



SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
SPECIAL DISTRICTS
COUNTY SERVICE AREA CSA 82
SEARLES VALLEY SEWER IMPROVEMENT PROJECT
FINAL SUBMITTAL PLANS

ABBREVIATIONS

| | | | |
|-------|------------------|------------------|---------------------|
| AB | AGGREGATE BASE | OH, O/H | OVERHEAD |
| AC | ASPHALT CONCRETE | PROP | PROPOSED |
| AVE | AVENUE | PVC | POLYVINYL CHLORIDE |
| DIST | DISTRICT | RC | RELATIVE COMPACTION |
| E | EASTING | RIM | MH RIM ELEVATION |
| EXIST | EXISTING | ROW | RIGHT OF WAY |
| G | GAS | SAN BERNARDINO | SAN BERNARDINO |
| INV | INVERT | COUNTY FLOOD | COUNTY FLOOD |
| LF | LINEAR FEET | CONTROL DISTRICT | CONTROL DISTRICT |
| MAX | MAXIMUM | SQUARE FOOT | SQUARE FOOT |
| MIN | MINIMUM | SPECIFICATIONS | SPECIFICATIONS |
| MH | MANHOLE | ST | SANITARY SEWER |
| N | NORTHING | STA | STATION |
| NO. | NUMBER | TYP | TYPICAL |
| NTS | NOT TO SCALE | UNK | UNKNOWN |

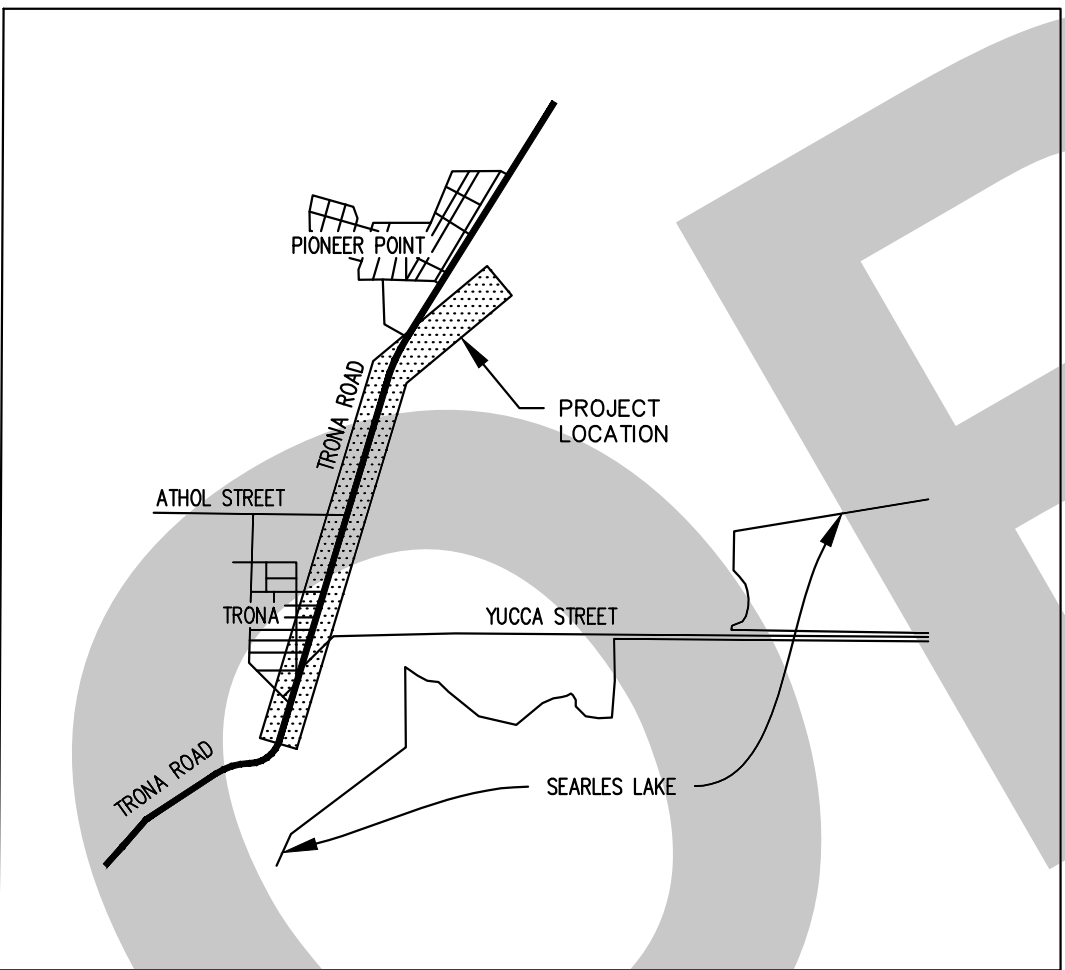
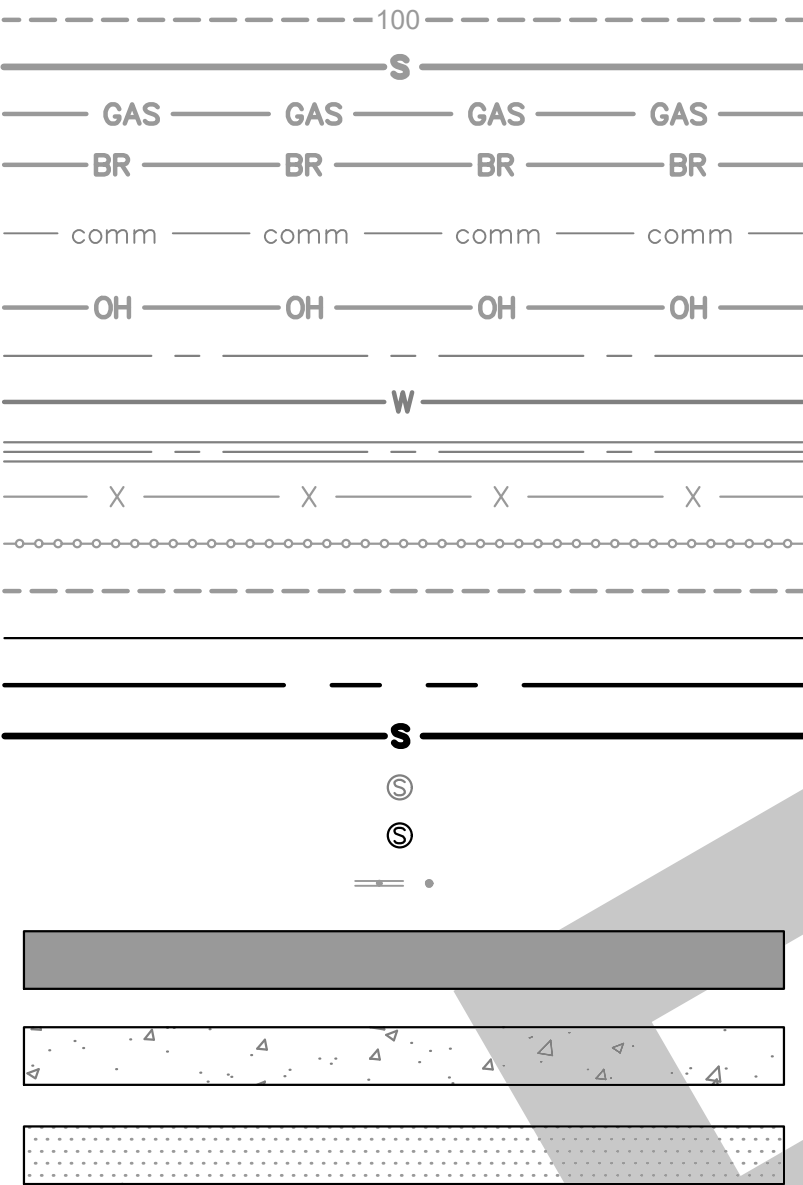
LEGEND

EXISTING CONTOUR
EXIST SEWER
EXIST GAS
EXIST BRINE
EXIST UNDERGROUND
COMMUNICATION
EXIST OVERHEAD
EXIST ELECTRICAL
EXIST WATER
EXIST STORM DRAIN
EXIST FENCE
EXIST WROUGHT IRON
EXIST EASEMENT
PROPERTY LINE
RIGHT OF WAY
PROP SEWER
EXIST SEWER MANHOLE
PROP SEWER MANHOLE
EXIST UTILITY POLE

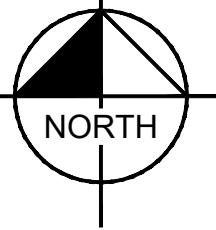
EXIST PAVEMENT

EXIST CONCRETE

PAVEMENT TO BE REPLACED



PROJECT VICINITY MAP
NOT TO SCALE



DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS (SD) IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH SD PROCEDURES, APPLICABLE POLICES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD, I AGREE TO INDEMNIFY AND HOLD SD, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENCE, ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD. I HAVE READ AND INFORMED THE PROJECT APPLICANT/DEVELOPER THAT APPROVAL OF THESE PLANS DO NOT RELIEVE THEM FROM THE REQUIREMENTS OF THE DESIGN CONDITIONS.

BY: RENEE KATHRYN CHUANG 04/26/2024
C92140 EXP 03/31/2025

NOTIFICATIONS

- AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY:
- SPECIAL DISTRICTS - PROJECT MANAGEMENT DIVISION - ALFONSO FAUSTO (909) 386-8827
 - UNDERGROUND SERVICE ALERT (USA): 811
 - ALL OTHER AFFECTED AGENCIES THAT ARE NOT MEMBERS OF USA ALERT

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819; SAID BEARINGS ARE DETERMINED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING CALIFORNIA SPATIAL REFERENCE CENTER (C.S.R.C.) CONTINUOUSLY OPERATING REFERENCE STATIONS (C.O.R.S.):

C.S.R.C. P463:
NORTHING = 2559530.28' EASTING = 6808734.66'

C.S.R.C. P594:
NORTHING = 2513266.29' EASTING = 6742328.65'

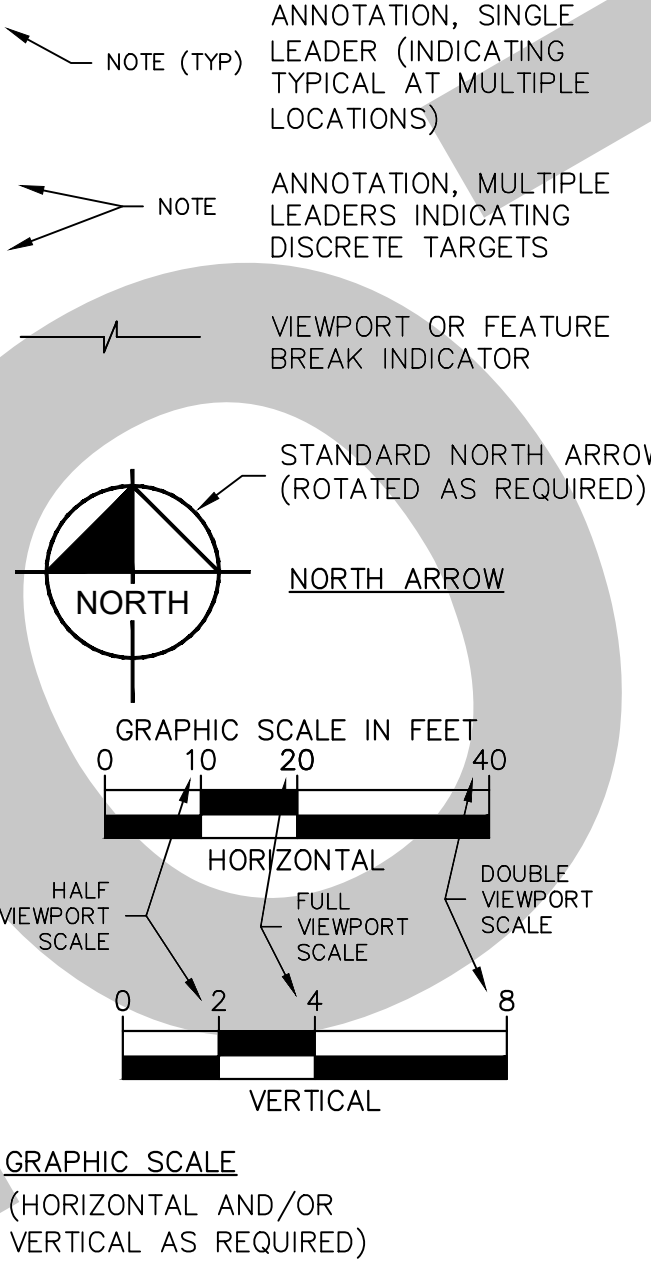
THE COMBINATION FACTOR FOR THIS PROJECT WAS APPLIED AT THE FOLLOWING POINT:
NORTHING = 2467993.54' EASTING = 6748927.70'

MAPPING ANGLE = -0°21'35" SCALE FACTOR = 1.00000700

SHEET LIST TABLE

| SHEET NUMBER | SHEET TITLE |
|--------------|---------------------------|
| 1 | COVER SHEET |
| 2 | GENERAL NOTES |
| 3 | QUANTITIES |
| 4 | KEY MAP |
| 5 | SEWER PLAN AND PROFILE 1 |
| 6 | SEWER PLAN AND PROFILE 2 |
| 7 | SEWER PLAN AND PROFILE 3 |
| 8 | SEWER PLAN AND PROFILE 4 |
| 9 | SEWER PLAN AND PROFILE 5 |
| 10 | SEWER PLAN AND PROFILE 6 |
| 11 | SEWER PLAN AND PROFILE 7 |
| 12 | SEWER PLAN AND PROFILE 8 |
| 13 | SEWER PLAN AND PROFILE 9 |
| 14 | SEWER PLAN AND PROFILE 10 |
| 15 | SEWER PLAN AND PROFILE 11 |
| 16 | SEWER PLAN AND PROFILE 12 |
| 17 | SEWER PLAN AND PROFILE 13 |
| 18 | SEWER PLAN AND PROFILE 14 |
| 19 | TRAFFIC CONTROL PLAN 1 |
| 20 | TRAFFIC CONTROL PLAN 2 |
| 21 | TRAFFIC CONTROL PLAN 3 |
| 22 | TRAFFIC CONTROL PLAN 4 |
| 23 | DETAILS |
| 24 | DETAILS - 2 |

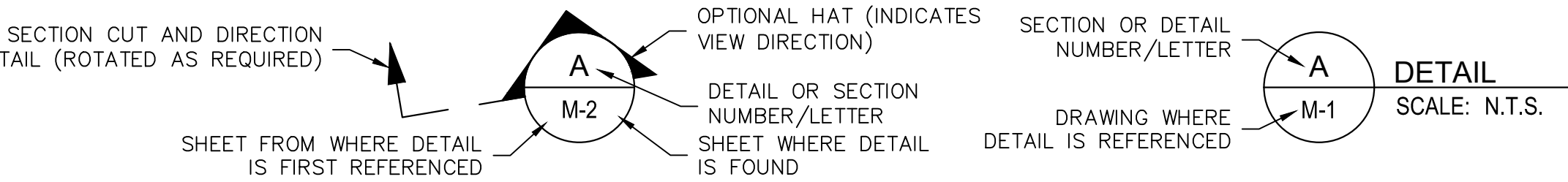
DRAFTING LEGEND



LIST OF SAN BERNARDINO COUNTY STANDARD DRAWINGS

| | |
|------|------------------------------|
| E-3 | MANHOLE ADJUSTMENT TO GRADE |
| E-3A | PRECAST MANHOLE UNPAVED AREA |
| E-5 | MANHOLE FRAME AND COVER |
| E-18 | PIPE BEDDING |
| E-26 | CONCRETE ENCASEMENT |

DETAIL/SECTION REFERENCES



UNDERGROUND SERVICE ALERT



Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:

THE CALIFORNIA SPATIAL REFERENCE CENTER
C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD
88).

