CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENTS

SCHEDULE A - WATER SCHEDULE B - SEWER

60% PLANSET

CITY OFFICIALS

STEVE DOBOSH

Mayor

EMILY MORGAN RON NEUMANN

CAROL HILL

City Council

GLENDA FORGA GUY SPRATT

City Council

JON CRAVENS
PUBLIC WORKS ASSISTANT

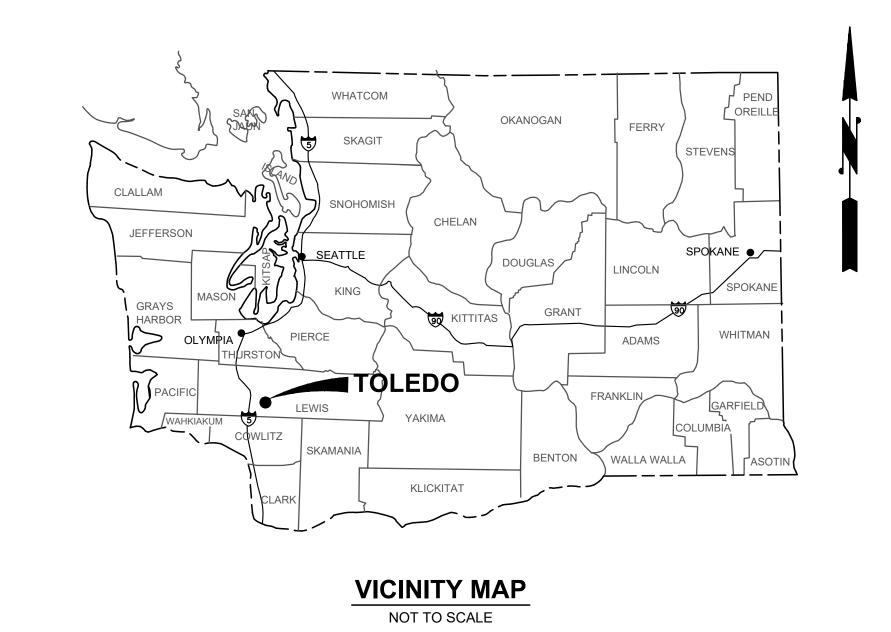
MICHELLE WHITTEN
CITY MANAGER

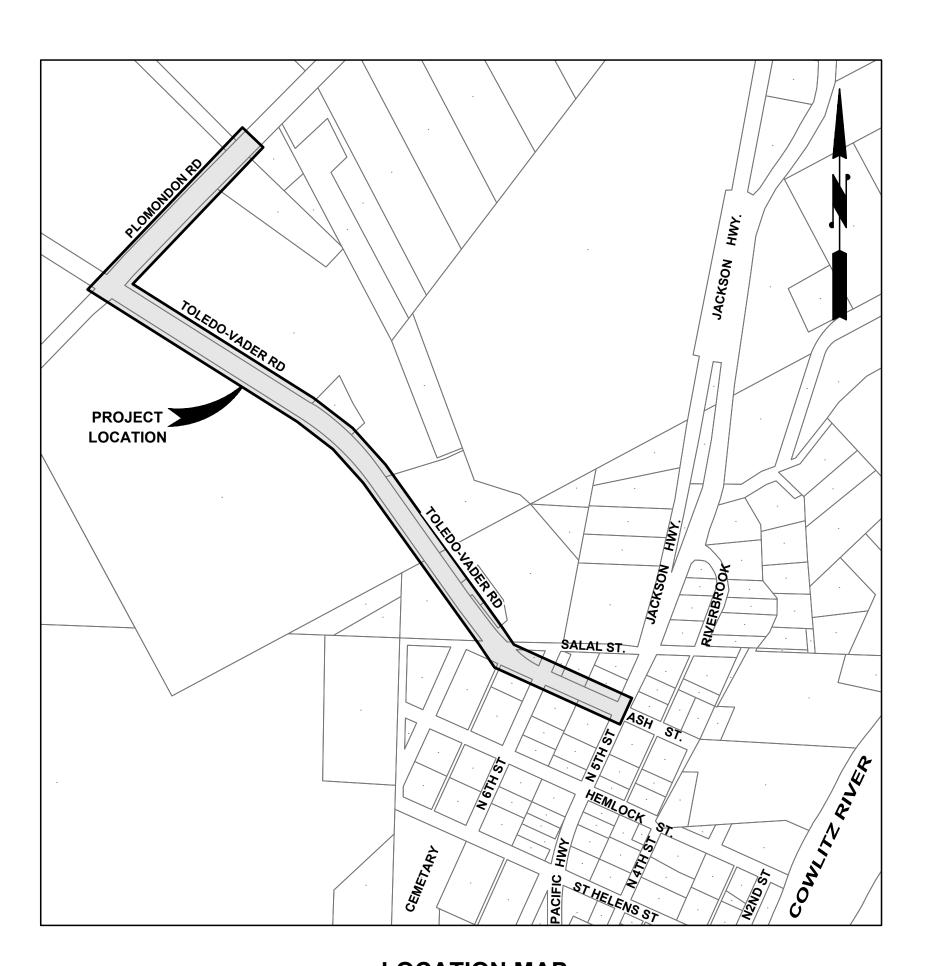


JANUARY 2022 G&O #20227.00

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C-2A	WATER MAIN PLAN AND PROFILE STA 14+00 TO 18+00
C-3A	WATER MAIN PLAN AND PROFILE STA 18+00 TO 22+00
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C-7A	WATER MAIN PLAN AND PROFILE STA 34+00 TO 38+00
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C-4B	GRAVITY SEWER PLAN AND PROFILE STA 22+00 TO 26+00
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C-9B	GRAVITY SEWER PLAN AND PROFILE STA 44+00 TO 48+00
C-10B	GRAVITY SEWER PLAN AND PROFILE STA 48+00 TO 49+00
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S_3	TYPICAL STRUCTURAL DETAILS

TYPICAL STRUCTURAL DETAILS





LOCATION MAP

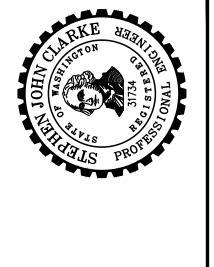
SCALE: 1" = 400'

S, T, R: S18 T11N R1W AND S7 T11N R1W



60% PLANSET

REVISION DATE APPD



TOLEDO

WASHINGTON

ER IMPROVEMENTS

CITY OF TOLED

LEWIS COUNTY WAS

/ATER AND SEWER IMPRO

VICINITY AND LOCATION I

SHEET: G-1

OF: **6**JOB NO.: 20227.00

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DWG:VIC_SHT-INDEX

AB	BREVIATIONS	LINET	YPES		WATE
AVE AC	AVENUE ASBESTOS CEMENT PIPE	<u>EXISTING</u>	PROPOSED	DESCRIPTION	EXISTII
ADJ ALT	ADJUST ALTERNATE	SURFACE	FEATURES		<u> Extern</u>
ALUM ANSI	ALUMINUM AMERICAN NATIONAL STANDARDS INSTITUTE			OUDD (TVDE AC NOTED)	
AP ASPH	ANGLE POINT ASPHALT			CURB (TYPE AS NOTED)	
ASTM ASSY	AMERICAN SOCIETY OF TESTING AND MATERIALS ASSEMBLY BLIND FLANGE			ASPHALT PAVEMENT	
BF BLDG	BUILDING BLOCK			GRAVEL SURFACING	
BLK BO	BLOW OFF BEGINNING OF PROJECT	4		CONCRETE SURFACING	
BOP BVCE	BEGIN VERTICAL CURVE ELEVATION BEGIN VERTICAL CURVE STATION			CEMENT CONC. SIDEWALK	
BVCS CTR	CENTER CORRUGATED ALUMINUM PIPE			GUARD RAIL	
CAP CB	CATCH BASIN CAST IRON	x x		FENCE/RAILING (TYPE AS NOTED)	
CI €	CENTER LINE CLEARANCE	\\\		SHRUB/TREE/VEGETATION LINE	
CLR CMP	CORRUGATED METAL PIPE CLEANOUT			EDGE OF LANDSCAPING	
CO CONC	CONCRETE CONDUIT	SUR	VEY		
C CONN	CONNECTION CONTINUOUS				Γ
CONT CPEP	CORRUGATED POLYETHYLENE PIPE COUPLING			RIGHT-OF-WAY LINE	
CPLG CY	CUBIC YARD CONTINUED			CENTERLINE OF RIGHT-OF-WAY	ް
CONT CL	CLASS CUBIC FEET			CENTERLINE OF CONSTRUCTION	9
CF CFS	CUBIC FEET PER SECOND DEGREE OF CURVATURE			PROPERTY LINE	\bowtie
DC DI				CONTOUR LINE	
DIA DOT	DEPARTMENT OF TRANSPORTATION DIMENSION			SAWCUT LINE (APPROXIMATE LOCATION)	GAS/P
DIM DWGS	DRAWING(S) DRAIN		<u>ITIES</u>		EXISTI
D E	EAST EACH	——— OH ———		OVERHEAD UTILITIES	
EA EL	ELEVATION ELECTRICAL	——— Е ———		BURIED ELECTRICAL	Œ
ELEC EOA	EDGE OF ASPHALT END OF PROJECT	Т —		BURIED TELEPHONE/COMMUNICATIONS	
EOP EVCE	END VERTICAL CURVE ELEVATION END VERTICAL CURVE STATION	G		GAS MAIN (SIZE AS NOTED)	P -0-
EVCS EXIST	EXISTING FIGURE	W	W	WATER MAIN (SIZE AS NOTED)	\leftarrow
FIG FIN	FINISHED FLANGE	s	s	SANITARY SEWER MAIN (SIZE AS NOTED)	
FL FT	FEET GAUGE	D		STORM DRAIN (SIZE AS NOTED)	
GA GALV	GALVANIZED GALVANIZED IRON	→ D —		CULVERT (SIZE & TYPE AS NOTED)	Т
GI GV	GATE VALVE HIGH DENSITY POLYETHYLENE PIPE				SANIT
HDPE ID	INSIDE DIAMETER INVERT ELEVATION				EXISTII
IE INV	INVERT INCH				
IN L	LENGTH POUND				0
LB LF	LINEAR FEET MAXIMUM				_
MAX MFR	MANUFACTURER MANHOLE				
MH MIN	MINIMUM MECHANICAL JOINT				<u>s</u>
MJ MISC	MISCELLANEOUS NORTH				
N NO	NUMBER NOT TO SCALE				
NTS NST	NO STEEPER THAN ON CENTER				SURVI
OC OD	OUTSIDE DIAMETER POINT OF INTERSECTION				EXISTII
PI PP	POWER POLE POINT OF VERTICAL INTERSECTION				Δ
PVI PE	PLAIN END PERFORATED				•
PERF PVC	POLYVINYL CHLORIDE PAVEMENT				<u>@</u>
PVMT PVT	POINT OF VERTICAL TANGENT POINT OF CURVATURE				•
PC PT	POINT OF TANGENCY QUANTITY				SURF
QTY RET	RETAINING RAILROAD				EXISTII
RR R	RADIUS REDUCER				
RED REINF	REINFORCE REQUIRED				
REQD R/W	RIGHT-OF-WAY SLOPE				
SL S	SOUTH SCHEDULE				/////
SCH SF	SQUARE FEET SHEET				
SHT SPECS	SPECIFICATIONS SQUARE				
SQ STA	STATION STANDARD				Т
STD TB	THRUST BLOCK TOP OF CURB				
TC TEL	TELEPHONE TEMPORARY EROSION AND SEDIMENT CONTROL THREADED				
TESC THRD	THROUGH TYPICAL				
THRU TYP	VERTICAL WEST				\bigcirc
VERT W	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION WITH				
WSDOT W/	WITHOUT				

ER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
]	CAP/PLUG
	羃	COUPLING/ADAPTER
	•	GUARD POST
	•	REDUCER
	◄	THRUST BLOCK
⊞	•	WATER METER
	FIRE HYDRAN	Ī
		FIRE HYDRANT (2-NOZZLE)
	±	FIRE HYDRANT (3-NOZZLE)
	<u>JOINTS</u>	
	I	FLANGE/BLIND FLANGE
Е	С	MECHANICAL JOINT
	<u>VALVES</u>	
P°	, ₱*	AIR RELIEF VALVE
Ŷ	†	BLOW-OFF VALVE
\bowtie	H	GATE VALVE

POWER/TELEPHONE SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		GAS METER
Ø		GAS VALVE
Р		POWER VAULT (SIZE VARIES)
-0-		UTILITY POLE
\leftarrow		UTILITY POLE ANCHOR
\boxtimes		UTILITY PEDESTAL
Т		TELEPHONE VAULT (SIZE VARIES)

TARY/STORM SEWER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
0		STORM DRAIN MANHOLE/TYPE 2 CATCH BASIN (ACTUAL DIMENSION SHOWN FOR PROPOSED)
		STORM DRAIN CATCH BASIN, CONCRETE INLET, OR YARD/AREA DRAIN (ACTUAL DIMENSION SHOWN FOR PROPOSED)
<u></u>	S	SANITARY SEWER MANHOLE (ACTUAL DIMENSION SHOWN FOR PROPOSED)
	•	CLEAN OUT (SAN. SEWER OR STORM)

YEY SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
Δ		CONTROL POINT
•		MONUMENT (IN CASE)
@		MONUMENT (SURFACE

FACE FEATURES/LANDSCAPING

SUKFACE	FLATURES	5/LANDSCAPING
EXISTING	PROPOSED	DESCRIPTION
		BUILDING
		BUILDING EAVES
		MAIL BOX (NOTED)
Д		SIGN
		SHRUB
		TREE (CONIFER)
\odot		TREE (DECIDUOUS)
=		EDGE OF CREEK/STREAM OR OHWM

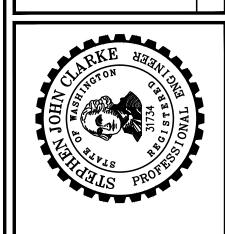
GENERAL NOTES:

- 1. ALL MATERIALS AND WORKMANSHIP SHALL BE FURNISHED AND SUPPLIED IN ACCORDANCE WITH THE 2020 EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, UNLESS OTHERWISE SPECIFICALLY NOTED.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT AND COORDINATE WITH ALL UTILITY COMPANIES IN ORDER TO ASSURE THAT ALL LINES, PIPES, POLES AND OTHER APPURTENANCES ARE PROPERLY LOCATED, SECURED, AND/OR PROTECTED. BURIED UTILITIES (WHERE KNOWN) ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. NOTIFY THE UNDERGROUND UTILITIES LOCATE CENTER: 1-800-424-5555.
- 3. ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN CONFORMANCE TO THE REQUIREMENTS OF THESE PLANS, CONTRACT SPECIFICATIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 5. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS, ANY ADDENDA, CHANGE ORDERS, AND THE CONTRACT SPECIFICATIONS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 6. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN THE EVENT OR DISCOVERY OF UNSUITABLE SOILS OR HIGH GROUND WATER CONDITIONS OR DISCREPANCIES FROM THE PLANS.
- 7. WHEREVER PLANS REFER TO "SAWCUT" OF ASPHALT CONCRETE PAVEMENT OR CONCRETE SURFACE, THE CONTRACTOR SHALL PERFORM A "NEAT LINE CUT" PER SPECIFICATIONS.



JPW	SLG	JMH
DRAWN:	CHECKED:	APPROVED:

	DATE APPD
	DATE
60% PLANSET	REVISION
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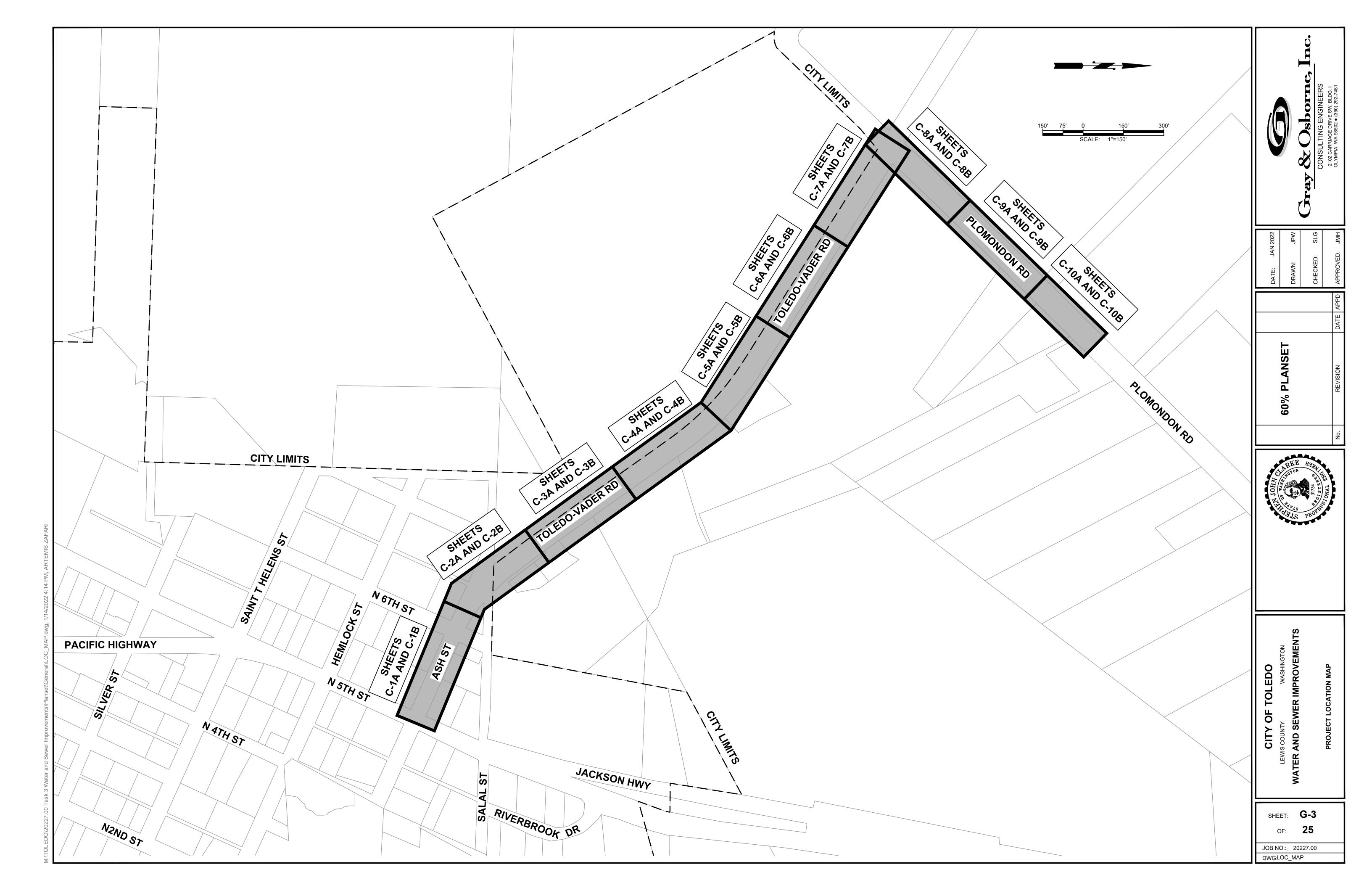
TOLEDO CITY OF

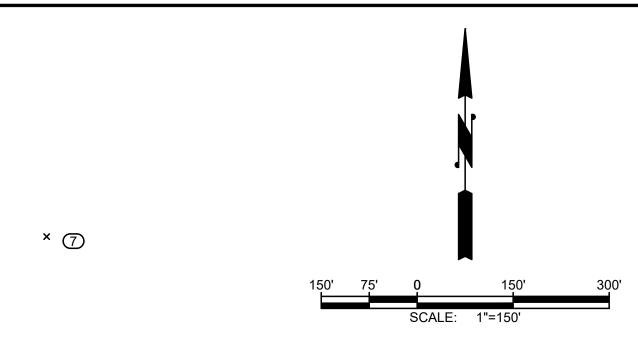
LEWIS COUNTY WASHINGTO ATER AND SEWER IMPROVEM

SHEET: **G-2**

DWGŁEGEND

JOB NO.: 20227.00

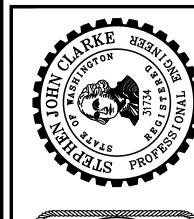


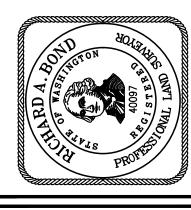


The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.

DRAWN: JPW CHECKED: SLG APPROVED: JMH			
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	DRAWN:	CHECKED:	APPROVED:

	DATE APPD
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60% PLANSET	REVISION
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CITY OF WATER AND SEV SCHEDULE A - WA SCHEDULE B - SE SURVE WATER

SHEET: **G-4AB**

BURIED UTILITIES IN AREA
CALL BEFORE YOU DIG
1-811

EXISTING UTILITIES SHOWN ARE FROM THE
BEST AVAILABLE INFORMATION AND NO
GUARANTEE IS MADE AS TO THE EXACT SIZE,
TYPE, LOCATION OR DEPTH

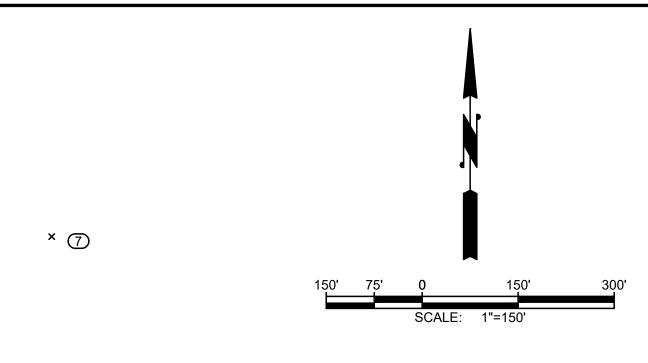
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

JOB NO.: 20227.00 DWG:SV_CTRL

CONTRO	L POINT TABLE			
Horizonta	al Datum:	NAD83/91		
Vertical I	Datum:	NAVD88		
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
7	416486.85	1049419.44	277.55	SFM*WSDOT "TOLEDO" MON ID: 2794. NEAR TOLEDO HIGH SCHOOL READER BOARD.
277	414325.94	1048984.90	177.91	SSRC, IN THE NW QUADRANT OF THE INTX OF SALAL ST & N 5TH ST. 6' SW OF A N-S CULVERT. 5' SE OF THE END OF THE WALK AND 22.4' S OF A HYDRANT.
278	414044.30	1048872.55	172.80	SSNT, IN THE SW QUADRANT OF THE INTX OF N 5TH ST & ASH ST. NEAR THE 1/2 DELTA OF CURVE. 1.9' E OF THE FACE OF CURB.
279	416382.17	1047290.61	306.21	SSNT, 18' E OF A LIGHTED WOODEN SIGN @ THE ENTRANCE TO TOLEDO TEL (183 PLOMONDON RD). N OF TOLEDO-VADER RD NEAR THE EDGE OF ASPHALT.
280	415792.70	1046782.48	305.24	SSRC, IN THE SE QUADRANT OF THE INTX OF TOLEDO-VADER RD & PLOMONDON RD.
281	415450.48	1047397.25	274.39	SSNT, IN ASPHALT SHOULDER N OF FOG LINE OF TOLEDO-VADER RD. EVEN WITH ONLY POWER POLE IN THIS AREA NOT SURROUNDED BY VEGETATION. ~725' SE OF CENTER OF INTX W/ PLOMONDON RD.
282	415104.92	1047843.89	253.42	SSRC, 1.5' NE OF EDGE OF PAVEMENT TOLEDO-VADER RD. ~500' NW OF DRIVEWAY TO 562 TOLEDO-VADER RD DRIVEWAY (7TH ST ON GOOGLE MAPS).
283	414688.45	1048147.76	216.50	SSRC, 8'S OF THE SIEND OF A GUARDRAIL ON THE FIDGE OF TOLEDO-VADER RD, ACROSS FROM THE DRIVEWAY TO 562
284	414260.28	1048434.08	184.56	SSRC, 8.7' SW OF SW EDGE OF ASPHALT OF TOLEDO-VADER RD. ~140' NW OF N 6TH ST INTX. E OF A RED METAL BUILDING NEAR 1/2 DELTA OF CURVE IN ROAD.
285	414312.15	1049301.60	179.83	SFM, SECTION CORNER. E OF INTX SALAL ST & RIVERBROOK DR. 2" BRASS LEWIS COUNTY SURFACE MONUMENT. 15.5' N OF CENTERLINE SALAL ST.
286	413888.68	1048462.40	168.13	SFP, FOUND 1" IRON PIPE PLUGGED W/ TACK. NE CORNER HEMLOCK ST & N 6TH ST.
287	414713.50	1048144.27	214.70	SFRC, 1/2" REBAR W/ CAP. "E.A. BUTLER LS 18896."
288	414589.50	1048235.66	204.82	SFR, 1/2" REBAR W/ FLAGGING. LEANING. SHOT AT BASE.
289	414982.79	1047949.77	240.64	SFRC, 1/2" REBAR W/ CAP. FLUSH W/ ASPHALT. "LS 29269 K. BLUHM."
290	415187.88	1047788.98	265.62	SFRC, "LS 29269 K BLUHM"
291	415315.89	1047636.13	268.12	SFRC, 1/2" REBAR W/ CAP "LS 29269 K BLUHM."
292	415824.50	1046832.42	304.00	SFP, 2/4" IRON PIP LEANING HEAVILY TO THE E. SHOT AT BASE.
293	415865.82	1046818.58	305.79	SFM, 2" BRASS DISC W/ PUNCH "LEWIS CO. $45+63.74$ " IN THE CENTERLINE OF NORTHBOUND LANE OF PLOMONDON RD. ~55 NE OF CENTER OF INTX W/ TOLEDO-VADER RD.
294	416161.06	1047103.50	306.36	SFM, 2" BRASS DISC W/ PUNCH "LEWIS CO. 41+53.45" IN THE CENTERLINE OF NORTHBOUND LANE OF PLOMONDON RD. ~465' NE OF CENTER OF INTX W/ TOLEDO-VADER RD.
295	416233.98	1047211.83	304.86	SFRC, 1/2" REBAR W/ CAP "LS 29269 K BLUHM." 0.15' ABOVE GRADE.
296	416229.12	1047219.05	305.20	SFR, 1/2" REBAR W/ 2" DOMED ALUMINUM CAP W/ PUNCH.

× (285)

° (277)



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Gray & Osbotane,

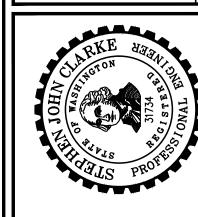
Consulting engineers

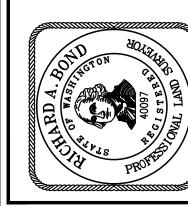
2102 CARRIAGE DRIVE SW, BLDG. 1

OLYMPIA, WA 98502 • (360) 292-7481

DRAWN:	JPW
CHECKED:	SLG
APPROVED:	JMH

	DATE APPD
60% PLANSET	REVISION
	·





SEWER IMPROVEMENTS
CHEDULE C
AND BOOSTER STATION
CONTROL RESERVOIR

CITY OF TO LEWIS COUNTY WATER AND SEWER SCHEDU RESERVOIR AND BO

SHEET: **G-5C**

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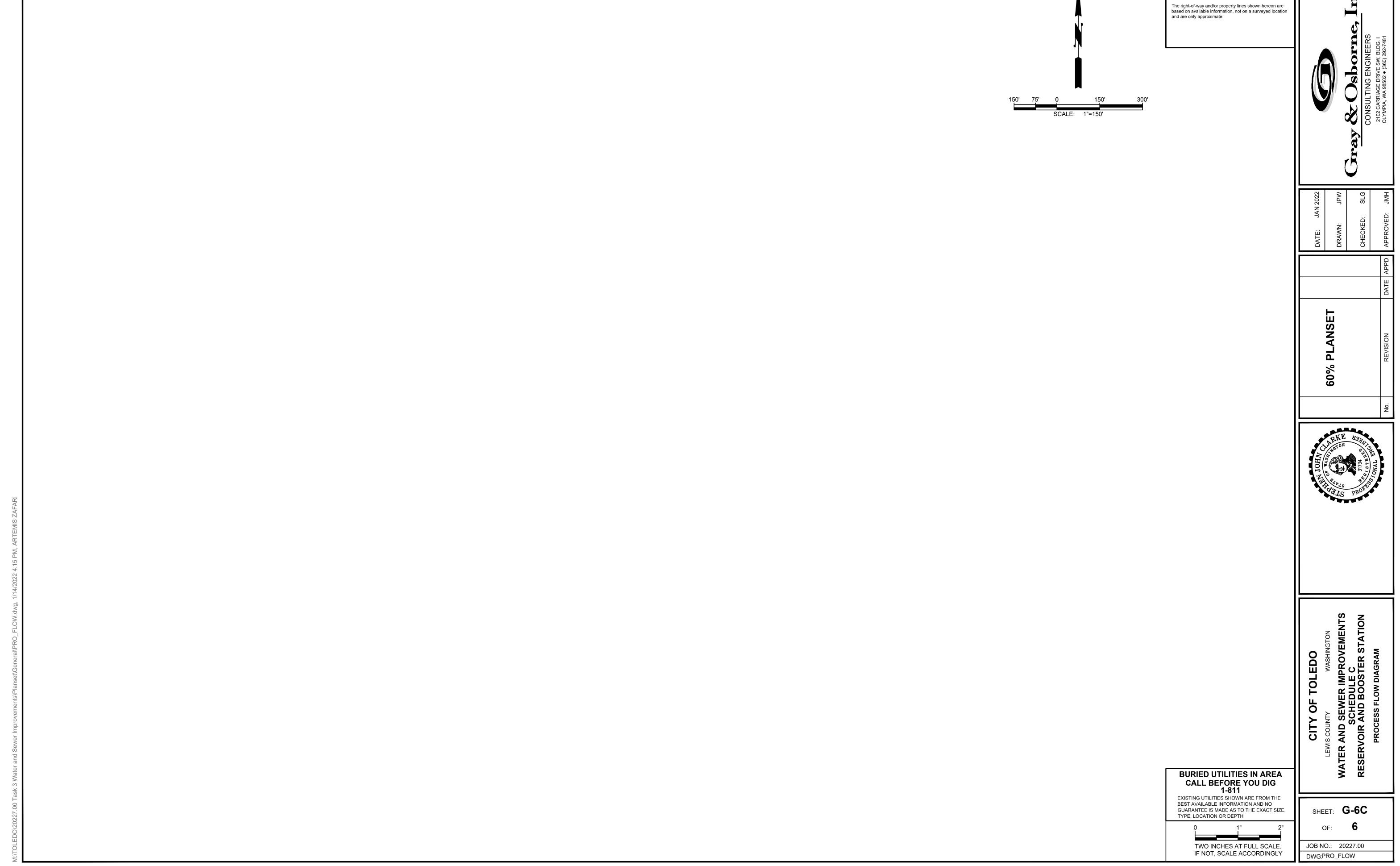
OF: **6**

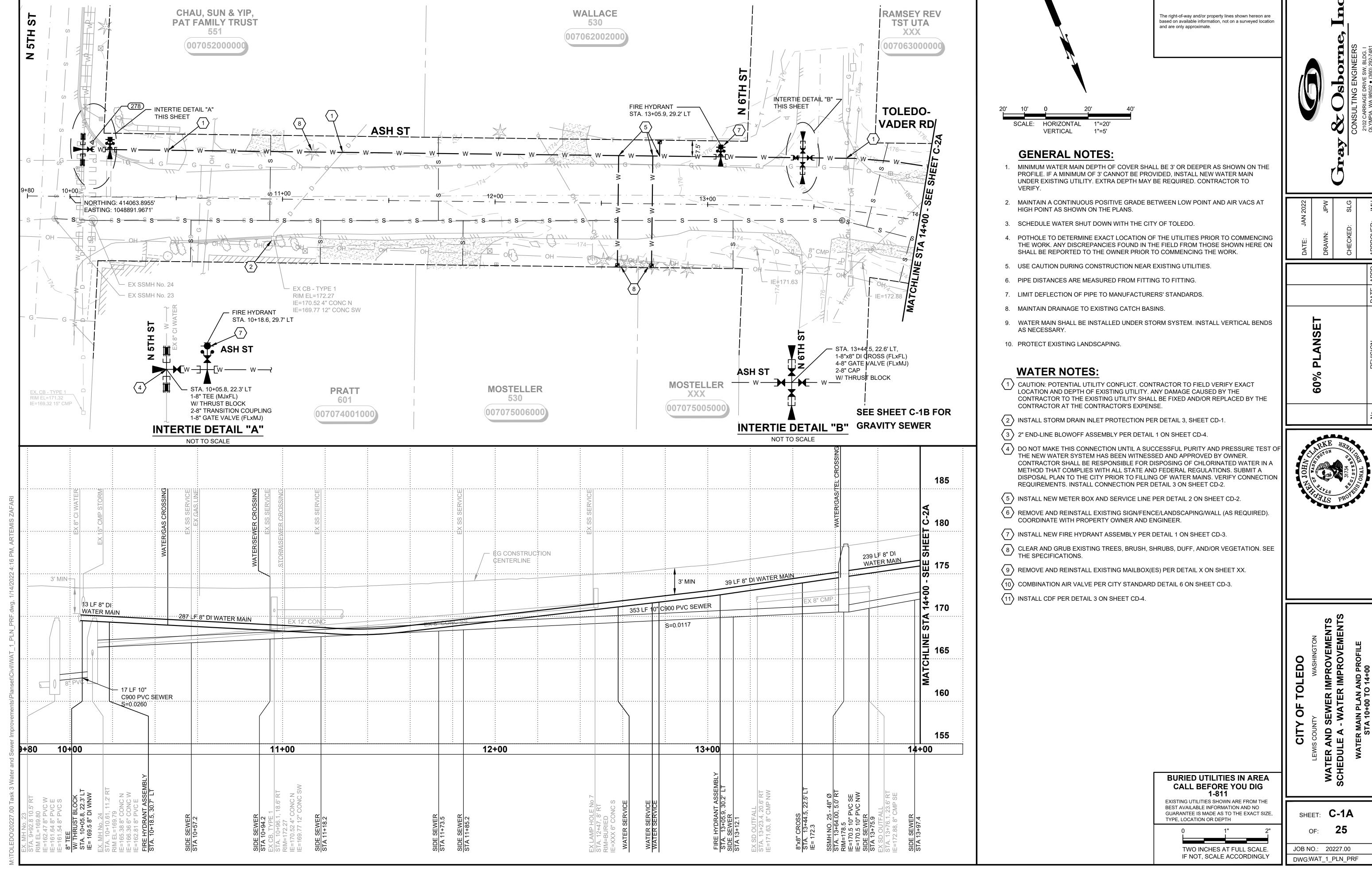
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292	415824.50	1046832.42	304.00	SFP, 2/4" IRON PIP LEANING HEAVILY TO THE E. SHOT AT BASE.
293	415865.82	1046818.58	305.79	SFM, 2" BRASS DISC W/ PUNCH "LEWIS CO. $45+63.74$ " IN THE CENTERLINE OF NORTHBOUND LANE OF PLOMONDON RD. \sim 55' NE OF CENTER OF INTX W/ TOLEDO-VADER RD.
294	416161.06	1047103.50	306.36	SFM, 2" BRASS DISC W/ PUNCH "LEWIS CO. 41+53.45" IN THE CENTERLINE OF NORTHBOUND LANE OF PLOMONDON RD. ~465' NE OF CENTER OF INTX W/ TOLEDO-VADER RD.
295	416233.98	1047211.83	304.86	SFRC, 1/2" REBAR W/ CAP "LS 29269 K BLUHM." 0.15' ABOVE GRADE.
296	416229.12	1047219.05	305.20	SFR, 1/2" REBAR W/ 2" DOMED ALUMINUM CAP W/ PUNCH.

