NOTES:
1. PHYSICAL SINGLE-MODE FIBER OPTIC RING AND DISTRIBUTION SWITCH LOCATIONS
2. MERE RUN CABLE CONNECTS DISTRIBUTION SWITCH, DISTRIBUTION SYSTEM AND EACH SUBSYSTEM DEVICE (STAR TOPOLOGY)
3. PRODUCT AVAILABILITY MAY ALLOW FIBER RING TOPOLOGY BETWEEN SUBSYSTEM DEVICES FOR IMPROVED NETWORK RELIABILITY (FUTURE)
4. TWO 1 GB NETWORK SWITCHES ARE USED FOR DISTRIBUTION CABINET FOR REDUNDANCY
5. ACTUAL QUANTITY OF SUBSYSTEM DEVICES DEPEND ON SPECIFIC STATION LOCATION AND DESIGN
6. SOME CALTRAIN STATIONS MAY STILL UTILIZE OUTSIDE STATION COMMUNICATIONS CABINETS (ssi), ALSO REFERRED TO AS COMMUNICATIONS INTERFACE CABINETS (SSI), ALL SSO/CO'S WILL BE PLACED OUT AND REPLACED BY cpo's. IN THESE DRAWINGS SSO's, CO's ARE OMITTED AND COP's USED INSTEAD.
NOTES:
1. PHYSICAL, STANDBY FIBER OPTIC RING REMAIN IN PLACE AND DISTRIBUTION SWITCH LOCATIONS REMAIN IN PLACE.
2. WHERE RUN CAT5 COPPER CABLE BETWEEN DISTRIBUTION CABINET AND EACH SUBSYSTEM DEVICE (STAR TOPOLOGY) INSTEAD.
3. PRODUCT AVAILABILITY MAY ALLOW FOR FIBER OPTIC RING TOPOLOGY BETWEEN MULTIPLE SUBSYSTEM DEVICES FOR IMPROVED NETWORK RELIABILITY (FUTURE).
4. TWO 10/100 BASE-T SWITCHES ARE USED PER DISTRIBUTION CABINET FOR REDUNDANCY.
5. ACTUAL QUANTITY OF SUBSYSTEM DEVICES DEPEND ON SPECIFIC STATION LOCATION AND DESIGN.
6. SOME CALTRAIN STATIONS MAY STILL UTILIZE OUTDOOR STATION COMMUNICATIONS CABINETS (SSC), ALSO REFERRED TO AS COMMUNICATIONS INTERFACE CABINETS (CIC), ALL SITES WILL BE PHASED OUT AND REPLACED BY CRS. IN THESE DRAWINGS, SITES CABS ARE OMITTED AND CRS USED INSTEAD.

FIBER OPTIC RINGS

DUAL REDUNDANT 1 GIGABIT ETHERNET FIBER OPTIC RINGS
NOTES:
1. PHYSICAL SINGLE-MODE FIBER OPTIC RING IS BEST AND DISTRIBUTION Switch LOCATIONS
2. MORE NON-GATE COFFEE SUSHI BETWEEN DISTRIBUTION SWITCH AND EACH SUBSYSTEM DEVICE (STAR TOPOLOGY)
3. SUBSYSTEM DEVICE CONNECTIVITY SHALL BE DEEMED DISTRIBUTED BETWEEN RING 1 AND RING 2 NETWORK SWITCHES
4. ACTUAL QUANTITY OF SUBSYSTEM DEVICES DEPEND ON SPECIFIC STATION LOCATION AND DESIGN
5. EACH FIBER RING CONSISTS OF TWO (2) SINGLE-MODE FIBER STRANDS
6. SOME CALTRAIN STATIONS MAY STILL UTILIZE OUTDOOR STATION COMMUNICATIONS CABLES (RCD), ALSO REFERRED TO AS COMMUNICATIONS INTERFACE CABLES (CIC). ALL Sockets WILL BE PASSED OUT AND REPLACED BY CIC IN THESE DRAWINGS. Sockets ARE UNLIT AND LENS USED INSTEAD
NOTES:

1. PHYSICAL SINGLE-MODE FIBER OPTIC RING IS USED AS THE MAIN AND DISTRIBUTION SYSTEM LOCATIONS.
2. MULTIPLE RINGS ARE CONNECTED BETWEEN DISTRIBUTION SYSTEM AND EACH SUBSYSTEM DEVICE (STAR TOPOLOGY).
3. SUBSYSTEM DEVICE CONNECTIVITY SHALL BE DETERMINED BETWEEN RING 1 AND RING 2 NETWORK SWITCHES.
4. ACTUAL QUANTITY OF SUBSYSTEM DEVICES DEPENDS ON SPECIFIC STATION LOCATION AND DESIGN.
5. EACH FIBER RING CONSISTS OF TWO (2) SINGLE-MODE FIBER STRANDS.
6. SOME CALTRAIN STATIONS MAY STILL UTILIZE OUTDOOR STATION COMMUNICATIONS CABINETS (OCCS) OR REFERRED TO AS COMMUNICATIONS INTERFACE CABINETS (CII). ALL OCCS/CII S/W WILL BE REPLACED AND will BE METERED AND Cuts IN THESE DRAWINGS OCCS/CII ARE SHOWN AND Cuts USED RATHER.
NOTES:
1. PHYSICAL CONNECTIONS ARE NOT SHOWN. NETWORK TIES MAIN AND DISTRIBUTION SWITCH AND EACH CID
   DEVICE (STAR TOPOLOGY)
2. ACTUAL QUANTITY OF CID EQUIPMENT DEPEND ON SPECIFIC STATION LOCATION AND DESIGN.
3. CADD TO PROVIDE THE CID ROUTER, CID MAIN AND DISTRIBUTION SWITCHES, AND CID DEVICES.
   CADD TO INSTALL CABLES AND TERMINATE CID DEVICES ON PADS FOR CID NETWORK.
   CALTRAIN TO PROVIDE CID PADS. CONTRACTOR TO PROVIDE AND INSTALL CID (WAVY DC POWER
   SUPPLIES IN DISTRIBUTION CABINET), CONDUIT, AND COMMUNICATION POWER WIRING, AND OTHER
   REMAINING MISCELLANEOUS EQUIPMENT TO COMPLETE FULLY FUNCTIONAL CID SUBSYSTEM.
NOTES:
1. PHYSICAL SINGLE WIRE FIBER OPTIC NETWORK FOR MAIN AND DISTRIBUTION SWITCH AND EACH CID DEVICE (STAR TOPOLOGY)
2. ACTUAL QUANTITY OF CID EQUIPMENT DEPENDS ON SPECIFIC STATION LOCATION AND DESIGN
3. CLIPPER TO PROVIDE CID ROUTER, CID MAIN AND DISTRIBUTION SWITCHES, AND CID DEVICES. CLIPPER TO EXTEND PHONE SERVICE AND TERMINATE CID DEVICES ON RACES FOR CID NETWORK. CALTRAIN TO PROVIDE CID RACES AND INSTALL CID DRY CONTACTS FOR POWER SUPPLIES IN DISTRIBUTION CABINETS, CONSULTS AND COMMUNICATION POWER WIRING, AND OTHER RELEVANT WIRING TO COMPLETE FULLY FUNCTIONAL CID SUBSYSTEM

PENINSULA CORRIDOR JOINT POWERS BOARD
STANDARD DRAWINGS
STATION COMMUNICATIONS
OVERALL SYSTEM DESCRIPTIONS
2-PLATFORM CID LAN SUBSYSTEM
LOGICAL TOPOLOGY
NOTES:
1. PHYSICAL SINGLE MODE FIBER OPTIC NETWORK. IN MAIN AND DISTRIBUTION
   SWITCH LOCATIONS (2 STRANDS OF FIBER PER LINK)
2. HOME RUN COMMUNICATIONS CABLE AND 24V DC POWER CABLES BETWEEN
   DISTRIBUTION SWITCH AND EACH ASSOCIATED CID DEVICE
3. ACTUAL QUANTITY OF SHOWN DEVICES DEPENDS ON SPECIFIC STATION LOCATION
   AND DESIGN
4. FOR CLARITY, INTERMEDIATE CROSS-CONNECT PATCH-PANEL EQUIPMENT AND
   CORDS ARE NOT SHOWN.
COMMUNICATIONS
EQUIPMENT ROOM (CER)
REFER TO SD-4904 FOR EQUIPMENT PROFILE