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED UPON
THE CALIFORNIA COORDINATE SYSTEM OF 1983,
CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE
CALIFORNIA PUBLIC RESOURCES CODE SECTIONS
8801-8819.



Kimley»Horn

401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF:

RENEE KATHRYN CHUANG

R.C.E. No. 92140

04/26/2024
EXP 03/31/2025

REVISIONS

REVISIONS

TRENCH DETAIL UPDATE AND COUNTY COMMENTS

PROPOSED MANHOLE

SEWER PLANS APPROVED BY:

SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

ASSISTANT DIRECTOR

DATE

APPROVALS

REVIEWER

INITIAL

DATE

WAS, DIVISION MANAGER

PM, DIVISION MANAGER

SEWER IMPROVEMENT PLANS

SEARLES VALLEY SEWER
IMPROVEMENT PROJECT

COVER SHEET

DWG NO.

30.30.0158

FILE NO.

SHEET 1 OF 24

FINAL SUBMITTAL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND TO THE LATEST SPECIAL DISTRICTS "STANDARDS FOR SEWER SYSTEMS" AS POSTED ON SPECIAL DISTRICTS WEBSITE AT:
<https://specialdistricts.sbcounty.gov/project-management/water-sewer-standards/>
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CURRENT AND APPROVED SET OF SPECIAL DISTRICTS STANDARD SPECIFICATIONS ON THE JOB SITE AT ALL TIMES. STANDARD SPECIFICATIONS CAN BE PURCHASED AT THE SAN BERNARDINO COUNTY SPECIAL DISTRICTS OFFICE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ARRANGEMENTS FOR CONSTRUCTION INSPECTION AT LEAST 48 HOURS PRIOR TO BEGINNING WORK BY CALLING DEVELOPMENT SERVICES AT (760) 955-9885 OR BY EMAIL AT DEVSERVICES@SDD.SB.COUNTY.GOV
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE ITSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIG ALERT REQUESTS AND EXPLORATORY EFFORTS NECESSARY TO VERIFY ANY UNDERGROUND OBSTRUCTIONS. THE CONTRACTOR WILL BE UNILATERALLY RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES THAT ARE SHOWN OR NOT SHOWN ON THESE PLANS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO PIPE INCURRED WHILE BACK FILLING AND COMPACTING.
6. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE, COUNTY OR LOCAL PERMITS.
7. CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND ENCROACHMENT PERMIT OR OTHER REQUIRED PERMITS FROM THE SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION, PRIOR TO ANY GRADING OR PIPELINE EXCAVATION WITHIN THE COUNTY RIGHT OF WAY BY CALLING (909) 387-7910.
8. THE CONTRACTOR SHALL NOTIFY ALL SERVING UTILITY COMPANIES 48 HOURS PRIOR TO BEGINNING ANY DITCH EXCAVATION WHEN WORK IS TO BE PERFORMED NEAR THEIR FACILITIES BY CALLING 811.
9. CONTRACTOR SHALL ENSURE THAT UTILITY EASEMENTS HAVE BEEN RECORDED PRIOR TO START OF WORK.
10. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE UNDERSIGNED ENGINEER, SAN BERNARDINO COUNTY SPECIAL DISTRICTS, AND SAN BERNARDINO FLOOD CONTROL DISTRICT.
11. THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
12. ALL STATIONING IS BASED ON THE CENTER LINE OF THE PIPE.
13. ALL EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH WORKING DAY AND ROADS OPEN TO VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY THE SPECIAL DISTRICTS ENGINEER.
14. ALL PIPE DISTANCES SHOWN ARE HORIZONTAL.
15. ALL WORK SHALL BE CONSTRUCTED ACCORDING TO THE VERTICAL AND HORIZONTAL MEASUREMENTS OF THESE PLANS AND EXISTING DESIGN STANDARDS. ADEQUATE STAKES SHALL BE SET UNDER THE DIRECTION OF A LICENSED SURVEYOR/ENGINEER FOR THE CONTRACTOR. ALL CONSTRUCTION SURVEYING SHALL BE PERFORMED IN ACCORDANCE TO THE SURVEYING PROCEDURES OF THE SURVEYOR/ENGINEER OF RECORD. IF THIRD PARTY SUBCONTRACTORS PERFORM THE CONSTRUCTION LAYOUT AND SURVEYING FOR THIS PROJECT WITHOUT THE COORDINATION OF THE SURVEYOR/ENGINEER OF RECORD, THEY HAVE ASSUMED THE POSITION OF SURVEYOR/ENGINEER OF RECORD. THE FINAL CHECK OF THIS DESIGN IS TO BE THE CONSTRUCTION STAKING AS THE DESIGN MEETS THE EXISTING CONTROL AND ELEVATIONS. ALL EXISTING DISCREPANCIES IN THE STANDARD DESIGN CRITERIA SHALL BE BROUGHT TO THE SURVEYOR/ENGINEER OF RECORD'S ATTENTION PRIOR TO PROCEEDING WITH CONSTRUCTION. IF CONSTRUCTION CONTINUES WITHOUT VERIFICATION THE CONTRACTOR ASSUMES THE RESPONSIBILITY OF THE CORRECTNESS OF THE INTENDED DESIGN.
16. THESE PLANS WERE DESIGNED FOR THE IN-SERVICE CONDITIONS ONLY. THE METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE PIPELINE AND ASSOCIATED APPURTENANCES AT ALL STATES OF CONSTRUCTION.
17. DRAWINGS DO NOT INDICATE TEMPORARY OR BYPASSING REQUIREMENTS. NEED FOR TEMPORARY SHORING AND BRACING, TEMPORARY DEWATERING, TEMPORARY BYPASSING OR OTHER TEMPORARY MEASURES MAY BE INDICATED ON DRAWINGS AT SELECTED AREAS AS SUGGESTIONS FOR THE CONTRACTOR'S CONVENIENCE. THE DRAWINGS DO NOT IDENTIFY ALL AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM TEMPORARY MEASURES INDICATED ON THE DRAWINGS, IDENTIFY OTHER AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES, DETERMINE MOST EFFICIENT TEMPORARY SYSTEMS, AND DESIGN AND CONSTRUCT REQUIRED TEMPORARY SYSTEMS. ALL TEMPORARY SYSTEMS SHALL BE DESIGNED BY A CA LICENSED ENGINEER AND SUBMITTED TO THE DISTRICT ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
18. CONTRACTOR TO REVIEW AND ADHERE TO THE REQUIREMENTS OF SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT PERMIT NUMBER FCON-2023-00091 PROVIDED IN ATTACHMENT B OF THE SPECIAL PROVISIONS WITHIN THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICTS RIGHT-OF-WAY. ANY REVISIONS MUST BE SUBMITTED TO AND REVIEWED BY THE FLOOD CONTROL DISTRICT FOR APPROVAL.
19. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT TITLED "GEOTECHNICAL EVALUATION SEARLES VALLEY SEWER IMPROVEMENT" PREPARED BY NINYO & MOORE DATED JANUARY 22, 2024 FOR PROJECT CONDITIONS.

4. THE EROSION CONTROL SYSTEMS REQUIRE CERTIFICATION BY THE ENGINEER OF RECORD, SUCH CERTIFIED SYSTEMS SHALL BE COMPLETED, INSPECTED, AND IN PLACE NO LATER THAN OCTOBER 15. ALL EROSION CONTROL SYSTEMS SHALL REMAIN IN PLACE AT ALL TIMES FOR ALL AREAS IN WHICH CONSTRUCTION IS NOT SCHEDULED TO COMMENCE WITHIN THE NEXT SEVEN (7) DAYS. ALL EROSION CONTROL SYSTEMS SHALL REMAIN IN PLACE UNTIL (APRIL 15).
5. THE CONTRACTOR, PERMITTEE, OR OWNER SHALL BE RESPONSIBLE FOR THE INSPECTION, MODIFICATION, AND PROPER MAINTENANCE OF THE EROSION CONTROL DEVICES NECESSARY. IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN SAID DEVICES, THE CITY ENGINEER MAY CAUSE EMERGENCY MAINTENANCE WORK TO BE DONE TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY, THE COST (INCLUDING AN INITIAL MOBILIZATION AMOUNT) OF WHICH SHALL BE CHARGED TO THE OWNER.
6. ALL EROSION CONTROL MEASURES REQUIRED TO RETAIN SEDIMENT ON-SIT AND TO SAFELY DISCHARGE ANY ACCELERATED RUNOFF GENERATED BY THE PROJECT SHALL BE INSTALLED DURING THE INITIAL CONSTRUCTION PHASE OF THE PROJECT.
7. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES AS RECOMMENDED BY THE ENGINEER OF WORK AND AS APPROVED BY THE CITY ENGINEER.
8. ALL REMOVABLE PROTECTION DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40-PERCENT.
9. EROSION CONTROL SYSTEMS SHALL BE SERVICED AND MAINTAINED TO PROVIDE CONTINUOUS CAPACITY AND ADEQUACY TO FUNCTION AS DESIGNED. AFTER PRECIPITATION EXCEEDING ONE QUARTER ($\frac{1}{4}$) INCH IN ANY 12-HOUR PERIOD, OR UPON DIRECTION OF THE CITY ENGINEER, SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS AND DESILTING BASINS AND THE BASINS PUMPED DRY AND OTHERWISE RESTORED TO THE ORIGINAL DESIGN CONDITION.
10. PAVED STREETS, SIDEWALKS, AND OTHER IMPROVEMENTS SHALL BE MAINTAINED IN A NEAT AND CLEAN CONDITION, FREE OF LOOSE SOIL, CONSTRUCTION DEBRIS, AND TRASH. STREET SWEEPING OR OTHER EQUALLY EFFECTIVE MEANS SHALL BE USED ON A REGULAR BASIS TO CONTROL EROSION. WATERING SHALL NOT BE USED TO CLEAN STREETS EXCEPT FOR THE REMOVAL OF FINE MATERIAL NOT OTHERWISE REMOVED BY WEEPING OR OTHER MECHANICAL MEANS.
11. STAND-BY CREWS SHALL BE ALERTED BY THE CONTRACTOR, PERMITTEE, OR OWNER FOR EMERGENCY WORK DURING RAINSTORMS.
12. GRAVEL BAGS AND NECESSARY MATERIALS IN ACCORDANCE WITH THE APPROVED PLANS, SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT. A STAND-BY CREW SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
13. ALL UTILITY TRENCHES SHALL BE BACKFILLED WITHIN 24 HOURS AND MUST BE BACKFILLED BEFORE THE END OF THE WORKDAY IF A 40-PERCENT CHANCE OF RAIN IS PREDICTED.
14. A GRAVEL BAG SILT BASIN OR TRAP SHALL BE PROVIDED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
15. ALL EROSION CONTROL PLANS MUST PROVIDE A 24-HOUR TELEPHONE NUMBER AND THE NAME(S) OF THE PERSON(S) RESPONSIBLE FOR EMERGENCY WORK. A TELEPHONE ANSWERING MACHINE OR ANSWERING SERVICE IS UNACCEPTABLE.

1. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN ON THESE DRAWINGS AND TO VERIFY ALL DIMENSIONS, PIPE SIZES, PIPE MATERIALS, FLANGE SIZES, AND BOLT CONFIGURATIONS PRIOR TO STARTING ANY PART OF THE WORK. THE CONTRACTOR'S QUANTITY TAKE-OFFS, MEASUREMENTS, AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE DRAWINGS.
2. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE COUNTY OF TARRANT, TEXAS, ITS BOARD OF COUNTY COMMISSIONERS AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

1. MANHOLES TO BE REPLACED IN-KIND WITHOUT REDUCTION IN SPACING PER DIRECTION FROM SPECIAL DISTRICTS.
2. PIPE SLOPES MATCH PROJECT CONSTRAINTS AT BOTH THE UPSTREAM AND DOWNSTREAM ENDS OF THE REPLACED SEWER. IT IS ACKNOWLEDGED THAT THESE SLOPES ARE BELOW THE COUNTY'S MINIMUM SLOPE OF 0.22% FOR 12 INCH SEWERS. ALTERNATIVE OPTIONS TO INCREASE THE SLOPE WERE EVALUATED WITH SPECIAL DISTRICTS BUT ULTIMATELY DEEMED INFEASIBLE. ALTERNATIVES EVALUATED INCLUDE A SIPHON SYSTEM, LIFT STATION, AND EXTENDING THE PIPE DAYLIGHT LOCATION AT THE SYSTEM'S ULTIMATE OUTFALL.
3. NO DROP ACROSS MANHOLE STRUCTURES IS DESIGNED ACROSS NEW MANHOLE STRUCTURES DUE TO LIMITED VERTICAL FALL ACROSS THE SYSTEM.
4. THE EXISTING SEWER ALIGNMENT IS WITHIN 5' OF AN EXISTING GRAVITY SEWER IN TRONA ROAD. REPLACING IN-KIND WAS CHOSEN OVER A NEW SEWER ALIGNMENT TO ENSURE MINIMAL CONFLICTS WITH EXISTING UTILITIES, MINIMAL ADDED INFRASTRUCTURE TO CONNECT TO THE EXISTING DOWNSTREAM SYSTEM, AND AVOID CHANGE WHERE THE PIPE CROSSES PRIVATE LAND.
5. THE EXISTING AND PROPOSED SEWER ALIGNMENTS CROSS MULTIPLE STRETCHES OF PRIVATE PROPERTY OWNED BY SEARLES VALLEY MINERALS OPERATIONS INC. THE CONTRACTOR SHALL OBTAIN TEMPORARY CONSTRUCTION EASEMENTS (TCES) AS NECESSARY. THE PROJECT DOES NOT PLAN TO ACQUIRE PERMANENT EASEMENTS.
6. OPERATORS SHOULD CONSIDER INSPECTING AND FLUSHING THIS SEWER PIPE MORE FREQUENTLY THAN MAY BE TYPICAL DUE TO THE LOW SLOPES MENTIONED IN NUMBER 2 ABOVE. AS THIS PIPE IS THE EFFLUENT LINE FROM THE SEPTIC SYSTEMS, THE WASTEWATER SHOULD HAVE LESS SOLIDS THAN TYPICAL RESIDENTIAL SEWER FLOWS SO VELOCITIES BELOW THE STANDARD 2 FT/S DESIRED FOR PIPE SELF-CLEANING CHARACTERISTICS.

