





PRIOR TO EXCAVATING

DATE

T.V.M.W.D.

THREE VALLEYS MUNICIPAL WATER DISTRICT

CONSTRUCTION DRAWINGS

FOR

MIRAGRAND WELL EQUIPPING IMPROVEMENTS

(PROJECT NO. 58463)

APRIL 2021



TVMWD BOARD OF DIRECTORS

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APPROVED BY:

MATTHEW H. LITCHFIELD P.E., GENERAL MANAGER / CHIEF ENGINEER

DATE

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SHEETS NO.

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GENERAL NOTES

- ALL GRADING AND CONSTRUCTION WITHIN THE PUBLIC ROW SHALL CONFORM TO THE 2019 CITY OF CLAREMONT BUILDING CODES AND THE STATE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE UNLESS SPECIFICALLY NOTED ON THESE PLANS.
- 2. ANY MODIFICATIONS OF OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED BY THE DISTRICT'S CIVIL ENGINEER.
- NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE DISTRICT'S CIVIL ENGINEER. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE THE START OF THE GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, LANDSCAPE ARCHITECT, OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETING AND MUST NOTIFY THE DISTRICT'S CIVIL ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING ON SITE.
- ALL GRADING AND CONSTRUCTION ACTIVITIES WITHIN THE PUBLIC RIGHT OF WAY SHALL COMPLY WITH CITY OF CLAREMONT CODE, TITLE 12, SECTION 12.12.030 THAT CONTROLS AND RESTRICTS NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT FROM THE HOURS OF 8:00 PM TO 6:30 AM, AND ON SUNDAYS AND HOLIDAYS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY GOVERN, AS REQUIRED BY THE DEPARTMENT OF REGIONAL PLANNING AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)
- CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050.5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE, OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN:
- A. THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED.
- B. IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ASSOCIATED GRAVE GOODS
- THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL EXPORT OF MATERIAL FROM THE SITE. IF REQUIRED, MUST GO TO A PERMITTED SITE OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE DISTRICT'S CIVIL ENGINEER UPON REQUEST.
- A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE 8 PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
- SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE DISTRICT'S CIVIL ENGINEER, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.
- NO GRADING OR CONSTRUCTION SHALL OCCUR WITHIN THE PROTECTED ZONE OF ANY OAK TREE AS REQUIRED PER--TITLE CHAPTER 22.56 THE CITY OF CLAREMONT ZONING CODE. THE PROTECTED ZONE SHALL MEAN THAT AREA WITHIN THE DRIP LINE OF AN OAK TREE EXTENDING THERE FROM A POINT AT LEAST FIVE FEET OUTSIDE THE DRIP LINE, OR 15 FEET FROM THE TRUNK(S) OF A TREE, WHICHEVER IS GREATER. ALL TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO START OF DEMOLITION OR GRADING WORK.
- 11. ALL GRADING AND CONSTRUCTION WITHIN THE PROTECTED ZONE OF ALL OAK TREES SHALL BE PER T.V.M.W.D. RECOMMENDATIONS. THE OAK TREE MUST BE PROTECTED WITH AND ARE A PART OF THE GRADING PLAN. OAK TREE ON SITE SHALL BE PROTECTED AT ALL TIMES. ALL TREE PROTECTION FENCING MUST BE IN PLACE AND APPROVED BY PROJECT ENGINEER PRIOR TO START OF DEMOLITION OR GRADING WORK.
- 12. THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT, A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL STANDARD RETAINING WALLS.
- NOTE: THIS NOTE ONLY APPLIES TO STANDARD RETAINING WALLS. GEO GRID FABRIC AND SEGMENTAL RETAINING WALLS 13 DO NOT REQUIRE A SEPARATE RETAINING WALL PERMIT DETAILS AND CONSTRUCTION NOTES FOR ALL GEO GRID WALLS MUST BE ON THE GRADING PLAN.
- 14. IF GRADING AUTHORIZED BY THIS PLAN IS TO EXTEND THROUGH THE RAINY SEASON, NOVEMBER 1 THROUGH APRIL 15 OF THE FOLLOWING YEAR. SEPARATE UPDATED PLANS FOR EROSION CONTROL MUST BE SUBMITTED PRIOR TO OCTOBER PER THE CITY OF CLAREMONT BUILDING CODE.

AGENCY NOTES

- 25. AN ENCROACHMENT PERMIT FROM CITY OF CLAREMONT IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OF WAY SHALL CONFORM TO CITY OF CLAREMONT ENCROACHMENT PERMIT.
- PERMISSION TO OPERATE IN VERY HIGH FIRE HAZARD SEVERITY ZONE MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.
- 27. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION/DEMOLITION, GRADING, AND STORAGE OF BULK MATERIALS MUST NOT EXCEED THE EXCAVATION THRESHOLDS REQUIRING A LOCAL AQMD RULE 403 PERMIT FOR FUGITIVE DUST. A 403 PERMIT WILL NOT BE ACQUIRED BY THE CONTRACTOR FOR THIS PROJECT AND GRADING OPERATIONS SHALL NOT EXCEED THE THRESHOLDS REQUIRING A PERMIT. INFORMATION ON RULE 403 IS AVAILABLE AT AQMD'S WEBSITE HTTP://AVAQMD.CA.GOV.

GENERAL GEOTECHNICAL NOTES

- REPORT(S) AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.
- 29. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY A GEOTECHNICAL CONSULTANT CONTRACTED BY THE CONTRACTOR AND APPROVED BY TVMWD WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE DISTRICT'S CIVIL ENGINEER. CONTRACTOR IS RESPONSIBLE FOR PAYMENT OF INSPECTION.
- 30. THE GEOTECHNICAL CONSULTANT SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR PAYMENT OF INSPECTION
- ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT PREPARED BY 31. CONTRACTOR'S GEOTECHNICAL CONSULTANT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS (SECTION J105.12 OF THE CITY OF CLAREMONT BUILDING CODE). THE FINAL REPORT(S) MUST BE SUBMITTED TO TVMWD.
- 32. FOUNDATION, WALL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOIL ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.
- 33. BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

FILL NOTES

- 93 PERCENT OF MAXIMUM DRY DENSITY DEEPER THAN 15 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE B COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL CONSULTANT.
- THE RELATIVE COMPACTION SHALL BE DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557-91 WHERE APPLICABLE: WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE CITY ENGINEER SHALL BE USED. (SECTION J107.5 THE CITY OF CLAREMONT BUILDING CODE.)
- 35. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE CITY ENGINEER. (SECTION J107.5 THE CITY OF CLAREMONT BUILDING CODE.) HOWEVER, NOT LESS THAN 10% OF DENSITY TESTS SHOULD BE SAND CONE TESTS. THE REQUIRED DENSITY TEST, UNIFORMLY DISTRIBUTED AND SHALL BE OBTAINED BY THE SAND CONE METHOD.
- SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:
- ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
- ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED
- ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR-FOOT VERTICAL LIFT OR POSITION THEREOF.
- D. ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL LIFT OF PORTION THEREOF.
- SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE GEOTECHNICAL CONSULTANT, CONTRACTED BY THE CONTRACTOR, INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
- A. PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.
- SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES DETERMINED BY THE GEOTECHNICAL CONSULTANT IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL
- MATERIAL THAT IS IN PLACE. FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.
- 38. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE CITY ENGINEER MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM D-2974-87 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNER THAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND THE SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.
- 39. ROCK OR SIMILAR MATERIAL GREATER THAN 3 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE CITY ENGINEER. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
- 40. CONTINUOUS INSPECTION BY THE GEOTECHNICAL CONSULTANT, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1. (SECTION J107.8) THE CITY OF CLAREMONT BUILDING CODE.
- CONTINUOUS INSPECTION BY THE GEOTECHNICAL CONSULTANT, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED 41 DURING ALL SUBDRAIN INSTALLATION. (SECTION J107.2 OF THE CITY OF BRADBURY BUILDING CODE)
- 42. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS-BUILT" GRADING PLAN.
- 43. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE CITY ENGINEER THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT. (SECTION J107.5) CITY OF CLAREMONT BUILDING CODE.

EARTH WORK CALCULATIONS

GRADING PERMIT APPLICATION No. GR

EARTHWORK VOLUMES: CUT: 858.34 CY, FILL: 338.66 CY NET: 519.68 CY EXPORT: 519.66 CY, EXPORT LOCATION: PER CONTRACTOR

TOTAL DISTURBED AREA: 0.99 ACRE

PRE-DEVELOPMENT IMPERVIOUS AREA: 0.00 ACRES POST-DEVELOPMENT IMPERVIOUS AREA: 0.21 ACRES OVER EXCAVATION / ALLUVIAL REMOVAL AND COMPACTION REMOVAL 305 CY RECOMPACTION 358.66 CY.

TOTAL PROPOSED LANDSCAPE AREA 10,577 SQUARE FEET.

TOTAL TURF AREA O% (PERCENT OF TOTAL PROPOSED LANDSCAPING) TOTAL DROUGHT TOLERANT LANDSCAPING AREA 100% (PROPOSED LANDSCAPING).

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	UNDERGROUND SERVICE ALERT		
PLAY IT SAFE. DIAL BEFORE YOU DIG!	AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATING	REV	DESCRIPTION

28. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S

34. ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:

A. 90 PERCENT OF MAXIMUM DRY DENSITY OF ASTM 1557 MODIFIED PROCTOR LABORATORY MAXIMUM DENSITY

PLANTING AND IRRIGATION NOTES

- 44. PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES: A. THE SURFACE OF ALL CUT SLOPES MORE THAN 5 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL
 - BE PROTECTED AGAINST DAMAGE BY EROSION BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS; OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION. CONSIDERATION SHALL BE GIVEN TO DEEP-ROOTED PLANTING MATERIAL NEEDING LIMITED WATERING. MAINTENANCE, HIGH ROOT TO SHOOT RATIO, WIND SUSCEPTIBILITY AND FIRE-RETARDANT CHARACTERISTICS. ALL PLAN MATERIAL MUST BE APPROVED BY THE ENGINEER. (SECTION J110.3 OF THE CITY OF CLAREMONT BUILDING CODE). THE LANDSCAPE PLAN HAS BEEN PREPARED TO COMPLY WITH THESE REQUIREMENTS.
 - ------ENGINEER AND AN ENGINEER. SPECIFIC RECOMMENDATIONS MUST CONSIDER SOILS AND CLIMATIC CONDITIONS. IRRIGATION REQUIREMENTS, PLANTING METHODS, FIRE RETARDANT CHARACTERISTICS, WATER EFFICIENCY, MAINTENANCE NEEDS, AND OTHER REGULATORY REQUIREMENT. RECOMMENDATIONS MUST INCLUDE A FINDING THAT THE ALTERNATIVE PLANTING WILL PROVIDE A PERMANENT AND EFFECTIVE METHOD OF EROSION CONTROL. MODIFICATIONS TO PLANTING MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
 - B. SLOPES REQUIRED TO BE PLANTED BY SECTION J110.3 SHALL BE PROVIDED WITH AN APPROVED SYSTEM OF IRRIGATION THAT IS DESIGNED TO COVER ALL PORTIONS OF THE SLOPE. IRRIGATION SYSTEM PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. A FUNCTIONAL TEST OF THE SYSTEM IS REQUIRED. FOR SLOPES LESS THAN 20 FEET IN VERTICAL HEIGHT, HOSE BIBS TO PERMIT HAND WATERING WILL BE ACCEPTABLE IF SUCH HOSE BIBS ARE
 - IRRIGATION. THE REQUIREMENTS FOR PERMANENT IRRIGATION SYSTEMS HAVE BEEN REMOVED UPON SPECIFIC -------RECOMMENDATION OF A LANDSCAPE ARCHITECT OR EQUIVALENT AUTHORITY THAT, BECAUSE OF THE TYPE OF PLANTS SELECTED, THE PLANTING METHODS USED AND THE SOIL AND CLIMATIC CONDITIONS AT THE SITE, IRRIGATION ONLY BRADBURY BUILDING CODE)
 - C. NO OTHER GOVERNMENTAL AGENCIES HAVE ADDITIONAL REQUIREMENTS FOR LANDSCAPING AND IRRIGATION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE WITH OTHER AGENCIES TO MEET THEIR REQUIREMENTS WHILE MAINTAINING COMPLIANCE WITH THE CITY OF BRADBURY BUILDING CODE.
- 45. THE PLANTING AND IRRIGATION SYSTEMS SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER ROUGH GRADING. PRIOR TO FINAL GRADING APPROVAL ALL REQUIRED SLOPE PLANTING MUST BE WELL ESTABLISHED FOR A PERIOD OF 12 MONTH. (SECTION J110.7 OF THE CITY OF BRADBURY BUILDING CODE.)
- LANDSCAPE IRRIGATION SYSTEM SHALL BE DESIGNED AND MAINTAINED TO PREVENT SPRAY ON STRUCTURES. (TITLE 31, 46 SECTION 5 407 2 1)
- 47. PRIOR TO ROUGH GRADE APPROVAL THIS PROJECT DOES NOT REQUIRE A LANDSCAPE PERMIT
- CONSULTANT HAS PREPARED AN IRRIGATION AND LANDSCAPE PLAN. IN ACCORDANCE WITH STATE CODE OF REGULATION 48 1881 AT RESERVOIR SITE. PLANS HAVE BEEN PREPARED BY PROFESSIONAL EXPERIENCED IN DESIGN OF DROUGHT TOLERANT LANDSCAPE AND WATER EFFICIENT IRRIGATION SYSTEMS LANDSCAPE PLANS HAVE BEEN ACKNOWLEDGED BY-THE CITY AS DIRECTED ABOVE. FEES FOR PLAN CHECK AND PERMIT ARE REQUIRED TO BE PAID BY THE COUNTY. ALLOW -90-120 DAYS FOR REVIEW AND APPROVAL OF LANDSCAPE AND IRRIGATION PLANS BY THE CITY OF CLAREMONT.
- 49 REFER TO EXISTING OAK PROTECTION PLAN AND LANDSCAPE PLAN FOR MORE DETAILS.

BEST MANAGEMENT PRACTICE NOTES

- EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
- ERODED SEDIMENT AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- 3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED BY THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITION MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND 8. AND WATER
- "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ENSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/ OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/ OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND/ OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."
- PRINT NAME (OWNER OR AUTHORIZED AGENT OF OWNER)

(OWNER OR AUTHORIZED AGENT OF OWNER)

SIGNATURE

DATE

THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE LATEST EDITION OF THE CASQA CONSTRUCTION BMP ONLIN HANDBOOK OR CALTRANS STORMWATER QUALITY HANDBOOKS (CONSTRUCTION SITE BMP MANUAL), MAY APPLY DURING T CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJEC ENGINEER OR THE CITY ENGINEER). THE CONTRACTOR IS REQUIRED TO PREPARE THE SWPPP AND OBTAIN APPROVAL WITH AN NUMBER FROM THE QUALIFIED SWPPP DEVELOPER AND PRACTITIONER.

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ENVIRONMENTAL NOTES

1. IN THE EVENT THAT ANY ARCHAEOLOGICAL MATERIALS (E.G., STONE TOOLS, POTTERY, OR MILLING-RELATED ARTIFACTS LIKE MANOS OR METATES, OR HISTORIC-AGE CANS AND GLASS FRAGMENTS) ARE ENCOUNTERED DURING GROUND-DISTURBING CONSTRUCTION ACTIVITIES, ALL ACTIVITIES MUST BE SUSPENDED IN THE VICINITY TO THE FIND UNTIL THE DEPOSITS ARE RECORDED AND EVALUATED BY A QUALIFIED ARCHAEOLOGIST. IF ANY HUMAN REMAINS ARE FOUND DURING CONSTRUCTION, THE REQUIREMENTS OF CEQA GUIDELINES 15064.5(E) AND ASSEMBLY BILL 2641 SHALL BE FOLLOWED.

TRAFFIC CONTROL NOTES:

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES ACCORDING TO THE LATEST CALIFORNIA MUTCD TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL PRIOR TO START OF WORK FOR ANY CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING HIS OWN TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE CITY ENGINEER FOR ALL ASPECTS OF THE WORK.
- FLASHING ARROW BOARD(S) ARE MANDATORY FOR LANE CLOSURES ON MAJOR STREETS. THEY SHALL OPERATE UNTIL TRAFFIC CONTROL IS REMOVED. FLASHING WARNING LIGHTS ARE TO WARN DRIVERS OF APPROACHING CONSTRUCTION AND STEADY BURNING LIGHTS ARE TO DELINEATE THE CHANGE OF STREET ALIGNMENT, AND BARRICADES ARE TO PROTECT THE WORK AREA. ALL BARRICADES SHALL BE EQUIPPED WITH FLASHING/STEADY BURN WARNING AT NIGHT TIME. ALL DELINEATORS SHALL BE 36" OR HIGHER AND EQUIPPED WITH WHITE REFLECTIVE SLEEVES AT NIGHT TIME.
- ALL OPEN TRENCHES SHALL BE COVERED WITH NON-SKID STEEL PLATES OR TEMPORARY ASPHALT PAVEMENT BEFORE AND AFTER WORK HOURS. WORK AREA SHALL BE ENCLOSED WITH TEMPORARY FENCE.
- 4. ALL SIGNS DELINEATORS, BARRICADES, ETC., SHALL CONFORM TO THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS LATEST EDITION, THE CALIFORNIA DEPARTMENT OF TRANSPORTATION MUTCD PART 6, AND THE "WATCH", LATEST EDITION, ALL BARRICADES SHALL BE EQUIPPED WITH FLASHING/STEADY BURN WARNING LAMPS AT NIGHT. ALL CONES. DELINEATORS, BARRICADES, AND "K" RAIL SHALL BE REFLECTORIZED. ALL TRAFFIC CONTROL SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY. ANY DEVICES NOT PART OF THE REQUIRED TRAFFIC CONTROL OR DETOURS SHALL BE REMOVED FROM THE VIEW OF THE TRAVELING PUBLIC IMMEDIATELY.
- WHERE NECESSARY, PROPERLY POST "TEMPORARY NO PARKING ANYTIME" SIGNS AT LEAST 5 DAYS BEFORE START OF WORK. THE SIGN SHALL LIST CBC651 CODE REFERENCE.
- VEHICULAR AND PEDESTRIAN ACCESS TO ADJACENT PROPERTIES SHALL BE PROVIDED AT ALL TIMES. CLOSED SIDEWALKS SHALL BE POSTED WITH "SIDEWALK CLOSED" SIGNS AT EACH APPROACH TO THE CLOSURE AND APPROVED ALTERNATE ROUTE PROVIDED.
- PROTECT TRAFFIC SIGNAL DETECTORS IN PLACE OR REPLACE WITHIN 5 CALENDAR DAYS OF FINAL PAVING. ALL DETECTORS DAMAGED BY THE WORK SHALL BE REPLACED TO THE STANDARDS OF THE CITY TRAFFIC ENGINEER.
- 8. NOTIFY CITY ENGINEER AT LEAST 72 HOURS PRIOR TO ANY WORK IN THE RIGHT-OF-WAY
- 9. ANY REVISIONS TO THE TRAFFIC CONTROL PLANS OR REQUIREMENTS SHALL BE APPROVED BY THE CITY ENGINEER.
- 10. CONTRACTOR SHALL NOTIFY ALL AFFECTED RESIDENTS AND BUSINESS FIVE WORKING DAYS PRIOR TO CONSTRUCTION. ACCESS TO ALL DRIVEWAYS MUST REMAIN OPEN AT ALL TIME.
- 11. NO MORE THAN 500 FEET OF ROADWAY SHALL BE CLOSED AT A TIME.
- 12. UPON COMPLETION OF A PHASE, REMOVE ALL SIGNS AND TEMPORARY STRIPPING INSTALLED FOR THE COMPLETED PHASE UNLESS INDICATED TO REMAIN FOR THE FOLLOWING PHASE.
- 13. ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED WHEN LANES ARE OPEN.
- 14. SIGNING MAY BE MOUNTED ON WOODEN POSTS OR PORTABLE SUPPORTS UNLESS OTHERWISE INDICATED ON THE PLAN.
- 15. FIVE FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OPEN EXCAVATION AND ADJACENT MOVING TRAFFIC LANE. OPEN TRENCH WITH LESS THAN FIVE FEET OF CLEARANCE SHALL BE STEEL-PLATED OR BACK FILLED IMMEDIATELY AFTER EXCAVATION.
- 16. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE REPLACED IN KIND.
- 17. TRAFFIC SIGNALING SHALL REMAIN IN OPERATION AT ALL TIMES IF THERE IS A CONFLICT WITH CONSTRUCTION AND TRAFFIC SIGNAL OPERATION NEEDS TO BE CHANGED, CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEER FOR COORDINATION AND APPROVAL.
- 18. G-20-2 "END ROAD WORK" SIGN, AS APPROPRIATE, SHALL BE PLACED AT THE END OF THE WORK ZONE.
- 19. ALL BARRICADES SHALL BE TYPE II OR TYPE III.
- 20. THE CITY PERMIT INSPECTOR RESERVE THE RIGHT TO REVISE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS AND BE DONE SOLELY AT THE CONTRACTOR'S EXPENSE.
- 21. CONTRACT SHALL OBTAIN LANE CLOSURE PERMITS FOR ANY WORK IN THE CITY OF CLAREMONT.
- 22. ALL TEMPORARY TRAFFIC CONTROL MARKINGS SHALL BE PER WATCH MANUAL STANDARD SPECIFICATIONS.
- 23. DURING NON WORKING HOURS ALL TRENCHES WILL BE PAVED OR PLATED AND ALL TRAFFIC WILL BE RETURNED TO NORMAL PATTERNS AND ALL SIGNS AND BARRICADES WILL BE REMOVED.
- 24. CONTRACTOR IS RESPONSIBLE FOR TAKING BEFORE AND AFTER PICTURES THROUGHOUT THE PROJECT AREA TO LIMIT LIABILITY FROM POTENTIAL DAMAGE.
- 25. ONLY ONE DRIVEWAY APPROACH MAY BE IMPACTED AT ANY GIVEN TIME.
- 26. REMOVE EXISTING ROAD SIGN DURING CONSTRUCTION AND RE-INSTALL AFTER CONSTRUCTION.

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CI	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
	GRADING NOTES	G-2
		<u>2</u> _{OF} <u>49</u>

GENERAL NOTES

- THE CONTRACTOR IS HEREBY NOTIFIED THAT ESSENTIAL AND PERTINENT INFORMATION REGARDING THE CONSTRUCTION AND COMPLETION OF WORK FOR THIS PROJECT IS CONTAINED IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO READ AND REVIEW THIS INFORMATION TO HIS OWN SATISFACTION PRIOR TO PERFORMING ANY WORK. ANY DEFICIENT, INCOMPLETE, OR INCORRECT WORK SHALL BE REDONE TO MEET THE REQUIREMENTS AT THE CONTRACTOR'S SOLE EXPENSE.
- 2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (SSPWC) CURRENT EDITION EXCEPT AS MODIFIED HEREIN.
- 3. ALL PIPE WITHIN THE PUBLIC RIGHT OF WAY IN OPEN TRENCH SHALL BE BEDDED AND BACKFILLED ACCORDING TO APPLICABLE DETAILS AND PROVISIONS OF THE CITY OF CLAREMONT STD. DWG. 1028. LOCATION OF EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON BEST DATA AVAILABLE FROM THE UTILITY AGENCIES.
- EXISTING UNDERGROUND STRUCTURES: 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 THE ENGINEERS KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOW ON THESE DRAWINGS. IT SHALL BE THE CONTACTOR'S RESPONSIBILITY TO ASCERTAIN THE TRUE LOCATION AND IDENTITY OF OWNERS OF ANY/ALL UNDERGROUND UTILITIES, BY REVIEW OF THE REFERENCE DRAWINGS AND POTHOLING, AND TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES 2 WEEKS BEFORE STARTING WORK. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UNDERGROUND UTILITY PIPES, CONDUITS, AND STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (811) AT LEAST TWO WORKING DAY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO ALLOW THE UTILITY OWNERS TO MARK THE LOCATION OF THEIR RESPECTIVE UNDERGROUND FACILITIES/UTILITIES, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN ON THESE PLANS.
- CONSTRUCTION MATERIALS, TESTING, AND INSPECTIONS SHALL COMPLY WITH THE SSPWC AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS. FAILURE TO MEET THE ABOVE REQUIREMENTS WILL BE CAUSE FOR REJECTION.
- CONTRACTOR SHALL DETERMINE DEPTH AND LOCATION VIA POTHOLING OF EXISTING UNDERGROUND FACILITIES PRIOR TO 6. TRENCHING.
- 7. CONTRACTOR SHALL SHORE ALL TRENCHES AND CONDUCT ALL TRENCH CONSTRUCTION AND OPERATIONS IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS.
- 8. PIPE SHALL BE HANDLED IN A MANNER TO PROTECT PIPE, JOINTS, LINING, AND COATING AND CAREFULLY BEDDED TO PROVIDE CONTINUOUS BEARING AND PREVENT UNEVEN SETTLEMENT, PIPE SHALL BE PROTECTED AGAINST FLOATING AT ALL TIMES. OPEN ENDS SHALL BE SEALED AT ALL TIMES WHEN CONSTRUCTION IS IN PROGRESS.
- 9. PIPE JOINTS SHALL NOT BE DEFLECTED AT ANY ANGLE GREATER THAN 80% OF THE MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURER.
- 10. MAIN LINE VALVES SHALL BE OPERATED ONLY BY TVMWD OPERATIONS STAFF.
- CONNECTION TO EXISTING TVMWD PIPELINES SHALL BE MADE AS DIRECTED BY TVMWD.
- 12. TRENCH BACKFILL AND BEDDING SHALL BE COMPACTED TO A MIN. RELATIVE DENSITY OF 90%, EXCEPT WHERE OTHERWISE SPECIFIED OR CEMENT SLURRY IS SPECIFIED.
- 13. ALL WORK SHALL BE INSPECTED BY TVMWD OR ITS REPRESENTATIVE, AND THE CONTRACTOR SHALL NOT BACKFILL TRENCH EXCAVATION UNTIL PIPELINE WORK IS APPROVED.
- 14. ANY CONTRACTOR/SUB-CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATION.
- 15. CONTRACTOR/SUB-CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE OF THE WORK CONTEMPLATED, AS WELL AS THE PLANS AND SPECIFICATIONS. THE SUBMISSION OF A BID SHALL BE CONCLUSIVE EVIDENCE THAT THE CONTRACTOR/SUB-CONTRACTOR HAS INVESTIGATED THE PROJECT SITE AND IS SATISFIED WITH THE CONDITIONS TO BE ENCOUNTERED AND THE CHARACTER, QUALITY AND SCOPE OF THE WORK TO BE PERFORMED, THE QUANTITY OF MATERIALS TO BE FURNISHED AND THE REQUIREMENTS OF THE BID PROPOSAL, PLANS AND GENERAL SPECIFICATIONS.
- 16. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER PIPELINES WHERE CONNECTIONS WILL OCCUR. THE CONTRACTOR SHALL VERIFY THEIR ELEVATION, LOCATION AND SHALL NOTE IT ON THEIR FIELD SET DRAWINGS.
- 17. NEW WATERLINES MUST BE PRESSURE TESTED BEFORE ANY CONNECTION WILL BE ALLOWED TO THE EXISTING SYSTEM. AFTER TESTING PROCEDURES ARE APPROVED BY TVMWD, LINES MUST BE FLUSHED, AND ONLY THEN WILL CONNECTION BE ALLOWED TO EXISTING LINE.
- 18. TESTING OR COMPACTION MUST BE PERFORMED BY A LICENSED AND QUALIFIED GEOTECHNICAL ENGINEER APPROVED BY TVMWD AND PAID FOR BY THE CONTRACTOR.
- 19. NO ROCKS LARGER THAN 3 INCHES IN DIAMETER WILL BE ALLOWED AS PIPELINE TRENCH BACKFILL. IF REQUIRED, EXCAVATED MATERIAL WILL BE REMOVED FROM THE SITE AND REPLACED WITH IMPORT OF CLEAN BACKFILL MATERIAL/SOIL.

WATER NOTES

- CASE OF CONFLICT, THE MOST STRINGENT SHALL APPLY.
- EXCAVATIONS REQUIRING SUCH.
- PROVIDE TWO EXCHANGES OF WATER IN THE PIPE, OR UNTIL WATER IS CLEAR.
- LIQUID CHLORINE COMPOUND. TABLETS SHALL NOT BE USED.
- VISUAL LEAKAGE TEST WITH LINE PRESSURE BEFORE BACKFILLING.
- TO PROTECT THE EXISTING WATER SYSTEM UNTIL SUCH TIME THAT THE NEW PIPE IS CONNECTED.
- TEMPORARY ASPHALT.
- BUILD HEADS FOR PRESSURE TESTING AND DISINFECTING AS NEEDED.
- SATISFACTION OF AND AS DIRECTED BY THE ENGINEER AND/OR TVMWD.
- PERMISSION FOR THIS SCHEDULE AND PLAN HAS BEEN OBTAINED FROM TVMWD.

JOB SITE SAFETY

BY ACCEPTING THIS CONTRACT, CONTRACTOR HEREBY RELEASES AND AGREES TO INFINITY, DEFEND AND HOLD HARMLESS TVMWD, CONSULTANTS, THEIR AGENTS, EMPLOYEES, CONSULTANTS AND REPRESENTATIVES FOR ANY AND ALL DAMAGE TO PERSONS OR PROPERTY OR WRONGFUL DEATH REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE, ACTIVE OR PASSIVE, OF TVMWD OR CONSULTANTS, AS WELL AS THEIR AGENTS AND EMPLOYEES TO THE FULLEST EXTENT PERMITTED BY LAW. SUCH INDEMNIFICATION SHALL EXTEND TO ALL CLAIMS, DEMANDS, ACTIONS, OR LIABILITY FOR INJURIES, DEATH OR DAMAGES OCCURRING AFTER COMPLETION OF THE PROJECT, AS WELL AS DURING THE WORK'S PROGRESS. CONTRACTOR FURTHER AGREES THAT THE CONTRACTOR SHALL ACCOMPLISH THE ABOVE AT ITS OWN COST, EXPENSE AND RISK EXCLUSIVE OF AND REGARDLESS OF ANY APPLICABLE INSURANCE POLICY OR POSITION TAKEN BY ANY INSURANCE COMPANY REGARDING COVERAGE.

1-800-422-4133 DIG ALERT		PROFESSION AL	PLANS PREPARED BY: General and V Mar	al Civil, Municipal, Water Vastewater Engineering, Planning, Construction anagement and Surveying MUNICIPA	EE VALLEYS	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
UNDERGROUND SERVICE ALERT	Image: marked bit is a state of the state of th	C 69578	<u>CIVILTEC</u>	118 West Lime Avenue 1021 E. N Monrovia, Ca. 91016 CLARE Phone: (626) 357-0588 (9) Fax: (626) 303-7957 (9)	MIRAMAR AVENUE EMONT, CA 91711 (909) 621-5568	MIRAGRAND WELL EQUIPPING IMPROVEMENTS GENERAL NOTES, SYMBOLS,	drawing no. G-3
PLAY IT SAFE. DIAL BEFORE YOU DIG! AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATING	REV DESCRIPTION ENGR DAT	APPD DATE	DESIGNED BY:CSHCHECKED BY:DRAWN BY:JM / MM / JGDATE:APRIL	CSH SCALE 2021 AS SHOWN	FILE NO.	LEGEND, AND ABBREVIATIONS	SHEETS NO

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AND ANY SPECIAL PROVISIONS. IN

2. CONNECTIONS TO EXISTING WATERLINES SHALL BE DONE IN THE PRESENCE OF THE TVMWD INSPECTOR/REPRESENTATIVE.

3. THE CONTRACTOR SHALL PROVIDE A SHORING DIAGRAM FOR ALL EXCAVATIONS IN EXCESS OF THE DEPTH INDICATED IN THE CAL-OSHA DOCUMENTS. SAID SHORING DIAGRAM SHALL BE SIGNED BY CALIFORNIA STATE REGISTERED STRUCTURAL ENGINEER. THE CONTRACTOR SHALL PROVIDE SHORING OR SLOPE CUTTING AS INDICATED ON THE DIAGRAM FOR ALL

4. AFTER INSTALLATION, THE INSTALLED PIPE SHALL BE FLUSHED AT 2 FPS OR GREATER FOR A PERIOD LONG ENOUGH TO

AFTER FLUSHING, THE PIPE SHALL BE PRESSURE TESTED IN THE PRESENCE OF THE TVMWD INSPECTOR. AFTER AN ACCEPTABLE PRESSURE TEST HAS BEEN COMPLETED, THE NEW WATER LINE SHALL BE DISINFECTED PER AWWA C651 USING A

AFTER FLUSHING, CHLORINATION, PRESSURE TEST AND BACTERIOLOGICAL RESULTS ARE ACCEPTED BY TVMWD, WATER LINES MUST BE FLUSHED OF EXCESS CHLORINE IN COMPLIANCE WITH APPLICABLE WATER DISCHARGE REGULATIONS. ONLY THEN WILL CONNECTION BE ALLOWED TO EXISTING WATER LINES. CONNECT TO THE EXISTING WATER SYSTEM AT THE LOCATIONS SHOWN. SWAB EACH PIECE OF PIPE OR FITTINGS THAT WILL COME IN CONTACT WITH POTABLE WATER WITH A SOLUTION OF 1 GALLON HOUSEHOLD BLEACH IN 4 GALLONS OF WATER. KEEP RAG CLEAN BETWEEN SWABS. WHILE THE FITTING IS STILL WET, CAREFULLY LOWER INTO THE TRENCH AND MAKE THE CONNECTION. ALL CONNECTIONS SHALL BE SUBJECTED TO A 10 MINUTE

7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOBSITE SAFETY. NEITHER TVMWD, NOR A CONSULTANT HIRED BY TVMWD FOR OBSERVATION, IF APPLICABLE, SHALL BE RESPONSIBLE FOR JOBSITE SAFETY. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE US DEPARTMENTS OF LABOR, AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS".

8. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY BACKFLOW DEVICES THAT ARE REQUIRED

9. WATER FOR CONSTRUCTION FILLING, FLUSHING, ETC. SHALL BE OBTAINED FROM A METERED SOURCE APPROVED BY TVMWD. 10. PROTECT ALL EXISTING UTILITIES AND STRUCTURES IN PLACE.

11. CONTRACTOR SHALL STEP GRIND ASPHALT TRENCH TO ALLOW TRAFFIC RATED STEEL PLATES TO BE SEATED TO THE FINISHED SURFACE WHEN TRENCHES ARE NOT IN ACTIVE CONSTRUCTION. COVER, FILL OR PLATE OVER EXCAVATIONS WHEN NOT IN ACTIVE CONSTRUCTION. ALL STEEL TRAFFIC RATED PLATING SHALL BE SECURED WITH SPIKES, AND RAMPED WITH

12. CONTACTOR TO FURNISH AND INSTALL TEMPORARY AIR RELEASE ASSEMBLY PIPING CONNECTIONS, PIPING SAMPLE TAPS, AND

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES AND RELATED EQUIPMENT, STRUCTURES, IMPROVEMENTS, AS A RESULT OF HIS OPERATIONS AND WILL BE REQUIRED TO REPAIR OR REPLACE SAME TO THE

14. PRIOR TO PERFORMING ANY INTERCONNECTION WORK, THE CONTRACTOR SHALL SUBMIT A WORKING SCHEDULE AND WORK PROCEDURE PLAN TO TVMWD ENGINEER. THE CONTRACTOR SHALL NOT PERFORM ANY INTERCONNECTION WORK UNTIL

15. CONTRACTOR SHALL PROTECT EXISTING WATER AND FIRE SERVICE SUPPLY AND MINIMIZE SERVICE INTERRUPTIONS.

16. CONTACTOR SHALL NOTIFY TVMWD 48 HOURS PRIOR TO INTERRUPTION OF WATER SERVICE AND REQUIRED INSPECTIONS.

17. UPON COMPLETION OF THE PROJECT AND PRIOR TO RETENTION PAYMENT, CONTRACTOR SHALL PROVIDE TVMWD WITH A CLEAN DETAILED SET OF AS-BUILT PLANS. A SET OF PLANS SHALL BE REDLINED SHOWING ALL DEVIATIONS FROM THE ORIGINAL PLANS, QUANTITIES AND TYPES OF ALL MATERIALS, ALIGNMENT AND DEPTH OF PIPELINE AND DIMENSIONS TO ALL FITTINGS.

