

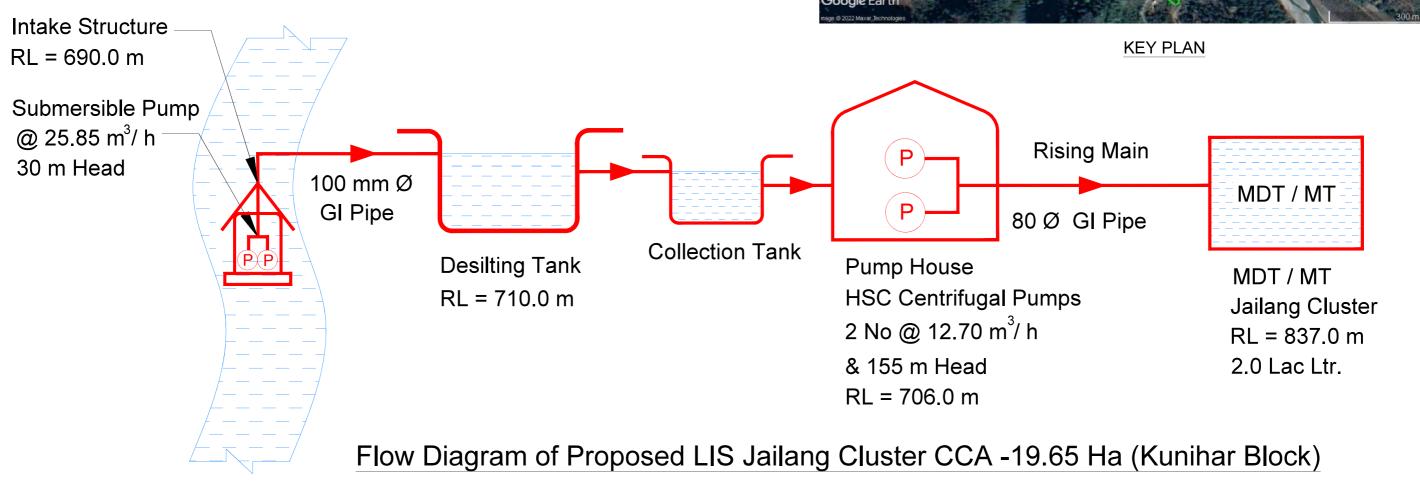


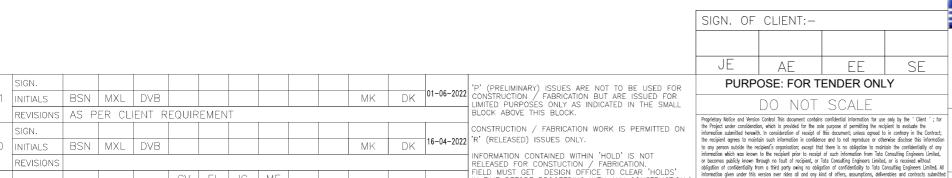
DRN DSN CHD

Legend:-

- 1. Proposed
- 2. Source
- 3. MDT Main Distribution Tank
- 4. MT Modular Tank







DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09) RRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

FLOW DIAGRAM OF PROPOSED LIS JAILANG CLUSTER KUNIHAR BLOCK, SOLAN DISTRICT

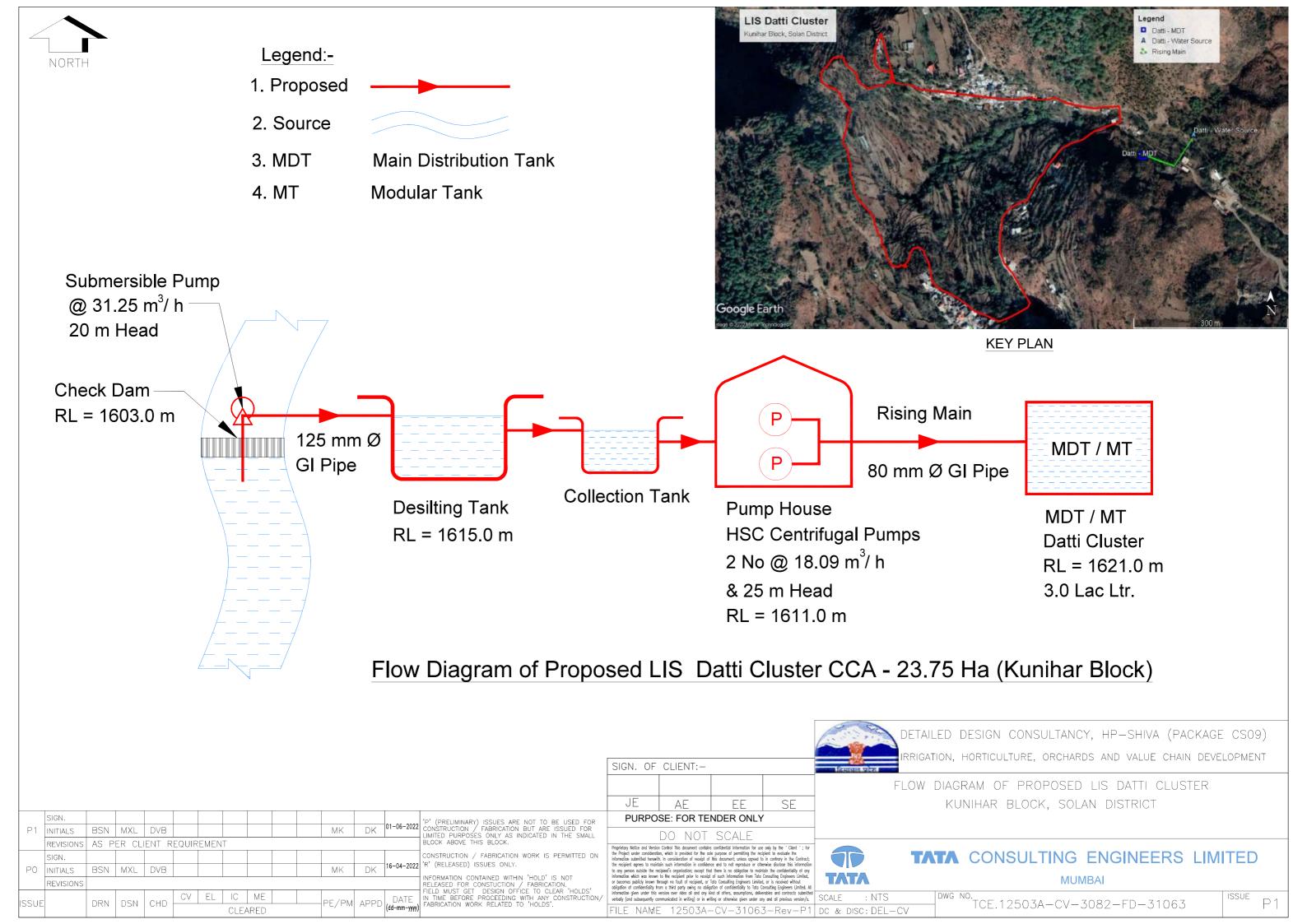


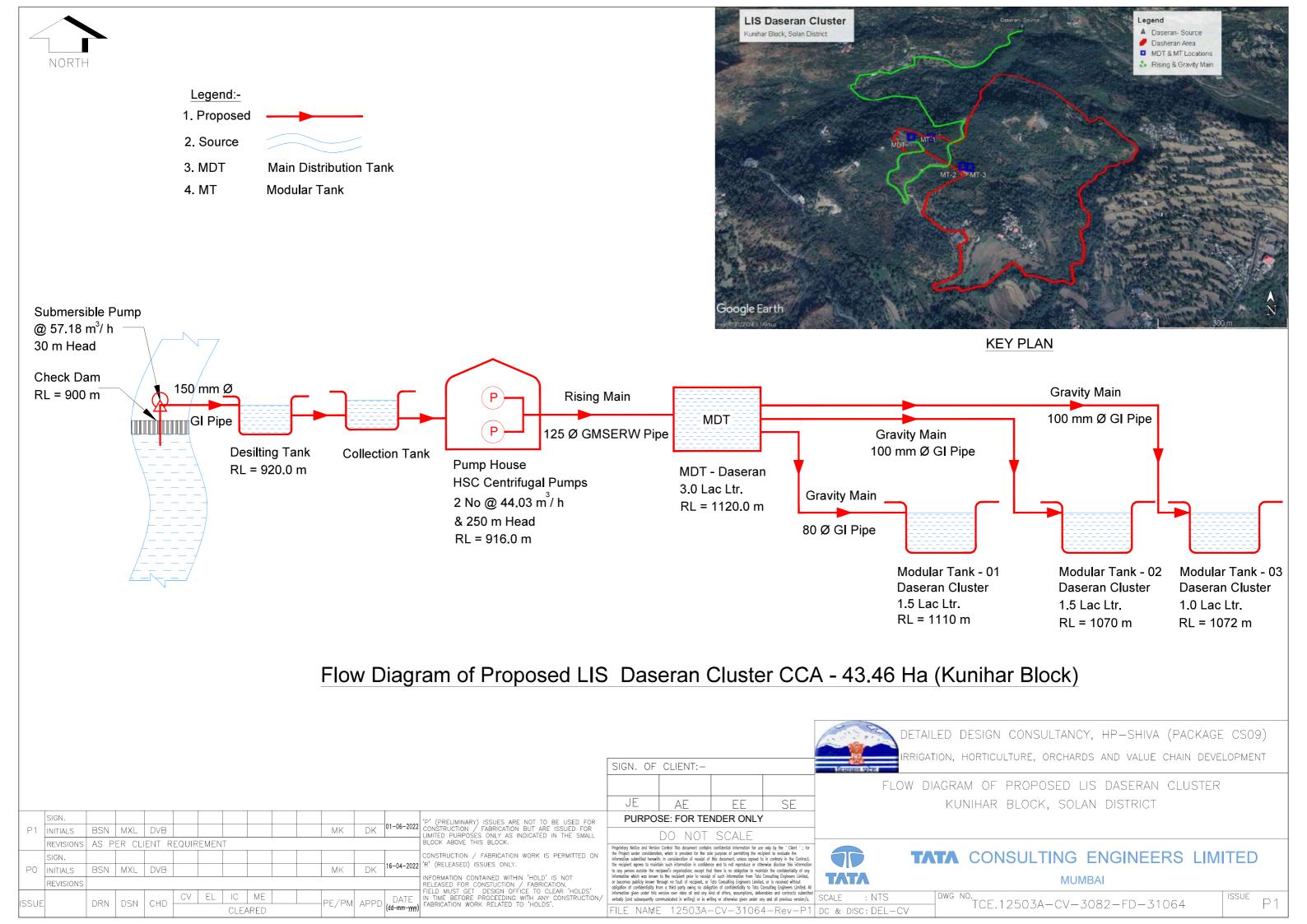
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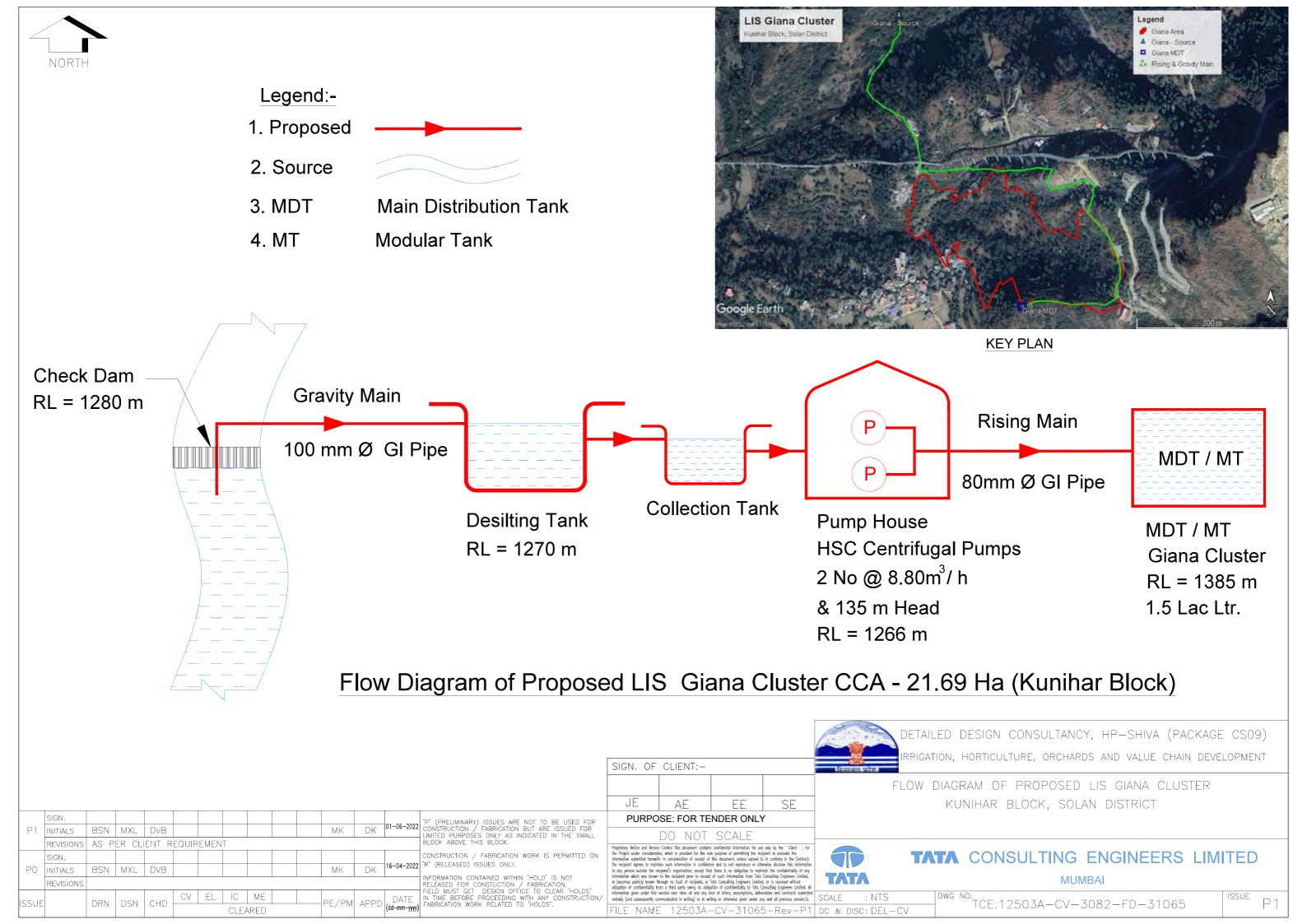
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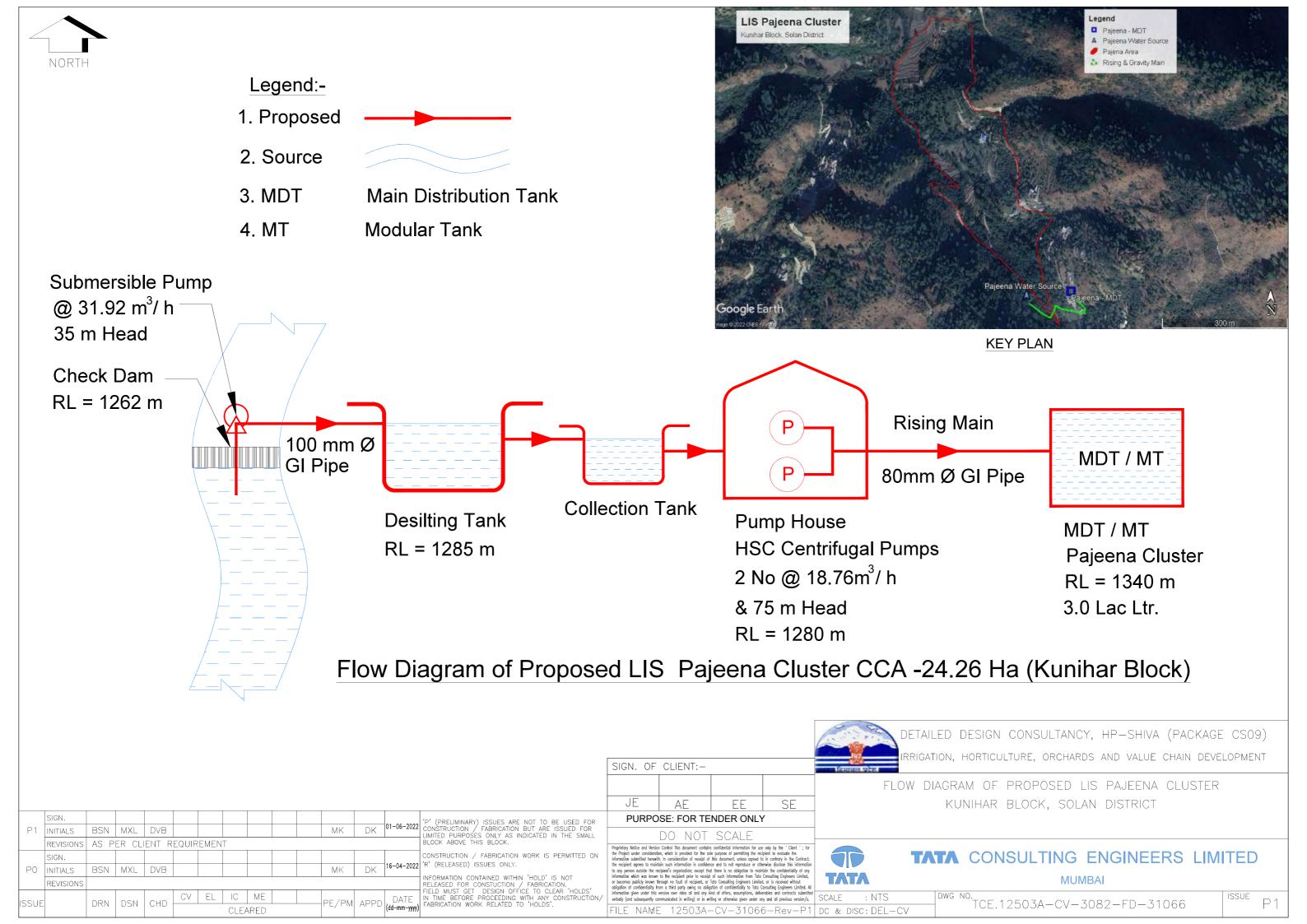
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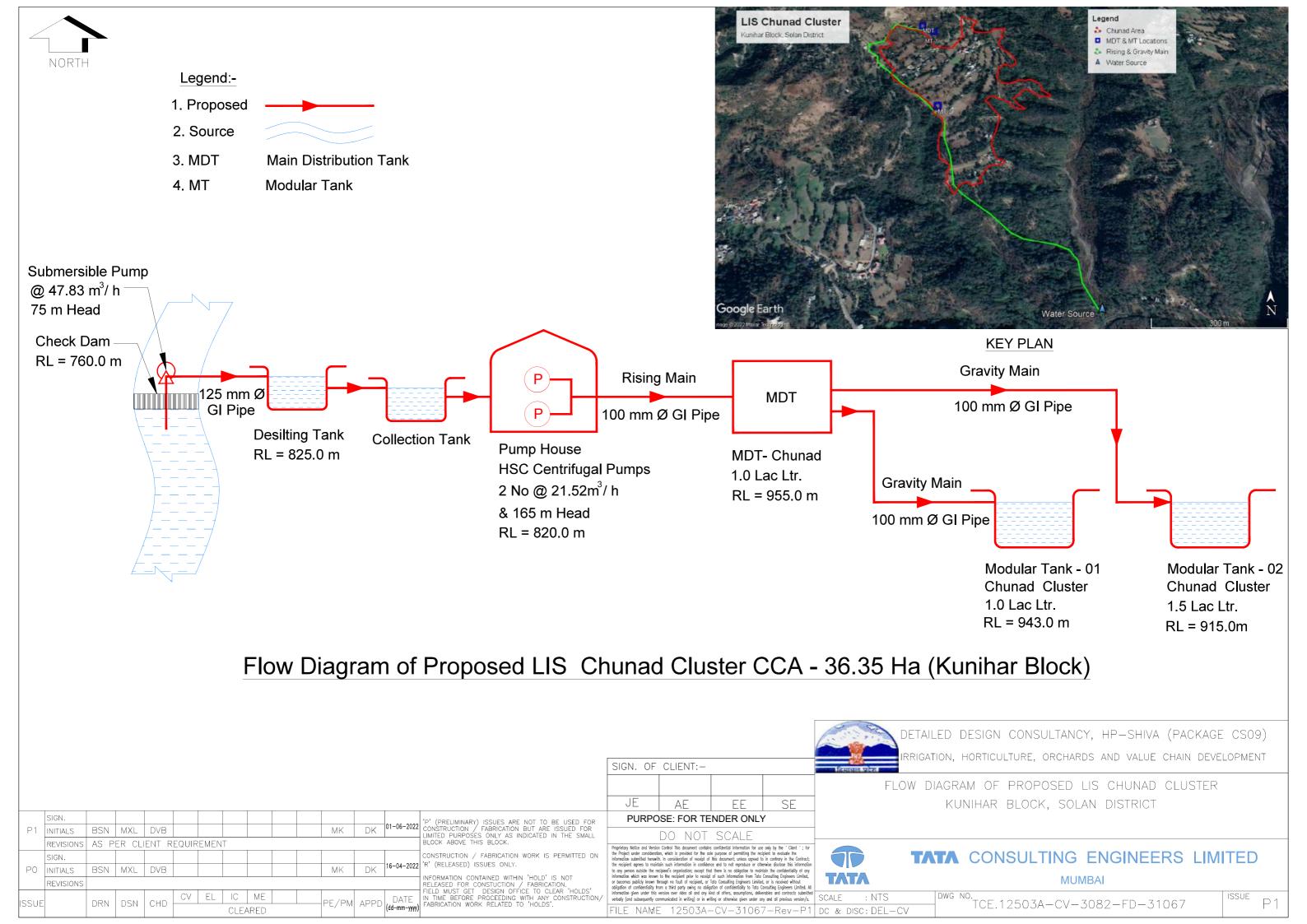
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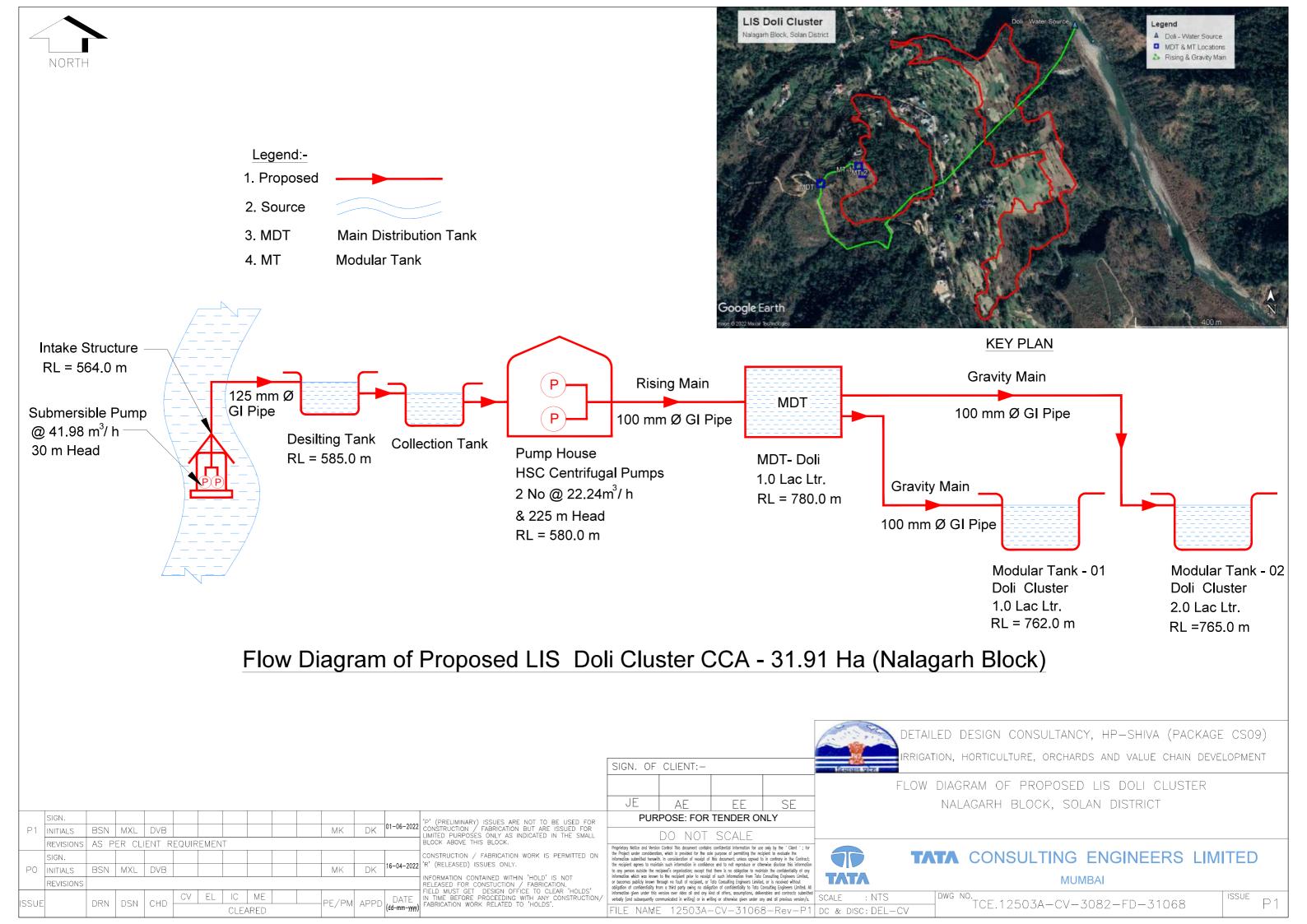