1. CONTRACTOR TO SUBMIT BYPASS PLAN FOR COUNTY REVIEW AND APPROVAL AT PRECON PRIOR TO WORK.
2. THE SEWAGE BYPASS PLAN SHALL INDICATE THE LOCATIONS AND CAPACITIES OF ALL PUMPS, SUMPS SUCTION AND DISCHARGE LINES.
3. BYPASS PIPING SHALL BE CONSTRUCTED OUTSIDE AREAS SUBJECT TO TRAFFIC LOADING AND MAY REQUIRE UNDERGROUND INSTALLATION.
4. EQUIPMENT AND PIPING SHALL BE SIZED TO HANDLE 1.5 TIMES PEAK WET WEATHER FLOW (PWWF). THE SEARLES VALLEY SEWER IMPROVEMENTS TECHNICAL MEMORANDUM CITED A JUNE 2022 PEAK FLOW OF 384 GALLONS PER MINUTE (GPM). IT IS RECOMMENDED THAT THE CONTRACTOR VERIFY THE LATEST PEAK FLOW RATES WITH SEARLES VALLEY WATER COMPANY DATA.
5. EQUIPMENT AND PIPING SHALL CONFORM TO PLANS AND SPECIFICATIONS.
6. BYPASS PUMP SUCTION AND DISCHARGE LINES THAT EXTEND INTO MANHOLES SHALL BE RIGID HOSE OR HARD PIPE.
7. LAY-FLAT HOSE WILL NOT BE ALLOWED TO EXTEND INTO MANHOLES, THE CONTRACTOR SHALL PROVIDE A BACKUP BYPASS PUMPING SYSTEM IN CASE OF MALFUNCTION.
8. THE BACKUP BYPASS SYSTEM SHALL PROVIDE 100 PERCENT CAPABILITY, AND BE IN PLACE AND READY FOR IMMEDIATE USE.
9. EACH STANDBY PUMP SHALL BE A COMPLETE UNIT WITH ITS OWN SUCTION AND DISCHARGE PIPING.
10. CONTRACTOR SHALL FURNISH AND OPERATE VACUUM TRUCKS WHEN REQUIRED.

1. THE PLAN SHALL IDENTIFY THE LOCATION TYPE AND SIZE OF DEWATERING DEVICES AND RELATED EQUIPMENT, THE SIZE AND TYPE OF MATERIALS COMPOSING THE COLLECTION SYSTEM, THE SIZE AND TYPE OF EQUIPMENT TO BE USED TO RETAIN, AND, IF REQUIRED, TREAT ACCUMULATED WATER, AND THE PROPOSED DISPOSAL LOCATIONS.
2. IF THE PROPOSED DEWATERING DISCHARGE LOCATION IS A SANITARY SEWER, THE CONTRACTOR SHALL SUBMIT TO THE COUNTY A COMPLETE DEWATERING PLAN FOR DISCHARGE TO THE SEWER. THE PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO, THE DESIGN FOR DISCHARGE CONNECTION TO THE SEWER SYSTEM, ANTICIPATED DISCHARGE RATES AND/OR VOLUMES, DISCHARGE DURATION AND/OR SCHEDULE, COMPLETE WATER SAMPLING ANALYSIS INCLUDING COMPREHENSIVE ASSAY OF CONSTITUENTS RELATED TO LOCAL LIMITS RESTRICTIONS, AND DISCHARGE PROCEDURE BASED ON THE PROTOCOL PROVIDED BY THE COUNTY.
3. IF THE PROPOSED DISPOSAL LOCATION IS A STORM DRAIN SYSTEM OR RECEIVING BODY OF WATER, THE CONTRACTOR SHALL SUBMIT WRITTEN EVIDENCE OF PERMISSION FROM THE OWNER OF THE STORM DRAIN SYSTEM AND, IF NOT OBTAINED BY THE COUNTY, ORIGINAL SIGNED PERMITS FROM JURISDICTIONAL REGULATORY AGENCIES OR WRITTEN EVIDENCE THAT SUCH PERMITS ARE NOT REQUIRED.

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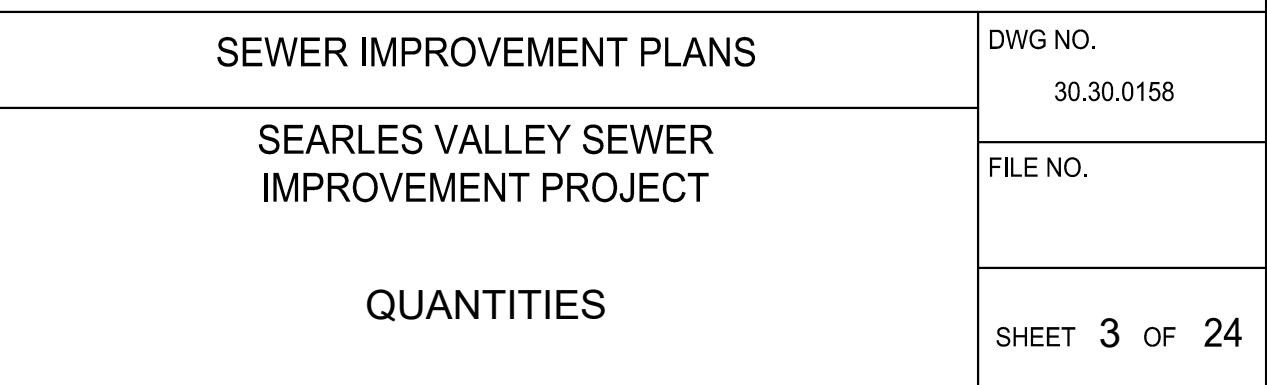
| BID ITEM NUMBER | CONSTRUCTION NOTE NUMBER | SPEC. SECTION NO. | CONSTRUCTION NOTES | UNITS | TOTAL |
|-----------------|--------------------------|-------------------|--|-------|-------|
| 3 | ① ⑥ | 3, 9.3, 13 | REMOVE AND REPLACE 12" SDR-26 PVC SEWER, BACKFILL AND BEDDING WITH GEOGRID PER COUNTY STANDARDS. | LF | 5249 |
| 4 | ⑤ | 4, 9.4 | INSTALL NEW 4' POLYMER CONCRETE MANHOLE | EA | 10 |
| 5 | ⑦ | 4, 9.5 | INSTALL MANHOLE FRAME AND COVER | EA | 10 |
| 6 | ③ ④ | 4, 9.6 | CONSTRUCT CONCRETE STABILIZING RING AT GRADE | EA | 10 |
| 7 | ② | 9.8 | REMOVE AND DISPOSE MANHOLES | EA | 9 |
| 8 | | 3.6, 3.15 | SEWER LATERAL RECONNECTION | EA | 1 |
| 9 | ⑧ | 8, 9.9 | REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE | LF | 1,511 |
| 10 | ⑧ | 8, 9.10 | REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE | LF | 1,511 |
| 11 | ⑨ | 3, 9.11 | CONCRETE ENCASEMENT | LF | 60 |

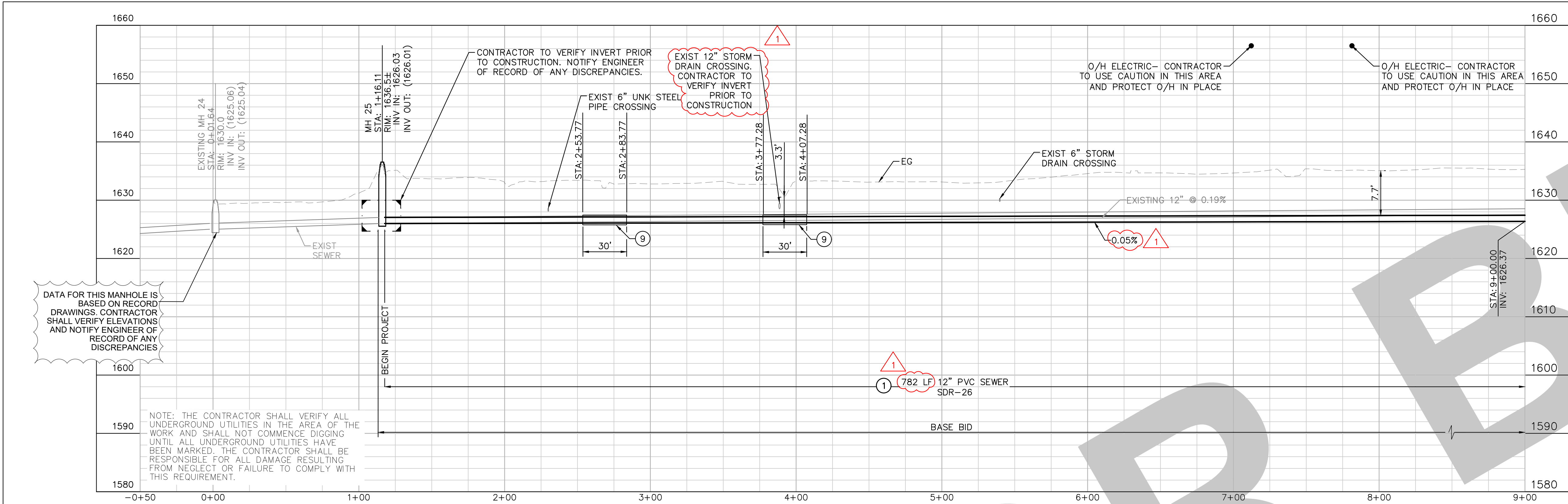
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| BID ITEM NUMBER | CONSTRUCTION NOTE NUMBER | SPEC. SECTION NO. | CONSTRUCTION NOTES | UNITS | TOTAL |
|-----------------|--------------------------|-------------------|--|-------|-------|
| 3 | ① ⑥ | 3, 9.3, 13 | REMOVE AND REPLACE 12" SDR-26 PVC SEWER. BACKFILL AND BEDDING WITH GEOGRID PER COUNTY STANDARDS. | LF | 2504 |
| 4 | ⑤ | 4, 9.4 | INSTALL NEW 4" POLYMER CONCRETE MANHOLE | EA | 3 |
| 5 | ⑦ | 4, 9.5 | INSTALL MANHOLE FRAME AND COVER | EA | 3 |
| 6 | ③ ④ | 4, 9.6 | CONSTRUCT CONCRETE STABILIZING RING AT GRADE | EA | 3 |
| 7 | ② | 9.8 | REMOVE AND DISPOSE MANHOLES | EA | 3 |
| 9 | ⑧ | 8, 9.9 | REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE | LF | 390 |
| 10 | ⑧ | 8, 9.10 | REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE | LF | 390 |
| 11 | ⑨ | 3, 9.11 | CONCRETE ENCASEMENT | LF | 145 |
| 13 | ⑬ | 9.13 | CONSTRUCT MANHOLE APRON | EA | 1 |

1

| BID ITEM NUMBER | CONSTRUCTION NOTE NUMBER | SPEC. SECTION NO. | CONSTRUCTION NOTES | UNITS | TOTAL |
|-----------------|--------------------------|-------------------|--|-------|-------|
| 3 | ① ⑥ | 3, 9.3, 13 | REMOVE AND REPLACE 12" SDR-26 PVC SEWER, BACKFILL AND BEDDING WITH GEOGRID PER COUNTY STANDARDS. | LF | 3547 |
| 4 | ⑤ | 4, 9.4 | INSTALL NEW 4' POLYMER CONCRETE MANHOLE | EA | 6 |
| 5 | ⑦ | 4, 9.5 | INSTALL MANHOLE FRAME AND COVER | EA | 6 |
| 6 | ③ ④ | 4, 9.7 | INSTALL CONCRETE STABILIZING RING IN UNPAVED AREA | EA | 6 |
| 8 | ② | 9.8 | REMOVE AND DISPOSE MANHOLES | EA | 6 |
| 11 | ⑨ | 3, 9.11 | CONCRETE ENCASEMENT | LF | 231 |





DATA FOR THIS MANHOLE IS BASED ON RECORD DRAWINGS. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES

NOTE: THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK AND SHALL NOT COMMENCE DIGGING UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN MARKED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLECT OR FAILURE TO COMPLY WITH THIS REQUIREMENT.

CONSTRUCTION NOTES

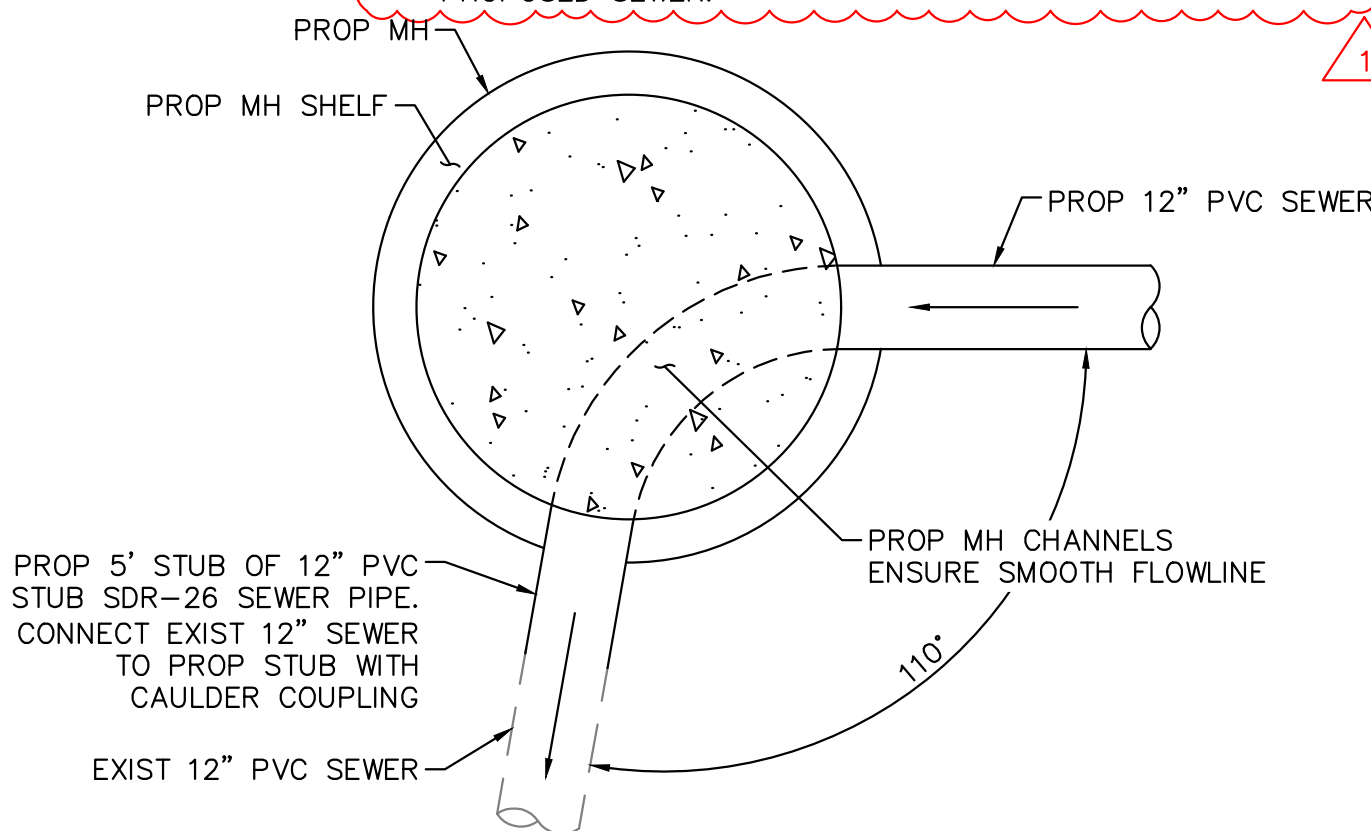
1. INSTALL 12" SDR-26 PVC SEWER. TRENCH BACKFILL AND GEOGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
3. CONSTRUCT CONCRETE STABILIZING RING IN UNPAVED AREA PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3A.
5. INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
6. REMOVE AND DISPOSE EXISTING SEWER PIPE.
7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
9. CONCRETE ENCASEMENT PER SAN BERNARDINO COUNTY STANDARD DRAWING E-26.
10. PROTECT IN PLACE EXISTING MANHOLE.
11. PROTECT IN PLACE EXISTING 8" SEWER.
12. PROTECT IN PLACE EXISTING COMMUNICATION LINE.

