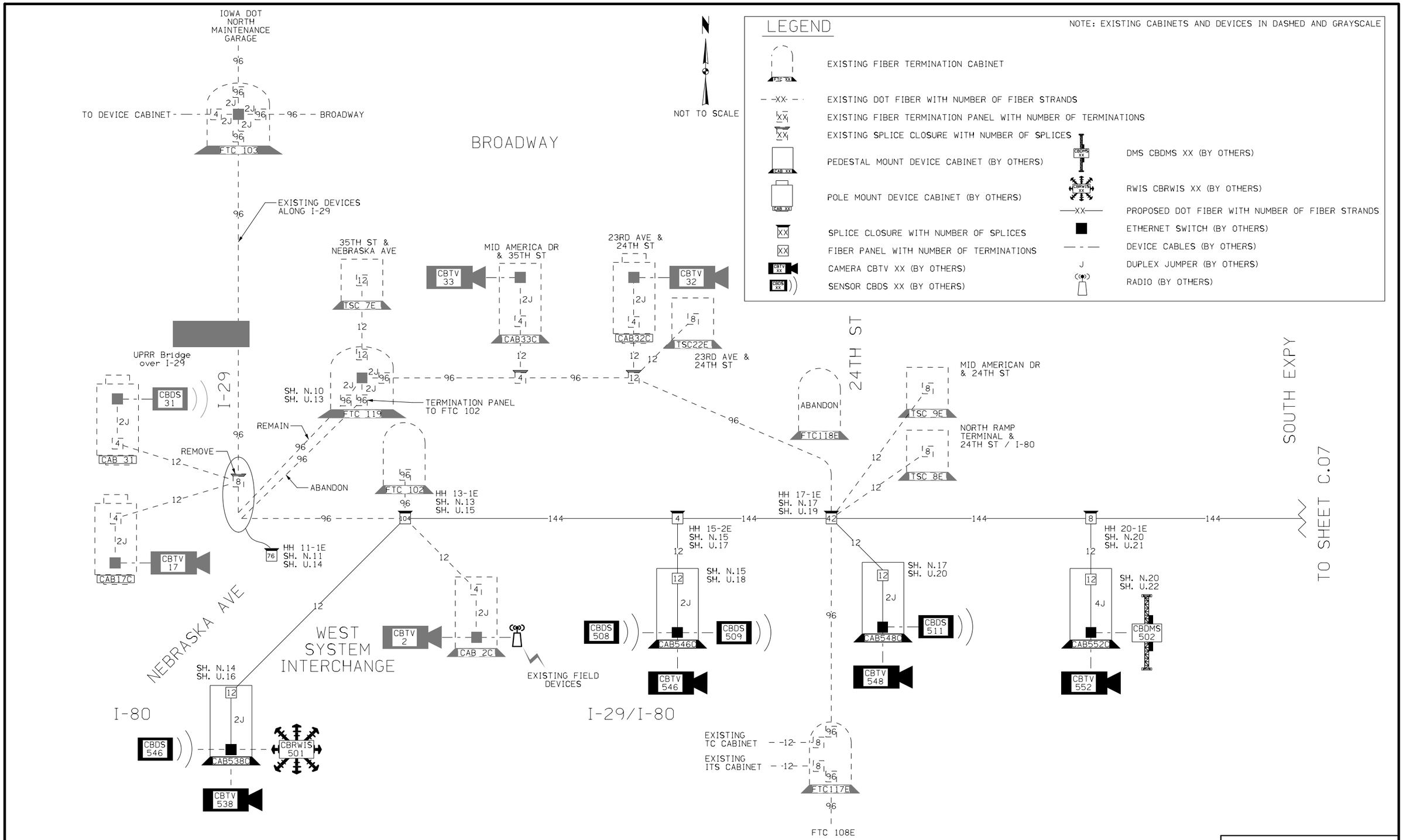
Handhole Label	Handhole Type	Splice Closure	Install 12F Coil	Reinstall 12F Coil	Install 96F Coil	Reinstall 96F Coil	Install 144F Coil
HH 1-1E	CITY						
HH 1-2E	FIBER VAULT						
HH 1-3E	CITY						
HH 1-4E	CITY						
HH 1-5E	CITY						
HH 2-1E	FIBER VAULT						
HH 2-2E	FOR27						
HH 2-3E	FIBER VAULT						
HH 2-4E	CITY						
HH 3-1E	FOR27						
HH 3-2E	FOR27						
HH 3-3E	FIBER VAULT	1	75		75	75	
HH 3-4E	CITY						
HH 3-5E	CITY						
HH 3-6E	CITY						
HH 3-7E	CITY						
HH 3-8E	FOR27		60		60	60	
HH 4-1E	CITY		60				
HH 4-2E	CITY						
HH 4-3E	CITY						
HH 4-4E	CITY						
HH 4-5E	CITY						
HH 4-6E	FOR27			60	60		
HH 4-7E	FOR27						
HH 4-8E	FIBER VAULT						
HH 4-9E	FOR27						60
HH 4-10E	FIBER VAULT	1		75	150		150
HH 4-11E	FOR27				60		
HH 4-12E	FIBER VAULT				150	150	
HH 4-13E	CITY						
HH 4-14E	CITY						
HH 4-15E	CITY						
HH 4-16E	CITY						
HH 5-1E	CITY				60		
HH 5-2E	CITY				60		
HH 5-3E	CITY				60		
HH 6-1E	FIBER VAULT	1			500		
HH 6-2E	CITY				60		
HH 6-3E	CITY				60		
HH 6-4E	CITY				60		
HH 6-5E	CITY				60		
HH 7-1E	CITY				60		
HH 7-2E	CITY				60		
HH 7-3E	CITY	1			150		
HH 7-4E	CITY				60		
HH 8-1E	CITY				60		
HH 8-2E	CITY				60		
HH 8-3E	CITY				60		

LISTING OF WORK

Conduit Run	Location		Existing Conduit Length (ft)	Existing Fiber in Conduit	Existing Signal Cables In Conduit	Abandon Existing 12F	Remove Existing 12F	Remove Existing 96F	Reinstall 12F	Reinstall 96F	Install 12F	Install 96F	Install 144F	Install Tracer Wire
	From	To												
9A	HH 9-1E	HH 9-2E	90									1		1
9B	HH 9-2E	HH 9-3E	310									1		1
9C	HH 9-3E	HH 9-4E	370									1		1
9D	HH 9-4E	HH 9-5E	629	X										
9E	HH 9-5E	DATA ROOM	224	X										
10A	HH 10-1E	HH 10-2E	70	X										
10B	HH 10-2E	TSC 7E	30	X										
10C	HH 10-2E	HH 10-3E	120	X										
10D	HH 10-4E	HH 10-3E	110	X										
10E	HH 10-3E	FTC 119	10	X										
10F	HH 10-4E	HH 10-5E	500	X										
10G	HH 10-5E	HH 10-6E	75	X										
10H	HH 10-6E	HH 11-1E	730	X										
11A	HH 11-2E	HH 11-3E	90	X										
11B	HH 11-3E	LIGHT POLE	15	X										
11C	HH 11-2E	HH 11-1E	115	X										
11D	HH 11-1E	POLE 17C	15	X										
11E	HH 11-1E	HH 11-4E	290	X										
11F	HH 11-4E	HH 11-5E	190	X										
11G	HH 11-5E	HH 12-1E	800	X										
12A	HH 12-1E	HH 12-2E	830	X										
12B	HH 12-2E	HH 13-4E	800	X										
13A	HH 13-4E	HH 13-1E	1115	X										
13B	HH 13-1E	FTC 102	15											
13C	HH 13-1E	FTC 102	15	X			1							
13D	HH 13-1E	CAB 2C	15	X										
13E	HH 13-1E	HH 13-2E	301								1			
13F	HH 13-2E	HH 13-3E	240								1			
13G	HH 13-3E	CAB 538C	950								1			
13H	HH 13-1E	HH 14-1E	580										1	
14A	HH 14-1E	HH 15-1E	840										1	
15A	HH 15-1E	HH 15-2E	1180										1	
15B	HH 15-2E	CAB 546C	15								1			
15C	HH 15-2E	HH 16-1E	400										1	
16A	HH 16-1E	HH 16-2E	730										1	
16B	HH 16-2E	HH 17-1E	820										1	
17A	HH 17-1E	HH 17-6E	85				1							
17B	HH 17-1E	HH 17-7E	270	X										
17C	HH 17-1E	FTC 118E	25				2	2						
17D	HH 17-1E	TSC 8E	25	X	X									
17E	HH 17-2E	HH 17-1E	210								1		1	
17F	HH 17-1E	HH 17-11E	180	X										
17G	HH 17-2E	HH 17-3E	120								1			
17H	HH 17-3E	HH 17-4E	230								1			
17I	HH 17-4E	HH 17-5E	180								1			
17J	HH 17-5E	CAB 548C	15								1			
17K	HH 17-2E	HH 17-12E	650										1	
17L	HH 17-7E	HH 17-8E	410	X										
17M	HH 17-9E	HH 17-10E	130	X										
17N	HH 17-10E	POLE 3C	25	X										
17O	HH 17-12E	HH 18-1E	700										1	
18A	HH 18-1E	HH 18-2E	1000										1	
18B	HH 18-2E	HH 19-1E	930										1	
19A	HH 19-1E	HH 19-2E	340										1	
19B	HH 19-2E	HH 19-3E	170										1	
19C	HH 19-3E	HH 19-4E	320										1	
19D	HH 19-4E	HH 20-1E	360										1	
20A	HH 20-1E	CAB 552C	15								1			
20B	HH 20-1E	HH 20-2E	870										1	
20C	HH 20-2E	HH 21-1E	700										1	
21A	HH 21-1E	HH 21-2E	480										1	
21B	HH 21-2E	HH 21-3E	450										1	
22A	HH 22-4E	HH 22-5E	550	X										
22B	HH 22-1E	HH 22-4E	115	X										
22C	HH 22-1E	HH 22-3E	390	X										
22D	HH 22-1E	HH 22-2E	550	X										

Handhole Label	Handhole Type	Splice Closure	Install 12F Coil	Reinstall 12F Coil	Install 96F Coil	Reinstall 96F Coil	Install 144F Coil
HH 9-1E	CITY				60		
HH 9-2E	CITY				60		
HH 9-3E	CITY				60		
HH 9-4E	FIBER VAULT	1			150		
HH 9-5E	FIBER VAULT						
HH 10-1E	FOR27						
HH 10-2E	FOR27						
HH 10-3E	FIBER VAULT						
HH 10-4E	FOR27						
HH 10-5E	FOR27						
HH 10-6E	FOR27						
HH 11-1E	FIBER VAULT	1					
HH 11-2E	FOR27						
HH 11-3E	FOR27						
HH 11-4E	FOR27						
HH 11-5E	FCA						
HH 12-1E	FIBER VAULT						
HH 12-2E	FOR27						
HH 13-1E	FIBER VAULT	1	75				75
HH 13-2E	FOR27		60				
HH 13-3E	FOR27		60				
HH 13-4E	FOR27						
HH 14-1E	FIBER VAULT						150
HH 15-1E	FIBER VAULT						150
HH 15-2E	FIBER VAULT	1	75				150
HH 16-1E	FOR27						60
HH 16-2E	FOR27						60
HH 17-1E	FIBER VAULT	1	75				150
HH 17-2E	FOR27		60				60
HH 17-3E	FOR27		60				
HH 17-4E	FOR27		60				
HH 17-5E	FOR27		60				
HH 17-6E	FOR27						
HH 17-7E	JB						
HH 17-8E	JB						
HH 17-9E	FOR27						
HH 17-10E	FIBER VAULT						
HH 17-11E	FOR27						
HH 17-12E	FOR27						60
HH 18-1E	FOR27						60
HH 18-2E	FIBER VAULT						150
HH 19-1E	FOR27						60
HH 19-2E	FIBER VAULT						150
HH 19-3E	FOR27						60
HH 19-4E	FOR27						60
HH 20-1E	FIBER VAULT	1	75				150
HH 20-2E	FOR27						60
HH 21-1E	FOR27						60
HH 21-2E	FOR27						60
HH 21-3E	FOR27						60
HH 22-1E	FOR27	1					
HH 22-2E	FOR27						
HH 22-3E	CITY						
HH 22-4E	CITY						
HH 22-5E	CITY						

LISTING OF WORK



NETWORK ARCHITECTURE

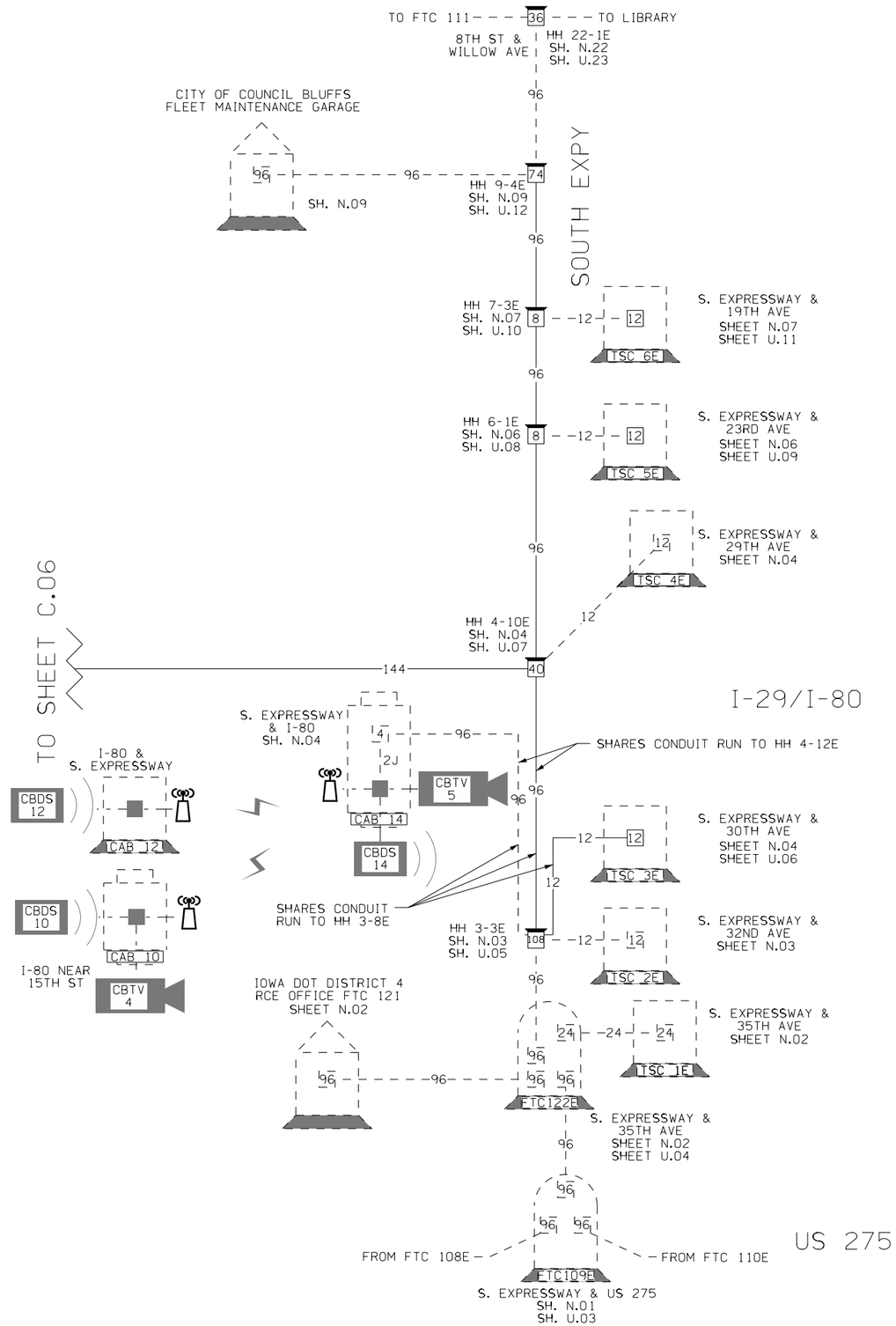
FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER C.06

5:43:52 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150C01.sht

LEGEND

- EXISTING FIBER TERMINATION CABINET
- EXISTING DOT FIBER WITH NUMBER OF FIBER STRANDS
- EXISTING FIBER TERMINATION PANEL WITH NUMBER OF TERMINATIONS
- SPLICE CLOSURE WITH NUMBER OF SPLICES
- PEDESTAL MOUNT DEVICE CABINET
- POLE MOUNT DEVICE CABINET
- SPLICE CLOSURE WITH NUMBER OF SPLICES
- FIBER PANEL WITH NUMBER OF TERMINATIONS
- CAMERA CBTV XX (BY OTHERS)
- SENSOR CBDS XX (BY OTHERS)
- DMS CBDMS XX (BY OTHERS)
- RWIS CBRWIS XX (BY OTHERS)
- PROPOSED DOT FIBER WITH NUMBER OF FIBER STRANDS
- ETHERNET SWITCH (BY OTHERS)
- DEVICE CABLES (BY OTHERS)
- DUPLEX JUMPER (BY OTHERS)
- RADIO (BY OTHERS)

NOTE: EXISTING CABINETS AND DEVICES IN DASHED AND GRAYSCALE



NOT TO SCALE

NETWORK ARCHITECTURE

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER C.07

5:43:54 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150C01.sht

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. All traffic control on this project shall be in accordance with Section 2528 of the Iowa Department of Transportation's Standard Specifications for Highway and Bridge Construction, the TC series of Standard Road Plans found in Tab 105-4 on Sheet C.1, and the Iowa Supplemental Manual on Uniform Traffic Control Devices. For additional complementary information, refer to Part 6 of the Manual on Uniform Traffic Control Devices.

2. Traffic shall be maintained at all times. Temporary lane closures will not be allowed, except in Note 3. Interchange ramps shall remain open at all times.

3. A. S. Expressway Street: Single lane closures will be allowed during the following hours: 10:00 PM (Sunday - Thursday) to 6:00 AM (Monday - Friday), 10:00 PM Friday to 8:00 AM Saturday and 10:00 PM Saturday to 7:00 AM Sunday.
   B. 19th Avenue, 7th Street, 10th Avenue, Willow Avenue, 8th Street and all other local city streets: single lane closures will be allowed at all times except 6:00 AM to 9:00 AM and 3:00 PM to 7:00 PM weekdays Monday through Friday.
   C. The time, length and duration of lane closures shall be as approved by the engineer. The department of local municipalities reserve the right to modify these restrictions to accommodate specific contractor activities and unforeseen traffic conditions, as well as special events.

4. A. Shoulder closures will be allowed at all times except 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM weekdays Monday through Friday.
   B. The time, length and duration of lane closures shall be as approved by the engineer. The department and local municipalities reserve the right to modify these restrictions to accommodate specific contractor activities and unforeseen traffic conditions, as well as special events.

5. The contractor shall coordinate traffic control with other projects as described in Tab 111-01 on Sheet J.01.

6. Construction traffic shall not use median crossovers.

7. The contractor shall maintain a clean pavement leading into and out of the work area at all times.

8. Any disturbed areas must be restored and level with the surrounding pavement each night. Daytime drop-offs shall not be allowed.

9. Access to splice points at all locations may be made from the shoulder of the road. No stopping or parking shall be allowed on I-80 ramps without prior authorization from the engineer.