CALTRAIN 1 Gbps BASE ETHERNET

NOTE 1

CALTRAIN
REDUNDANT CARRIER
NETWORK

RACK MOUNT CCTV MONITOR AND
SERVER AND EXTERNAL VIDEO
STORAGE (WHERE NECESSARY)

REFER TO SD-4902 FOR CCTV PROFILE

STATION SUBSYSTEM
REFER TO SD-4301

DISTRIBUTION CABINET

CALTRAIN 1 Gbps BASE ETHERNET

SN FIBER DISTRIBUTION PANEL

DC

24F

Fiber optic connector

NOTE

NUMBER OF
SINGLE-MODE OPTICAL FIBERS

1. NETWORK TRANSPORT MEDIAN TO CCF TO BE DETERMINED (TBD)
2. REFER TO STANDARD DRAWINGS FOR BACKBONE CABLE RUN LISTS
3. SPECIFIC STATION DESIGN WILL DETERMINE THE QUANTITY OF DISTRIBUTION CABINETS. THE BACKBONE FIBER OPTIC CABLE SHALL BE A PHYSICALLY DIVERSE RING TOPOLOGY.
4. SEPARATE VIRTUAL LAYERS OF AT LEAST THREE SHALL BE PARTITIONED FOR EACH TYPE OF SUBSYSTEM.
5. VIDEO RECORDING DEVICES SHALL BEVIEW AT STATION CER, WITH REMOTE ACCESS FROM
CALTRAIN CCTV HEAD END IN SAN FRANCISCO.
6. ACTUAL QUANTITY OF SUBSYSTEM DEVICES SHALL BE BASED ON SPECIFIC STATION DESIGN.
NOTES:
1. EXCEPT FOR T568A/B (IEC 60645) OR T568C (IEC 60645) CIRCUIT CONFIGURATION THE CIRCUIT CONFIGURATION IS T568A/B.
2. WA (WORK AREA) CAN BE ANY NETWORK DEVICE SUCH AS: WAC, WLS, WSM, D2000, D2001, OR DATA OUTLET.
3. EACH UTP CABLE SHALL BE PROTECTED AT THE TRANSITION OF THE DC OR CE BY USE OF AN APPROPRIATE SURGE/LIGHTNING PROTECTOR.

MAX DISTANCE
SM FOC = 9840 FT
MAX DISTANCE
UTP (CAT 6) = 328 FT

TIA/EIA
MAIN
CROSS-CONNECT (MC) → TIA/EIA
INTERMEDIATE
CROSS-CONNECT (MC) → TIA/EIA
WORK AREA
DEVICE

COMUNICATIONS
EQUIPMENT ROOM
(CER)

OR

COMMUNICATIONS INTERFACE
CABINET (CIC)

FIBER OPTIC CABLE (FOC)
OR COPPER (UTP) CABLE
STAR TOPOLOGY

MAX 250 FEET HORIZONTAL CABLE LENGTH FROM
DC TERMINATION TO WA TERMINATION
MAX 9 FEET CABLE LENGTH AT WA
MAX 23 FEET CROSS-CONNECT AND PATCH CABLE AT DC
MAX 300 FEET MAXIMUM CABLE DISTANCE

CALTRAIN
SINGLE-MODE
FIBER OPTIC
CABLE (FOC)
RING TOPOLOGY OR
CIC SINGLE-MODE FOR
STAR TOPOLOGY

MAX DISTANCE 250 FT HORIZONTAL CABLE LENGTH FROM
DC TERMINATION TO WA TERMINATION
MAX 9 FT CABLE LENGTH AT WA
MAX 23 FT CROSS-CONNECT AND PATCH CABLE AT DC
MAX 300 FT MAXIMUM CABLE DISTANCE