

Chelan UGA Development Standards

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5A. GENERAL

The overall goal of this chapter is to encourage the uniform development of an integrated, fully accessible public transportation system that will facilitate present and future travel demand with minimal environmental impact to the community as a whole. All design standards shall follow accepted engineering practices with an emphasis on safety.

The street layout of every development shall be in conformance with these standards and with the City's adopted comprehensive plan, including the Transportation Element thereof, and shall provide for the continuation of major streets which serve property contiguous to the development. Street networks shall provide ready access for fire and other emergency vehicles and the Council, upon recommendation of the planning commission, may require additional access points if such are found to be necessary to protect the public safety. Street layout in mountainous areas may allow alignment cross section shifts as approved by the City engineer to accommodate topographical conditions.

5B PUBLIC WORKS CONSIDERATIONS**5B.010 Standard Specifications**

Design detail, workmanship and materials shall be in accordance with the current edition of the "Standard Specifications for Road, Bridge and Municipal Construction:", the "APWA Amendments to Division One", and the "Standard Plans for Road, Bridge and Municipal Construction", all written and promulgated by the Washington State Chapter of the American Public Works Association and the Washington State Department of Transportation, except where these standards provide otherwise.

All applicable rules of Washington State shall be adhered to with respect to safety, construction methods, and other state requirements. This includes, but is not limited to the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC).

The following specifications shall be applicable when pertinent, when specifically cited in the standards, or when required by a higher funding authority.

1. Conditions and standards as set forth in the City of Chelan Water Comprehensive Plan, most current edition.
2. Conditions and standards as set forth in the City of Chelan Comprehensive Sanitary Sewer Plan, most current edition.
3. Rules and regulations as adopted in the City of Chelan Municipal Code.
4. Criteria set forth in the City of Chelan Traffic Circulation Enhancement Study.
5. Criteria set forth in the Local Agency Guidelines as amended and approved by Washington State Department of Transportation, most current edition.
6. Conditions and standards as set forth in the WSDOT Design Manual as amended and approved by WSDOT.

7. U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD) as amended and approved by Washington State Department of Transportation.
8. DOT Construction Manual as amended and approved by Washington State Department of Transportation.
9. Standard Specifications for Road, Bridge, and Municipal Construction as amended and approved by Washington State Department of Transportation.
10. Policy on Design of Highways and Streets by American Association of State Highway and Transportation Officials (AASHTO).
11. Trip Generation Manual by Institute of Traffic Engineers (ITE)
12. Conditions and standards as set forth by the State of Washington, Department of Labor and Industries.
13. Other specifications not listed above as may apply when required by the City of Chelan.

5B.020 Plan Checklist

The Plan Checklist is provided in Appendix E of the Development Standards.

5B.030 Plan and Profile Submittal

A plan and profile of the proposed street meeting all drafting standards of Section 8 and showing the following data shall be submitted to the City engineer for approval prior to preliminary development approval and construction:

Plan:

- Street alignment in stations of one-hundred foot intervals;
- Bearings on street centerline (construction drawings only);
- Curve data on all horizontal curves, 50-foot stations minimum;
- Right-of-way lines and width for proposed streets;
- All topography within the right-of-way limits, including all utilities;
- Label all streets and adjoining subdivisions;
- Typical roadway section of proposed street;
- Existing and proposed drainage structures indicating direction of flows; and
- Map size shall be twenty-four inches by thirty-six inches. A one and one-half inch margin shall be provided on the left edge and a one-half inch margin shall be provided on the other edges of the map. All mapping to be drawn on mylar sheets.

Profile:

- Original ground line; Control elevation on border of sheet;
- Stationing in intervals of one hundred feet;
- Grade line showing grade percents and vertical curves.

5B.040 Workmanship and Materials

Workmanship and materials shall be in accordance with Sections 1-05 and 1-06 of the current edition of the Washington State Department of Transportation Standard Specifications for Roads, Bridges, and Municipal Construction.