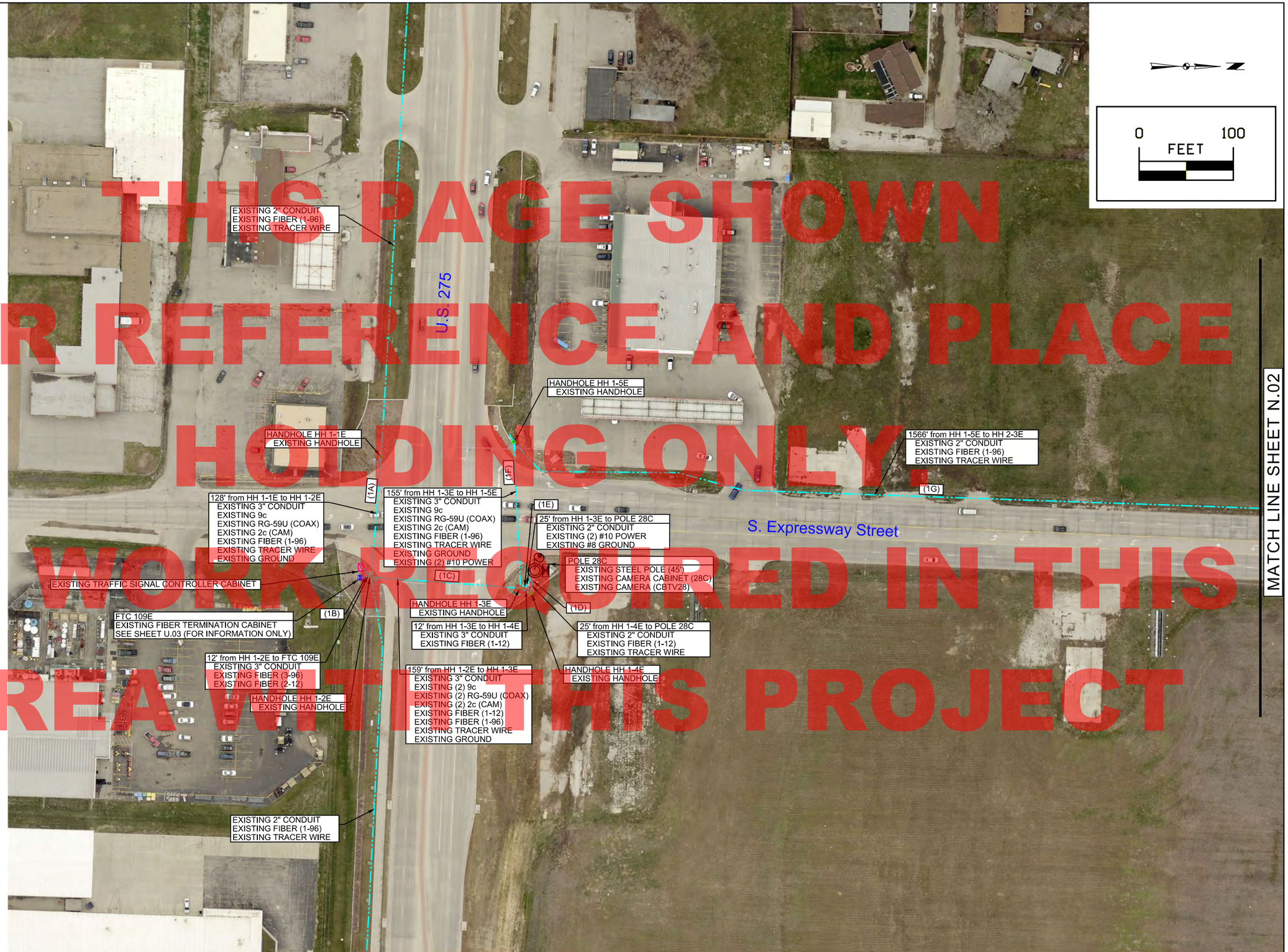
111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with the Engineer and contractors working within the same area.

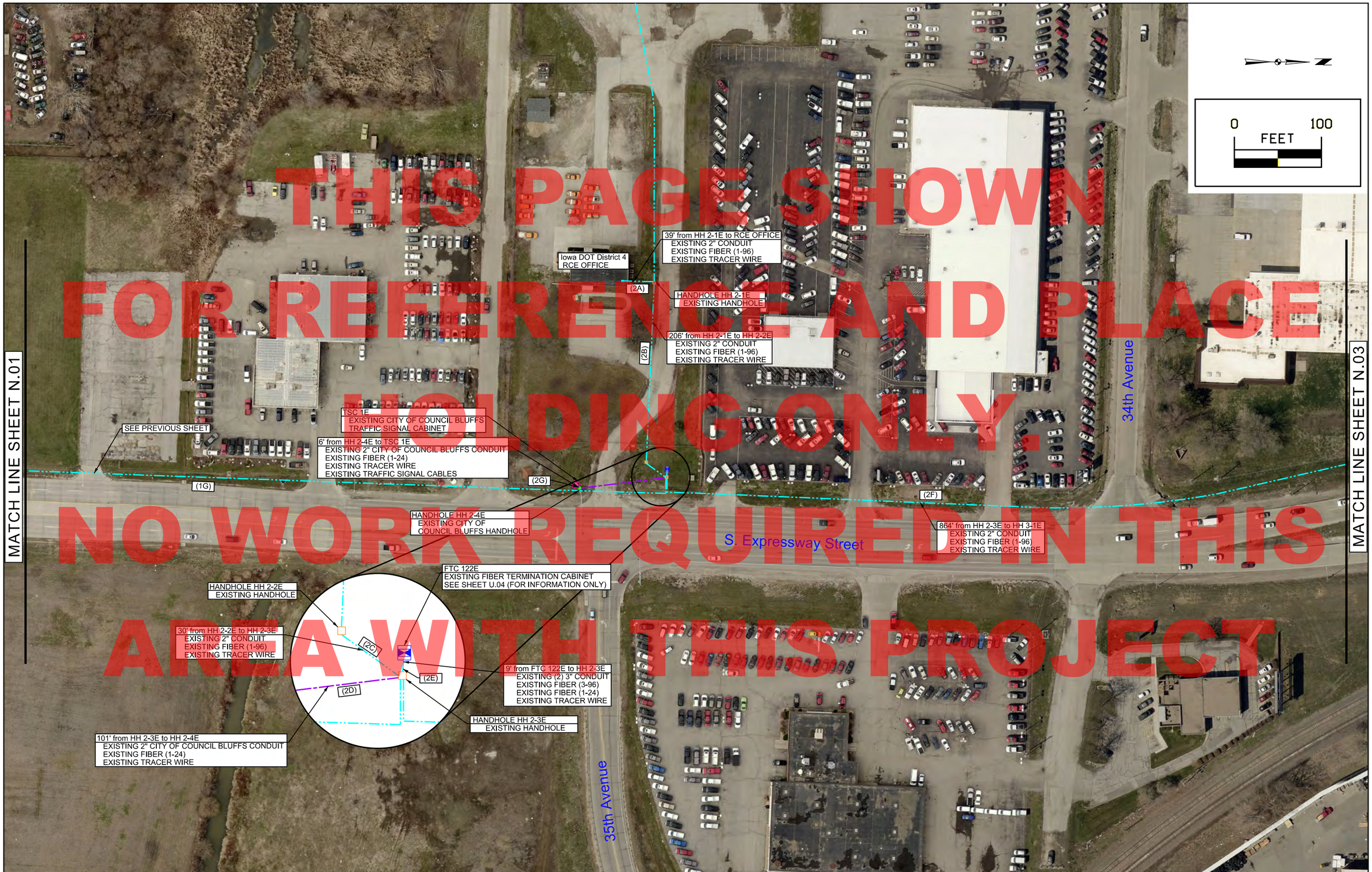
Project	Type of Work
IM-NHS-080-1(386)0--03-78	Lighting
IM-NHS-080-1(387)0--03-78	Traffic Signs
IM-NHS-080-1(388)2--03-78	Bridge
IMN-080-1(452)1--0E-78	ITS Conduit Infrastructure
IM-NHS-080-1(364)3--03-78	Grade and Pave
IM-NHS-029-3(102)48--03-78	Grade and Pave
IM-NHS-029-3(104)48--03-78	Signals and ITS
IM-NHS-080-1(370)4--03-78	Grading
IM-NHS-080-1(385)2--03-78	Grade and Pave; ITS
ITS Statewide Contract	Maintenance

Traffic Control Plan and
Coordinated Operations



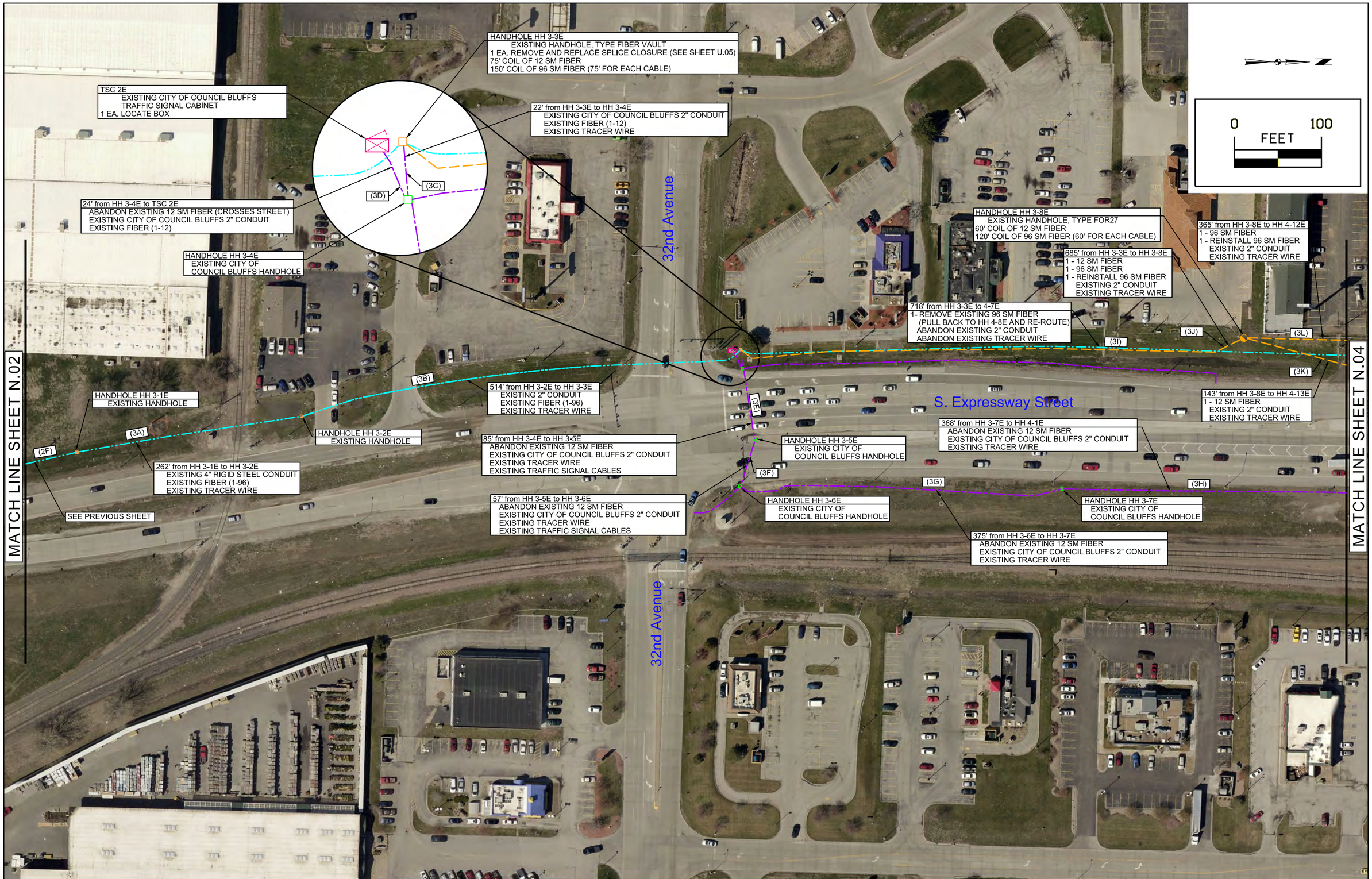
THIS PAGE SHOWN FOR REFERENCE AND PLACE HOLDING ONLY!
NO WORK REQUIRED IN THIS AREA WITH THIS PROJECT

ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.01



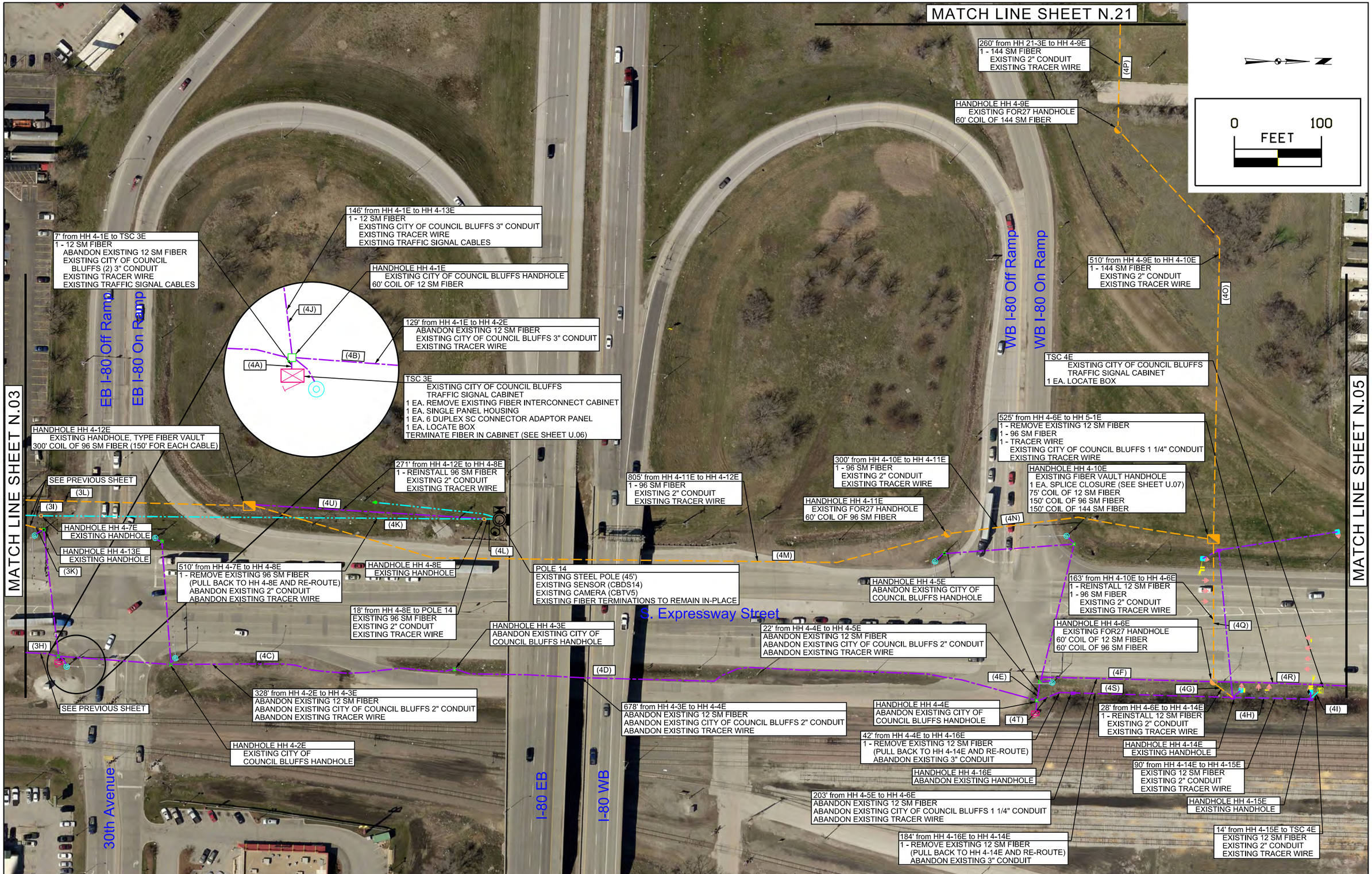
ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.02

8:18:25 AM 7/6/2015 kmlnark F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\002.dgn



ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE	COUNTY	PROJECT NUMBER	IMN-029-3(150)54--0E-78	SHEET NUMBER	N.03

8:18:42 AM 7/6/2015 kmlnarik F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\003.dgn

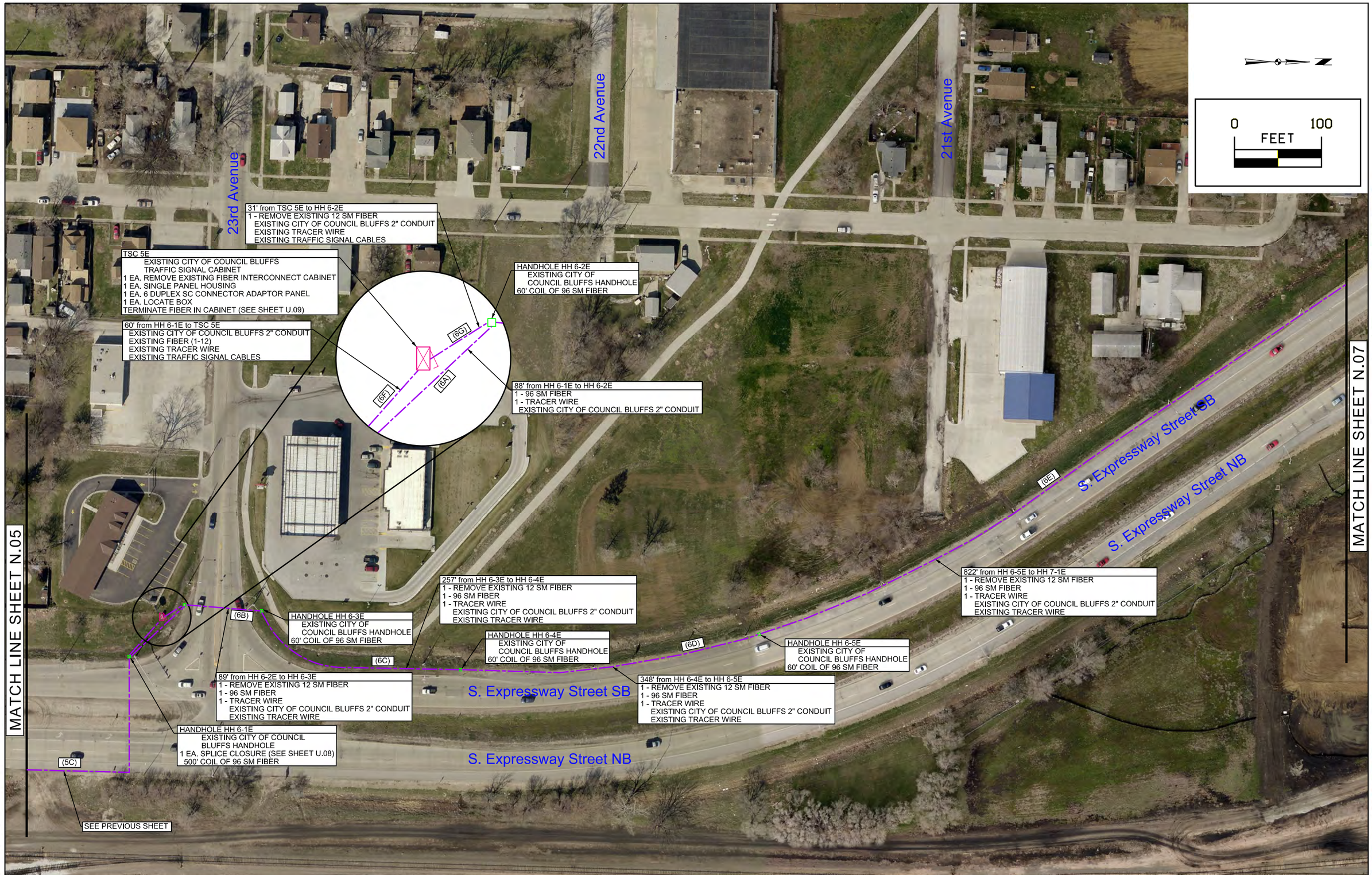


ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.04

8:19:00 AM 7/6/2015 kmlnark F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\004.dgn

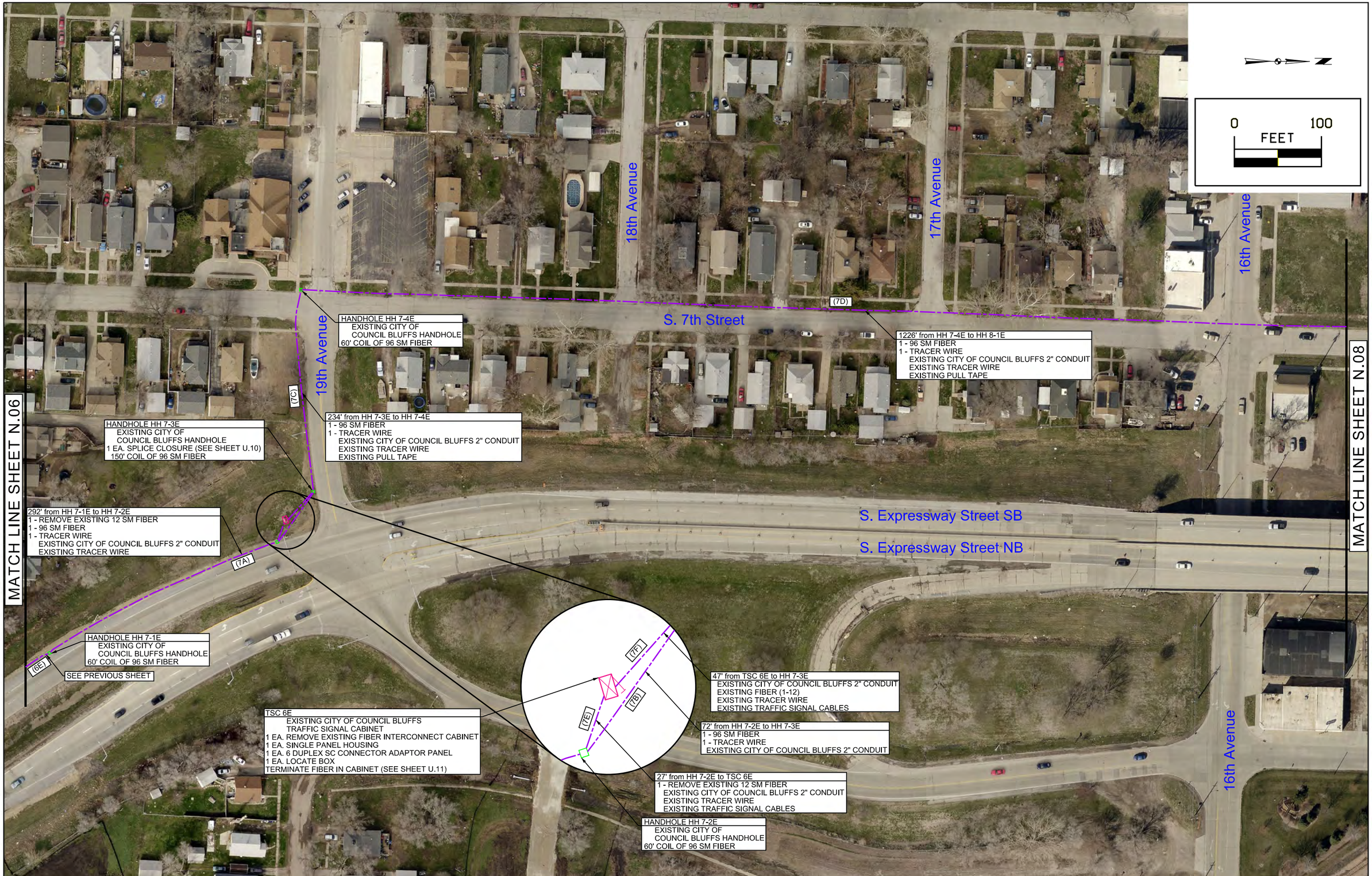
ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.05

