

CITY OF SPARKS

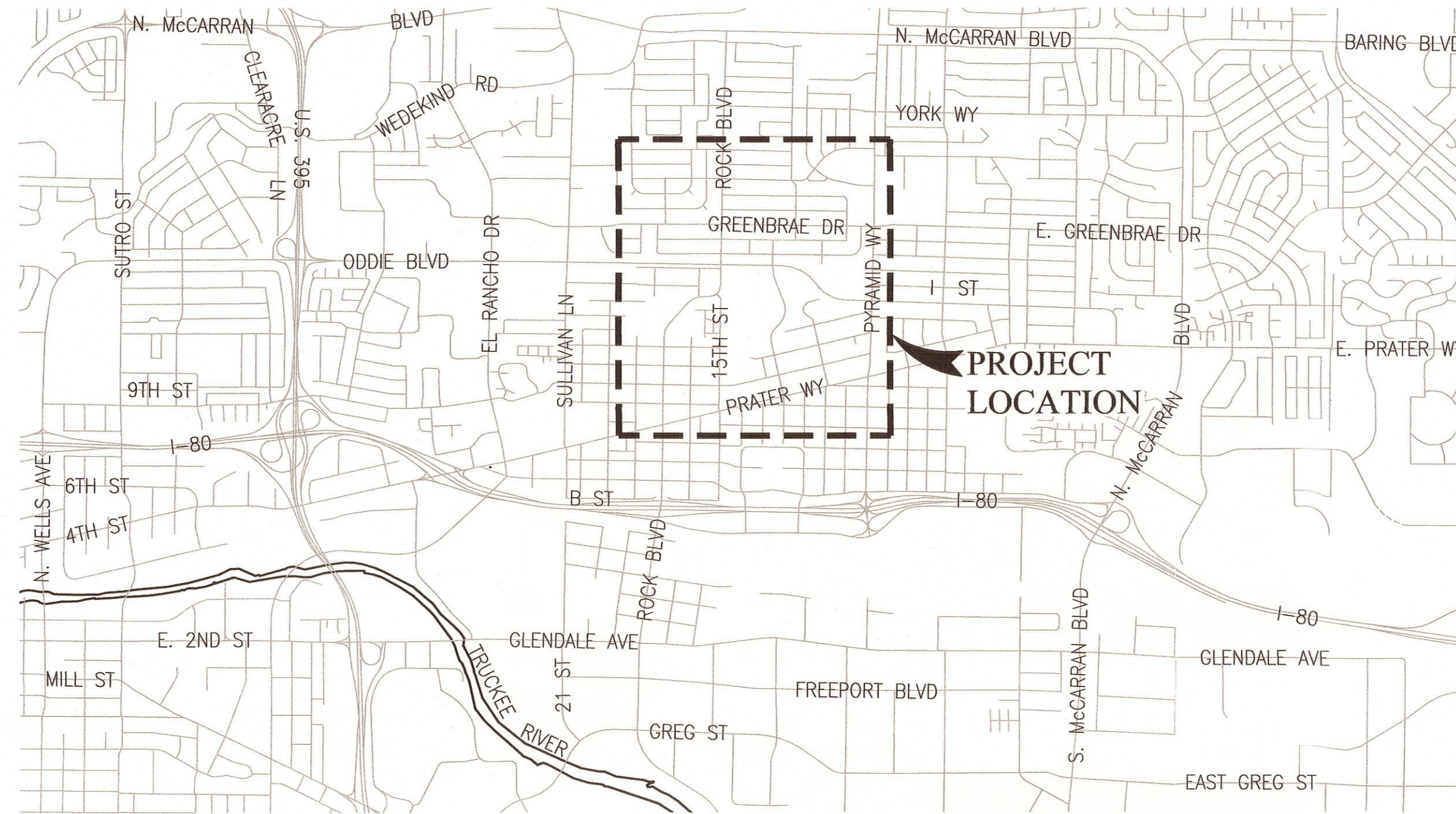
SANITARY SEWER CIPP LINING - FISCAL 2022

SPARKS, NEVADA

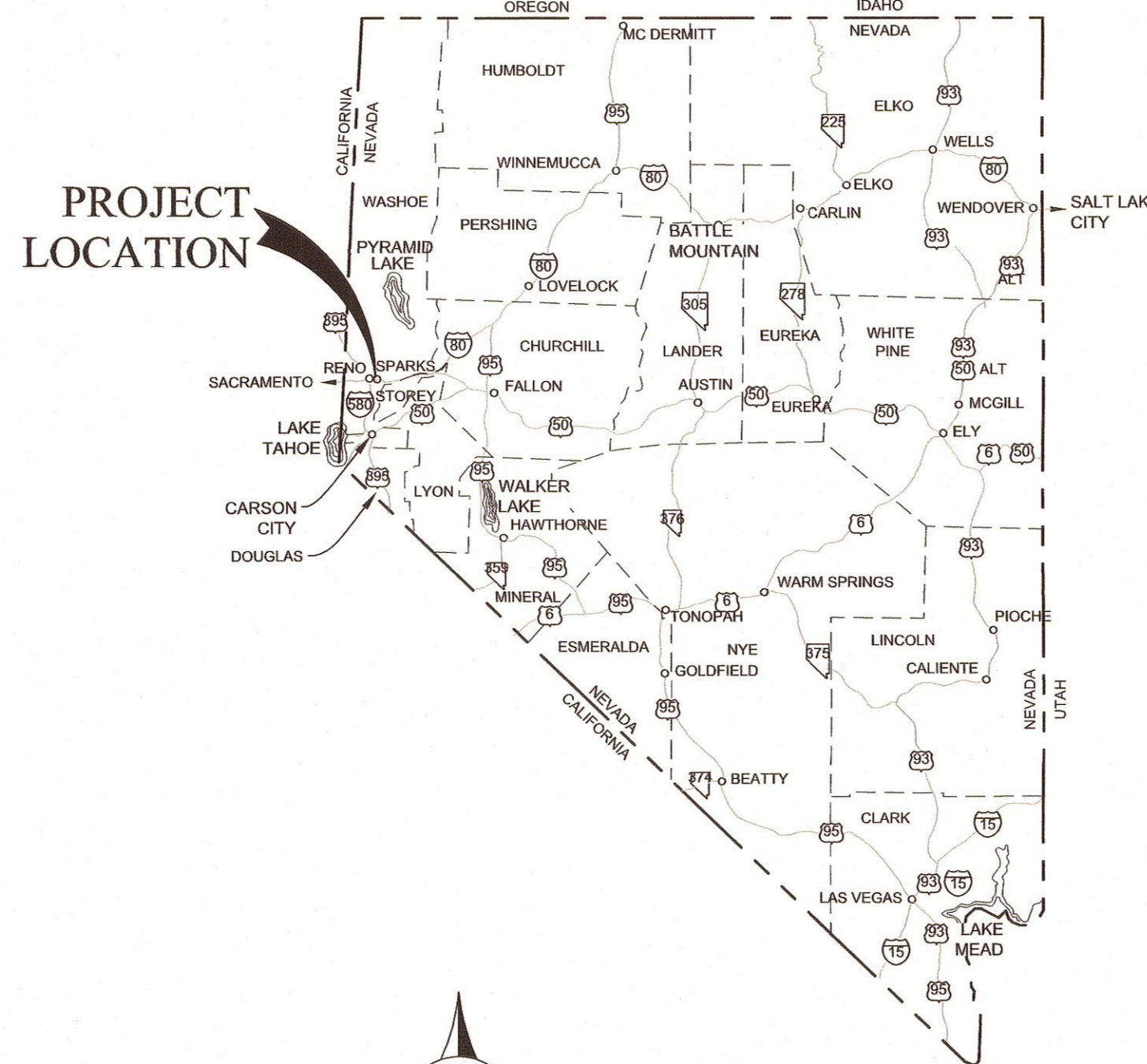
BID #21/22-002, PWP #WA-2021-356

OWNER:
CITY OF SPARKS
 431 PRATER WAY
 P.O. BOX 857
 SPARKS, NV 89431-0857
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ENGINEER/SURVEYOR:
FARR WEST ENGINEERING
 5510 LONGLEY LANE
 RENO, NV 89511
 PHONE: (775) 851-4788
 FAX: (775) 851-0766



VICINITY MAP
 N.T.S.



LOCATION MAP
 N.T.S.

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[Signature]
 JON R. ERICSON, P.E., P.T.O.E.
 CITY ENGINEER

7/7/2021
 DATE

CITY OF SPARKS

ED LAWSON
 DONALD ABBOTT
 DIAN VANDERWELL
 PAUL ANDERSON
 CHARLENE BYBEE
 KRISTOPHER DAHIR
 NEIL KRUTZ

MAYOR
 COUNCIL MEMBER WARD 1
 COUNCIL MEMBER WARD 2
 COUNCIL MEMBER WARD 3
 COUNCIL MEMBER WARD 4
 COUNCIL MEMBER WARD 5
 CITY MANAGER

CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
 COVER SHEET

WASHOE COUNTY

NEVADA

BID SET



SHEET NUMBER
G1

1 OF 11

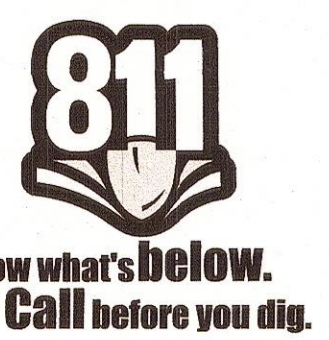
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JOB NO.:	1988
DATE:	JULY 2021
SCALE:	SEE SHEET
DESIGNED:	EXK
DRAWN:	EXK
CHECKED:	SKS

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PROFESSIONAL ENGINEER-STATE OF NEVADA
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FILE SPEC: P:\Client Projects\Sparks City of 094\988 2021 CIPP\5.0 Drawings\3.2 DWG\1988_G1-03_GENERAL.dwg
 PLOT DATE: Jul 06, 2021 - 11:30am



FARR WEST ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND WHAT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.

