

VICINITY MAP  
N.T.S.

# CITY OF LAKEWOOD

## DRILLING, CONSTRUCTION, DEVELOPMENT, AND TESTING OF LAKEWOOD WELL 22B AND DEMOLITION OF WELL 22A LAKEWOOD, CALIFORNIA PROJECT NUMBER PW 25-04



LOCATION MAP  
N.T.S.

**GENERAL NOTES:**

- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO REGULAR WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS EMPLOYEES, AGENTS AND WOOD ROGERS INC. FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY'S STANDARD DRAWINGS AND SPECIFICATIONS, ALL APPLICABLE CALIFORNIA DEPARTMENT OF WATER RESOURCES' CALIFORNIA WATER WELL STANDARDS BULLETIN 74-81, ITS SUPPLEMENT BULLETIN 74-90, AMERICAN WATER WORKS ASSOCIATION WELLS STANDARDS A100-20, AND ANY APPLICABLE COUNTY AND LOCAL REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPORT DISCREPANCIES IN PLANS AND/OR FIELD CONDITIONS IMMEDIATELY TO THE HYDROGEOLOGIST, OR ENGINEER OF RECORD, FOR RESOLUTION PRIOR TO CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR DISCREPANCIES, NOT SO REPORTED AND RESOLVED.
- CONTRACTOR SHALL HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ON SITE AT ALL TIMES, AND SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL IDENTIFY AND OBTAIN ALL NECESSARY LICENSES AND PERMITS IN ACCORDANCE WITH THE LAWS AND REGULATIONS GOVERNING THE WORK. ANY INFORMATION ABOUT SPECIFIC LICENSES OR PERMITS PROVIDED HEREIN IS FOR INFORMATIONAL PURPOSES AND DOES NOT RELIEVE THE CONTRACTOR OF THIS OBLIGATION.
- THE CONTRACTOR SHALL PROVIDE AND MAKE AVAILABLE A QUALIFIED AND EXPERIENCED FOREMAN AND DRILLING SUPERINTENDENT WHO WILL BE RESPONSIBLE FOR COORDINATING THE WORK SO THAT THE PROJECT IS SUCCESSFULLY EXECUTED WITHOUT CONFLICT OR DELAY.
- CONTRACTOR MAY ONLY PERFORM WORK OUTSIDE REGULAR WORKING HOURS (MONDAY THROUGH SATURDAY 7:00 A.M. - 7:00 P.M. AND SUNDAY 9:00 A.M. - 7:00 P.M.) OR LEGAL HOLIDAYS WITH OWNER'S WRITTEN CONSENT AND PRIOR APPROVAL.
- THE CONTRACTOR SHALL PROPERLY SAFEGUARD ALL EQUIPMENT, MATERIALS, AND WORK AGAINST LOSS, DAMAGE, MALICIOUS MISCHIEF OR TAMPERING BY UNAUTHORIZED PERSONS UNTIL ACCEPTANCE OF THE WORK BY THE OWNER.
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 422-4133 AT LEAST TWO (2) WORKING DAYS, BUT NO MORE THAN 14 WORKING DAYS, BEFORE ANY UNDERGROUND EXCAVATION AT THE SITE. IF NECESSARY, THE CONTRACTOR SHALL HAND DIG TO EXPOSE ANY UNDERGROUND UTILITIES THAT MAY CONFLICT WITH PLANNED EXCAVATION.
- IF THE CONTRACTOR DAMAGES, DISCONNECTS, OR RELOCATES ANY EXISTING FACILITIES OR UTILITIES, THE CONTRACTOR SHALL, AT CONTRACTOR'S OWN EXPENSE, RESTORE THEM TO THE ORIGINAL CONDITION AS SPECIFIED BY THE OWNER OF THE FACILITY OR UTILITY.
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL POTHOLE BELOW GRADE EXCAVATION AT LEAST 6 BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION.

**LIST OF DRAWINGS**

SHEET	DRAWING	DESCRIPTION
1	W-1	TITLE SHEET
2	W-2	WELL LOCATION AND SITE LAYOUT
3	W-3	CONSTRUCTION SITE LAYOUT
4	W-4	SITE DEMOLITION PLAN
5	W-5	WELL DESTRUCTION PROFILE
6	W-6	SITE IMPROVEMENTS PLAN
7	W-7	PRELIMINARY DESIGN PROFILE
8	W-8	STANDARD CONSTRUCTION DETAILS - CASING
9	W-9	STANDARD CONSTRUCTION DETAILS - TESTING

PROFILE SCALE  
HORIZ. Not to Scale  
VERT. Not to Scale



PLANS APPROVED BY:  
  
02/28/25  
DATE  
DEREK NGUYEN, PH.D., P.E.  
DIRECTOR OF WATER RESOURCES  
LICENSE NO. 74688 Exp. 12/31/2025



PLANS PREPARED BY:  
  
WOOD ROGERS  
608 E. CHAPMAN AVENUE, SUITE 200  
COSTA MESA, CA 92626  
UNDER THE SUPERVISION OF  
KEVIN GUSTORF, P.E. 02/28/25  
DATE

BENCH MARK:  
NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_

REVISIONS			
NO.	DESCRIPTION	APP.	DATE
1	90% PLANSETS		11/08/24
2	100% PLANSETS		12/12/24
3	FINAL PLANSETS		01/09/25
4	ADVERTISED PLANSETS		02/08/25

### CITY OF LAKEWOOD DRILLING, CONSTRUCTION, DEVELOPMENT, AND TESTING OF LAKEWOOD WELL 22B AND DEMOLITION OF WELL 22A TITLE SHEET