5B.050 Bonding and Insurance

Developers shall meet all standards as set forth in Section 13 of this manual, "Bonding and Liability Insurance".

5B.060 Latecomers

For existing platted lots, the City may enter into latecomer agreements with developers prior to installation of infrastructure to provide for the reimbursement of a pro-rata share of the cost of construction by the service users of any real estate who have not contributed to the original cost of such facilities and who subsequently connect to the system, pursuant to Chapters 12.28 and 13.36 of the Chelan Municipal Code as it now exists or as may be hereafter amended.

5B.070 Streets Vacated by Operation of Law

The City will not issue building permits to property of lots served by streets or alleys vacated by operation of law unless recorded and dedicated access is provided meeting full street standards of the City.

5C STREETS**5C.010 General Notes (Street Construction)**

- A. All workmanship and materials shall be in accordance with City of Chelan standards and the most current copy of the WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction. In cases of conflict, the most stringent standard shall apply.
- B. The contractor shall be in compliance with all safety standards and requirements as set forth by OSHA, WISHA and the Washington State Department of Labor and Industries.
- C. The contractor shall be responsible for all traffic control in accordance with the *WSDOT/APWA Standard Plans for Road, Bridge and Municipal Construction* (all applicable "K" plans) and/or the *Manual on Uniform Traffic Control Devices (MUTCD)*. Prior to disruption of any traffic, a traffic control plan shall be prepared and submitted to the City for approval. No work shall commence until all approved traffic control is in place.
- D. All approvals and permits required by the City of Chelan shall be obtained by the contractor prior to the start of construction.

E. If construction is to take place in other jurisdiction’s right-of-way (i.e., the County or the State), the contractor shall notify the jurisdiction and obtain all the required approvals and permits.

F. A pre-construction meeting shall be held with the City of Chelan Public Works Department a minimum 72 hours prior to the start of construction.

G. The contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate line at 1-800-424-5555 a minimum of two business days prior to any excavation.

H. It shall be the responsibility of the contractor to have a copy of an approved set of plans on the construction site at all times.

I. All surveying and staking shall be performed per the corresponding sections of the *City of Chelan Development Standards Manual*.

5C.020 Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is a specialized study of the impacts that development will have on the surrounding transportation system. The TIA is an integral part of the development impact review process. It is specifically concerned with the generation, distribution, and assignment of traffic from the “new development”. New development is defined as a “site action that triggers SEPA requirements. “New development” shall not include individual one or two-family residential lots within plats.

In accordance with the City of Chelan Traffic Impact Analysis Guidelines, a full or partial TIA may be required if:

1. The new development generates 20 or more new PM peak hour trips; or
2. The project requires a SEPA review; or
3. The new development will generate more than 50 peak hour trips at a time other than the PM peak hour.

The TIA Guidelines are provided in Appendix D of the Development Standards Manual.

5C.030 Minimum Street Design Standards

Functional Classification		Local/ Private	Minor Collector	Major Collector	Principal Arterial
Minimum horizontal curve radius on inside face of curb	Terrain ≤ 15%	80'	100'	150'	300'
	Mountainous > 15%	80'	80'	N/A	N/A
Maximum Grade in %	Terrain ≤ 15%	10%	10%	10%	8%
	Mountainous > 15%	12%	12%	N/A	N/A
Minimum roadway width, curb face to curb face	Terrain ≤ 15%	28'	32'	52'	46' (Note 4)
	Mountainous > 15%	28'	28'	N/A	N/A
Sidewalk Minimum Width (add 0.5' for curb) (see Note 1)	Terrain ≤ 15%	5' both sides	5' both sides	5' both sides	10' both sides (Note 5)
	Mountainous > 15%	5' one side	5' both sides	N/A	N/A
Bank Slope (h:v)	Terrain ≤ 15%	2:1	2:1	2:1	2:1
	Mountainous > 15%	2:1	2:1	N/A	N/A
Minimum Right of Way	Terrain ≤ 15%	50' (Note 2)	54'	74'	100'
	Mountainous > 15%	38' (Note 3)	43' (Note 3)	N/A	N/A
Parking Lane	Terrain ≤ 15%	1@8'	1@8'	2@8'	Note 6
	Mountainous > 15%	1@8'	1@8'	N/A	N/A
Bike Lanes	Terrain ≤ 15%	N/A	N/A	2@6'	2@6'
	Mountainous > 15%	N/A	N/A	N/A	N/A
Traffic Lanes	Terrain ≤ 15%	2@10'	2@12'	2@12'	Note 7
	Mountainous > 15%	2@10'	2@10'	N/A	N/A
Planter Strip	Terrain ≤ 15%	2@6'	2@6'	2@6'	2@6' (Note 8)
	Mountainous > 15%	N/A	N/A	N/A	N/A
Utility Easement (See Note 9)	Terrain ≤ 15%	2@6'	2@6'	2@6'	2@6'
	Mountainous > 15%	N/A	N/A	N/A	N/A
Road Surface (See Note 10)		3" asphalt, 3" top course, 4" base	3" asphalt, 3" top course, 4" base	4" asphalt, 4" top course, 6" base	4" asphalt, 4" top course, 6" base