LINE TABLE

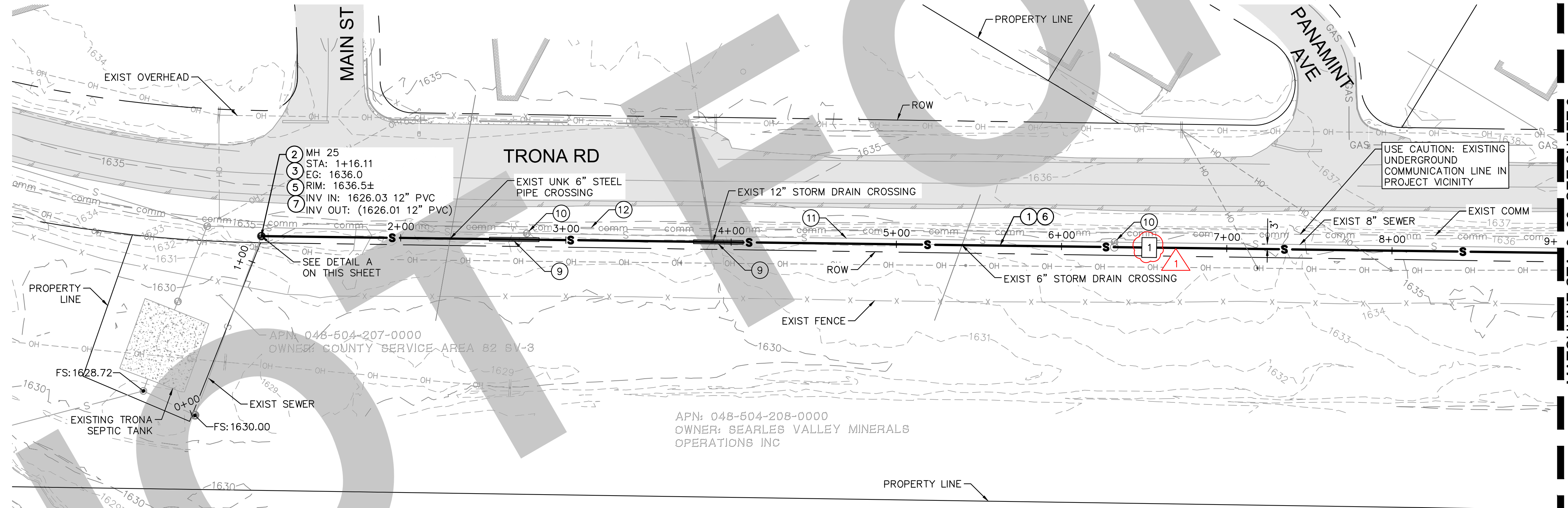
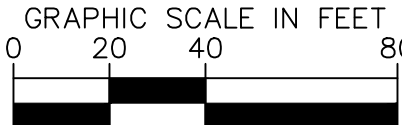
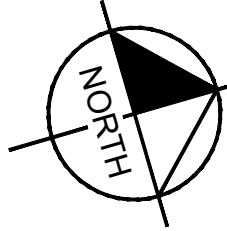
| LINE | LENGTH | BEARING |
|------|---------|-------------|
| 1 | 781.93' | N16°53'18"E |

NOTES:

1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF MANHOLE.
2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
3. IF DEWATERING IS NEEDED TO CONSTRUCT THE PROPOSED IMPROVEMENTS, REFER TO DEWATERING NOTES ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
4. BRINE, SEWER, WATER, AND STORMWATER CROSSING HORIZONTAL AND VERTICAL LOCATIONS ARE BASED ON SEARLES VALLEY WASTEWATER FACILITIES PLANS (1979). CONTRACTOR TO VERIFY LOCATIONS AND INVERTS.
5. WATER MAINS ARE DEPICTED BASED ON AS-BUILTS PROVIDED BY SEARLES DOMESTIC WATER COMPANY. LOCATION TO BE VERIFIED BY CONTRACTOR.
6. GAS AND COMMUNICATIONS LOCATION TO BE VERIFIED BY CONTRACTOR. CONTRACTOR TO NOTIFY COUNTY BEFORE BEGINNING CONSTRUCTION IF COMMUNICATION AND GAS LINES ARE ANTICIPATED TO INTERFERE WITH TRENCHING FOR THE PROPOSED SEWER.



MANHOLE DETAIL A
NOT TO SCALE



PROFILE VIEW
HORZ: 1"=40'
VERT: 1"=4'

TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

UNDERGROUND SERVICE ALERT

Call: TOLL FREE 1-800-227-2600 OR 811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
THE CALIFORNIA SPATIAL REFERENCE CENTER C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD 88).

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819.

Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF:
RENEE KATHRYN CHUANG R.C.E. No. 92140 04/26/2024 EXP 03/31/2025

| REVISIONS | |
|-----------|--|
| NO. | DESCRIPTION |
| 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS |
| 2 | PROPOSED MANHOLE |

SEWER PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS

| APPROVALS | DATE | | |
|-----------------------|----------|---------|------|
| | REVIEWER | INITIAL | DATE |
| WAS, DIVISION MANAGER | | | |
| PM, DIVISION MANAGER | | | |

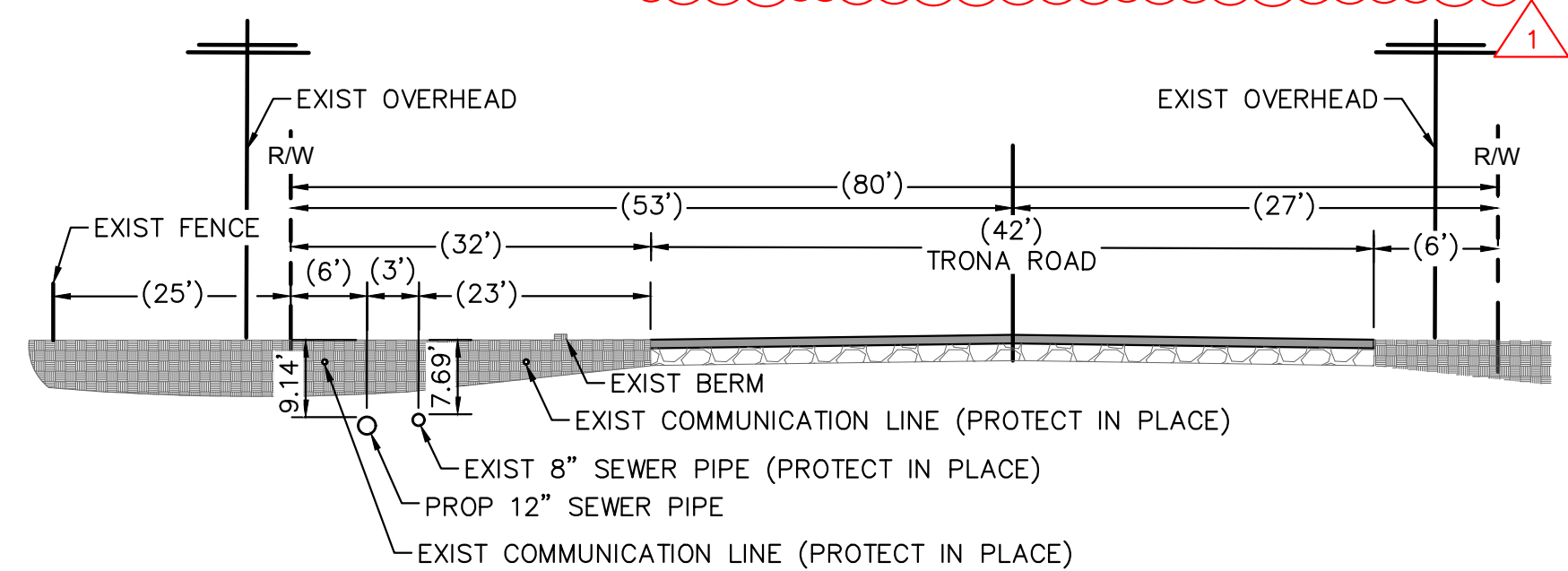
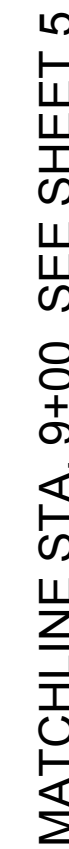
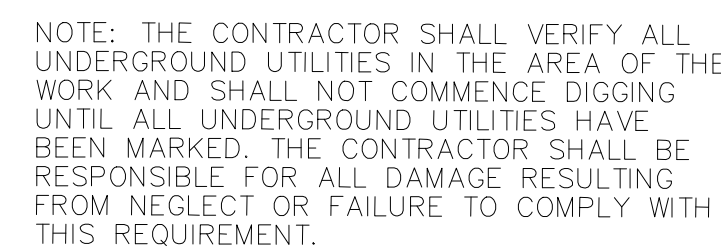
SEWER IMPROVEMENT PLANS

SEARLES VALLEY SEWER IMPROVEMENT PROJECT
0+00 - 9+00
SEWER PLAN AND PROFILE 1
BASE BID

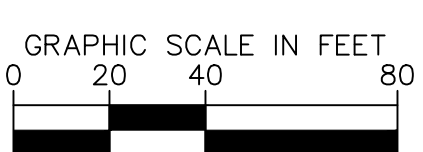
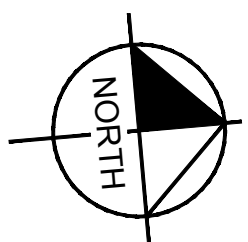
DWG NO. 30.30.0158

FILE NO.

SHEET 5 OF 24



SECTION A-A
NOT TO SCALE
STA 11±50



- 1 INSTALL 12" SDR-26 PVC SEWER, TRENCH BACKFILL AND GEGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
- 2 REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
- 3 CONSTRUCT CONCRETE STABILIZING RING IN EXISTING AREA PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3A.
- 4 INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
- 5 REMOVE AND DISPOSE EXISTING SEWER PIPE.
- 6 INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
- 7 PROTECT IN PLACE EXISTING MANHOLE.
- 8 PROTECT IN PLACE EXISTING 8" SEWER.
- 9 PROTECT IN PLACE EXISTING COMMUNICATION LINE.

| LINE TABLE | | |
|------------|---------|-------------|
| LINE | LENGTH | BEARING |
| 2 | 191.31' | N16°53'18"E |
| 3 | 703.87' | N15°37'08"E |

1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF NEXT MANHOLE.
2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
3. IF Dewatering is needed to construct the proposed improvements, refer to dewatering notes on sheet 2, and the project's specifications.
4. BRINE, SEWER, WATER, AND STORMWATER CROSSING HORIZONTAL AND VERTICAL LOCATIONS ARE BASED ON SEARLES VALLEY WASTEWATER FACILITIES PLANS (1979), CONTRACTOR TO VERIFY LOCATIONS AND INVERTS.
5. WATER MAINS ARE DEPICTED BASED ON AS-BUILTS PROVIDED BY SEARLES DOMESTIC WATER COMPANY. LOCATION TO BE VERIFIED BY CONTRACTOR.
6. COORDINATE COMMUNICATIONS LOCATION TO BE VERIFIED BY CONTRACTOR. CONTRACTOR TO NOTIFY COUNTY BEFORE BEGINNING CONSTRUCTION IF COMMUNICATION AND GAS LINES ARE ANTICIPATED TO INTERFERE WITH TRENCHING FOR THE PROPOSED SEWER.

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.



UNDERGROUND SERVICE ALERT



Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
THE CALIFORNIA SPATIAL REFERENCE CENTER
C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD
88).

