



**City of Elko**  
**Building Department**  
1753 College Avenue  
Elko, Nevada 89801  
(775) 777-7220 fax (775) 777-7229

# Single Family Dwelling Submittal Requirement Checklist with Basement

**TWO COMPLETE SETS OF PROPERLY STAMPED & SIGNED PLANS ARE REQUIRED. PLANS THAT ARE STAMPED “PRELIMINARY”, “FOR REVIEW ONLY” AND/OR “NOT FOR CONSTRUCTION” ARE UNACCEPTABLE. PLANS DRAWN IN PENCIL, INK OR COLORED HIGHLIGHTING ARE NOT ACCEPTABLE. COMPLETE PLANS SHALL INCLUDE THE FOLLOWING:**

1. Two plat, site and grading plans required. (See Attached Residential Site Plan Requirements Sheet).
2. Two Code Analysis Sheets:
  - Location of Property/Address/APN
  - Total Sq Ft of living area
  - Total Sq Ft of nonliving area
3. Two building plans required with the following:
  - Plans shall be complete and consist of architectural, structural, electrical, plumbing, and mechanical drawings with supportive data.
  - A Nevada State Licensed Architect or Engineer must draw plans. The architect and/or engineer are responsible for the design and shall date, stamp and sign each sheet submitted per NRS.
  - A Nevada State Licensed Contractor or Owner/Builder when used for his own work may also draw plans. Contractor or Owner/Builder must sign these plans. If a licensed Contractor draws the plans, the plans shall be so identified with the following information on the front sheet of each principle’s drawings on each set of plans:
    - o The Contractor Company Name
    - o State Contractors License Number
    - o State Contractor Classification (C-1, C-2b, B, B-2, etc)
    - o State License Limit
    - o Printed Name of Person who prepared drawings
    - o Original Signature of Person who prepared drawings

**In order to utilize this exemption, the Contractor will be required to title the plans without references to being prepared by a party other than the Contractor who is completing the work.**

If an Owner/Builder draws the plans, the plans shall be so identified with the following information on the front sheet of each set of plans:

- o Printed Name of Owner who prepared drawings.

- o Original Signature of Owner who prepared drawings
- o Statement “Owner/Builder” underneath Signature

**In order to utilize this exemption, the owner will be required to title the plans without references to being prepared by a party other than the owner who is completing the work.**

4. Two sets of structural plans and documents are required with the following, but are not limited to:
  - Structural calculations, specifications, soils report (when not included in the sub-division plans), and other documents if deemed necessary & requested by the City. Each set of documents shall be stamped, signed and dated by the Nevada licensed engineer who has responsible charge of these documents.
  - Foundation plans showing all footings, posts, bearing walls, slabs, basement walls, stem walls, anchor bolts and spacing, and hold-downs.
  - Foundation plans showing size depth and reinforcement of foundations.
  - Foundation plans showing post-tensioned slab foundation where required.
  - Foundation plans showing sections and details.
  - Foundation plans showing material specifications and foundation notes.
  - Crawl space ventilation details
  - The location and size of readily accessible crawl space access shall be shown on plans (if located in foundation)
5. Two sets of framing plans and details are required with the following:
  - Roof and floor framing plans showing location and spacing of trusses, joists and rafters, beams, headers, posts, trimmers, king studs, exterior and interior bearing walls, framing hardware, connections and details.
  - Lateral force resisting system including shear walls, rigid frames, cantilevered columns, drag struts, collectors, diaphragm, nailing schedule, hold-downs, framing hardware and connections.
  - Framing layouts and connection details are included when trusses are to be used. Truss design and shop drawings prepared, stamped and signed by a Nevada Licensed Engineer required, when doing 4-way inspection.
  - General structural notes, material specifications, loading and structural design criteria are to be included with plans.
6. Floor plans required with the following:
  - Name of rooms and spaces with complete dimensions.
  - Door and window sizes and schedules.
7. Exterior elevations required with the following:
  - Wall coverings shall be specified by components, thickness, and material specification.

- ❑ One-coat stucco systems require an approved applicator. Owner/Builder cannot use these systems.
- ❑ Roofing shall be specified by its type, manufacturer's name, and product name.

8. Miscellaneous Details required with the following:

- ❑ Gypsum type, size and nailing schedule
- ❑ Insulation location and R-values
- ❑ Construction features such as stairs, fireplaces, showers, sunken tubs, etc. shall be detailed on the plans.
- ❑ The location and size of readily accessible attic access scuttles shall be shown on the plans.
- ❑ Attic ventilation details and calculations must be shown.
- ❑ Crawl space ventilation details
- ❑ The location and size of readily accessible crawl space access shall be shown on plans (if located in floor)
- ❑ For room additions and remodeling of existing buildings, including mobile homes and manufactured buildings, provide plans and details of adjacent areas and connections for structural and weather resistive information.
- ❑ When basements are installed, provide a cross sectional detail showing materials used, waterproofing of exterior side and egress window wells. (Also See Attached Building Foundation Drainage Requirements for Structures with Basements and Crawl Spaces Sheet).
- ❑ Energy Code Compliance must be shown either by Prescriptive Method or RESCheck. Please contact the Building Department personnel for details.

9. Electrical plans require the following:

- ❑ Provide service size and load calculations.
- ❑ Plans showing outlets, lights, smoke detectors and other electrical equipment served.

For additions or alterations to electrical systems:

- ❑ Plan of original structure showing areas being added or altered.
- ❑ Size and location of existing and proposed electrical service and subpanels. Provide service and load calculations to include the old and new loads.
- ❑ Identify the names or uses of the new areas (bedrooms, porch, etc.).
- ❑ New outlets, switches, light fixtures, smoke detectors and special outlets. (Energy Code Compliant for Shell fixtures only)

10. Mechanical plans require the following:

For heating/cooling unit cfm (cubic feet per minute) capacity, location and working space:

- ❑ Evaporative Cooler-Number of Horse Power (HP).
- ❑ Heat Pump-Tonnage and KW strip.
- ❑ Electrical AC/Furnace-Total KW demand.
- ❑ Gas Furnace-BTU/h demand or input.
- ❑ Energy Code Compliance

Access and working space must be provided for all concealed equipment. Detail how combustion air is provided.