DRAWN BY: MH  
DESIGNED BY: JS  
CHECKED BY: KG  
SHT. 1 of 9 SHTS. DRAWING W-1



**GENERAL NOTES:**

- CONTRACTOR SHALL CONFINE ALL CONSTRUCTION ACTIVITIES TO THE SUBJECT PARCEL, ADJACENT EASEMENTS, AND PUBLIC RIGHT-OF-WAY, AND THE CONTRACTOR SHALL NOT ENCROACH ONTO PRIVATE PROPERTY WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PROPERTY OWNER.
- A TRAFFIC CONTROL PROGRAM SHALL BE IMPLEMENTED TO PROTECT THE ENTRANCE TO THE SITE AND ANY EQUIPMENT OR VEHICLES ON THE ADJACENT ROADWAYS. AT A MINIMUM, THIS PROGRAM SHALL CONSIST OF INSTALLING TRAFFIC CONES AROUND ANY EQUIPMENT PARKED ON ROADWAYS AND AT THE SITE ENTRANCE. CONSTRUCTION AREA SIGNS AND TRAFFIC CONES SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND REMOVED WHEN NO LONGER REQUIRED.
- PRIOR TO MOBILIZATION, THE CONTRACTOR SHALL PROVIDE THE HYDROGEOLOGIST WITH A NOISE CONTROL PLAN, INCLUDING A LAYOUT SHOWING THE CONFIGURATION OF THE SOUND BARRIERS, AND A REPORT PREPARED BY A REGISTERED STRUCTURAL ENGINEER PROVIDING GEOTECHNICAL AND STRUCTURAL ENGINEERING CALCULATIONS SPECIFIC TO THE PROJECT SITE AND THE TYPE OF SOUND BARRIERS UTILIZED.
- THE PROJECT WILL REQUIRE CONTAINMENT AROUND ALL FOUR BOUNDARIES OF THE LAKEWOOD WELL 22B WORK AREA WITH SOUND BARRIERS TO MITIGATE NOISE GENERATED DURING EXECUTION OF THE CONTRACT AND TO SHIELD ADJACENT RESIDENTIAL AREAS. SOUND BARRIERS WILL BE A MINIMUM OF 24 FEET IN HEIGHT.
- THE LAYOUT OF SOUND BARRIERS IS ANTICIPATED TO CONSIST OF APPROXIMATELY 485 LINEAR FEET OF 24-FOOT NOISE PANELING, APPROXIMATELY 16 LINEAR FEET OF 24-FOOT SOUND CURTAINS. HOWEVER, THE CONTRACTOR SHALL EVALUATE THE EXISTING SITE CONDITIONS AND SATISFY THE NECESSARY LEVEL OF REQUIRED NOISE MITIGATION.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL SOUND CONTROL AND NOISE LEVEL RULES, REGULATIONS, AND ORDINANCES THAT APPLY TO ANY WORK PERFORMED PURSUANT TO THE CONTRACT.
- DRILLING FLUIDS SHALL BE CONTAINED AT ALL TIMES. IN NO EVENT SHALL DRILLING FLUIDS BE ALLOWED TO RUN OFF THE PROJECT SITE, WHEN NO LONGER IN USE. DRILLING FLUIDS SHALL BE LEGALLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY.
- CONTRACTOR SHALL STOCKPILE DRILL CUTTINGS AT THE PROJECT SITE. AT THE END OF THE PROJECT, THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND LEGALLY DISPOSE OF ALL DRILL CUTTINGS UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE OWNER.
- CONSTRUCTION WATER IS AVAILABLE FROM A FIRE HYDRANT LOCATED ON THE WEST SIDE OF CANDLEWOOD ST. AND KLONDIKE AVE. INTERSECTION, APPROXIMATELY 318 FEET NORTHWEST OF THE PROPOSED WELL LOCATION. THE OWNER WILL PROVIDE CONSTRUCTION WATER AT NO COST. HOWEVER, THE CONTRACTOR MUST METER ALL WATER USED FOR CONSTRUCTION AND SHALL MAKE ALL EFFORT TO CAREFULLY CONSERVE WATER. ARRANGEMENTS TO OBTAIN A WATER METER CAN BE MADE BY CONTACTING THE OWNER.
- THE CONTRACTOR SHALL PROVIDE AN APPROVED BACKFLOW PREVENTION (BFP) DEVICE. THE BFP SHALL BE TESTED IN-SITU BY A CERTIFIED BFP TESTER AND THE TEST DATA SHALL BE PROVIDED TO THE HYDROGEOLOGIST AND OWNER FOR THEIR RECORDS.
- CONTRACTOR SHALL SUPPLY TEMPORARY STORAGE TANKS (E.G., BAKER TANKS), CONNECTED IN SERIES, AND OF SUFFICIENT NUMBER AND CAPACITY TO ADEQUATELY SETTLE SUSPENDED SOLIDS WITHIN THE DISCHARGE PRIOR TO CONVEYANCE TO THE DISCHARGE POINT.
- THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO ENSURE THE EXISTING INFRASTRUCTURE ONSITE AND ADJACENT TO THE SITE WILL BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT. EXISTING INFRASTRUCTURE TO BE PROTECTED INCLUDES, BUT IS NOT LIMITED TO, WELLS ON THE PROPERTY (AND LAKEWOOD 1), POWER POLES, STREET SIGNS, TREE, GENERATOR, RESERVOIR, BOOSTER PUMPS AND RELATED DISCHARGE PIPING, AND CELL PHONE TOWER.
- THE FINAL WELL LOCATION SHALL BE STAKED BY THE OWNER.
- CITY FORCES WILL RELOCATE AM FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF AM COMMUNICATION POLE.

- Proposed Lakewood Well 22B
- Lakewood Well 22A
- WRD Monitoring Well
- Existing Pump to Waste
- Fire Hydrant
- Cell Phone Tower
- AMI Communication Pole
- Sewer Manhole
- Existing Overhead Utilities
- Sanitary Sewer Line
- Sound Curtain
- Sound Wall (24 ft in Height)
- DIR Minimum Horizontal Offset (10 feet)
- Parcel Boundary

PROFILE SCALE  
 HORZ. Not to Scale  
 VERT. Not to Scale

REVISIONS			CITY OF LAKEWOOD DRILLING, CONSTRUCTION, DEVELOPMENT, AND TESTING OF LAKEWOOD WELL 22B AND DEMOLITION OF WELL 22A WELL LOCATION AND SITE LAYOUT
NO.	DESCRIPTION	APP. DATE	
1	90% PLANSETS	11/06/24	DRAWN BY: MH DESIGNED BY: JS CHECKED BY: KG
2	100% PLANSETS	12/19/24	
3	FINAL PLANSETS	01/31/25	
4	ADVERTISED PLANSETS	02/28/25	



