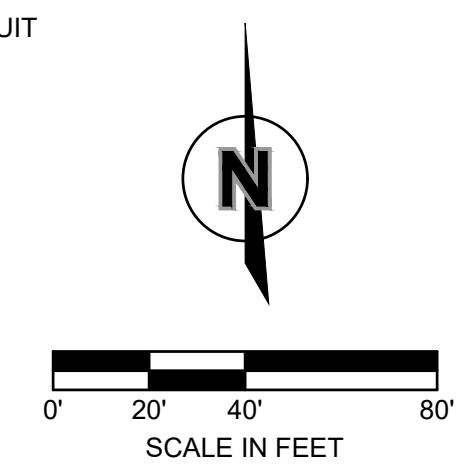
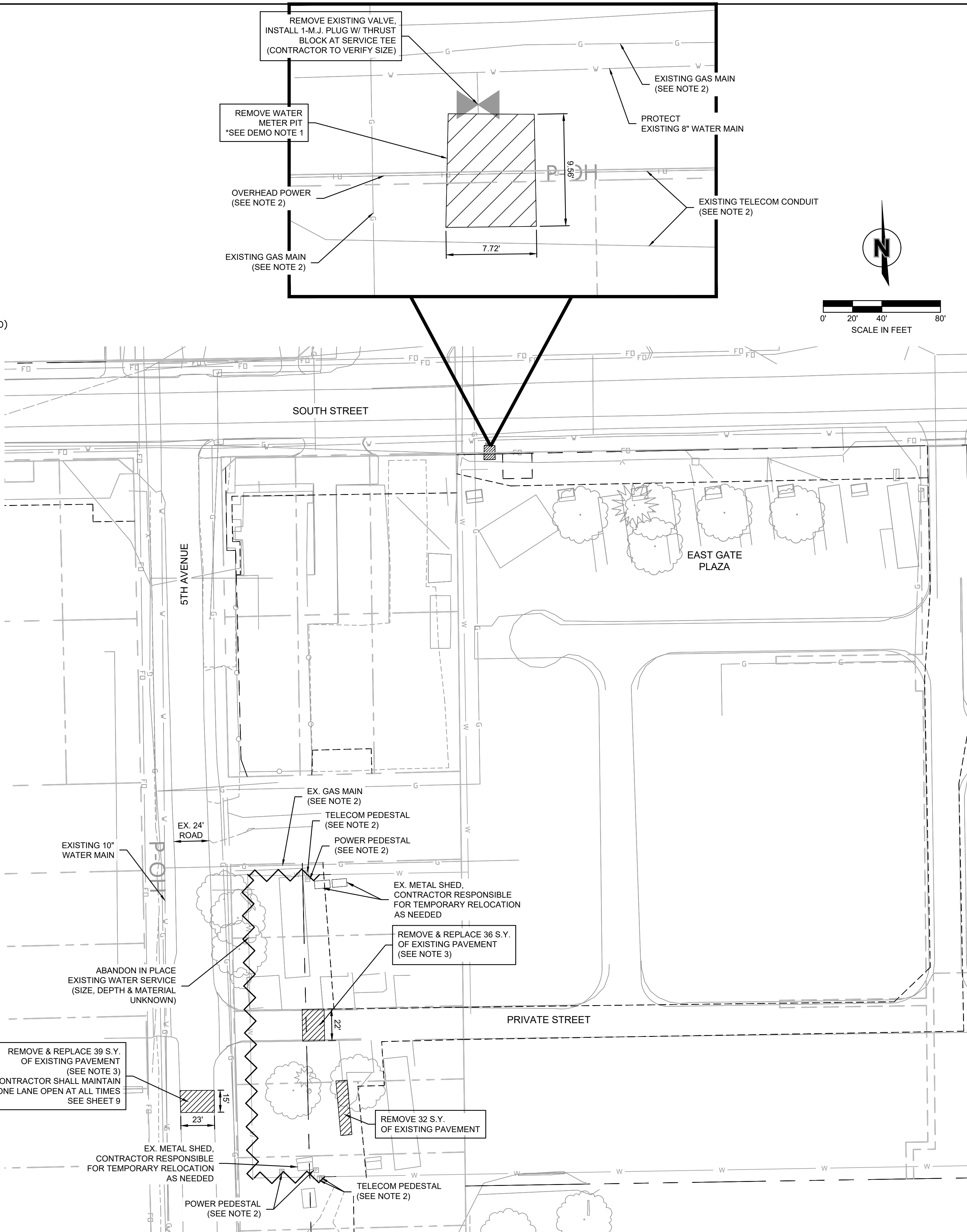


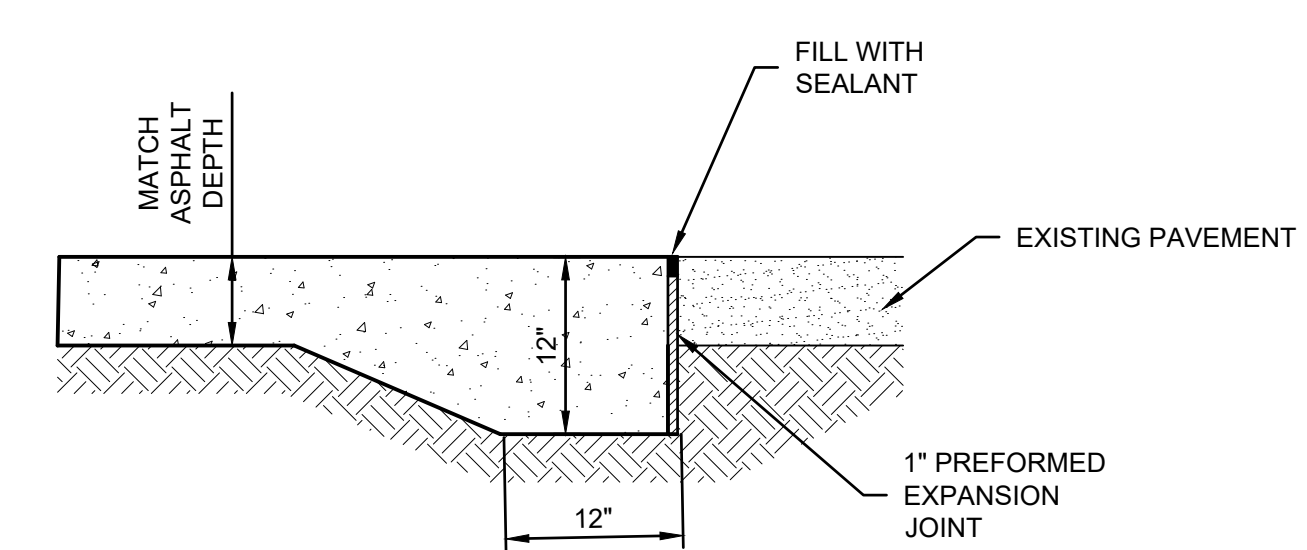
LEGEND

- ▲ CTL CONTROL POINT
- SIGN
- FHT FIRE HYDRANT
- ⊛ LIGHT POLE
- SPRINKLER HEAD
- ▲ TRANSFORMER
- EV ELECTRIC VAULT
- S SPRINKLER BOX
- ⊕ CATCH BASIN
- ☎ TELEPHONE BOX
- ⊕ POWER POLE
- E ELECTRIC BOX
- ⊕ STORM DRAIN MANHOLE
- ⊕ SANITARY MANHOLE
- ⊕ WATER VALVE
- UTILITY VAULT
- CORNER FOUND (AS NOTED)
- P-UG UNDERGROUND ELECTRIC
- G GAS LINE
- SS SANITARY SEWER LINE
- SD STORM SEWER LINE
- P-OH OVERHEAD ELECTRIC
- W WATER LINE
- FO FIBER OPTIC LINE
- TEL TELEPHONE LINE
- /// BUILDING LINE
- GUTTER
- CURB
- - - PROPERTY LINE
- ||||| UTILITY REMOVAL
- ▨ PAVEMENT REMOVAL
- ▩ STRUCTURE REMOVAL

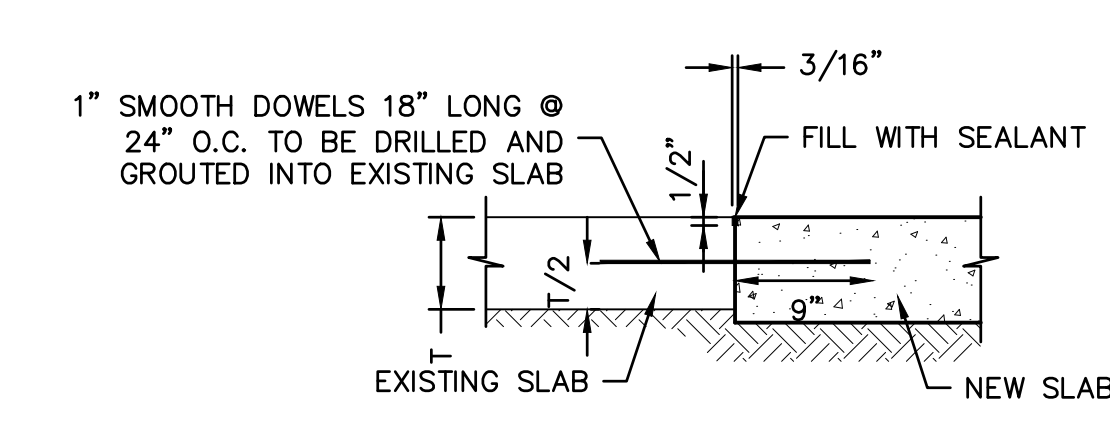


DEMOLITION NOTES:

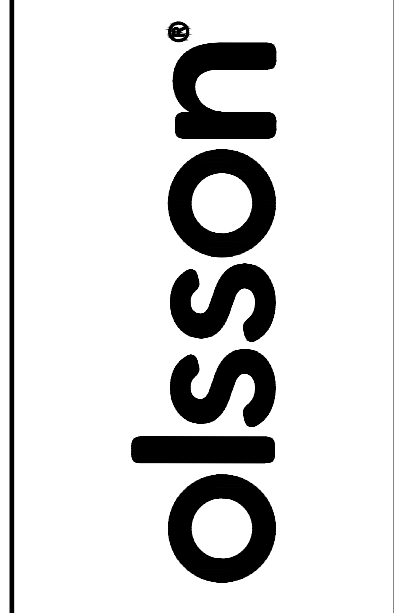
1. WATER METER PIT SHALL BE REMOVED ENTIRELY. WATER MAIN SHALL BE CAPPED AT ENTRANCE POINT(S). CONTRACTOR TO COORDINATE WITH HASTINGS UTILITIES BEFORE BACKFILLING. EXISTING WATER METER PIT REMOVALS SHALL NOT TAKE PLACE UNTIL NEW METER BUILDING IS IN SERVICE.
2. CONTRACTOR SHALL COORDINATE WITH GAS, TELECOM AND POWER COMPANIES FOR UTILITY CROSSING CONFLICTS. LOWERING OR RE-ROUTING OF EXISTING UTILITY LINES SHALL BE CONSIDERED SUBSIDIARY TO REMOVALS.
3. REPLACEMENT PAVEMENT SHALL MATCH EXISTING PAVEMENT DEPTH. CONTRACTOR TO REMOVE PAVEMENT AT EXISTING JOINTS WHERE APPLICABLE. SAWCUTTING PAVEMENT FOR REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO PAVEMENT REMOVAL.
4. THE CONTRACTOR SHALL ACCURATELY RECORD ACTUAL LOCATIONS OF CAPPED UTILITIES AND SUBSURFACE OBSTRUCTIONS THAT WILL REMAIN AFTER DEMOLITION.
5. COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OR REMOVAL OF STRUCTURES, FOUNDATIONS, ETC., USING APPROVED SELECT FILL MATERIALS. FILL MATERIALS SHALL BE FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS, AND OTHER ORGANIC MATTER.
6. REMOVE ALL STUMPS, BUSHES, TREES, WEEDS AND OTHER SURFACE OBSTRUCTIONS THAT ARE WITHIN THE REMOVAL AREA.
7. ALL ITEMS INDICATED ON THE DEMOLITION PLAN SHALL BE DEMOLISHED AND DISPOSED OF OFF-SITE.
8. CONTRACTOR SHALL PROTECT AND MAINTAIN ITEMS WHICH ARE INDICATED TO REMAIN.
9. REMOVE & DISCONNECT ALL UTILITIES DURING DEMOLITION OPERATIONS AS NEEDED. (GAS, CABLE, & ELECTRICAL) CONTRACTOR TO COORDINATE WORK WITH LOCAL UTILITIES.
10. REMOVE ALL PIPING AND UTILITY SERVICE LINES BENEATH FLOOR SLABS NEAR EXISTING BUILDINGS AND WITHIN PAVEMENT REMOVAL AREAS UNLESS OTHERWISE NOTED TO BE PROTECTED INCLUDING SEWER CLEANOUTS, STORM DRAINS, AND ETC.
11. PROTECT UTILITIES THAT ARE NOT BEING CALLED OUT TO BE REMOVED. (POWER POLES, ELECTRICAL SUBSTATION, FIRE HYDRANTS, STORM SEWER INLETS, STORM SEWER MANHOLES, ETC.)
12. THE CONTRACTOR SHALL ADHERE TO ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS PERTAINING TO DISPOSAL OF ALL CONSTRUCTION RELATED MATERIALS. CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED DEMOLITION PERMITS AND DISPOSAL FEES.
13. CONCRETE PAVEMENT FOR REPLACEMENT SHALL BE NEBRASKA DEPARTMENT OF TRANSPORTATION 47B-3500. ALL CEMENT SHALL BE 1P, 1S OR 1T. SEE PAVEMENT DETAIL FOR CONCRETE TIE-IN TO EXISTING ASPHALT OVERLAY ON 5TH AVENUE.



CONCRETE/ASPHALT TIE IN
NOT TO SCALE



NEW PAVEMENT TO EXISTING PAVEMENT CONNECTION
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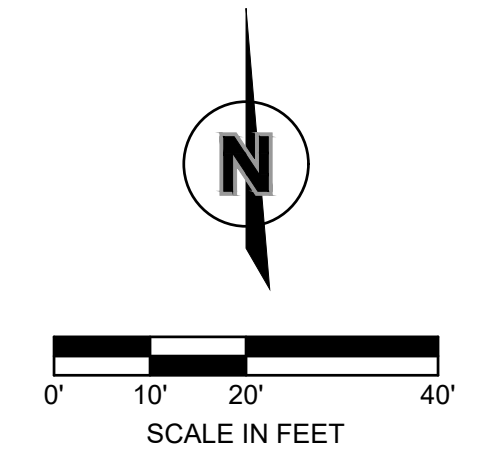
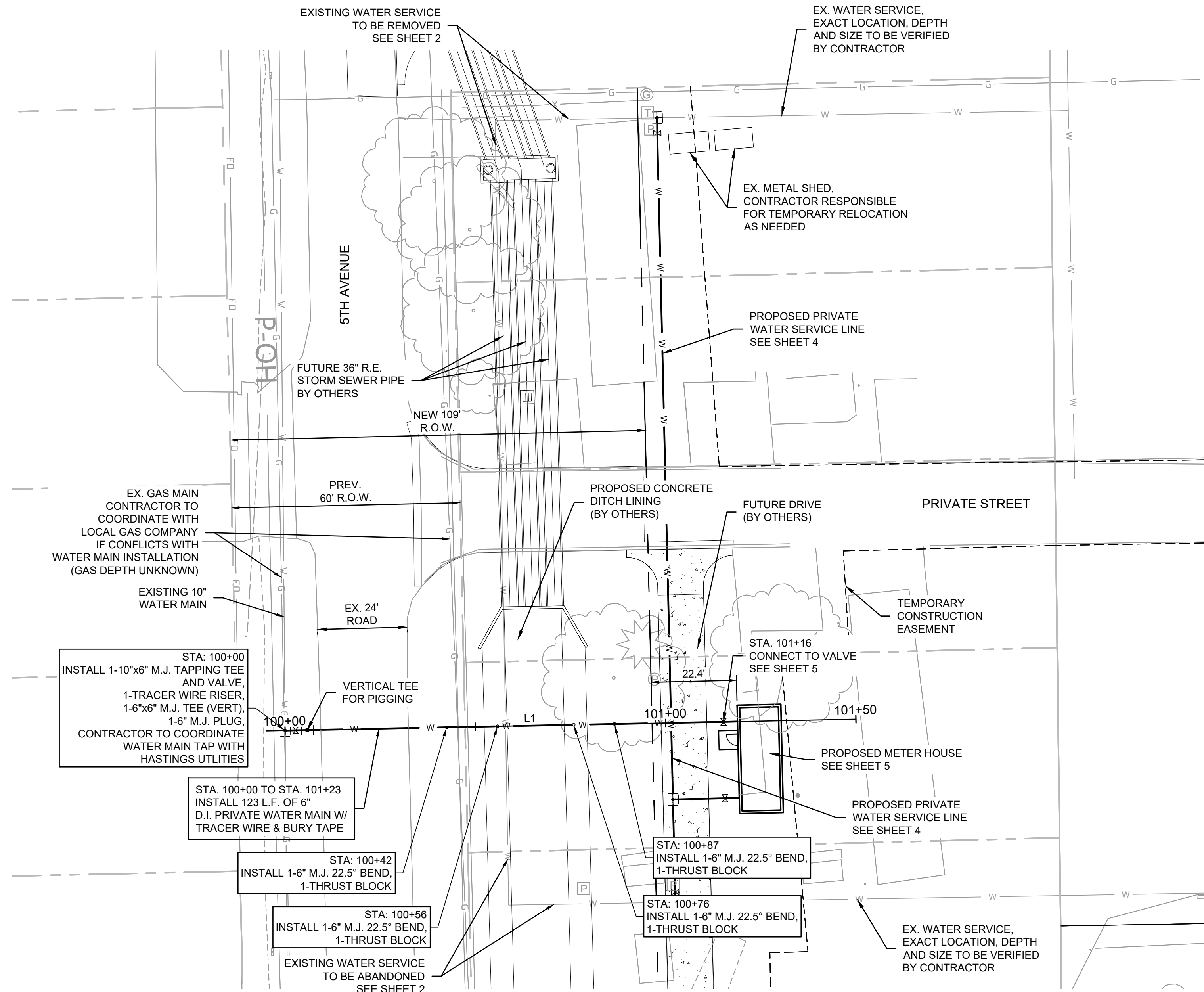
REV. NO.	DATE	DESCRIPTION	BY

SITE REMOVALS	REVISIONS

drawn by: _____ AST
designed by: _____ AST
project no.: 025-04734
date: FEBRUARY, 2026