° (277) × (285)

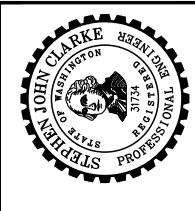
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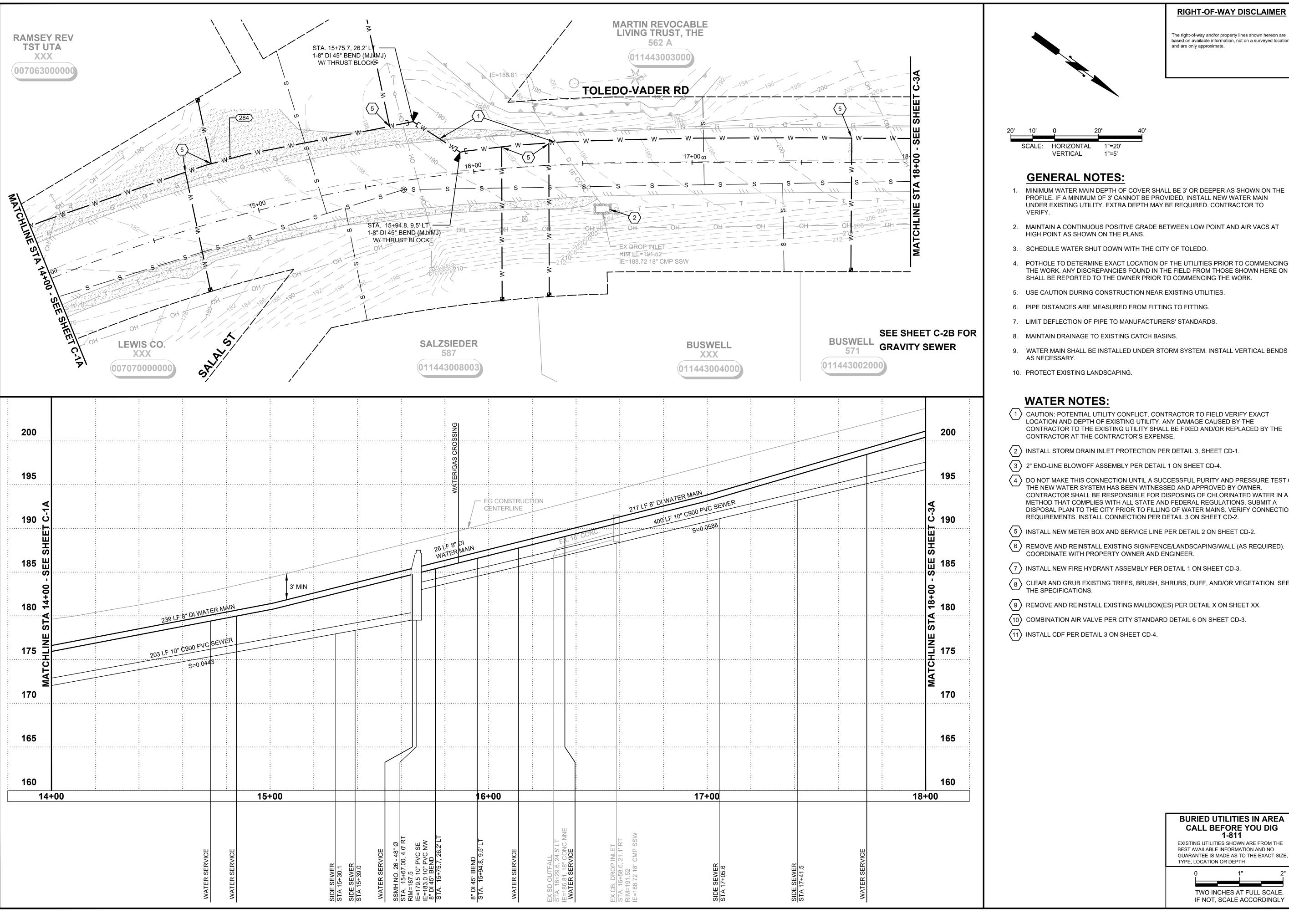




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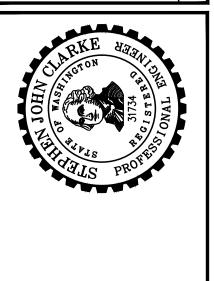
The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.



- 1. MINIMUM WATER MAIN DEPTH OF COVER SHALL BE 3' OR DEEPER AS SHOWN ON THE PROFILE. IF A MINIMUM OF 3' CANNOT BE PROVIDED, INSTALL NEW WATER MAIN UNDER EXISTING UTILITY. EXTRA DEPTH MAY BE REQUIRED. CONTRACTOR TO
- 2. MAINTAIN A CONTINUOUS POSITIVE GRADE BETWEEN LOW POINT AND AIR VACS AT
- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HERE ON
- 9. WATER MAIN SHALL BE INSTALLED UNDER STORM SYSTEM. INSTALL VERTICAL BENDS
- \langle 1 \rangle CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE
- 4 DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION

- (7) INSTALL NEW FIRE HYDRANT ASSEMBLY PER DETAIL 1 ON SHEET CD-3.
- CLEAR AND GRUB EXISTING TREES, BRUSH, SHRUBS, DUFF, AND/OR VEGETATION. SEE THE SPECIFICATIONS.

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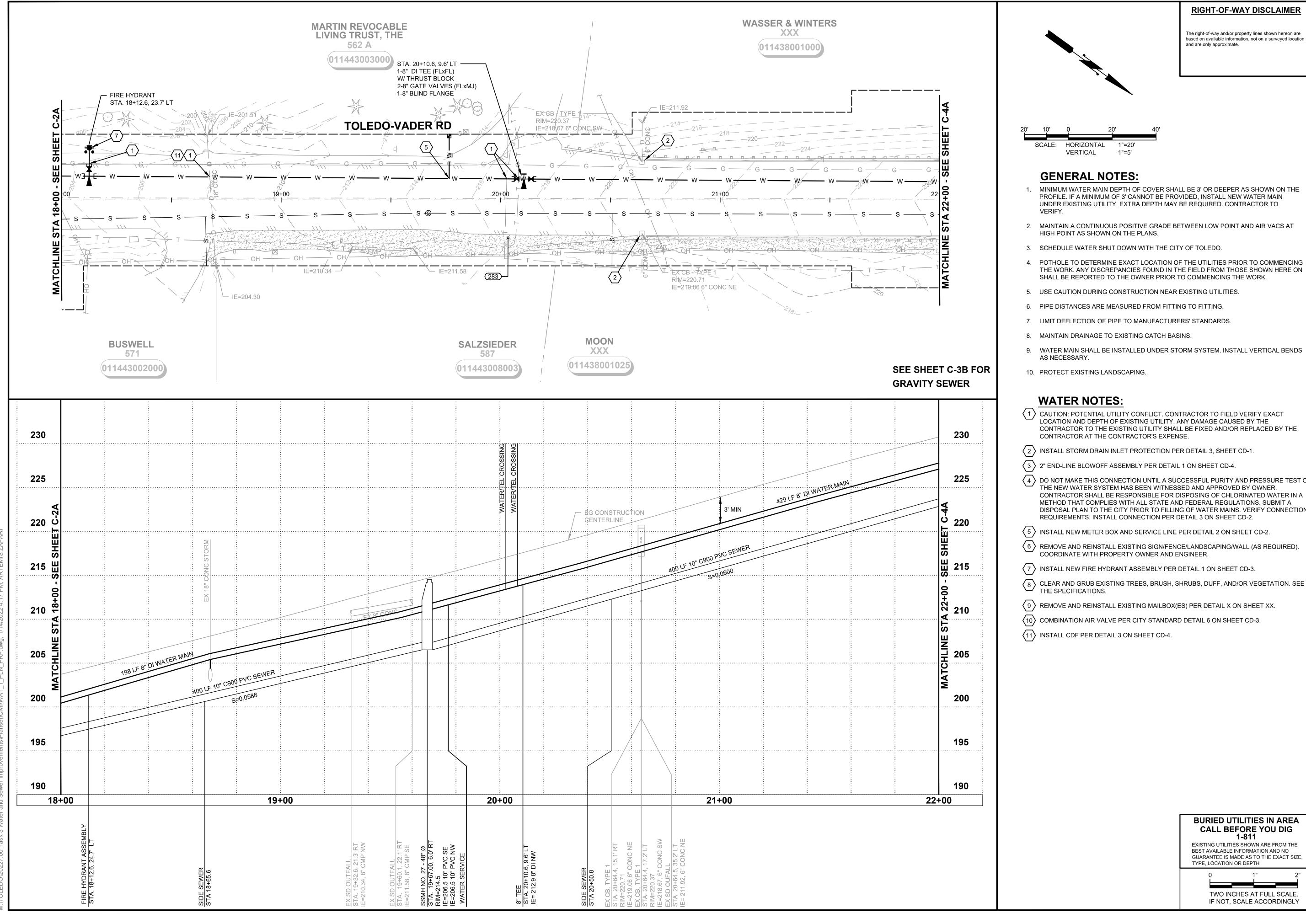


WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI R MAIN PLAN AND PRO STA 14+00 TO 18+00

TOLEDO CITY OF

SHEET: C-2A

JOB NO.: 20227.00 DWG:WAT_1_PLN_PRF



The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location



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OF 3' CANNOT BE PROVIDED, INSTALL NEW WATER MAIN	
Y. EXTRA DEPTH MAY BE REQUIRED. CONTRACTOR TO	
	4 8

- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING
- 9. WATER MAIN SHALL BE INSTALLED UNDER STORM SYSTEM. INSTALL VERTICAL BENDS
- (1) CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE
- DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF THE NEW WATER SYSTEM HAS BEEN WITNESSED AND APPROVED BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CHLORINATED WATER IN A METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION

- CLEAR AND GRUB EXISTING TREES, BRUSH, SHRUBS, DUFF, AND/OR VEGETATION. SEE THE SPECIFICATIONS.
- 9 REMOVE AND REINSTALL EXISTING MAILBOX(ES) PER DETAIL X ON SHEET XX.

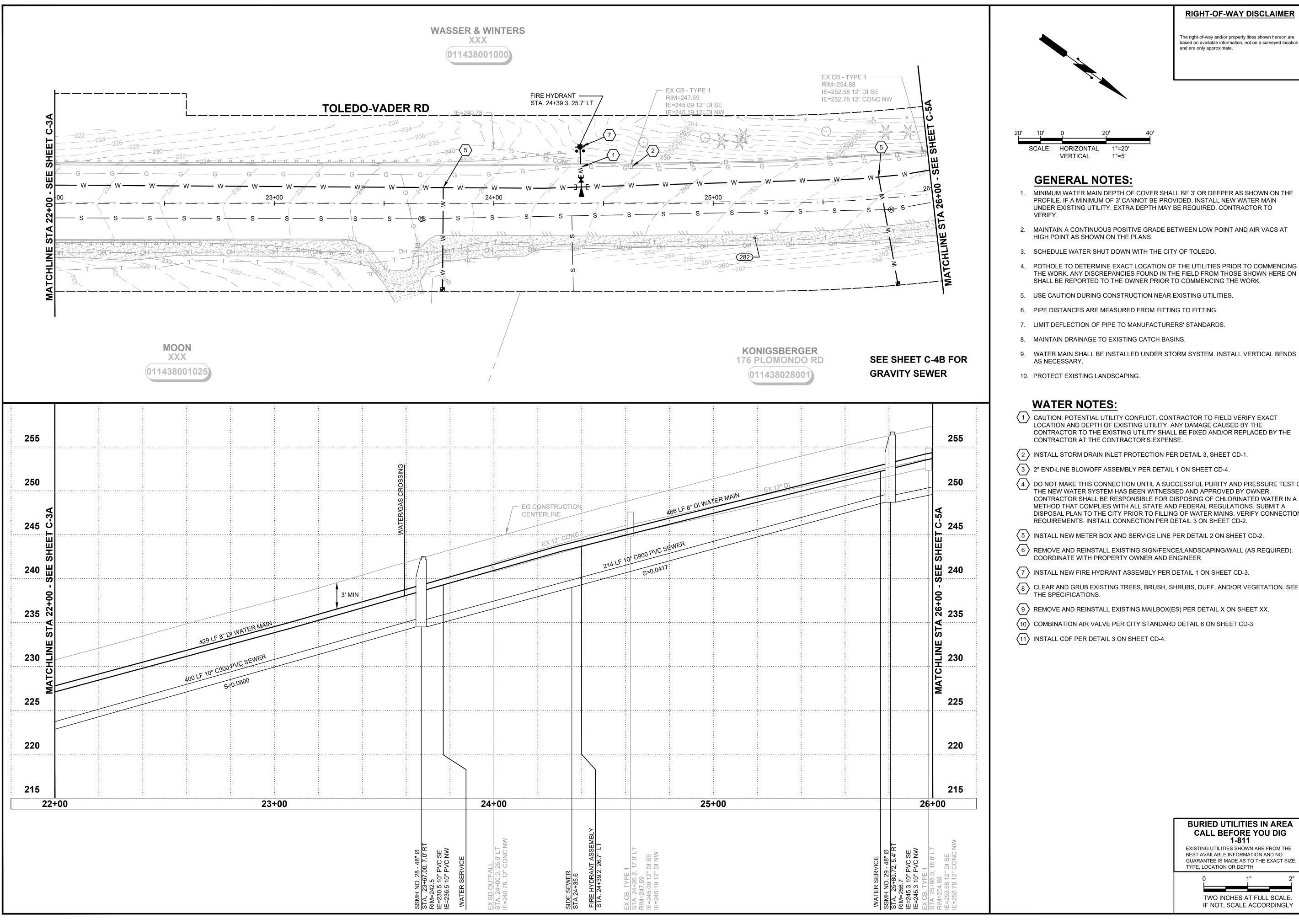
TOLEDO

WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI

SHEET: C-3A

CITY OF

JOB NO.: 20227.00 DWG:WAT_1_PLN_PRF



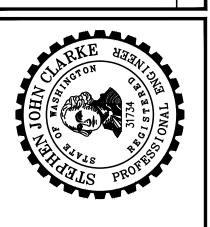
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- 2. MAINTAIN A CONTINUOUS POSITIVE GRADE BETWEEN LOW POINT AND AIR VACS AT
- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HERE ON
- \langle 1 \rangle CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE
- 4 DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CHLORINATED WATER IN A METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION
- (8) CLEAR AND GRUB EXISTING TREES, BRUSH, SHRUBS, DUFF, AND/OR VEGETATION. SEE THE SPECIFICATIONS.



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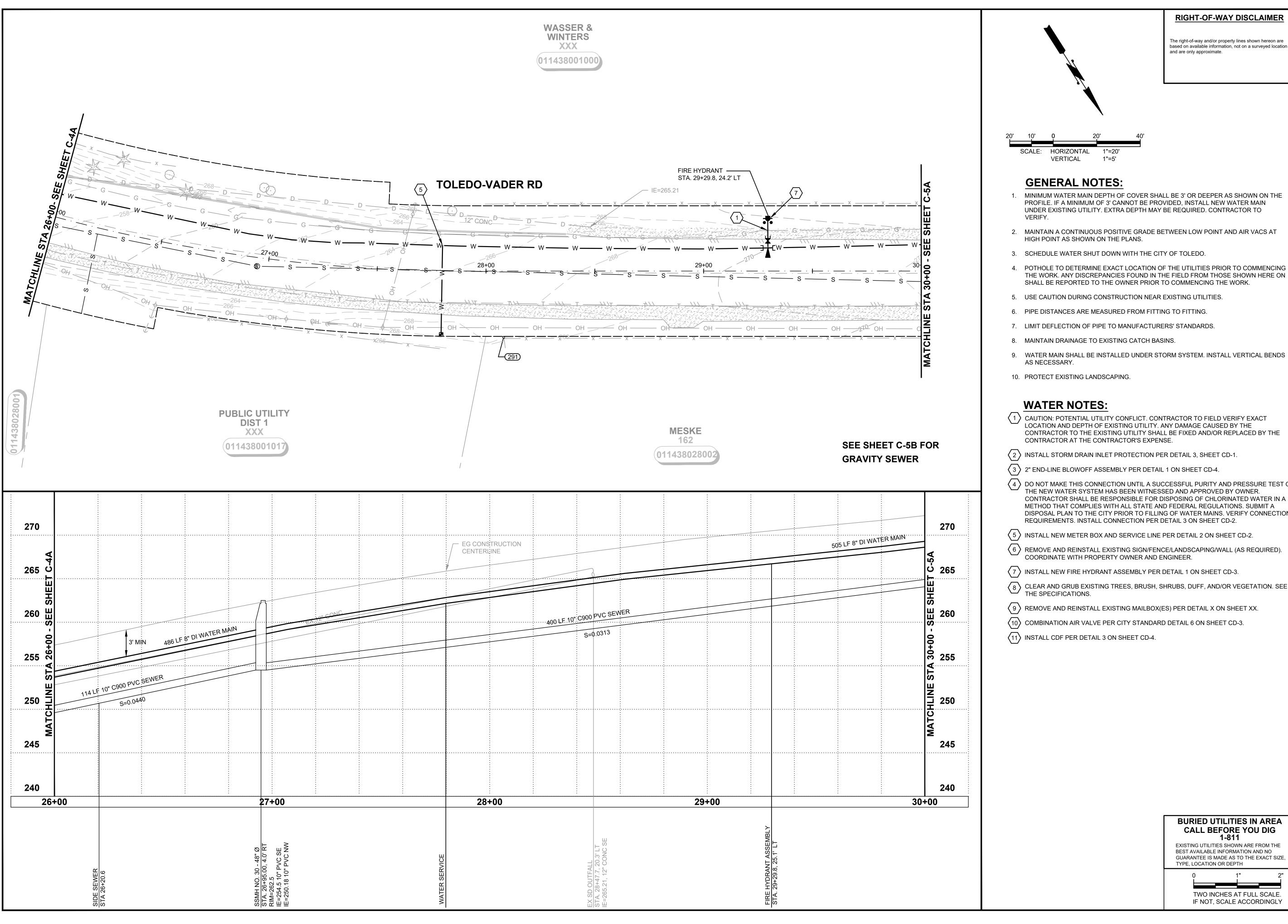
WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI TOLEDO

CITY OF

SHEET: C-4A

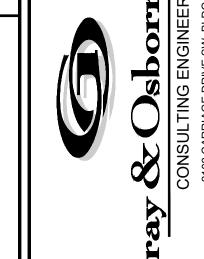
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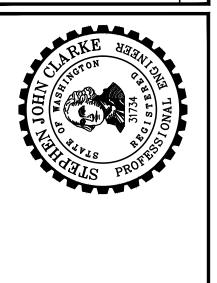




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- PROFILE. IF A MINIMUM OF 3' CANNOT BE PROVIDED, INSTALL NEW WATER MAIN UNDER EXISTING UTILITY. EXTRA DEPTH MAY BE REQUIRED. CONTRACTOR TO
- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HERE ON
- LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE
- 4 DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CHLORINATED WATER IN A METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION
- (8) CLEAR AND GRUB EXISTING TREES, BRUSH, SHRUBS, DUFF, AND/OR VEGETATION. SEE THE SPECIFICATIONS.



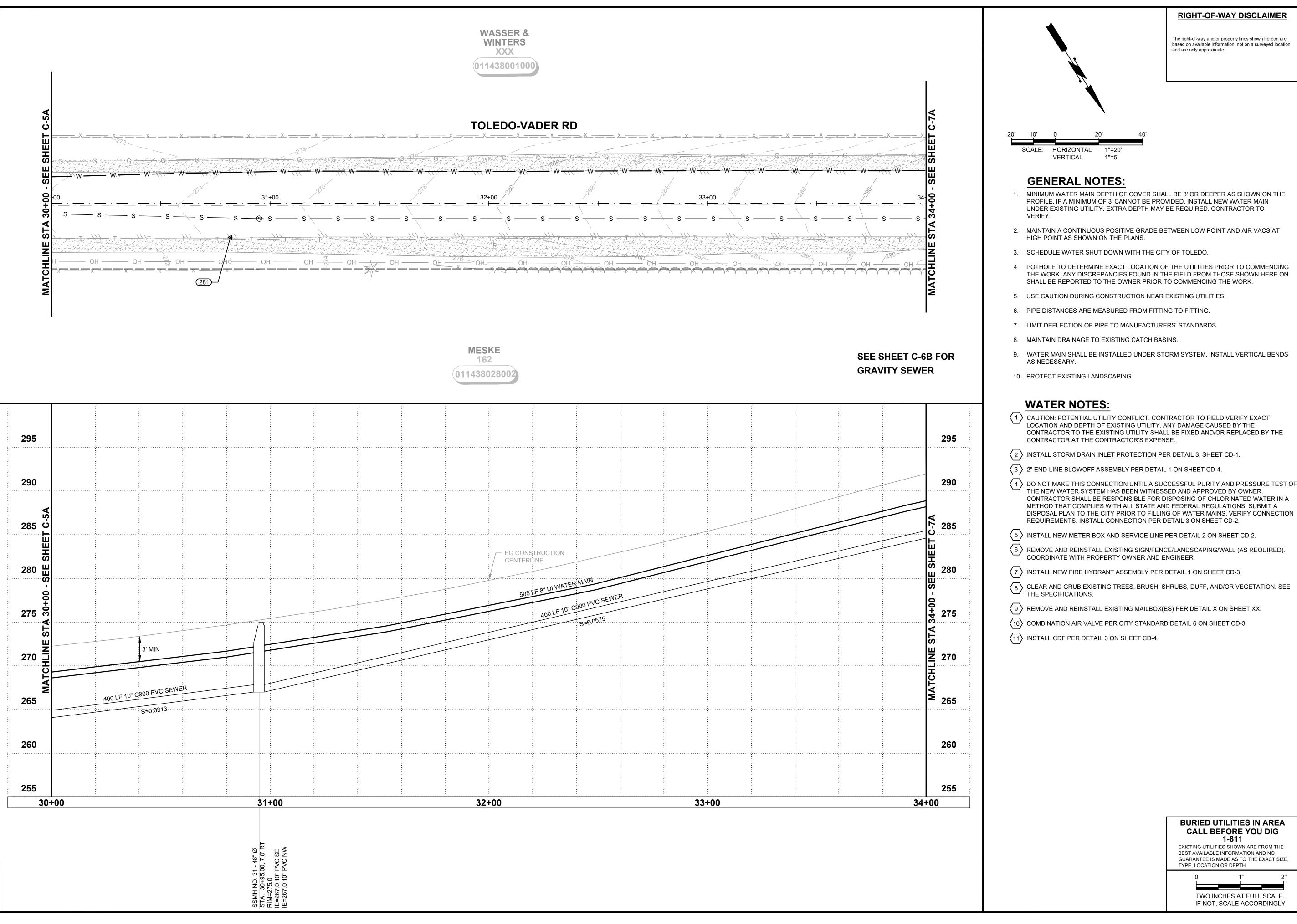
WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI TOLEDO CITY OF

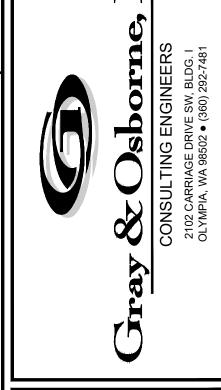
BURIED UTILITIES IN AREA CALL BEFORE YOU DIG 1-811

GUARANTEE IS MADE AS TO THE EXACT SIZE,

TWO INCHES AT FULL SCALE IF NOT, SCALE ACCORDINGLY SHEET: C-5A

JOB NO.: 20227.00 DWG:WAT_2_PLN_PRF





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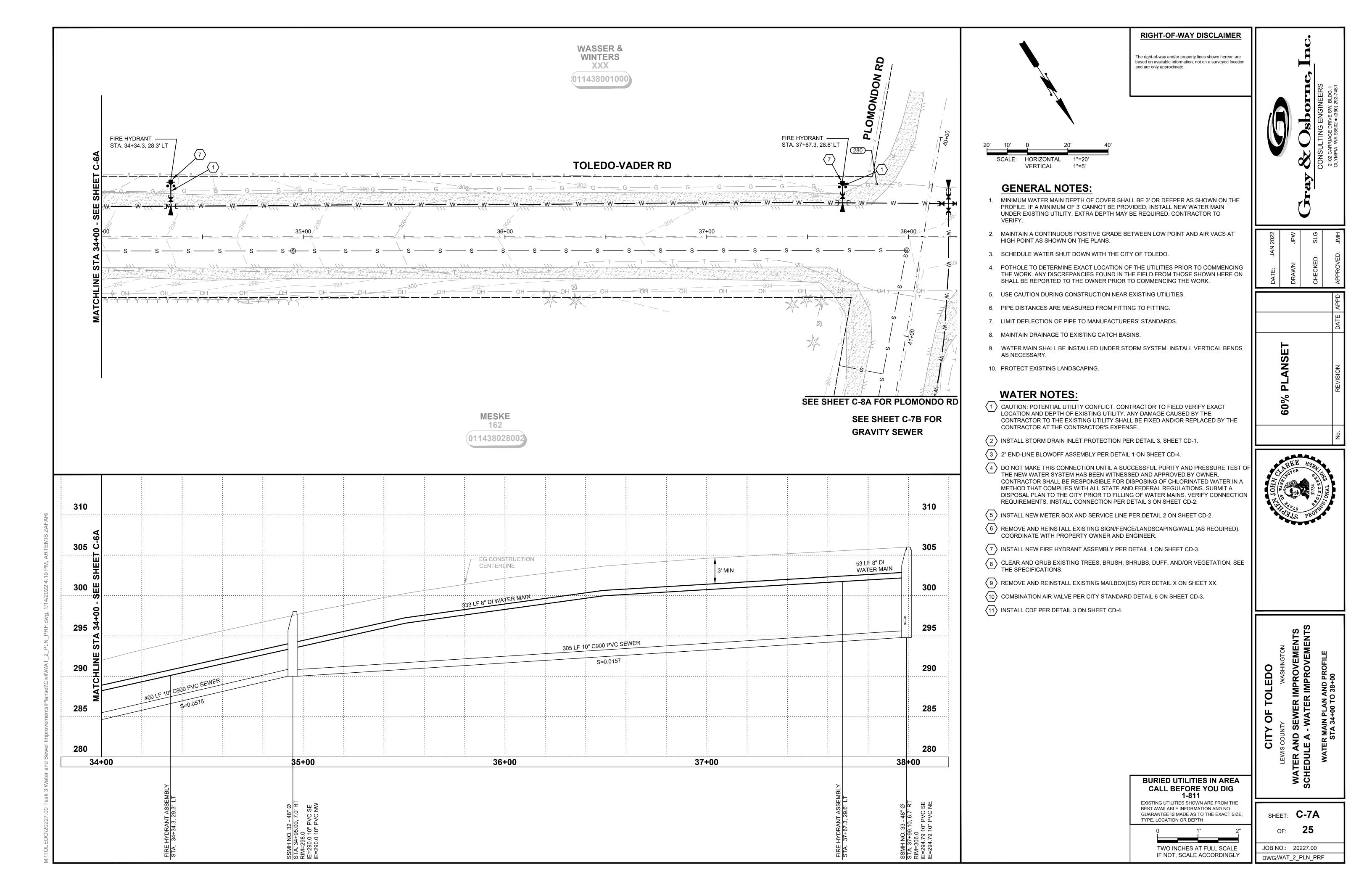
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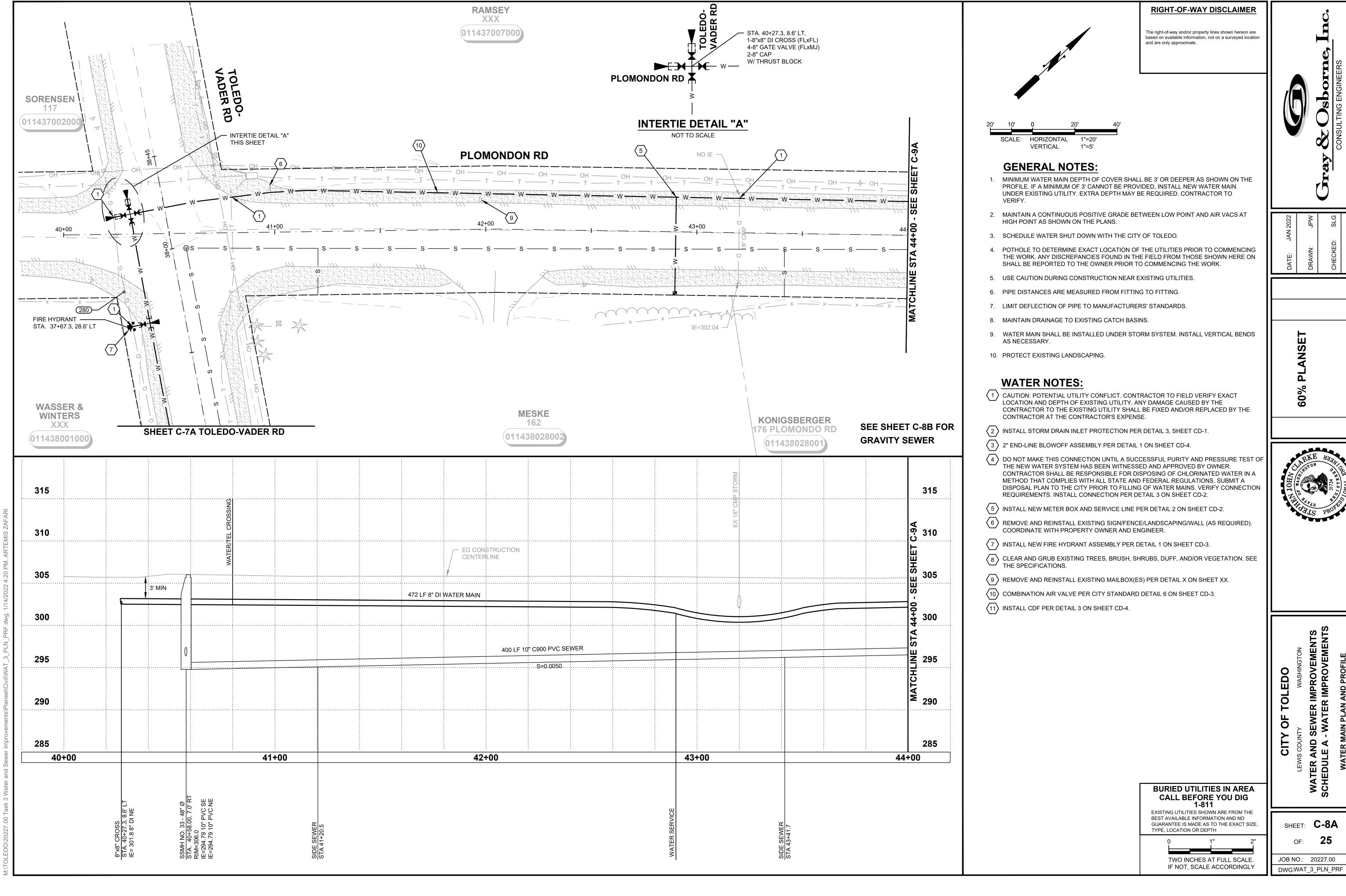


WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI TOLEDO CITY OF

SHEET: C-6A

JOB NO.: 20227.00 DWG:WAT_2_PLN_PRF

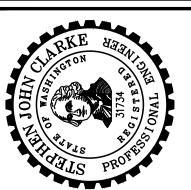


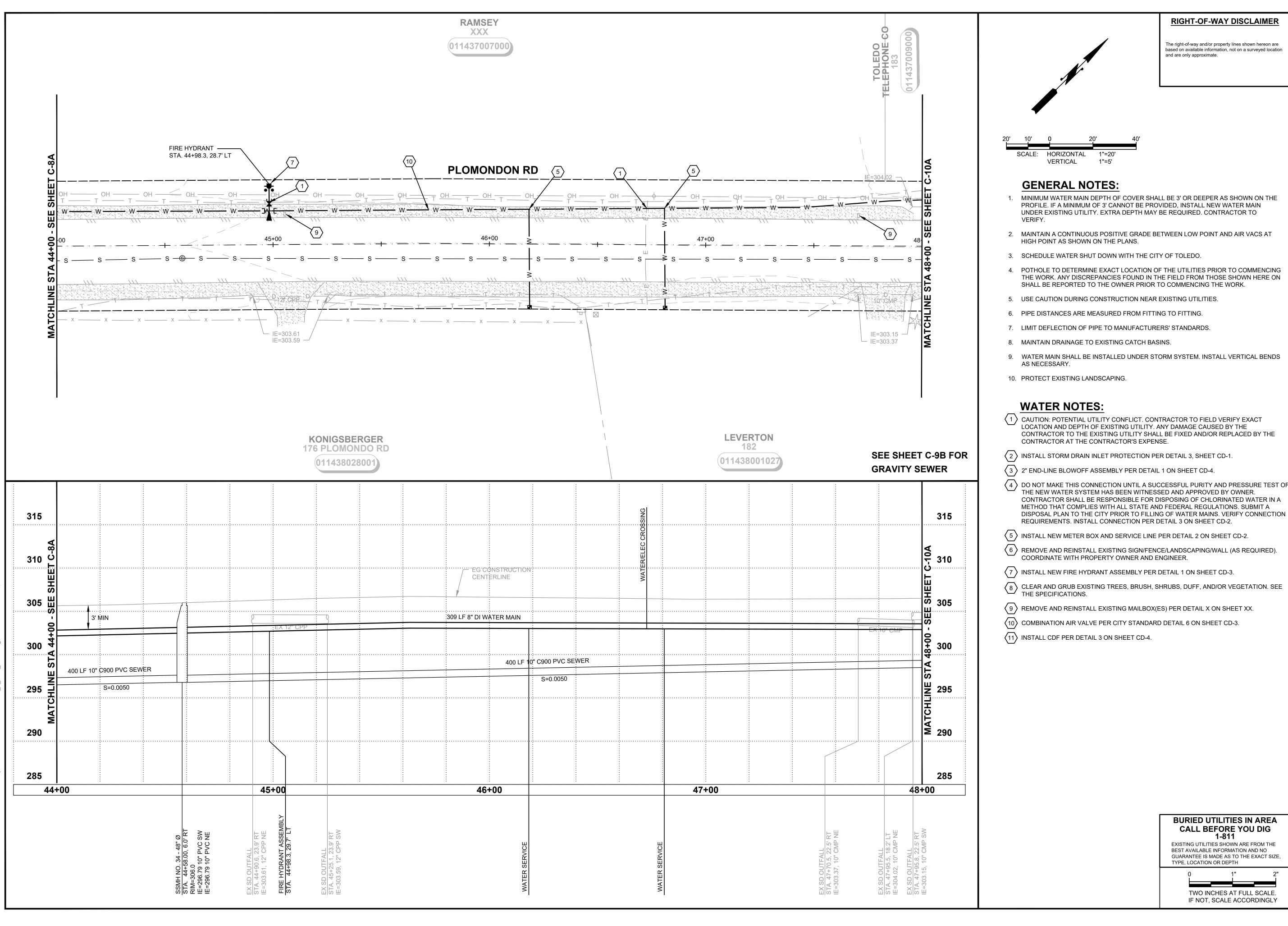




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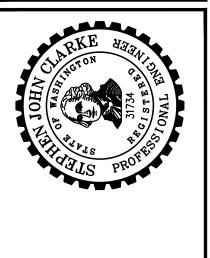
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- 1. MINIMUM WATER MAIN DEPTH OF COVER SHALL BE 3' OR DEEPER AS SHOWN ON THE PROFILE. IF A MINIMUM OF 3' CANNOT BE PROVIDED, INSTALL NEW WATER MAIN UNDER EXISTING UTILITY. EXTRA DEPTH MAY BE REQUIRED. CONTRACTOR TO
- 2. MAINTAIN A CONTINUOUS POSITIVE GRADE BETWEEN LOW POINT AND AIR VACS AT
- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HERE ON
- 9. WATER MAIN SHALL BE INSTALLED UNDER STORM SYSTEM. INSTALL VERTICAL BENDS
- LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE
- DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF THE NEW WATER SYSTEM HAS BEEN WITNESSED AND APPROVED BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CHLORINATED WATER IN A METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION



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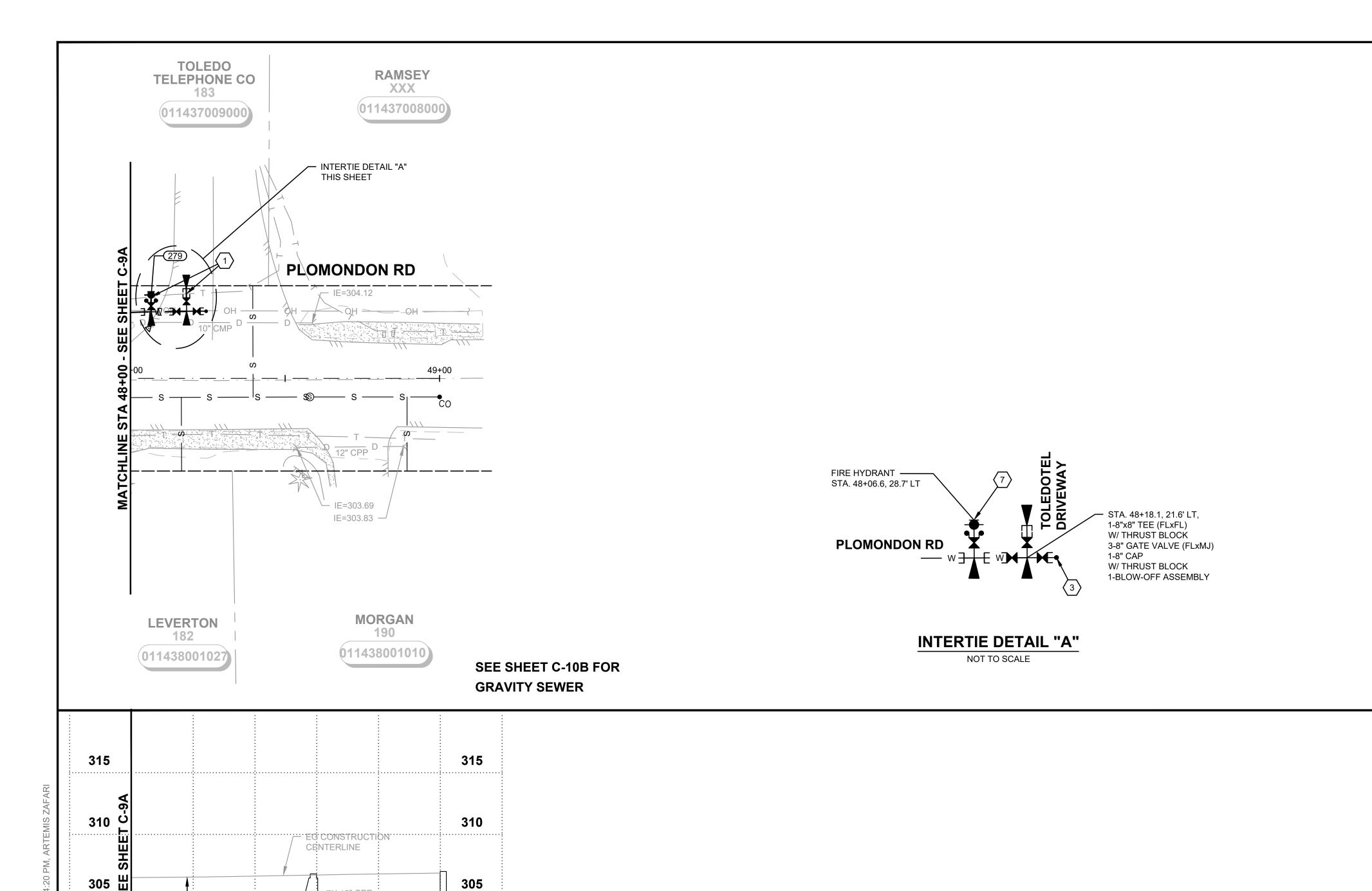


WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI TOLEDO

CITY OF

SHEET: C-9A

JOB NO.: 20227.00 IF NOT, SCALE ACCORDINGLY DWG:WAT_3_PLN_PRF



EX 12" CPP.

42 LF 10" C900 PVC SEWER

S=0.0050

300

295

290

285

49+00

WATER MAII

48+00

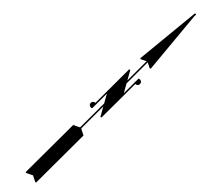
.400 LF.10 C900.PVC SEWER.

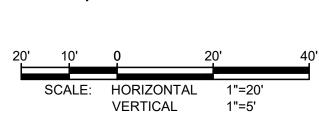
S#0.0050

SIDE SEWER STA 48+39.7



and are only approximate.





GENERAL NOTES:

- 1. MINIMUM WATER MAIN DEPTH OF COVER SHALL BE 3' OR DEEPER AS SHOWN ON THE PROFILE. IF A MINIMUM OF 3' CANNOT BE PROVIDED, INSTALL NEW WATER MAIN UNDER EXISTING UTILITY. EXTRA DEPTH MAY BE REQUIRED. CONTRACTOR TO
- 2. MAINTAIN A CONTINUOUS POSITIVE GRADE BETWEEN LOW POINT AND AIR VACS AT HIGH POINT AS SHOWN ON THE PLANS.
- 3. SCHEDULE WATER SHUT DOWN WITH THE CITY OF TOLEDO.
- 4. POTHOLE TO DETERMINE EXACT LOCATION OF THE UTILITIES PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HERE ON SHALL BE REPORTED TO THE OWNER PRIOR TO COMMENCING THE WORK.
- 5. USE CAUTION DURING CONSTRUCTION NEAR EXISTING UTILITIES.
- 6. PIPE DISTANCES ARE MEASURED FROM FITTING TO FITTING.
- 7. LIMIT DEFLECTION OF PIPE TO MANUFACTURERS' STANDARDS.
- 8. MAINTAIN DRAINAGE TO EXISTING CATCH BASINS.
- 9. WATER MAIN SHALL BE INSTALLED UNDER STORM SYSTEM. INSTALL VERTICAL BENDS AS NECESSARY.
- 10. PROTECT EXISTING LANDSCAPING.

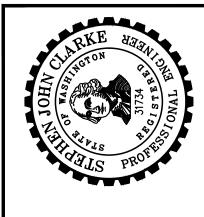
WATER NOTES:

- \langle 1 \rangle CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- 2 INSTALL STORM DRAIN INLET PROTECTION PER DETAIL 3, SHEET CD-1.
- (3) 2" END-LINE BLOWOFF ASSEMBLY PER DETAIL 1 ON SHEET CD-4.
- DO NOT MAKE THIS CONNECTION UNTIL A SUCCESSFUL PURITY AND PRESSURE TEST OF THE NEW WATER SYSTEM HAS BEEN WITNESSED AND APPROVED BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CHLORINATED WATER IN A METHOD THAT COMPLIES WITH ALL STATE AND FEDERAL REGULATIONS. SUBMIT A DISPOSAL PLAN TO THE CITY PRIOR TO FILLING OF WATER MAINS. VERIFY CONNECTION REQUIREMENTS. INSTALL CONNECTION PER DETAIL 3 ON SHEET CD-2.
- 5 INSTALL NEW METER BOX AND SERVICE LINE PER DETAIL 2 ON SHEET CD-2.
- REMOVE AND REINSTALL EXISTING SIGN/FENCE/LANDSCAPING/WALL (AS REQUIRED). COORDINATE WITH PROPERTY OWNER AND ENGINEER.
- $\langle 7 \rangle$ INSTALL NEW FIRE HYDRANT ASSEMBLY PER DETAIL 1 ON SHEET CD-3.
- CLEAR AND GRUB EXISTING TREES, BRUSH, SHRUBS, DUFF, AND/OR VEGETATION. SEE THE SPECIFICATIONS.
- 9 REMOVE AND REINSTALL EXISTING MAILBOX(ES) PER DETAIL X ON SHEET XX.
- (10) COMBINATION AIR VALVE PER CITY STANDARD DETAIL 6 ON SHEET CD-3.
- 11 INSTALL CDF PER DETAIL 3 ON SHEET CD-4.



JAN 2022	JPW	SLG	JMH	
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TOLEDO CITY OF

WATER AND SEWER IMPROVEME SCHEDULE A - WATER IMPROVEMI

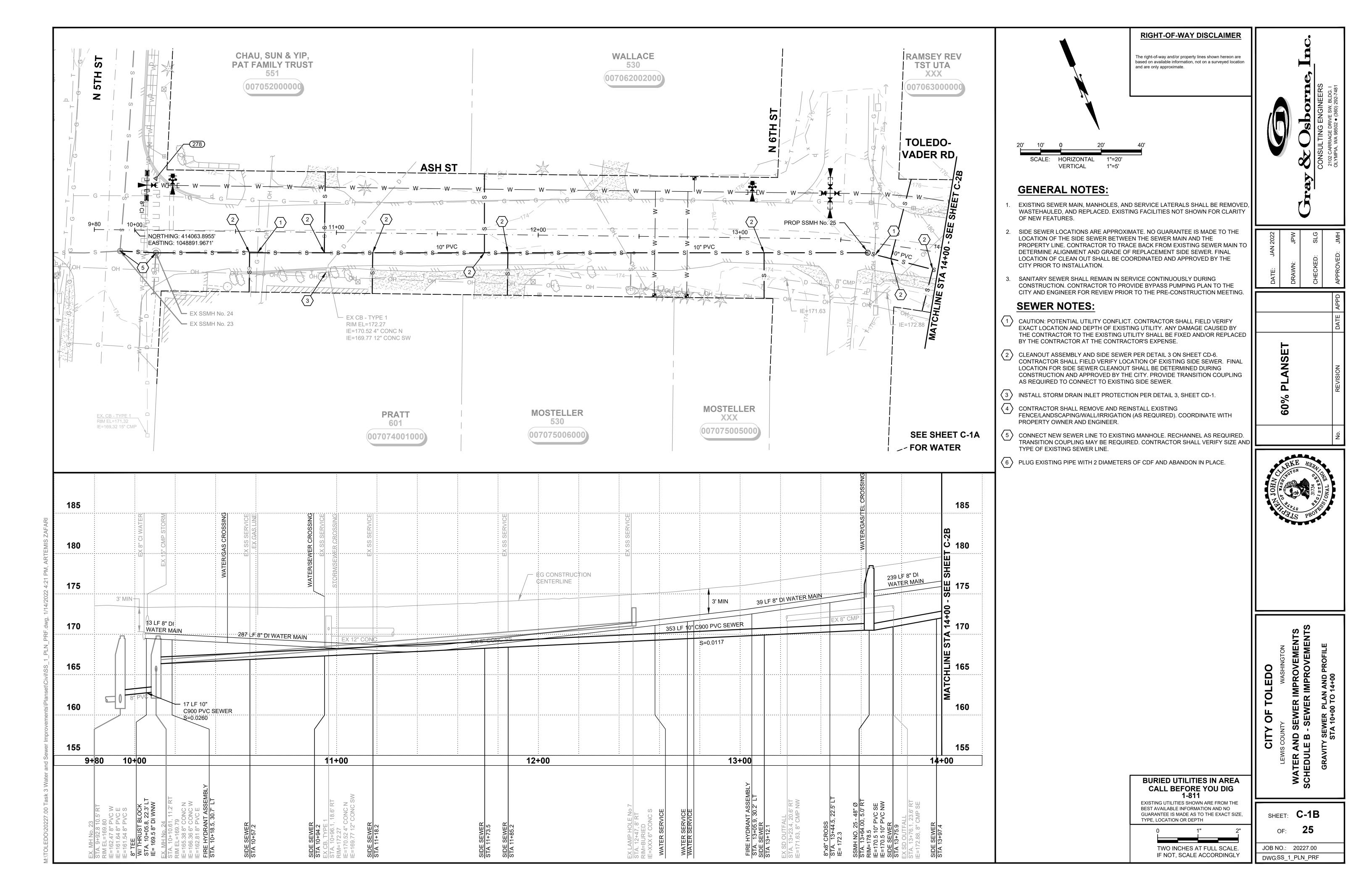
BURIED UTILITIES IN AREA CALL BEFORE YOU DIG

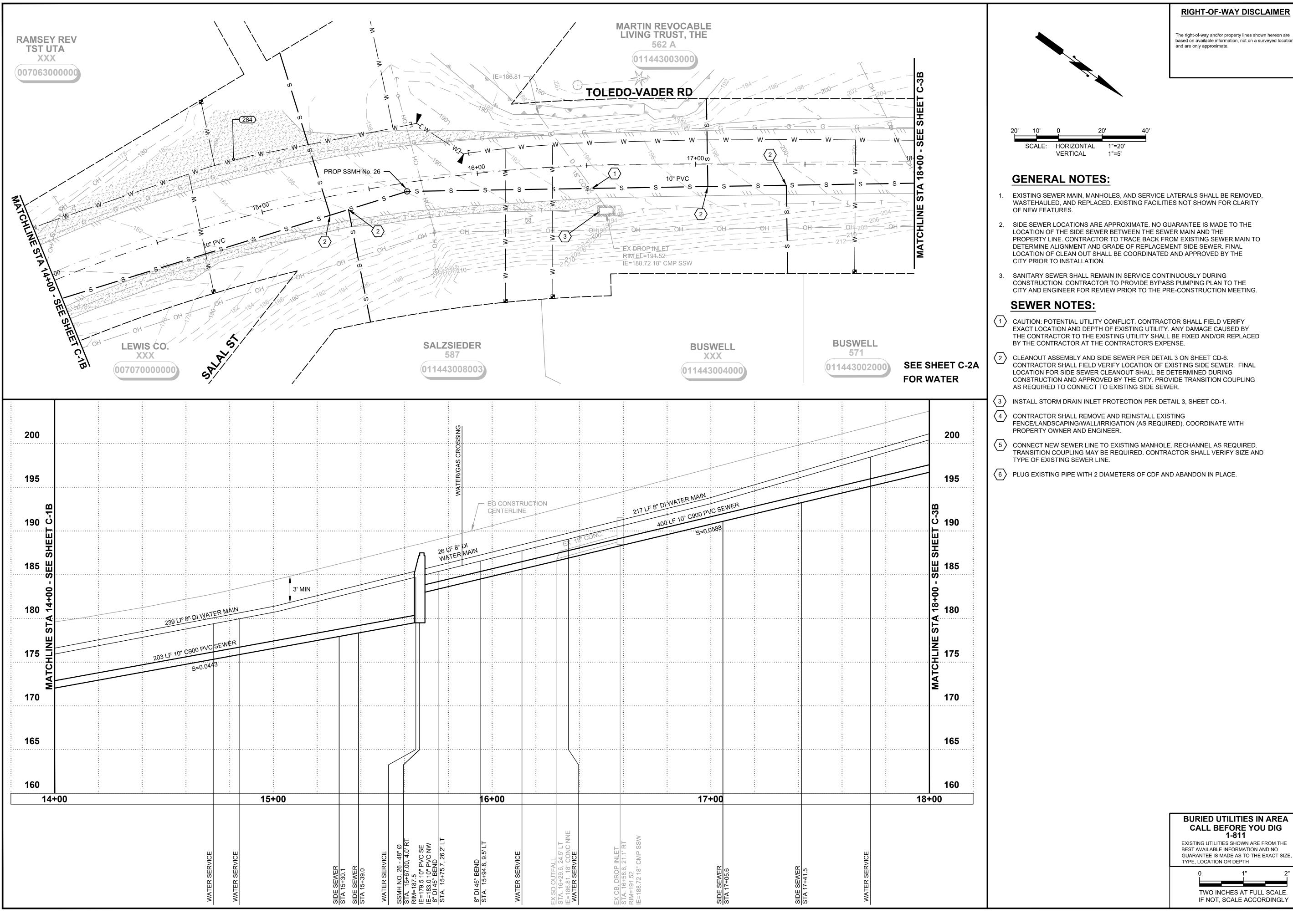
EXISTING UTILITIES SHOWN ARE FROM THE BEST AVAILABLE INFORMATION AND NO GUARANTEE IS MADE AS TO THE EXACT SIZE, TYPE, LOCATION OR DEPTH

TWO INCHES AT FULL SCALE IF NOT, SCALE ACCORDINGLY

SHEET: C-10A

JOB NO.: 20227.00 DWG:WAT_3_PLN_PRF

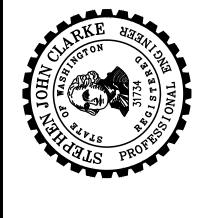




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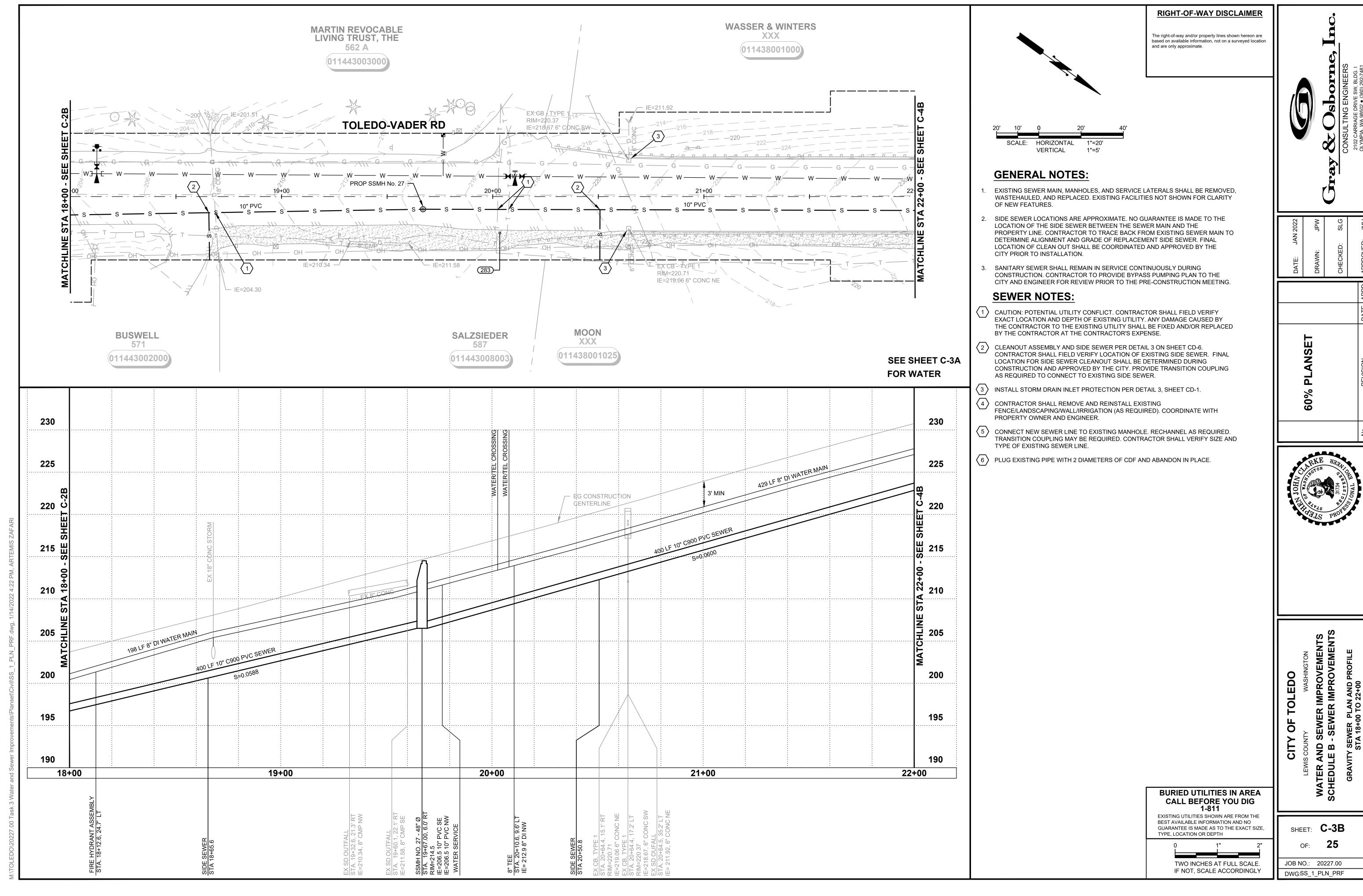
WATER AND SEWER IMPROVEME SCHEDULE B - SEWER IMPROVEM CITY OF

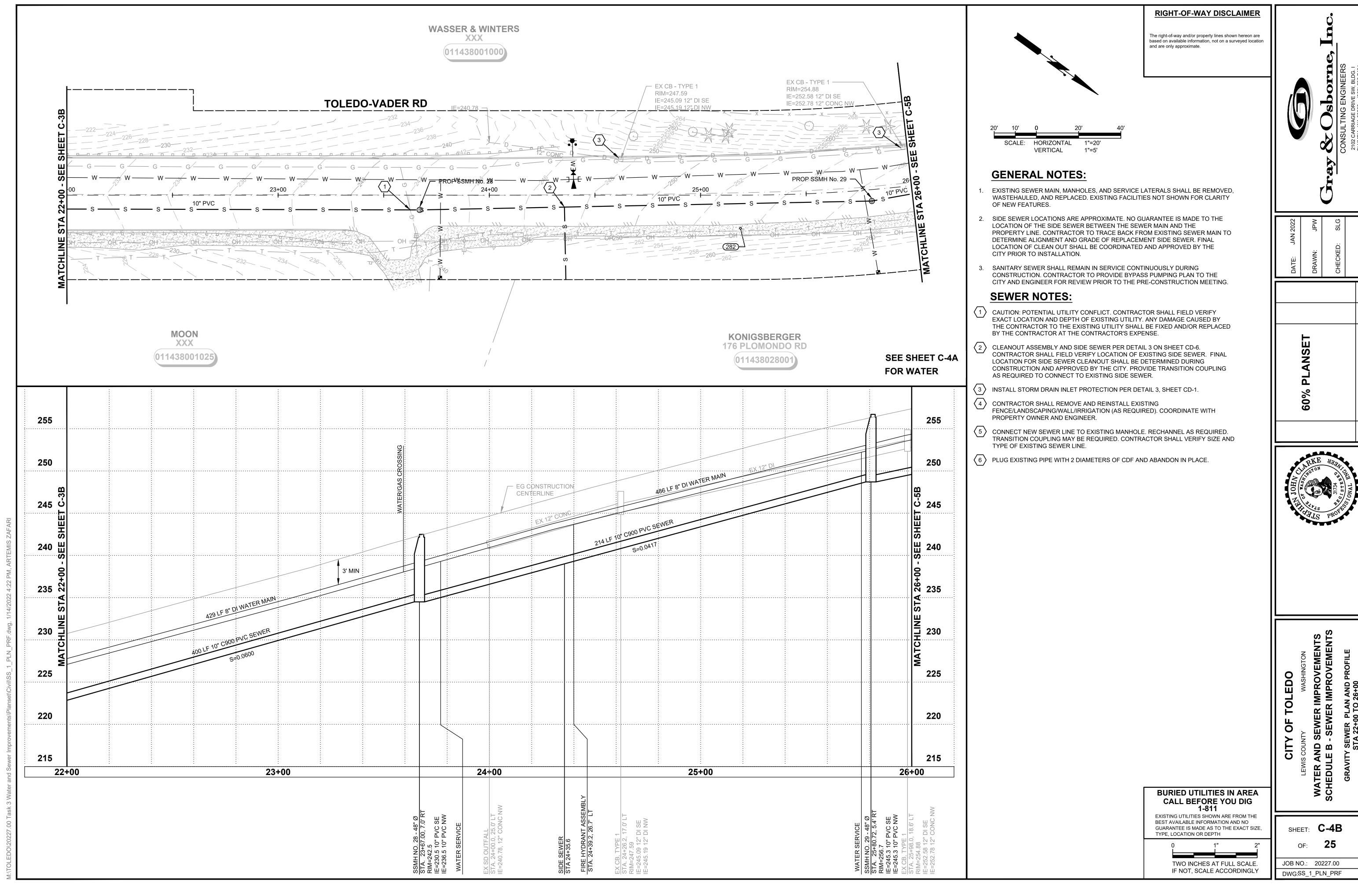
TOLEDO

SHEET: C-2B

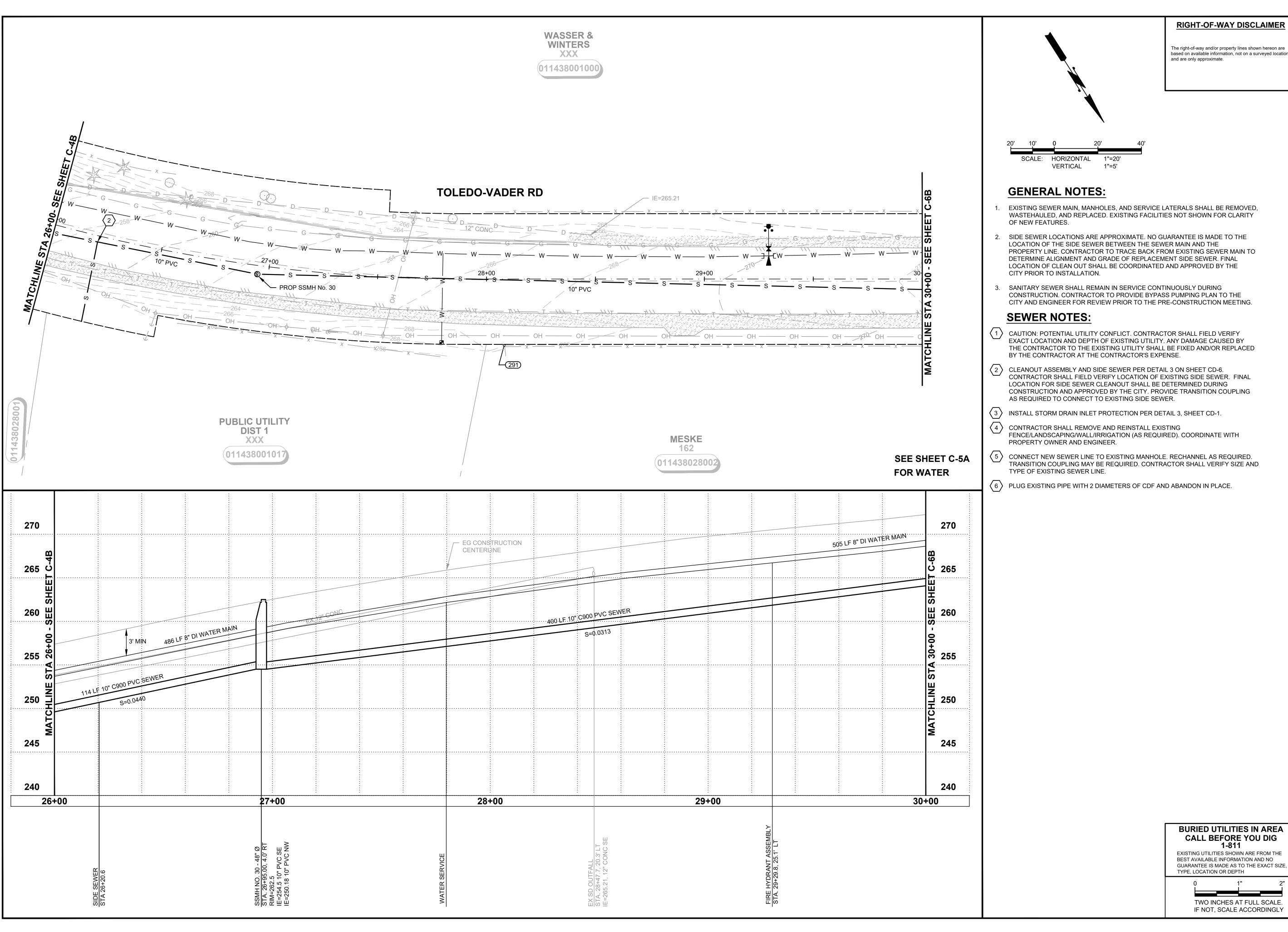
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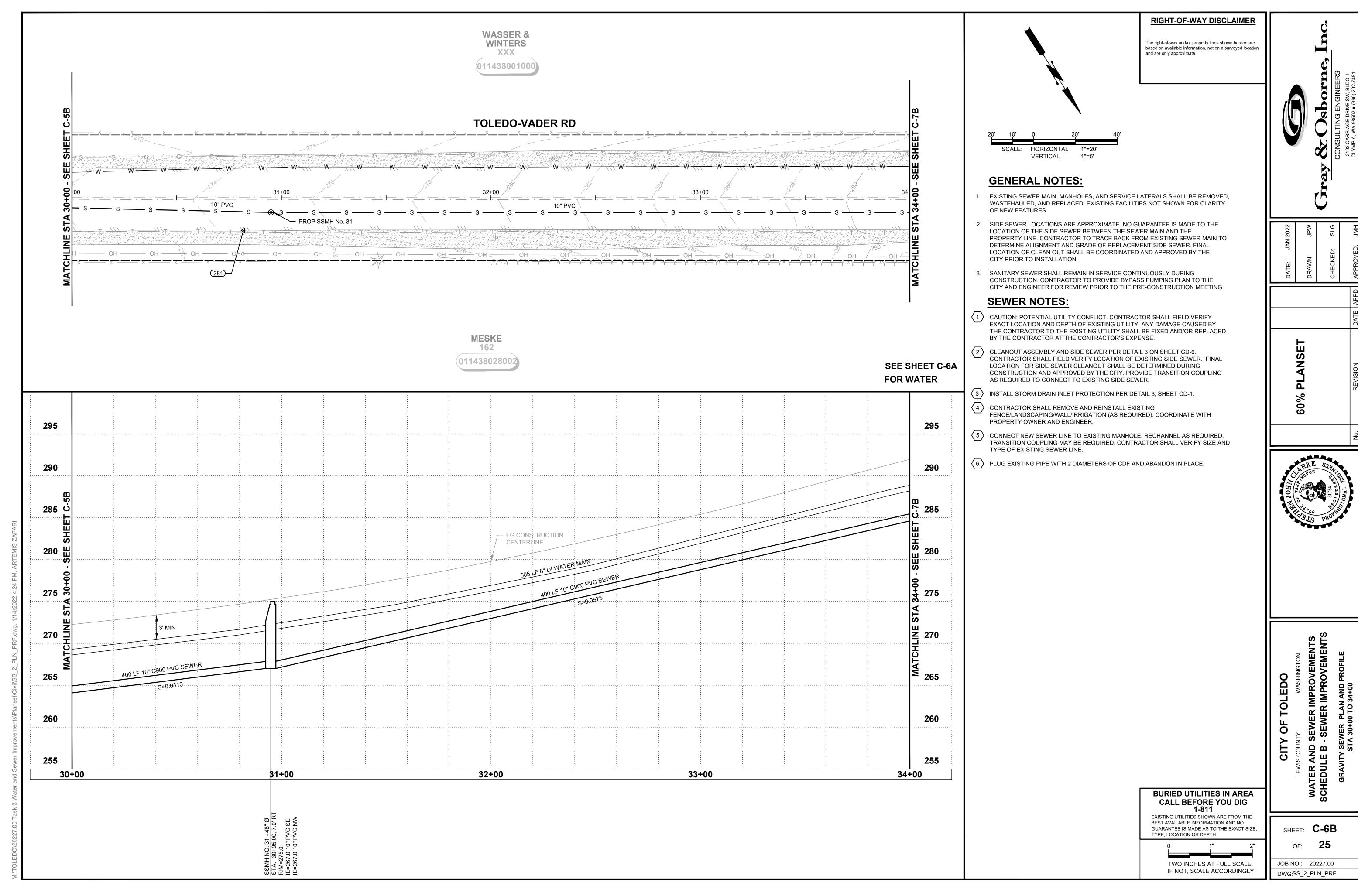