Size and type of ductwork with register sizes, cfm's and material used:

- ❑ Duct sizes.
- ❑ Exhaust fans size, type and location.
- ❑ Dryer vent size and location. Provide calculations if over length limitations. UMC 504.3.2.2.
- ❑ Attic mounted/roof mounted equipment to show method of support and engineering calculations if required. Access and a platform are to be detailed when a roof pitch exceeds 4:12 (UMC 910.5).
- ❑ Energy Code Compliance.

11. Plumbing plans require the following:

- ❑ Location, size and material specification of all water and DWV (drain waste vent) piping to be shown on the plumbing floor plan. Fixture types to be indicated with appropriate symbols. Individual fixtures and fixture groups may have pipe sizes indicated in a fixture schedule.
- ❑ Location and size of gas piping with BTU/h demands and pipe lengths.
- ❑ Location, type and size of water heater. Detail combustion air requirements if gas.
- ❑ Location and size of cleanouts to be shown.
- ❑ Energy Code Compliance.



**City of Elko Engineering Department**  
**1755 College Avenue**  
**Elko, NV 89801**  
**(775) 777-7210**  
**FAX (775) 777-7219**

**Section 2-6-3 Building Foundation Drainage Requirements for Structures with Basements and Crawl Spaces**

- A. **Introduction.** All residential and commercial basement foundations must be designed and constructed with a foundation drainage system and a damp-proofing system, or waterproofing system, meeting the requirements of this guide and the requirements of the Elko City Building Code (the International Residential Code, IRC, Section R405 Foundation Drainage and the Uniform Plumbing Code, Subsection 1105.5 Subsoil Drains). Foundations without basements (only crawl spaces) will normally not require foundation drains but shall meet the same grading requirements as foundations with basements.
- B. **Roof Drainage and Exterior Grading.** The ground surface shall be graded away from all basement foundations. A minimum slope of 1-inch vertical to 12-inches horizontal (8.33% slope) shall be maintained for a distance of at least 8-feet away from all basement foundation walls. This distance may be less when setback distances from foundation walls to property lines are less than 8-feet. Runoff from roof drains shall also be directed away from the foundation wall in a fashion that prohibits ponding of water next to the foundation.
- C. **Foundation Drain System.** A suitably designed foundation drain system shall be installed around all basement foundations. The system shall meet the minimum requirements of the Elko City Building Code. The foundation drainage system shall be composed of either polyvinyl chloride (PVC), corrugated polyethylene, or high-density polyethylene (HDPE) perforated drain pipe encased within a clean gravel drainage layer. The gravel drain aggregate (gravel drainage layer) shall be encased or wrapped with a non-woven filter fabric to prevent clogging of the aggregate material and the clogging of the drain pipe perforations. The filter fabric shall be a 4.0 oz./square-yard needle-punched, non-woven geotextile fabric, made of 100% polypropylene filaments and meeting the specifications of fabric designation US 115NW as produced by US Fabrics Inc. The drain pipe shall be placed at least 6-inches below the basement floor elevation. The foundation drainage system shall be placed around the complete perimeter of the basement foundation. See Figure No. 1 for details. The drain system shall not be connected to the City sanitary sewer system. The drain system may daylight at the ground surface, where lot grading permits, or may be connected to an underground storm drain. Mechanical pumping devices may be required on flat lots. Crawl space construction may require foundation drains where groundwater or perched groundwater is experienced near the ground surface.

- D. **Basement Floor Construction.** A minimum of 4-inches of compacted clean gravel base material shall be placed below all basement floors. A 4 oz./square-yard non-woven geotextile filter fabric is recommended, but not required, in order to provide separation of native silt and clay soil from the clean gravel base. The clean gravel base and optional filter fabric shall be installed to provide a capillary water break between the existing soils and the bottom of the concrete floor. Where it is anticipated that shallow groundwater or percolating water may rise up through the concrete floor because of capillary forces in the underlying soil, then an interior drain pipe and sump shall be provided in order to collect the drainage water. The floor drain system may be connected directly to the foundation drain system. See attached Figures No. 1, No. 3A, No. 3B, No. 4 and No. 5 for construction/installation details. Basement concrete floors shall be a minimum of 4-inches thick. A sump and pump may be required to pump foundation drainage water to the ground surface where basements and/or crawl spaces are constructed on flat lots. Sumps and pumps must also comply with requirements described in the current edition of the Uniform Plumbing Code, Chapter 11.
- E. **Soils and Hydrogeological Studies:** In areas of the City where it is believed that a foundation drain is not needed for a specific project then the building contractor must conduct a geotechnical and/or hydrogeological study, stamped and certified by a qualified engineer, to address the specific foundation drainage improvements that will be needed for the specific project area. The certifying engineer and the building contractor shall be solely responsible for any defects that the study may overlook with respect to foundation drainage control.
- F. **Waterproofing and Dampproofing of Foundation Walls.** The outside surface of all basement foundation walls shall be either “dampproofed” or “waterproofed” in accordance with the IRC, Section R406 – Foundation Waterproofing and Dampproofing, and/or IBC, Section 1807 – Dampproofing and Waterproofing. “Dampproofing” and/or “waterproofing” shall extend from the bottom of the wall to a point above the outside finish grade elevation.
- G. **High Groundwater.** Basements shall be prohibited where the high seasonal groundwater level of the regional aquifer is less than 3-feet below the proposed basement floor elevation of any structure unless that structure is flood-proofed in accordance with the provisions of Chapter 3-8 FLOOD DAMAGE PREVENTION of the Elko City Code. This requirement is intended for basements and foundations that are subject to high hydrostatic pressures caused by groundwater acting on the building foundation and floor. Basements and crawl space construction located within Special Flood Hazard Areas shall be subject to this requirement.
- H. **Crawl Space Foundations.** Engineers and contractors must provide adequate drainage and ventilation of crawl spaces to prohibit the seeping and ponding of infiltrating water in any crawl space. The architect, engineer, and/or building contractor must undertake studies to determine if standing water (from outdoor seepage) can be reasonably expected in building crawl spaces. Foundation drains will not be required for foundations without basements **unless it is determined that seepage can be expected to enter the building crawl space** then foundation drains shall be constructed.