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 DATE: Feb 19, 2026 12:51pm USER: alarango



WATER ALIGNMENT					
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING
L1	99+95.00 101+50.00	276808.9564 276812.0124	2095088.1906 2095243.1611	155.00'	N88°52'13"E

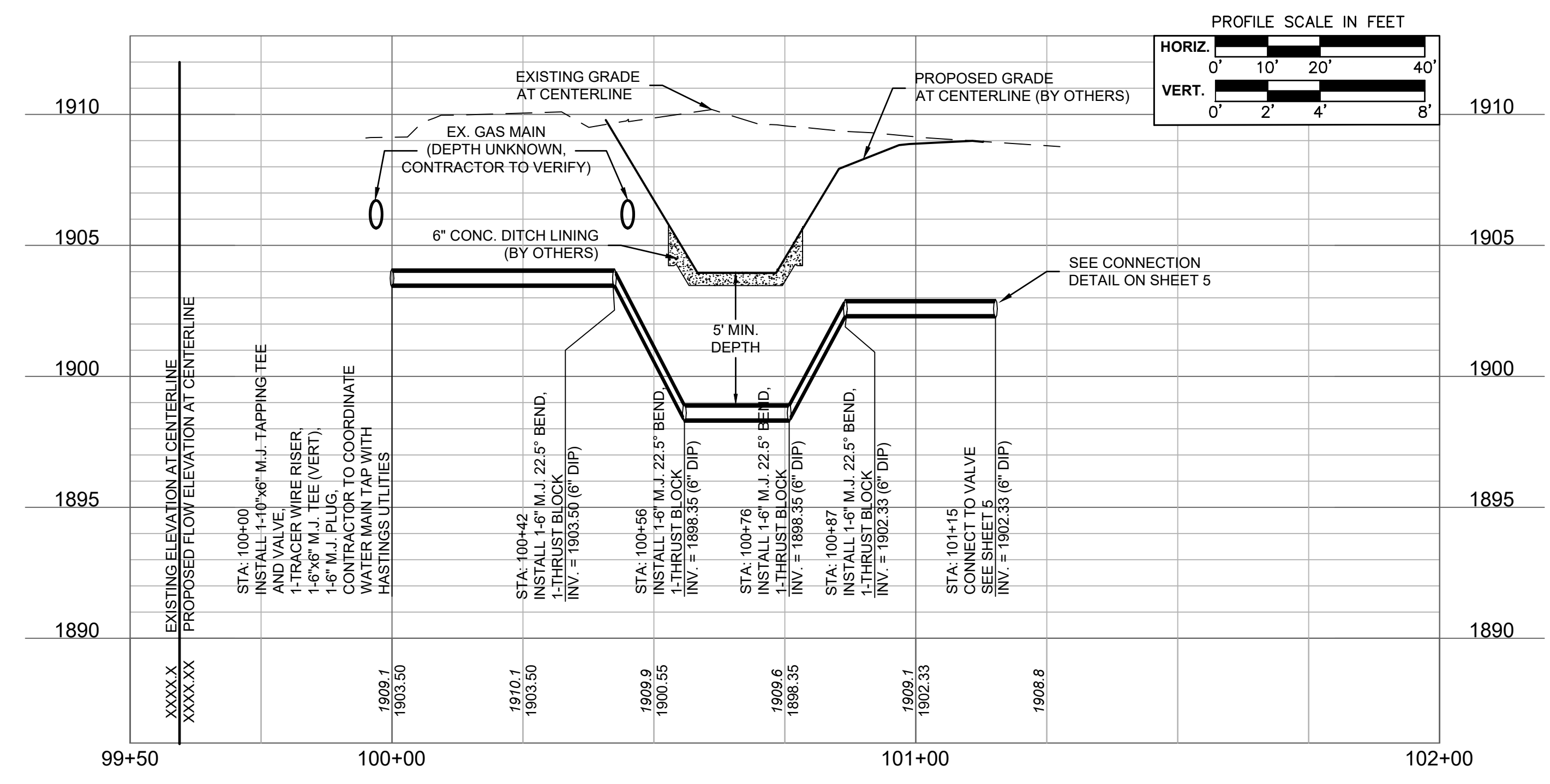
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REV. NO.	DATE	DESCRIPTION	BY

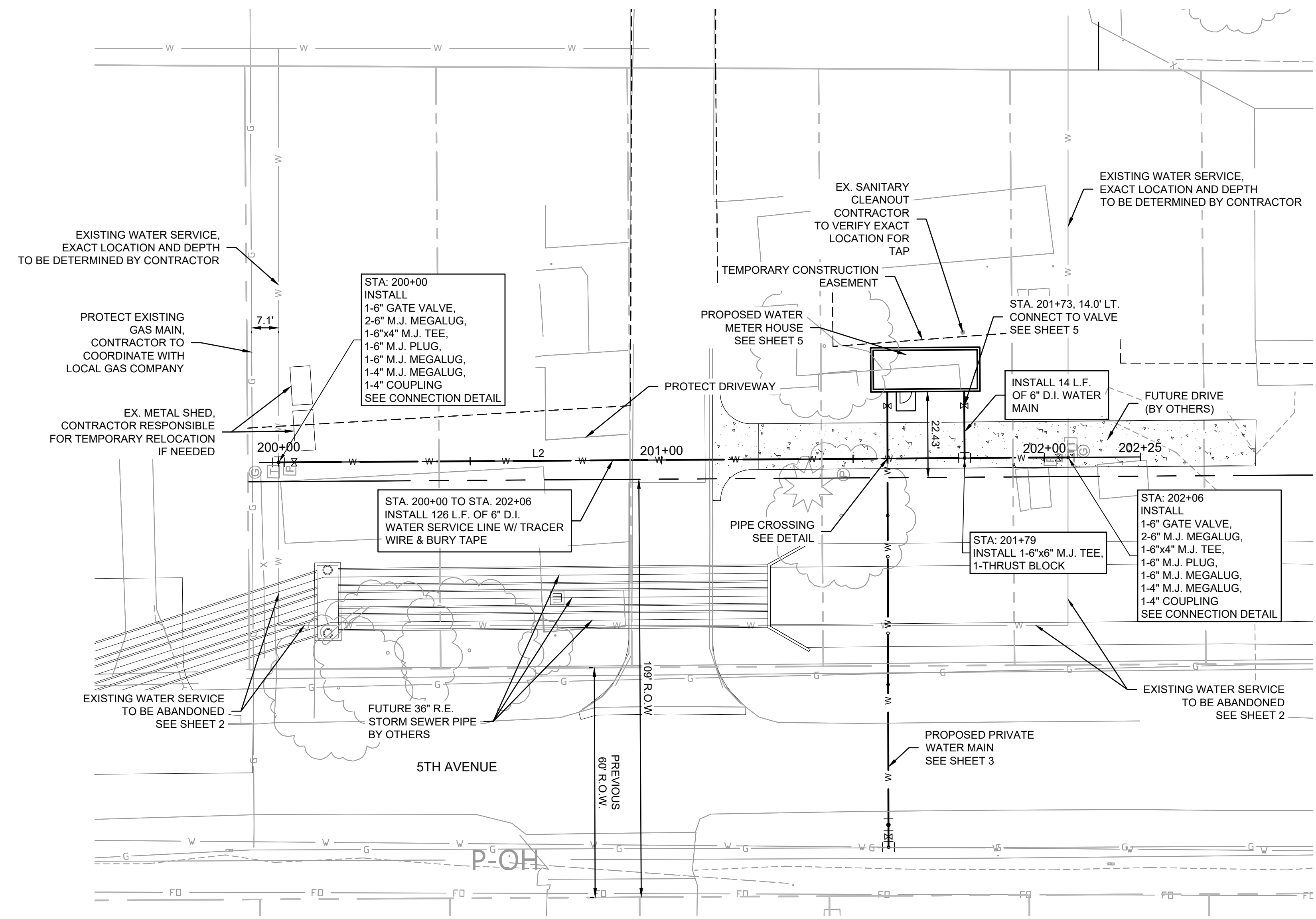
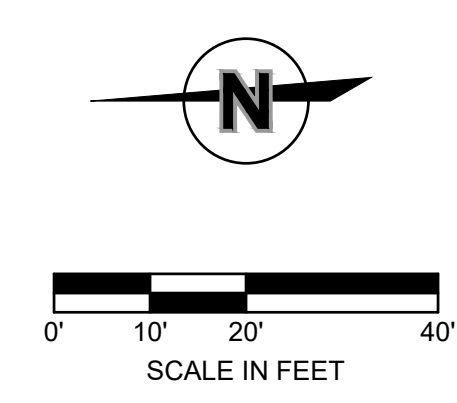
REVISIONS



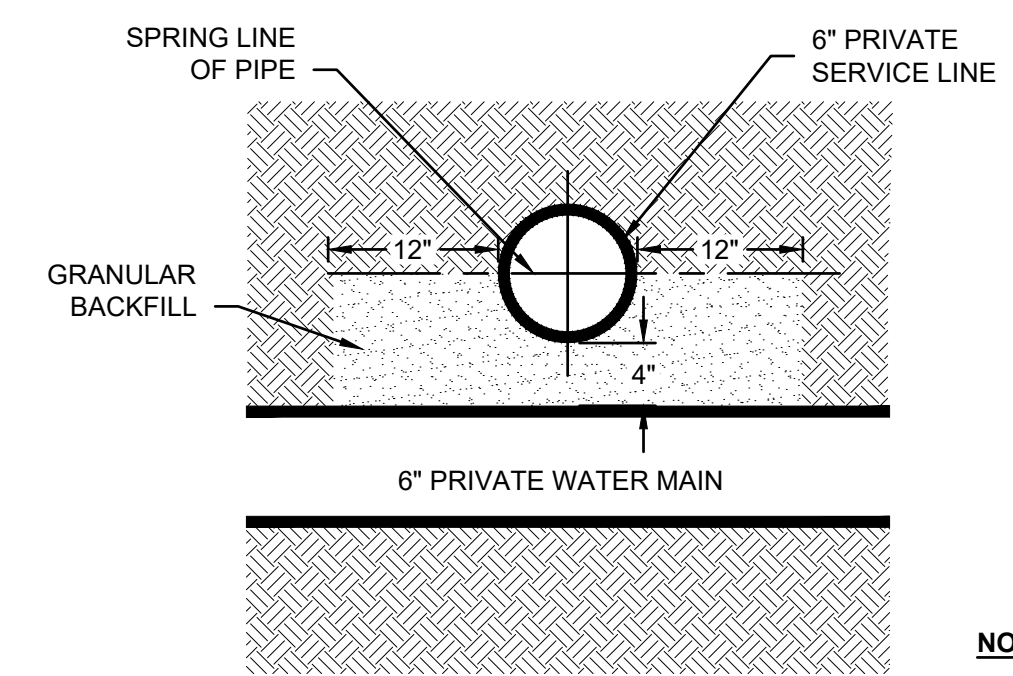
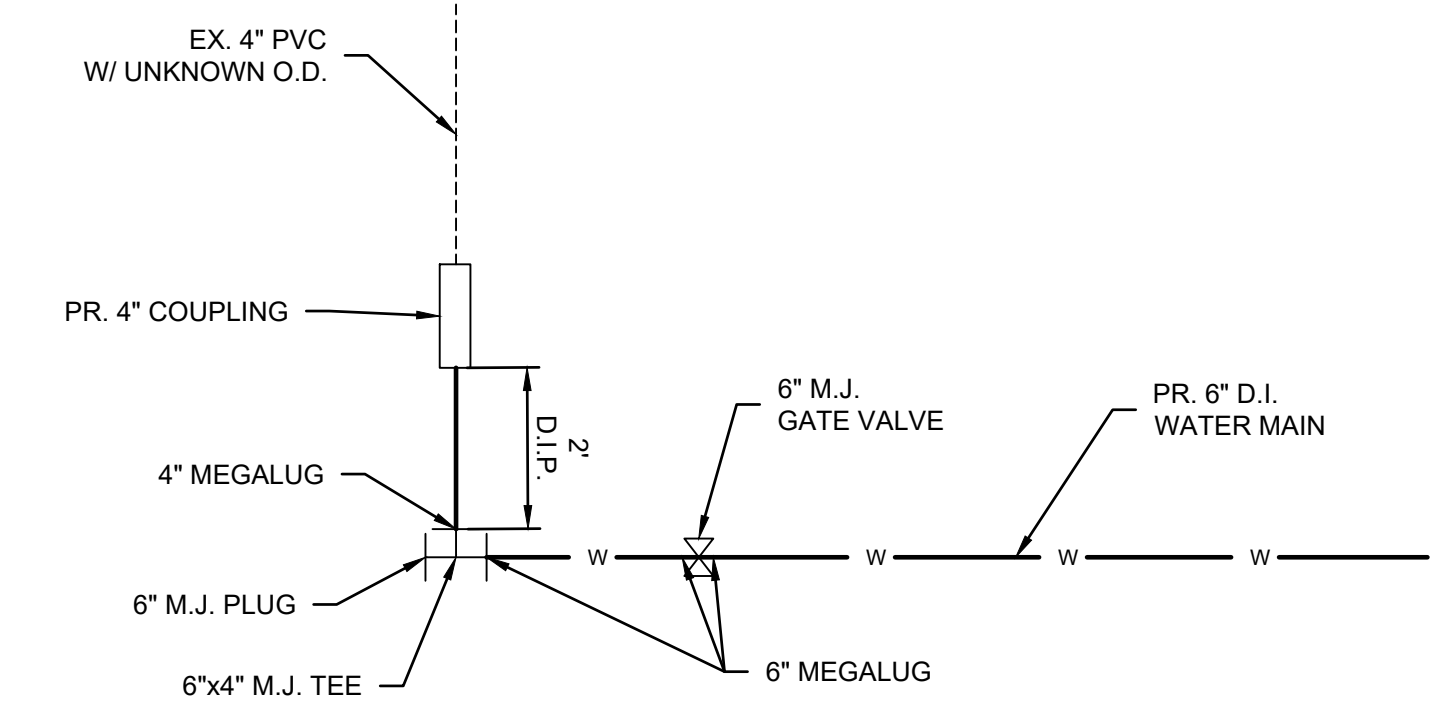
STA. 100+00 TO STA. 101+25
 WATER SERVICE PLAN
 WATER METER HOUSE
 EAST GATE PLAZA

HASTINGS, NE

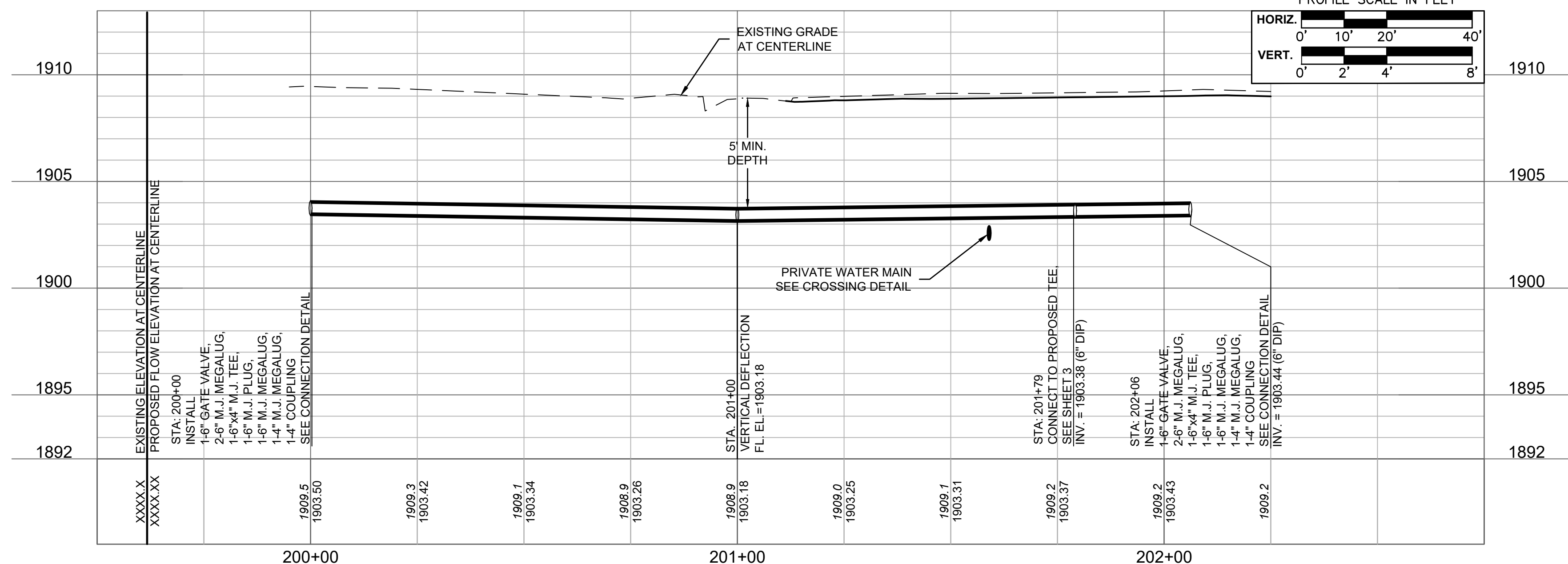
drawn by: _____ AST
 designed by: _____ AST
 project no.: 025-04734
 date: FEBRUARY, 2026



WATER ALIGNMENT					
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING
L1	99+95.00 101+50.00	276808.9564 276812.0124	2095088.1906 2095243.1611	155.00'	N88°52'13"E



- NOTES:**
1. GRANULAR BACKFILL SHALL BE CONSIDERED SUBSIDIARY TO PIPE INSTALLATION. NATIVE SAND MAY BE USED AS GRANULAR BACKFILL.
 2. CONTRACTOR SHALL CENTER FULL LENGTH OF PIPES TO PLACE JOINTS AWAY FROM CROSSING.