CITY OF SPARKS PUBLIC WORKS GENERAL NOTES

- CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITIONS OF THE PROJECT SPECIFICATIONS, AND PROJECT PLANS AND CONSTRUCTION DETAILS, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC, 2012 EDITION) AS ADOPTED BY THE CITY OF SPARKS AND THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION (SDPWC), NEVADA ADMINISTRATIVE CODE, AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. ALL SPECIFICATIONS REFERENCED HEREIN REFER TO THE PROJECT SPECIFICATION SECTION UNLESS INDICATED OTHERWISE. WHERE CONFLICTS EXIST BETWEEN SPECIFICATIONS, CONTRACTOR SHALL ADHERE TO THE STRICTER SPECIFICATION WITH APPROVAL OF THE OWNER AND INSPECTORS.
- THE CONTRACTOR SHALL CALL THE CITY OF SPARKS PUBLIC WORKS FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION, REQUIRED INSPECTIONS, AND TESTING.
- MODIFICATIONS TO THE APPROVED PLANS REQUIRE REVIEW AND APPROVAL BY THE OWNER & ENGINEER. WORK PERFORMED WITHOUT WRITTEN APPROVAL WILL REQUIRE REMOVAL AT THE CONTRACTOR'S EXPENSE.
- THE APPROVED PLANS, PERMITS AND INSPECTION RECORDS MUST BE ON THE JOBSITE AT ALL TIMES.
- OUTSIDE OF AN UNFORESEEN CIRCUMSTANCE, SEWER MAIN SHUTDOWNS AND INTERRUPTION OF SERVICE IS NOT PERMITTED UNLESS APPROVED BY OWNER AND ENGINEER WITH PROPER NOTIFICATIONS PROVIDED. OWNER APPROVAL IS REQUIRED 48 HOURS PRIOR TO NOTIFICATION OF CUSTOMERS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 48 HOURS WRITTEN NOTICE. THE OWNER IS RESPONSIBLE FOR THE NOTIFICATION WHEN WORK IS PERFORMED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME, AND ADDRESS OF ALL PERSONS NOTIFIED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES WITHOUT AUTHORIZATION OF THE UTILITY OWNER.
- CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER CONFORMING TO ALL PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE OWNER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.
- MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION AREAS ON PAVED SURFACES ONLY. CONTRACTOR SHALL STORE/CONTAIN, HANDLE AND TRANSPORT HAZARDOUS OR FLAMMABLE MATERIALS TO MINIMIZE THE POTENTIAL FOR SPILLS, FIRES OR EXPLOSIONS. STORAGE/CONTAINMENT, HANDLING AND TRANSPORT OF HAZARDOUS OR FLAMMABLE MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE OR FEDERAL REQUIREMENTS.
- CONTRACTOR SHALL MAINTAIN AND OPERATE EQUIPMENT IN A MANNER TO MINIMIZE THE POTENTIAL FOR SPILLS. SPILLS OF HAZARDOUS OR FLAMMABLE MATERIALS SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR OWNER REPRESENTATIVE.
- CONTRACTOR SHALL OPERATE VEHICLES IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS. VEHICLE AND EQUIPMENT OPERATORS SHALL BE PROPERLY LICENSED AND TRAINED.
- VEHICLE ACCIDENTS, INJURIES, SPILLS OR OTHER INCIDENTS SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR OWNER REPRESENTATIVE.
- ROAD SHOULDERS MAY NOT BE UTILIZED FOR OVERNIGHT EQUIPMENT AND MATERIALS STORAGE, BUT MAY BE USED FOR THE APPLICABLE SECTION OF EACH DAY'S WORK. CONTRACTOR SHALL INQUIRE WITH THE CITY OF SPARKS FOR STAGING AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS. CONTRACTOR MAY OBTAIN PERMISSIONS TO STAGE AT OTHER LOCATIONS ON OWN ACCORD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND SHALL REPLACE ANY MONUMENTS OBLITERATED OR DAMAGED DURING CONSTRUCTION AT OWN EXPENSE, REPLACEMENT SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND SURVEYOR.
- THE CONTRACTOR SHALL UTILIZE CONSTRUCTION TECHNIQUES TO MINIMIZE GRADING, VEGETATION REMOVAL, AND SURFACE DISTURBANCE. CONTRACTOR WILL BE RESPONSIBLE FOR THE RESTORATION OF ALL LANDSCAPING, SOD, CURBS, ASPHALT, DRIVEWAY PAVERS, RIP RAP, RETAINING WALLS, IRRIGATION PIPING AND LANDSCAPE LIGHTING TO EQUAL OR BETTER THAN EXISTING CONDITION. ALL COST FOR RESTORATION WILL BE INCLUDED IN THE APPLICABLE BID ITEM.
- THE CONTRACTOR SHALL SUBMIT SUBMITTALS OF ALL MATERIALS TO BE USED ON THE SITE TO INCLUDE, BUT NOT BE LIMITED TO, ASPHALT MIX DESIGN, AGGREGATE BASE QUALIFICATIONS, PIPE BEDDING, PIPING, AND CIPP PRODUCTS PER SPECIFICATION SECTIONS 306D AND 306E TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE MANUFACTURER OR USE OF SUCH ITEMS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT AND MAKE OWN INTERPRETATIONS WITH REGARD TO MATERIALS, MEANS AND METHODS, AND EQUIPMENT NECESSARY TO PERFORM THE WORK REQUIRED FOR THIS PROJECT PRIOR TO BIDDING AND ORDERING MATERIALS.
- ANY HAZARDOUS MATERIALS COLLECTED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE HAZARDOUS MATERIALS LAWS AND REGULATIONS.
- CONTRACTOR SHALL EXAMINE THE PROJECT WORK AREAS PRIOR TO BIDDING TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF EXISTING SITE CONDITIONS THAT WILL BE ENCOUNTERED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS AND SUBJECT TO THE SPECIAL PROVISIONS OF THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING AND SHORING PROCEDURES AND CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY OTHER NECESSARY PERMITS AND FEES REQUIRED PRIOR TO BEGINNING WORK.
- PROJECT BEARINGS IS BASED ON NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994, HIGH ACCURACY REFERENCE NETWORK (NAD 83/94-HARN). ALL DIMENSIONS SHOWN ARE GRID DISTANCES. COMBINED GRID-TO-GROUND FACTOR=1.000197939. NO SURVEY FIELDWORK WAS PERFORMED FOR THIS PROJECT.
- ALL SANITARY SEWER MANHOLE RIM AND INVERT (FROM CENTER OF MANHOLE) ELEVATIONS WERE RETRIEVED FROM THE CITY OF SPARKS GEOGRAPHIC INFORMATION SYSTEM'S SPARKS SEWER CONDITION ASSESSMENT APP DATED JUNE 11, 2021. NO SURVEY FIELDWORK WAS PERFORMED FOR THIS PROJECT.

EROSION CONTROL NOTES

- BEST MANAGEMENT PRACTICES SHALL BE IN PLACE FOR DUST CONTROL, SEDIMENT CONTROL, AND EROSION CONTROL DURING CONSTRUCTION.
- THE CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE EROSION OR PONDING AND TO PROTECT ADJACENT IMPROVEMENTS AND PROPERTIES FROM AN INFLUX OF RUNOFF OR SEDIMENT.
- SURPLUS OR WASTE MATERIAL AND/OR FILL OF EARTHEN MATERIAL SHALL NOT BE PLACED IN DRAINAGE WAYS.
- ALL LOOSE PILES OF SOIL, SILT, CLAY, SAND, DEBRIS OR OTHER EARTHEN MATERIALS MUST BE PROTECTED IN A REASONABLE MANNER TO PREVENT THE DISCHARGE OF THESE MATERIALS TO WATERS OF THE STATE. THESE MATERIALS MUST BE REMOVED FROM THE SITE AT THE END OF EACH WORKING DAY.
- IF NECESSARY, CONTRACTOR SHALL ENHANCE EROSION CONTROL MEASURES IN THE FIELD.
- CONTRACTOR SHALL INSTALL SEDIMENT CONTROL DEVICES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REMOVE ALL GRADING AND CONSTRUCTION DEBRIS AT THE END OF EACH WORKING DAY.
- DEWATERING EFFLUENT SHALL BE TREATED PRIOR TO DISCHARGE BY MEANS OF DEWATERING STRUCTURES (e.g. STRAW BALE FILTER/SILT FENCE PIT, GRAVEL FILTER, ETC.).

DUST CONTROL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR PREVENTING CONTROLLABLE FUGITIVE DUST FROM THE PROJECT'S DISTURBED AREAS TO BECOME AIRBORNE ON A 7-DAY/WEEK, 24-HOUR/DAY BASIS FROM COMMENCEMENT OF THE PROJECT TO FINAL COMPLETION.
- REGULAR VACUUM OR SWEEPING OF PAVED SURFACES WHERE CONSTRUCTION IS OCCURRING WILL BE PERFORMED AT LEAST DAILY AND MORE OFTEN IF NECESSARY TO REMOVE DIRT OR WASTE RESULTING FROM THE CONSTRUCTION.
- STOCKPILED EARTHEN MATERIALS SHALL BE REMOVED FROM THE SITE AT THE END OF EACH WORKING DAY.
- ALL TRUCKS IMPORTING OR EXPORTING DIRT, ROCK OR OTHER FILL MATERIALS SHALL PREVENT SPILLAGE OR LOSS OF BULK MATERIAL FROM HOLES OR OTHER OPENINGS IN THE CARGO COMPARTMENT FLOOR, SIDES, AND/OR TAILGATE. ALL HAUL TRUCKS MUST BE COVERED WITH A TARP OR OTHER SUITABLE CLOSURE; OR BULK MATERIALS MUST CONTAIN ENOUGH MOISTURE AND/OR DUST SUPPRESSANT TO PREVENT FUGITIVE DUST EMISSIONS DURING TRANSPORT; OR LOAD ALL TRUCKS SUCH THAT THE FREEBOARD IS NOT LESS THAN SIX (6) INCHES.
- ALL PROJECT RELATED VEHICLES SHALL PARK ON EXISTING PAVED SURFACES. CONTRACTOR SHALL MINIMIZE CONSTRUCTION RELATED VEHICLE AND EQUIPMENT EMISSIONS DURING CONSTRUCTION BY SHUTTING OFF EQUIPMENT AND VEHICLES NOT IN USE. IDLING OF DIESEL ENGINES SHALL BE KEPT AT A MINIMUM SO FAR AS PRACTICAL.

ACCESS/TRAFFIC CONTROL NOTES:

- PROVIDE AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL, THROUGHOUT CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE PARTS OF SSPWC SECTION 332 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD, LATEST EDITION).
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC CONTROL IN STRICT ACCORDANCE WITH PLANS AND SPECIFICATIONS AT ALL TIMES. ROADS WITHIN THE PROJECT MAY HAVE LIMITED SIGHT DISTANCE.
- STREETS SHALL REMAIN OPEN TO LOCAL TRAFFIC AND ONE-WAY TRAFFIC SHALL BE PROVIDED AT ALL TIMES.
- RESIDENCES SHALL HAVE ACCESS TO/FROM DRIVEWAY AT ALL TIMES. CONTRACTOR SHALL PROVIDE COORDINATION FOR ACCESS (TRENCH PLATE, MOVE EQUIPMENT, ETC.) WITH RESIDENCES.
- TRAFFIC DELAYS SHALL BE HELD TO 10 MINUTES OR LESS.
- CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND ACCESS TO THE SITE PRIOR TO BID.
- CONTRACTOR SHALL DETERMINE BEST METHODS FOR ACCESS WHEN OFF HAULING WASTE, DELIVERY OF MATERIALS, AND DAY TO DAY ACTIVITIES.
- TRAFFIC CONTROL PLANS TO BE SUBMITTED TO CITY OF SPARKS FOR REVIEW. SUBMIT TRAFFIC CONTROL PLANS TO:
NAME: ASHLEY ELSON
TEL: (775)353-2375
EMAIL: AELSON@CITYOFSPARKS.US
OFFICE LOCATION: SPARKS CITY HALL, 431 PRATER WAY, SPARKS, NV 89431
- THE HOURS OF WORK SHALL BE FROM 7:00 AM TO 7:00 PM MONDAY THROUGH FRIDAY; WEEKEND AND HOLIDAY WORK UPON APPROVAL BY CITY PROJECT COORDINATOR.
- THE WORK OF SETTING UP AND TEARING DOWN TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE COMPLETED EACH DAY WITHIN THE HOURS SPECIFIED ON THE PERMIT AND/OR ON THE APPROVED TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES SHALL BE COMPLETELY REMOVED FROM THE ROADWAY AT THE END OF EACH WORKING DAY.

NDOT REQUIREMENTS:

- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A TEMPORARY OCCUPANCY PERMIT FROM NDOT.
- CONTRACTOR SHALL BE BOUND TO ALL NDOT PERMIT REQUIREMENTS.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO NDOT FOR APPROVAL PRIOR TO CONSTRUCTION WITHIN ALL NDOT ROADWAYS. THE TRAFFIC CONTROL PLAN MUST CONFORM TO ALL REQUIREMENTS ESTABLISHED BY NDOT.
- THE APPROVED PLANS, PERMITS, AND INSPECTION RECORD MUST BE ON THE JOB AT ALL TIMES.
- CONTRACTOR TO NOTIFY NDOT PERMIT OFFICE TWO (2) WORKING DAYS PRIOR TO COMMENCING WORK WITHIN NDOT R/W.

BYPASS PUMPING NOTES

- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL CONSTRUCTION ACTIVITIES TO PROPERLY CONTROL AND DISPOSE OF RAW SEWAGE FROM EACH CONSTRUCTION SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS AND LAWS FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL SUPPLY ALL NECESSARY EQUIPMENT AND WORK WITH SPARES TO MEET THIS REQUIREMENT.
- CONTRACTOR TO PROVIDE TEMPORARY CONNECTION TO NEW MAIN OR BYPASS PUMPING TO PROVIDE UNINTERRUPTED FLOW TO THE SYSTEM NOT BEING WORKED ON. SEWER TO BE COUPLED TO EXISTING AND FLOW REESTABLISHED AT END OF EACH DAY.
- REFER TO SPECIFICATION SECTION SECTION 306A – BYPASS PUMPING FOR ADDITIONAL REQUIREMENTS.