- l. **Building Electrical and Mechanical Equipment Rooms.** Building electrical and mechanical equipment must not be placed in crawl spaces beneath residential and light commercial buildings and shall not be placed in other locations where excessive moisture can be expected. If mechanical and electrical equipment must be placed in locations such as crawl spaces or basements where shallow groundwater or surface water can enter the mechanical space and damage the equipment, then a reliable drainage system must be installed in order to maintain dry conditions. All below grade mechanical/electrical equipment areas as well as all below grade living areas must be provided with foundation drainage systems.

Contact the City Engineering Department with any questions that you may have. I have attached proposed standard plans/details for foundation drain systems.

Drawings and Figures are attached.

FSK/fsk

**CITY OF ELKO  
RESIDENTIAL SITE PLAN REQUIREMENTS**

**The City of Elko Engineering Department requires two (2) site plans on 8 ½x11 paper or larger for any single-family residence. The following information is required for review:**

**GENERAL**

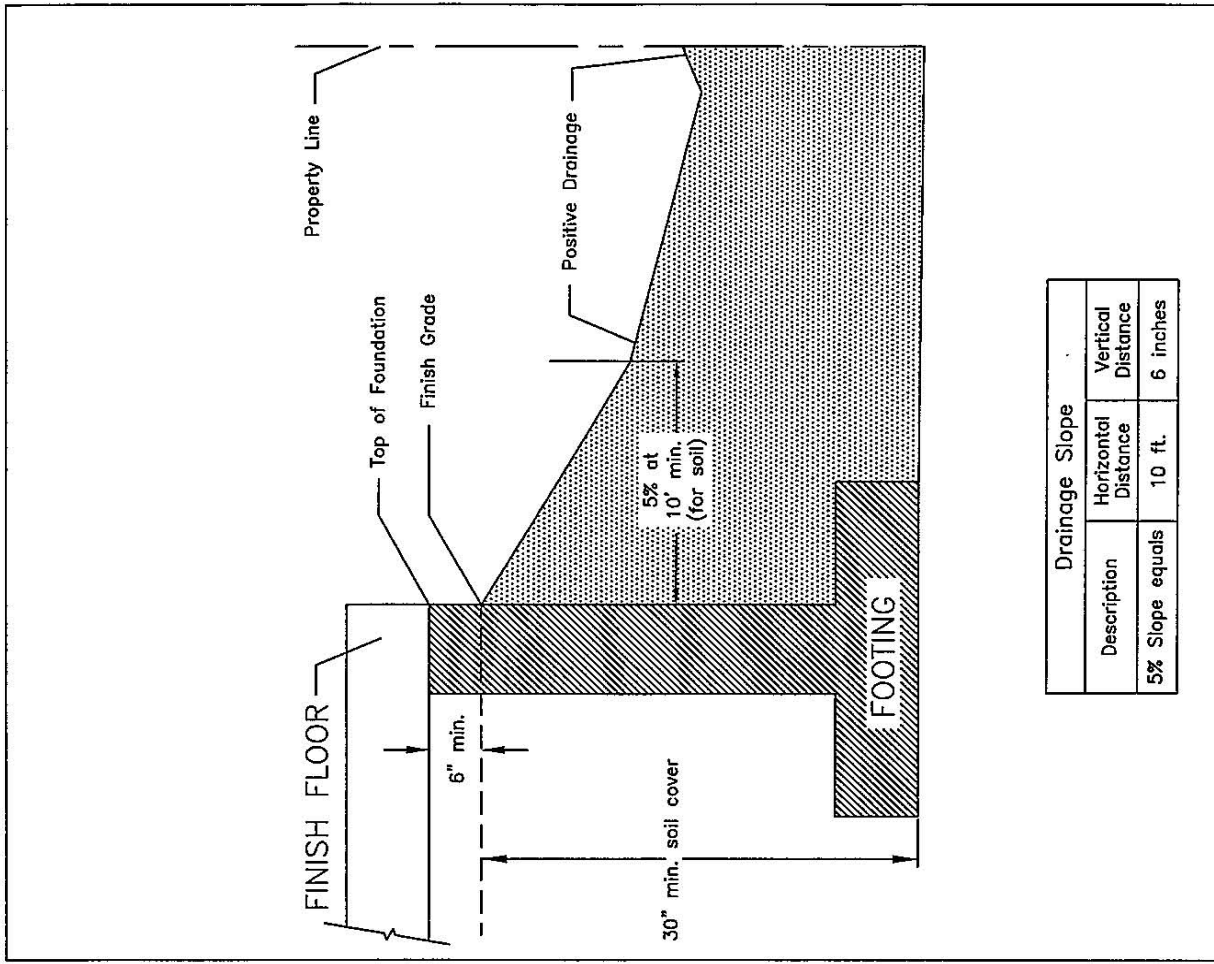
- Recorded lot number and subdivision name.
- Street address and APN (Parcel Number)
- North arrow and scale of drawing.
- FEMA rate zone with base flood elevation or a note indicating the project is not within a special flood hazard area (SFHA). (Engineering Department will verify.) **If construction is within a SFHA**, then the following documentation shall be provided prior to any building permit being granted:
  1. A "Floodplain Development Permit" application shall be filled out and submitted to the Engineering Dept. for review and approval, and
  2. Submit to the Engineering Dept. any additional information the "Floodplain Development Permit" application requires, and
  3. An Elevation Certificate shall be completed & must be certified by a state licensed Architect, Engineer, or Land Surveyor and submitted to the Engineering Dept. for review.
- Property boundary dimensions.
- Street right-of-way line. (Note: back of sidewalk is not the right-of-way line.)
- Utility and drainage easements.
- Curb, gutter, sidewalk and driveway location.
- Off-street parking (2 spaces within setbacks per residence).
- Setback lines. (Check with Planning Department for current zoning and setback information).
- Dimensions to building from property lines.
- Overall dimensions of building.