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR

ALL UNDERGROUND UTILITIES AND STRUCTURES, PRIVATE AND PUBLIC, SHOWN HEREON REFLECT A SEARCH OF ALL KNOWN RECORD DATA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION, AND DAMAGE TO ALL STRUCTURES AND UTILITIES, SHOWN OR NOT, HEREIN.

WHERE ANGULAR DEFLECTION AT GRADE BREAKS AND ANGLE POINTS EXCEEDS THE MAXIMUM ALLOWABLE AS REQUIRED BY TVMWD FOR THE TYPE OF PIPE USED, THE CONTRACTOR SHALL "ROPE" OR DEFLECT EACH LENGTH OF PIPE OR USE NON-STANDARD PIPE LENGTHS AS FIELD CONDITIONS DICTATE SO THAT ALLOWABLE PIPE JOINT DEFLECTIONS ARE NOT EXCEEDED.

BASIS OF BEARINGS & DATUM STATEMENT

THE BEARINGS OF THE LINES SHOWN HEREIN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 5, 2011.00 EPOCH AND WERE DETERMINED BY GLOBAL POSITIONING SYSTEM (G.P.S.) TIES TO TWO CALIFORNIA SPATIAL REFERENCE NETWORK (C.S.R.N.) STATIONS REFERRED TO AS EWPP & LORS. PUBLISHED HORIZONTAL ACCURACIES ON THESE STATIONS MEET OR EXCEED FEDERAL GEOGRAPHIC DATA COMMITTEE (F.G.D.C.) 5-MILLIMETER ACCURACY CLASSIFICATION PER FGDC-STD-007.2-1998. SAID C.S.R.N. POSITIONS WERE HELD "FIXED" HORIZONTALLY IN THIS SURVEY.

THE CCS83 GRID BEARING BETWEEN C.S.R.N. STATIONS EWPP AND LORS BEING N81°29'26"W, AS DERIVED FROM THE POSITIONS FOR SAID STATIONS, IN SAID EPOCH, PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (C.S.R.C.) ON MAY 24, 2011, WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.

ALL VALUES ARE EXPRESSED IN U.S. SURVEY FEET (1 FOOT = 1200/3937 METERS).

ALL LINEWORK SHOWN HEREIN IS GRID. TO OBTAIN GROUND DISTANCES DIVIDE GRID DISTANCES BY THE COMBINED FACTOR OF 0.99991042 (AT POINT 1, WITH AN ELEVATION OF 1576.67 FEET AND CONVERGENCE ANGLE OF 00°10'09.70").

BENCHMARK

COUNTY OF LOS ANGELES BENCH MARK NO. JG5303 ELEVATION: 1518.341 FEET (NAVD88), QUAD YEAR 2005.

DESCRIBED BY COUNTY OF LOS ANGELES - "LACO BM TAG IN N CB 1 FT W/O BCR @ NW COR BASELINE RD & PADUA AVE"

LEGEND

	EXISTING BLOCK WALL
//	EXISTING EDGE OF PAVEMENT
<u>SD</u> <u></u>	EXISTING STORM DRAIN
S	EXISTING SEWER
——— OH ———	EXISTING OVERHEAD LINE
G	EXISTING GAS
——— W ———	EXISTING WATERLINE
IRR	EXISTING IRRIGATION
MWD	EXISTING MWD
──────────	EXISTING VALVE
 •••	EXISTING MANHOLE
	EXISTING RIGHT-OF-WAY
	ROAD CENTERLINE
	PROPOSED WATERLINE
—— ⊗ ——	PROPOSED GATE VALVE
	PROPOSED PAVEMENT
ÞQa	PROPOSED DISCHARGE RISER
◀───	PROPOSED AIR RELEASE

INSPECTION NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 48 HOURS (TWO DAYS) WORKING DAY IN ADVANCE OF REQUIRED INSPECTIONS FOR WORKING WITHIN THE PUBLICK RIGHT OF WAY AT FOLLOWING STAGES OF THE WORK. (SECTION J105.7 OF THE BUILDING CODE.)
- 2. ASPHALT PAVING: TEMPORARY AND FINAL GRADE AND OVERLAY
- ALL GRADED SITES FOR WORK WITHIN THE PUBLIC RIGHT OF WAY MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL PER SECTION J105.7 THE CITY OF CLAREMONT BUILDING CODE.
- 4. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.



				PROFESSION RHER SHEER FILE SOUTH C 69578	PLANS PREF	PARED BY: LTEC ering ind	Gener and N C.	ral Civil, Municipa d Wastewater Eng. Planning, Con. Aanagement and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	THE OF CALIFORN	DESIGNED BY: DRAWN BY	CSH JM / MM / JG	CHECKED BY:	CSH		SCALE AS SHOWN	FILE NO.

		1700
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		1600
	MIRAMAR TREATMENT FACILITY	1550
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		1000
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	AS-BID PLANS	
ICT	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
IC I	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
		SHEETS NO

LEGEND AND SYMBOLS

				&	AND
◯ A/V		TSB	EXISTING TRAFFIC SIGNAL BOX	Š. Z	ANGLE ANGLE (STRUCTURAL)
	AIR AND VACUUM VALVE	X X		∠s @	ANGLES AT
В.О.	BLOW-OFF		EXISTING STREET LIGHT	Ä.C.	ASPHALT CONCRETE
₽ wm			EXISTING ELECTRICAL MANHOLE	E AISC	AMERICAN INSTITUTE OF STEEL CONSTRUC
	WATER SERVICE METER		EXISTING MWD MANHOLE	APPD. EQ.	APPROVED EQUAL
	REDUCER/ENLARGER		EXISTING STORM DRAIN MANHO	APPROX.	AMERICAN PUBLIC WORKS ASSOCIATION
	END CAP	SMH	EXISTING SEWER MANHOLE	ART. ASSY.	ARTICLE ASSEMBLY
	TEE	○ тмн	EXISTING TELEPHONE MANHOLE	ASTM AVE.	AMERICAN SOCIETY FOR TESTING AND MAT
Π		О МН	EXISTING MANHOLE	AWG AWS	AMERICAN WIRE GAUGE AMERICAN WELDING SOCIETY
	FOLL BOX	,Q, ^{FH}	EXISTING FIRE HYDRANT	AWWA B &S	AMERICAN WATER WORKS ASSOCIATION
\otimes	EXISTING VALVES	\bigcirc P	EXISTING STEEL POST	B.C.	BEGINNING OF CURVE
(PRV)	PRESSURE REGULATING VALVE		EXISTING DRAINAGE GRATE	BDRY. B'ELY	BOUNDARY
	PROPOSED A.C. PAVEMENT	0	EXISTING STREET SIGNS	BLDG. BLVD	BUILDING
44		A ^{HV90}		B.M. BOT	BENCH MARK
		1569		B.V. BW	BUTTERFLY VALVE BACK OF WALK
	PROPOSED GRAVEL	\ast	EXISTING ROCKS	C.A.B.	CRUSHED AGGREGATE BASE
	LANDSCAPE AREA/GRADED AREA (OR		EXISTING POWER POLE	CB C.C.	CATCH BASIN CENTER TO CENTER
	HYDROSEEDED AREAS)	E B	EXISTING BUSH	C.F. CH'KD P	CURB FACE CHECKERED PLATE
XX	PROPOSED FENCE	- () 		C.I. C.I.P.	CAST IRON CAST IRON PIPE
(930.00 FS)	EXISTING ELEVATION		EXISTING BRUSH	CL. € OR CL	CLASS CENTER LINE
930.00 FS	PROPOSED FI EVATION		EXISTING TREES	C.L.F. CLRN.	CHAIN LINK FENCE CLEARANCE
-				C.M.C. C.M.L.	CEMENT MORTAR COATED CEMENT MORTAR LINED
250	PROPOSED CONTOUR		EXISTING TREES	CML & C CML & P	CEMENT MORTAR LINED & COATED CEMENT MORTAR LINED & PAINTED
(102.78)	EXISTING GRADE			C.M.P. CO.	CORRUGATED METAL PIPE COMPANY
	EDGE OF A. C. PAVEMENT	all Like		COEF. COL.	COEFFICIENT COLUMN
				CONC. CONST.	CONCRETE CONSTRUCTION
		•••••••	HAND RAILING	CONT. COORD.	CONTINUOUS COORDINATE
· · · · ·	CITY BOUNDARY		DAYLIGHT LINE	COR. CORP.	CORNER CORPORATION
o	DAYLIGHT		EXISTING EDGE OF PAVEMENT	CORR. CPLG.	CORRUGATED COUPLING
			EXISTING CURB AND GUTTER	CTR. CU.	CENTER CUBIC
SSS	EXISTING SEWER MAIN			CPVC. CV	CHLORINATED POLYVINYL CHLORITE CHECK VALVE
———E ——E ——	EXISTING ELECTRICAL LINE	-025			DELTA
	PROPERTY LINE	X	EXISTING CHAIN LINK FENCE	DWG.	
(SD)(SD)	EXISTING STORM DRAIN		2:1 SLOPE AND GRADED AREA	DET.	
				D.I.P.	DUCTILE IRON PIPE
			GATE VALVE / TAPPING VALVE	E.	EAST
\wedge				EA. E.C.	EACH END OF CURVE
	OVER EXISTING UTILITY			ECC. E.F.	ECCENTRIC EACH FACE
\wedge			BUTTERFLY VALVE	EL. OR ELEV. ELL.	ELEVATION ELBOW
	UNDER EXISTING UTILITY	a 1 1		EMH E/O	ELECTRICAL MANHOLE EAST OF
			TRANSITION COUPLING	EP EPDM	EDGE OF PAVEMENT ETHYLENE PROPYLENE DIENE MONORMER
P	LOCATION OF EXISTING UTILITY	\frown		EQ. OR = E.W.	EQUAL EACH WAY
6" MIN.		(\bigcirc)	POST BARRICADE	E.W.E.F. EXIST. OR EX.	EACH WAY EACH FACE EXISTING
CLR. <u>U</u>	CROSSING EXISTING UTILITIES			FDN.	
	SHEET FLOW			F.F.	FINISHED FLOOR
		DETAIL	XX	FH FIG	FIRE HYDRANT
		SCALE: 1"=1'-0"	X-X	FIN.	FINISH
	SECTION LETTER			FLG.	FLANGE
SECTION	Å		WHICH THE DETAIL	F.S. FT	FINISHED SURFACE
SCALE: 1"=1'-0"	$\frac{\sqrt{x}}{\sqrt{x}}$		13 3HOWN ON.	GA.	GAGE OR GAUGE
	SHEET NUMBER ON WHICH THE SECTION	r- DETAIL	NUMBER	GAL. GALV.	GALLON GALVANIZED
	R IS DRAWN ON.			G.B. G.I.P.	GRADE BREAK GALV. IRON PIPE
	4	(XX) SEE		G.M. GND.	GROUND
$- \frac{XX}{YY} -$		DET/		G.V. H.B.	HOSE BIBB
				HORIZ. H.P.	HORIZONTAL HIGH POINT
SHEET NUMBER WHICH THE SEC	CTION IS	WHICH TH	E DETAIL ON.	INST. INV	INSTALL INVERT
SHOWN ON.		1_200)_1222_1122		
			$\underline{\neg} A I E D T$		
			SER SER		
		PLAY IT SAFF	Г А У ат		
		DIAL BEFORE YOU DIG!	WOF PRIOR TO E	RKING DAYS REV	DESCRIPTION
					•

ABBREVIATIONS





	SITE COORD	INATE TABLE
\bigcirc	Ν	E
Α	1869694.8184	6651466.9963
В	1869694.8184	6651498.9963
С	1869668.1517	6651466.9963
D	1869668.1517	6651498.9963
Е	1869711.8184	6651449.9963
F	1869711.8184	6651526.9954
G	1869667.8934	6651537.4932
Н	1869648.1517	6651449.9963
	1869648.1517	6651497.2504
J	1869650.4656	6651537.4932
K	1869753.6027	6651419.6206
L	1869754.3674	6651513.6067
M	1869713.0126	6651513.5937
Ν	1869713.0151	6651539.6071
0	1869454.6826	6651539.6067
Ρ	1869454.6868	6651420.3017

·	<u>36"W</u> 12"W		
- <u>2"C</u>		2"6	
MWD		MWD	

1-800-422-41	33		
DIGALEI	RT		
	UNDERGROUND SERVICE ALERT		
PLAY IT SAFE.	AT LEAST TWO		
DIAL BEFORE YOU DIG!	WORKING DAYS PRIOR TO EXCAVATING	REV	DESCRIPTION



CONSTRUCTION NOTES:

- (1) A.C. PAVEMENT OVER COMPACTED AGGREGATE BASE.
- 2 16'-0" WIDE P.C.C. DRIVEWAY APPROACH.
- 3 GROUTED ROCK SWALE PER MODIFY CITY OF CLAREMONT STANDARD DRAWING 1047 AS MODIFIED PER TYPICAL SECTION HERON.
- 4 A.C. PAVEMENT OVER COMPACTED AGGREGATE BASE, MATCH EXISTING.
- 5 BLOCK WALL TO BE PROTECTED IN PLACE.
- 6 CONCRETE BLOCK AND ROCKS PILASTER. SEE DETAIL 4 ON DRAWING C-5.
- (7) HIGH WROUGHT IRON FENCE PER DETAIL 1 ON DRAWING C-5.
- (8) HIGH WROUGHT IRON GATE PER DETAIL 1 ON DRAWING C-5.
- 9 DIAMETER FLOOR DRAIN.
- (10) PVC DRAIN PIPE, SDR 35.
- (11) PUMP DISCHARGE TO WASTE PIPE
- (12) ROCKS RIP-RAP WITH GROUT.
- (13) WIDE SPILL WAY OPENING.
- (14) VARIABLE WIDTH GROUTED ROCKS SWALE.
- (15) GUARD SHACK PER DETAIL 5 ON DRAWING M-6.
- (16) PROTECT IN PLACE EXISTING STREET SIGN.
- (17) RELOCATE EXISTING STREET SIGN.

(18) GSWC TO INSTALL NEW WATER SERVICE AND WATER METER. CONTRACTOR TO INSTALL COPPER PIPING FEOM NEW MWTER TO BUILDING.

- (19) INSTALL PVC CONDUIT FOR IRRIGATION AND ELECTRICAL.
- 20 NEW SCE CONCRETE PAD.

	FILTRATION BASINS LINE DATA					
Q	BEARING	LENGTH				
L1	N64°51'08"W	18.95'				
L2	N89°49'15"E	14.10'				
L3	N89°49'15"E	13.83'				
L4	N21°10'56"E	11.00'				
L5	N21°10'56"E	18.04'				
L6	N21°10'56"E	12.41'				
L7	N14°06'58"W	10.31'				
L8	N36°22'30"E	7.19'				
L9	N40°23'50"E	15.00'				
L10	S64°04'44"	7.94'				
L11	0°00'00"	16.53'				
L12	S21°01'07"W	15.03'				

	FILTRATION BASIN # 1 - CURVE DATA								
\bigcirc	DELTA RADIUS LENGTH TANGENT								
C1	87°46'10"	17.00'	26.04'	16.35'					
C2	26°15'56"	43.48'	19.93'	-					
C3	41°29'33"	43.40'	31.41'	-					
C4	40°05'50"	10.41'	7.29'	-					
C5	86°45'16"	14.10'	21.35	13.32					
C6	58°50'27"	5.00'	5.13'	-					
C7	39°18'12"	32.92'	22.58'	11.76'					

	FILTRATION BASIN # 2 - CURVE DATA								
\bigcirc	DELTA	RADIUS	LENGTH	TANGENT					
C8	75°52'36"	5.00'	6.62	3.90					
C9	22°11'51"	36.57'	14.17	7.17					
C10	28°48'58"	11.63	5.85	2.99					
C11	47°42'04"	11.57	9.63	5.11					
C12	70°29'47"	32.27	39.70	22.80					
C13	31°16'10"	68.79	37.54	19.25					
C14	68°49'4"	5.00	6.01	3.42					

FEX. R/W



	AS-BID PLANS	
Ť	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
Ĵ	MIRAGRAND WELL EQUIPPING IMPROVEMENTS GENERAL SITE PLAN	DRAWING NO.
		SHEETS NO.



0\2020158.00-TVMWD-MIRAGAND WELL EQIPPING\DWG\SHEETS\2020158.00 SHT 07 C-3 GRADING PLAN.DWG (04-22-21 4:38:07PM)



SEE DRAWING C-3 FOR CONTINUATION

CONSTRUCTION NOTES:

- (1) CONSTRUCT 3" A.C. OVER 4" AGGREGATE BASE, SEE SECTION 3 ON DRAWING C-8 AND PER GEOTECHNICAL REPORT SECTION 3.8.
- (2) CONSTRUCT P.C.C. DRIVEWAY APPROACH, SEE DETAIL 7 ON DRAWING C-8.
- (3) CONSTRUCT 4"-6" GROUTED ROCK SWALE PER CITY OF CLAREMONT
- STANDARD DRAWING 1046 AND 1047. SEE DETAIL 5 ON DRAWING C-8. (4) CONSTRUCT 8" P.C.C. ROLL GATE GUIDE FOOTING PER SECTION C ON DRAWING C-5.
- (5) EXISTING BLOCK WALL TO BE PROTECTED IN PLACE.
- (6) CONSTRUCT 24" x 24" FIELD STONE PILASTER. SEE DETAIL 4 AND 5 ON DRAWING C-5.
- (7) INSTALL 7' HIGH WROUGHT IRON FENCE PER DETAIL 1 ON DRAWING C-6.
- (8) INSTALL 7' HIGH WROUGHT IRON ROLLING GATE PER DETAIL 1 ON DRAWING C-6.
- (9) INSTALL 4" DIAMETER FLOOR DRAIN, SEE DETAIL 7 ON DRAWING M-5.
- (10) INSTALL 4" DIAMETER PVC DRAIN PIPE, SDR 35.
- (11) INSTALL 6" DIAMETER PVC DRAIN PIPE, SDR 35.
- (12) INSTALL REDWOOD HEADER PER SECTION 1 ON DRAWING C-8.
- (13) INSTALL 6" DIAMETER STEEL BOLLARD PER DETAIL 2 ON DRAWING C-8.
- (14) CONSTRUCT 8' x 6.5' CONCRETE SLAB PER STRUCTURAL PLANS.

- (15) INSTALL 2" BACKFLOW PRINCIPAL AND GUARD SHACK PER DETAIL 5 ON DRAWING M-6.
- (16) CONSTRUCT 8 LF OF 12" C-150 CL 350 DIP, CONNECT TO EXISTING 12" STUB-OUT.
- (17) INSTALL 24" x 24" DROP INLET WITH STANDARD FLOGARD FILTER MODEL FGP-24F, SEE DETAIL 6 ON DRAWING C-8.
- (18) CONSTRUCT 24" x 24" STONE PILASTER. SEE DETAIL 4 ON DRAWING C-5.
- (19) CONSTRUCT 6" P.C.C. CURB PER CITY OF CLAREMONT STANDARD DRAWING NO. 1052, SEE DETAIL 4 ON DRAWING C-8.
- (20) RELOCATE EXISTING STREET SIGN AS SHOWN.
- (21) CONSTRUCT 4' WIDE NATIVE SOIL BERM, SEE DETAIL E HEREON .
- (22) CONSTRUCT 3' WIDE NATIVE SOIL WITH ROCKS CHANNEL
- (23) CONSTRUCT 4' THICK P.C.C.SIDEWALK.
- (24) NEW WATER SERVICE , METER AND BOX.
- (25) INSTALL STREET SIGN PER CITY OF CLAREMONT STANDARD DRAWING NO. 1062.
- (26) INSTALL 7' HIGH SINGLE LEAF WROUGHT IRON GATE PER DETAIL 1 ON DRAWING C-6.
- (28) INSTALL 2 (3") PVC CONDUIT FOR IRRIGATION AND ELECTRICAL.



GENERAL OAK TREE NOTES:

CONSTRUCTION MITIGATION AND PRESERVATION RECOMMENDATIONS THESE RECOMMENDATIONS ARE DESIGNED FOR THE TREES THAT WILL REMAIN AND REQUIRE PHYSICAL PROTECTION THAT SHOULD BE IN PLACE PRIOR TO CONSTRUCTION. THESE PROTECTIONS MAY INCLUDE FENCING OR OTHER BARRIERS AND INCLUDE THE PRESENCE OF A QUALIFIED ARBORIST TO MONITOR ACTIVITIES AND ENSURE THE TREES THAT REMAIN ARE PROTECTED. IT IS RECOMMENDED THAT THE PROJECT ARBORIST/ ARBORIST OF RECORD (AOR) IS PRESENT FOR THE PRE-CONSTRUCTION MEETING. FENCING IS REQUIRED TO BE INSTALLED AND INSPECTED BY THE PROJECT ARBORIST PRIOR TO THE BEGINNING OF WORK ON-SITE.

TREE PROTECTION FENCING SHOULD BE A CHAIN LIKE FENCE WITH AN ACCESS GATE AT LEAST 4 FEET HIGH WITH 2 INCH BY 6-INCH STEEL POSTS INSTALLED AT 8 FEET ON CENTER. POST LOCATIONS TO BE INSTALLED UNDER OBSERVATION BY A QUALIFIED CONSULTING ARBORIST TO AVOID ROOT DAMAGE.

PROVIDE A MINIMUM 8.5 INCH BY 11-INCH RETROREFLECTIVE SIGN SPACED A MAXIMUM OF EVERY 100 FEET ALONG EACH FENCE PERIMETER. THE SIGNS SHOULD DISPLAY THE FOLLOWING INFORMATION:

- "TREE PROTECTION ZONE"
- NAME AND CONTACT INFORMATION OF PROJECT OWNER OR AUTHORIZED REPRESENTATIVE

2. AVOID MECHANICAL INJURY AND COMPACTION TO ROOTS, ROOT FLARES, TRUNKS, AND BRANCHES. BREAK AND LIFT OFF ASPHALT AND CONCRETE BY HAND OR USING EQUIPMENT THAT CAN CAREFULLY REACH IN WHILE LOCATED OUTSIDE THE DRIPLINE. A QUALIFIED ARBORIST IS RECOMMENDED BE PRESENT TO OBSERVE THE AREA WITH THE ROOTS EXPOSED, PRIOR TO UNDERTAKING ANY ROOT PRUNING OR GRADING.

- 3. LAY STEEL PLATES OVER 4 INCHES OF WOOD CHIP MULCH ACROSS THE PARKWAY STRIP WHERE CONSTRUCTION TRAFFIC MUST RUN THROUGH TREE PROTECTION ZONES. ADD MULCH PERIODICALLY AS NEEDED TO MAINTAIN THE 4-INCH-THICK LAYER.
- 4. LAY¾ INCH PLYWOOD CLIPPED TOGETHER WITH HURRICANE CLIPS OVER 4 INCHES OF BARK CHIP MULCH IN FLAT AREAS TO PROTECT THE AREAS WITHIN THE CANOPIES OF PROTECTED TREES IF MACHINERY OR EQUIPMENT NEEDS TO PASS THROUGH THE AREA.
- 5. KEEP EXPOSED ROOTS MOIST WITH SEVERAL LAYERS OF WET BURLAP OVER THE SURFACE. FOR AREAS WHERE A WALL IS BEING REMOVED, IT IS RECOMMENDED TO TEMPORARILY SHORE THE AREA WITH PLYWOOD TO ALLOW FOR WATERING AND PREVENT SOIL EROSION. 6. NO CONSTRUCTION STAGING, WASHOUT OR DISPOSAL OF CONSTRUCTION MATERIALS OR BYPRODUCTS SHOULD BE PLACED WITHIN THE TREE PROTECTION ZONE. AVOID STORING
- SOIL OR MATERIAL ON

UNPROTECTED NATURAL GRADE. CONTAINMENT TO BE PROVIDED FOR CONCRETE, PAINT, STUCCO, AND OTHER

WASHOUT ACTIVITIES. EQUIPMENT SHOULD NOT IDLE UNDER THE DRIPLINES OF TREES. SIGNIFICANT BURN CAN OCCUR TO LEAVES

AND BARK FROM EXHAUST AND HEAT.

- 7. THE TREE/ROOT PROTECTION ZONE SHOULD BE IRRIGATED SUFFICIENTLY WITH CLEAN, POTABLE WATER TO KEEP THE TREE IN GOOD HEALTH AND VIGOR BEFORE, DURING AND AFTER CONSTRUCTION. TREES SHOULD BE SOAKED AT EACH WATERING EVENT SO THAT WATER REACHES A DEPTH OF 2-3 FEET TO HELP FLUSH SALTS DOWN IN THE SOIL PROFILE. MONITOR MOISTURE LEVELS USING A SOIL CORE SAMPLER OR OTHER MOISTURE SAMPLING DEVICE PRIOR TO WATERING.
- 8. MULCH IN THE FORM OF WOOD/BARK CHIPS IS RECOMMENDED FOR APPLICATION OVER THE SURFACE OF THE SOIL TO 4 INCHES DEEP TO PRESERVE MOISTURE AND IMPROVE SOIL CONDITION. THE SOIL IS RECOMMENDED TO BE WATERED BEFORE AND AFTER APPLICATION OF MULCH.
- 9. TREES SHOULD BE PRUNED BY QUALIFIED TREE CARE SERVICE CONTRACTOR WITH UNDER OBSERVATION BY TVMWD USING SPECIFICATIONS DEVELOPED FROM THE BEST MANAGEMENT PRUNING PRACTICES (2019) PART OF ANZI A300 OR EQUIVALENT. TREES SHOULD BE PRUNED AS NEEDED, NOT ON A SET SCHEDULE. MORE INFORMATION IS AVAILABLE AT WW.ISA-ARBOR.COM.

10.TREES SHOULD BE INSPECTED ON A PERIODIC BASIS BY A QUALIFIED TREE CONSULTANT. THE RELATIVE AGE, CONDITION AND TARGETS UNDER THE TREE SHOULD DETERMINE THE INSPECTION FREQUENCY. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

TREE CARE GUIDANCE

LEAVE LEAF LITTER WITHIN THE PROTECTED ZONE INSIDE THE FENCING TO HELP RETAIN SOIL MOISTURE. IF THE SOIL IS DRY AS JUDGED BY A QUALIFIED ARBORIST, WATER CAN BE APPLIED IN THE OUTER 2/3 OF THE ROOT ZONE AWAY FROM THE TRUNK TO A DEPTH OF 24 INCHES. MULCH IN THE FORM OF BARK CHIPS IS RECOMMENDED FOR APPLICATION OVER THE SURFACE OF THE SOIL TO FOUR INCHES DEEP TO PRESERVE MOISTURE AND IMPROVE SOIL CONDITION.

IRRIGATION

TRENCHING FOR IRRIGATION SHOULD BE KEPT COMPLETELY OUTSIDE THE PROTECTED ZONE OF PROTECTED TREES. IRRIGATION MAY NEED TO BE ABOVE GRADE TO AVOID DAMAGE TO TREE ROOTS. A DRY ZONE SHOULD BE MAINTAINED 10 FEET FROM THE TRUNK OF PROTECTED TREES. A CONTINUOUSLY WET SOIL CONDITION NEAR THE BASE OF THE TREE, FAVORS THE GROWTH OF PREDATORY DISEASE ORGANISMS. THE TWO PROMINENT PATHOGENS IN SOUTHERN CALIFORNIA ARE ROOT ROT (PHYTOPHTHORA SPP.) AND OAK ROOT FUNGUS (ARMILLARIA ME/LEA). IT IS RECOMMENDED THAT IRRIGATION SHOULD NOT SPRAY THE TREE TRUNKS. CARE SHOULD BE TAKEN WITH IRRIGATION UPSLOPE FROM PROTECTED TREES TO AVOID RUNOFF.

PLANTING

LAWN OR HIGH-WATER USE PLANTS ARE NOT RECOMMENDED WITHIN THE TREE PROTECTION ZONE. LIMIT PLANTING OF NEW LOW WATER PLANTS TO THE OUTSIDE 2/3 OF THE ROOT PROTECTION ZONE. PLANTS COMPETE WITH TREES FOR WATER, NUTRIENTS, AND ROOT SPACE. PLANTS THAT REQUIRE FREQUENT SUMMER IRRIGATION SHOULD BE KEPT OUTSIDE THE PROTECTED ZONE. LOCALLY NATIVE PLANTS THAT CAN TOLERATE SUMMER DRYNESS ARE MOST SUITABLE FOR PLANTING UNDER MATURE TREES. THESE PLANTS COME FROM THE MEDITERRANEAN, SOUTH AFRICA, AUSTRALIA, BAJA

				PROFESSION RATER SHEET COPTO	PLANS PRE CIVI engine	PARED BY: LTEC ering ind		General Civil, Municipa and Wastewater Eng Planning, Con Management and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	l, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THREI MUNICIPAL 1021 E. MI CLAREN (90	E VALLEYS WATER DISTRICT IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY	Y: CSH APRIL 2021		SCALE AS SHOWN	FILE NO.

CALIFORNIA, AND CALIFORNIA. RESOURCES FOR PLANTING IDEAS CAN BE FOUND AT THE THEODORE PAYNE FOUNDATION IN SUNLAND TUJUNGA (WWW.THEODOREPAYNE.ORG).

MULCH

BARK MULCH OR LEAF LITTER CAN BE BENEFICIAL IN THE ROOT ZONE OF TREES. IT IS RECOMMENDED THAT A 4- INCH THICK LAYER OF MINIMUM 2-INCH DIAMETER BARK CHIPS BE PLACED THROUGHOUT THE PROTECTION ZONE OF EACH TREE. KEEP THE BARK AT LEAST 6-INCHES AWAY FROM THE TRUNK OF THE TREE. MULCHES ENCOURAGE BENEFICIAL FUNGUS (SUCH AS TRICHODERMA SPP.), RETAIN MOISTURE, AND SUPPRESS WEEDS.

HEALTHY SOIL PROMOTES HEALTHY TREE GROWTH. MULCH LEAVES OR OTHER ORGANIC MATERIAL ENCOURAGE EARTHWORM AND MICROBIAL ACTIVITY. EARTHWORMS AERATE AND ROTOTILL THE SOIL. BRINGING NUTRIENTS TO THE ROOTS. FERTILIZATION CAN LEAD TO A FLUSH OF GROWTH THAT MAY ATTRACT INSECTS OR CAUSE THE TREE TO SPLIT APART

WATERING AND FERTILIZATION

WARM WEATHER AND MOISTURE COMBINE TO ENCOURAGE THE GROWTH OF WOOD DECAY FUNGUS AND OTHER PATHOGENS. WATERING SHOULD BE RESTRICTED TO ONCE A MONTH OR LESS DURING THE SUMMER, WHEREVER FEASIBLE. WINTER RAINFALL CAN SUPPLY SUFFICIENT WATER FOR MOST TREES IF THE LEAF LITTER IS ALLOWED TO STAY UNDER THE CANOPY. TOO MUCH WATER CAN ALSO BE A PROBLEM. IF THE SPACES BETWEEN THE SOIL PARTICLES (PORE SPACES) ARE FILLED WITH WATER, THE TREE IS UNABLE TO GET ADEQUATE OXYGEN. LOW SOIL OXYGEN CAN CAUSE ROOTS TO SUFFOCATE AND DIE.

PRUNING

MATURE TREES GENERALLY REQUIRE MINIMAL PRUNING EXCEPT TO PROVIDE CLEARANCE, REDUCE END-WEIGHT, AND REMOVE CROSSING BRANCHES AND DEADWOOD. HOWEVER, IF A TREE HAS AN INHERENT STRUCTURAL DEFECT, PROPER PRUNING PRACTICES MAY REDUCE THE POTENTIAL FOR THE TREE TO HAVE A CATASTROPHIC FAILURE, ALWAYS CONSULT QUALIFIED PROFESSIONAL ARBORIST FOR ADVICE.

GRADE CHANGES

SOIL OR DEBRIS OVER THE NATURAL GRADE OF A MATURE TREE IN THE ROOT ZONE CAN HAVE A SIGNIFICANT IMPACT. AS LITTLE AS SIX INCHES CAN LEAD TO DECLINE. DRAINAGE PATTERNS SHOULD BE MAINTAINED TO PREVENT WATER GATHERING AT THE BASE OF A TREE. EXCESS SOIL SHOULD BE REMOVED BY HAND UNDER OBSERVATION BY A QUALIFIED ARBORIST . THE FLARE AT THE ROOT CROWN SHOULD JUST BE VISIBLE.

INSPECTION

TREES SHOULD BE INSPECTED ON A PERIODIC BASIS BY A QUALIFIED TREE CONSULTANT. THE RELATIVE AGE, CONDITION AND TARGETS UNDER THE TREE SHOULD DETERMINE THE INSPECTION FREQUENCY. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ESTABLISH AND IMPLEMENT AN APPROPRIATE INSPECTION SCHEDULE BASED ON THE RECOMMENDATION PROVIDED BY A QUALIFIED ARBORICULTURAL CONSULTANT.



GRADING PLAN

C-5

OF

-49

SHEETS NO.