Notes to table:

- 10' width in commercial or industrial areas as required by City Engineer.
- Private road right-of-way width may be reduced to 40' at discretion of City Engineer.
- For mountainous terrain, an additional 2 feet of right-of-way is provided behind the back of curb and/or sidewalk.
- Two 11-foot lanes, one 12-foot center lane, and two 6-foot bike lanes. Actual width will be determined by number of travel lanes based on the projected volume of traffic.
- The minimum sidewalk width will be six feet for all other areas not designated within City planning documents.
- Parking lane required in designated areas per approved planning documents.
- Actual width will be determined based on two-five travel lanes depending on projected volume of traffic using the facility. (Refer to Transportation Plan.)
- Planter strips will be required for all areas where the sidewalk width is between 5-8 feet; otherwise, street trees may be included within the 10-foot sidewalk width. The City Engineer will make the final determination.
- Utility easement strips will be located immediately adjacent to the back of sidewalk and/or street right-of-way edge. For mountainous terrain areas, non-City utilities will be located within the roadway prism at the location approved by the City Engineer. The easement strips are provided for all non-City utilities and snow removal.
- Base course depths may require a design depth by a soils engineer if determined by the City Engineer.

Additional notes:

11. Rolled curb (see City standard plan) is allowed at the discretion of the City Engineer on local and minor collector streets in excess of 32' between curbs in width, except in mountainous terrain where access or parking is not permitted.
12. The City Engineer may allow reduction in paving width to a minimum 24' and an increase in grade up to a maximum of 18% on mountainous terrain where no driveway access is provided to the street and no feasible alternative exists, providing all emergency services approve of the same.
13. Cut slopes steeper than 2:1 may be used where favorable soil conditions exist or stepped construction is used, when approved by the City Engineer. The City Engineer may also require slopes flatter than 2:1, depending on native soil conditions.
14. Right of way limits shall be per the information presented above and as depicted on the street cross-section details.
15. Street design standards specified in approved plans, including the Non-Motorized Transportation Implementation Plan, the Downtown Master Plan, and any adopted neighborhood plans, may be substituted for the standards shown in the table above at the discretion of the City Engineer.
16. Switch backs, when necessary, shall be designed with a minimum centerline radius of 55' and a minimum inside radius of 25' with pavement widening on the inside edge accordingly. The limits of additional pavement widening will be confirmed based on design vehicle turning radius requirements as depicted on approved "auto-turn" exhibits. The City Engineer may also require pavement widening on other curve sections as deemed necessary.
17. In a Planned Development District, curbside sidewalks may be replaced as a functional equivalent by a separate path or trail with equivalent surface and dimensions, with all-weather impervious surfacing on a public easement, when approved as part of the Homeowners Association ownership and responsibility in lieu of public sidewalks as normally placed adjacent to the roadway and serving the same function.
18. Additional right-of-way width may be required where a clear pattern of future development is present (such as to serve areas included in the Urban Growth Boundary).
19. Sidewalks, where necessary because of topographic constraints, may be, upon approval of the City engineer, required on only one side.
20. Any roadway surface that restricts parking shall be so posted at the expense of the developer.
21. Curb radius shall be 25' radius to face of curb on local and minor collectors and 35' on major collectors and arterials.
22. An approved traffic safety control plan is required when working in the right-of-way.
23. Dust and erosion control will be required for all construction projects.

