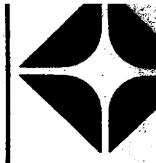


DEMOLITION NOTES

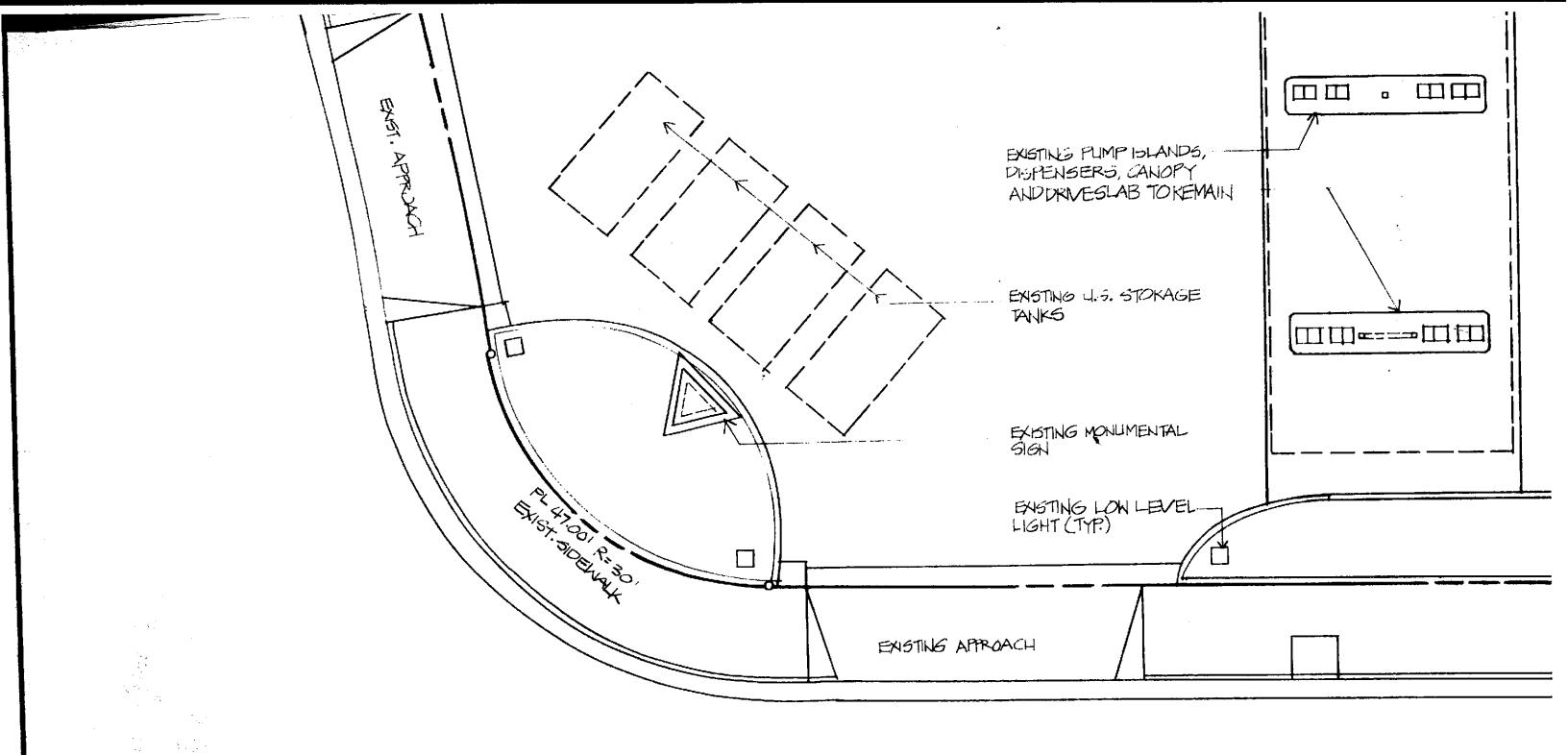
ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED IN THE FIELD BEFORE STARTING ANY WORK. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S ENGINEER FOR HIS DECISION BEFORE PROCEEDING WITH THE WORK.

- REMOVE ALL EQUIPMENT, CONDUITS, FIXTURES, PIPINGS, SHELVINGS, SIGNAGES, ETC. SHOWN DOTTED AND ALL OTHER ELEMENTS THAT INTERFERE WITH AND ARE UNNECESSARY FOR NEW CONSTRUCTION.
- Z REMOVE SALES COUNTER, GONDOLAS AND WALL SHELVINGS.
- 3 SMIT . M
- SAW-CUT AND REMOVE PORTION OF FLOOR SLAB FOR THE INSTALLATION OF NEW ELECTRICAL AND SELF SERVE AND PUBLIC ADDRESS CONSOLES CONDUITS.
- REMOVE CEILING, LIGHT FIXTURES, CEILING REGISTERS THAT INTERFERE WITH NEW CONSTRUCTION (LIGHT FIXTURE AND CEILING REGISTER TO BE RELOCATED).
- REMOVE SELF SERVE AND PUBLIC ADDRESS CONSOLES (TO BE RELOCATED).
- REMOVE ILLUMINATED OVERHEAD CIGARETTE RACK (TO BE RELOCATED).
- 8 REMOVE EXISTING PREPARATION TABLE (TO BE RELOCATED)
 CAP WATER SUPPLY & DRAIN LINES AS RECPLIRED.