**GRADING AND DRAINAGE-PER APPROVED SUBDIVISION PLANS**

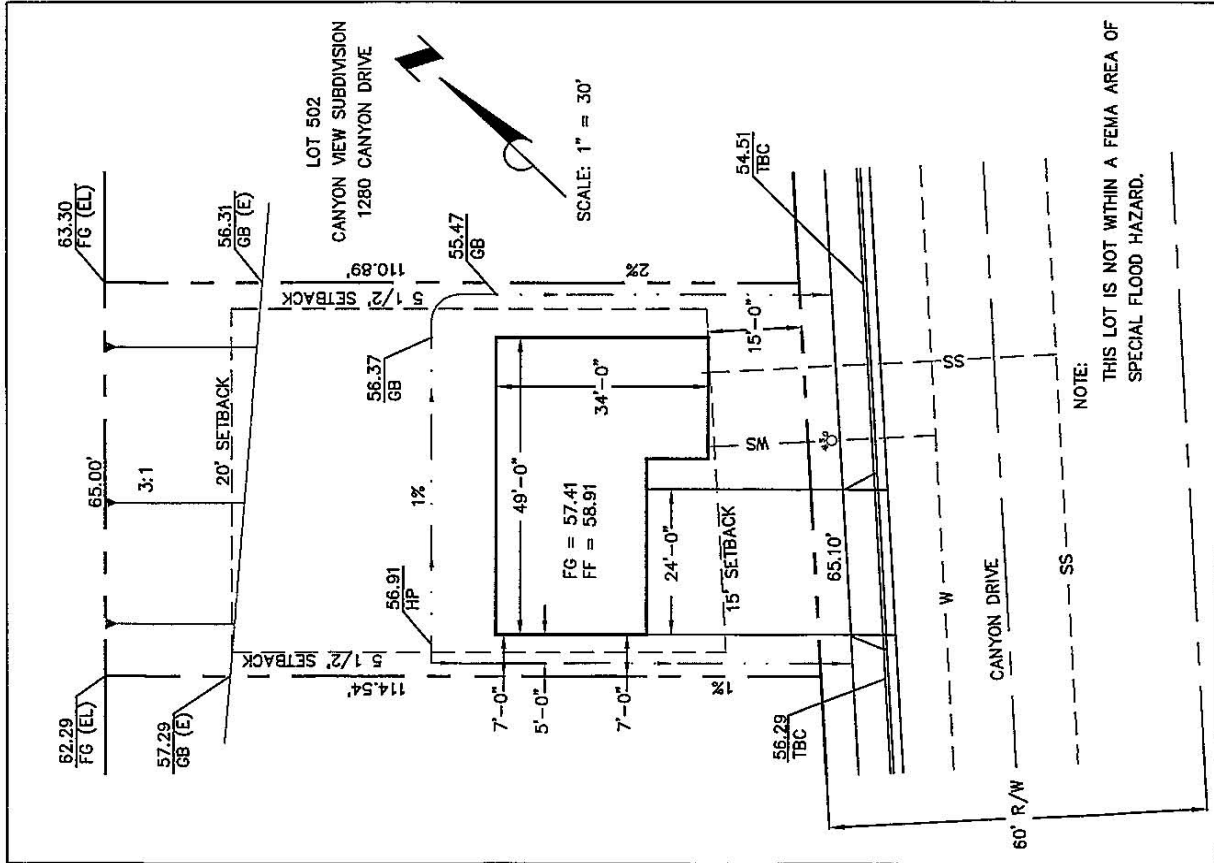
- Finish floor or top of footing elevation for all ground floor levels.
- Finish grade elevation. Must be at least 6" below top of footing. Use a single elevation if level or spot elevations if grade varies around the building.
- Elevation of existing property corners, curb or sidewalk, and grade breaks along lot lines. In new subdivisions use grade elevations as shown on an approved subdivision grading plan.
- Toe and top of slope locations with setbacks per final approved grading plan.
- Flow line elevations with distance from structures (a minimum of 5% for 10' away from building is required for soil surfaces, 2% for concrete & asphalt).
- Flow line grades (a minimum of 1 % is required for soil, ½% for concrete).
- Other elevations and grade breaks sufficient to establish finish grade conditions.
- Storm Water Pollution Prevention Plan-Requirements dependent on project (lot) size (See Multi-Family, Commercial and Industrial Submittal Requirements Checklist).

**UTILITIES**

- Water and sewer main line locations.
- Water service and meter box location (1-foot in back of sidewalk).
- Sewer service location.
- Septic Tank Location & Size (If Applicable)
- State Health Approval Certificate fore Septic Tank (If Applicable)



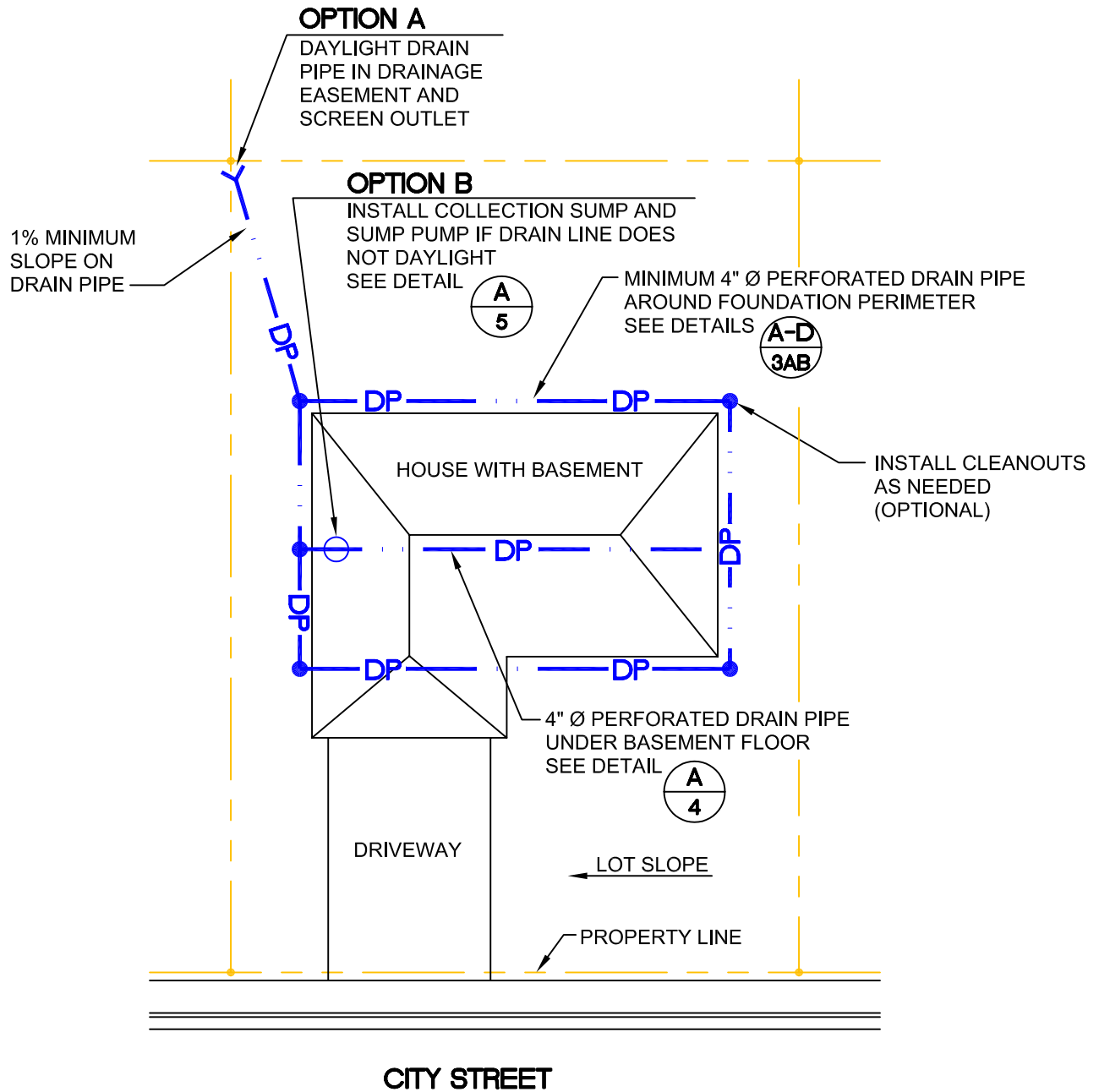
Drainage Slope		
Description	Horizontal Distance	Vertical Distance
5% Slope equals	10 ft.	6 inches