5C.040 Street Frontage Improvements

A. All commercial and residential (including multi-family) development, subdivisions, short subdivisions and binding site plans shall install street frontage improvements at the time of construction as required by the Public Works Department. For new proposals which fall under the definition of development in Appendix A, if Site Plan Review (SPR) approval is necessary, frontage improvements shall be required. If an existing use is being altered or improved, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, or SPR approval per CMC 19.01, and
2. The site has more than 100 feet of total frontage, and
3. The project meets the threshold requirements as determined by all applicable CMCs.

Per the Site Plan Review approval, such improvements include but are not limited to: curb and gutter; sidewalk; street storm drainage; street lighting system; holiday lighting features; traffic signal modification, utility conduit, traffic control devices, signal interconnect, relocation or installation; public transit amenities, street signing; utility relocation; planter strips; landscaping and irrigation; and street widening all per these Standards. Plans shall be prepared and signed by a licensed engineer registered in the State of Washington.

B. All frontage improvements shall be made across full frontage of property to include full street section with sidewalk on development side of street only. Off project site frontage improvements may be required if determined by the City for public safety.

C. Utility relocations shall follow the requirements as outlined in Section 10, Utility Designs, in these Standards.

D. If contiguous parcels are under the same ownership, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, or SPR approval, and
2. The contiguous sites have more than 100 lineal feet of combined frontage, and,
3. The project meets the threshold requirements as determined by all applicable CMCs.

E. Exceptions. When the City Engineer deems the above such improvements cannot be accomplished at the time of building construction, frontage improvements may be deferred, modified or waived. These exceptions shall be made a condition of Site Plan Review approval or as a condition of subdivision, short subdivision, binding site plan, and conditional use permit approval.

Improvements may be deferred by signing a Waiver of Protest for a Local Improvement District (L.I.D.), by signing a Deferral of Frontage Improvements Agreement, or by paying a fee in lieu of constructing the improvements. If a fee-in-lieu is paid, it shall be based on the engineer's estimate and the City will be responsible for constructing said facilities at a later date.

If the frontage improvements are deferred, all necessary right-of-way must be dedicated as a condition of approval. If additional right-of-way is required and the side slopes exceed 7:1 slope, then a 10-foot slope easement shall also be required to facilitate construction of future improvements. All methods of deferral, and components thereof, must be in place, signed, collected, and/or processed prior to the project scheduling a preconstruction meeting.

5C.050 Right-of-Way

Right-of-way shall be dedicated for a subdivision, short subdivision, binding site plan, for a project that triggers Site Plan Review, or for a conditional use permit. The requirement to dedicate right-of-way shall be determined by Public Works. Although a right-of-way dedication may be required, frontage improvements may be deferred per Chapter 5C.040 of the Development Standards Manual.

Right-of-way width is determined by the functional classification of a street. Refer to Table 5C.030 Minimum Street Design Standards.

Right-of-way requirements may be increased if additional lanes, turn pockets, intersection treatments, transit lanes, bus loading zones, bus shelters, operational speed, bike lanes, utilities, schools or future planned improvements are required as determined by the City Engineer.

The right-of-way boundaries at intersections shall be sufficient to contain all portions of the sidewalk, curb ramps, all signal and lighting appurtenances, and any other appurtenance associated with a public utility.

Right-of-way shall be conveyed to the City on a recorded subdivision or by a right-of-way dedication deed. If the dedication is by deed, the deed shall be submitted and approved upon completion of the street improvement that reflects the "as-built" condition of the roadway. For all developments requiring a subdivision of property, the right-of-way shall be a condition of approval and conveyed through the final plat process.