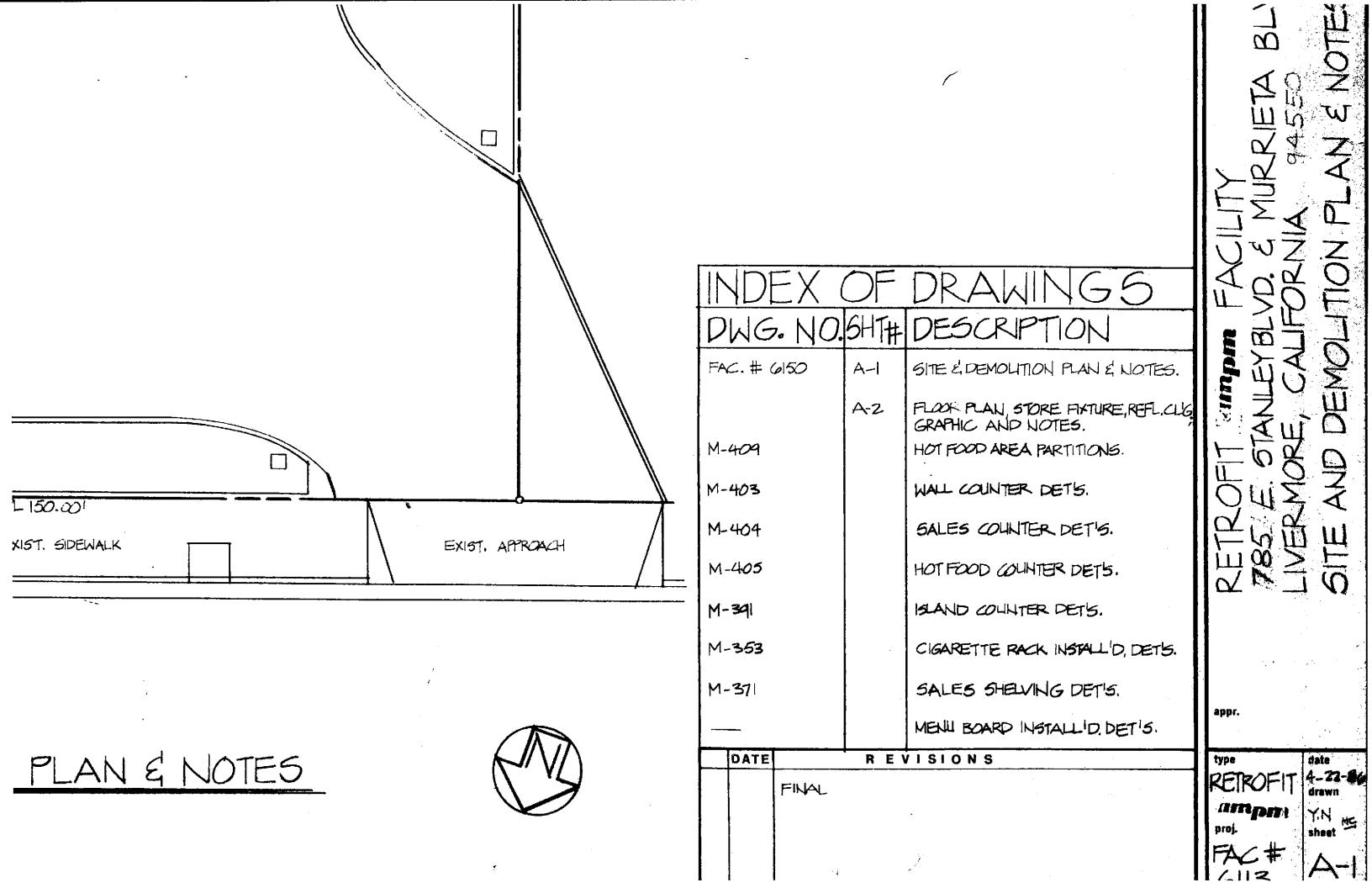
roducts ARCO Petroleum

Retail Marketing



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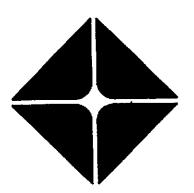


SUBGI PIPI

OWNER
ARCO Products Company
P.O. Box 5891
San Mateo, California 94402

RADE REMEDIATING INSTALLAT

ARCO' Products Company
Division of Atlantic Richfield Company



ARCO Station 6113

785 East Stanley Boulevard Livermore, California

MASTER COPY.

ENGINEER
RESNA Industries, Inc.
3315 Almaden Expressway, Suite 34
San Jose, California 95118
Phone: (408) 264-7723

NOTES:

- 1) NO ATTEMPT HAS BEEN MADE TO IDENTIFY EXISTING UNDERGROUND UTILITIES. ENGINEER DOES NOT WARRANTY THAT UTILITIES SHOWN ARE IN THE LOCATION SHOWN OR THAT UTILITIES NOT SHOWN DO NOT EXIST. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND UTILITIES BY CONTACTING A LOCATOR COMPANY.
- 2) CONTRACTOR SHALL HAND DIG IN THE VICINITY OF UTILITY LINES.
- 3) CONTRACTOR SHALL USE LONG SWEEP ELBOWS AT ALL TURNS.
- 4) ALL EXISTING MONITORING WELLS SHALL REMAIN INTACT. CHRISTY BOXES FOR THESE WELLS IF DAMAGED SHALL BE REPLACED, UNLESS BEING REPLACED BY REMEDIATION WELLHEAD COVERS.
- 5) ALL AREAS TO RECEIVE FILL SHALL BE COMPACTED TO 95% DENSITY AS DETERMINED BY ASTM SPECIFICATION D1557.
- 6) SAWCUT EXISTING PAVEMENT TO PROVIDE A CLEAN AND UNIFORM JOINT PRIOR TO REPAVING. REPAVE ASPHALT TO EXISTING CONDITIONS. CLASS C CONCRETE SHALL BE USED IN AREAS PAVED WITH CONCRETE. A SCREEN OR REBAR SHALL BE USED FOR THE CONCRETE TOPPING OF THE TRENCH IN AREAS WHERE NO OTHER EXCAVATION WAS REQUIRED.
- 7) PRIOR TO BACKFILLING THE TRENCH, THE CONTRACTOR SHALL PNEUMATICALLY TEST ALL SUBGRADE GROUNDWATER DOUBLE CONTAINMENT PIPING, VAPOR PIPING, ELECTRICAL CONDUIT, AND COMPRESSED AIR LINES AT A PRESSURE OF 5 TO 10 PSI IN THE PRESENCE OF A PROJECT ENGINEER FOR A MINIMUM OF 20 MINUTES. ALL JOINTS SHALL BE VISUALLY INSPECTED USING A SOAP SOLUTION.

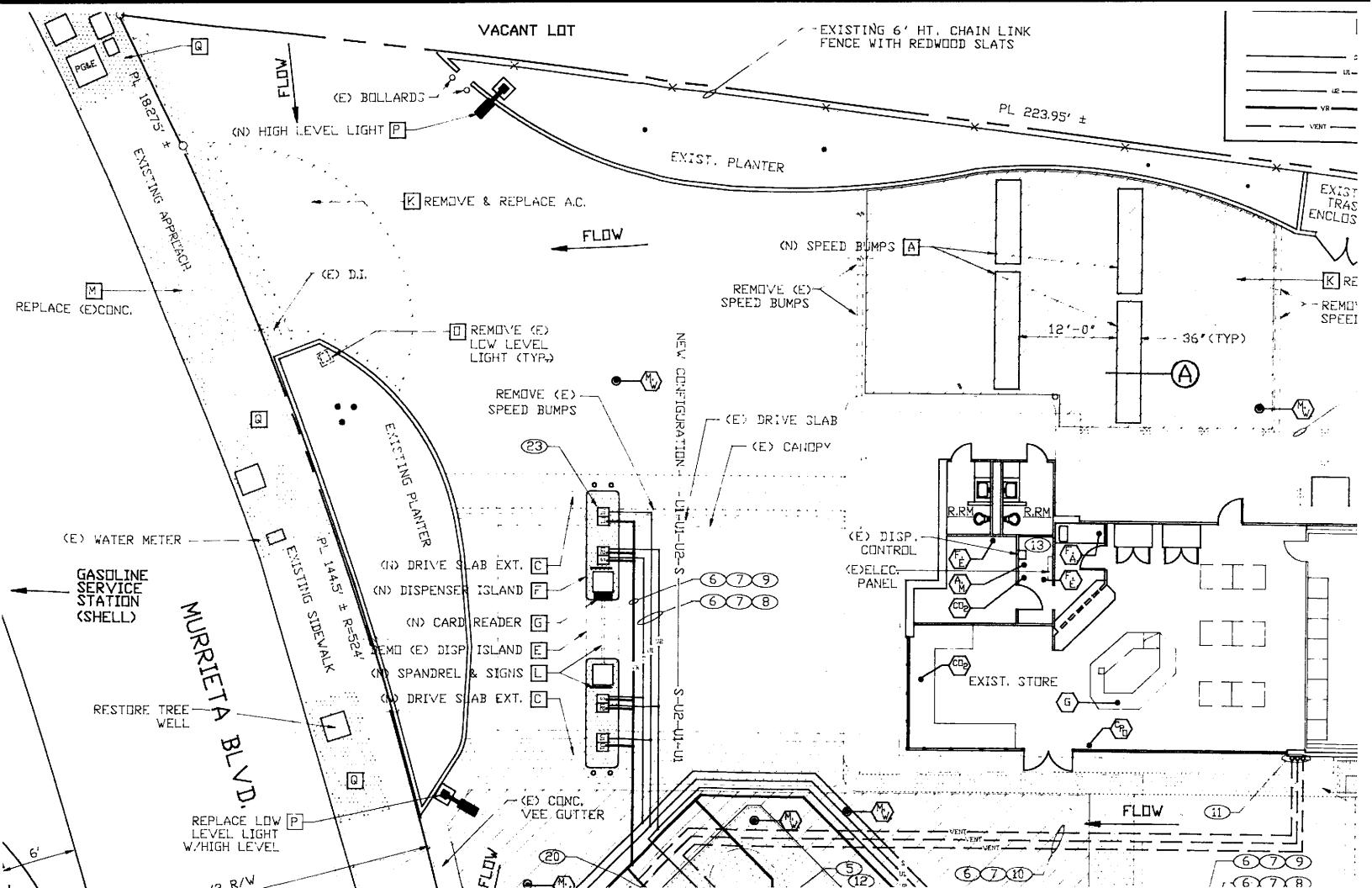
WARNING: "DO NOT EXCEED A TEST PRESSURE OF 10 PSI. SEVERE DAMAGE OR BODILY INJURY MAY RESULT"