8:19:25 AM 7/6/2015 kmlnark F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\005.dgn



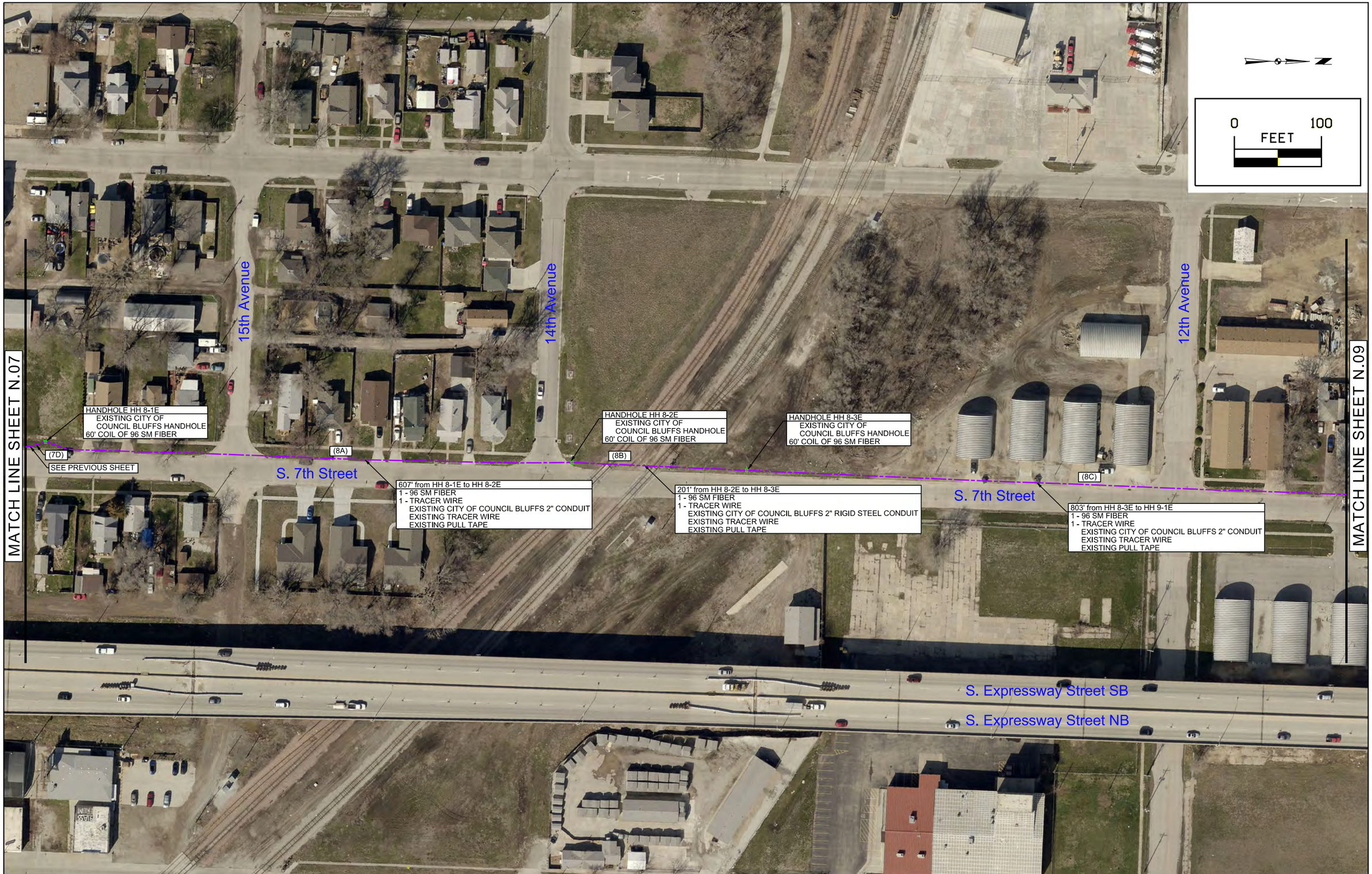
ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.06

8:19:41 AM 7/6/2015 kmlnarik F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\006.dgn



ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.07

8:20:00 AM 7/6/2015 kmlnarik F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\007.dgn

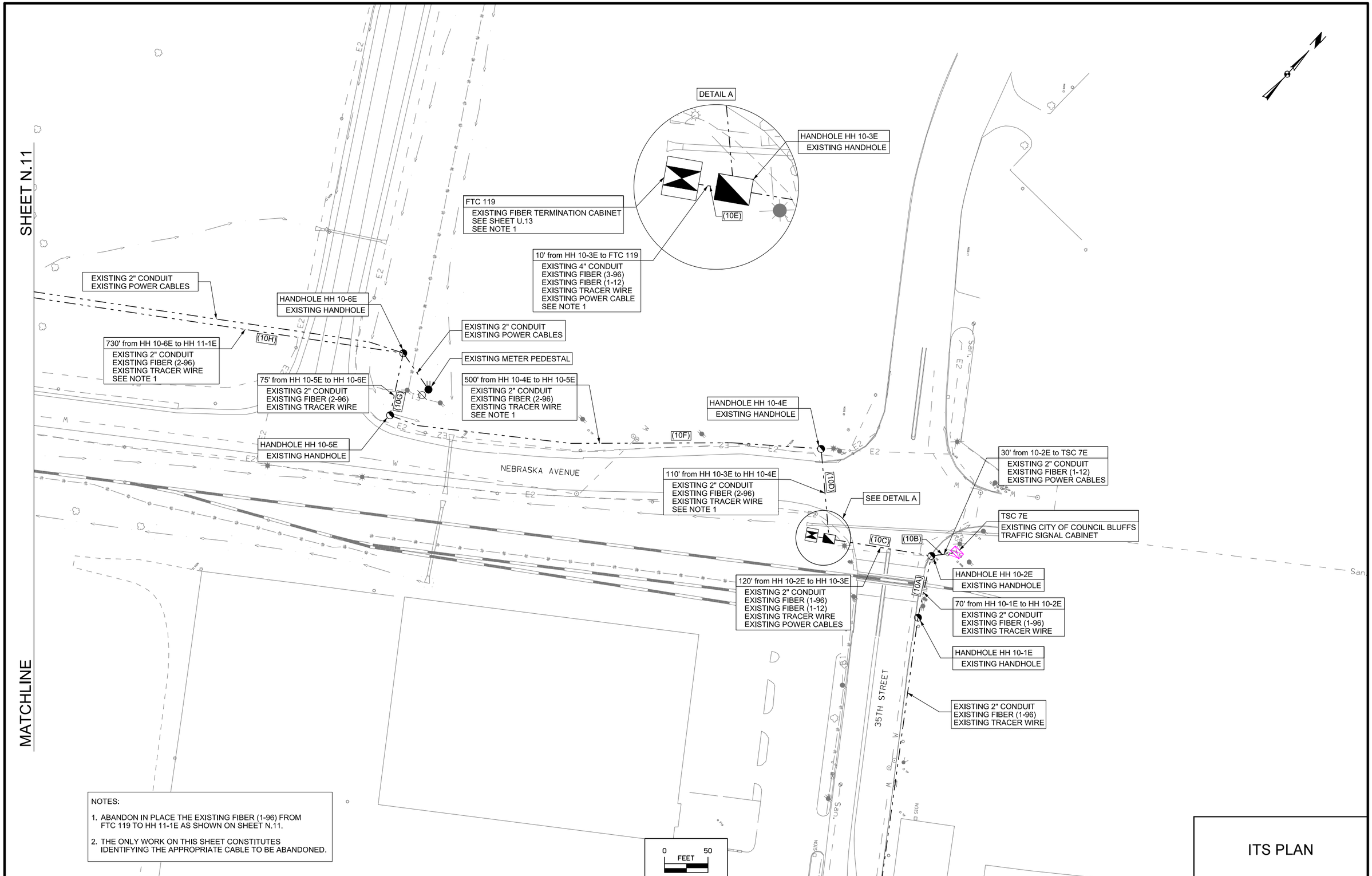


ENGLISH	IOWA DOT	DESIGN TEAM Olsson Associates	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.08

8:20:17 AM 7/6/2015 kmlnar1k F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\008.dgn

ENGLISH	IOWA DOT	DESIGN TEAM	Olsson Associates	POTTAWATTAMIE	COUNTY	PROJECT NUMBER	IMN-029-3(150)54--0E-78	SHEET NUMBER	N.09

8:20:33 AM 7/6/2015 kmlnarlk F:\Projects\014-1253\WO 5 - Council Bluffs Fiber Design_TRFC\DGN\Sheets\14_N Sheets\009.dgn



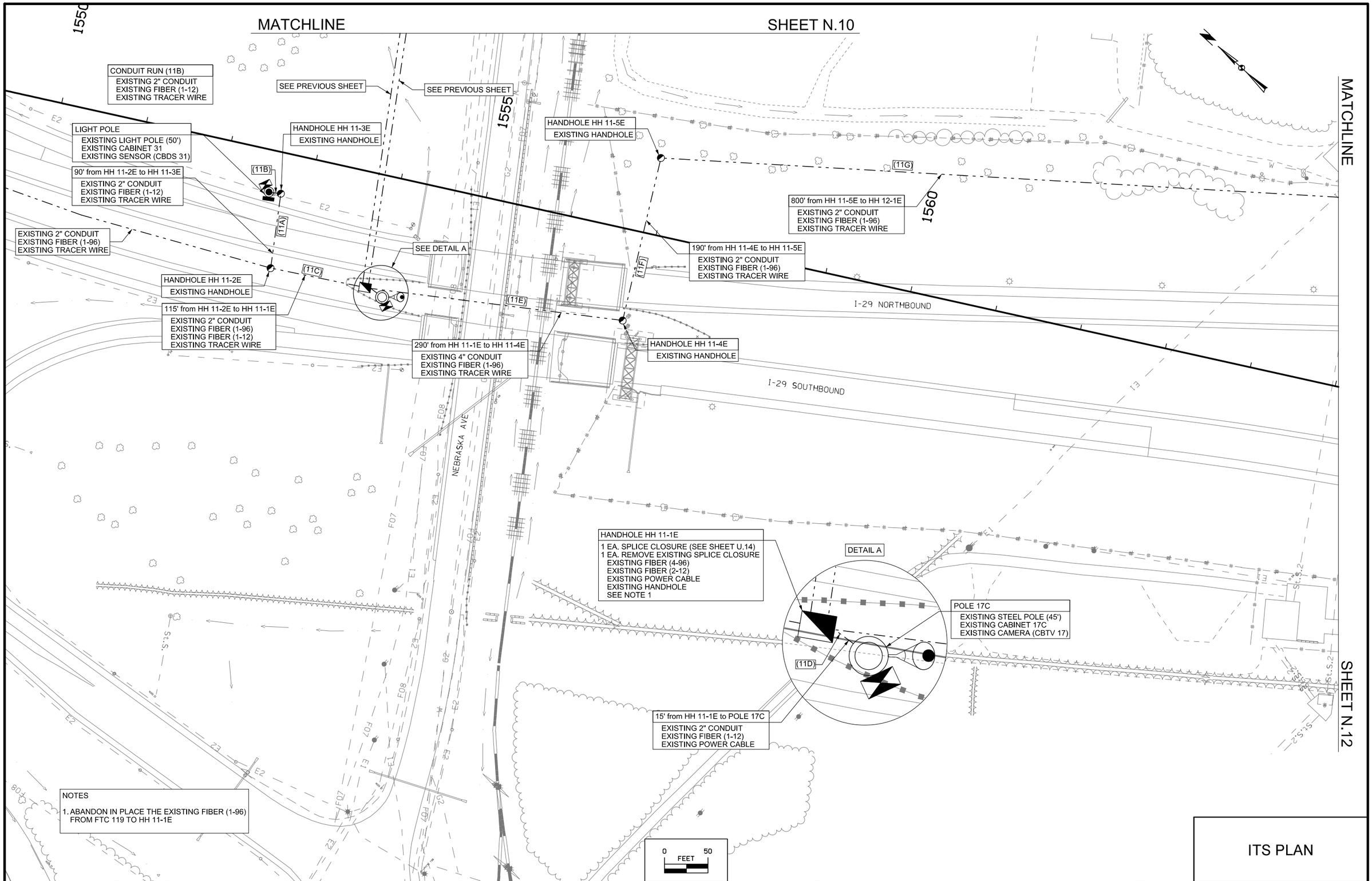
NOTES:

1. ABANDON IN PLACE THE EXISTING FIBER (1-96) FROM FTC 119 TO HH 11-1E AS SHOWN ON SHEET N.11.
2. THE ONLY WORK ON THIS SHEET CONSTITUTES IDENTIFYING THE APPROPRIATE CABLE TO BE ABANDONED.

ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.10

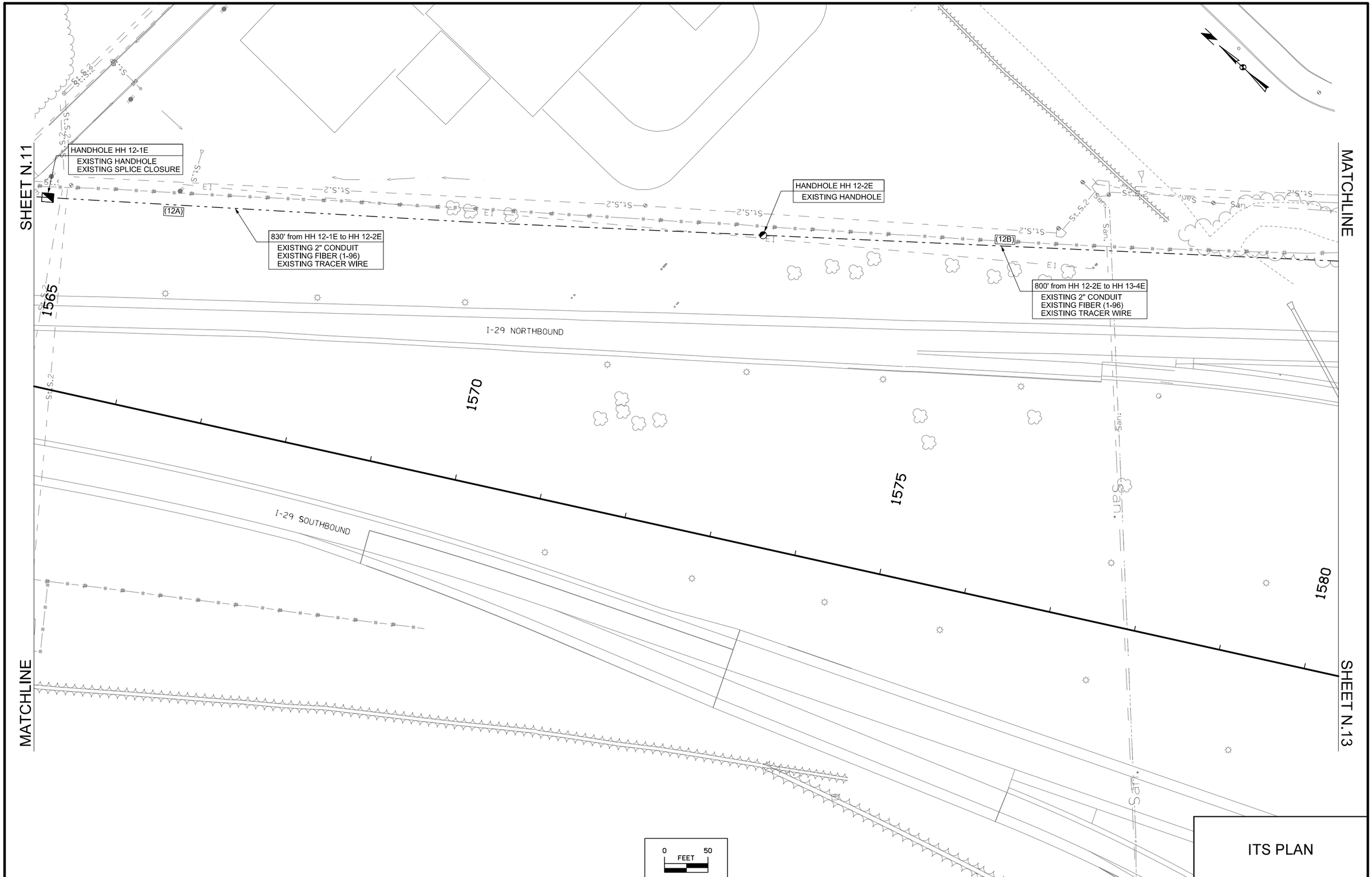
6:28:03 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.11

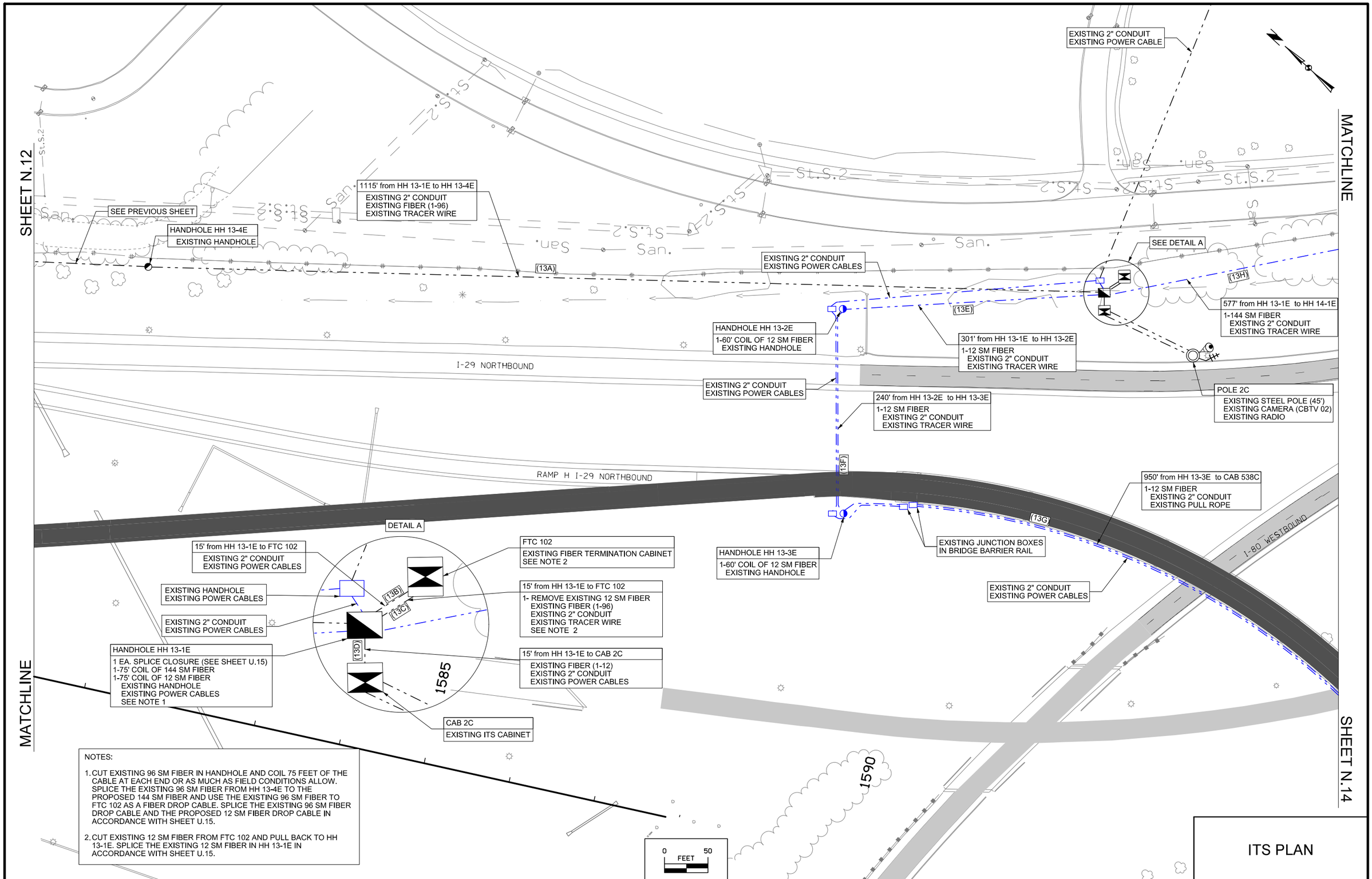
6:28:07 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.12