IN-SITU CONSTRUCTION GENERAL NOTES

- IDENTIFIED EXISTING SEWER MAINS AND LATERALS SHALL RECEIVE CURED-IN-PLACE PIPE (CIPP). REFER TO SPECIFICATION SECTION 306E FOR INFORMATION.
- CONTRACTOR TO PRE CLEAN AND VIDEO EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- ALL CIPP SHALL HAVE A COLOR TELEVISION INSPECTION PRIOR TO ACCEPTANCE BY OWNER.
- NOTE THAT MAIN AND LATERAL SIZES ARE SHOWN BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL CONFIRM AND NOTIFY THE ENGINEER OF ANY SIGNIFICANT ALTERATIONS PRIOR TO PROCURING MATERIALS.

SEWER LATERAL NOTES

- CONTRACTOR SHALL VERIFY ALL LATERAL LOCATIONS DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT ALL SANITARY SEWER LATERALS ARE ACTIVE OR INACTIVE PRIOR TO THE INSTALLATION OF CIPP LINING.
- IF NO INDICATIONS OF FLOW ARE PRESENT THEN A PUSH TYPE CAMERA WITH VIDEO TAPE INSPECTION CAPABILITY, DYE TESTING, OR SURFACE LOCATE CAPABILITY SHALL BE USED TO CONFIRM IF LATERAL IS ACTIVE OR INACTIVE. EACH LATERAL SHALL BE CONSIDERED ACTIVE UNLESS IT CAN BE POSITIVELY DETERMINED TO BE INACTIVE. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL INACTIVE AND ACTIVE LATERALS PRIOR TO RECONNECTION OR ABANDONMENT PER THE SPECIFICATIONS.
- CONTRACTOR SHALL CONFIRM EACH BUILDING ON EACH STREET HAS AN ACTIVE SANITARY SEWER LATERAL THAT IS CONNECTED TO A SEWER MAIN. IF NO LATERAL CAN BE FOUND, CONTRACTOR SHALL EMPLOY THE USE OF A LOCATOR DOWN AN EXISTING PLUMBING VENT, CLEANOUT OR BUILDING FIXTURE WITHIN THE BUILDING TO LOCATE AND PROVIDE CONNECTION TO THE SEWER MAIN.
- CONTRACTOR SHALL VERIFY LATERAL SIZES (2", 3", 4" OR 6") PRIOR TO LATERAL REINSTATEMENT AND MATCH EXISTING.

EXISTING LEGEND:

— EX W —	WATERLINE
— EX SS —	SANITARY SEWER
— EX SD —	STORM DRAIN
— EX E —	ELECTRICAL
— EX OHP —	OVER HEAD POWER
— EX TELE —	TELEPHONE/COMM LINE
— EX G —	GAS MAIN/LATERAL
— ABANDONED —	ABANDONED UTILITY
---	PROPERTY LINE
⊙	EXISTING MANHOLE
□	EXISTING PLUG-IN-PLACE

PROPOSED LEGEND:

108+00	SS	CIPP SANITARY SEWER MAIN/CONSTRUCTION CONTROL LINE
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ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
CIPP	CURED-IN-PLACE PIPE
IE	INVERT ELEVATION
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
SSL	SANITARY SEWER LINE
SSMH	SANITARY SEWER MANHOLE
SSN	SANITARY SEWER NUMBER
STA	STATION
UNK	UNKNOWN
VCP	VITRIFIED CLAY PIPE

JOB NO.: 1988	DATE: JULY 2021	SCALE: SEE SHEET	DESIGNED: EJK	DRAWN: EJK	CHECKED: JK
	REVISION	DESCRIPTION	ONE INCH AT FULL SCALE:		

CITY OF SPARKS
SANITARY SEWER CIPP LINING - FISCAL 2022
GENERAL NOTES, LEGEND & ABBREVIATIONS

WASHOE COUNTY NEVADA

SHEET NUMBER
G2
 2 OF 11

FILE SPEC: P:\Client\Projects\Sparks_City of Sparks\1988_2021\CIPPs\5.0 Drawings\5.2 DWG\1988_G1-03_GENERAL.dwg PLOT DATE: Jul 06, 2021 - 12:17pm

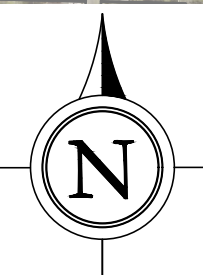
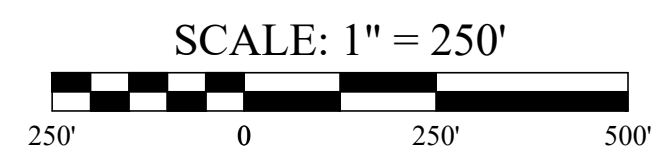
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SHEET INDEX MAP

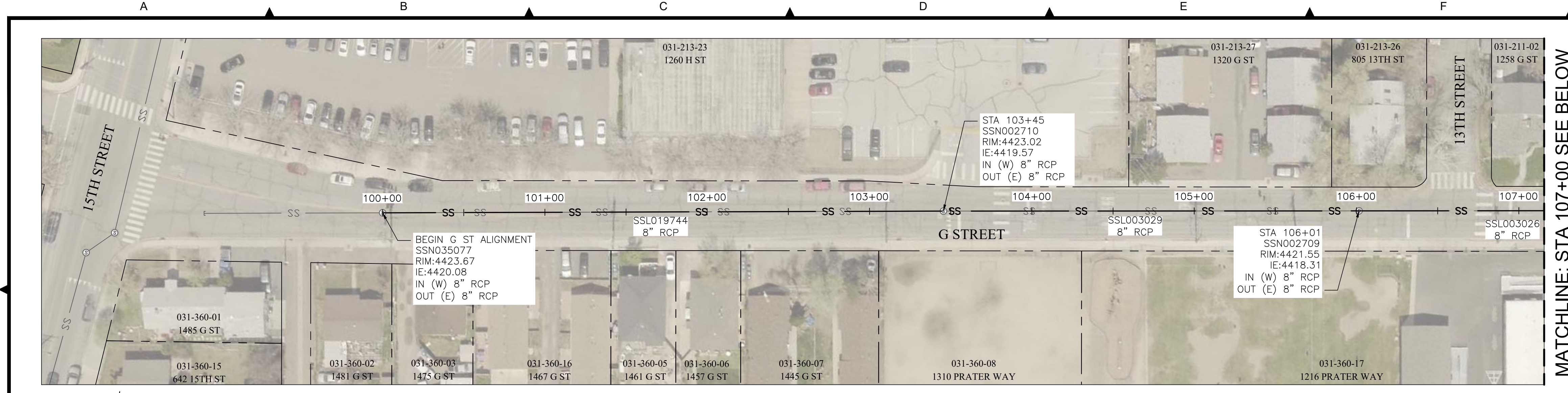


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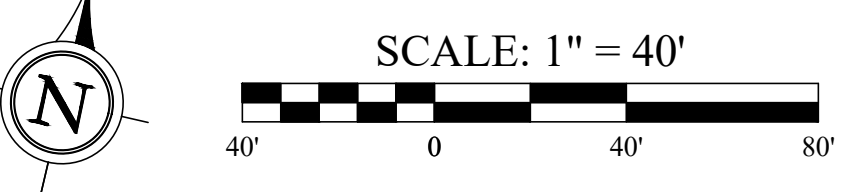


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<p>DESCRIPTION</p>		<p>2</p>
<p>BY</p>		<p>1</p>
<p>DATE</p>		<p>0</p>
<p>WASHOE COUNTY</p>		
<p>NEVADA</p>		
<p>SIGNED: 7/6/21</p>		
<p>PROFESSIONAL ENGINEER - STATE OF NEVADA ERIC Y. KAO Exp. 6/30/23 CML No. 027946</p>		
<p>FARR WEST ENGINEERING 5510 LONGLEY LANE RENO, NEVADA 89511 PHONE: (775) 851-4788 FAX: (775) 851-0766 FARRWESTENGINEERING.COM</p>		
<p>CITY OF SPARKS SANITARY SEWER CIPP LINING - FISCAL 2022 SHEET INDEX MAP</p>		
<p>SHEET NUMBER</p>		<p>G3</p>
<p>3 OF 11</p>		<p>1</p>

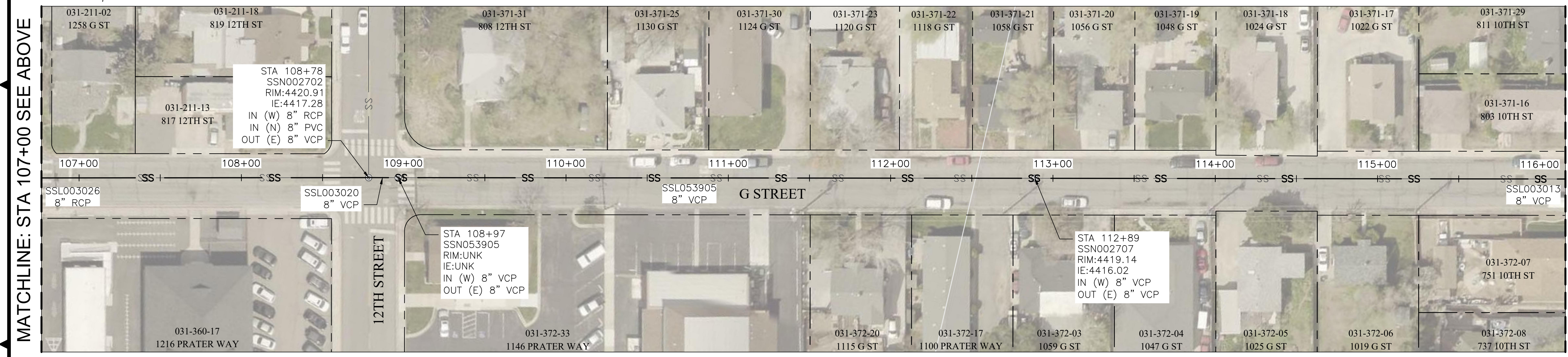
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 PLOT DATE: Jul 06, 2021 12:18pm



MATCHLINE: STA 107+00 SEE BELOW

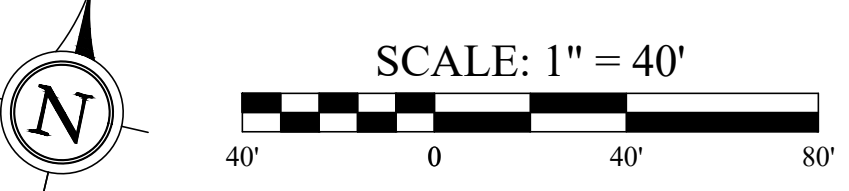


G STREET - STA: 100+00 TO 107+00

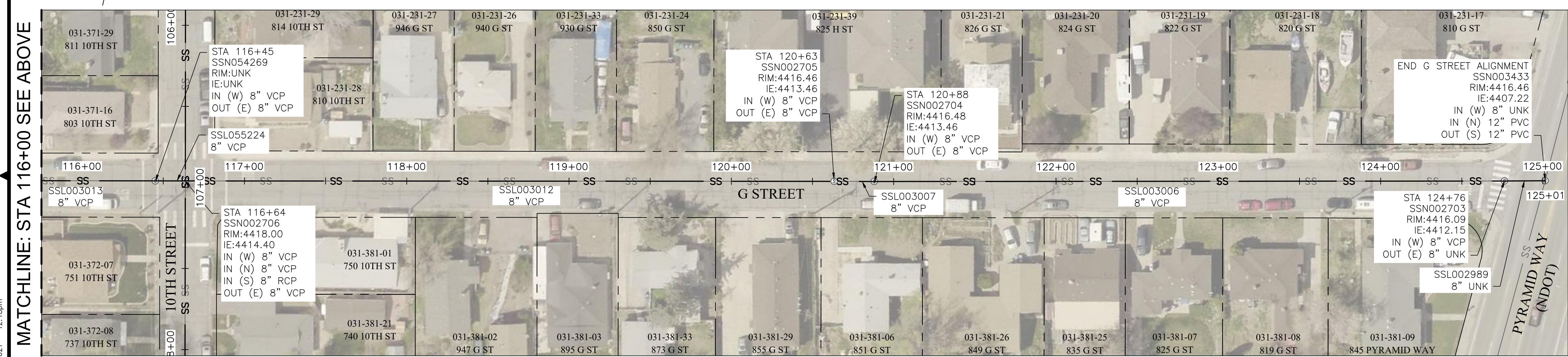


MATCHLINE: STA 107+00 SEE ABOVE

MATCHLINE: STA 116+00 SEE BELOW



G STREET - STA: 107+00 TO 116+00



MATCHLINE: STA 116+00 SEE ABOVE



G STREET - STA: 116+00 TO 125+01

GENERAL NOTES:

- A. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VIDEO, MEASURE THE DISTANCE FROM INSIDE MANHOLE, AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO BIDDING AND CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- B. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER 48 HOURS IN ADVANCE OF ANY SECTION REPLACEMENT.
- C. CLEAN AND REHABILITATE EXISTING SEWER MAIN WITH CIPP PER SPECIFICATION SECTIONS 306B & 306E. CONFIRM INNER DIAMETER PRIOR TO PROCURING MATERIALS.
- D. THE CONTRACTOR SHALL VERIFY THE SIZE, SIGN OF ACTIVITY, AND PRECISE LOCATION OF EACH LATERAL PRIOR TO LATERAL REINSTATEMENT AND/OR INSTALLING SERVICE LATERAL CONNECTION LINERS. SERVICE LATERAL CONNECTION LINERS WILL BE DETERMINED DURING THE TIME OF CONSTRUCTION BASED ON THE CONDITION OF THE EXISTING LATERAL TO MAIN CONNECTION. IF GROUNDWATER INFILTRATION, TREE ROOT INTRUSION, OR ANY OTHER DAMAGE IS OBSERVED, CONTRACTOR SHALL INSTALL THE SERVICE LATERAL CONNECTION IN ACCORDANCE WITH SECTION 306E-CURED-IN-PLACE PIPE LINING SUBSECTION 2.7 - SERVICE LATERAL CONNECTIONS.
- E. CONTRACTOR TO PROVIDE BYPASS PUMPING TO PROVIDE UNINTERRUPTED FLOW TO THE SYSTEM NOT BEING WORKED ON PER SPECIFICATION SECTION 306A. SEWER FLOW TO BE RE-ESTABLISHED AT THE END OF EACH DAY.
- F. PRIOR TO PERFORMING POINT REPAIRS, IF ANY, CONTRACTOR SHALL MAKE OWN DETERMINATION AS TO WHETHER EXISTING PIPE CONTAINS ASBESTOS, AND USE APPROPRIATE ABATEMENT AS NECESSARY.
- G. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND TRIM ALL ROOTS WHICH HAVE THE POTENTIAL TO REFLECT THROUGH THE CIPP, INCLUDING IN THE PORTIONS OF LATERALS WHICH ARE TO BE REHABILITATED.
- H. CONTRACTOR SHALL PROVIDE AND IMPLEMENT A TRAFFIC CONTROL PLAN PER THE SPECIFICATIONS, MUTCD LATEST EDITION, NDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DETAILS ON SHEETS D1 & D2, AND EXCAVATION AND ENCROACHMENT PERMIT OR NDOT TEMPORARY OCCUPANCY PERMIT.

DATE	BY	DESCRIPTION

REVISION	DESCRIPTION

JOB NO.:	1988
DATE:	JULY 2021
SCALE:	SEE SHEET
DESIGNED:	EJK
DRAWN:	EJK
CHECKED:	JK

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5510 LONGLEY LANE RENO, NEVADA 89511 PHONE: (775) 851-4788 FAX: (775) 851-0766 FARRWESTENGINEERING.COM
PROFESSIONAL ENGINEER - STATE OF NEVADA
ERIC Y. KAO Exp. 6/30/23 CML No. 027946
SIGNED: 7/6/21

CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
 G ST

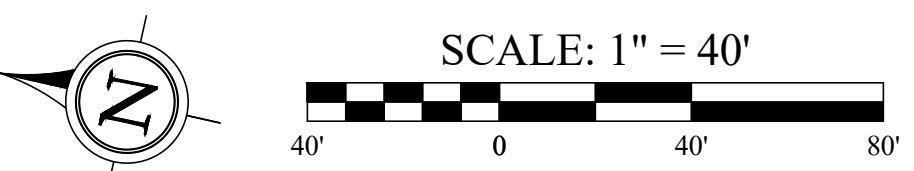
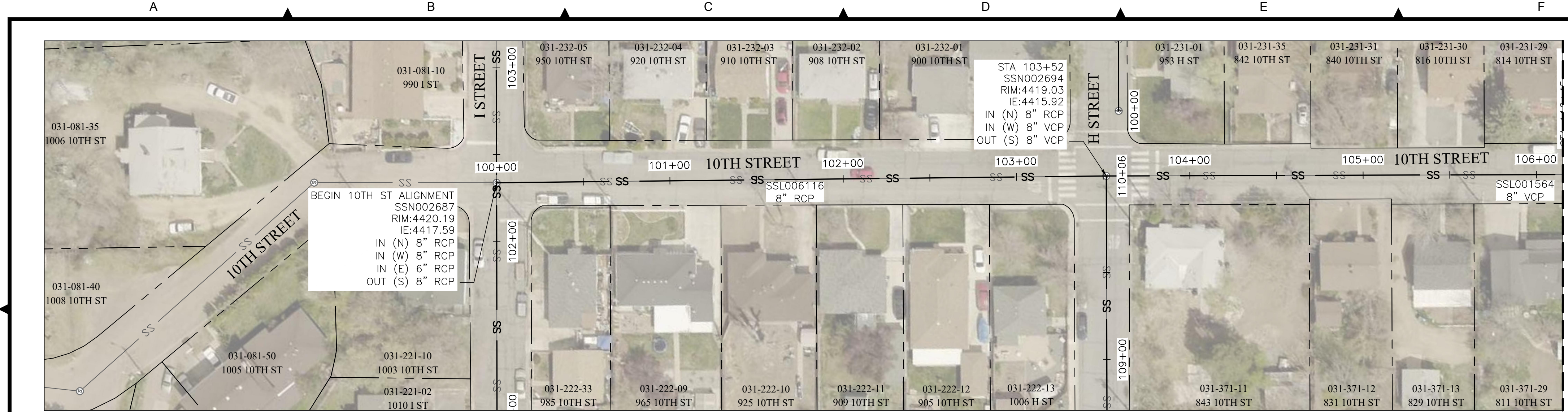
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 WASHOE COUNTY

SHEET NUMBER
C1
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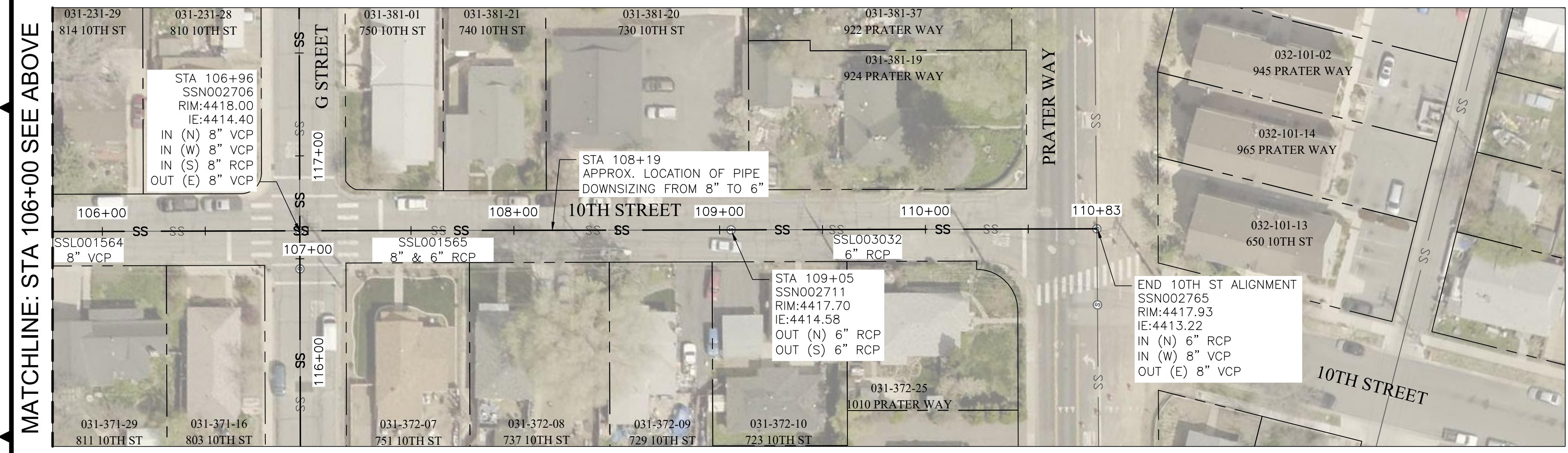
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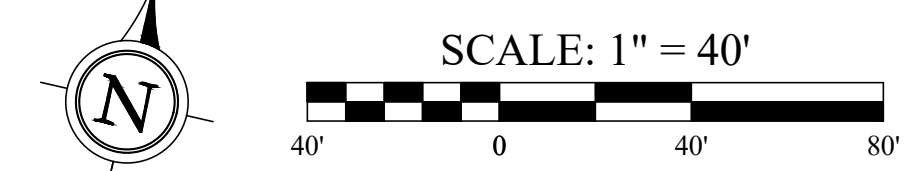
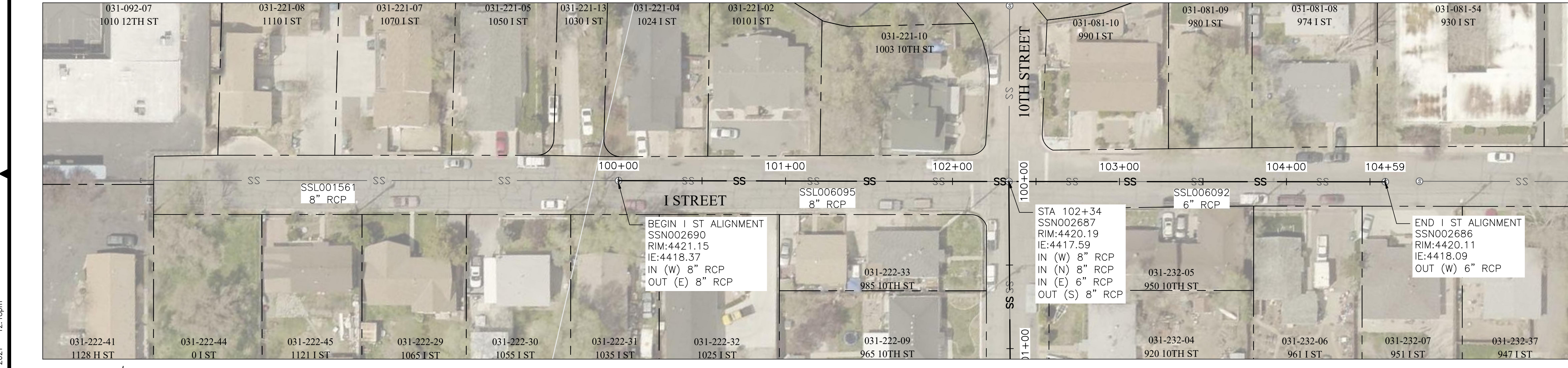
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 PLOT DATE: Jul 06, 2021 12:18pm



10TH STREET - STA: 100+00 TO 106+00



10TH STREET - STA: 106+00 TO 110+83



I STREET - STA: 100+00 TO 104+59

GENERAL NOTES:

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JOB NO.:	1988	REVISION:			
DESCRIPTION:					
ONE INCH AT FULL SCALE:					