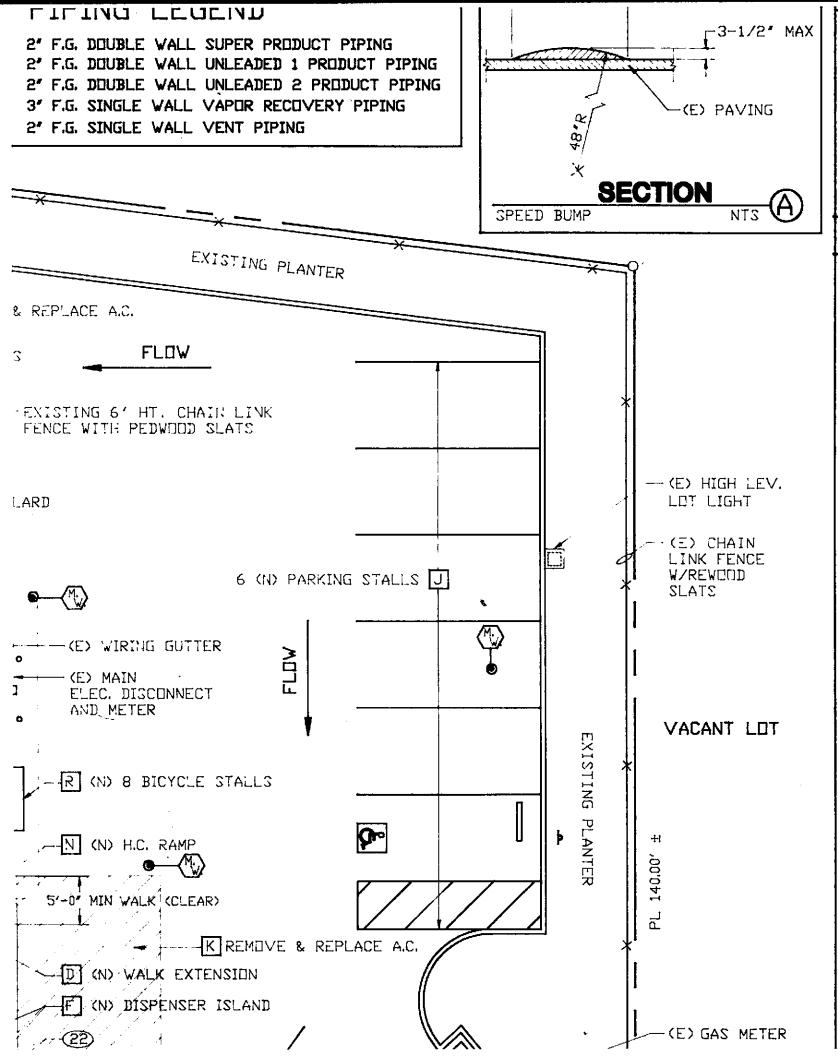
- 8) THE CONTRACTOR SHALL PRESSURE TEST THE BELOW GRADE 2" DIAM., ABS CLEAN WATER DISCHARGE PIPING AT A PRESSURE OF 5 FEET OF WATER FOR ONE HOUR OR PER CITY OF LIVERMORE'S REQUIREMENTS. IF A 1/4" PER FOOT SLOPE AND A COVER OF 12" CANNOT BE MAINTAINED, PER CITY CODES, THE CONTRACTOR SHALL INSTALL A 2" OR 4" CAST IRON PIPE AS THE DISCHARGE PIPE. FOR A 4" CAST IRON PIPE A MINIMUM SLOPE OF 1/8" PER FOOT SHALL BE MAINTAINED. THE CONTRACTOR SHALL INFORM THE ENGINEER IF GRADE STILL CANNOT BE MAINTAINED.
- 9) THE CONTRACTOR SHALL INSTALL A 1-3/8" DIAMETER BRASS S-HOOK MONUMENT MARKER TO A DEPTH OF 6 TO 8" BELOW GRADE THAT WILL BE FLUSHED TO GRADE. THE BRASS MARKER WILL BE INSTALLED A MAXIMUM OF 4-FT AWAY FROM THE REMEDIATION PIPING TRENCH. THE MARKER WILL SERVE TO LOCATE THE 1" DIAMETER PVC, SCHEDULE 80 PIPE FOR AIR SPARGING THAT WILL BE STUBBED UP AND CAPPED TO 12 " BELOW GRADE EVERYWHERE A BRASS MARKER IS SHOWN ON DRAWING C-1. THE CONTRACTOR WILL USE A THREADED METAL CAP ON THE PIPE AND WILL INSTALL A DETECTABLE WARNING TAPE 4 TO 6 INCHES BELOW GRADE WHERE THE PIPE STUBUPS.