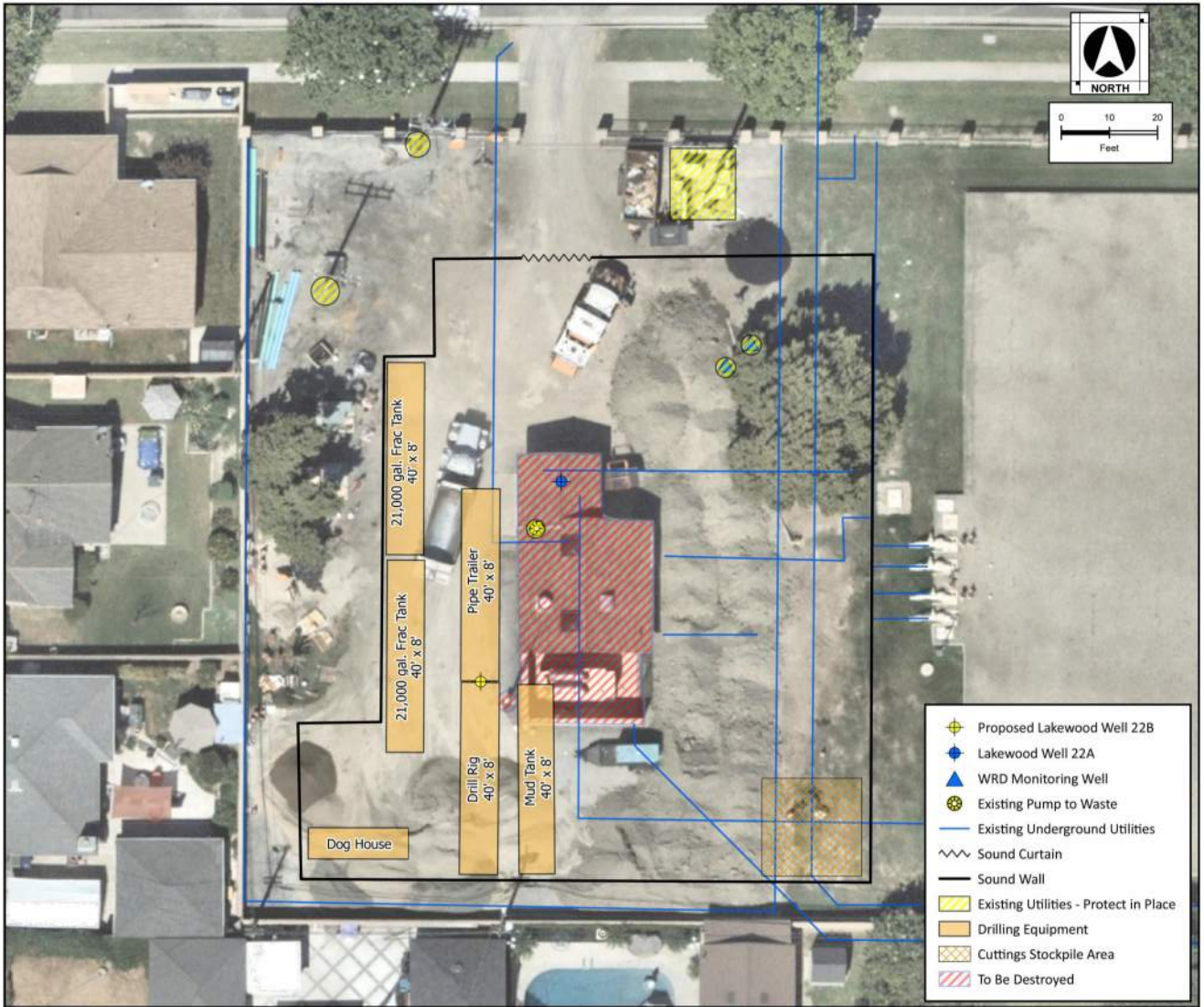
PLANS APPROVED BY:  
  
 DEREK NGUYEN, PH.D., P.E.  
 DIRECTOR OF WATER RESOURCES  
 LICENSE NO. 74668 EXP. 12/31/2025



PLANS PREPARED BY:  
  
 WOOD ROSSERS  
 604 E. CHAPMAN AVENUE, SUITE 200  
 (957) 226-1400  
 UNDER THE SUPERVISION OF  
  
 KEVIN GUSTORF, P.E.  
 DATE: 02/28/25

BENCH MARK:  
 NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
 DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_

SHT. 2 OF 9 SHTS. DRAWING W-2



**GENERAL NOTES:**

- THIS PROPOSED LAYOUT IS FOR PLANNING PURPOSES ONLY. THE CONTRACTOR SHALL EVALUATE SITE CONDITIONS AND NEARBY NOISE RECEPTORS TO DETERMINE THEIR CONSTRUCTION LAYOUT.

PROFILE SCALE  
 HORIZ. Not to Scale  
 VERT. Not to Scale

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/06/24
2	100% PLANSETS	12/12/24
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**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT,**  
**AND TESTING OF LAKEWOOD WELL 22B**  
**AND DEMOLITION OF WELL 22A**  
 CONSTRUCTION SITE LAYOUT