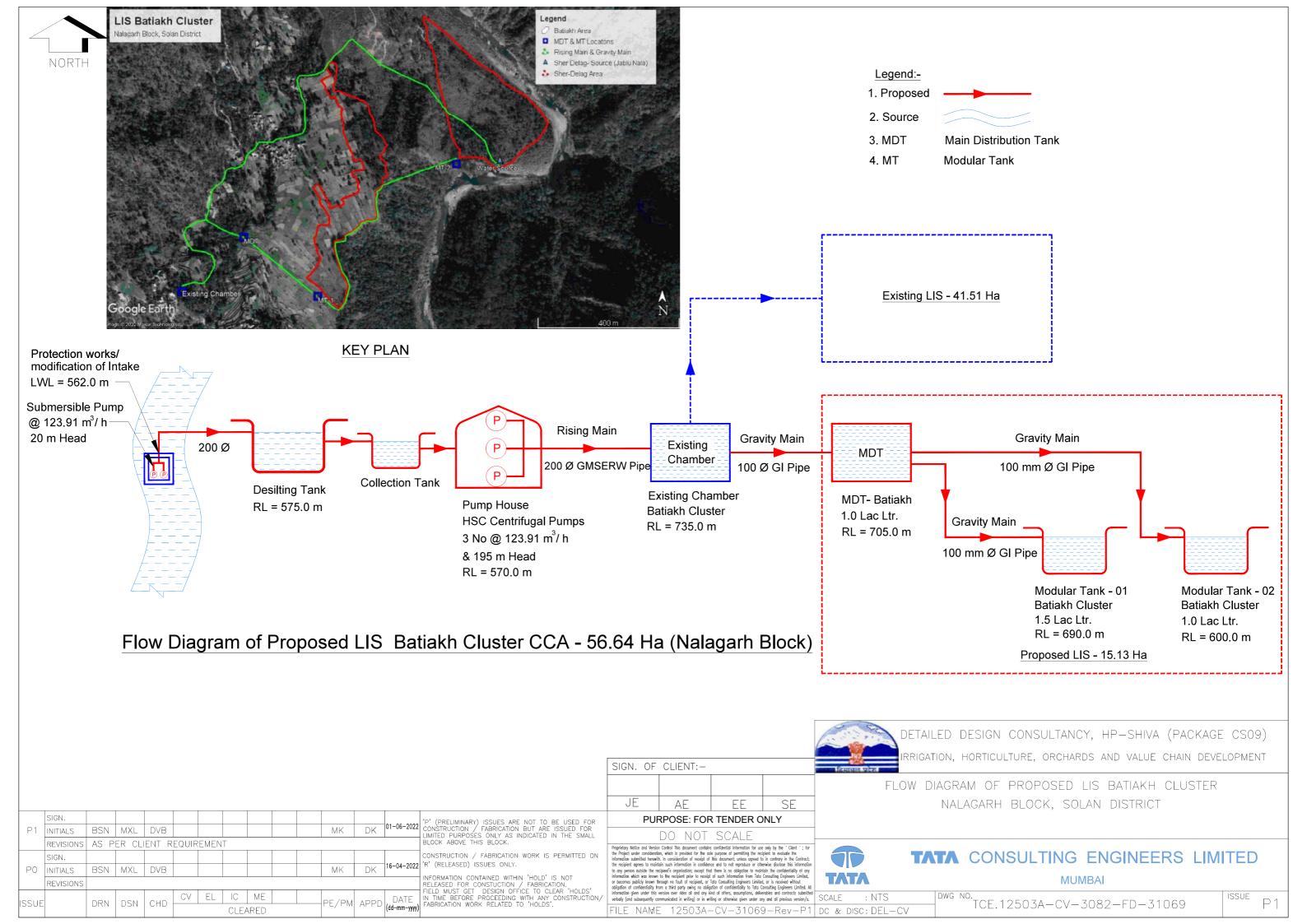


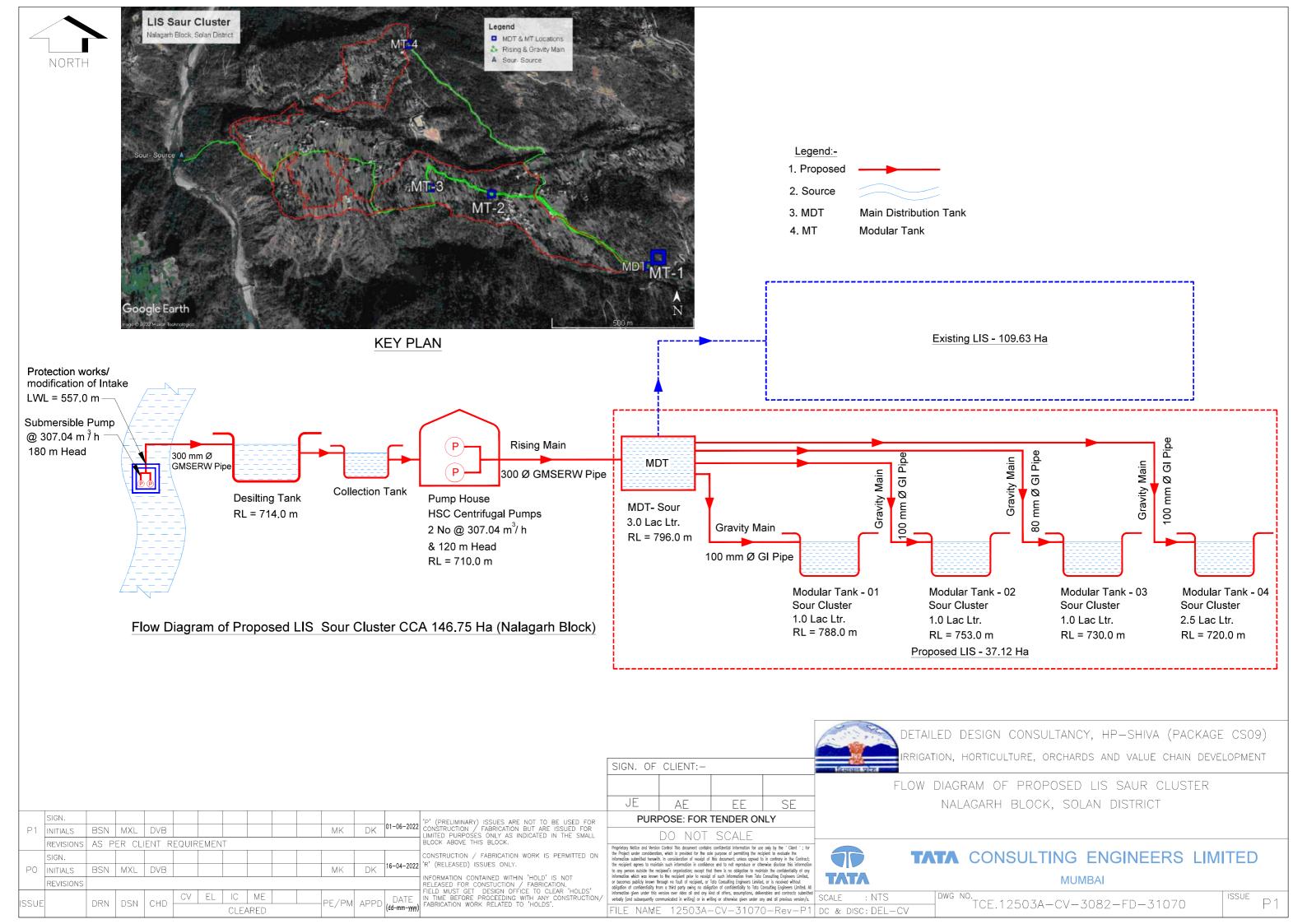


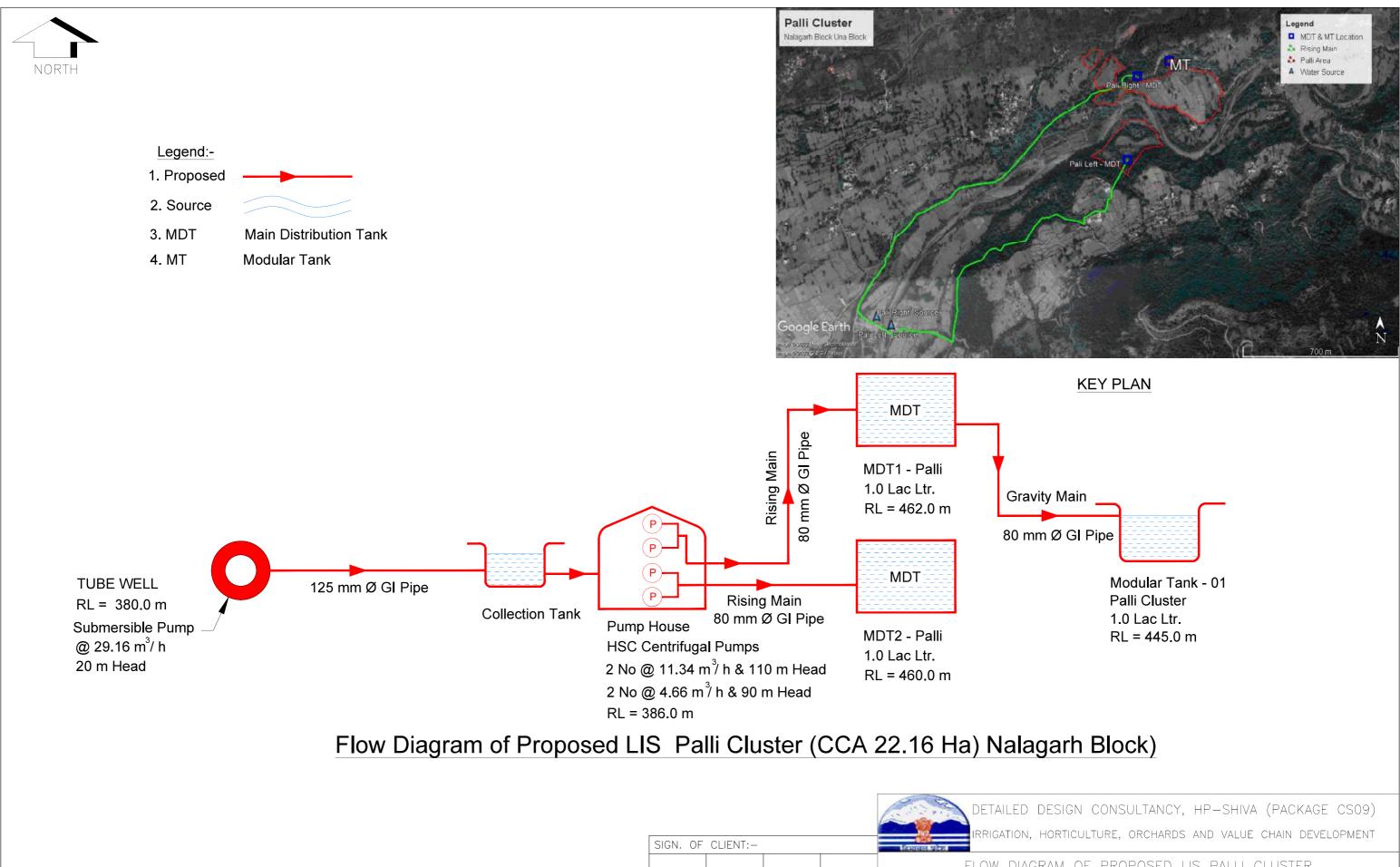


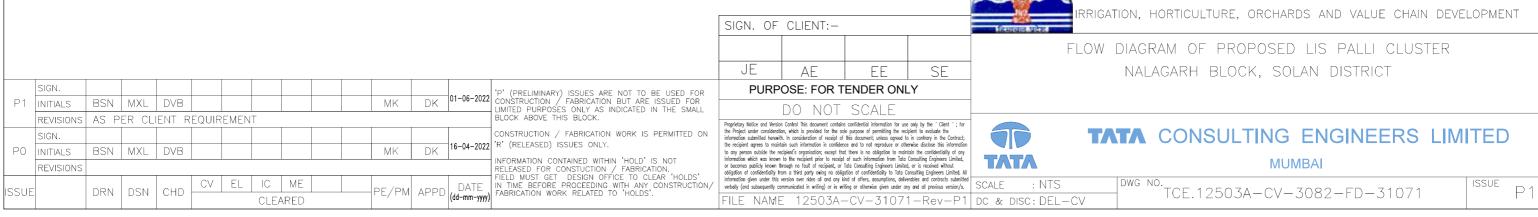


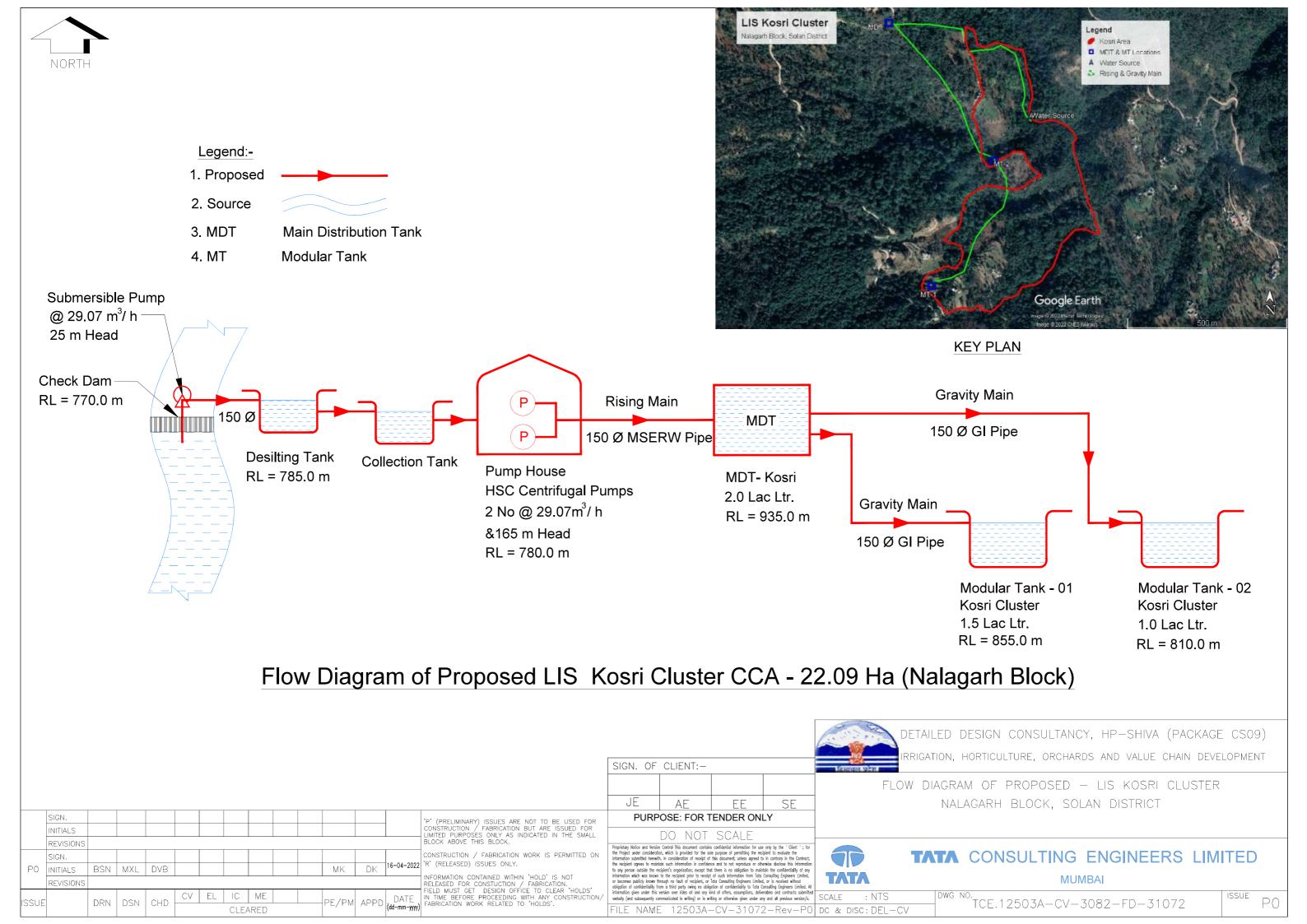


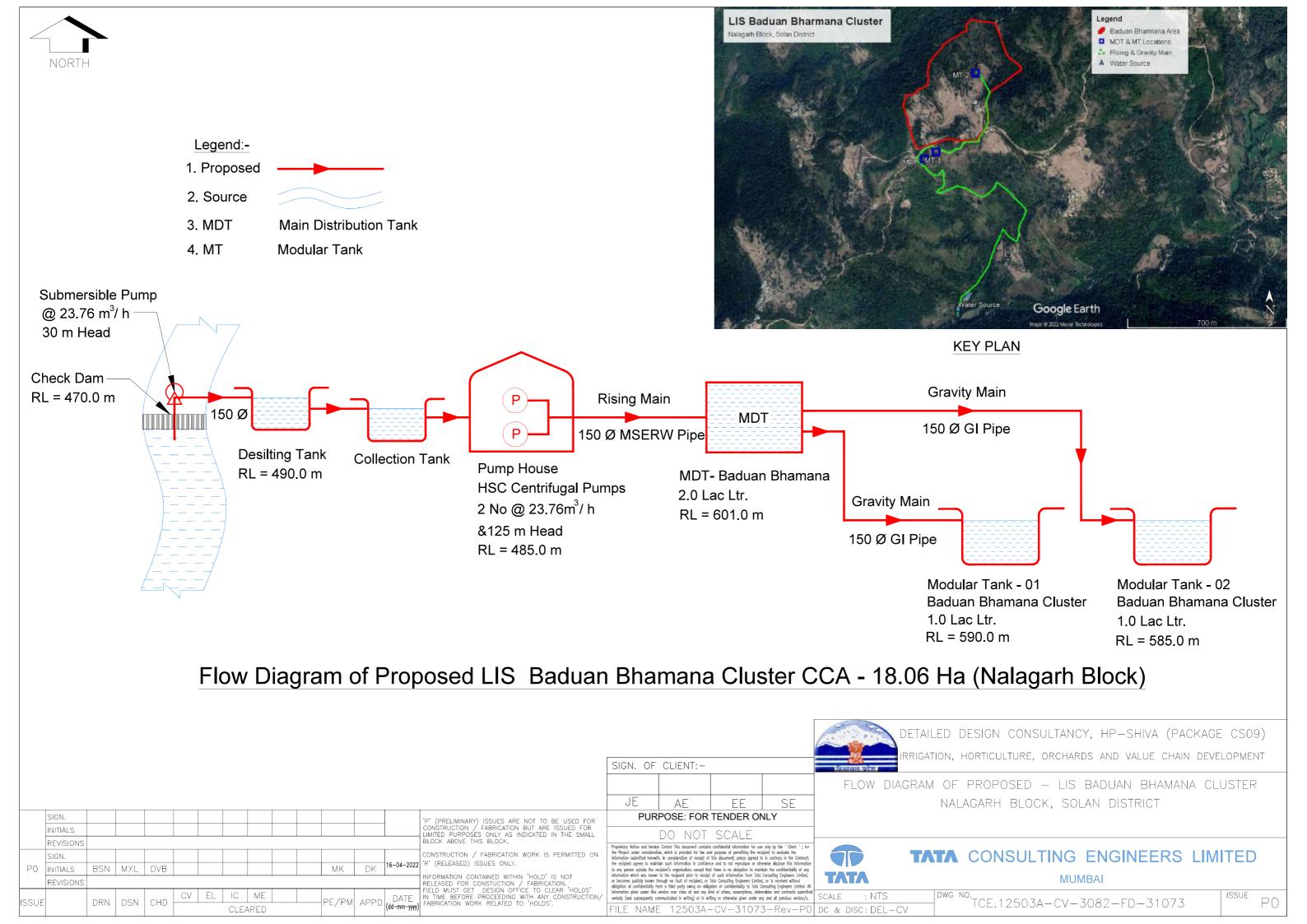


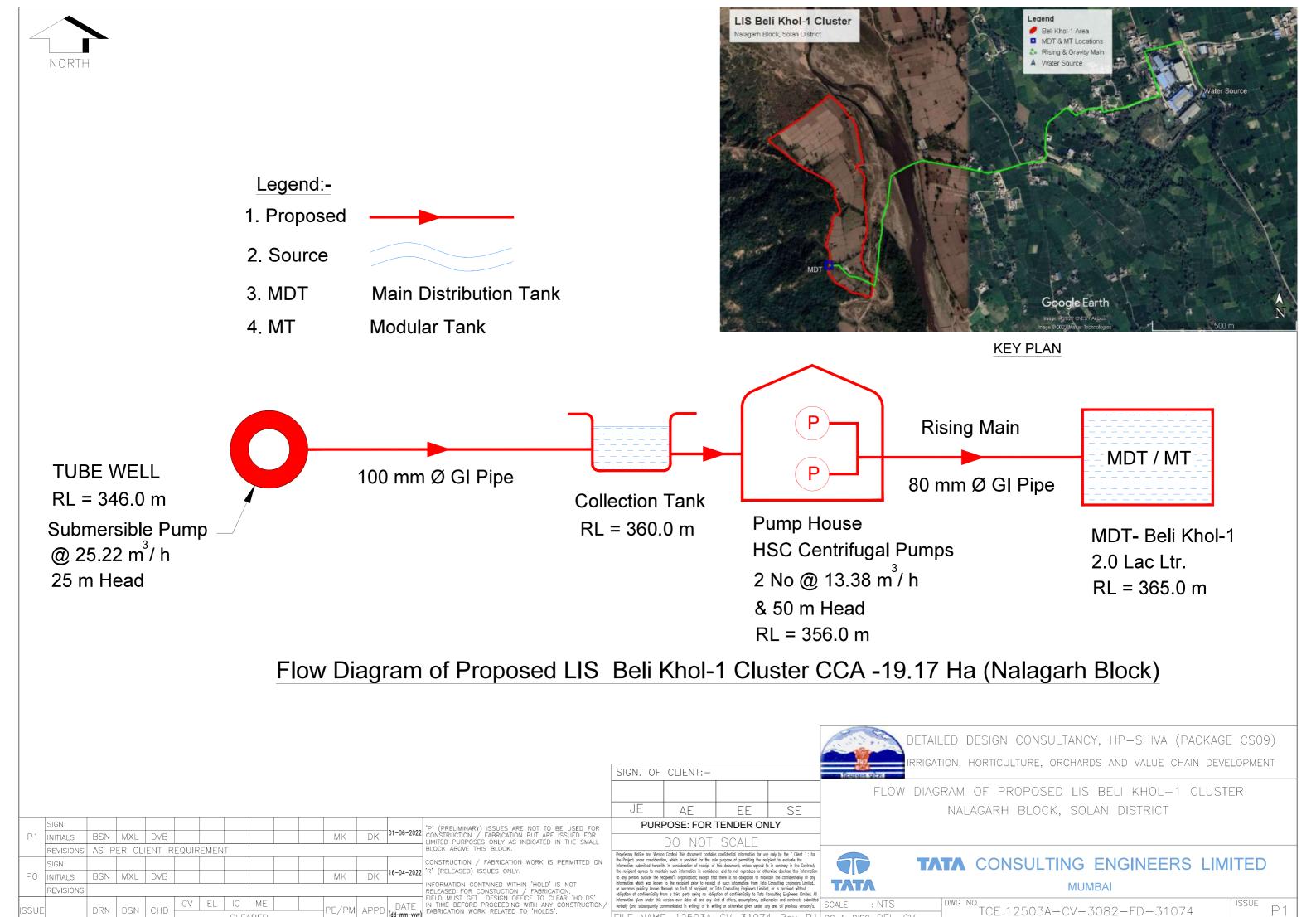




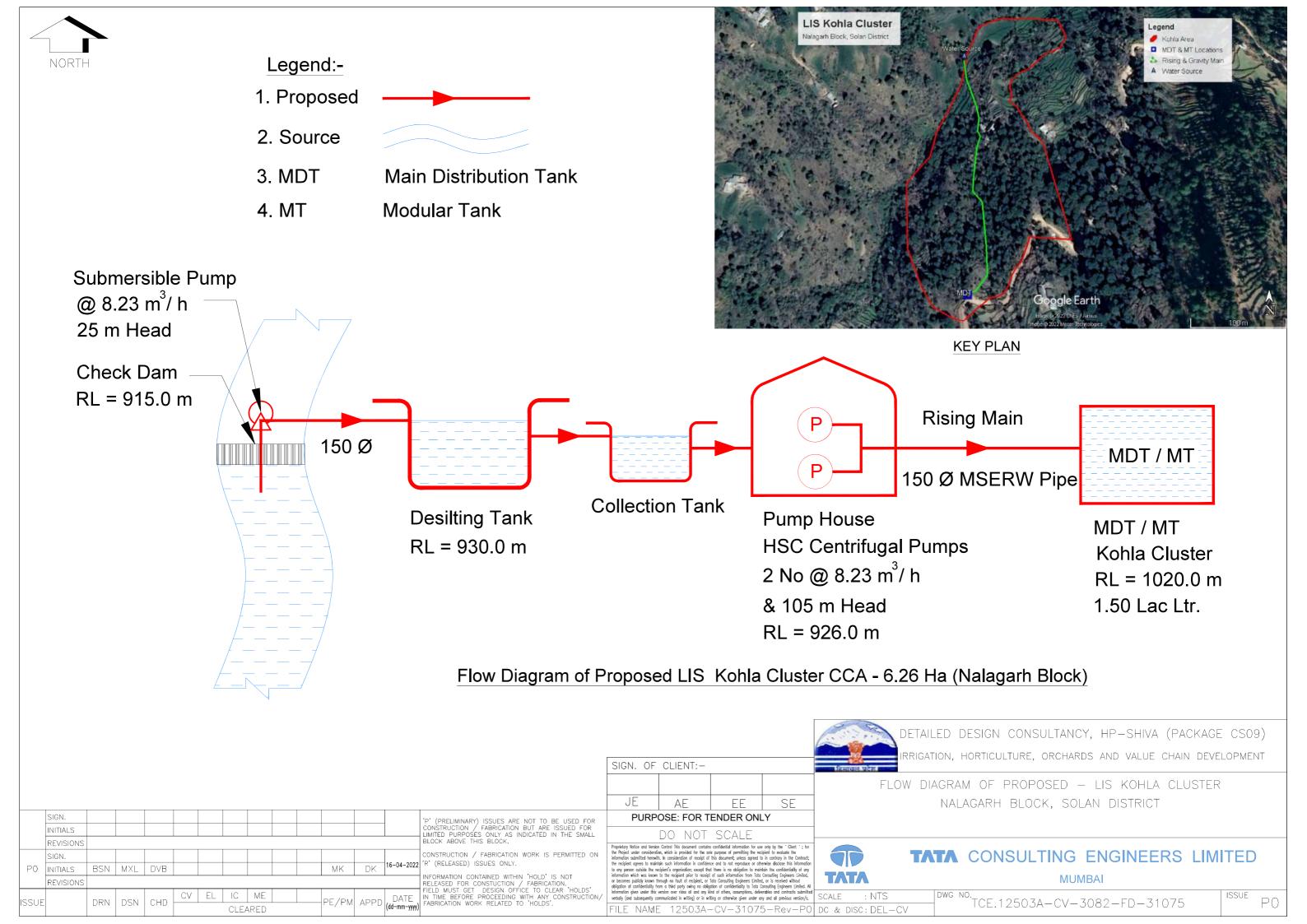


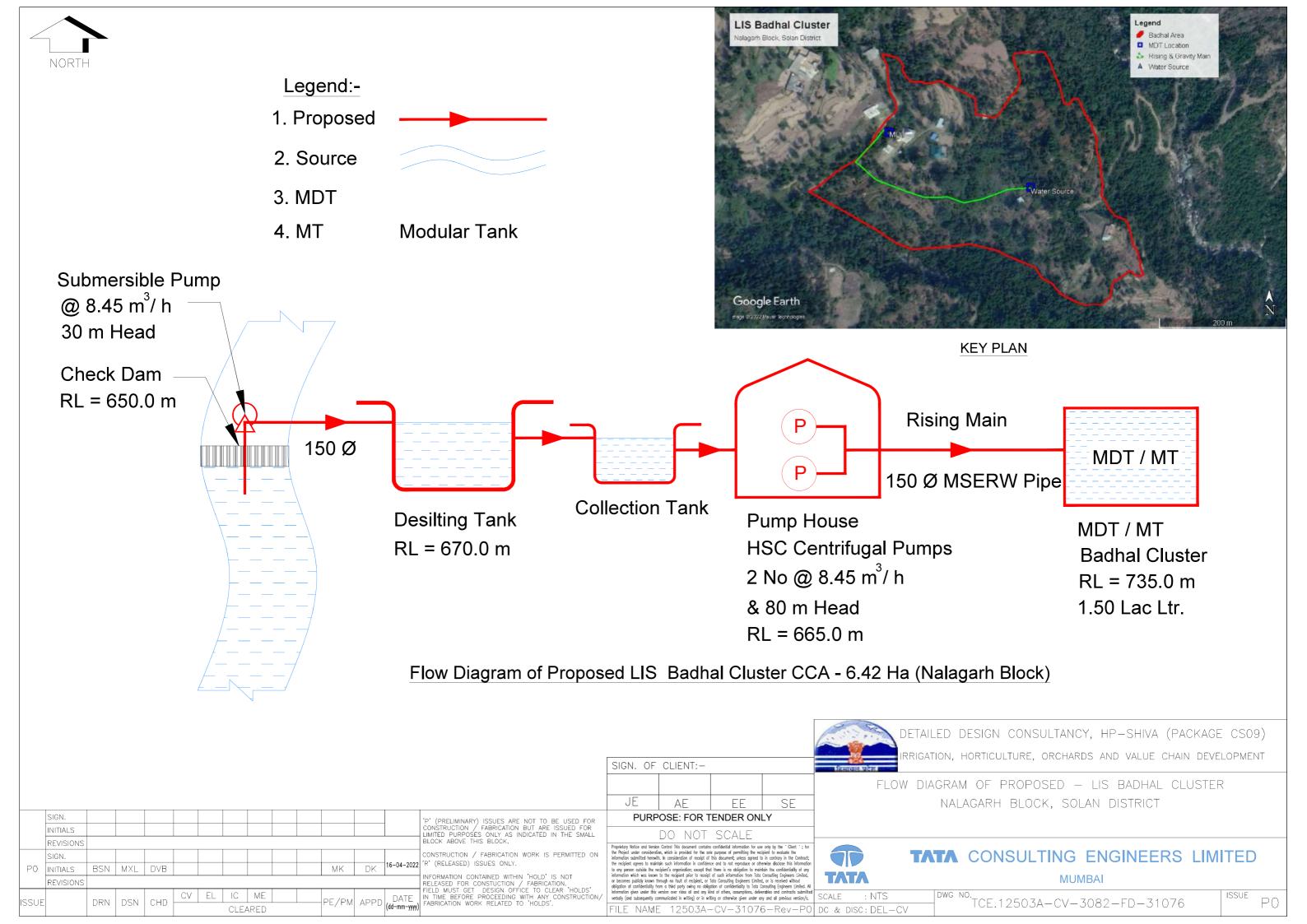


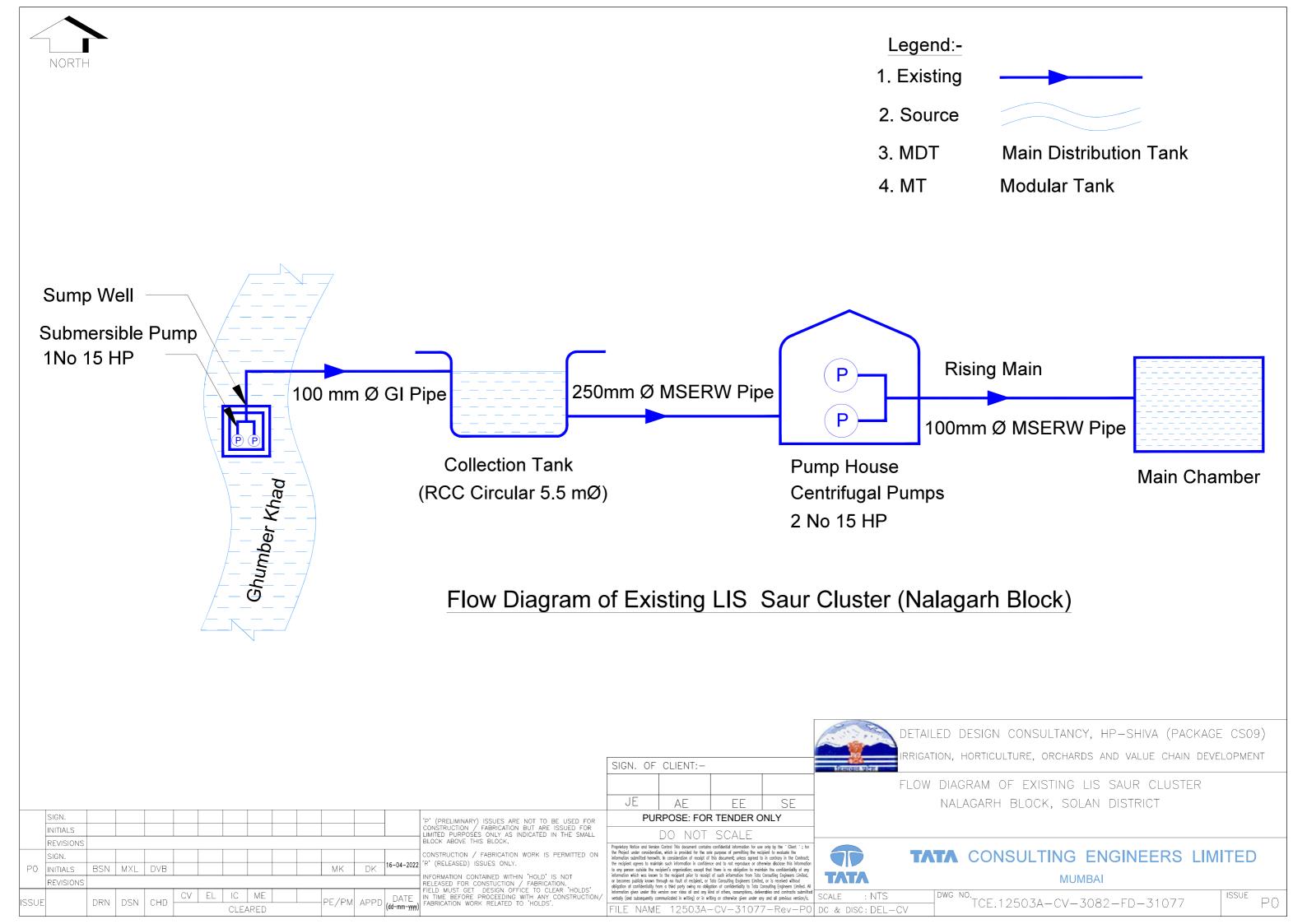


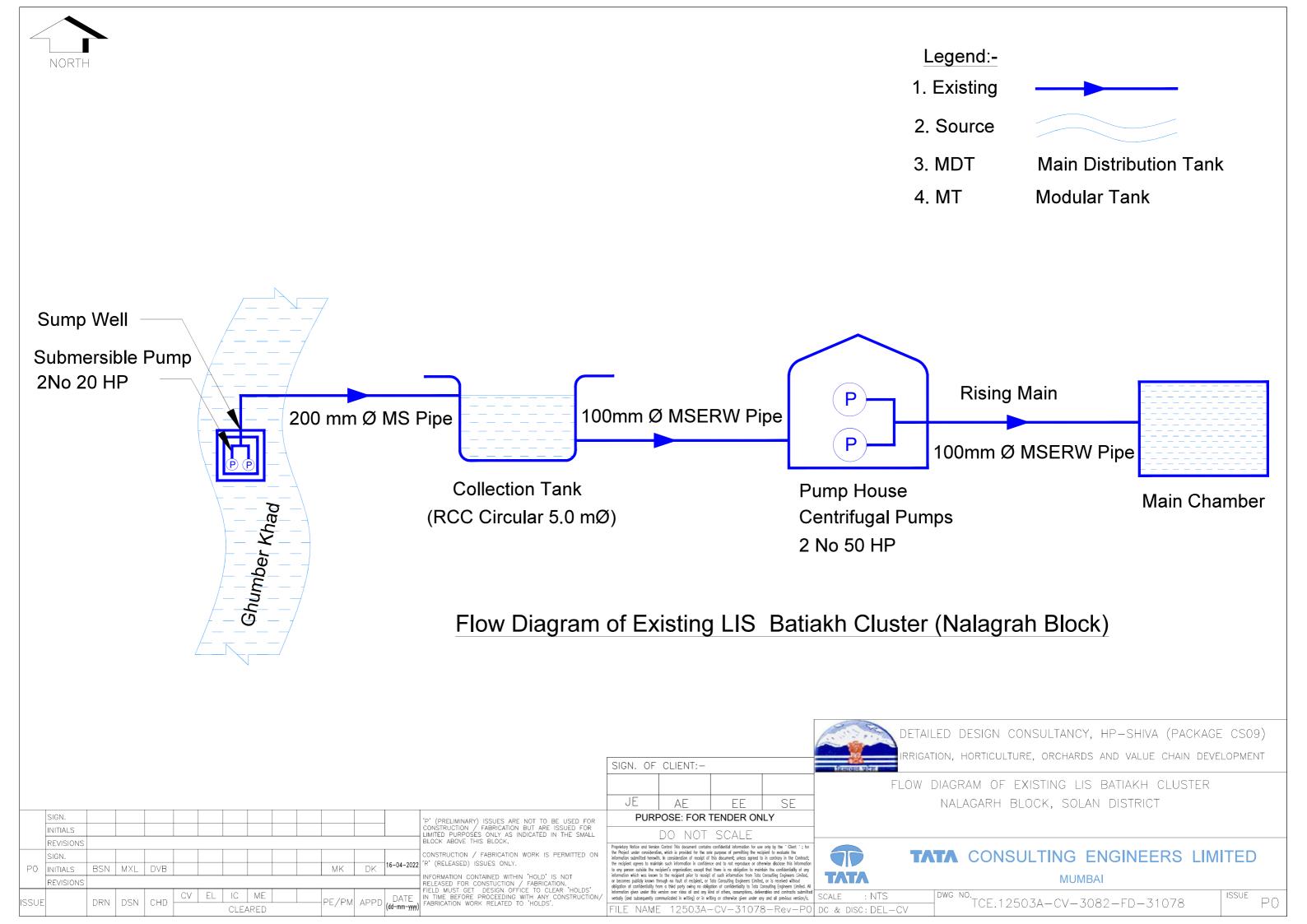


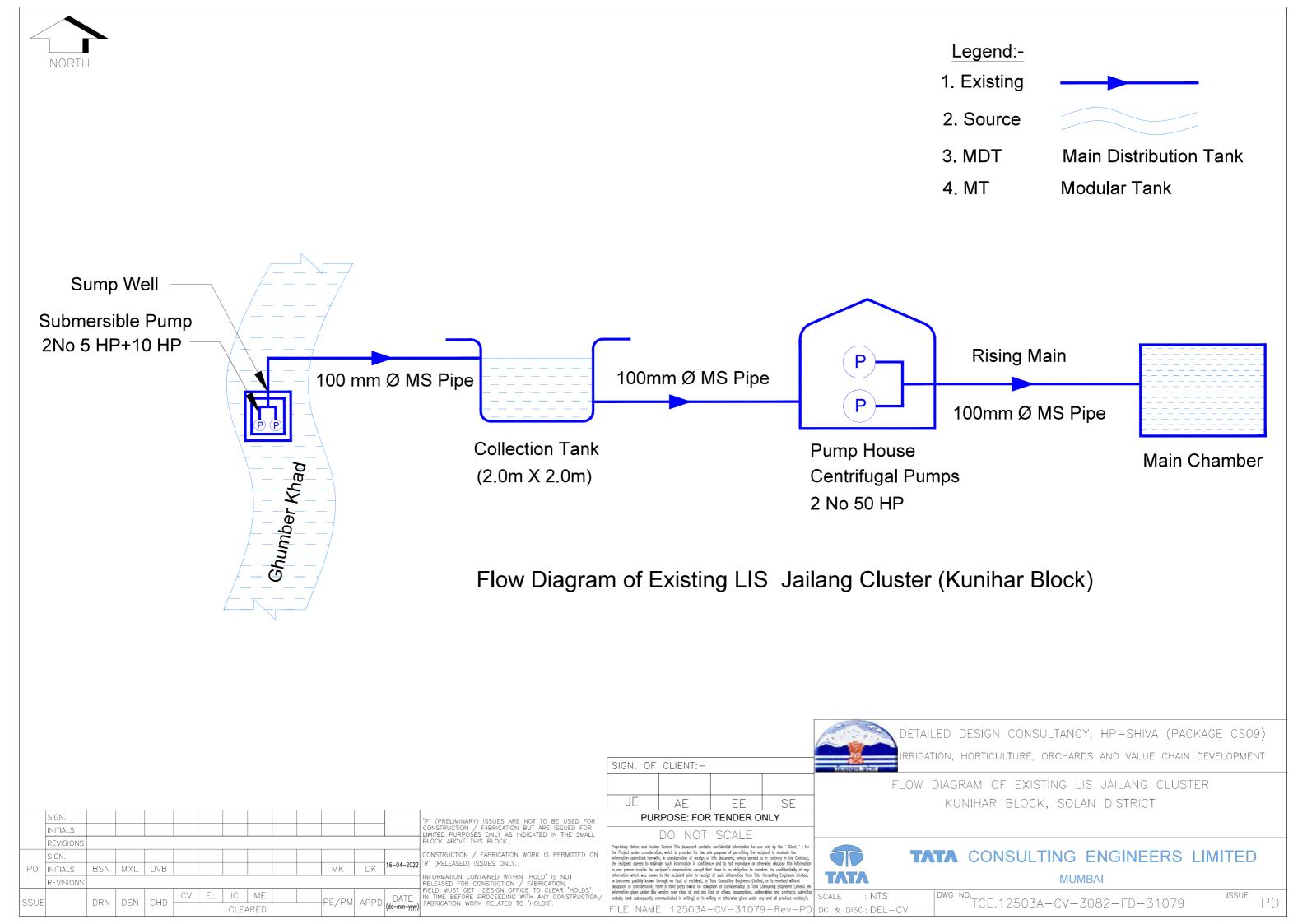
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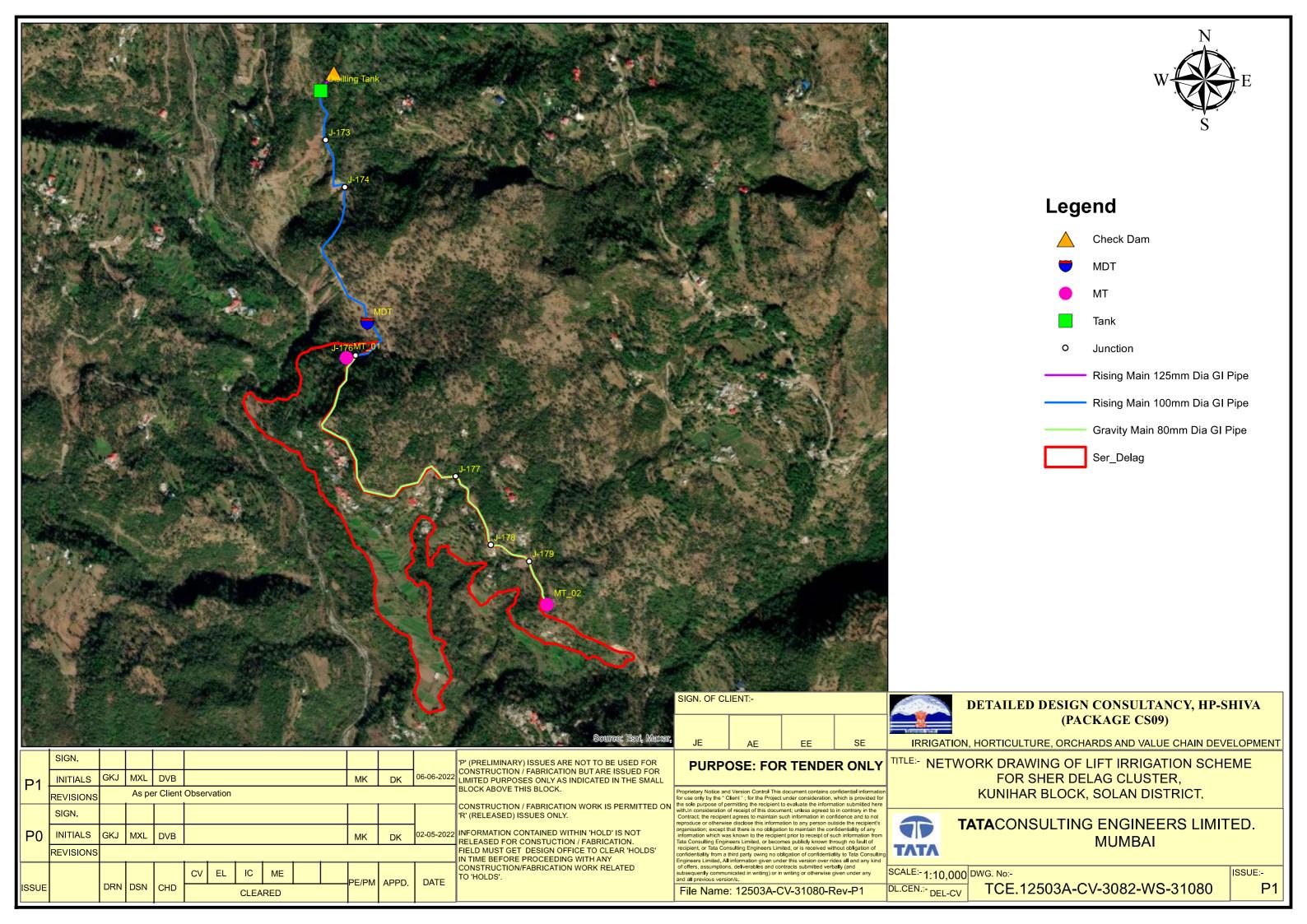