- 10) SUBGRADE REMEDIATION PIPING FROM JUNCTION BOX JB-3 TOWARDS MW-9, AND FROM JUNCTION BOX JB-1 TOWARDS MW-6 WILL BE CAPPED BELOW GRADE AS SHOWN ON PLATE C-1.
- 11) VAPOR EXTRACTION WELL LOCATIONS ARE BASED ON SITE VISITS BY THE ENGINEER. WHILE BELIEVED TO BE REASONABLY ACCURATE, THE CONTRACTOR SHALL NOT RELY UPON FACILITIES OR DIMENSIONS SHOWN. THE CONTRACTOR SHALL CONDUCT HIS OWN SURVEYS AS ARE NEEDED FOR CONSTRUCTION WITH NO COST TO THE ENGINEER OR THE OWNER.
- 12) THE ENGINEER HAS ESTABLISHED CONTACT WITH PG&E REGARDING NECESSARY ELECTRICAL SERVICE AT THE SUBJECT SITE. THE CONTRACTOR SHALL MEET WITH PG&E AND DETERMINE THE EXACT LOCATION OF THE ELECTRICAL SERVICE PEDESTAL AND METER, THE SIZE AND TYPE OF ELECTRICAL CONDUIT AND PEDESTAL REQUIRED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SECURING CITY AND PG&E INSPECTIONS AND APPROVALS OF THE SUBGRADE ELECTRICAL CONDUITS, SERVICE PEDESTAL AS REQUIRED, PRIOR TO BACKFILLING. CONTACT PERSON FOR PG&E IS MR. JERRY BROWN OR MR. STEVE DEBACKER AT (510) 373-2741/2702. REFERENCE PG&E DRAWINGS (SHEET 5 OF SPECIFICATIONS, PG&E DRAWING NO. 054712, SHEETS 1 TO 3, AND DWG NO. 036670, SHEETS 1, 2, AND 3.
- 13) THE CONTRACTOR SHALL HAVE A LOCATOR COMPANY LOCATE ALL LINES WITHIN THE VICINITY OF THE PROPOSED VAPOR EXTRACTION WELLS TO DETERMINE IF THERE EXISTS ANY UTILITY LINES THAT WILL PREVENT DRILLING AND INSTALLATION OF THE WELLS TO A MINIMUM DEPTH OF 30 FEET AT A LATER DATE.
- 14) THE CONTRACTOR SHALL MAKE CERTAIN THAT THE LOCATION OF THE REMEDIATION WELL VAULT COVER AT THE PROPOSED REMEDIATION COMPOUND WILL NOT RENDER THE VAULT INACCESSIBLE WHEN A FENCE IS CONSTRUCTED WITHIN A 6-INCH THICK CONCRETE SLAB IN THE FUTURE.
- 15) CONTRACTOR SHALL EXTEND AND CAP ALL UNUSED PIPE WITHIN 6-INCHES FROM THE WELL VAULT LID ON COMPLETION OF PRESSURE TESTING OF ALL LINES.
- 16) ALL SUBGRADE PIPING STUBBED UP AT EACH WELL VAULT SHALL BE IDENTIFIED BY USE OF INDELIBLE PAINT AS FOLLOWS: V1, V2, V3 FOR VAPOR MANIFOLD PIPING AS INDICATED ON THE PLANS; GW FOR GROUNDWATER DOUBLE CONTAINMENT PIPING; E-1 FOR THE 2-INCH CONDUIT FOR FUTURE ELECTRIC USE; AND A FOR THE COMPRESSED AIR LINE.
- 17) FOR WELLS TO BE INSTALLED AT A LATER DATE, CONTRACTOR SHALL NOT BE REQUIRED TO INSTALL THE 3" BALL VALVE AND DRILL 1/4" NPT TAPS FOR THE PRESSURE INDICATOR AND SAMPLE PORT. PIPING SHALL BE STUBBED UP TO ALLOW FOR SPACE TO FIT THESE FUTURE ITEMS IN THE CONFIGURATION SHOWN. THIS ASSUMES THAT THE WELL WILL BE LOCATED WITHIN THE WELL VAULT, AS INDICATED, IN THE FUTURE.

- 18) CONTRACTOR SHALL ENSURE THAT ALL PIPE STUB UPS WILL BE IN CONFORMANCE TO THE WELLHEAD SECTIONS SHOWN ON THE PLANS. A MINIMUM OF 2-FEET OF LATERAL CLEARANCE SHALL BE PROVIDED BETWEEN THE VAPOR PIPE STUB UP AND THE PROPOSED VAPOR WELL LOCATION.
- 19) END CAPS ON PIPE STUBUPS SHALL BE SLIP X SLIP, NO GLUE IS ALLOWED.
- 20) ALL PEA GRAVEL SHALL BE WASHED.
- 21) ALL VALVES SHALL BE THREADED, TRUE UNION, UNLESS OTHERWISE INDICATED.
- 22) THE CONTRACTOR SHALL USE A 1" DIAMETER SCH 80 PVC PIPE FOR AIR SPARGING.
- 23) A 12" WIDE CONCRETE COLLAR SHALL BE USED TO SUPPORT ALL REMEDIATION WELL VAULT BOXES AND JUNCTION BOXES.
- 24) THE CONTRACTOR SHALL SUPPLY DETAILED AS-BUILTS TO THE ENGINEER UPON COMPLETION OF WORK. AS-BUILTS WILL INCLUDE PERMIT NUMBERS ASSOCIATED WITH THE ENGINEER'S WORK, IN THE EVENT THESE PERMITS NEED TO BE PULLED AT A LATER DATE.
- 25) THE CONTRACTOR SHALL INSTALL 18 OR 12-GAUGE BARE COPPER WIRE WITHIN ALL VAPOR MANIFOLD PIPING TO THE COMPOUND. THIS COPPER WIRE SHALL BE GROUNDED AT THE COMPOUND AND AT ANY BREAKS IN THE WIRE AT WELL VAULTS.
- 26) WELLHEAD COVERS, VAULTS AND JUNCTION BOXES SHALL BE REMEDIATION WELLHEAD COVERS, 36-INCH X 36-INCH HINGED, H2O TRAFFIC RATED STEEL COVERS WITH AN 18-INCH METAL SKIRT AS SUPPLIED BY CEECON AT (415) 738-1115 OR EQUIVALENT.
- 27) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, INSPECTIONS AND APPROVALS NECESSARY FROM THE CITY, AND PG&E FOR SUBGRADE REMEDIATION PIPING INSTALLATION. THE CONTRACTOR SHALL CONFORM TO ALL RELEVANT CITY BUILDING, PLANNING, AND FIRE DEPARTMENT REQUIREMENTS, AND WILL INFORM THE ENGINEER IN THE VENT THAT ANY CONFLICT ARISES BETWEEN CITY REQUIREMENTS AND THESE PLANS AND SPECIFICATIONS.
- 28) AS-BUILTS (NEATLY MARKED UP PLANS) AND COPIES OF PERMIT APPROVALS, IF ANY ARE OBTAINED, SHALL BE PROVIDED TO THE ENGINEER BY THE CONTRACTOR ON COMPLETION OF THE JOB.
- 29) THE CONTRACTOR SHALL HAVE THE ENGINEER AND THE CITY OF LIVERMORE (IF NECESSARY) CONDUCT AN OPEN INSPECTION OF THE TRENCH, PIPING, WELLHEAD CONNECTIONS, PRIOR TO BACKFILLING.