BASIS OF BEARINGS:
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PREPARED UNDER THE SUPERVISION OF:

RK
 RENEE KATHRYN CHUANG R.C.E. No. 92140 EXP 03/31/2024

Kimley»Horn

PREPARED UNDER THE SUPERVISION OF:


RENEE KATHRYN CHUANG

R.C.E. No. 92140

04/26/2024
EXP 03/31/2025

[illegible]

SEWER PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

| | | | |
|--------------------|-----------------------|---------|------|
| ASSISTANT DIRECTOR | | DATE | |
| APPROVALS | | INITIAL | DATE |
| | REVIEWER | | |
| | WAS, DIVISION MANAGER | | |
| | PM, DIVISION MANAGER | | |

SEWER IMPROVEMENT PLANS

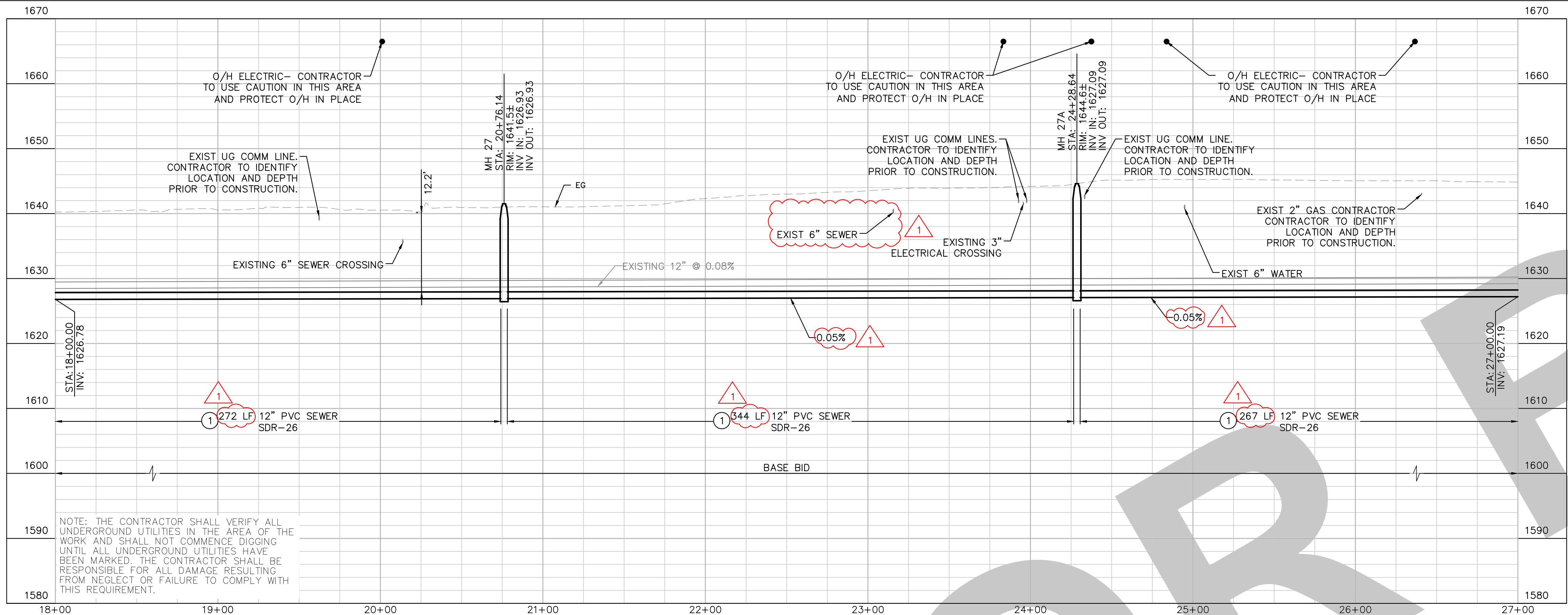
SEARLES VALLEY SEWER
IMPROVEMENT PROJECT
9+00 - 18+00
SEWER PLAN AND PROFILE 2
BASE BID

DWG NO.
30.30.0158

FILE NO.

SHEET 6 OF 24

FINAL SUBMITTAL

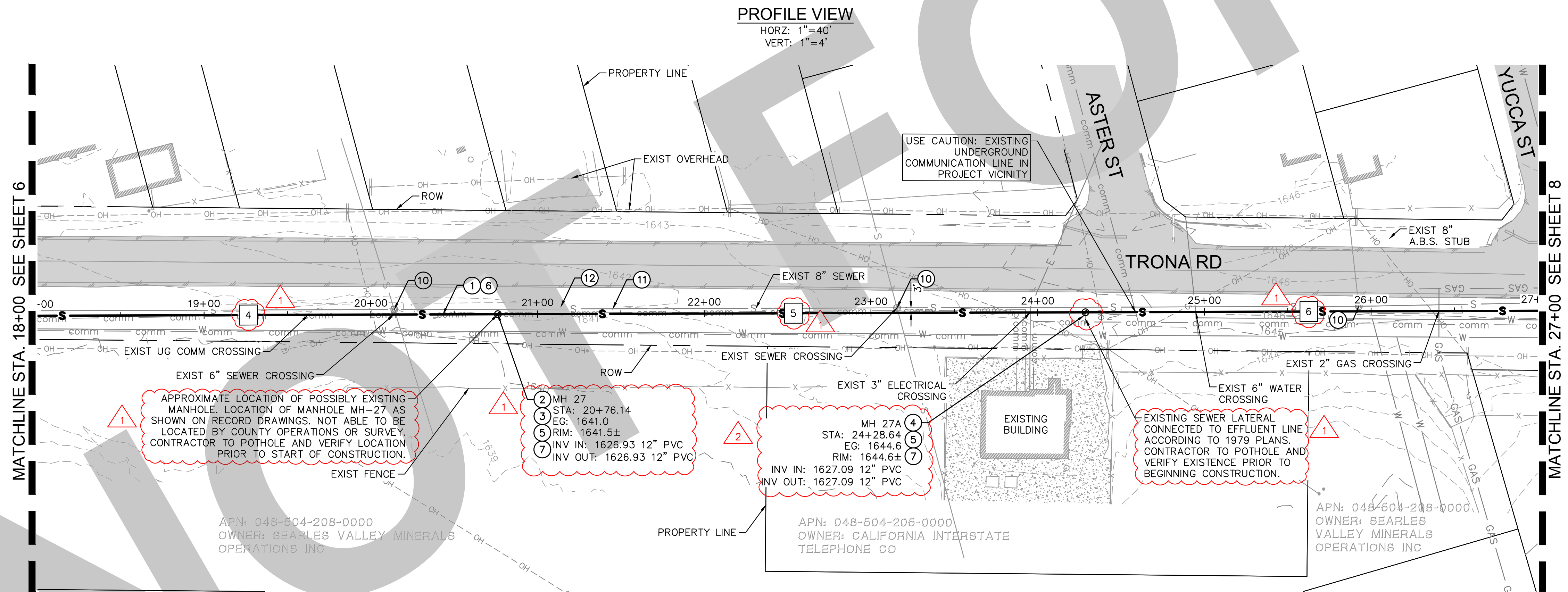


- CONSTRUCTION NOTES**
1. INSTALL 12" SDR-26 PVC SEWER. TRENCH BACKFILL AND GEOGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
 2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
 3. CONSTRUCT CONCRETE STABILIZING RING IN UNPAVED AREA PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3A.
 4. CONSTRUCT CONCRETE STABILIZING RING AT GRADE PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3.
 5. INSTALL NEW 4" POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
 6. REMOVE AND DISPOSE EXISTING SEWER PIPE.
 7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
 10. PROTECT IN PLACE EXISTING MANHOLE.
 11. PROTECT IN PLACE EXISTING 8" SEWER.
 12. PROTECT IN PLACE EXISTING COMMUNICATION LINE.

LINE TABLE

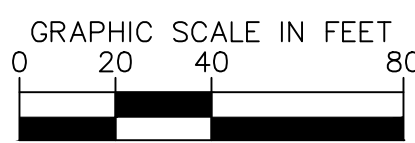
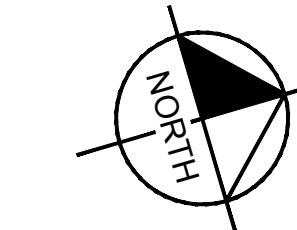
| LINE | LENGTH | BEARING |
|------|---------|-------------|
| 4 | 272.16' | N15°37'08"E |
| 5 | 344.41' | N15°37'08"E |
| 6 | 267.43' | N15°37'08"E |

- NOTES:**
1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF MANHOLE.
 2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
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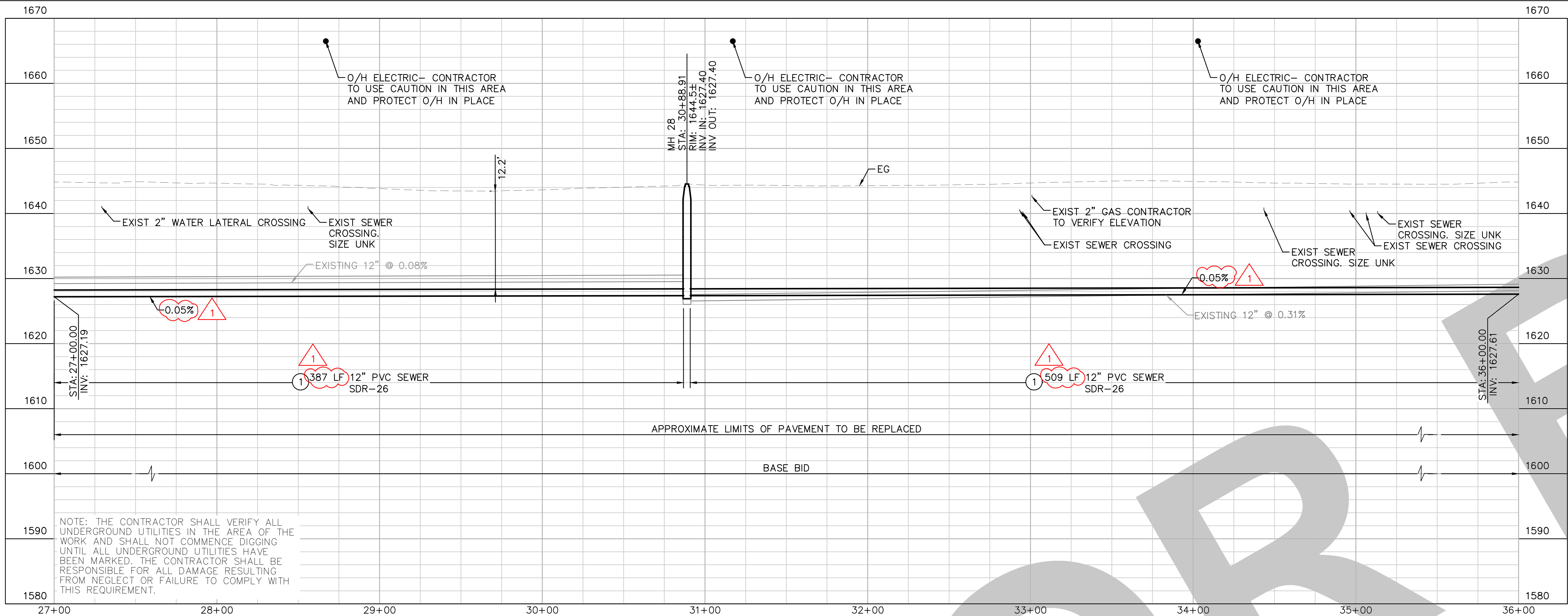
TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTORS BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.



| | | | | | | | |
|---|---|--|--|--|---|--|--|
| UNDERGROUND SERVICE ALERT Call: TOLL FREE 1-800-227-2600 OR 811 TWO WORKING DAYS BEFORE YOU DIG | BENCHMARK: THE CALIFORNIA SPATIAL REFERENCE CENTER C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD 88). | BASIS OF BEARINGS: THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819. | Kimley»Horn 401 B STREET, SUITE 600, SAN DIEGO, CA 92101 PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM PREPARED UNDER THE SUPERVISION OF: RENEE KATHRYN CHUANG R.C.E. No. 92140 04/26/2024 EXP 03/31/2025 | REVISIONS TRENCH DETAIL UPDATE AND COUNTY COMMENTS PROPOSED MANHOLE | SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS ASSISTANT DIRECTOR DATE APPROVALS REVIEWER INITIAL DATE WAS, DIVISION MANAGER PM, DIVISION MANAGER | SEWER IMPROVEMENT PLANS SEARLES VALLEY SEWER IMPROVEMENT PROJECT 18+00 - 27+00 SEWER PLAN AND PROFILE 3 BASE BID | DWG NO. 30.30.0158 FILE NO. SHEET 7 OF 24 |
|---|---|--|--|--|---|--|--|

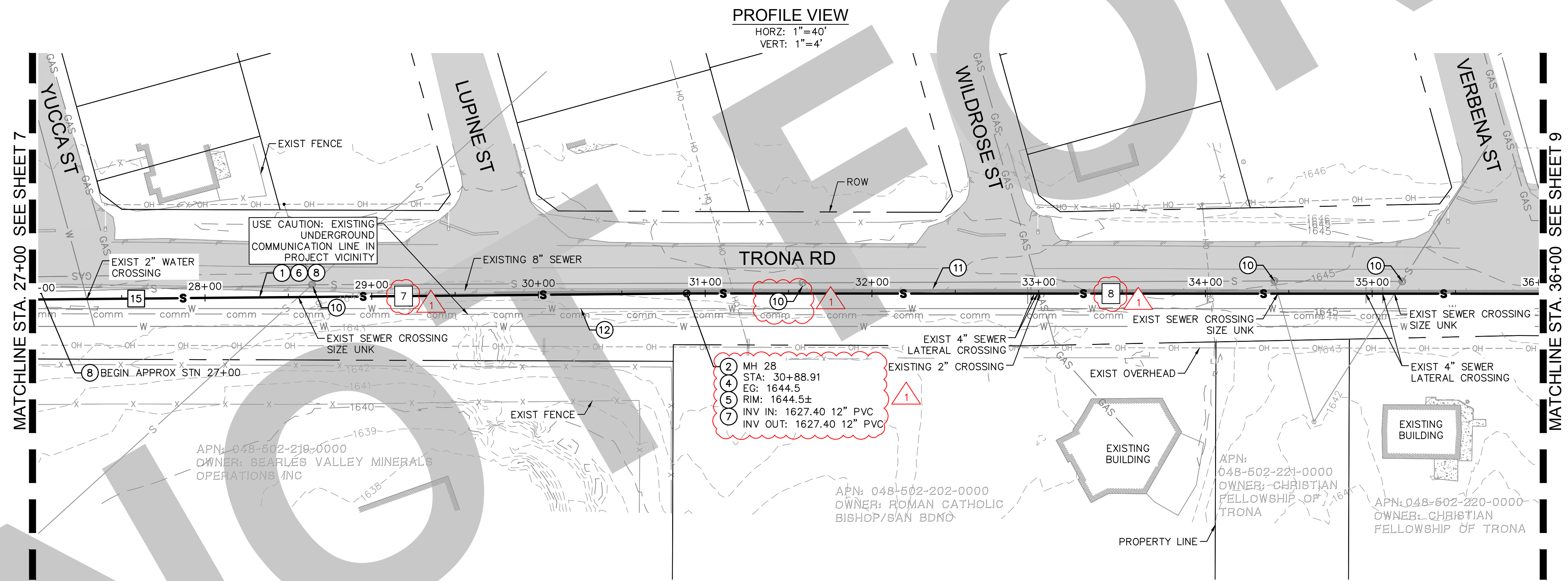
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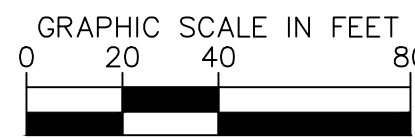
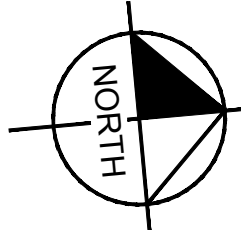
- CONSTRUCTION NOTES**
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 2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
 4. CONSTRUCT CONCRETE STABILIZING RING AT GRADE PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3.
 5. INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
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 7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
 8. REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE PER DETAIL B, SHEET 23.
 10. PROTECT IN PLACE EXISTING MANHOLE.
 11. PROTECT IN PLACE EXISTING 8" SEWER.
 12. PROTECT IN PLACE EXISTING COMMUNICATION LINE.