When right-of-way is conveyed to the City by plat or by dedication deed, the right-of-way centerline or other appropriate control line shall be monumented by a Washington licensed Professional Land Surveyor. A monumentation plan shall be submitted to the Public Works Department for approval prior to placement of the monument positions.

5C.060 Existing Unimproved Street Requirements

Residential

A. The following minimum standards shall apply to the development of single family residential dwelling units on an unimproved right-of-way (existing plats), and private roads:

1. Minimum surfacing of all local private access streets shall conform to design standards in Table 5C.030.
2. An improved turn-around shall be provided consistent with the current edition of these standards if the lot to be developed is located at the end of any road that is over 150 feet in length.
3. All utilities which have not already been installed to serve the site shall be constructed to full City standards as set forth herein and installed

underground. The list of affected utilities shall include but not be limited to water, sewer, storm drainage, electrical and communications.

4. Existing subgrade soils may require additional compacted depths as directed by the City Engineer.

B. All developments will require improvement of the road, sidewalks, curbs, gutters, and utilities in full compliance with these development standards, which shall include completion of conditions in A-3 above. However, street improvements for singular lot development that is non-contiguous to improved streets in existing plats, the existing R/W width, AC width and sidewalk status shall be extended to match the nearest impervious surfaced street. If the developer does not or can not bear the cost of connectivity and if the latecomers agreement does not apply, Council shall form an LID if improvements are required as a health and safety issue. Otherwise, development will not be allowed. The grades shall be established by the developer's engineer. The AC matching width shall be a minimum of 20 feet and must meet access standards as per Section 902 of the Uniform Fire Code as it now exists or as may be hereafter amended. The cross section of the said street shall meet specifications of these standards. The intent of the exception for singular lot development herein is to allow a private party to build and access a single family residence without the financial burden of completely developing the facilities to all the lots. Should the private party acquire an interest in the intermediate lots, he will be considered as a developer and the above exception shall be disallowed.

C. Properties installing improvements as required in Section A above shall receive credit for the current value of such improvements, to the extent that the improvements reduce the cost of a LID, against the cost of any future LID assessment for street improvements for a period of up to ten years after the date of installation of such improvements, as demonstrated by their acceptance by the City of Chelan.

Commercial/Industrial

All new commercial development, including multifamily dwelling units, and conditional uses for business other than a home occupation, shall make the following minimum street improvements as a condition of any development permit issuance on any right-of-way which is not fully improved to current City standards:

A. Improve the frontage of the property along the street right-of-way with curbs, gutters, sidewalks, planter strips, storm drainage facilities and paving between the edge of gutter and existing asphalt.

B. Improve the alley serving the property by complying with "Alleys" standards contained herein.

C. Subject to the limitations set forth in RCW 35.43.182 as it now exists or as may be hereafter amended, when the City determines that improvements should be delayed, property owners shall sign an agreement to support and not oppose

formation of a local improvement district for completion of the road and all utilities to City standards.

D. Properties installing improvements as required in Sections A and B above shall receive credit for the current value of such improvements, to the extent that the improvements reduce the cost of a LID, against the cost of their LID assessment for a period of up to ten years after the date of installation of such improvements, as demonstrated by their acceptance by the City of Chelan.

5C.070 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of streets shall be as directed by the City Engineer or as follows:

- A. Stake centerline every 50 foot in tangent sections and 25 feet in curved sections plus grade breaks, PVCs, PVTs, high points and low points, with cut and/or fill to subgrade.
- B. Stake top of ballast and top of crushed surfacing at centerline and edge of pavement at the above-described intervals.
- C. Stake top back of curb at a minimum 3 foot offset at the above-described intervals with cut or fill to finished grade

5C.080 Testing

Testing shall be required at the developer's or contractor's expense. The testing shall be ordered by the City construction inspector from a testing lab approved by the City. Testing shall be done on all materials and construction as specified in the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* and with frequency as specified in Sampling and Testing Frequency Guide located in section 9-5.7 of the *WSDOT Construction Manual*.