WATER AND SEWER IMPROVEN SCHEDULE B - SEWER IMPROVE TOLEDO

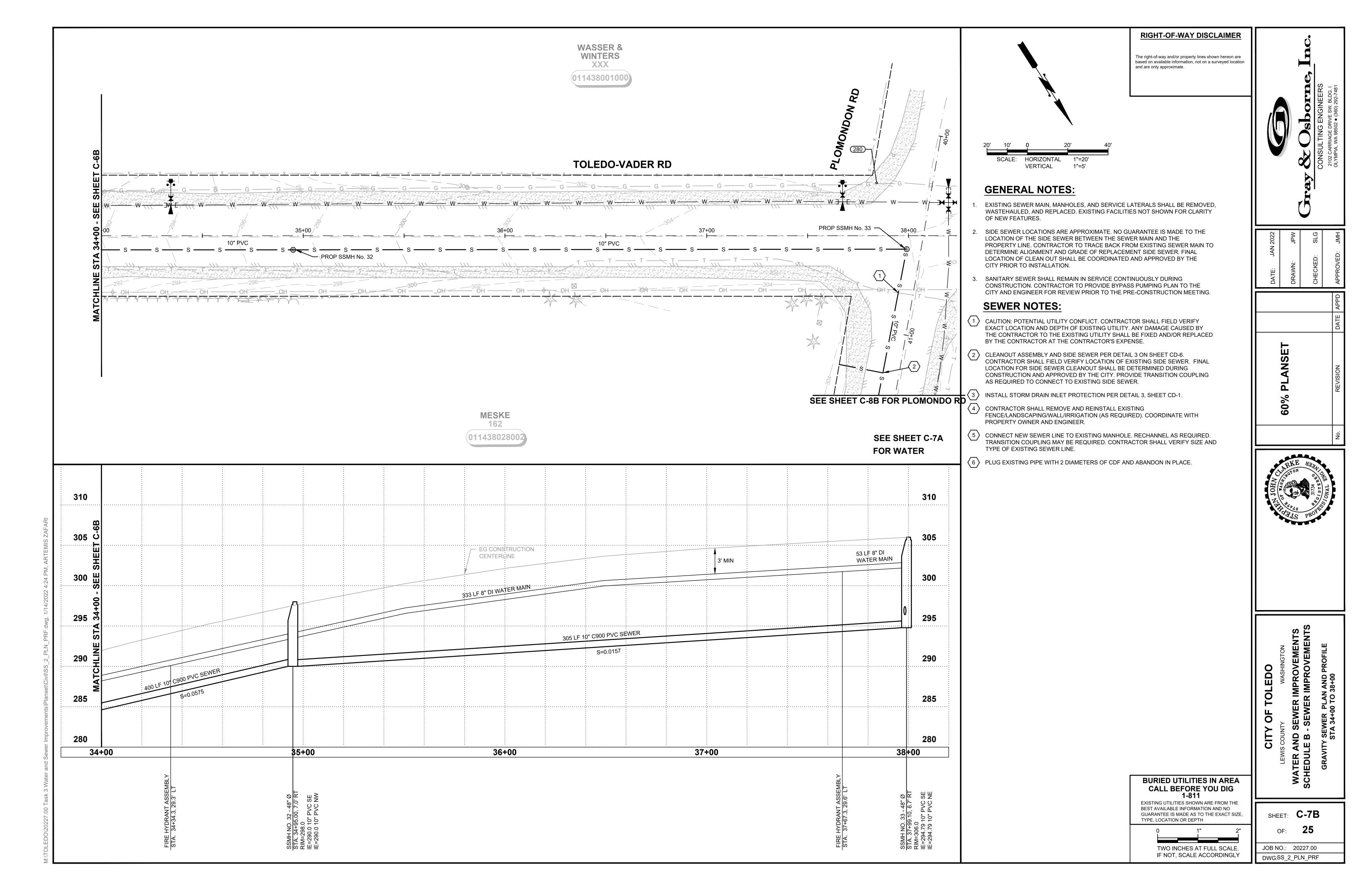
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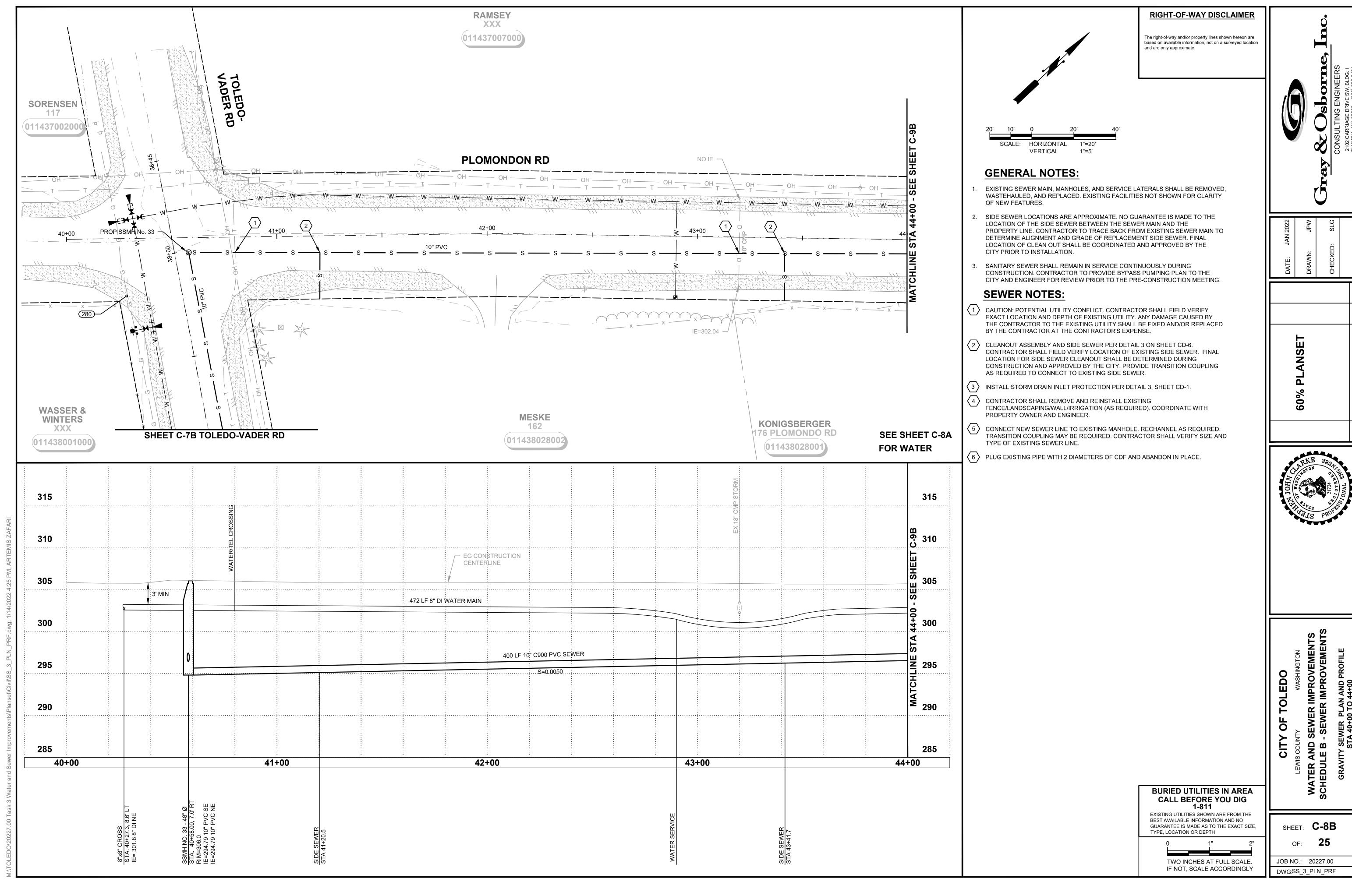
SHEET: C-5B

JOB NO.: 20227.00 DWG:SS_2_PLN_PRF



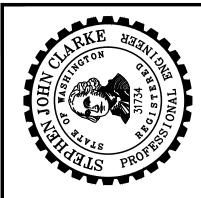
			
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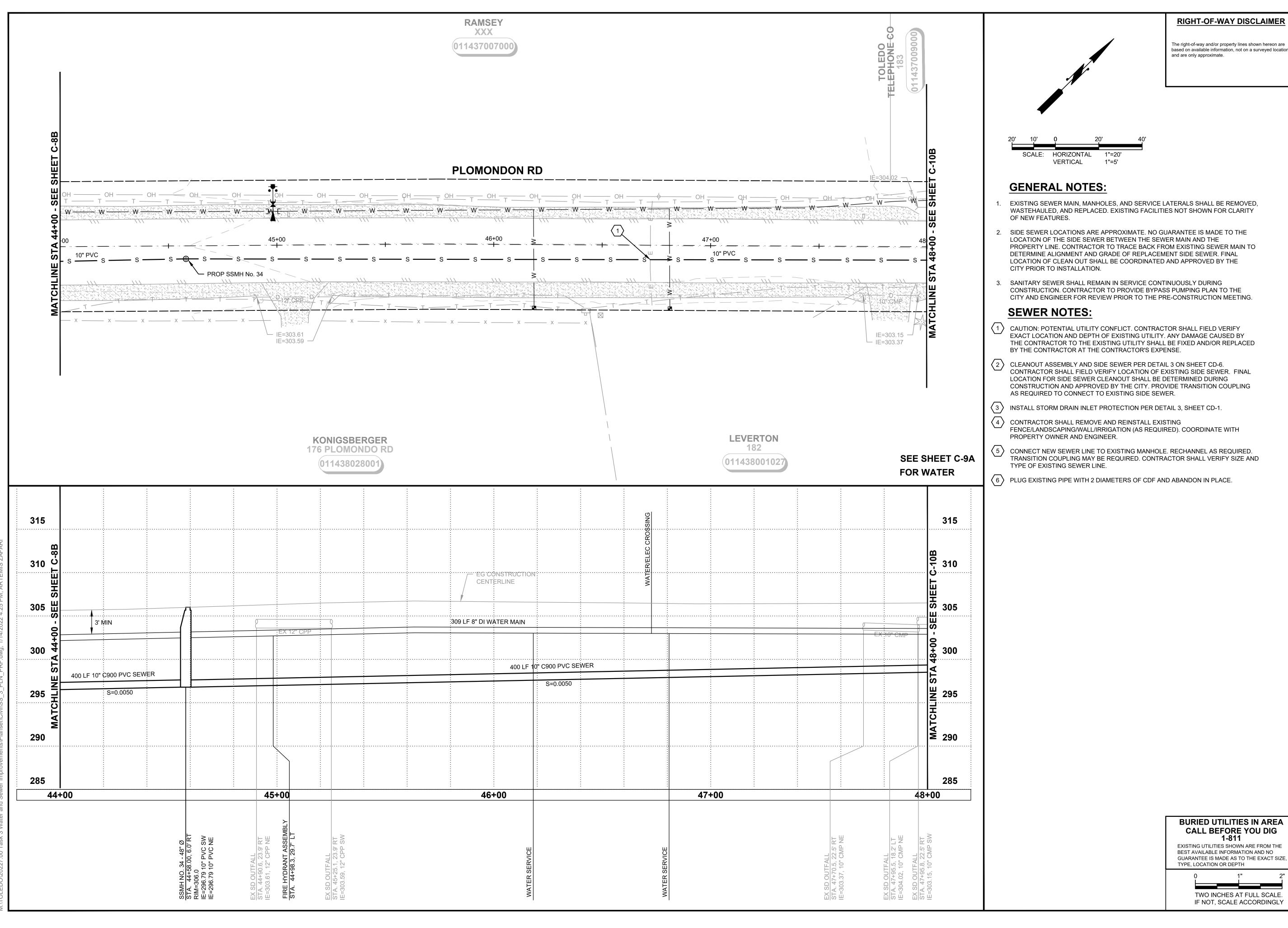




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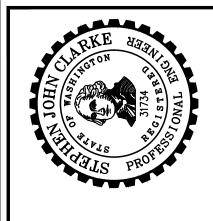




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based on available information, not on a surveyed location

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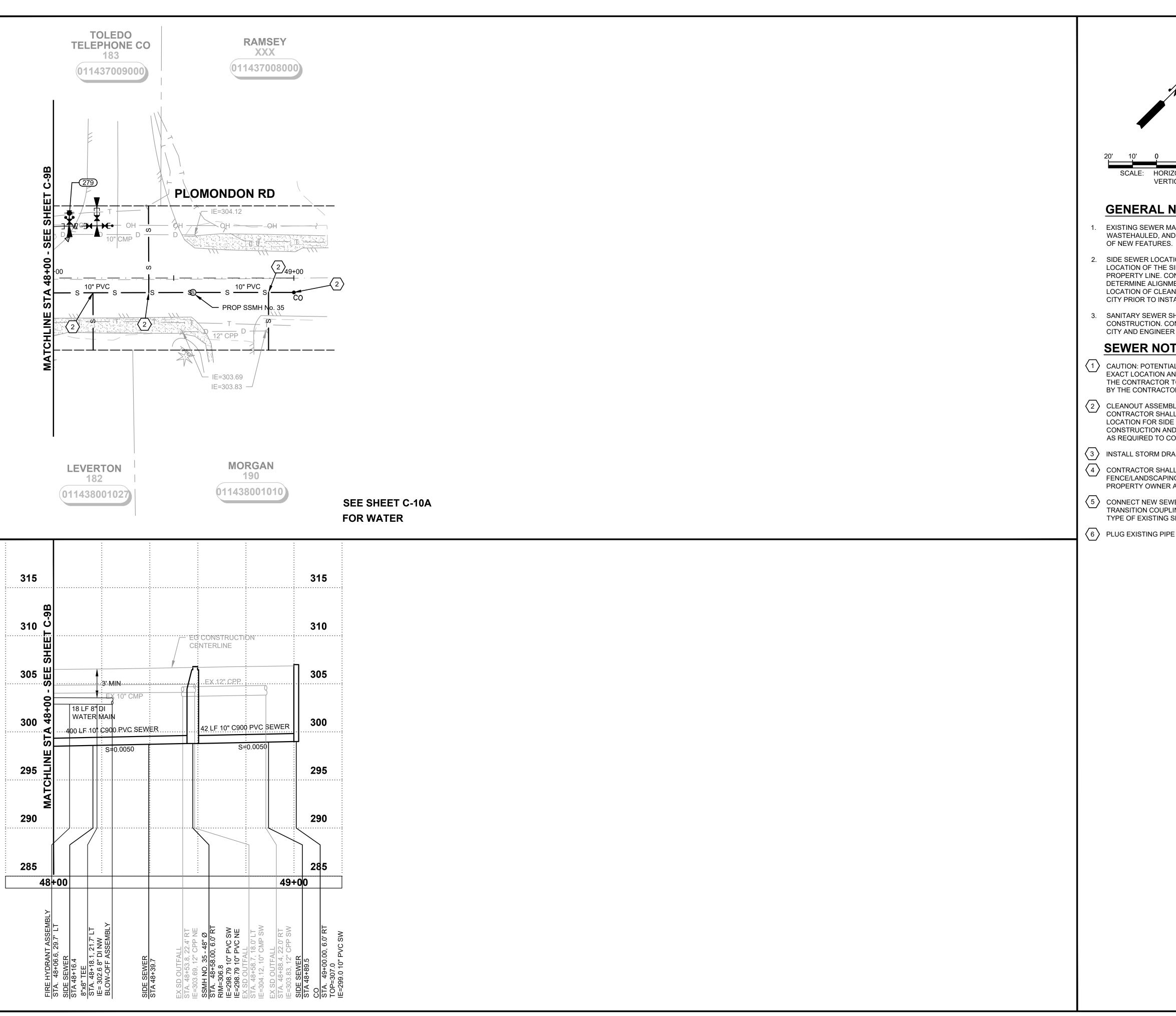
WATER AND SEWER IMPROVEME SCHEDULE B - SEWER IMPROVEM

TOLEDO

CITY OF

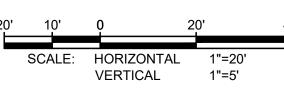
SHEET: **C-9B**

JOB NO.: 20227.00 DWG:SS_3_PLN_PRF



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and are only approximate.

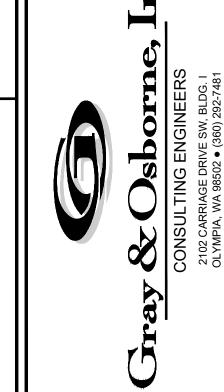


GENERAL NOTES:

- EXISTING SEWER MAIN, MANHOLES, AND SERVICE LATERALS SHALL BE REMOVED, WASTEHAULED, AND REPLACED. EXISTING FACILITIES NOT SHOWN FOR CLARITY
- SIDE SEWER LOCATIONS ARE APPROXIMATE. NO GUARANTEE IS MADE TO THE LOCATION OF THE SIDE SEWER BETWEEN THE SEWER MAIN AND THE PROPERTY LINE. CONTRACTOR TO TRACE BACK FROM EXISTING SEWER MAIN TO DETERMINE ALIGNMENT AND GRADE OF REPLACEMENT SIDE SEWER. FINAL LOCATION OF CLEAN OUT SHALL BE COORDINATED AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
- SANITARY SEWER SHALL REMAIN IN SERVICE CONTINUOUSLY DURING CONSTRUCTION. CONTRACTOR TO PROVIDE BYPASS PUMPING PLAN TO THE CITY AND ENGINEER FOR REVIEW PRIOR TO THE PRE-CONSTRUCTION MEETING.

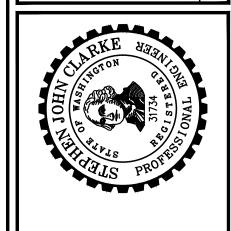
SEWER NOTES:

- (1) CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR TO THE EXISTING UTILITY SHALL BE FIXED AND/OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- CLEANOUT ASSEMBLY AND SIDE SEWER PER DETAIL 3 ON SHEET CD-6. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING SIDE SEWER. FINAL LOCATION FOR SIDE SEWER CLEANOUT SHALL BE DETERMINED DURING CONSTRUCTION AND APPROVED BY THE CITY. PROVIDE TRANSITION COUPLING AS REQUIRED TO CONNECT TO EXISTING SIDE SEWER.
- 3 INSTALL STORM DRAIN INLET PROTECTION PER DETAIL 3, SHEET CD-1.
- 4 CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING FENCE/LANDSCAPING/WALL/IRRIGATION (AS REQUIRED). COORDINATE WITH PROPERTY OWNER AND ENGINEER.
- 5 CONNECT NEW SEWER LINE TO EXISTING MANHOLE. RECHANNEL AS REQUIRED. TRANSITION COUPLING MAY BE REQUIRED. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING SEWER LINE.
- 6 PLUG EXISTING PIPE WITH 2 DIAMETERS OF CDF AND ABANDON IN PLACE.



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CITY OF TOLEDO

WATER AND SEWER IMPROVEMEI SCHEDULE B - SEWER IMPROVEME

SHEET: **C-10B**

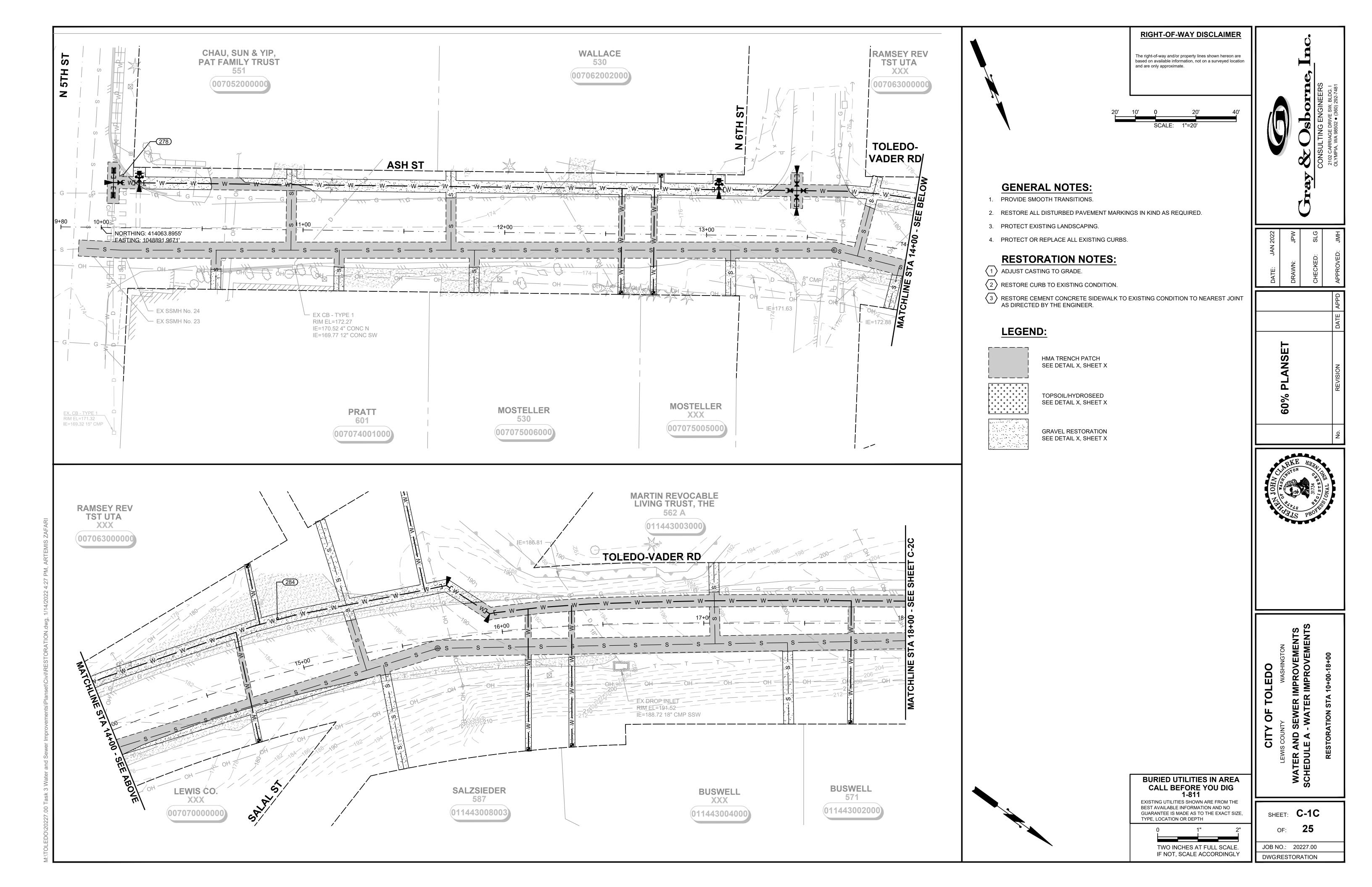
DWG:SS_3_PLN_PRF

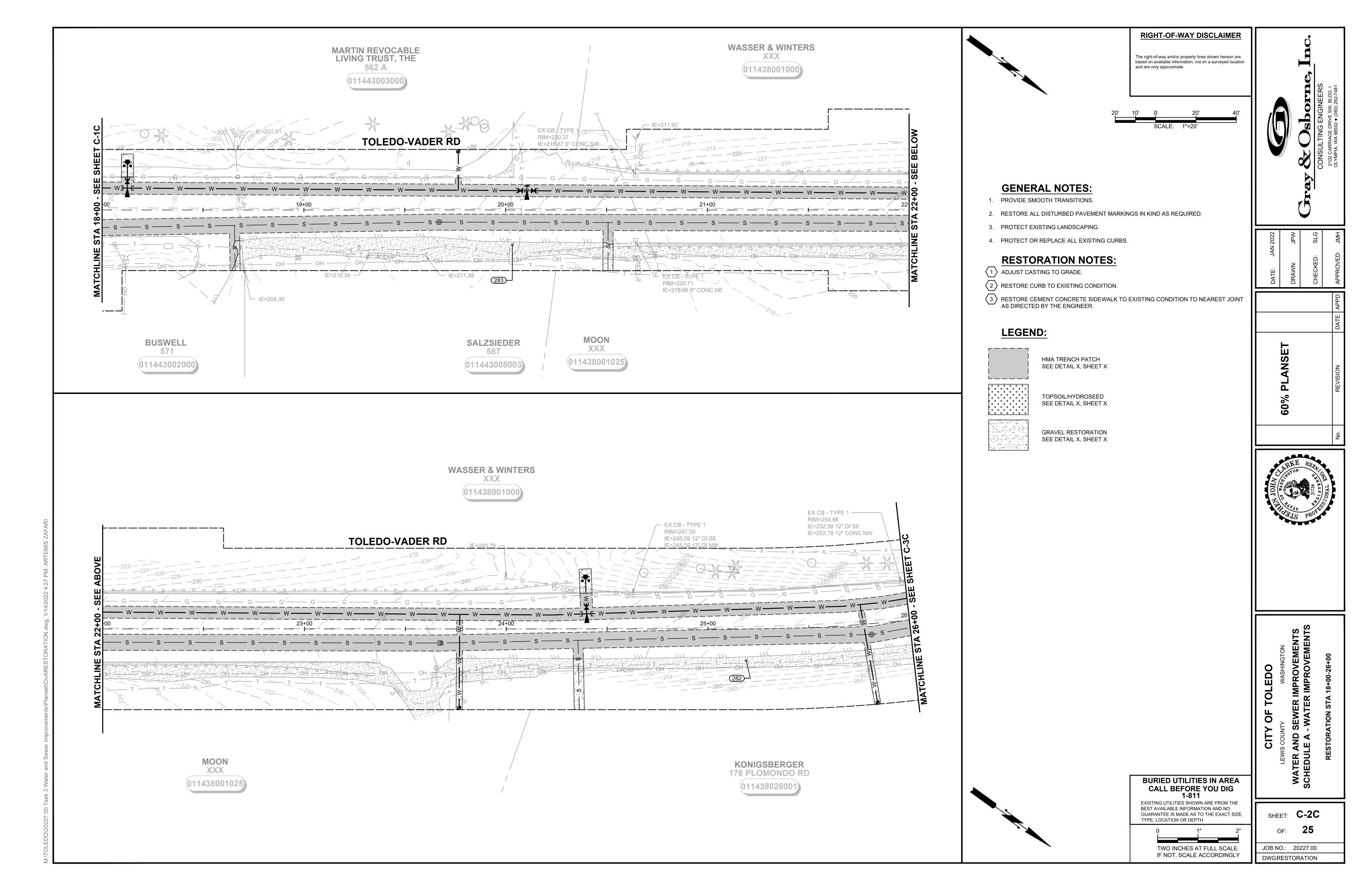
BURIED UTILITIES IN AREA CALL BEFORE YOU DIG
1-811

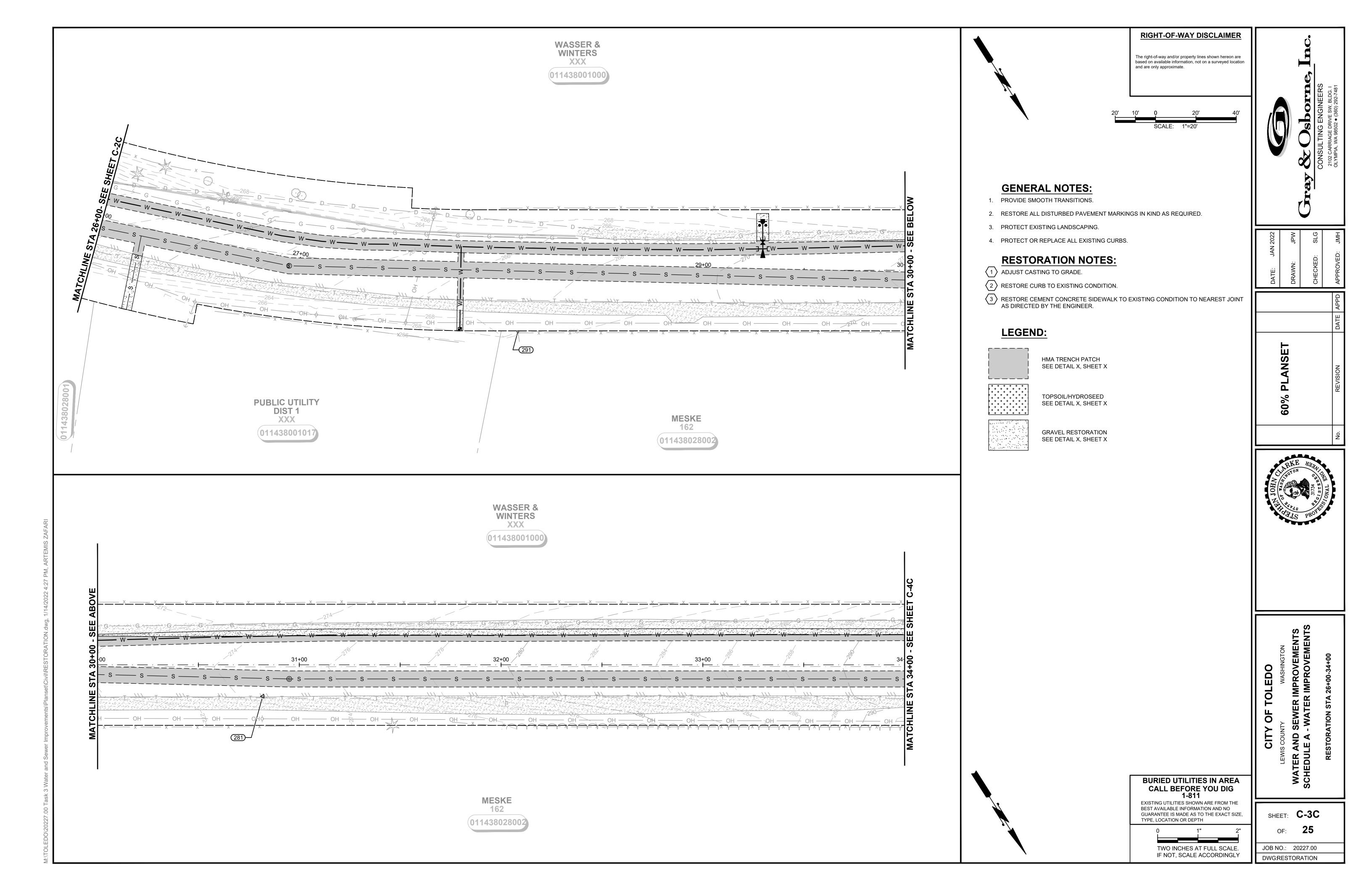
EXISTING UTILITIES SHOWN ARE FROM THE
BEST AVAILABLE INFORMATION AND NO

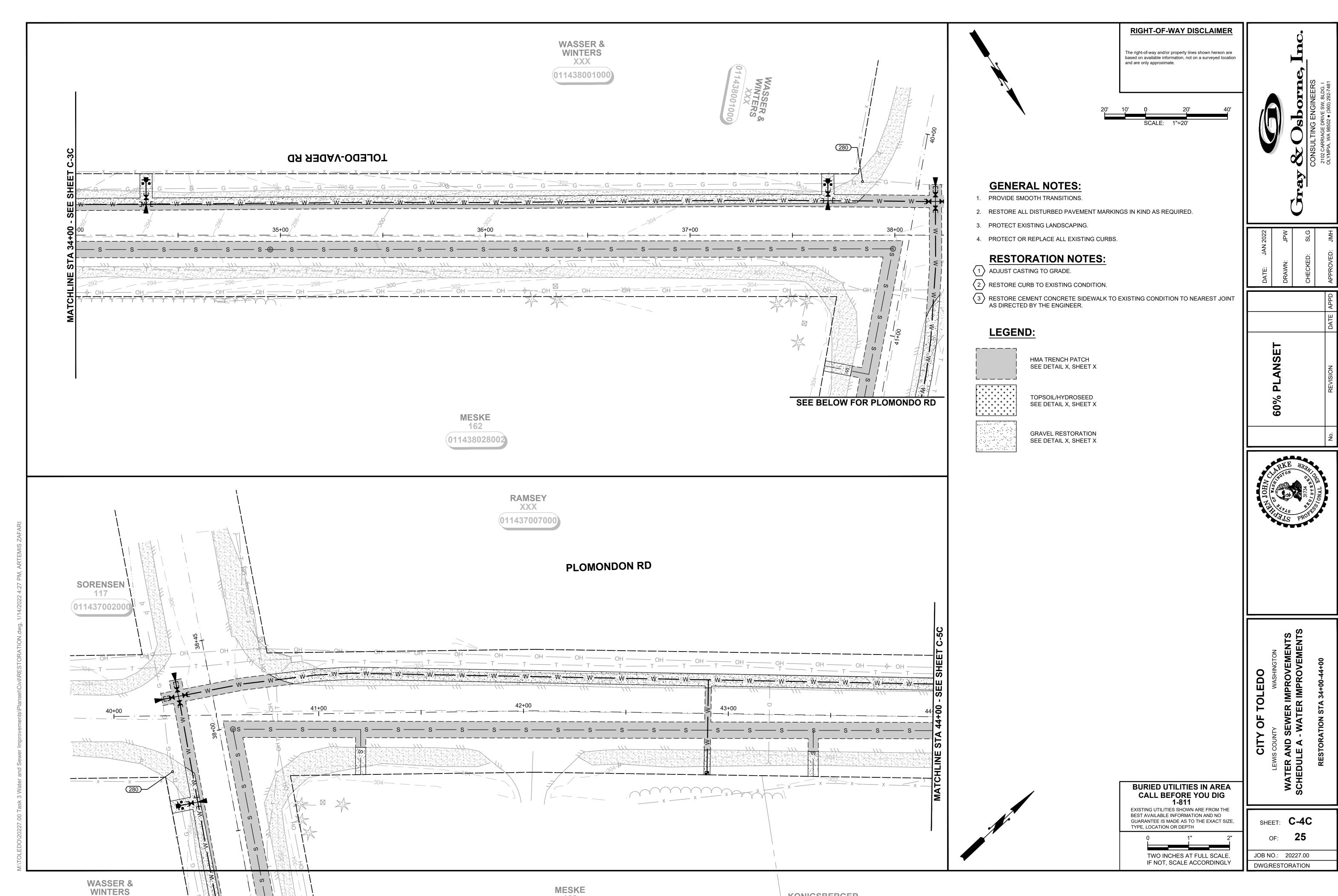
GUARANTEE IS MADE AS TO THE EXACT SIZE, TYPE, LOCATION OR DEPTH TWO INCHES AT FULL SCALE IF NOT, SCALE ACCORDINGLY