FARR WEST ENGINEERING
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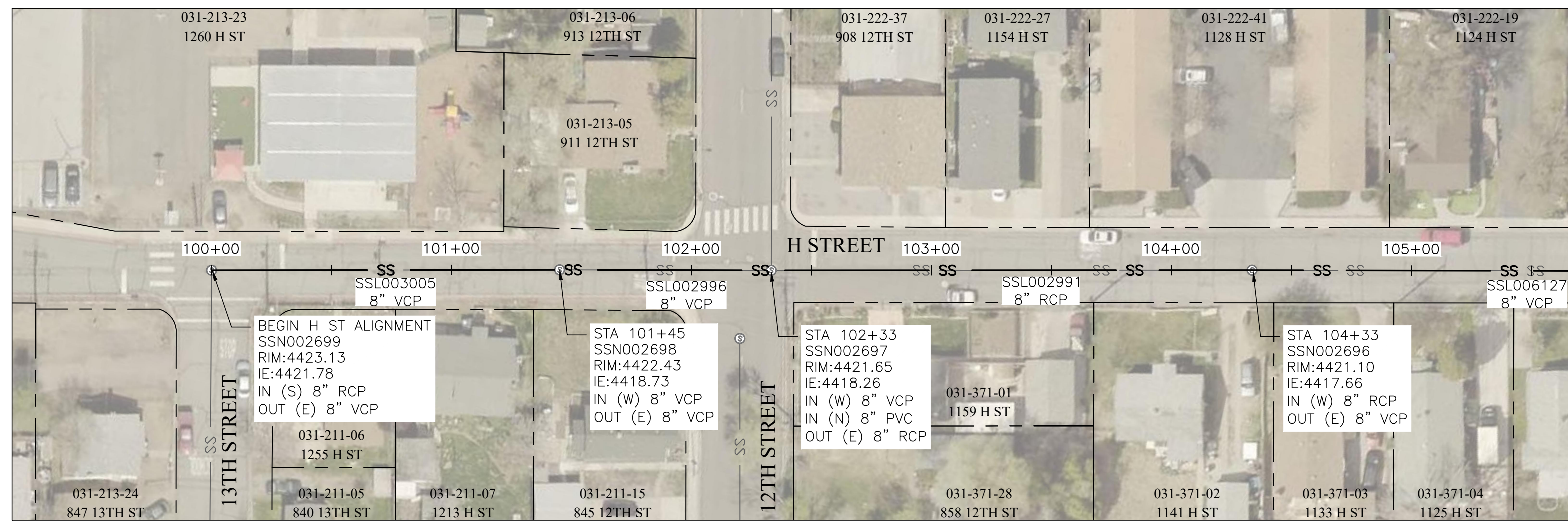
CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
 10TH ST & I ST
 NEVADA
 WASHOE COUNTY



BID SET

SHEET NUMBER
C2
 5 OF 11

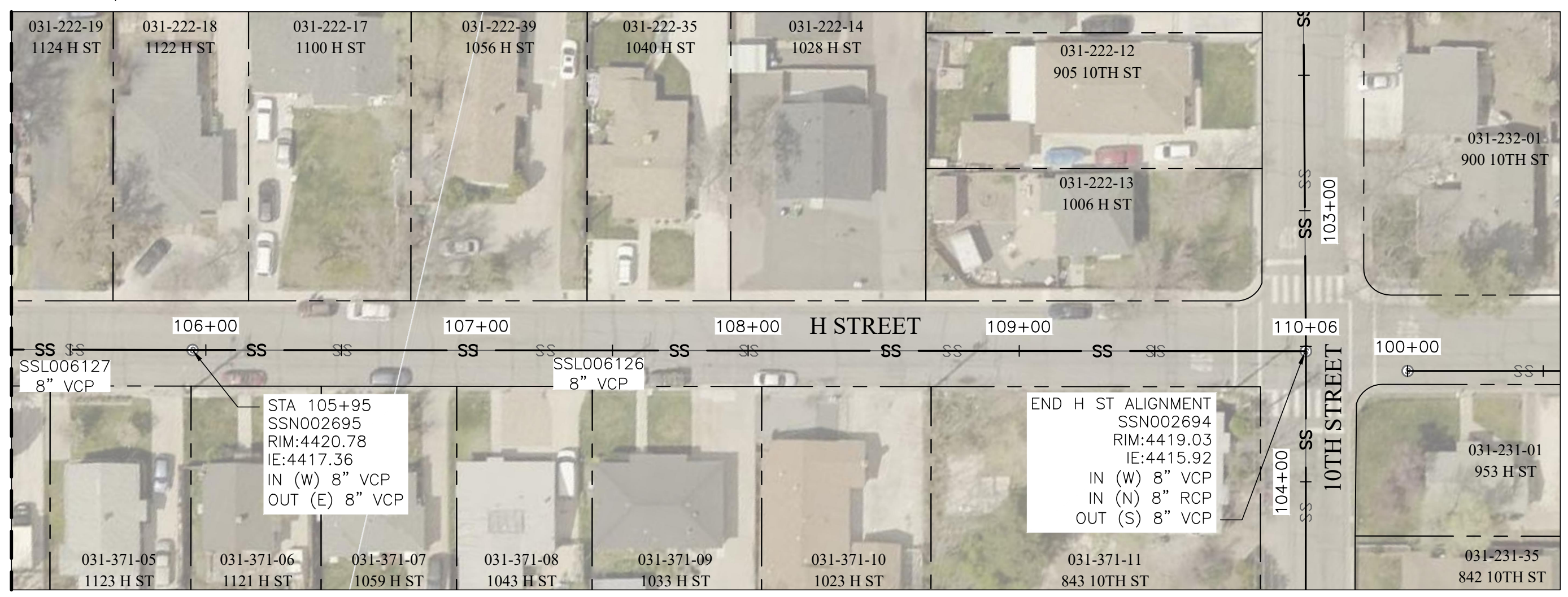
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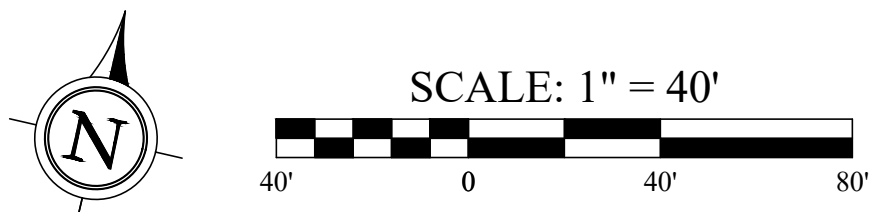
MATCHLINE: STA 105+50 SEE BELOW



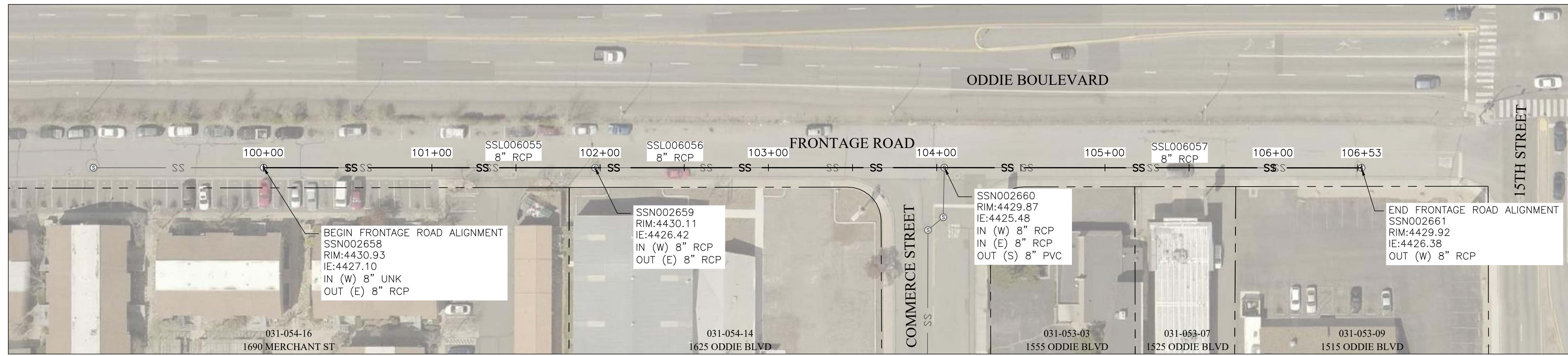
H STREET - STA: 100+00 TO 105+50



MATCHLINE: STA 105+50 SEE ABOVE



H STREET - STA: 105+50 TO 110+06



FRONTAGE ROAD - STA: 100+00 TO 106+53

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CITY OF SPARKS
SANITARY SEWER CIPP LINING - FISCAL 2022
H ST & FRONTAGE RD

NEVADA

WASHOE COUNTY

SHEET NUMBER
C3

6 OF 11

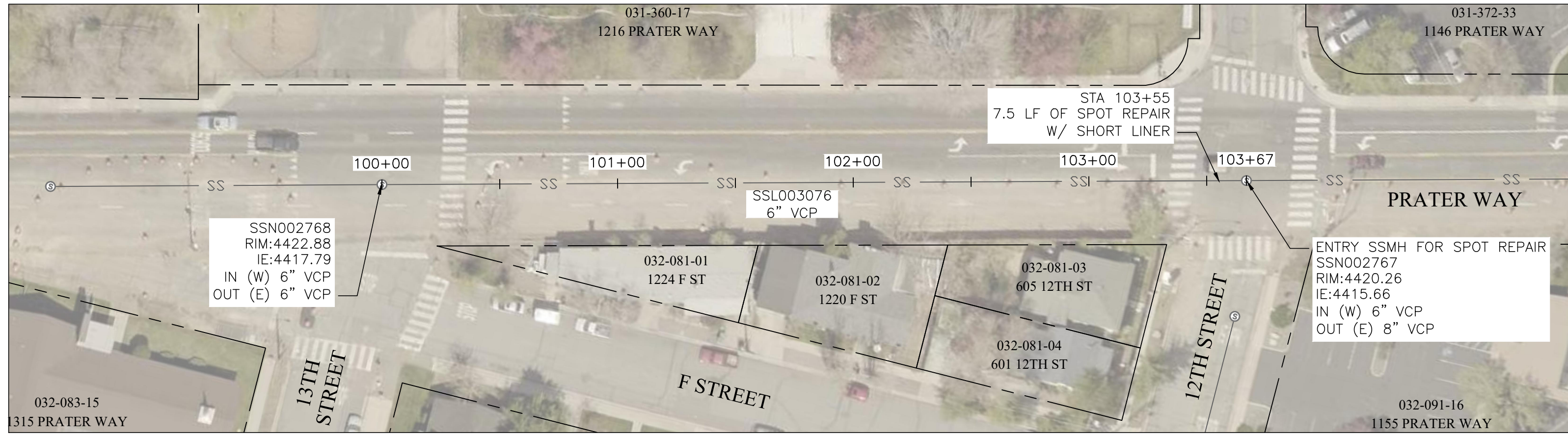
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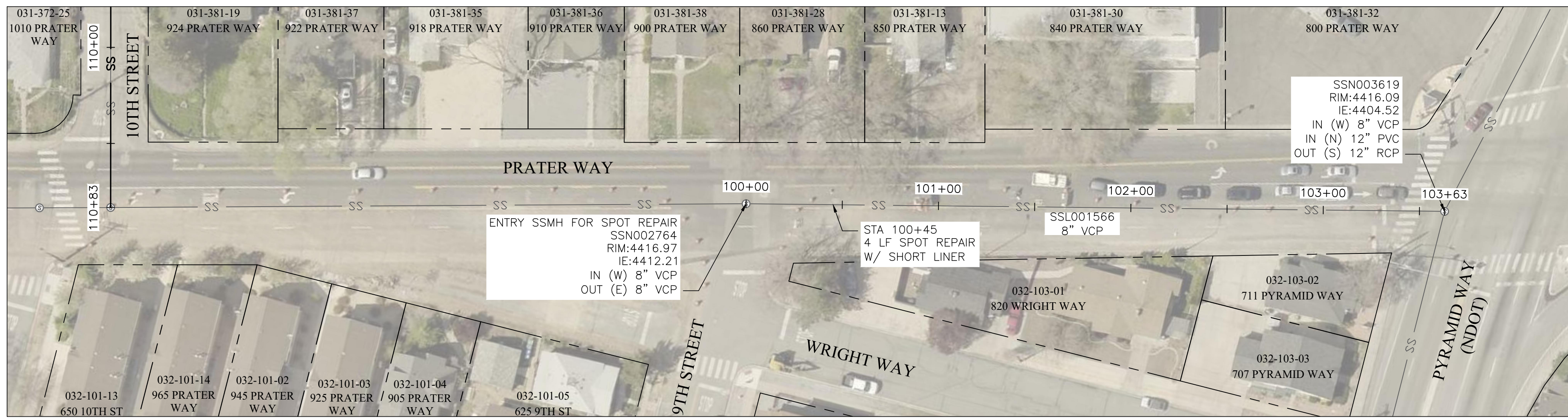
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16TH STREET ALLEY - STA: 100+00 TO 104+30