6:28:10 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



NOTES:

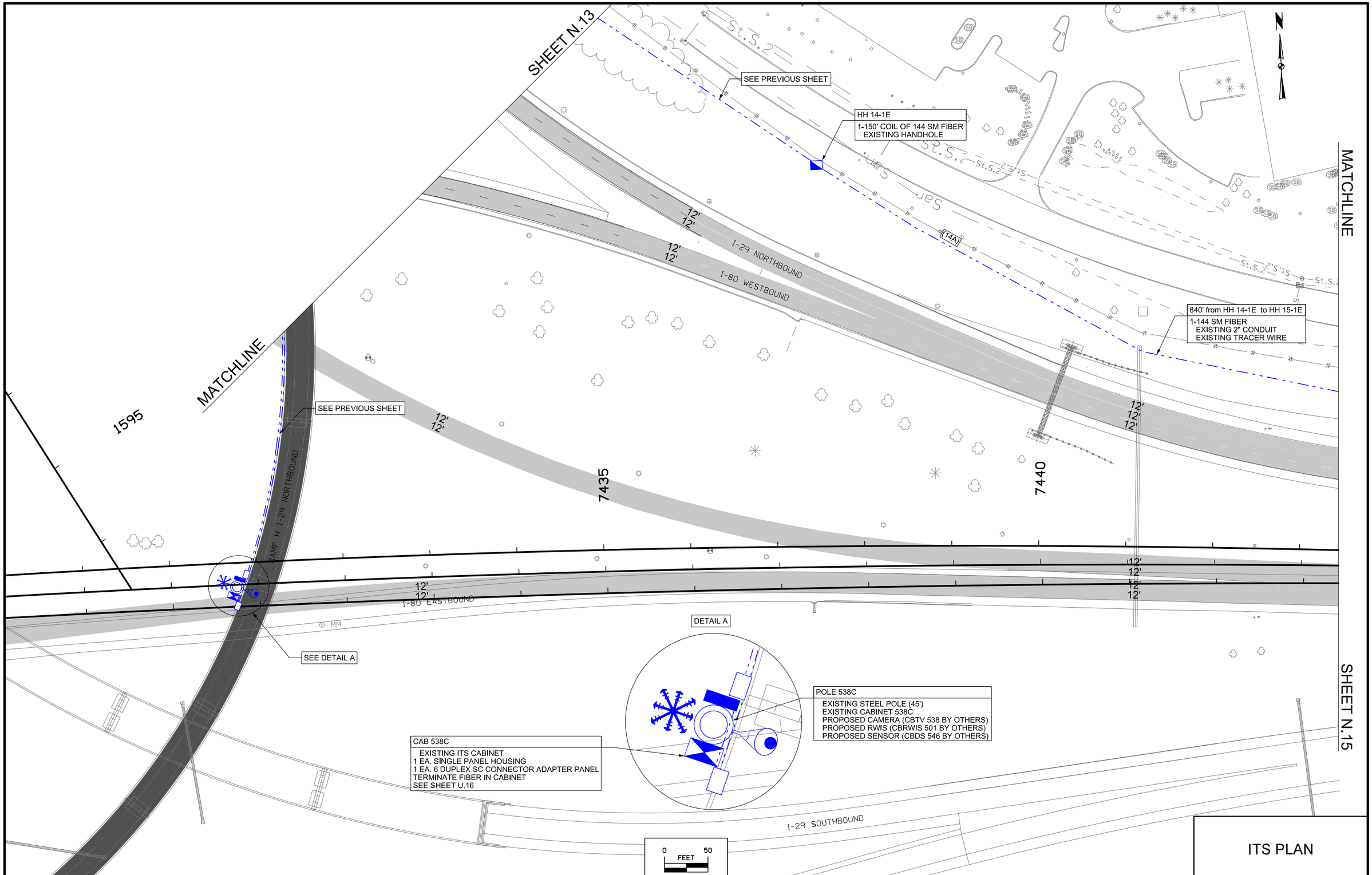
1. CUT EXISTING 96 SM FIBER IN HANDHOLE AND COIL 75 FEET OF THE CABLE AT EACH END OR AS MUCH AS FIELD CONDITIONS ALLOW. SPLICE THE EXISTING 96 SM FIBER FROM HH 13-4E TO THE PROPOSED 144 SM FIBER AND USE THE EXISTING 96 SM FIBER TO FTC 102 AS A FIBER DROP CABLE. SPLICE THE EXISTING 96 SM FIBER DROP CABLE AND THE PROPOSED 12 SM FIBER DROP CABLE IN ACCORDANCE WITH SHEET U.15.

2. CUT EXISTING 12 SM FIBER FROM FTC 102 AND PULL BACK TO HH 13-1E. SPLICE THE EXISTING 12 SM FIBER IN HH 13-1E IN ACCORDANCE WITH SHEET U.15.

ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.13

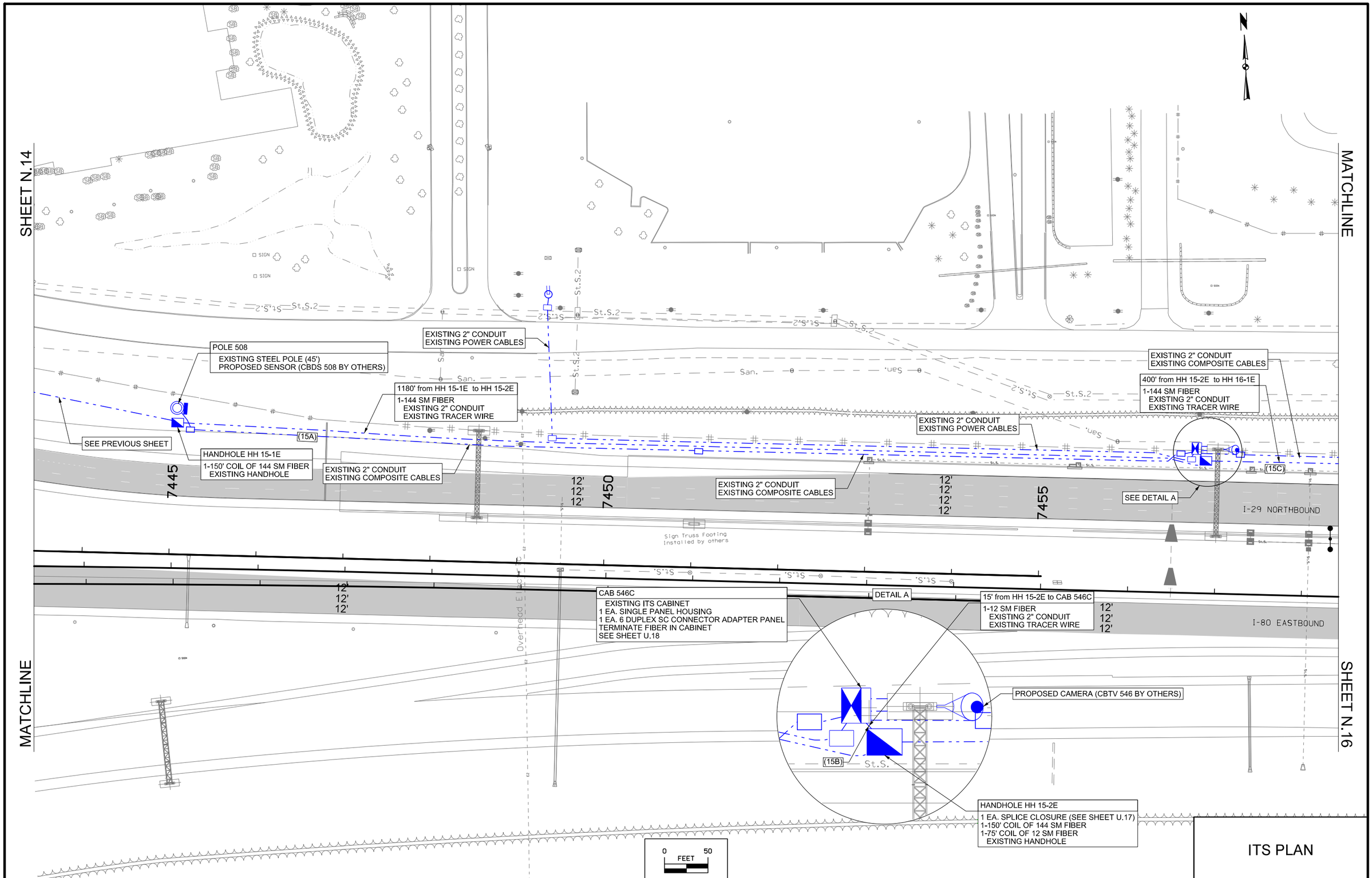
6:28:18 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.14

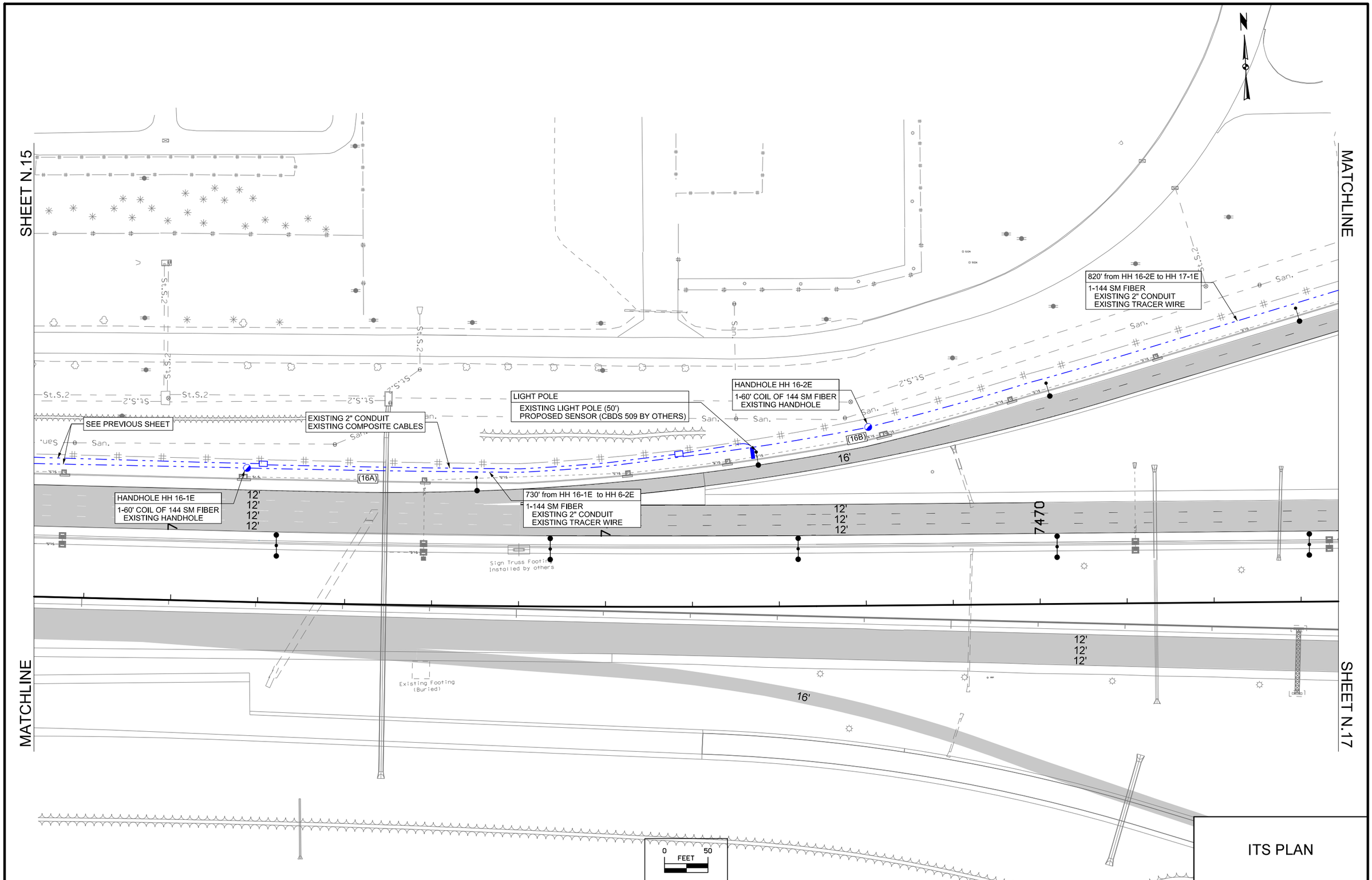
6:28:20 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.15

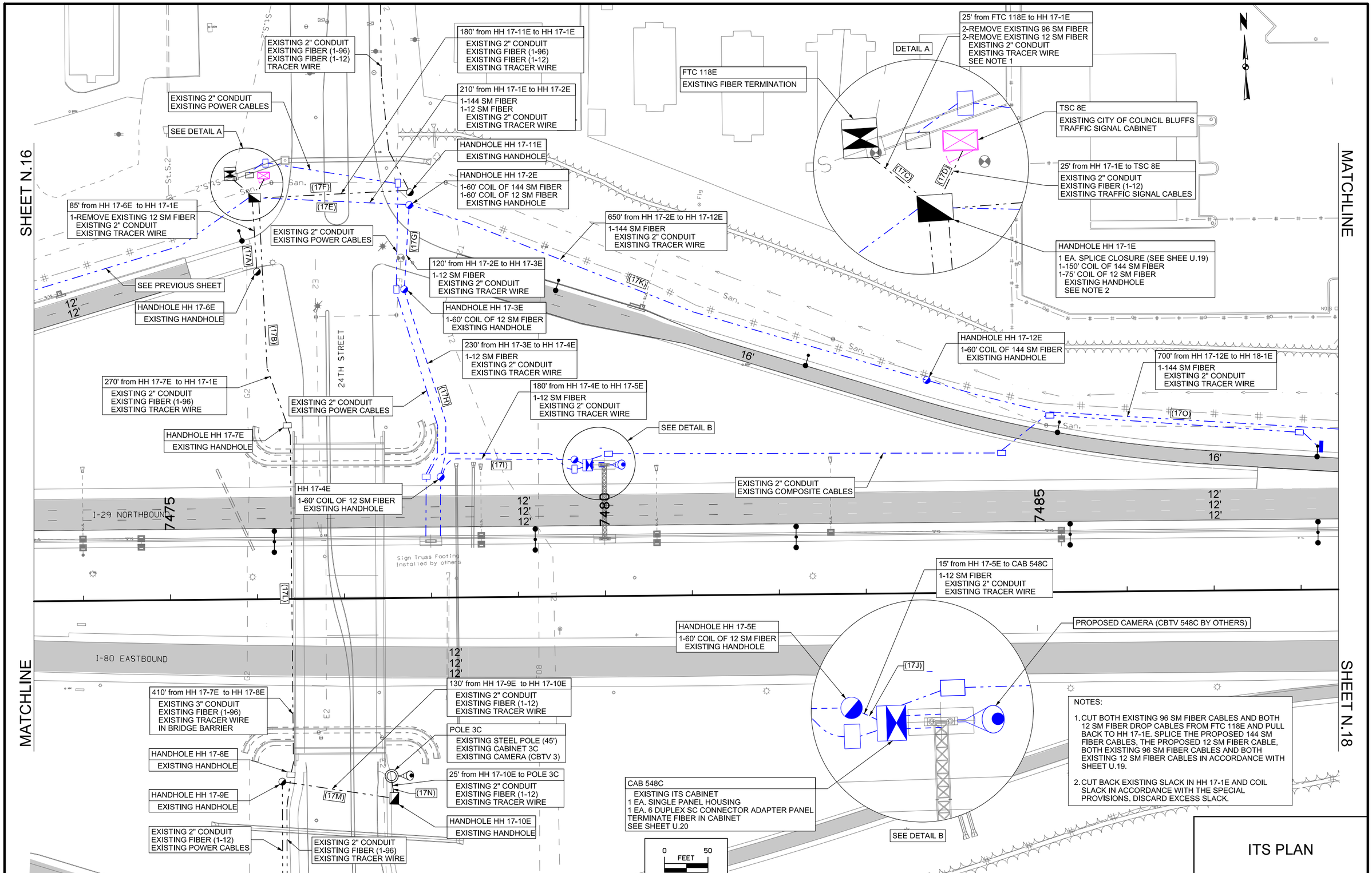
5:56:31 AM 7/17/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.16

5:56:35 AM 7/17/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



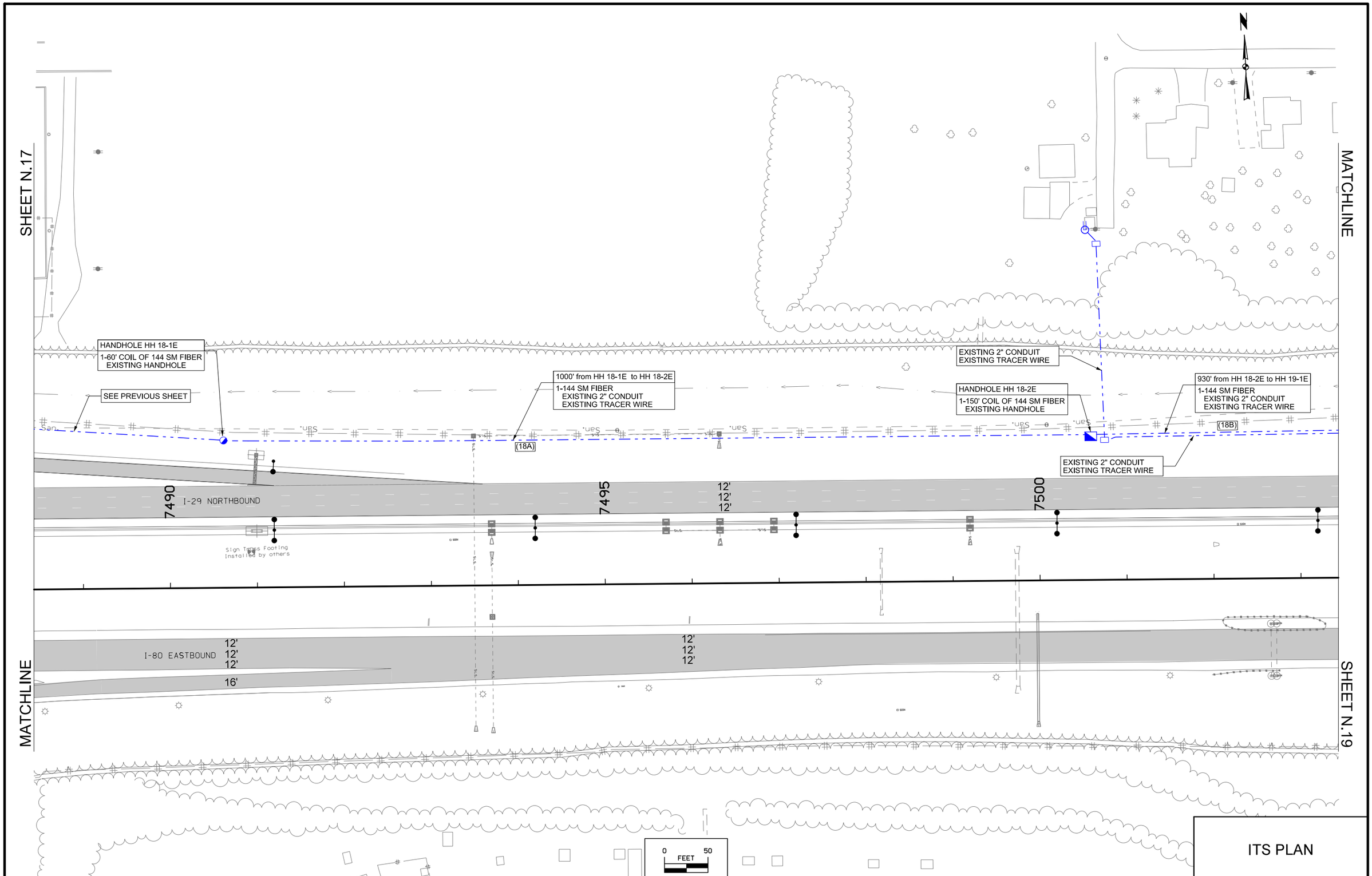
NOTES:

1. CUT BOTH EXISTING 96 SM FIBER CABLES AND BOTH 12 SM FIBER DROP CABLES FROM FTC 118E AND PULL BACK TO HH 17-1E. SPLICE THE PROPOSED 144 SM FIBER CABLES, THE PROPOSED 12 SM FIBER CABLE, BOTH EXISTING 96 SM FIBER CABLES AND BOTH EXISTING 12 SM FIBER CABLES IN ACCORDANCE WITH SHEET U.19.
2. CUT BACK EXISTING SLACK IN HH 17-1E AND COIL SLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS. DISCARD EXCESS SLACK.

ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.17

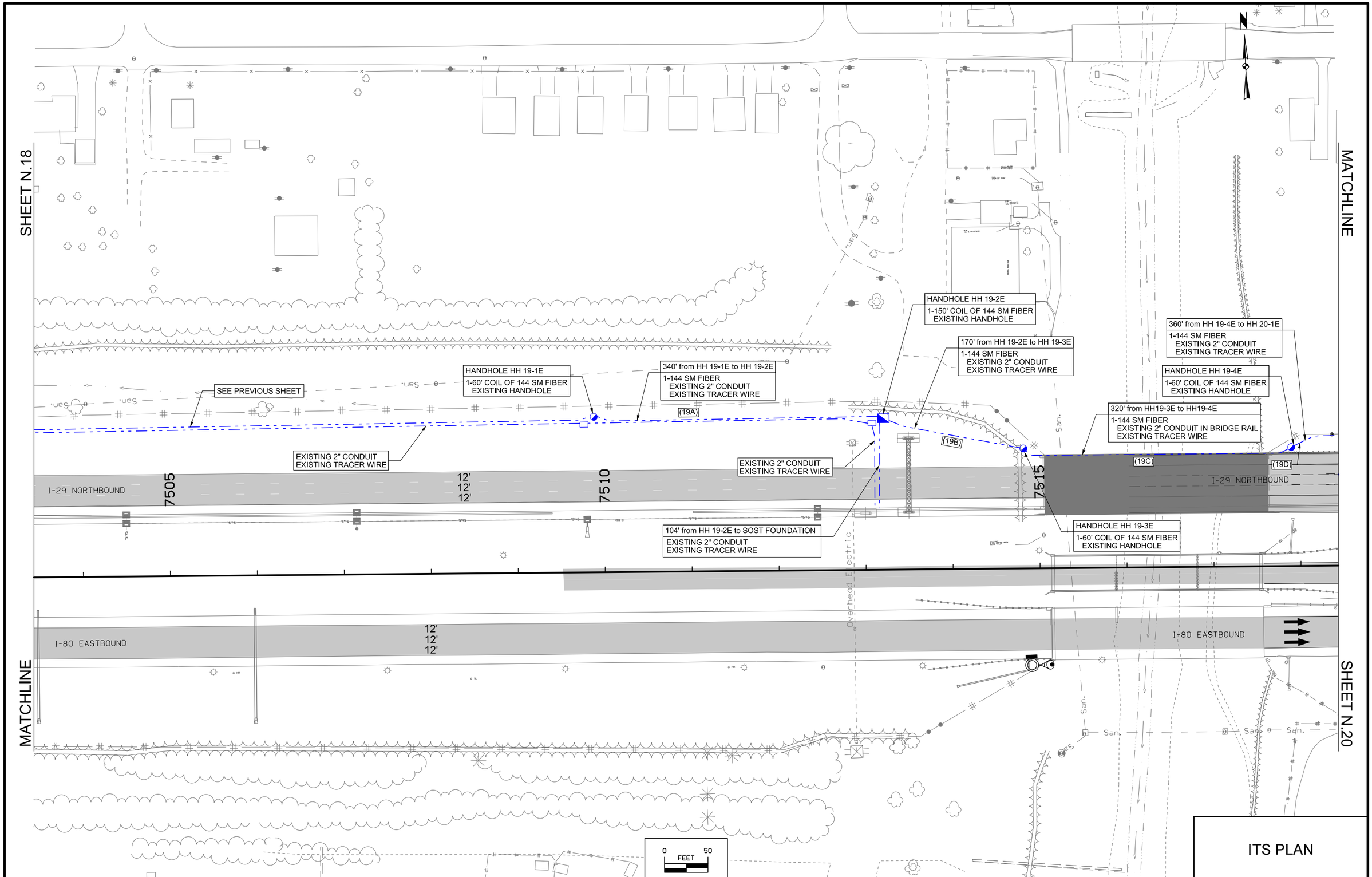
5:56:38 AM 7/17/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.18

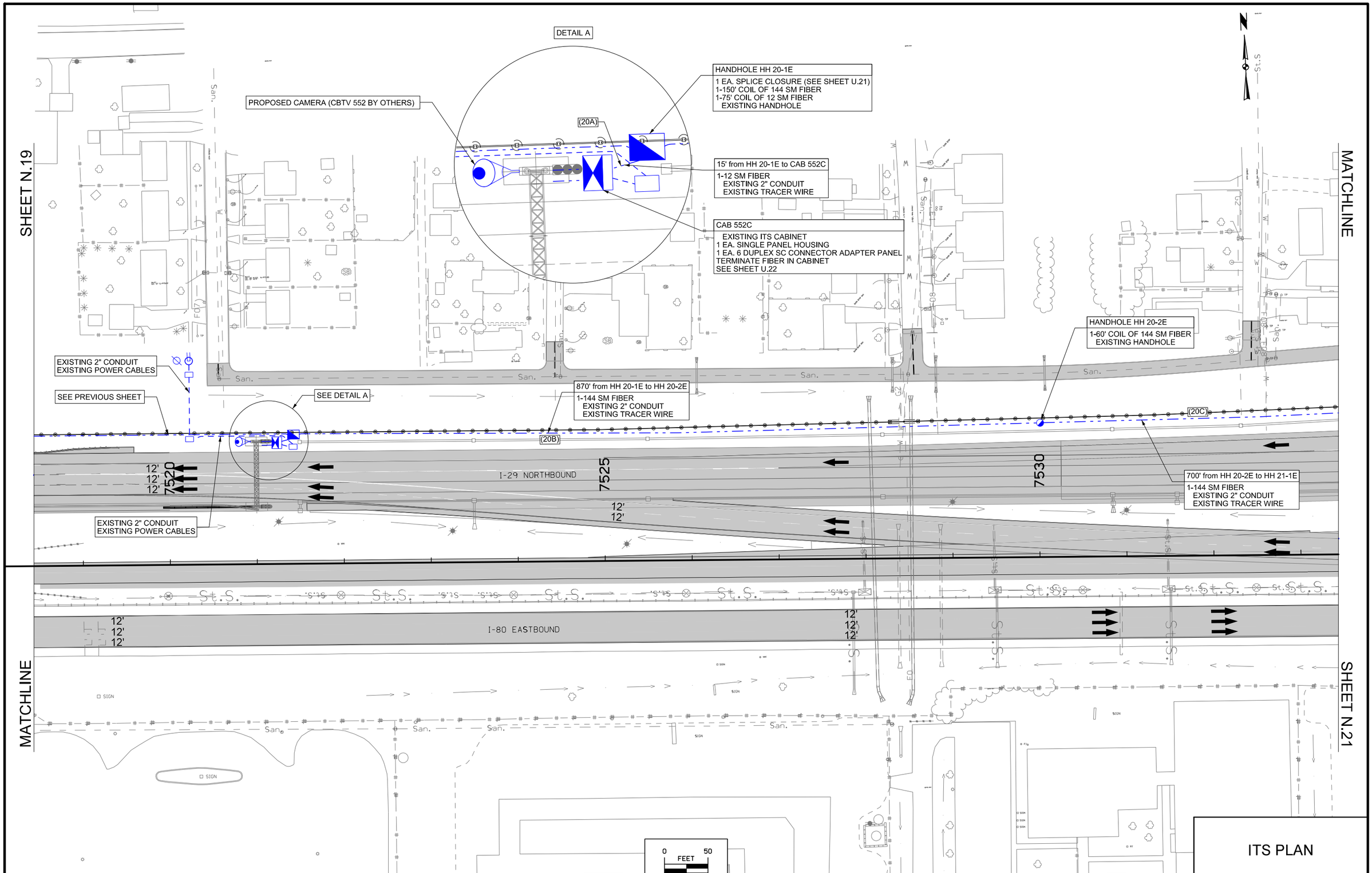
6:28:32 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.19

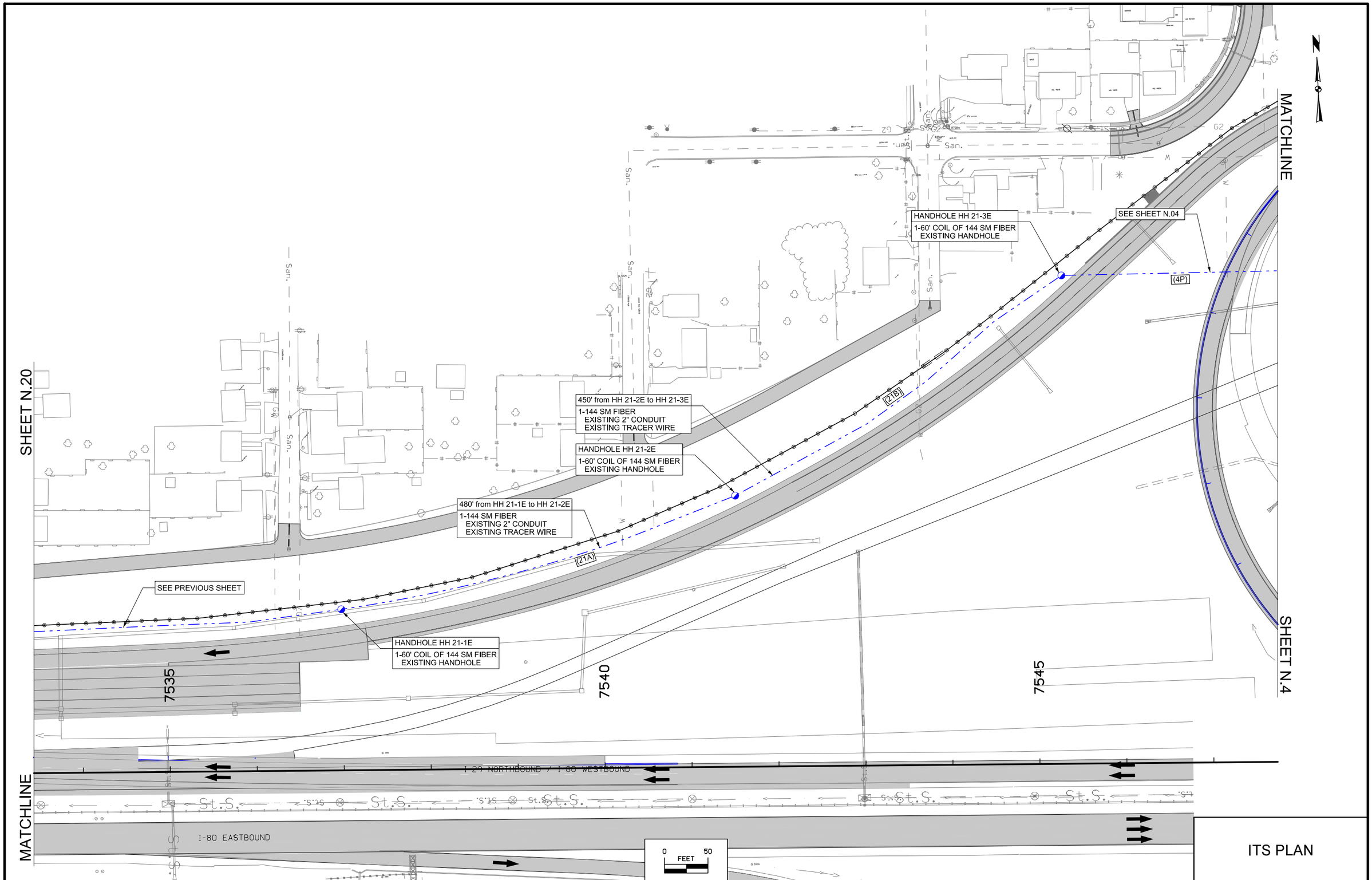
6:28:35 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.20

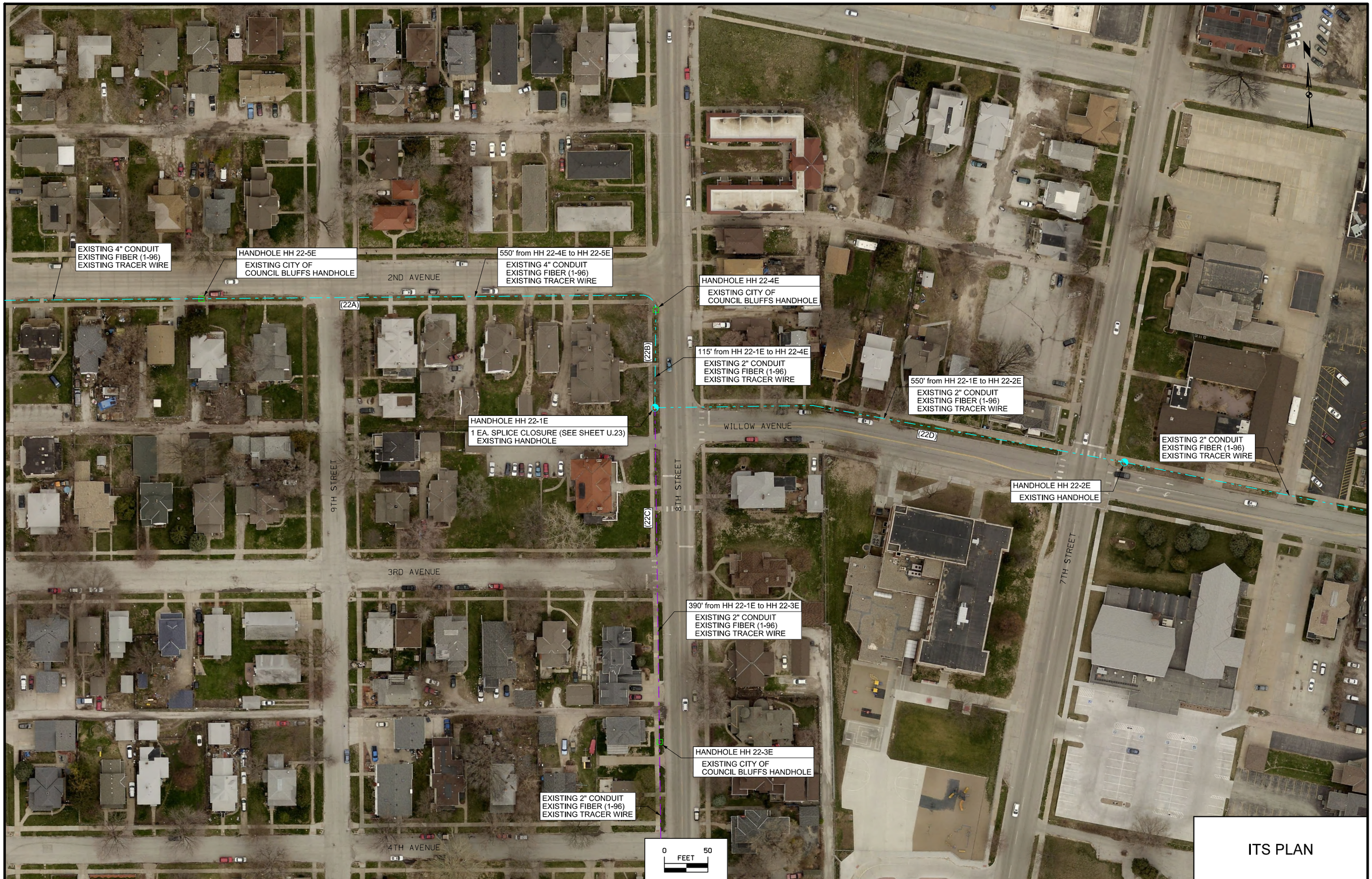
6:28:37 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht



ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.21

6:28:40 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht

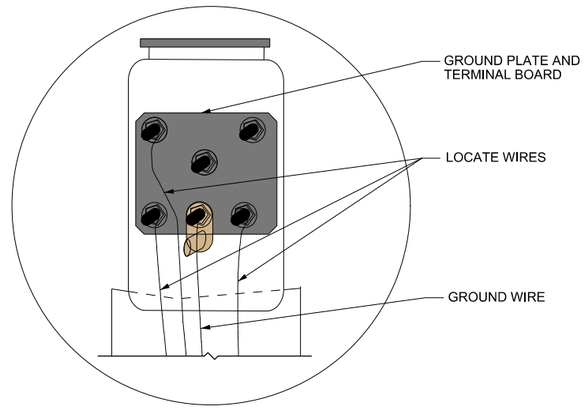


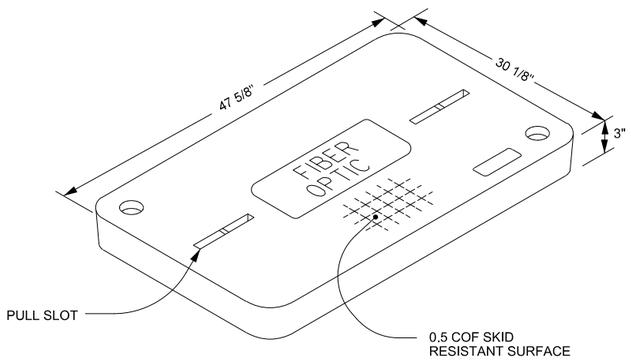
ITS PLAN

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER N.22

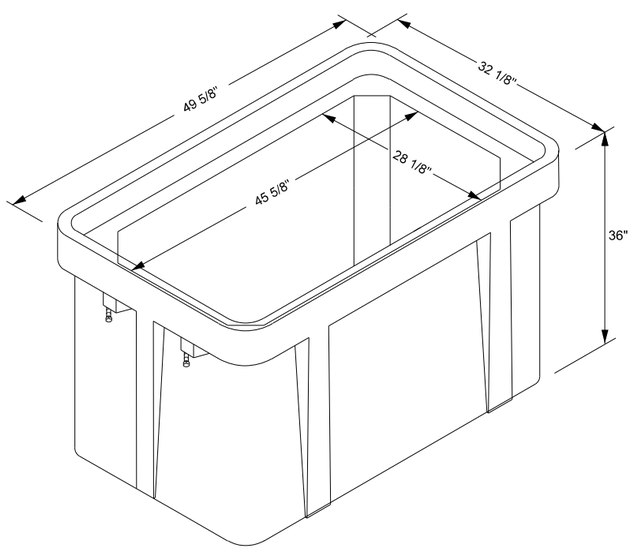
6:35:23 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150N01.sht