Ø







EROSION CONTROL (EC)

SCHEDULING PRESERVATION OF EXISTING VEGETATION HYDRAULIC MULCH HYDROSEEDING SOIL BINDERS STRAW MULCH GEOTEXTILES AND MATS WOOD MULCHING EARTH DIKES AND DRAINAGE SWALES VELOCITY DISSIPATION DEVICES SLOPE DRAINS STREAMBANK STABILIZATION RESERVED COMPOST BLANKETS SOIL PREPARATION / ROUGHENING NON-VEGETATIVE STABILIZATION

NON-STORMWATER MANAGEMENT (NS)

WATER CONSERVATION PRACTICES DEWATERING OPERATIONS PAVING AND GRADING OPERATIONS TEMPORARY STREAM CROSSING CLEAR WATER DIVERSION ILLICIT CONNECTION/DISCHARGE PORTABLE WATER/IRRIGATION VEHICLE AND EQUIPMENT CLEANING VEHICLE AND EQUIPMENT FUELING VEHICLE AND EQUIPMENT MAINTENANCE PILE DRIVING OPERATIONS CONCRETE CURING CONCRETE FINISHING MATERIAL OVER WATER DEMOLITION ADJACENT TO WATER NS-16 TEMPORARY BATCH PLANTS

TEMPORARY SEDIMENT CONTROL (SE)

SE-1SILT FENCESE-2SEDIMENT BASINSE-3SEDIMENT TRAPSE-4CHECK DAMSE-5FIBER ROLLSSE-6GRAVEL BAG BERMSE-7STREET SWEEPING AND VACUUMINGSE-8SANDBAG BARRIERSE-9STRAW BALE BARRIERSE-10STORM DRAIN INLET PROTECTIONSE-11ACTIVE TREATMENT SYSTEMSSE-12TEMPORARY SILT DIKESE-13COMPOST SOCKS AND BERMSSE-14BIOFILTER BAGS

WASTE MANAGEMENT AND MATERIAL POLLUTION CONTROL (WM)

WM-1 MATERIAL DELIVERY AND STORAGE
WM-2 MATERIAL USE
WM-3 STOCKPILE MANAGEMENT
WM-4 SPILL PREVENTION AND CONTROL
WM-5 SOLID WASTE MANAGEMENT
WM-6 HAZARDOUS WASTE MANAGEMENT
WM-7 CONTAMINATED SOIL MANAGEMENT
WM-8 CONCRETE WASTE MANAGEMENT
WM-9 SANITARY/SEPTIC WASTE MANAGEMENT
WM-10 LIQUID WASTE MANAGEMENT

TEMPORARY TRACKING CONTROL (SE)

TC-1STABILIZED CONSTRUCTION ENTRANCE/EXITTC-2STABILIZED CONSTRUCTION ROADWAYTC-3ENTRANCE/OUTLET TIRE WASH

WIND EROSION CONTROL (SE)

WE-1 WIND EROSION CONTROL

ESCP LEGEND

	PROJECT LIMITS
XXXX	TEMPORARY CONSTRUCTION FENCE
XXXX	TEMPORARY PROTECTIVE FENCE
×	SAMPLING LOCATIONS
	DIRECTION OF SURFACE FLOW
	BMP SE-1, SILT FENCE
	BMP SE-2, SEDIMENT BASIN
	BMP SE-4, CHECK DAM (SEE PLAN FOR SPACING)
	BMP SE-5, FIBER ROLL OR BMP SE-8, GRAVEL BAG BERM
\bigcirc	BMP SE-10, STORM DRAIN INLET PROTECTION
SCE	BMP TC-1, STABILIZED CONSTRUCTION ENTRANCE / EXIT
	BMP NS-8, VEHICLE AND EQUIPMENT CLEANING
VEF	BMP NS-9, VEHICLE AND EQUIPMENT FUELING
VEM	BMP NS-10, VEHICLE AND EQUIPMENT MAINTENANCE
	BMP WM-1, MATERIAL DELIVERY AND STORAGE
\bigcirc	BMP WM-3, STOCKPILE MANAGEMENT
SWM	BMP WM-5, SOLID WASTE MANAGEMENT
	BMP WM-6, HAZARDOUS WASTE MANAGEMENT
CWM	BMP WM-8, CONCRETE WASTE MANAGEMENT
SSWM	BMP WM-9, SANITARY / SEPTIC WASTE MANAGEMENT
	TRAILER
	TREATED SLOPES
	PLASTIC
	EXISTING
	LANDSCAPED
	TEMPORARY STORAGE BINS
	CONSTRUCTION OFFICE

	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463			
ICI	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.			
	EROSION CONTROL PLAN	C-7			
		<u>11</u> of <u>49</u>			





			(42)
	-	TO DISCHARGE BASIN BASIN	
			(
1-800-422-4133			
	UNDERGROUN	D	
PLAY IT SAFE. DIAL BEFORE YOU DIG! PRIO	AT LEAST TWO WORKING DAY R TO EXCAVATING	D S G REV	DESCRIPTION



CONCRETE PIPE SLEEVE SECTION

FINISHED GRADE







DESIGNED BY:

DRAWN BY:

ENGR DATE APPD DATE

CHECKED BY:

APRIL 2021

CSH

JM / MM / JG DATE:

CSH

SCALE

AS SHOWN

CONSTRUCTION NOTES:

- (20) INSTALL 8" DIAMETER STEEL PIPE, STD WALL THICKNESS.
- (21) INSTALL 8"-90° STEEL BEND, FLG x FLG.
- (22) INSTALL 8"-45° STEEL BEND, FLG x PE.
- 23 INSTALL 8" GATE VALVE, FLG x FLG WITH MOTOR ACTUATOR.
- (24) INSTALL PUMP AND MOTOR PER SPECIFICATIONS.
- (25) INSTALL 2" AIR RELEASE VALVE ASSEMBLY. SEE DETAIL 1 ON DRAWING M-5.
- (26) INSTALL 8" SWING CHECK VALVE, FLG x FLG.
- (27) INSTALL 8" DISMANTLING JOINT.
- (28) INSTALL 6" STEEL PIPE,1/4" WALL THICKNESS.
- (29) INSTALL 8" x 6" x 8" REDUCING TEE, FLG x FLG x FLG.
- (30) INSTALL 6" GATE VALVE, FLG x FLG WITH MOTOR ACTUATOR.
- (31) INSTALL 6"-90° STEEL BEND, FLG x PE.
- (32) INSTALL VALVE CAN AND COVER PER DETAIL 2 ON DRAWING M-5.
- (33) INSTALL 4" FLOOR DRAIN. SEE DETAIL 7 ON DRAWING M-5.
- (34) PROVIDE PIPE PENETRATION PER DETAIL 5 ON DRAWING M-5.
- $(\overline{35})$ INSTALL PRESSURE SWITCH AND GAUGE PER DETAIL 3 ON DRAWING M-5.
- (36) INSTALL 4' SQUARE 3/4" STEEL WELDED BASE PLATE.
- (37) INSTALL 1" WELDED-OUT LET PER DETAIL 3 ON DRAWING M-6.
- (38) INSTALL 22.8" L x 23.5" W x 14" D UTILITY SINK AND FAUCET PER DETAIL 2 ON DRAWING M-6.
- (39) INSTALL ENO REMOTE READOUT ON WALL NEXT TO OR NEAR TURBIDITY METER REMOTE READOUT.
- (40) INSTALL 3/4" PVC CONDUIT AND 1/2" CHEMICAL LINE.
- (41) INSTALL 1" PVC CONDUIT FOR FUTURE CHEMICAL LINE.
- (42) INSTALL 6" PVC DRAIN PIPE, SDR 35.
- (43) INSTALL 4" PVC DRAIN PIPE, SDR 35.
- (44) INSTALL 4'-6" L x 2'-0" CONCRETE IN CASING. SEE DETAIL 1 HEREON.
- (45) INSTALL 2" DOMESTIC COOPER PIPE LINE.
- (46) INSTALL 1" DOMESTIC COOPER PIPE LINE.
- (47) INSTALL 1" WATER VALVE AND VALVE BOX.
- (48) INSTALL PIPE SUPPORT PER DETAIL 6 ON DRAWING M-5.
- (49) INSTALL 1" WELD-OUT LET
- (50) INSTALL ENO SERIES 700 ENO SONIC LEVEL SENSOR ON 2" TUBE.
- (51) PROVIDE SECOND SPARE 2" TUBE AND CAP.

AS-BID PLANS THREE VALLEYS MUNICIPAL WATER DISTRICT THREE VALLEYS MUNICIPAL WATER DISTRICT MIRAGRAND WELL EQUIPPING IMPROVEMENTS WELL PIPING SECTIONS DRAWING NO. M-2 SHEETS NO. 14 of 49

FILE NO.



2020158.00-TVMWD-MIRAGAND WELL EQIPPING\DWG\SHEETS\2020158.00 SHT 15 M-3 WTERWELLSECTDTLS.DWG (04-22-21 4:39:59PM)



ADJUSTABLE PIPE SUPPORT APPROXIMATE DIMENSIONS IN INCHES							
PIPE SIZE	'A'	'B'	'C'	'D' MINIMUM	'D' MAXIMUM		
2-1/2	2-1/2	1-1/2	9	8	11-1/2		
3	2-1/2	1-1/2	9	8-1/2	11-3/4		
3-1/2	2-1/2	1-1/2	9	8-1/2	12		
4	3	* * 2-1/2	9	10-1/4	14		
6	3	* 2-1/2	9	11-5/8	15-1/4		
8	3	* 2-1/2	9	13-5/8	16-1/2		
10	3	* 2-1/2	9	14-5/8	18-1/4		
12	3	* 2-1/2	9	15-5/8	19-3/4		
14	4	3	10	18-7/8	20-3/4		
16	4	3	10	19-7/8	22-1/4		
18	6	3 1/2	10	20	30		

SYMBOL	SERVICE	LOCATION	MANUFACTURER & MODEL		FAN DATA			MOTOR DATA				WEIGHT (LBS)	REMARKS
			DAVTON	CFM	S.P. IN.W.G.	R.P.M	TYPE	HP	VOLTS	PHASE	HZ		2-SPEED DIRECT DRIVE EXHAUST FAN, PROVIDE BACK DRAFT DAMPER & BIRD
	STORAGE ROOM	SEE PLAN	DAYTON 484X48 1DGZ9	3,385/ 2,069	0.125	1075/ 945	BALL BEARING	1/3	115	1	60	77	2-SPEED DIRECT DRIVE EXHAUST FAN, PROVIDE BACK DRAFT DAMPER & BIRD SCREEN. MOTORS STARTERS BY ELECT. CONTRACTOR. PROVIDE TOGGLE-SWITCH FAN CONTROL.

EXHAUST FAN CONTROLS:

1. EXHAUST FANS SHALL BE CONTROLLED BY WALL MOUNTED T-STAT (REFER TO PLANS).TWO(2) STAGE T-STAT SHALL START 1ST EF AT LOW TEMPERATURE SETPOINT 90°F (ADJ.) AND START 2ND & 3RD EF AT HIGH TEMPERATURE SETPOINT 95°F (ADJ.). EF SHALL STOP WHEN TEMPERATURE DROPS BELOW LOW TEMPERATURE SETPOINT.

AIR CONDITIONING UNIT SCHEDULE

SYMBOL			MANUFACTURER	COOLING CAPACITY				ELECTRICAL DATA		FFR		AIR (CFM)		REMARKS	WEIGHT
STMBOL	JERVICE	LOCATION	& MODEL	(BTU/Hr)	VOLTS	AMPS	WATTS	LENGTH OF POWER CORD	PLUG TYPE (NEMA)		LOW	MED	HIGH	REMARKO	(LBS)
AC 1	ELECTRICAL ROOM	SEE PLAN	BOSCH 8733954427	30,000	-	-	-	POWER FROM CONDENSER UNIT	-	19.8	-	-	-	CLOSED MINI SPLIT UNIT INT. AIR HANDLER	39.9
AC 2	ELECTRICAL ROOM	SEE PLAN	BOSCH 8733954427	30,000	230	15	3,450	6'	LCDI (6-30P)	9.0	-	-	-	CLOSED AC SPLIT SYSTEM EXT. CONDENSER	135.6

1-800-422	2_4133		
DICA	LF PT		
	UNDERGROUND		
	SERVICE ALERT		
	WORKING DAYS		
YOU DIG!	PRIOR TO EXCAVATING	REV	DESCRIPTION

KEYED NOTES

- (1) WALL OPENING 2'-0" x 2'-0". INSTALL PER MANUFACTURER RECOMMENDATIONS, SEE SPECIFICATIONS AND BUILDING ELEVATION DRAWING A-4.
- (2) SEE ELECTRICAL DRAWINGS FOR POWER AND WIRING.
- 3 COORDINATE WITH STRUCTURAL DRAWINGS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT AND SIZE FOR AC UNITS, LOUVERS (A&B) AND EXHAUST FAN (EF-1 THRU EF-2).

VENTILATION CALCULATIONS:

MIN. VENTILATION PER 2017 LACBC

WELL PUMP ROOM:

15 AIR CHANGE PER HOUR = [12.67 (FT) x 30.67 (FT) x 9.58(FT) + 206 (SF) x 30.67 (FT)] x 15 ACH/60 = <u>2,516 CFM</u>

STORAGE ROOM:

60 AIR CHANGE PER HOUR = 12 (FT) x 14.67 (FT) x 9.58 (FT) x 60 ACH/60 = <u>1,686 CFM</u>

ELECTRICAL ROOM:

- VARIABLE FREQUENCY DRIVE: 100HP, 103kW @ 95% EFFICIENCY = <u>17,595 BTU/HR</u> 30KV TRANSFORMER: 30 kW @ 97% EFFICIENCY = 3,074 BTU/HR (4) LIGHTS: 0.196 kW @ 1% EFFICIENCY = 663 BTU/HR
- 17,595 + 3,074 + 663 = 21,332 BTU/HR / 12,000 = <u>1.77 TON</u>

DESIGN VENTILATION CFM PROVIDED:

PUMP ROOM: 3,385 CFM > 2,516 CFM

CHEMICAL ROOM: 3,385 > 1,686 CFM - SEE DRAWING M-1

FOR PIPING LAYOUT

ELECTRICAL ROOM: 2.5 TON/ 30,000 BTU/HR > 1.77 TON/ 21,332 BTU/HR

SPECIAL NOTES

- 1. PROVIDE A MINIMUM WORKING SPACE PER NEC 110.27(A)(1), NOT LESS THAN 30 INCHES WIDE OR THE WIDTH OF THE EQUIPMENT, WHICHEVER IS WIDER, SHALL BE MAINTAINED IN FRONT OF ALL SWITCHES, OVER CURRENT DEVICES AND ELECTRIC CONTROL COMPONENTS.
- 2. COMPLETE AIR BALANCE SHALL BE PERFORMED BY INDEPENDENT CERTIFIED AIR BALANCE FIRM. OWNER (TVMWD) RESERVES THE RIGHT TO WITNESS AIR BALANCING AND SHALL BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE OF SCHEDULED DATE OF PERFORMANCE. FIVE COPIES OF COMPLETED AIR BALANCE REPORT SHALL BE PROVIDED TO TVMWD UPON SUCCESSFUL COMPLETION.

GENERAL NOTES

- 1. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL AC UNITS AND LOUVERS.
- 2. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF ALL APPLICABLE CODES INCLUDING 2013 CMC, LAWS, ORDINANCES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.
- 3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, ADDITIONAL PLAN CHECK FEES, INSPECTIONS, ETC. AND FURNISH SIGNED, CERTIFIED AND ACCEPTABLE COPIES TO THE OWNER FOR HIS RECORD.
- 4. CONTRACTOR SHOULD VISIT THE JOB SITE AND VERIFY ALL THE CONDITIONS, LOCATIONS, AND DIMENSIONS BEFORE STARTING WORK AND ORDERING OF EQUIPMENT.
- 5. PROVIDE AS BUILT DRAWINGS AND SUBMIT COPIES TO THE OWNER.
- 6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS.
- 7. IT IS THE SPECIFIC INTENT OF THIS DESIGN CONDITIONS THAT THE ENTIRE SYSTEM INCLUDING EQUIPMENT, DUCTWORK, AIR OUTLETS/INLETS, AND ALL OTHER PARTS BE NOISELESS AND FREE OF VIBRATION TRANSMISSION. PROVIDE AND INSTALL VIBRATION ISOLATORS AND SIMILAR MATERIAL AS REQUIRED. INSTALL VOLUME DAMPERS ON ALL DUCTS AS FAR AS POSSIBLE FROM AIR INLET/OUTLET. MAKE THE NECESSARY NOISE OR VIBRATION CORRECTIONS BY INSTALLING THESE ITEMS AT NO COST TO THE OWNER.
- 8. THE DRAWINGS ARE IN PART DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF THE WORK; THEY INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE SIZES OF EQUIPMENT, DUCTWORK, PIPING, OUTLETS, ETC. FOLLOW THE DRAWING AS CLOSELY AS PRACTICAL IN LAYING OUT THE WORK, BE GUIDED BY THE CONDITIONS AT THE JOB AND CONSULT THE CONSTRUCTION DRAWINGS OF THE OTHER TRADES TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE WORK.
- 9. PERFORM TESTS BEFORE FINAL ACCEPTANCE AND UNDER THE SUPERVISION OF THE ARCHITECT AND/OR OWNER. OPERATION OF THE TESTS SHALL BE FOR EIGHT HOURS. FURNISH ALL LABOR AND INSTRUMENTS FOR TESTS. UPON COMPLETION OF AND AFTER CLEANING OF SYSTEM AND EQUIPMENT, CAREFULLY ADJUST FOR NORMAL OPERATION.
- 10. WHEN MORE THAN ONE PIECE OF EQUIPMENT ARE INSTALLED ON ROOF OR A COMMON AREA, LABEL EACH PIECE EQUIPMENT TO IDENTIFY THE AREA IT SERVES.
- 11. CONTRACTOR SHALL BALANCE AIR SYSTEM TO THE CFM CAPACITY AS SHOWN ON FLOOR PLAN.
- 12. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE.
- 13. CONTRACTOR TO INCLUDE ALL NECESSARY LOW VOLTAGE WIRING FOR MECHANICAL SYSTEMS, WITH TERMINATIONS AT MECHANICAL EQUIPMENT PERFORMED OR SUPERVISED BY THE MECHANICAL CONTRACTOR OR CONTROLS SPECIALIST, AS REQUIRED.
- 14. ALL NECESSARY PATCHING, CUTTING, RATED SHAFTS, FURRING, FLASHING, AND PANTING REQUIRED AS PART OF INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AS PART OF THIS WORK.
- 15. LICENSED ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE VOLTAGE WIRING, LOW AND LINE VOLTAGE CONDUITS, AND AUXILIARIES REQUIRED FOR MECHANICAL SYSTEM AS PART OF THIS WORK.

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ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRIL	CSH 2021		SCALE AS SHOWN	FILE NO.

AIR CONDITIONING SYMBOLS & ABBREVIATIONS

SYMBOLS	ABBR	DESCRIPTION			
	Ø	EXHAUST DUCT SECTION			
	2	RETURN DUCT SECTION			
	\otimes	SUPPLY DUCT SECTION			
Ø		DIAMETER OR ROUND/PHASE			
	GA	GAUGE			
	AC	AIR CONDITIONING			
	B.H.P.	BREAK HORSEPOWER			
	0.C.	ON CENTER			
Ţ	_	THERMOSTAT			
	HP	HORSEPOWER			
	INSUL	INSULATE/INSULATION			
	REQ'D	REQUIRED			
	S.P.	STATIC PRESSURE			
	TYP.	TYPICAL FOR			
	OPNG	OPENING			
	W.G.	WATER GAGE			
	CFM	CUBIC FEET PER MINUTE (CFM)			

ICT	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
	VENTILATION FLOOR PLAN	SHEETS NO. 18 OF 49

ARCHITECTURAL GENERAL NOTES

- ALL WORKMANSHIP SHALL BE PERFORMED BY SKILLED MECHANICS USING THE BEST STANDARD PRACTICES AND SHALL CONFORM TO THE CODES REFERRED TO UNDER "CODE REFERENCE."
- THE GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE AS DESCRIBED IN THE CONTRACT DOCUMENTS PRIOR TO STARTING CONSTRUCTION. ALL TRADES SHALL VERIFY AT THE PROJECT SITE CONDITIONS AND MEASUREMENTS RELATED TO THEIR WORK.
- DETAILS MARKED TYPICAL SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY DETAILED OTHERWISE. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS SHOWN FOR OTHER SIMILAR WORK.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND TO CROSS-CHECK DETAILS AND DIMENSIONS ON THE ARCHITECTURAL STRUCTURAL. MECH. AND ELEC DRAW'GS.(AS APPLICABLE) ANY DISCREPANCIES SHALL BE REPORTED TO THE TVMWD REPRESENTATIVE PRIOR TO THE CONSTRUCTION.
- DAMAGE DONE TO ADJOINING PROPERTY AND/OR EXISTING STRUCTURES NOT INCLUDED IN THE CONTRACT SHALL BE RESTORED TO EXISTING CONDITIONS BY THE CONTRACTOR.
- 6. PROVIDE BARRICADES APPROVED BY THE CITY FOR PEDESTRIAN PROTECTION PRIOR TO COMMENCING ANY WORK.
- CONTRACTOR SHALL PROVIDE & MAINTAIN A CENTRAL POINT OF OPERATION W/ A PHONE @ THE SITE. AN UP TO DATE, MARKED UP SET OF PROJECT DWGS. & SPECIFICATIONS W/ ALL AS BUILT CHANGES INDICATED, SHALL BE RECORDED BY THE CONTRACTOR, & SHALL BE AVAILABLE FOR REFERENCE, IN THE SITE "OFFICE" AT ALL TIMES. LOCATION OF THE POINT OF OPERATION SHALL BE ACCEPTABLE TO OWNER.
- UPON COMPLETION OF WORK, ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN IN ACCORDANCE W/ THE CRITERIA AND PROTOCOLS INDICATED IN THE SPEC'S. & SHALL BE LEFT COMPLETELY FREE FROM DEBRIS.
- WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS, A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE GIVEN THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION FOR THE WORK AT HAND AND SHALL BE APPROVED IN ADVANCE BY THE OWNER. (AS APPLICABLE)
- 10. IN THE EVENT THE UTILITY SERVICE IS INTERRUPTED WITHOUT THE REQUIRED 48 HOURS NOTICE. THEN THE CONTRACTOR SHALL BE FINANCIALLY LIABLE FOR ALL DAMAGES SUFFERED BY THE OWNER DUE TO THE UNAUTHORIZED INTERRUPTION. RECONNECTION SHALL BE MADE IMMEDIATELY.
- 11. IF THE CONTRACTOR ASCERTAINS AT ANY TIME THAT REQUIREMENTS OF THIS CONTRACT CONFLICT WITH, OR ARE IN VIOLATION OF APPLICABLE LAWS CODES REGULATIONS AND ORDINANCES HE SHALL NOT PROCEED WITH WORK IN QUESTION EXCEPT AT HIS OWN RISK, UNTIL CIVILTEC AND TVMWD HAS BEEN NOTIFIED IN WRITING AND WRITTEN DETERMINATION IS MADE BY CIVILTEC AND TVMWD. WHERE COMPLETED OR PARTIALLY COMPLETED WORK IS DISCOVERED TO BE IN VIOLATION WITH APPLICABLE LAWS, CODES, REGULATIONS AND ORDINANCES, CONTRACTOR SHALL BE REQUIRED TO REMOVE THAT WORK FROM THE PROJECT AND REPLACE SUCH WORK WITH ALL NEW COMPLYING WORK AT NO ADDITIONAL COST TO THE OWNER.
- 12. DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, AND THIS SET OF PLANS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANYTHING ELSE DEEMED NECESSARY TO COMPLETE INSTALLATIONS AS DESCRIBED HEREIN.
- 13. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, & FIELD CONDITIONS AND CONFIRM THAT THE PROJECT MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. DISCREPANCIES BETWEEN FIELD DATA AND DATA ON PLANS AND SPECIFICATIONS SHALL BE REPORTED TO CIVILTEC. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCIES UNTIL DISCREPANCIES HAVE BEEN RESOLVED.
- 14. THE CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION FROM OWNER TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/ CONTRACT DOCUMENTS.
- 15. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE SAFETY AND PERFORMANCE OF THE WORK. SAFETY COMPLIANCE SHALL BE IN ACCORDANCE WITH OSHA, U. S. DEPT. OF LABOR, STATE, AND LOCAL REQUIREMENTS.
- 16. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/ VENDOR'S WRITTEN SPECS. UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- 17. ALL WORK PERFORMED ON PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES, CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE
- 18. CAULKING & SEALANTS WHERE REQUIRED TO WATER SEAL OR DUST SEAL ALL TRADES CONSTRUCTION JOINTS, AND TO SEAL BETWEEN SIM. AND DISSIMILAR METALS SHALL BE SIM. & EQUAL TO SIKA FLEX 1A WATERPROOF, URETHANE CAULKING SEALING COMPOUND CONFORMING TO THE OWNER'S REQ'S. ALL SEALANTS & CAULKINGS SHALL BE NON- HARDENING, WATERPROOF. TYPE FLASH'G. COMPOUNDS. ANY PROPOSED ALTERNATES TO THIS COMPOUND SHALL BE SUBMITTED FOR WRITTEN REVIEW BY OWNER'S PROJ. MGR. PRIOR TO PURCHASING OR APPLYING. COLORS SHALL BE SELECTED & SCHEDULED BY THE ARCHITECT. SEAL PENETRATIONS THROUGH FIRE-RATED WALLS WITH U.L. LISTED OR FIRE MARSHALL APPROVED 3 M PRODUCTS FIRE STOP CLASS 100 APPROVED MATERIALS AS APPLICABLE TO THIS FACILITY &/OR PROJECT SITE.
- 19. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
- 20. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY, AS APPLICABLE.
- 21. CONTRACTOR SHALL SEE TO IT THAT THE GENERAL WORK AREA IS KEPT CLEAN AND HAZARD FREE FREE DURING CONSTRUCTION AND FOLLOWS ALL OF THE PROTOCOL FOR CONSTRUCTION REQ'S. DISPOSE OF ALL DIRT, DEBRIS, RUBBISH & REMOVE EQUIP. NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN A THOROUGHLY CLEAN CONDITION, FREE FROM PAINT SPOTS, ROCK AND MORTAR DEBRIS, DUST, OR SMUDGES OF ANY NATURE, IN A CONDITION ACCEPTABLE TO THE OWNER. BURNING TRASH, BRUSH, OR WOOD AND/OR RUNNING HOSES & WATERING DEBRIS INTO THE STORM DRAINS IS STRICTLY PROHIBITED, AT ALL TIMES.
- 22. DISSIMILAR METALS: WHERE ALUMINUM IS PLACED IN CONTACT WITH OR FASTENED TO DISSIMILAR METALS (EXCEPT STAINLESS STEEL OR ZINC) THE CONTACT SURFACES SHALL BE GIVEN A HEAVY BRUSH COAT OF SOLIDS EPOXY WALL FINISH (AS SPECIFIED UNDER COATING SYSTEMS : SOLIDS EPOXY WALL FINISH) FOLLOWED BY ONE FINISH COAT OF THE SAME SOLIDS EPOXY WALL FIN. WHERE ALUMINUM METAL IS IN CONTACT W/ CONCRETE OR MASONRY, COAT W/ TWO COATS OF SOLIDS EPOXY WALL
- 23. THE CONTRACTOR IS TO USE EXTREME CAUTION AT ALL TIMES TO INSURE ADEQUATE PROTECTION TO ALL EQUIP. FROM DUST. DEBRIS, MOISTURE, VIBRATION, ETC.
- 24. THE WORD " REMOVE" MEANS TO REMOVE COMPLETELY, INCLUDING ALL ATTACHMENTS, FRAMES, ANCHORS, BASES, CONDUITS AND SUPPORTS, INCLUDING CAPPING BEHIND EXISTING SURFACES.

ARCHITECTURAL GENERAL NOTES

- 25. KEEP ALL EXIT DOORS AND EXIT PASSAGEWAYS FREE OF MAT'LS. AND DEBRIS AT ALL TIMES.
- CORRECTED.
 - ENGINEER.
- 28. CONTRACTOR SHALL ISSUE AND SHALL REQUIRE THEIR SUBCONTRACTORS TO ISSUE WARNINGS TO
- 29. OWNER'S PERSONNEL ON THE WORKSITE, AND THE PUBLIC FOR EXPOSURE TO CHEMICALS ON THE GOVERNOR'S LIST KNOWN TO THE STATE OF CALIF. TO CAUSE CANCER, BIRTH DEFECTS, AND/ OR OTHER REPRODUCTIVE HARM ("CHEMICALS") WHICH ARE PROVIDED BY CONTRACTOR AND/ OR SUBCONTRACTORS FROM THE TIME THAT THE CONTRACTOR AND/ OR SUBCONTRACTORS ENTER OWNER'S PREMISES AND/ OR BEGINS PERFORMANCE OF THE WORK HEREUNDER UNTIL THE WORK IS COMPLETED. CONTRACTOR SHALL WARN, AND REQUIRE ITS SUBCONTACTORS TO WARN, OWNER. OF ANY EXPOSURE TO CHEMICALS WHICH MAY CONTINUE AFTER CONTRACTORS AND SUBCONTRACTORS HAVE COMPLETED THEIR SERVICES. SUCH WARNINGS TO OWNER SHALL COMPLY W/ PROP. 65 AND REG'S. PROMULGATED THEREUNDER, WHICH MAY TAKE, WHEN APPLICABLE, THE FORM OF MAT'L. SAFETY DATA SHEETS (MSDS) AS DEFINED IN TITLE 8 OF THE CALIF. CODE OF REGULATIONS, SECTION 5194.
- 30. ALL WORK SHALL BE ACCOMPLISHED IN A FIRST CLASS WORKMANLIKE MANNER. ALL WORK SHALL BE GUARANTEED FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MAT'LS. FOR ONE YEAR FROM DATE OF COMPLETION THEREOF. ANY DEFECTIVE WORK SHALL BE REPLACED W/ IN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE WORK. THE CORRECTION OF THE WORK SHALL BE ACCOMPLISHED, W/OUT ANY ADD'TL. CHARGE TO OWNER. ALL DAMAGES AND EXPENSES IN CONNECTION W/ SUCH REMOVAL AND CORRECTION. WARRANTEES AND GUARANTEES SHALL BE ENFORCED BY TVMWD. ALL PAINT WORK SHALL BE GUARANTEED FOR A PERIOD OF FIVE YEARS BY THE PAINT CO. MANUFACTURER. CONTRACTOR SHALL OBTAIN AND PRESENT ALL SUCH WARRANTEES TO OWNER.
- 31. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

CODE REFERENCES

- 1. 2019 CALIFORNIA ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 1
- 2. 2019 CALIFORNIA BUILDING CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 2.
- 2019 CALIFORNIA ELECTRICAL CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 3.
- 4. 2019 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 4.
- 5. 2019 CALIFORNIA PLUMBING CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 5.
- 2019 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 6.
- 7. 2019 CALIFORNIA FIRE CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 9.
- 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 11. 2019 CALIFORNIA REFERENCED STANDARDS CODE- CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 12.
- 9. THE COMMISSIONING PROCESS; ASHRAE, GUIDELINE 0-2005, AND INCORPORATING AND INCLUDING TOTAL BUILDING COMMISSIONING TECHNICAL (TBC) GUIDELINES.
- 10. ROAD SYSTEM DESIGN STANDARDS, CALTRANS, LOS ANGELES, CALIFORNIA COUNTY CODE. (CURRENT EDITION)
- 11. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT REGULATIONS (AQMD), INCLUDING BUT NOT LIMITED TO REGULATIONS II, IV, XI, XIII, XIV, XX, AND XXX.-(CURRENT EDITION)

REQUIREMENTS PER CBC 19

OCCUPANCY CLASSIFICATION - U CONSTRUCTION TYPE- VB **BUILDING HEIGHT 15'-8" FEET** BUILDING AREA - 854 SQ.FT. ZONE - NON SPRINKLERED

STORAGE ROOM

ONE EXIT REQUIRED FOR U OCCUPANCY. AREA 176 SQ.FT. LENGTH 14'-8". ONE EXIT WITH ROLL-UP DOOR FOR OUTSIDE EXIT

ELECTRICAL ROOM

ONE EXIT REQUIRED FOR U OCCUPANCY. AREA 176 SQ.FT. LENGTH 14'-8". TWO EXITS.

1-800-422-4133			
DIGALERT			
	UNDERGROUND		
	SERVICE ALERT		
	AT LEAST TWO		
PLAY IT SAFE. DIAL BEFORE YOU DIG! PRIOF	WORKING DAYS R TO EXCAVATING	REV	DESCRIPTION

- 26. INSPECT SUBSTRATES TO RECEIVE NEW WORK, AND CONDITIONS UNDER WHICH WORK SHALL BE PERFORMED. AND REPORT UNSATISFACTORY CONDITIONS. DO NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN
- 27. NO HOLES SHALL BE DRILLED OR CUT THROUGH ANY STRUCTURAL ELEMENT WITHOUT WRITTEN REVIEW FROM STRUCTURAL

12. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS (CAL OSHA) - CURRENT EDITION

PUMP ROOM

ONE EXIT REQUIRED FOR U OCCUPANCY. AREA 389 SQ.FT. LENGTH 30'-8". TWO EXITS.

MISCELLANEOUS NOTES

- THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- 2. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
- 3. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE. CIVILTEC INC. IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS CIVILTEC INC. RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH ANY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.
- 4. FIRE SAFETY DURING CONSTRUCTION
 - A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OR REGULATIONS (CCR) TITLE 24, PART 9, CHAPTER 14.
 - B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH (CFC) CHAPTER 14, SECTION 1410. CLEAR ACCESS TO THE BUILDING (UNDER CONSTRUCTION) SHALL BE MAINTAINED AT ALL TIMES.
- 5. PENETRATIONS OF FIRE RESISTIVE WALLS, FLOOR, CEILINGS AND ROOF SHALL BE PROTECTED AS REQUIRED IN CBC SECTION 713.
- A. INSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.
- B. ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS, SECTIONS 719 AND 2603.
- C. ALL EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL AND OBSERVABLE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHERWISE SEALED.
- D. SITE CONSTRUCTED DOORS, WINDOWS AND SKYLIGHTS SHALL BE CAULKED BETWEEN THE UNIT AND THE BUILDING AND SHALL BE WEATHER STRIPPED (EXCEPT FOR UNFRAMED GLASS DOORS AND FIRE DOORS).
- E. MANUFACTURED DOORS AND WINDOWS INSTALLED SHALL HAVE AIR SHGC + U VALUES, INFILTRATION RATES CERTIFIED BY THE MANUFACTURER IN ACCORDANCE WITH TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS, SECTION 116(a) 1.
- F. WALL INSULATION SHALL BE INSTALLED IN ALL PANELS OPAQUE PORTIONS OF FRAMED WALLS (EXCEPT DOORS).
- 7. DEFERRED APPROVAL ITEMS FOR THIS PROJECT ARE THE FOLLOWING ITEMS
 - A. FIRE ALARM, INTERIOR ACOUSTICAL METAL PANELS.
- 8. PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:
 - A. ANCHOR DIAMETER REFERS TO THE THREAD SIZE FOR THE WEDGE CATEGORY ANCHOR.
 - B. APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.
 - C. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
 - D. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
 - E. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - 1. HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE TYPE ANCHOR, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD.
 - 2. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS FOR WEDGE ANCHORS: ONE-HALF (1/2) TURN OF THE NUT.
 - 3. IF MANUFACTURERS TORQUE IS LESS THAN SPECIFIED TEST TORQUE THE MANUFACTURERS LISTED TORQUE SHALL BE USED FOR TESTING.
 - H. TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.
 - I. ALL EXPANSION TYPE ANCHOR BOLTS USED FOR STRUCTURAL APPLICATIONS SHALL BE TESTED. ALL ANCHOR BOLTS OF THE EXPANSION TYPE USED FOR NON STRUCTURAL APPLICATIONS (LOADED IN EITHER PULLOUT OR SHEAR) SHALL HAVE 50 PERCENT OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT ALLOWED BY THE TYPE OF SUBSTRATE AND DIAMETER OF BOLT LISTED BELOW UNDER TEST VALUES TABLE) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED. [TESTING SHALL BE PERFORMED IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 1916A.7 AND IR 10=9-1]
 - J. ALL BOLTS MUST HAVE ICC/ES APPROVAL.
 - K. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
 - 1. ITW RAMSET/REDHEAD WEDGE ANCHOR ICC/ES NO. 2427
 - 2. HILTI, INC. QWIK BOLT TZ WEDGE ANCHOR ICC/ES NO. 1917
 - 3. SIMPSON STRONGBOLT WEDGE ANCHOR ICC/ES NO. 1771
- 9. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

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ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY:	CSH	CHECKED BY:	CSH		SCALE	FILE NO.

SUBSTITUTIONS

REFERENCE TO MAKERS, BRAND, MODELS, ETC., IS TO ESTABLISH THE TYPE AND QUALITY DESIRED; SUBSTITUTION OF ACCEPTABLE EQUIVALENTS WILL BE PERMITTED IF APPROVED BY TVMWD AND CIVILTEC PRIOR TO BID (UNLESS NOTED OTHERWISE).

MATERIALS AND EQUIPMENT

ONLY NEW ITEMS OF RECENT MANUFACTURE, OF QUALITY SPECIFIED, FREE FROM DEFECTS, WILL BE PERMITTED ON THE WORK.

GUARANTEES

THE CONTRACTOR SHALL PROVIDE A BLANKET ONE (1) YEAR GUARANTEE FOR THE CONTRACT PROJECT WITH SEPARATE GUARANTEES FOR TRADES/ EQUIPMENT ITEMS WITH NAMES OF LOCAL REPRESENTATIVES TO BE CONTACTED FOR SERVICE. PROVIDE OPERATING MAINTENANCE BROCHURES, AND GUARANTEES AS REQUIRED. THIS GUARANTEE IS IN ADDITION TO WARRANTEES AND GUARANTEES INDICATED IN THE SPECIFICATIONS.