PRATER WAY SPOT REPAIR 1 - STA: 100+00 TO 103+67



PRATER WAY SPOT REPAIR 2 - STA: 100+00 TO 103+63

GENERAL NOTES:

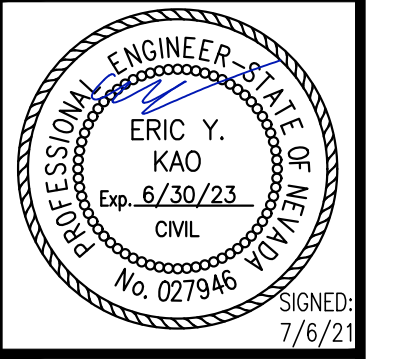
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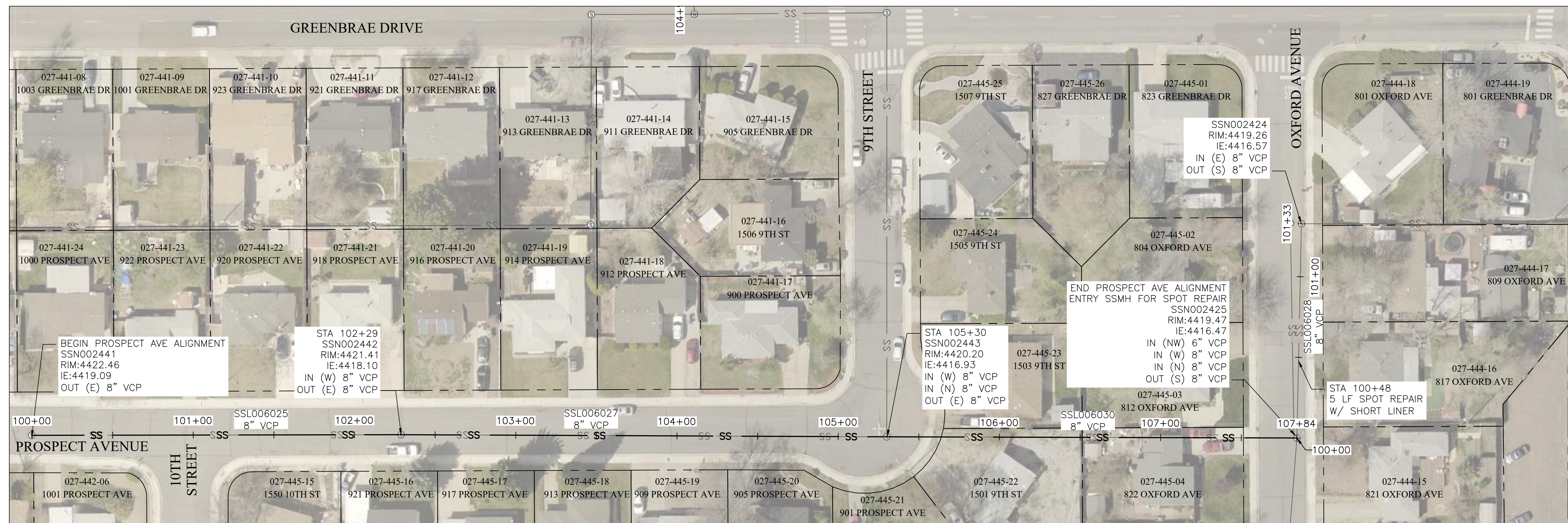


CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
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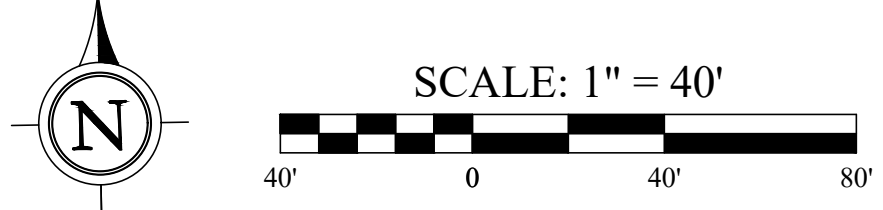
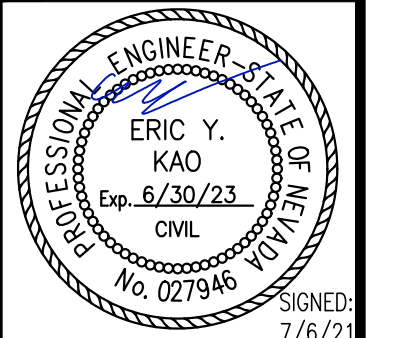
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 FARRWESTENGINEERING.COM



PROSPECT AVENUE - STA: 100+00 TO 107+84 & OXFORD AVENUE SPOT REPAIR - STA: 100+00 TO 101+33



MEADOWVALE WAY SPOT REPAIRS - STA: 100+00 TO 105+79

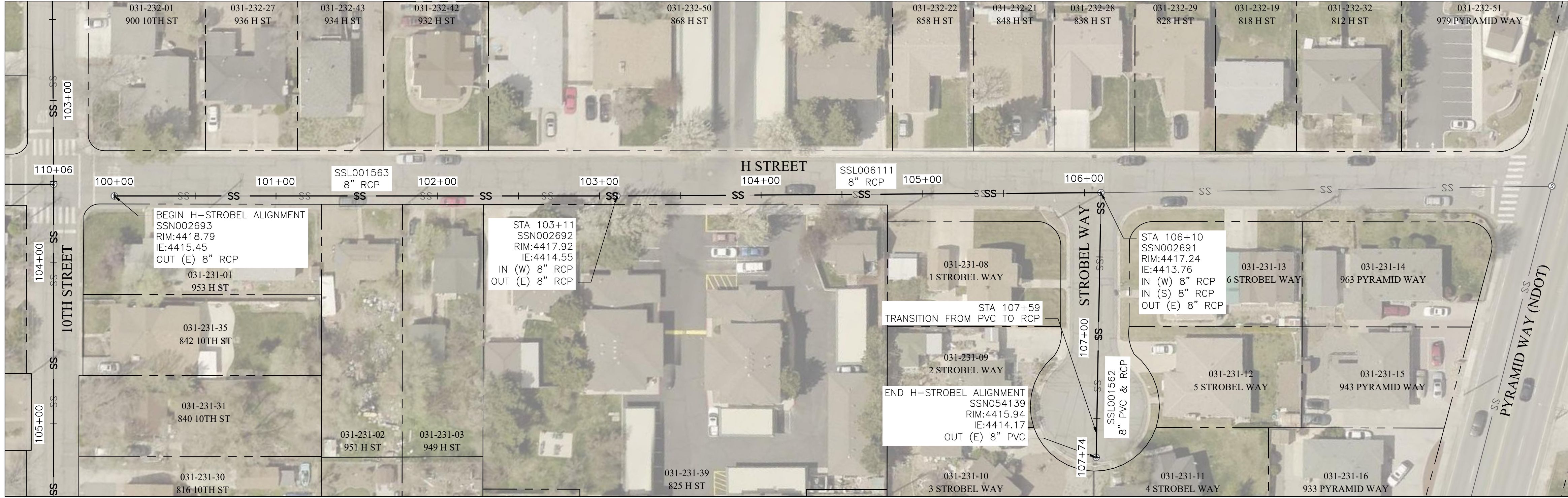
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NEVADA
 WASHOE COUNTY
 CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
 PROSPECT AVE & MEADOWVALE WAY



BID SET

A B C D E F G H



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H STREET AND STROBEL - STA: 100+00 TO 107+74

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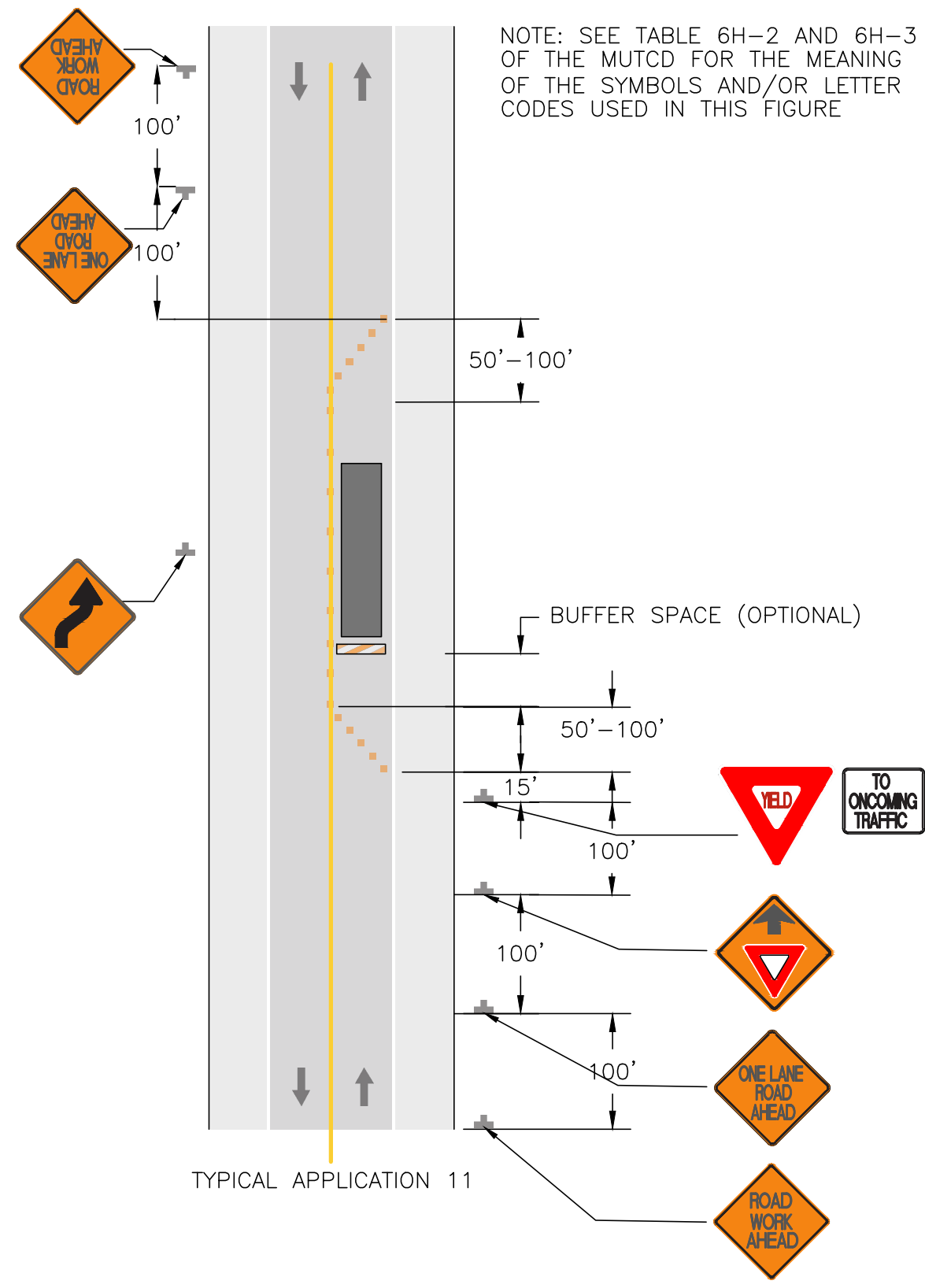
CITY OF SPARKS
 SANITARY SEWER CIPP LINING - FISCAL 2022
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 WASHOE COUNTY
 NEVADA