DETAIL A

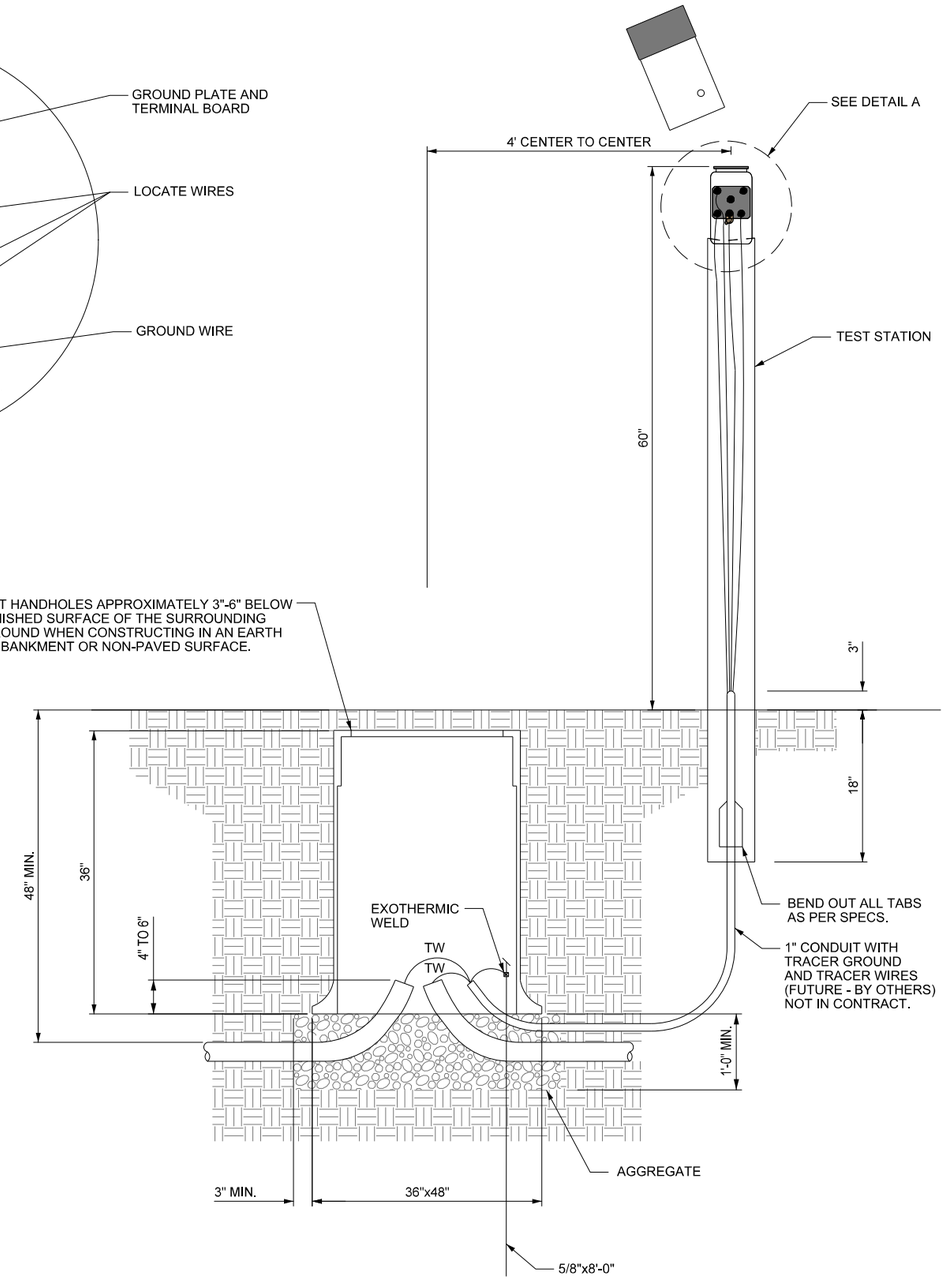




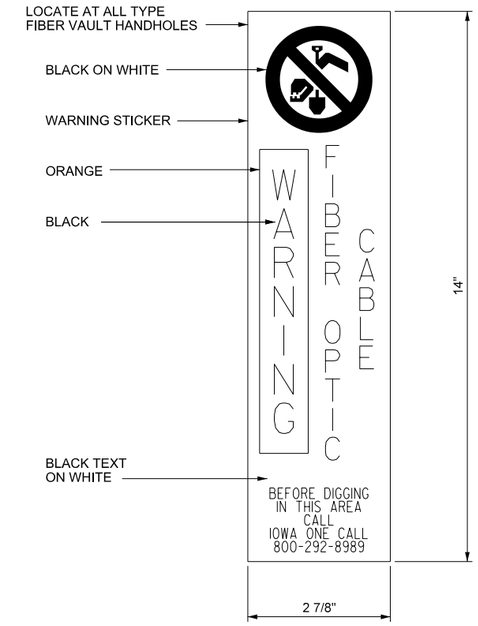
COVER



BOX



TYPE FIBER VAULT
NTS



TEST STATION
NTS

GENERAL NOTES:

1. HANDHOLES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED HEREIN AND AS PER THE SPECIAL PROVISIONS.
2. ALL HANDHOLE COVERS SHALL HAVE AN APPROVED ANTI-SKID PATTERN.
3. HANDHOLES SHALL REST FIRMLY ON A BED OF PORTLAND CEMENT CONCRETE FINE AGGREGATE GRADATION NO. 1 WITH A MINIMUM DEPTH OF 12" BELOW THE BOTTOM OF THE HANDHOLE, EXTENDING AT LEAST 3" BEYOND THE OUTSIDE EDGES OF THE PULL BOX.
4. DO NOT INSTALL LID BOLTS.
5. AFTER TRACER WIRE IS INSTALLED, ALL DUCT TERMINALS ENDS IN HANDHOLES SHALL BE SEALED AGAINST ENTRY OF MOISTURE BY METHODS STATED IN SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
6. ALL LIDS SHALL BE LABELED. ALL TYPE FIBER VAULT LIDS SHALL BE LABELED 'FIBER OPTIC'.
7. NO CONDUIT CAN ENTER THROUGH SIDE WALL OF HANDHOLES, THEY MUST ENTER FROM THE BOTTOM.
8. EACH TRACER WIRE SHALL LAND INDIVIDUALLY ON SEPARATE LUGS AS SHOWN IN DETAIL A.
9. ALL TRACER WIRE SHALL BE LABELED AS PER THE SPECIAL PROVISIONS.

FIBER VAULT TRACER WIRE DETAIL

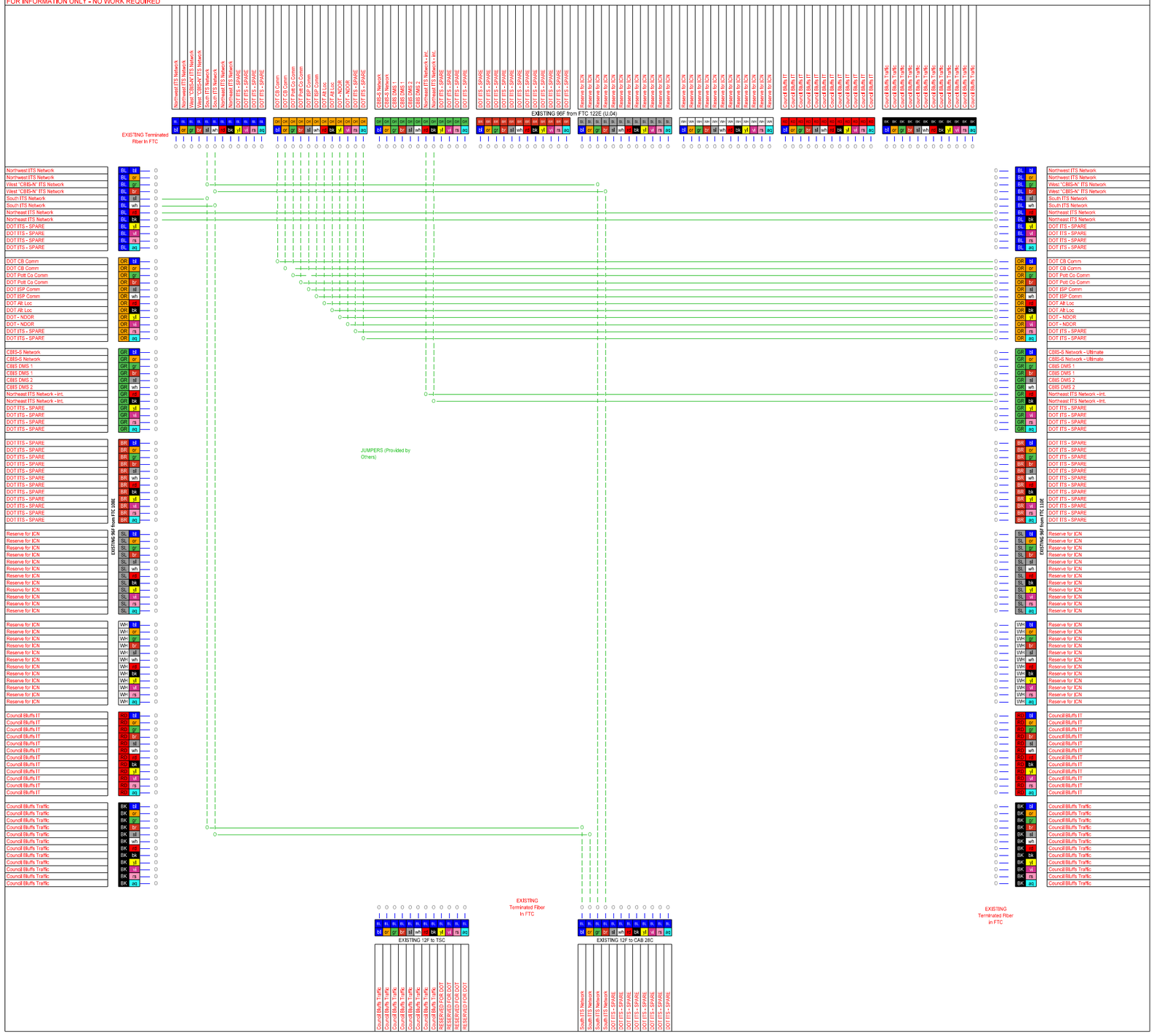
LISTING OF SPLICE DIAGRAMS				
Cabinet / Handhole Number	Route	Location Description	N Sheet Number	U Sheet Number
FTC 109E	US 275	SE corner of US 275 and South Expessway	N.01	U.03
FTC 122E	South Expressway	NW corner of 35th Avenue and South Expressway	N.02	U.04
HH 3-3E	South Expressway	NW corner of 32nd Avenue and South Expressway	N.03	U.05
TSC 3E	South Expressway	SE corner of 30th Avenue and South Expressway	N.04	U.06
HH 4-10E	South Expressway	SW corner of 29th Avenue and South Expressway (Loop Ramp)	N.04	U.07
HH 6-1E	South Expressway	SW corner of 23rd Avenue and South Expressway	N.06	U.08
TSC 5E	South Expressway	SW corner of 23rd Avenue and South Expressway	N.06	U.09
HH 7-3E	South Expressway	SW corner of 19th Avenue and South Expressway	N.07	U.10
TSC 6E	South Expressway	SW corner of 19th Avenue and South Expressway	N.07	U.11
HH 9-4E	10th Avenue	NW corner of 10th Avenue and 8th Street	N.09	U.12
FTC 119	Nebraska Avenue	SW corner of 35th Street and Nebraska Avenue	N.10	U.13
HH 11-1E	I-29	North side of Nebraska Avenue between I-29 Mainline	N.11	U.14
HH 13-1E	I-29/I-80	NE of the West System Interchange	N.13	U.15
CAB 538C	I-29/I-80	Ramp H of the West System Interchange	N.14	U.16
HH 15-2E	I-29/I-80	North side between 24th Street and the West System Interchange	N.15	U.17
CAB 546C	I-29/I-80	North side between 24th Street and the West System Interchange	N.15	U.18
HH 17-1E	I-29/I-80	NW corner of 24th Street and the North Ramp Terminal I-29/I-80	N.17	U.19
CAB 548C	I-29/I-80	North side of I-29/I-80 just east of the 24th Street bridge	N.17	U.20
HH 20-1E	I-29/I-80	North side of I-29/I-80 just east of the Indian Creek bridge	N.20	U.21
CAB 552C	I-29/I-80	North side of I-29/I-80 just east of the Indian Creek bridge	N.20	U.22
HH 22-1E	Willow Avenue	NW corner of 8th Street Willow Avenue	N.22	U.23

SPLICE DIAGRAMS LEGEND	
FIBER STRAND	------
JUMPER (BY OTHERS)	------
FIBER CONTINUATION	O
JUMPER CONTINUATION (BY OTHERS)	O
PROPOSED SPLICE	+
EXISTING TERMINATION	O
PROPOSED TERMINATION	O

LISTING OF FIBER EQUIPMENT							
Cabinet / Handhole Number	Fiber Optic Splice Closure (with storage baskets)	Fiber Optic Splice (with protector sleeves)	UPC/SC Factory Terminated Fiber Connector and Pigtails (include splice and protector sleeves)	Fiber Optic 12 Splice Tray	Fiber Optic 24 Splice Tray	Single Panel Housing	6 Duplex SC Connector Adapter Panel
HH 3-3E	1	108	0	1	4	0	0
TSC 3E	0	0	12	0	0	1	1
HH 4-10E	1	40	0	0	2	0	0
HH 6-1E	1	8	0	1	0	0	0
TSC 5E	0	0	12	0	0	1	1
HH 7-3E	1	8	0	1	0	0	0
TSC 6E	0	0	12	0	0	1	1
HH 9-4E	1	74	0	1	3	0	0
HH 11-1E	1	76	0	1	3	0	0
HH 13-1E	1	104	0	1	4	0	0
CAB 538C	0	0	12	0	0	1	1
HH 15-2E	1	4	0	1	0	0	0
CAB 546C	0	0	12	0	0	1	1
HH 17-1E	1	42	0	0	2	0	0
CAB 548C	0	0	12	0	0	1	1
HH 20-1E	1	8	0	1	0	0	0
CAB 552C	0	0	12	0	0	1	1
HH 22-1E	1	36	0	1	1	0	0

LISTING OF FIBER WORK AND SPLICE LEGEND

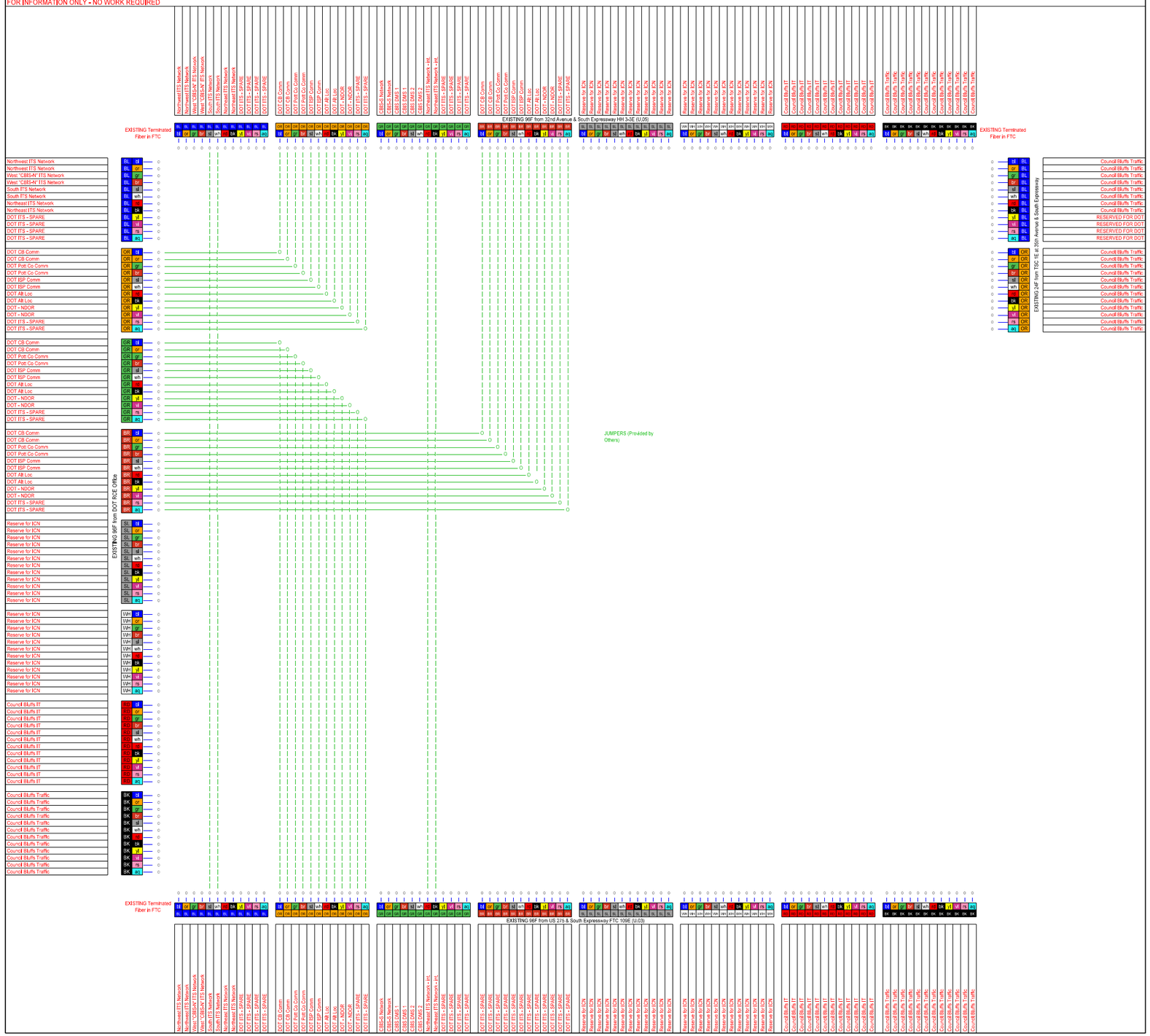
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
US 275 & South Expressway (FTC 109E)
Fiber Termination Cabinet - Termination Diagram
See Sheet N.01
FOR INFORMATION ONLY - NO WORK REQUIRED



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.03

6:18:40 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
South Expressway & 35th Avenue (FTC 1222)
Fiber Termination Cabinet - Termination Diagram
See Sheet N.02
FOR INFORMATION ONLY - NO WORK REQUIRED



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.04

6:18:43 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

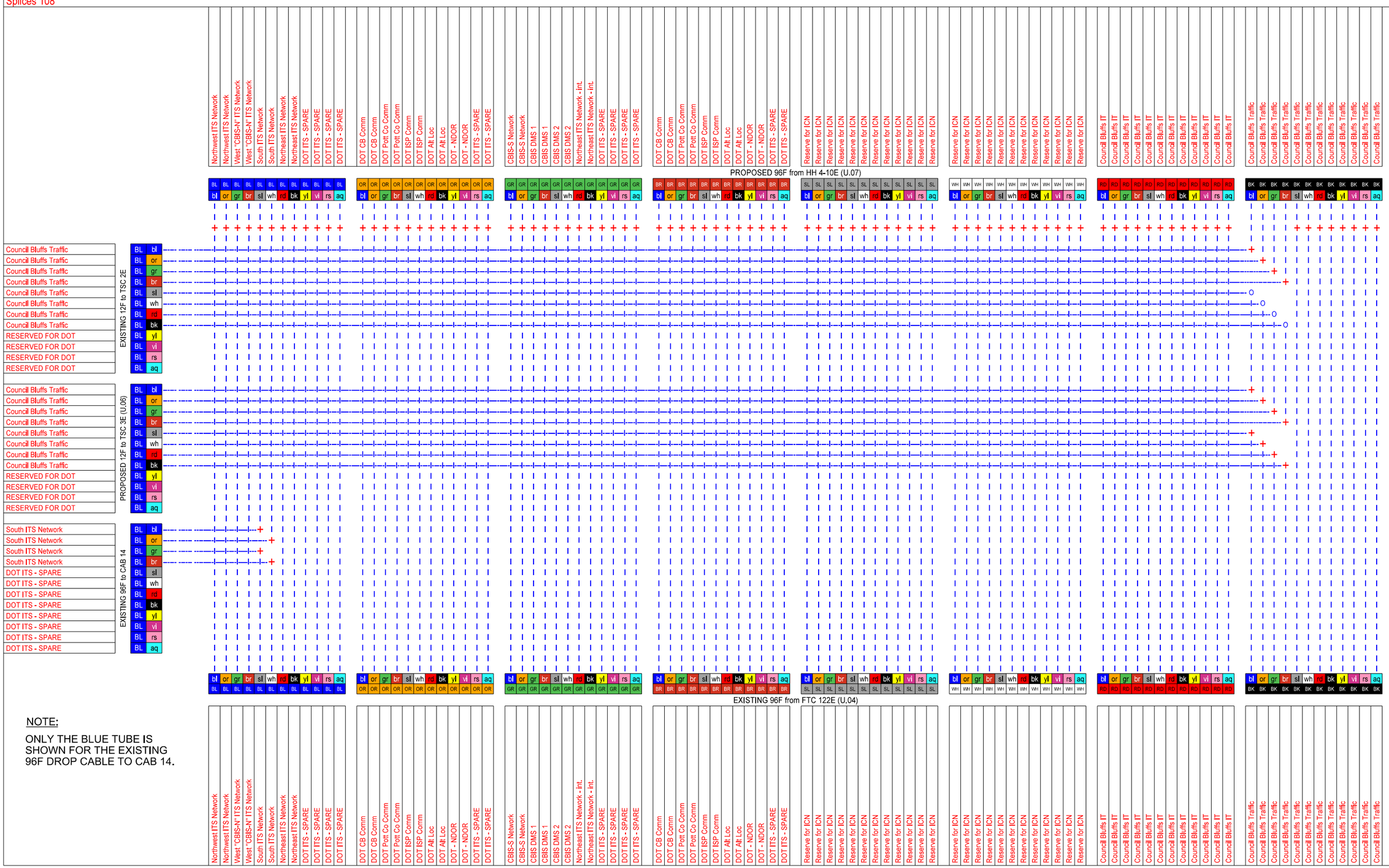
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

S. Expressway St. & 32nd Avenue (HH 3-3E)

Fiber Splice Diagram

See Sheet N. 03

Splices 108



NOTE:

ONLY THE BLUE TUBE IS SHOWN FOR THE EXISTING 96F DROP CABLE TO CAB 14.