EXECUTION OF WORK

ANCHORAGE OF EQUIPMENT SHALL COMPLY WITH THE PROVISIONS OF CURRENT TITLE 24 SECTION FOR LATERAL FORCE ON ELEMENTS OF STRUCTURES, NON-STRUCTURAL COMPONENTS & EQUIPMENT SUPPORTED BY STRUCTURES. THE WORK OF CONSTRUCTION IN ALL STAGES OF PROGRESS SHALL BE SUBJECT TO THE PERSONAL CONTINUOUS OBSERVATION OF THE CITY REVIEW'G. INSPECTOR. HE SHALL HAVE FREE ACCESS TO ANY OR ALL PARTS OF THE WORK AT ANY TIME. THE CONTRACTOR SHALL FURNISH THE INSPECTOR REASONABLE FACILITIES FOR OBTAINING SUCH INFORMATION AS MAY BE NECESSARY TO KEEP HIM FULLY INFORMED RESPECTING THE PROGRESS AND MANNER OF THE WORK AND THE CHARACTER OF THE MATERIALS. INSPECTION OF THE WORK SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO FULFILL THIS CONTRACT.

NOTICE TO CONTRACTORS

ALL CONTRACTORS AND/OR THEIR SUB-CONTRACTORS PERFORMING WORK ON THE PROJECT PREMISES SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING AN APPROVED SAFETY PROGRAM INCLUDING, BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MIGHT ENDANGER OTHER WORKERS AND/OR OCCUPANTS.

RECORD DRAWING

THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF MARKED CONSTRUCTION DRAWINGS INDICATING ALL DISCREPANCIES, CHANGES, ETC., & ACTUAL LOCATIONS OF CONCEALED WORK TO THE OWNER AT THE COMPLETION OF WORK, PRIOR TO FINAL INSPECTIONS.

SHORING AND SAFETY NOTES

THE ARCHITECT AND/OR STRUCTURAL ENGINEER (AS APPLICABLE) HAVE NOT DESIGNED THE ERECTION SUPPORTS. SCAFFOLDING, OR SHORING OF ANY PORTION OF THIS PROJECT. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE SAFETY AND PERFORMANCE OF THE WORK. THE CONTRACT ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS & SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT AND ENGINEERS OR HIS FIELD REPRESENTATIVES SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR CON-STRUCTION PROCEDURES REQ'D FOR SAME. ANY ASSISTANT SERVICES PERFORMED BY THE ARCH-ITECT & ENGINEERS DURING CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL & IN ACHIEVING CONFORMANCE W/ THE CONTRACT DRAWINGS AND SPECIFICATIONS. THE ASSISTANT SERVICES DO NOT ASSURE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

SAFETY NOTES:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS AS THEY APPLY TO THIS PROJECT OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND O.S.H.A. REQUIREMENTS. THE ARCHITECT, STRUCTURAL ENGINEER, & THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE SAFETY ORDERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.

EGRESS THROUGH INTERVENING SPACES SHALL NOT PASS THROUGH ROOMS SUBJECT TO LOCKING.

ENVIRONMENTAL QUALITY - COUNTY NOTE:

AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING, AND VENTILATING EQUIP-MENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL, AND/OR OTHER ACCEPTABLE METHODS TO REDUCE THE AMOUNT OF DUST WATER AND DEBRIS WHICH MAY COLLECT IN THE SYSTEM.

MATERIAL CONSERVATION & RESOURCE **EFFICIENCY - COUNTY NOTE:**

GENERAL CONTRACTOR SHALL MAINTAIN AT THE JOB SITE DOCUMENTATION SHOWING THAT A MINIMUM OF 65% OF NONHAZARDOUS CONSTRUCTION DEBRIS WILL BE SALVAGED, RECYCLED, AND/OR RE-USED. DOCUMENTATION SHALL BE AVAILABLE FOR THE BUILDING INSPECTORS REVIEW. THE OWNER SHALL RECEIVE COPIES OF ALL SUCH DOCUMENTATION FOR THEIR RECORDS AS A PART OF THE PROJECT CLOSE-OUT DOCUMENTS.

AS-BID PLANS			
THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463		
MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.		
ARCHITECTURAL NOTES	HEETS NO.		
	<u>19</u> _{of} <u>49</u>		

WORK DESCRIPTION

PROVIDE ALL MATERIALS, LABOR, EQUIPMENT AND SUPERVISION REQUIRED TO PERFORM ALL WORK IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THE SPEC'S., DRAWINGS, AND APPLICABLE PORTIONS OF CODES AND STANDARDS.

TERMINOLOGY

CONTRACTING OFFICER: REFERS TO THE TVMWD'S PROJECT MANAGER.

INDICATED: THE TERM "INDICATED" IS USED TO REFERENCE DETAILS, NOTES, AND SCHEDULES, AND PASSAGES OF TEXT ON THE DRAWINGS AND IN THE SPEC'S. WHERE TERMS SUCH AS SHOWN, NOTED, SCHEDULED, AND SPECIFIED ARE USED, INSTEAD OF INDICATED, NO SPECIFIC LIMITATION OF LOCATION IN THE CONTRACT DOCUMENTS IS INTENDED EXCEPT AS EXPLICITLY NOTED.

"DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", "ACCEPTED", AND "PERMITTED" SHALL MEAN "DIRECTED" BY THE TVMWD AUTHORIZED REPRESENTATIVE".

PROVIDE, FURNISH, AND/OR INSTALL: MEANS TO SUPPLY, AND DELIVER TO THE PROJECT SITE, AND TO INSTALL COMPLETELY AND READY FOR THE INTENDED USE.

TESTING LABORATORY: REFERS TO AN INDEPENDENT ORGANIZATION ENGAGED BY THE CONTRACTOR TO PERFORM SPECIFIC INSPECTIONS OR TESTS OF THE WORK, EITHER AT THE SITE OR ELSEWHERE, AND TO REPORT THE RESULTS OF THOSE INSPECTIONS OR TESTS TO THE OWNER & ARCHITECTURAL AND ENGINEERING (A & E) TEAM IN ACCORDANCE WITH GENERAL PROVISIONS. INDEPENDENT TESTING AND INSPECTION DOES NOT ALTER TVMWD'S RIGHT TO TEST AND INSPECT THE WORK.

CALIFORNIA CONTRACTOR'S LICENSE LAW:

ALL GENERAL AND SUBCONTRACTORS SUBMITTING BIDS FOR THIS PROJECT SHALL BE CURRENTLY LICENSED BY THE STATE OF CALIF. PRUSUANT TO THE PROVISIONS OF THE CALIF. CONTRACTOR'S LICENSE LAW. SAID LICENSE SHALL BE IN THE AREA OF WORK OR TRADE FOR WHICH HE IS CONTRACTED AND THIS SHALL INCLUDE ALL TRADES OR I SPECIALTIES RELATED TO BUILDING CONSTRUCTION FOR WHICH RELEVANT LICENSES ARE ISSUED.

AS-BUILT DRAWINGS:

THE CONTRACTOR WITH-IN FIFTEEN DAYS AFTER COMPLETION OF CONSTRUCTION SHALL PROVIDE SFSSM WITH ONE SET OF MARKED-UP PRINTS SHOWING CLEARLY AND NEATLY IN RED INK. ALL CHANGES. CORRECTIONS, AND ADDITIONS MADE DURING THE CONSTRUCTION. SUCH FEATURES SHALL BE KEPT UP TO DATE AND RECORDED ON A COMPLETE SET OF AS-BUILT RECORD DRAWINGS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE CONTRACT DRAWINGS AND SPEC'S. THE EXACT AS-BUILT LOCATIONS, SIZES, FIXTURES, KINDS, WIRES, CONDUIT, ETC, AS APPLICABLE, SHALL BE MAINTAINED CONTINUOUSLY BY THE CONTRACTOR. THE SET OF RECORD DWG. AS-BUILT INFO. PRINTS SHALL BE SUBJECT TO INSPECTION BY TVMWD AND THE A & E TEAM AT ANY TIME.

UNIT PRICES

THE BIDDER SHALL STATE IN HIS BID THE UNIT PRICES FOR THE WORK INDICATED. UNIT PRICES SHALL APPLY TO ADDITIONS TO OR DEDUCTIONS FROM THE CONTRACT WORK

EACH UNIT PRICE SHALL COMPENSATE ALL COSTS FOR COMPLETING A UNIT OF WORK. IN SUBMITTING UNIT PRICES, THE BIDDER AGREES TO PERFORM SUCH WORK STATED IN THE UNIT PRICE. CHANGES IN THE WORK REQUIRED AFTER THE APPROPRIATE LABOR &/OR EQUIP. HAVE BEEN REMOVED FROM THE JOB SITE WILL BE CONSIDERED SEPARATELY, UNLESS THE SUBMITTED UNIT PRICES ARE MUTUALLY AGREEABLE TO THE CONTRACTOR AND HIE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO GET WRITTEN APPROVAL FROM THE HIE REPRESENTATIVE PRIOR TO STARTING ANY ADDITIONAL WORK, AND ALLOW ENOUGH TIME BEFORE THE WORK IS TO BE PERFORMED TO ALLOW THE REPRESENTATIVE TO VERIFY THE ADDITION OR DEDUCTION OF THE WORK IS ACCEPTABLE. AND THAT THE IMPACT ON THE WORK SCHEDULE AND CONSTRUCTION CHANGES ARE DEFINED AND MUTUALLY ACCEPTABLE.

DISTRIBUTION OF LOADS:

MATERIALS AND EQUIPMENT SHALL BE EVENLY DISTRIBUTED ACROSS THE FLOOR & OTHER SUPPORT'G SURFACES TO MAKE SURE STRUCTURAL SYSTEMS ARE NOT OVERLOADED.

PRE-BID APPROVAL OF MATERIALS & OTHER SUBSTITUTION ITEMS:

PRE-BID APPROVAL BY TVMWD FOR MATERIALS, PRODUCTS, EQUIPMENT, PROCESSES, AND OTHER CONSTRUCTION ITEMS WHICH DO NOT MEET THE EXACT REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE REQUIRED BEFORE THE SUBMITTAL OF THE BIDS. ANY REQUESTS FROM BIDDERS FOR PRE-BID APPROVAL OF ITEMS THAT ARE THEN APPROVED BY TVMWD, WILL BE INCORPORATED INTO THE CONTRACT DOC'S. BY PUBLISHED ADDENDUM DURING THE BIDDING PROCESS. NO VERBAL APPROVALS WILL BE HONORED OR GIVEN. OPINIONS EXPRESSED BY ANY TVMWD EMPLOYEE PRIOR TO BID OPENING & REVIEW, SHALL NOT BE CONSTRUED AS OFFICIAL TVMWD ACCEPTANCE OR APPROVAL. THE PUBLISHED ADDENDUM SHALL BE THE ONLY VALID ACCEPTANCE OR APPROVAL. TO OBTAIN PRE-BID APPROVAL, THE BIDDER SHALL SUBMIT AN "APPLICATION FOR PRE-BID APPROVAL" NO LATER THAN 10 CALENDAR DAYS BEFORE THE BID OPENING DATE. THE FORM OF APPLICATION CAN BE SUBMITTED IN THE FORM OF A FORMAL RFI. BIDDERS REQUESTING SUBSTITUTIONS OR DEVIATIONS THAT ARE APPROVED FOR USE IN THE PROJECT SHALL BE RESPONSIBLE FOR MEET'G SPACE REQ'S. & PROPERLY CONNECTING & ALTER'G. EXIST. ITEMS TO COORDINATE W/ SUBSTITUTED ITEMS, @ NO ADDED CHARGE TO SFSSM. PRE-BID APPROVALS APPLY NOT ONLY TO TRADE NAMES, MODEL, & CAT. NUMBERS, BUT ALSO TO ALL SUBSTITUTIONS &/ OR DEVIATIONS FROM MATERIALS, PRODUCTS, EQUIP., PROCESSES AND OTHER CONSTRUCTION ITEMS THAT ARE IN THE CONTRACT DOC'S.

WHEN APPROVAL OF SUBSTITUTIONS OR DEVIATIONS ARE REQUESTED BY THE BIDDERS, ANY COSTS INCURRED BY THE BIDDERS IN ASSEMBLING THE DATA TO PROVE EQUALITY WILL BE THE SOLE RESPONSIBILITY OF THE BIDDER.

SCHEDULING OF WORK

WHEREVER SPEC'S. OR DRAWINGS CALL FOR ADVANCE NOTIFICATION, THE CONTRACTOR SHALL INCLUDE NOTIFICATION IN THE PROJECT WORK SCHEDULE, TO INSURE PROPER COORDINATION OF THE CONSTRUCTION ACTIVITIES. THE WORK SCHEDULE SHALL SPECIFICALLY IDENTIFY ACTIVITIES WHICH WILL GENERATE HEAVY CONCENTRATIONS OF DUST. OR WHICH USE CLEANING OR FINISHING TECHNIQUES THAT EMIT HEAVY CONCENTRATIONS OF AIRBORNE SOLVENTS. HYDROCARBONS, & OTHER AEROSOLS. SUCH ACTIVITIES SHALL INCLUDE DEMOLITION, WORK, PREP., PATCHING, REPAIRING, OR NEW WORK. GIVE NOTIFICATION 10 DAYS IN ADVANCE OF SUCH WORK.

SUBMITTALS

A STANDARD TRANSMITTAL FORM WILL BE USED TO TRANSMIT ALL SUBMITTALS. SUBMITTAL DRAWINGS, DESCRIPTIONS, DIAGRAMS, LAYOUTS, SCHEMATICS, DESCRIPTIVE LITERATURE, SCHEDULES, MSDS SHEETS, TEST AND PERFORMANCE DATA & MANUFACTURER'S SPEC'S. AND CUT-SHEETS SHALL BE FURNISHED BY THE CONTRACTOR EXPLAINING IN DETAIL SPECIFIC PORTIONS OF THE WORK REQUIRED BY THE CONTRACT. SUBMITTALS INCLUDE BUT ARE NOT LIMITED TO: PRECONSTRUCTION SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA, SAMPLES, MSDS SHEETS, DESIGN DATA, TEST REPORTS, CERTIFICATES, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S FIELD REPORTS, OPERATION AND MAINTENANCE DATA, & CLOSE-OUT SUBMITTALS. PROVIDE SHOP DRAWINGS OF ALL ITEMS FOR TVMWD WRITTEN REVIEW AND ACCEPTANCE PRIOR TO ORDERING ANY MATERIALS.

SHOP DRAWING

PROVIDE SHOP DRAWINGS OF ALL ITEMS FOR TVMWD PM'S WRITTEN REVIEW AND ACCEPTANCE PRIOR TO ORDERING ANY MATERIALS.

GENERAL SAFETY REQUIREMENTS:

THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN TO THE CONTRACTING OFFICER FOR REVIEW AND ACCEPTANCE, 10 DAYS AFTER NOTICE TO PROCEED. THIS DOC. WILL BE AVAILABLE UPON REQ. THE SAFETY PLAN SHALL INCLUDE: SAFETY PROGRAM OBJECTIVES, METHODS TO OBTAIN OBJECTIVES, RESPONSIBILITY OF KEY PERSONNEL FOR THE CONTRACTOR, SAFETY MEETINGS, SURVEYS, INSPECTIONS, & REPORTS, DISASTER AND EMERGENCY PROGRAMS, COMPLIANCE W/ OSHA STDS, 29 CFR. 1910 & 29 CFR 1926 & VARIOUS SAFETY REQ'S. FOR OTHER AUTHORITIES HAVING JURISDICTION, METHODS TO COMPLY W/ REQ'S. FOR IMMEDIATELY REPORTING A MISHAP W/ NPD8621.1G, A STATEMENT THAT CONTRACTOR WILL NOT INVALIDATE THE INTEGRITY OF EXIST. SAFETY SYSTEMS W/OUT PROPER AUTHORIZATION, PROCEDURES FOR EMERGENCY ACTIONS TO SECURE DANGEROUS SITUATIONS, PROTECT PERSONNEL, PROTECT GUESTS, & SECURE WORK AREAS IN THE EVENT OF AN ACCIDENT OR ACT OF NATURE, AND PROCEDURES FOR SECURING A MIS-HAP SITE SO THAT THE AREA REMAINS SECURE UNTIL A SAFETY INVESTIGATOR ARRIVES & UNTIL THE SITE IS RELEASED FROM BEING SECURE BY THE CONTRACTING OFFICER.

PERSONNEL, GUESTS, STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES ADJACENT TO THE WORK AREAS SHALL BE PROTECTED AT ALL TIMES AGAINST INJURY OR DAMAGE OF OF ANY KIND.

CONTRACTOR SHALL TAKE PROPER SAFETY AND HEALTH MEASURES IN PERFORMING ALL WORK UNDER THIS CONTRACT. CONTRACTOR IS SUBJECT TO APPLICABLE FEDERAL, STATE, & LOCAL CODES AND ORDERS RELATING TO SAFETY AND HEALTH IN EFFECT. ON THE DATE OF THIS CONTRACT.

THE CONTACTOR SHALL PROTECT, CONTROL, AND MONITOR THE SAFETY OF PERSONS VISITING THE PROJECT SITE. THE CONTRACTOR IS RESPONSIBLE FOR HIS PERSONNEL & FOR FAMILIARIZING EA. SUBCONTRACTOR W/ THE SAFETY REQ'S. CONTRACTOR SHALL NOTIFY TVMWD IN WRITING OF ANY SPECIAL SAFETY STD'S. HE HAS ESTABLISHED SO THAT TVMWD PERSONNEL CAN BE NOTIFIED OF THE RESTRICTIONS.

ACCIDENT TREATMENT AND RECORDS:

CONTRACTOR SHALL POST EMERGENCY FIRST AID AND AMBULANCE INFO. @ THE PROJECT SITE. CONTRACTOR MAY UTILIZE LOCAL MUNICIPALITY EMERGENCY FACILITIES FOR INJURY AND EMERGENCY MEDICAL TREATMENT. SUCH TREATMT, SHALL BE RECORDED ON THE STD. REQ'D. FORM FOR AN INJURY REPORT.

FIRE PREVENTION AND PROTECTION:

OPEN FLAME DEVICES WILL NOT BE PERMITTED EXCEPT AS APPROVED OF IN WRITING BY THE CONTRACTING OFFICER. BURNING TRASH, BRUSH, OR WOOD IS STRICTLY PROHIBITED.

WATER CONSERVATION:

RUNNING HOSES AND WATERING DEBRIS INTO THE STORM DRAINS IS STRICTLY PROHIBITED

PROTECTION OF WORK:

PRIOR TO THE APPLICATION OF ANY COATING MATERIAL, THE CONTRACTOR SHALL CHECK WITH THE CONTRACTING OFFICER TO INSURE SAFE CONDITIONS PRIOR TO PROCEEDING.

WELDING, FLAME CUTTING, AND MELTING:

CONTRACTOR SHALL CLEAR ALL WELDING AND CUTTING OPERATIONS WITH THE CONTRACT-ING OFFICER BEFORE BEGINNING OPERATIONS. ALL OPERATIONS SHALL COMPLY W/ THE REQUIREMENTS FOR A CLASS 100 OUTCOME. CONTRACTOR SHALL DISCONTINUE BURNING, CUTTING, OR WELDING OPERATIONS 1 HOUR PRIOR TO THE END OF EA. WORK DAY & A WORKMAN SHALL BE SOLELY DESIGNATED TO REMAIN AT THE SITE FOR 1 HOUR AFTER DISCONTINUING OPERATIONS TO MAKE A THOROUGH INSPECTION OF THE AREA FOR POSSIBLE SOURCES OF LATENT COMBUSTION. HE SHALL BE EQUIPPED W/ TWO FULL 15 LB. CARBON DIOXIDE FIRE EXTINGUISHERS. ANY UNSAFE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE TVMWD PROJECT MGR. CONTRACTOR SHALL NOTIFY TVMWD CONTRACTING OFFICER IN ADVANCE OF ALL FIRE HAZARD OPERATIONS, AND SHALL NOT PROCEED UNTIL WRITTEN CLEARANCE IS OBTAINED.

SEVERE STORM PLAN:

IN THE EVENT OF STORM WARNING THE CONTRACTOR SHALL SECURE OUTSIDE EQUIP., MTL'S., & CHECK FOR LOOSE MATERIALS IN SURROUNDING AREAS - AS APPLICABLE, THAT COULD BE BLOWN AWAY OR BLOWN AGAINST THE FACILITY. INSURE THAT TEMP. WATERPROOFING CONTROLS ARE ADEQUATE.

BUILDING VENTILATION:

FORCED AIR VENTILATION IS REQUIRED FOR ALL CONFINED SPACE ENTRY OPERATIONS & THE MIN. AIR EXCHANGE REQ'S. MUST BE MAINTAINED. USE VENTILATORS WHERE REQUIRED TO PERFORM DEMOLITION. CLEAN-UP, PATCHWORK, AND FINAL FINISH OPERATIONS TO INSURE THE SAFETY OF ALL WORKERS AND PERSONNEL, IF REQUIRED.

PRODUCT REQUIREMENTS:

PRODUCT SHIPMENTS SHALL BE ADDRESSED TO THE CONTRACTOR WHO SHALL BE RE-SPONSIBLE FOR THEIR RECEIPT, UNLOADING, HANDLING AND STORAGE. TVMWD WILL NOT EXCEPT DELIVERIES ON BEHALF OF THE CONTRACTOR OR HIS SUBCONTRACTORS NOR ASSUME RESPONSIBILITY FOR SECURITY OF MAT'LS. EQUIP., OR SUPPLIES @ THE SITE.

CONTRACTOR SHALL PROTECT, PRESERVE MAT'LS., SUPPLIES, & EQUIP., INCLUDING PROPERTY WHICH MAY BE FURNISHED BY TVMWD, AND WORK PERFORMED. MATERIALS AND PRODUCTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE REQ'S. OF THE CONTRACT DWGS., MANUFACTURER'S WRITTEN SPECIFICATIONS, CONTRACT SPEC'S., AND REFERENCED STD'S. & SPEC'S.

ADJACENT OCCUPANCIES:

PROTECTIVE MEASURES SHALL BE PROVIDED TO CONTROL THE ACCUMULATION AND MIGRA-TION OF DUST AND DIRT IN ALL AREAS ADJACENT TO THE WORK. DUST, DEBRIS, AND DIRT SHALL BE REMOVED FROM THE AREAS OF WORK DAILY. DEBRIS, RUBBISH, SCRAP, AND OTHER NONSALVAGEABLE MAT'LS, RESULTING FROM THE WORK OF THIS PROJECT SHALL BE DISPOSED OF IN ACCORDANCE W/ ALL APPLICABLE FEDERAL, STATE, AND LOCAL JURISDICTIONS AND REGULATIONS.

INTERRUPTION OF SERVICES:

NOTICES TO INTERRUPT UTILITIES (AS APPLICABLE) & TRAFFIC SHALL BE SUBMITTED 48 HOURS IN ADVANCE FOR WRITTEN ACCEPTANCE BY THE CONTRACTING OFFICER. WORK SHALL NOT PROCEED WITHOUT TVMWD'S WRITTEN ACCEPTANCE.

SILICONE PRODUCTS

SILICONE PRODUCTS TO BE USED FOR PATCHING, SEALING, CAULKING, CLEANING, REPAIRING OR PAINTING ON THIS PROJECT SHALL BE COMPLIANT WITH FEDERAL AND STATE OF CALIFORNIA VOC REQUIREMENTS.

8" CMU WALL, GROUT SOLID W/ JOINTS STRUCK
FOUNDATION SIZE AND REINFORCING.

	ON EXTERIOR SIDE OF CMU WALL PROVIDE RIVER ROCK STON
-	PREPARATION AND DETAILS.
(1)	NEW DOOR AND FRAME. REFER TO DOOR SCHEDULE SHT A-4

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SHALL BE 50 LUX.

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	UNDERGROUND		
	SERVICE ALERT		
PLAY II SAFE.	WORKING DAYS		
	PRIOR TO EXCAVATING	REV	DESCRIPTION

(FLUSH (SMOOTH). REFER TO STRUCTURAL DRAWINGS FOR WALL DETAILS,

VER ROCK STONE FINISH. REFER TO STRUCTURAL DRAWINGS FOR CMU WALL

NEW ¹/₇ THK. TEMPERED. CLEAR GLAZED. FIXED WINDOW.

EXIT SIGN. REFER TO ELEC. DWGS. FOR EXACT LOCATIONS OF EXIT SIGNS. EXIT SIGNS SHALL BE IN ACCORDANCE WITH CBC & UFC ARTICLE 12. EXIT SIGNS SHALL BE BLOCK LETTERS, MIN. 6" HIGH WITH A STROKE OF MIN $\frac{3}{4}$ ". LUMINANCE ON F.O. SIGN

MATERIAL SPECIFICATIONS:

1.03 SUBMITTALS

SPECIFICATIONS

- PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL DATA. INSTALLATION INSTRUCTIONS, AND GENERAL Α. RECOMMENDATIONS FOR CMU BLOCKS, ALL ROOFING MATERIALS & SYSTEMS FLOORING MAT'L (IF APPLICABLE). GYPSUM BD. PRODUCTS, INSULATION PRODUCTS, ACOUSTICAL WALL PANELS, DOORS, WINDOWS, FRAMES, ACCESSORY ITEMS, HARDWARE, ROOF HATCH, MECHANICAL, PLUMBING AND & ELEC, ITEMS IDENTIFIED ON THE DWGS, INCLUDE PROPERTIES AND CERTIFICATIONS INDICATING COMPLIANCE OF MATERIALS WITH REQUIREMENTS.
- SAMPLES: SUBMIT, FOR VERIFICATION PURPOSES, 4-INCH SQUARE SAMPLES: GYPSUM BD., STANDING SEAM ROOF В COLOR SAMPLES, ROOF PROFILE SAMPLE, AND PAINT SAMPLES REQUIRED FOR EACH SELECTED COLOR AND FINISH INDICATED. FOR SELECTIONS OF COLORS AND FINISHES, SUBMIT MANUFACTURER'S COLOR CHARTS SHOWING FULL RANGE OF COLORS AND FINISHES AVAILABLE TO P.M.
- 1.04 DELIVERY STORAGE AND HANDLING
- MATERIALS SHALL BE DELIVERED TO JOB SITE AND CHECKED BY GENERAL CONTRACTOR FOR COMPLETENESS AND Α. SHIPPING DAMAGE PRIOR TO JOB START. HANDLING OF MATERIALS SHALL BE IN ACCORDANCE W/ MANUFACTURER'S WRITTEN SPEC'S. INSPECT MATERIALS ON SITE FOR DAMAGE PRIOR TO USE. RETURN TO MANUFACTURER ANY PACKAGED MATERIALS IN DENTED, RUSTY, OR LEAKING CONTAINERS. RETURN TO MANUFACTURER MATERIALS WITH AN EXPIRED SHELF LIFE FOR TESTING, AND IF COMPLIANT, REISSUING OF SHELF LIFE EXTENSION.
- ALL MATERIALS USED SHALL BE FACTORY PRE-WEIGHED AND PRE-PACKAGED IN SINGLE, EASY TO MANAGE AMOUNTS. ELIMINATE ON SITE MIXING ERRORS. NO ON SITE WEIGHING OR VOLUMETRIC MEASUREMENTS ARE ALLOWED.
- MATERIALS SHALL BE STORED IN A DRY, ENCLOSED AREA PROTECTED FROM EXPOSURE TO MOISTURE. TEMPERATURE С OF STORAGE AREA SHALL BE MAINTAINED BETWEEN 65 AND 85 DEGREES F/18 AND 30 DEGREES C.

PAINT:

PAINT SPEC. IS BASED ON THE PRODUCTS OF DUNN EDWARDS CORP. TYP. ALL: PREPARE NEW SURFACES TO RECEIVE NEW FINAL PAINTED SURFACES.

PREPARE SURFACES AND ALL APPLICATIONS OF PAINT IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. THOROUGHLY CLEAN AND LEAVE SITE IN A FIRST CLASS CONDITION.

INTERIOR PAINT

GYPSUM BOARD 1ST COAT VINYLASTIC PIGMENTED SEALER 2ND COAT DECOSHEEN W 440 EGGSHELL ENAMEL - FIELD VERIFY AND MATCH EXIST SHEEN 3RD COAT (ALL NEW SURFACES AND ADJACENT EXIST.: REPEAT 2ND COAT ABOVE.)

EXTERIOR PAINT:

ALL NEW TRIM AT DOORS, LOUVERS, AND FASCIA (IF APPLICABLE):

1ST COAT VALSPAR - PRIMEPLUS (FACTORY APPLIED) MUST SEAL WITH TOP COATS W/IN 180 HOURS. 2ND COAT PERMASHEEN SEMI-GLOSS W 901 (VERIFY SHEEN W/ OWNER PRIOR TO PURCHASING). 3RD COAT: REPEAT 2ND COAT ABOVE.

METAL DOORS AND FRAMES;

1ST COAT APPLICABLE PRIMER 2ND AND 3RD COATS PERMASHEEN SEMI-GLOSS W-901 (VERIFY SHEEN W/ OWNER PRIOR TO PURCHASING).

FERROUS METAL:

1ST COAT CORROBAR 43-5 2ND AND 3RD COATS PERMASHEEN SEMI-GLOSS W 901 (VERIFY SHEEN W/ OWNER PRIOR TO PURCHASING).

NON-FERROUS METAL:

1ST COAT GALV-ALUM QD 43-7 2ND AND 3RD COATS PERMASHEEN SEMI-GLOSS W 901 (VERIFY SHEEN W/ OWNER PRIOR TO PURCHASING).

CONC MASONRY UNITS:

1ST COAT VERIFY WITH DUNN EDWARDS - SUPER-LOC W 718 2ND COAT ENDURACRYL LOW SHEEN W 705 - VERIFY CMU PAINT SHEEN W/ OWNER PRIOR TO PURCHASING. 3RD COAT ENDURACRYL LOW SHEEN W 705

INSULATION

INSULATION INSTALLER & CONTRACTOR SHALL POST A SIGNED CERTIFICATE OF COMPLIANCE IN A CONSPICUOUS LOCATION IN THE BUILDING. THIS CERTIFICATE SHALL STATE THAT THE INSULATION & MATERIALS CONFORM TO THE APPROPRIATE SECTIONS OF THE CALIFORNIA ADMINISTRATIVE CODE, TITLES 20 & 24 AND SHALL SPECIFY MANUFACTURERS NAME & MATERIAL IDENTIFICATION AND INSTALLED VALUE. ROOF SHALL BE INSULATED PER STATE ENERGY REQUIREMENTS.

ROOF HATCH:

NEW ROOF SCUTTLE SHALL BE BILCO CO. DOUBLE LEAF EQUIPMENT ROOF CUSTOM SCUTTLE, TYPE D SIZE 6'-0" X 6'-0", AS DISTRIBUTED BY SPECIALTY BLDG. COMPONENTS, PICO RIVERA (562-821-0170). FINAL FINISH SHALL MATCH NEW STANDING SEAM KYNAR COLOR. COVER SHALL BE 11 GA. ALUMINUM W/ A 3" BEAD FLANGE & FORMED REINFORCING MEMBERS WELDED TO SUPPORT A MIN. L.L. OF 40 LBS./SF OR 140 LB./SF WIND UPLIFT. INSULATION SHALL BE GLASS FIBER 1" THICK, FULLY COVERED & PROTECTED BY A 22 GA. PAINT BOND STEEL LINER.

CURB SHALL BE MIN. 12" HIGH, 14 GA. PAINT BOND G-90 GALV. STL. FORMED W/ 3 1/2" FLANGE WITH HOLES PROVIDED FOR SECURING TO THE ROOF DECK. CURB SHALL BE EQUIPPED W/ AN INTEGRAL METAL CAPFLASHING OF THE SAME GA. & MTL. AS THE CURB AND SHALL BE FULLY WELDED AT THE CORNERS FOR WEATHERTIGHTNESS. CAPFLASHING SHALL BE EQUIPPED WITH A BILCLIP (R) FLASHING SYSTEM. INCLUDING STAMPED TABS. INSULATION ON THE EXT. OF THE CURB SHALL BE RIGID FIBER BOARD 1" IN THKNESS.

SCUTTLE SHALL BE COMPLETELY ASSEMBLED W/ HEAVY PINTLE HINGES, POSITIVE SNAP LATCH W/ TURN HANDLES, PADLOCK HASPS INSIDE AND OUTSIDE & AN EXTRUDED EPDM RUBBER GASKET PERMANENTLY ADHERED TO THE COVER. COMPRESSION SPRING OPERATORS, ENCLOSED IN TELESCOPIC TUBES, CONSTRUCTED OF REINFORCED NYLON 6/6 BASED ENGINEERED COMPOSITE MAT'L., SHALL BE PROVIDED FOR SMOOTH, EASY, & CONTROLLED DOOR OPERATION THROUGH OUT THE ENTIRE ARC OF OPENING AND CLOSING. OPERATION SHALL NOT BE AFFECTED BY TEMPERATURE. COVER SHALL BE EQUIPPED WITH AUTO. HOLD-OPEN ARM COMPLETE W/ RED VINYL GRIP HANDLE TO PERMIT EASY RELEASE & ONE HAND CONTROL OF THE COVER TO ITS CLOSED & LATCHED POSITION. ALL HARDWARE SHALL BE REIN. NYLON 6/6 BASED ENGINEERED COMPOSITE MAT'L. OR ZINC PLATED & CHROMATE SEALED. FACTORY FINISH SHALL BE RED OXIDE PRIMER. UNIT SHALL BE MIAMI-DADE PRODUCT CONTROL APPROVED FOR HIGH VELOCITY HURRICANE ZONE, NOA #10-0113.01 INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS AND PRINTED DETAILS. MANUFACTURER SHALL GUARANTEE AGAINST DEFECTS IN MATERIAL & WORKMANSHIP FOR A PERIOD OF 5 YEARS.

PROVIDE ROOFING PANEL FLASHING AROUND PERIMETER OF CURB IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S WRITTEN DETAILS AND SPECIFICATIONS FOR A COMPLETE WATERPROOF INSTALLATION WITH FIRST CLASS WORKMANSHIP AT TRANSITIONS. GENERAL CONTRACTOR SHALL GUARANTEE DEFECTS IN MATERIAL TRANSITIONS & WORKMANSHIP

				ROFESSION ROFESSION CRHER SHEER COPHER SHEER COPHER SHEER COPHER SHEER COPHER SHEER COPHER SHEER	PLANS PRE CIV engine	PARED BY: LTEC ering ind	Ger.	eral Civil, Municipa nd Wastewater Eng Planning, Con Management and S 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLARE (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	TE OF CALLFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APF	CSH RIL 2021		SCALE AS SHOWN	FILE NO.

GYPSUM BOARD

NEW GYPSUM WALLBOARD FOR CEILING SHALL CONFORM TO CBC REQUIREMENTS & SHALL BE INSTALLED IN CONFORMANCE W/ THE REQ'S. OF "STANDARD SPECIFICATIONS FOR GYPSUM WALLBOARD INTERIOR FINISHES" ANSI # A97.1 FURNISH MATERIALS AND LABOR REQUIRED TO EXECUTE THIS WORK. WHERE INDICATED INCLUDING GYPSUM WALL-BOARD. METAL FRAMING FOR DRYWALL CONSTRUCTION, JOINT AND CORNER REINFORCING, ADHESIVE, TAPE, FINISHING, AND DRYWALL ACCESSORIES. GYPSUM WALL BOARD FOR CEILINGS, SHALL CONFORM TO ASTM C840 (TAPERED EDGE SHEETS SHALL CONFORM TO ASTM C36) IN THKNESSES INDICATED. FOR JOINT REINFORCING TAPE, ADHESIVE. METAL CORNER REINFORCEMENT AND METAL EDGE TRIM USE STD. PRODUCTS RECOMMENDED BY THE MANUFAC-TURER OF THE GYPSUM DRYWALL. FASTENERS SHALL BE SELF DRILLING SELF TAPERING, COUNTERSUNK DRYWALL SCREWS USED TO ATTACH WALLBOARD TO STUDS. SCREWS LENGTHS SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR THE WALLBOARD THKNESS USED. REFER TO STRUCTURAL DRAWINGS FOR SIZES & GAUGES OF CEILING JOISTS REQUIRED. PERFORM ALL GYPSUM BOARD INSTALLATION AND FINISHING IN ACCORDANCE W/ ASTM C840 AND THE GYPSUM BOARD MANUFACTURER'S PRINTED SPEC'S. CUT WALL BD BY SCORING & BREAKING OR BY SAWING FROM THE FACE SIDE. SAND, CUT EDGES & ENDS TO OBTAIN NEAT JOINING. SCORE CUT-OUTS BEFORE KNOCKING OUT OR CUT-OUT; DO NOT PUNCH. NEATLY SCRIBE WALL BD. MEETING PROJECTING EDGES. SPACE FASTENERS AT 12" O.C. IN THE FIELD AND 8" O.C. STAGGERED ALONG ABUTTING EDGES. ACCURATELY CUT AND FIT WALL BOARD AT OPENINGS (AS APPLICABLE).