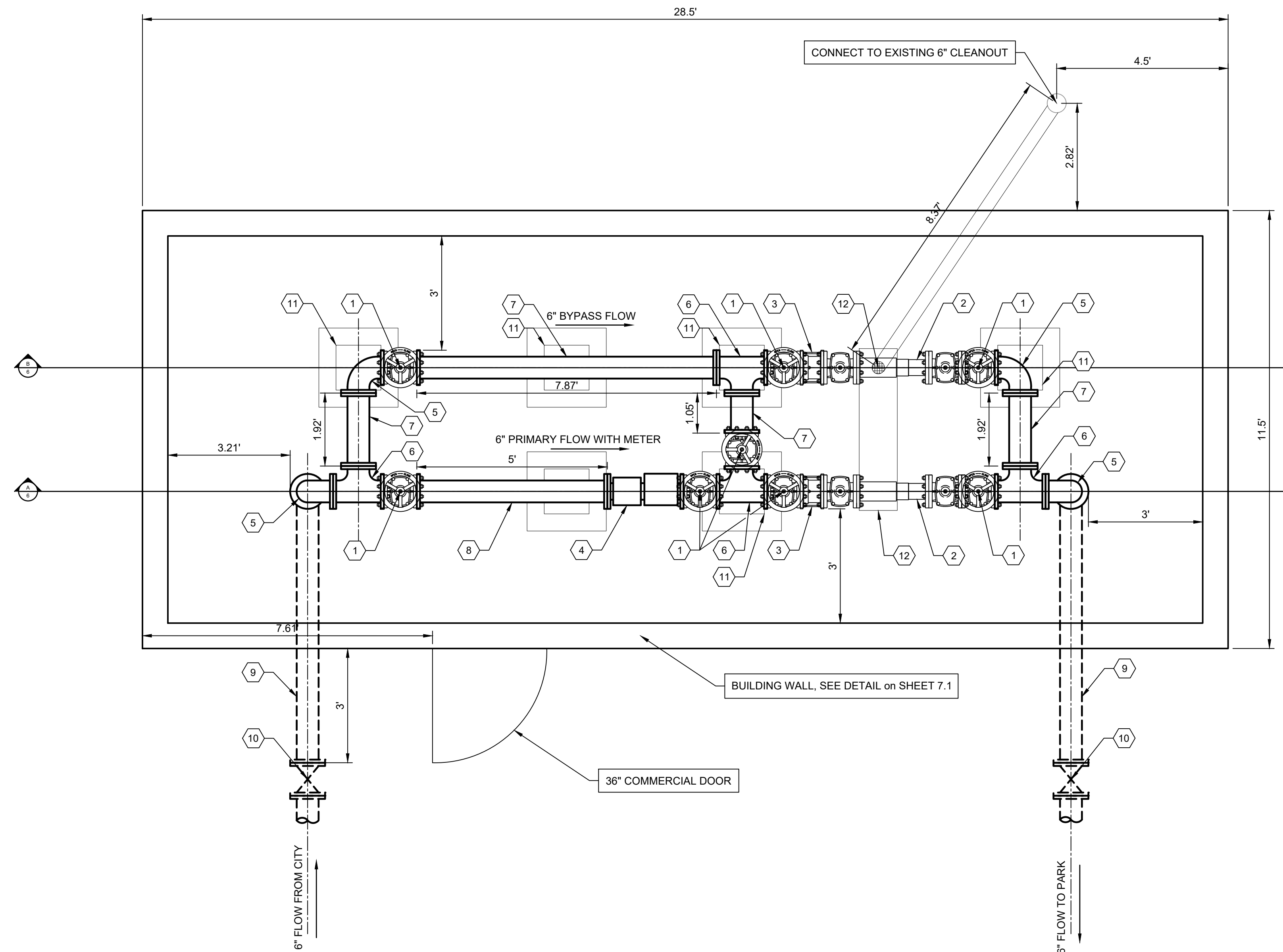


BY	DESCRIPTION	DATE	REV. NO.

STA. 200+00 TO STA. 202+15
 WATER SERVICE PLAN
 WATER METER HOUSE
 EAST GATE PLAZA
 HASTINGS, NE

drawn by: _____ AST
 designed by: _____ AST
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 date: FEBRUARY, 2026

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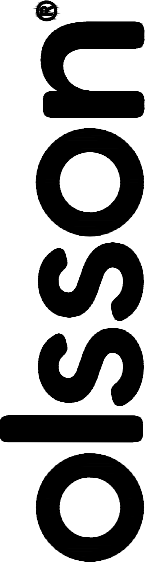


WATER METER HOUSE DETAIL PLAN VIEW

SCALE: 1" = 2'-0"

EQUIPMENT TABLE		
TAG #	DESCRIPTION	QTY
1	6" WATTS SERIES 405 NON-RISING STEM, RESILIENT WEDGE FLANGED GATE VALVE OR APPROVED EQUAL	8
2	6" WATTS SERIES 957-NRS REDUCED PRESSURE VALVE ASSEMBLY OR APPROVED EQUAL	2
3	6" ROMAC DJ400 DISMANTLING JOINT OR APPROVED EQUAL	2
4	6" RECORDALL BADGER COMPOUND METER	1
5	6" 90° D.I. BEND, FLANGED	4
6	6"x6" D.I. TEE, FLANGED	4
7	6" D.I. SPOOL, FLANGED	4
8	6" D.I. SPOOL, FLANGED X SPIGOT WITH FLANGE ADAPTER (EBAA 1000 E-Z FLANGE OR APPROVED EQUAL)	3
9	6" D.I. SPOOL, MJ	2
10	6" GATE VALVE, MJ X MJ WITH 2 MEGA LUGS	2
11	PIPE SUPPORT, SEE DETAIL 6 SHEET	6
12	12" TRENCH WITH 4" FLOOR DRAIN AT BOTTOM OF SUMP	1
13	6" 90° D.I. BEND, MJ X MJ WITH 2 MEGA LUGS	2
14	4" SDR 35 DRAIN PIPE	30
15	4" SDR 35 45° BEND	2
16	4" SDR 35 TRAP	2


SPOOL TABLE	
LENGTH	QUANTITY
1.05', FLANGED	1
1.92', FLANGED	2
5', FLANGED X SPIGOT	1
5.96', MJ X MJ	1
6.46', MJ X MJ	1
7.87', FLANGED	1
7.02', FLANGED X SPIGOT	1
8.66', FLANGED BY SPIGOT	1



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WATER METER HOUSE PLAN

WATER METER HOUSE
EAST GATE PLAZA

HASTINGS, NE

2026

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 date: FEBRUARY, 2026

SHEET
5 of 12



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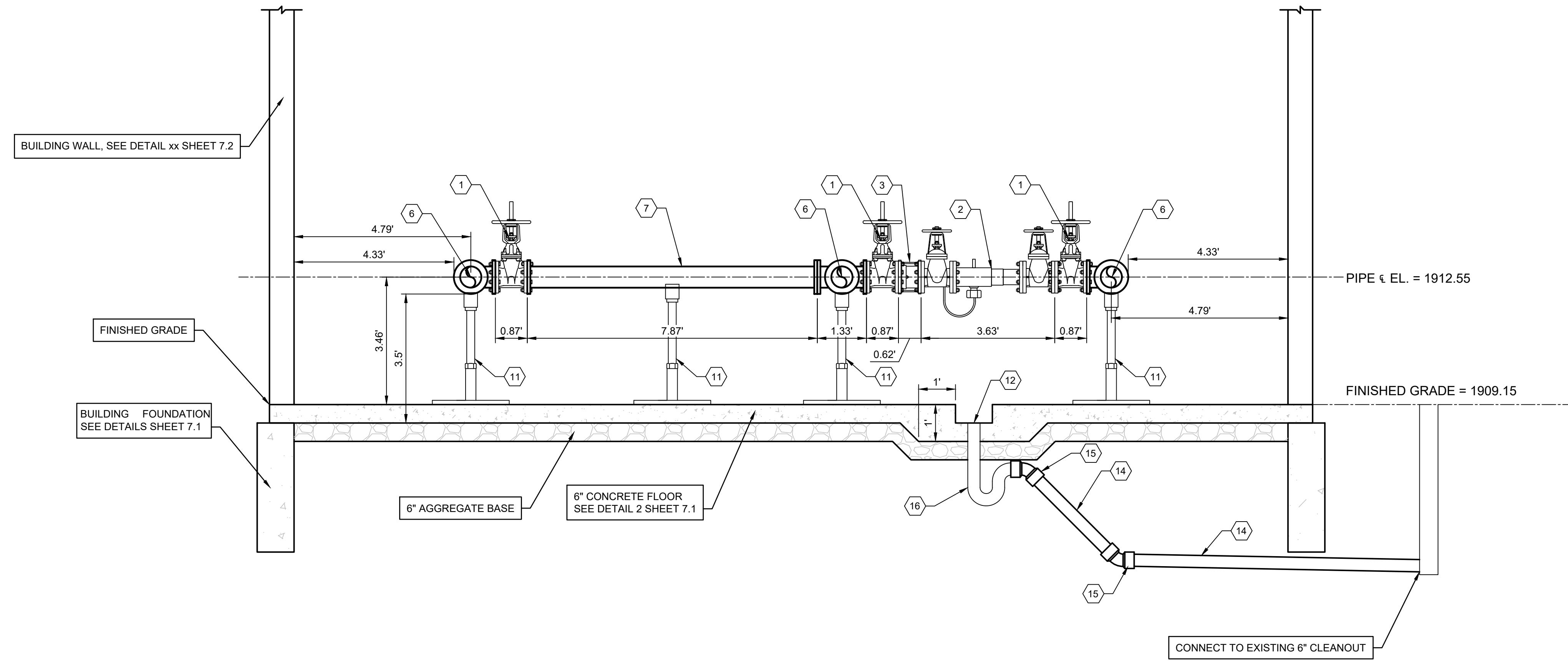
2026

WATER METER HOUSE SECTIONS
WATER METER HOUSE
EAST GATE PLAZA
HASTINGS, NE

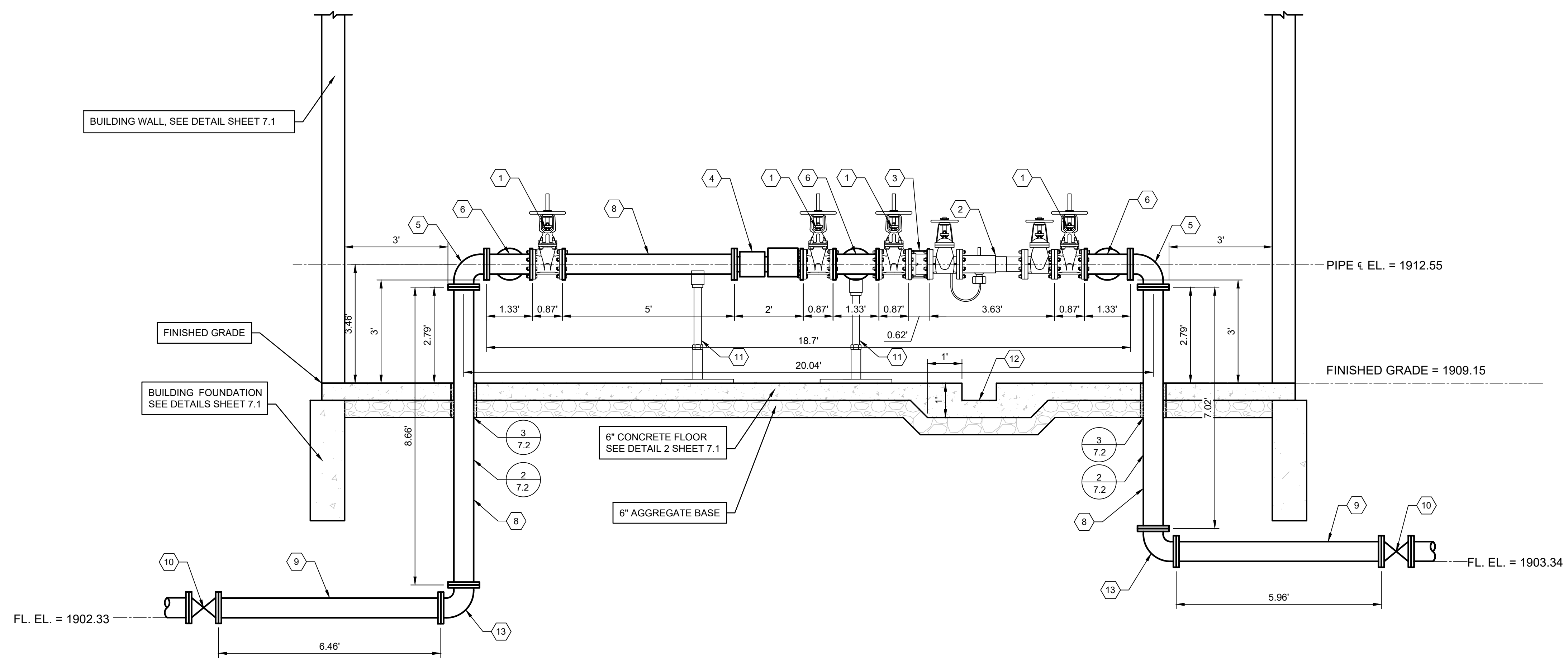
drawn by: _____ AST
designed by: _____ AST
project no.: 025-04734
date: FEBRUARY, 2026

TAG #	DESCRIPTION	QTY
1	6" WATTS SERIES 405 NON-RISING STEM, RESILIENT WEDGE FLANGED GATE VALVE OR APPROVED EQUAL	8
2	6" WATTS SERIES 957-NRS REDUCED PRESSURE VALVE ASSEMBLY OR APPROVED EQUAL	2
3	6" ROMAC DJ400 DISMANTLING JOINT OR APPROVED EQUAL	2
4	6" RECORDALL BADGER COMPOUND METER (SUPPLIED BY COH)	1
5	6" 90° D.I. BEND, FLANGED	4
6	6"X6" D.I. TEE, FLANGED	4
7	6" D.I. SPOOL, FLANGED	4
8	6" D.I. SPOOL, FLANGED X SPIGOT WITH FLANGE ADAPTER (EBAA 1000 E-Z FLANGE OR APPROVED EQUAL)	3
9	6" D.I. SPOOL, MJ	2
10	6" GATE VALVE, MJ X MJ WITH 2 MEGA LUGS	2
11	PIPE SUPPORT, SEE DETAIL 6 SHEET 7.1	6
12	12" TRENCH WITH 4" FLOOR DRAIN AT BOTTOM OF SUMP	1
13	6" 90° D.I. BEND, MJ X MJ WITH 2 MEGA LUGS	2
14	4" SDR 35 DRAIN PIPE	30
15	4" SDR 35 45° BEND	2
16	4" SDR 35 TRAP	2

LENGTH	QUANTITY
1.05', FLANGED	1
1.92', FLANGED	2
5', FLANGED X SPIGOT	1
5.96', MJ X MJ	1
6.46', MJ X MJ	1
7.87', FLANGED	1
7.02', FLANGED X SPIGOT	1
8.66', FLANGED BY SPIGOT	1

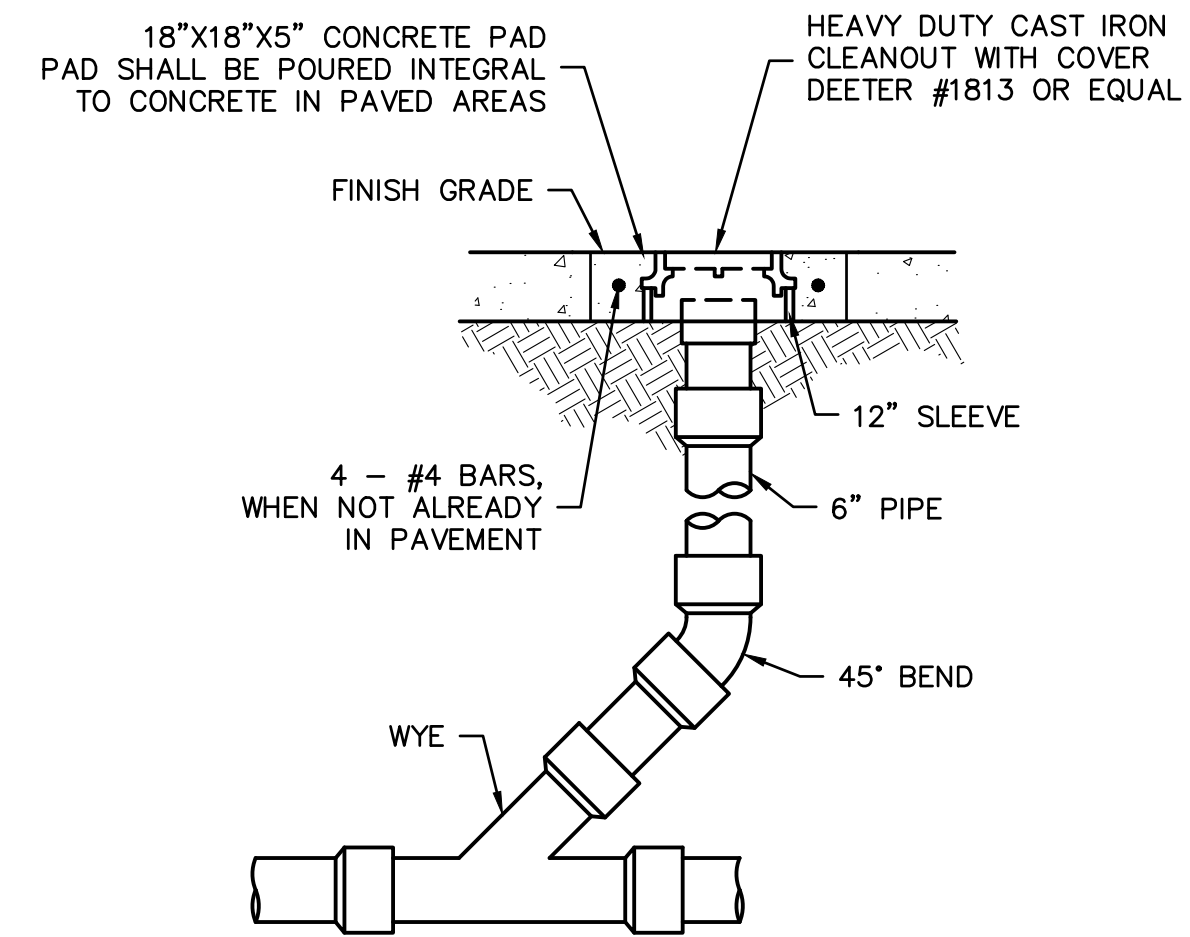


WATER METER HOUSE SECTION B
SCALE: 1" = 2'-0"