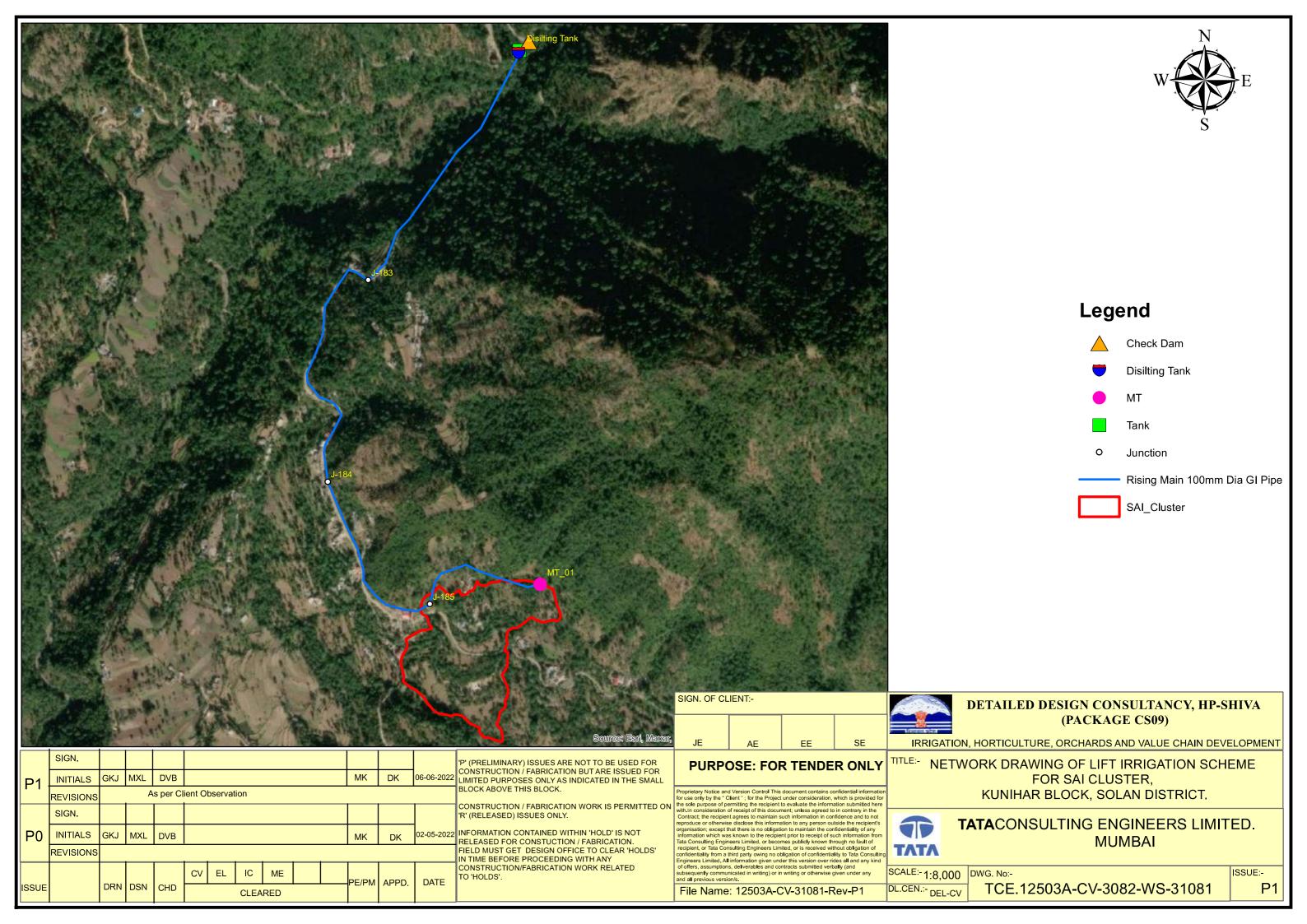


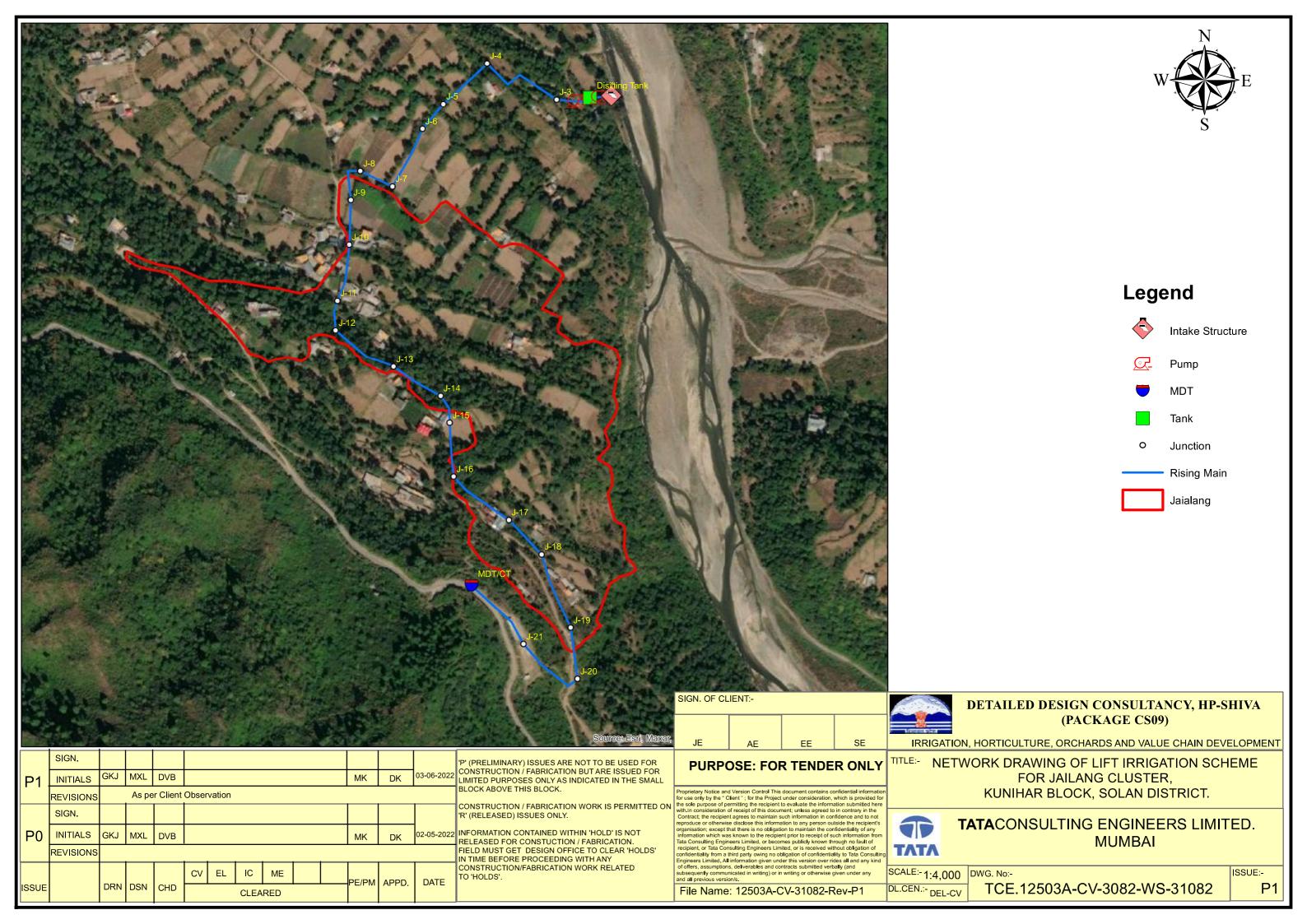


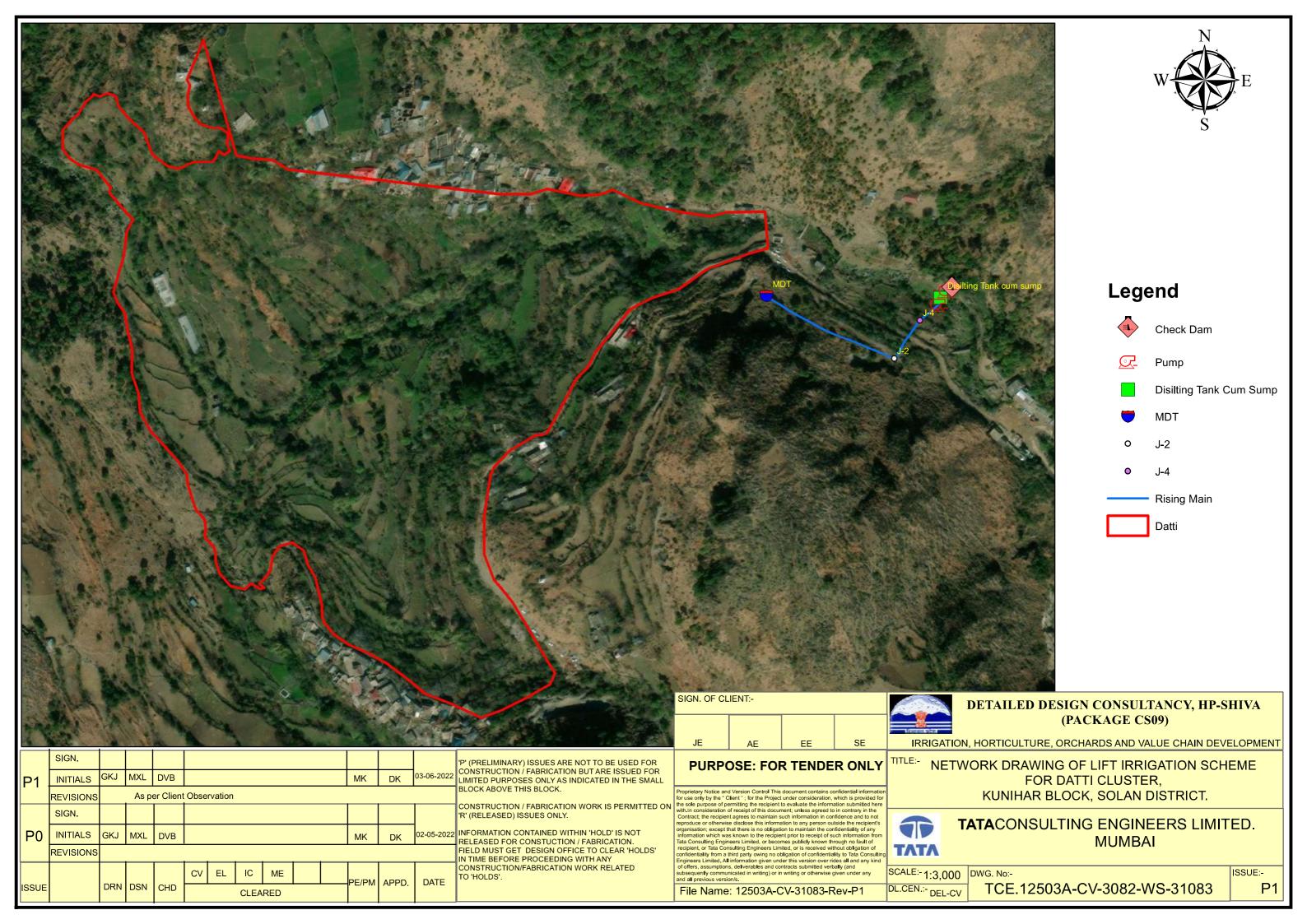


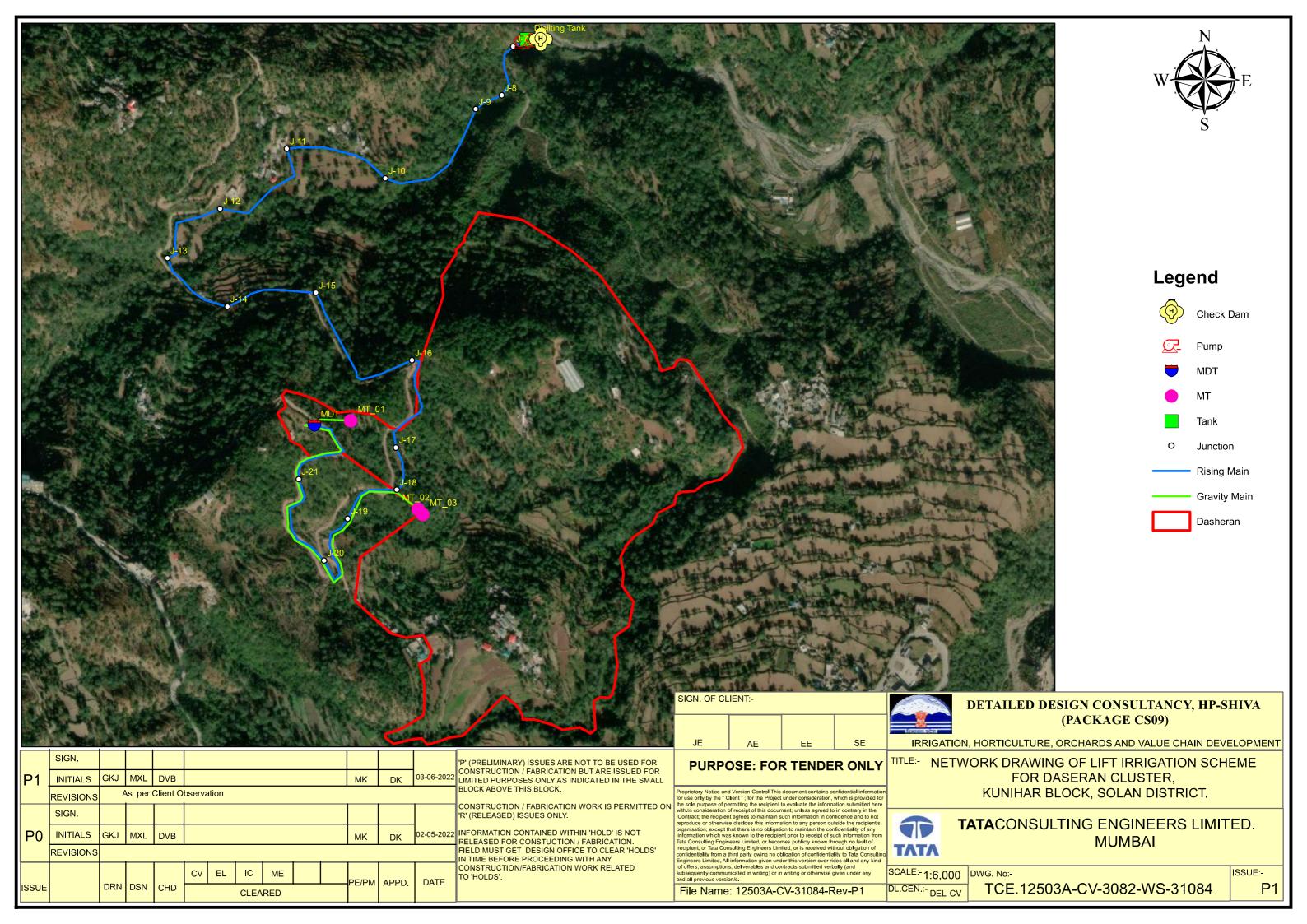


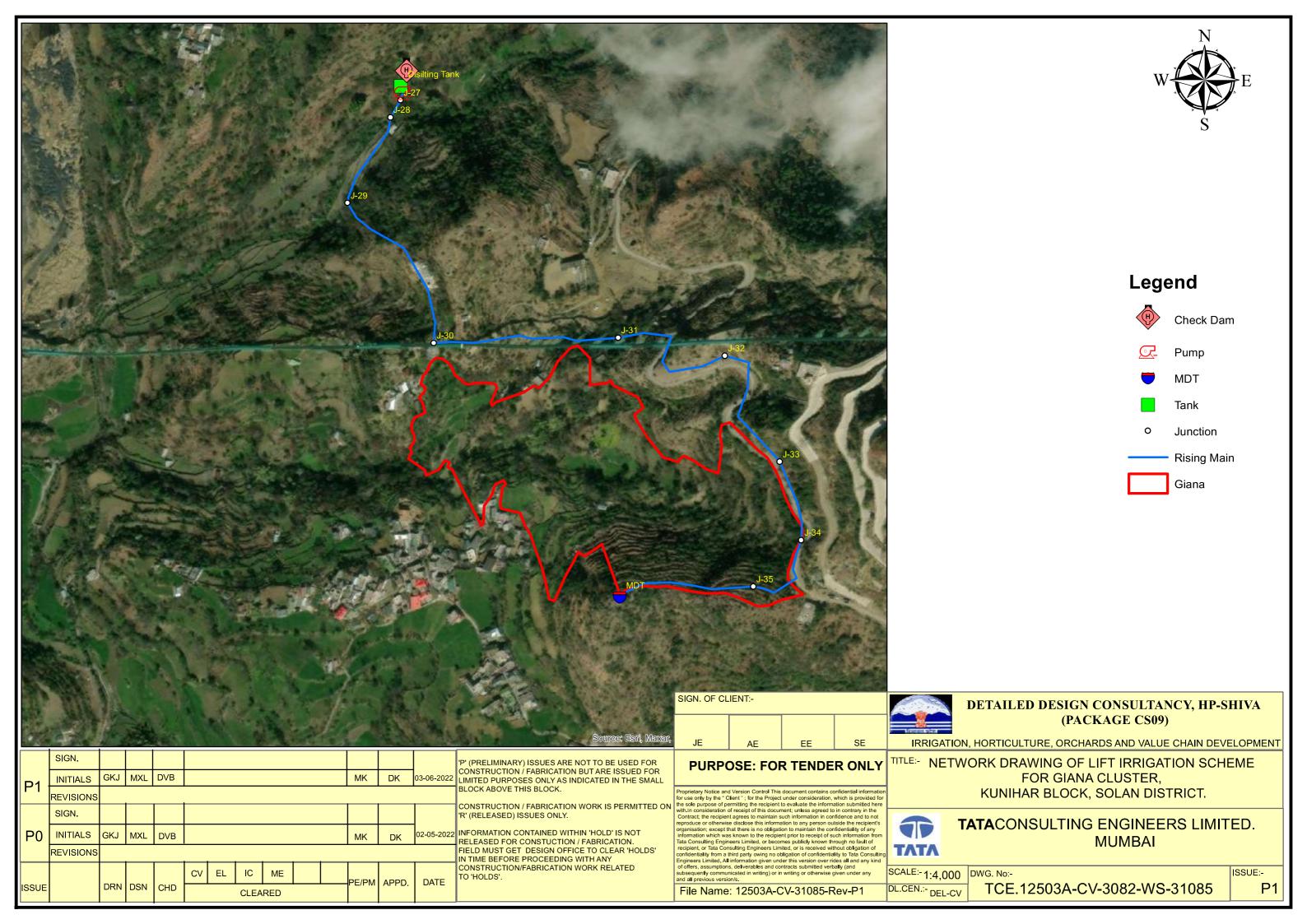


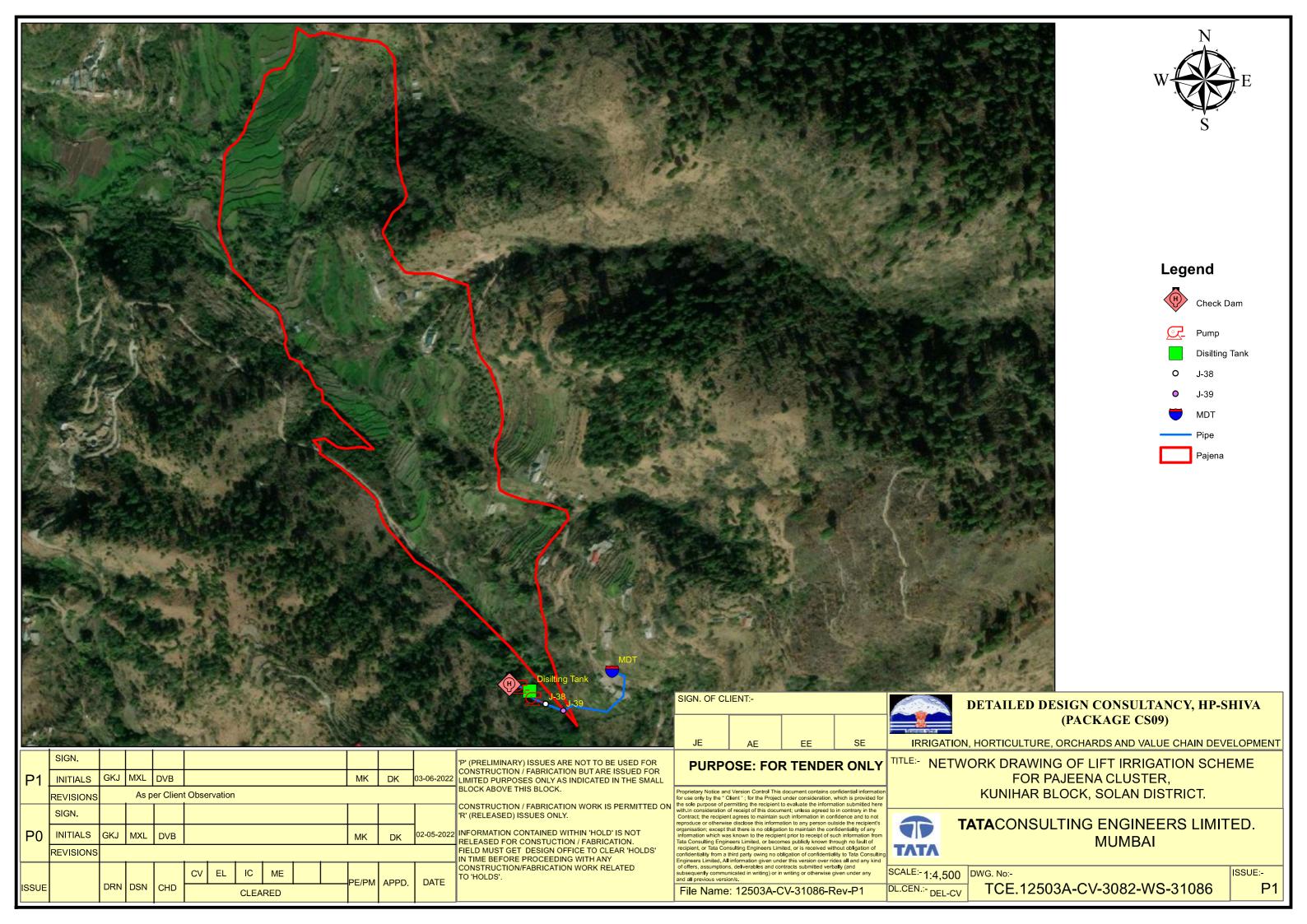


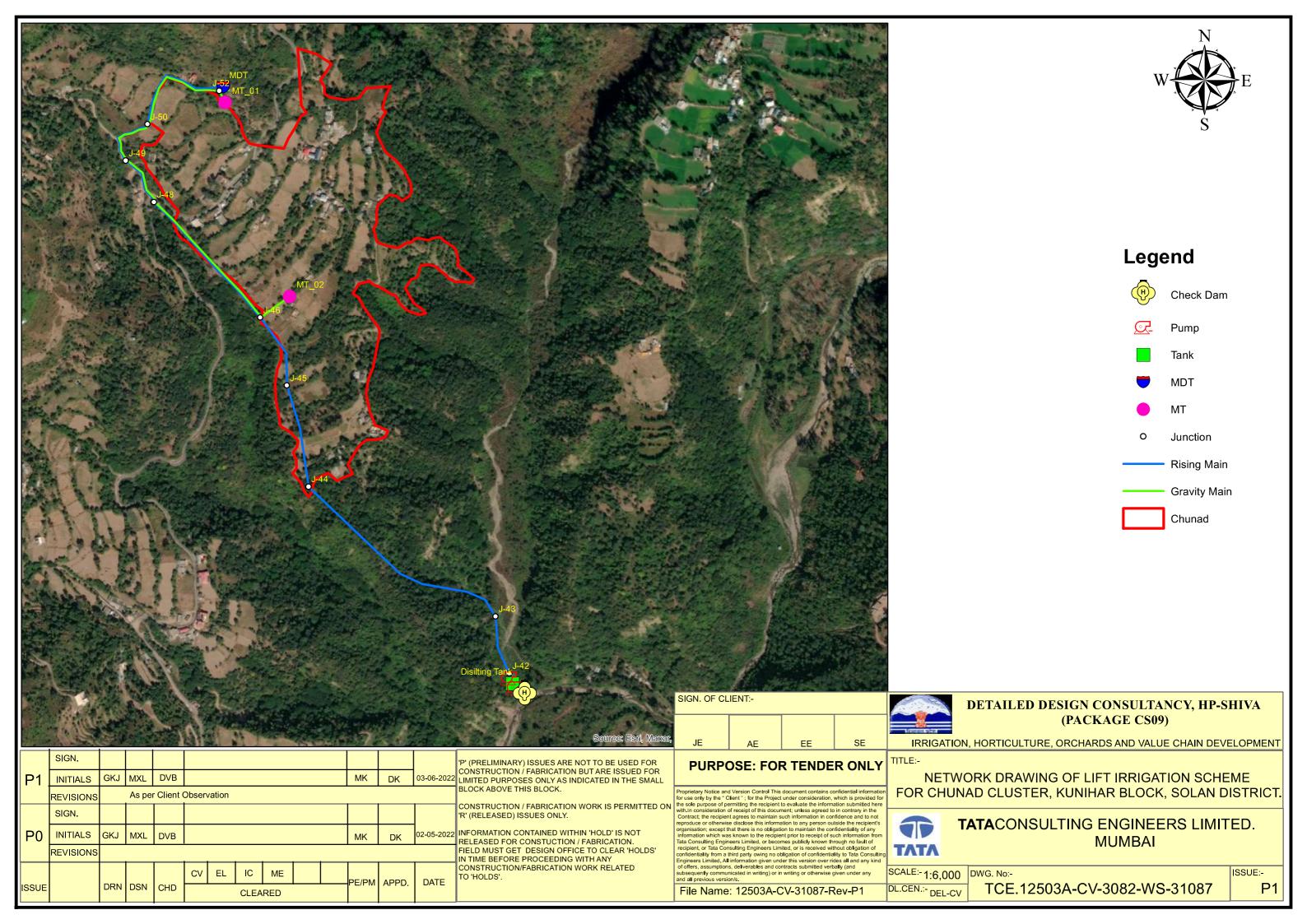


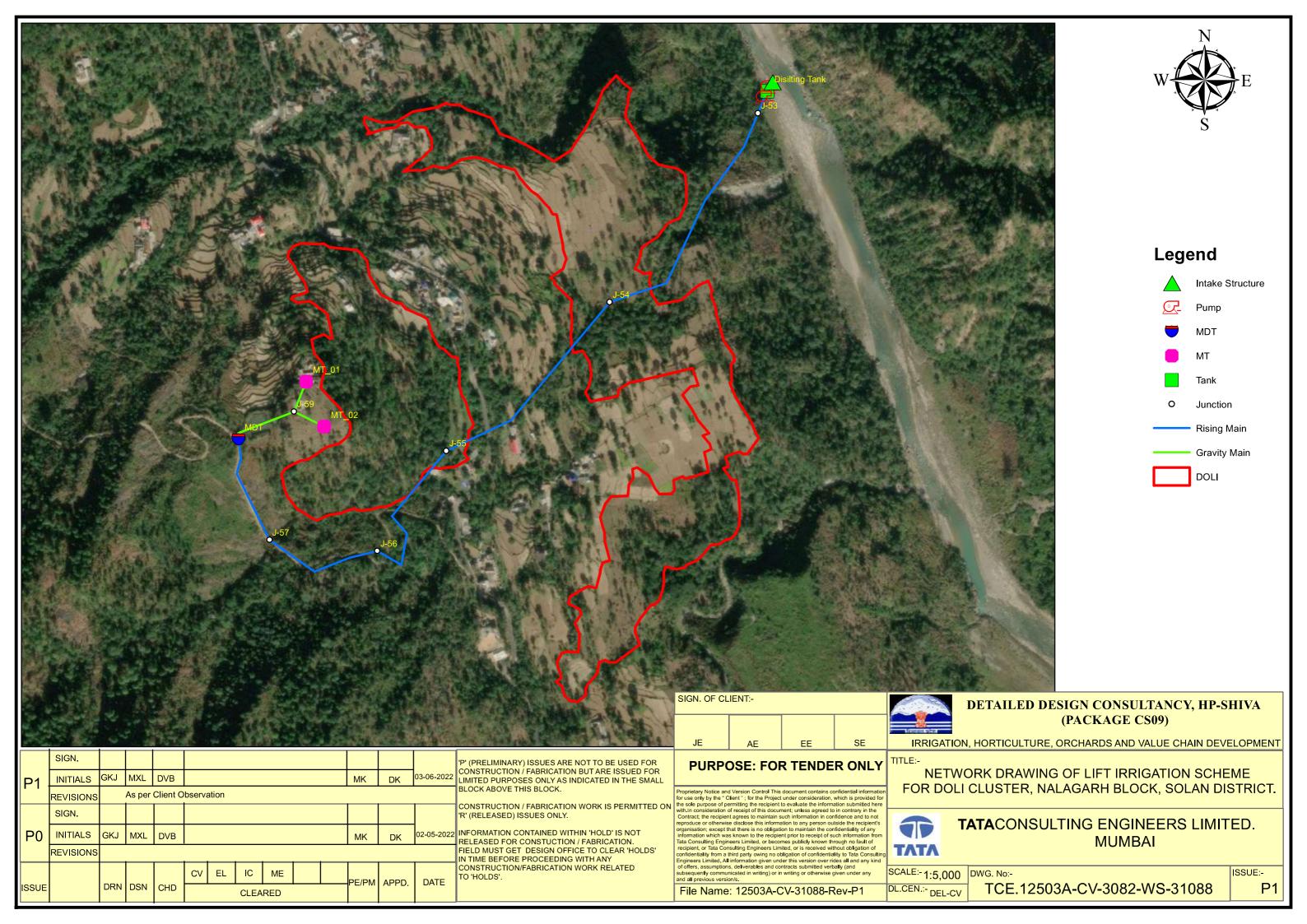


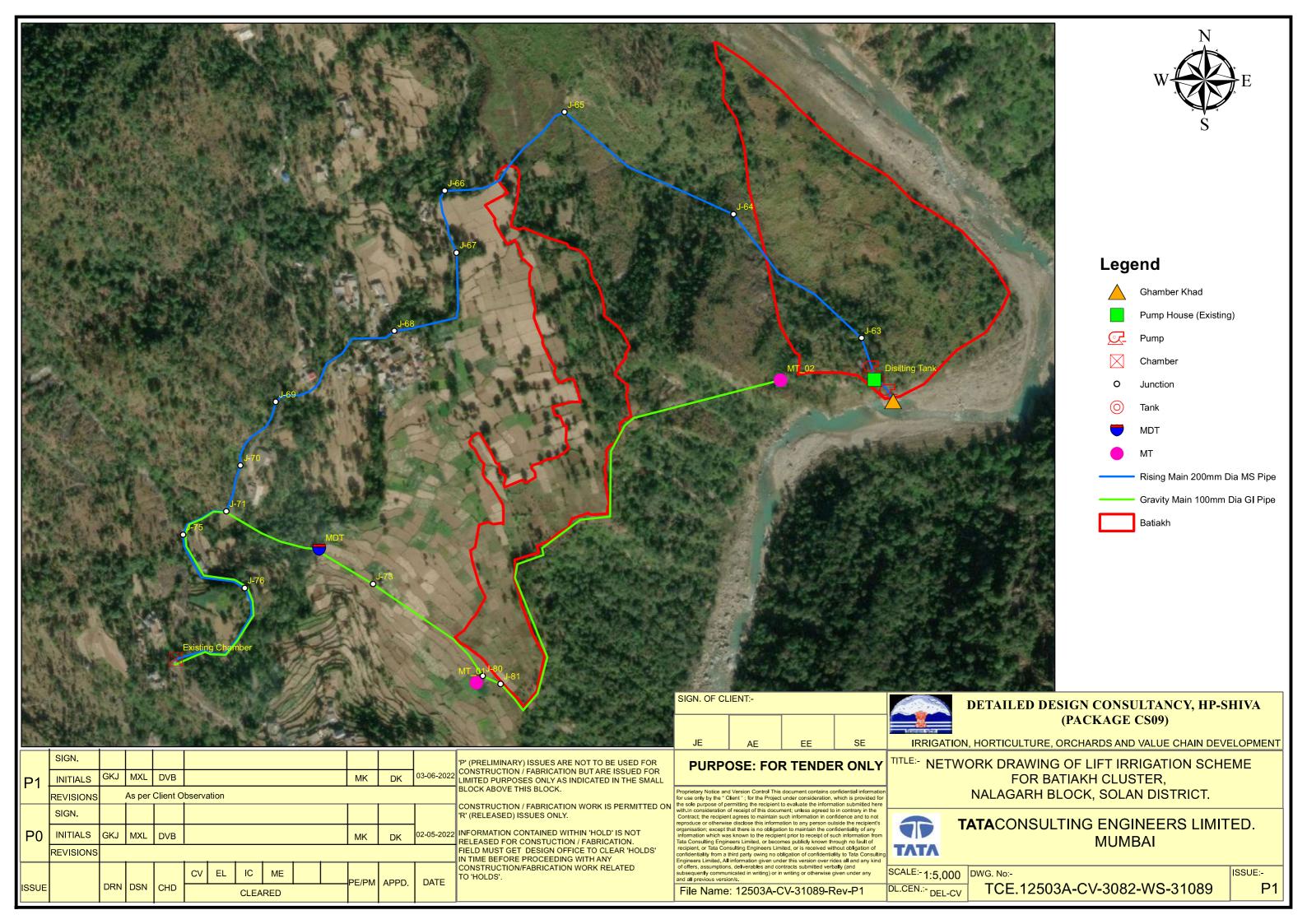


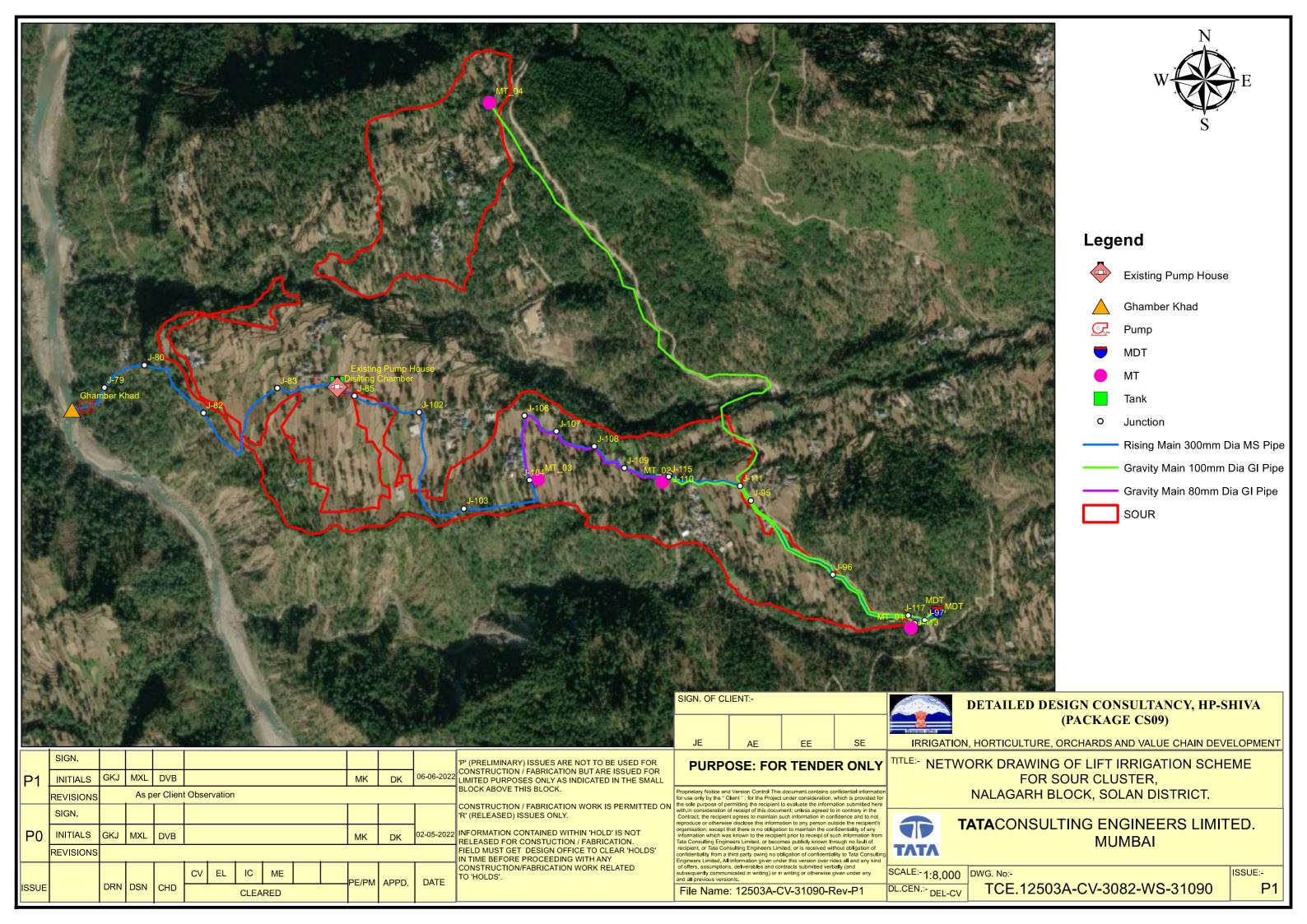


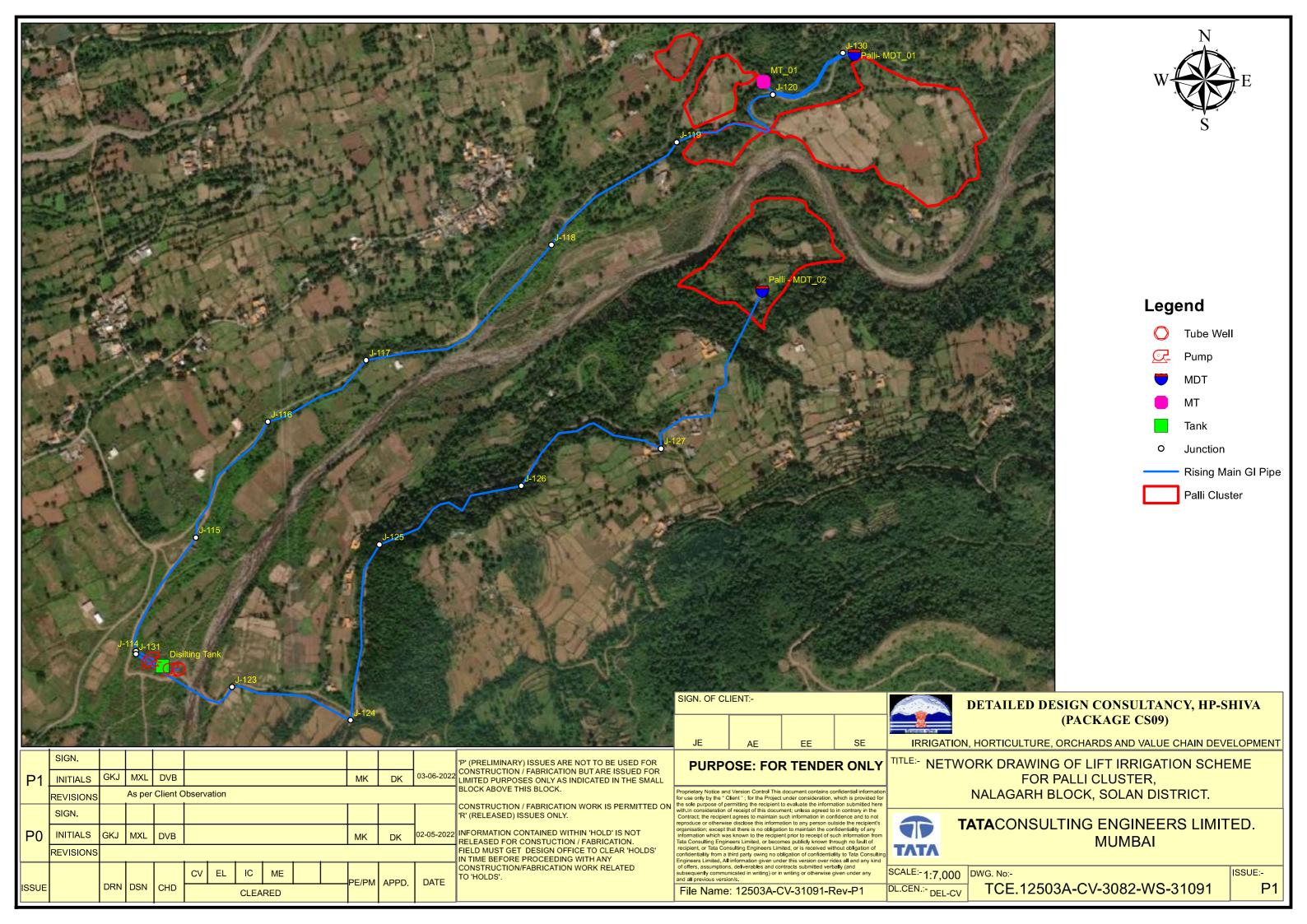


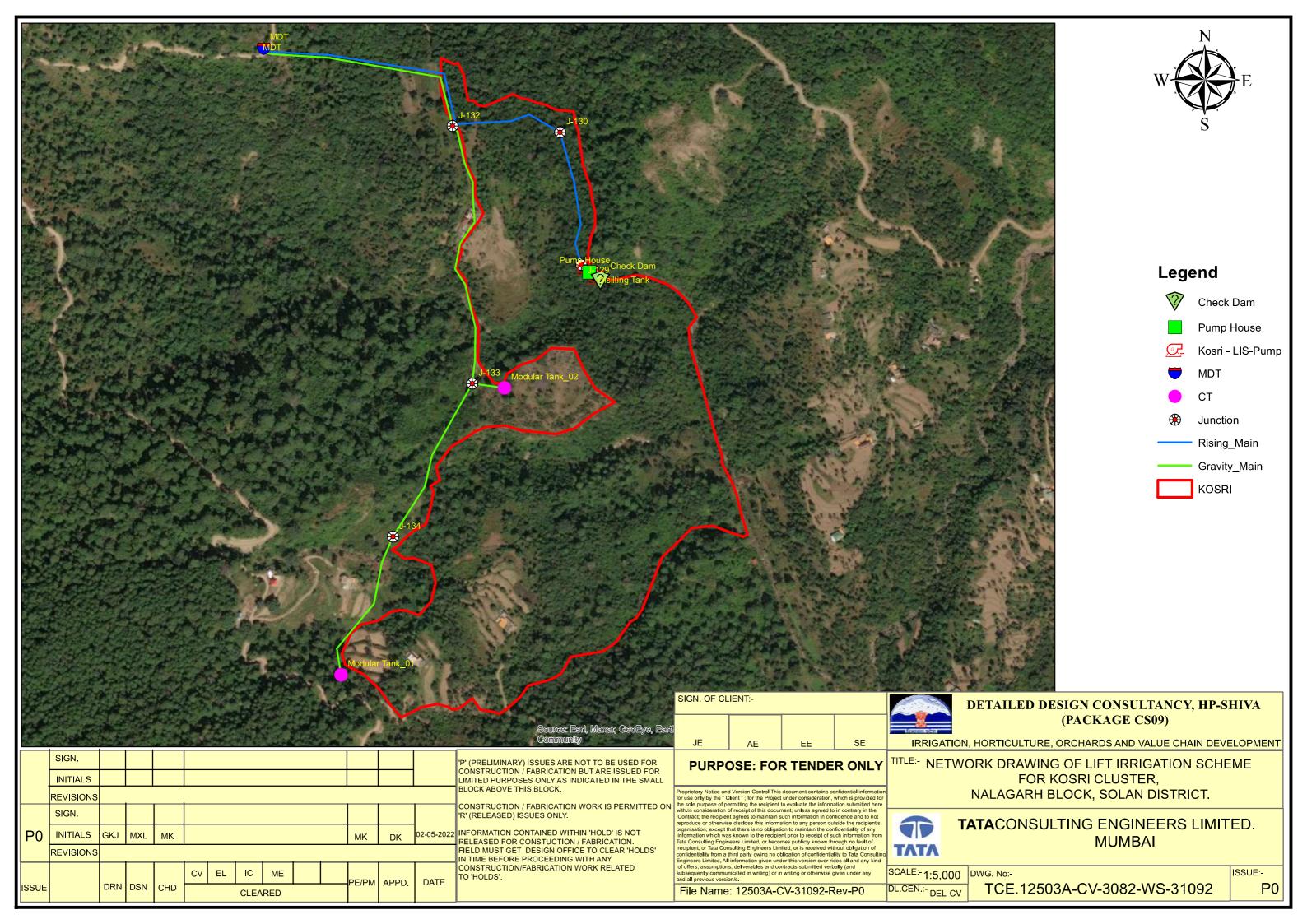


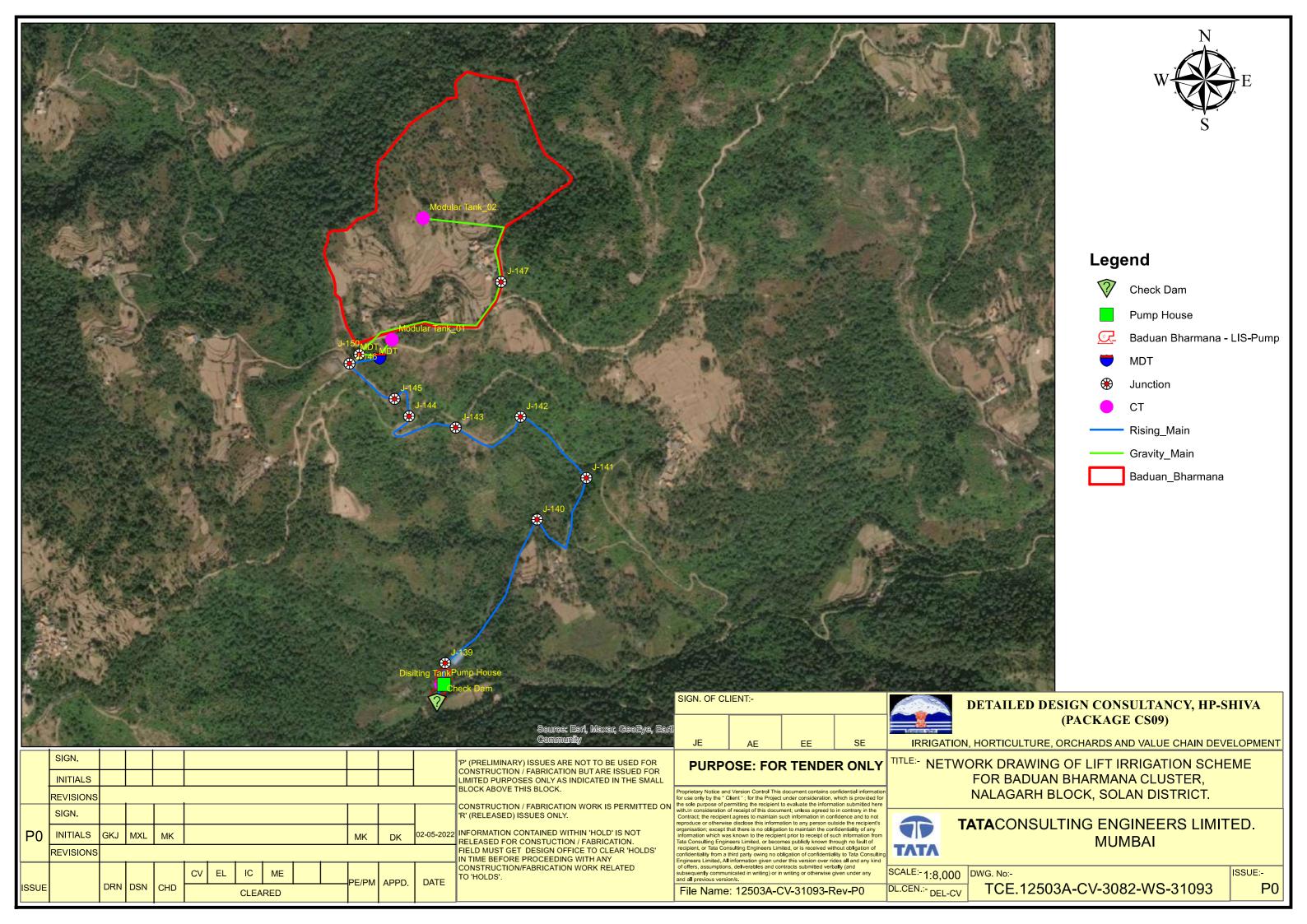


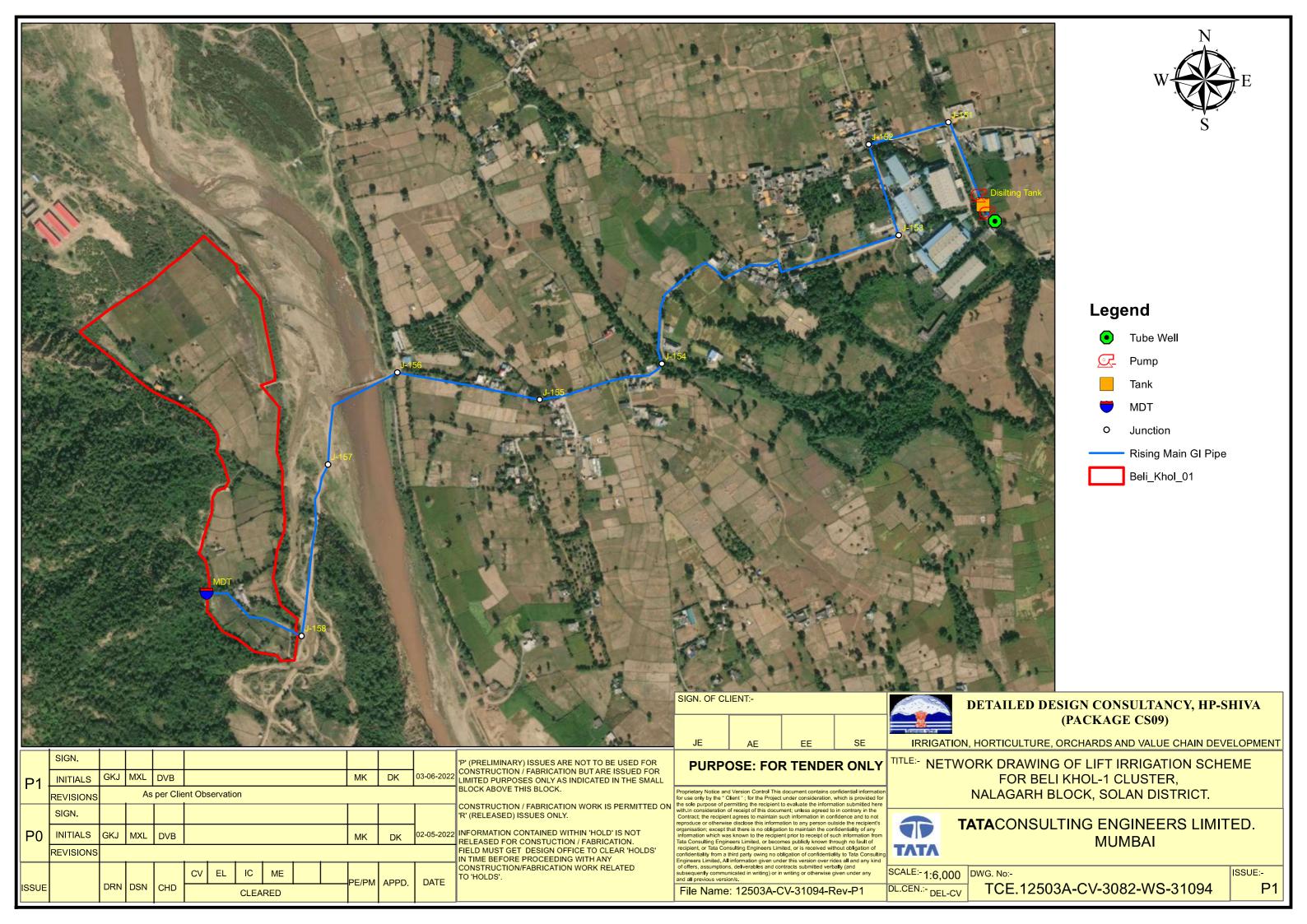


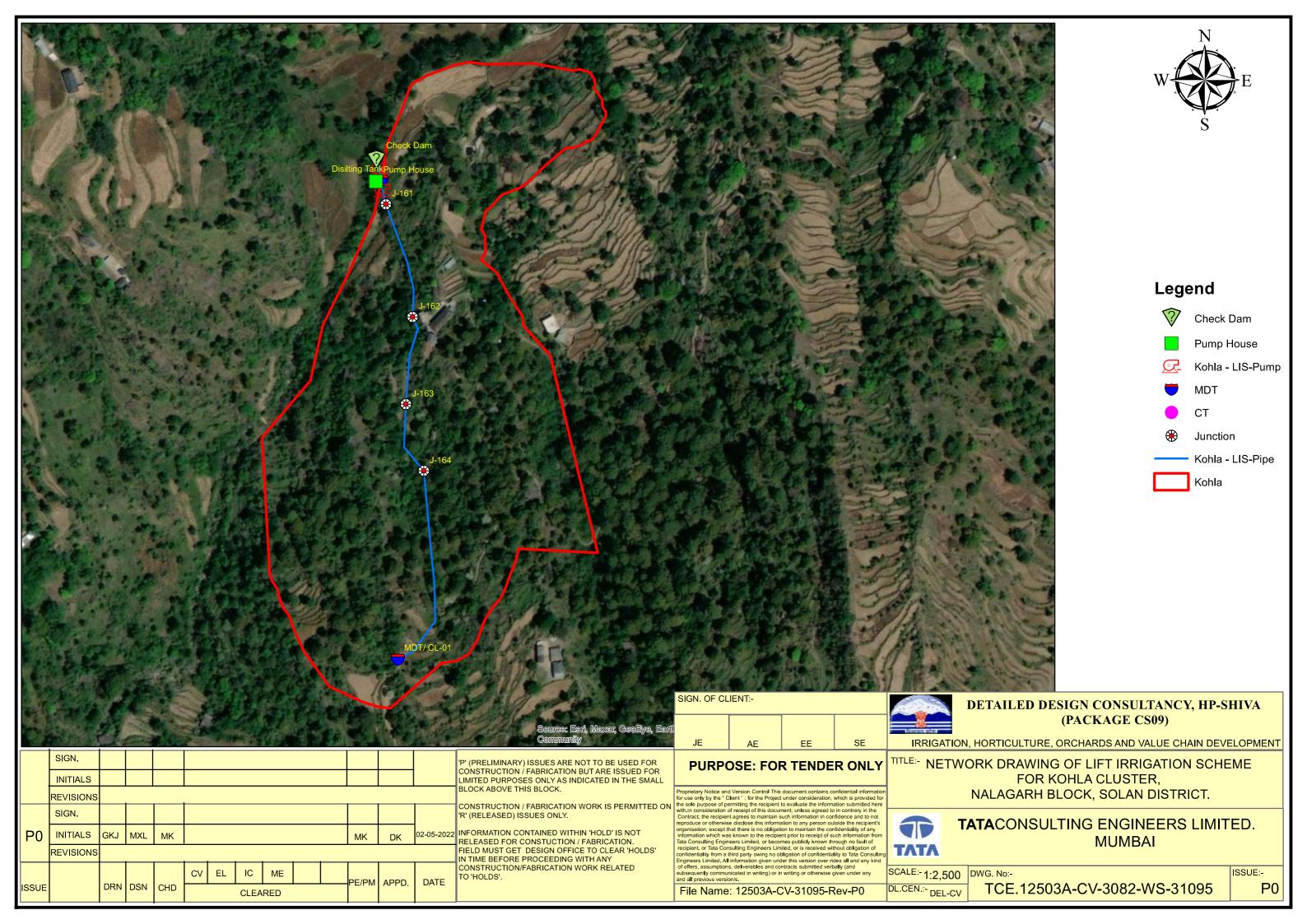