Job. No. 69028.10 File No. 6113Logo

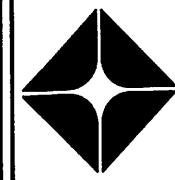




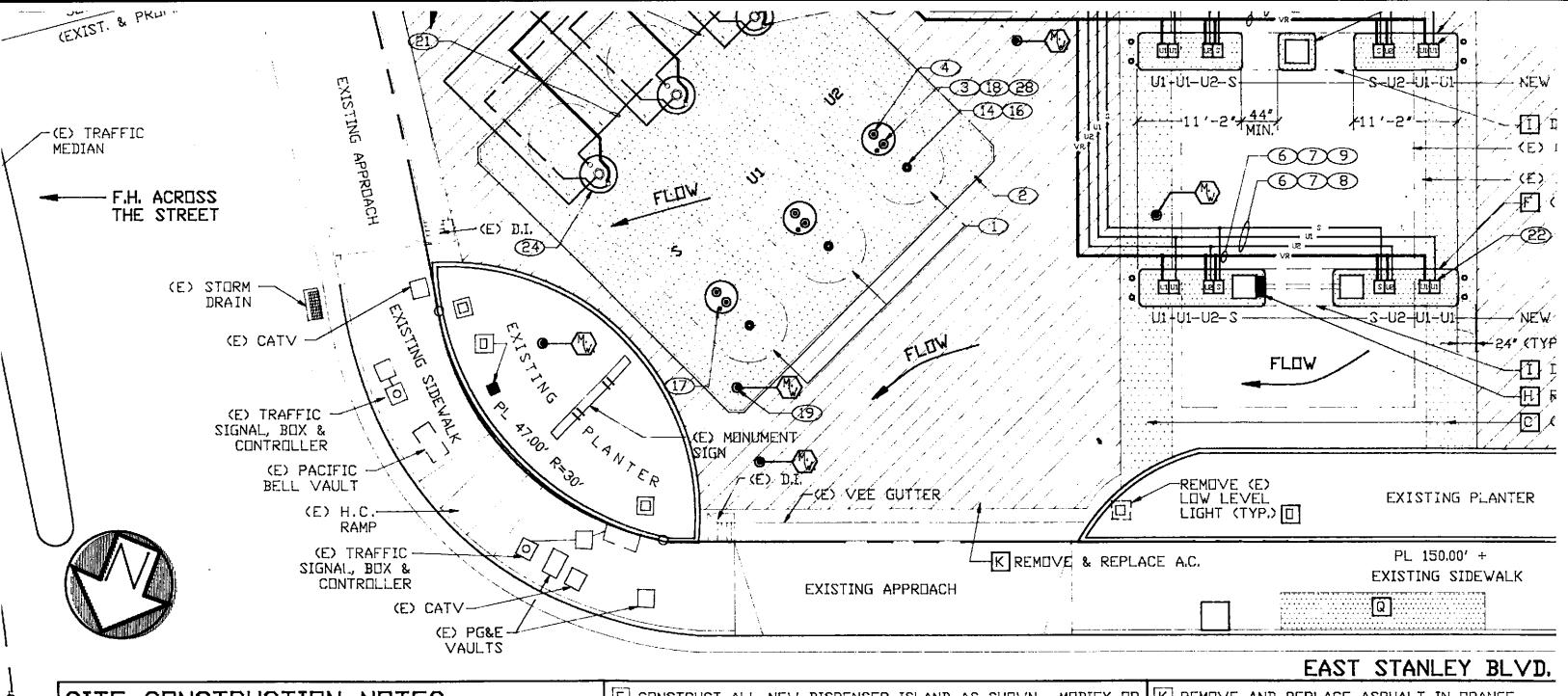
- 1. ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED IN THE FIELD BEFORE STARTING ANY WORK. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S ENGINEER FOR HIS DECISION BEFORE PROCEEDING WITH THE WORK,
- 2. FACILITY OPERATOR TO FURNISH AND INSTALL VIDEO CAMERA AND MENITOR SO THAT ALL FUELING STATIONS ON REACTINATED DISPENSER ISLAND ARE VISIBLE BY CASHIER. (PER LIVERMORE FIRE DEPT.)

TANK & PIPING CONSTRUCTION NOTES

- 1 UPGRADE EXISTING UST'S AND PIPING TO CURRENT ARCO SPECS INCLUDING LEAK DETECTION AND CONNECTIONS AT DISPENSERS. NEW SUMPS AND ATTACHMENT COLLARS WILL BE PROVIDED BY ARCO. SEE APPLICABLE DWGS. TK-102 THRU TK-115.
- PEINFURCED CONCRETE SLAB. SET MANHOLE COVERS 1-1/2"
 ABOVE SLAB. SEE DETAIL #18 ON DWG. TK-109.
- (1) 4" FILL PER TANK, SEE DWG, TK-103,
- 4 (1) 3° VAPOR RECOVERY FITTING PER TANK, SEE DWG, TK-103.
- (1) 1-1/2 HP SUBMERSIBLE PUMP PER TANK W/"RED JACKET"/
 "TOKHEIM" LEAK DETEDOTOR. SEE DWG. TK-103.
- 6 SAW-CUT EXISTING PAVING AND RE-PAVE PER ARCO SPECS.
 MATCH EXISTING GRADE, COLOR AND FINISH WHERE APPLICABLE.
- 7 REMOVE AND DISPOSE OF ALL EXISTING VENT, PRODUCT, AND VAPOR LINES PER STATE AND LOCAL CODES.
- 8 INSTALL NEW, INDIVIDUAL, 2' DIA. DOUBLE WALL, FIBERGLASS PRODUCT LINES. LINES TO BE EQUIPPED WITH LEAK MONITOR IN PIPING SUMP ATTACHED TO TANK WIRED FOR TURBINE SHUT DOWN. SEE DETAIL #10 ON DWG. TK-105 FOR TYPICAL PIPING ARRANGEMENT AT TANK. PIPING SHALL BE INSTALLED PER MFGS. RECOMMENDATION AND SLOPED 1/4" PER FOOT TO TANKS.
- 9 INSTALL NEW, 3" DIA. SINGLE WALL, FIBERGLASS VAPOR RECOVERY LINE. SLOPE 1/4" PER FOOT TO TANKS. SEE DETAILS AND SECTIONS ON DWG. TK-106.
- (10) INSTALL NEW, 2" DIA, INDIVIDUAL, SINGLE WALL, FIBERGLASS VENT LINES FOR EACH TANK. SLOPE 1/4" PER FOOT TO TANKS. CONNECT TO EXISTING VENT RISERS PER BETAIL #4, DWG. TK-104.
- 11 TANK VENTS TO EXTEND MIN, 30" ABOVE ROOF. EXTEND DR REPLACE EXISTING IF NECESSARY. ADD VENT CAPS IF NOT EXISTING, REMOVE 4TH, UNUSED VENT RISER. SEE DETAIL #4, DWG. TK-104.
- 12 INSTALL 1" DEDICATED CONDUIT FOR POWER TO EACH SUBMERSIBLE PUMP.
- (13) INSTALL RONAN "API" TANK AND LINE ALARM CONTROL BOX MODEL #X763 IN BUILDING. SEE DWG. TK-110 FOR LEAK DETECTION AND DISPENSER WIRING DIAGRAM. IF REQUIRED, RUN NEW CONDUIT OVERHEAD TO PANEL. CONCEAL AS MUCH



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SITE CONSTRUCTION NOTES:

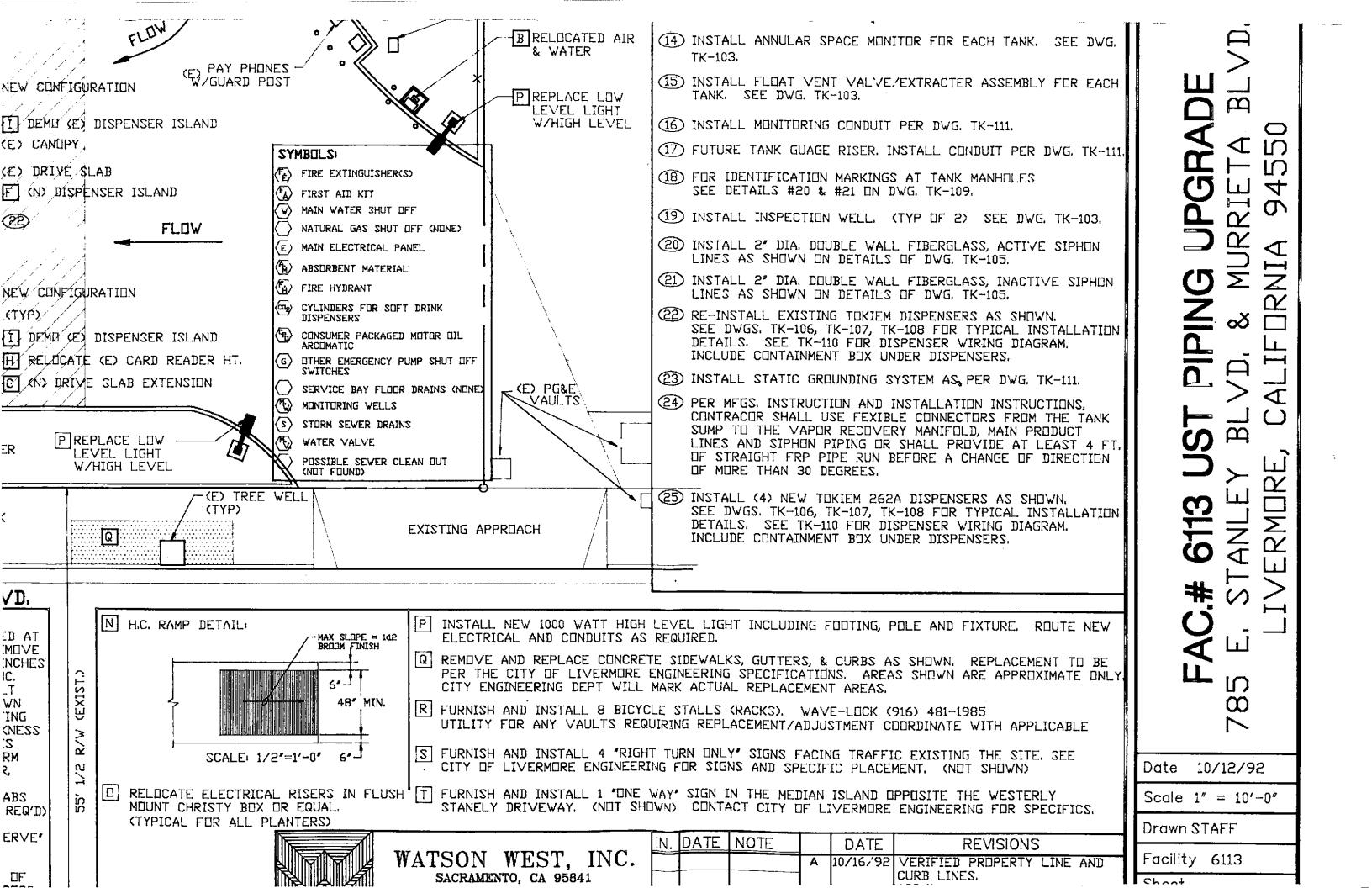
- A INSTALL NEW ASPHALT SPEED BUMPS AS SHOWN, PROVIDE OPENINGS FOR DRAINAGE AND TAPER ALL ENDS. SEE SECTION A THIS DWG., STRIPE COMPLETE SPEED BUMP.
- B RELOCATED AIR & WATER. STUB-UP NEW AIR & WATER LINES AND INSTALL CONCRETE PAD AND GUARD POSTS PER VENDOR INSTRUCTIONS. SEE OWNER'S ENGINEER FOR VENDOR.
- C EXTEND DRIVE SLAB 2 FT. BEYOND ENDS OF NEW DISPENSER ISLANDS. SEE DETAIL #6 ON DWG T-101A.
- D WIDEN SIDE WALK TO MIN. 5'-0" CLEAR FROM FRONT OF BLDG. OR CBSTICALS.
- E DEMOLISH COMPLETE EXISTING IN-ACTIVE DISPENSER ISLAND & PLANTER INCLUDING GUARD POSTS, BRICK CANOPY COLUMNS TO REMAIN, REMOVE AIR & WATER FOR RELOCATION, PATCH TO

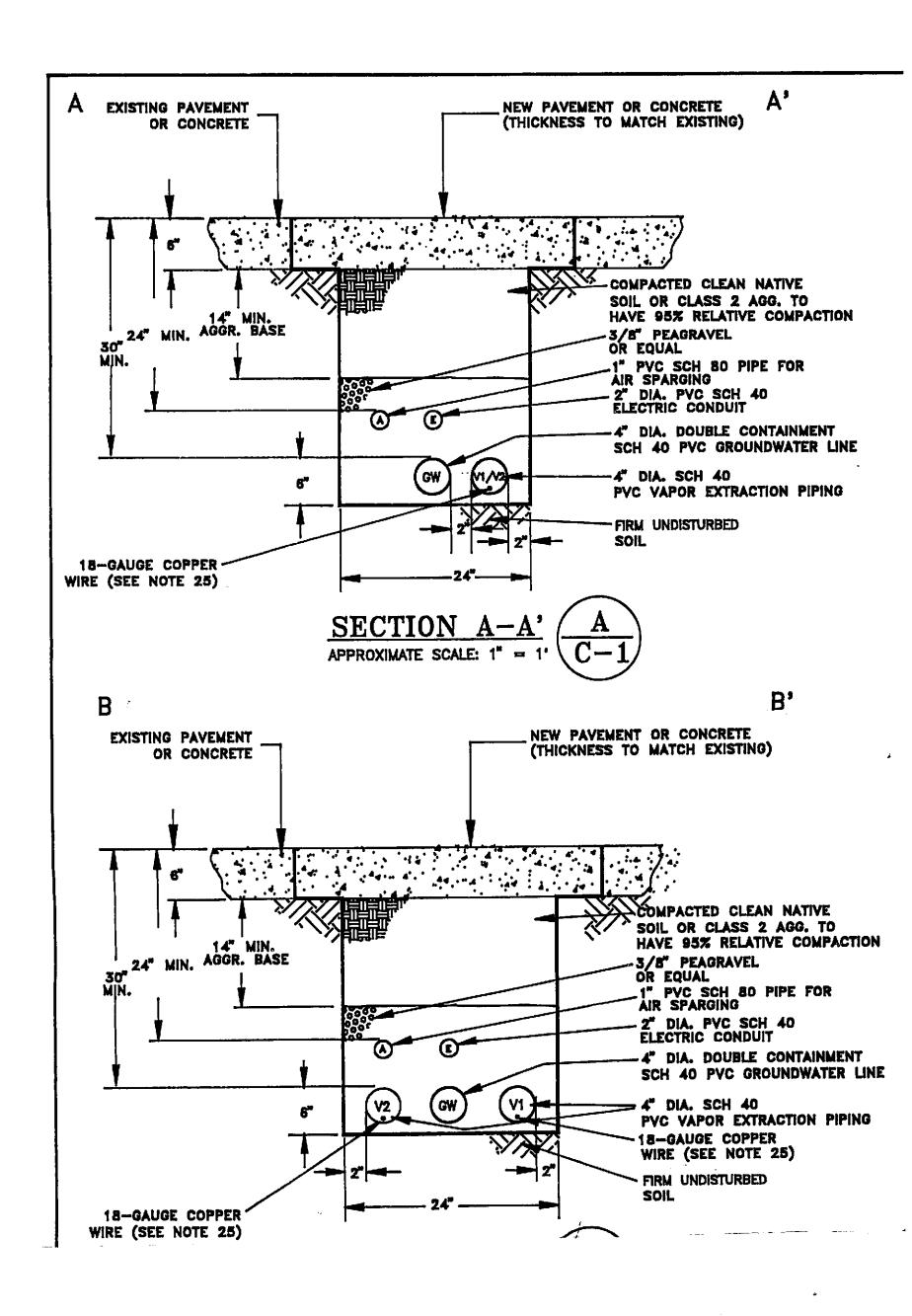
- F CONSTRUCT ALL NEW DISPENSER ISLAND AS SHOWN. MODIFY OR INSTALL NEW OVERHEAD RETRACTOR BARS INCLUDING HOSE RETRACTORS & PUMP TOPPERS. INSTALL NEW GAURD POSTS AND SIGNS. SEE DWG. T-101A FOR DETAILS.
- G INSTALL NEW "PAY-POINT" CARD READER AS SHOWN INCLUDING ALL ELECTRICAL AND WIRING REQUIRED FOR FUNCTIONAL SYSTEM. LOCATE BOTTOM OF CARD READER 3'-5" FROM TOP OF DRIVE SLAB (NOT FROM TOP OF ISLAND). ROUTE CONDUIT OVERHEAD TO CONTROL PANEL IN BLDG.
- H ADJUST HT. OF EXISTING CARD READER SO THAT BOTTOM OF C.R. IS 3'-5' FROM TOP OF DRIVE SLAB (NOT FROM TOP OF ISALND).
- I DEMOLISH <u>COMPLETE</u> EXISTING DISPENSER ISLAND INCLUDING GAURD POSTS. BRICK CANDPY COLUMNS TO REMAIN. PATCH TO MATCH.
- J STRIPE 9' X 19' PARKING STALLS AS SHOWN INCLUDING H.C. PARKING W/METAL H.C. SIGN PER CODE.