DRAWN BY: MH  
 DESIGNED BY: JS  
 CHECKED BY: KG

SHT. **3** OF **9** SHTS. DRAWING W-3

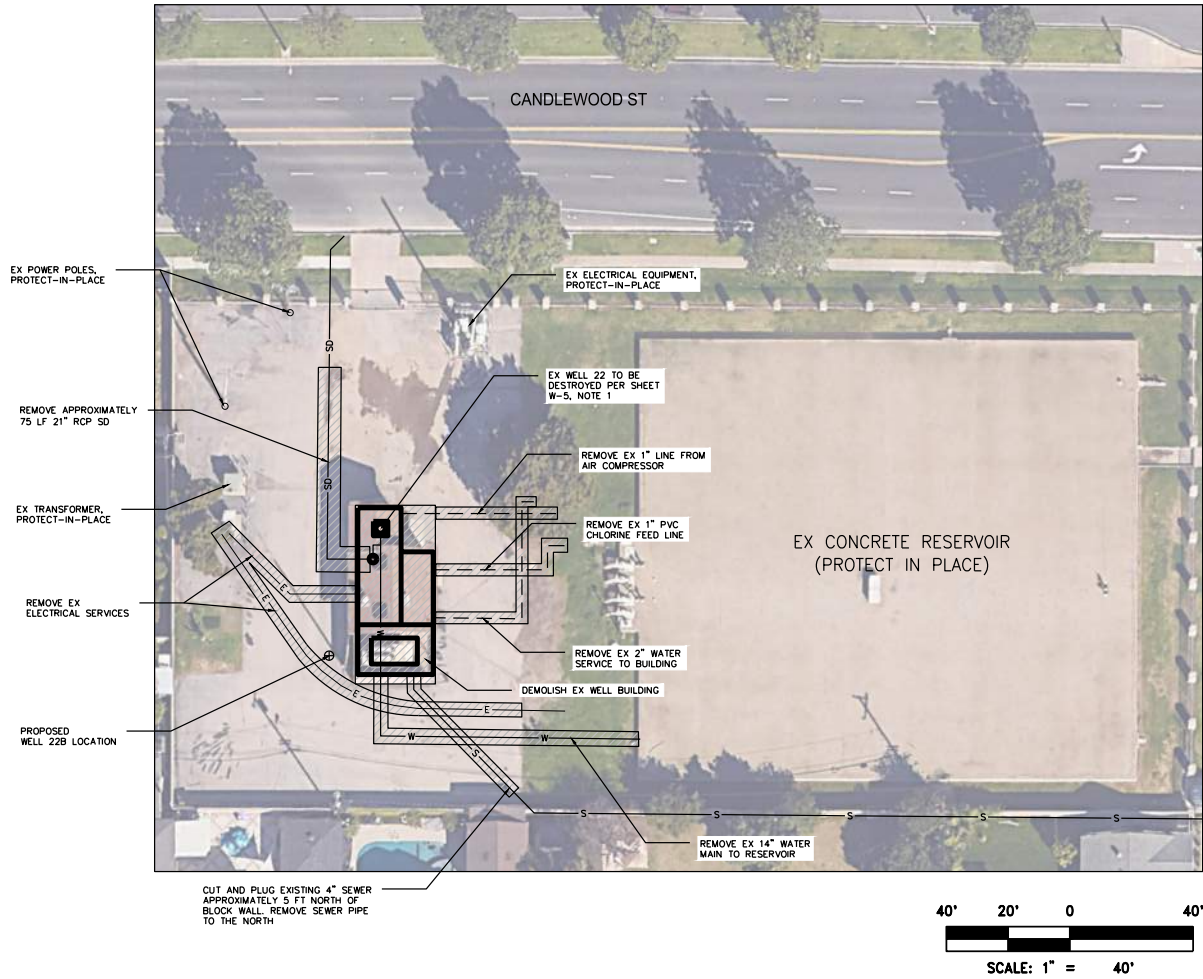


PLANS APPROVED BY:  
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 UNDER THE SUPERVISION OF  
 KEVIN GUSTORF, P.E.

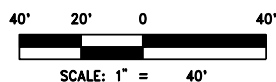
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 DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_



**GENERAL NOTES:**

- EXISTING WELL 22 MOTOR AND PLC TO BE SALVAGED AND DELIVERED TO AN ONSITE STORAGE WAREHOUSE AT 5812 ARBOR ROAD, LAKEWOOD, CA 90713.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL FEATURES, IMPROVEMENTS, AND UTILITIES MARKED FOR DEMOLITION UNLESS OTHERWISE PROTECTED-IN-PLACE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LEGAL DISPOSAL OF ALL ITEMS REMOVED. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
- ABOVE AND BELOW GRADE FEATURES, INCLUDING BELOW GRADE UTILITIES, ARE SHOWN BASED ON AVAILABE RECORD DRAWING INFORMATION, AERIAL SURVEY, AND FIELD OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER FEATURES TO BE REMOVED AND PROTECTED IN PLACE.
- IF FOUND, CONTRACTOR SHALL REMOVE AND DISPOSE OF LEAD-BASED PAINT MATERIALS OR ASBESTOS PER MITIGATION MEASURES DESCRIBED OR REFERENCED IN THE SPECIFICATIONS.
- CONTRACTORS SHALL PROTECT IN PLACE, EXISTING CONDUITS, FROM TRANSFORMERS TO THE CELL TOWER AND LIGHT POST AT THE RESERVOIR. IF CONDUITS OR ELECTRICAL SERVICE ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL RESTORE POWER AND REPAIR CONDUITS WITHIN 24-HOURS.

**LEGEND**




**PROFILE SCALE**  
 HORIZ. Not to Scale  
 VERT. Not to Scale


REVISIONS			
NO.	DESCRIPTION	APP.	DATE
1	90% PLANSETS		11/06/24
2	100% PLANSETS		12/02/24
3	FINAL PLANSETS		01/09/25
4	ADVERTISED PLANSETS		02/28/25

**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT,**  
**AND TESTING OF LAKEWOOD WELL 22B**  
**AND DEMOLITION OF WELL 22A**  
**SITE DESTRUCTION PLAN**

DRAWN BY: MH  
 DESIGNED BY: JS  
 CHECKED BY: KG  
 SHT. 4 OF 9 SHTS. DRAWING W-4



PLANS APPROVED BY:  
  
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PLANS PREPARED BY:  
  
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 UNDER THE SUPERVISION OF  
 KEVIN GUSTORF, P.E.  
 02/28/25  
 DATE

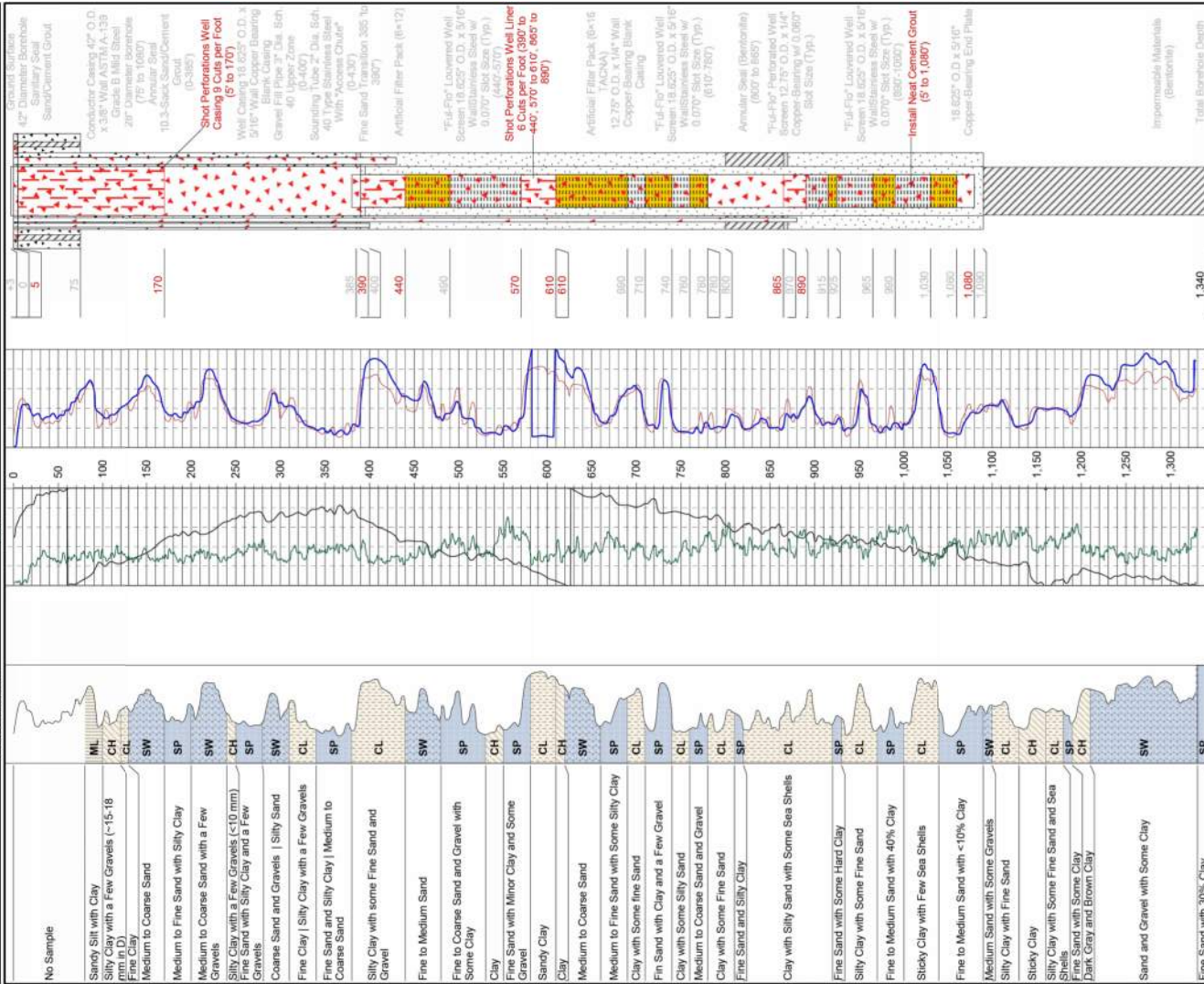
BENCH MARK:  
 NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
 DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_