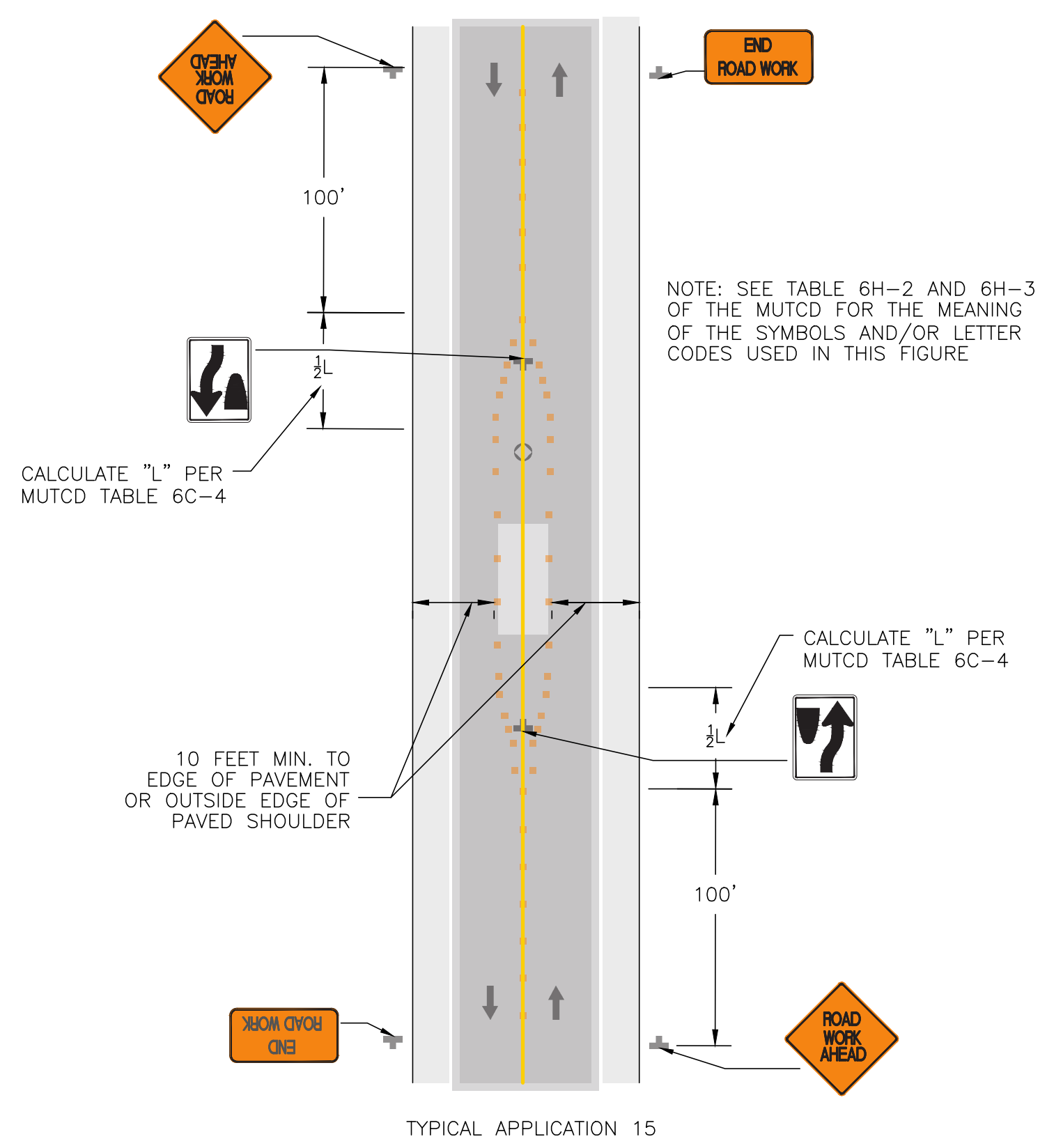
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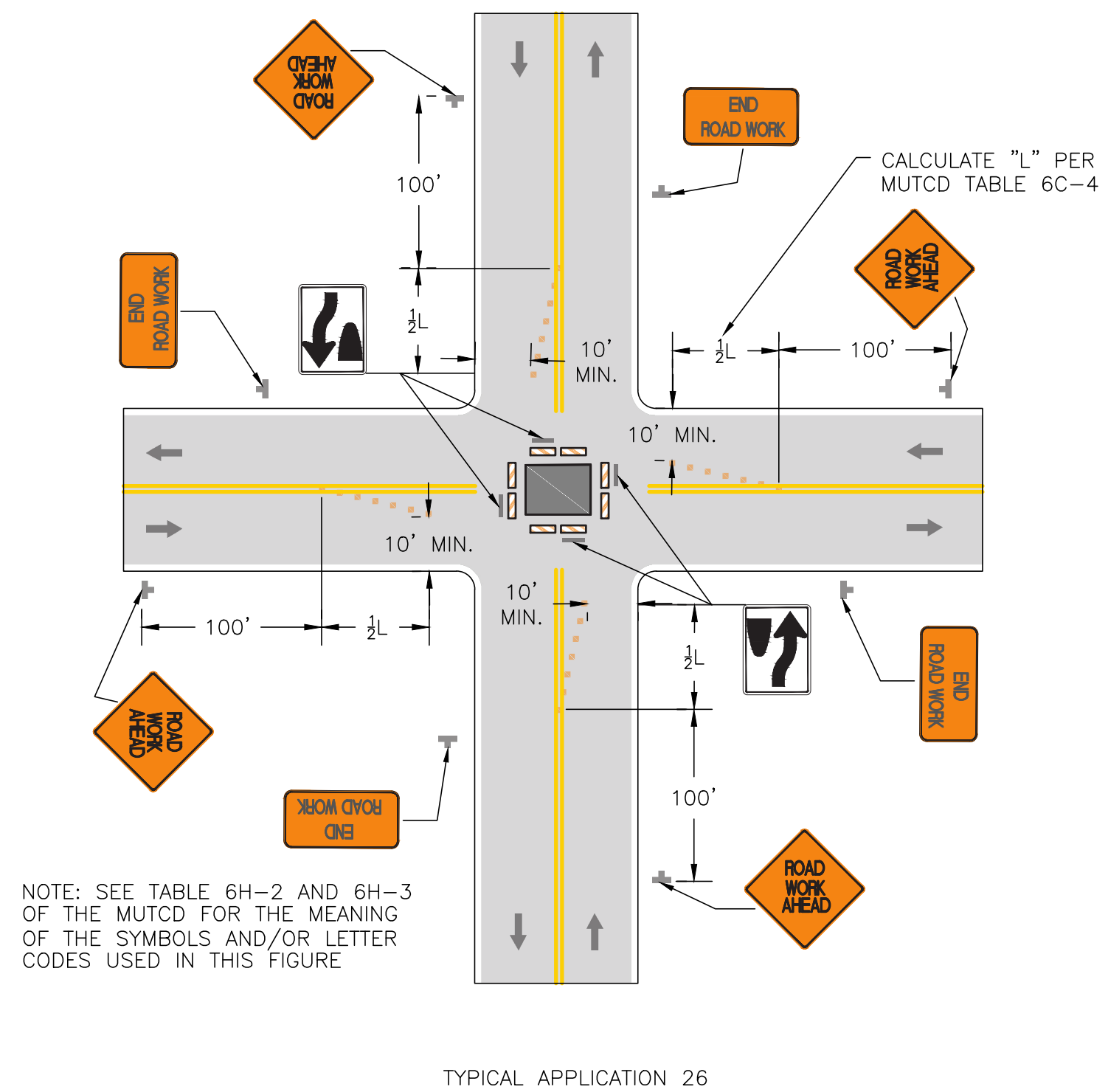
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 PLOT DATE: Jul 06, 2021 - 12:19pm



LANE CLOSURE ON A TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES
SCALE: NTS



WORK IN THE CENTER OF A ROAD WITH LOW TRAFFIC VOLUMES
SCALE: NTS



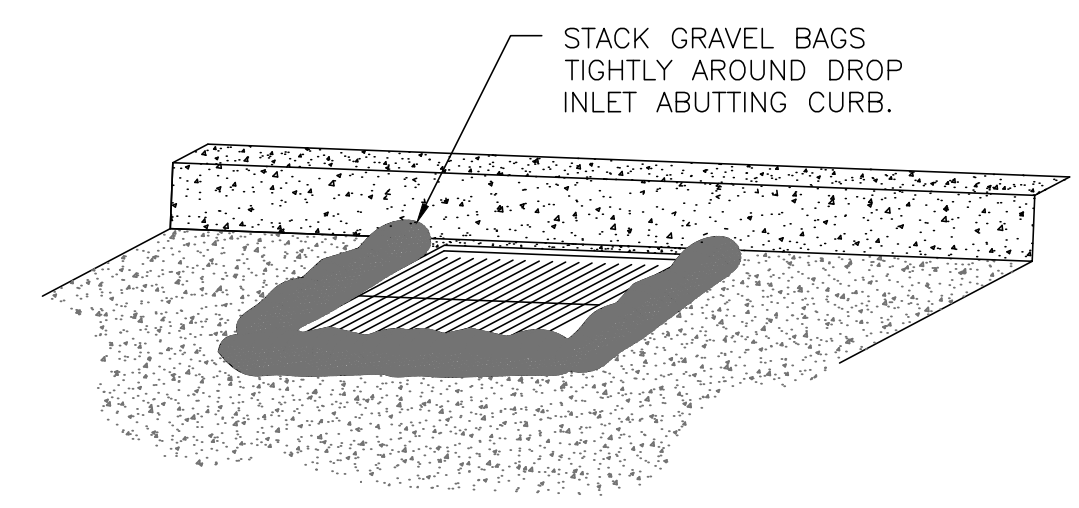
CLOSURE IN THE CENTER OF AN INTERSECTION
SCALE: NTS

- 1) ALL TRAFFIC CONTROL SHALL MEET OR EXCEED THE REQUIREMENTS AS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION, NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK, NDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, & STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF PUBLIC WORKS, UNLESS NOTED OTHERWISE. IF DEVIATIONS FROM THE TYPICAL TRAFFIC CONTROL PLANS ARE NECESSARY, THE CONTRACTOR SHALL SUBMIT AN AMENDED TRAFFIC CONTROL PLAN FOR APPROVAL.
- 2) PRIOR TO CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR HANDLING TRAFFIC THROUGH THE PROJECT SITE TO THE OWNER FOR APPROVAL.
- 3) ALL ADVANCED WARNING SIGNS SHALL BE PER THE TABLE IN DETAIL E ON THIS SHEET.
- 4) PORTABLE DELINEATORS SHALL BE A MINIMUM OF 36" HIGH AND PLACED APPROXIMATELY 25 FEET APART.
- 5) WHEN TWO-WAY TRAFFIC IS NOT POSSIBLE, CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION ACTIVITY. AFTER WORKING HOURS ALL TRAFFIC CONTROLS SHALL BE LIFTED, TRAFFIC BARRIERS REMOVED AND TRAFFIC FLOW RETURNED TO NORMAL.
- 6) CONTRACTOR SHALL MANAGE AND BE RESPONSIBLE FOR ALL TRAFFIC CONTROL OPERATIONS TO ENSURE PUBLIC SAFETY AND SHALL ASSIGN AN EMPLOYEE TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES.
- 7) ALL TRAFFIC CONTROL OPERATIONS ARE SUBJECT TO APPROVAL OF THE OWNER AND MAY BE REQUIRED TO BE ALTERED BY THE CONTRACTOR IF IT IS PERCEIVED THAT A DANGEROUS CONDITION MAY EXIST. THE CONTRACTOR SHALL PROACTIVELY MANAGE TRAFFIC CONTROL OPERATIONS & MAKE ADJUSTMENTS AS NECESSARY TO ENSURE PUBLIC SAFETY.