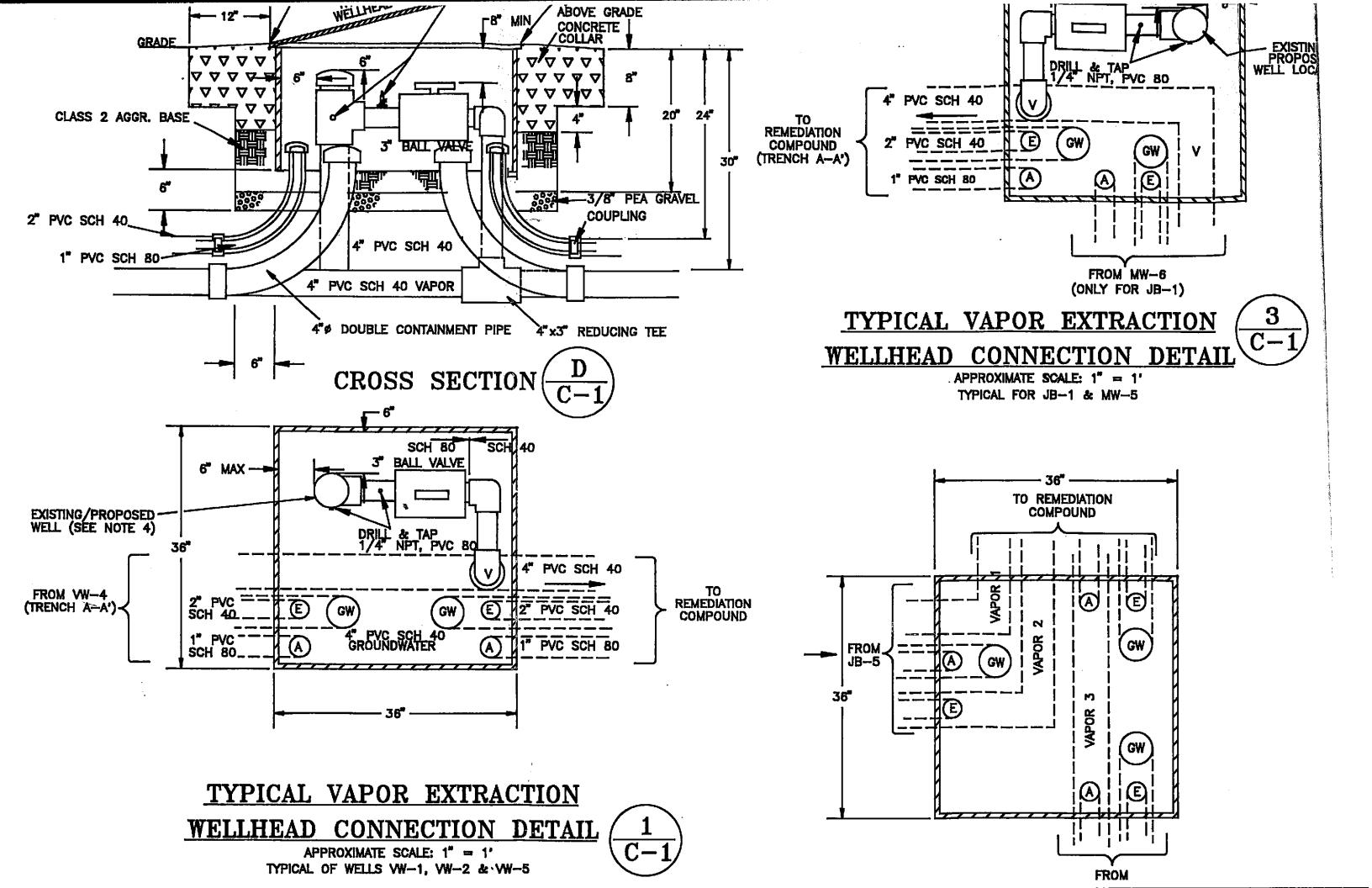
- REMOVE AND REPLACE ASPHALT IN DRANGE MARKED AREAS AT SITE (SITE TO BE MARKED A
- BID MEETING, DATE TO BE ANNOUNCED). REMOVED DOWN TO 7 INCHES AND REPLACE WITH 4 INCHE ASPHALT BASE AND 3 INCHES ASPHALT CONC. RAISE EXISTING ACCESS COVERS IN ASPHALT AREAS AND PROVIDE 1 INCH CONCRETE CROWN FOR WATER RUN-OFF. OVERLAY ALL EXISTING ASPHALT WITH 1-1/2 INCHES MINIMUM THICKNES: OF ASPHALT WITH PETROMAT. THICKNESS IS MEASURED AFTER COMPRESSION TO A UNIFORM DEPTH WITH AN 8 TON OR HEAVIER ROLLER, PREFERABLY TANDEM. FEATHER BACK THE ASPHALT OVERLAY FROM ALL CONCRETE SLABS
- L INSTALL NEW SPANDREL SIGN AND "SELF SERVE COLUMN SIGNS (2).