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.05

6:18:45 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

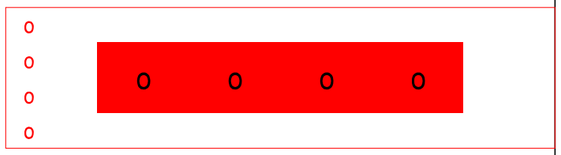
S. Expressway St. & 30th Avenue (TSC 3E)

Traffic Signal Cabinet Terminations

See Sheet N.04

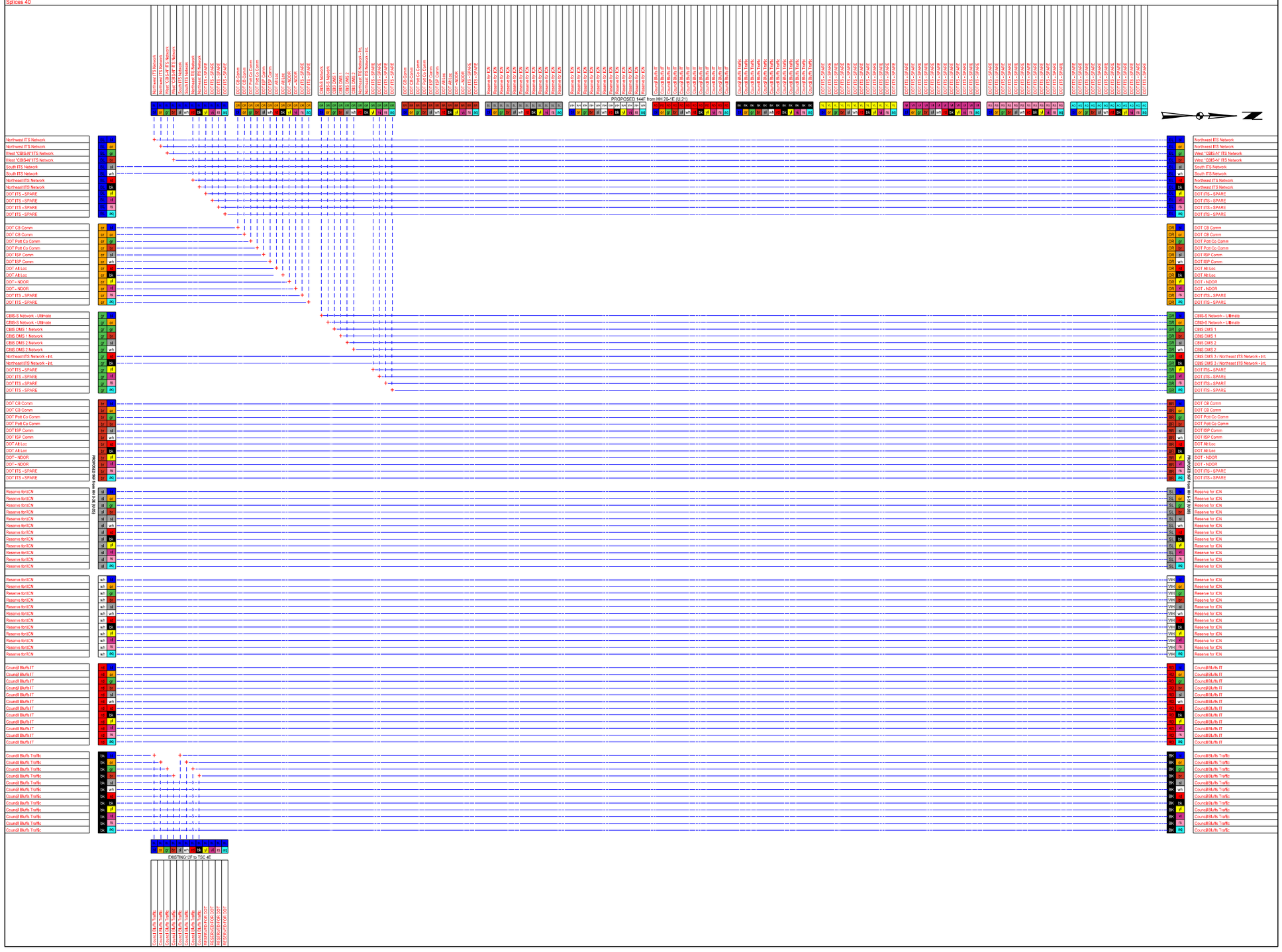
Terminations 12

Council Bluffs Traffic	PROPOSED 12F from HH 3-3E (U.05)	BL	bl	------	o
Council Bluffs Traffic		BL	or	------	o
Council Bluffs Traffic		BL	gr	------	o
Council Bluffs Traffic		BL	br	------	o
Council Bluffs Traffic		BL	sl	------	o
Council Bluffs Traffic		BL	wh	------	o
Council Bluffs Traffic		BL	rd	------	o
Council Bluffs Traffic		BL	bk	------	o
RESERVED FOR DOT		BL	yl	------	o
RESERVED FOR DOT		BL	vi	------	o
RESERVED FOR DOT		BL	rs	------	o
RESERVED FOR DOT		BL	aq	------	o



Fiber Optic Field Switch (Provided by Others)

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
South Expressway & 29th Avenue (Loop Ramp) (HH 4-10E)
Fiber Splice Diagram
See Sheet N.04
Splices 40



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.07

6:18:50 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

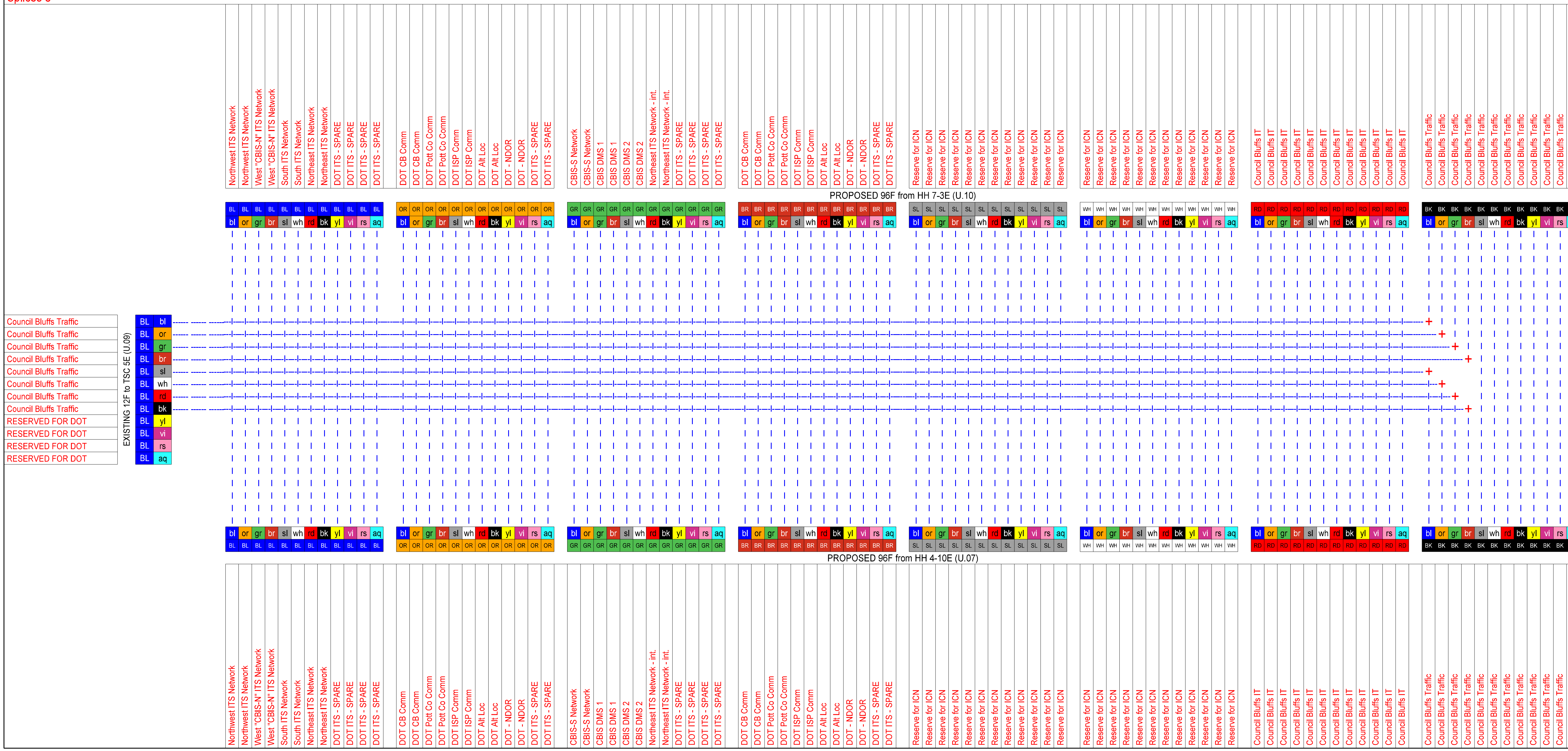
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

S. Expressway Street & 23rd Avenue (HH 6-1E)

Fiber Splice Diagram

See Sheet N.06

Splices 8



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.08

6:18:54 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

S. Expressway St. & 23rd Avenue (TSC 5E)

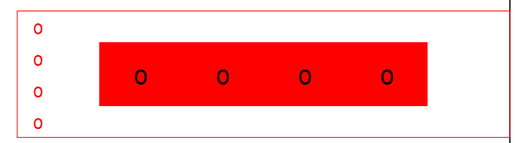
Traffic Signal Cabinet Terminations

See Sheet N.06

Terminations 12

EXISTING 12F from HH 6-1E (U.08)

Council Bluffs Traffic	BL	bl	o
Council Bluffs Traffic	BL	or	o
Council Bluffs Traffic	BL	gr	o
Council Bluffs Traffic	BL	br	o
Council Bluffs Traffic	BL	sl	o
Council Bluffs Traffic	BL	wh	o
Council Bluffs Traffic	BL	rd	o
Council Bluffs Traffic	BL	bk	o
RESERVED FOR DOT	BL	yl	o
RESERVED FOR DOT	BL	vi	o
RESERVED FOR DOT	BL	rs	o
RESERVED FOR DOT	BL	aq	o



Fiber Optic Field Switch (Provided by Others)

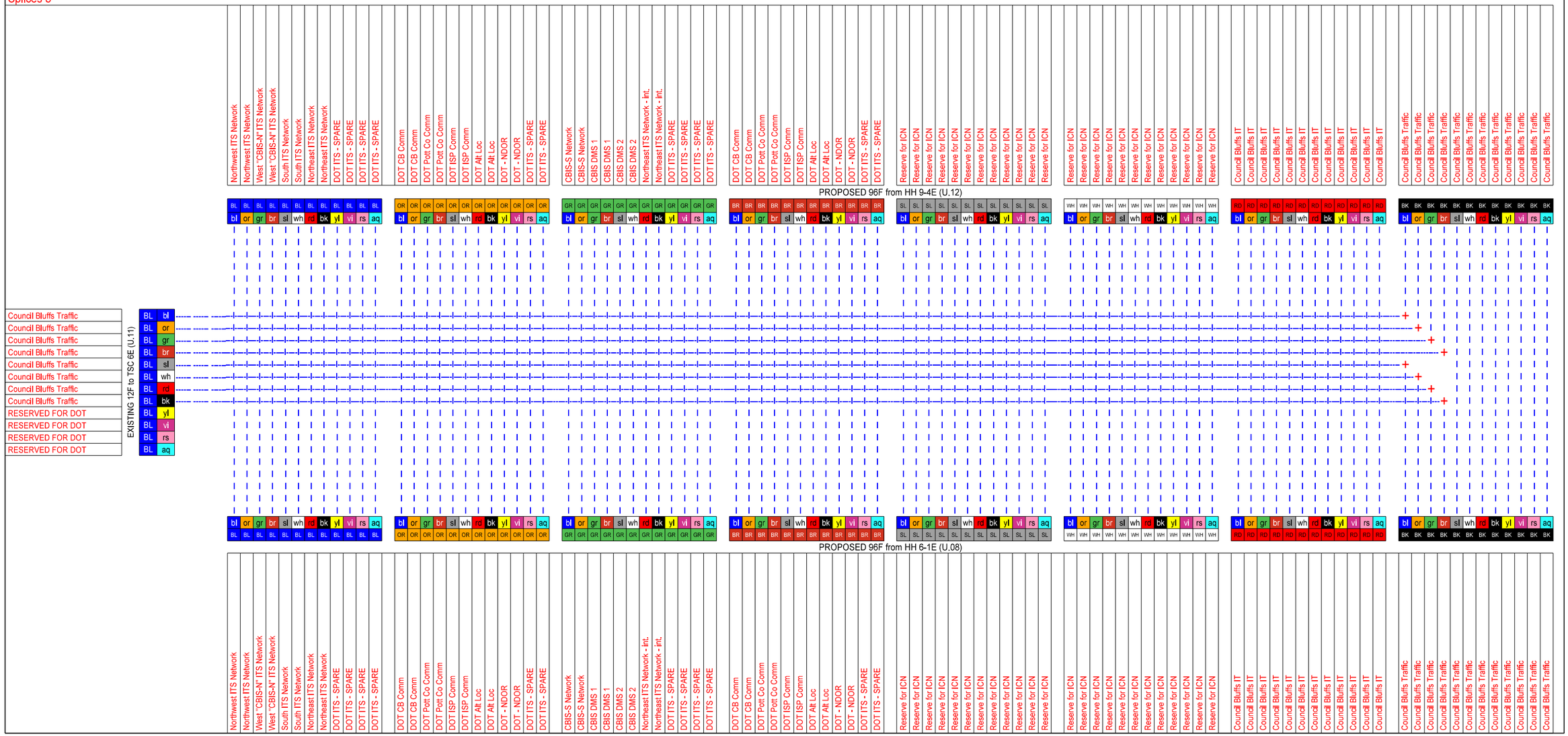
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

S. Expressway Street & 19th Avenue (HH 7-3E)

Fiber Splice Diagram

See Sheet N. 07

Splices 8



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.10

6:18:58 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

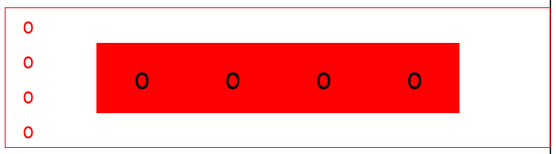
S. Expressway St. & 19th Avenue (TSC 6E)

Traffic Signal Cabinet Terminations

See Sheet N.07

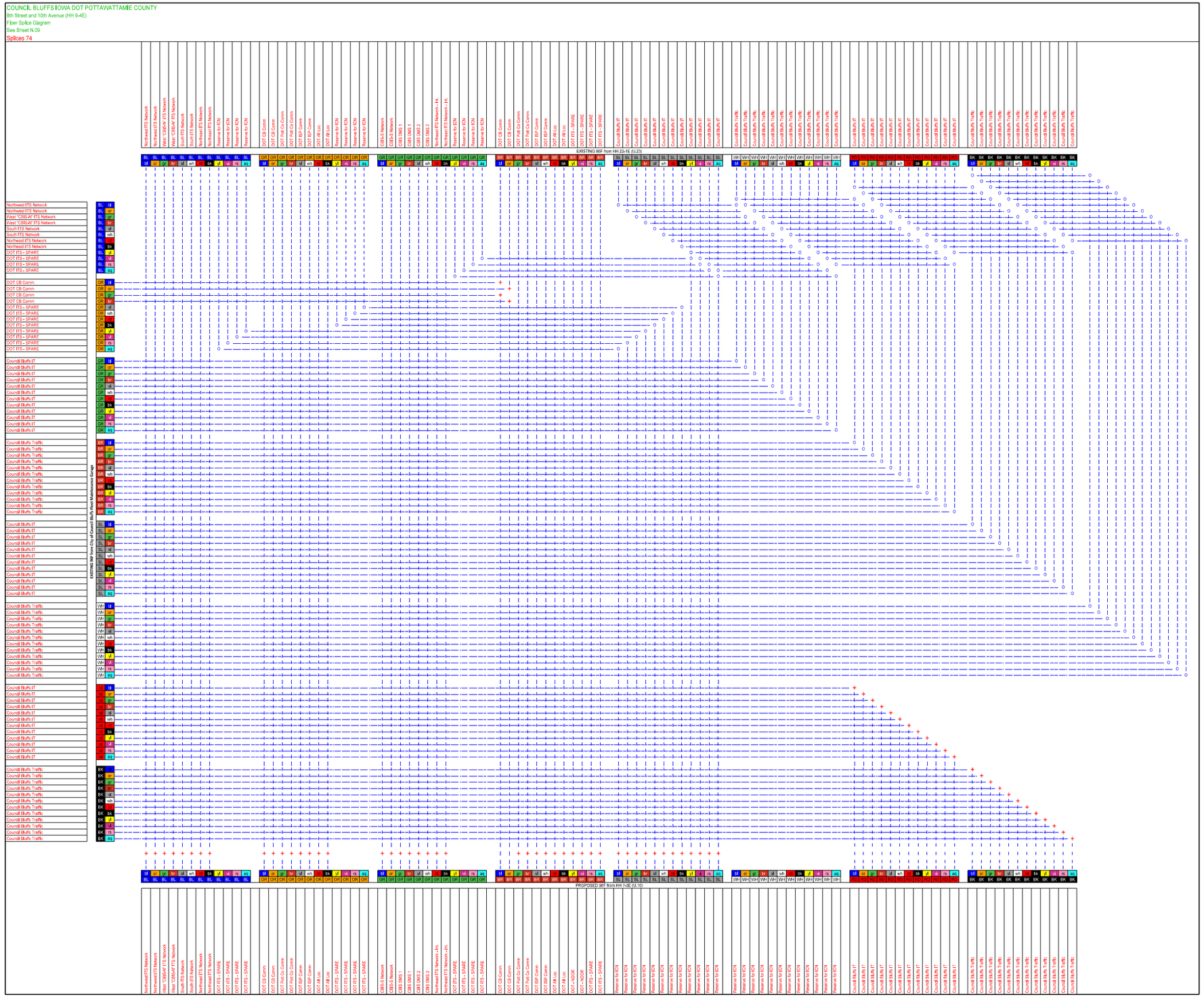
Terminations 12

Council Bluffs Traffic	EXISTING 12F from HH 7-3E (U.10)	BL	bl	------ o
Council Bluffs Traffic		BL	or	------ o
Council Bluffs Traffic		BL	gr	------ o
Council Bluffs Traffic		BL	br	------ o
Council Bluffs Traffic		BL	sl	------ o
Council Bluffs Traffic		BL	wh	------ o
Council Bluffs Traffic		BL	rd	------ o
Council Bluffs Traffic		BL	bk	------ o
RESERVED FOR DOT		BL	yl	------ o
RESERVED FOR DOT		BL	vi	------ o
RESERVED FOR DOT		BL	rs	------ o
RESERVED FOR DOT		BL	aq	------ o



Fiber Optic Field Switch (Provided by Others)

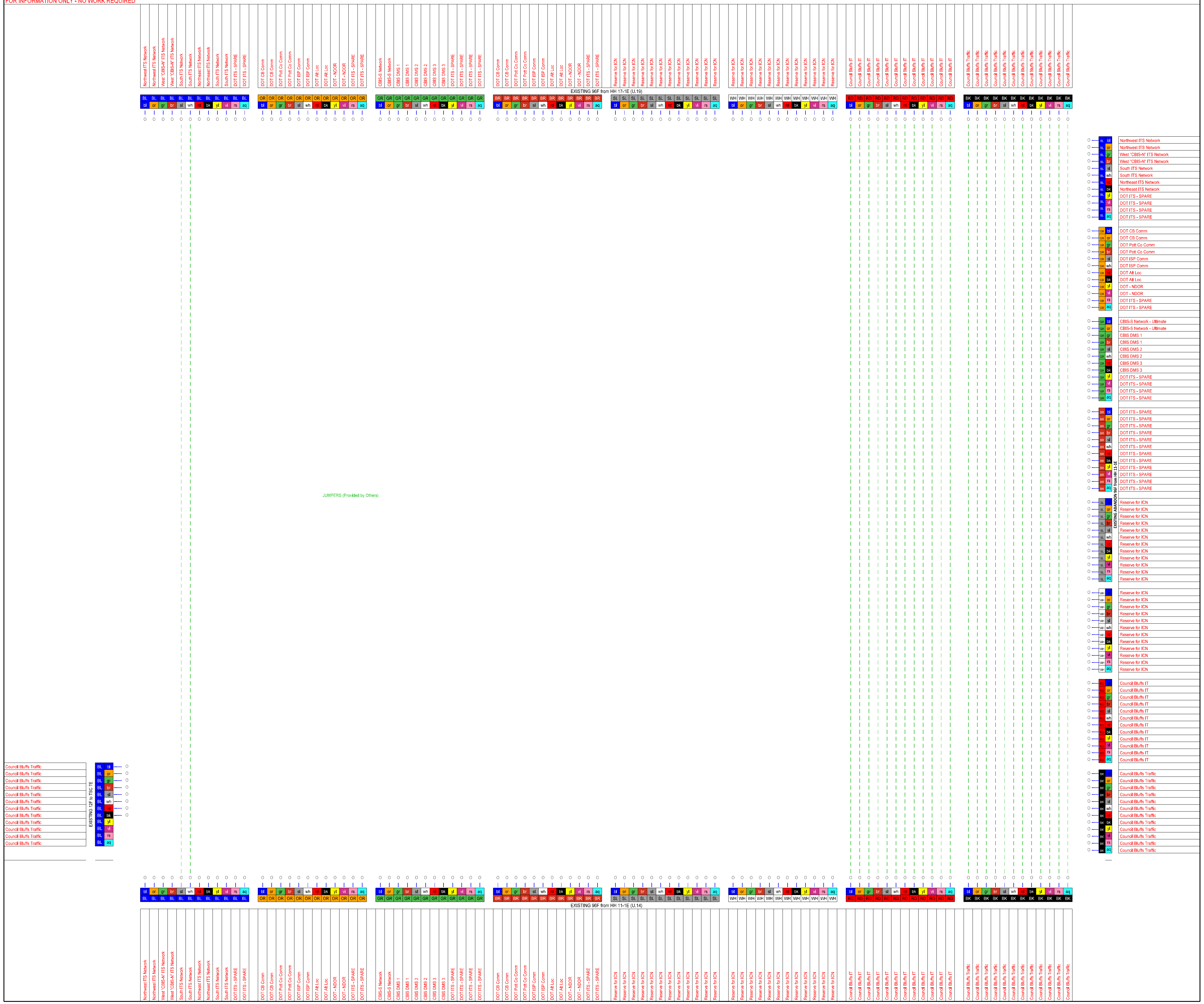
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
8th Street and 10th Avenue (HH 9-4E)
Fiber Splice Diagram
See Sheet N.09
Splices 74