**CITY OF LAKEWOOD  
WELL 22A  
WELL DESTRUCTION PROFILE**

**BOREHOLE DATA**  
City of Lakewood Well 22A

**Simplified Boring Log Lithology**

**Simplified USCS Field Classification**



**LEGEND:**  
 Perforated 12" Casing  
 Perforated 15" Casing  
 Blank Casing  
 Excavate, out, and remove upper 5' of casing. Install 12" of neat cement cap on casing in cement slurry over casing. Backfill with sandstone soil to ground surface.  
 Neat Cement

**Sources:**  
 Well Section is based on Well linear Design by Tetra Tech Geo (05-31-2012)  
 Lithological Log is Based on Geosciences (10/31/1996)

**PROFILE SCALE**  
 HORIZ. Not to Scale  
 VERT. Not to Scale

- GENERAL NOTES:**
1. THE CONTRACTOR SHALL EXCAVATE, CUT AND FLARE CASING, INSTALL A MUSHROOM CAP, INSTALL BACKFILL MATERIAL AND COMPACT BACKFILL MATERIAL TO 90% COMPACTION PER ASTM D1557.
  2. PERFORATIONS TO BE MADE DURING WELL DESTRUCTION ARE SHOWN AS RED MLL SLOTS, WITH THEIR CORRESPONDING DEPTHS IN RED.
  3. CASING PERFORATIONS FOR WELL DESTRUCTION WILL BE CONFIRMED FOLLOWING THE DOWNHOLE VIDEO SURVEY TO ADDRESS SCREEN INTERVAL DISCREPANCIES.
  4. CONTRACTOR TO REFERENCE BID PROPOSAL SHEET FOR WELL DESTRUCTION BID LINE ITEMS AND QUANTITIES.



**PLANS APPROVED BY:**

02/28/25 DATE  
 DEREK NGUYEN, PH.D., P.E.  
 DIRECTOR OF WATER RESOURCES  
 LICENSE NO. 74668 EXP. 12/31/2025



**PLANS PREPARED BY:**

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 UNDER THE SUPERVISION OF  
 KEVIN GUSTORF, P.E. 02/28/25 DATE

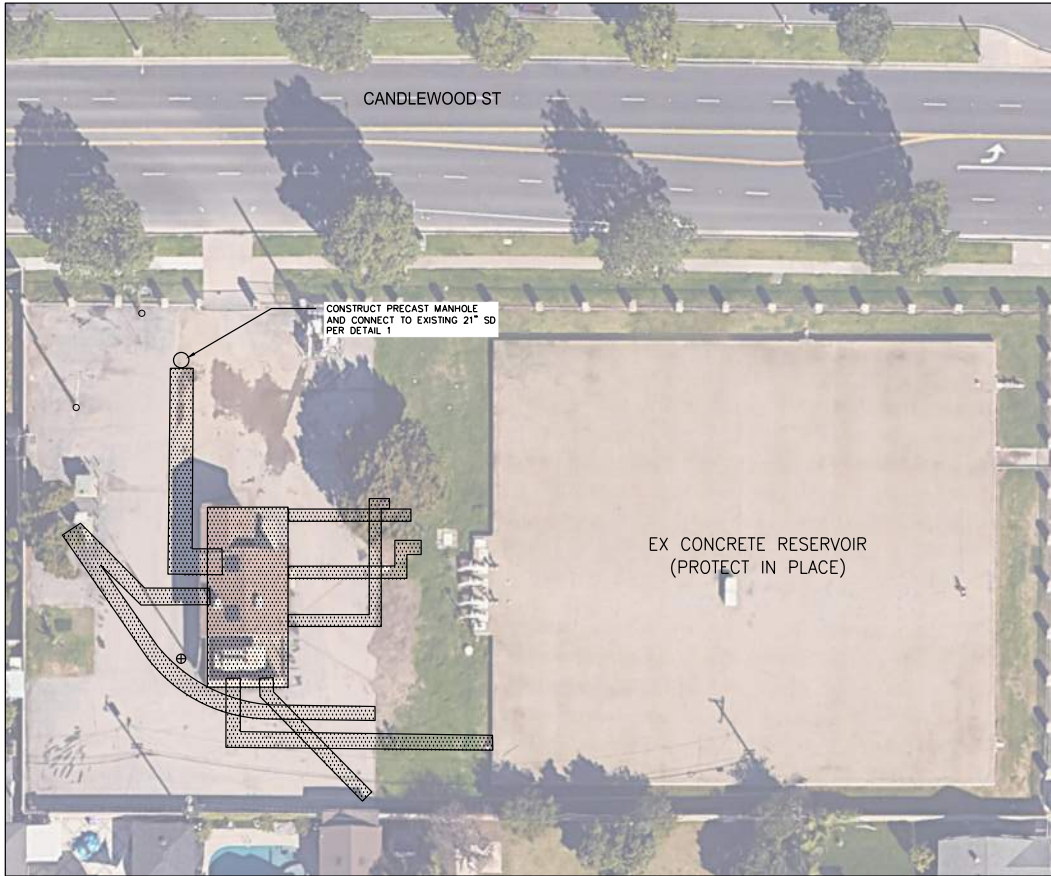
**BENCH MARK:**  
 NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
 DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/08/24
2	100% PLANSETS	12/12/24
3	FINAL PLANSETS	01/31/25
4	ADVERTISED PLANSETS	02/28/25

**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT,  
 AND TESTING OF LAKEWOOD WELL 22B  
 AND DEMOLITION OF WELL 22A**  
**WELL DESTRUCTION PROFILE**

**DRAWN BY:** MH  
**DESIGNED BY:** JS  
**CHECKED BY:** KG

SHT. 5 OF 9 SHTS. DRAWING W-5

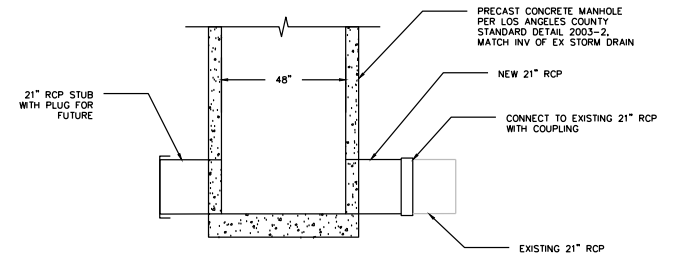


**GENERAL NOTES:**

1. SURFACE REPAIR SHALL CONSIST OF PLACING NATIVE COMPACTED TO 95%, UP TO 6 INCHES BELOW GROUND SURFACE. THE TOP 6 INCHES SHALL CONSIST OF CRUSHED ROCK COMPACTED TO 90%.