PLACE CORNER BEADS AT EXTERNAL CORNERS AND "L" EDGE TRIM WHERE GYP. BD. ABUTS DISSIMILAR MAT'LS. METAL TRIM AND CORNER BEADS SHALL CONFORM TO ASTM C 1047, HOT DIPPED GALV. STL. W/ TAPING FLANGES. PLACE GYP. BD. HORIZONTALLY WITH THE LONG DIM. ACROSS THE FURRING, OR IN ONE PIECE VERTICAL HEIGHTS.

GYPSUM WALL BD. FINISH SHALL COMPLY WITH ASTM C840 (GA-214-M-96) ALL JOINTS AND INTERIOR ANGLES SHALL HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS & ONE SEPARATE COAT OF JT. COMPOUND APPLIED OVER INTERIOR ANGLES. FASTENER HEADS AND ANGLES SHALL BE COVERED W/ THREE SEP. COATS OF JT. COMPOUND A THIN SKIM OF COMPOUND SHALL BE APPLIED OVER THE ENTIRE SURFACE. THE SURFACE SHALL BE SMOOTH AND FREE OF TOOL MARKS &/OR RIDGES. COAT WITH DRY WALL PRIMER PRIOR TO APPLICATION OF FINAL FINISHES. APPLY TAPE BEDDING COMPOUND ON JOINTS. IN WALLBOARD AND OVER SCREWS HEADS. TREAT ALL INSIDE CORNERS W/ JT. BEDDING COMPOUND, TAPE, AND FINISHING COMPOUND. TREAT OUTSIDE CORNERS W/ CORNER BEADS, BEDDING COMPOUND AND FINISHING COMPOUND. PROVIDE MTL. CASING BEADS WHERE WALLBD. ABUTS CEILINGS, WALLS, OR COLUMNS, OPENINGS, OFFSETS, ETC, MAKE ALL EXPOSED JOINTS, TRIMS, & ATTACHMENTS NON-APPARENT FOLLOWING APPLICATION OF FINAL FINISH, COORDINATE W/ THE MECH, AND ELEC, TRADES FOR INSTALLATION AND LOCATIONS OF THEIR WORK

DUMPSTER AND PORTABLE TOILETS:

CONTRACTOR SHALL PROVIDE HIS OWN DUMPSTER AND PORTABLE TOILET FACILITIES FOR USE BY THE G.C. & ALL SUBCONTRACTORS. THE DUMPSTER SHALL BE IMMEDIATELY REMOVED FROM THE PREMISES WHEN IT IS FULL & THE PORTABLE TOILET SHALL BE SERVICED REGULARLY SO AS TO INSURE IT IS KEPT CLEAN, IN A MANNER ACCEPTABLE TO ONWER. COMPLY WITH ALL CITY REQ'S REGARDING WASTE MANAGEMENT.

ROOFING

- 1. OVER THE ENTIRE NEW ROOF STRUCTURAL DECK PROVIDE AND INSTALL NEW 30# FELT VAPOR BARRIER. ON TOP OF THE VAPOR BARIER PROVIDE AND INSTALL ¹/₄" MIN. G-P GYPSUM DENSDECK WITH ALL JOINTS STAGGERED A MIN. OF 6" FROM THE DECKING JOINTS. OVER THE DENSDECK PROVIDE AND INSTALL 1" THICK ISO. INSULATION. (STAGGER ALL ISO. JOINTS A MINIMUM OF 6" FROM THE DENSDECK JOINTS.) MECHANICALLY ATTACH ISO. INSULATION, FELT, AND DENSDECK TO STRUCTURAL METAL DECK PER ROOFING MANUFACTURER'S WRITTEN SPECIFICATIONS AND DETAILS. PROVIDE AND INSTALL CRAFTSMAN SERIES, 24 GA. STEEL, GALVALUM, SNAP-ON BATTEN ROOF SYSTEM, SMALL BATTEN (SB) 1" HIGH, AS MANUFACTURERED BY MBCI. THE 24 GA. BASE METAL IS MANUFACTURERED FROM HIGH STRENGTH GALVAALUM PRODUCED TO ASTM A792/A792M-AZ50 OR AZ55 GRADE 50.
- 2. PANEL FINISH SHALL BE SMOOTH FINISH WITH A FINAL FINISH SIGNATURE 300 COATING. COLOR: TO BE SELECTED.
- 3. CRAFTSMAN SERIES SYSTEM IS A WATER SHEDDING SYSTEM INTENDED TO BE INSTALLED OVER A WATERPROOF, SOLID SUBSTRATE WITH A MINIMUM SLOPE OF 3:12. PANEL ATTACHMENT SHALL BE WITH THE MANUFACTURER'S CONCEALED FASTENING SYSTEM.
- 4. EXPOSED ENDS OF SMALL BATTEN SHALL BE FIRE STOPPED PER MANUFACTURER'S WRITTEN SPECIFICATIONS AND DETAILS.
- 5. PROVIDE CRAFTSMAN SERIES, SNAP-ON, SMALL BATTEN (SB), 1" HIGH, BATTEN ROOF SYSTEM COMPLETE WITH EAVE TRIM (WITH AN EXTENDED PIECE IF REQUIRED) TO ACCOMMODATE CONTINUOUS GUTTERS AND DOWNSPOUTS. PROVIDE EAVE FASCIA TRANSITION PIECE AND COORDINATE DIMENSIONS WITH MANUFACTURER AND MODIFY AS REQUIRED. SPECIFICALLY TO PROVIDE A COVERED (ENCLOSED) UNDERSIDE OF EAVE OVERHANG THAT MATCHES THE CRAFTSMAN SYSTEM. FIELD VERIFY AT SITE ALL REQUIREMENTS FOR EAVE EDGE, OVERHANG COVER, GUTTERS, AND DOWNSPOUTS. THESE SYSTEM PARTS SHALL MATCH CRAFTSMAN SERIES ROOF DETAILS AND FINISHES.
- 6. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMMULATION OF LEAVES AND/OR DEBRIS, IN THE GUTTER.
- 7. ALL ROOFING MATERIALS SHALL BE INSTALLED IN STRICT COMPLAINCE WITH MANUFACTURER'S WRITTEN DETAILS AND SPECIFICATIONS.
- 8. SR# .33 (ENERGY STAR NUMBER MIN SR VALUE = .25 OR HIGHER FOR A SLOPED ROOF ABOVE 2:12).
- 9. SRI# 34 PER ASTM E1980 (MIN SRI# = 29 OR HIGHER FOR A SLOPED ROOF ABOVE 2:12).
- 10. WIND UPLIFT CLASS 90, ASTM E-1592.
- 11. ETB NO. 005-12-03 AND ETB WATER AND AIR TEST DATA NO. 111-02-87 PER TEST REPORTS \$04-C-10-87 & #05-C-10-87, TESTED PER ASTM E328-84 AND ASTM E 331-83.
- 12. SUBMIT COMPLETE SHOP DRAWINGS AND DETAILS OF ALL ROOFING MATERIALS, FASTENERS, ETC., TO TVMWD AND CIVILTEC FOR WRITTEN REVIEW AND ACCEPTANCE PRIOR TO PURCHASING ANY ROOFING MATERIALS.
- 13. SUBMIT A COMPLETE COLOR CHART OF SERIES 300 COLORS TO TVMWD AND CIVILTEC FOR COLOR SELECTION.

MISC. ROOFING

- 1. ROOF, WALL LOUVER/VENTS SHALL RESIST THE INTRUSION OF FLAME AND EMBERS IN THE INTERIOR BUILDING AREAS OF THE STRUCTURE AND SHALL BE PROTECTED BY CORROSION RESISTANT, (GALV.), NON-COMBUSTIBLE WIRE MESH WITH $\frac{1}{4}$ " OPENINGS OR ITS EQUIVALENT.
- EAVES AND EAVE OVERHANG SHALL MEET THE REQ'MTS. OF SFM 12-7A-3 OR SHALL BE PROTECTED BY IGNITION RESISTANT MATERIALS OR NONCOMBUSTIBLE CONSTRUCTION ON THE EXPOSED UNDERSIDE (707A.5.5)
- 3. IF APPLICABLE: THE SPACE BETWEEN ROOF COVERING AND ROOF DECK SHALL BE PROTECTED AGAINST THE INTRUSION OF FLAMES OR EMBERS AND SHALL BE FIRE STOPPED PER CODE REQUIREMENTS.

	AS-BID PLANS	
CT	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
CT	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
	ARCHITECTURAL SPECIFICATIONS	A-2 SHEETS NO.
		20 _{of} 49

FIELDSTONE VENEER NOTES

- 1. MAXIMUM STONE MATERIAL DIMENSIONS SHALL BE 5-INCHES HORIZONTAL PROJECTION AND 12-INCHES OVERALL IN ANY DIRECTION. DIMENSIONAL TOLERANCE FOR STONE MATERIAL SHALL BE ± 1 INCH.
- 2. STONE MATERIAL SOURCE SHALL BE SUPPLIED BY TVMWD AND/OR SORTED FROM WELL SITE EXCAVATION WORK. A MANDATORY PRE-BID SITE VISIT TO THE WELL SITE AND TO THE MIRAMAR WTP TO INSPECT THE STOCK PILE OF FIELDSTONE WILL BE REQUIRED.
- 3. THE CONTRACTOR WILL BE REQUIRED TO SORT, WASH, AND TRANSPORT THE FIELDSTONE COBBLES TO THE PROJECT SITE.
- 4. CONTRACTOR SHALL SORT BY SIZE, COLOR, AND TEXTURE TO APPLY UNIFORM AESTHETIC NATURAL VARIATIONS OF THE STONES AND WITHIN THE REQUIREMENTS SHOWN ON THE PLANS. REFER TO DETAIL 3 ON DRAWING A-7.
- 5. SELECT STONE FOR VENEER WORK ACCORDING SIZE AND HORIZONTAL PLACEMENT THICKNESS LIMITS SHOWN ON THE PLANS. SELECTION OF STONE WILL INCLUDE THE INSTALLER'S EXPERIENCE IN AESTHETICS TO PROVIDE AN INSTALLED LOOK OF CONSISTENT VARIATION IN COLOR AND TEXTURE.
- 6. CONTRACT SHALL BUILD PARTIAL MOCKUPS MIN. 48" IN HEIGHT/ WIDTH OF AN EXAMPLE WALL AND PILASTER TO VERIFY SELECTIONS, FULL THICKNESS INCLUDING FACE AND BACKUP.
- 7. CONTRACTOR TO ANTICIPATE UP TO THREE (3) VARIATIONS ON FIELDSTONE WORK STYLES FOR EACH TYPE OF INSTALLATION TO BE REQUESTED FOR CONSIDERATION AND FINAL ACCEPTANCE BY TVMWD AS THE STYLE FOR USE IN THE BUILDING AND PILASTER VENEER WORK.
- 8. REFER TO STRUCTURAL DETAILS AND PROJECT SPECIFICATIONS FOR FULL REQUIREMENTS OF VENEER WALL ASSEMBLY; INCLUDING MATERIAL LIMITATIONS, WEATHER PROTECTION, SEISMIC ANCHORAGE, SUBMITTALS AND INSTALLER QUALIFICATIONS.

LEGEND

	8" x 8" x 16" FULLY GROUTED CMU WALL W/ 6"(MA) STONE VENEER ASSEMBLY REFER TO STRUCTUR
	8" x 8" x 16" FULLY GROUTED CMU WALL. REFER ⁻ DRAWINGS.
	4", 18 GA (OR 20 GA) STL STUD @ 16" O.C. W/ 5/8" REFER TO FINISH SCHEDULE FOR FINAL FINISH. I "X" WATER RESISTANT GYPSUM BOARD IN PUMP
1	NEW DOOR + FRAME. REFER TO SCHEDULES SH
A	NEW WINDOW + FRAME. REFER TO SCHEDULES
$\langle \# \rangle$	NEW LOUVER. REFER TO SCHEDULES SHT A-6.

**SEPARATE BID ITEM PER PROJECT SPECIFICATIONS

				PROFESSION PROFESSION RATER SHEET CONTENT CONT	PLANS PREF	EXARED BY:	Gener and N	ral Civil, Municipa d Wastewater Eng. Planning, Con Aanagement and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	TE OF CALLFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRI	CSH L 2021		SCALE AS SHOWN	FILE NO.

<u>21</u> _{OF} <u>49</u>

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ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY:	CSH	CHECKED BY:	CSH		SCALE	FILE NO.

- MATERIAL OFFSETS GREATER THAN 1/4" REQUIRE A MAXIMUM BEVELED SLOPE OF 1 UNIT VERTICAL TO 2 UNITS HORIZONTAL, EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY
- OCCUPANCY THE APPROPRIATE CERTIFICATE'S OF COMPLIANCE AND A LIST OF FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING, AND

- CONCRETE SEALER SHALL BE A WATER BASED ACRYLIC SEALER MEETING CALIFORNIA. AIR

CT	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
	BUILDING ELEVATIONS	A-4 SHEETS NO.
		<u>22</u> _{OF} <u>49</u>

-													HA	RDWA	RE SE	TS						
												C	OOR	SPEC	IFICA	FIONS						
	SET #01 Doors: 1 =	3'-0" X 8'-0" X 2 1/2"	HM INS DR. (STC52)										SET #03 = Door: 3	3'-0" X 7'	-0" X 18 GA. I	HM DR.					
	(Per Each) 4 Hinges 1 Entrance 1 Closer 1 Kick Pla 1 Wall Sto 1 Raindrip 1 Weather	e Lock te p strip	T/ P! K 40 34 30	A2714 4 1/2 BR 8847FL 500 1050 10" X 06 (Convex) 46C 03 APK (He	2 X 4 1/2 N ADA LEV 2" LDW ad & Jamt	IRP ER o)			26D 626 689 US32D US32D	MC KIN YALE NORTO ROCKV PEMKO PEMKO PEMKO	NNEY NOOD NOOD NOOD			(Per Ea 3 Hir 1 Sto 1 Clo 1 Kio 1 Wa 3 Do VER	ach) oreroom Loc oser kk Plate all Stop or Silencers IFY HANDII	k NG	TA2714 PBR 54(7500 K1050 1 406 (Col 608	4 1/2 X 4 1/2 NON R 05LN ADA LEVER 10" X 2" LDW nvex)	EMOVABLE	26DMC KINNEY626YALE689NORTONUS32DROCKWOODUS32DROCKWOODGRAYROCKWOOD		
++	1 Sweep 1 Thresho VERIFY H	ld IANDING	27	72A MS&A /	ADA COM	IPLIANT				PEMKC	5											
	SET #02 PAIR OF Do 8 Hinges 1 Set Auto 1 Entrance Panic Har 1 Astragal 1 Coordina 2 Closer 2 Kiel Pla	ors: 2 = 3'-0" X 8'-0' omatic Bolts e Lock dware ator	" X 2 1/2" HM T/ 18 P S/ 3! 16 75	INS DR. (ST A2714 4 1/2 348 BR 8847FL eries 99 Tou / LHR or RH 57SP 500 500	TC52) 2 X 4 1/2 N ADA LEV uch-bar w/ IR outside	IRP ER concealed trim #3721	vert. rod		26D US26D 626 BLK 689	MC KIN ROCKV YALE VON D PEMKO ROCKV NORTO	NNEY WOOD UPRIN D WOOD DN		A A C C C	BBR. M L A MU C T C TC C TM C	IATERIAL LUMINUM ONCRETE ERAMIC T ERAMIC T FRAMIC T	MASONRY I LE LE COVE LE MOSAIC	UNIT	ABBR. MATERIA GAL GALVA GB GYPSU HM HOLLO MS METAL S STEEL	AL LEGEND IAL NIZED M BOARD W METAL (DOOR) SLAT	ABBR. SM SS TSB	MATERIAL SHEET METAL STAINLESS STE TOP SET BASE COVED BASE	EEL = 6" RUBBER
HILTI, INC. KWIK BOLT III WEDGE ANCHOR ICC/ES NO 1385 3/8" Ø 3" EMBEDMENT	2 Kick Pla 2 Wall Sto 1 Raindrip 1 Weather 2 Sweep 1 Thresho VERIFY H	tes p rstrip Id IANDING	K 40 34 30 18 27	1050 10" X)6 (Convex) }6C)3 APK (Hea 3062 CNB 72A MS&A A	2" LDW ad & Jamb ADA COM) PLIANT			US32D US32D		WOOD WOOD D D D		E E E F F	C B MP E S E F F G F RP F	ROOM FIN XPOSED N XPOSED S ACTORY F IBERGLAS IBERGLAS	ISHED EXPO IASONRY P/ TRUCTURE INISH S S REINFORO	DSED CONCRETE AINTED CED PLASTIC	SC STEEL SGE SEMI-G SH SEALEI TO SPE	CHANNEL ELOSS ENAMEL PAINT R / HARDENER - REFER EC'S.	VI WB WG WMP USA	WINYL TILE WONDER BOAR WIRE GLASS 1/4 WIRE MESH PAI UNDERSIDE OF	RD OVER GYPSUM BOARD 4" THICK CLEAR RTITION ⁵ STRUCTURE ABOVE
<u>RAGE</u>												INTE	RIOR	FINISH	I SCH	EDULE						
	ROOM OR SPACE		FLO MT'L	OR FINISH	NORTH MT'L	FINISH	EAST	WALL FINISH	SOUTH MT'L	I WALL FINISH	WEST MT'L	FINISH	CO MT'L	LUMN FINISH	CEII MT'L	LING FINISH		COMMENTS		<u>NOTES:</u> *	INCLUDING CURB	AT MTL STUD WALL
	ELECTRICAL ROOM		*EC	SH	CMU	-	CMU	-	G.P.	SGE	G.P.	SGE	-	-	GB	SGE	5/8" TYPE	E "X" GYP. BD. = 1 Hf	RRATED	***	R-30 INSULATION UNDER ENTIRE R	+ BLANKET INSULATION OOF DECK
	STORAGE ROOM		*EC	EPOXY	CMU	-	G.P.	SGE	G.P.	SGE	CMU	-	-	-	*** GB	SGE						
		DOOR			WALI		;		FRAM	1E			JUUF					TOTAL	PANIC			
	DOOR TYPE WIDTH		NESS MT'L	. GLASS	S WIDT	H HEIGH	IT MT'L	- HEAI) JAMI	B JAMB	SIL	L R	EF. DWG		IRESHOLD		FIRE RATING	REQUIRED	HARDWARE	COMI	MENTS	
	(1) B 3'-0"	8'-0" 2 1/	/2" HM	-	3'-4"	' 8'-3"	-	-	-	-	-		A-3		-	SS	-	1	NO	"QUIETSWI	NG" MODEL QS-52-	SL
	2 A 6'-0"	8'-0" 2 1/	/2" HM	-	6'-4"	' 8'-3"	-	-	-	-	-		A-3		-	SS	1-HR	3	YES		ING" MODEL QS-52-I	
	(3) B 3'-0"	7'-0" 18 (4'-0" 18 (GA HM		6'-0"	' 7'-3" <u>+</u> ' 4'-0"	-	-	-	-	-		A-3 A-3		-		- 1-HR	2	NO	FIXED PAN	EL, DUAL GLAZED L	
	B - 4'-0"	4'-0" 18 0	GA HM	3%"	4'-0'	' 4'-0"	-	-	-	-	-		A-3		-	-	-	2	-	FIXED PAN GLASS, NC	EL, SINGLE GLAZED	D LAMINATED SAFETY
	6 -	6"	' AL	-	2'-8'	' 2'-8"	-	-	-	-	-		A-3		-	AL	-	1	-	"CONSTRU STANDARE	CTION SPECIALTIES FIXED 8" ACOUST	S" MODEL A8370 ICAL LOUVER
(AS NOTED)			AL	-	2'-8'	' 1'-4"	-	-	-	-	-		A-3		-	AL	-	2	-	"CONSTRU STANDARE	ICTION SPECIALTIES) FIXED 8" ACOUST	S" MODEL A8370 ICAL LOUVER
5/8" GYP. BD. (USE WATER RESIST. GYP. BD. AND/OR TYPE																						
16 GA. HOLLOW METAL FRAME. 16 GA.} STEEL	1. FIRE-RESISTANT RA	TED GLAZING IN FIF	RE RATED WI	NDOW ASS	EMBLIES	SHALL	2.	FIRE-RA	TED GLAZ	VV ED ASSEM	BLIES SH	HALL BE L	ABELED /	IES AND GLAZI	NG SHALL	BE ETCHED						
2" 2" ANCHORS 3 PER JAMB FOR 7' HIGH JAMB FOR 7' HIGH SEE WALL PER HEAD	COMPLY WITH CBC	SEC 716.1.2.3						FOR 1 H	OUR RATE	ED FRAME /			ιστι	20								
TIFL	1. LATCHING AND LOCKI PATH OF TRAVEL, SHA HARDWARE BY PANIC DESIGNED TO PROVID THE OPENING HARDW 2. THE WIDTH OF THE LE	NG DOORS THAT AF ALL BE OPERABLE V BARS, PUSH-PULL / DE PASSAGE WITHO /ARE EVEL AREA ON THE	RE HAND ACT VITH A SINGL ACTIVATING UT REQUIRIN SIDE TO WHI	IVATED AN E EFFORT BARS OR C IG THE ABI CH THE DC	ND WHICH BY LEVEN DTHER HA ILITY TO (DORS SW	I ARE IN A R TYPE ARDWARE GRASP INGS SHAL	3. 4. L 5.	HARDWAF PROVIDE UNLESS S MEET ALL ALL DOOF	RE SHALL ALUMINUI PECIFIED ADA LEVI RS SHALL	MEET ACC M REDUCER OTHERWIS EL CHANGE COMPLY W	ESSIBILI R STRIP SE. BEVI R REQUIF	ITY REQUI WHERE D TEL ALL CC REMENTS	INTERNENT IFFEREN DRNER EI E PRESSI	S - REFER CE IN MATI DGES ABO' JRE REQU	TO NOTES ERIALS OC VE FINISH I IREMENTS.	BELOW. CURS. FLOOR.	 NEW SWINGING HANDING. FOF LEAF, FOR 7' H DOORS. PROV ALL DOORS AN 	g doors shall re R 8' high doors pf Iigh doors provii /ide all hardwar ND frames shall f	CEIVE NEW LEVER TYP ROVIDE AND INSTALL 4 E DE AND INSTALL 3 BUTT E FOR A COMPLETE INS RECEIVE PAINT FINAL FI	E LOCKSETS 3UTTS AND F HINGES PEF TALLATION.	6. VERIFY IINGES PER R LEAF. PROVIDE CL	LOSERS ON ALL
RIOR R HEADER (JAMB SIM) EXTEND 24" PAST THE INTERIOR DOORS FOL A. INTERIOR DO B. EXTERIOR DO C. FIRE DOORS	STRIKE EDGE FOR LOWING: ORS - 22 NEWTONS ORS - 38 NEWTONS - 66.72 NEWTONS	EXTERIOR D	OORS AND) 18" FOR	OF 17 \L	6. 7.	FIELD VEF ADJACEN [®] FIELD VEF SIZES & A	RIFY ALL E T SUPPOF RIFY ALL E PPLICATIO	DIMENSION RT AND FINI DIMENSION DNS BEFOF	S BEFOF ISH REQI S FOR D RE INSTA	RE INSTAL UIREMEN OOOR & AE ALLATION.	LATION A T CONDIT	AND COOR TONS. WINDOWS	dinate Wi . Coordin	TH ATE ALL			A	S-BID	PLANS	
	PROFESSION AL	PLANS F	PREPARED B	Y:		General Ca and Wa F Manag	ivil, Munic stewater E lanning, C gement and	cipal, Wate Engineering Construction I Surveying		TH	REF PAL	E VA WAT	LLI Er e	EYS DISTR	ICT		THREE VAL	LEYS MUNI	CIPAL WATER	₹ DISTR	RICT	PROJECT NO. 58463
	C 69578	- <u>CIN</u> engin	NILT neering	EC		118 1 Ph	West Lin Monrovia, one: (626 Fax: (626	me Avenue Ca. 91016) 357-0588) 303-7957		1021 CL	E. MI AREN (90	IRAMA MONT, 99) 621-	R AVE CA 91 5568	ENUE 711		MIRA	AGRAND V BUILDI	NELL EQU	JIPPING IMF OR AND LO	PROVE PUVEF	EMENTS R	DRAWING NO. A-5
ENGR DATE APPD DATE	OF CALLFORM	DESIGNED BY: DRAWN BY:	C JM / M	SH CH M/JG DA	IECKED E	BY: APRIL 20	CSH 21		SCA AS SI	ALE HOWN			FILE	NO.				JUHE	DOLEO			23 OF 4

				ROFESSION ROFESSION ROFER SHERING CORTER SHERING CONTRACTOR	PLANS PREF	PARED BY: LTEC ering inc	Gener and M C.	al Civil, Municipa I Wastewater Eng Planning, Con Ianagement and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREI (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRIL	CSH _ 2021		SCALE AS SHOWN	FILE NO.

GE	NERAL:			LOADS:		
1.	STEEL FABRICATOR SHALL TO BE APPROVED BY LOS ANGELES C	OUNTY FOR NEW CONSTRU	ICTION.	DEAD LOADS:		AS CALCU
2.	DESIGN CODE AND GENERAL REQUIREMENTS:			1. LIVE LOADS:		
	A.) ALL WORK SHALL CONFORM TO THE 2015 INTERNATIONAL B CALIFORNIA TITLE 24, AND THE 2017 COUNTY OF LOS ANGE	UILDING CODE, 2016 CALIF(LES BUILDING CODE, TITLE	ORNIA BUILDING CODE, 26.	PAVEMI	ENT TRENCHES	H-20
	 B.) FEDERAL OCCUPATIONAL SAFETY AND HEALTH STANDARDS C.) CALIFORNIA STATE INDUSTRIAL SAFETY ORDERS. 	S ACT. (O.S.H.A.)		ROOF L	IVE LOAD 20 PSF	11 20
3	COORDINATE ALL WORK WITH THE WATER COMPANY'S FIELD EN(2. WIND:		
J.				EXPOSURE C	ATEGORY	В
4.	SHALL CONTACT ENGINEERING FOR ANY REQUIRED DIMENSION	S.	UR	BASIC WIND	SPEED (ASCE 7-16, CH. 26)	110 MPH
5.	THE LOCATIONS OF THE SUBSTRUCTURES SHOWN ON THESE PL	ANS WERE OBTAINED BY SE	EARCH OF THE AVAILABLE		DRY (ASCE 7-16, CH. 1)	IV 1.0
	RECORDS. THERE IS NO ASSURANCE THAT THE RECORD INFORM	ATION IS ACCURATE, OR T	HAT ALL EXISTING TAKING THE NECESSARY	3. SEISMIC		1.0
	PRECAUTIONARY MEASURES TO PROTECT THE SUBSTRUCTURE	S SHOWN AND ANY OTHER	SUBSTRUCTURES NOT OF	SITE COORD	INATES (DECIMAL DEGREES)	34.
-	RECORD OR NOT SHOWN ON THESE PLANS.			SITE CLASS (ASCE 7-16, CH. 20)	D
6.	ADJUSTED ACCORDINGLY. ALL SUGGESTED CHANGES OR MODIF	FICATIONS TO THE DESIGN	SHOWN ON THESE			IV 1.5
	CONSTRUCTION DOCUMENTS MUST HAVE WRITTEN APPROVAL F SUCH MODIFICATIONS. THE CONTRACTOR IS INSTRUCTED NOT T	ROM AN OWNER REPRESE	NTATIVE PRIOR TO MAKING ANY RIZATIONS AND ASSUMES ANY	IMPORTANCE SEISMIC DES	: FACTOR (ASCE 7-16, CH. 1)	1.5 1) D
	AND ALL LIABILITY FOR NOT COMPLYING WITH THIS PROCEDURE REQUIRED TO REVAMP ANY UNAUTHORIZED MODIFICATIONS TO	IN IT'S ENTIRETY. AS A RES COMPLY WITH THE DESIGN	SULT, THE CONTRACTOR MAY BE			., _
	CONSTRUCTION DOCUMENTS, AT NO ADDITIONAL COST. NO EXC	EPTIONS WILL BE PERMITT	ED.	SITE COEFFI	CIENTS (PER GEOTECHNICAL REP	PORT):
7.	GENERAL CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY A	LL GRADES, DIMENSIONS, A	AND EXISTING CONDITIONS PRIOR	S _S = 1.7	$S_1 = 0.668g,$	
_				$F_a = 1.0$	$F_v = 1.7$	
8.	SUB-TRADES.	DINATION OF ALL WORK, INC	CLUDING THAT OF ALL	S _{DS} = 1.1	174g, $S_{D1} = 0.757g$	
9.	GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCH	ITECT IMMEDIATELY OF AN	IY DISCREPANCIES FOUND	PGA = 0	.753g, F _{PGA} = 1.1,	PGA _M = 0.8
	WITHIN THE CONTRACT DOCUMENTS.					
10.	ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REMOVAL (ED AS A RESULT OF THEIR	SEISMIC FOF	CE-RESISTING SYSTEM (ASCE 7-1	6, CH. 12):
	OPERATION. ALL SCRAP, DEBRIS, AND OTHER EXCESS MATERIA					
11.	ALL MATERIALS SHALL BE FURNISHED AS SHOWN HEREIN UNLESS OWNER.	S EQUAL ALTERNATES ARE	APPROVED IN WRITING BY THE	SEISMI	CRESPONSE MODIFICATION, R =	
12.	GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING /	ND PROVIDING BRACING D	URING CONSTRUCTION AND/OR	OVERS	FRENGTH FACTOR, Ω_0 =	
	ERECTION TO SUPPORT ALL LOADS TO WHICH THE STRUCTURE	MAY BE SUBJECTED.		DEFLEC	TION AMPLIFICATION FACTOR, C_d	=
13.	ANY REFERENCE TO THE WORDS APPROVE, APPROVED, OR APPR MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIV	ROVAL IN THESE DOCUMEN		REDUN	JANCY FACTOR, $\rho =$	
	ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LAI	BOR SPECIFIED.	NOR HIS SUBCONTRACTORS OF	SEISMI	C RESPONSE COEFFICIENT CS = ρ	SDS I /R = 0.45
14.	THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT TH	E FINISHED STRUCTURE AN	ND DO NOT INDICATE THE	ANALYS	SIS PROCEDURE:	
	METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERV RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIC	/ISE AND DIRECT THE WORI JUES, SEQUENCES, AND PR	K AND SHALL BE SOLELY OCEDURES, INCLUDING, BUT NOT	EC	QUIVALENT LATERAL FORCE;	
	LIMITED TO, BRACING AND SHORING. OBSERVATION VISITS TO T OR ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTE	HE SITE BY FIELD REPRESE	ENTATIVES OF THE ARCHITECT CONSTRUCTION PROCEDURES.	35	ISMIC DESIGN DASE SHEAR -	
	ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT OR EN	NGINEER DURING THE CONS	STRUCTION SHALL BE			
	SUPPORT SERVICES PERFORMED BY THE ARCHITECT OR ENGIN	EER, WHETHER OF MATERIA	AL OR WORK, AND FOR THE			
	GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE	CONSTRUED AS SUPERVIS	SION OF CONSTRUCTION.	12773.001 PERF	ORMED BY LEIGHTON CONSULTIN	IG, INC. ON JUL
15.	CONTRACTOR SHALL VERIFY AND DOCUMENT THE LOCATION OF	ALL UNDERGROUND LINES	WITHIN THE AREAS OF	EXPLORED DEF	RING LOGS IS PREDOMINANTLY P 'TH (5.3 FEET). GROUNDWATER W.	OORLY GRADE AS NOT ENCOL
	PROPOSED CONSTRUCTION. UNDERGROUND PIPELINES SHALL F CONSTRUCTION, OTHERWISE THE PIPELINES SHALL BE RELOCA	REMAIN IN PLACE IF THEY D FED BY OTHERS AT THE OW	O NOT CONFLICT WITH THE NEW /NER'S DISCRETION.	FEET BELOW G	ROUND SURFACE ON MAY 26, 2020). HISTORICALL
16.	REFERENCE ELEVATIONS ARE FOR CONSTRUCTION PURPOSES C	NLY AND DO NOT REPRESE	ENT TRUE PLANT ELEVATIONS.	2. THE SOILS ALL	DWABLE BEARING CAPACITY FOR	SHALLOW SPR
17	ALLOWARI E VALUES FOR STRUCTURAL DESIGN SHALL BE PER TH	IE 2017 LOS ANGELES COUI		BEARING) OF 25	30 PSF AND COEFFICIENT OF FRIC	TION OF 0.35.
17.	ALL CALL OUTS AND REFERENCES.	12 2017 200 ANGELES COO	TT BOILDING CODE, INCLODING	3. ALL EARTHWOF	K SHALL BE DONE IN A SAFE MAN	INER, COMPLY
				SURFACE GRAD	DE OR ONE (1) FOOT BELOW THE E	BOTTOM OF FO
<u> PR</u>	E-ENGINEERED TRUSS LOADS:			EXTEND AT LEA	ST THREE (3) FEET LATERALLY BE RADES SHOULD BE SCARIEED TO	EYOND THE LIN
1.	TRUSSES ARE TO BE DESIGNED FOR THE FOLLOWING SERVICE-I	LEVEL (UNFACTORED) LOAD	DS:	OPTIMUM MOIS	TURE CONTENT. ANY SOFT AND/C	DR UNSUITABLE
A. B.	ROOF DEAD LOAD = 20 PSF ROOF LIVE LOAD = 20 PSF			A MINIMUM OF	3HOULD BE REMOVED AND REPLA 30% OF THE ASTM D1557 MODIFIE	ACED WITH FILL D PROCTOR MA
С. П	ROOF WIND UPLIFT = -12 PSF BOTTOM CHORD TO BE DESIGNED FOR A SEISMIC AXIAL LOAD	= +3 100 LBS		6. FILLS AND BACH	(FILLS SHALL BE PLACED IN LOOS	
E.	TOP CHORD TO BE DESIGN FOR CONCENTRATED LOAD AT OPE	NING AS SHOWN		DETERMINED B	Y ASTM D1557 MODIFIED PROCTO	R TEST METHC
	2. LIVE LOAD = 410 LBS			7. ALL IMPORT FIL	L SOILS SHOULD BE PREDOMINAN	
				SLEEVE. IMPOR	T FILL SHOULD HAVE AN EXPANS	ION POTENTIAL
	r		ROOF DL	8. ENCOUNTERED	SITE SANDS ARE GENERALLY SU	ITABLE FOR US
	\checkmark \checkmark \checkmark	\checkmark	\checkmark	WEIGHT (ASTM	D 2974), FREE OF DEBRIS AND HA	VE AN EXPANS
			ROOF LL	INCHES BUT LE PERCENT SOILS	SS THAN 12 INCHES IN LARGEST D S AND NOT ALLOWED TO NEST OF	DIMENSION MAY
	\vee \vee \vee	\checkmark	\checkmark	REQUIREMENTS	3 MAY BE USED WITH THE APPRO	VAL OF THE GE
	$\uparrow \qquad \uparrow \qquad \uparrow$	\wedge		9. EXISTING UNDE REQUIRED, EXC	RGROUND UTILITIES AND FOUND	ATIONS SHALL
			ROOF WL		S AND FOUNDATIONS SHALL BE P	
				DURING EXCAV	ATION, CONSULT THE FIELD ENGI	NEER IMMEDIA
	9'-6" DI + I I			10.A COMPACTION	REPORT SHALL BE SUBMITTED T	O THE COUNTY
	3'-6" DL + LL	40		11.THE GEOTECH	JICAL ENGINEER SHALL REVIEW A	ND APPROVE 1
		$\overline{}$				
	$\leftarrow \pm \text{AXIAL SESIMIC}$	\rightarrow				
	8" CMU		8" CMU			
		4 000	100 1100	I 1		
			IALEKI			
				GROUND		
		5				
		PLAY IT SAFE.		ST TWO		
			PRIOR TO EXCA	VATING		

AS CALCULATED

- 34.129283, -117.703175
- PGA_M = 0.829g
 - BUILDING FRAME SYSTEM, SPECIALLY **REINFORCED MASONRY SHEAR WALLS**

 - 2.5
 - 3.5 1.3

DS I /R = 0.458 g

 $C_{S,ASD} = 0.7 \times CS = 0.321g$ C_{S.ASD} x TOTAL WEIGHT

BE IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT NO. INC. ON JULY 2, 2020 AND CBC 2019, CHAPTER 18. THE OBSERVED SOIL RLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) UP TO THE MAXIMUM NOT ENCOUNTERED IN BORINGS DRILLED TO A MAXIMUM DEPTH OF 5.3 HISTORICALLY THE HIGHEST GROUND WATER LEVELS IN THE SITE VICINITY GROUND SURFACE ACCORDING TO DATA FROM CGS (2000a).