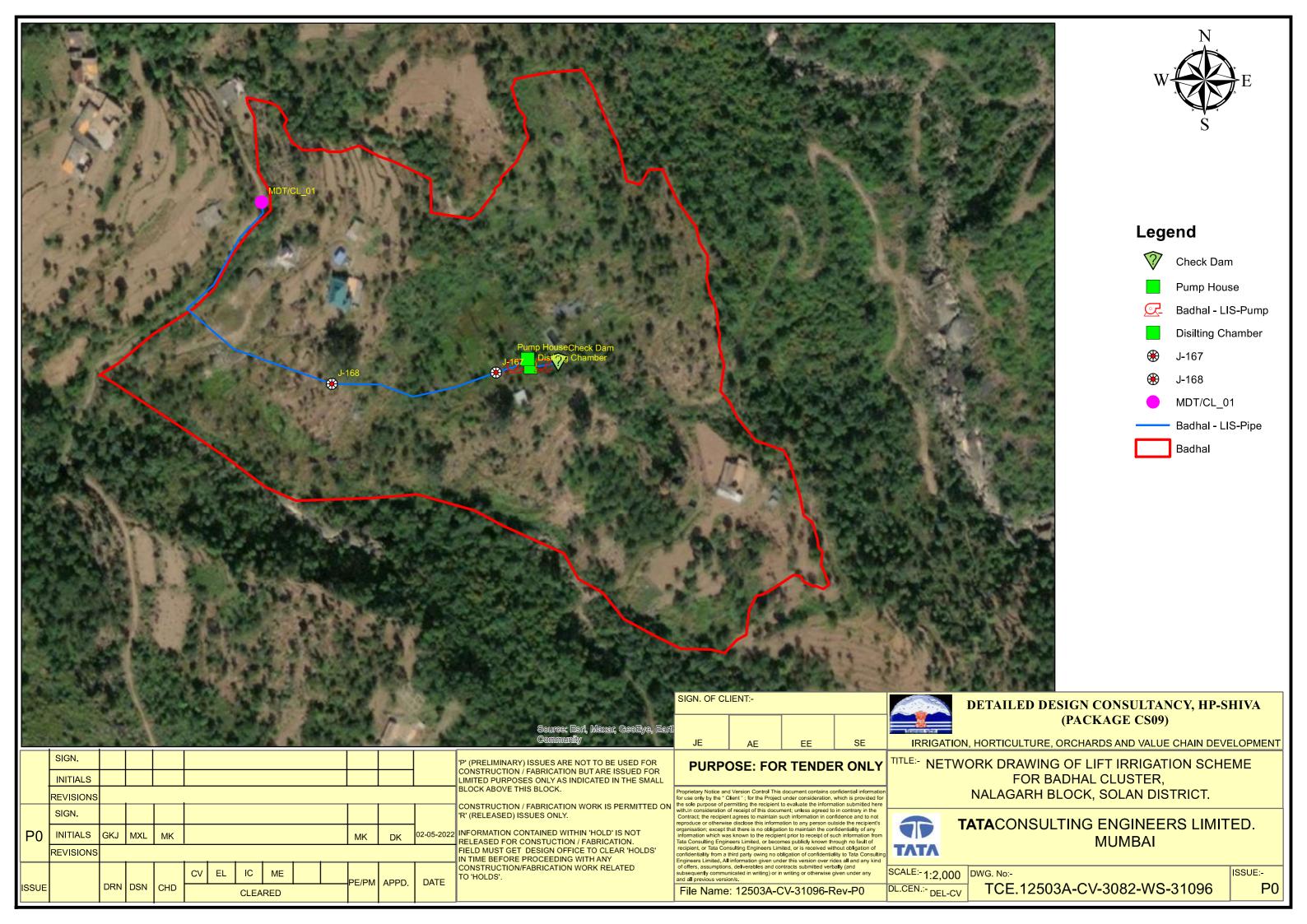


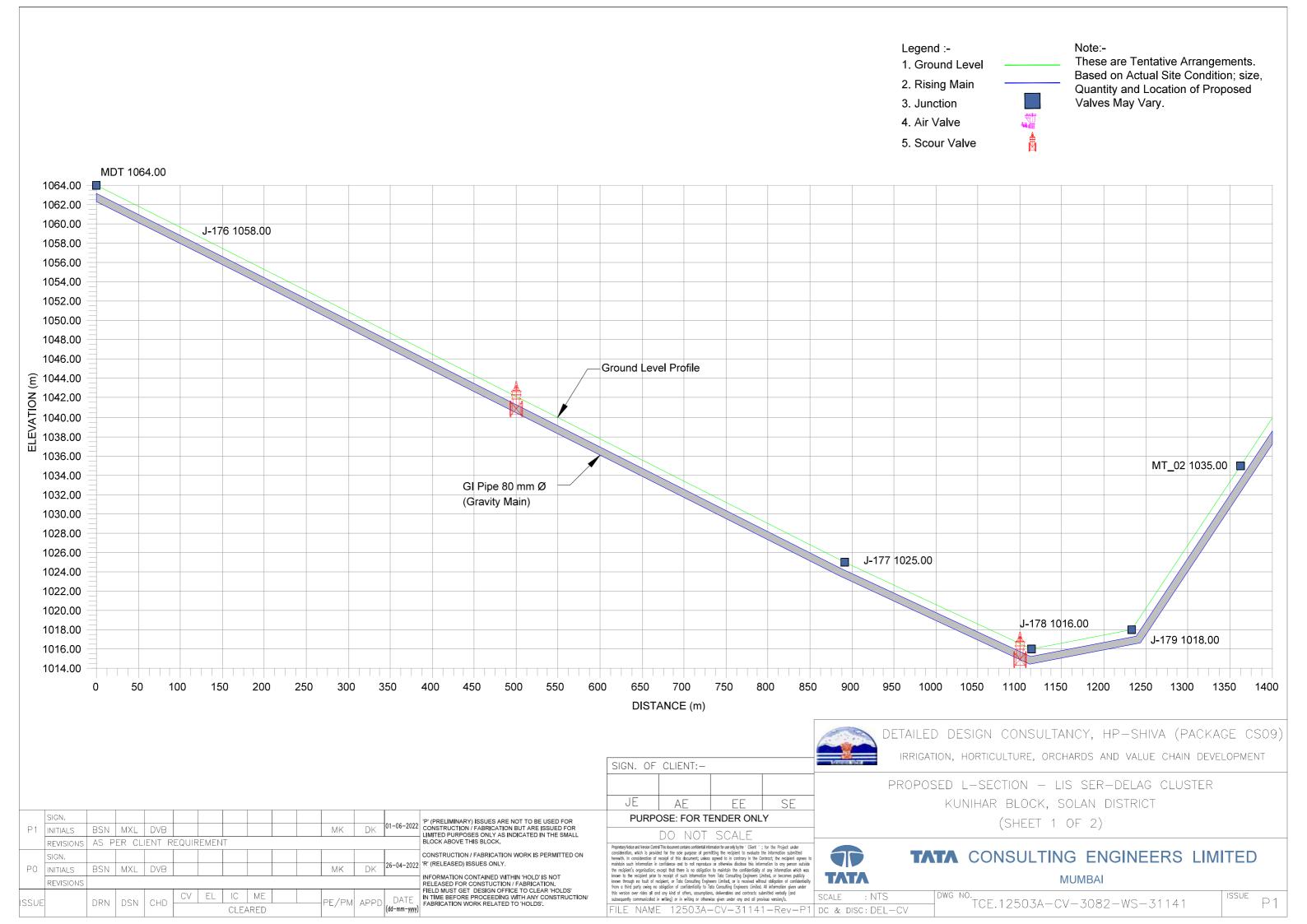


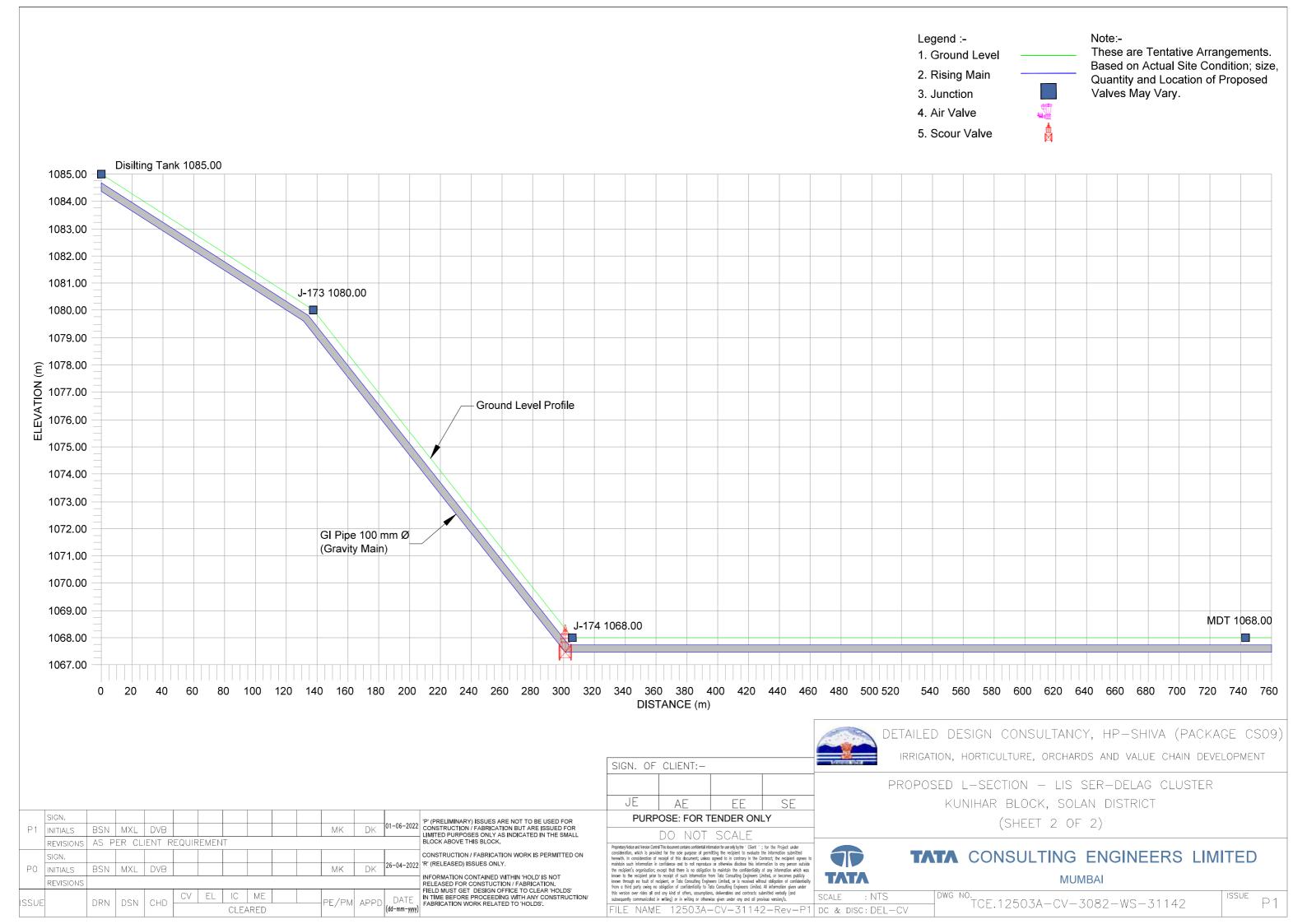


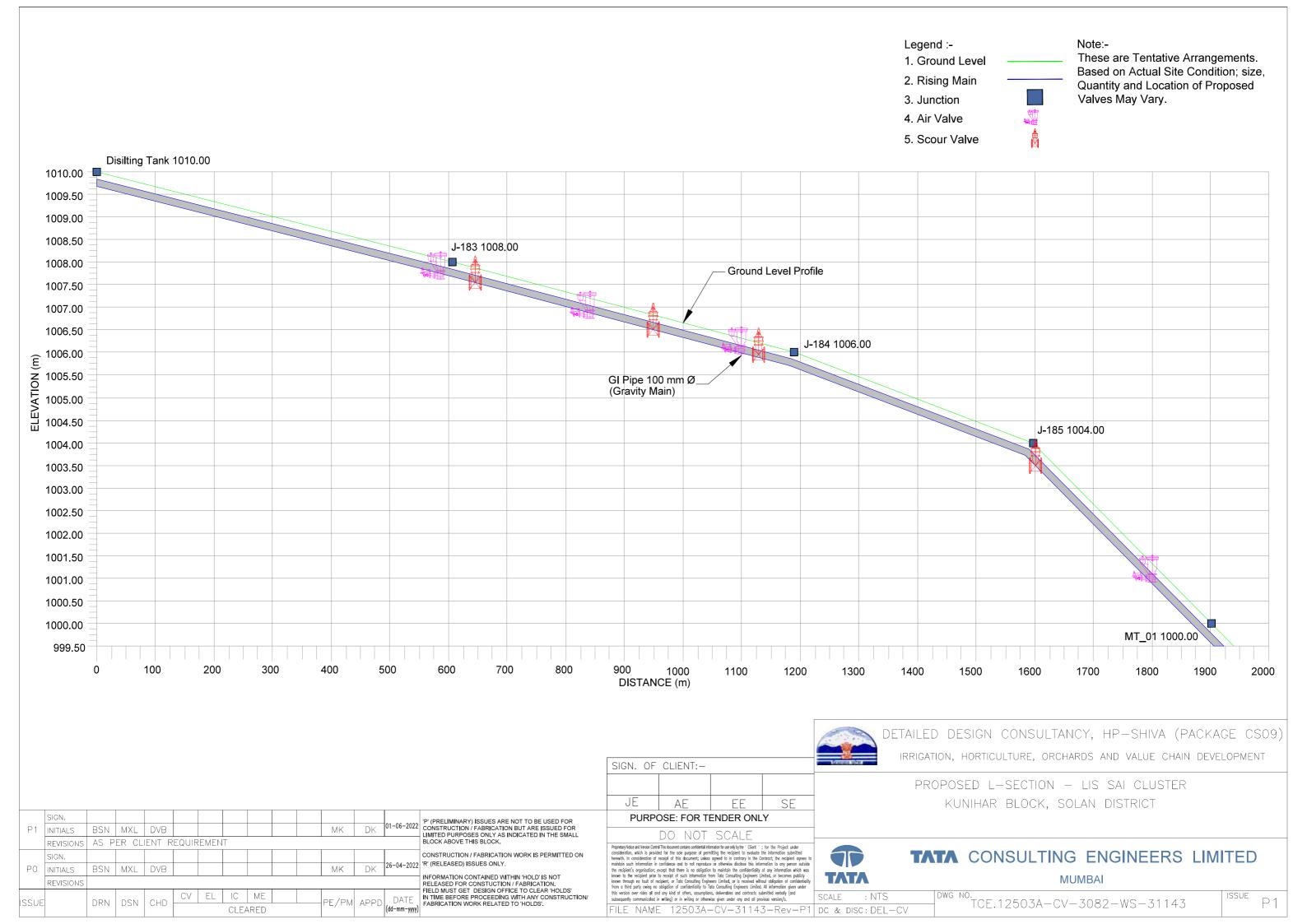


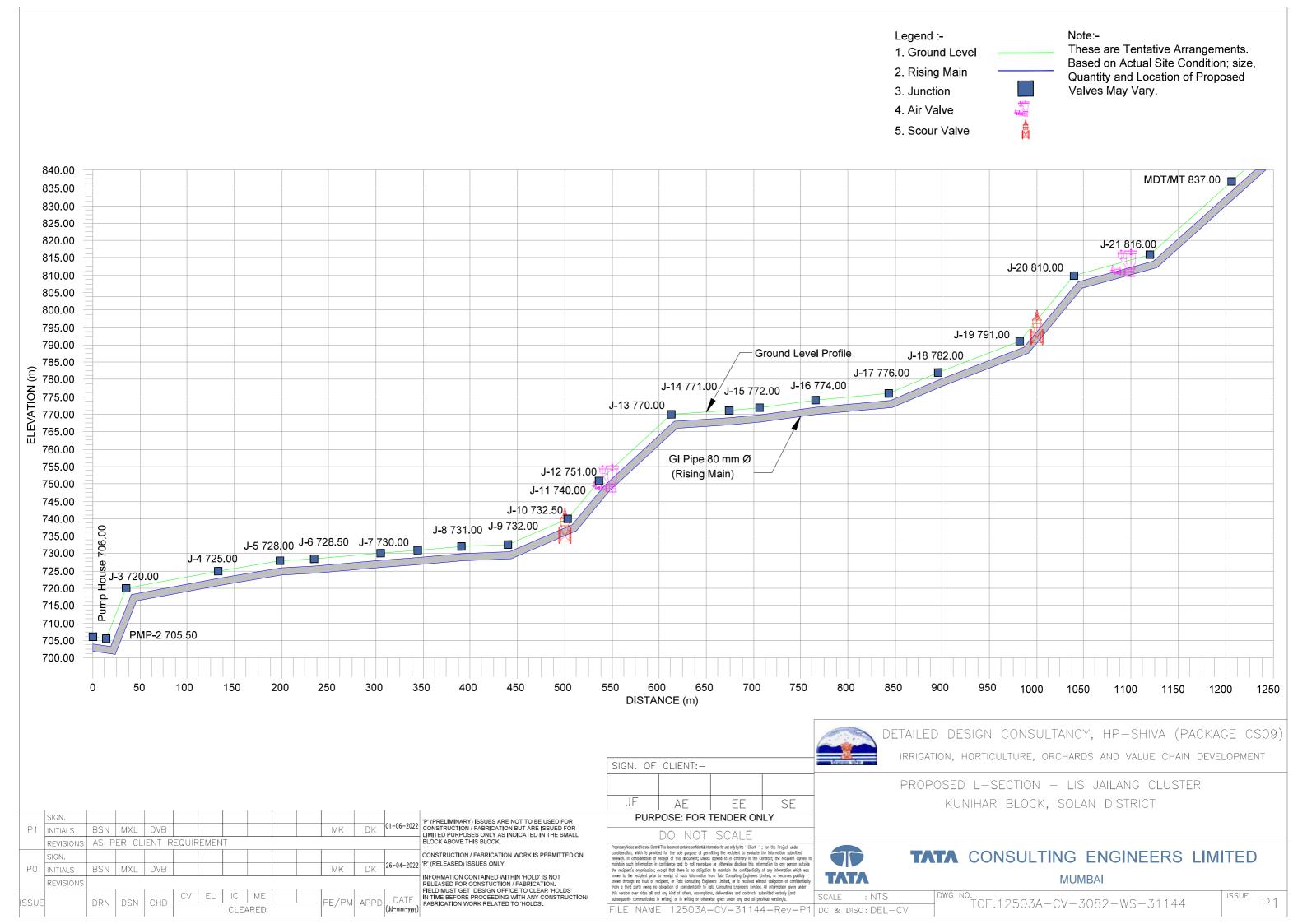


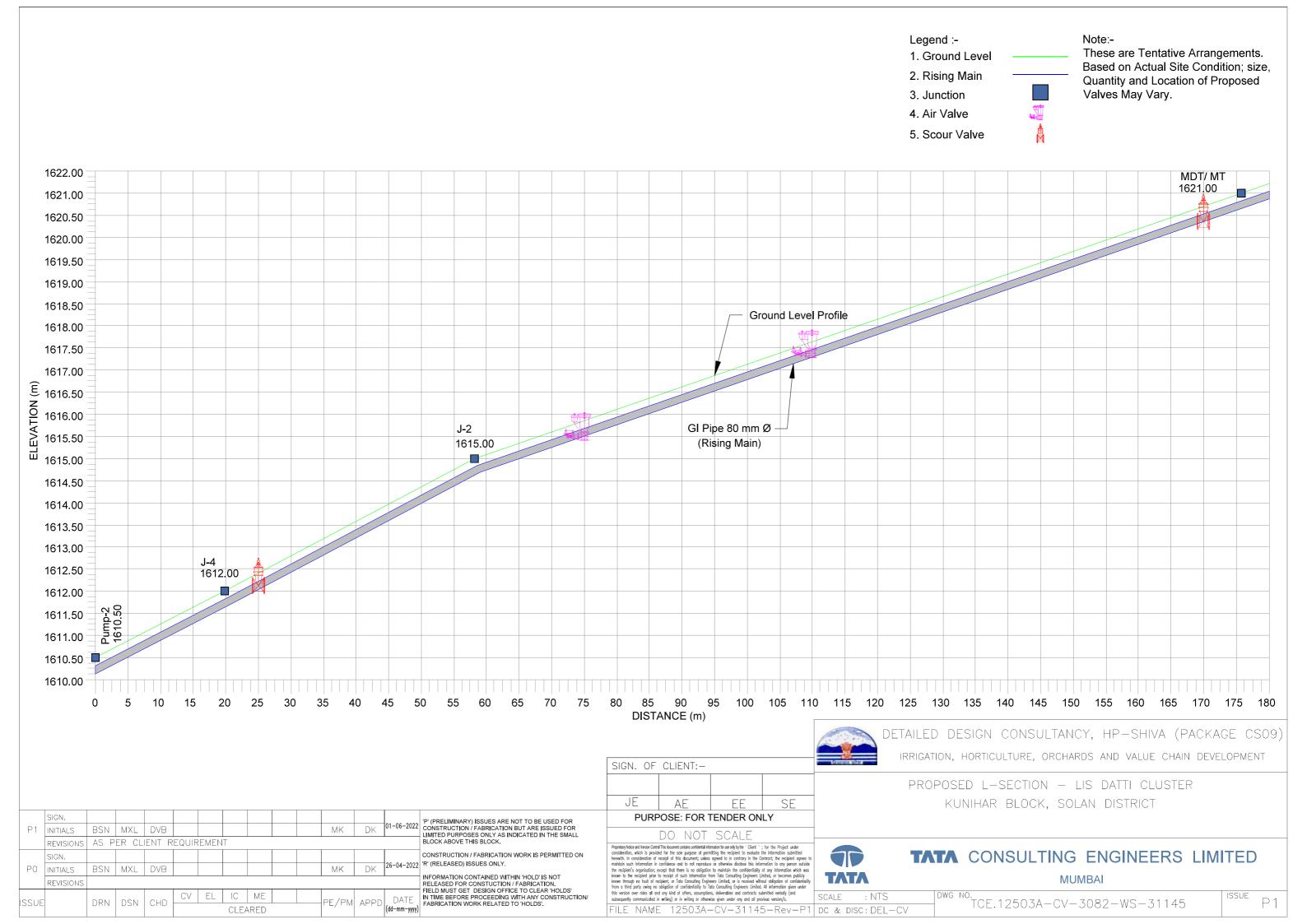


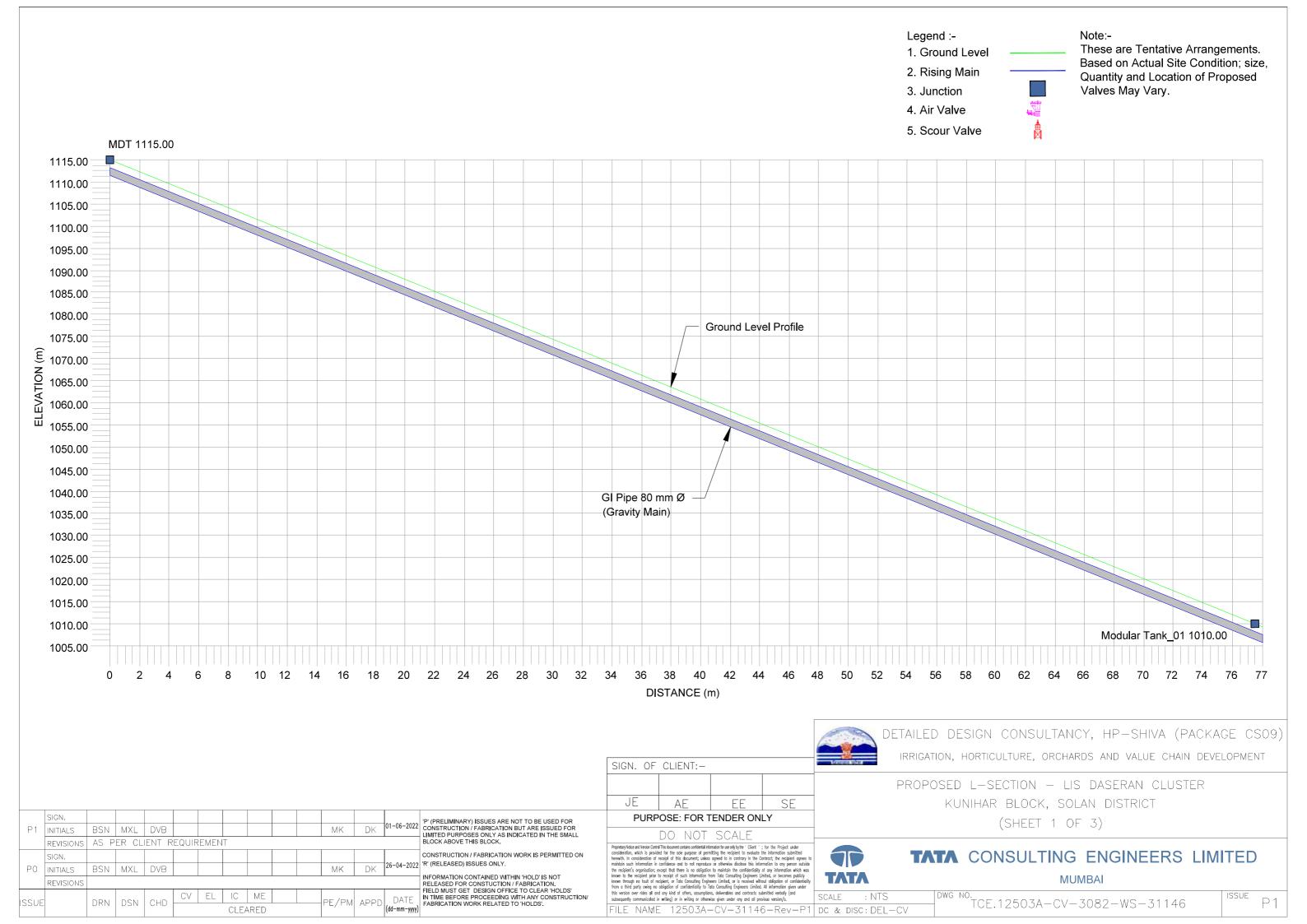


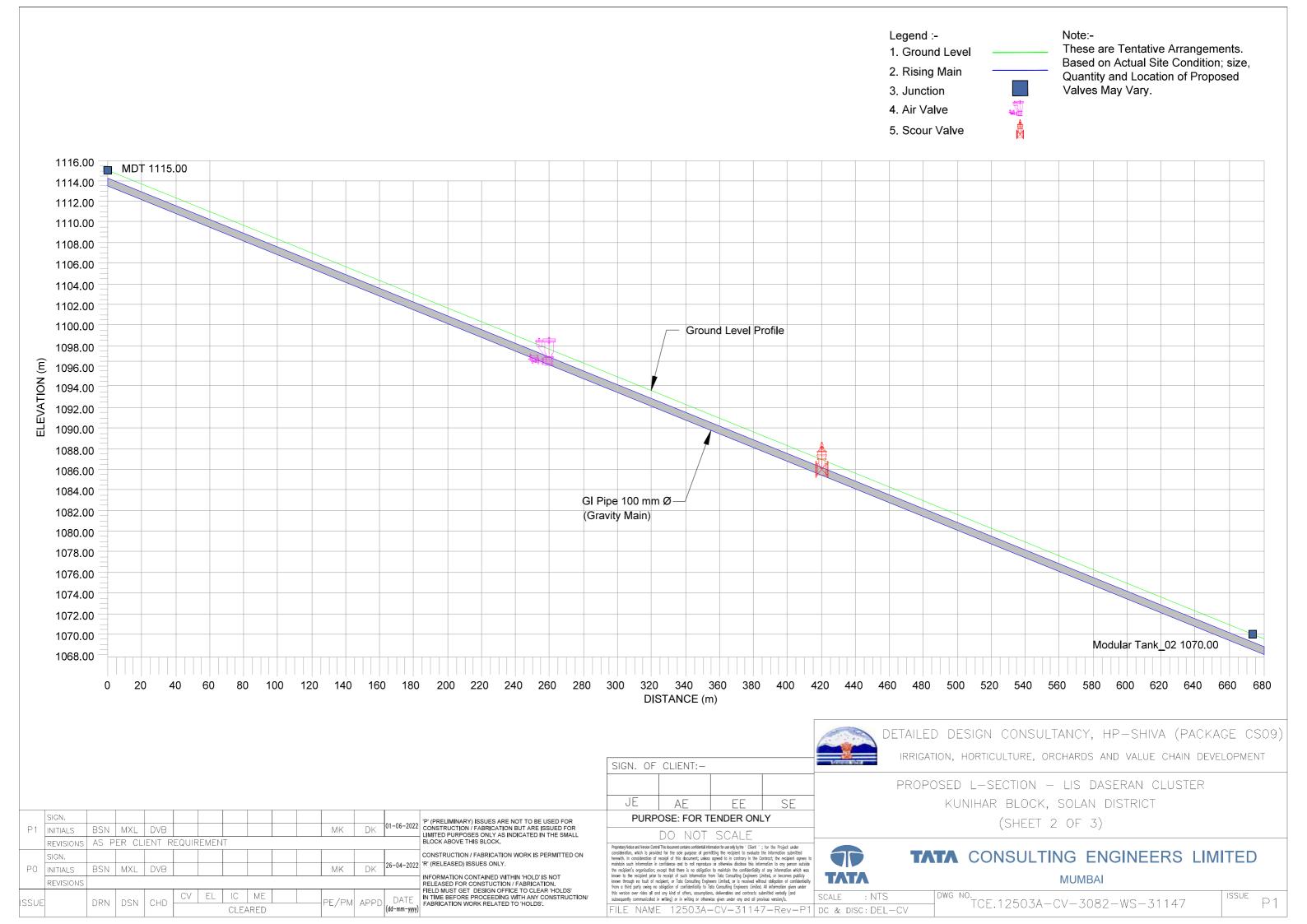


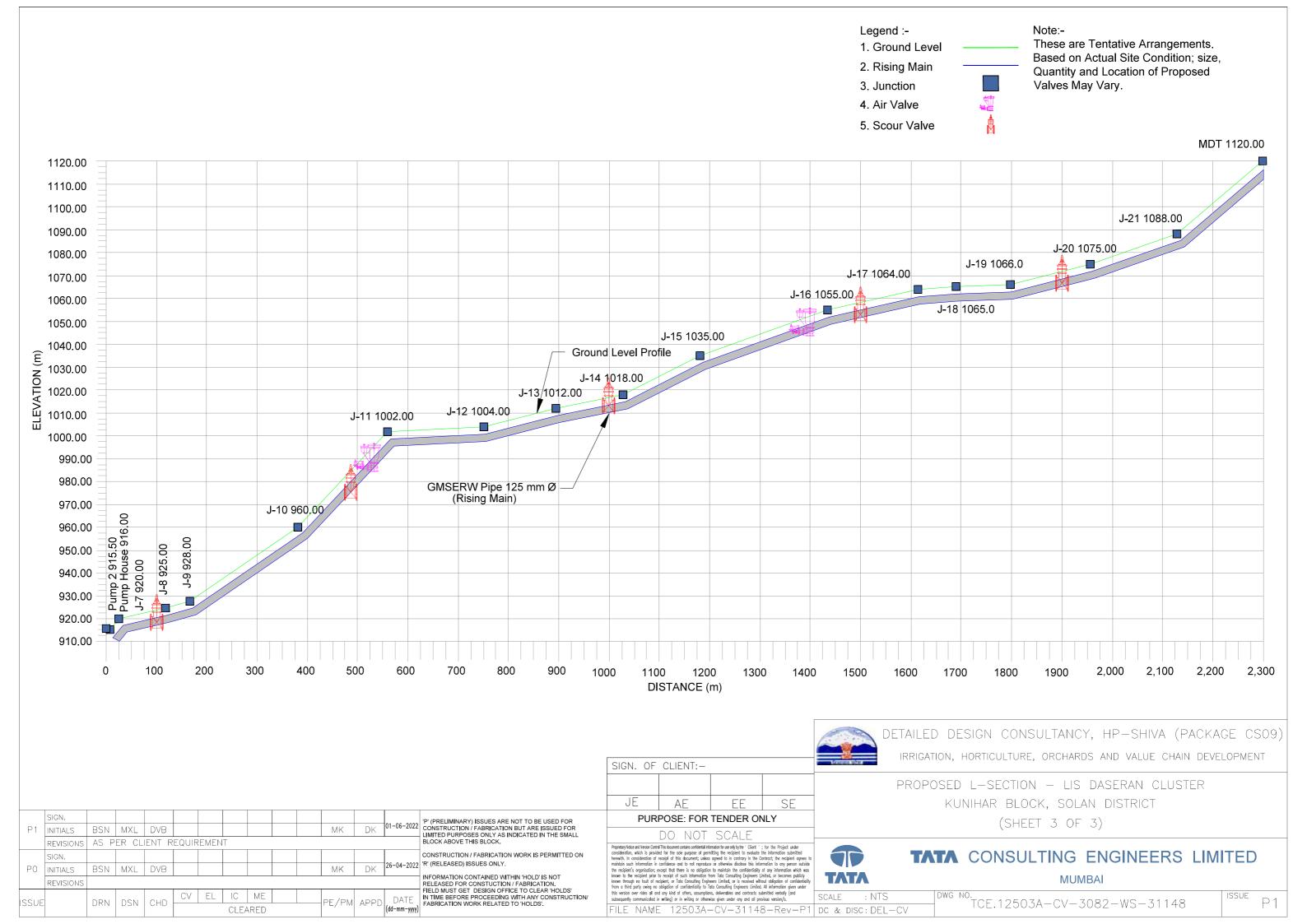


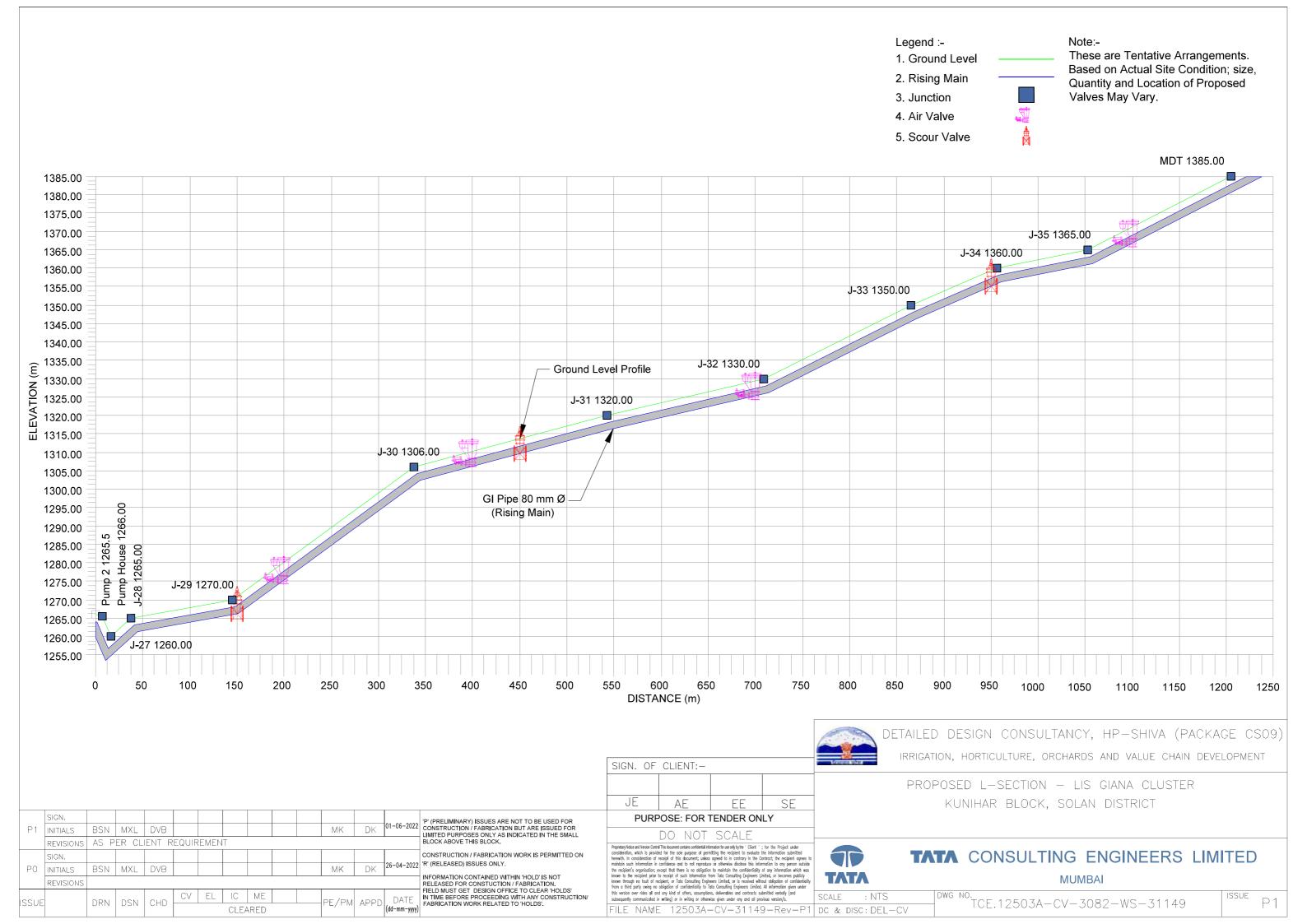


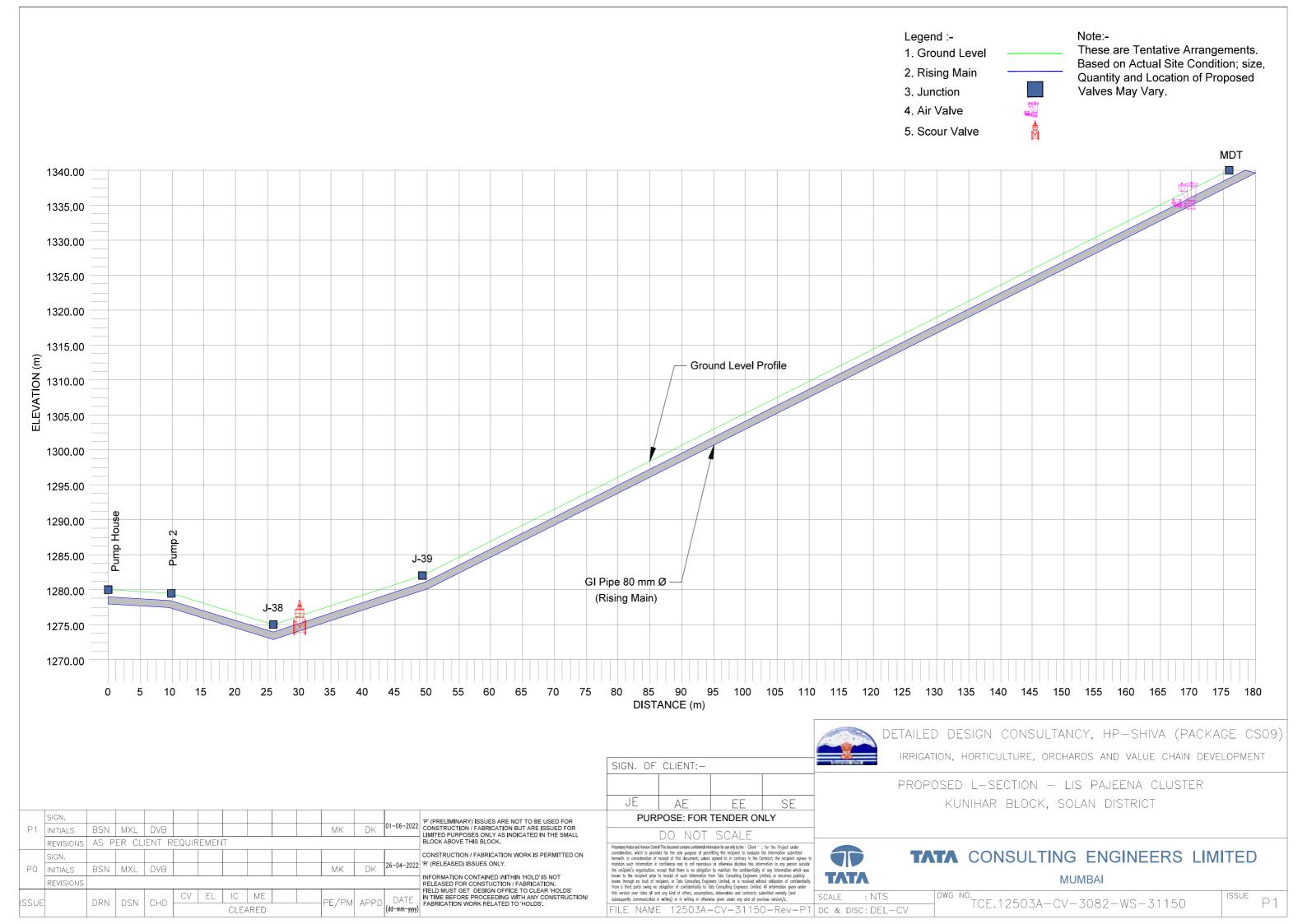


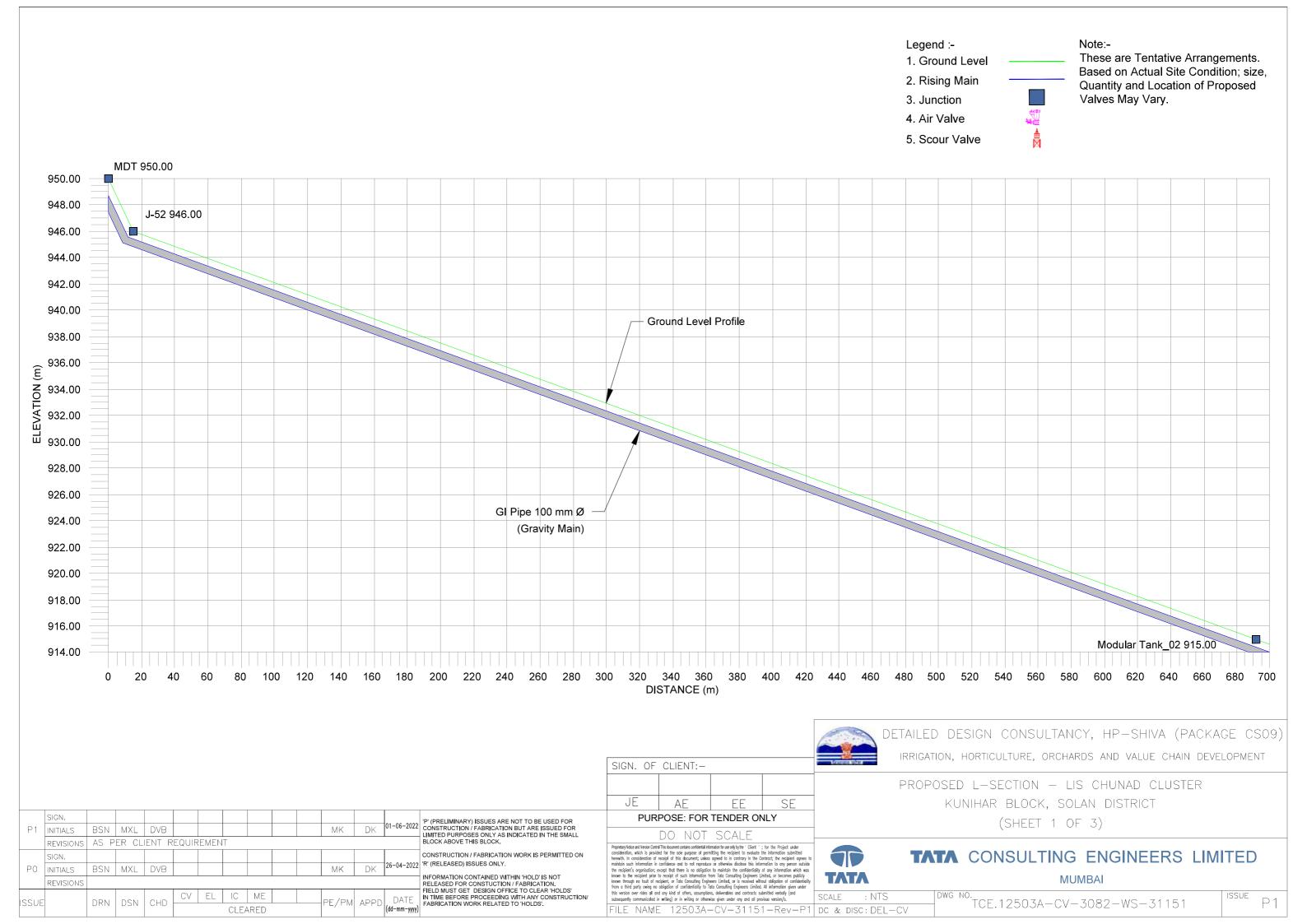


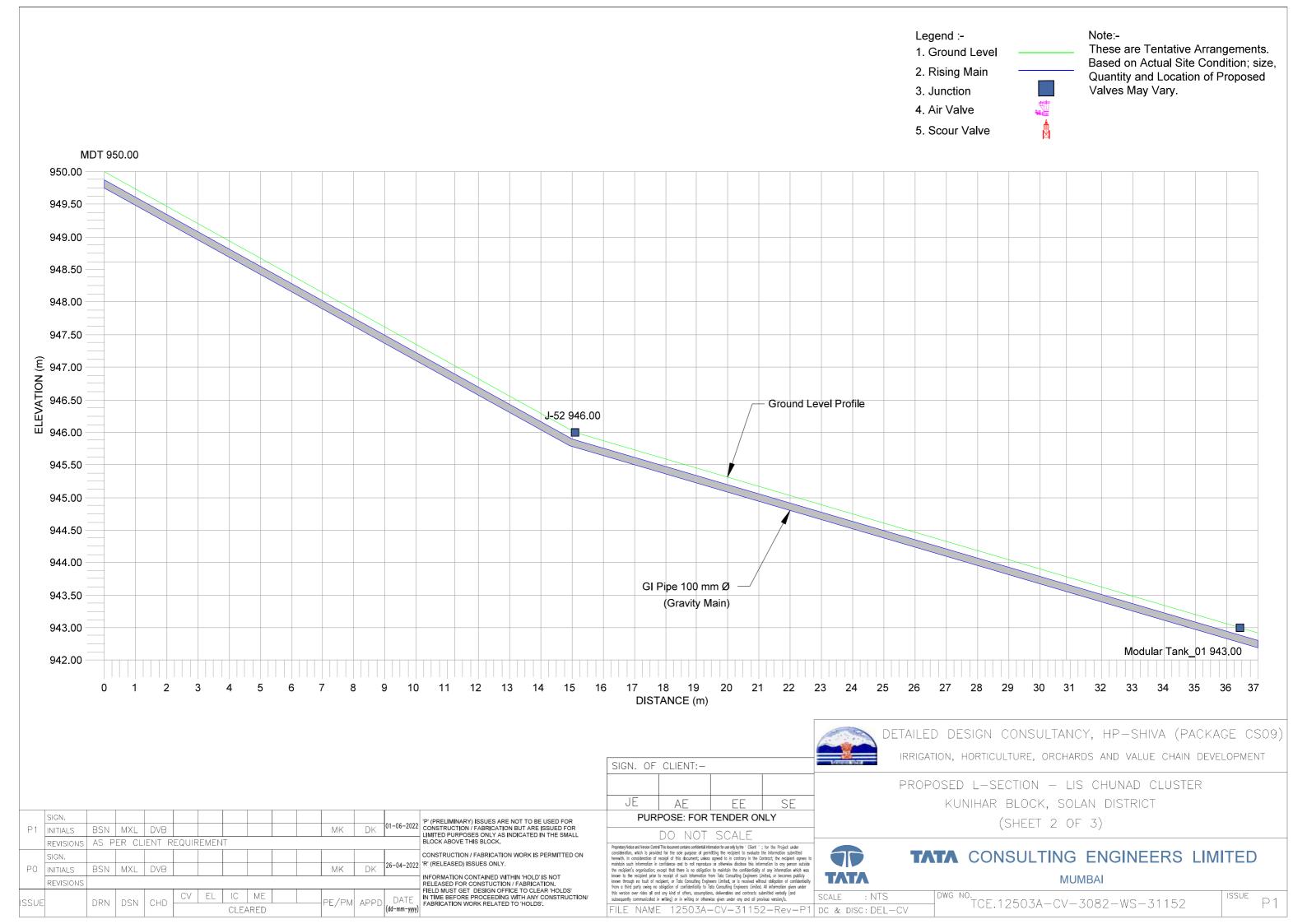


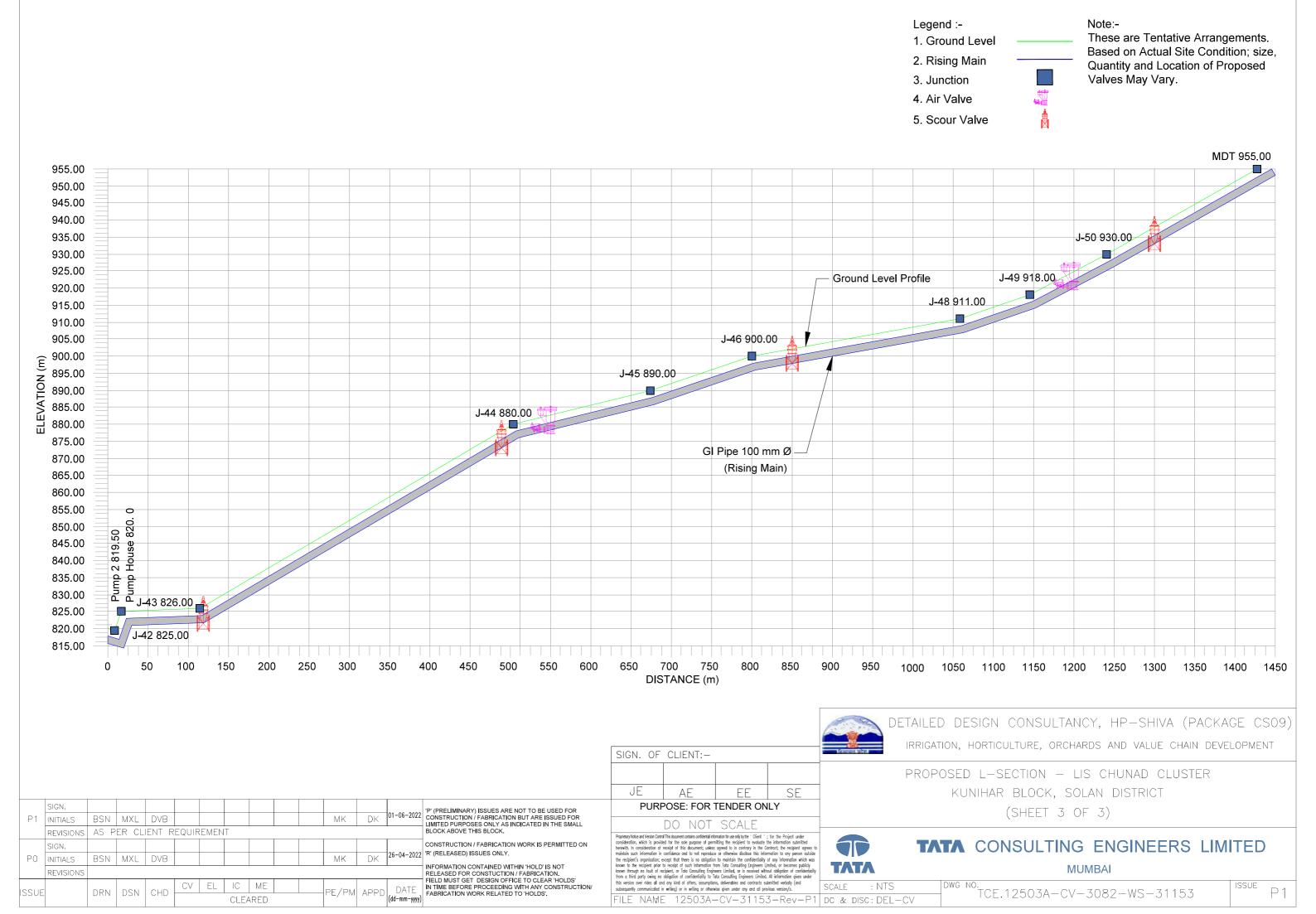


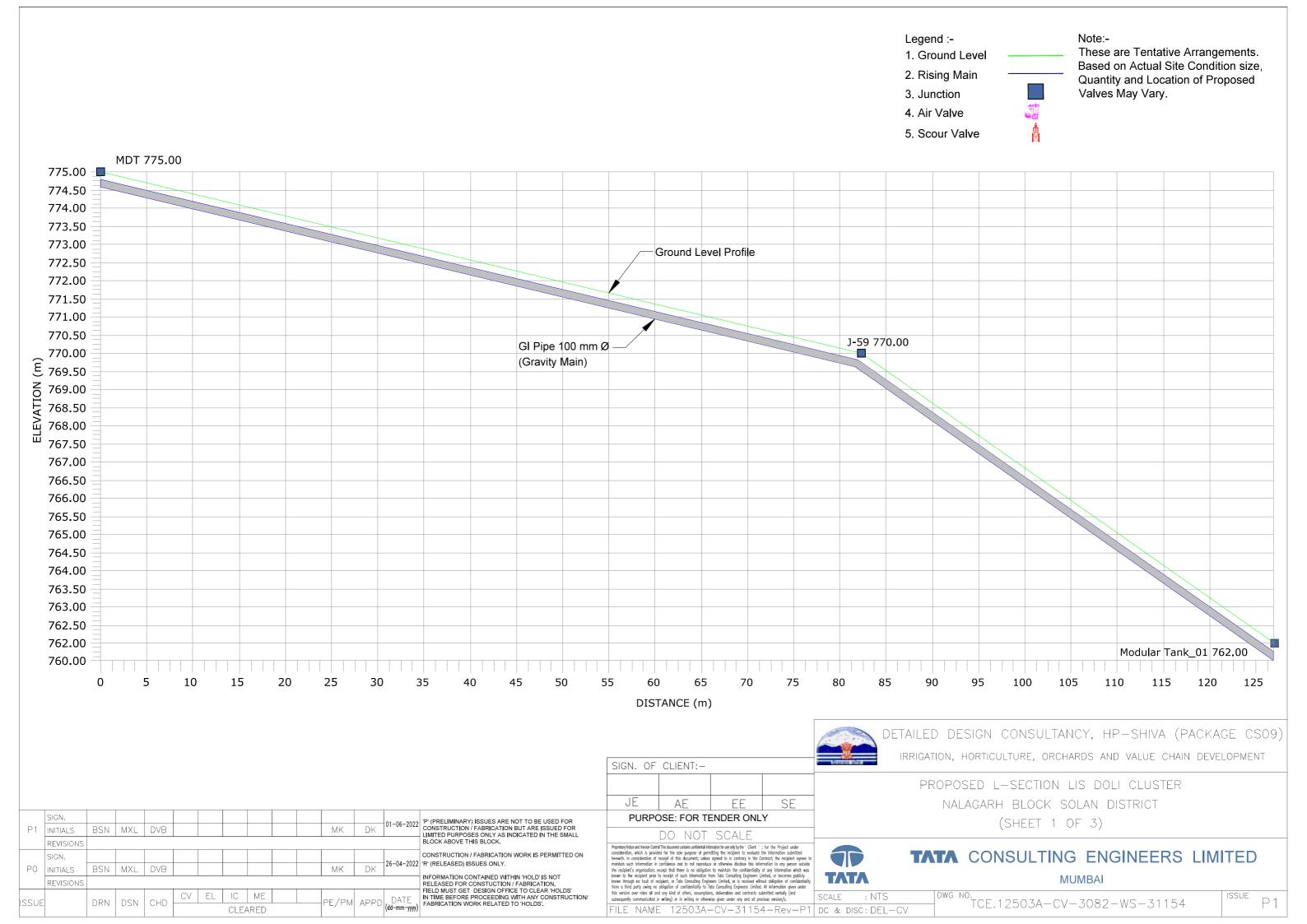


