

- CONSTRUCTION NOTES**
1. ALL CONSTRUCTION SHALL CONFORM TO THE TELECOM STANDARDS AND SPECIFICATIONS.
 2. ALL CONDUIT, PULL BOXES, MANHOLES, TRENCHING, BACK FILLING AND SUBSTRUCTURES ARE TO BE PROVIDED BY THE CONTRACTOR AND CONFORM TO THE TELECOM STANDARDS UNLESS OTHERWISE SPECIFIED.
 3. TRENCHING AND TELEPHONE BOXES ARE TO BE PLACED IN THE SIDEWALK AREA WHENEVER FEASIBLE. ALL TRENCHING SHALL BE OF A MINIMUM DEPTH TO MAINTAIN A 6" COVER OVER ALL 1" TELECOM FACILITIES AND A 18" MINIMUM SEPARATION FROM FOREIGN UTILITIES. NEW AND EXISTING BOXES WILL BE ESTABLISHED TO FINISH GRADE.
 4. ALL 90 DEGREE BENDS MUST BE A MINIMUM OF A 48" SWEEP.
 5. ALL PULL BOXES LARGER THAN 17"x20" AND MANHOLES ARE TO BE GROUNDING WITH A 3/8"x1/2" TAPPED SOFT COPPER BONDING RUSTON PLACED VERTICALLY AROUND THE BOTTOM OF THE BOX WITH A 3" END STUBBED INSIDE.
 6. PLYWOOD BACKBOARDS ARE TO BE TREATED WITH A FIRE RESISTANT MATERIAL, PAINT OR SEALER.
 7. THE CONTRACTOR SHALL PROVIDE AND INSTALL A MEASURING TAPE CONSISTING OF A WATER PROOF 400 LB. TENSILE STRENGTH MORE IN ONE FOOT OR LESS INCREMENTS IN AT LEAST ONE INCH IN ALL CONDUIT SECTIONS. ALL OTHER DUCTS IN A ROW WILL HAVE A 3/2" JET LINE PULL STRING WITH 400 LB. TENSILE STRENGTH.
 8. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT AFTER BACK FILLING WHILE A TELECOM ENGINEER IS PRESENT. MANHOLE SIZE IS TO BE 1/4" SMALLER THAN THE INSIDE DIAMETER OF THE CONDUIT.
 9. IN ORDER TO INSURE ADEQUATE FACILITIES ARE PROVIDED FOR ON THE PROJECT, IT IS IMPERATIVE THAT THE CONDUIT DESIGN NOT BE CHANGED WITHOUT THE TV ENGINEER'S APPROVAL.
 10. ALL TERMINALS, BACKBOARDS, CABINETS, ETC., SHALL BE EQUIPPED WITH A #6 GAUGE COPPER GROUND WIRE, ATTACHED TO A COMMON POWER NON.
 11. ALL PULL BOXES AND MANHOLES NOT IN A CONCRETE SIDEWALK WILL BE REQUIRED TO HAVE A PROTECTIVE 8"x8" CONCRETE COLLAR POURED AROUND THE TOP PORTION OF THE BOX.
 12. ALL CONDUIT ENDS (TERMINATED OR STUBBED) WILL HAVE A TAPERED POLYETHYLENE DUCT PLUG WITH A PULL STRING ATTACHED.
 13. INSPECTION IS REQUIRED FOR ALL PHASES OF THE JOB. THESE PHASES ARE:
 - OPEN TRENCHES AFTER CONDUIT HAS BEEN PLACED
 - OBSERVATION OF BACK FILL AND COMPACTION AS MEETING STANDARDS
 - MANHOLES OF ALL CONDUIT
 - WALL OF PULL BOXES AND MANHOLES MUST BE COURED WITH PROPER AMOUNT OF TERNOMINATING
 - GROUTING OF PULL BOXES AND CONCRETE COLLARS
 - PULL STRING IN ALL CONDUITS
- ALL WORK MUST BE ACCEPTED BY THE TELECOM ENGINEER AS MEETING THE TELECOM STANDARDS, FOR A CONTRACTOR TO BE PAID AND FOR THE TELECOM TO PLACE ANY TYPE OF TELECOMMUNICATION CABLE.