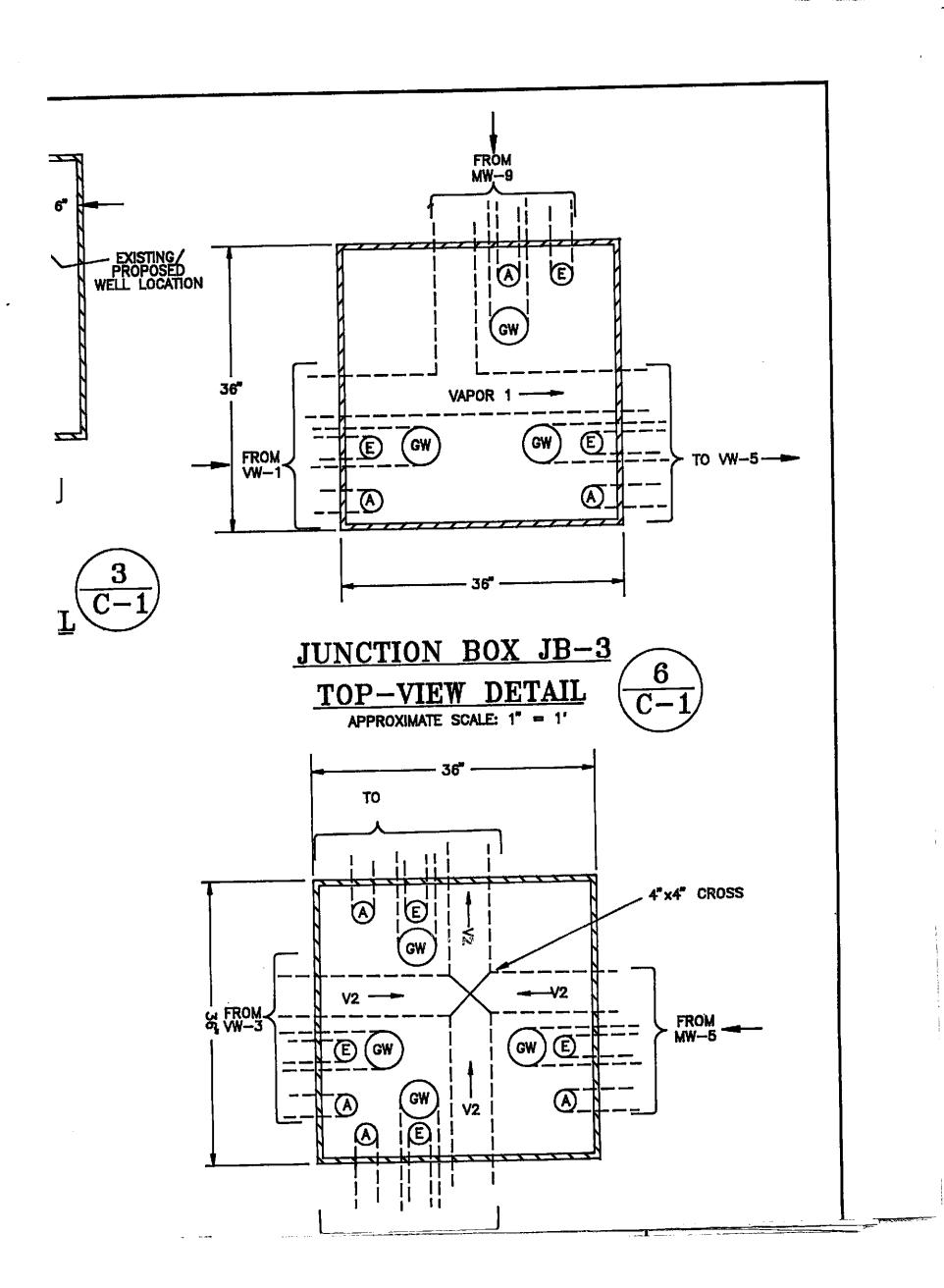
AND DRIVEWAY APPROACHES, (GRIND A.C. AS REQ'

M REPLACE DAMAGED CONC. SWALE & PORTION OF APPROACH PER ARCO & LIVERMORE ENGR. SPECO

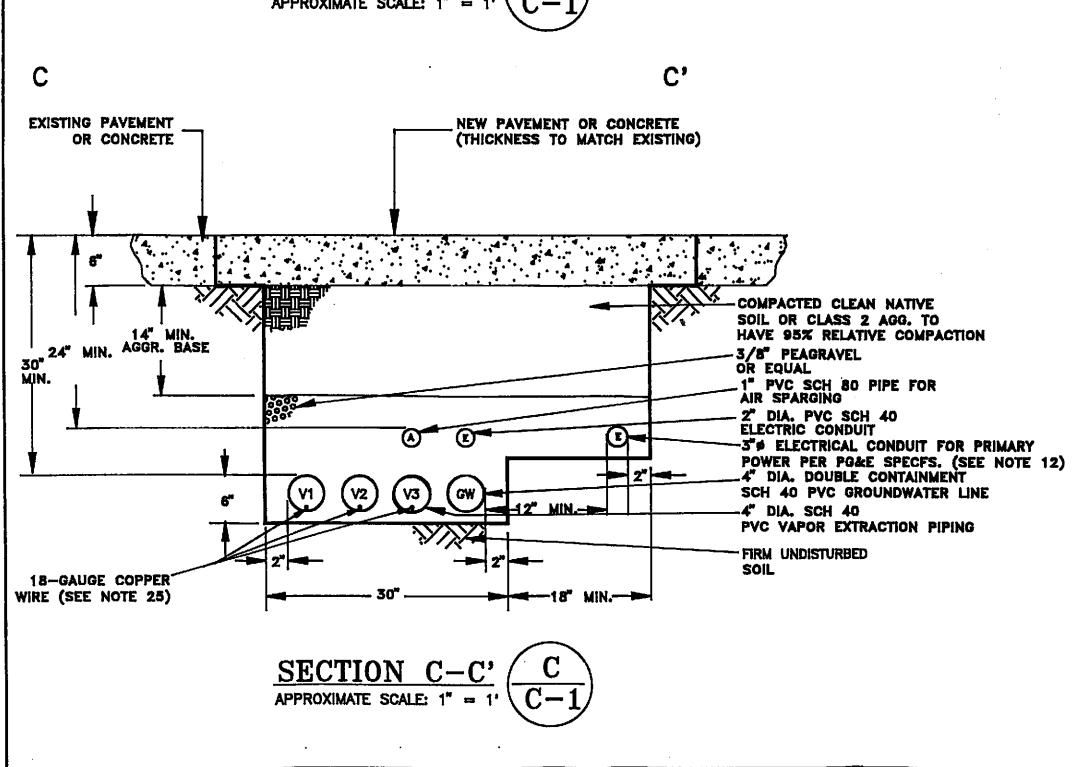


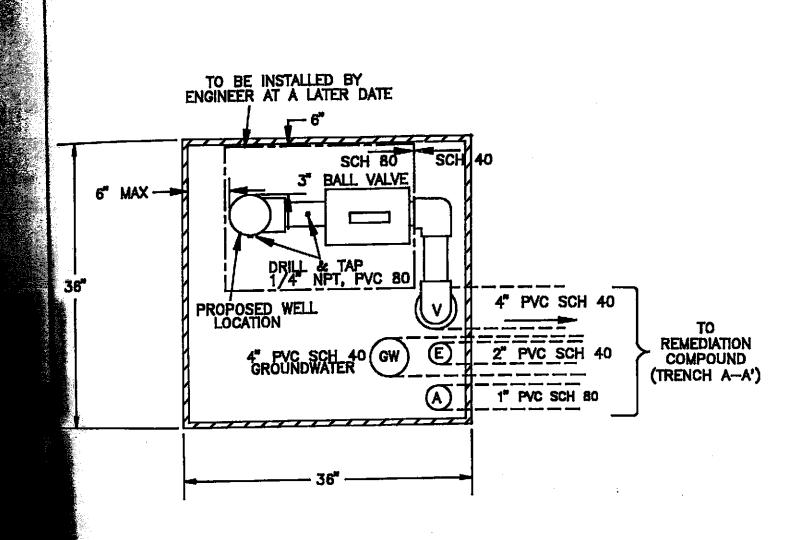












TYPICAL VAPOR EXTRACTION
WELLHEAD CONNECTION DETAIL

APPROXIMATE SCALE: 1" = 1'
TYPICAL OF WELLS VW-3, VW-4 & JB-4

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JUNCTION BOX JB-2 APPROXIMATE SCALE: 1" = 1' FROM_ VW-2 TO JB-2 VAPOR 2 ---36" FROM **JB-1** JUNCTION BOX JB-5 TOP-VIEW DETAIL APPROXIMATE SCALE: 1" = 1'

FROM JB-1 TRENCH A-A'

JUNCTION BOX JB-6

TOP-VIEW DETAIL

APPROXIMATE SCALE: 1" = 1'



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No.	Date	Revision	Dwn.	Chk.	App.
Scale: N/A			Designed by: YY & DW Drawn by: JS Checked by: YY & DW 11/25/92-		
Date:			Job Number: 69028.10		
ARCO Station 6113					
Title:	TRENCH	& WELLHEAD	DIAGRAMS	Drawing	No.