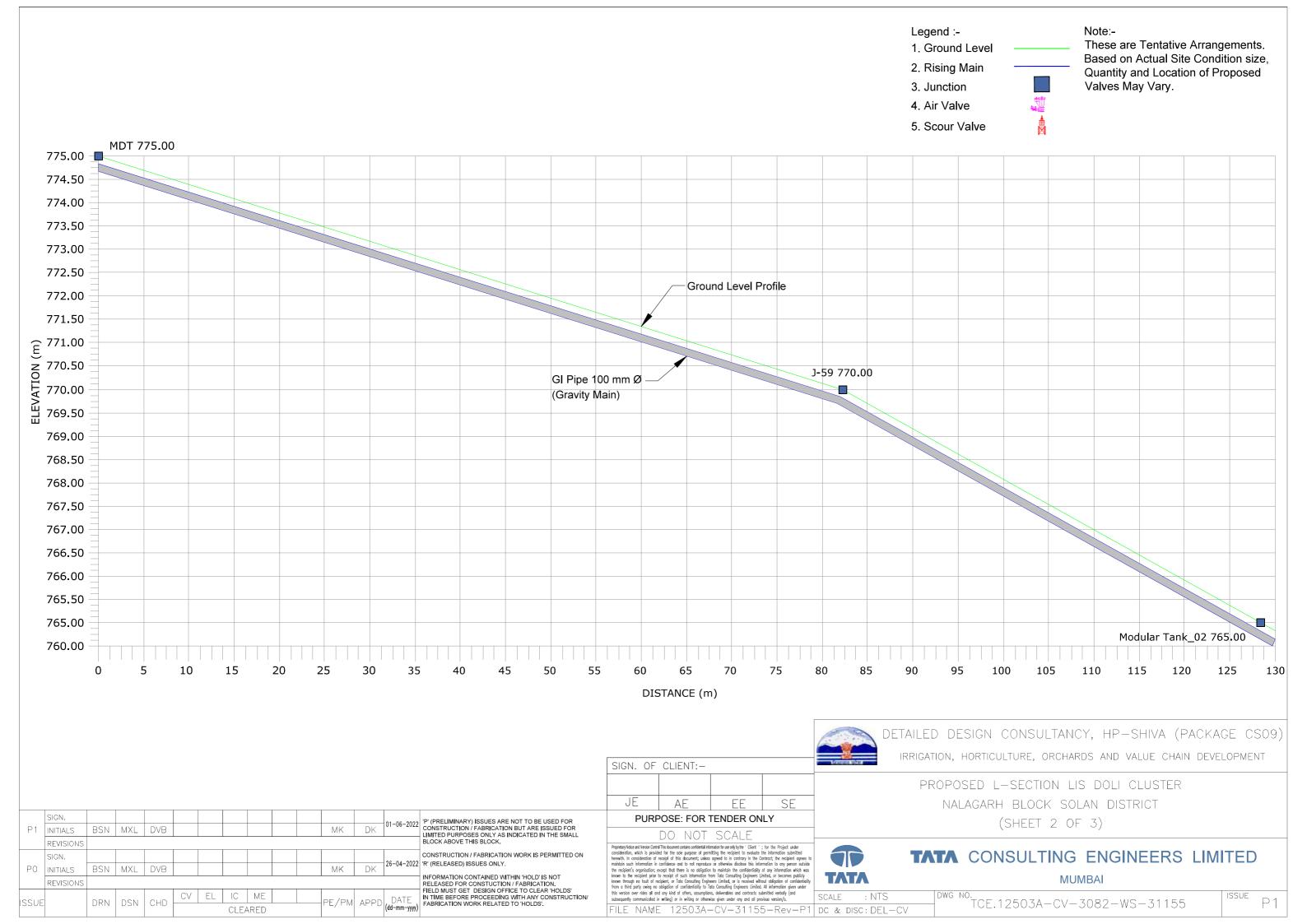


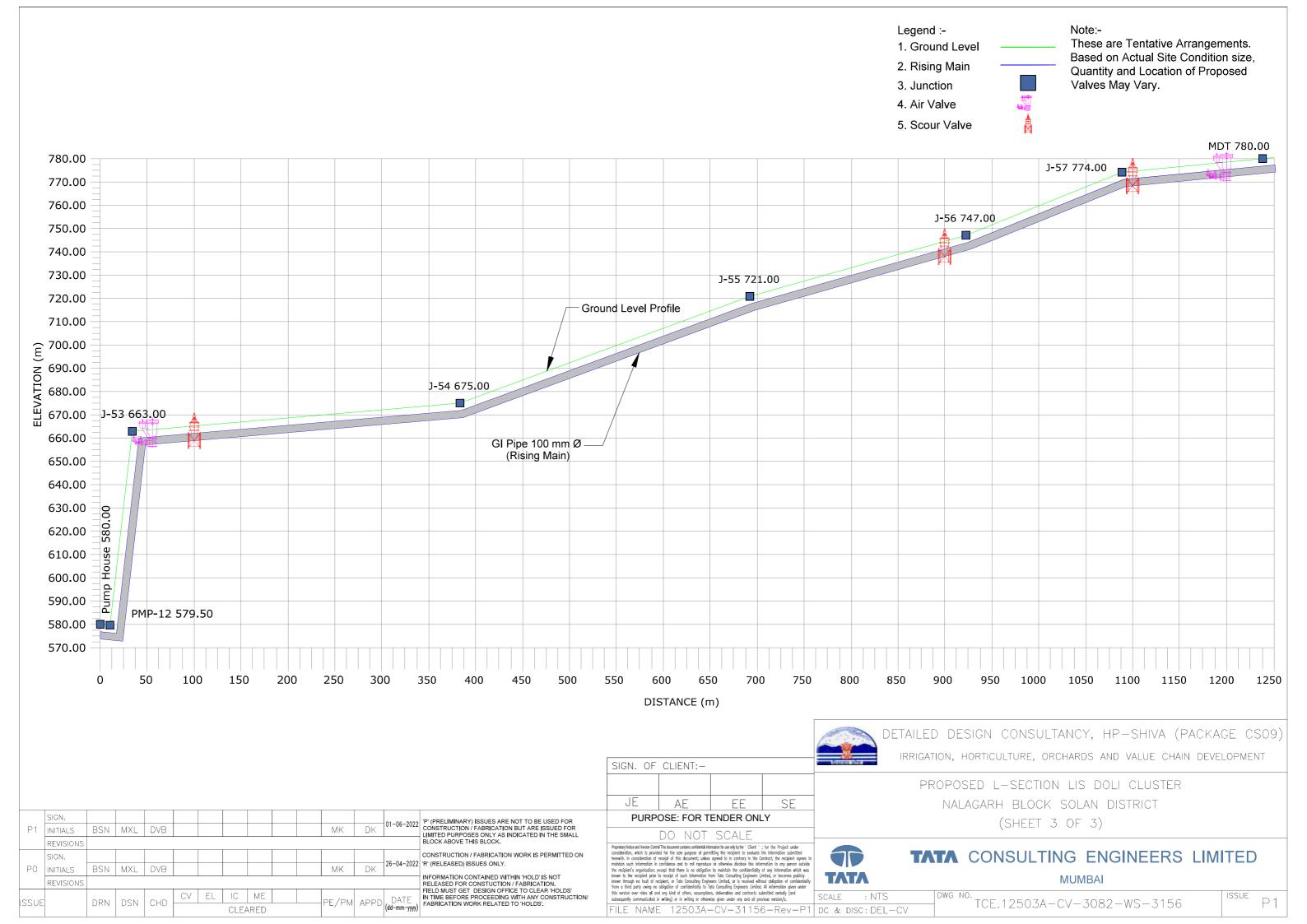










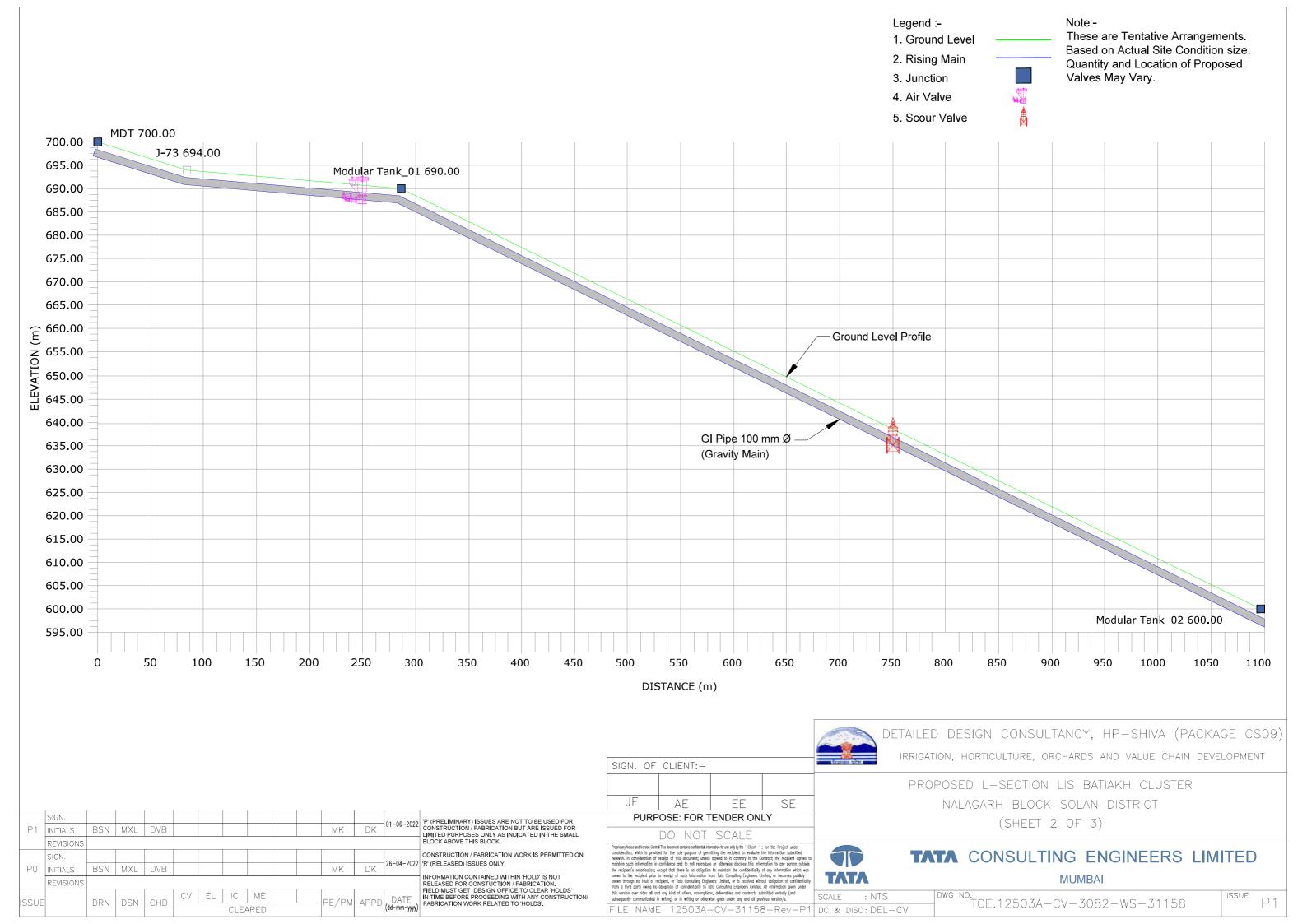


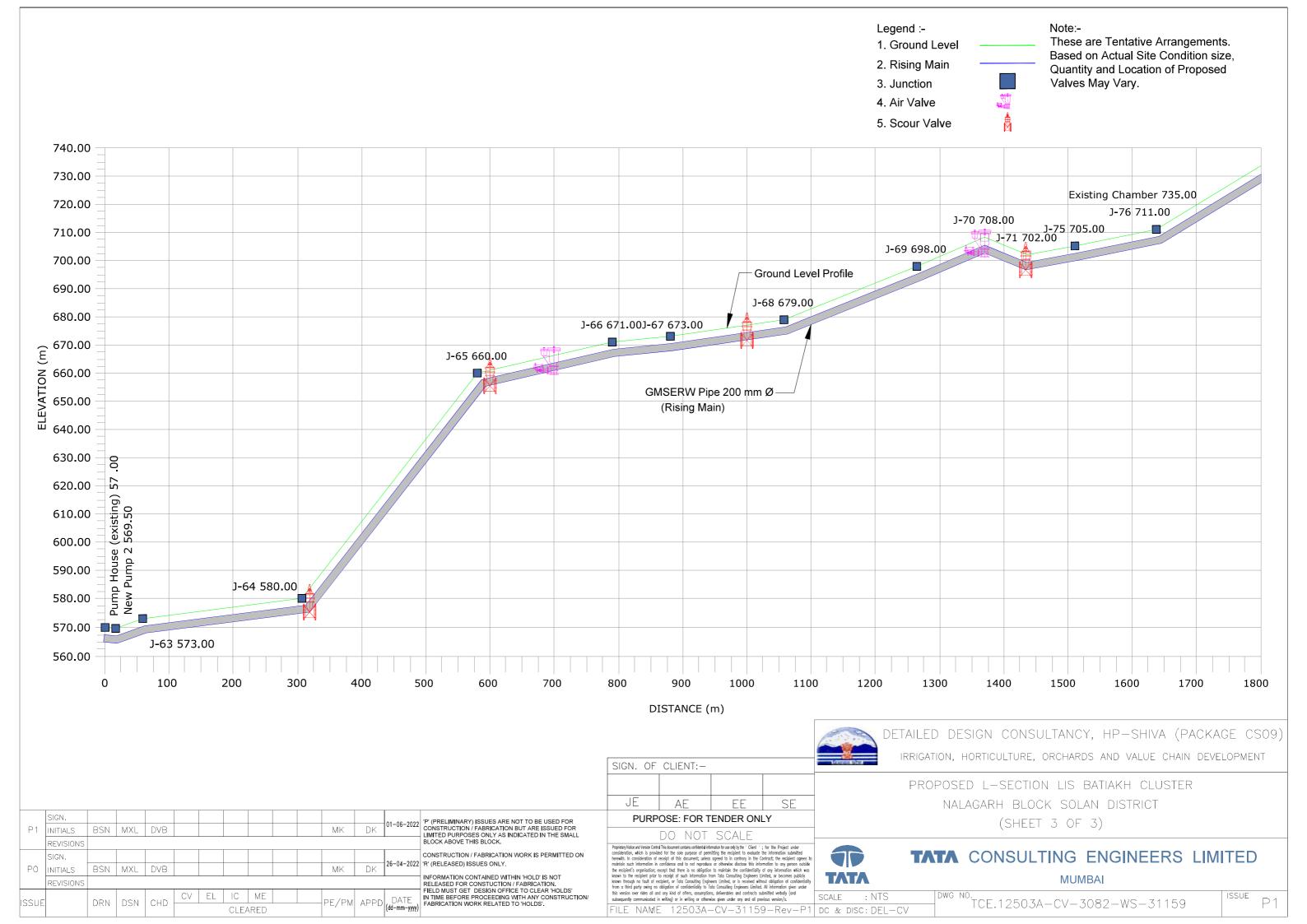
Legend :-Note:-These are Tentative Arrangements. 1. Ground Level Based on Actual Site Condition size, 2. Rising Main Quantity and Location of Proposed 3. Junction Valves May Vary. 4. Air Valve 5. Scour Valve Existing Chamber 730.00 730.00 729.00 728.00 727.00 726.00 725.00 724.00 723.00 722.00 721.00 (E) 720.00 719.00 718.00 717.00 716.00 Ground Level Profile 715.00 GI Pipe 100 mm Ø 714.00 (Gravity Main) 713.00 712.00 711.00 710.00 709.00 708.00 707.00 MDT 705.00 706.00 705.00 100 