JOB NO.: 20227.00

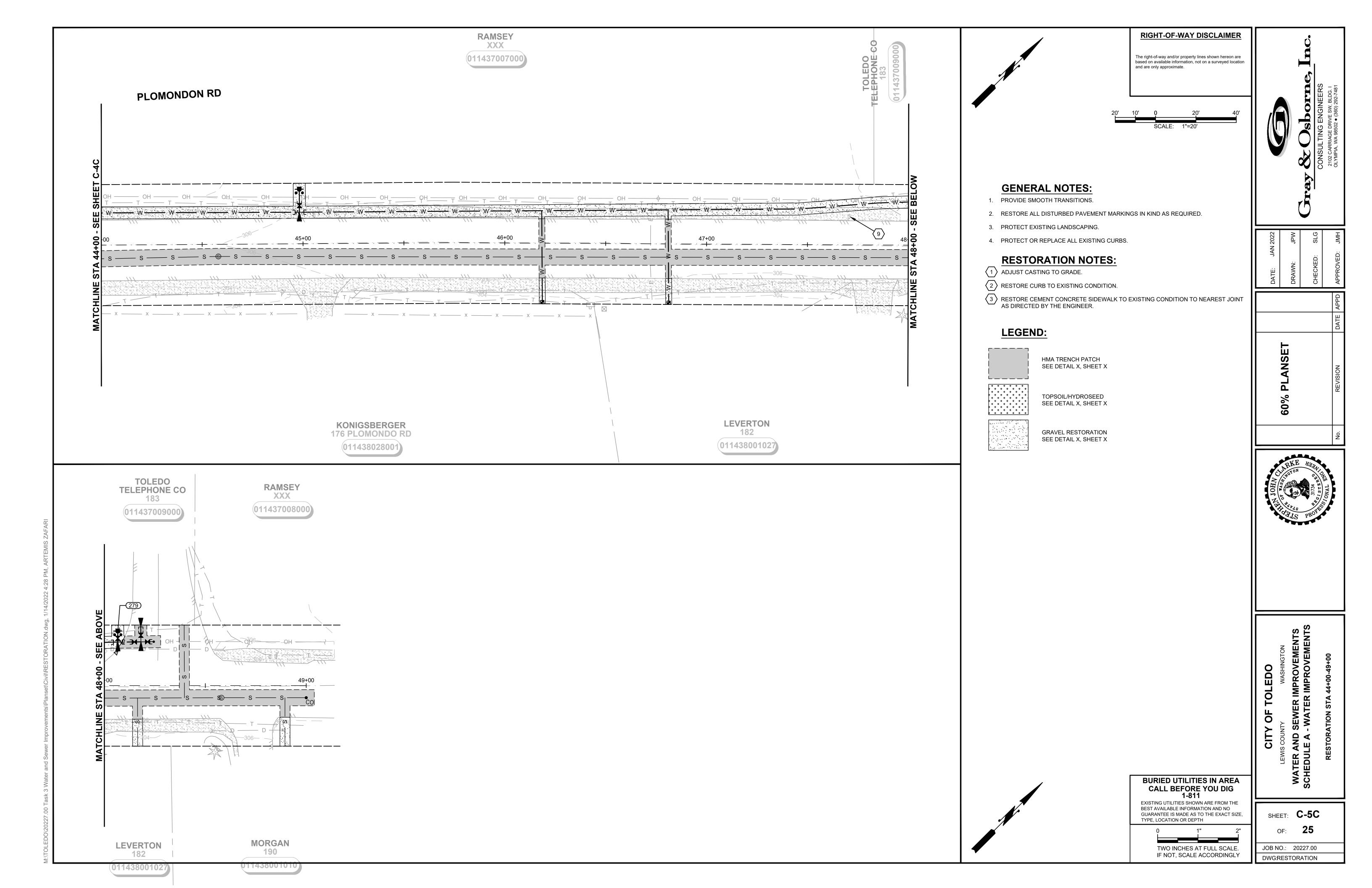


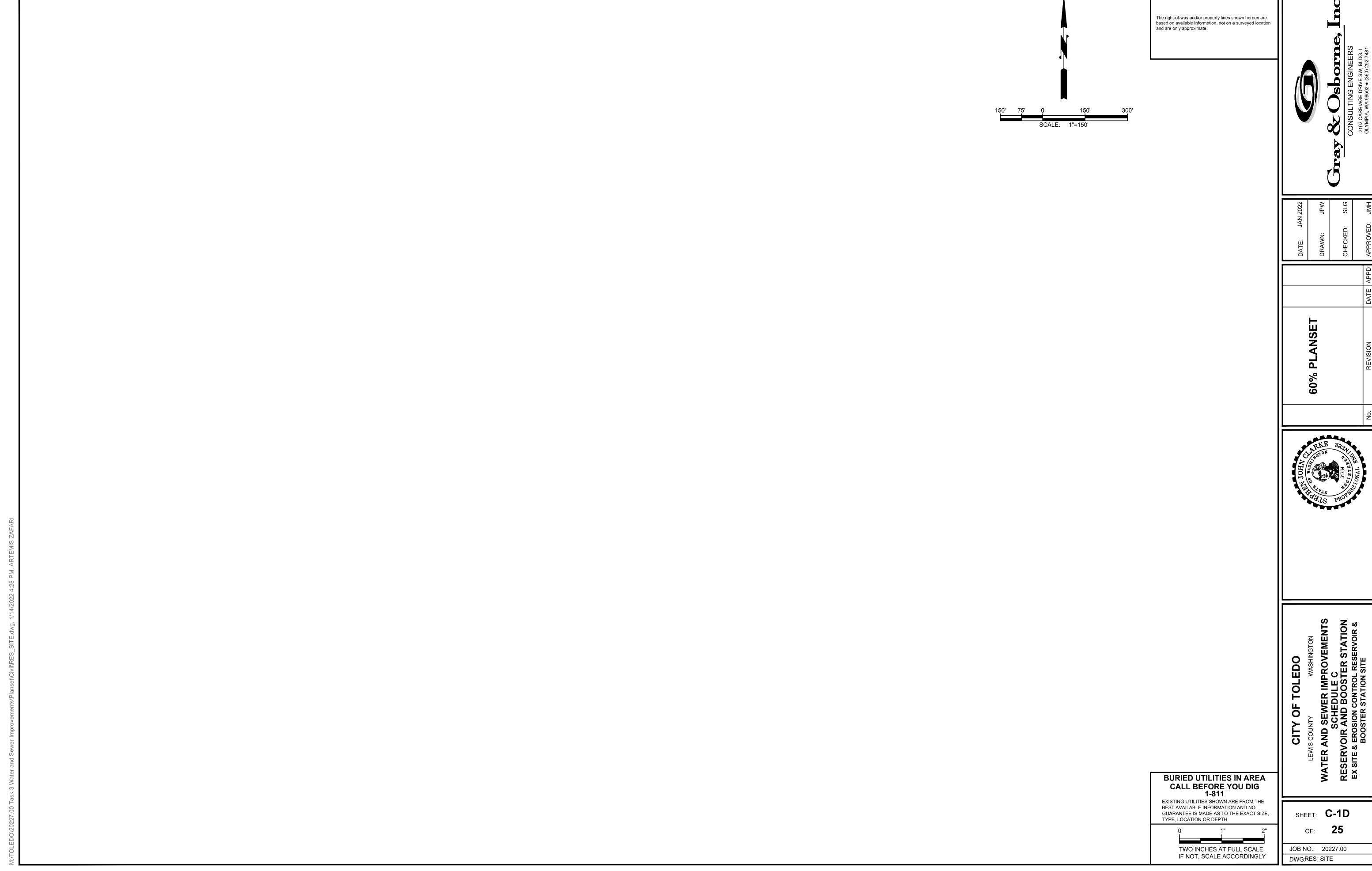




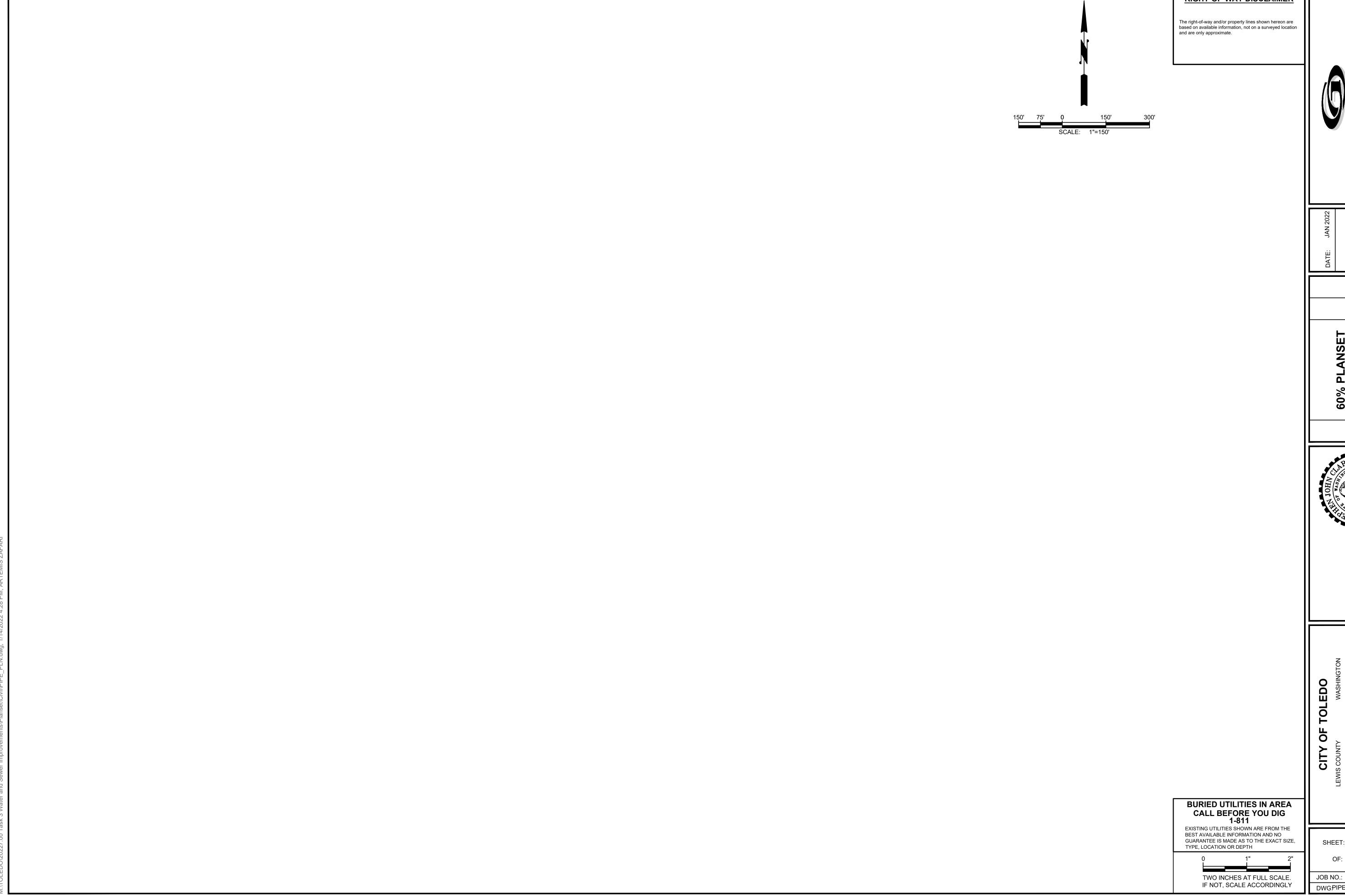


MESKE









60% PLANSET



CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENTS

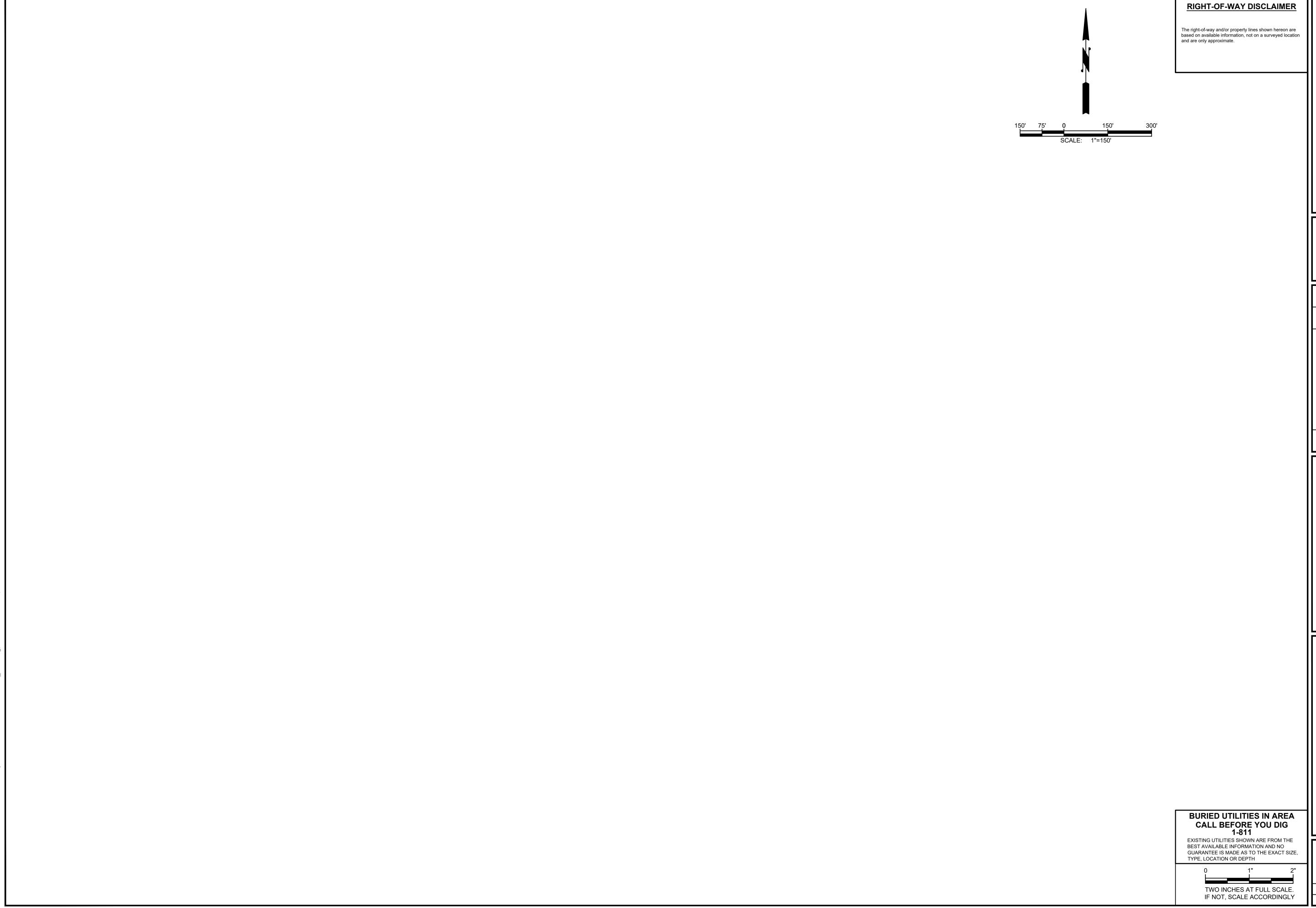
SCHEDULE C

RESERVOIR AND BOOSTER STATION

PROPOSED SITE PIPING PLAN

SHEET: C-2D

JOB NO.: 20227.00 DWGPIPE_PLN



60% PLANSET



CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENTS

SCHEDULE C

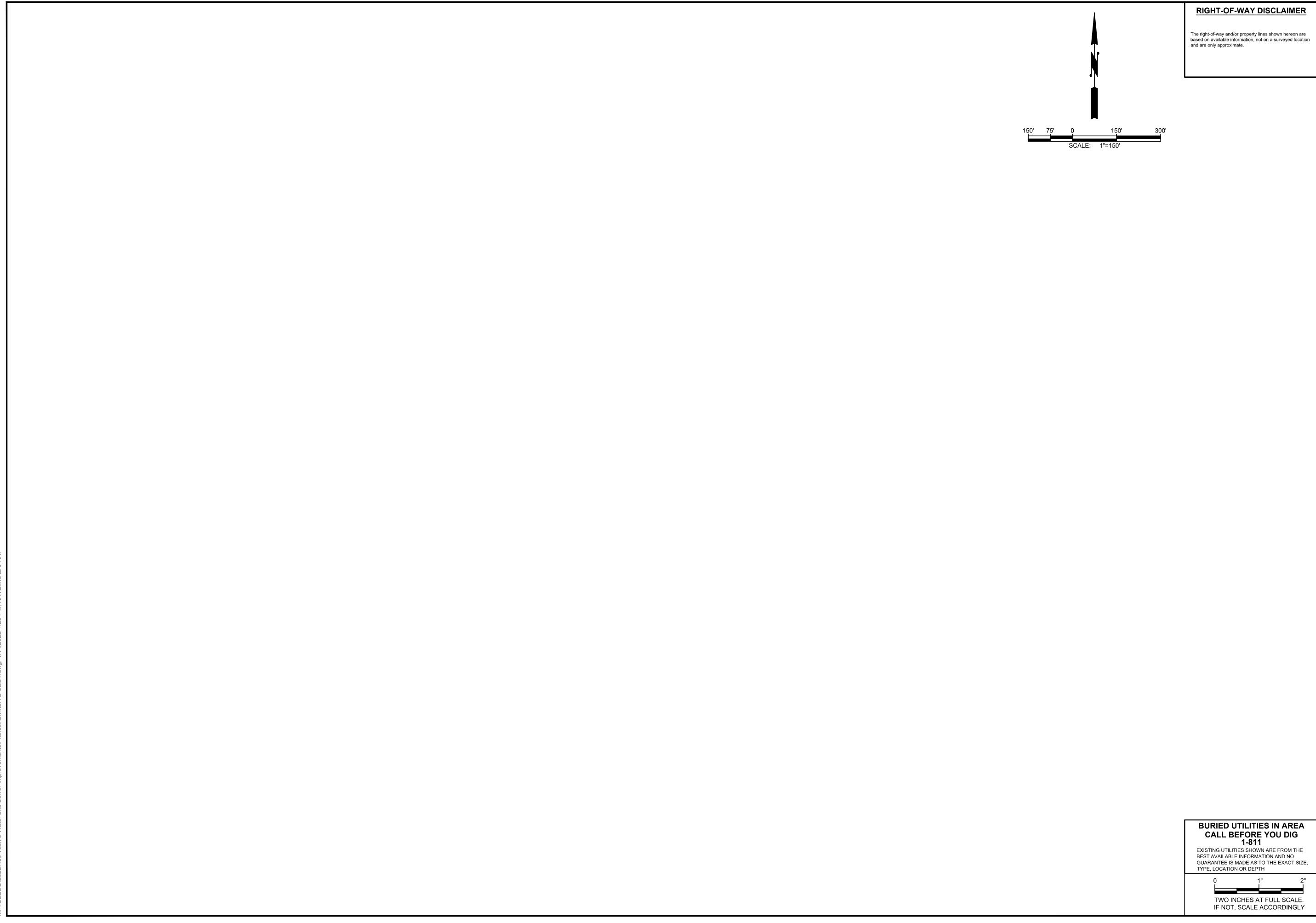
SCHEDULE C

SCHEDULE C

PROPOSED GRADING PLAN

SHEET: C-3D

JOB NO.: 20227.00 DWG:GRADE_PLN



60% PLANSET



CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENTS

SCHEDULE C

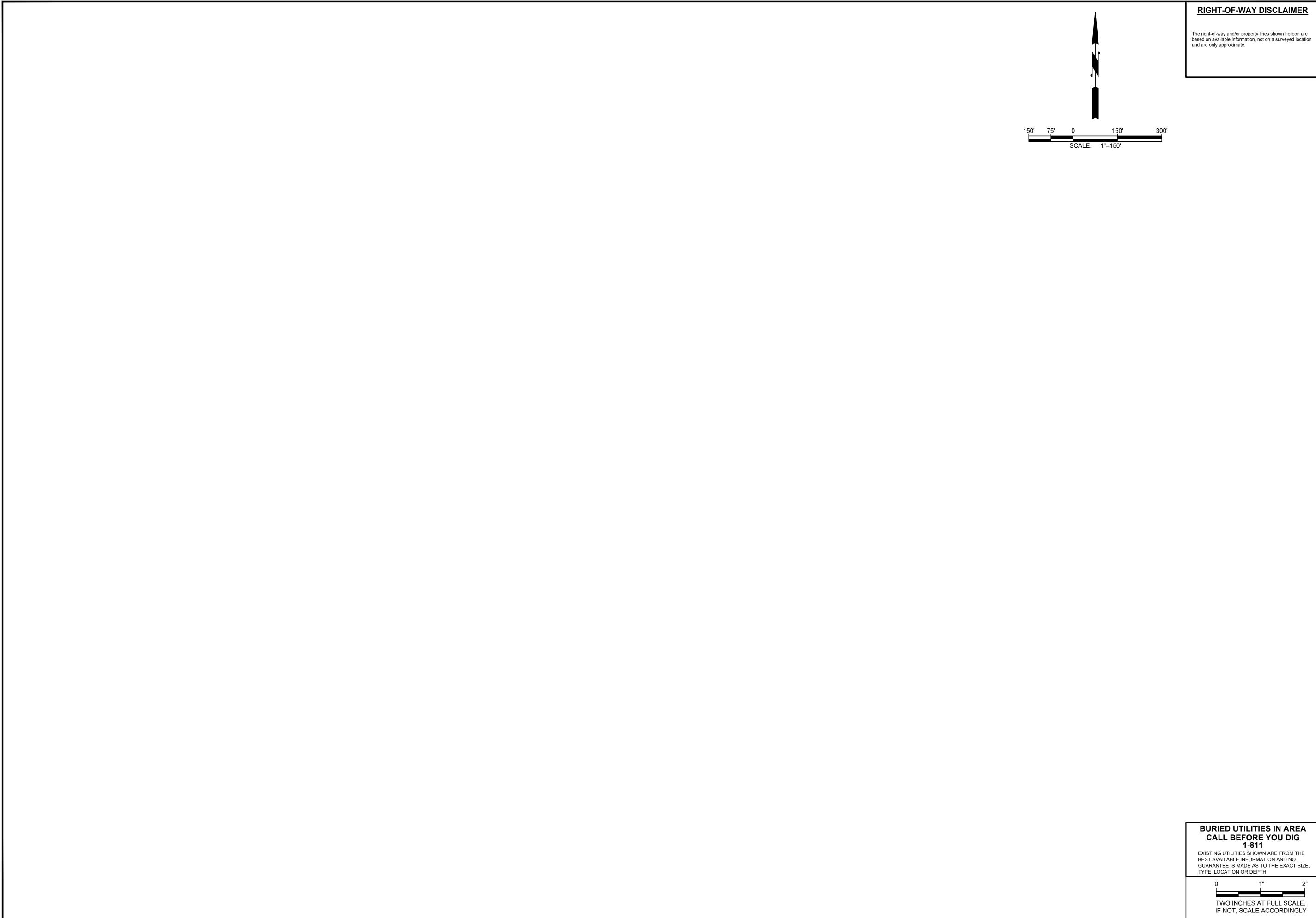
SCHEDULE C

RESERVOIR AND BOOSTER STATION

PROPOSED SITE SECTIONS

SHEET: C-4D

JOB NO.: 20227.00 DWG:SITE-SECT



60% PLANSET



CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENTS

SCHEDULE C

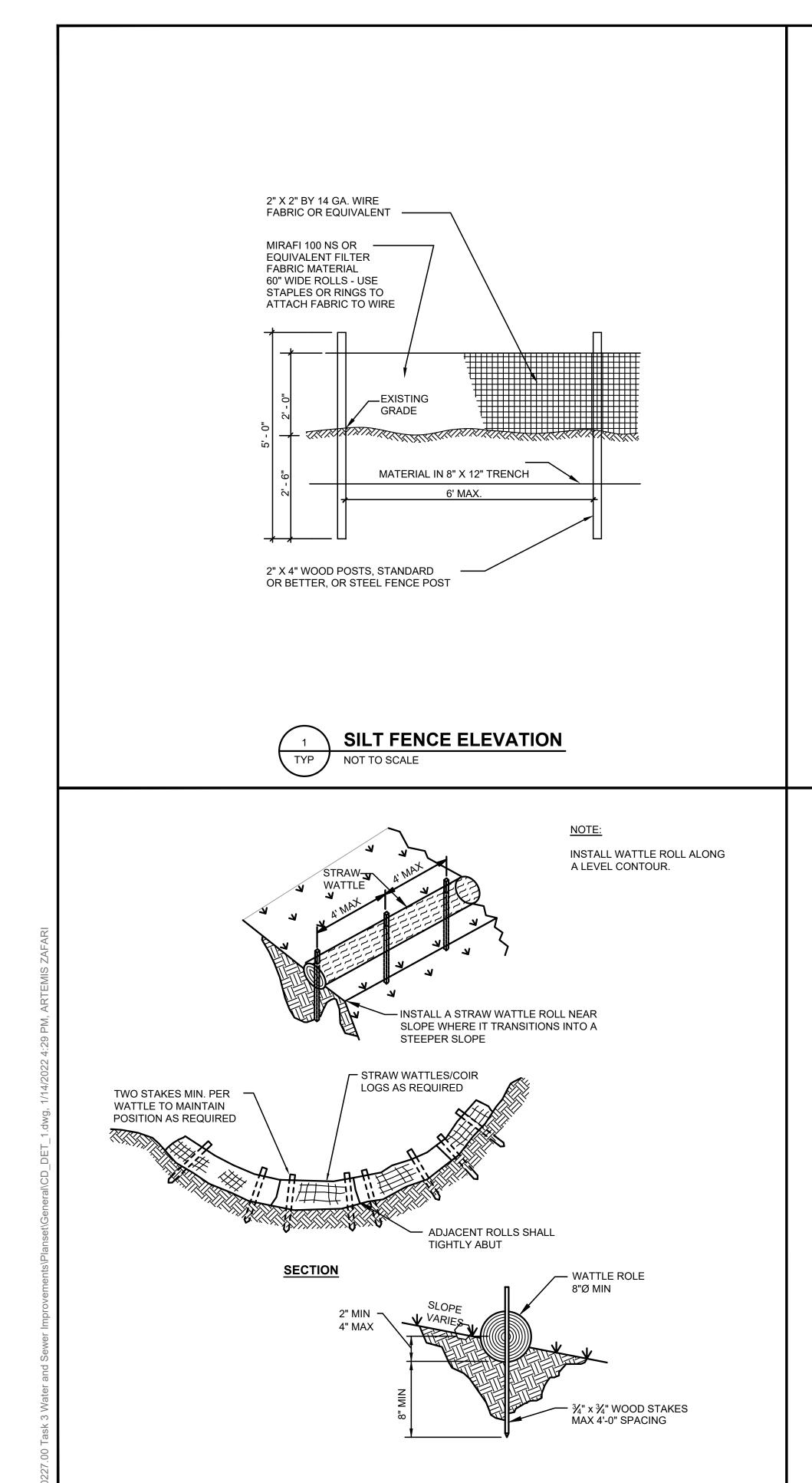
SCHEDULE C

RESERVOIR AND BOOSTER STATION

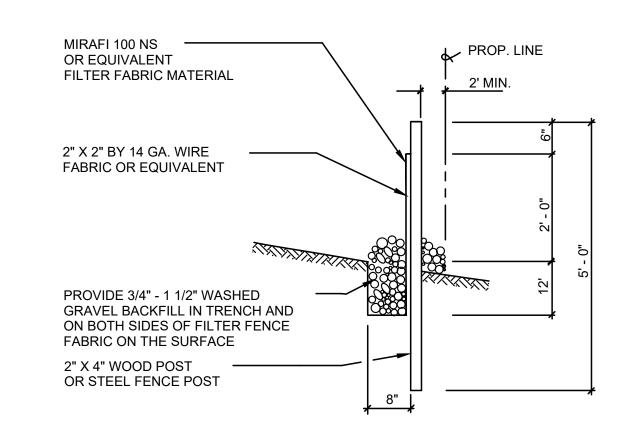
PROPOSED SITE SECTIONS

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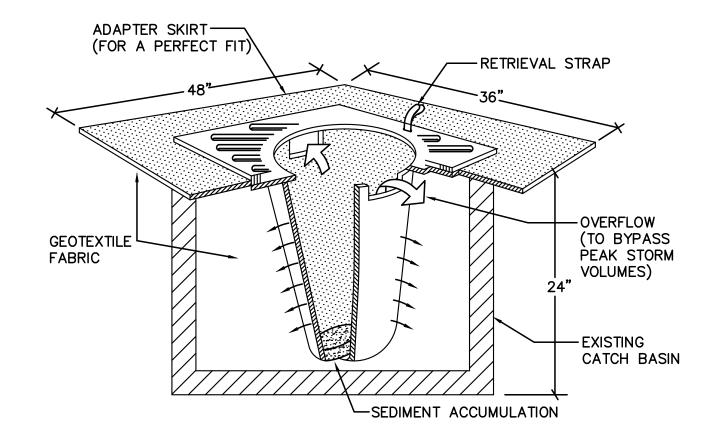
JOB NO.: 20227.00 DWG:SITE-SECT



STRAW WATTLE ROLL DETAIL







PROVIDE CATCH BASIN SEDIMENT PROTECTION WITH STREAMGUARD BASIN INSERT #3003, FROM FOSS ENVIRONMENTAL OR APPROVED

7440 W. MARGINAL WAY S. SEATTLE, WA 98108-4141 PHONE: 1-800-909-3677



CATCH BASIN SEDIMENT BARRIER

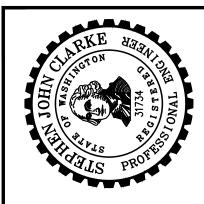
EROSION/SEDIMENTATION CONTROL NOTES

- CONTRACTOR SHALL SUBMIT TEMPORARY WATER POLLUTION/EROSION CONTROL PLAN PER THE CONTRACT SPECIFICATIONS.
- 2. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION SHALL BE OBSERVED DURING CONSTRUCTION.
- 3. ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES MUST BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND /OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND THE WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.
- 5. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF THE SEDIMENT. ALL CATCH BASINS, CONVEYANCE LINES AND DITCHES SHALL BE CLEANED PRIOR
- 6. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE CITY RIGHT-OF-WAY OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.
- 7. TEMPORARY EROSION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND MAINTAINED WITHIN 24 HOURS FOLLOWING A STORM EVENT. SEDIMENT SHALL BE REMOVED TO INSURE THE FACILITIES WILL FUNCTION PROPERLY. THE FACILITIES SHALL BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- 8. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- 9. NO DISTURBED SOIL SHALL REMAIN UNSTABILIZED FOR MORE THAN TWO DAYS.



JAN 2022	JPW	SLG	JMH
DATE: JAN	DRAWN:	CHECKED:	APPROVED:
	· ·		

60% PLANSET	REVISION DATE APPD
%09	No.



