Appendix F—Selection of protective systems.
The following figures are a graphic summary of the requirements contained in Part N for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance with WAC 296-155-657 (2) and (3).

**FIGURE N-27 - PRELIMINARY DECISIONS**

1. Is the excavation more than 4 feet in depth?
2. Is there potential for cave-in?
3. Is the excavation entirely in stable rock?
4. Excavation must be made with vertical sides.
5. Excavation must be sloped, shored or shielded.
6. Sloping selected
7. Go to Figure N-28
8. Shoring or shielding selected
9. Go to Figure N-29
FIGURE N-28 - SLOPING OPTIONS

Sloping selected as the methods of protection

Will soil classification be made in accordance with WAC 296-155-657(2)?

YES

Excavation must comply with one of the following three options:

OPTION 1:
WAC 296-155-657(2)(b) which requires Appendices A and B to be followed.

OPTION 2:
WAC 296-155-657(2)(c) which requires other tabulated data (see definition) to be followed.

OPTION 3:
WAC 296-155-657(2)(d) which requires the excavation to be designed by a registered professional engineer.

NO

Excavation must comply with WAC 296-155-657(2)(a) which requires a slope of 1-1/2H: 1V (34°)
FIGURE N-29 - SHORING AND SHIELDING OPTIONS

| OPTION 1: |
| WAC 296-155-657(3)(a) which requires Appendices A and C to be followed (e.g., timber shoring) |

| OPTION 2: |
| WAC 296-155-657(3)(b) which requires manufacturers data to be followed (e.g., hydraulic shoring, trench jacks, air shores, shields) |

| OPTION 3: |
| WAC 296-155-657(3)(c) which requires tabulated data (see definition) to be followed (e.g., any system as per the tabulated data). |

| OPTION 4: |
| WAC 296-155-657(3)(d) which requires the excavation to be designed by a registered professional engineer (e.g., any designed system). |

[Statutory Authority: RCW 49.17.010, [49.17].040, [49.17].050. WSR 02-12-098, § 296-155-66411, filed 6/5/02, effective 8/1/02. Statutory Authority: Chapter 49.17 RCW and RCW 49.17.040, [49.17].050 and [49.17].060. WSR 92-22-067 (Order 92-06), § 296-155-66411, filed 10/30/92, effective 12/8/92.]