120 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 500 DISTANCE (m) DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09) IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT SIGN. OF CLIENT:-PROPOSED L-SECTION LIS BATIAKH CLUSTER SE NALAGARH BLOCK SOLAN DISTRICT ΑF ΕE PURPOSE: FOR TENDER ONLY SIGN. 01-06-2022

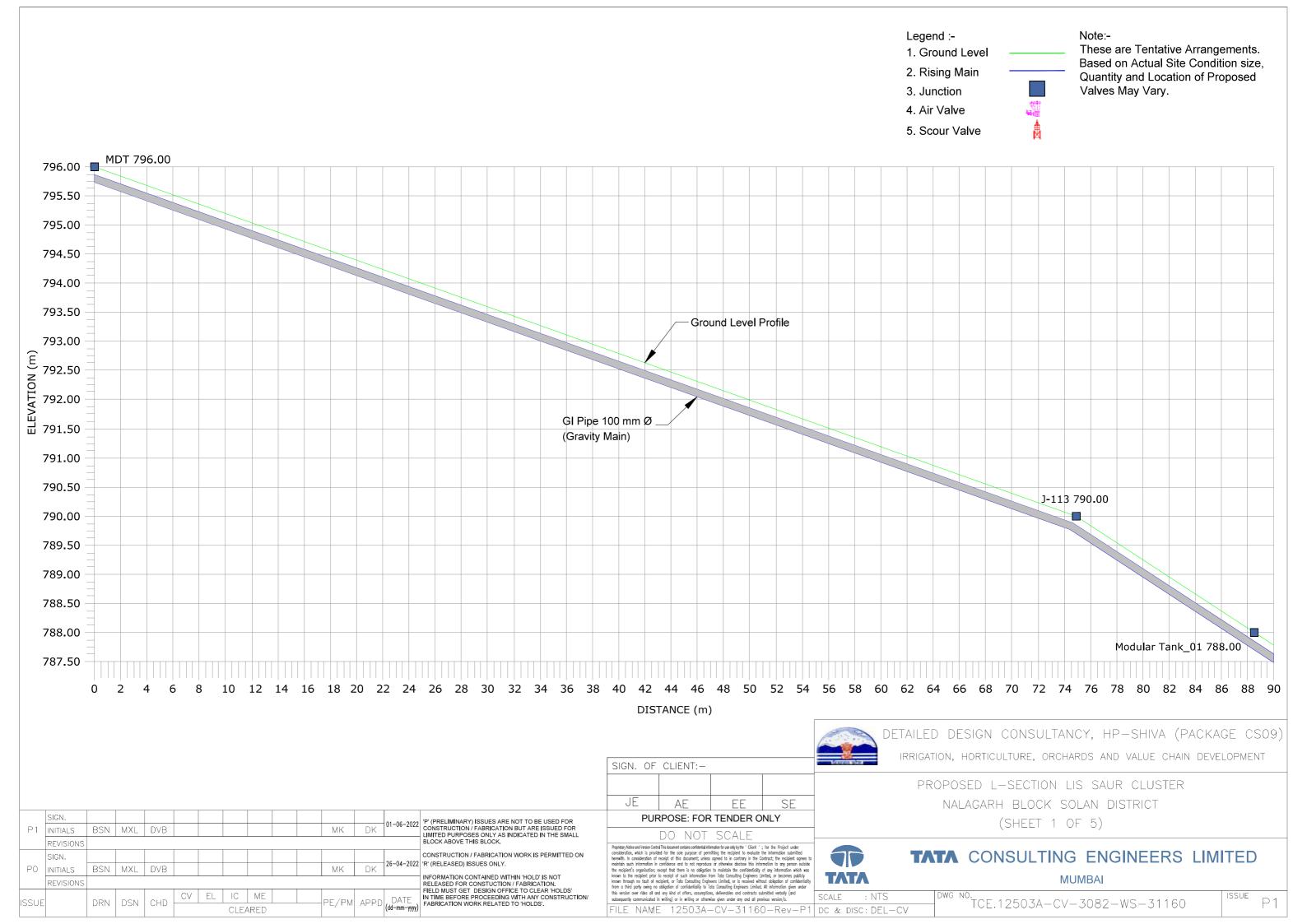
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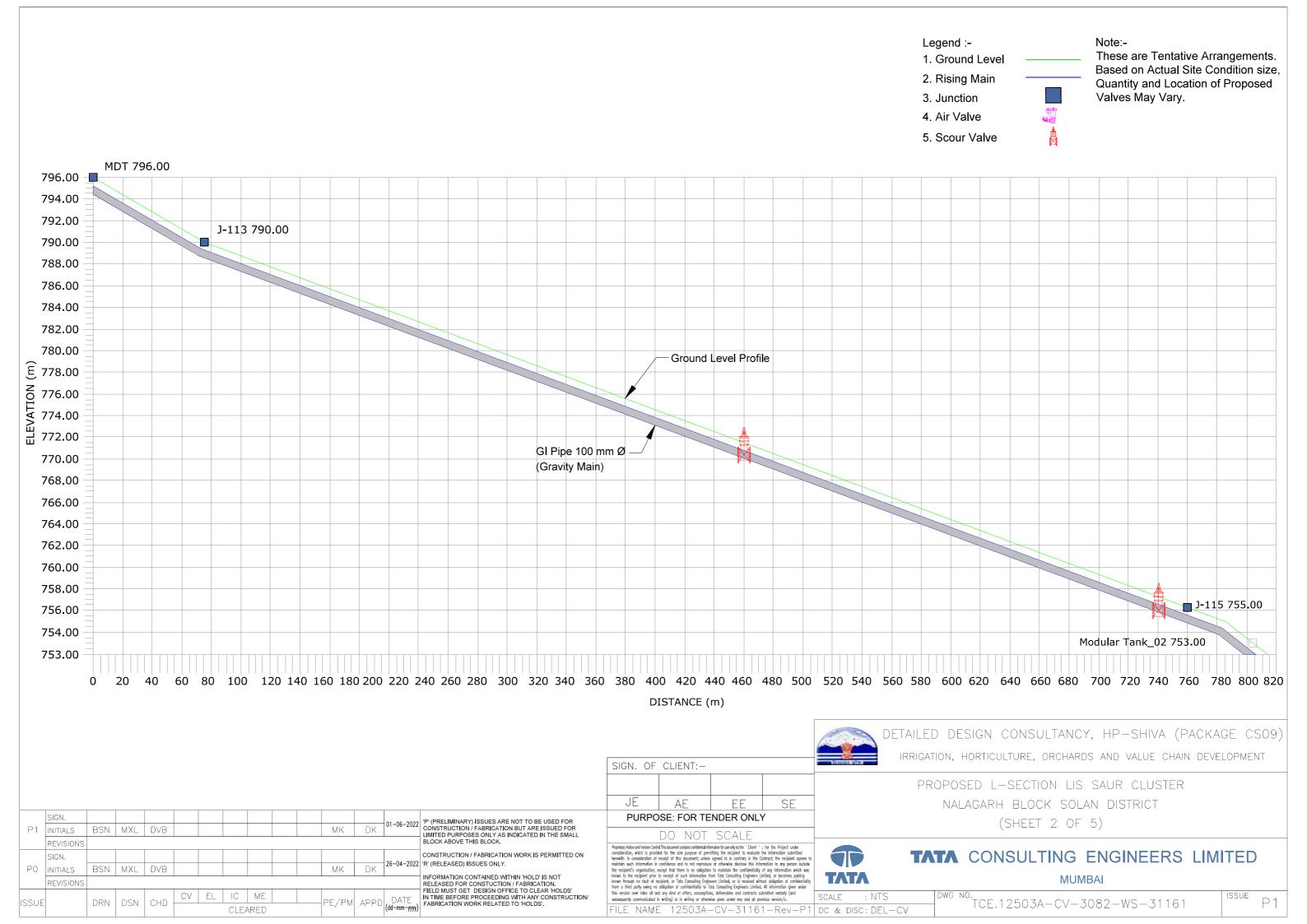
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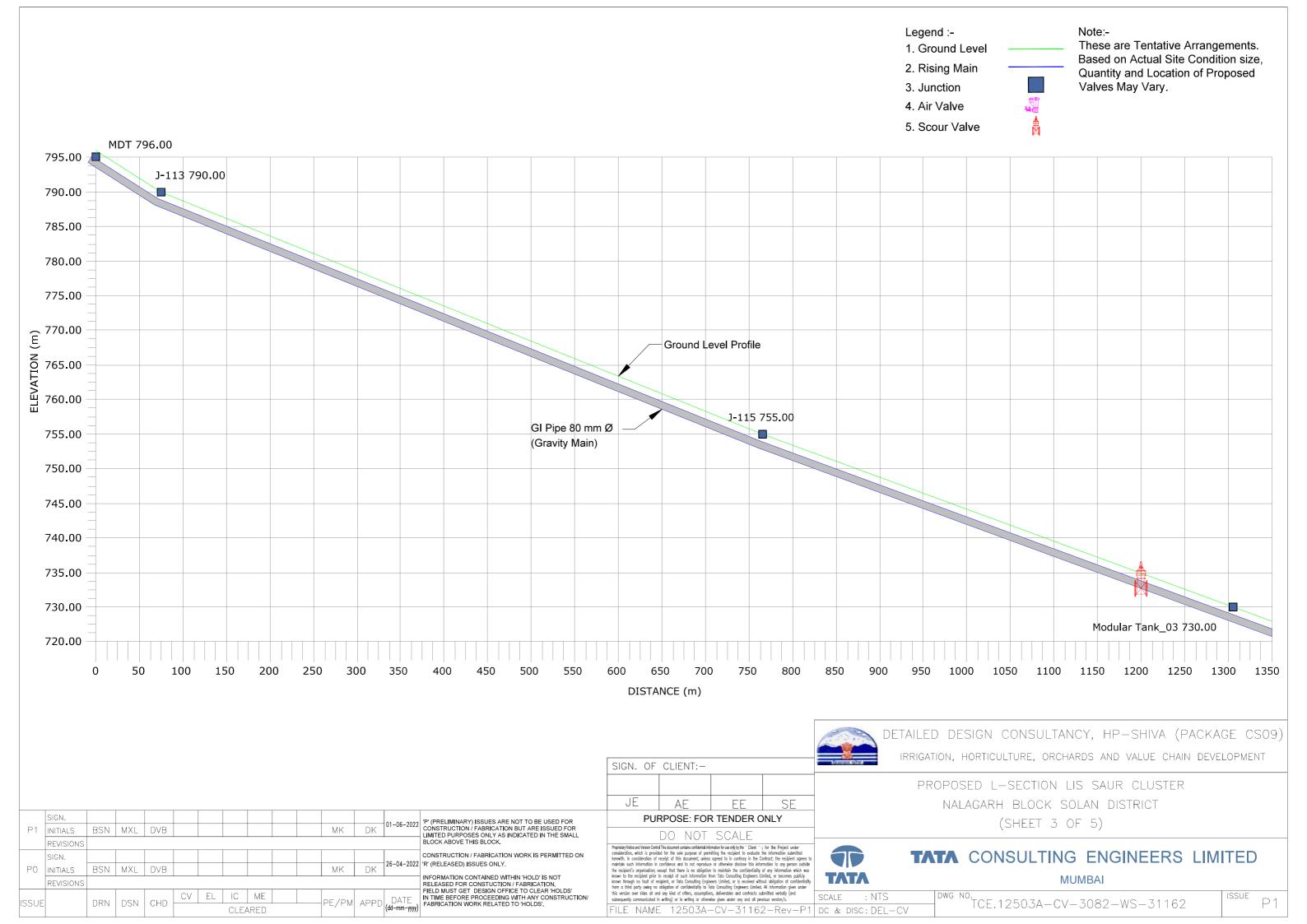
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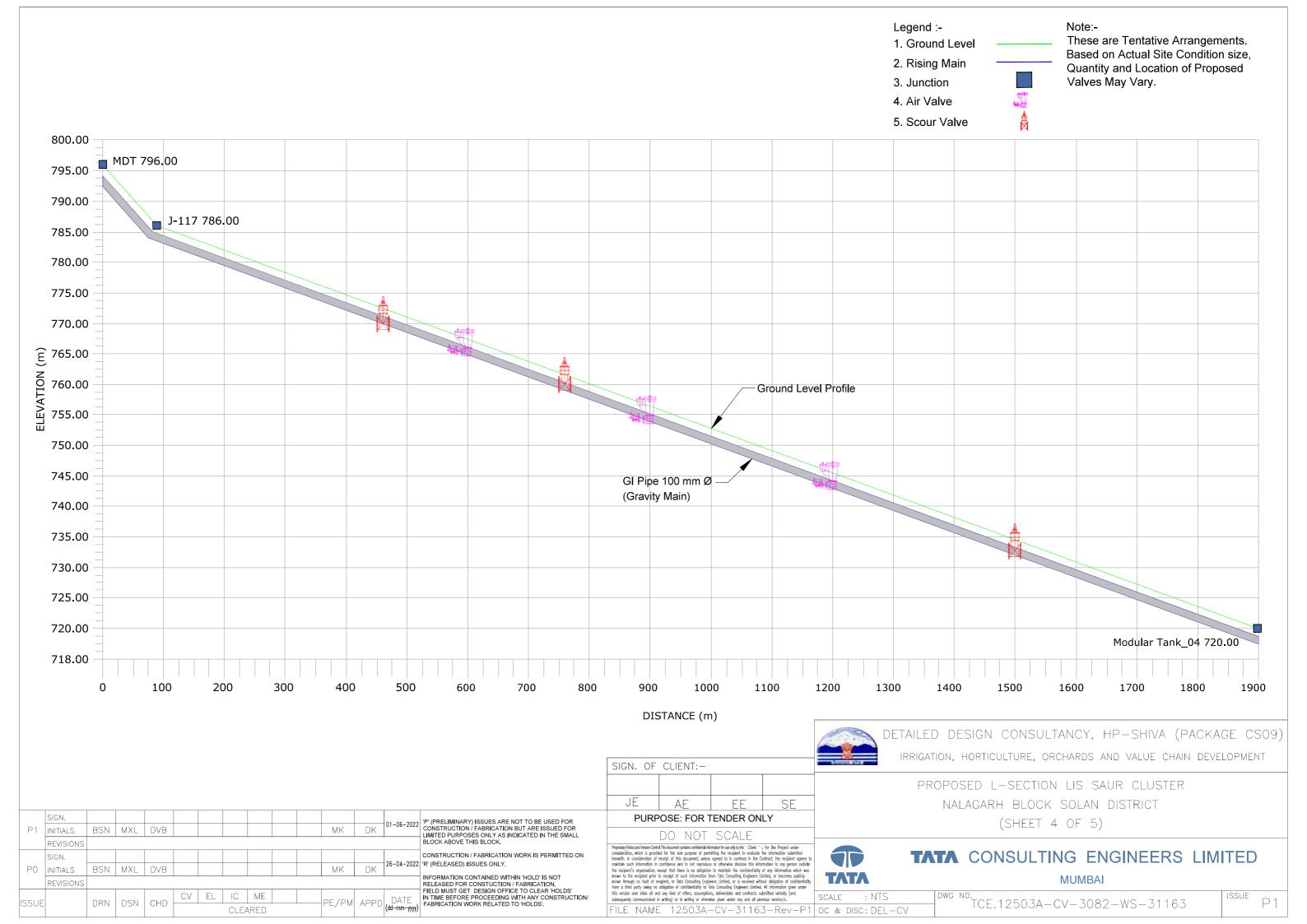