AND

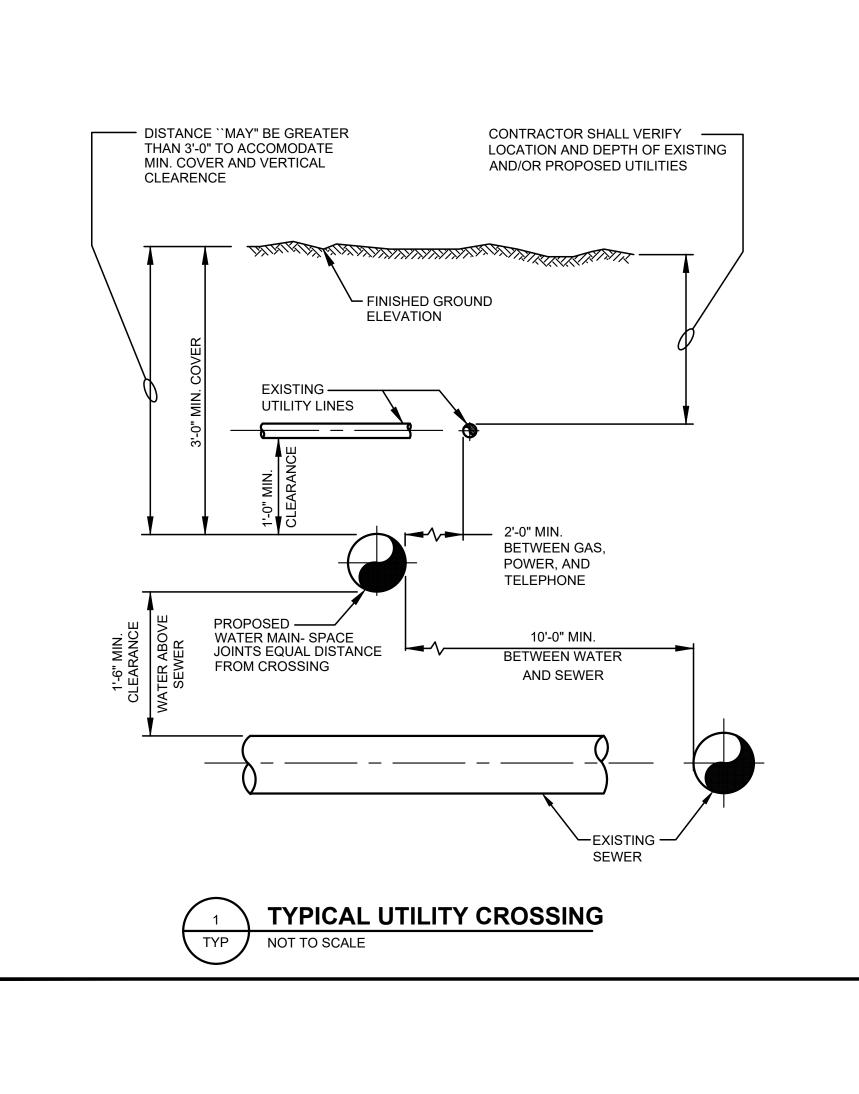
JOB NO.: 20227.00

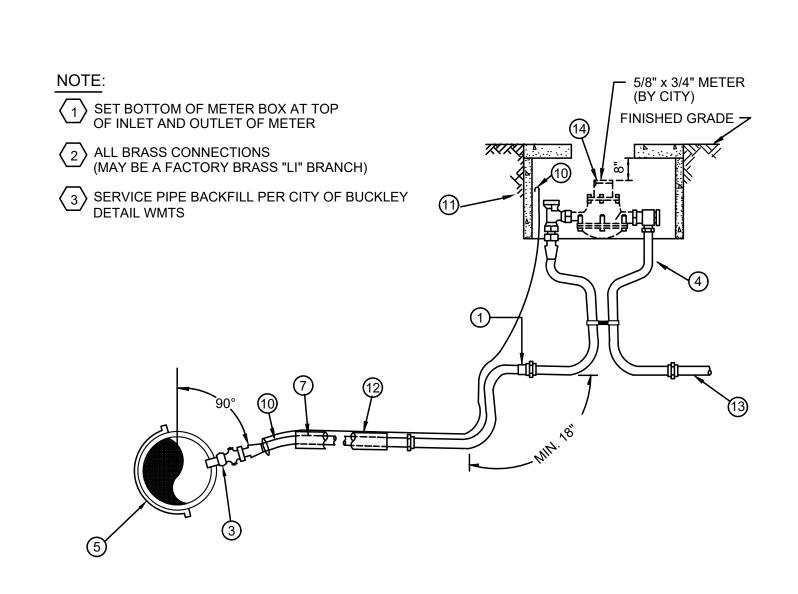
TOLEDO

OF

SHEET: CD-1

DWG:CD_DET_1



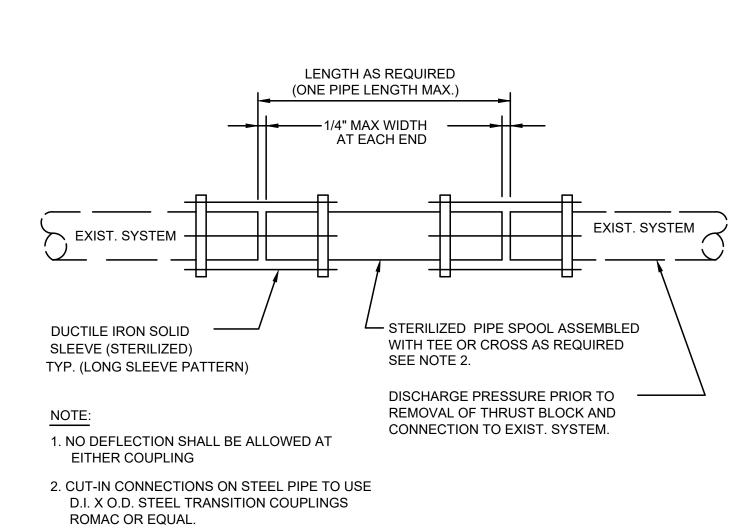


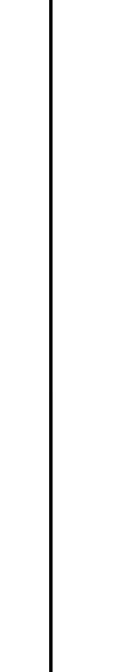


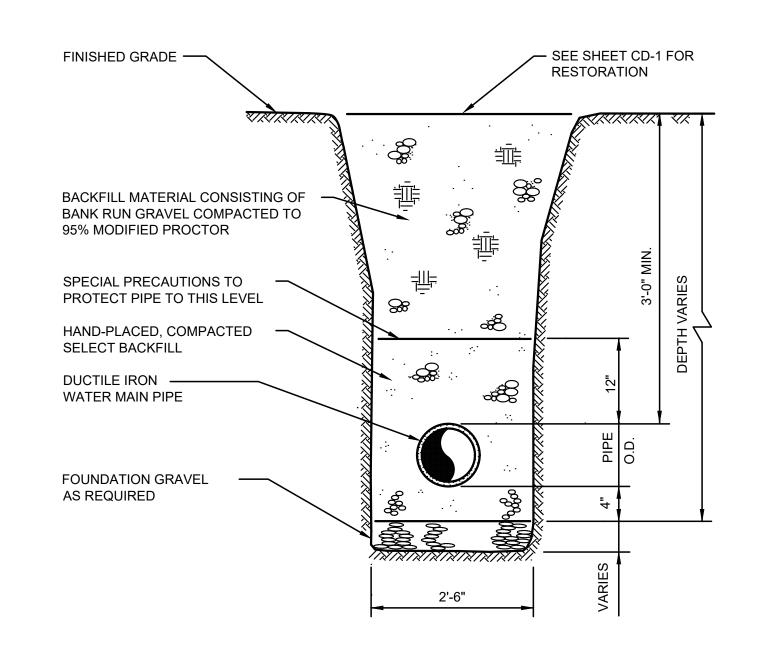
LEGEND

- 1" PI X 3/4" MIP
- 2 1" MIP x PEP JOINT ADAPTER EQUAL TO FORD C86-44
- (3) 1" MIP X PEP JOINT CORP STOP EQUAL TO FORD F1101
- (4) COPPER SETTER EQUAL TO VBH72-12W WITH FORD C86-33
- 5 ROMAC DI DOUBLE STRAP SERVICE STRAP
- 6 NOT USED
- 3/4" (SINGLE SERVICE) HIGH MOLECULAR (200 PSI, SDR 7)
- "POLY" PIPE (LENGTH AS REQUIRED)
- 8 3/4" BRASS NIPPLE (LENGTH AS REQUIRED)
- 9 3/4" STREET ELBOW
- 10 14 GUAGE WIRE FROM MAINLINE TAP TO METER BOX AND EXPOSE 6"
 MINIMUM IN BOX (RUN INSIDE 2" PVC GUARD CONDUIT
 WHERE APPLICABLE)
- METER BOX FOGTITE NO.1 WITH H20 LOADING (SET FLUSHED WITH FINISHED GRADE)
- 12 INSTALL SERVICE LINE IN 2" PVC GUARD PIPE (SCH-80) WHEN CROSSING ROADWAY (3' MINIMUM BEYOND AND BENEATH PAVEMENT SECTION)
- PROVIDE APPROVED WATERTIGHT PLUG UNTIL CONNECTION TO PRIVATE SYSTEM IS MADE.
- CITY WILL PROVIDE AND INSTALL NEW WATER METERS.
 CITY WILL REMOVE OLD WATER METERS.

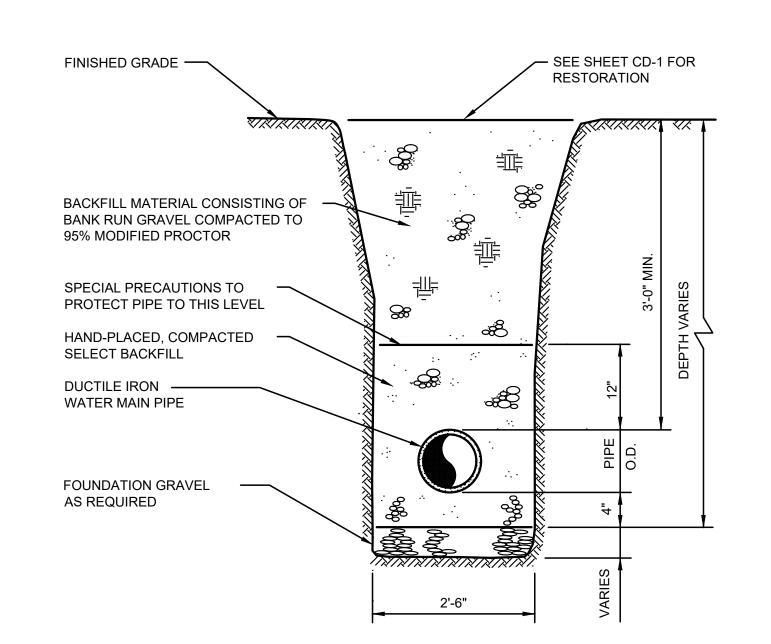












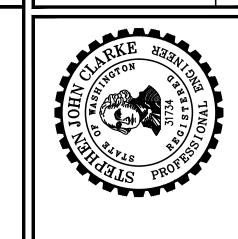


Cray & Osbotne, Inconsulting engine sw, bldg. 1 Olympia, wa 98502 • (360) 292-7481

DRAWN: JPW
CHECKED: SLG
APPROVED: JMH

60% PLANSET

S. REVISION DATE APPD



CITY OF TOLEDO

LEWIS COUNTY WASHINGTON

WATER AND SEWER IMPROVEMENT

WATER DETAILS

SHEET: **CD-2**OF: **11**

JOB NO.: 20227.00

DWG:CD_DET_1

20227.00 Task 3 Water and Sewer Improvements\Planset\General\CD_DET_1.dwg, 1/14/2022 4:29 PM,

CUT IN CONNECTION

NOT TO SCALE

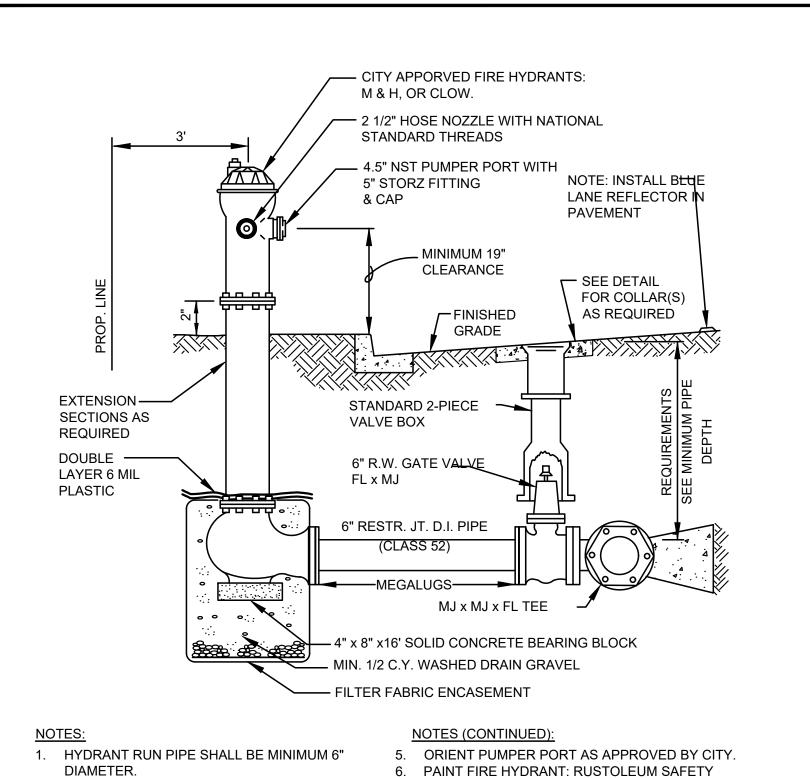
3. IN-LINE VALVE(S) IN EXISTING SYSTEM MAY BE

ARE NOT SHOWN ABOVE FOR CLARITY)

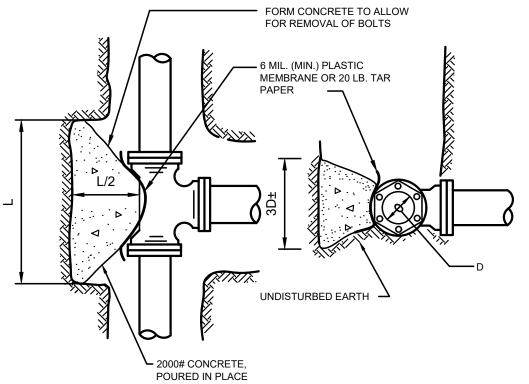
REQUIRED AT THE SOLE DISCRETION OF THE CITY AT ALL NEW INTERTIE LOCATIONS. (NOTE: VALVE(S)

ONNECTION

5 **T**



MINIMUM BEARING AREA TABLE FITTING D 11 1/4 ° TEE 45° 22 1/2 ° 4 SQ.FT. 6 SQ.FT. 3 SQ.FT. 2 SQ.FT. 2 SQ.FT. 3 SQ.FT. 2 SQ.FT. 10 SQ.FT. 6 SQ.FT. 7 SQ.FT. 10 SQ.FT. 15 SQ.FT. 9 SQ.FT. 5 SQ.FT. 3 SQ.FT. 14 SQ.FT. 22 SQ.FT. 12 SQ.FT. 6 SQ.FT. 4 SQ.FT. 25 SQ.FT. 38 SQ.FT. 21 SQ.FT. 11 SQ.FT. 7 SQ.FT. 32 SQ.FT. 48 SQ.FT. 27 SQ.FT. 14 SQ.FT. 8 SQ.FT.



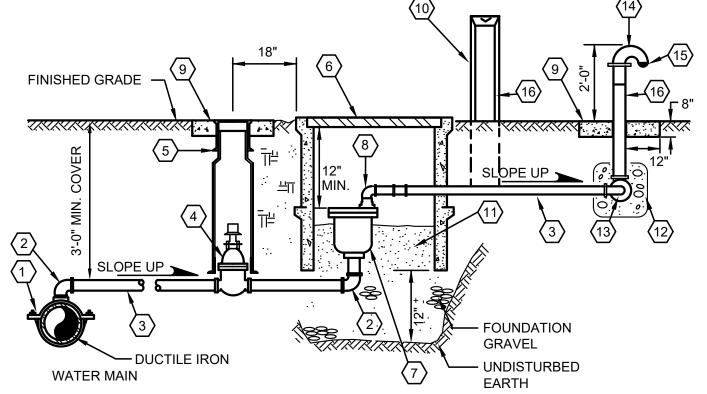
PLAN

BEARING AREA TABLE BASED ON 250 PSI PRESSURE AND 2000 PSF SOIL BEARING. IF PRESSURE IS GREATER OR SOIL BEARING IS LESS, THE THRUST BLOCK SIZE SHALL BE INCREASED.

THIS TABLE REPRESENTS THE "MINIMUM" CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZE OF ALL THRUST BLOCKS BASED ON EXISTING AND LOCAL CONDITIONS.



ELEVATION



DOUBLE STRAP SERVICE CLAMP W/ 2" CORP. STOP

2 2" SWING JOINT

(3) 2" GALVANIZED IRON PIPE

2" AWWA RESILIENT SEAT GATE VALVE W/ OPERATING NUT

(5) CAST IRON VALVE BOX

6 CONCRETE METER BOX, 17"X28" FOGTITE NO. 2, W/ DIAMOND PLATE STEEL SOLID

2" AIR & VACUUM RELEASE VALVE, APCO OR CRISPIN MODELS ONLY

(8) 2"X90° ELBOW

9 CONCRETE COLLAR

(10) 4"X4" CONC. MARKER POST W/ DISTANCE & DIRECTION TO VALVE STENCILED IN BLACK

(11) PEA GRAVEL

(12) MIN. 1/4 CY OF WASHED ROCK, WRAP WITH FILTER FABRIC

(13) 2, 2"X90° ELBOW (GALV.) WITH WEEP HOLE IN ONE

(14) 2" OPEN PATTERN RETURN BEND

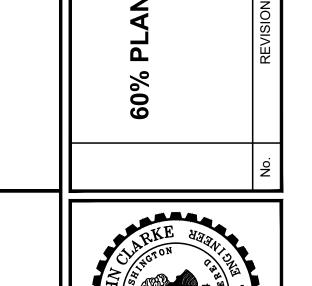
(15) 2" BEEHIVE STRAINER

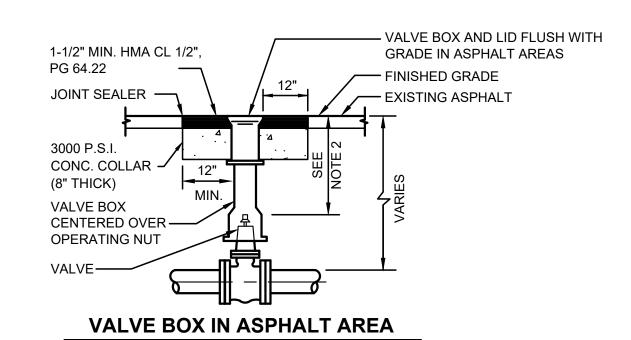
(16) PAINT PORTION ABOVE GROUND WITH TWO COATS OF BLUE PAINT

1) TAP WATER MAIN AT HIGH POINT LOCATION, AS APPROVED BY ENGINEER.

2) ASSEMBLY SHALL BE INSTALLED IN NON-TRAFFIC AREA.

2" AIR & VACUUM RELEASE ASSEMBLY TYP NOT TO SCALE





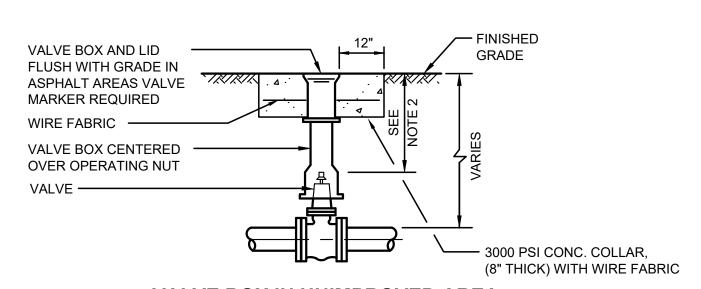
FIRE HYDRANT

NOT TO SCALE

YELLOW BASE No. 288-14, COLOR CODE AX-6732,

T-4432, OR PER LOCAL FIRE MARSHALL,

CONTRACTOR TO VERIFY



VALVE BOX IN UNIMPROVED AREA

2. ALL JOINTS ON HYDRANT RUN SHALL BE

RESTRAINED PER CITY STANDARDS.

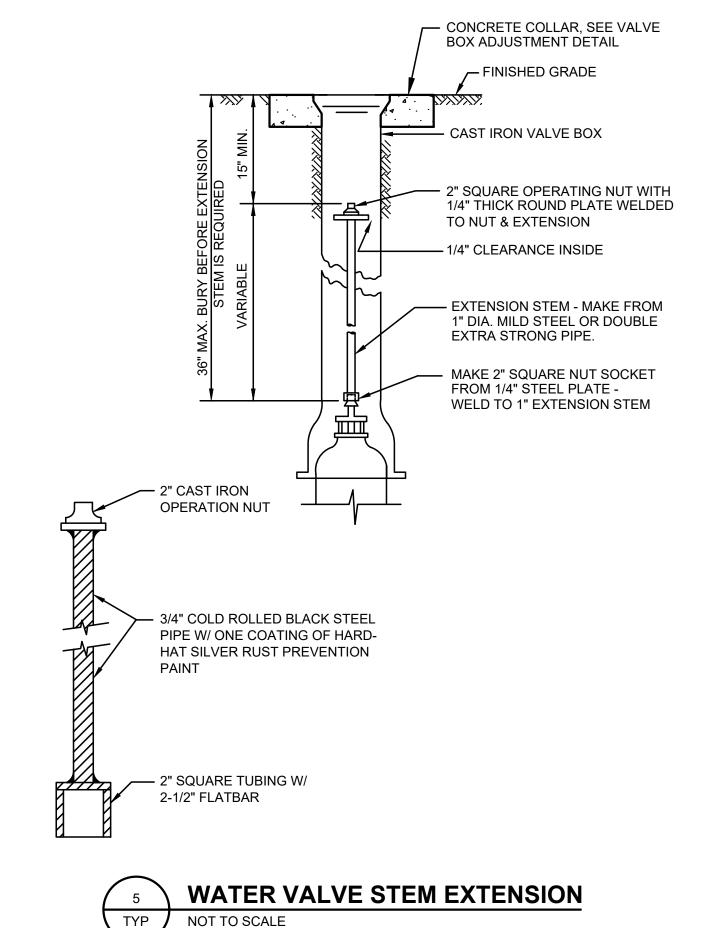
AROUND HYDRANT.

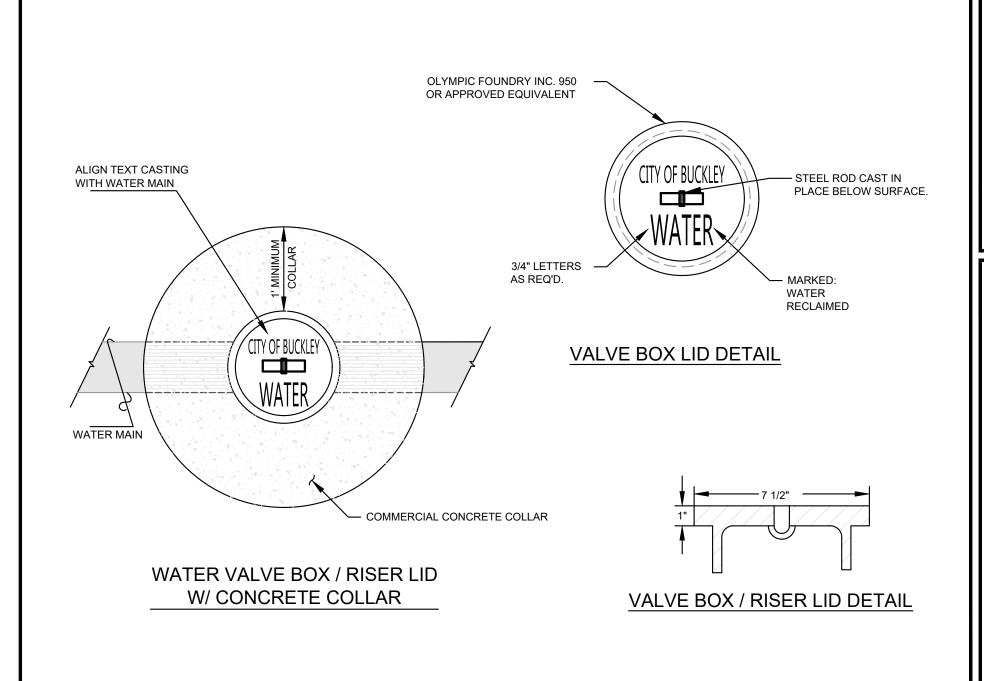
3. INSTALL GUARD POSTS AS REQUIRED BY THE

4. PROVIDE MIN. 3 FT. CLEAR AND LEVEL AREA

- 1. EACH VALVE SHALL BE PROVIDED WITH AND ADJUSTABLE CAST IRON VALVE BOX OF 5 INCHES (5") INSIDE DIAMETER. VALVE BOXES SHALL HAVE A TOP SECTION WITH AN EIGHTEEN INCH (18") MINIMUM LENGTH.
- 2. 15" MINIMUM, 36" MAXIMUM FOR OPERATOR NUT. EXTENSION MAY BE REQUIRED.





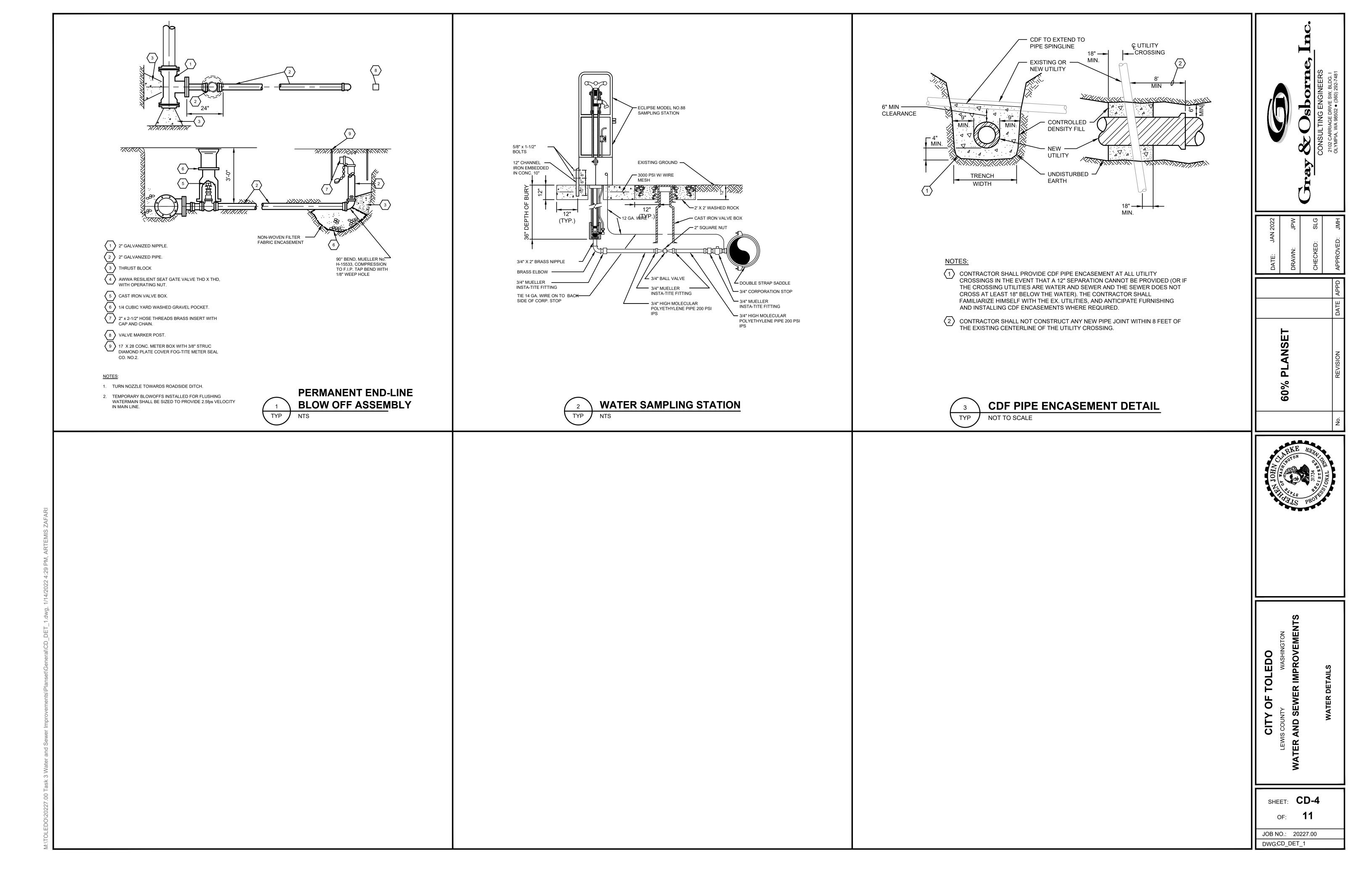


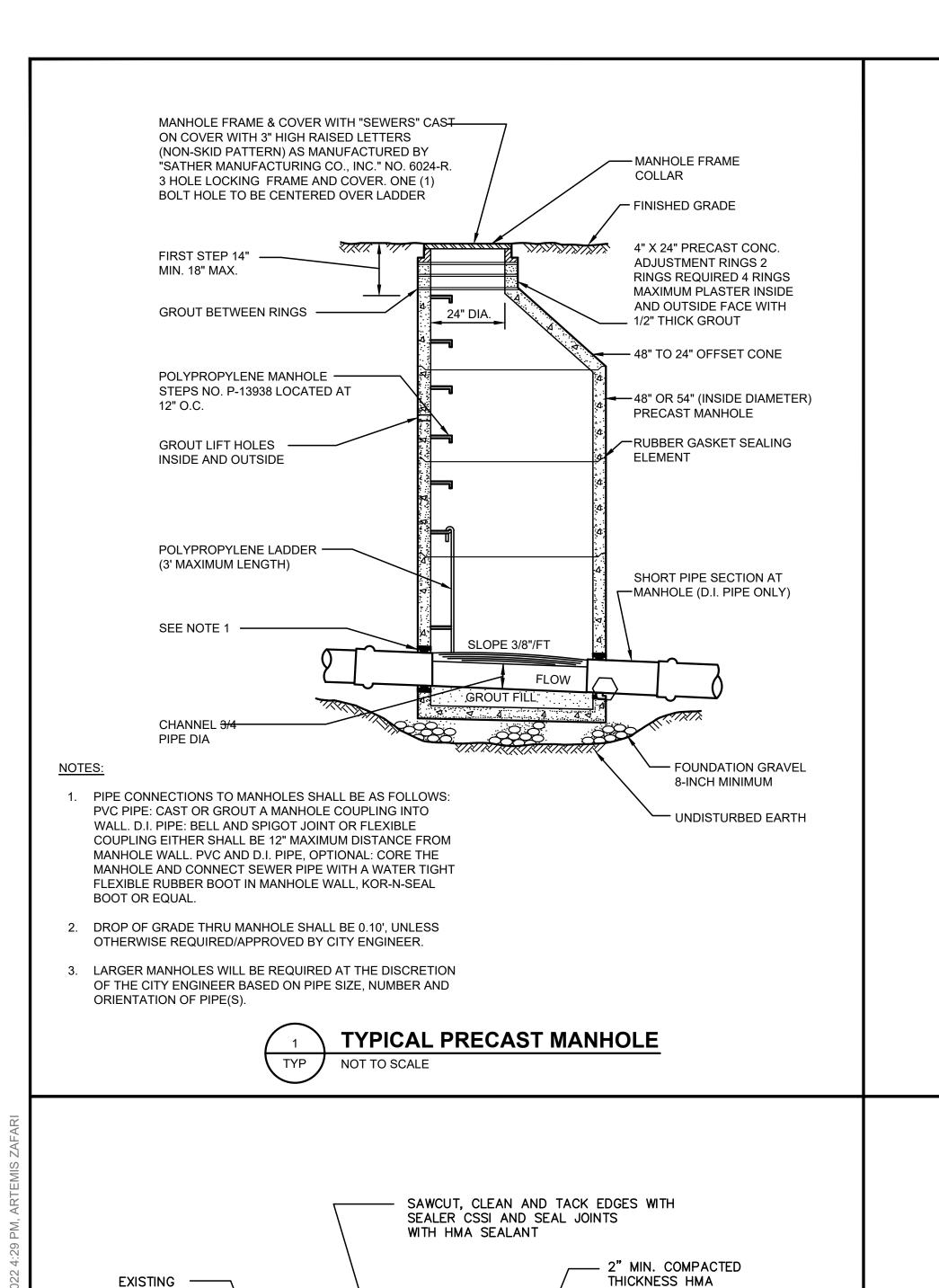




SHEET: CD-3 11 JOB NO.: 20227.00

DWG:CD_DET_1

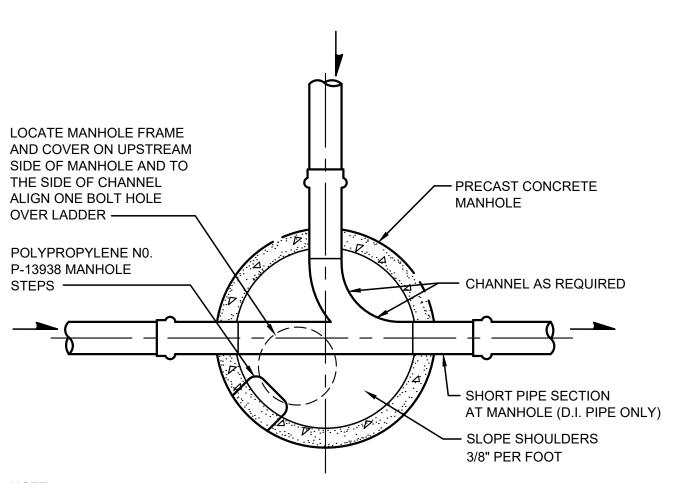




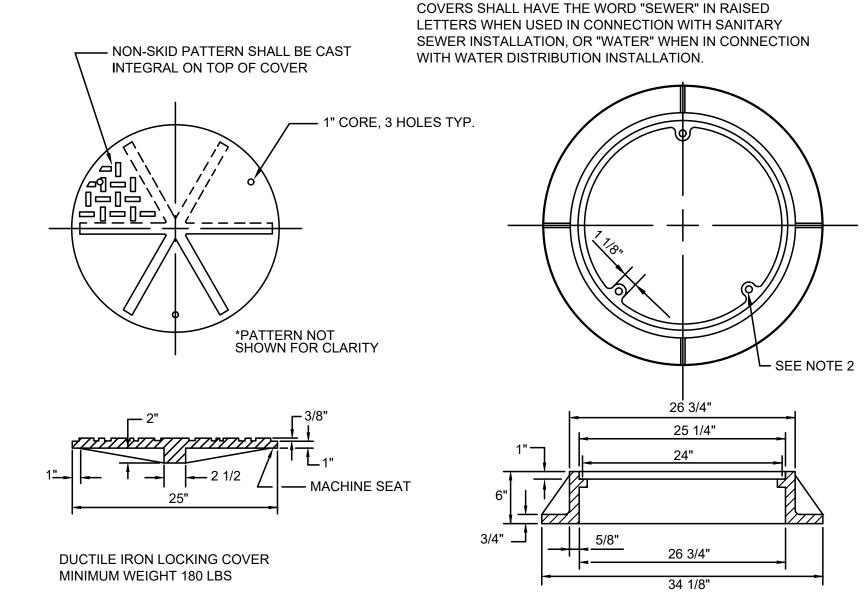
-CEMENT CONCRETE

(CLASS 3000 PSI)

COLLAR W/ WIRE MESH



PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL. D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING. EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL. PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N- SEAL BOOT OR EQUAL. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE WITH A CONCRETE CORING MACHINE UNLESS OTHERWISE APPROVED BY THE ENGINEER.



