

**NOTES FOR DESIGNER:**

(DO NOT INCLUDE ON CONSTRUCTION DRAWINGS)

1. WHEN EDITING DETAIL TO SUIT PROJECT, ADD JOB SPECIFIC REQUIREMENTS AND DELETE ONLY THOSE PORTIONS THAT DO NOT APPLY. TO SEEK A VARIANCE FROM APPLICABLE REQUIREMENTS, CONTACT THE ESM CIVIL POC.
2. REFER TO THE FOLLOWING LANL STANDARDS FOR ADDITIONAL REQUIREMENTS:
  - A. ENGINEERING MANUAL, CIVIL CHAPTER.
  - B. MASTER SPECIFICATION 31 2000, EARTH MOVING.
  - C. MASTER SPECIFICATION 33 1000, WATER UTILITIES.
  - D. CIVIL DRAWING ST-G30GEN-1, BOLLARD DETAIL.
  - E. MECH DRAWING ST-D2020-1, SITE/BUILDING WATER COMPONENT DIAGRAM.
3. DO NOT SEPARATE THE FIRE HYDRANT FROM THE SHUT-OFF VALVE WITH A BARRIER (FENCE, ETC).
4. FIRE HYDRANT SHALL BE LOCATED WITH A MINIMUM 5 FEET CLEAR AREA ON SIDES AND BACK, I.E. LANDSCAPING, FENCE, ETC. PUMPER CONNECTION SIDE SHALL BE FREE OF ANY OBSTRUCTIONS.
5. IF FIRE HYDRANTS ARE LOCATED WITHIN A POTENTIAL RELEASE SITE (PRS) CONSULT WITH THE LANL WATER QUALITY GROUP.
6. IF REQUIRED, TWO OR FOUR BOLLARDS WILL BE PLACED EQUALLY AROUND HYDRANT AT 2'-0" FROM HYDRANT. BOLLARDS FOR PROTECTING WATER SERVICES WILL BE 4" STEEL PIPE 3'-6" ABOVE GRADE AND 2'-6" BELOW GRADE. CONCRETE BASE WILL PROVIDE 4" OF CONCRETE ALL AROUND PIPE.

DRAWING DEVELOPED FOR ML-3/ML-4 PROJECTS. FOR ML-1/ML-2, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN INSERTED INTO A DRAWING PACKAGE).

| NO | DATE    | CLASS REV | DC | DESCRIPTION  | DWN | DSGN | CHKD | SUB | APP |
|----|---------|-----------|----|--|-----|------|------|-----|-----|
| 3  | 1-28-14 | U         |    | GENERAL REVISION   | KT  | MS   | JG   | RT  | TO  |
| 2  | 1-18-06 | U         | DY | ADDED AND REVISED NOTES FOR DESIGNER. REVISED TITLE BLOCK DATA, AND ADTS - ENGINEERING LOGO. | RP  | EH   | MS   | EH  | TO  |
| 1  | 8-23-02 | U         |    | GENERAL REVISION AND DWG. NO. WAS ST6110.  | RP  | EH   | MS   | EH  | TO  |

|   |                      |  |                       |
|---|----------------------|--|-----------------------|
| <b>ENGINEERING STANDARDS PROGRAM</b>  |                      |  |                       |
| ENGINEERING STANDARDS MANUAL  |                      |  | DRAWN<br>R.PEARSON    |
| FIRE HYDRANT DETAIL   |                      |  | DESIGN<br>E.HOTH      |
| NOTES   |                      |  | CHECKED<br>M.SMITHOUR |
| TA-XX   | BLDG XXX             |  | DATE<br>6-28-99       |
| SUBMITTED<br>DISCIPLINE POC: EDWARD HOTH  |                      | APPROVED FOR RELEASE<br>STANDARDS MANAGER: TOBIN ORUCH |                       |
| SHEET   |                      |  | 2                     |
|  PO Box 1663<br>Los Alamos, New Mexico 87545 |                      |  | 2 OF 2                |
| D.C.: UNCLASSIFIED  | REVIEWER: LARRY BAYS | BASIS: BASIS   | DATE:                 |
| PROJECT ID  | DRAWING NO           | ESR NO.:   | REV                   |
| CHAPTER 3   | ST-G3010-4           | ESR #  | 3                     |