- LEGEND**
- INDICATES EX. UTILITIES & CABLE
 - PROPOSED 2.5 & 4" PVC, SCHEDULE 40
 - PROPOSED 1 1/4" HDPE DUCT
 - INDICATES CENTER LINE
 - PROPOSED FIBER
 - [] PROPOSED PULL BOX 3'x3'x4'6"
 - [] PROPOSED PULL BOX 2'6"x4'x3'
 - [] EXISTING PULL BOX 3'x3'x4'6"
 - [] EXISTING PULL BOX 2'6"x4'x3'
 - [] PROPOSED PULL BOX 30"x48"x36"
 - [] TERMINAL CABINET 36"x36"x6"
 - [] TERMINAL CABINET 36"x36"x6" (AL APPROVED)
 - [] 3/4" PLYWOOD BACKBOARD TREATED WITH A FIRE RETARDANT PAINT OR SEALER. BACKBOARDS SMALLER THAN 4'x8' SHOULD BE MOUNTED 40" ABOVE THE FLOOR.
 - [] #6 COPPER GROUND WIRE ATTACHED TO A POWER NON.

Call before you Dig
1-702-455-7511
1-702-229-6611
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

UTILITY NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Avoid cutting underground utility lines. If a conflict, call before you dig.

Call before you Dig
Dial 811
UNDERGROUND SERVICE (USA)

Avoid hitting overhead power lines. If a conflict, call before you dig.

Call before you Dig
YOU DO OVERHEAD
CALL 1-702-227-2929

CONSTRUCTION NOTES:
COORDINATE CONSTRUCTION WITH tw telecom
ALL UG CONDUIT TO BE EQUIPPED WITH LOCATE WIRE
MAINTAIN A MINIMUM OF 36" DOC (PLACE BORE PITS AS NECESSARY)

Contact:
Hank Schlesinger,
tw telecom
(702) 216-2233

- 1 INSTALL 1-4" RISER
- 2 INSTALL 1-4" PVC SCH 40
- 3 INSTALL 1 PULL BOX 30"x48"x36"

APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CLV RW OR CLV EASEMENT ONLY. OBTAINING PERMISSION OR EASEMENTS FOR WORK SHOWN ON PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY

APPROVAL: *[Signature]* DATE: 11/25/2008

CITY OF LAS VEGAS
PUBLIC WORKS
PERMIT REQUIRED*

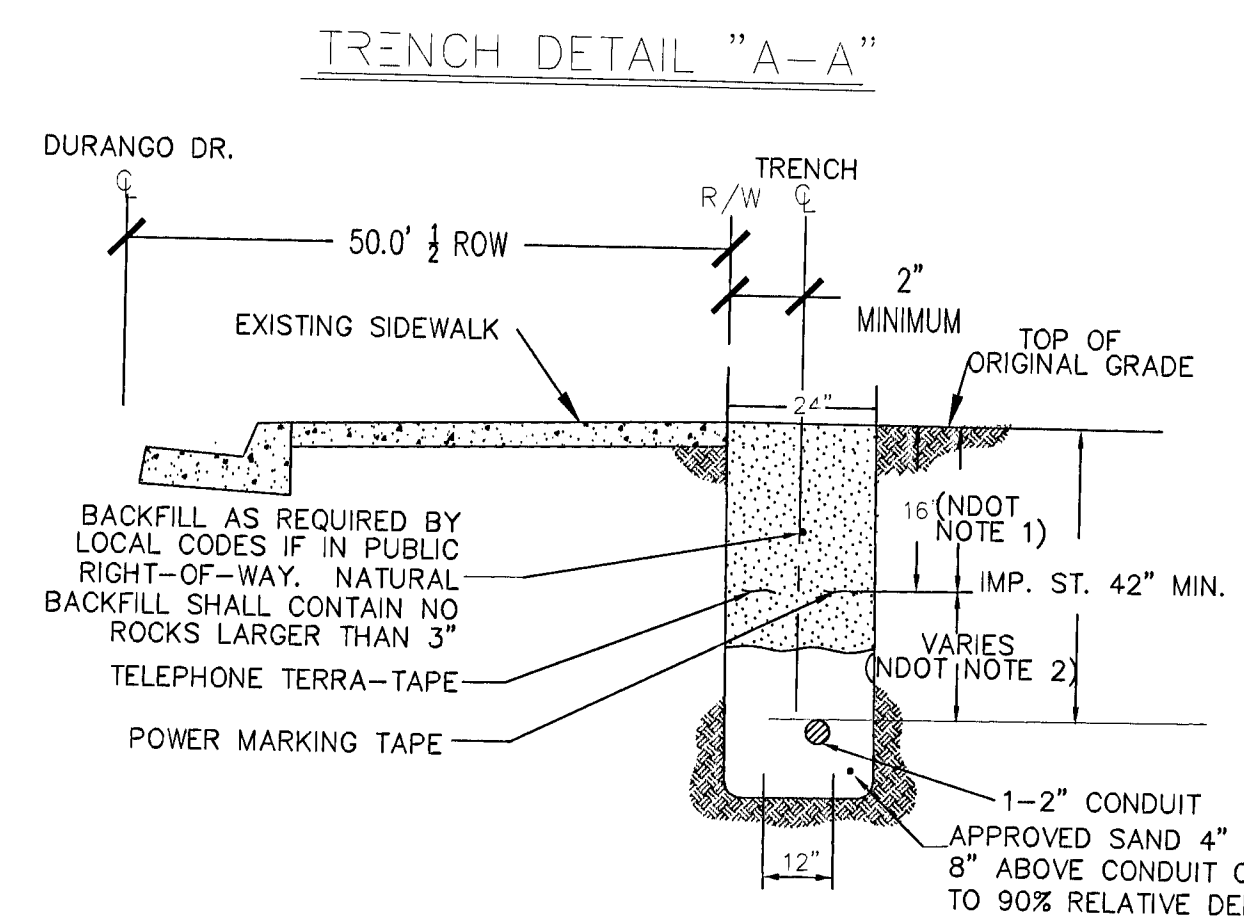
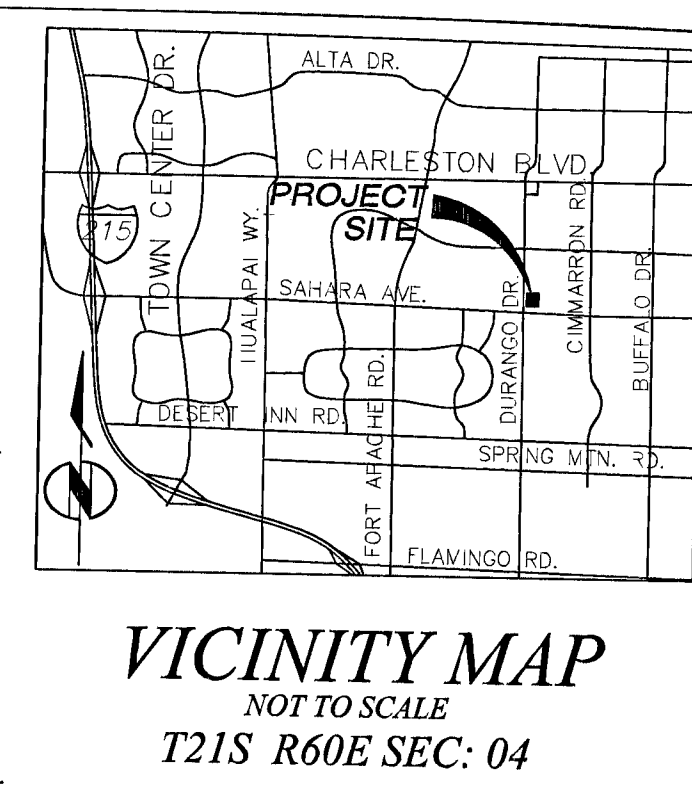
DEVELOPER/CONTRACTOR SHALL OBTAIN A CITY OF LAS VEGAS PERMIT BEFORE ANY EXCAVATION WORK WITHIN CITY OF LAS VEGAS RIGHT OF WAY

* TW INSPECTOR WILL VERIFY CITY OF LAS VEGAS PERMIT FOR WORK DONE WITHIN CLV RIGHT-OF-WAY

INSPECTOR: _____ DATE: _____

tw telecom
3944 East Silvestri Lane
Las Vegas, NV 89120
(702) 216-2239 FAX/CELL

SHEET
1
1 OF 1 SHEETS



LEGEND

114832

107V5077-FIB-2

NOV 1 2 2008
31913 LV WEST VALLEY EXPANSION SEGMENT 2 - 2ND PB