1. MATERIALS ARE DUCTILE IRON ASTM A-40 CLASS 30

TYP

- 2. DRILL AND TAP THREE 5/8" HOLES THRU FRAME AT 120° AND 11 1/16" RADIUS
- 3. SATHER MANUFACTURING CO 6024-R OR OTHERWISE APPROVED R EQUAL
- 4. WATERTIGHT MANHOLE FRAME AND COVERS MAY BE REQUIRED BASED ON LOCAL CONDITIONS. 5. ALL MANHOLES LOCATED OUTSIDE PAVEMENT AREAS SHALL BE PROVIDED WITH LOCKING

NOT TO SCALE

MANHOLE FRAME AND COVER

POLYPROPYLENE LADDER

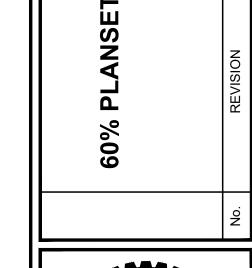
AND MANHOLE STEPS

NOT TO SCALE

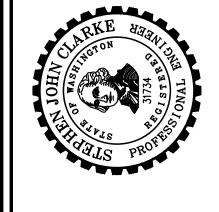
MANHOLE FRAME AND COVER.

POLYPROPYLENE

MANHOLE STEPS







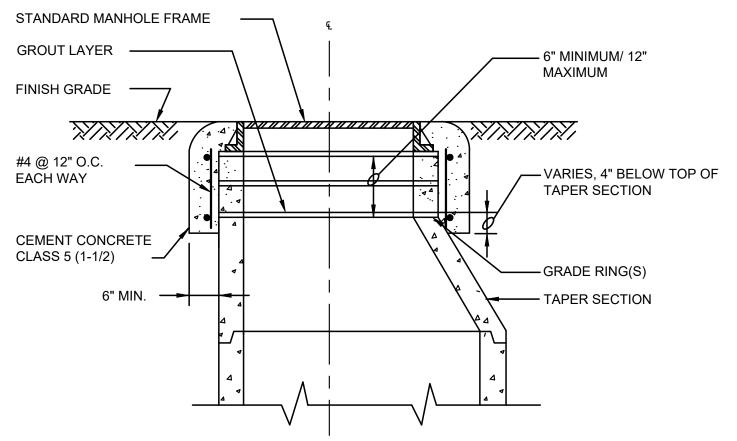
TOLEDO AND SEWER CITY OF

SHEET: CD-5 11

JOB NO.: 20227.00

DWG:CD_DET_1

TYPICAL MANHOLE PLAN NOT TO SCALE



SECTION

CONSTRUCT CONCENTRIC CONCRETE COLLARS AROUND ALL MANHOLE FRAMES LOCATED OUTSIDE OF PAVEMENT AREAS

MANHOLE FRAME COLLAR

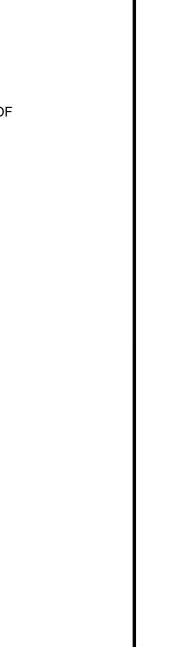


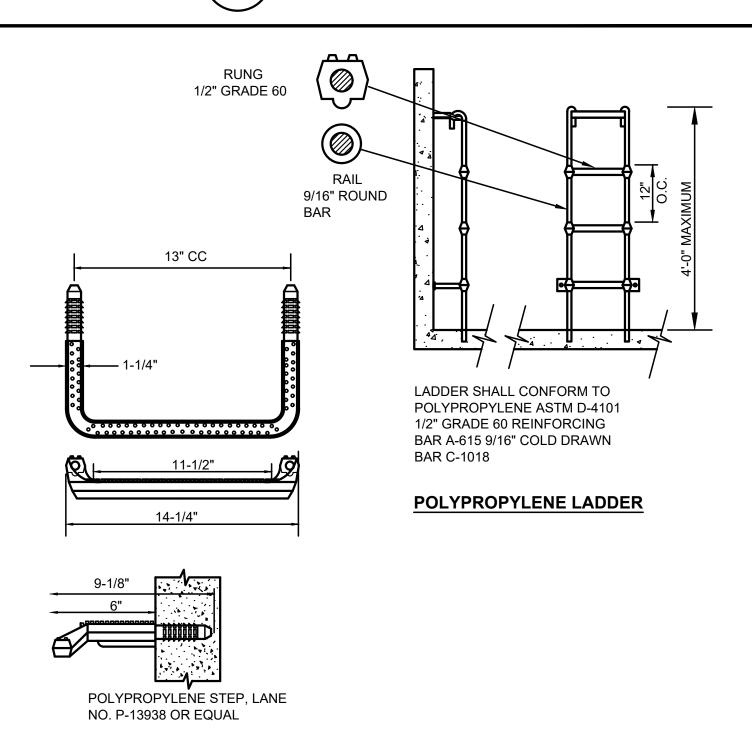
PAVEMENT

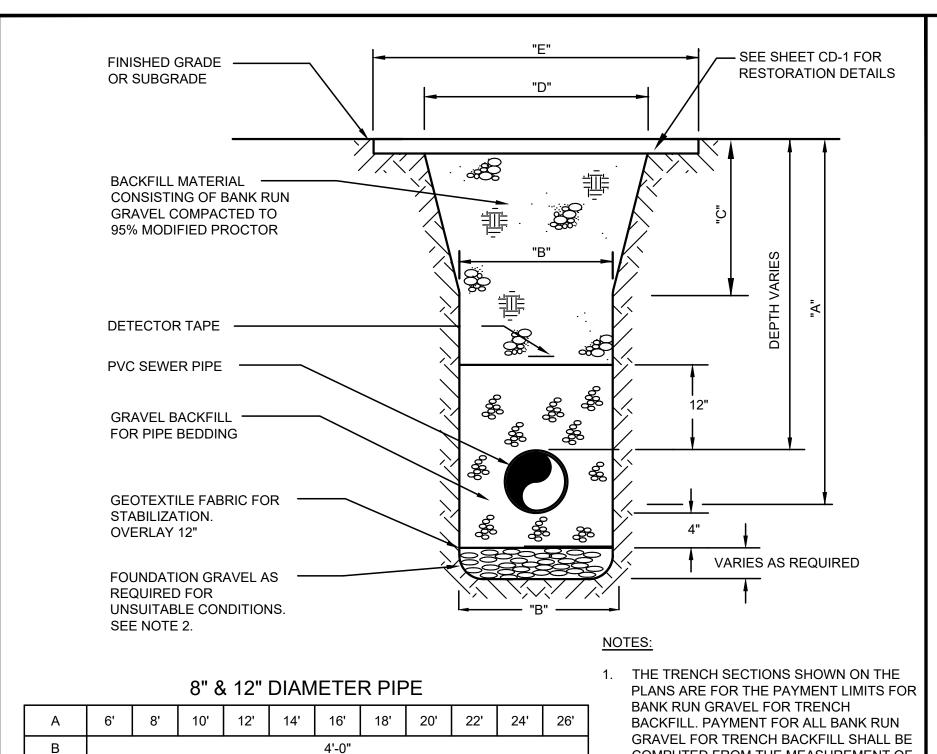
FULL MORTOR

CONTINUOUS JOINT.

CONCRETE ADJUSTMENT







C 1.5' 1.5' 1.75' 2.25' 2.75' 3.25' 3.75' 4.25' 4.75' 5.25' 5.75'

4.5' | 5.5' | 6.5' | 7.5' | 8.5' | 9.5' | 10.5' | 11.5' | 12.5' | 13.5' | 14.5'

6.5' 7.5' 8.5' 9.5' 10.5' 11.5' 12.5' 13.5' 14.5' 15.5' 16.5'

NOT TO SCALE

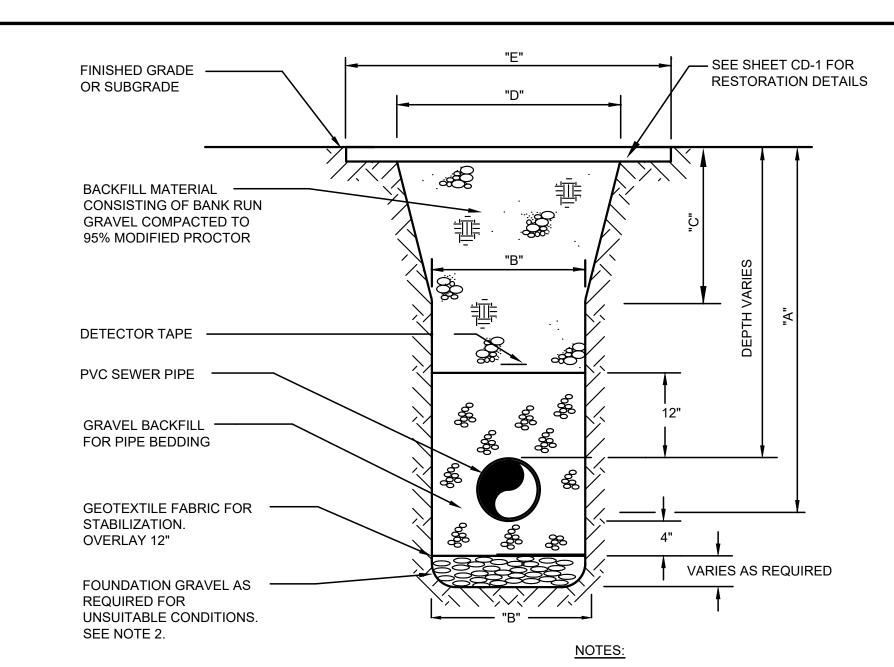
TRENCH PAYMENT LIMIT SCHEDULE

COMPUTED FROM THE MEASUREMENT OF THE CONSTRUCTED TRENCH SECTION, TO THE MAXIMUM PAYMENT LIMITS AS INDICATED IN THE SCHEDULE ON THIS

SHEET.

2. WHERE UNSUITABLE MATERIAL IS **ENCOUNTERED BELOW THE PIPE BEDDING** SUBGRADE, THE CONTRACTOR SHALL REMOVE THE UNSUITABLE MATERIAL AND REPLACE WITH FOUNDATION GRAVEL AND GEOTEXTILE FOR STABILIZATION.

SEWER IN CITY TYPICAL TRENCH SECTION



8" & 12" DIAMETER PIPE

Α	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'
В						4'-0"					
С	1.5'	1.5'	1.75'	2.25'	2.75'	3.25'	3.75'	4.25'	4.75'	5.25'	5.75'
D	4.5'	5.5'	6.5'	7.5'	8.5'	9.5'	10.5'	11.5'	12.5'	13.5'	14.5'
E	6.5'	7.5'	8.5'	9.5'	10.5'	11.5'	12.5'	13.5'	14.5'	15.5'	16.5'

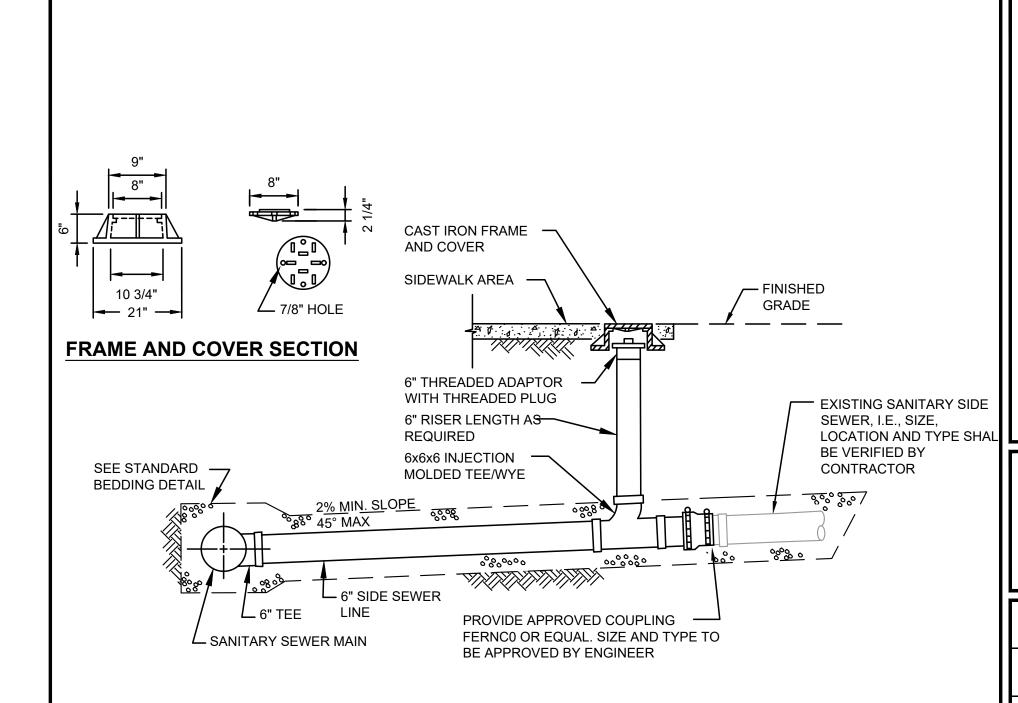
TRENCH PAYMENT LIMIT SCHEDULE

1. THE TRENCH SECTIONS SHOWN ON THE PLANS ARE FOR THE PAYMENT LIMITS FOR BANK RUN GRAVEL FOR TRENCH BACKFILL. PAYMENT FOR ALL BANK RUN GRAVEL FOR TRENCH BACKFILL SHALL BE COMPUTED FROM THE MEASUREMENT OF THE CONSTRUCTED TRENCH SECTION, TO THE MAXIMUM PAYMENT LIMITS AS INDICATED IN THE SCHEDULE ON THIS SHEET.

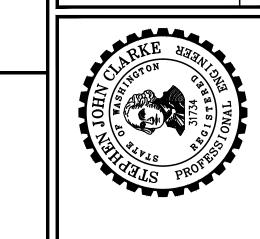
2. WHERE UNSUITABLE MATERIAL IS ENCOUNTERED BELOW THE PIPE BEDDING SUBGRADE, THE CONTRACTOR SHALL REMOVE THE UNSUITABLE MATERIAL AND REPLACE WITH FOUNDATION GRAVEL AND GEOTEXTILE FOR STABILIZATION.



NOT TO SCALE



SIDE SEWER CONNECTION DETAIL NOT TO SCALE

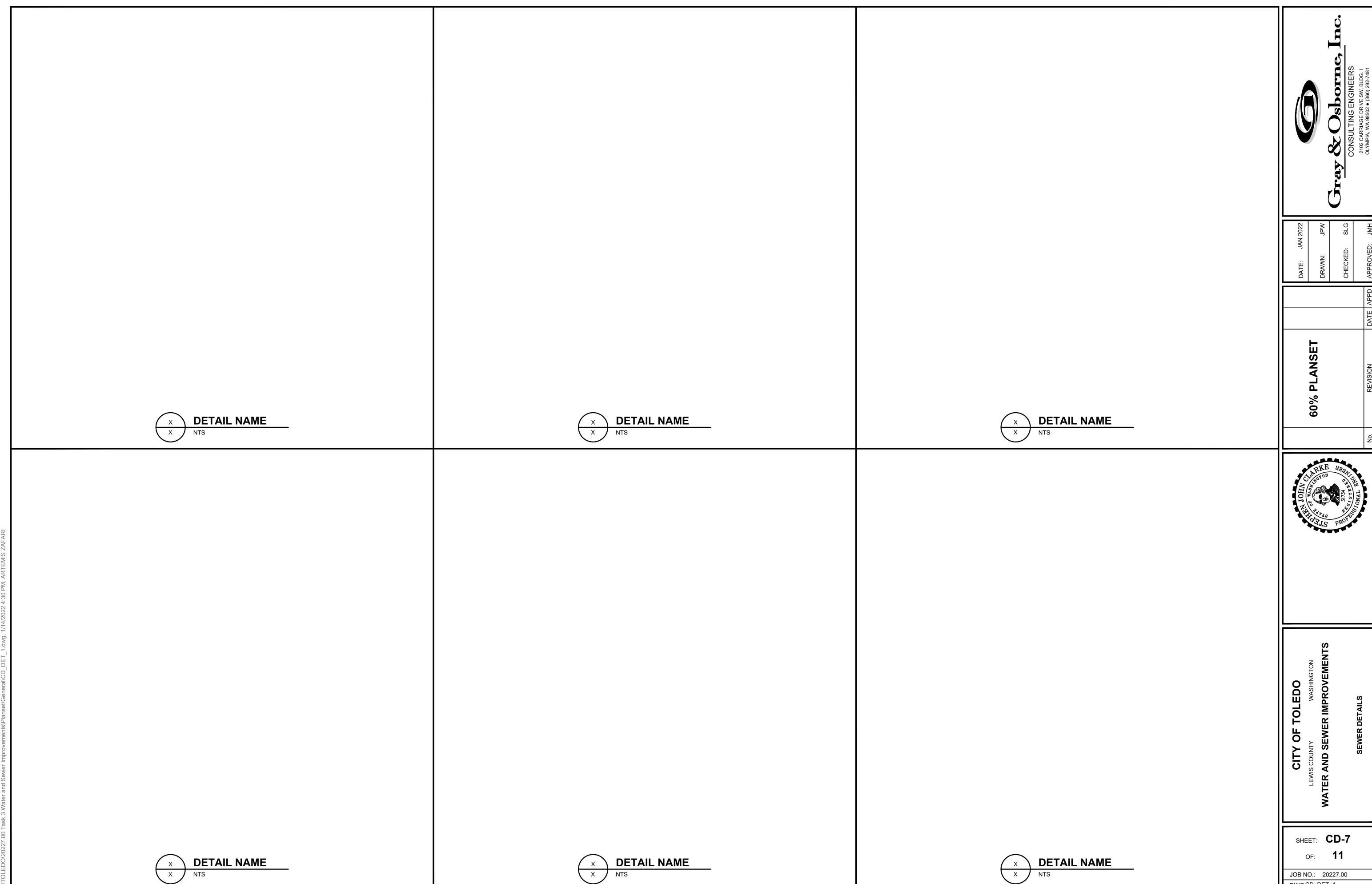


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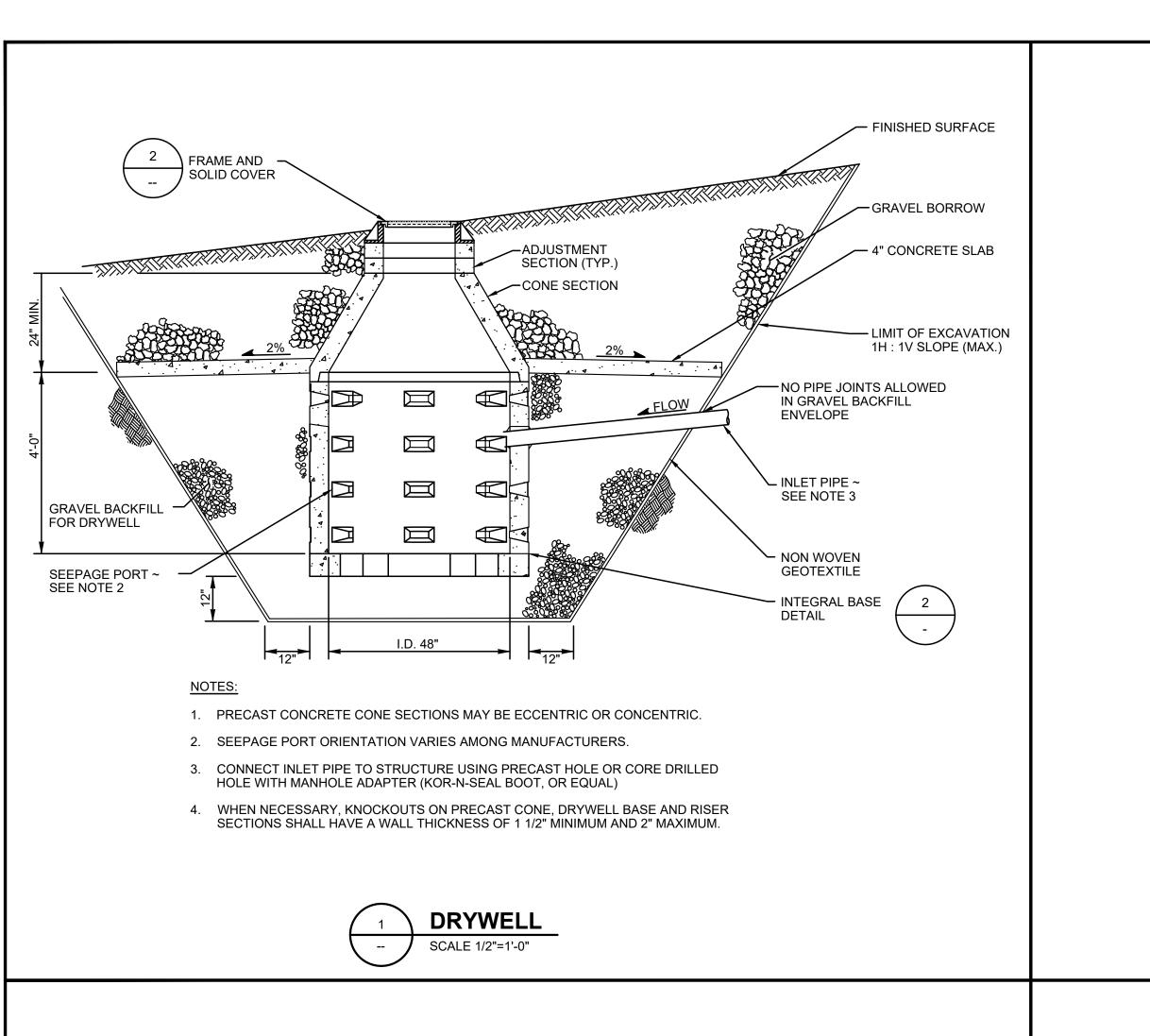
SHEET: CD-6 JOB NO.: 20227.00

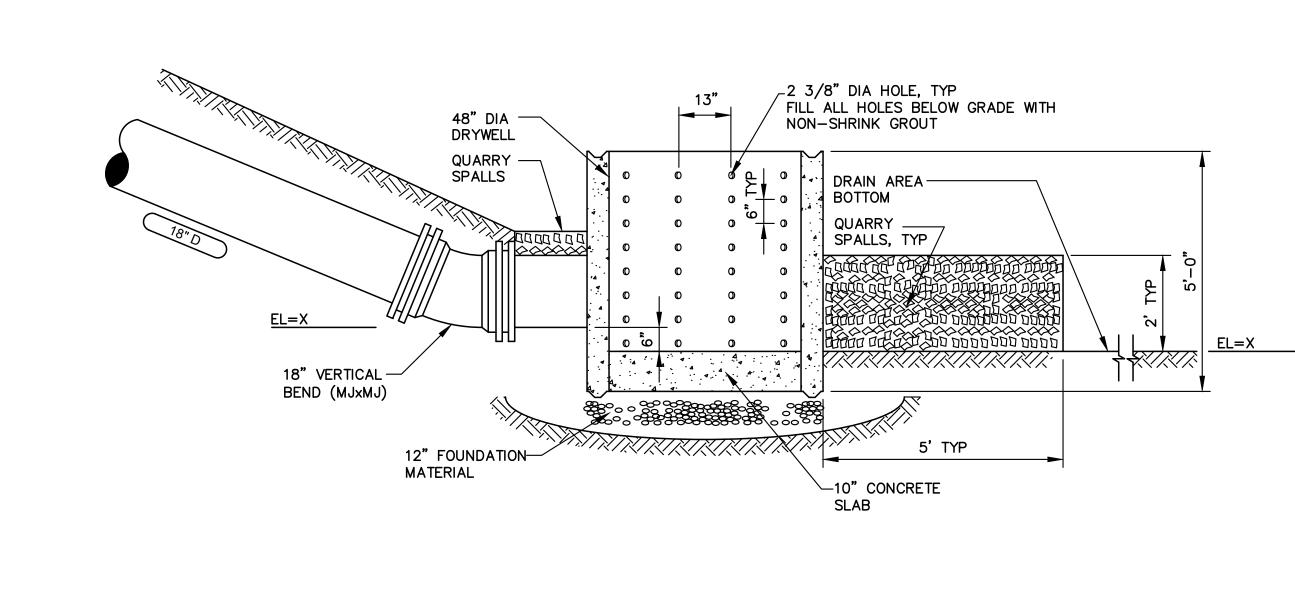
CITY OF

DWG:CD_DET_1

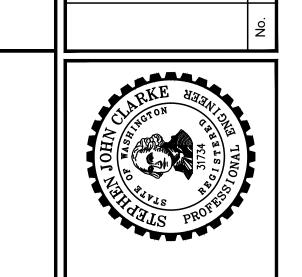


JOB NO.: 20227.00 DWG:CD_DET_1

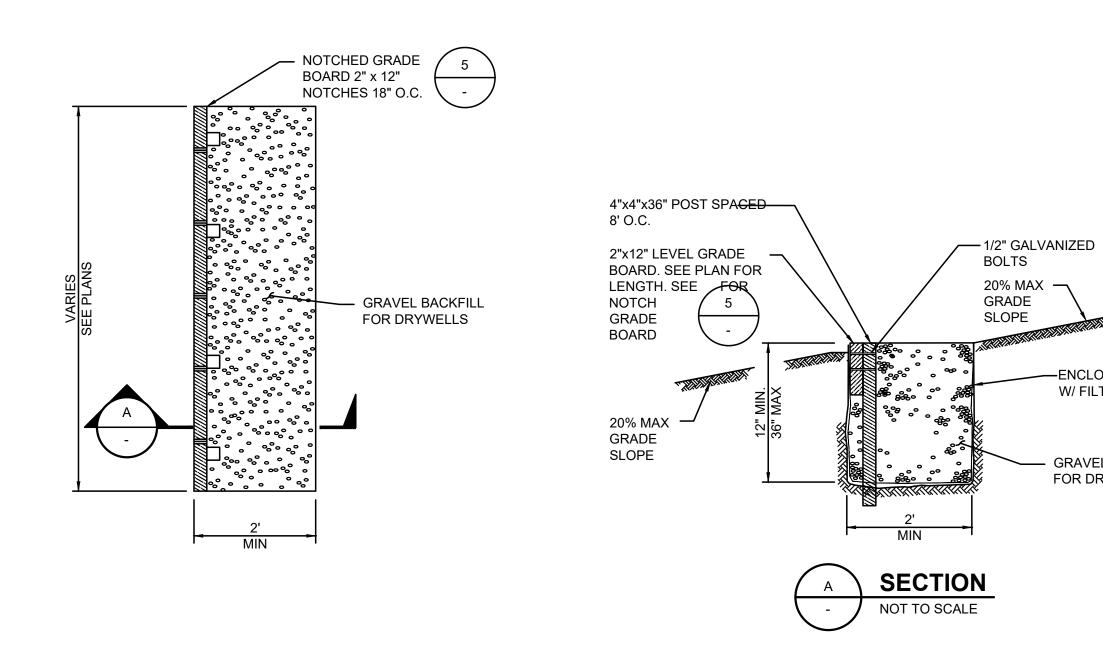


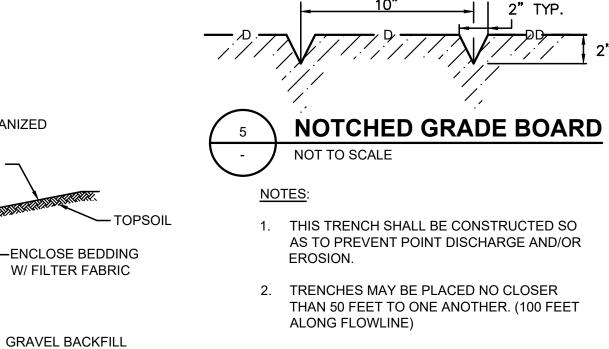


SCALE: 1/2" = 1'-0"



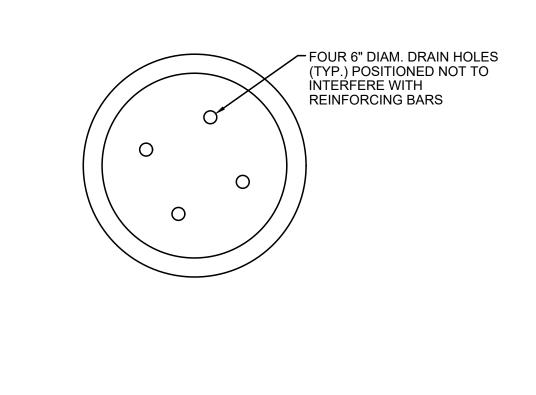
%09





- 2. TRENCHES MAY BE PLACED NO CLOSER THAN 50 FEET TO ONE ANOTHER. (100 FEET
- 3. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF
- 4. SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS TO ENSURE GRADE BOARD REMAINS LEVEL.
- 5. GRADE BOARD AND SUPPORTS SHALL BE MADE OF POLYMER COMPOSITE NUMBER. (TREX OR EQUAL)