IALLOW SPREAD FOOTINGS IS 2,000 PSF WITH A PASSIVE (LATERAL

ER, COMPLYING WITH OSHA REQUIREMENTS.

- I SHOULD BE TO A MINIMUM DEPTH OF THREE (3) FEET BELOW EXISTING TTOM OF FOOTINGS, WHICHEVER IS DEEPER. OVEREXCAVATION SHOULD OND THE LIMITS OF PERIMETER.
- MINIMUM DEPTH OF 6 INCHES AND MOISTURE CONDITIONED TO ABOVE UNSUITABLE MATERIALS ENCOUNTERED AT THE BOTTOM OF THE ED WITH FILL MATERIAL. EXPOSED SUBGRADES SHOULD BE COMPACTED TO PROCTOR MAXIMUM LABORATORY DENSITY.
- LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS, MOISTURE CONDITIONED AT T, AND COMPACTED TO AT LEAST 95% RELATIVE COMPACTION AS FEST METHOD.
- Y GRANULAR, LESS THAN 3 INCHES IN ANY DIMENSION, FREE OF ANY ABOUT 20% NON-EXPANSIVE, NON-PLASTIC FINES PASSING THE NO. 200 VPOTENTIAL LESS THAN 20.
- ABLE FOR USE AS COMPACTED STRUCTURAL FILL, IF THESE PROPOSED FILL AL (NO MORE THAN 2 PERCENT ORGANIC CONTENT MEASURED BY DRY AN EXPANSION INDEX (EI) LESS-THAN (<) 30. COBBLES GREATER THAN 3 IENSION MAY BE USED IN COMPACTED FILL IF MIXED WITH AT LEAST 80 REATE VOIDS IN THE FILL. EXCAVATED ON SITE SOILS MEETING THE ABOVE L OF THE GEOTECHNICAL ENGINEER.
- IONS SHALL BE LOCATED BY CAREFUL EXCAVATION INCLUDING AS NG FOUNDATION EXCAVATION WORK. SUPPORT AND PROTECTION OF VIDED DURING EARTHWORK OPERATIONS IF THEY ARE TO REMAIN IN ARTED UNDERGROUND UTILITIES AND FOUNDATIONS BE ENCOUNTERED ER IMMEDIATELY FOR DIRECTIONS.
- THE COUNTY BUILDING INSPECTOR PRIOR TO FOOTING INSPECTION. APPROVE THE FOUNDATION PLANS PRIOR TO CONSTRUCTION.

CONCRETE:

- 1. ALL CONCRETE CONSTRUCTION, IN ADDITION TO THE SPECIFICATIONS, SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE FOLLOWING ACI CODES: ACI 318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE, ACI 315 MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES, ACI 304 GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE, ACI 301 SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- 2. CEMENT SHALL BE TYPE I AND CONFORM TO ASTM C150, UNLESS OTHERWISE SPECIFIED OR REQUIRED. PRIOR TO CONSTRUCTION.
- 3. PORTLAND BLAST-FURNACE SLAG CEMENT OR PORTLAND-POZZOLANA CEMENT SHALL CONFORM TO ASTM C595, "SPECIFICATION FOR BLENDED HYDRAULIC CEMENTS".
- 4. MIXING WATER SHALL CONFORM TO ASTM C94. MAXIMUM ALLOWABLE WATER-CEMENT RATIO IS 0.45.
- 5. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 "SPECIFICATION FOR CONCRETE AGGREGATES".
- 6. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330 "SPECIFICATION FOR LIGHTWEIGHT AGGREGATES FOR STRUCTURAL CONCRETE".
- 7. THE NOMINAL MAXIMUM SIZE OF THE AGGREGATE SHALL NOT BE MORE THAN 1". THESE LIMITATIONS MAY BE WAIVED IF, IN THE JUDGMENT OF THE ENGINEER, WORKABILITY AND METHODS OF CONSOLIDATION ARE SUCH THAT THE CONCRETE CAN BE PLACED WITHOUT HONEYCOMB OR VOIDS.
- 8. ADMIXTURES SHALL NOT BE USED WITHOUT WRITTEN CONSENT OF THE ENGINEER.
- 9. CONCRETE FOR ALL PARTS OF THE WORK SHALL BE OF THE SPECIFIED QUALITY, CAPABLE OF BEING PLACED WITHOUT EXCESSIVE SEGREGATION AND, WHEN HARDENED, OF DEVELOPING ALL CHARACTERISTICS REQUIRED BY THESE SPECIFICATIONS AND THE CONTRACT DOCUMENTS.
- 10. THE SPECIFIED COMPRESSIVE STRENGTH OF THE CONCRETE (fc) FOR EACH PORTION OF THE STRUCTURE SHALL BE AS DESIGNATED BELOW. STRENGTH REQUIREMENTS SHALL BE BASED ON 28-DAY COMPRESSIVE STRENGTH, UNLESS NOTED OTHERWISE. * ALL REINFORCED CONCRETE IS DESIGNED FOR MIN. fc = 3,500 PSI
- 11. ALL REINFORCING STEEL, WIRE MESH, ANCHOR BOLTS, HOLD DOWN ANCHORS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE BUILDING OFFICIAL PRIOR TO PLACING OF CONCRETE.
- 12. EXPOSED HORIZONTAL CONCRETE SURFACES SHALL BE WOOD FLOATED TO DEPRESS COARSE AGGREGATE AND STEEL TROWELED TO A SMOOTH SURFACE. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4 INCH OR TOOLED. ALL WALKING SURFACES SHALL HAVE A LIGHT BROOM FINISH.
- 13. CONCRETE SURFACES SHALL BE PROTECTED DURING CURING AGAINST EARLY EVAPORATION OF WATER, ACTION BY SUN, RAIN, WATER, FROST AND MECHANICAL INJURY.
- 14. ANCHOR BOLTS, SHALL BE 316 S.S. WITH NUTS AND WASHERS TO BE FURNISHED AND ERECTED BY THE CONCRETE CONTRACTOR.
- 15. PREMOLDED EXPANSION JOINT FILLER SHALL BE 1/2" AND SHALL COMPLY TO ASTM 1751. JOINT SEALANT SHALL BE 1/4" DEEP AND OF THE CHEMICAL RESISTANT TYPE. EPOXY ANCHORS SHALL BE IN ACCORDANCE WITH DESIGN DETAILS.
- 16. GROUT SHALL BE NON-SHRINK CEMENTITOUS GROUT BY "FIVE STAR".
- 17. INSPECTOR SHALL BE PRESENT DURING TAKING OF TEST SPECIMENS
- 18. AND PLACING OF REINFORCE CONCRETE.
- 19. INSPECT EXCAVATION, REINFORCEMENT, AND OTHER EMBEDDED ITEMS PRIOR TO PLACING CONCRETE TO ASSURE COMPLIANCE WITH APPROVED DRAWINGS.
- 20. CONCRETE COVER FOR REINFORCING SHALL BE 2" EXCEPT FOR CONCRETE CAST AGAINST THE GROUND. CONCRETE COVER FOR CONCRETE CAST AGAINST GROUND SHALL BE 3 INCHES.
- 21. WHEN CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE INTERFACE SHALL BE CLEANED AND FREE OF LAITANCE.
- 22. DO NOT BACKFILL CONCRETE UNTIL CONCRETE WITHIN THE STRUCTURE HAS CURED TO 28 DAY STRENGTH.
- 23. ALL CAST IN PLACE CONCRETE SHALL BE COMPACTED USING HIGH FREQUENCY, INTERNAL MECHANICAL VIBRATING EQUIPMENT, SUPPLEMENTED BY HAND SPADING AND TAMPING.

CONCRETE BLOCK MASONRY:

- 1. UNITS SHALL BE TWO CELL 8"x8"x16" SPLIT FACE BLOCK. CONCRETE CHANNEL BLOCK SHALL BE USED AT HORIZONTAL REINFORCEMENT. CMU SPLIT FACE CONCRETE BLOCKS WILL BE INSTALLED WITH SPLIT FACE FACING OUTWARD TO THE EXTERIOR AND THE SMOOTH FACE FACING INWARD TO THE INTERIOR. THE INTERIOR WILL BE ENTIRELY SMOOTH. ALL CELLS GROUTED SOLID UNLESS NOTED OTHERWISE. COLOR SHALL BE NUFAD.
- 2. CONCRETE BLOCK SHALL BE MEDIUM WEIGHT, MOISTURE CONTROLLED UNITS, CONFORMING TO ASTM SPECIFICATIONS C-90. fm=1500 PSI. BLOCK SHALL BE CURED NO LESS THAN 28 DAYS BEFORE BEING PLACED IN WALL. BLOCK MANUFACTURER SHALL PROVIDE DOCUMENTATION CERTIFYING ACTUAL AGE OF BLOCK. ALL BLOCK SHALL BE LAID UP IN MORTAR WITH FULL HEAD AND BED JOINTS. WEBS OF
- 3. EACH BOND WITH TOOLED JOINTS. COURSE SHALL CENTER ON WEBS OF COURSES BELOW. BLOCK SHALL BE LAID IN RUNNING BOND.
- MORTAR SHALL BE TYPE "M" AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. MORTAR STRENGTH TESTS SHALL CONFORM TO ASTM C270. AGGREGATE SHALL CONFORM TO ASTM C144. HYDRATED LIME SHALL CONFORM TO ASTM C207.
- GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS. GROUT SHALL BE FLUID AND FLOWABLE. GROUT SHALL FLOW INTO ALL JOINTS OF MASONRY WITHOUT SEGREGATION. DO NOT USE COARSE GROUT WHERE DIMENSION OF CELL IS LESS THAN 4".
- 6. PROVIDE A MINIMUM OF 1/2" GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
- 7. MAXIMUM GROUT POUR HEIGHT IS 4 FT.
- 8. REINFORCING STEEL SHALL BE DEFORMED TYPE CONFORMING TO ASTM A615, GRADE 60. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706 GRADE 60.
- 9. REINFORCING BARS LAPS AT ALL SPLICES AND CORNERS SHALL BE AT A MINIMUM LENGTH PER LAP SPLICE SCHEDULE, BUT NOT LESS THAN 24 INCHES.
- 10. VERTICAL CONTROL JOINTS SHALL BE PLACED EVERY 30'-0" OC (MAX.)

			ED PROFESSIONAL	PLANS PREPARED BY:	General Civil, Municipa and Wastewater Engr Planning, Cons Management and St	l, Water heering, truction rearing, MUNICIPA	EE VALLEYS	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
			C 69578	<u>CIVILTE</u>	C 118 West Lime Monrovia, Ca Phone: (626) 32 Eax: (626) 33	Avenue 1021 E.1 .91016 CLAR 3.7957 ()	MIRAMAR AVENUE EMONT, CA 91711 909) 621-5568	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	drawing no. S-1
ENGR DATE	APPD	DATE	CIVIL OF CALIFORNIE	DESIGNED BY: CSH DRAWN BY: JM / MM / JG	CHECKED BY: CSH DATE: APRIL 2021	SCALE AS SHOWN	FILE NO.		SHEETS NO. <u>26</u> OF <u>49</u>

N	IASONRY RE	INFORCING	LAP SPLICE	SCHEDULE		
BAR SIZE	#3	#4	#5	#6	#7	#8
TYP. LAP LENGTH	16"	26"	40"	74"	101"	152"
BUNDLED, JAMBS, CHORDS, LINTELS	19"	34"	54"	100"	134"	202"
BUNDLED, JAMBS, CHORDS, LINTELS	19"	34"	54"	100"	134"	202"

. CRITERIA: 8" CONC. BLOCKS, f'm=1500 psi, Fy=60 ksi,

K=2" TYP. & K=1.5" BUNDLES, 2. SPLICE LENGTHS PER TMS402/ACI530 SEC. 2.1.7.7.1 & EQUATION (2-12)

3. DEVELOPMENT LENGTH IS THE SAME AS THE SPLICE LENGTH

REINFORCING STEEL:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO ACI DETAILING MANUAL, SP-66.

2. REINFORCING SHALL HAVE THE FOLLOWING MINIMUM COVER:

- B. EXPOSED TO EARTH OR WEATHER: NO. 5 AND SMALLER
- C. PRECAST CONCRETE EXPOSED TO EARTH OR WEATHER:

3. DOWELS SHALL BE PROVIDED AT POUR AND CONSTRUCTION JOINTS AND SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCING SHOWN FOR THE SUBSEQUENT CONSTRUCTION, UNLESS OTHERWISE NOTED.

. . 1-1/2"

4. BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BONDING.

5. ALL REBAR SHALL BE BENT COLD IN ACCORDANCE WITH ACI 318 CURRENT EDITION.

6. ALL REINFORCING STEEL LAPS OR SPLICES SHALL BE AS INDICATED ON PLANS AND TABLE BELOW. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFIED, LAPS OR SPLICES SHALL BE WELL STAGGERED BY MIN. 24".

7. CONTINUOUS INSPECTION OF CONCRETE SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OF REINFORCING STEEL.

8. ALL FIELD WELDED REINFORCING STEEL SHALL CONFORM TO ASTM A706. WELDING SHALL BE PERFORMED BY BUILDING DEPARTMENT APPROVED CERTIFIED WELDERS USING E70XX ELECTRODES. ALL FIELD WELDING SHALL BE CONTINUOUSLY INSPECTED BY A REGISTERED DEPUTY INSPECTOR AT THE EXPENSE OF THE GENERAL CONTRACTOR UNLESS A PRIOR AGREEMENT IS MADE WITH THE OWNER.

TABLE: DEVELOPMENT LENGTHS U.N.O.									
BAR SIZE	TOP BAR LENGTH DEVELOPMENT	TENSION LAP SPLICE DEVELOPMENT LENGTH							
#3	18"	24							
#4	24"	32							
#5	30"	39							
#6	36"	47							
#7	48"	63							
#8	56"	73							

THESE DEVELOPMENT LENGTHS ARE ONLY APPLICABLE WHEN:

. MINIMUM CLEAR SPACING BETWEEN BARS IS GREATER THAN 2X DIA. OF BAR.

2. BARS ARE NON-EPOXY COATED. 3. CONCRETE IS NORMAL WEIGHT.

- 4. 28-DAY COMPRESSIVE STRENGTH OF CONCRETE IS f_c = 3,000 PSI OR MORE.
- . TOP REINFORCEMENT IS ANY HORIZONTAL REINFORCEMENT SO PLACED
- THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.

(IF ANY OF THESE CONDITIONS CHANGE CONTACT ENGINEER)

STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE ASTM SPECIFICATION AND SHALL BE FABRICATED AND ERECTED ACCORDING TO AISC PRACTICE AND SPECIFICATIONS FOR BUILDINGS AS SPECIFIED IN THE LATEST AISC MANUAL OF STEEL CONSTRUCTION.
- WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A572 GR50 OR A992 (50 KSI). PLATES AND BARS SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.
- 3. TUBE MEMBERS SHALL CONFORM TO ASTM A500, GRADE B OR ASTM A501 (FY = 46 KSI). PIPE COLUMNS SHALL CONFORM TO ASTM A53, GRADE B (FY = 35 KSI).
- 4. GUSSET PLATES SHALL BE 3/8" THICK OR GREATER.
- ALL PLATFORMING MATERIALS SHALL BE GALVANIZED. SERRATED, WELDED, BAR GRATING WITH 1"x 3/16" BEARING BARS AT 1 3/16" CENTERS AND CROSSBARS AT 4" CENTERS. BAND ALL EDGES AND OPENINGS. ATTACHMENT OF GRATING AT SUPPORTS NORMAL TO PANEL SPAN SHALL BE BY CLIPS AT EVERY 6TH BEARING BAR AND AT EACH END OF PANEL. (MIN IS 4 CLIPS PER PANEL)
- WELDING SHALL CONFORM WITH THE LATEST EDITION OF THE WELDING CODE AWS D1.1 USE APPROVED ELECTRODES CONFORMING WITH ASTM A233. WELDING SHALL BE PERFORMED BY BUILDING DEPARTMENT APPROVED CERTIFIED WELDERS. ALL FIELD WELDING SHALL BE CONTINUOUSLY INSPECTED BY A REGISTERED DEPUTY INSPECTOR.
- WELD ELECTRODES SHALL BE E70XX.
- 8. ALL EXPOSED WELDS SHALL BE FILLED AND GROUND SMOOTH. 1/8" RADIUS ALL SHARP EDGES.
- 9. ALL WELDS SHALL BE UNIFORM IN APPEARANCE AND BE FREE OF UNDER CUTTING. REMOVE ALL SLAG AND ARC SPLATTER PRIOR TO BEING GALVANIZED.
- 10. UNLESS OTHERWISE NOTED, ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL BE MADE WITH UNFINISHED AMERICAN STANDARD REGULAR BOLTS CONFORMING TO ASTM A325 (GALVANIZED), NUTS TO ASTM A563 (GALVANIZED) AND WASHERS TO BE HEAVY WEIGHT WROUGHT (GALVANIZED).
- 11. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
- 12. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THRU STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT PRIOR CONSENT OF THE ENGINEER.
- 13. ALL STRUCTURAL STEEL, AND EMBEDS TO BE GALVANIZED PER ASTM A123 OR A153. ALL REPAIRS SHALL CONFORM TO ASTM A780.
- 14. REPAIR ALL AREAS AFFECTED BY FIELD WELDING (USE "GALVALOY").
- 15. GROUTING TO BE DONE AFTER STRUCTURAL STEEL IS IN FINAL POSITION WITH NON-SHRINK GROUT.
- 16. STEEL CONNECTIONS SHALL BE PER AISC MANUAL OF STEEL CONSTRUCTION (FOURTEENTH EDITION) PART 4. FRAMED BEAM CONNECTIONS, TABLES II AND III USING MAXIMUM NUMBER OF FIELD BOLTS SHOWN IN TABLE II FOR EACH BEAM DEPTH.
- 17. ALL STILEWAYS, PLATFORMS, AND STAIRS SHALL BE FABRICATED AND INSTALLED BY THE STEEL FABRICATING CONTRACTOR.
- 18. ALL CONNECTIONS SHALL BE WELDED WITH 1/4" FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE.
- 19. THE USE OF ROLLED STEEL SECTIONS AND/OR BOLTS MANUFACTURED OUTSIDE THE UNITED STATES WILL REQUIRE VERIFICATION THAT THE PRODUCTS COMPLY WITH APPLICABLE ASTM STANDARDS. MILL CERTIFICATES WILL REQUIRED FOR ALL STEEL. STEEL GRADES OTHER THAN ASTM-A36 WILL REQUIRED TESTING BY AN APPROVED LABORATORY. ALL FOREIGN BOLTS MUST BE APPROVED BY L.A. COUNTY BUILDING AND SAFETY PRIOR TO THEIR USE.

WELDING:

- 1. ALL WELDING SHALL BE IN STRICT CONFORMANCE WITH AWS D1.1.
- COMPLETE JOINT PENETRATION GROOVE WELDS SHALL HAVE A FILLER METAL WITH A NOTCH TOUGHNESS OF 20 FOOT-POUNDS MINIMUM AT -20°F. WELD METAL FOR CONTINUITY PLATES SHALL ALSO MEET THIS NOTCH-TOUGH REQUIREMENT. ALL SHIELDED METAL ARC WELDING (SMAW) ELECTRODES SHALL BE OF THE LOW HYDROGEN TYPE.
- A WELDING PROCEDURE SPECIFICATION (WPS) AND PROCEDURE QUALIFICATION RECORDS (POR) PER AWS D1.1 SHALL BE DEVELOPED BY THE FABRICATOR FOR SHOP WELDING AND THE ERECTOR FOR FIELD WELDING AND BE REVIEWED BY THE ENGINEER OF RECORD OR HIS DESIGNEE. THE WPS SHALL INCLUDE THE WELDING PARAMETERS RECOMMENDED BY THE ELECTRODE MANUFACTURER. THE WELDING ELECTRODE MANUFACTURER'S SPECIFICATIONS SHALL INCLUDE THE WELDING PARAMETERS RECOMMENDED BY THE ELECTRODE MANUFACTURER.
- DEPUTY INSPECTORS ARE TO BE LOS ANGELES COUNTY CERTIFIED DEPUTY STEEL INSPECTORS.
- 5. ALL WELDERS AND DEPUTY INSPECTORS SHALL HAVE COPIES OF THE WPS DURING WELDING. IT IS RECOMMENDED THAT A PRE-CONSTRUCTION MEETING BETWEEN THE ENGINEER OF RECORD, THE FABRICATOR, THE ERECTOR, THE CONTRACTOR, THE COUNTY INSPECTOR, THE PLAN CHECK ENGINEER, AND THE DEPUTY INSPECTOR TAKE PLACE AT THE COMPANY OR LOCAL COUNTY BUILDING AND SAFETY OFFICE TO DISCUSS THE WPS.
- 6. THE DEPUTY INSPECTORS REPORT SHALL DOCUMENT THAT THE WPS REQUIREMENTS WERE FOLLOWED, THAT PROPER AMPERAGE AND VOLTAGE IS USED IN THE WELDING PROCESS, AND THAT TRAVEL SPEED AND ELECTRODE STICK OUT COMPLY WITH THE APPROVED WPS. A HAND-HELD CALIBRATED AMP AND VOLT METER SHALL BE USED BY THE FABRICATOR, ERECTOR, AND DEPUTY INSPECTORS, AMPERAGE AND VOLTAGE SHALL BE MEASURED NEAR THE ARC.
- 7. THE PREHEAT AND INTERPASS TEMPERATURES REQUIRED IN AWS D1.1 SHALL BE STRICTLY OBSERVED.
- AFTER WELDING, BACKING BARS SHALL BE REMOVED FROM THE BOTTOM FLANGE. A REINFORCING FILLET WELD SHALL BE PLACED WHERE THE BACK-UP BAR WAS REMOVED. WELD EXTENSION TABS SHALL BE REMOVED FROM THE TOP AND BOTTOM FLANGE. OTHER BACKING BARS AND WELD EXTENSION TABS NEEDED FOR WELDS IN THE CONNECTION, SUCH AS WELDS FOR CONNECTING PLATES, SHALL BE REMOVED IF THESE BARS AND TABS WERE REMOVED FROM TESTED CONNECTIONS. THE ENGINEER OF RECORD SHALL INCLUDE NOTES OR DETAILS ON THE PLANS THAT SPECIFY WHICH BACKING BARS AND WELD EXTENSION TABS MUST BE REMOVED AND WHICH MAY REMAIN, AND WHERE REINFORCING FILLET WELDS ARE REQUIRED, FOR ALL WELDS IN THE AREA OF BEAM-TO-COLUMNS CONNECTIONS.
- STRUCTURAL OBSERVATION IS REQUIRED FOR ALL WELDED MOMENT CONNECTIONS. ANY OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR CONTRACTOR AND THE BUILDING OFFICIAL.

ANCHOR BOLT:

- 1. ALL ANCHOR BOLTS, MACHINE BOLTS AND NUTS SHALL BE SS304 STAINLESS STEEL.
- 2. NUTS SHALL BE AMERICAN STANDARD. HEXAGONAL HEAVY, WITH UNC-2B THREAD AND SHALL BE PROVIDED BY BOLT DESIGN DRAWINGS.
- 3. FIT OF NUTS ON THREADS OF ANCHOR BOLTS SHALL BE VERIFIED BEFORE SHIPMENT.
- 4. ALL ANCHOR BOLTS SHALL BE HEADED BOLTS & TO BE ENCLOSED WITH #4 TIES.

EXPANSION JOINT ANCHOR BOLTS:

PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:

- A. ANCHOR DIAMETER REFERS TO THE THREAD SIZE FOR THE WEDGE CATEGORY ANCHOR.
- В. LOAD.
- C. ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
- D. RECOGNIZED PROCEDURES.
- E. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

 - WEDGE ANCHORS: ONE-HALF (1/2) TURN OF THE NUT.
 - BE USED FOR TESTING.
- TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS. н

ALL EXPANSION TYPE ANCHOR BOLTS USED FOR STRUCTURAL APPLICATIONS SHALL BE TESTED. ALL ANCHOR BOLTS OF THE EXPANSION TYPE USED FOR NON STRUCTURAL APPLICATIONS (LOADED IN EITHER PULLOUT OR SHEAR) SHALL HAVE 50 PERCENT OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT ALLOWED BY THE TYPE OF SUBSTRATE AND DIAMETER OF BOLT LISTED BELOW UNDER TEST VALUES TABLE) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED. [TESTING SHALL BE PERFORMED IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 1916A.7 AND IR 10=9-1]

- J. ALL BOLTS MUST HAVE ICC/ES APPROVAL.
- 1. ITW RAMSET/REDHEAD WEDGE ANCHOR ICC/ES NO. 2427
- 2. HILTI, INC. QWIK BOLT TZ WEDGE ANCHOR ICC/ES NO. 1917
- 3. SIMPSON STRONGBOLT WEDGE ANCHOR ICC/ES NO. 1771

SCAFFOLDING PROTECTION:

- 1. SHALL COMPLY WITH PROVISIONS OF THE CAL/OSHA/ARTICLE 6.
- THE WORK IN PERFECT CONDITION.

SHORING:

1. ALL SHORING SHALL COMPLY WITH CAL/OSHA, SECTION 1541-1.

FIRE DEPARTMENT REQUIREMENTS:

- 2. ALL PIPING SYSTEMS SHALL BE LABELED IN ACCORDANCE WITH SPECIFICATIONS.
- 3. VEHICULAR ACCESS SHALL BE MAINTAINED DURING CONSTRUCTION.

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VENDOR UNLESS OTHERWISE NOTED ON PURCHASE ORDER. PROVIDE ONE NUT PER BOLT UNLESS OTHERWISE NOTED ON

5. "L" OR "J" TYPE ANCHOR BOLTS MAY BE USED FOR 5/0 OR SMALLER BOLTS WITH APPROVAL OF THE ENGINEER.

APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY

REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE

TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD

1. HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE TYPE ANCHOR, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD.

2. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS FOR

3. IF MANUFACTURERS TORQUE IS LESS THAN SPECIFIED TEST TORQUE THE MANUFACTURERS LISTED TORQUE SHALL

K. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

2. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL SCAFFOLDING, STAGING, TRESTLES AND PLANKING FOR THE DURATION OF THE WORK. THE CONTRACTOR SHALL MAINTAIN ALL FORMS OF PROTECTION, AS REQUIRED, TO PRESERVE

1. ALL NEW CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FIRE DEPARTMENT REGULATIONS.

				ED PROFESSION	PLAN	S PREPARED BY:	Gen a	eral Civil, Municip nd Wastewater Eng Planning, Con	al, Water gineering, astruction	THRE	E VALLEYS	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
				C 69578		VILTEO		118 West Lime Monrovia, C Phone: (626) 3	e Avenue ca. 91016 357-0588	1021 E. M CLAREN (90	WATER DISTRICT IRAMAR AVENUE MONT, CA 91711 09) 621-5568	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO. S-2
ENGR	DATE	APPD	DATE	· CIVIL CIVIL PUT	DESIGNED E DRAWN BY:	Y: CSH JM / MM / JG	CHECKED BY: DATE: APF	Fax: (626) 3 CSH RIL 2021	303-7957	SCALE AS SHOWN	FILE NO.		SHEETS NO

SHOP DRAWINGS & SUBMITTALS:

- 1. PRIOR TO FABRICATION. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW BY THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS SPECIFIED HEREIN AND THE CONTRACT SPECIFICATIONS.
 - * CONCRETE MIX DESIGN, CURING COMPOUND, GROUT * STRUCTURAL STEEL, GRATING, MISC. MATERIAL
 - * STEEL JOIST
- 2. THE DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW AND APPROVED THEM, AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. PROVIDE AMPLE TIME FOR THE BUILDING OFFICIAL TO REVIEW THE DOCUMENTS. DEFERRED SUBMITTALS INCLUDE STEEL JOINTS AND METAL DECKS.

SPECIAL INSPECTION (COST BY OWNER):

SPECIAL INSPECTION BY A LOS ANGELES COUNTY REGISTERED INSPECTOR SHALL BE PROVIDED FOR THE FOLLOWING (UNLESS NOTED OTHERWISE):

THE NAME OF THE DEPUTY INSPECTOR HIRED BY THE OWNER OR THE ENGINEER OR ARCHITECT OF RECORD IS

- A. ALL CONCRETE WORK, INCLUDING REBAR PLACEMENT, FOR CONCRETE STRENGTHS GREATER THAN 2500 PSI DESIGN (U.N.O.).
- B. ALL FIELD WELDING INCLUDING WELDING OF REBAR.
- C. HIGH STRENGTH BOLTING.
- D. SHOP WELDING, IF NOT DONE BY AN APPROVED FABRICATOR.
- E. MASONRY WORK.
- F. ALL EPOXY OR EXPANSION TYPE ANCHORS.
- G. HIGH LIFTING GROUT.

THE PERMIT APPLICANT SHALL RETAIN A RESPONSIBLE ENGINEER APPROVED BY THE BUILDING OFFICIAL TO ENSURE THAT:

- A. ALL ELEMENTS OF CONSTRUCTION WHICH REQUIRE SPECIAL INSPECTION ARE INSPECTED BY QUALIFIED DEPUTY INSPECTORS APPROVED BY THE BUILDING OFFICIAL; AND
- B. ALL CODE DEFICIENCIES DETECTED AND DEVIATIONS FROM THE APPROVED PLANS ARE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF NOT CORRECTED, REVISED DESIGNS TO OVERCOME THE DEFICIENCY SHALL BE PREPARED BY THE DESIGN ENGINEER OR ARCHITECT OF RECORD FOR APPROVAL BY THE BUILDING OFFICIAL; AND
- C. ALL CORRECTIVE WORK REQUIRED IS COMPLETED IN ACCORDANCE WITH APPROVED PLANS, SPECIFICATIONS, AND COUNTY ADOPTED CODES.

A FINAL INSPECTION REPORT, SIGNED BY THE SPECIAL INSPECTOR AND THE RESPONSIBLE ENGINEER, IS SUBMITTED TO THE BUILDING OFFICIAL UPON THE COMPLETION OF EACH ELEMENT REQUIRING SPECIAL INSPECTION. THE REPORT MUST CERTIFY THAT THE WORK WAS IN COMPLIANCE WITH APPROVED PLANS, SPECIFICATIONS AND APPLICABLE COUNTY CODES, INCLUDING ANY AUTHORIZED CHANGES TO THE PLANS.

STRUCTURAL OBSERVATIONS:

- 6. STRUCTURAL OBSERVATION REQUIRED THE OWNER SHALL EMPLOY A CIVIL OR STRUCTURAL ENGINEER APPROVED BY THE COUNTY TO PERFORM STRUCTURAL OBSERVATION AS DEFINED IN CBC CHAPTER 2 AND SECTION 1754.
 - A. STRUCTURAL OBSERVATION WILL BE PERFORMED BY THE ENGINEER OF RECORD
 - B. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER:

CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED

- A) PRIOR TO POURING FOUNDATIONS /
- B) DURING ANCHOR INSTALLATION /
- C) STEEL STRUCTURE INSTALLED / D) PRIOR TO GROUTING MASONRY

REINFORCING STEEL, DOWELS AND ANCHOR BOLTS ANCHOR SIZE AND TYPE SIZE, TYPE, CONNECTIONS, AND GROUTING SIZE, TYPE, AND GROUTING

STRUCTURAL TEST AND INSPECTION PROGRAM (COST BY OWNER):

- SPECIAL INSPECTION.
- 4. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION (U.N.O):

I. FOUNDATION:

- A. COMPACTED FILL, GRADING, A **B. VERIFY MATERIALS BELOW SI**
- ADEQUATE TO ACHIEVE THE D
- C. VERIFY EXCAVATIONS ARE EX HAVE REACHED PROPER MATI
- D. PERFORM CLASSIFICATION AN MATERIALS.....
- E. VERIFY USE OF PROPER MATE THICKNESS DURING PLACEME COMPACTED FILL. (CONTINUOU
- F. PRIOR TO PLACEMENT OF COM AND VERIFY THAT THE SITE H

II. REINFORCING STEEL

- A. PLACING OF REINFORCING .
- B. SAMPLING AND TESTING STEE **IDENTIFICATION OF STEEL).**

III. CONCRETE:

- A. INSPECT FORMWORK FOR SHA OF THE CONCRETE MEMBER E
- B. BOLTS TO BE INSTALLED IN CC
- C. VERIFY USE OF REQUIRED DE
- D. AT THE TIME FRESH CONCRET FOR STRENGTH TESTS, PERFC AND DETERMINE THE TEMPER
- E. INSPECT CONCRETE AND SHO APPLICATION TECHNIQUES.
- F. VERIFY MAINTENANCE OF SPE TECHNIQUES.....
- G. CONTINUOUS INSPECTION ANI STRUCTURAL CONCRETE EXCI 2500 PSI OR LESS

IV. METAL DECK

A. PLACEMENT, ORIENTATION, AN B. CONNECTIONS WELDED OR BO

V. STRUCTURAL STEEL

A. SAMPLING AND TESTING (MILL **B. INSTALLATION OF OPEN-WEB S**

a. END CONNECTIONS, V b. BRIDGING – HORIZON

VI. WELDING:

- A. ALL STRUCTURAL WELDING (II WELDED STUDS).....
- **B. ULTRASONIC TESTING OF FULI** CONNECTIONS AT MOMENT FR AND FIELD WELDS.
- C. STRUCTURAL LIGHT GAGE ME
- D. REINFORCING STEEL WELDING

VII. BOLTING:

- A. HIGH STRENGTH BOLT A325S0 (TORQUE VERIFICATION)
- B. HIGH STRENGTH BOLT A325N
- C. EXPANSION / ADHESIVE ANCHO MASONRY
- D. ANCHOR BOLTS OR EMBEDS I AND CONCRETE PLACEMENT)
- E. ANCHOR BOLTS OR EMBEDS I

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1. THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE DESCRIBED IN CBC 1705. COPIES OF TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE COUNTY, IN ADDITION TO OTHER NORMAL DISTRIBUTIONS, WITHIN TWO DAYS OF THE TEST OR INSPECTION.

2. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR AGENT OF THE OWNER AND NOT THE CONTRACTOR PER CBC SECTION 1704A. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE A

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A CONSTRUCTION SCHEDULE TO THE TEST AND INSPECTION FIRM TO FACILITATE THE PROPER COORDINATION OF WORK.