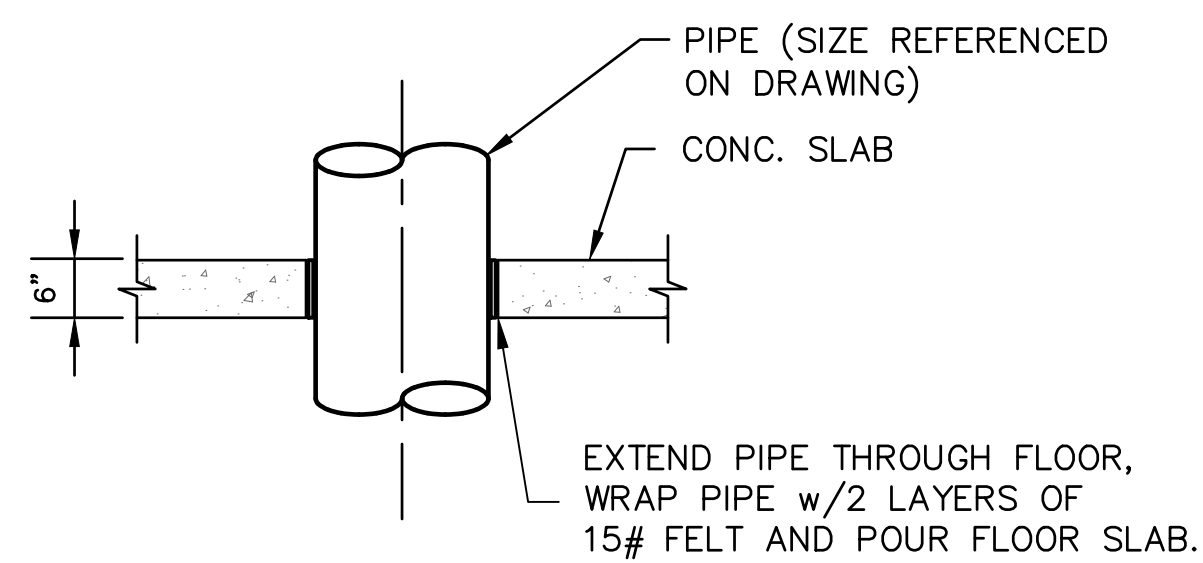


WATER METER HOUSE SECTION A
SCALE: 1" = 2'-0"

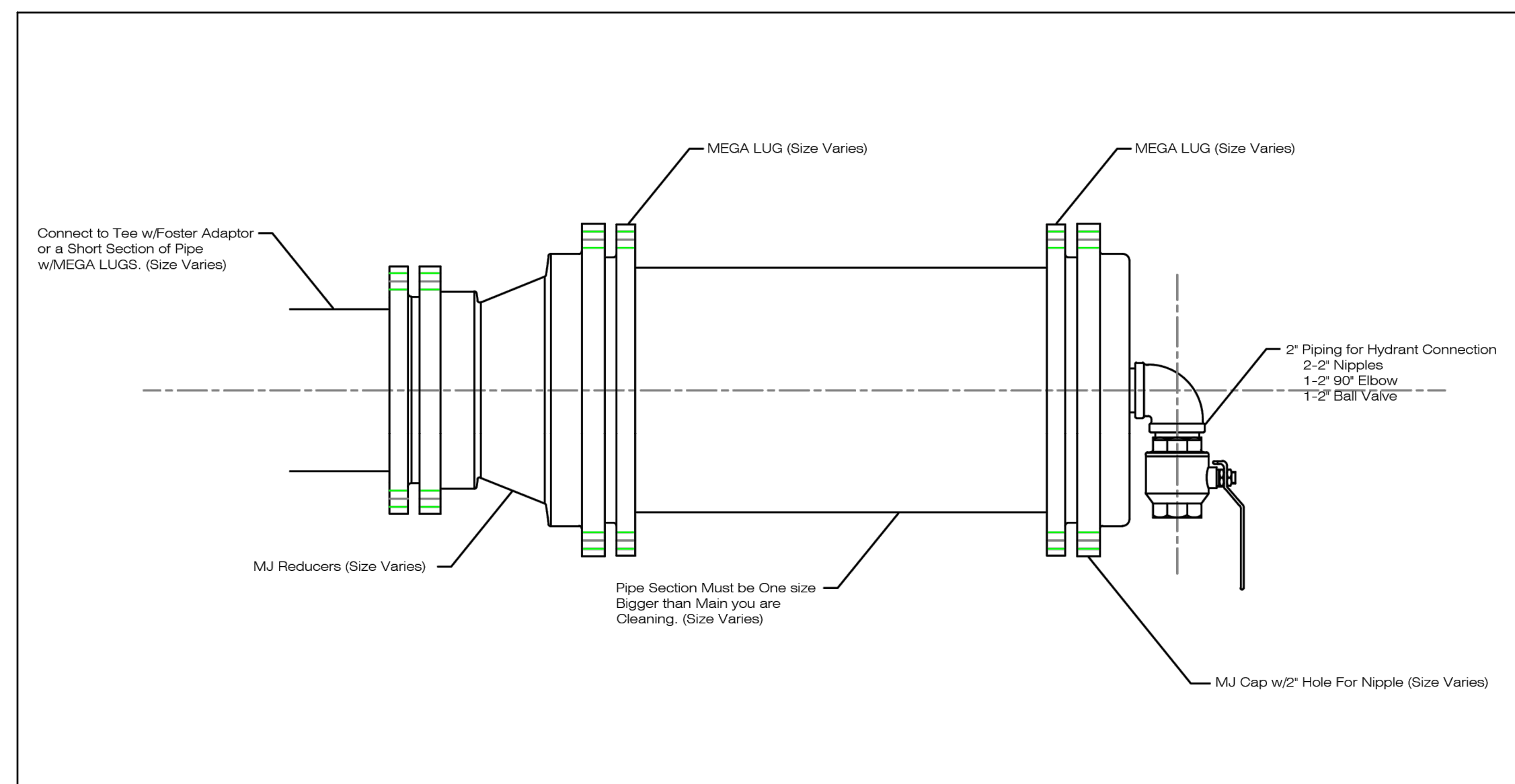
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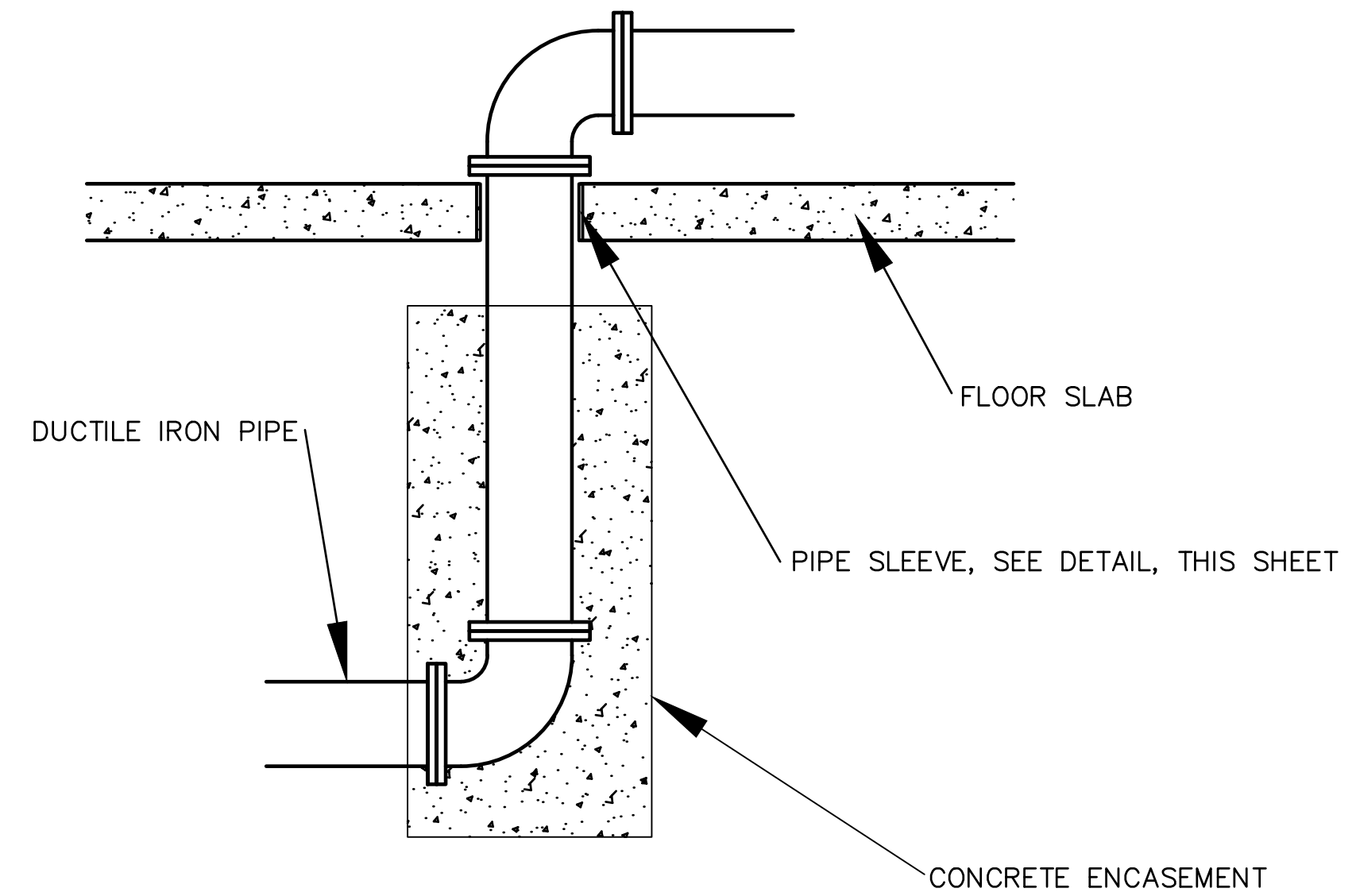
1 SANITARY CLEANOUT DETAIL
SCALE: NOT TO SCALE



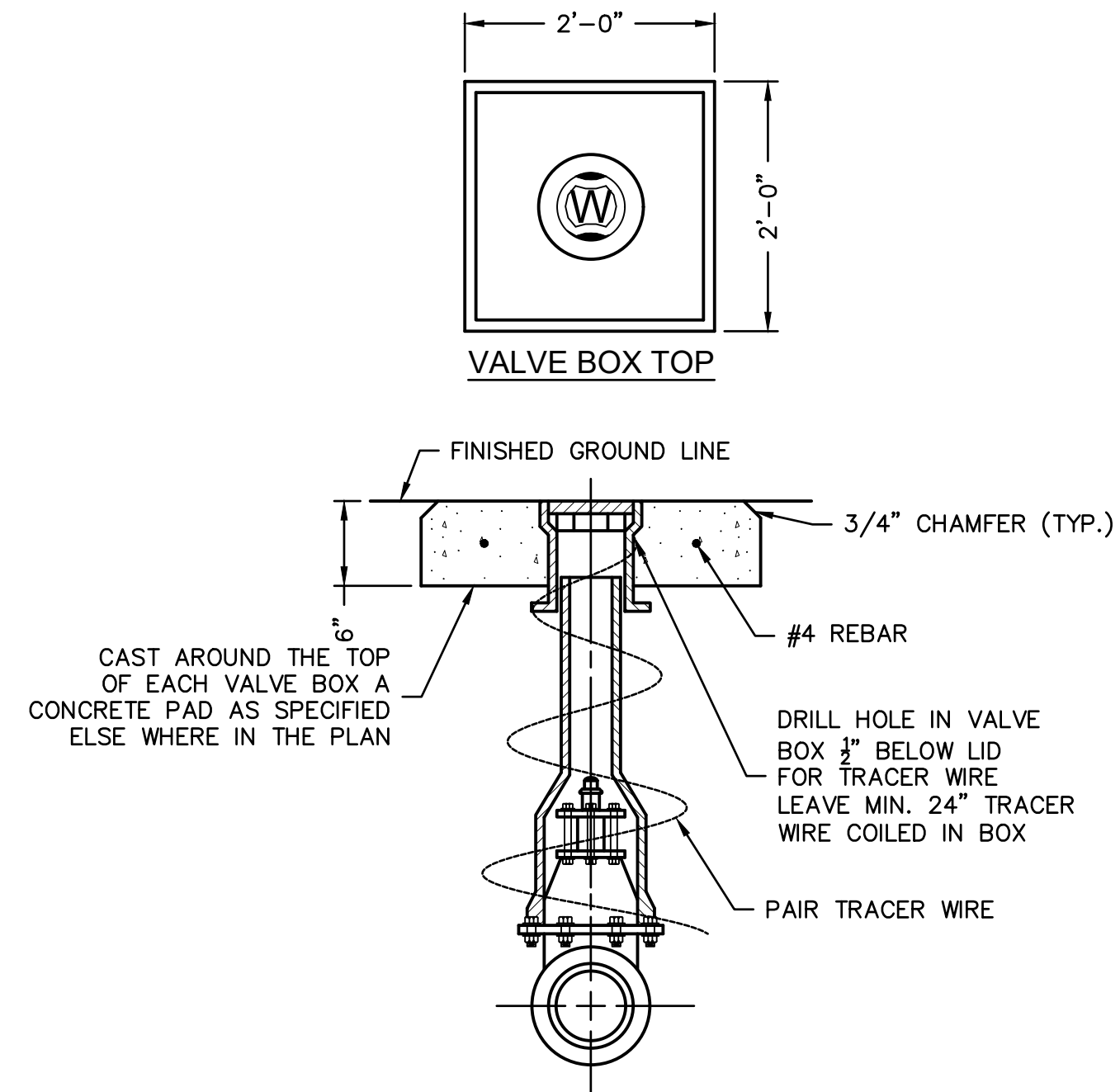
3 PIPE SLEEVE DETAIL
SCALE: NOT TO SCALE



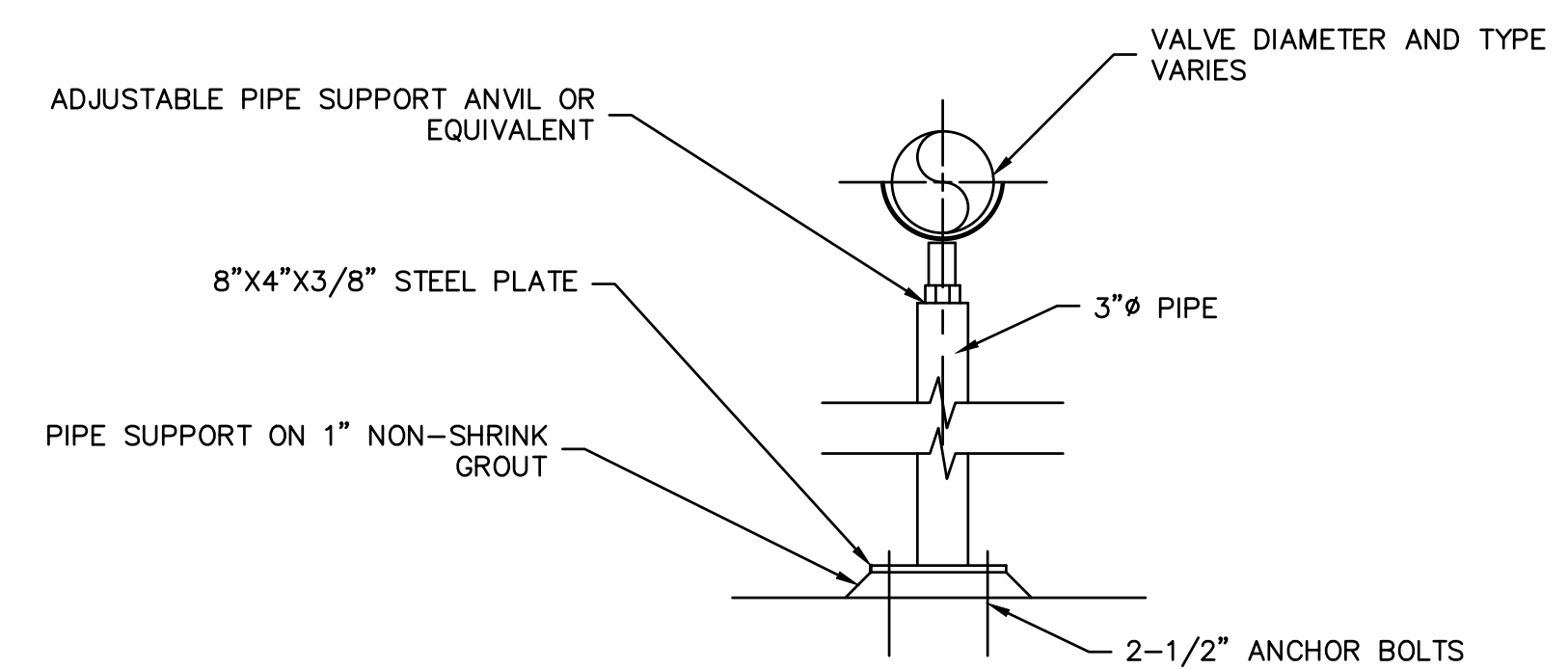
5 PIG LAUNCHER DETAIL
SCALE: NOT TO SCALE



2 FLOOR PENETRATION DETAIL
SCALE: NOT TO SCALE



4 VALVE BOX DETAIL
SCALE: NOT TO SCALE



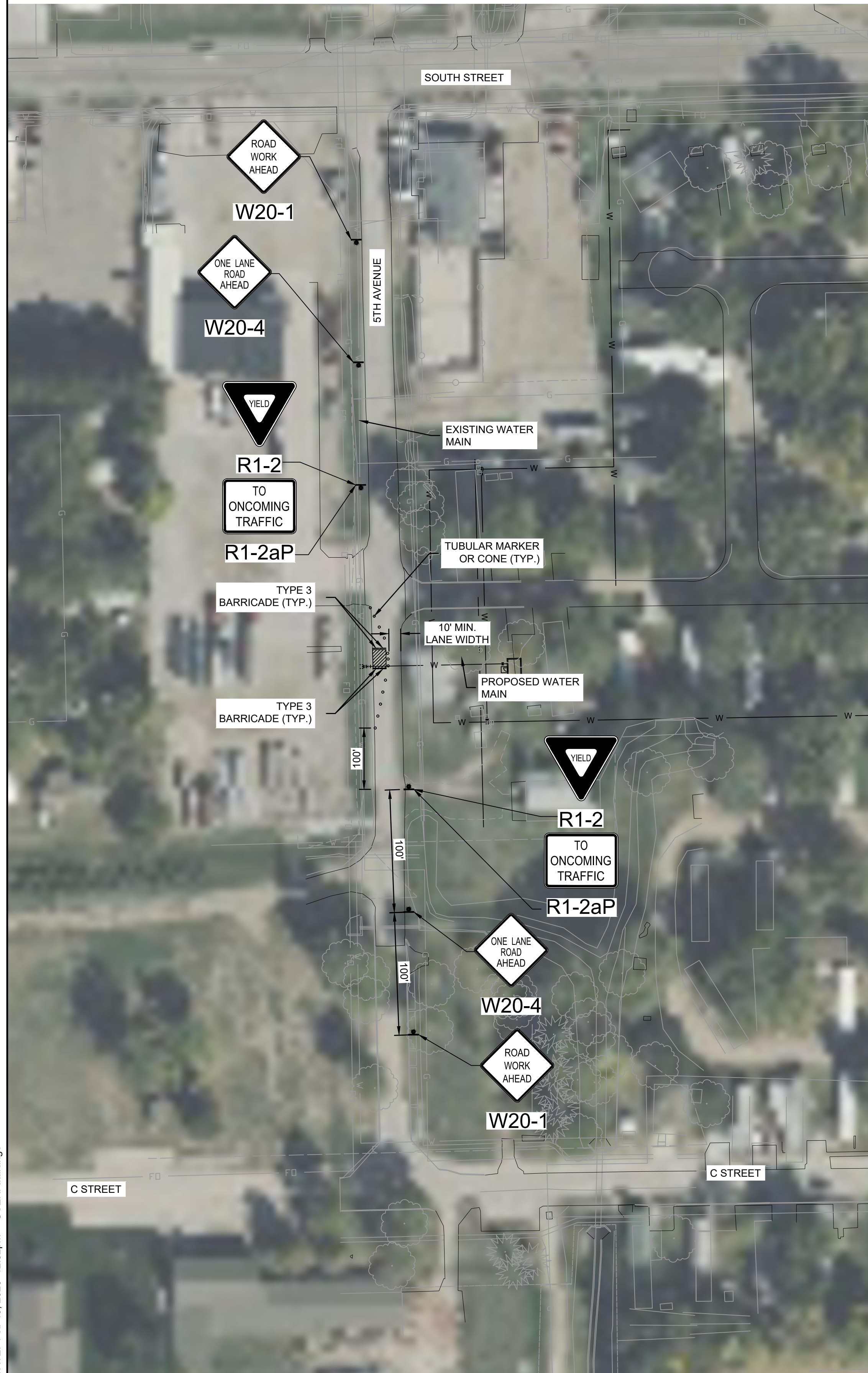
6 TYPICAL PIPE SUPPORT DETAIL
SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