CITY OF ELKO  
ENGINEERING DEPARTMENT  
Typical Site Plan

SCALE: 1" = 20'  
(Typical)

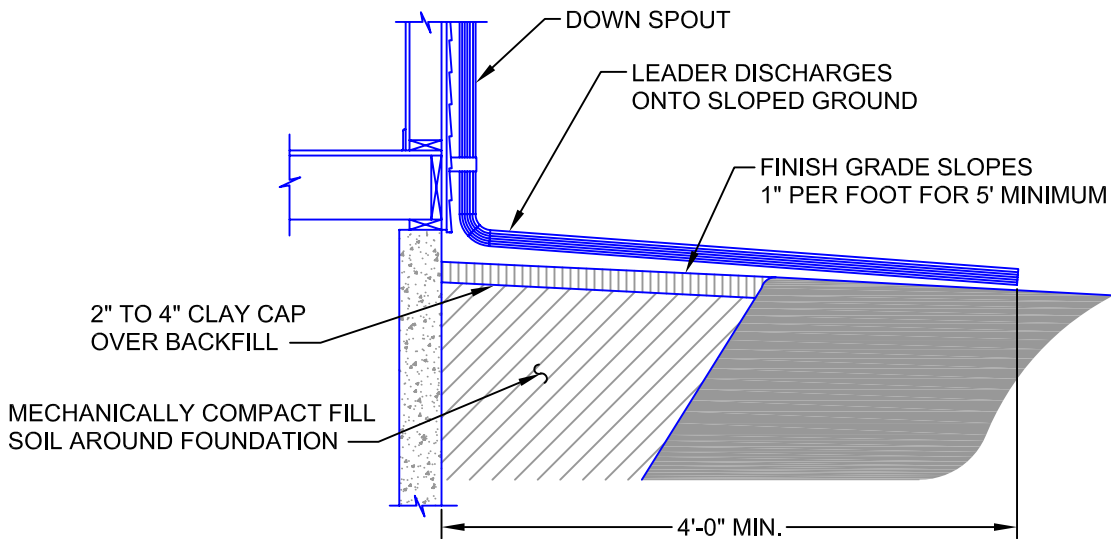
NOTE: These Drawings  
are for Reference Only.



**NOTES:**

1. INSTALL AND BACKFILL 4" Ø PERFORATED DRAIN PIPE, AS SPECIFIED BY THE CITY OF ELKO, AROUND HOUSE FOUNDATION FOOTING.
2. DAYLIGHT FOUNDATION DRAINAGE THROUGH HIGH DENSITY POLYETHYLENE GRAVITY DRAIN PIPE WITH 1% MINIMUM SLOPE. PROVIDE HDPE GRAVITY DRAIN PIPE WITH WATER TIGHT JOINTS.
3. FOUNDATION DRAIN PIPE SHALL BE PERFORATED POLYETHYLENE OR HIGH DENSITY POLYETHYLENE PLASTIC PIPE SPECIFICALLY DESIGNED FOR FOUNDATION DRAINAGE APPLICATIONS WITH SOIL TIGHT JOINTS AND MEETING THE MINIMUM REQUIREMENTS OF AASHTO STANDARDS M-252 AND M-294.