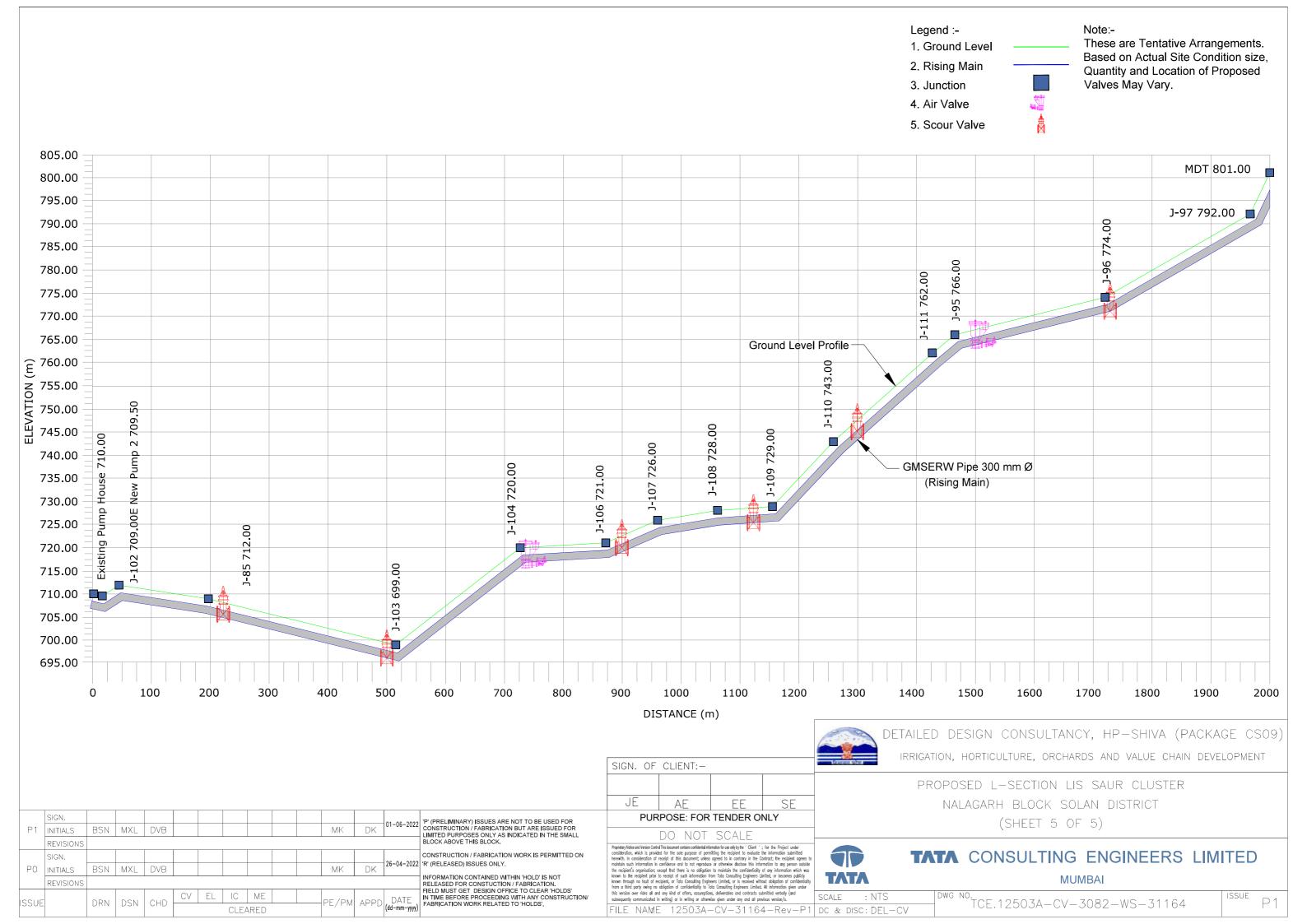


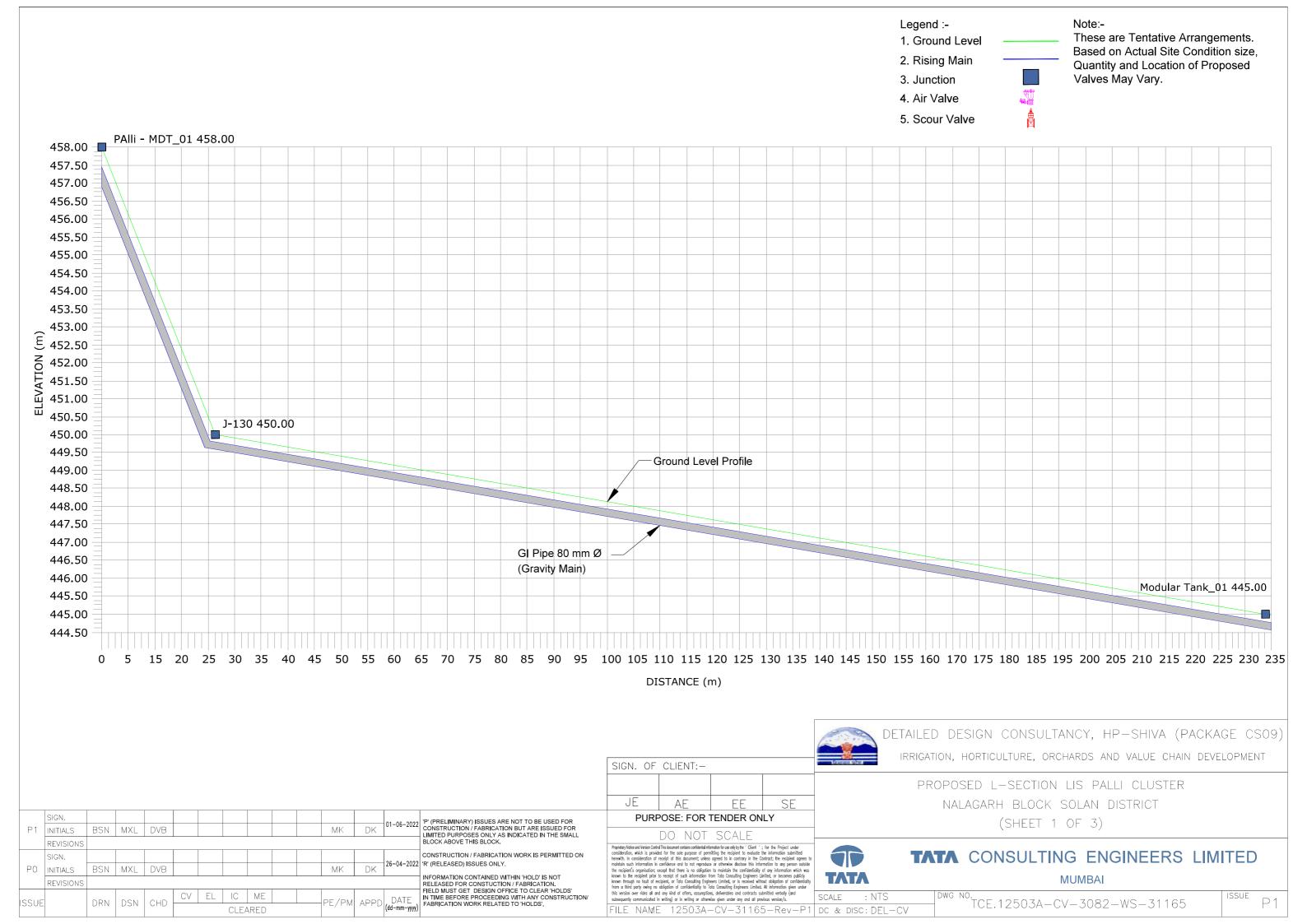


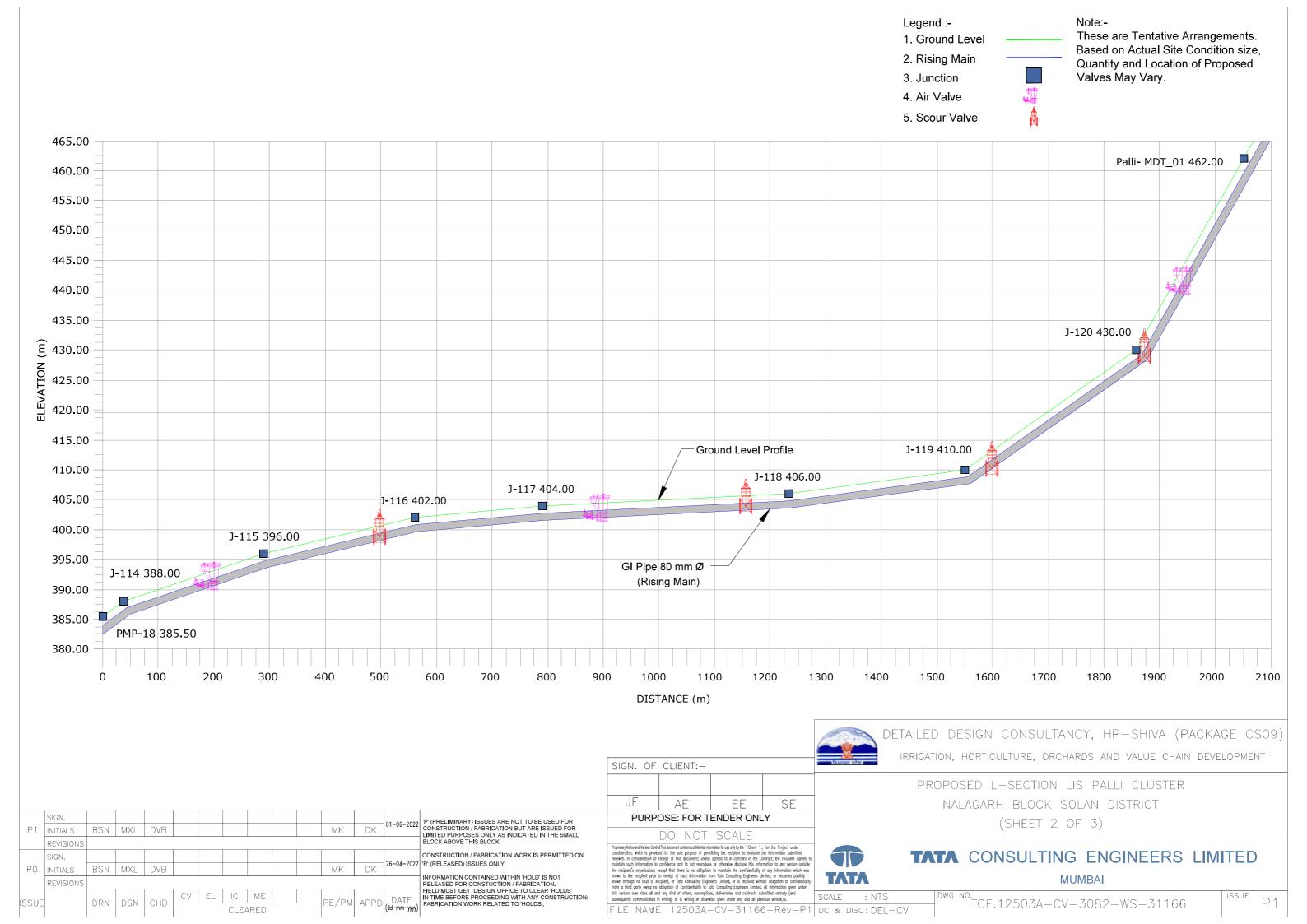


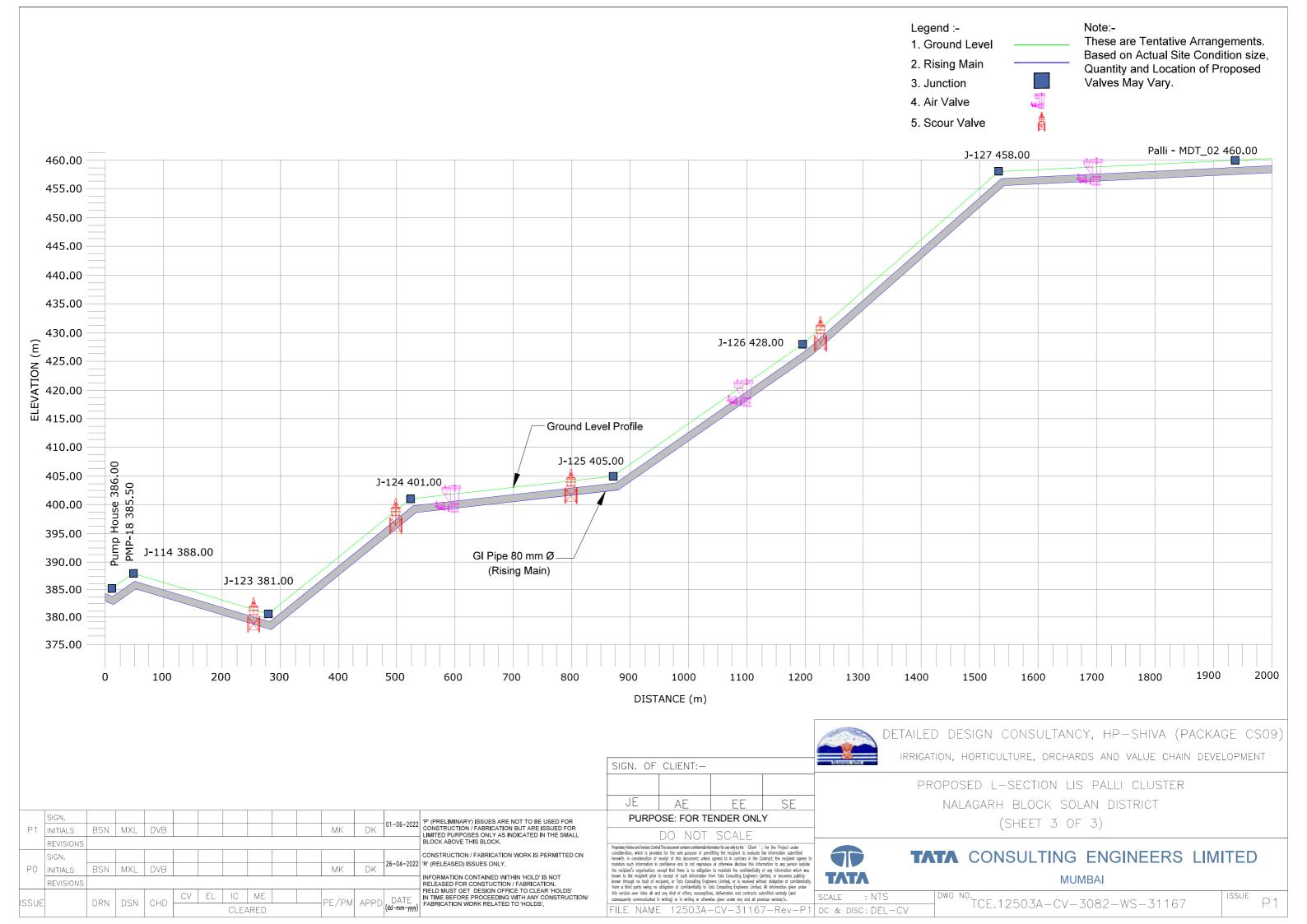


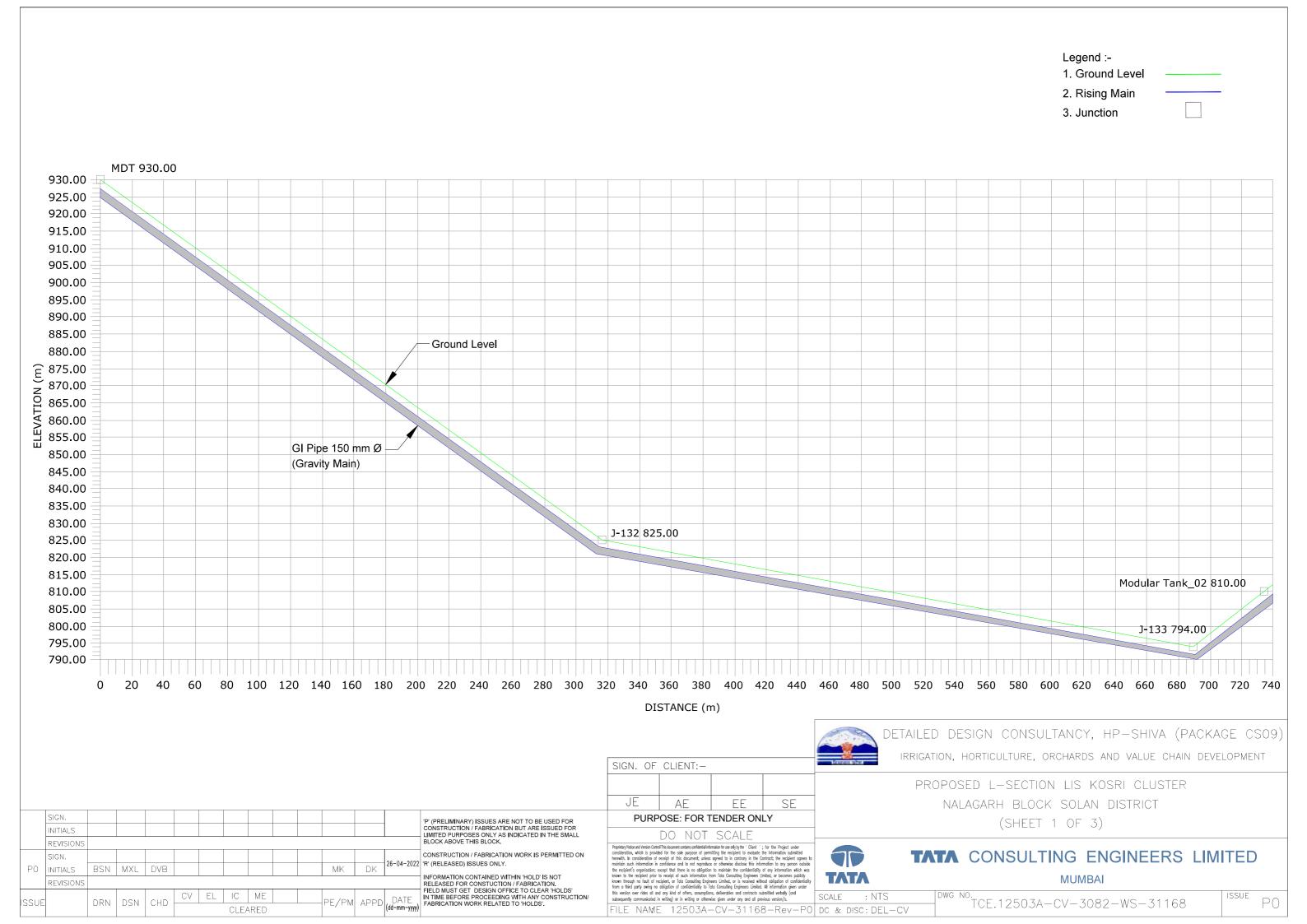


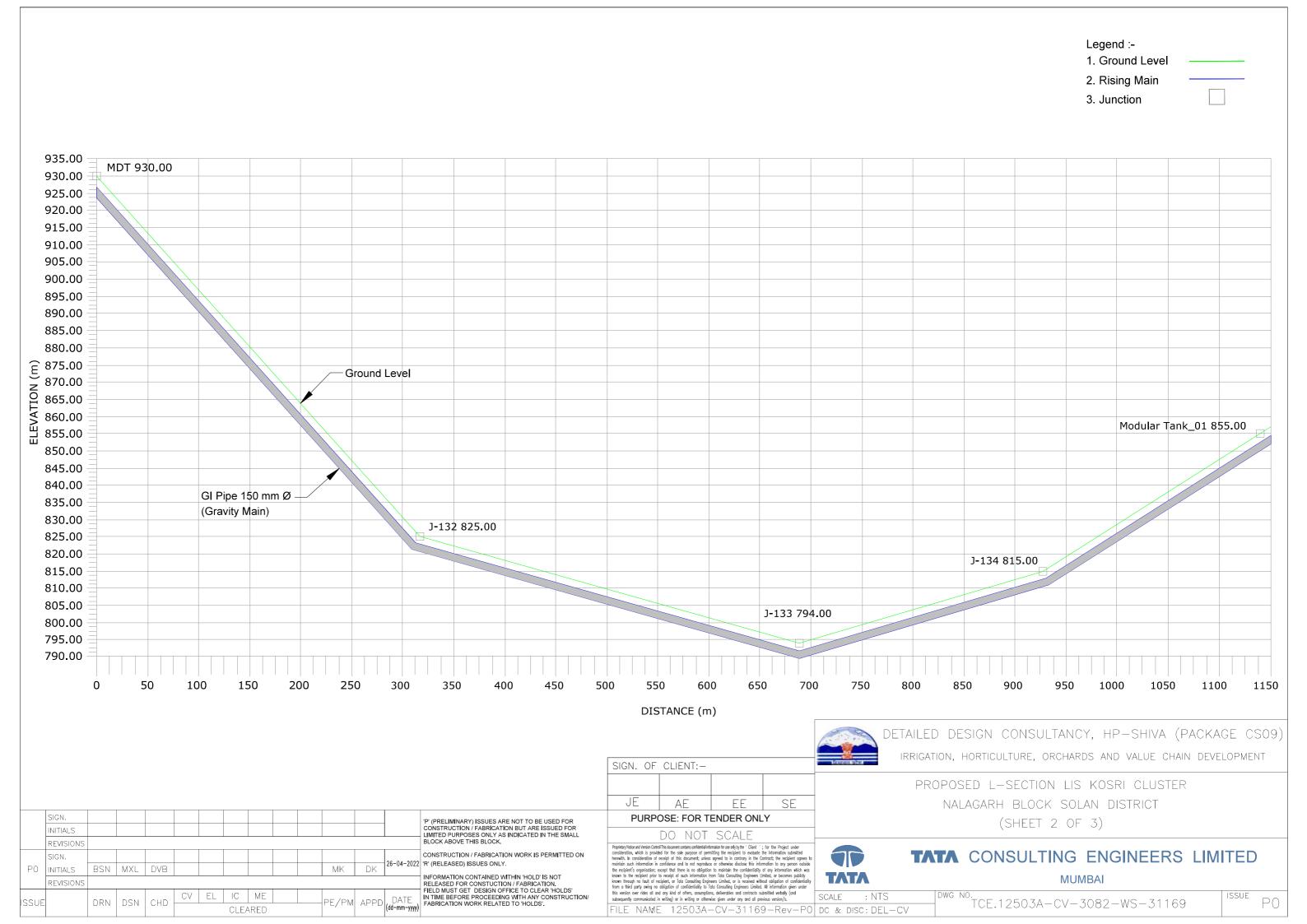


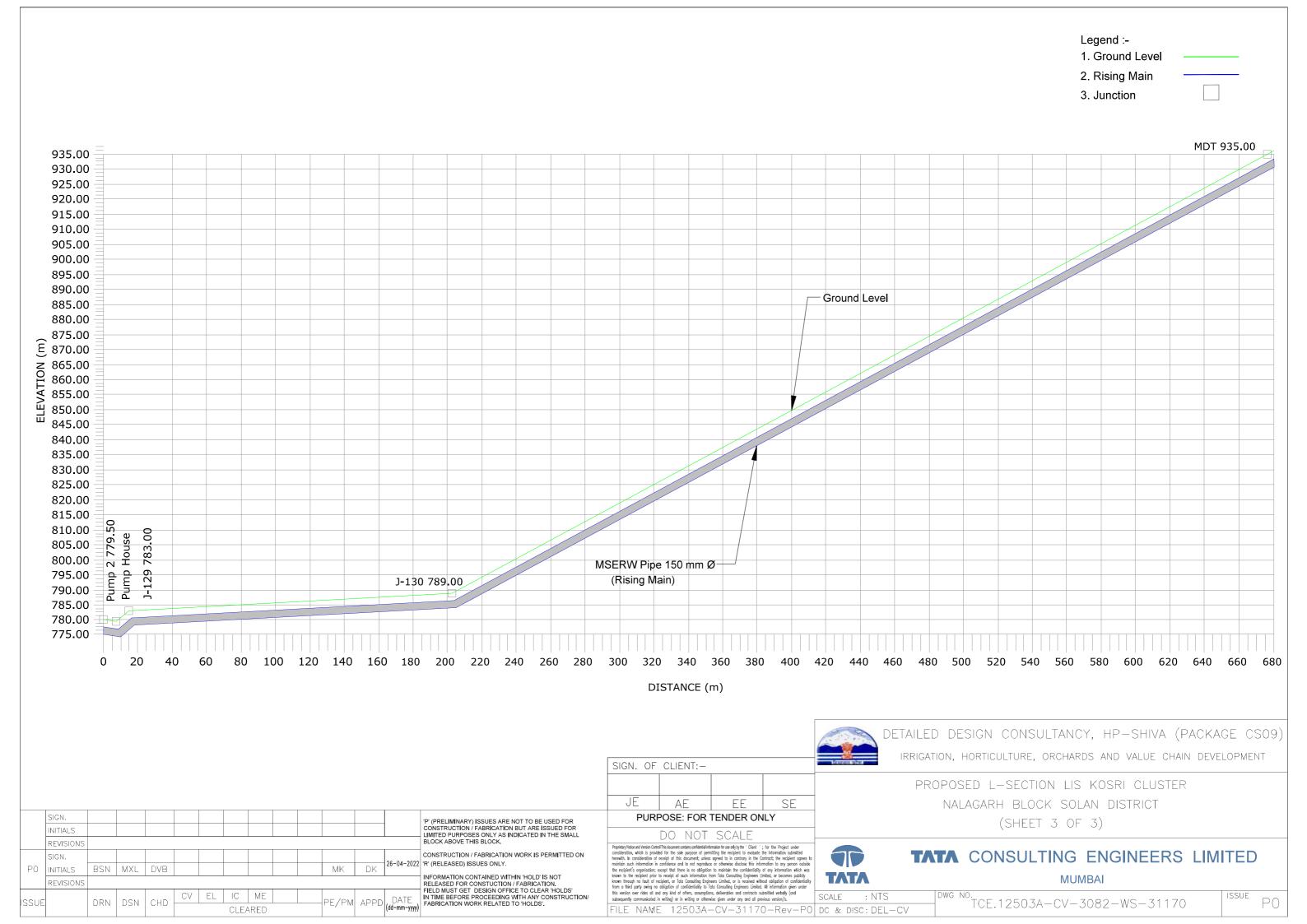


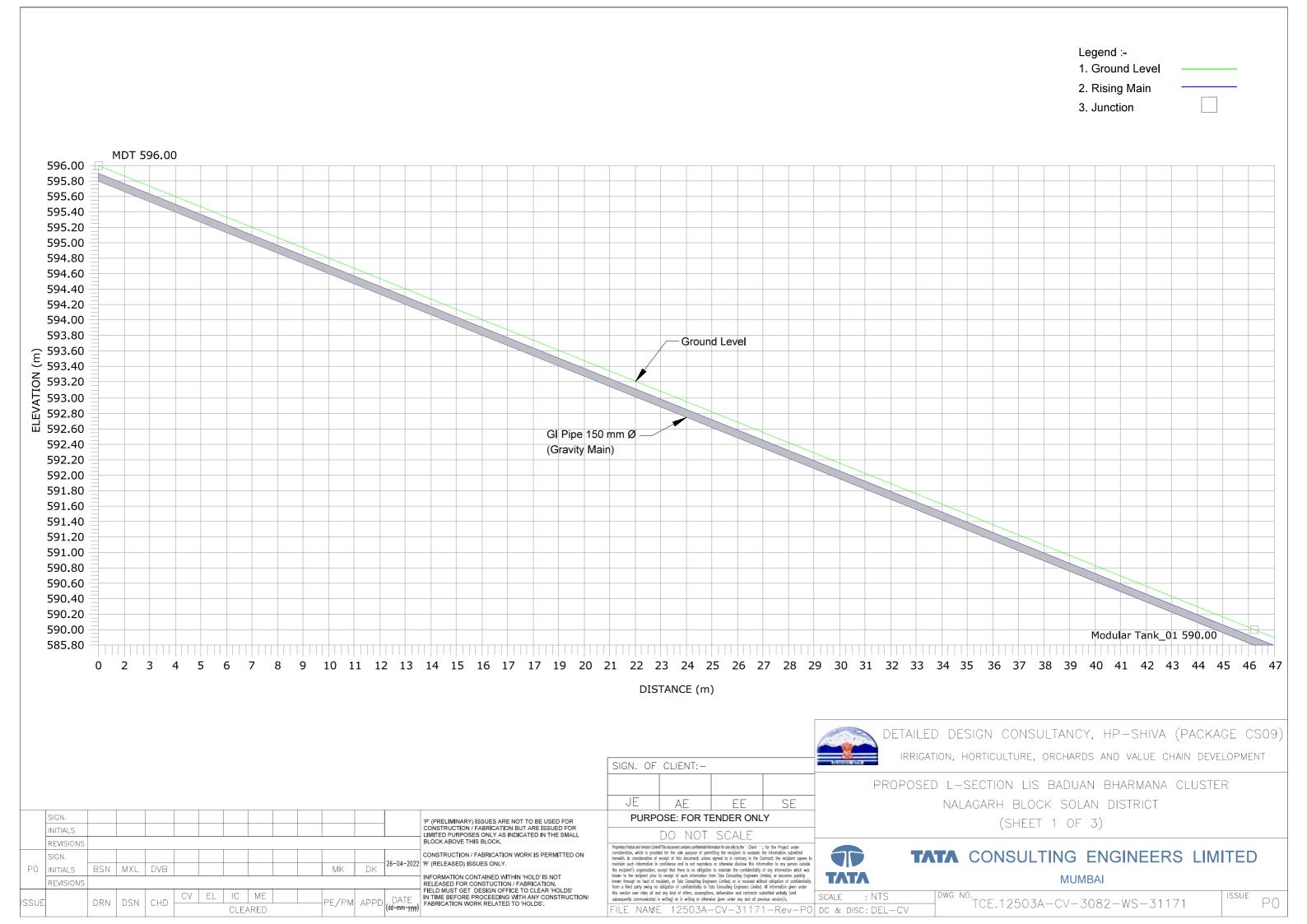


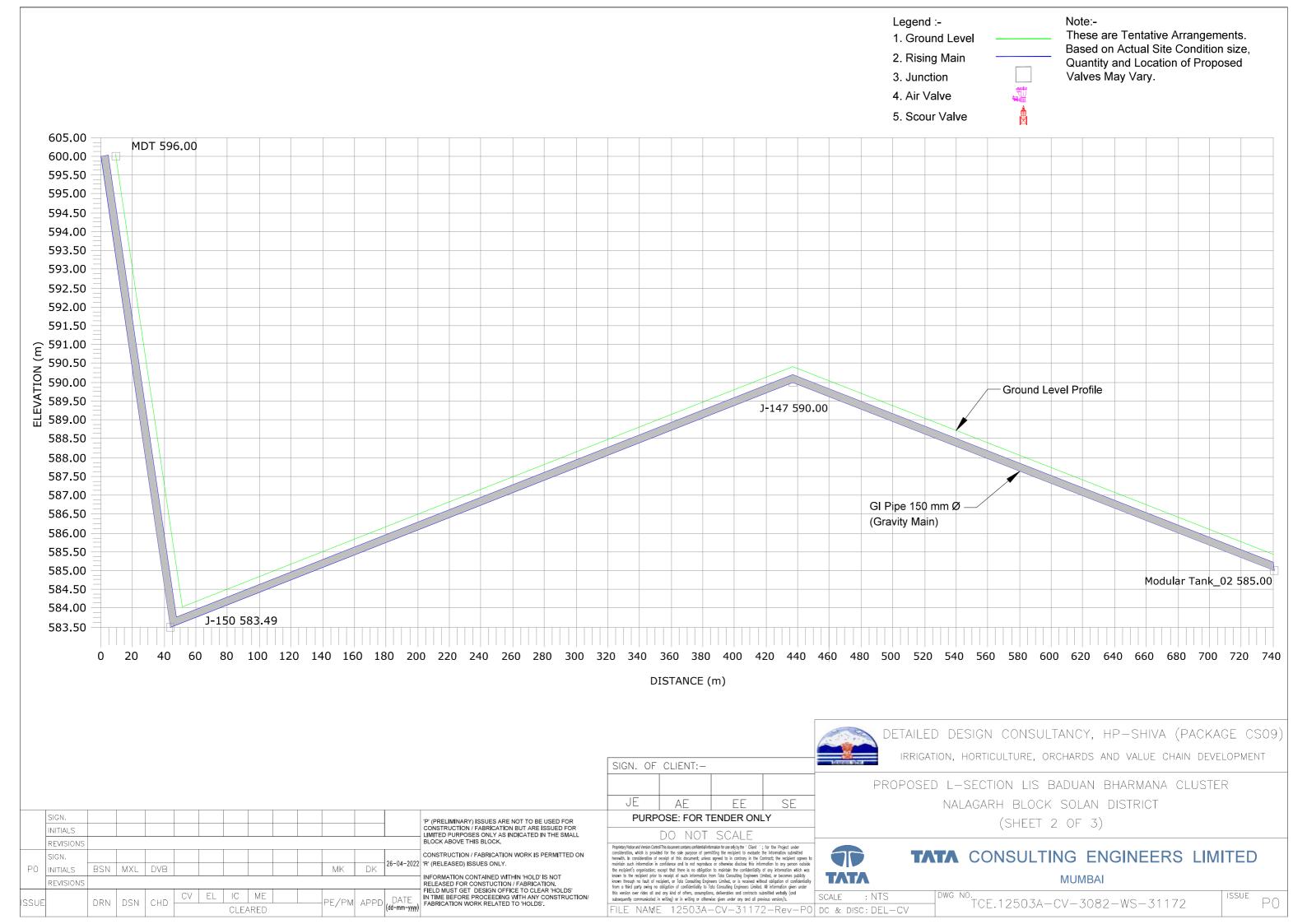


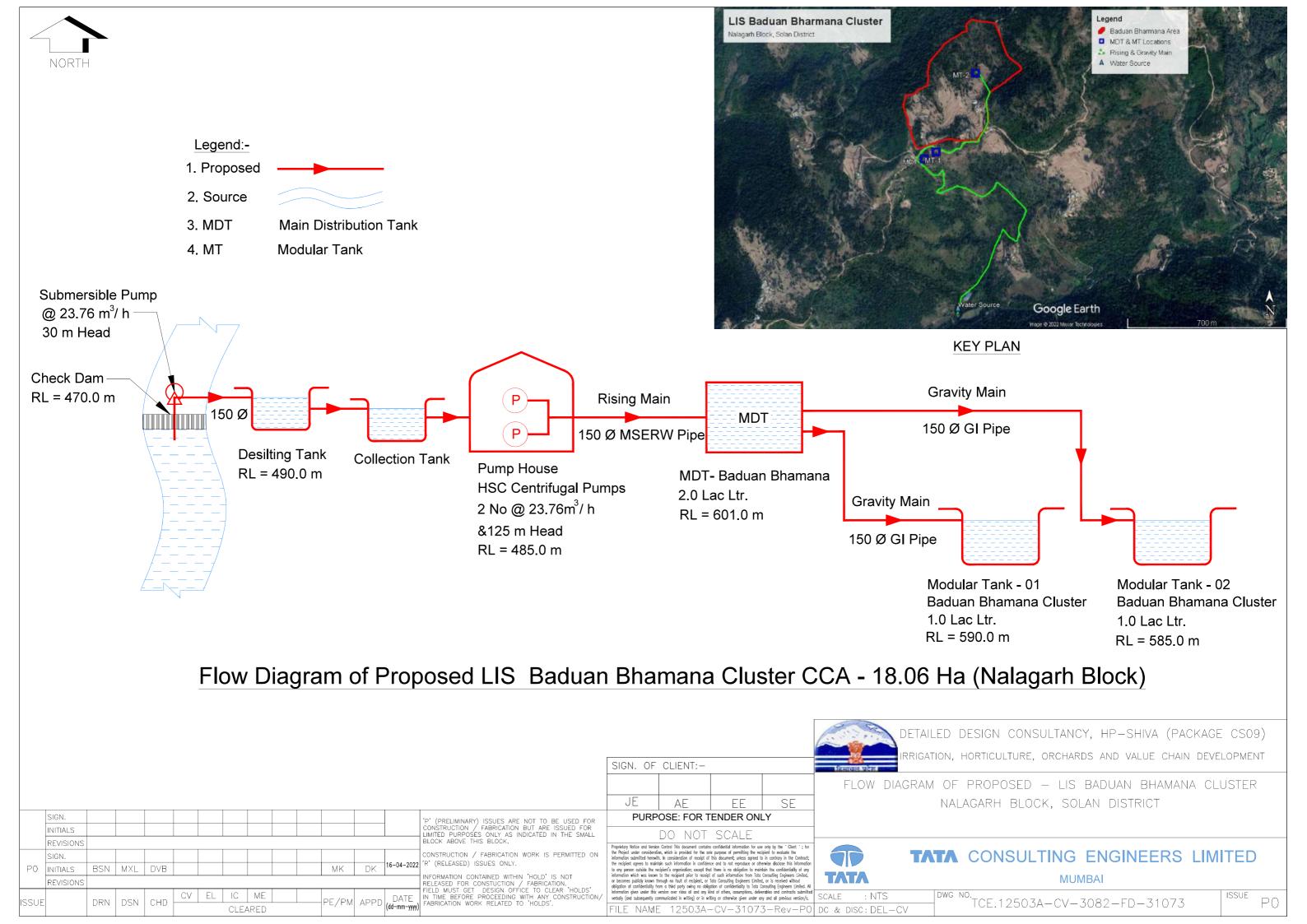


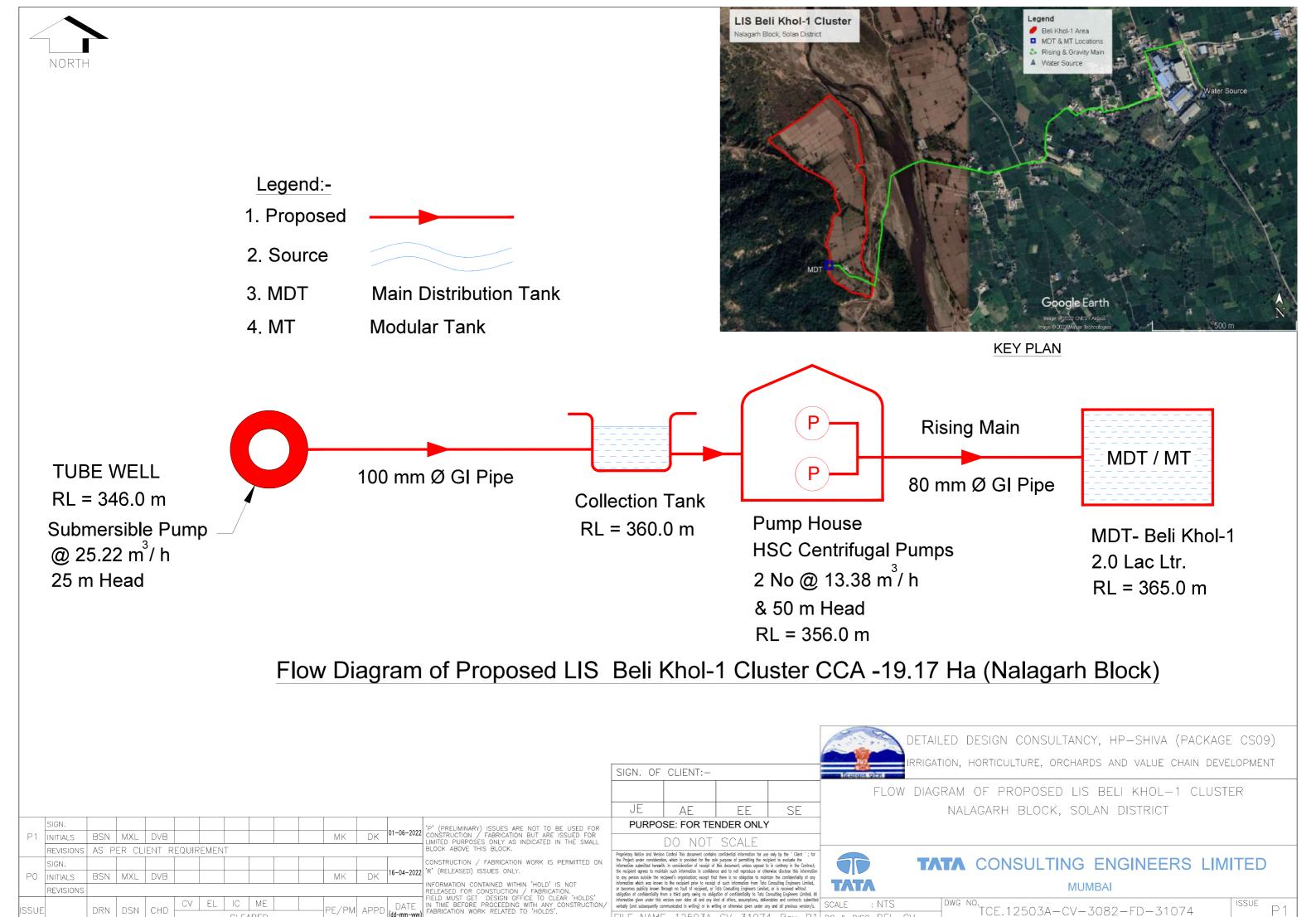




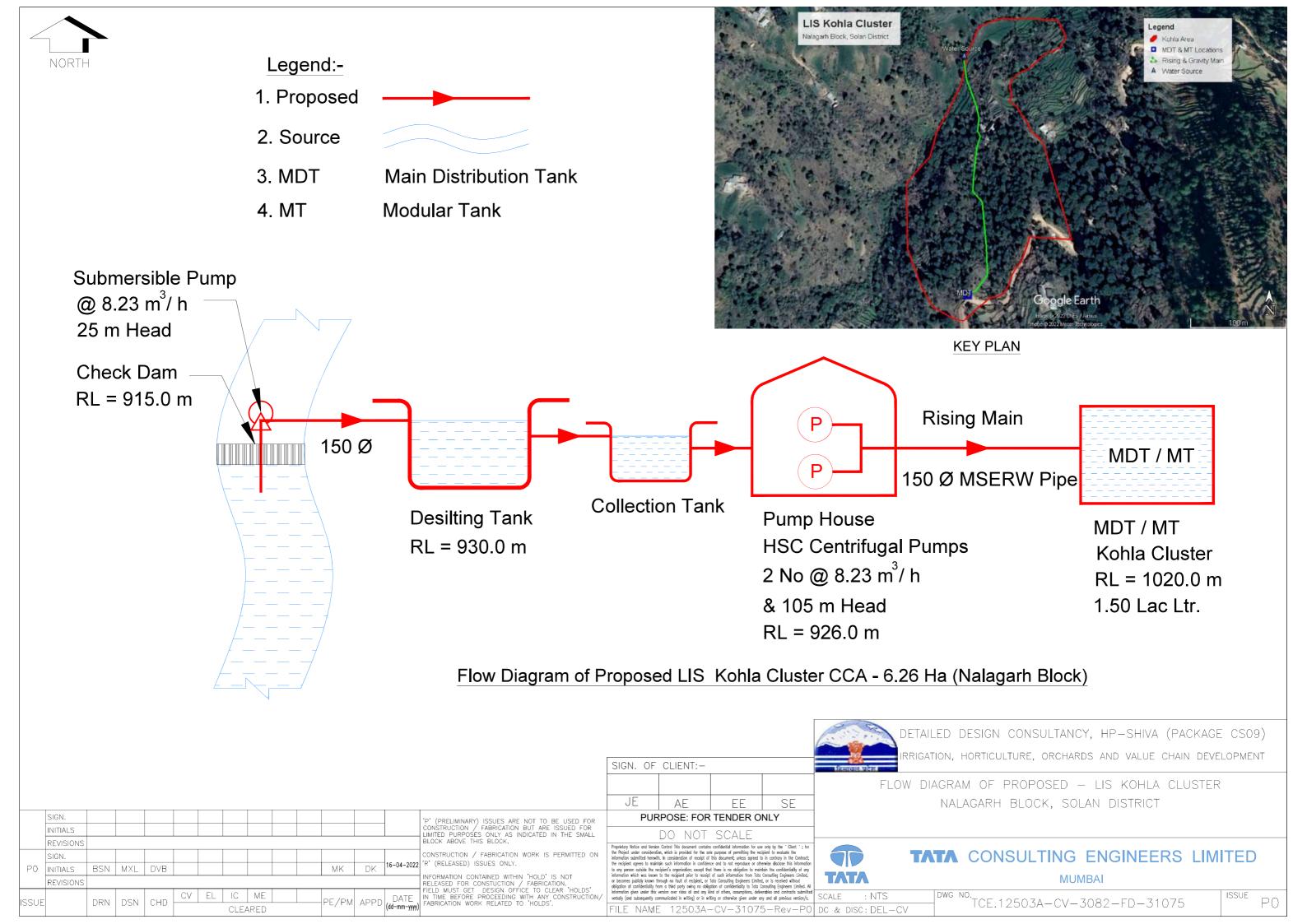


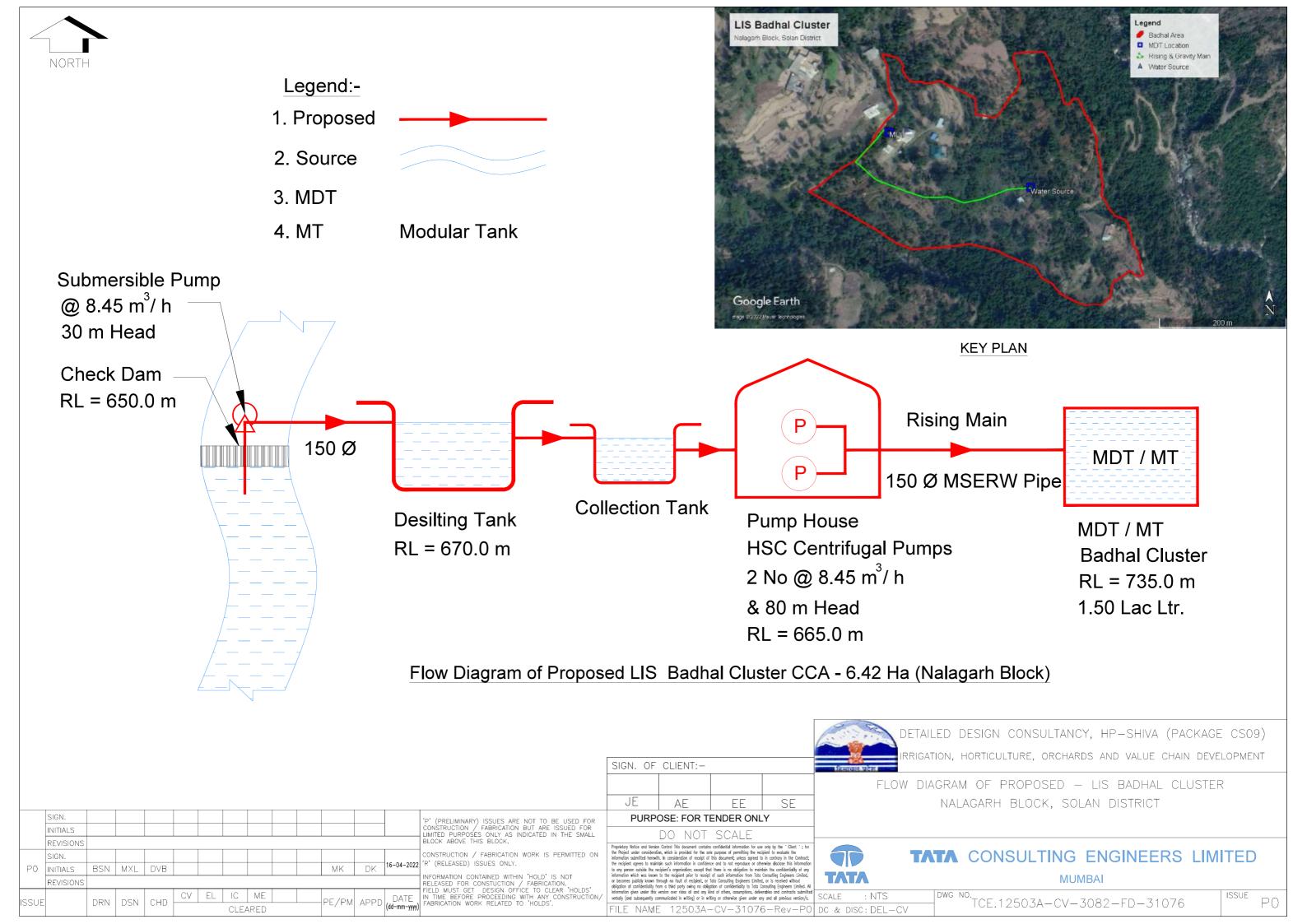


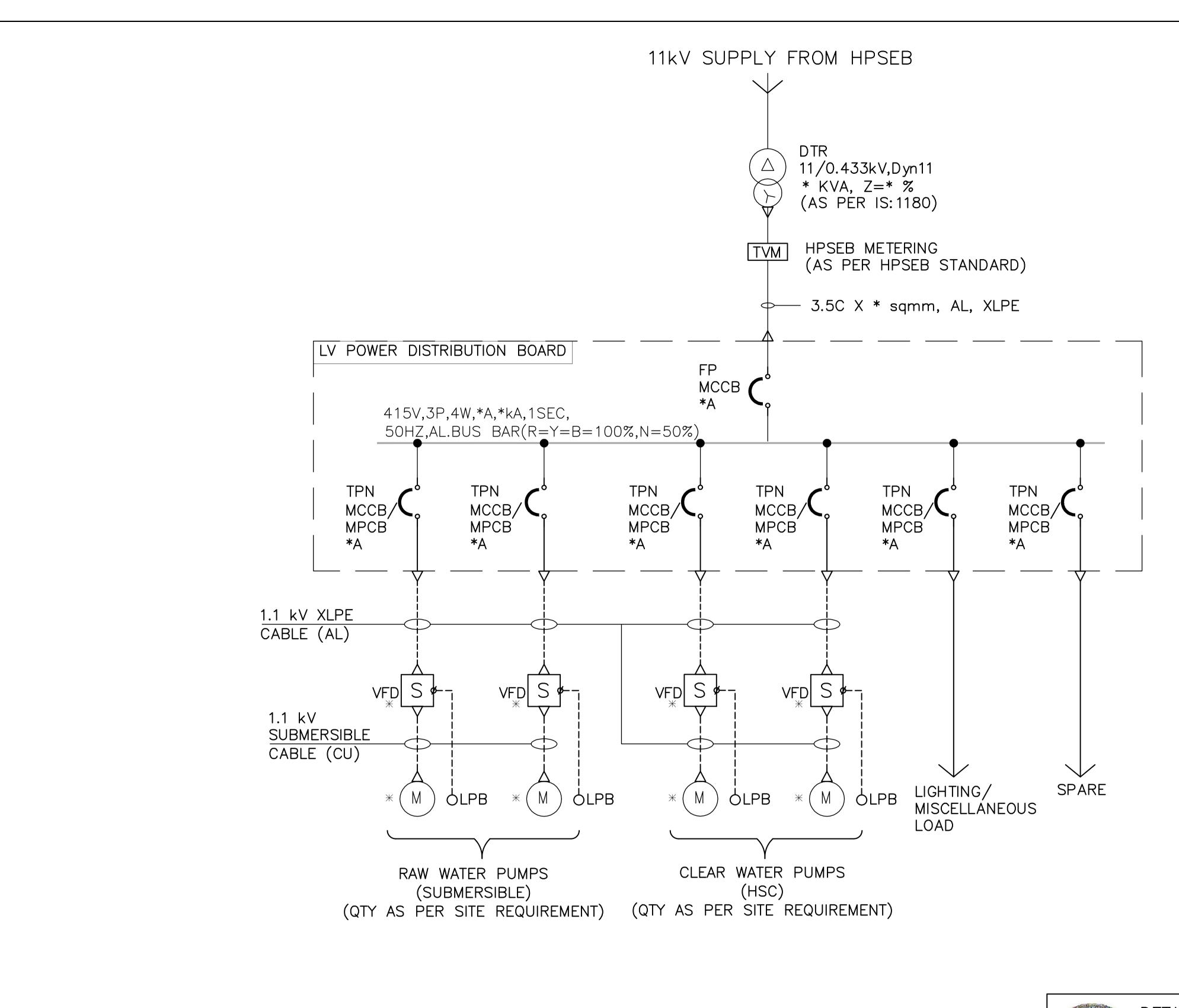


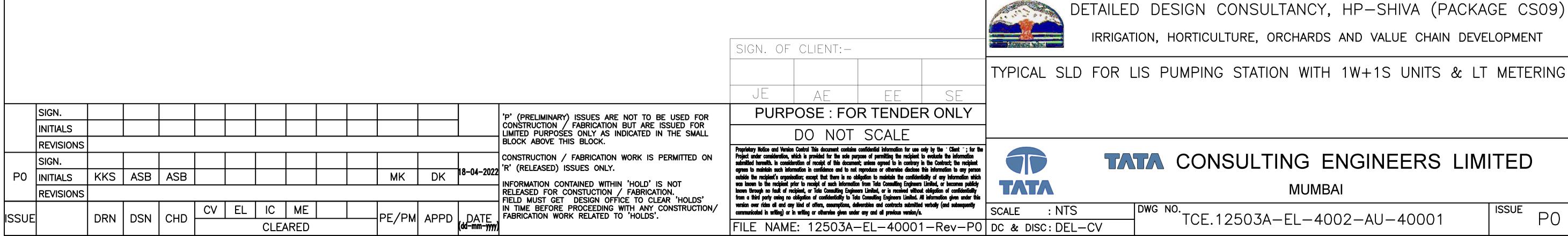


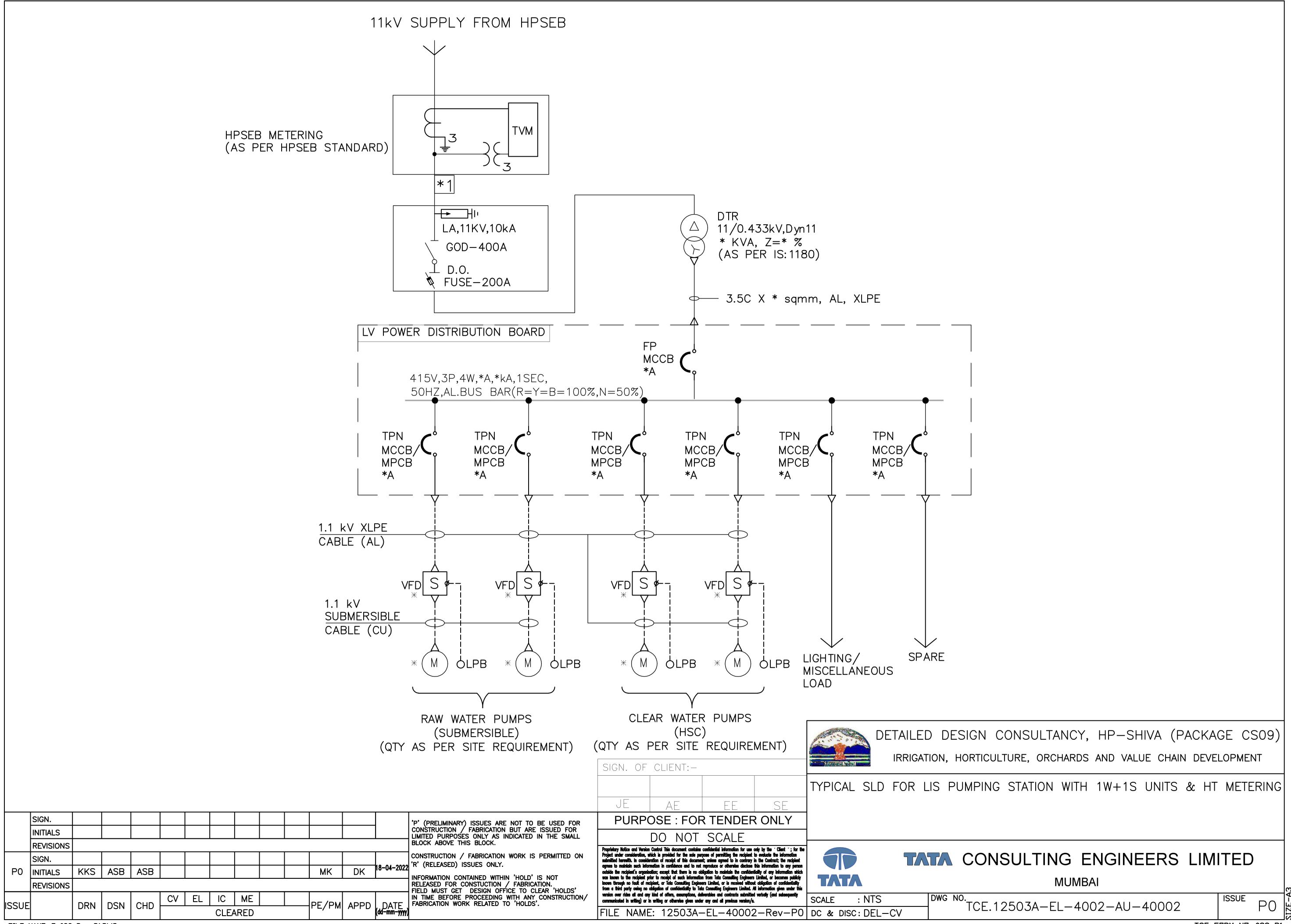
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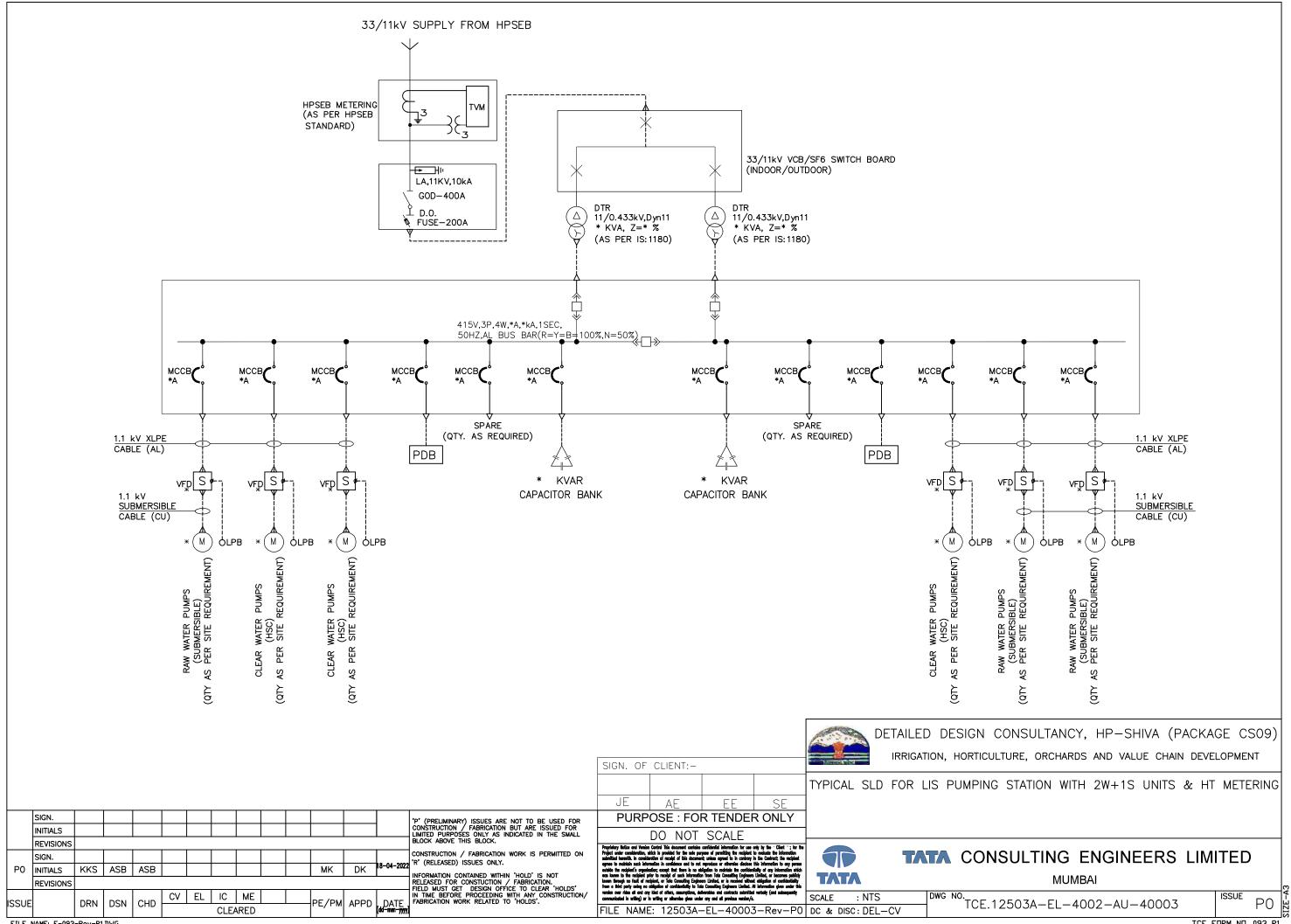












GENERAL NOTES:

- 1. THIS SLD SHOWS THE SCHEME FOR DISTRIBUTION OF THE POWER WITHIN THE PROJECT BATTERY LIMIT & SHALL be READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRGS. RATINGS, SIZES & QUANTITIES OF EQUIPMENTS MARKED AS '*' NEED TO BE CALCULATED / PROVIDED BASED ON SYSTEM REQUIREMENT AS TENDER SPECIFICATIONS. CONTRACTOR SHALL SUBMIT THE EQUIPMENT SIZING CALCULATIONS & CORRESPONDING SWITCH GEAR RATING ALONG WITH THE BID.
- 2. THE CONTRACTOR HAS TO DO DETAIL ENGINEERING OF HV & LV SYSTEM AND WORK OUT THE RATING OF EACH COMPONENT AS PER DESIGN CRITERIA GIVEN IN TENDER & EQUIPMENT SIZING CALCULATIONS AS APPROVED BY ENGINEER-IN -CHARGE.
- HV SYSTEM
- INTER TRIPPING & CLOSING INTERLOCK SHALL BE PROVIDED BETWEEN TRANSFORMER FEEDER (11KV) AND LT PANEL INCOMER (0.415KV) SIDE. a)
- CT /PT UNIT FOR HT METERING AND TVM SHALL BE AS PER DISCOM.
- LV SYSTEM:
- a) <u>ACB</u>
- 415V SWITCHBOARD INCOMER/ BUS COUPLER ACB SHALL BE FP, EDO TYPE WITH MICROPROCESSOR-BASED O/C, S/C & INBUILT E/F AND UV RELEASES.
- ALL OUTGOING ACBS SHALL BE TP, EDO TYPE WITH MICROPROCESSOR-BASED O/C, S/C & INBUILT E/F RELEASES EXCEPT FOR APFC WHICH SHALL BE MDO TYPE WITH THERMAL MAGNETIC RELEASES
- IN ALL LT SWITCHBOARDS, CURRENT RATING ABOVE 630A SHALL HAVE ACBs.
- -ALL ACBS SHALL BE WITH ICS=ICU=ICW=100%.
- b) MCCE
- 415V SWITCHBOARD INCOMER/ BUSCOUPLER MCCB (>=250A) SHALL BE FP FIXED TYPE WITH MICROPROCESSOR BASED O/C, S/C & E/F RELEASES AND OUTGOING MCCB (>=250A) SHALL BE TP FIXED TYPE WITH MICROPROCESSOR BASED O/C, S/C & E/F RELEASES EXCEPT FOR APFC AND WHICH SHALL HAVE TM BASED O/C, S/C & E/F RELEASES WITH EXTERNAL E/F MODULE. ALL INCOMER/ OUTGOING MCCB (<250A) SHALL HAVE TM BASED O/C, S/C & E/F RELEASES WITH EXTERNAL E/F MODULE.
- ALL MCCB SHALL BE WITH Ics=Icu=100%.
- ALL INDICATIONS, SHUNT TRIP/CLOSING COILS OF HT/ LT BREAKERS (VCBS/ ACBS) WILL BE ON 30/110V DC CONTROL SUPPLY. SPRING CHARGING MOTORS OF ALL BREAKERS WILL BE ON 230V AC SUPPLY. IF, DC SUPPLY IS NOT AVAILABLE FROM EXTERNAL SOURCE, IT SHALL BE DERIVED FROM INBUILT DC POWER PACK SUITABLE FOR ACCEPTING 230V AC SUPPLY FROM EXTERNAL SOURCE.