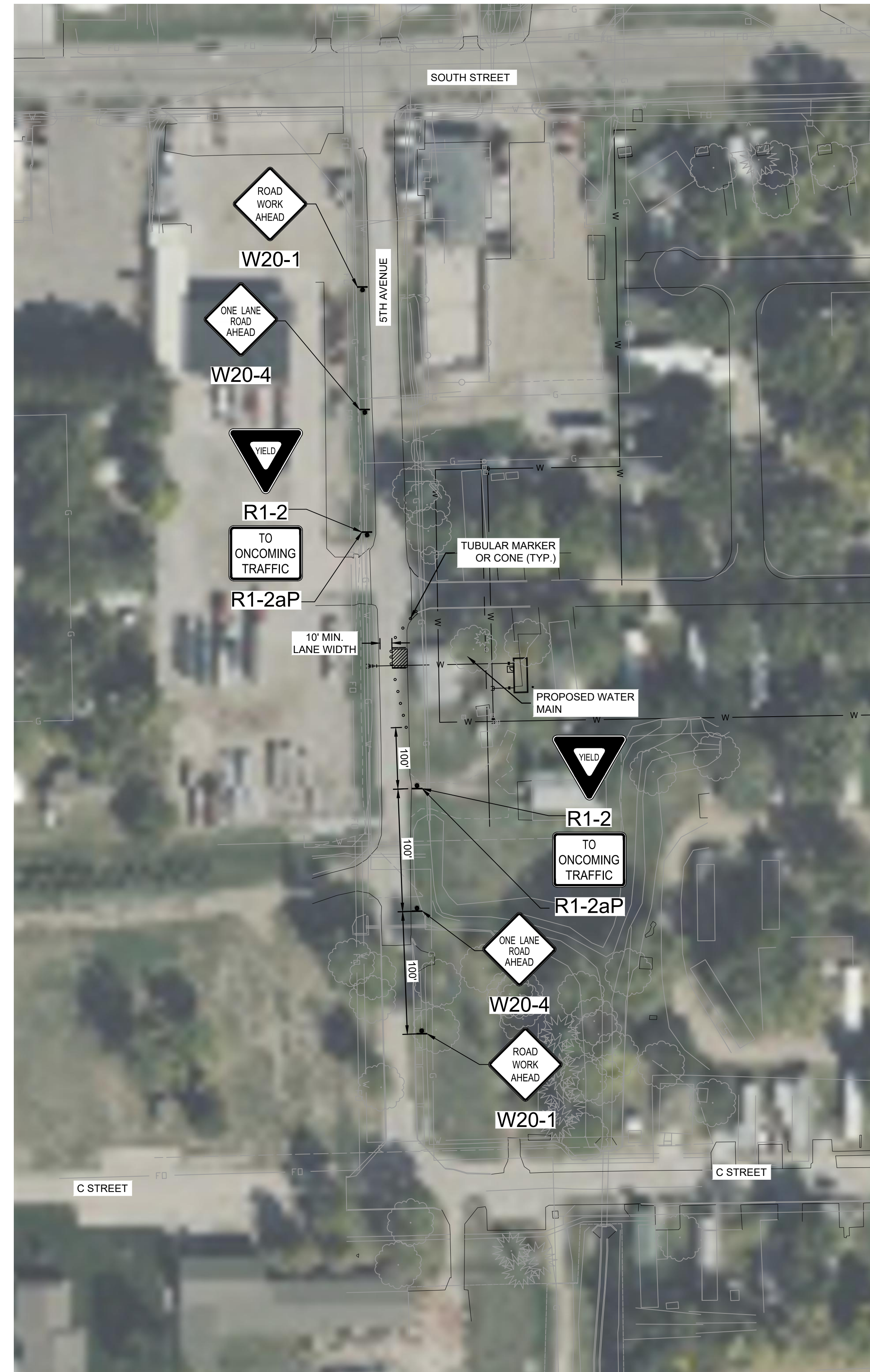
WATER METER HOUSE DETAILS	2026
WATER METER HOUSE EAST GATE PLAZA	
HASTINGS, NE	

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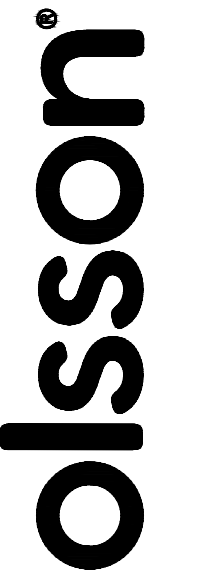
PHASE 1



PHASE 2



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REV. NO.	DATE	DESCRIPTION	BY

TEMPORARY TRAFFIC CONTROL	2026
WATER METER HOUSE EAST GATE PLAZA	
HASTINGS, NE	

drawn by: AST
 designed by: AST
 project no.: 025-04734
 date: FEBRUARY, 2026



REV. NO.	DATE	DESCRIPTION	BY

REVISIONS

ELECTRICAL PLANS

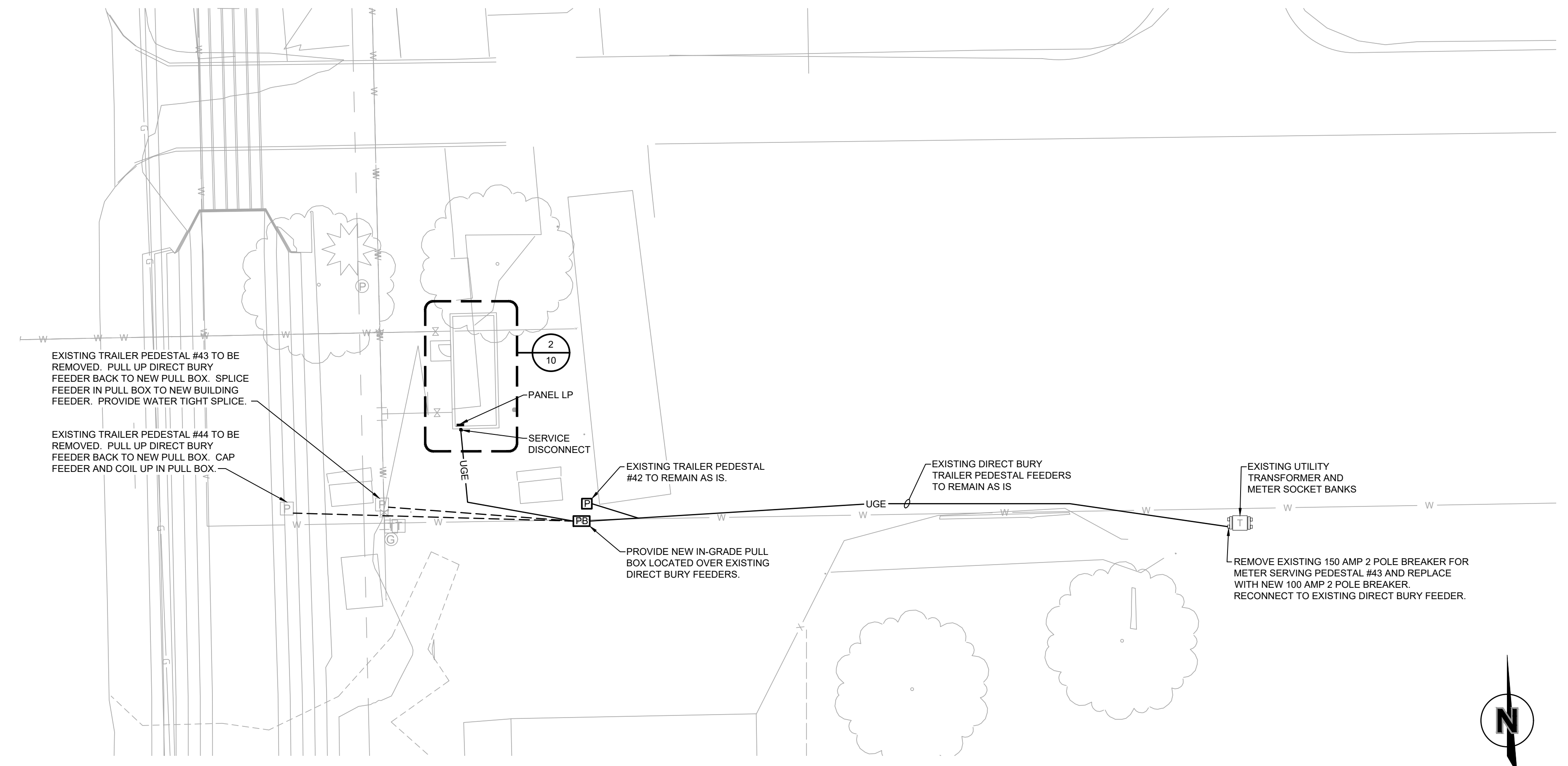
WATER METER HOUSE
EAST GATE PLAZA

2026

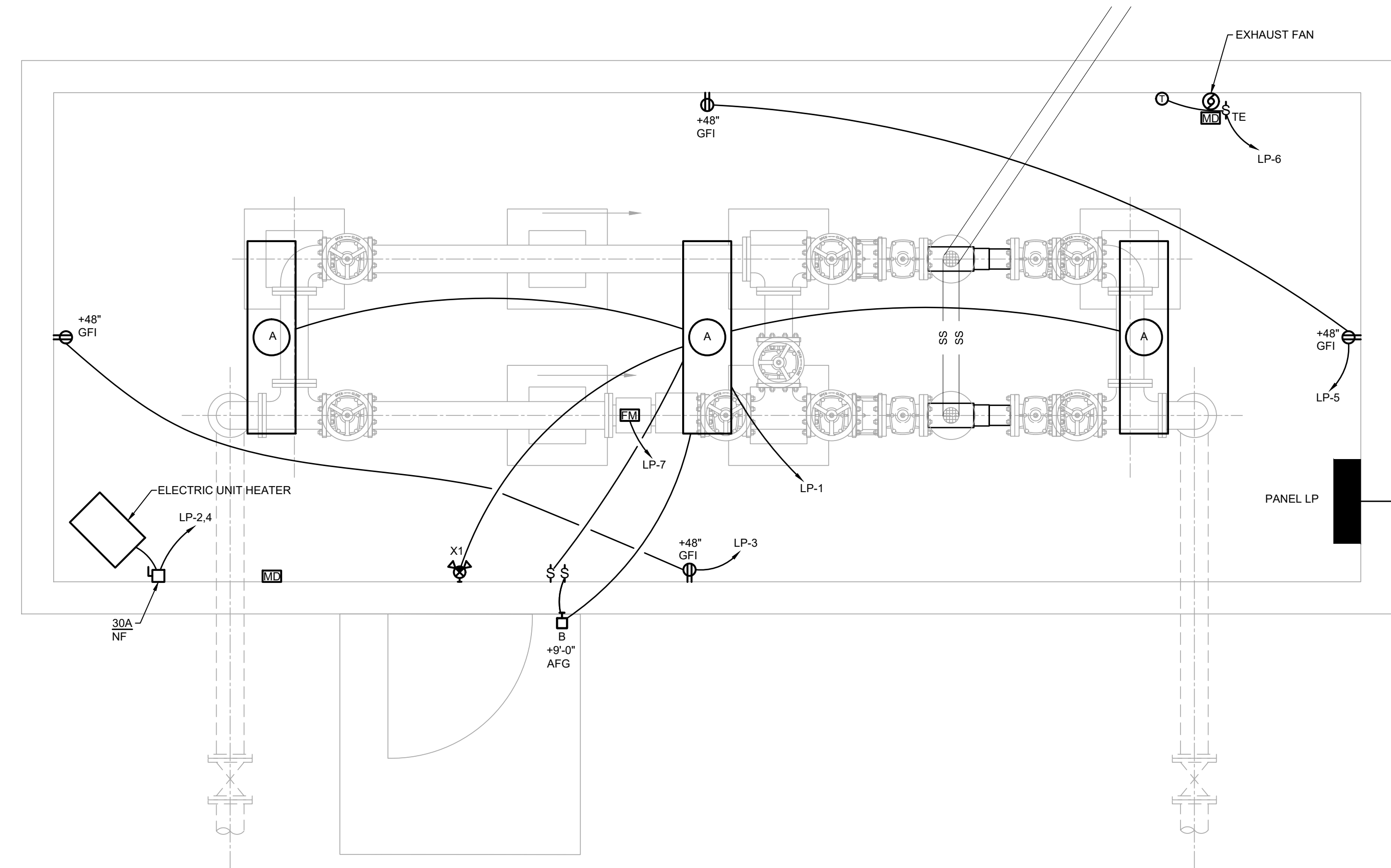
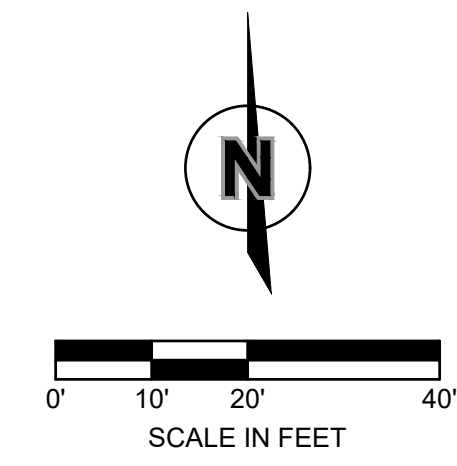
HASTINGS, NE

drawn by: EMK
designed by: FLE
project no.: 025-04734
date: JANUARY, 2026

SHEET
10 of 12



1 ELECTRICAL SITE PLAN

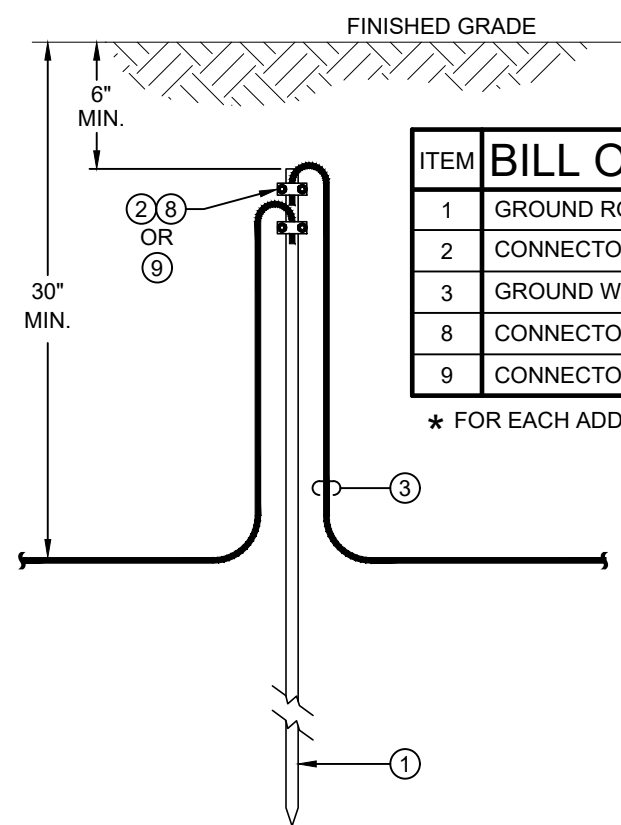


ID	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMPS	LOAD	VOLTAGE	MOUNTING	COMMENTS
A	4" ENCLOSED CORROSION RESISTANT, LED, FIBERGLASS HOUSING, HIGH IMPACT FROSTED ACRYLIC DIFFUSER, STAINLESS STEEL LATCHES	WILLIAMS	96-4-L62-840-HIAFR-DRV-120	62.00 LUMENS, 4000K LED	48	120	SURFACE	
B	WALL PACK, DIE-CAST ALUMINUM, BRONZE FINISH WITH PHOTOCELL	LUMARK	XTOR2B-W-PC1	2100 LUMENS, 4000K LED	18	120	WALL	
X1	LED EXIT & EMERGENCY LIGHT, WHITE WITH RED LETTERS, ADJUSTABLE HEADS, SELF-DIAGNOSTICS	WILLIAMS	EXIT/EM/LED-SF-R-WHT-SDT	LED	4	120	WALL MOUNT +7'-9" A.F.F.	