DATION:	CONTINUOUS	PERIODIC	TEST
COMPACTED FILL, GRADING, AND EXCAVATIONS.	🗆		
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	🗆	-	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	o □	-	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	- 🛛		
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. (CONTINUOUS)			
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRA AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	ADE		
FORCING STEEL:			
PLACING OF REINFORCING	🔳		
SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)			
CRETE:			
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	s 	•	
BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT	; · · · · ■		
VERIFY USE OF REQUIRED DESIGN MIX			
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SEF FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	PECIMENS TESTS,		
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROP APPLICATION TECHNIQUES.	ER 		
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE	AND		
CONTINUOUS INSPECTION AND TEST CYLINDERS FOR STRUCTURAL CONCRETE EXCEPT FOUNDATION CONCRETE OF 2500 PSI OR LESS	= 		
AL DECK	_		
PLACEMENT, ORIENTATION, AND BASE PREPARATION CONNECTIONS WELDED OR BOLTED			
ICTURAL STEEL			
SAMPLING AND TESTING (MILL CERTIFICATES) INSTALLATION OF OPEN-WEB STEEL JOISTS AND GIRDERS a. END CONNECTIONS, WELDED OR BOLTED	···· 🔲		
b. BRIDGING – HORIZONTAL & DIAGONAL			
.DING: Co	ONTINUOUS	PERIODIC	TEST
ALL STRUCTURAL WELDING (INCLUDES DECKING AND WELDED STUDS)			
ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS AT MOMENT FRAMES, BRACED FRAMES, AND FIELD WELDS			
STRUCTURAL LIGHT GAGE METAL FRAME WELDING	🔳		
REINFORCING STEEL WELDING.			
_TING:			
HIGH STRENGTH BOLT A325SC & A490SC (TORQUE VERIFICATION)			
HIGH STRENGTH BOLT A325N & A490N (SNUG CONTACT OF PLIES)	🗆		
EXPANSION / ADHESIVE ANCHORS IN CONCRETE OR MASONRY	🔳		
ANCHOR BOLTS OR EMBEDS IN CONCRETE (INSTALLATION AND CONCRETE PLACEMENT)			
ANCHOR BOLTS OR EMBEDS IN MASONRY (INSTALLATION AND GROUT PLACEMENT)			

STRUCTURAL TEST AND INSPECTION (CONTINUED):

VIII. MASONRY: (LEVEL B, NEW LEVEL 2)

	MINIMUM SPECIAL INSPECTION REQUIREMENTS								
		FREQUENCY							
	INSFECTION TASK	LEVEL 3							
1.	1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING AR COMPLIANCE:								
Α.	PROPORTIONS OF SITE-PREPARED MORTAR	Р							
В.	GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	Р							
C.	GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	Р							
D.	NOT USED	-							
E.	NOT USED	-							
F.	SAMPLE PANEL CONSTRUCTION	С							
2.	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE	•							
Α.	GROUT SPACE	С							
В.	NOT USED	-							
C.	PLACEMENT OF REINFORCEMENT, CONNECTORS AND ANCHOR BOLTS	Р							
D.	PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	Р							
3.	3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:								
Α.	MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	Р							
В.	PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	Р							
C.	SIZE AND LOCATION OF STRUCTURAL MEMBERS	Р							
D.	TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	С							
E.	GROUT SPACE	С							
F.	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C)	Р							
G.	NOT USED	-							
Н.	PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	С							
1.	NOT USED	-							
4.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	С							

FREQUENCY REFERS TO FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE LISTED TASK OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE. NR = NOT REQUIRED, P = PERIODIC, C = CONTINUOUS

MINIMUM VERIFICATION REQUIREMENTS	REQUIRED FOR QUALITY ASSURANCE		
	LEVEL 3		
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R		
PRIOR TO CONSTRUCTION, VERIFICATION OF $f_{\rm m}$ AND $f_{\rm AAG}$, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	R		
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	R		
DURING CONSTRUCTION, VERIFICATION OF f_m AND f_{AAC} FOR EVERY 5,000 SQ. FT. (465 SQ.M).	R		
DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT.	R		

NR = NOT REQUIRED. R = REQUIRED

IX. INSULATING CONCRETE FILL:	CONTINUOUS	PERIODIC	TEST
A. TEST CYLINDERS AND INSPECTIONS			
X. CEMENT BOARD OR PLYWOOD SHEATHING			
A. INSPECTION OF SHEATHING PLACEMENT AND CONNECTOR S	PACING		
XI. GENERAL MANUFACTURED ITEMS:			
A. APPROVED FABRICATORS REQUIRED FOR OFFSITE FABRICAT (MUST SUBMIT CERTIFICATE OF COMPLIANCE)	ION :		
B. STRUCTURAL STEEL, MANUFACTURED WOOD & GLU-LAMS, PRECAST CONCRETE, ETC			

			ROFESSION THERE	PLANS PREF	ARED BY: LTEC	Gener and N	ral Civil, Municipa d Wastewater Eng Planning, Con Aanagement and S 118 West Lime Monrovia, Ca Phone: (626) 2	al, Water ineering, struction furveying Avenue a. 91016 57-0588 02 7057	THRE MUNICIPAL 1021 E. M CLAREI (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
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METAL DECKS

- 1. ALL METAL DECK AND ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A653 SS GRADE 50 OR HIGHER AND AS SPECIFIED IN PLANS, SCHEDULES, AND SPECIFICATIONS.
- 2. THE MINIMUM YIELD STRENGTH OF THE METAL DECK SHALL BE 55 KSI.
- METAL DECK SHALL BE INSTALLED IN NOT LESS THAN THREE SPAN LENGTHS EXCEPT WHERE STEEL LAYOUT DOES NOT PERMIT.
- 4. THE METAL ROOF DECK AND ACCESSORIES SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
- a. GAUGE 18, 1½" DEEP, 36" WIDE
- b. SHEETS W/ASTM A653 G90 GALVANIZED COATING. G60 NOT ACCEPTED
- c. VERCO HSB-36; UES EVALUATION REPORT No. 0423, (Old IAPMO ES EVALUATION REPORT No. 0217 & ESR REPORT No. 2078), OR EQUAL.
- 5. SHEAR CAPACITY AND VERTICAL CAPACITY SHALL CONFORM TO LATEST APPROVAL REPORT. METAL DECKS WITHOUT APPROPRIATE APPROVAL REPORT WILL NOT BE ACCEPTED.
- 6. DECKS SHALL HAVE MINIMUM 2" BEARING AT SUPPORTS.
- 7. WELDING OF DECKING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED INSPECTOR.
- 8. UNLESS NOTED OTHERWISE, SUSPENDED PIPING, LIGHT FIXTURES OR CONDUITS SHALL NOT BE SUSPENDED FROM METAL DECK.

STRUCTURAL STEEL JOISTS:

- 1. STEEL JOIST SHALL BE FABRICATED BY A SPECIALIZED LICENSED MANUFACTURER CERTIFIED BY THE STEEL JOIST INSTITUTE.
- 2. PREFABRICATED TRUSSES SHALL BE DESIGNED BY MANUFACTURER TO SUPPORT THEIR OWN WEIGHT PLUS LIVE AND SUPERIMPOSED DEAD LOADS STATED BELOW AND AS INDICATED ELSEWHERE ON DRAWINGS & SPECIFICATIONS, WHICHEVER IS HIGHER. LOADS:
 - a. SUPERIMPOSED DEAD LOAD ON ROOF TRUSSES = 20 PSF. (EXCLUDES TRUSS WEIGHT) (20 PSF TOP CHORD /15 PSF BOTTOM CHORD NON-CUMULATIVE)
 - TOTAL MIN. ROOF DEAD LOAD = 23 PSF. (INCLUDING TRUSS WEIGHT)
- b. ROOF LIVE LOAD = 20 PSF., ROOF WIND LOAD = 20 PSF.
- c. AXIAL LOAD AT SUPPORTS = 4000 POUNDS (ASD) HORIZ. TENSION AND COMPRESSION d. ADDITIONAL 500 Lbs POINT LOAD OCCURRING ANYWHERE WITHIN THE SPAN AT THE TOP OR BOTTOM CHORD. VERIFY W/ MECHANICAL UNIT MANUF.
- e. LOADS DUE TO HUNG MECHANICAL ITEMS: PER MANUFACTURER & OTHER DETAILS
- DESIGNED AND BRACED FOR SEISMIC LOADS PER CBC. f. TRUSS BRACE LOADS (ASD): HORIZ. LOAD = 4000 Lbs, AXIAL LOAD = 4500 Lbs TENSION AND COMPRESSION
- 3. STEEL JOISTS SHALL BE DESIGNED TO MEET OR EXCEED THE LOADS REQUIRED BY THE CONTRACT DOCUMENTS IN THE STRUCTURAL DRAWINGS INCLUDING BUT NOT LIMITED TO GRAVITY, AXIAL, AND UPLIFT FORCES. WHERE A SPECIFIC STEEL JOIST IS USED ON PLAN (I.E. 20K3) THE STEEL JOIST SHALL BE DESIGNED TO MEET OR EXCEED THE MAXIMUM DESIGN LOADS PROVIDED IN THE JOIST MANUFACTURER'S LOAD TABLES. ANY CLARIFICATION NEEDED FOR LOAD REQUIREMENTS SHOULD BE DISCUSSED WITH THE ENGINEER OF RECORD PRIOR TO FABRICATION. ALL STEEL JOISTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER PROFICIENT IN STRUCTURAL DESIGN AND LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- 4. STEEL JOIST CHORDS SHALL BE DESIGNED WITH A MATERIAL YIELD STRENGTH (Fy) OF 50 KSI MINIMUM.
- STEEL JOIST WEB MEMBERS SHALL BE DESIGNED WITH A MATERIAL YIELD STRENGTH (Fy) OF 36 KSI MINIMUM.
- 6. JOISTS DAMAGED DURING TRANSPORT OR ERECTION SHALL NOT BE ERECTED WITHOUT A SIGNED AND SEALED ACCEPTANCE STATEMENT FROM THE ENGINEER OF RECORD PROFICIENT IN STRUCTURAL DESIGN AND LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED, ALL DAMAGED AND REPAIRED JOISTS MUST BE FOUND SUITABLE TO WITHSTAND THE STRUCTURAL DESIGN LOADS AND SHOULD NOT BE ERECTED WITHOUT NOTIFYING THE ENGINEER OF RECORD AND THE OWNER.
- 7. JOIST SHALL BE SHOP PAINTED IN ACCORDANCE WITH THE RECOMMENDATIONS PROVIDED BY THE STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION. TOUCH UP PAINTING MAY BE REQUIRED AFTER ERECTION FOR JOISTS EXPOSED TO WEATHER.
- STEEL JOIST SEATS AND STEEL SUPPORTS SHALL BE CONNECTED WITH A FILLET WELD ALONG EACH SIDE OF THE JOIST SEAT PARALLEL TO THE SPAN UNLESS NOTED OTHERWISE, USE 1/8" MINIMUM FILLET WELD FOR "K" JOISTS AND 1/4" MINIMUM FILLET" WELD FOR "LH" JOISTS. PROVIDE 4" MINIMUM OF BEARING LENGTH OF THE JOIST SEAT ONTO SUPPORTS FOR "LH" JOISTS AND 6" MINIMUM FOR "K" JOISTS.
- BRIDGING AND X-BRACING SHALL BE PROVIDED PER JOIST MANUFACTURER 9 RECOMMENDATIONS. JOISTS SHALL NOT EXPERIENCE DESIGN LOADS UNTIL ALL BRIDGING AND STRUCTURAL DECKING HAS BEEN INSTALLED. BRIDGING AND X-BRACING LOCATIONS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONSIDERED MINIMUMS. ADDITIONAL BRIDGING AND BRACING MAY BE REQUIRED BY THE JOIST MANUFACTURER.
- 10. STEEL JOIST SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 11. STIFFENERS SHALL BE PROVIDED AS SHOWN IN THE TYPICAL DETAILS AND IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AT ALL CONCENTRATED LOADS APPLIED TO STEEL JOISTS.
- 12. FABRICATION OF STEEL JOISTS SHALL NOT TAKE PLACE UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE STRUCTURAL ENGINEER AND RETURNED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. FABRICATE STEEL JOISTS ONLY FROM APPROVED SHOP DRAWINGS.

	AS-BID PLANS			
/T -	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463		
	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.		
	STRUCTURAL NOTES III	S-3 SHEETS NO.		
		<u>28</u> _{OF} <u>49</u>		

													AS-BID PLANS	
					PROFESSION	PLANS PRE	EPARED BY:	Ge	neral Civil, Municip and Wastewater Eng Planning, Con	al, Water gineering, nstruction	THRE	EE VALLEYS	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
					C 69578		ILTEO	\sim	Management and S 118 West Lime Monrovia, C	Surveying N e Avenue Ca. 91016	MUNICIPA 1021 E. J CLAR	L WATER DISTRICT MIRAMAR AVENUE EMONT, CA 91711	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
				$\exists l$	· · CIVIL CIVIL	engineering inc.		<i>c</i> .	Phone: (626) 357-0588 Fax: (626) 303-7957		(909) 621-5568		FOUNDATION AND FLOOR PLAN	SHEETS NO.
ENG	GR DATE	E APP	D DAT	E	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: AF	CSH RIL 2021	A	SCALE S SHOWN	FILE NO.		<u>29</u> _{OF} <u>49</u>

CONCRETE BLOCK WALL REINFORCEMENT SCHEDULE

WALL LOCATION	WALL THICKNESS	GROUT					
	(INCHES)		HORIZ.	PLACEMENT	VERT.	PLACEMENT	
EAST & WEST	8 NOMINAL	SOLID	#6@16" O.C.	CENTER	2-#6@8" O.C.	EACH FACE	YES
NORTH & SOUTH	8 NOMINAL	SOLID	#5@8" O.C.	CENTER	2-#5@16" O.C.	EACH FACE	YES

SCHEDULE NOTES:

SPECIAL INSPECTION REQUIRED: "LEVEL 3", SEE SPECIAL INSPECTION NOTES.

THE ABOVE IS MINIMUM TYPICAL REINFORCING FOR ALL CONCRETE MASONRY ELEMENTS. SEE PLAN AND DETAILS FOR ADDITIONAL REINFORCEMENT.

- SINGLE LAYER REINFORCING SHALL BE IN CENTER OF WALL UNLESS OTHERWISE DETAILED.

CONTINUOUS INTERMEDIATE STRUTS BETWEEN TRUSSES WELDED TO ROOF DECKING PER SECTION B ON DRAWING S-11
CONTINUOUS STRUTS WELDED TO C-BLOCKING PER SECTION C ON DRAWING S-11
ADDITIONAL SUPPORTS AS INDICATED.
 CENTERLINE OF TRUSS BRIDGING PER TRUSS MANUFACTURER
 CENTERLINE OF TRUSS PER MANUFACTURER
 EXTENT OF ROOF OVERHANG
 METAL ROOF DECKING

				ROFESSION RROFESSION RHER SHEID COST C 69578	PLANS PREF	LTEC	Gen a	neral Civil, Municipa and Wastewater Engr Planning, Cons Management and St 118 West Lime Monrovia, Ca Phone: (626) 35 Fax: (626) 30	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLARE (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY:	CSH	CHECKED BY:	CSH		SCALE	FILE NO.

				PROFESSION RALER SHEN FOR BULL COSTON COSTON COSTON CIVIL	PLANS PREF	ARED BY: LTEC ering inc		eral Civil, Municipa nd Wastewater Eng. Planning, Com Management and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	VE OF CALLFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APR	CSH		SCALE AS SHOWN	FILE NO.

\\2020158.00-TVMWD-MIRAGAND WELL EQIPPING\DWG\SHEETS\2020158.00 SHT 32 S-7 FOUNDATIONSECTS.DWG (04-22-21 4:43:26PM)

ENGR				OF CALIFOR	DESIGNED BY:	CSH	CHECKED E	BY:	CSH		SCALE	FILEN
LINGIN	DAIL	AFFD	DATE		DRAWN BY:	JM / MM / JG	DATE:	APRIL 2021		1	AS SHOWN	

	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463	
ICT	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.	
	STRUCTURAL DETAILS I	SHEETS NO	
		<u>33</u> _{of} <u>49</u>	

TYPICAL BAR BENDS DETAIL	\bigcap
NOT TO SCALE	-)

		С	MU LINTEL S	SCHEDULE		
SPAN	В	D	BOTTOM REINF RE	TOP INF	STIRRUPS	NOTES
0' TO 4'-0"	12"	8"	2 - #5	1 - #5	#4@16" EF	-
4'-0" TO 6'-8"	12"	24"	2 - #5	1 - #5	#4@16" EF	-
6'-8" TO 10'-0"	12"	32"	2 - #5	2 - #5	#4@16" EF	-
12"-0"	12"	40"	2 - #5	2 - #5	#4@16" EF	-
16"-0"	12"	48"	3 - #5	2 - #5	#4@16" EF	-
19"-0"	12"	16"	2 - #5	2 - #5	-	TB - EAST EL
0 TO 6'-8"	8"	24"	1 - #5	1 - #5	#3@16"	-
7'-4" TO 10'-0"	8"	32"	1 - #5	1 - #5	#3@16"	-

MASONRY LINTEL NOTES

- 1. PROVIDE 8" MIN BEARING AT EACH SIDE OF CLEAR SPAN, UNO. BEARING CELLS SHALL BE FULLY GROUTED FROM FOUNDATION TO LINTEL.
- 2. ALL REINFORCING SHALL BE CONTINUOUS AND EXTEND A FULL LAP LENGTH PAST THE OPENING. WHERE WALLS STOP SHORT OF THE FULL LAP LENGTH, OR WHERE CONTROL JOINTS OCCUR AT THE END OF AN OPENING, THE REINFORCING BARS SHALL BE TERMINATED IN THE LAST CELL WITH A STANDARD HOOK.

3. ALL LINTEL CELLS SHALL BE FULLY GROUTED.

- WHERE CONTROL JOINTS OCCUR AT ONE OR BOTH ENDS OF AN OPENING, THE LINTEL SHORING 4. SHALL REMAIN IN PLACE UNTIL THE COMPRESSIVE STRENGTH OF THE CONCRETE CAP OR CMU BOND BEAM ABOVE HAS REACHED IT SPECIFIED 28-DAY STRENGTH. (THE S-430 SLIP DOWELS ARE NOT DESIGNED TO RESIST VERTICAL LOADS)
- WHERE CONTROL JOINTS OCCUR AT ONE OF BOTH ENDS OF AN OPENING, ALL STIRRUPS SHALL BE EXTENDED 12" MINIMUM INTO THE CONCRETE CAP OR CMU BOND BEAM ABOVE. STIRRUPS SHALL BE CONTINUOUS (LAP SPLICES ARE NOT PERMITTED). ADDITIONAL #4 BARS SHALL BE PROVIDED IN THE CONCRETE CAP TO ENGAGE THE UPPER STIRRUP HOOKS. ADDITIONAL BARS SHALL BE CONTINUOUS AND SHALL EXTEND 2'-0" MIN BEYOND THE FIRST AND LAST STIRRUP.
- 6. FOR ALL OPENINGS WHERE THE HEIGHT OF MASONRY ABOVE THE OPENING IS LESS THAN ONE HALF THE HORIZONTAL LENGTH OF THE OPENING, ALL STIRRUPS SHALL BE EXTENDED 12" MINIMUM INTO THE CONCRETE CAP OR CMU BOND BEAM ABOVE. SEE NOTE 5 FOR ADDITIONAL REQUIREMENTS.

JM / MM / JG DATE:

DRAWN BY:

APRIL 2021

AS SHOWN

CM SCALE:	ULINTEL REIN	NFORC	CING 5 S-6
1-800-422-4 DIG ALE	133 RT UNDERGROUND		
PLAY IT SAFE.	SERVICE ALERT		
DIAL BEFORE YOU DIG!	WORKING DAYS PRIOR TO EXCAVATING	REV	DESCRIPTION

020158.00-TVMWD-MIRAGAND WELL EQIPPING\DWG\SHEETS\2020158.00 SHT 35 S-10 MTLSTUDDTLS.DWG (04-22-21 4:43:55PM)

220\2020158.00-TVMWD-MIRAGAND WELL EQIPPING\DWG\SHEETS\2020158.00 SHT 36 S-11 ROOFDTLS.DWG (04-22-21 4: 44: 04P

GENERAL NOTES:

- BIDDERS SHALL VISIT THE JOB SITE TO MAKE THEMSELVES THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND SHALL BE FAMILIAR WITH THE EXTENT OF WORK TO BE DONE ON THE DRAWINGS AND SPECIFICATIONS BEFORE SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DISTRICT TO TAKE APPROPRIATE ACTIONS FOR THE BID.
- DESCRIPTION OF WORK: THE SCOPE OF WORK COVERED BY THIS SECTION CONSISTS OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND SUPERVISION TO COMPLETE THE CONSTRUCTION OF THE COMPLETE FUNCTIONING ELECTRICAL SYSTEMS IN ACCORDANCE WITH THESE SPECIFICATIONS AND DRAWINGS, TO OPERATE SAFELY AND SATISFACTORILY.
- DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. VERIFY THE INFORMATION AGAINST FIELD CONDITIONS. PROVIDE CLARIFYING DETAILS WHERE REQUIRED BY THE INSPECTING OFFICER AND OBTAIN THE ENGINEER'S AND THE INSPECTOR'S APPROVAL PRIOR TO INSTALLATION.
- CODE REQUIREMENTS: ALL WORK SHALL CONFORM WITH THE NATIONAL ELECTRICAL CODE 2011 EDITION; CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 3(2010 EDITION); CAL/OSHA TITLE 8, CHAPTER 4, SUBCHAPTER 5, ELECTRICAL SAFETY ORDERS; THE AMERICANS DISABILITIES ACT (1990) AND AMENDMENT (2008); AND OTHER AUTHORITIES HAVING JURISDICTION. RESOLVE CODE CONFLICTS PRIOR TO INSTALLATION. ANY CONFLICTS BETWEEN THE REQUIREMENTS, SHALL BE GOVERNED BY THE MOST STRINGENT REQUIREMENT.
- EXISTING CONDITION: ALL EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM EXISTING AVAILABLE DRAWINGS WHICH MAY NOT REFLECT THE EXACT AS-BUILT CONDITIONS. CONTRACTOR SHALL INCLUDE IN HIS BID TO PERFORM FIELD INVESTIGATIONS AS NECESSARY TO IDENTIFY THE EXACT LOCATIONS, NUMBERS, SIZES, AND EXISTING FUNCTIONING OF THE ITEMS TO REMAIN AND RECONNECTED TO THE NEW SYSTEM AS REQUIRED FOR THE NEW CONSTRUCTION. ANY CONFLICTS SHALL BE RESOLVED PRIOR TO COMMENCE ANY WORK.
- UTILITY INTERRUPTIONS: NO LIVE LINE WORKS ALLOWED FOR THIS PROJECT. DE-ENERGIZE THE EQUIPMENT OR COMPONENTS PRIOR TO START ANY WORK. WHEN AN INTERRUPTION IS NECESSARY TO THE SYSTEMS, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IN WRITING AT LEAST 48 HOURS IN ADVANCE AND FOLLOW HIS INSTRUCTIONS TO ARRANGE THE OUTAGE SCHEDULES. ANY OVERTIME PAY DUE TO THE OUTAGES OR FOR ANY NON-REGULAR HOUR WORKING SHALL BE INCLUDED IN THE BID.
- CONTRACTOR SHALL FURNISH SOLID STATE DEVICES WHERE AVAILABLE AND WHERE APPLICABLE. ONLY THE DISTRICT APPROVED DEVICES SHALL BE USED. SOLID STATE TIME DELAY RELAYS SHALL BE USED UNLESS MOTOR DRIVEN UNITS ARE SPECIFIED OR PERMITTED. PNEUMATIC TIMING DEVICES SHALL NOT BE USED.
- FLOOR OPENING LOCATIONS FOR ELECTRICAL CONDUITS SHALL BE VERIFIED OR SPECIFIED PRIOR TO CONSTRUCTION. ADJUST OPENING LOCATIONS AND COMPONENT LOCATIONS AS REQUIRED FOR EQUIPMENT TO BE FURNISHED.
- CONDUIT SYSTEM: CONDUIT RISERS SHALL BE STUBBED UP 6 INCHES MINIMUM AND THEY SHALL BE GALVANIZED RIGID STEEL TYPE. SCHED 40 PVC CONDUIT SHALL BE USED FOR THE UNDERGROUND INSTALLATION. USE GALVANIZED RIGID STEEL CONDUITS FOR ALL THE ABOVE GROUND AREA INSTALLATION. MATERIALS OF THE CONDUIT FITTINGS AND BOXES SHALL MATCH THE CONDUIT.

CONDUITS TERMINATING AT MOTOR CONTROL CENTER AND CONTROL CABINET, SHALL BE EQUIPPED WITH A GROUNDING BUSHING 'OZ' TYPE GB.

ALL CONDUITS SHALL BE RECESSED IN WALL, CLG OR UNDERGROUND, IF APPLICABLE.

- 10. CONDUCTORS SHALL BE STRANDED COPPER WITH THHN/THWN INSULATION.
- 11. NAMEPLATES SHALL BE PROVIDED IN ACCORDANCE WITH THE BASIC ELECTRICAL SPECIFICATIONS. THEY SHALL BE LAMINATED PLASTIC WITH 1/8" WHITE LETTERING ON BLACK BACKGROUND AND THEY SHALL BE FASTENED WITH STAINLESS STEEL DRIVE SCREWS.
- 12. MOTOR LEADS SHALL BE ENCLOSED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT FROM RIGID CONDUIT IN PUMP BASE TO MOTOR TERMINAL BOX.
- 13. PROVIDE SEPARATE GROUNDING CONDUCTORS IN ALL THE CONDUITS REGARDLESS ANY OTHER INDICATIONS. SIZE THE GROUNDING CONDUCTORS PER NEC REQUIREMENTS.
- 14. CIRCUIT BREAKERS SHALL BE 100% RATED TYPE, IF AVAILABLE FOR THE SIZE. MINIMUM INTERRUPTING CAPACITY OF EACH PROTECTIVE DEVICE IN THE SWITCHBOARD AND MCC SHALL BE 35,000 SYMMETRICAL AMPERES.
- 15. ALL THE CONTROL RELAYS SHALL BE MACHINE TOOL GRADE RELAYS, UNLESS OTHERWISE INDICATED.
- 16. A FEW JUNCTION BOXES ARE SHOWN ON THE DRAWINGS FOR A CLARIFICATION FOR THE CONDUIT SYSTEM. CONTRACTOR SHALL PROVIDE ADDITIONAL BOXES AS REQUIRED FOR THE CONDUIT SYSTEM. ALL THE JUNCTION BOXES AND THE DEVICE ENCLOSURES SHALL BE CAST ALUMINUM OR CAST IRON, WATERPROOF TYPE. THE JUNCTION BOXES AND ENCLOSURES SHALL BE SIZED PROPERLY TO EXCEED THE NEC REQUIREMENTS.
- 17. FINAL CONNECTIONS TO MOTORS AND THE CONTROL EQUIPMENT OR FIELD DEVICES SHALL BE LIQUID-TIGHT FLEXIBLE CONDUITS. REGARDLESS ANY OTHER INDICATIONS ON THE DRAWINGS. THE FLEXIBLE CONDUIT LENGTH FOR THE FINAL CONNECTIONS SHALL BE MAXIMUM 18".
- 18. INSTRUMENTATION CONDUCTORS SHALL RUN IN SEPARATE CONDUITS FROM THOSE CONTAINING A.C. POWER CONDUCTORS. INSTRUMENTATION CONDUCTORS SHALL BE CONTINUOUS. NO CABLE SPLICING IS ALLOWED. PROVIDE FIELD CONDUCTORS FOR THE SENSORS, TRANSDUCERS, TRANSMITTERS, AND CONTROLLERS SHALL BE PROVIDED BY THE SENSOR OR DEVICE MANUFACTURES' REQUIREMENTS AND INSTRUCTIONS, REGARDLESS ANY INDICATIONS ON THESE DRAWINGS. PROVIDE CKT CONDITIONING MATERIALS AS NECESSARY TO MEET THE DEVICE MFR'S REQUIREMENTS FOR THE PROPER FUNCTIONING OF THE DEVICES.
- 19. UNLESS AS NOTED OTHERWISE, MINIMUM SIZE OF CONDUIT SHALL BE 3/4" AND MINIMUM SIZE OF CONDUCTOR SHALL BE AWG #12.
- 20. UNLESS OTHERWISE NOTED (SUCH AS "EXISTING" OR "(E)"), ALL THE ITEMS SHOWN ON THE DRAWINGS ARE NEW INSTALLATION.
- 21. IDENTIFICATIONS: COMPLETE IDENTIFICATION OF PROJECT ELECTRICAL COMPONENTS IS REQUIRED. IDENTIFY ALL EQUIPMENT, PANELS, DISCONNECTS, CONDUIT RUNS, CONTROL DEVICES, ETC. WITH THE NOMENCLATURE REQUIRED, USING PLASTIC LAMINATE NAMEPLATE. STENCILED DESIGNATIONS FOR CONDUIT RUNS ON 25' CENTERS AND ON BOTH SIDES OF WALL AND FLOOR PENETRATIONS. INDICATE CIRCUIT DESIGNATION AND NUMBER ON ALL CONDUCTORS WITH PREMARKED. SELF-ADHESIVE, WRAPAROUND CLOTH WIRE MARKERS IN EVERY ACCESSIBLE ENCLOSURES INCLUDING EVERY OUTLET BOX OR JUNCTION BOX. CONSULT THE ENGINEER FOR COLOR REQUIREMENTS FOR THE NAMEPLATES, STENCILS, TAGS, AND LETTERING. INSTALL TYPEWRITTEN DIRECTORIES OF ALL CIRCUITS REFLECTING ALL CHANGES, ON INSIDE OF EACH PANEL.
- 22. PROVIDE MATERIALS AS NECESSARY FOR MOUNTING ALL THE EQUIPMENT AND COMPONENTS.
- 23. RECORD DRAWINGS: THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE "AS-BUILT" RECORD SET OF DRAWINGS WHICH SHALL SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND THE EXACT "AS-BUILT" LOCATIONS AND SIZES OF THIS TRADE. UPON COMPLETION OF THE WORK, THIS SET OF DRAWINGS SHALL BE DELIVERED TO THE DISTRICT.

UNDERGROUNE SERVICE ALER

AT LEAST TW WORKING DAYS PRIOR TO EXCAVATING

REV

GENERAL NOTES (CONTINUED)

- DONE AT NO COST TO THE DISTRICT.
- 26. COORDINATE WITH SCE FOR THE NEW CONSTRUCTION.

SPECIAL NOTE FOR EQUIPMENT ANCHORAGE:

ALL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA: FIXED EQUIPMENT ON GRADE 30% OF OPERATING WEIGHT FIXED EQUIPMENT ON STRUCTURE 45% OF OPERATING WEIGHT EMERGENCY POWER EQUIPMENT ON GRADE 40% OF OPERATING WEIGHT EMERGENCY POWER EQUIPMENT ON STRUCTURE 60% OF OPERATING WEIGHT FOR FLEXIBLY MOUNTED EQUIPMENT USE 4 X THE ABOVE VALUES. SIMULTANEOUS VERTICAL FORCE USE 1/3 X HORIZONTAL FORCE.

FOR EQUIPMENT WEIGHING MORE THAN 400 POUNDS AND WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWING. THE CONTRACTOR SHALL SUBMIT ISOLATION/ANCHORAGE DETAIL FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. THE DETAILS SHOULD INCLUDE ALL ELEMENTS TO BE FURNISHED BETWEEN THE EQUIPMENT AND BUILDING STRUCTURE TO PROVIDE THE REQUIRED SUPPORT.

FOR EQUIPMENT WEIGHING LESS THAN 400 POUNDS AND WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS. THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE RESPONSIBLE ENGINEER AND THE FIELD INSPECTOR.

CODE.

DESCRIPTION

24. PRELIMINARY OPERATION: THE DISTRICT RESERVES THE RIGHT TO OPERATE PORTIONS OF THE ELECTRICAL SYSTEM ON A PRELIMINARY BASIS WITHOUT VOIDING THE GUARANTEE OR RELIEVING THE CONTRACTOR OF HIS RESPONSIBILITIES.

25. OPERATIONAL TESTS: UPON COMPLETION OF ALL THE INSTALLATION, THE CONTRACTOR SHALL CONDUCT AN OPERATING TEST TO ADJUST AND TEST ALL CIRCUITS, AND ANY OTHER ELECTRICAL ITEMS TO INSURE ALL THE ELECTRICAL SYSTEMS ARE IN A SATISFACTORY OPERATING CONDITION. ITEMS IN NEED OF CORRECTIONS OR DISCOVERED DEFECTS DURING SUCH TESTING, SHALL BE IMMEDIATELY REPAIRED THEN SHALL BE RETESTED. ALL SUCH REPAIRS OR REPLACEMENTS SHALL BE

ALL CALCULATIONS SHALL CONFORM TO THE CRITERIA ABOVE AND THE MINIMUM STANDARDS OF 2010 CALIFORNIA BUILDING

SYMBOLS: DIAGRAMS 3-PHASE MOTOR, 250 HORSE POWER. HAND-OFF-AUTO (HOA) SWITCH ELAPSE TIME METER, CRAMER MOD # 635E&S

FIELD WIRING (BY CONTRACTOR OR RESPONSIBLE VENDOR) INTERNAL PANEL WIRING (BY CONTRACTOR OR RESPONSIBLE VENDOR)

PILOT LIGHT, LED TYPE, NEMA 4, OIL TIGHT, PUSH-TO-TEST. G: GREEN, A: AMBER, R: RED, W: WHITE,

GROUNDING

SPLICE

250

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EOL

CONTROL RELAY WITH RELAY SOCKET

TIME DELAY RELAY WITH RELAY SOCKET

SOLID-STATE-SOFT(REDUCED VOLTAGE)-STARTER, SIZE 5.