INTEGRAL BASE DETAIL NOT TO SCALE

JOB NO.: 20227.00 DWG:CD_DET_2

SHEET: CD-8

11

AND SEWER

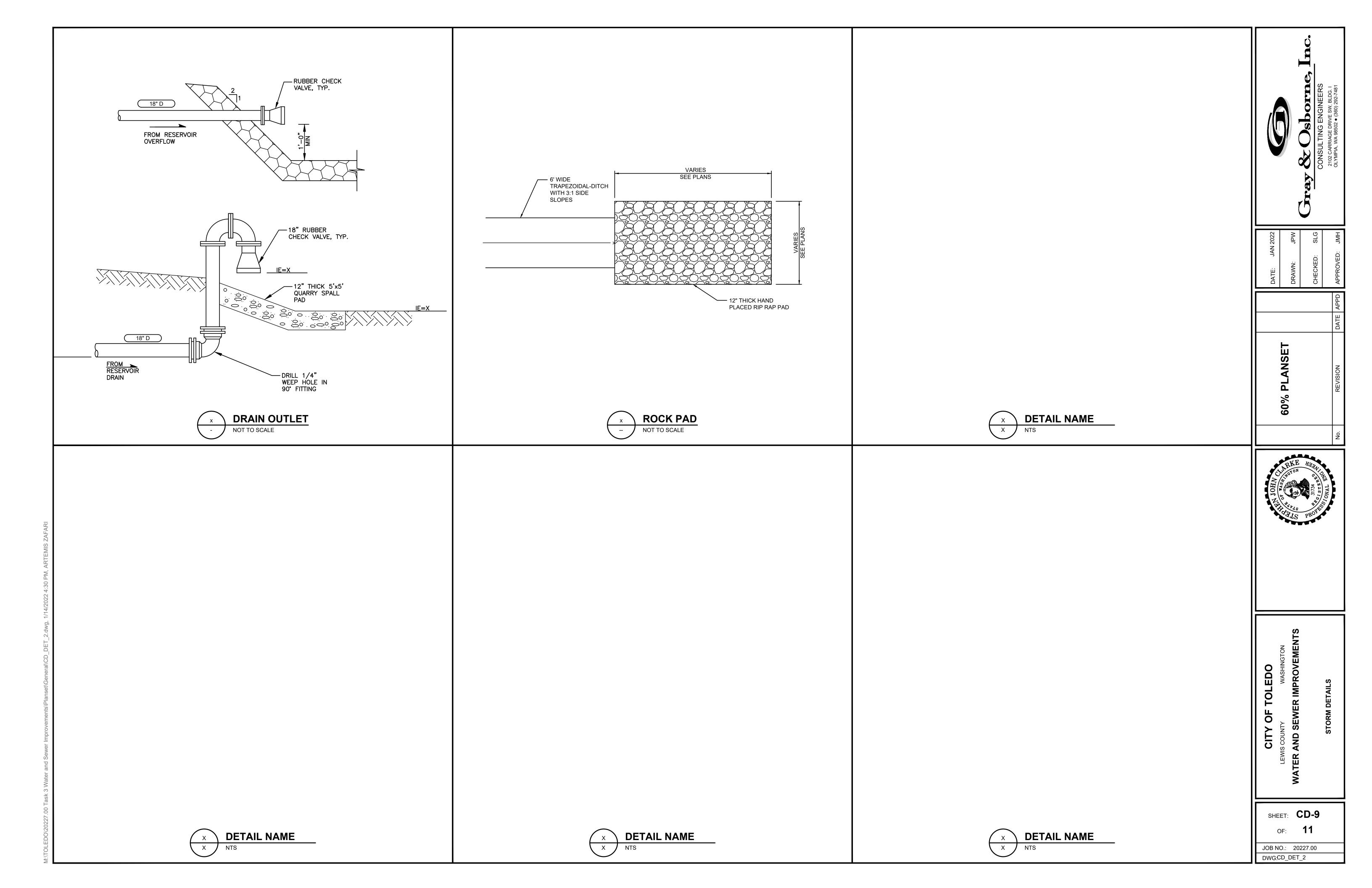
TOLEDO

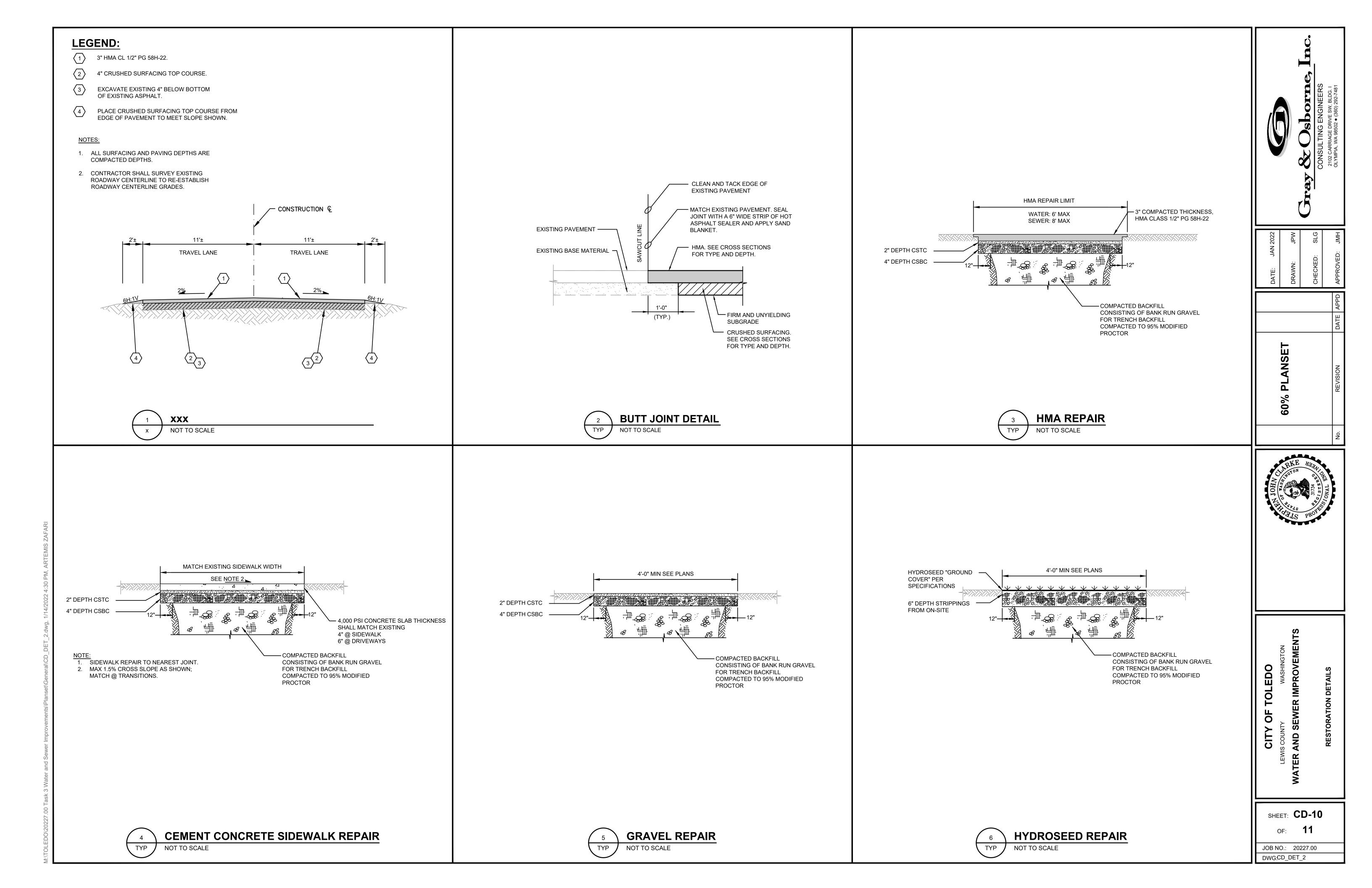
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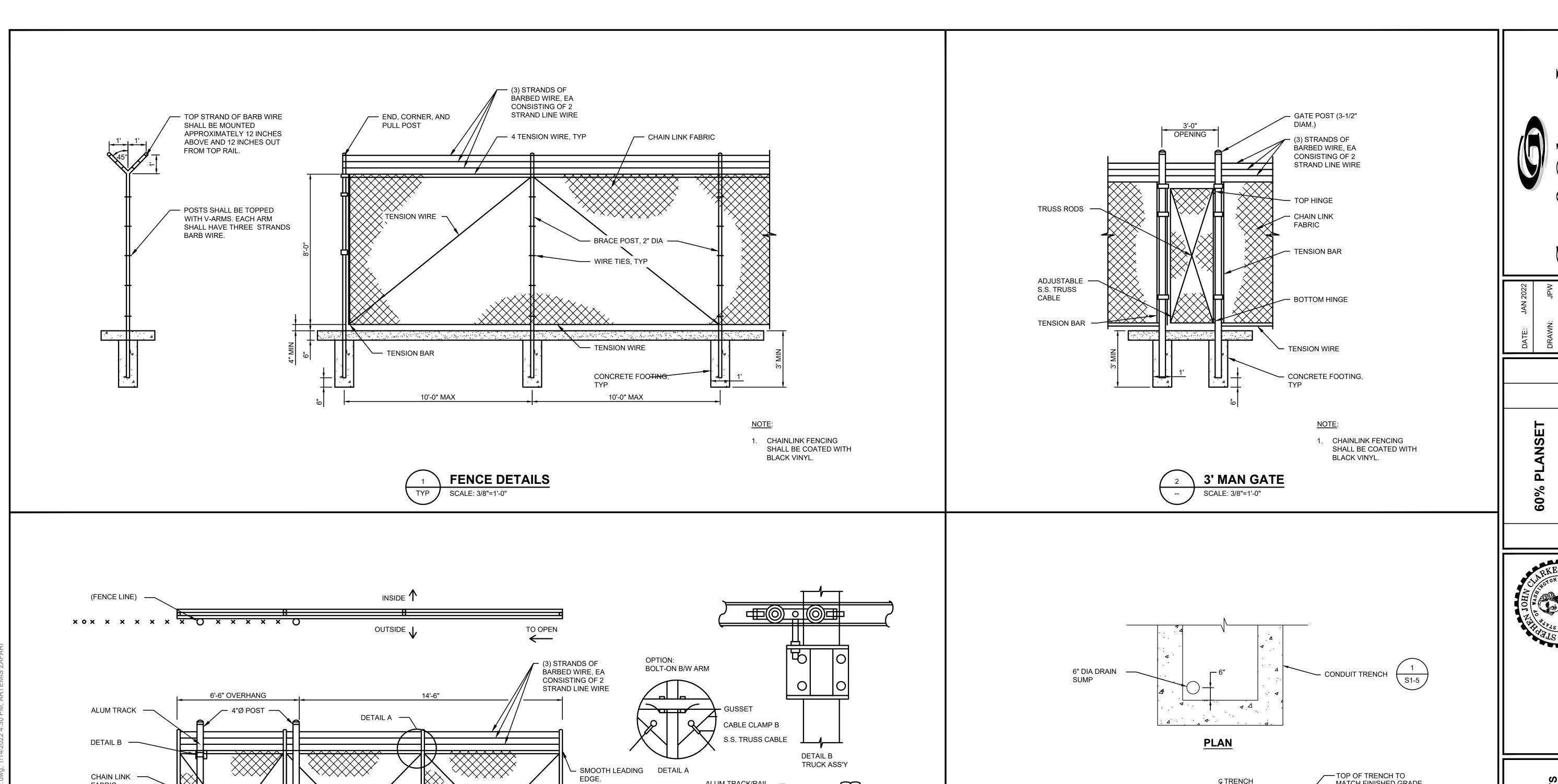
FOR DRYWELLS

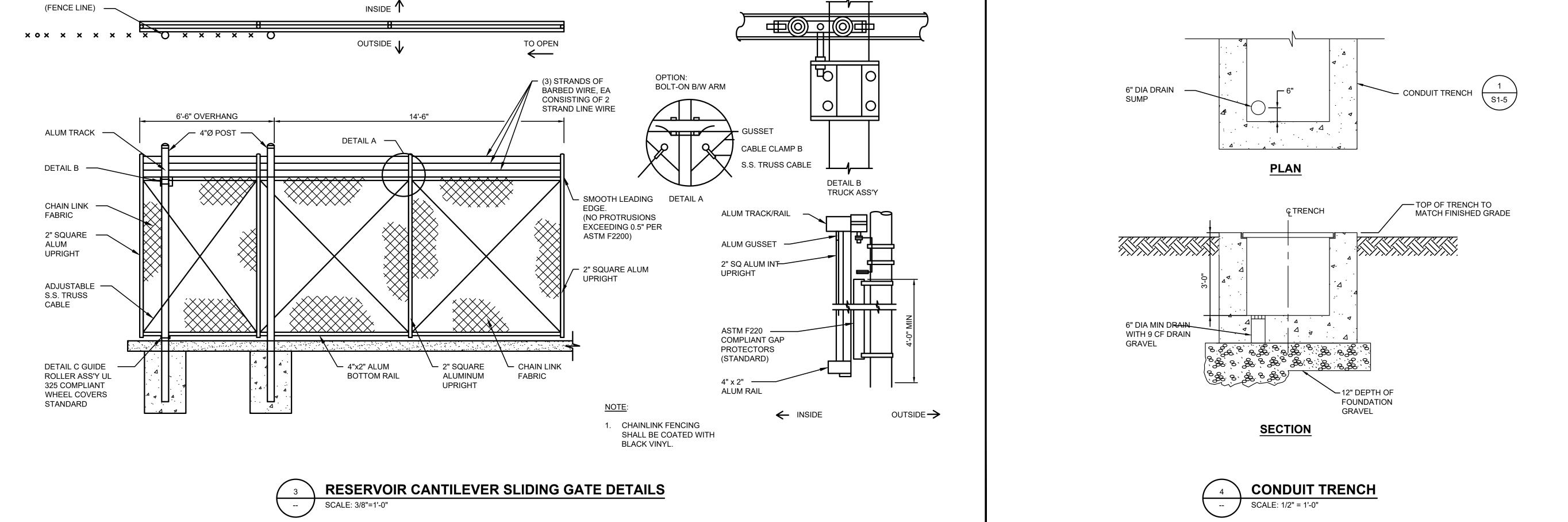


EROSION CONTROL OUTLET STRUCTURE









TOLEDO

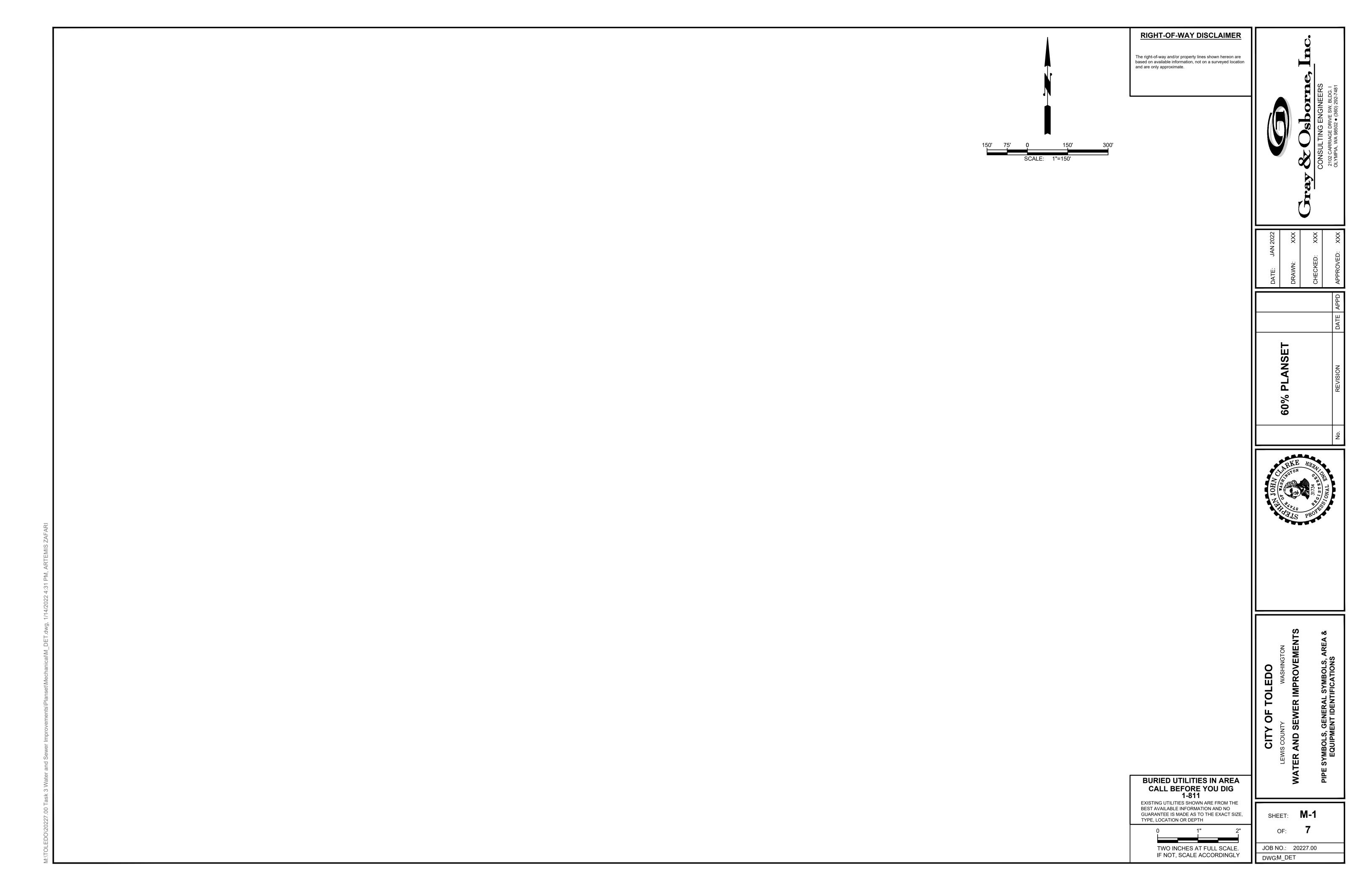
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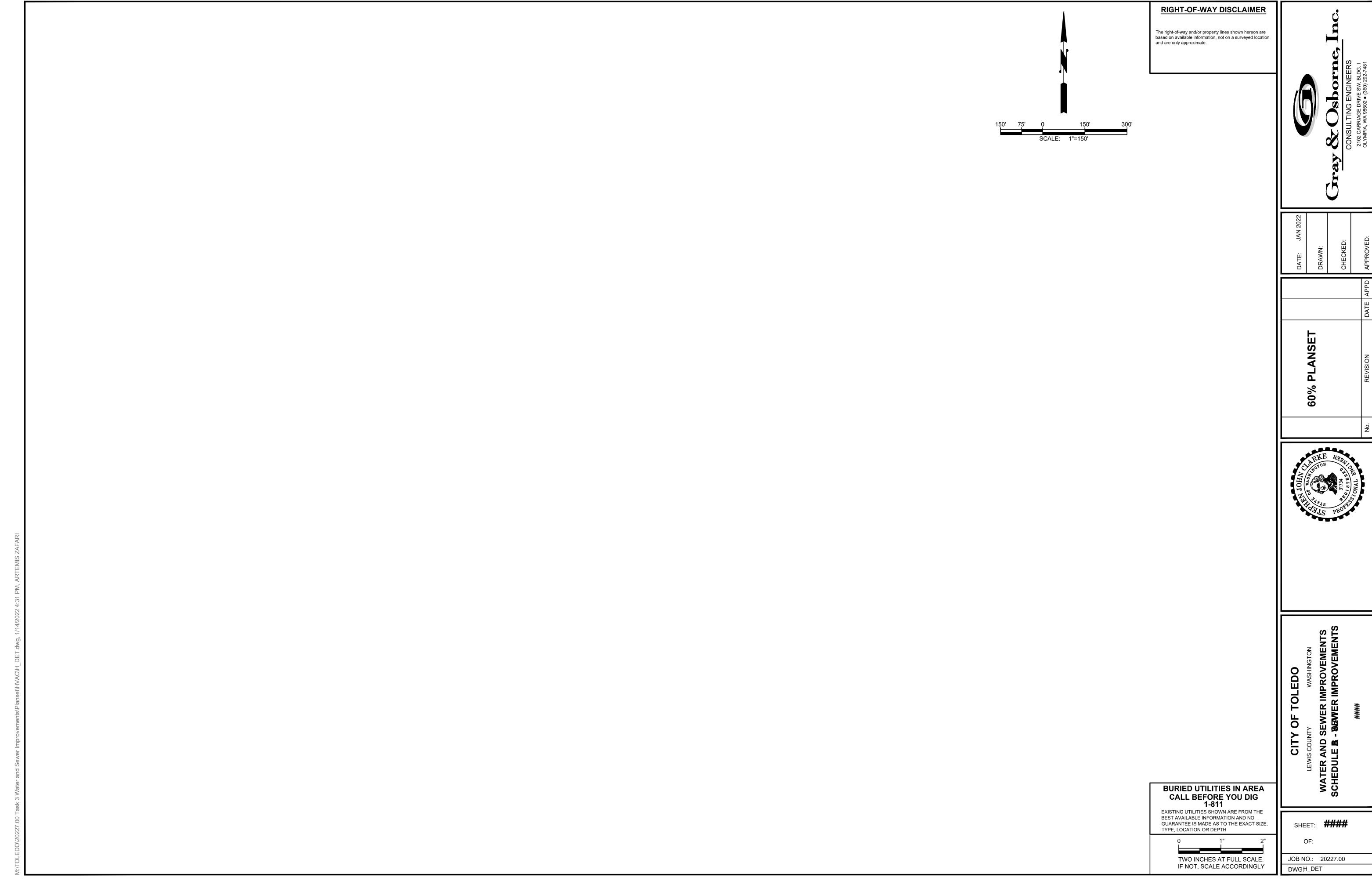
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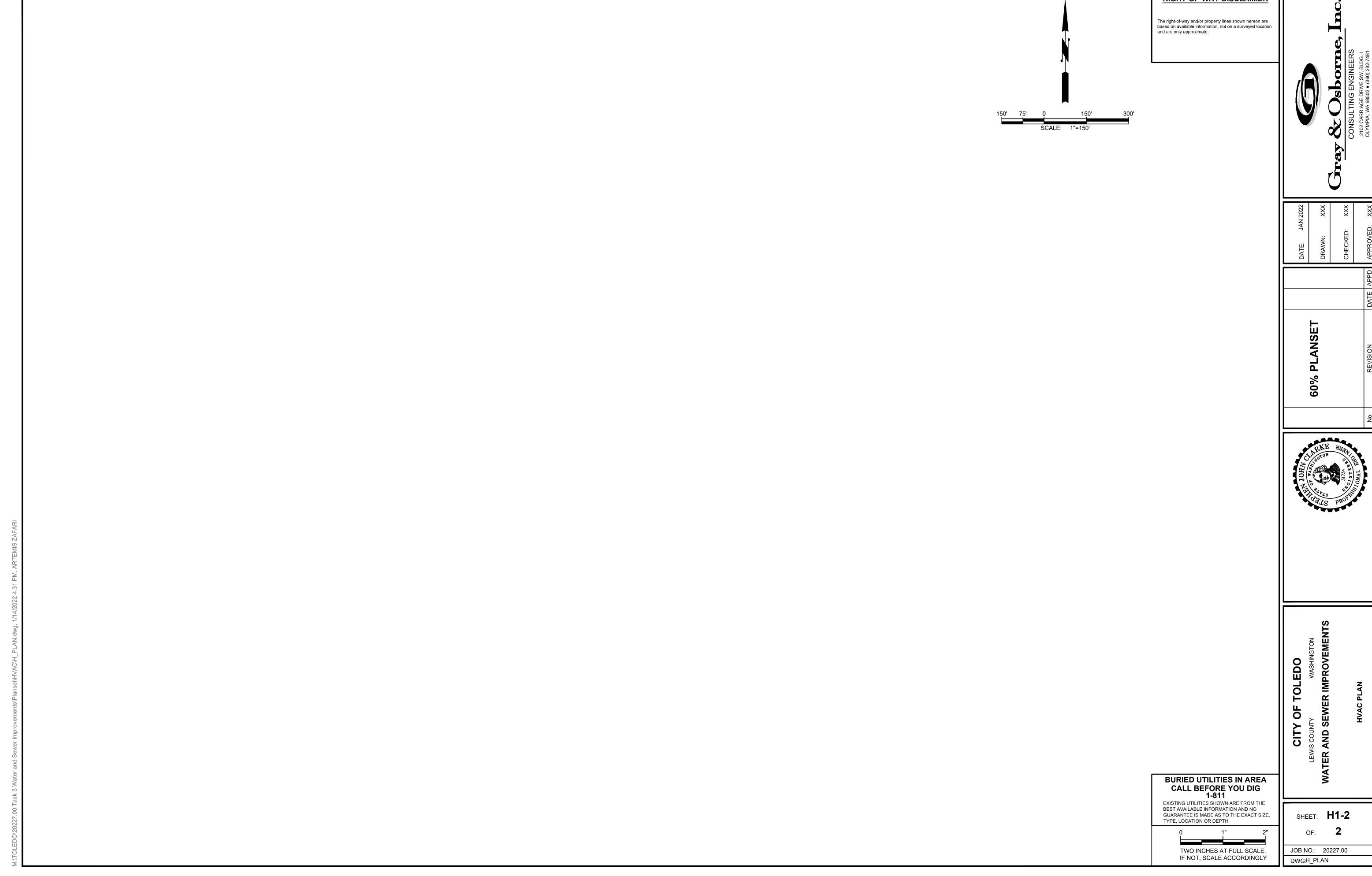
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JOB NO.: 20227.00

DWG:CD_DET_2

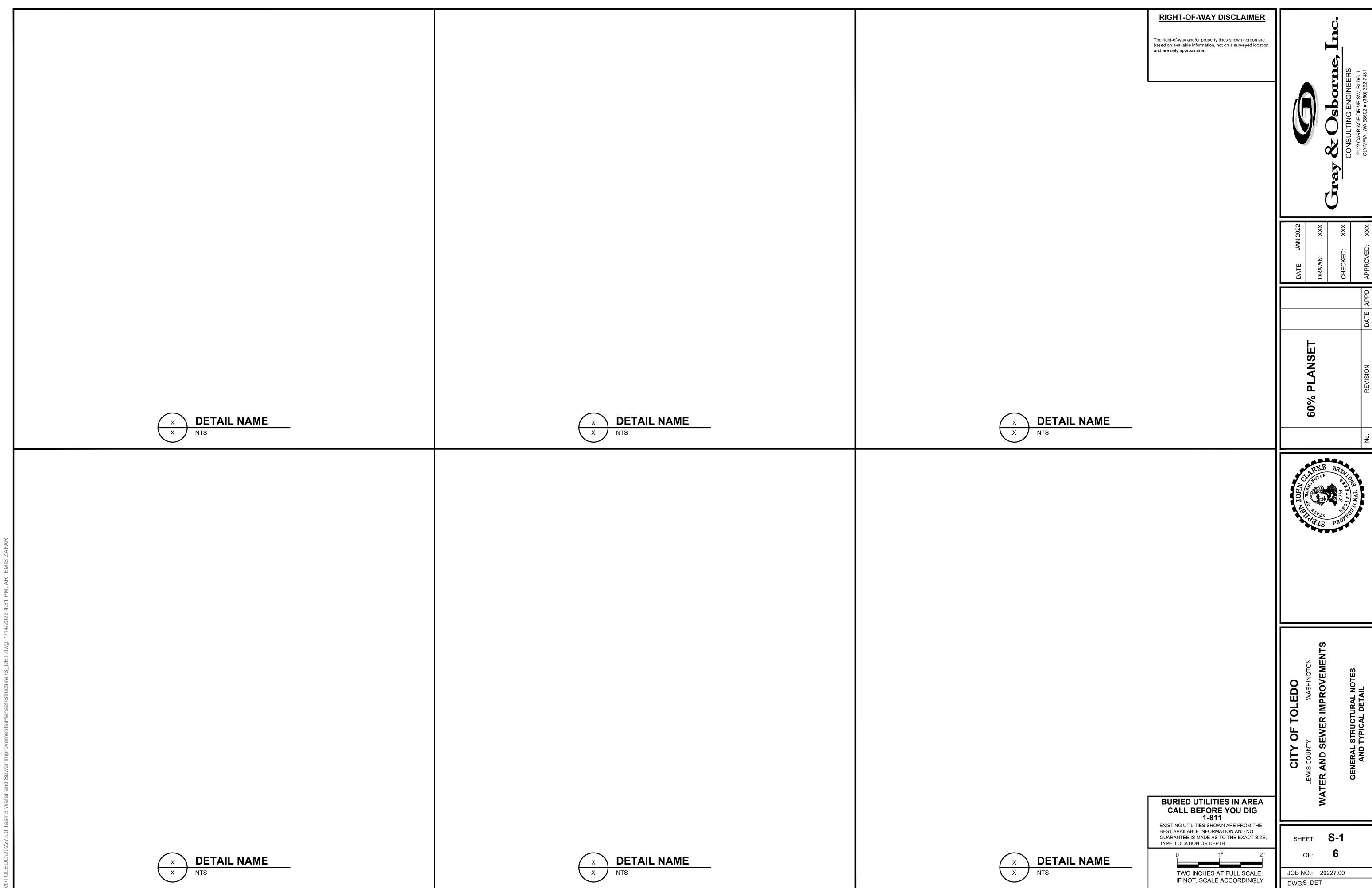


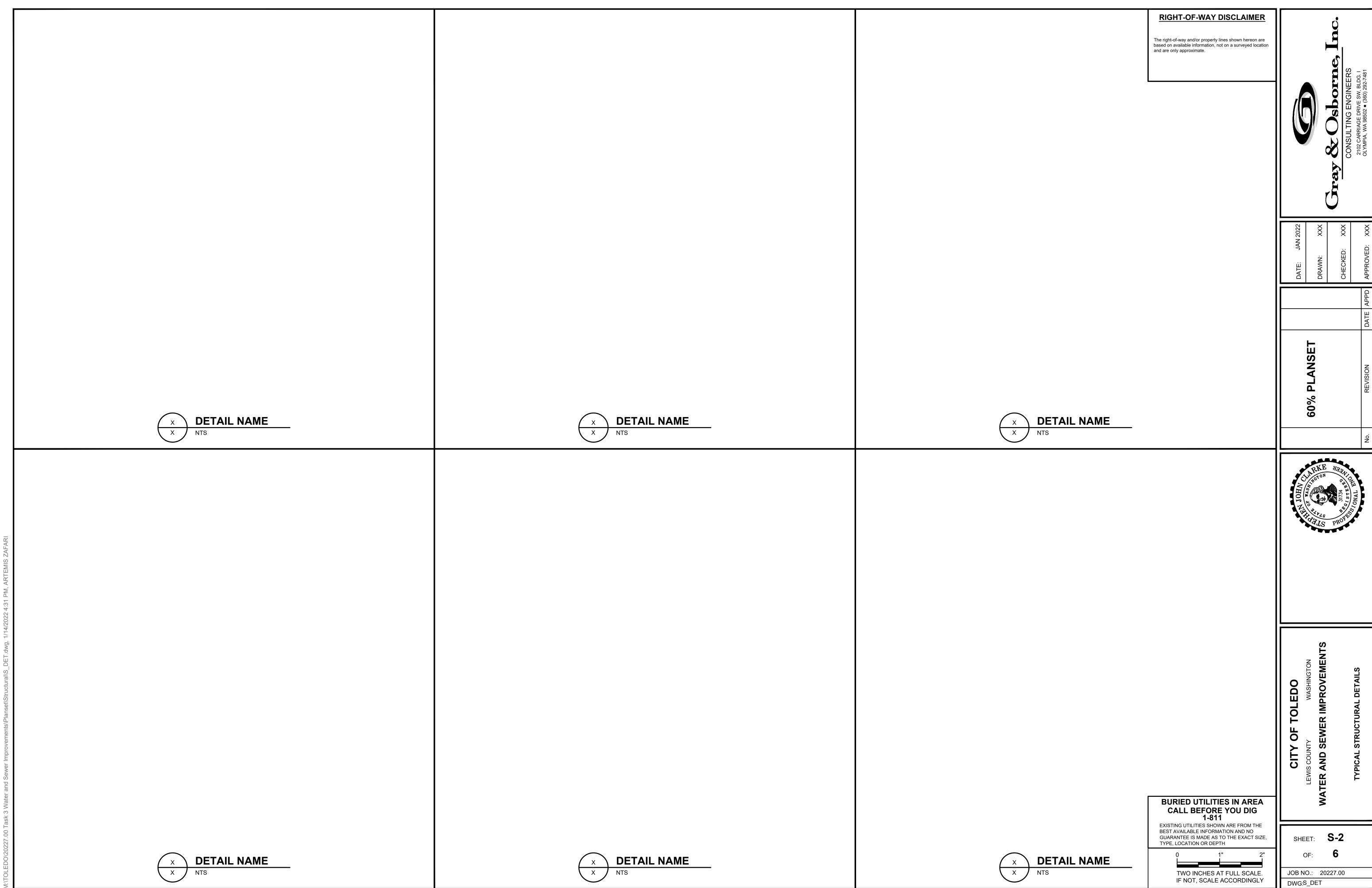


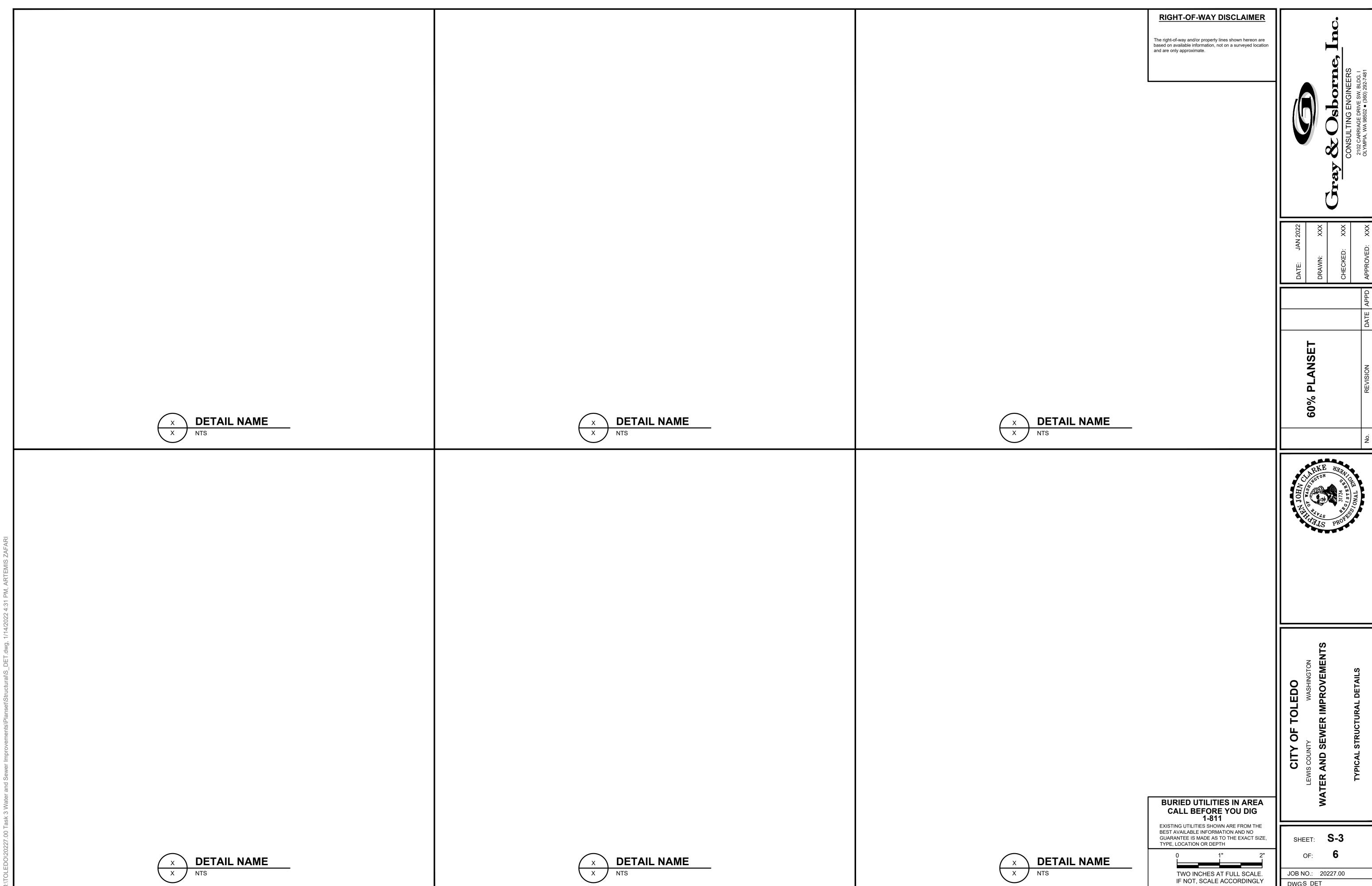


RIGHT-OF-WAY DISCLAIMER









DWG:S_DET