| LINE TABLE | | |
|------------|---------|-------------|
| LINE | LENGTH | BEARING |
| 7 | 386.50' | N15°37'08"E |
| 8 | 508.68' | N16°09'56"E |

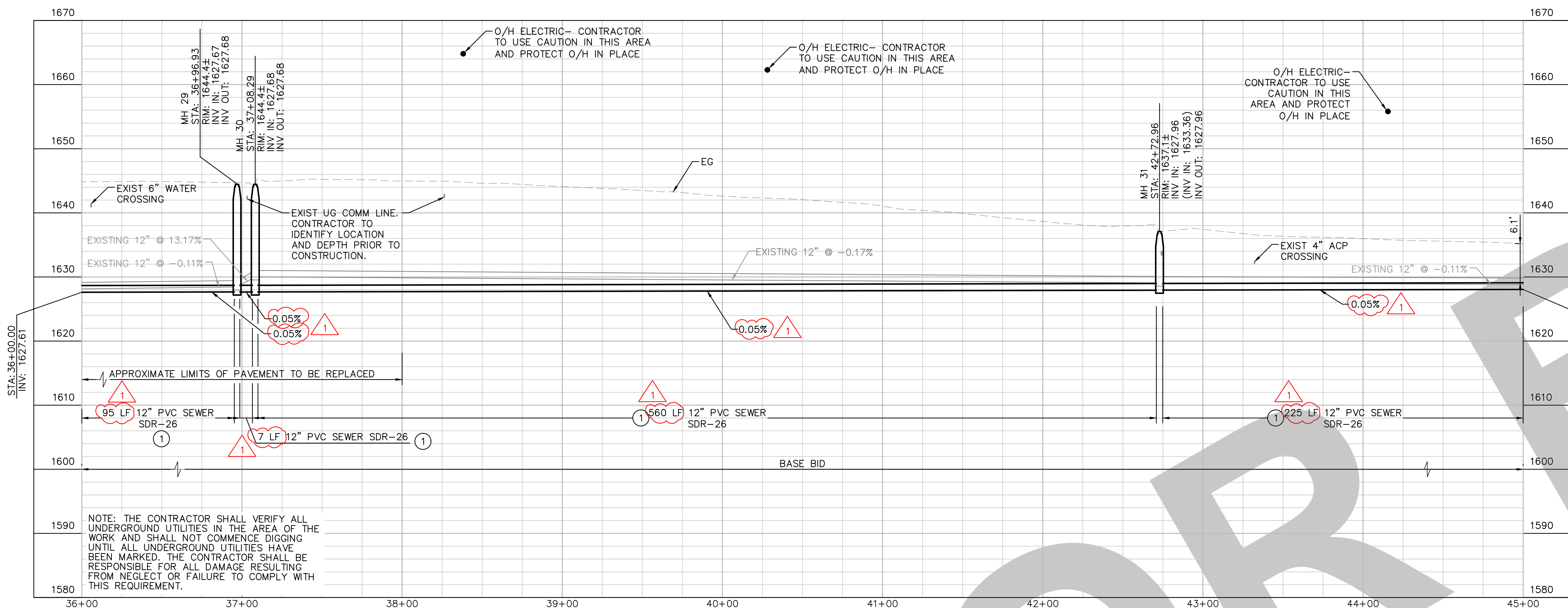
- NOTES:**
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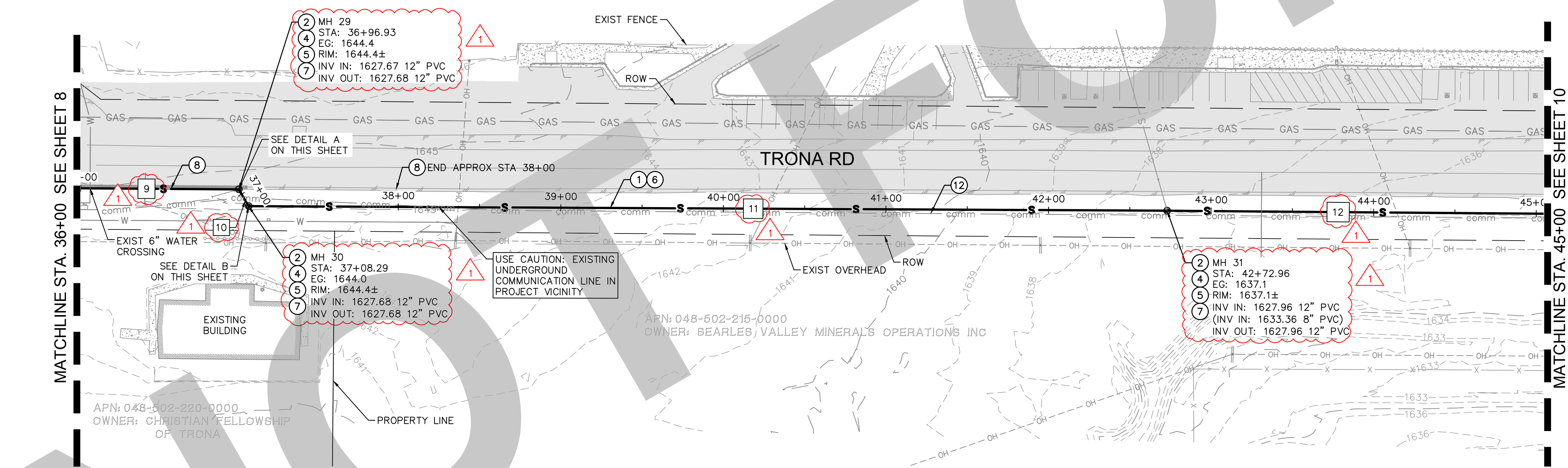
TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'



| UNDERGROUND SERVICE ALERT  Call: TOLL FREE 1-800-227-2600 OR 811 TWO WORKING DAYS BEFORE YOU DIG | BENCHMARK: THE CALIFORNIA SPATIAL REFERENCE CENTER C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD 88). | BASIS OF BEARINGS: THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819. |  Kimley»Horn 401 B STREET, SUITE 600, SAN DIEGO, CA 92101 PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM PREPARED UNDER THE SUPERVISION OF:  RENEE KATHRYN CHUANG R.C.E. No. 92140 04/26/2024 EXP 03/31/2025 | REVISIONS <table><tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th></tr><tr><td>1</td><td>TRENCH DETAIL UPDATE AND COUNTY COMMENTS</td><td></td></tr><tr><td>2</td><td>PROPOSED MANHOLE</td><td></td></tr></table> | NO. | DESCRIPTION | DATE | 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS | | 2 | PROPOSED MANHOLE | | SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS <table><tr><th colspan="2">ASSISTANT DIRECTOR</th><th colspan="2">DATE</th></tr><tr><td rowspan="3">APPROVALS</td><td>REVIEWER</td><td>INITIAL</td><td>DATE</td></tr><tr><td>WAS, DIVISION MANAGER</td><td></td><td></td></tr><tr><td>PM, DIVISION MANAGER</td><td></td><td></td></tr></table> | ASSISTANT DIRECTOR | | DATE | | APPROVALS | REVIEWER | INITIAL | DATE | WAS, DIVISION MANAGER | | | PM, DIVISION MANAGER | | | SEWER IMPROVEMENT PLANS SEARLES VALLEY SEWER IMPROVEMENT PROJECT 27+00 - 36+00 SEWER PLAN AND PROFILE 4 BASE BID DWG NO. 30.30.0158 FILE NO. SHEET 8 OF 24 |
|---|---|--|---|---|-----|-------------|------|---|--|--|---|------------------|--|--|--------------------|--|------|--|-----------|----------|---------|------|-----------------------|--|--|----------------------|--|--|--|
| NO. | DESCRIPTION | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | PROPOSED MANHOLE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ASSISTANT DIRECTOR | | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPROVALS | REVIEWER | INITIAL | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WAS, DIVISION MANAGER | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PM, DIVISION MANAGER | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



PROFILE VIEW
HORZ: 1"=40'
VERT: 1"=4'



TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'

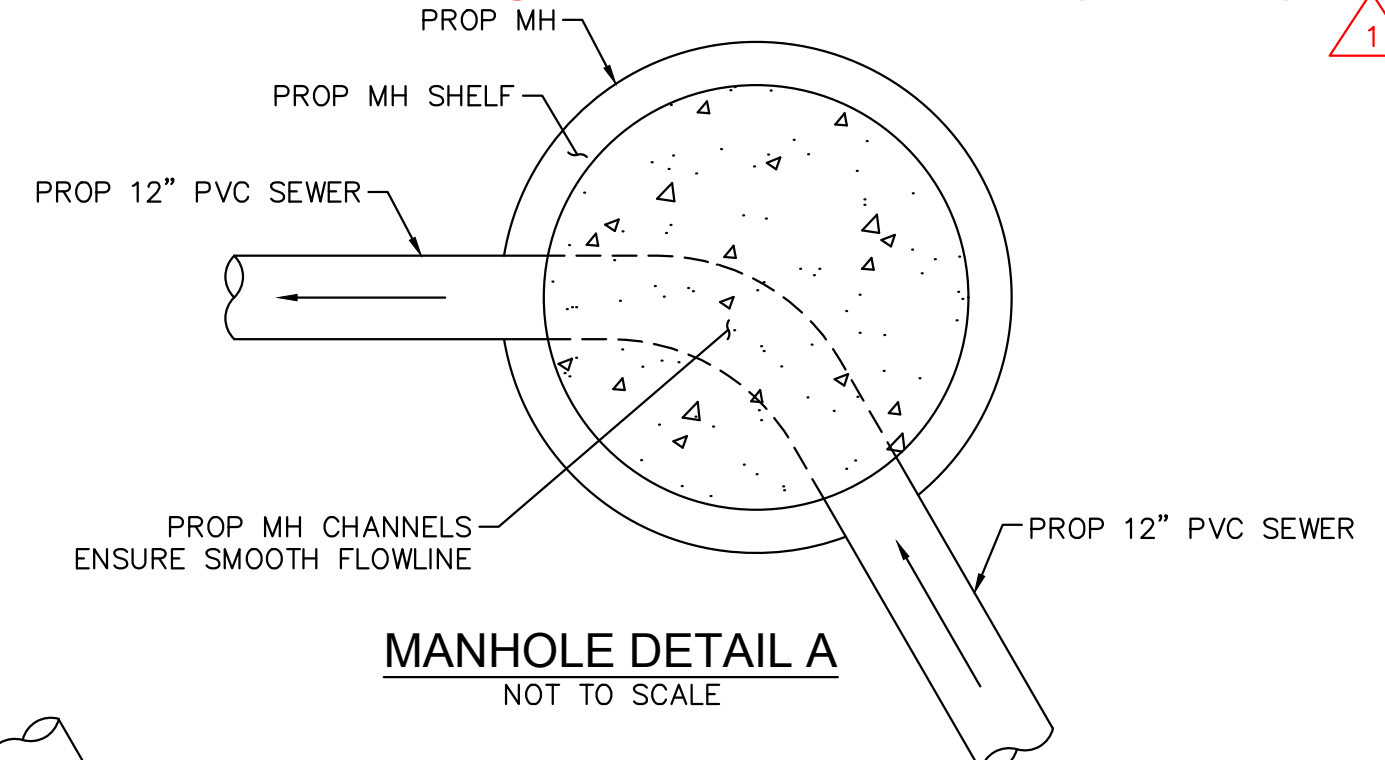
CONSTRUCTION NOTES

1. INSTALL 12" SDR-26 PVC SEWER. TRENCH BACKFILL AND GEOGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
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12. PROTECT IN PLACE EXISTING COMMUNICATION LINE.

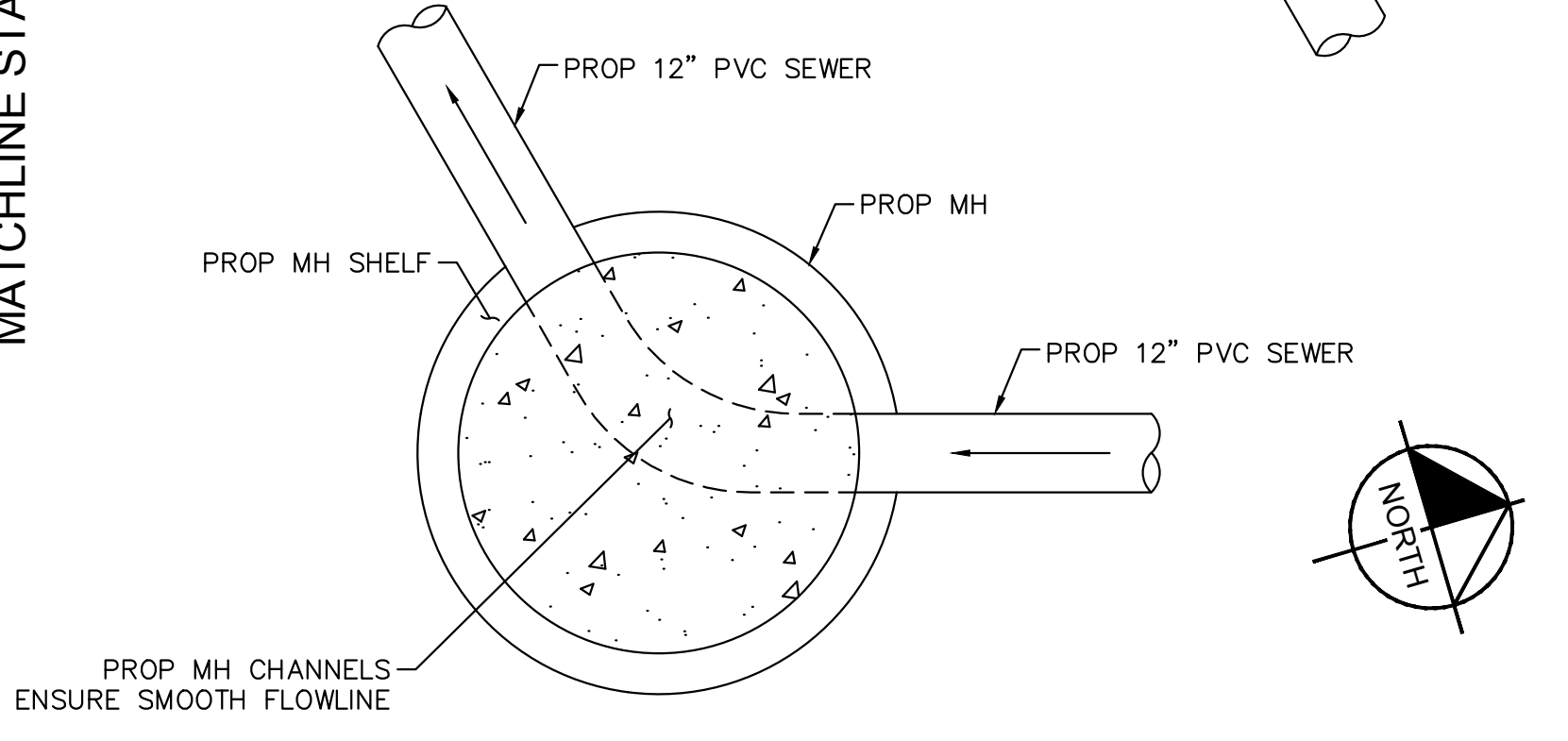
| LINE TABLE | | |
|------------|---------|-------------|
| LINE | LENGTH | BEARING |
| 9 | 94.84' | N16°09'56"E |
| 10 | 7.19' | N75°40'36"E |
| 11 | 560.17' | N16°05'24"E |
| 12 | 224.62' | N16°16'08"E |

NOTES:

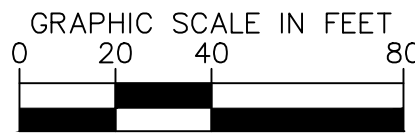
1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF MANHOLE.
2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
3. IF DEWATERING IS NEEDED TO CONSTRUCT THE PROPOSED IMPROVEMENTS, REFER TO DEWATERING NOTES ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
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5. WATER MAINS ARE DEPICTED BASED ON AS-BUILTS PROVIDED BY SEARLES DOMESTIC WATER COMPANY. LOCATION TO BE VERIFIED BY CONTRACTOR.
6. GAS AND COMMUNICATIONS LOCATION TO BE VERIFIED BY CONTRACTOR. CONTRACTOR TO NOTIFY COUNTY BEFORE BEGINNING CONSTRUCTION IF COMMUNICATION AND GAS LINES ARE ANTICIPATED TO INTERFERE WITH TRENCHING FOR THE PROPOSED SEWER.