NORMALLY OPEN CONTACT

NORMALLY CLOSED CONTACT

HAND-OFF-AUTO 3-POSITION SELECTOR SWITCH

LIMIT SWITCH-NORMALLY OPENED

HIGH PRESSURE SWITCH, CLOSE ON RISING PRESSURE

CIRCUIT BREAKER

OPEN AFTER DELAY ON ENERGIZATION

CLOSE AFTER DELAY ON ENERGIZATION

GENERATOR

SOLID STATE (SOFT) STARTER

ELECTRONIC OVERLOAD

THERMOSTAT

PLANS

\bigcirc	JUNCTION BOX OR PULL BOX SIZED PER N	EC.	
	3/4"C-2#12+1#12GND. (HASH MARK INDICATE NUMBER OF #12 CO #12 GROUND CONDUCTOR, UNLESS OTHEF	NDUCTORS PLUS RWISE NOTED.)	
	CONDUIT HIDDEN IN WALL, CLG OR UNDER	GROUND	
	OVERHEAD OR EXPOSED ABOVE GROUND	CONDUIT.	
0	CONDUIT UP TOWARD VIEWER		
	CONDUIT DOWN AWAY FROM VIEWER.		
XX	HOME RUN, P=PANEL, 6=CIRCUIT, M=MCC,	3=SECTION 3.	
\sim	LIQUID-TIGHT FLEXIBLE CONDUIT.		
€	CONVENIENCE RECEPTACLE OUTLET, DUP 3 WIRES, GROUNDING TYPE.	PLEX 125V, 2 POLES,	
S	SINGLE POLE SWITCH		
S ₃	3-WAY SWITCH		
OS	OCCUPANCY SENSOR		
S_{TM}	SPRING-WOUND TIMER SWITCH		
ARED BY:	General Civil, Municipal, Water	THREE VALLEVS	r
	and wastewater Engineering, Planning, Construction)
	Management and Surveying	MUNICIPAL WATER DIST	RIC

				ROFESSION 4
ENGR	DATE	APPD	DATE	PALECTRICAL

PLANS PREF	LTEC	Ger 2 7 2.	neral Civil, Municipa and Wastewater Eng Planning, Con Management and S 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THREI MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DIST IRAMAR AVENUE MONT, CA 91711 19) 621-5568
ESIGNED BY:	CSH	CHECKED BY:	CSH		SCALE	FILE NO.
RAWN BY:	JM / MM / JG	DATE: API	RIL 2021		AS SHOWN	

ABBREVIATIONS:

A AF APPROX AT AWG AC AS	AMPERE AMPERE FRAME OR FUSE APPROXIMATELY AMPERE TRIP AMERICAN WIRE GAUGE ALTERNATING CURRENT AMPERE SWITCH	NC NEC No. N NO NTS NA
AM ADJ AFF AIC AUTO A-B	AMPERE METER ADJUSTABLE ABOVE FINISHED FLOOR AMPERE INTERRUPTING CURRENT IN RMS SYM CURRENT AUTOMATIC ALLEN-BRADLEY	NEMA NIC OC OL
BLK BC BLDG BKR BP	BLACK BARE COPPER BUILDING BREAKER BOOSTER PUMP	PB PNL PVC PWR PR
CKT CT CO CR CAT C-H C COMM CS CONC CPT CWP	CIRCUIT CURRENT TRANSFORMER COMPANY CONTROL RELAY CATALOGUE CROUSE-HINDS CYCLE OR CONDUIT COMMUNICATION CONTROL SWITCH CONCRETE CONTROL POWER TRANSFORMER COLD WATER PIPE	PH PT PS REM RCPT REQ'D REV RM RMS RQMTS
DIA DIAG DIV DWG DC DPDT DIST DIM DISC DS DM	DIAMETER DIAGRAM DIVISION DRAWING DIRECT CURRENT DOUBLE-POLE DOUBLE-THROW DISTRIBUTION DIMENSION DISCONNECT DISCONNECT SWITCH DEMAND	SA SCE SEL SPEC SHT SECT SHLD SN SW SWBD SYM SST
EA ELEC ELEV EQUIP ETM EXIST (E)	EACH ELECTRICAL ELEVATION EQUIPMENT ELAPSE TIME METER EXISTING EXISTING	STP STL SYS SH TR SIG SQ-D
FLA FLEX FLS FVNR F FT FWD	FULL LOAD AMPS FLEXIBLE FLOW SENSING SIGNALING RELAY FULL VOLTAGE, NON-REVERSING FUSE FOOT OR FEET OR FLOW TRANSMITTER FORWARD	TD TYP TEMP TERM TEFC TEL TEL TSP
GA GALV GFI GND GRS	GAUGE GALVANIZED GROUND FAULT INTERRUPTING GROUND GALVANIZED RIGID STEEL CONDUIT	UG UON UV V
HV HT HP HPS HTR HZ HOA INSTR	HIGH VOLTAGE HEIGHT HORSEPOWER HIGH PRESSURE SWITCH HEATER HERTZ HAND-OFF-AUTO INSTRUMENT	VD W W/ WP XFMR XFR
JB JCT	JUNCTION BOX JUNCTION	XMTR XDCR
KVA KW KV	KILO-VOLT AMPERE KILOWATT KILOVOLT	@ & Ø %Z 3/C
LA LOS LTG LVL LPS	LIGHTNING ARRESTER LOCK OUT STOP LIGHTING LEVEL LOW SUCTION PRESSURE SWITCH	
MAX MCC MCM MCP MH MIN MISC MTD MTG MTG MTR mA MAG MAINT MFR	MAXIMUM MOTOR CONTROL CENTER KILO CIRCULAR MILS MOTOR CIRCUIT PROTECTOR MOUNTING HEIGHT MINIMUM MISCELLANEOUS MOUNTED MOUNTING MOTOR MILLIAMPERE MAGNET, MAGNETIC MAINTENANCE MANUFACTURER	

NORMALLY CLOSED NATIONAL ELECTRICAL CODE NUMBER NEUTRAL NORMALLY OPEN NOT TO SCALE NOT APPLICABLE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NOT IN CONTRACT OVERCURRENT OVERLOAD PULL BOX PUSHBUTTON POLE PANEL POLYVINYL CHLORIDE POWER PAIR PHASE PRESSURE TRANSMITTER PRESSURE SWITCH REMOTE RECEPTACLE REQUIRED REVISION ROOM ROOT MEAN SQUARE REQUIREMENTS SURGE ARRESTER SOUTHERN CALIFORNIA EDISON COMPANY SELECTOR SPECIFICATIONS SHEET SECTION SHIELD SOLENOID SWITCH SWITCHBOARD SYMMETRICAL STAINLESS STEEL STOP STEEL SYSTEM SHUNT TRIP SIGNAL SQUARE-D COMPANY **TERMINAL BLOCK** TIME DELAY TYPICAL TEMPERATURE TERMINAL TELEPHONE TELEPHONE TWISTED SHIELDED PAIR UNDERGROUND UNLESS OTHERWISE NOTED UNDERVOLTAGE VOLTS VOLT AMPERE VOLTAGE DROP

WATT OR WEST WITH WEATHERPROOF

TRANSFORMER TRANSFER TRANSMITTER TRANSDUCER

AND PHASE PERCENT IMPEDANCE CONDUCTOR, MULTIPLE (NUMBER INDICATED)

T	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
∠ 1	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.
	ABBREVIATIONS	SHEETS NO.
		<u>37</u> _{of} <u>49</u>

120/208 VAC, 3

PHASE, 4 WIRE .

PHASE, 4 WIRE ,					PO	WER PAN	EL PP					10 KAIC
100A MAIN BREAKER,												
CONDUCTORS	CABLE#	CKT#	LOAD	BKR SIZE	VA	CONF.	VA	BKR SIZE	LOAD	CKT#	CABLE #	CONDUCTORS
2-#12 + #12G, 3/4"C	P201	1	EXTERIOR LIGHTING	20/1	150	+++	1080	20/1	DUPLEX RECEPTS.	2	P202	2-#12 + #12G, 3/4"C
2-#12 + #12G, 3/4"C	P203	3	SCADA SYSTEM	20/1	600	┤┿┿┼	12	20/1	EMERGENCY LIGHTING	4	P204	2-#12 + #12G, 3/4"C
2-#12 + #12G, 3/4"C	P205	5	INTERIOR LIGHTING	20/1	784	▏╇╇╋	528	20/1	CHEM. ROOM EXH. FAN	6	P206	2-#12 + #12G, 3/4"C
	P207	7	SPARE	20/1		Ì┢┽∓		20/1	SPARE	8		
	P209	9	SPARE	20/1		▏╇╋╋		20/1	SPARE	10		
2-#12 + #12G, 3/4"C	P211	11	SOUTH GATE OPERATOR	20/1	1176	▏∔∓┢		20/1	SPARE	12		
2-#12 + #12G, 3/4"C	P213	13	EAST GATE OPERATOR	20/1	1176	Ì ∳∔∔		20/1	SPARE	14		
		15	SPARE	20/1		┤┼┿┼		20/1	SPARE	16		
2-#12 + #12G, 3/4"C	P217	17	FLOWMETER FIT-100	20/1	60	│┃╋╋		20/1	SPARE	18		
		19	SPARE	20/1		│ ✦╂ ╋	1725	20/2	ELECT. RM. AIR COND.	20	P220	2-#12 + #12 G, 3/4"C
		21	SPARE	20/1		┤┽┿┼	1725			22		
2-#12 + #12G, 3/4"C	P223	23	IRRIGATION CONTRL.	20/1	60	│ ┽┼┿	528	20/1	PUMP ROOM EXH. FAN	24	P224	2-#12 + #12G, 3/4"C
		•	•	SUBTOTAL:	9604	S/N			·	•	•	

PHASE A LOAD: PHASE B LOAD: PHASE C LOAD:

PLAY IT SAFE. DIAL BEFORE YOU DIG!

4131 2337 3136

1-800-422-4133 DIGALERT

UNDERGROUND SERVICE ALERT

REV

AT LEAST TWO

WORKING DAYS PRIOR TO EXCAVATING

<u>AMPS@120V:</u>

27 AMPS

LOAD CALCULATIONS											
LOAD	HP	KVA	AMPS								
MIRAGRAND WELL #1	100		124								
MOV-101	1.5		5								
MOV-102	1.5		5								
30 KVA TRANSFORMER		30	36								
SUBTOTAL:			170								
25% OF LARGEST MOTOR			39								
TOTAL:			209								

USE 400 AMPS

- RECOMMENDATION.
- CONNECTOR MODEL GCP-N-0-5-400-5-1-3-0-0.
- CONNECTORS TO PROPERLY MATE WITH GENERATOR CONNECTION PANEL.
- OPERATION.
- FOR INSTALLATION OF SCADA EQUIPMENT.

				PROFESSION AT FROMEER	PLANS PRE CIVI engine	PARED BY: LTEC ering ind	Gener and M	al Civil, Municipa l Wastewater Eng. Planning, Con lanagement and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	nl, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREI (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	THE OF CALLFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRIL	CSH _ 2021		SCALE AS SHOWN	FILE NO.

1. MAIN BREAKERS ARE KIRK-KEY INTERLOCKED TO FUNCTION AS A MANUAL TRANSFER SWITCH FOR USE WITH A

2. SIZE OF CIRCUIT BREAKER FEEDING SURGE PROTECTION DEVICE (SPD) SHALL BE PER MANUFACTURERS

3. GENERATOR CONNECTION BOX SHALL BE IN A NEMA 4X RATED ENCLOSURE. BOX SHALL BE A UNION

4. PORTABLE GENERATOR IS INTENDED TO BE A TRAILER MOUNTED 480/277V, 3 PHASE, 60 HZ, 350 KVA UNIT WITH A 400 AMP OR LARGER CIRCUIT BREAKER. CONNECTOR CABLES SHALL BE FITTED WITH FEMALE POSI-LOCK

5. VARIABLE FREQUENCY DRIVE UNIT FOR WELL PUMP MOTOR SHALL BE SUPPORTED BY A NEMA SIZE 4 FVNR STARTER. OUTPUTS TO THE VFD AND STARTER SHALL BE CONNECTED INTERNALLY WITHIN THE MCC. BOTH THE VFD AND STARTER CIRCUIT BREAKERS SHALL BE KIRK-KEY INTERLOCKED TO PREVENT SIMULTANEOUS

6. MOTOR CONTROL CENTER SHALL BE FURNISHED WITH A EMPTY 30' WIDE SECTION AT THE END OF THE LINEUP

ſ	MAIN	SPD		PANEL PP	
	BKK.	SHARK PWR. MTR.	VFD		SCADA
		(2) MOV			
١G	GEN. BKR.	NEMA 4 STARTER		30 KVA XFMR	
	20"	20"	20"	20"	30"
-		-			

MOTOR CONTROL CENTER LAYOUT SCALE: 1" = 2'-0"

AS-BID PLANS PROJECT NO

ГСТ	THREE VALLEYS MUNICIPAL WATER DISTRICT	58463		
	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.		
	SINGLE LINE DIAGRAM	E-2		
		SHEETS NO.		
		<u>38</u> _{of} <u>49</u>		

NOTE: ELEMENTARY WIRING SHOWN FOR ALLEN-BRADLEY 753 VARIABLE FREQUENCY DRIVE.

GENERAL NOTES:

- 1. INSTALL L3 LIGHT FIXTURES ON POSTS ON EACH SIDE OF GATES.
- 2. SEE DRAWING E-5 FOR LIGHT FIXTURE SCHEDULE.
- 3. SEE DRAWING E-7 FOR GATE OPERATOR WIRING AND DETAILS.
- 4. STEEL FENCE TO BE CONTINUOUSLY GROUNDED THROUGH REBAR AT EACH PILASTER FORMER A UFER TYPE GROUNDING SYSTEM. CONTRACTOR TO INSTALL #12 AWG BARE COPPER CABLE BETWEEN REBAR WITHIN FOUNDATION OF EACH PILASTER TO STEEL FENCE. CONNECTION BETWEEN BARE COPPER CABLE AND REBAR SHALL BE EXOTHERMAL WELD. CONNECTION BETWEEN COPPER CABLE AND FENCE SHALL BE COMPRESSION TYPE RING-TONGUE TERMINAL INSTALLED UNDER SCREW ANCHOR FOR FENCE ON BOTH SIDES OF PILASTER.
- 5. CONTRACTOR IS RESPONSIBLE FOR INSTALLING UNDERGROUND CONDUIT U001 FOR PRIMARY UTILITY FEEDER FROM TRANSFORMER TO NEW POLE LOCATION. LOCATION OF POLE NOT DETERMINED AT THIS TIME. CONTRACTOR TO ESTIMATE INSTALLING 5" PVC CONDUIT 120' UNTIL EXACT LOCATION OF POLE DETERMINED.

THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO. E-4
	SHEETS NO

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL #	VOLTAGE	LAMPS						
L1	LED VAPOR TIGHT STRIP	LITHONIA	VAP-6000LM-PCL-WD-120-30K-80CRI-DL	120	LED						
L2	OUTDOOR WALL LIGHT	LITHONIA	WST-LED-P2-30K-VW-120	120	LED						
L3	OUTDOOR PIER LIGHT	FRANKLIN IRON	HICKORY POINT 16" BRONZE PIER	120	LED						
Х	EXIT COMBO UNIT	LITHONIA	LHQM LED R	120	LED						

1-8	00-422-413	3		
D	GALER	Т		
		UNDERGROUND SERVICE ALERT		
DIAL BEFORE YOU DIG!		WORKING DAYS PRIOR TO EXCAVATING	REV	DESCRIPTION

				PROFESSION AL HIGH	PLANS P CIV engin	REPARED BY: THE TEC neering ind	Genera and <u>M</u> <u>C</u> .	al Civil, Municipa Wastewater Engr Planning, Cons anagement and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	nl, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	PLE OF CALIFOR	DESIGNED BY:	CSH	CHECKED BY:	CSH		SCALE	FILE NO.
					DRAWN BY:	JM / MM / JG	DATE: APRIL	2021		AS SHOWN	

GENERAL NOTES:

- 1. CONTRACTOR TO ESTABLISH GROUNDING COUNTERPOISE AROUND BUILDING CONSISTING OF #4/O BARE COPPER BURIED 12" DEEP AROUND PERIMETER OF BUILDING AND 12" AWAY FROM WALL. INSTALL TWO (2) 3/4" x 10' GROUND RODS IN WELLS AT OPPOSITE CORNERS OF BUILDING.
- 2. CONTRACTOR TO INSTALL #2 BARE COPPER GROUNDING CONDUCTORS FROM GROUNDING COUNTERPOISE TO METAL ROOF STRUCTURE IN OPPOSITE CORNERS OF BUILDING. GROUNDING CONDUCTORS SHALL BE INSTALLED RISING THROUGH INTERIOR OF BUILDING AND NOT VISIBLE FROM EXTERIOR. CONNECT GROUNDING CONDUCTOR TO ROOF BY USING BOLTED LUG TO STEEL ROOF TRUSS.
- 3. L2 WALL LIGHTING FIXTURES TO BE MOUNTED 84" ABOVE DOOR LANDING. INSTALL PHOTOCELL ON ROOF AT NORTHEAST CORNER TO CONTROL LIGHTS AT NIGHT. INSTALL 100W EQUIVALENT LED LAMP.
- 4. L3 PIER LIGHTING FIXTURES TO BE MOUNTED ON GATE. SEE ELECTRICAL SITE PLAN FOR LOCATIONS. INSTALL 100W EQUIVALENT LED LAMP.
- 5. TYPE X COMBO EXIT SIGN TO BE POWERED FROM PANEL PP, CIRCUIT 4 (NOT SHOWN FOR CLARITY).
- 6. ALL CONDUIT IN CHEMICAL ROOM SHALL BE PVC-COATED GRS. ALL OTHER ELECTRICAL EQUIPMENT IN CHEMICAL ROOM BE DESIGNED NEMA 4X FOR CORROSIVE ENVIRONMENT.
- 7. PROVIDE A 2-POLE 30 AMP RATED FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE FOR AIR CONDITIONER CONDENSER. PROVIDE (2) 20 AMP FUSES.

AS-BID PLANS PROJECT NO. THREE VALLEYS MUNICIPAL WATER DISTRICT 58463 RICT MIRAGRAND WELL EQUIPPING IMPROVEMENTS DRAWING NO. E-5 BUILDING ELECTRICAL PLAN SHEETS NO. <u>41</u> _{OF} <u>49</u>

				PROFESSION AT THE REPORT	PLANS PRE	PARED BY: LTEC ering ind	Genera and Ma	al Civil, Municipa Wastewater Engi Planning, Cons anagement and Su 118 West Lime Monrovia, Ca Phone: (626) 35 Fax: (626) 30	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREI (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRIL	CSH 2021		SCALE AS SHOWN	FILE NO.

<u>42</u> _{of} <u>49</u>

											AS-BID PLANS	
				PROFESSION	PLANS PREPARED BY:		General Civil, Munici and Wastewater En Planning, Co	pal, Water gineering, onstruction	THRE	E VALLEYS	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463
				TIGITO CONTRACTOR	CIVILTE	$\underline{\mathbf{C}}_{nc}$	Management and 118 West Lim Monrovia, (Phone: (626)	<i>Surveying</i> le Avenue Ca. 91016 357-0588 202 7057	MUNICIPAL 1021 E. M CLARE	2 WATER DISTRICT IRAMAR AVENUE MONT, CA 91711 09) 621-5568	MIRAGRAND WELL EQUIPPING IMPROVEMENTS GATE OPERATOR, WIRING, AND	DRAWING NO. E-7
ENGR	DATE	APPD	DATE	OF CALLFOR	DESIGNED BY: CSH DRAWN BY: JM / MM /	CHECKED BY G DATE:	CSH APRIL 2021	303-7937	SCALE AS SHOWN	FILE NO.	DETAIL	SHEETS NO

CONCRETE PAD SURFACE

3/4" PVC TO GATE -

OPERATOR

CONTROL STATION MOUNTING DETAIL

APRIL 2021

AS SHOWN

JM / MM / JG DATE:

DRAWN BY:

NOTES:

- 1. WHERE CONDUITS ARE INSTALLED IN A CONCRETE SLAB, THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
- 2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.
- 3. MOUNT INSTRUMENT AS PER MANUFACTURERS' RECOMMENDATIONS.

GRS STUB-UP TO LTC DETAIL NOT TO SCALE

ANTENNA DETAIL NOT TO SCALE

				ROFESSION RUNK. Journal		CIV	PARED BY:		Genera. and Ma	 <i>l Civil, Municipa</i> <i>Wastewater Eng.</i> <i>Planning, Con.</i> <i>nagement and Si</i> 118 West Lime Monrovia, Ca Phone: (626) 3. Fax: (626) 3. 	al, Water ineering, estruction durveying Avenue a. 91016 57-0588 03-7957	THREE MUNICIPAL 1021 E. MI CLAREM (90	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 19) 621-5568
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LINGK	DATE	AFFD	DATE		DRA	WN BY:	JM / MM / JG	DATE:	APRIL	2021		AS SHOWN	

	FIRST LETTER	S		SUCCEEDING LETTERS	
ИE	ASURED OR INITIATING		READOUT OR		
	VARIABLE	MODIFIER	PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYZER		ALARM		AUTO
	BURNER, COMBUSTION				
3					
)					CLOSED
<u> </u>		DIFFERENTIAL			
<u> </u>	VOLTAGE				
<u> </u>	FLOW	RATIO			
~			GLASS, VIEWING		
<u>G</u>	GAUGE				
<u>н</u>					HIGH
<u> </u>		00411			
J	POWER	SCAN			
к	TIME, TIME SCHED	TIME RATE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
<u>–</u> И	MOTION				MIDDLE
N	INTRUSION				NORMAL
			ORIFICE.		
0	TORQUE		RESTRICTION		OPEN
P	PRESSURE		POINT CONNECTION		STOP
		INTEGRATE,			
Q	QUANTITY	TOTALIZE			
R	RADIATION		RECORD, OR PRINT		RUN OR REMOTE
s	SPEED, FREQUENCY	SAFETY		SWITCH	START
Т	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, LOUVER	
w	WEIGHT		WELL		
Х	MOTOR	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL FI EMENT	

AMPERE
ADJUSTABLE FREQUENCY DRIVE
ANALOG INPUT
AMPS INTERRUPTING CAPACITY
AIR RELIEF VALVE
ANALOG OUTPUT
AIR SUPPLY
AUTOMATIC TRANSFER SWITCH
AUTOMATIC
CIRCUIT BREAKER
CHLORINE
CONTACTOR
COPPER
CONTROL VALVE
DISTRIBUTED CONTROL SYSTEM
DISCRETE INPUT
DISSOLVED OXYGEN, DISCRETE OL
DIFFERENTIAL PRESSURE
DRAWING
EMERGENCY GAS OFF
ELAPSED TIME METER
ELAPSED TIME METER (FAST SPEE
ELAPSED TIME METER (SLOW SPEE
ELECTRONIC OVERLOAD
EXISTING
FOUL AIR
FAIL CLOSED
FINAL EFFLUENT
FORWARD-REVERSE
FLOAT SWITCH
FULL VOLTAGE NON-REVERSING
FINISHED WATER
GROUND
GALLONS
GALLONS PER DAY
GALLONS PER HOUR
GALLONS PER MINUTE
HIGH
HYDROGEN SULFIDE
HUMAN MACHINE INTERFACE
HAND-OFF-AUTO
CURRENT
INPUT/OUTPUT
INTERNAL-OFF-EXTERNAL

	P8	ID VALVI	E SYMBOLS				
\bowtie	GATE OR GENERIC VALVE	\bigotimes	DIAPHRAGM VALVE	S S			
\searrow	3-WAY VALVE	\square	DIAPHRAGM VALVE (ALTERNATE)		FLOW CONTROL VAL	VE	
	4-WAY VALVE	Ŕ	PRESSURE REGULATOR SELF CONTAINED		PRESSURE RELIEF V	ALVE	F
\bigtriangleup	ANGLE VALVE			*		VE	M
``	BUTTERFLY VALVE		GLODE VALVE		VACOOM RELIEF VAL	VL	
\bowtie	PLUG VALVE	I I	HAND VALVE		PRESSURE REGULA	OR WITH	
	ECCENTRIC		KNIFE VALVE				
\cap		<u>м</u> Т	MOTORIZED VALVE ACTUATOR	U Y	AIR RELEASE VALVE		
	CHECK VALVE	s S	SOLENOID VALVE 2-WAY				
	SWING CHECK VALVE	S	SOLENOID VALVE 3-WAY				
	STOP CHECK VALVE	r∆ S					
\mathcal{Q}	BALL CHECK VALVE		PUMP CONTROL VALVE				
\bowtie	PINCH VALVE	\bowtie					
							Π
			1-800-42	2-4133			
				SERV			
			PLAY IT SAFE. DIAL BEFORE YOU DIG!	AT LI WORK PRIOR TO EX	EAST TWO KING DAYS CAVATING REV		DESCRIPTION

			P&	ID AB	BRE	VIATIONS							TAG	NUMBERS & DES
FREQUENCY DRIVE JT RUPTING CAPACITY ALVE PUT RANSFER SWITCH AKER LVE CONTROL SYSTEM PUT XYGEN, DISCRETE OUTPUT L PRESSURE GAS OFF E METER E METER E METER (FAST SPEED) E METER (SLOW SPEED) OVERLOAD		JB L, L' LCF LCS LR MA MCI MGI MGI MGI MH MCI MO MOI MTU NPV NS NTU O/C	JI O Lu Lu C Lu C Lu M M M M M M M M M M M M M M M M M M M	UNCTION OW OCAL ARI OOP CON OCAL CO OCK-OFF OCAL/REI EVEL (i.e. IOTOR IANUAL/A IILLIAMP IANUFAC IOTOR CI IANUFAC IOTOR CI IANUFAC IILLION G IILLIGRAN IANHOLE IOTOR CI IANHOLE INCED LIQ IOSTURE IODULATI IASTER T ON-POTA ITROGEN URBIDITY IPEN / CL	BOX EA NETW ITROLLEI NTROL P -STOP MOTE . FLOAT) UTO TURE CA DNTROL (RCUIT PF TURER(S ALLONS <i>I</i> S PER L UOR RET ED ELEMETF BLE WAT I SUPPLY OSE	/ORK R ANEL SWITCH BLE CENTER ROTECTOR) PER DAY ITER TURN RY UNIT FER	PRE PS PSI PV RAS RAV REM RF RIO RS RSF RTD RUN SB SEC SLO SOV SPD SPD SPD	S PRESSURE PRESSURE POUNDS P PROCESS RETURN AG RAW WATE RAW WATE RAMOTE RAMOTE RAMOTE RAW SEWA RAW SEWA RAW SEWA RAW SEWA RAW SEWA RESET RESISTANO RESISTANO RESISTANO SERVICE E SERVICE E SERVICE E SERVICE E SINGLE LO SERVICE E SINGLE LO SSTART-LOO	SWITCH ER SQUARE INCH /ARIABLE CTIVATED SLUDGE R QUENCY PUT OUTPUT GE GE PUMP XE TEMPERATURE ELEMETRY UNIT SPEED) / SPEED) / SPEED /				TRL XXX PH	 FIRST LETTER SUCCEEDING LETTER(S) LOOP DESIGNATION NUMBER ADDITIONAL IDENTIF ABBREVIATIONS AND DESIGNATIONS
ENT EVERSE H E NON-REVERSING TER R DAY R HOUR R MINUTE ULFIDE IINE INTERFACE ITO T F-EXTERNAL		OC/ OCF OIT OL OO OO OO OO OO OO OO OO OO OO OO OO		PEN-CLC PEN-CLC PERATOI VERLOAI VOFF (M N-OFF-AI PEN-STC RESSURE ERMISSIN ROGRAM ANEL ULSE OU OSITION OTENTIO OUNDS P OUNDS PEI AIR	SE-AUTC SE-REMO R INTERF D IAINTAINI JTO EMOTE P-CLOSE E ALARM /E MABLE L TPUT METER PER GALL PER HOUF R MILLIO	ODTE FACE TERMINAL ED) HIGH OGIC CONTROLLER	SS SSS STR TAH T/M TEM TS UG USE V VFD W WAS WW XMT ZS	START/STC SOLID STA SOLID STA MOTOR ST TEMPERAT TEMPERAT TEMPERAT TOTAL SUS UNDERGRO UP/STOP/D VOLT VARIABLE WATER SWASTE AC WASTEWA TRANSMIT POSITION (OP (MAINTAINED) TE STARTER (SOF ARTER URE ALARM HIGH URE AND/OR MOIS URE URE SWITCH ORE SWITCH ORE SWITCH OWN FREQUENCY DRIV TIVATED SLUDGE TER TER TER TER I.e. LIMIT) SWITCH	T START) STURE 'E			HAI ES H HC JOA L	ND SWITCH DESIG OA EMERGENCY STOP OR HAND-OFF-AUTO OR HAND-OFF-REMOTE OR HAND-OFF-REMOTE OR HAND-OFF-REMOTE OC LOCAL-OFF-REMOTE OO LOCAL-REMOTE S/S OPEN-CLOSE ON-OFF START STOP PUSH BUT
		F	2&ID	EQUII	PMEN	IT AND PRO	CESS SY	/MBOLS					SENSING,	INDICATION, & CC
	METERIN STROKE (ROTARY SUBMER: AERATOF SUBMER: DIESEL G DIESEL G CENTRIF BLOWER	G PUMF CONTRO LUBE P SIBLE M R SIBLE P ENERA UGAL P	VITH M DL UMP IIXER UMP TOR			MOTOR OR MOTOR ACTUATOR PNEUMATIC ACTUATOR SOLENOID VERTICAL TURBINE PUMP CHLORINE TANK		SLUICE GATE SAMPLER PROPELLER FI ELEMENT CL2 FLOWMET ASS INSERTION TYN METER ASS MASS FLOW M TYPE DRAIN OUTLET SILEN	OWMETER OWMETER ELEMEN FER PE MASS FLOW ETER ANNUBAR		 INLET SILENCER ROTAMETER AIR RELIEF VALVE EJECTOR DIAPHRAGM SEAL DIFFUSER DIAPHRAGM Y-TYPE STRAINER IPS CORPORATION 	N STOP TH IPS OP	$ \begin{array}{c} \left(LE \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	ULTRASONIC LEVEL TRANSDUCER FLOAT SWITCH ON BEACON R=RED, A=AMBER, B=BLUE, G=GREEN OP INDICATING LIGHT A HAND SWITCH SMOKE DETECTOR
DESCRIPTION		ENGR	DATE) ` >	AIR COMPRESSOR	A PL HARMER A CONTRACTOR	PLANS PR	EPARED BY: ILTEC eering inco CSH	C C CHECKED BY	General Civil, Municipa and Wastewater Eng Planning, Con Management and S 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3 : CSH	al, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREI (90 SCALE	E VALLEYS WATER DISTRI IRAMAR AVENUE MONT, CA 91711 09) 621-5568 FILE NO.

IGNATIONS	LINE SYMBOLS								
	MAJOR PROCESS PIPING OR FLOW								
	SECONDARY PROCESS PIPING								
	EXISTING SECONDARY PROCESS PIPING								
R	EXISTING PIPING AND EQUIPMENT								
	FUTURE PIPING AND EQUIPMENT								
FICATION SEE D HAND SWITCH	— — — — ELECTRICAL SIGNAL								
	HYDRAULIC SIGNAL								
GNATIONS	FLOW ARROW FOR PROCESS PIPING								
	PROCESS OR SIGNAL LINE GOING TO ANOTHER SHEET (MATCH LETTERS)								
	PROCESS OR SIGNAL LINE FROM ANOTHER SHEET (MATCH LETTERS)								
ЛО	PROCESS LINES CROSSING (NOT CONNECTED)								
TTONS									
ONTROL SYMBOLS	P&ID INTERFACE SYMBOLS								
AIT ORP ORP ANALYZER	$\begin{array}{c} BBB \\ X \\ X \\ X \\ G = GREEN, A = AMBER B = BLUE \end{array}$								
PH	BBB AAA FIELD DEVICE VISCRETE OUTPUT								
ph analyzer	- AAA								
AE ANALYZER ELEMENT	BBB PANEL DEVICE ANALOG INPUT								
	BBB AAA DEVICE MOUNTED IN ANALOG OUTPUT								
AE DO DO SENSOR	SUBPAINEL								
ORP ORP	BBB REMOTE I/O TERMINAL PULSE INPUT								
AE ORP SENSOR									
PH	HMI OR OIT FUNCTION								
pH SENSOR									
	$ \begin{array}{c} I \\ X \\ $								
	DUAL CHANNEL CURRENT								
	ISOLATOR ISOLATOR								
	NOTE: REFER TO ISA INSTRUMENT IDENTIFICATION TABLE FOR DEFINITION OF LETTERS BBB								
AIT CL2 CHLORINE ANALYZER	INSIDE THE BUBBLES. CCC REPRESENTS LOOP ID (IF USED). SEE ABBREVIATIONS LIST FOR SUPERSCRIPT AAA.								
AS-BID PLANS									
THREE VA	LLEYS MUNICIPAL WATER DISTRICT								
MIRAGRAND	WELL EQUIPPING IMPROVEMENTS DRAWING NO.								
PID	NOTES, SYMBOLS, AND I-1								
	ABBREVIATIONS SHEETS NO.								

				PROFESSION RUNK PIGITE PIGITE CALE CALE CALE CALE CALE CALE CALE CALE CALE CALE CALE CALE	PLANS PRE CIV engine	PARED BY: LTEC ering ind	Genera and M.	al Civil, Municipa Wastewater Engr Planning, Cons anagement and St 118 West Lime Monrovia, Ca Phone: (626) 35 Fax: (626) 30	l, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREI (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED BY: DATE: APRIL	CSH 2021		SCALE AS SHOWN	FILE NO.

				PROFESSION ROFESSION K. JOHN RIGHTZG R	PLANS PREF	PARED BY: LTEC ering ind		General Civil, Municipa and Wastewater Eng Planning, Con Management and St 118 West Lime Monrovia, Ca Phone: (626) 3 Fax: (626) 3	nl, Water ineering, struction urveying Avenue a. 91016 57-0588 03-7957	THRE MUNICIPAL 1021 E. M CLAREN (90	E VALLEYS WATER DISTR IRAMAR AVENUE MONT, CA 91711 09) 621-5568
ENGR	DATE	APPD	DATE	OF CALIFOR	DESIGNED BY: DRAWN BY:	CSH JM / MM / JG	CHECKED B	Y: CSH		SCALE AS SHOWN	FILE NO.

	AS-BID PLANS		
ICT	THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463	
	MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.	
	FID-2	SHEETS NO. <u>48</u> OF <u>49</u>	

LEGEND:

PROJECT SITE

EXISTING ROCK PILE

TRUCK HAUL ROUTE

GENERAL NOTES:

NOTIFICATION SHALL BE MADE 48 HOURS PRIOR TO TRUCK HAULING TO THE FOLLOWING:

TVMWD 1021 E. MIRAMAR AVENUE CLAREMONT, CA 91711

CITY OF CLAREMONT 207 HARVARD AVE N CLAREMONT, CA 91711 BEN PERALTA PROJECT MANAGER (909) 621-5568

ENRIQUE VILLALOBOS ASSOCIATE ENGINEER (909) 399-5479

GENERAL CONCTRUCTION EQUIPMENT:

BACKHOE JCB 3CX:

REFERS TO THE ACTION OF THE BUCKET, NOT ITS LOCATION ON THE VEHICLE.[2] THAT IS, A BACKHOE DIGS BY DRAWING EARTH BACKWARDS, RATHER THAN LIFTING IT WITH A FORWARD MOTION LIKE A PERSON SHOVELLING, THE BUCKETS ON SOME BACKHOES MAY BE RECONFIGURED FACING FORWARD, MAKING THEM "HOES".

(210)

CN7

FOOTHILLY

IS A TYPE OF TRACTOR, USUALLY WHEELED, SOMETIMES ON TRACKS, THAT HAS A FRONT-MOUNTED SQUARE WIDE BUCKET CONNECTED TO THE END OF TWO BOOMS (ARMS) TO SCOOP UP LOOSE MATERIAL FROM THE GROUND, SUCH AS DIRT, SAND OR GRAVEL, AND MOVE IT FROM ONE PLACE TO ANOTHER WITHOUT PUSHING THE MATERIAL ACROSS THE GROUND. A LOADER IS COMMONLY USED TO MOVE A STOCKPILED MATERIAL FROM GROUND LEVEL AND DEPOSIT IT INTO AN AWAITING DUMP TRUCK OR INTO AN OPEN TRENCH EXCAVATION.

BULLDOZERS:

ARE LARGE AND POWERFUL TRACKED HEAVY EQUIPMENT. THE TRACKS GIVE THEM EXCELLENT GROUND-HOLDING CAPABILITY AND MOBILITY THROUGH VERY ROUGH TERRAIN. WIDE TRACKS HELP DISTRIBUTE THE BULLDOZER'S WEIGHT OVER A LARGE AREA (DECREASING GROUND PRESSURE), THUS PREVENTING IT FROM SINKING IN SANDY OR MUDDY GROUND. EXTRA-WIDE TRACKS ARE KNOWN AS SWAMP TRACKS OR LOW GROUND PRESSURE TRACKS. BULLDOZERS HAVE TRANSMISSION SYSTEMS DESIGNED TO TAKE ADVANTAGE OF THE TRACK SYSTEM AND PROVIDE EXCELLENT TRACTIVE FORCE.

BECAUSE OF THESE ATTRIBUTES, BULLDOZERS ARE OFTEN USED IN ROAD BUILDING, CONSTRUCTION, MINING, FORESTRY, LAND CLEARING, INFRASTRUCTURE DEVELOPMENT, AND ANY OTHER PROJECTS REQUIRING HIGHLY MOBILE, POWERFUL, AND STABLE EARTH-MOVING EQUIPMENT.

DUMP TRUCKS:

THE DUMP TRUCK CAPACITY, AS WELL AS THE DUMP TRUCK WITH THE LARGEST CAPACITY WILL ALSO AFFECT A RANGE OF OTHER FACTORS. DUMP TRUCK CAN BE MANEUVER WITHIN WORK SITE.

NOTE:

CONTRACTOR MAY HAVE A PREFERENCE OF CONSTRUCTION OF EQUIPMENT AND HAUL AWAY TRUCKS, THE CONTRACTOR HAS THE CONTROL FOR THE NECESSARY EQUIPMENT FOR THIS PROJECT..

				_
AS-B	ID	PL	.AN	S

THREE VALLEYS MUNICIPAL WATER DISTRICT	PROJECT NO. 58463				
MIRAGRAND WELL EQUIPPING IMPROVEMENTS	DRAWING NO.				
TRUCK HAUL ROUTE	T-1				
4	SHEETS NO.				
	49 _{of} 49				