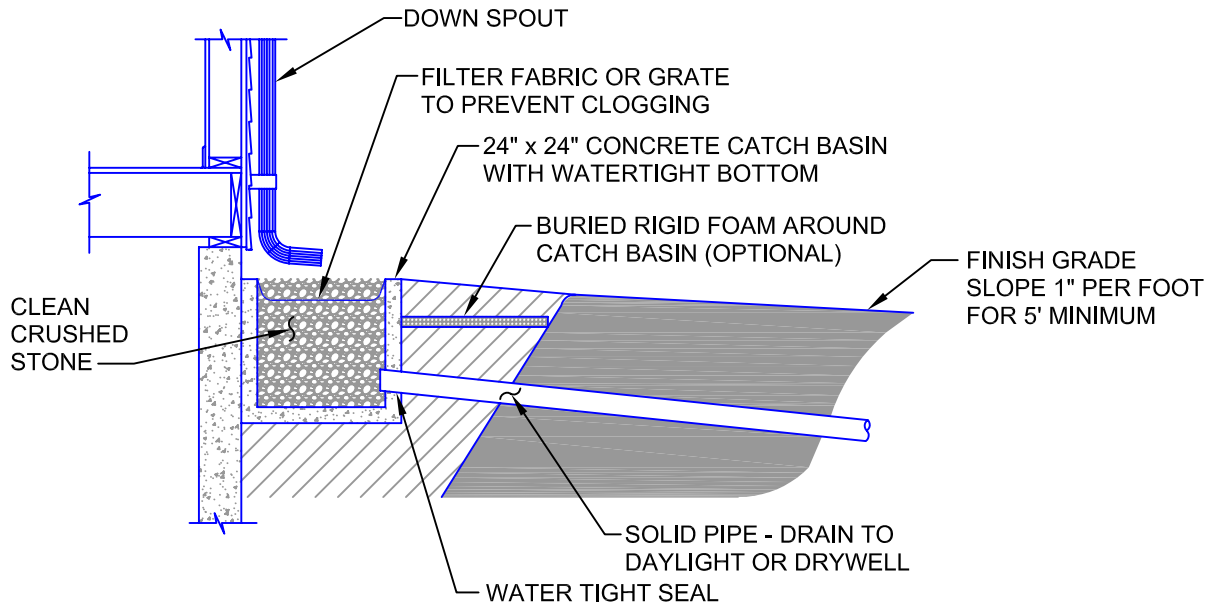
**FIGURE 1**



NOTE: SLOPED DOWN SPOUT LEADERS SHOULD DISCHARGE AT LEAST 5- FEET AWAY FROM THE FOUNDATION WALL.

**DOWN SPOUT WITH SLOPED LEADER**

**A**  
**2**

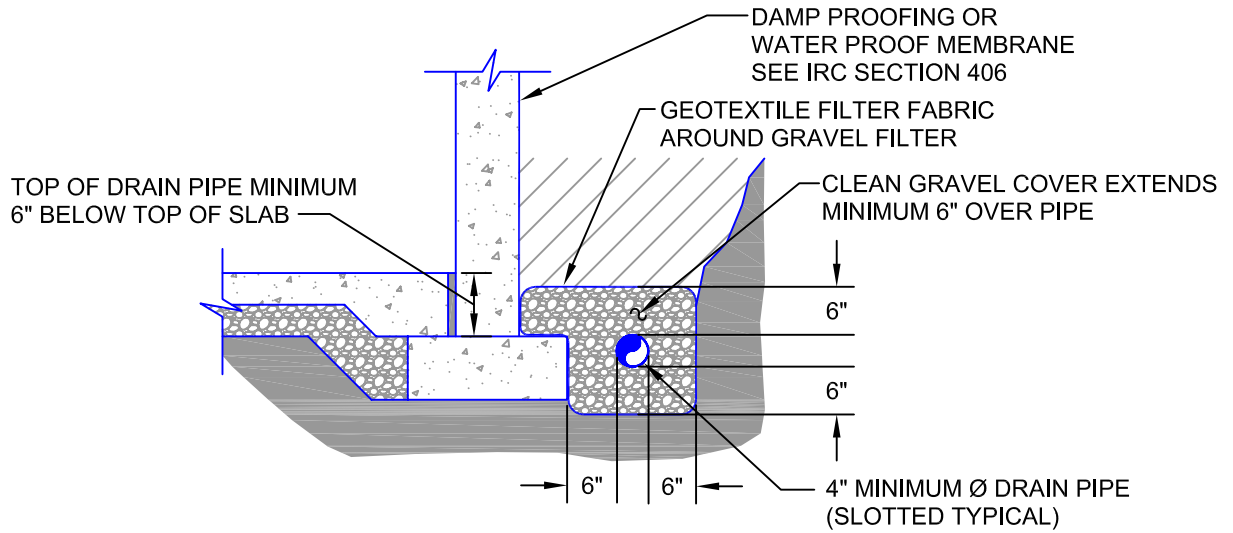


NOTE: USE SOLID DRAIN PIPE TO CARRY RUNOFF FROM A CONCRETE CATCH BASIN TO DAYLIGHT OR A DRYWELL.