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.12

6:19:02 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
Nebraska Avenue and 35th Street (FTC 119)
Fiber Termination Diagram
See Sheet N.10
FOR INFORMATION ONLY - NO WORK REQUIRED



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.13

6:19:06 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

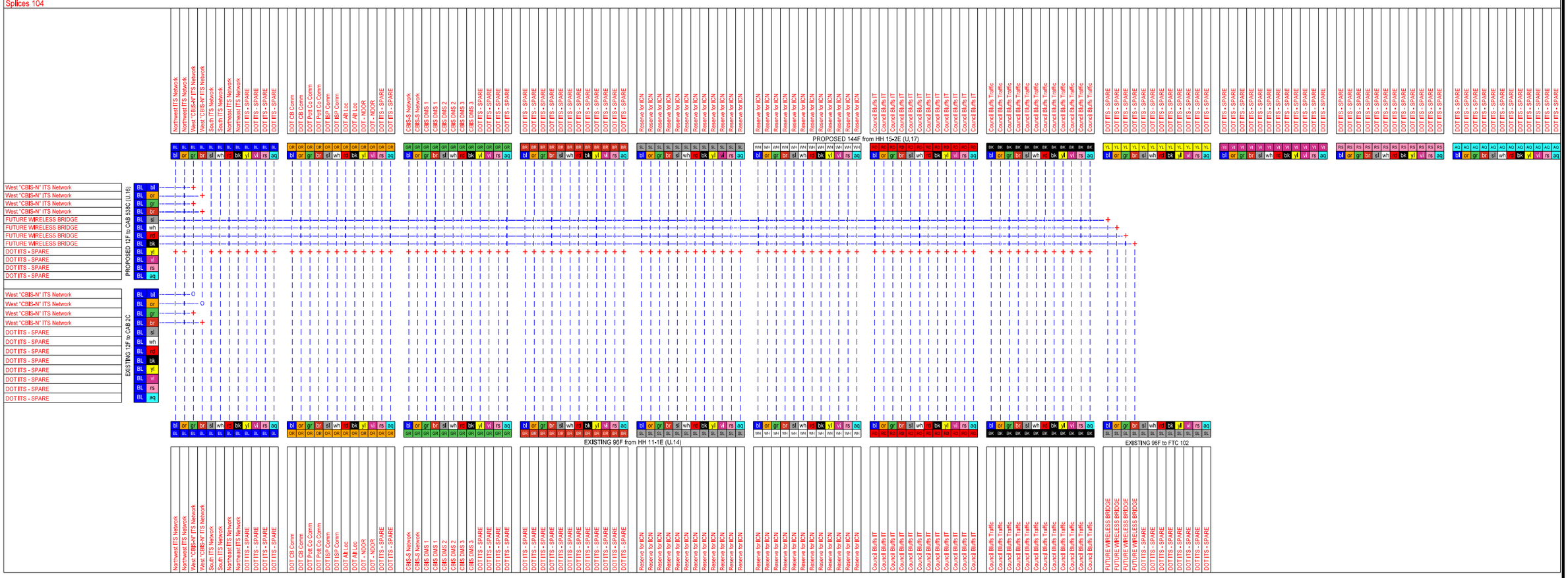
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
I-29 and Nebraska Ave (HH 11-1E)
Fiber Splice Diagram
See Sheet N.11

Splices 76

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.14

6:19:09 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
West System Interchange (HH 13-1E)
Fiber Splice Diagram
See Sheet N.13
Splices 104



NOTE:

ONLY THE SLATE TUBE IS SHOWN FOR THE EXISTING 96F DROP CABLE TO FTC 102.

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.15

6:19:12 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

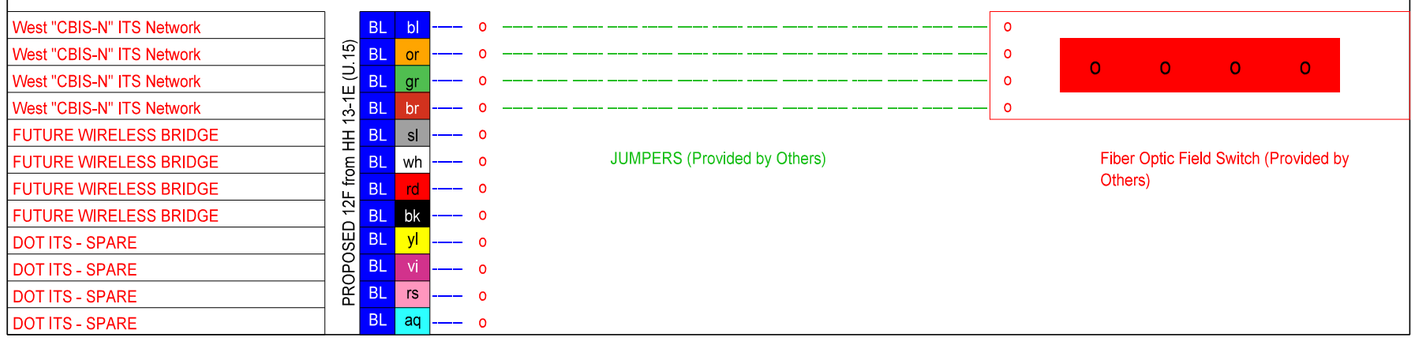
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

West System Interchange Ramp H (CAB 538C)

ITS Cabinet Terminations

See Sheet N.14

Terminations 12



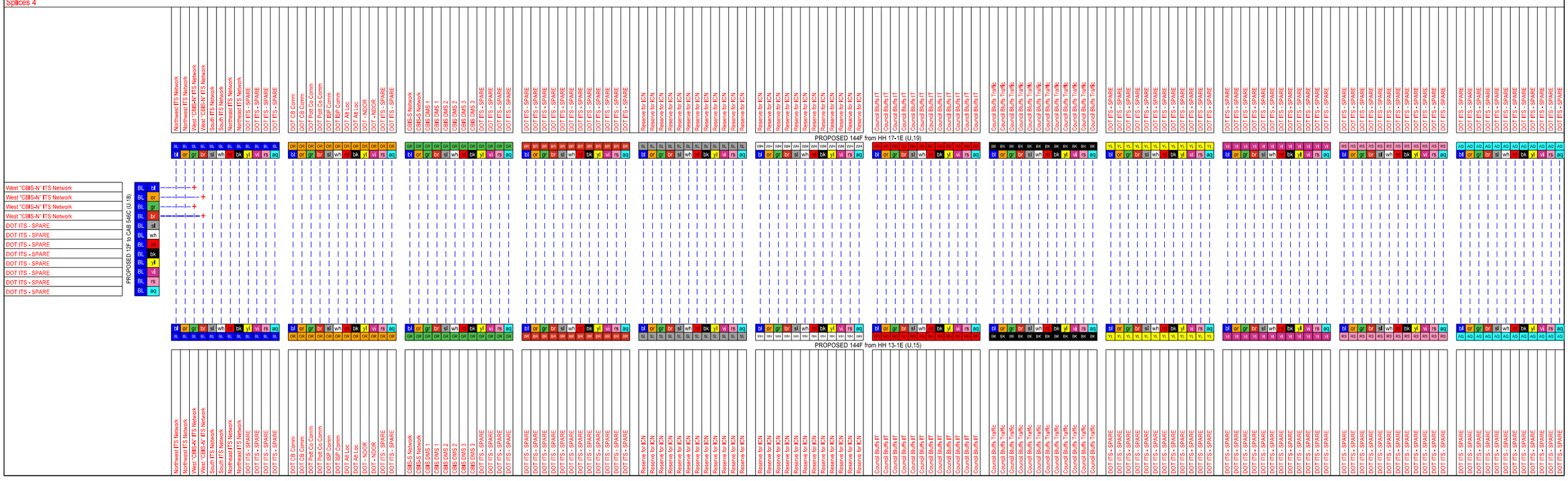
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

North Side of I-29/I-80 between 24th Street and West System Interchange (HH 15-2E)

Fiber Splice Diagram

See Sheet N.15

Splices 4



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.17

6:19:16 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

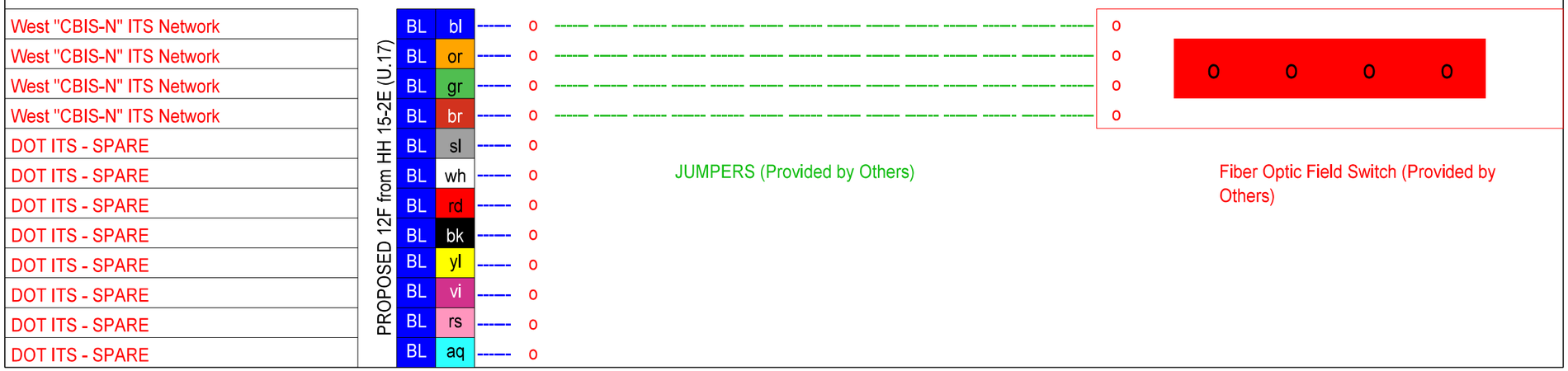
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

North Side of I-29/I-80 between 24th Street and West System Interchange (CAB 546C)

ITS Cabinet Terminations

See Sheet N.15

Terminations 12



COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
Northwest Corner of 24th Street and the I-29/I-80 North Ramp Termini/Intersection (HH 17-1E)
Fiber Splice Diagram
See Sheet N.17
Splices 42

FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.19

6:19:21 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht

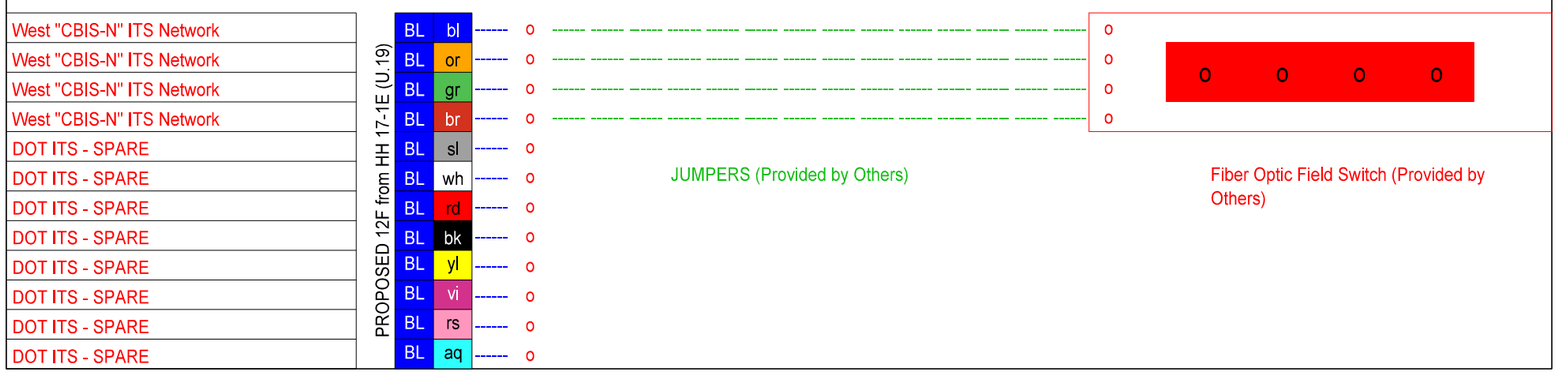
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

North Side of I-29/I-80 East of the 24th Street Bridge (CAB 548C)

ITS Cabinet Terminations

See Sheet N.17

Terminations 12



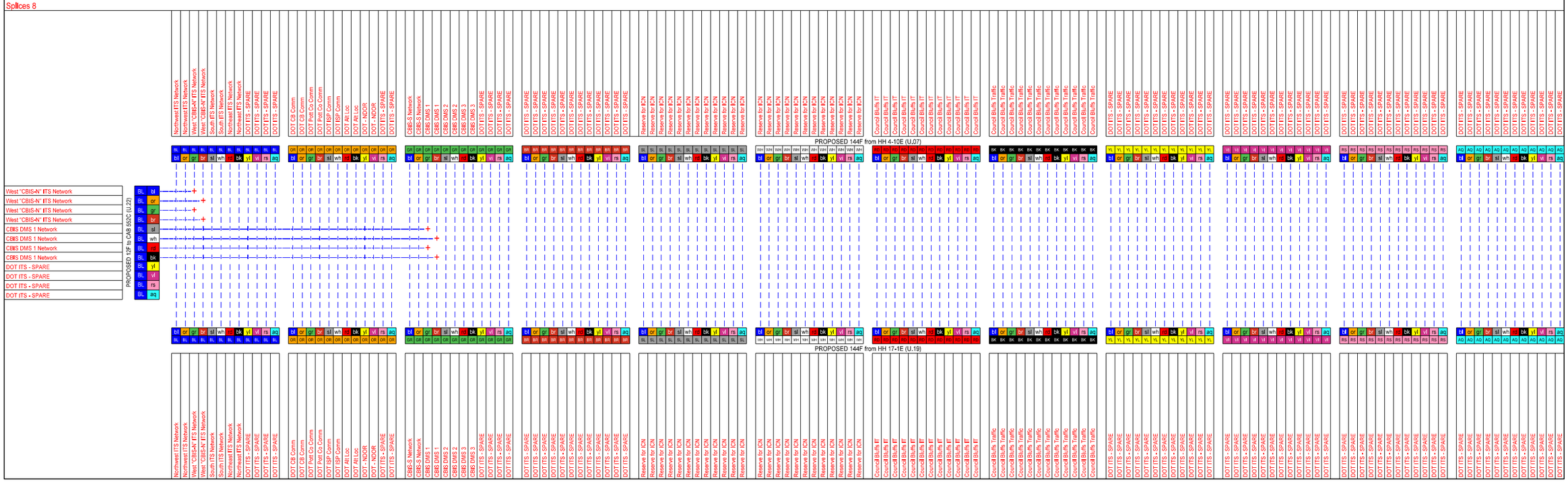
COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

North Side of I-29/I-80 East of Indian Creek (HH 20-1E)

Fiber Splice Diagram

See Sheet N.20

Splices 8



COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY

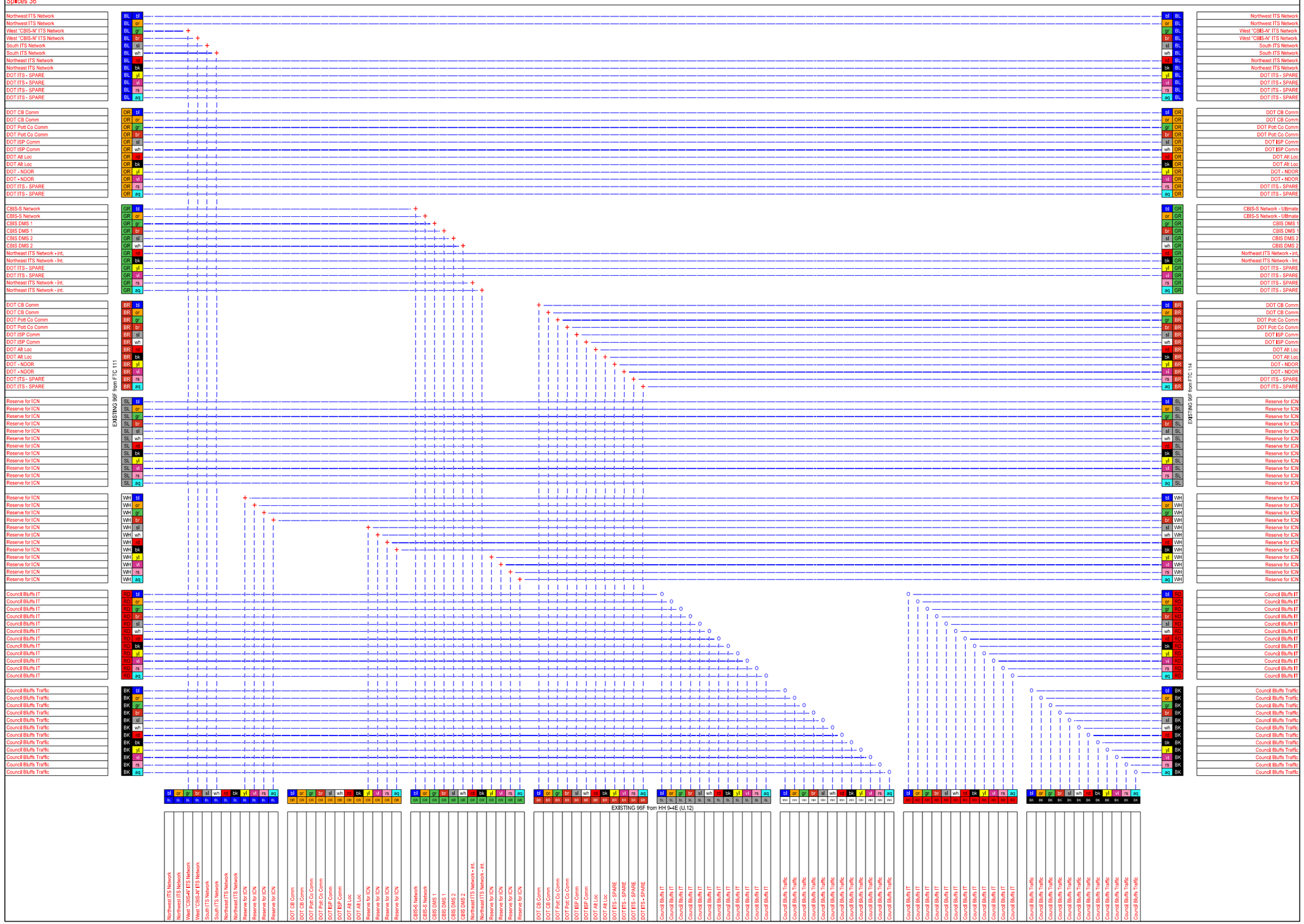
North Side of I-29/I-80 East of Indian Creek (CAB 552C)

ITS Cabinet Terminations

See Sheet N.20

Terminations 12

COUNCIL BLUFFS IOWA DOT POTTAWATTAMIE COUNTY
Willow Avenue & 8th Street (HH22-1E)
Fiber Splice Diagram
See Sheet N.22
Splices 36



FILE NO.	ENGLISH	DESIGN TEAM HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER IMN-029-3(150)54--0E-78	SHEET NUMBER U.23

6:19:30 AM 7/7/2015 mvyplel pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\TrafEng\ITS\78-0293-150_ITS_2\78029150U01.sht