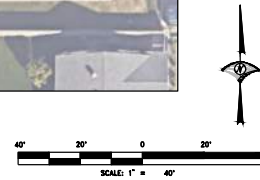
**LEGEND**

 SURFACE RESTORATION



**MANHOLE AND STORM DRAIN CONNECTION**

**DETAIL 1**  
N.T.S.



**PROFILE SCALE**  
HORZ. Not to Scale  
VERT. Not to Scale

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/28/24
2	100% PLANSETS	12/12/24
3	FINAL PLANSETS	01/09/25
4	ADVERTISED PLANSETS	02/28/25

**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT,  
AND DEMOLITION OF LAKEWOOD WELL 22B  
AND DEMOLITION OF WELL 22A**  
SITE IMPROVEMENTS PLAN

DRAWN BY: MH  
DESIGNED BY: JS  
CHECKED BY: KG

SHT. 6 OF 9 SHTS  
DRAWING W-6



PLANS APPROVED BY:  
  
DEREK NGUYEN, Ph.D., P.E.  
DIRECTOR OF WATER RESOURCES  
LICENSE NO. 74868 Exp. 12/31/2025

02/28/25  
DATE



PLANS PREPARED BY:  
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608 E. CHAPMAN AVENUE, SUITE 200  
(818) 258-1400  
UNDER THE SUPERVISION OF  
KEVIN GUSTORF, P.E.  
02/28/25  
DATE

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DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_

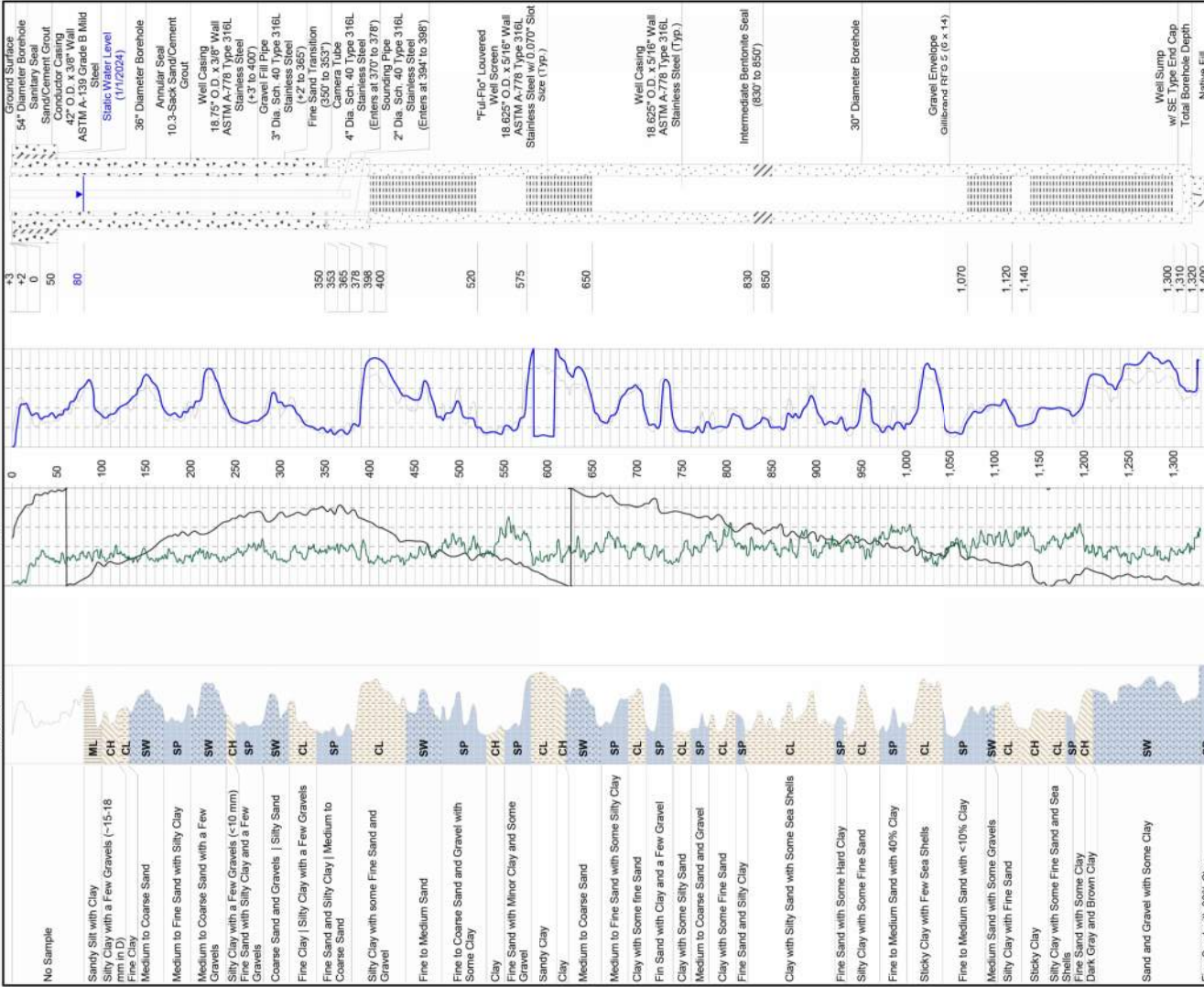
**CITY OF LAKEWOOD  
WELL 22B  
PRELIMINARY WELL DESIGN  
PROFILE**

**BOREHOLE DATA**  
City of Lakewood Well 22A



**Estimated  
USCS Field  
Classification**

**Simplified Driller's Log Lithology**



**NOTES:**

- UPON COMPLETION OF THE GEOPHYSICAL SURVEYS, THE CONTRACTOR SHALL PROVIDE THE HYDROGEOLOGIST WITH SIX (6) FIELD HARD COPIES AND ELECTRONIC COPIES OF THE GEOPHYSICAL SURVEYS IN LAS AND PDF FORMAT, AND ALLOW HYDROGEOLOGIST TWENTY-FOUR (24) HOURS FOR SELECTION OF ISOLATED AQUIFER ZONE. THE CONTRACTOR WILL NOT BE PAID CONTRACTOR STANDBY TIME DURING THIS DOWN TIME.
- AFTER OWNER AND HYDROGEOLOGIST RECEIVE ALL FINAL WATER QUALITY RESULTS, THE CONTRACTOR SHALL ALLOW THE HYDROGEOLOGIST 14 CALENDAR DAYS (EXCLUDING FEDERAL HOLIDAYS) TO FINALIZE THE WELL DESIGN.
- REFERENCE BID PROPOSAL SHEET FOR CONSTRUCTION BID LINE ITEMS AND QUANTITIES.