**DOWN SPOUT WITH CATCH BASIN**

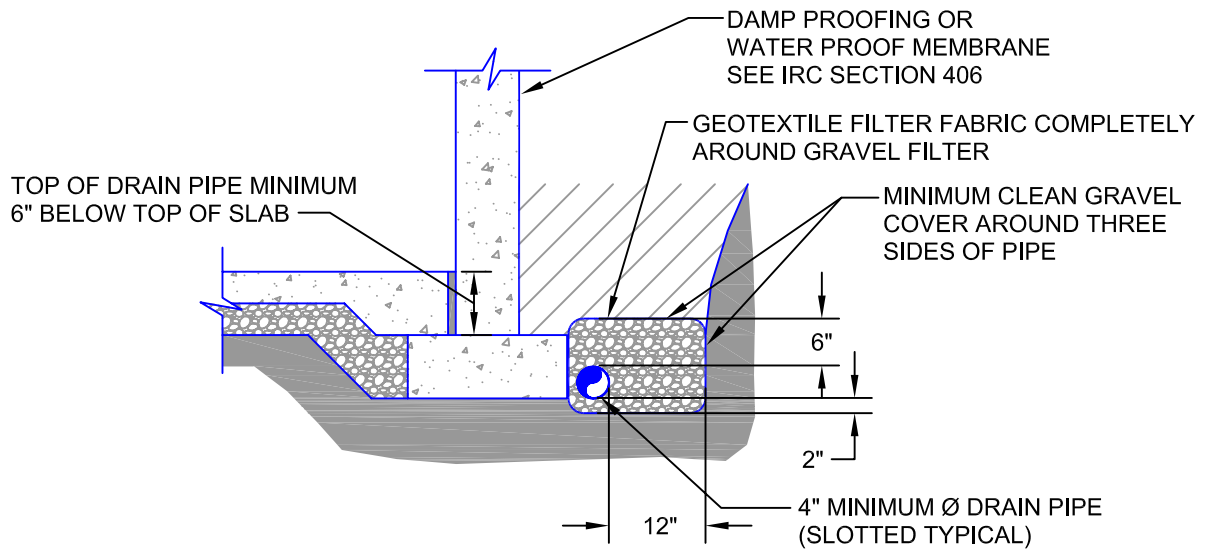
**B**  
**2**

**FIGURE 2**



**PIPE EVEN WITH TOP OF FOOTING**

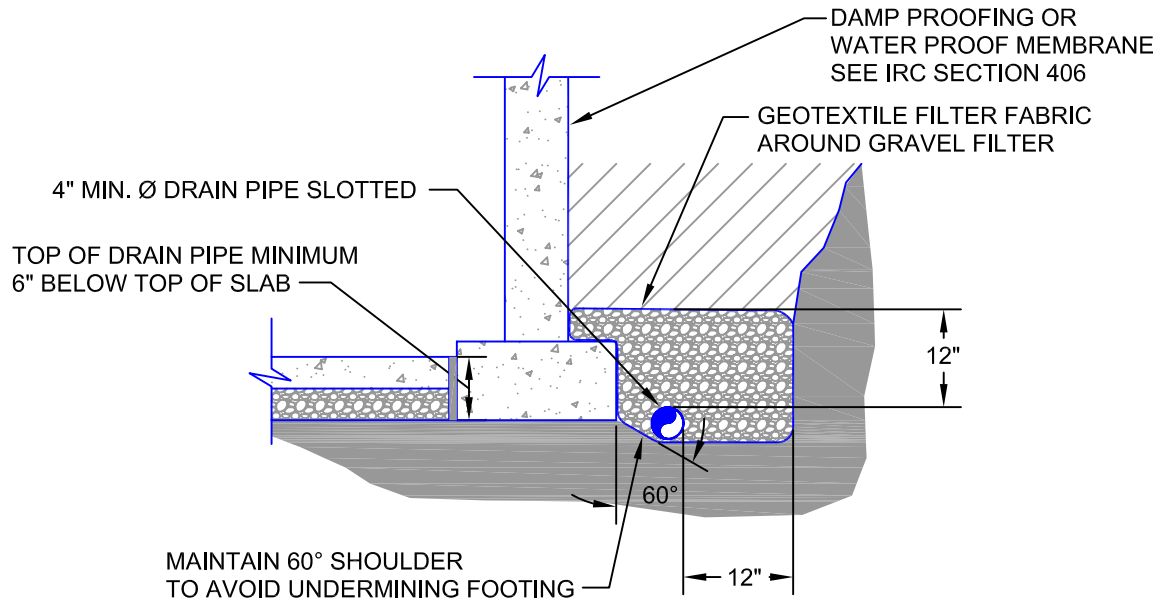
**A**  
**3A**



**PIPE AT BOTTOM OF FOOTING**

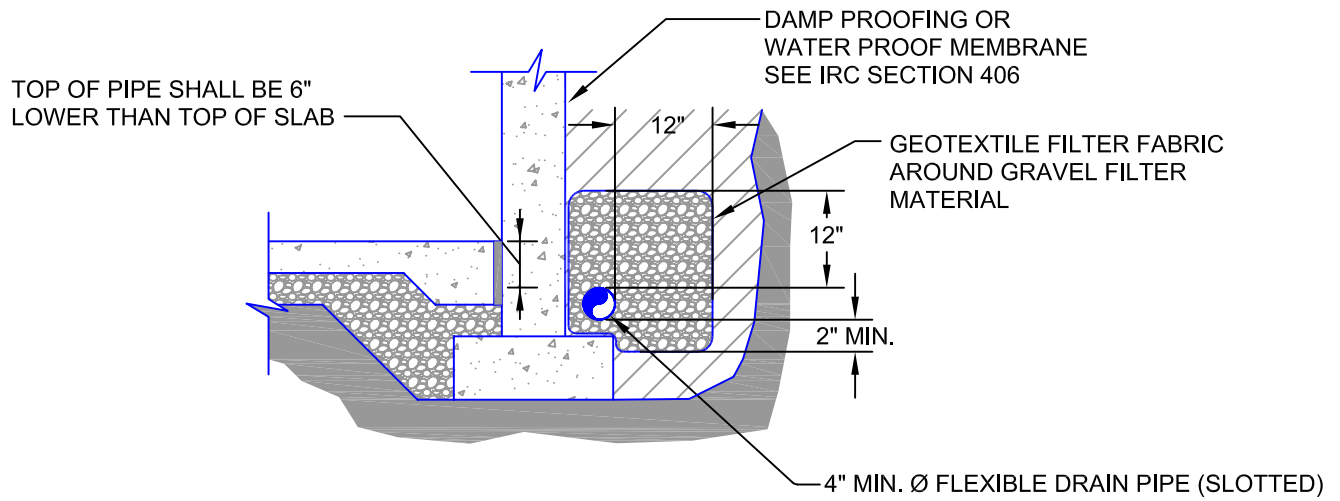
**B**  
**3A**

**FIGURE 3A**



**PIPE BELOW FOOTING**

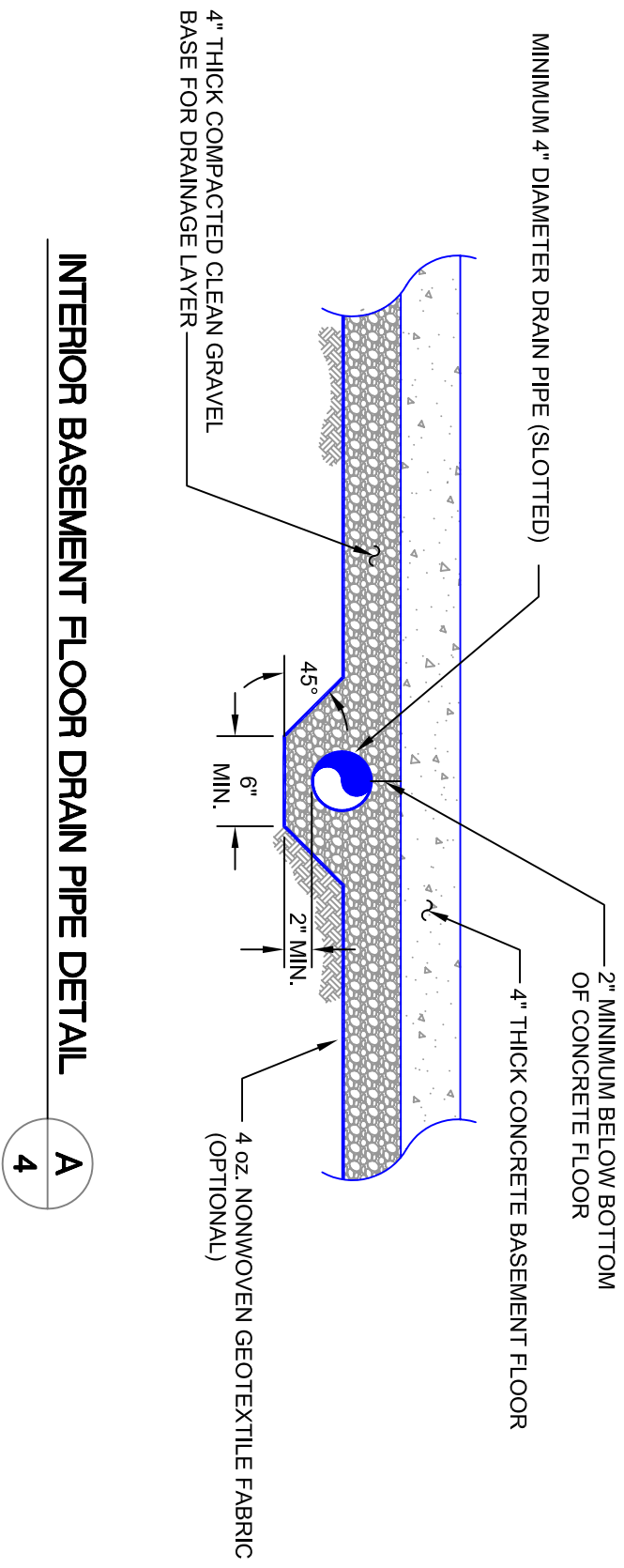
**C**  
**3B**



**PIPE RESTING ON FOOTING**

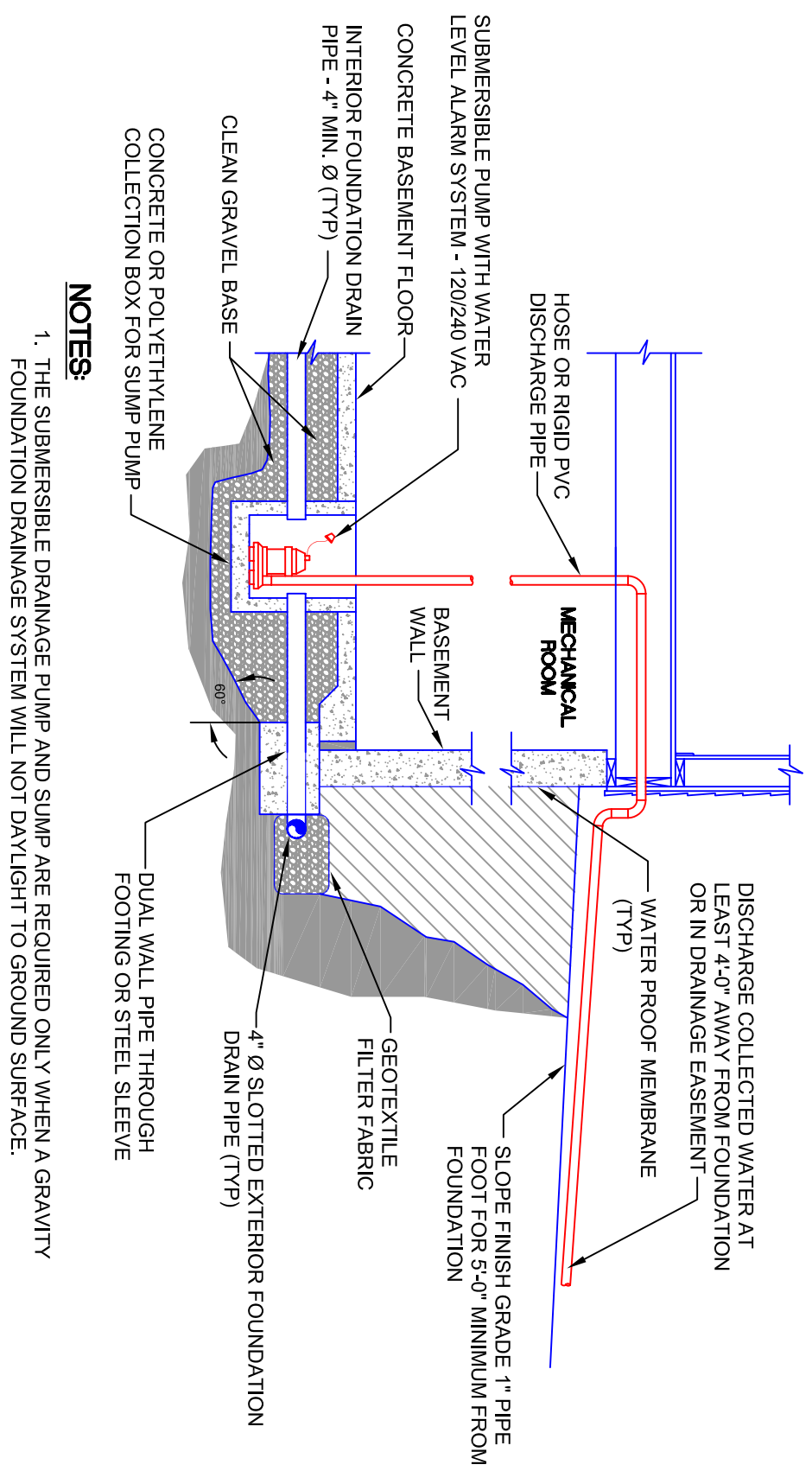
**D**  
**3B**

**FIGURE 3B**



CITY OF ELKO  
ELKO BUILDING DEPARTMENT  
DRAIN PIPE UNDER BASEMENT FLOOR

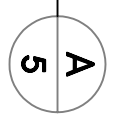
**FIGURE 4**  
TYPICAL DETAIL  
SCALE: 1" = 1'



**NOTES:**

1. THE SUBMERSIBLE DRAINAGE PUMP AND SUMP ARE REQUIRED ONLY WHEN A GRAVITY FOUNDATION DRAINAGE SYSTEM WILL NOT DAYLIGHT TO GROUND SURFACE.

**OPTIONAL DRAINAGE SUMP AND PUMP DETAIL**



**FIGURE 5**  
**TYPICAL DETAIL**  
**SCALE: 1" = 3'**