2 ELECTRICAL BUILDING PLAN
SCALE: 1/2" = 1'-0"

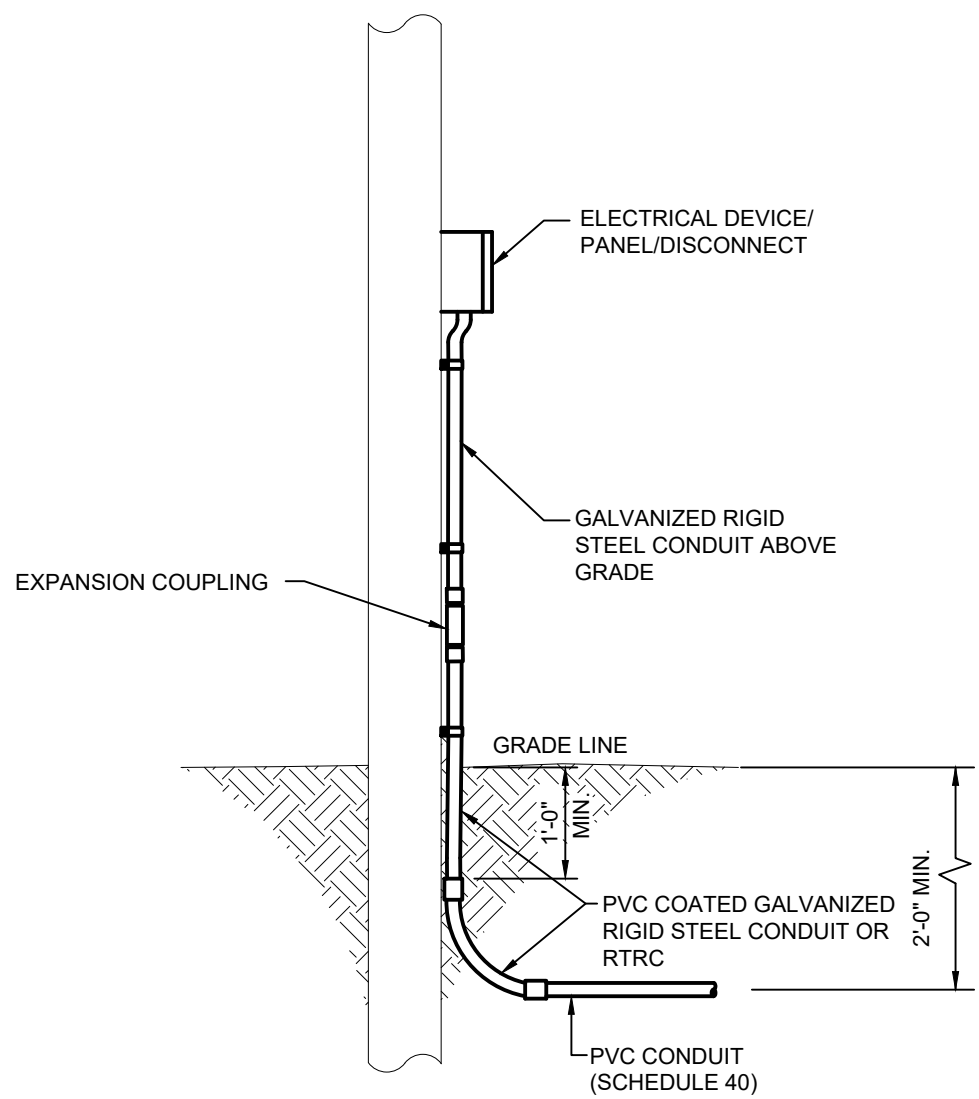
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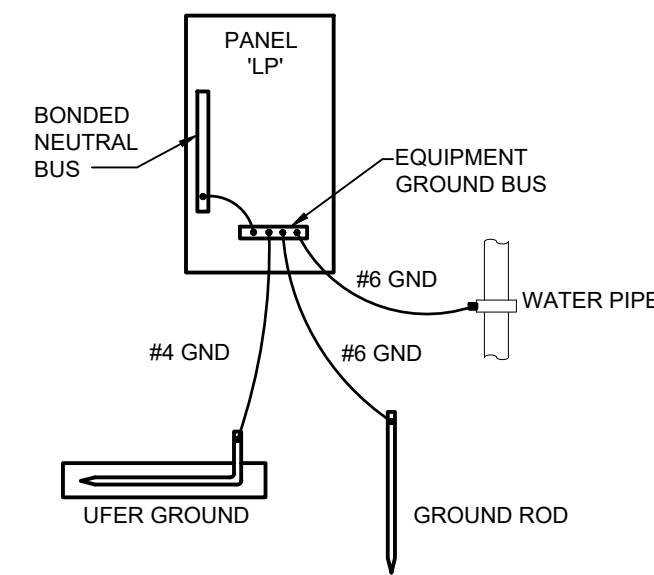
ITEM	BILL OF MATERIAL
1	GROUND ROD, 3/4" DIA. x 10' LONG, COPPER CLAD STEEL
2	CONNECTOR, #4 SOLID THRU #2/0 STR. CABLE TO GND. ROD, BURNDY #GAR-6426
3	GROUND WIRE, STRANDED DIRECT-BURRIED COPPER
8	CONNECTOR, #2/0 SOLID THRU 250KCMIL STR. CABLE TO GND. ROD, BURNDY #GAR-6429
9	CONNECTOR, #8 SOLID THRU #4 STR. CABLE TO GND. ROD, BURNDY #GAR-644C

* FOR EACH ADDITIONAL CABLE CONNECTION ADD 1 CONNECTOR.

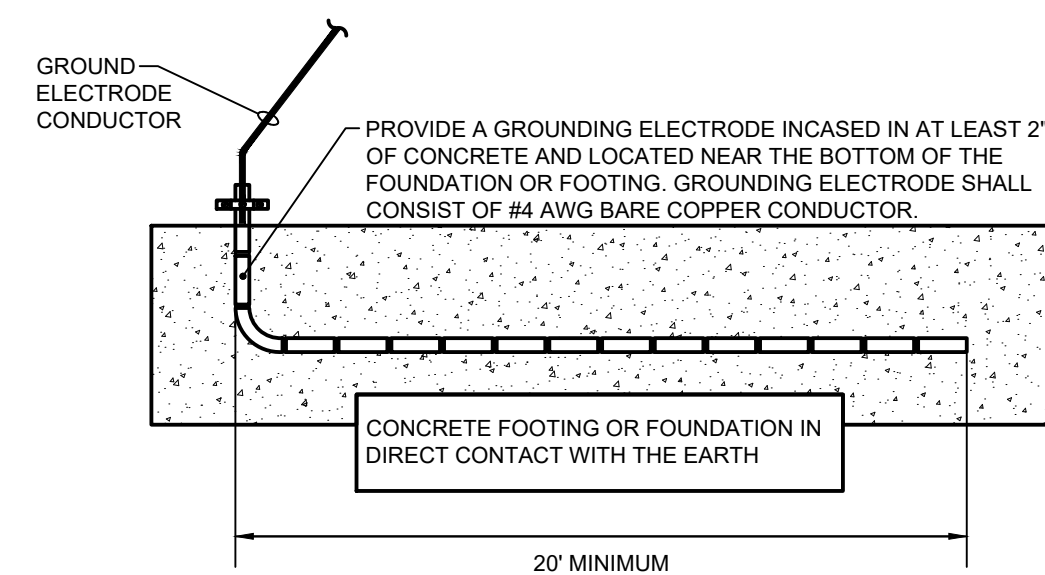
1 GROUND ROD INSTALLATION
NOT TO SCALE



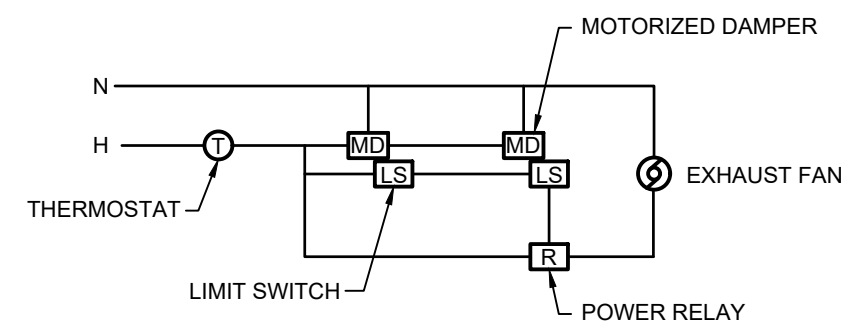
2 EXPOSED CONDUIT DETAIL
NOT TO SCALE



3 SERVICE ENTRANCE GROUNDING DETAIL
NOT TO SCALE



4 UFER GROUND DETAIL
NOT TO SCALE

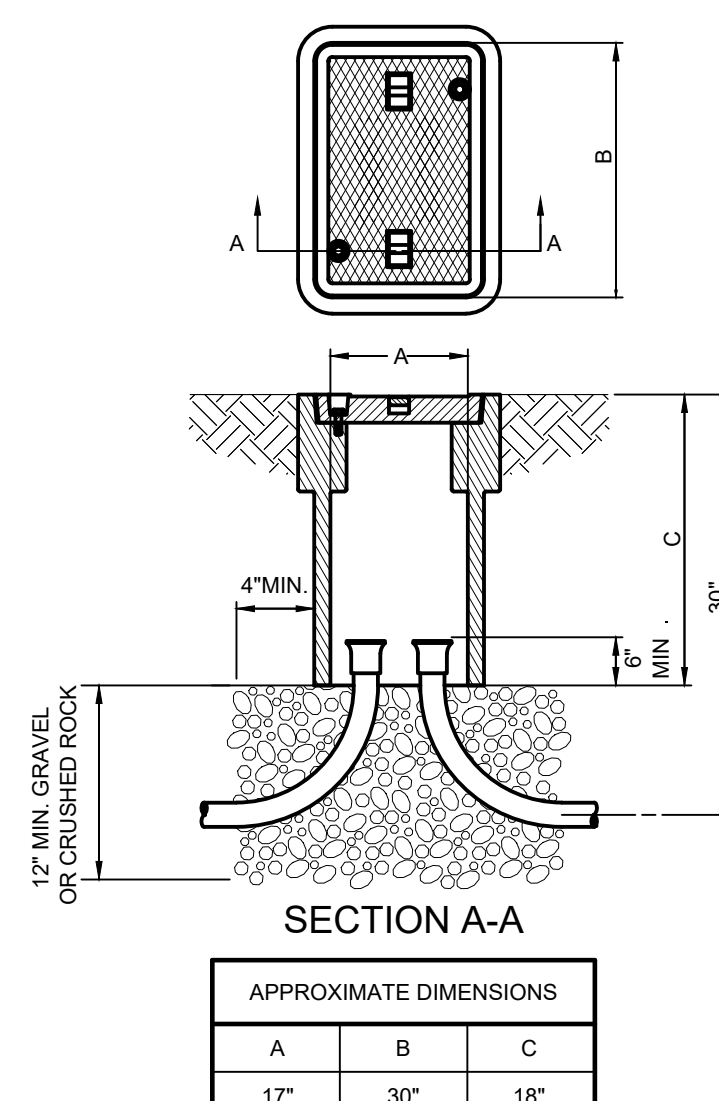


5 EXHAUST FAN WIRING DIAGRAM
NOT TO SCALE

PANEL NO.	LP	TYPE	LIGHTING & APPLIANCE	MOUNTING	Surface
SERVICE VOLTAGE	120/240-1Ø	PHASE BUS RATING	100A		
MAIN BREAKER SIZE	MLO	NEUTRAL BUS RATING	100A	SHORT CIRCUIT RATING	1ØK1C

DESCRIPTION	C/WDLT AMPS		CKT. NO.	C/WDLT AMPS		C/B	DESCRIPTION
	A	B		A	B		
LIGHTS	20/1	165	1	2	2500	---	5KW UNIT HEATER
NORTH-WEST RECEPTACLES	20/1	---	3	4	---	---	---
SOUTH-EAST RECEPTACLES	20/1	360	5	6	500	2Ø11	EXHAUST FAN
FLOW METER	2Ø1	---	7	8	---	2Ø11	SPARE
SPARE	2Ø1	0	9	10	0	0	2Ø1 SPARE
SPARE	2Ø1	0	11	12	0	0	2Ø1 SPARE
SURGE PROTECTION DEVICE	3Ø/2	0	13	14	0	---	SPACE
---	---	0	15	16	0	---	SPACE
SPACE	---	0	17	18	0	---	SPACE
SPACE	---	0	19	20	0	---	SPACE
SPACE	---	0	21	22	0	---	SPACE
SPACE	---	0	23	24	0	---	SPACE

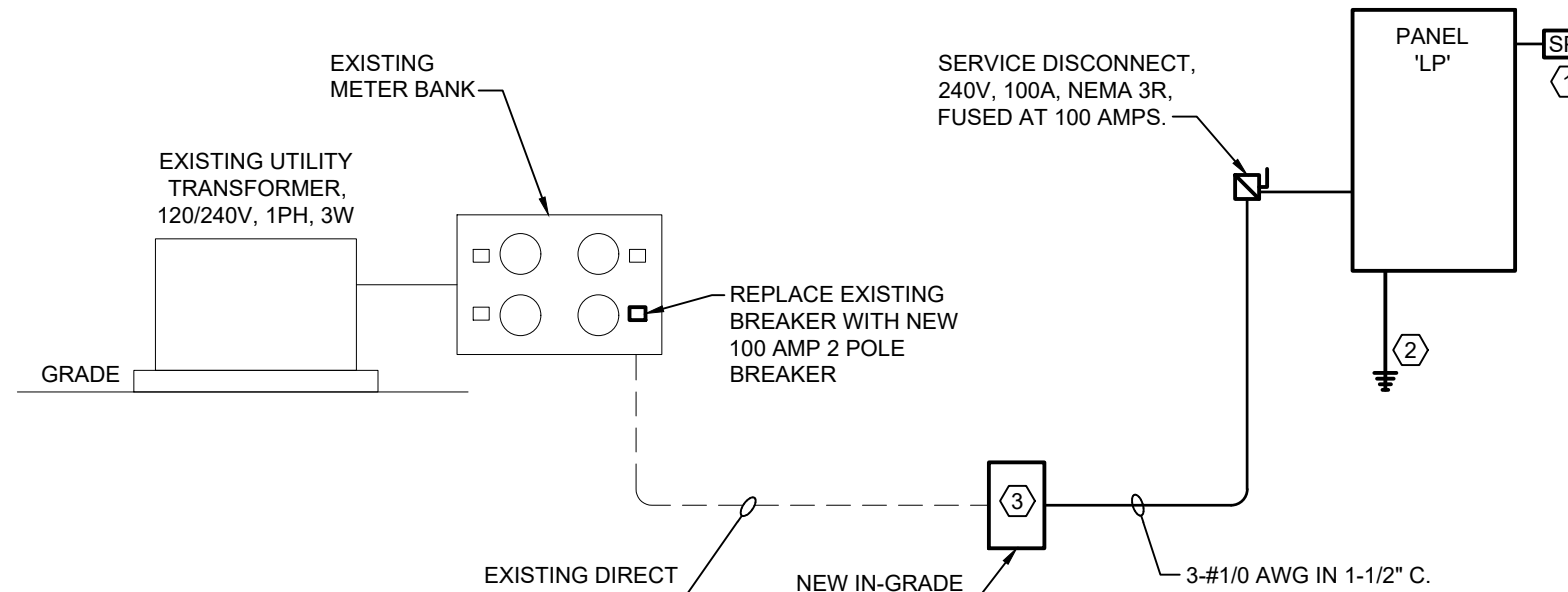
TOTAL PHASE A:	29.7 AMPS	3.6 KVA	TOTAL CONNECTED LOADS:	6.6 KVA
TOTAL PHASE B:	25.5 AMPS	3.1 KVA	ESTIMATED DEMAND LOADS:	6.7 KVA



6 IN-GRADE PULL BOX DETAIL
NOT TO SCALE

- NOTES**
- ACCESS DUCTS, BENDS AND/OR SWEEPS, ARE SUBSIDIARY TO THE ITEM "PULL BOX, TYPE PB".
 - FILL MATERIAL SHALL BE GRAVEL OR CRUSHED ROCK COMPOSED OF CLEAN, HARD, DURABLE AND UNCOATED.
 - PROLONGED EXPOSURE OF THE PULL BOX AND COVER TO SUNLIGHT, COMMON ICE MELTING CHEMICALS OR FERTILIZERS SHALL NOT CAUSE SIGNIFICANT DAMAGE TO THE PULL BOX OR COVER, OR IMPAIR ITS FUNCTION.
 - CONDUIT TERMINATIONS IN PULL BOX SHALL BE FITTED WITH BELL OR FLARED END.
 - CONCRETE SHALL BE CLASS 47B-3000.
 - PULL BOXES ARE IN GROUND, GRADE LEVEL ENCLOSURES INTENDED TO BE INSTALLED WHERE NON-DELIBERATE VEHICULAR TRAFFIC IS ANTICIPATED.
 - PULL BOX ILLUSTRATIONS ARE TYPICAL AND ARE NOT INTENDED TO LIMIT DESIGN. BOXES OF SQUARE OR CIRCULAR PLAN-SECTION AND OF EQUAL OR GREATER VOLUME ARE ACCEPTABLE. A MINIMUM DEPTH OF 18 INCHES, MUST BE MAINTAINED.
 - THE PULL BOX ENCLOSURES (BOX AND COVER) SHALL BE NON-METALLIC AND GREEN OR GRAY IN COLOR.
 - PULL BOX COVERS SHALL BE OF HEAVY-DUTY CONSTRUCTION TO WITHSTAND THE STRUCTURAL REQUIREMENTS OF THE SPECIFICATIONS. COVERS SHALL FIT SUFFICIENTLY TIGHT TO PREVENT THE ENTRANCE OF RUN-OFF WATER. COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE, THE MANUFACTURER'S NAME AND THE LOGO "ELECTRIC". COVERS SHALL BE HELD SECURELY IN PLACE BY TWO OR MORE 3/8" (MIN. DIA.) STAINLESS STEEL HEX HEAD BOLTS WITH FLAT WASHER. BOLTS SHALL BE HELD CAPTIVE TO THE COVER. ALL COVERS SHALL BE EQUIPPED WITH A RECESSED "LIFT PIN" AND HAVE A MINIMUM 0.50 COEFFICIENT OF FRICTION SKID RESISTANT SURFACE.
 - EACH PULL BOX ASSEMBLY (BOX WITH HEAVY-DUTY COVER SECURELY ATTACHED) SHALL CONFORM TO ALL TEST PROVISIONS AND REQUIREMENTS FOR TIER 15 APPLICATIONS AS OUTLINED IN THE LATEST ISSUE OF THE ANSIS/CTE 77 2002 STANDARD TITLED "SPECIFICATION FOR UNDER GROUND ENCLOSURE INTEGRITY". INDEPENDENT THIRD-PARTY TEST REPORTS TOGETHER WITH CERTIFICATION THAT ALL TEST PROVISIONS OF THE ANSIS/CTE 77 2002 STANDARD HAVE BEEN MET WILL BE REQUIRED FOR EACH TYPE OF PULL BOX BEING FURNISHED. ALL TESTS SHALL BE DATED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR THE LETTERHEAD OF THE TESTING AGENCY.