**PROFILE SCALE**  
HORIZ. Not to Scale  
VERT. Not to Scale

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/06/24
2	100% PLANSETS	12/12/24
3	FINAL PLANSETS	01/01/25
4	ADVERTISED PLANSETS	02/28/25

**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT,  
AND TESTING OF LAKEWOOD WELL 22B  
AND DEMOLITION OF WELL 22A**  
**PRELIMINARY DESIGN PROFILE**

DRAWN BY: MH  
DESIGNED BY: JS  
CHECKED BY: KG

SHT. 7 OF 9 SHTS. DRAWING W-7

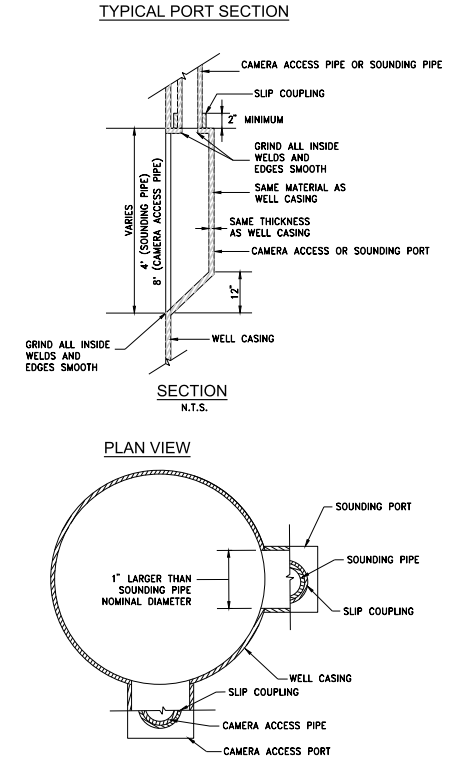
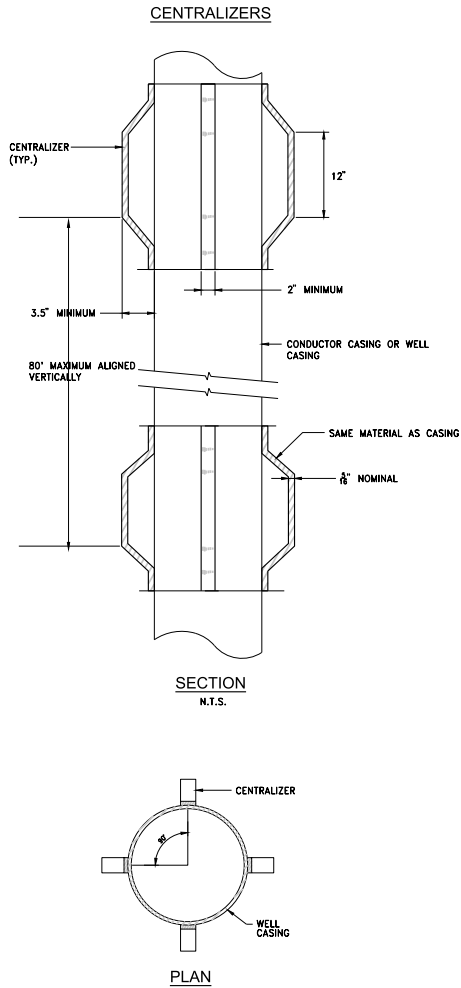
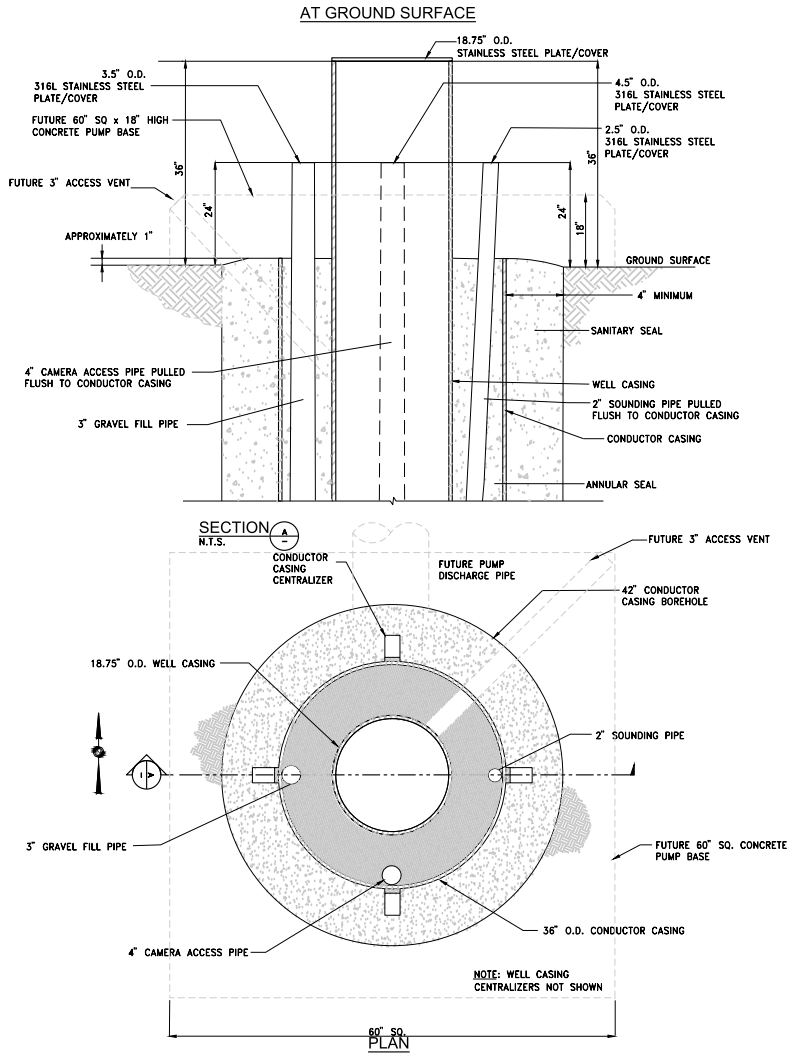