In addition, the City shall be notified before each phase that street construction commences (i.e., staking, grading, subgrade, ballast, base, top course, and surfacing).

5C.090 Access Management

Access Management is a tool to address traffic congestion, crashes, and loss of street capacity. The intent of Access Management is to provide access for land

development while preserving the flow of traffic in terms of safety, capacity and speed of travel. Studies show the uncontrolled proliferation of driveways and intersections along a given section of roadway reduces the capacity, increases the number of severity of crashes, and inhibits bicycle and pedestrian usage. In addition, poorly designed entrances and exits cause congestion and create a negative image for a commercial district.

A. Connection to State Highways and Work Within State Right-of-Way

Where City streets connect to state highways, design standards from the most recent edition of the Washington State Department of Transportation (WSDOT) Standards for intersection design shall apply. The developer is responsible to obtain review and approval from WSDOT for work within State Right-of-Way

B. Functional Classifications and Connectivity

Roadway hierarchy based on functional classification provides a network of streets based on the service they provide. Roadway layout shall be based primarily on the safety, efficiency of traffic flow, and functional use of the roadway. Roadways are divided into arterials, major and minor collectors, local/private access streets and alleys.

Roadways of all classifications shall be planned to provide for connectivity of existing and proposed streets in relation to adjoining parcels and possible future connections as approved by Public Works. New development roadway systems should be designed so as to minimize the distance pedestrians travel to bus stops.

The classifications of all streets shall be established by the Public Works Department. Arterials and collectors are identified in the most current adopted version of the Transportation Element. Street changes in classifications or classifications applied to new streets shall be shown to meet the following criteria.

1. **Local/Private Access Street:** A short street, cul-de-sac, court or a street with branching places or lanes. A Local Access Street is a minor residential street, and usually there is not through traffic between two streets of a higher classification. ADT (Average Daily Trips) less than or equal to 1,000.

Local access streets shall interconnect with each other and with minor collectors and have a minimum level of access control. Alleys in residential neighborhoods are encouraged. Traffic calming techniques shall be designed into all residential subdivisions. The pedestrian network shall be paramount in the residential roadway network. Local residential streets serve as land access from residences and generally connect with minor collectors. Safety is always the major consideration when determining intersection locations and connectivity.

2. **Minor Collector:** The typical residential street, the minor collector is most commonly recognized as the lesser through street of a residential grid. While vehicular traffic could often travel through on a minor collector, intersections are either controlled or encumbered with stop signs, thus encouraging vehicles to use a major collector for through traffic. ADT greater than 1,000 and less than 2,000.
3. **Major Collector:** The Major Collector is the major street in the urban system and correspondingly has the highest average daily traffic (ADT). The Major Collector generally receives many Minor Collector or Residential streets and/or is the major route to significant activity centers. These streets should not generally be encumbered with stop signs. ADT= 2,000+.

Collectors generally connect commercial, industrial and residential projects to other collectors and arterials and have a moderate level of access control.

4. **Arterial:** The Arterial will generally be a state road or other major facility that moves urban traffic along to other urban areas or higher class state or federal highways. The number of travel lanes and facilities will be determined by the carrying capacity to accommodate projected traffic levels. Arterials are intended for the efficient movement of people and goods and have the highest level of access control. They have limited access and accommodate controlled intersections. The level of service standard for the state-owned facilities will be established by WSDOT and the City will set the LOS standard for all other designated arterials.

Unless directed otherwise by the City Engineer, centerline striping will be performed for Arterial and Major Collector Streets only. (See street classification map)

All new developments shall provide for the continuation of streets that will potentially serve property contiguous to the new development. Extending the improved street up to the common property line will fulfill this requirement. Each street with the potential for extension into contiguous properties shall be sized based on the estimated number of Average Daily Trips (ADTs) which will be generated by all properties within the Urban Growth Area (UGA) served by this road. The number of ADTs shall be determined based on the land use designation of the properties in question. In no case shall any parcel of property within City limits and/or the Urban Growth Boundary be allowed to become "landlocked" due to development in adjoining properties.