MANHOLE DETAIL A
NOT TO SCALE



MANHOLE DETAIL B
NOT TO SCALE

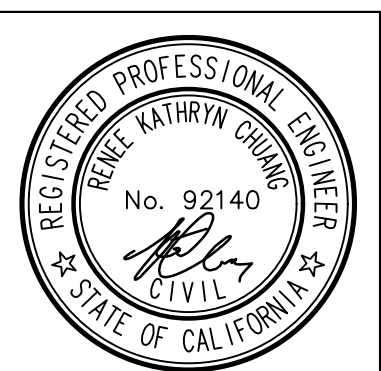


UNDERGROUND SERVICE ALERT



BENCHMARK:
THE CALIFORNIA SPATIAL REFERENCE CENTER
C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD
88).

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE BASED UPON
THE CALIFORNIA COORDINATE SYSTEM OF 1983,
CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE
CALIFORNIA PUBLIC RESOURCES CODE SECTIONS
8801-8819.



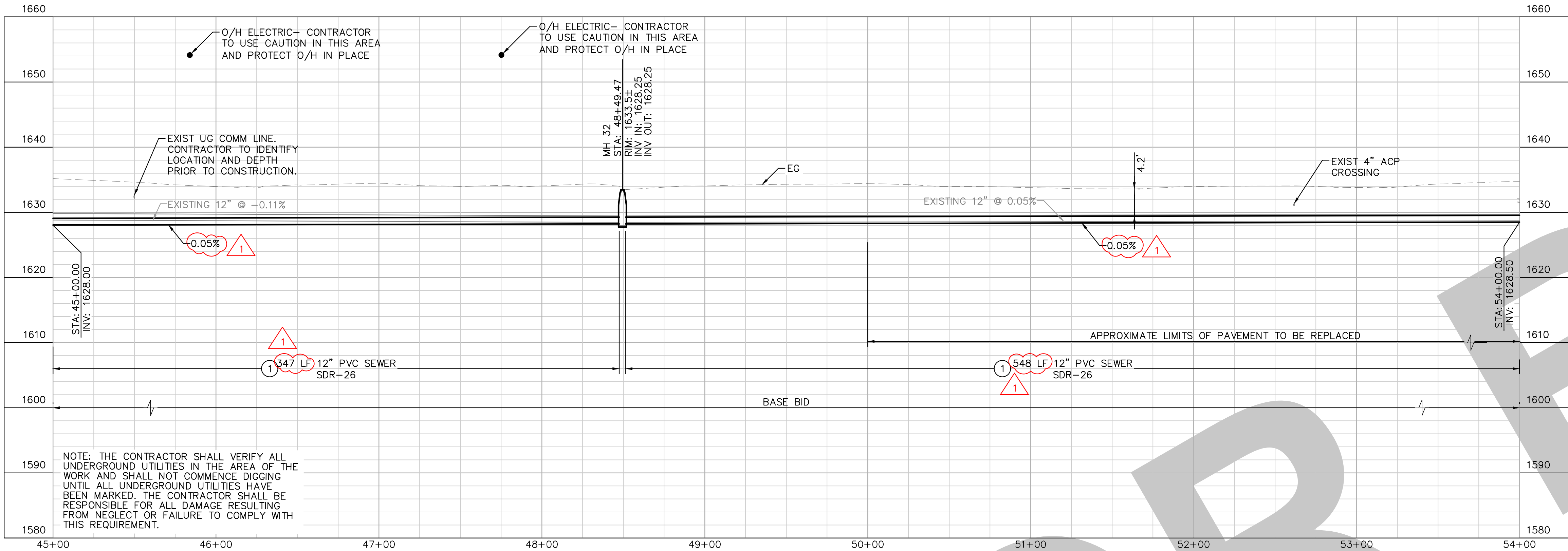
Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
RENEE KATHRYN CHUANG R.C.E. No. 92140
04/26/2024
EXP 03/31/2025

| REVISIONS | |
|-----------|--|
| NO. | DESCRIPTION |
| 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS |
| 2 | PROPOSED MANHOLE |

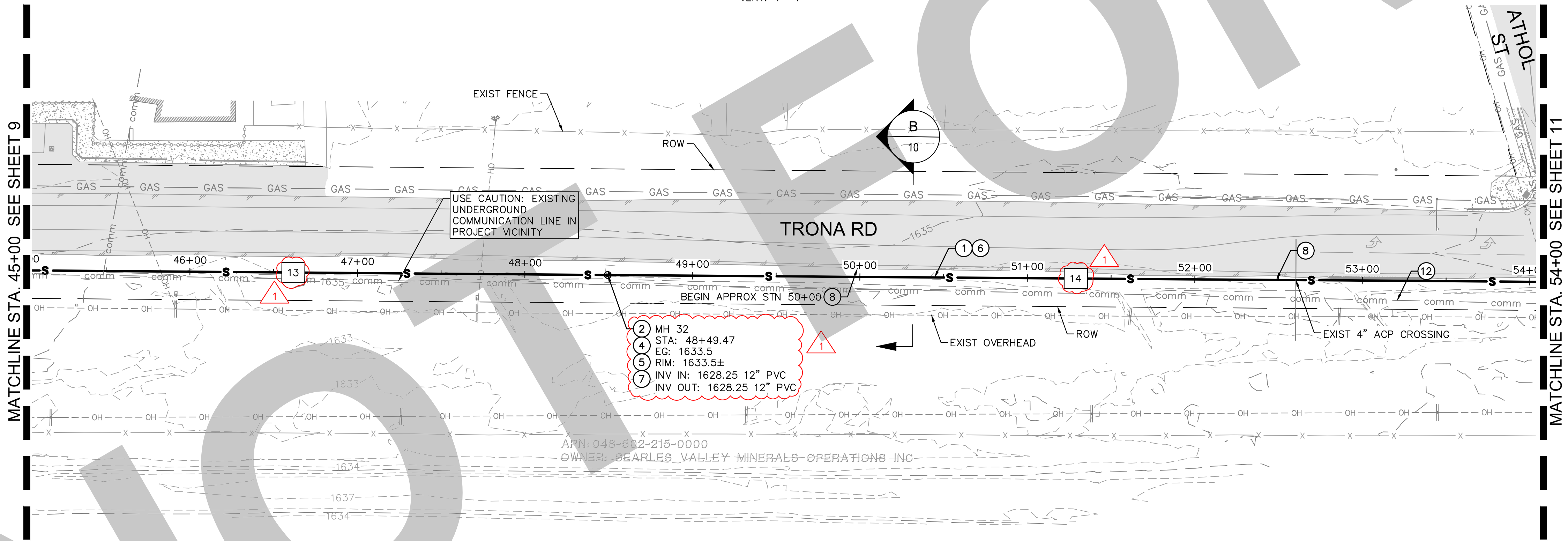
| SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS | | | |
|---|-----------------------|---------|------|
| ASSISTANT DIRECTOR | | DATE | |
| APPROVALS | REVIEWER | INITIAL | DATE |
| | WAS, DIVISION MANAGER | | |
| | PM, DIVISION MANAGER | | |

| SEWER IMPROVEMENT PLANS | | DWG NO. |
|--|--|---------------|
| SEARLES VALLEY SEWER IMPROVEMENT PROJECT 36+00 - 45+00 SEWER PLAN AND PROFILE 5 BASE BID | | 30.30.0158 |
| | | FILE NO. |
| | | SHEET 9 OF 24 |

FINAL SUBMITTAL



PROFILE VIEW
HORZ: 1"=40'
VERT: 1"=4'



TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'

CONSTRUCTION NOTES

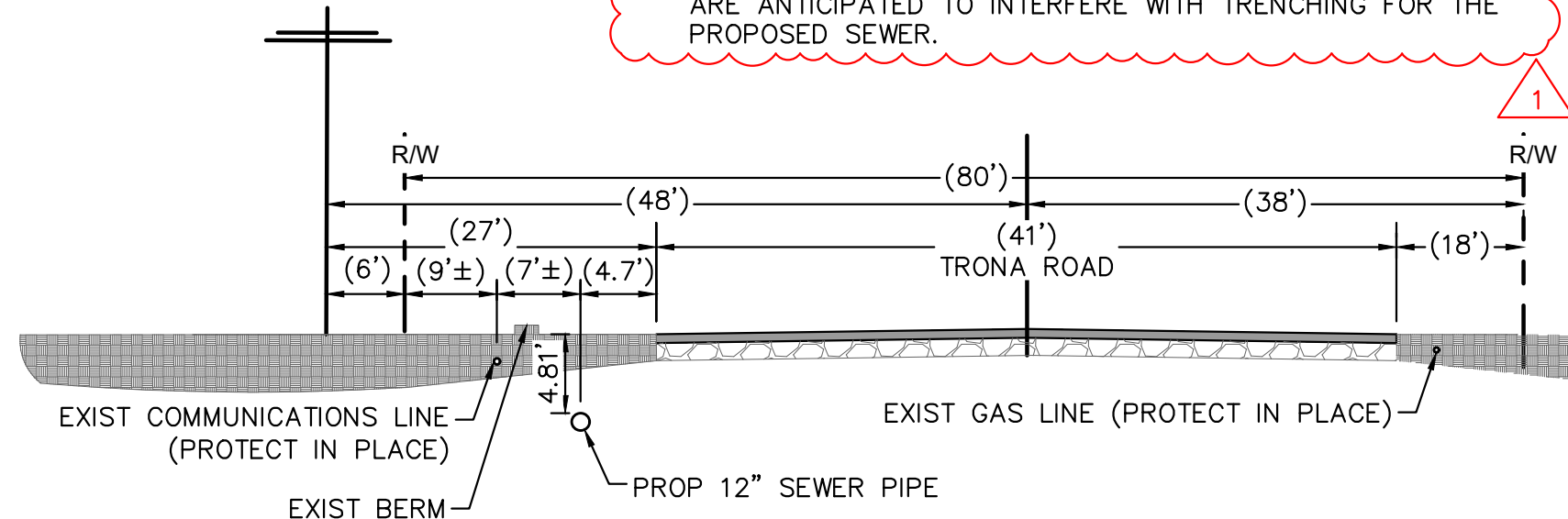
1. INSTALL 12" SDR-26 PVC SEWER. TRENCH BACKFILL AND GEOGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
4. CONSTRUCT CONCRETE STABILIZING RING AT GRADE PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3.
5. INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
6. REMOVE AND DISPOSE EXISTING SEWER PIPE.
7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
8. REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE PER DETAIL B, SHEET 23.
12. PROTECT IN PLACE EXISTING COMMUNICATION LINE.

LINE TABLE

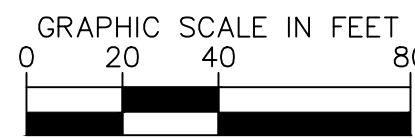
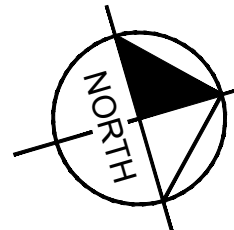
| LINE | LENGTH | BEARING |
|------|---------|-------------|
| 13 | 347.07' | N16°16'01"E |
| 14 | 548.11' | N16°13'21"E |

NOTES:

1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF MANHOLE.
2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
3. IF DEWATERING IS NEEDED TO CONSTRUCT THE PROPOSED IMPROVEMENTS, REFER TO DEWATERING NOTES ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
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SECTION B-B
NOT TO SCALE
STA 50±33



THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.



BENCHMARK:
THE CALIFORNIA SPATIAL REFERENCE CENTER
C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD
88).