- IN MCC, ALL MOTOR STARTER COMPONENTS RATING SHALL BE SELECTED AS PER MANUFACTURER'S TYPE-2 CO-ORDINATION CHART. MOTOR STARTERS SHALL BE COMPLETE WITH SINGLE PHASING PREVENTER. AMMETERS IN MOTOR FEEDERS SHALL BE PROVIDED WITH SUPPRESSED SCALE UP TO 6 TIMES FULL LOAD CURRENT FOR INDICATING STARTING CURRENT. ALL MOTOR FEEDERS UP TO OR EQUAL TO 5.5 KW SHALL HAVE DIRECT CONNECTED AMMETERS IN Y PHASE & MOTORS GREATER THAN 5.5KW WILL BE PROVIDED WITH ONE CT & AMMETER
- 7. THE ON, OFF AND TRIP POSITION OF MCCB/ MPCB SHALL BE CLEARLY INDICATED. ROTARY OPERATING HANDLE FOR MCCBs/ MPCBs WITH THE DOOR CLOSED INTERLOCK SHALL BE PROVIDED. ALL MCCB/ MPCB FEEDERS ON ALL PANELS SHALL BE PROVIDED WITH ON/OFF/TRIP INDICATING LAMPS THROUGH AUXILIARY CONTACTS. WHEREVER STARTER FEEDER PROVIDED WITH MPCB BUT WITHOUT OVERLOAD RELAY, MPCB SHALL HAVE INBUILT OVERLOAD PROTECTION FEATURE.
- 8. 110 OR 220V AC CONTROL SUPPLY FOR LT PCC/ MCC SHALL BE DERIVED FROM CONTROL TRANSFORMER(S) OF ADEQUATE RATING. INTERLOCKING BETWEEN TWO CONTROL SUPPLIES SHALL BE PROVIDED SUCH THAT ENERGIZED SECTION CATERS FOR THE NEED OF THE PCC/ MCC PANEL.
- 9. MCCB & MPCB TERMINALS SHALL BE SHROUDED AND SHALL BE DESIGNED TO RECEIVE CABLE LUGS FOR RELEVANT CABLE SIZES
- 10. ALL INDICATING LAMPS SHALL BE MULTICHIP LED TYPE.
- 11. MULTIFUNCTION METER FOR MEASURING ALL POWER & ENERGY PARAMETERS SHALL HAVE AN ACCURACY CLASS OF 1.0 OR BETTER, WITH RS 485 COMM PORT.
- 12. ALL CONTACTORS / TIMERS SHALL BE DIN RAIL MOUNTED.
- 13. UNDER STEADY STATE CONDITIONS, VOLTAGE DROP IN VARIOUS SECTIONS OF ELECTRICAL SYSTEM SHALL BE LIMITED TO A) CABLES BETWEEN TRANSFORMER SECONDARY TO PMCC - 2 % AND B) CABLES BETWEEN PMCC TO MOTOR - 3%. UNDER MOTOR STARTING CONDITIONS, THE CORRESPONDING VOLTAGE DROP SHALL NOT AFFECT THE OPERATION OF THE MOTOR CONTROLS OR THE ABILITY OF THE MOTOR TO START AND RUN EFFECTIVELY AND IN ANY EVENT SHALL NOT EXCEED 15%. FAULT CLEARING TIME TO BE CONSIDERED WHILE SIZING OF CABLES SHALL BE AS A) PCC INCOMER - 1 SEC AND B) TRANSFORMER PRIMARY: 0.16 SEC.
- 14. UNLESS SPECIFIED, ALL SWITCHBOARDS SHALL BE FREE STANDING, COMPARTMENTALIZED, EXTENSIBLE ON BOTH SIDES WITH HEIGHT NOT EXCEEDING 2300MM. ENCLOSURE PROTECTION OF SWITCHBOARDS SHALL BE AS PER TENDER.
- 15. WHEREVER APPLICABLE, SEPARATE PANEL FOR HVAC, FIRE AND PLUMPING PUMP WILL BE PART OF RESPECTIVE BOQ.
- 16. WHEREVER APPLICABLE, PROVISION OF ONE-WAY NET METERING SHALL BE PROPOSED IN THE SLD FOR INTEGRATION OF THE SOLAR WITH THE DISTRIBUTION SYSTEM. THIS METHODOLOGY NEEDS TO BE VERIFIED WITH THE STATE ELECTRICITY BOARD AND THE SOLAR VENDORS. SOLAR POWER SUPPLY WILL NOT BE ON WHEN DG IS
- 17. WHEN TWO DG'S ARE OPERATING IN PARALLEL THEN PROVISION OF NEUTRAL CONTRACTOR INTERLOCKING SHOULD BE SUCH THAT ONLY ONE DG WILL BE EARTHED.

MK

PE/PM APPD

DK

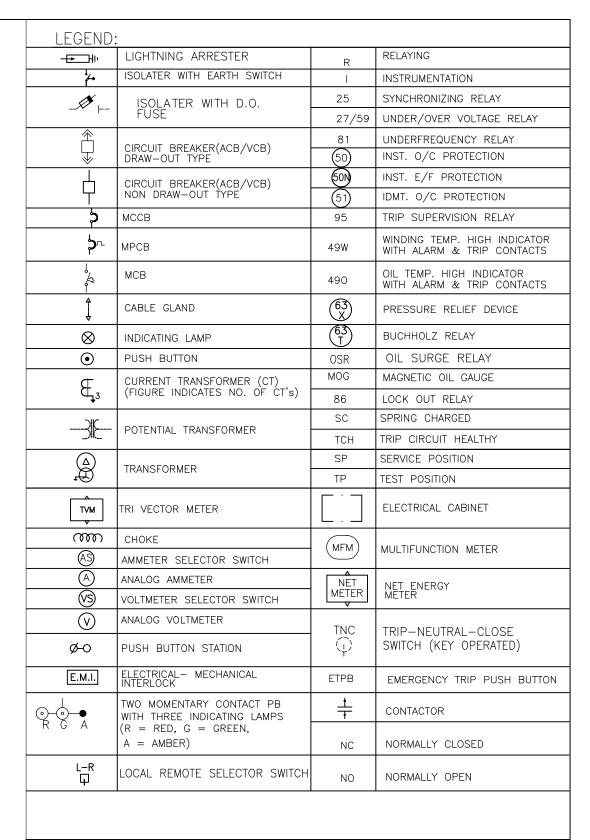
18. MCB USED FOR STANDARD NETWORK SHALL HAVE 'C' CHARACTERISTIC CURVE.

CV EL IC ME

CLEARED

19. EACH TYPE & RATING OF OUTGOING FEEDER SHALL HAVE 10% SPARE OR MINIMUM ONE NUMBER.

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DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09) IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL SLD FOR LIS PUMPING STATION WITH LT/HT METERING GENERAL NOTES & LEGENDS



TATA CONSULTING ENGINEERS LIMITED

MUMBAI

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