- ONE-LINE NOTES: (SYMBOLS ①, ②, ETC.)**
- PROVIDE TYPE 2 SURGE PROTECTION DEVICE RATED AT 120/240 VOLT, 1Ø, 3W, 16ØA PER PHASE, 8ØKA PER MODE, WITH 6 DISTINCT MODES OF PROTECTION COMPLYING WITH UL 1449 THIRD EDITION AND NEMA 3R ENCLOSURE.
 - REFER TO DETAIL 3 ON THIS SHEET.
 - PROVIDE WATER PROOF SPLICE BETWEEN NEW CONDUCTORS AND EXISTING DIRECT BURY CONDUCTORS IN NEW IN-GRADE PULL BOX.



7 ONE-LINE DIAGRAM
NOT TO SCALE

PROTECTION DEVICE RATING (AMPS)	REQUIRED CONDUCTOR SIZE	EQUIPMENT GROUNDING CONDUCTOR SIZE	SINGLE PHASE 2 WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3 WIRE + GND. CONDUIT SIZE *	THREE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 4 WIRE + GND. CONDUIT SIZE **
15	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
20	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
25	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
30	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
35	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
40	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
45	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"
50	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"
60	4 AWG	10 AWG	1"	1"	1"	1-1/4"
70	4 AWG	8 AWG	1"	1"	1"	1-1/4"
80	3 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"
90	2 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"
100	1 AWG	8 AWG	1-1/4"	1-1/2"	1-1/2"	1-1/2"

* = UNLESS OTHERWISE NOTED ON THE DRAWINGS.
** = ALL CONDUCTORS SIZED ON THE POWER RISER DIAGRAM OR IN BRANCH CIRCUIT CONDUCTOR TABLE ARE BASED ON 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY OR CABLE. CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE NEC IF 4 OR MORE CONDUCTORS ARE PLACED IN A RACEWAY OR CABLE.

201 East 2nd Street
Grand Island, NE 68801

olsson.com
TEL 308.384.8750
FAX 308.384.8752

Olsson - Engineering
Nebraska COA #CA-0638

REV. NO.	DATE	DESCRIPTION	BY

REVISIONS

ELECTRICAL ONE-LINE DIAGRAM, SCHEDULES, AND DETAILS

WATER METER HOUSE
EAST GATE PLAZA

HASTINGS, NE

2026

drawn by: _____ EMK
designed by: _____ FLE
project no.: 025-04734
date: JANUARY, 2026

SHEET
11 of 12

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 DATE: Jan 23, 2026 8:18am USER: atarango

DIVISION 26 - ELECTRICAL SPECIFICATIONS

SECTION 260100 - GENERAL PROVISIONS

GENERAL REQUIREMENTS

ALL REQUIREMENTS UNDER DIVISION ONE AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS SHALL BE A PART OF THIS SECTION. EACH CONTRACTOR SHALL BE RESPONSIBLE TO BECOME THOROUGHLY FAMILIAR WITH ALL ITS CONTENTS AS TO REQUIREMENTS WHICH AFFECT THIS DIVISION OR SECTION. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS, OR REASONABLY INFERRED TO BE NECESSARY TO FACILITATE EACH SYSTEMS FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED.

INSPECTION OF SITE

THE CONTRACTOR SHALL PERSONALLY INSPECT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE.

MATERIAL AND WORKMANSHIP

ALL MATERIAL AND APPARATUS SHALL BE NEW AND IN FIRST CLASS CONDITION. ALL MATERIAL AND APPARATUS SHALL HAVE MARKINGS OR A NAMEPLATE IDENTIFYING THE MANUFACTURER AND PROVIDING SUFFICIENT REFERENCE TO ESTABLISH QUALITY, SIZE AND CAPACITY. ALL WORKMANSHIP SHALL BE OF THE FINEST POSSIBLE BY EXPERIENCED MECHANICS OF THE PROPER TRADE. IN GENERAL, ALL MATERIALS AND EQUIPMENT SHALL BE OF COMMERCIAL SPECIFICATION GRADE IN QUALITY. LIGHT DUTY AND RESIDENTIAL TYPE EQUIPMENT WILL NOT BE ACCEPTABLE. ALL HOISTS, SCAFFOLDS, STAGING, RUNWAYS, TOOLS, MACHINERY AND EQUIPMENT REQUIRED FOR THE PERFORMANCE OF THE ELECTRICAL WORK SHALL BE FURNISHED BY THIS CONTRACTOR. MATERIAL AND EQUIPMENT SHALL BE STORED AND MAINTAINED IN CLEAN CONDITION, AND PROTECTED FROM WEATHER, MOISTURE, AND PHYSICAL DAMAGE. ALL ELECTRICAL MATERIALS USED IN THIS WORK SHALL BE APPROVED BY THE UNDERWRITERS' LABORATORIES AND SHALL BEAR THEIR LABEL OF APPROVAL.

COORDINATION

THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER CONTRACTORS AND SUBCONTRACTORS SO THAT VARIOUS COMPONENTS OF THE ELECTRICAL SYSTEMS WILL BE INSTALLED AT THE PROPER TIME, WILL FIT THE AVAILABLE SPACE AND WILL ALLOW PROPER SERVICE ACCESS TO ALL EQUIPMENT. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND TO RELEVANT EQUIPMENT DRAWINGS TO DETERMINE THE EXTENT OF CLEAR SPACES. THE CONTRACTOR SHALL MAKE ALL OFFSETS REQUIRED TO CLEAR EQUIPMENT, BEAMS AND OTHER STRUCTURAL MEMBERS, AND TO FACILITATE CONCEALING CONDUIT IN THE MANNER ANTICIPATED IN THE DESIGN. THE CONTRACTOR SHALL PROVIDE MATERIALS WITH TRIM WHICH WILL FIT PROPERLY THE TYPES OF CEILING, WALL, OR FLOOR FINISHES ACTUALLY INSTALLED.

SUBMITTALS

SUBMIT ONE ELECTRONIC VERSION OF SHOP DRAWINGS AND PRODUCT DATA ON ALL ELECTRICAL EQUIPMENT TO BE PROVIDED BY THE CONTRACTOR.

TITLE EACH DRAWING WITH PROJECT NAME AND NUMBER. IDENTIFY EACH ELEMENT OF DRAWINGS BY REFERENCE TO SHEET NUMBER AND DETAIL, SCHEDULE OR ROOM NUMBER OF CONTRACT DOCUMENTS.

SEQUENTIALLY NUMBER SUBMITTALS ACCORDING THEIR SPECIFICATION SECTION NUMBER. REVISED SUBMITTALS SHOULD INCLUDE ORIGINAL NUMBER AND A SEQUENTIAL ALPHABETIC SUFFIX.

CONTRACTOR AND SUPPLIER SHALL REVIEW AND STAMP AND SIGN SUBMITTALS PRIOR TO TRANSMITTAL. DETERMINE AND VERIFY FIELD MEASUREMENTS, FIELD CONSTRUCTION CRITERIA, MANUFACTURERS CATALOG NUMBERS AND CONFORMANCE OF SUBMITTAL WITH REQUIREMENTS OF CONTRACT DOCUMENTS. IDENTIFY IN WRITING AT TIME OF SUBMITTAL OF ANY DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS.

MARK DIMENSIONS AND VALUES IN UNITS TO MATCH THOSE SPECIFIED.

MARK ANY FEATURES/OPTIONS BEING PROVIDED. DELETE OR PUT A LINE THROUGH FEATURES/OPTIONS THAT ARE NOT BEING PROVIDED.

DO NOT FABRICATE OR ORDER PRODUCTS OR BEGIN WORK THAT REQUIRES SUBMITTALS UNTIL APPROVAL OF SUBMITTAL.

APPROVAL OF EQUIPMENT DOES NOT CONSTRUE APPROVAL OF EQUIPMENT, COMPONENTS, ETC. THAT NO INFORMATION IS FURNISHED TO SHOW COMPLIANCE WITH CONTRACT DOCUMENTS.

CONTRACTOR SHALL PAY A SHOP DRAWING REVIEW FEE OF \$100.00, TO THE ENGINEER, FOR EACH SHOP DRAWING REVIEW AFTER TWO REVIEWS THAT ARE MARKED "RETURNED FOR CORRECTIONS" BY THE ENGINEER.

SUBSTITUTIONS

THE ENGINEER SHALL BE THE SOLE AND FINAL JUDGE AS TO THE SUITABILITY OF ITEMS SUBSTITUTED FOR THOSE SPECIFIED. REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED NO LATER THAN TEN (10) DAYS PRIOR TO THE DAY OF BID OPENING. IF PRIOR APPROVAL IS NOT GRANTED, EQUIPMENT SHALL BE FURNISHED AS SPECIFIED OR AS SHOWN ON THE PLANS.

THE ENTIRE COST OF ALL CHANGES OF ANY TYPE DUE TO SUBSTITUTIONS FOR MATERIALS SPECIFIED SHALL BE BORNE BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER AND SHALL REIMBURSE OTHER TRADES OF ADDITIONAL COST DUE TO SUBSTITUTION.

DOCUMENT EACH REQUEST WITH COMPLETE DATA SUBSTANTIATING COMPLIANCE OF PROPOSED SUBSTITUTION WITH CONTRACT DOCUMENTS.

REQUEST CONSTITUTES A REPRESENTATION THAT CONTRACTOR:

- 1. HAS INVESTIGATED PROPOSED PRODUCT AND DETERMINED THAT IT MEETS OR EXCEEDS, IN ALL RESPECTS, SPECIFIED PRODUCT.
2. WILL PROVIDE THE SAME WARRANTY FOR SUBSTITUTION AS FOR SPECIFIED PRODUCT.
3. WILL COORDINATE INSTALLATION AND MAKE OTHER CHANGES THAT MAY BE REQUIRED FOR WORK TO BE COMPLETE IN ALL RESPECTS.
4. WAIVES CLAIMS FOR ADDITIONAL COSTS OR TIME EXTENSION THAT MAY SUBSEQUENTLY BECOME APPARENT.
5. WILL REIMBURSE OWNER FOR REVIEW OR REDESIGN SERVICES ASSOCIATED WITH RE-APPROVAL BY AUTHORITIES.
SUBSTITUTIONS WILL NOT BE CONSIDERED WHEN THEY ARE INDICATED OR IMPLIED ON SHOP DRAWING OR PRODUCT DATA SUBMITTALS WITHOUT SEPARATE WRITTEN REQUEST, OR WHEN ACCEPTANCE WILL REQUIRE SUBSTANTIAL REVISION OF CONTRACT DOCUMENTS.

DIMENSIONS AND LAYOUTS

THE DRAWINGS ARE SCHEMATIC IN NATURE, BUT SHOW THE VARIOUS COMPONENTS OF THE SYSTEMS APPROXIMATELY TO SCALE AND ATTEMPT TO INDICATE HOW THEY ARE TO BE INTEGRATED WITH OTHER PARTS OF THE BUILDING. FIGURED DIMENSIONS SHALL BE TAKEN IN PREFERENCE TO SCALE DIMENSIONS. DETERMINE EXACT LOCATIONS BY JOB MEASUREMENTS, BY CHECKING THE REQUIREMENTS OF OTHER TRADES, AND BY REVIEWING ALL CONTRACT DOCUMENTS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ERRORS WHICH COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPECTION.

ORDINANCES AND CODES

CONTRACTOR'S PERFORMANCE, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION CODES, STATE AND LOCAL BUILDING CODES, AND/OR ALL OTHER APPLICABLE CODES AND ORDINANCES. CONTRACTOR SHALL COMPLY WITH RULES AND REGULATIONS OF PUBLIC UTILITIES AND MUNICIPAL DEPARTMENTS AFFECTED BY CONNECTION OF SERVICES. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, FEES AND INSPECTIONS REQUIRED FOR THE WORK UNDER THIS CONTRACT UNLESS OTHERWISE SPECIFIED. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY VIOLATION OF THE LAW. CONTRACTOR SHALL MAINTAIN ALL NECESSARY SIGNAL LIGHTS AND GUARDS FOR THE SAFETY OF THE PUBLIC.

ADJUSTING, ALIGNING AND TESTING

ALL ELECTRICAL EQUIPMENT ON THIS PROJECT FURNISHED UNDER THIS DIVISION AND ALL ELECTRICAL EQUIPMENT FURNISHED BY OTHERS SHALL BE ADJUSTED, ALIGNED AND TESTED FOR PROPER OPERATION BY THE ELECTRICAL CONTRACTOR. COMPLETE WIRING SYSTEMS SHALL BE FREE FROM SHORT CIRCUITS. ALL MOTORS SHALL BE VERIFIED FOR PROPER ROTATION.

THE CONTRACTOR SHALL MAINTAIN ON THE PROJECT PREMISES THE FOLLOWING AT ALL TIMES: A TRUE RMS READING VOLTMETER, A TRUE RMS READING AMMETER, AND A MEGGER INSULATION RESISTANCE TESTER. THE CONTRACTOR SHALL PROVIDE TEST DATA RATINGS AS REQUESTED OR AS REQUIRED.

CUTTING AND PATCHING

THIS CONTRACTOR SHALL DO ALL CUTTING OF WALLS, FLOORS, CEILINGS, ETC. AS REQUIRED TO INSTALL WORK UNDER THIS SECTION. CONTRACTOR SHALL OBTAIN PERMISSION OF THE ARCHITECT BEFORE DOING ANY CUTTING. ALL HOLES SHALL BE CUT AS SMALL AS POSSIBLE. CONTRACTOR SHALL PATCH WALLS, FLOORS, ETC. AS REQUIRED BY WORK UNDER THIS SECTION. ALL PATCHING SHALL BE THOROUGHLY FIRST CLASS AND SHALL MATCH THE ORIGINAL MATERIAL AND CONSTRUCTION.

COORDINATE WITHOUT DELAY ALL ROUGHING-IN WITH GENERAL CONSTRUCTION. ALL CONDUIT ROUGH-IN SHALL BE CONCEALED EXCEPT IN UNFINISHED AREAS AND WHERE OTHERWISE SHOWN.

GUARANTEE

GUARANTEE AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF WRITTEN FINAL ACCEPTANCE. GUARANTEE SHALL INCLUDE MATERIAL TO BE REPLACED AND ALL LABOR REQUIRED.

SECTION 260519 - WIRE

ALL WIRE SHALL HAVE COPPER CONDUCTORS, WITH U.L. LABEL, AND 600 VOLT INSULATION. ALL WIRE SHALL BE RUN IN CONDUIT. SERVICE ENTRANCE CABLE SHALL BE TYPE USE, THWN OR XHHW WITH STRANDED CONDUCTORS. ALL FEEDER AND BRANCH CIRCUIT WIRE #8 AWG AND LARGER SHALL BE TYPE THWN OR XHHW, BOTH WITH STRANDED CONDUCTORS. ALL WIRE #10 AWG AND SMALLER SHALL BE TYPE THWN (WET OR DAMP LOCATIONS, OR IN CONDUIT BELOW GRADE OR SLAB) OR THHN (DRY LOCATIONS ONLY AND ABOVE GRADE), BOTH WITH SOLID CONDUCTORS. ALL BRANCH CIRCUIT WIRING SHALL BE NOT SMALLER THAN #12 AWG WIRE. IF NO WIRE SIZE IS INDICATED ON THE PLANS FOR A BRANCH CIRCUIT, PROVIDE #12AWG WIRE AND A 20A CIRCUIT BREAKER. CONTROL WIRING SHALL HAVE 600V INSULATION AND BE OF THE PROPER TYPE, SIZE AND NUMBER AS REQUIRED TO ACCOMPLISHED SPECIFIED FUNCTION. NO MORE THAN 6 RECEPTACLES OR 16 AMPS OF LOAD PER CIRCUIT.

WIRING INSTALLATION

ALL WIRING SHALL BE INSTALLED IN APPROVED RACEWAY AND ENCLOSURES.

SUPPORT ALL WIRE AND CABLES IN VERTICAL INSTALLATIONS AS REQUIRED BY CODE BY INSTALLING CABLE SUPPORTERS OR PLUG-TYPE CONDUIT RISER SUPPORTS.

ALL WIRE AND CABLE IN CONDUIT SHALL BE CONTINUOUS WITHOUT TAPS OR SPLICES. ALL SPLICES OR TAPS SHALL OCCUR IN APPROVED BOXES AND ENCLOSURES AND SHALL BE KEPT TO THE MINIMUM REQUIRED, AND SHALL BE MADE UP WITH APPROVED SOLDERLESS CONNECTORS. ALL SPLICES, TAPS, AND JOINTS SHALL BE INSULATED AS REQUIRED BY CODE.

ALL MATERIALS USED TO TERMINATE, SPLICE OR TAP CONDUCTORS SHALL BE DESIGNED FOR, PROPERLY SIZED FOR, AND U.L. LISTED FOR THE SPECIFIC APPLICATION AND CONDUCTORS INVOLVED, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, USING THE MANUFACTURER'S RECOMMENDED TOOLS.

WHERE WIRE IS INDICATED TO BE INSTALLED, BUT THE CONNECTION IS INDICATED "FUTURE" OR "BY OTHERS", CONTRACTOR SHALL LEAVE A MINIMUM OF 3 FEET OF "PIGTAIL" AT THE BOX, TAPE THE ENDS OF THE CONDUCTORS, AND COVER THE BOX.

CONDUCTORS SHALL HAVE INSULATION OF THE PROPER COLOR TO MATCH NEC COLOR CODE SYSTEM AND IN THE TABLE BELOW. IN LARGER WIRE SIZES WHERE PROPERLY COLORED INSULATION IS NOT AVAILABLE, THE CONTRACTOR SHALL USE VINYL PLASTIC ELECTRICAL TAPE OF THE APPROPRIATE COLOR AROUND EACH CABLE AT ALL TERMINATION POINTS, JUNCTION AND PULL BOXES.

SYSTEM VOLTAGE, CONDUCTOR TYPE, COLOR:

Table with 2 columns: Color and Phase. Rows: BLACK PHASE A, BLUE PHASE C, WHITE NEUTRAL, GREEN EQUIPMENT GROUND

ALL TERMINAL BLOCKS AND WIRE TERMINALS FOR CONTROL WIRING SHALL BE PROPERLY NUMBERED FOR IDENTIFICATION WITH VINYL STICK-ON MARKERS OR EQUIVALENT.

ALL RECEPTACLE AND NON-LIGHTING EQUIPMENT BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR INSTALLED IN THE BRANCH CIRCUIT RACEWAY, SIZED IN ACCORDANCE WITH NEC TABLE 250.122.

VOLTAGE DROP IN BRANCH CIRCUITS SHALL NOT EXCEED 2%.

SECTION 260526 - GROUNDING

THE ELECTRICAL SERVICE, ALL TRANSFORMERS, CONDUCTORS, CONDUITS, MOTOR FRAMES, AND SIMILAR CONDUCTING SURFACES IN THIS CONTRACT WHICH REQUIRE GROUNDING SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED BY THIS CONTRACTOR IN A THOROUGH AND EFFICIENT MANNER IN CONFORMANCE TO THE NATIONAL ELECTRICAL CODE. ALL CIRCUITS SHALL HAVE SEPARATE GREEN GROUND CONDUCTOR ROUTED WITH PHASE CONDUCTORS.