BASIS OF BEARINGS:
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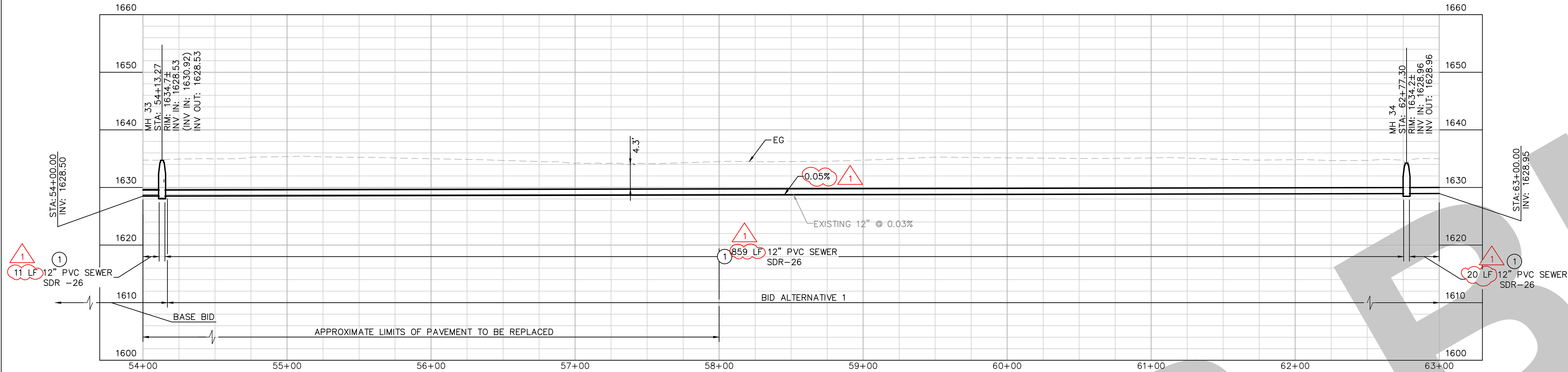
Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
RENEE KATHRYN CHUANG R.C.E. No. 92140
04/26/2024
EXP 03/31/2025

| REVISIONS | | |
|-----------|--|------|
| NO. | DESCRIPTION | DATE |
| 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS | |
| 2 | PROPOSED MANHOLE | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS | | | |
|---|-----------------------|---------|------|
| ASSISTANT DIRECTOR | | DATE | |
| APPROVALS | REVIEWER | INITIAL | DATE |
| | WAS, DIVISION MANAGER | | |
| | PM, DIVISION MANAGER | | |

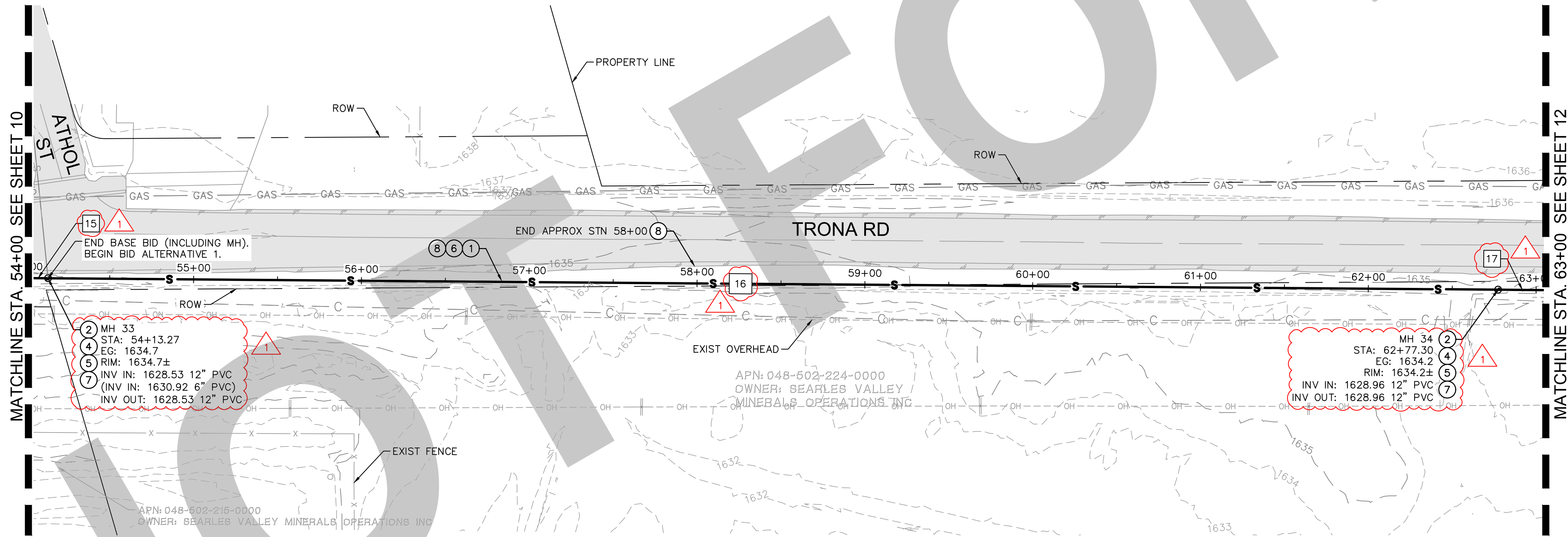
SEWER IMPROVEMENT PLANS
SEARLES VALLEY SEWER
IMPROVEMENT PROJECT
45+00 - 54+00
SEWER PLAN AND PROFILE 6
BASE BID

DWG NO.
30.30.0158
FILE NO.
SHEET 10 OF 24



NOTE: THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK AND SHALL NOT COMMENCE DIGGING UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN MARKED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLECT OR FAILURE TO COMPLY WITH THIS REQUIREMENT.

PROFILE VIEW
HORIZ: 1"=40'
VERT: 1"=4'



TRONA AVE - SEWER IMPROVEMENTS
SCALE: 1"=40'

CONSTRUCTION NOTES

1. INSTALL 12" SDR-26 PVC SEWER. TRENCH BACKFILL AND GEOGRID PER DETAIL B, SHEET 23. PIPE BEDDING PER SAN BERNARDINO COUNTY STANDARD DRAWING E-18, SPECIAL BEDDING.
2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
4. CONSTRUCT CONCRETE STABILIZING RING AT GRADE PER SAN BERNARDINO COUNTY STANDARD DRAWING E-3.
5. INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
6. REMOVE AND DISPOSE EXISTING SEWER PIPE.
7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
8. REPLACE ASPHALT AT TRENCH PATCH WITH 6-INCH AC OVER 6-INCH BASE COURSE PER DETAIL B, SHEET 23.

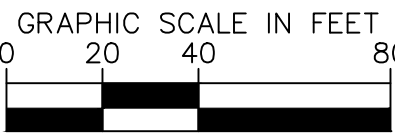
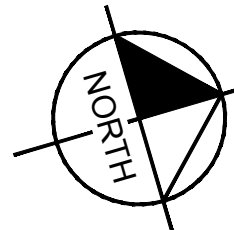
LINE TABLE

| LINE | LENGTH | BEARING |
|------|---------|-------------|
| 15 | 10.86' | N16°13'21"E |
| 16 | 859.22' | N16°15'22"E |
| 17 | 20.28' | N16°17'53"E |

NOTES:

1. PIPE LENGTHS SHOWN IN TABLE ARE FROM INNER WALL OF MANHOLE TO INNER WALL OF MANHOLE.
2. SEWER BYPASS PUMPING TO BE PROVIDED AS NOTED ON SHEET 2, AND THE PROJECT'S SPECIFICATIONS.
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THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.



UNDERGROUND SERVICE ALERT

Call: TOLL FREE 1-800-227-2600 OR 811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
THE CALIFORNIA SPATIAL REFERENCE CENTER C.O.R.S. "P463", ELEVATION 4449.16 FEET (NAVD 88).

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE TO THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819.

Kimley»Horn
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PHONE: (951) 543-9868 WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF:
RENEE KATHRYN CHUANG R.C.E. No. 92140
04/26/2024
EXP 03/31/2025

| REVISIONS | |
|-----------|--|
| NO. | DESCRIPTION |
| 1 | TRENCH DETAIL UPDATE AND COUNTY COMMENTS |
| 2 | PROPOSED MANHOLE |

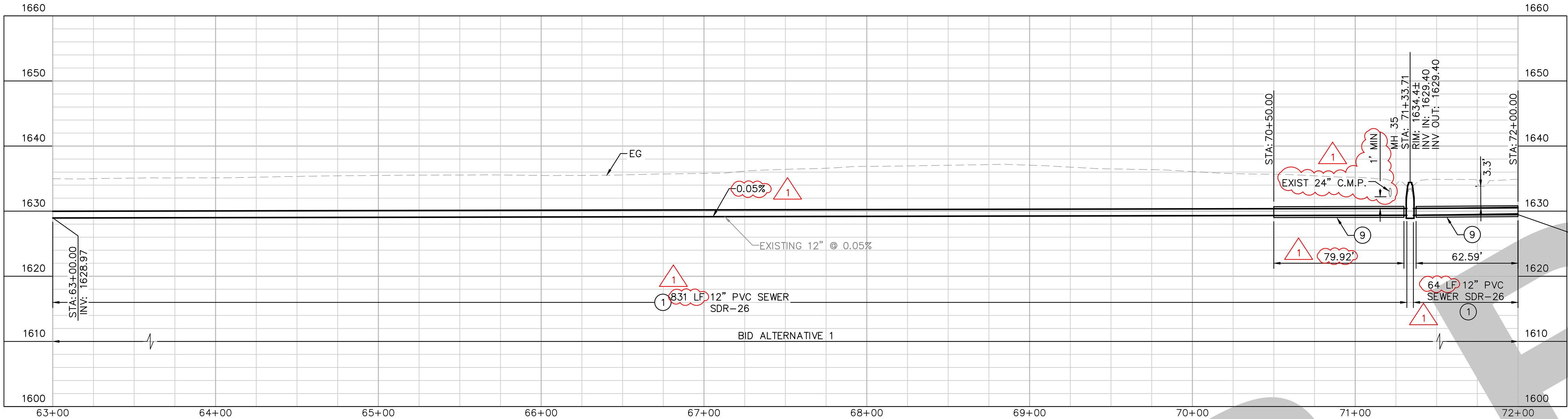
SEWER PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

| APPROVALS | DATE | | |
|-----------------------|----------|---------|------|
| | REVIEWER | INITIAL | DATE |
| WAS, DIVISION MANAGER | | | |
| PM, DIVISION MANAGER | | | |

SEWER IMPROVEMENT PLANS

SEARLES VALLEY SEWER IMPROVEMENT PROJECT
54+00 - 63+00
SEWER PLAN AND PROFILE 7
BID ALTERNATIVE 1

DWG NO. 30.30.0158
FILE NO.
SHEET 11 OF 24



NOTE: THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK AND SHALL NOT COMMENCE DIGGING UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN MARKED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLIGENCE OR FAILURE TO COMPLY WITH THIS REQUIREMENT.

PROFILE VIEW

HORZ: 1"=40'
VERT: 1"=4'

CONSTRUCTION NOTES

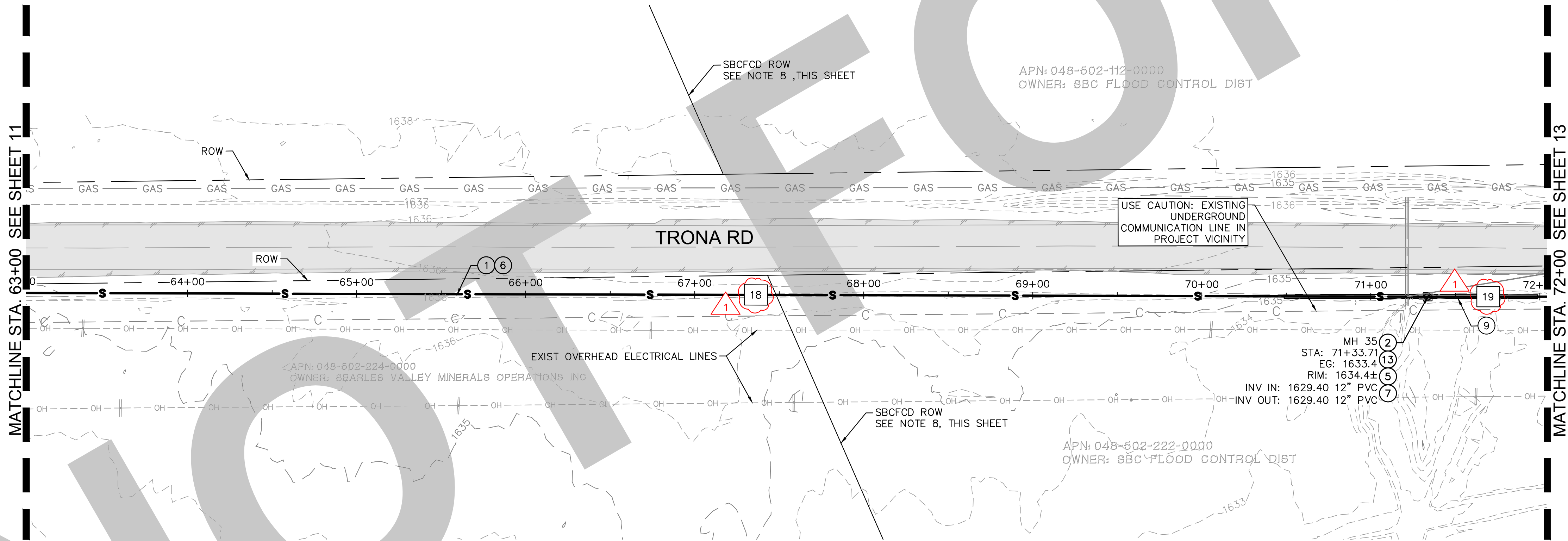
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2. REMOVE AND DISPOSE EXISTING SEWER MANHOLE.
5. INSTALL NEW 4' POLYMER CONCRETE MANHOLE PER DETAIL A, SHEET 23.
6. REMOVE AND DISPOSE EXISTING SEWER PIPE.
7. INSTALL MANHOLE FRAME AND COVER PER SAN BERNARDINO COUNTY STANDARD DRAWING E-5.
9. CONCRETE ENCASEMENT PER SAN BERNARDINO COUNTY STANDARD DRAWING E-26.
13. CONSTRUCT MANHOLE APRON PER SBCFCD STANDARD PLAN D260.

LINE TABLE

| LINE | LENGTH | BEARING |
|------|---------|-------------|
| 18 | 831.30' | N16°17'53"E |
| 19 | 63.87' | N16°08'51"E |

NOTES:

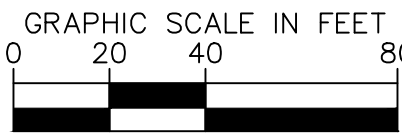
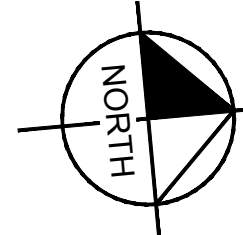
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7. REFER TO SBCFCD PERMIT NO F00N-2023-00091 FOR ALL CONSTRUCTION WITHIN SBCFCD ROW. PERMIT PROVIDED IN THIS PROJECT'S SPECIFICATIONS ATTACHMENT B.



TRONA AVE - SEWER IMPROVEMENTS

SCALE: 1"=40'

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UNDERGROUND SERVICE ALERT



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PREPARED UNDER THE SUPERVISION OF:

RENEE KATHRYN CHUANG

R.C.E. No. 92140

04/26/2024
EXP 03/31/2025

REVISIONS

- 1. TRENCH DETAIL UPDATE AND COUNTY COMMENTS
- 2. PROPOSED MANHOLE

| DESCRIPTION | APPR. | DATE |
|-------------|-------|------|
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |

SEWER PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

| ASSISTANT DIRECTOR | | DATE | |
|--------------------|-----------------------|---------|------|
| APPROVALS | REVIEWER | INITIAL | DATE |
| | WAS, DIVISION MANAGER | | |
| | PM, DIVISION MANAGER | | |

SEWER IMPROVEMENT PLANS

SEARLES VALLEY SEWER
IMPROVEMENT PROJECT

63+00 - 72+00

SEWER PLAN AND PROFILE 8

BID ALTERNATIVE 1

DWG NO.

30.30.0158

FILE NO.

SHEET 12 OF 24

FINAL SUBMITTAL