PLANS APPROVED BY:  
  
02/28/25  
DEREK NGUYEN, PH.D., P.E.  
DIRECTOR OF WATER RESOURCES  
LICENSE NO. 74668 EXP. 12/31/2025



PLANS PREPARED BY:  
**WOOD JOHNSON**  
606 E. CHAPMAN AVENUE, SUITE 200  
(857) 226-1400  
UNDER THE SUPERVISION OF  
KEVIN GUSTORF, P.E.  
02/28/25

BENCH MARK:  
NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_



**NOTES:**

1. ORIENTATION OF THE GRAVEL FILL PIPE, SOUNDING PIPE, AND THE CAMERA ACCESS PIPE SHALL BE AS DESCRIBED IN THE SPECIFICATIONS.
2. THE CAMERA ACCESS PIPE IS TO BE PULLED FLUSH TO THE CONDUCTOR CASING.
3. THE SOUNDING PIPE IS TO BE PULLED FLUSH TO THE CONDUCTOR CASING.
4. UPON COMPLETION OF ALL WORK IN THE WELL, THE CONTRACTOR SHALL PROVIDE AND WELD A 5/8-INCH WALL LIKE-STEEL CIRCULAR PLATE FOR SECURING THE WELL AND ACCESSORY PIPES PRIOR TO EQUIPPING.
5. CONCRETE PUMP BASE, 3" ACCESS VENT, AND PUMP DISCHARGE PIPE SHALL BE INSTALLED IN THE FUTURE UNDER DIFFERENT CONTRACTS.

**PROFILE SCALE**  
HORIZ. Not to Scale  
VERT. Not to Scale

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/06/24
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3	FINAL PLANSETS	01/31/25
4	ADVERTISED PLANSETS	02/28/25

**CITY OF LAKEWOOD**

**DRILLING, CONSTRUCTION, DEVELOPMENT,  
AND TESTING OF LAKEWOOD WELL 22B  
AND DEMOLITION OF WELL 22A**

STANDARD CONSTRUCTION DETAILS - CASING

DRAWN BY: MH  
DESIGNED BY: JS  
CHECKED BY: KG

SHT. 8 OF 9 SHTS. DRAWING W-8



PLANS APPROVED BY:  
  
02/28/25  
DATE  
DEREK NGUYEN, PH.D., P.E.  
DIRECTOR OF WATER RESOURCES  
LICENSE NO. 74668 EXP. 12/31/2025

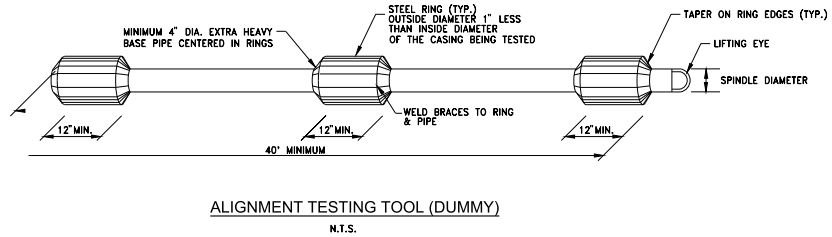
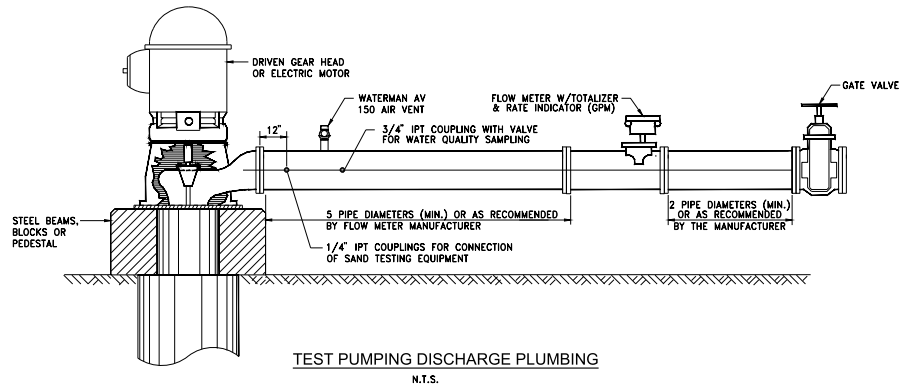
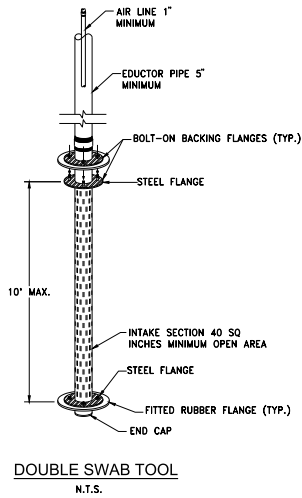


PLANS PREPARED BY:  
**WOOD ROEBERS**  
606 E. CHAPMAN AVENUE, SUITE 200  
(957) 226-1400  
UNDER THE SUPERVISION OF  
KEVIN GUSTORF, P.E. 02/28/25  
DATE

BENCH MARK:  
NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_



DEVELOPMENT EQUIPMENT AND TESTING TOOL DETAILS



PROFILE SCALE  
 HORIZ. Not to Scale  
 VERT. Not to Scale

REVISIONS		
NO.	DESCRIPTION	APP. DATE
1	90% PLANSETS	11/06/24
2	100% PLANSETS	12/12/24
3	FINAL PLANSETS	01/31/25
4	ADVERTISED PLANSETS	02/28/25

**CITY OF LAKEWOOD**  
**DRILLING, CONSTRUCTION, DEVELOPMENT, AND TESTING OF LAKEWOOD WELL 22B AND DEMOLITION OF WELL 22A**  
 STANDARD CONSTRUCTION DETAIL - TESTING

DRAWN BY: MH  
 DESIGNED BY: JS  
 CHECKED BY: KG  
 SHT. 9 OF 9 SHTS. DRAWING W-9



PLANS APPROVED BY:  
 02/28/25 DATE  
 DEREK NGUYEN, PH.D., P.E.  
 DIRECTOR OF WATER RESOURCES  
 LICENSE NO. 74668 EXP. 12/31/2025



PLANS PREPARED BY:  
 WOOD ROSSERS  
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 (857) 256-1400  
 UNDER THE SUPERVISION OF  
 KEVIN GUSTORF, P.E. 02/28/25 DATE

BENCH MARK:  
 NO. \_\_\_\_\_ ELEV. \_\_\_\_\_  
 DATE ADJ. \_\_\_\_\_ QUAD. \_\_\_\_\_