TRAFFIC CONTROL NOTES
SCALE: NTS

TEMPORARY TRAFFIC CONTROL ZONE SIGN AND PLAQUE SIZES			
SIGN OR PLAQUE	SIGN DESIGNATION	MUTCD SECTION	SIGN SIZE
YIELD	R1-2	6F.06	36X36X36
TO ONCOMING TRAFFIC (PLAQUE)	R1-2aP	6F.06	36X30
KEEP RIGHT	R4-7	6F.06	24X30
TURN AND CURVE SIGNS	W1-1,2,3,4	6F.16	36X36
YIELD AHEAD	W3-2	6F.16	36X36
ADVISORY SPEED (PLAQUE)	W13-1P	6F.52	24X24
XX FEET (PLAQUE)	W16-2P	6F.16	24X18
ROAD WORK (WITH DISTANCE)	W20-1	6F.16	36X36

TEMPORARY SIGNS TABLE
SCALE: NTS



- NOTES**
1. INSTALL FILTER FABRIC BELOW GRATES, EXTEND FILTER FABRIC EIGHTEEN INCHES (18") BEYOND THE EDGE OF THE GRATE ALL DIRECTIONS.

DROP INLET PROTECTION DETAIL
SCALE: NTS

ONE INCH AT FULL SCALE:

DATE	
APP	
BY	
DESCRIPTION	
REVISION	
JOB NO.:	1988
DATE:	JULY 2021
SCALE:	SEE SHEET
DESIGNED:	EJK
DRAWN:	EJK
CHECKED:	ZK

FARR WEST ENGINEERING
5510 LONGLEY LANE
RENO, NEVADA 89511
PHONE: (775) 851-4788
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PROFESSIONAL ENGINEER - STATE OF NEVADA
ERIC Y. KAO
Exp. 6/30/23
CML
No. 027946
SIGNED: 7/6/21

CITY OF SPARKS
SANITARY SEWER CIPP LINING - FISCAL 2022
DETAILS

NEVADA
WASHOE COUNTY

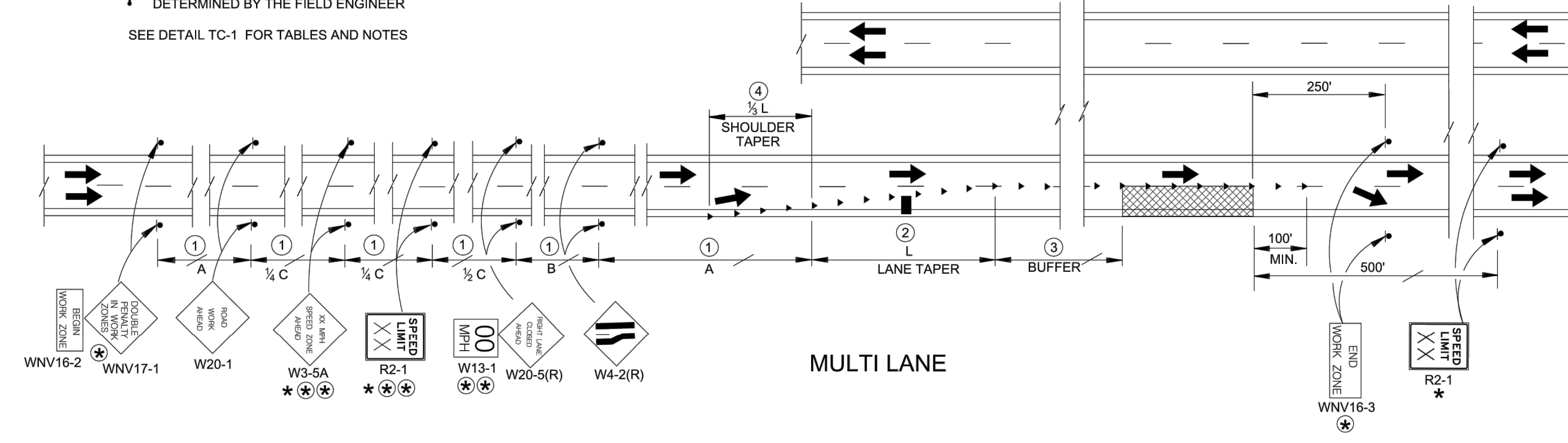
BID SET



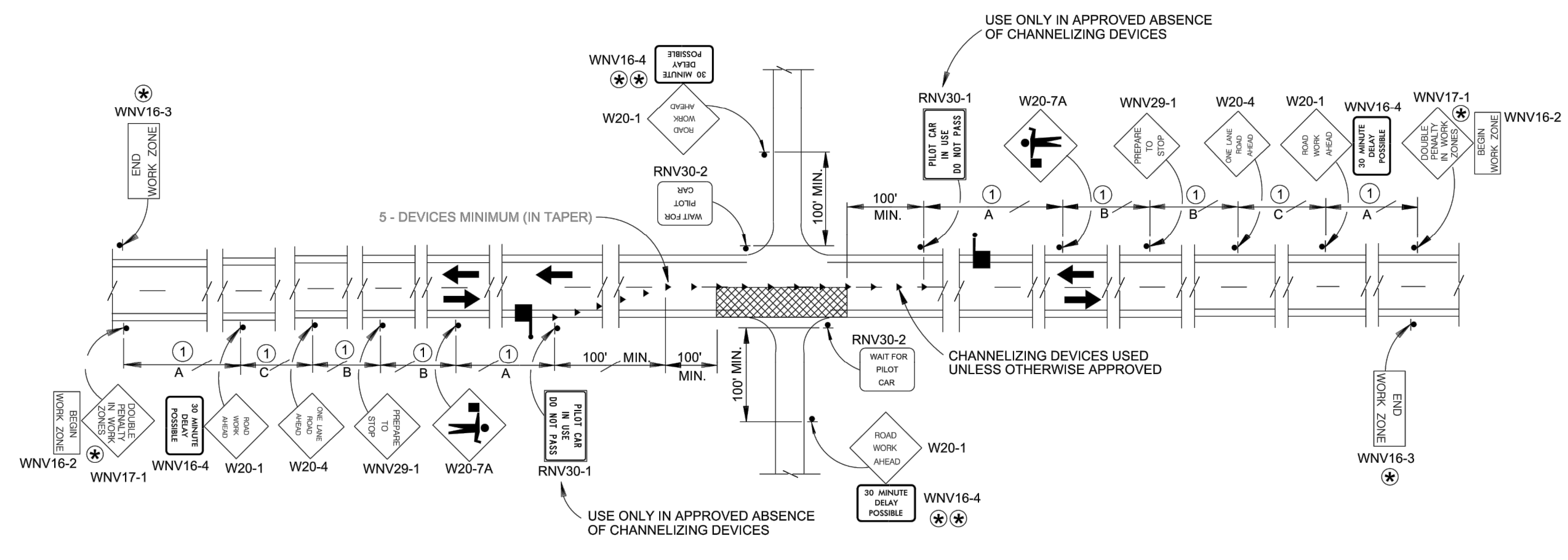
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PLOT DATE: Jul 06, 2021 - 12:19pm

FILE SPEC: P:\Client\Projects\Sparks, City of 094\1988 2021\1988\Drawings\5.2 DWG\1988_01-D3_DETAILS.dwg
 PLOT DATE: Jul 06, 2021 - 12:19pm

- LEGEND:**
- WORK AREA
 - CHANNELIZING DEVICES
 - ARROW BOARD
 - ≥ 45 MPH
 - OPTIONAL
 - SEE NOTE 1 ON DETAIL TC-1
 - FLAGGER LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER
- SEE DETAIL TC-1 FOR TABLES AND NOTES



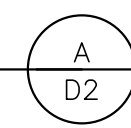
MULTI LANE



TWO LANE - TWO WAY

TRAFFIC CONTROL FOR ONE LANE CLOSURES

SCALE: NTS



1 ADVANCE WARNING SIGN SPACING

SPEED MPH	DISTANCE BETWEEN SIGNS FT.		
	A	B	C
0 - 20	200	200	200
25 - 30	300	300	300
35 - 40	400	400	400
45 - 50	600	600	600
55 - 80	1000	1600	2640

3 BUFFER LENGTH

SPEED MPH	LENGTH FT.
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820
80	920

2 TAPER LENGTH AND CHANNELIZING DEVICE SPACING

SPEED MPH	LENGTH FOR MERGING TAPER (L)			TAPER AND CHANNELIZATION DEVICE SPACING FT.
	10 FT.	11 FT.	12 FT.	
20	80	80	80	20
25	125	125	125	25
30	150	180	180	30
35	210	245	245	35
40	280	320	320	40
45	450	495	540	45
50	500	550	600	50
55	550	605	660	55 *
60	600	660	720	60 *
65	650	715	780	65 *
70	700	770	840	70 *
75	750	825	900	75 *
80	800	880	960	80 *

* ON RURAL INTERSTATE HIGHWAYS WHERE THE SPEED LIMIT IS 55 MPH OR GREATER, THE CHANNELIZATION DEVICE SPACING (EXCEPT FOR TAPERS) MAY BE INCREASED TO 90 FEET, WHEN INCREASED DEVICE SPACING IS USED, 3 DRUMS WILL BE PLACED DIAGONALLY AT 0.5-MILE INCREMENTS TO INDICATE THE LANE IS CLOSED

**4 SHIFTING TAPER = 1/2 L
 SHOULDER TAPER = 1/3 L**

$$\leq 40 \text{ MPH} \quad L = \frac{WS^2}{60}$$

$$\geq 45 \text{ MPH} \quad L = WS$$

S = SPEED (MPH)
 L = TAPER LENGTH (FT.)
 W = WIDTH OF LATERAL SHIFT (FT.)

NOTES:

- Projects with an existing speed limit greater than 55 mph may be temporarily reduced by 10 mph or to 55 mph, whichever is lower, with the concurrence from the Chief Traffic Operations Engineer. Any temporary reductions to a speed lower than 55 MPH may be reduced with concurrence from the Chief Traffic Operations Engineer and a recommendation forwarded by Traffic Operations to the Director for approval.
- The W1-3 signs shall be used when the recommended speed on a curve is 30 mph or less, the W1-4 signs shall be used when the recommended speed is 35 mph or greater.
- The W6-3 and R4-1 signs shall be installed alternately at 0.5-mile intervals when the lengths of crossovers exceed 0.5-mile.
- All regulatory signs (R series) shall be black on retroreflective white.
- All warning signs (W series) shall be black on retroreflective orange.
- Warning signs shall be a minimum of 3' x 3' for speeds of 45 mph or less, R2-1 shall be 3' x 4'.
- Warning signs shall be a minimum of 4' x 4' for speeds of 50 mph or greater, R2-1 shall be 4' x 5'.
- All device spacing shall be designed based on work zone speed.

TYPICAL APPLICATIONS:

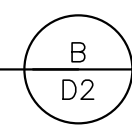
NDOT STANDARD DETAILS TC-2 THRU TC-22 INCLUDE A VARIETY OF TRAFFIC CONTROL METHODS, BUT DO NOT INCLUDE A LAYOUT FOR EVERY CONCEIVABLE WORK SITUATION. TYPICAL APPLICATIONS SHOULD BE ALTERED WHEN NECESSARY TO FIT THE CONDITIONS OF A PARTICULAR TEMPORARY TRAFFIC CONTROL ZONE. FOR ADDITIONAL INFORMATION REFER TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND REVISIONS.

ADVANCE WARNING ARROW PANEL

TYPE	MINIMUM SIZE INCHES	POSTED SPEED
A	48 x 24	30 MPH OR LESS
B	60 x 30	35 MPH TO 50 MPH
C	96 x 48	55 MPH OR MORE

TRAFFIC CONTROL NOTES

SCALE: NTS



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REVISION	DESCRIPTION	BY	DATE

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BID SET



SHEET NUMBER
D2
 11 OF 11