SECTION 260533 - RACEWAYS

GENERAL REQUIREMENTS

ALL CONDUIT SHALL BE RUN CONCEALED EXCEPT WHERE OTHERWISE NOTED. ALL CONDUIT RUN UNDERGROUND SHALL BE RIGID STEEL OR PVC SCHEDULE 40. ALL CONDUIT EXPOSED TO WEATHER, OR OTHER HAZARDOUS CONDITIONS SHALL BE RIGID STEEL. ALL OTHER CONDUIT MAY BE THIN-WALL EMT WHERE APPROVED BY LOCAL CODE.

FINAL CONNECTION TO EACH MOTOR AND TRANSFORMER, AND TO ANY DEVICE WHICH WOULD OTHERWISE TRANSMIT MOTION, VIBRATION OR NOISE, SHALL BE IN FLEXIBLE METAL CONDUIT. WHERE FLEXIBLE METAL CONDUIT IS EXPOSED TO LIQUIDS, VAPORS OR SUNLIGHT, LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED. ALL FLEXIBLE METAL CONDUIT SHALL BE PROVIDED WITH AN INSULATED GROUND WIRE.

CONDUIT INSTALLATION

ALL WIRING SHALL BE RUN IN CONDUIT. ALL CONDUIT RUNS SHOWN ARE DIAGRAMMATIC, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD.

CONDUIT SHALL BE INSTALLED CONCEALED ABOVE SUSPENDED CEILINGS OR CONCEALED IN WALL OR IN OR BENEATH FLOORS WHEREVER POSSIBLE. RUN PARALLEL TO BUILDING

CONDUIT SHALL BE INSTALLED TO REQUIREMENTS OF STRUCTURE AND TO REQUIREMENTS OF ALL OTHER WORK ON THE PROJECT. CONDUIT SHALL BE INSTALLED TO CLEAR ALL OPENINGS, DEPRESSIONS, PIPES, DUCTS, REINFORCING STEEL, AND SIMILAR ITEMS. CONDUIT SET IN FORMS FOR CONCRETE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT INSTALLATION WILL NOT AFFECT THE STRENGTH OF THE STRUCTURE. EXCEPT WHERE APPROVED IN WRITING BY THE ARCHITECT, NO CONDUIT SHALL BE RUN IN A SLAB ON GRADE. CONDUIT SHALL BE LOCATED IN GRANULAR FILL BELOW SLABS-ON GRADE.

CONDUITS SHALL BE INSTALLED CONTINUOUS BETWEEN CONNECTIONS TO OUTLETS, BOXES AND CABINETS WITH A MINIMUM POSSIBLE NUMBER OF BENDS AND NOT MORE THAN THE EQUIVALENT OF FOUR 90 BENDS BETWEEN CONNECTIONS. BENDS SHALL BE SMOOTH AND EVEN AND SHALL BE MADE WITHOUT FLATTENING CONDUIT OR FLAKING ENAMEL. RADIUS OF BENDS SHALL BE AS LONG AS POSSIBLE AND NEVER SHORTER THAN THE CORRESPONDING TRADE ELBOW. LONG RADIUS ELBOWS SHALL BE USED WHERE NECESSARY.

CONDUITS SHALL BE SECURELY FASTENED IN PLACE WITH APPROVED STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. SINGLE CONDUITS FOR FEEDERS SHALL BE HUNG WITH MALLEABLE SPLIT RING HANGERS WITH ROD AND TURNBUCKLE SUSPENSION FROM INSERTS SPACED NOT OVER 10 FEET APART IN CONSTRUCTION ABOVE. GROUPS OF HORIZONTAL FEEDER CONDUITS SHALL BE CLAMPED TO UNISTRUT STEEL CHANNELS AND SUSPENDED FROM INSERTS SPACED NOT OVER 10 FEET APART IN CONSTRUCTION ABOVE. VERTICAL FEEDER CONDUITS SHALL BE SECURELY CLAMPED TO STRUCTURAL STEEL MEMBERS ATTACHED TO STRUCTURE. CABLE CLAMPS SHALL BE INSTALLED FOR SUPPORT OF VERTICAL FEEDERS WHERE REQUIRED. CONDUIT SUPPORTS SHALL BE ADDED WITHIN 12" AT ONE END OF ALL BENDS. CONDUIT SHALL NOT BE SUPPORTED FROM SUSPENDED CEILING COMPONENTS.

CONDUIT ENDS SHALL BE REAMED BEFORE INSTALLATION AND ALL CONDUIT SHALL BE THOROUGHLY CLEANED BEFORE INSTALLATION AND KEPT CLEAN AFTER INSTALLATION. OPENINGS AND BOXES SHALL BE PLUGGED OR COVERED AS REQUIRED TO KEEP CONDUIT CLEAN DURING CONSTRUCTION AND ALL CONDUIT SHALL BE FISHED CLEAR OF OBSTRUCTIONS BEFORE THE PULLING OF WIRES. ALL CONDUIT SHALL BE OF AMPLE SIZE FOR PULLING OF WIRE AND SHALL NOT BE SMALLER THAN CODE REQUIREMENTS AND NOT LESS THAN 3/4" IN SIZE.

ALL ELECTRICAL WORK SHALL BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION. ANY WORK DAMAGED OR MOVED OUT OF LINE AFTER ROUGHING-IN SHALL BE REPAIRED TO MET ENGINEER'S APPROVAL WITHOUT ADDITIONAL COST TO THE OWNER.

CONDUIT TERMINATIONS AT PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL EQUIPMENT AND JUNCTION BOXES SHALL BE ALIGNED AND INSTALLED TRUE AND PLUMB.

INSTALL APPROVED EXPANSION FITTINGS WHERE CONDUIT OR EMT PASSES THROUGH EXPANSION JOINTS.

INSTALL A PULL WIRE IN EACH EMPTY CONDUIT WHICH IS LEFT BY THE CONTRACTOR FOR INSTALLATION OF WIRES OR CABLES BY OTHERS.

MAKE ALL JOINTS AND CONNECTIONS IN A MANNER WHICH WILL INSURE MECHANICAL STRENGTH AND ELECTRICAL CONTINUITY.

THRU-WIRING OF LIGHT FIXTURES IS NOT PERMITTED.

BUSHINGS AND LOCKNUTS

WHERE CONDUITS ENTER BOXES, THEY SHALL BE RIGIDLY CLAMPED TO THE BOX BY A BUSHING ON THE INSIDE AND A LOCKNUT ON THE OUTSIDE, AND CONDUIT SHALL ENTER THE BOX SQUARELY. BUSHINGS AND LOCKNUTS SHALL BE MADE OF GALVANIZED MALLEABLE IRON AND SHALL HAVE SHARP, CLEAN-CUT THREADS. WHERE THIN-WALL CONDUIT ENTERS BOX, PROVIDE APPROVED E.M.T. CONNECTORS. USE INSULATED GROUNDING BUSHINGS WHEREVER CONNECTION IS SUBJECT TO VIBRATION OR MOISTURE.

SECTION 260553 - EQUIPMENT IDENTIFICATION

THIS CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT IDENTIFICATION NAMEPLATES ON ALL PANELBOARDS, SWITCHES, STARTERS, ETC., INCLUDING SWITCHES IN DISTRIBUTION PANELS. NAMEPLATES SHALL BE ENGRAVED PHENOLIC PLASTIC AND SHALL BE FIRMLY ATTACHED TO THE EQUIPMENT WITH SELF-TAPPING, STAINLESS STEEL SCREWS OR STAINLESS STEEL MACHINE SCREWS WITH NUTS AN FLAT AND LOCK WASHERS. NAMEPLATES SHALL CLEARLY IDENTIFY EACH ITEM AND WHAT IT CONTROLS.

SECTION 262416 - PANELBOARDS

DESCRIPTION: NEMA PB1, CIRCUIT BREAKER TYPE, LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARD.

PANELBOARD BUS: COPPER, RATINGS AS INDICATED. PROVIDE COPPER GROUND BUS IN EACH PANELBOARD, PROVIDE INSULATED GROUND BUS WHERE SCHEDULED.

MINIMUM INTEGRATED SHORT CIRCUIT RATING: 10,000 AMPERES RMS SYMMETRICAL FOR 240 VOLT PANELBOARDS.

MOLDED CASE CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE THERMAL MAGNETIC TRIP CIRCUIT BREAKERS, WITH COMMON TRIP HANDLE FOR ALL POLES, LISTED AS TYPE SWD FOR LIGHTING CIRCUITS, TYPE HACR FOR AIR CONDITIONING EQUIPMENT CIRCUITS, CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS WHERE SCHEDULED. DO NOT USE TANDEM CIRCUIT BREAKERS.

ENCLOSURE: NEMA PB 1, TYPE 1.

CABINET BOX: 6 INCHES (153 MM) DEEP, 20 INCHES WIDE.

CABINET FRONT: SURFACE CABINET FRONT AS INDICATED WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE, METAL DIRECTORY FRAME, AND FLUSH LOCK ALL KEYED ALIKE. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL.

ACCEPTABLE MANUFACTURERS SHALL BE SQUARE D, SIEMENS, GENERAL ELECTRIC AND CUTLER HAMMER.

INSTALLATION

INSTALL PANELBOARDS IN ACCORDANCE WITH NEMA PB 1.1 AND THE NECA "STANDARD OF INSTALLATION."

INSTALL PANELBOARDS PLUMB. INSTALL RECESSED PANELBOARDS FLUSH WITH WALL FINISHES.

HEIGHT: 6 FEET (1800 MM) TO TOP OF PANELBOARD; INSTALL PANELBOARDS TALLER THAN 6 FEET (1800 MM) WITH BOTTOM NO MORE THAN 4 INCHES (100 MM) ABOVE FLOOR.

PROVIDE FILLER PLATES FOR UNUSED SPACES IN PANELBOARDS.

PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD.

PROVIDE ENGRAVED PLASTIC NAMEPLATES.

GROUND AND BOND PANELBOARD ENCLOSURE ACCORDING TO NEC.

SECTION 262726 - WIRING DEVICES

FURNISH AND INSTALL THE FOLLOWING OUTLETS AND SWITCHES WHERE SHOWN OR REQUIRED. MINOR CHANGES RELATIVE TO THE LOCATION OF ELECTRICAL EQUIPMENT MAY BE MADE BY THIS CONTRACTOR TO COMPLY WITH STRUCTURAL AND BUILDING REQUIREMENTS AS DETERMINED IN THE COURSE OF CONSTRUCTION. ALL OUTLETS AND SWITCHES MUST BE OF THE SAME MANUFACTURER AND NOT MIXED ON THE PROJECT. COLOR OF TOGGLES AND RECEPTACLES SHALL BE AS REQUIRED BY THE ARCHITECT.

- DUPLEX RECEPTACLE: PASS & SEYMOUR #5362
SINGLE POLE SWITCH: PASS & SEYMOUR #20AC1
THREE-WAY SWITCH: PASS & SEYMOUR #20AC3
PILOT LIGHT SWITCH: PASS & SEYMOUR #20AC1-RPL
KEY SWITCH: PASS & SEYMOUR #20AC1-L
GFCI DUPLEX RECEPTACLE: PASS & SEYMOUR #2091

EQUIVALENT HUBBELL, LEVITON AND BRYANT, WILL BE ACCEPTABLE. OTHER DEVICES SHOWN ON THE PLANS BUT NOT CALLED OUT ABOVE SHALL BE OF THE SAME CONSTRUCTION QUALITY AS DEFINED BY THE MODEL NUMBERS SHOWN.

SWITCH AND OUTLET COVER PLATES

ALL SWITCH AND OUTLET PLATES SHALL BE STAINLESS STEEL. SWITCH PLATES IN UNFINISHED ROOMS AND SPACES SHALL BE STAMPED STEEL PLATES, CADMIUM PLATED. GROUPS OF SWITCHES SHALL BE UNDER ONE GANG-PLATE, USUALLY MOUNTED HORIZONTALLY; WHERE REQUIRED BY DETAILS, VERTICAL MOUNTING SHALL BE USED INSTEAD. PLATES SHALL BE SET PLUMB, PARALLEL, AND SHALL FINISH FLUSH WITH THE WALL. WEATHER-PROOF COVER PLATES SHALL BE CAST ALUMINUM LISTED AND LABELED EXTRA DUTY WITH PVC GASKETING AND RATED FOR "WHILE-IN-USE".

LOCATIONS OF OUTLETS, SWITCHES AND OTHER WIRING DEVICES

OUTLETS MUST BE CENTERED WITH REGARD TO PANELING, FURRING, AND TRIM. ANY OUTLET WHICH IS IMPROPERLY LOCATED MUST BE CORRECTED AT THE CONTRACTOR'S EXPENSE. OUTLETS MUST BE SET PLUMB OR HORIZONTAL AND SHALL EXTEND TO THE FINISHED SURFACE OF THE WALL, CEILING OR FLOOR AS THE CASE MAY BE WITHOUT PROJECTING BEYOND SAME. RECEPTACLES, SWITCHES, AND OTHER WIRING DEVICES SHOWN ON WOOD TRIM, CASES OR OTHER FIXTURES SHALL BE INSTALLED SYMMETRICALLY ON SUCH TRIM OR FIXTURE AND WHERE NECESSARY, SHALL BE SET WITH THE LONG DIMENSION OF THE PLATE HORIZONTAL, OR SHALL BE GANGED IN TANDEM.

MOUNTING HEIGHTS TO CENTER OF BOX ABOVE FINISHED FLOOR SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.

Table with 2 columns: Device Type and Height. Rows: GENERAL FLUSH SWITCHES, MANUAL STATIONS 48"; GENERAL CONVENIENCE RECEPTACLES 18"; PANELBOARDS, TO TOP 72"; SAFETY SWITCHES 54"; MOTOR CONTROLLERS 54"

SECTION 262816 - DISCONNECT SWITCHES

CONTRACTOR SHALL FURNISH AND INSTALL SQUARE D, SIEMENS, GENERAL ELECTRIC OR CUTLER HAMMER FUSED OR NON-FUSED (AS NOTED OR REQUIRED) NEMA HEAVY DUTY EXTERNALLY OPERATED SAFETY SWITCHES WHERE NOT FURNISHED WITH THE STARTING EQUIPMENT, AND AT ALL OTHER POINTS REQUIRED BY CODE. FUSE HOLDERS SHALL HAVE CLASS R REJECTION FEATURE. CONSTRUCTION SHALL BE OF A NEMA DESIGN SUITABLE FOR THE ENVIRONMENT INSTALLED IN.

FUSES

EACH CIRCUIT AND SET OF FUSE CLIPS THROUGHOUT THE JOB SHALL BE EQUIPPED WITH BUSSMAN OR EQUIVALENT SHAWMUT FUSES, SIZE AND TYPE AS REQUIRED OR INDICATED. ALL FUSES LARGER THAN 600 AMPS, SHALL BE UL CLASS L, SIMILAR TO TYPE KRP-C BUSSMAN LOW PEAK OR EQUIVALENT. FUSES USED TO PROTECT MOTORS SHALL BE UL CLASS RKG, BUSSMAN FUSETRON OR EQUIVALENT. ALL FUSIBLE SWITCHES THROUGHOUT THE PROJECT SHALL HAVE FUSE HOLDERS WITH CLASS R REJECTION FEATURE. ALL FUSED DEVICES SHALL BE LABELED AS TO TYPE AND SIZE OF FUSE REQUIRED.

SECTION 265100 - LIGHT FIXTURES

LIGHT FIXTURE LOCATIONS

LIGHT FIXTURES SHOWN ON THE ELECTRICAL DRAWINGS REPRESENT GENERAL ARRANGEMENTS ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR MORE EXACT LOCATIONS. COORDINATE LOCATION WITH ALL OTHER TRADES BEFORE INSTALLATION TO AVOID CONFLICTS. LIGHT FIXTURES LOCATIONS IN MECHANICAL ROOMS SHALL BE COORDINATED WITH FINAL INSTALLED PIPING AND DUCTWORK LAYOUTS.

LIGHT FIXTURES

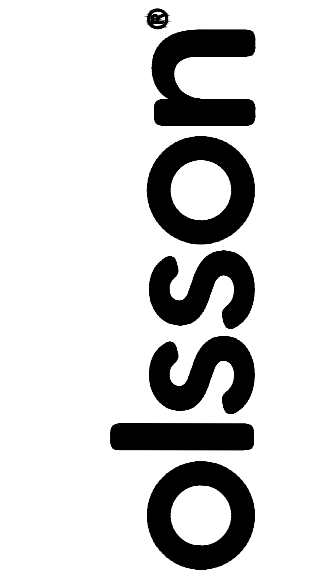
PROVIDE LIGHT FIXTURES AS SCHEDULED ON DRAWINGS. THIS SHALL INCLUDE ALL LAMPS, MATERIAL AND LABOR TO SECURELY HANG FIXTURES, CLEAN THEM AND MAKE THEM COMPLETELY READY FOR USE. ALL LIGHT FIXTURES SHALL INCLUDE ALL NECESSARY ACCESSORIES REQUIRED. LIGHT FIXTURE MODELS SCHEDULED ON THE DRAWINGS ARE TO SHOW THE MANUFACTURER, GRADE AND STYLE OF FIXTURES REQUIRED ONLY. PROVIDE ALL HANGERS, SUPPORTS, AND MISCELLANEOUS HARDWARE REQUIRED TO INSTALL LIGHT FIXTURES. PROVIDE PROPER TRIM TO FIT EACH CEILING CONDITION ACTUALLY ENCOUNTERED.

LED LIGHTING

UL COMPLIANCE: COMPLY WITH UL 1598, CRI OF MINIMUM 70, CCT OF 4000K, L70 LAMP LIFE OF 50,000 HOURS.

INTERNAL DRIVER: 10KV SURGE SUPPRESSION PROTECTION IN ACCORDANCE WITH IEEE/ANSI C62.41.2.

NOMINAL OPERATING VOLTAGE: 120 VAC.



201 East 2nd Street
Grand Island, NE 68801

olsson.com
TEL 308.384.8750
FAX 308.384.8752

Olsson - Engineering
Nebraska COA #CA-0638



Table with 2 columns: BY, DATE. Rows for revision tracking.

2026

REVISIONS

ELECTRICAL SPECIFICATIONS
WATER METER HOUSE
EAST GATE PLAZA
HASTINGS, NE

drawn by: EMK
designed by: FILE
project no.: 025-04734
date: JANUARY, 2026