C. Determination of Access Classification

Determination of access shall be the responsibility of the City except on State highways, where WSDOT maintains strict standards for access. The developer shall

provide the following information along with recommendations to assist the City in determining access locations:

1. Local land use plans, zoning, and land development regulations as set forth in adopted comprehensive plans.
2. The current and potential functional classification of the roadway.
3. Existing and projected traffic volumes, accident history, and other operational considerations.
4. Existing and projected state, local and regional planning organization transportation plans and needs, including considerations of new or improved facilities.
5. Drainage requirements.
6. The physical features of lands adjoining the roadway.
7. The availability of alternative connections to the existing roadway network.
8. The cumulative effect of existing and projected connections on the roadway’s ability to provide safe and efficient movement of people and goods.

D. Access Spacing

Minimum access spacing provides drivers with sufficient perception-reaction time to address one potential conflict area at a time. Access points shall be located to reduce the possibility of weaving, lane shifts, or other conflicts in the traffic stream. Existing access on both sides of the roadway shall be analyzed to determine proper location for a new access. Spacing is important to the safety and capacity of a roadway, as well as the appearance of a corridor. Bicyclists and pedestrians will benefit from the reduced conflicts generated by excessive access points. The following guidelines shall be used for minimum spacing between access points.

Functional Classification	Access Spacing
Arterial	660 feet
Major Collector	330 feet
Major Collector in Business District	165 feet

The spacing standards are for full access. Restricted access (right-in, right-out), shall be half the amount shown in the table above. If the spacing requirements and the connectivity requirements as outlined in this Chapter cannot be met, the access shall be designed using the objectives herein and as approved by the City. All distances in this chapter are measured centerline to centerline.

E. Additional Access

Developments shall provide a secondary access way to an Arterial or Major Collector when a traffic count of 1,000 ADT is reached. The number of ADTs shall be determined using both (1) existing development within the area that would be

served by the secondary access way and (2) the development proposal. A third access point may be required if necessary for public safety and/or reasonable level of service. If additional accesses cannot be installed due to topography, waterways, negotiable grades, or other similar conditions, the requirement may be waived, and mitigation measures will be required.

F. Secondary Access Requirements

1. Single-Family Residential Developments

Developments consisting of single-family residential housing where the number of dwelling units exceeds 30 shall provide two separate and approved access roads. Where the number of dwelling units is from 31 to 100, the requirement for a second access road may be waived if the secondary road cannot be installed due to topography, waterways, non-negotiable grades, or other similar conditions. If the requirement for a secondary access is waived, all dwelling units shall be protected by approved residential sprinkler systems. When the number of dwelling units exceeds 100, two separate and approved access roads shall be required regardless of whether the homes are equipped with approved residential sprinkler systems.

2. Multi-family Residential Developments

Developments consisting of multi-family residential units where the number of dwelling units exceeds 100 shall provide two separate and approved access roads. Where the number of dwelling units is from 101-150, the requirement for a second access road may be waived if the secondary road cannot be installed due to topography, waterways, non-negotiable grades, or other similar conditions. If the requirement for a secondary access is waived, all buildings including nonresidential occupancies, shall be equipped throughout with approved automatic sprinkler systems. When the number of dwelling units exceeds 150, two separate and approved access roads shall be required regardless of whether the buildings are equipped with an approved automatic sprinkler system.

3. Mixed Developments

For developments that contain both single-family and multi-family units, two separate and approved access roads shall be required when the number of Average Daily Trips (ADTs) exceeds 300. The total number of ADTs shall be estimated using the trip rate identified in the latest edition of the *Trip Generation Manual* as published by the Institute of Transportation Engineers (ITE). Where the total number of ADTs is between 300 and 1,000, the requirement for a second access road may be waived if the secondary road cannot be installed due to topography, waterways, nonnegotiable grades, or other similar conditions. If the requirement for a secondary access is waived, all dwelling units and

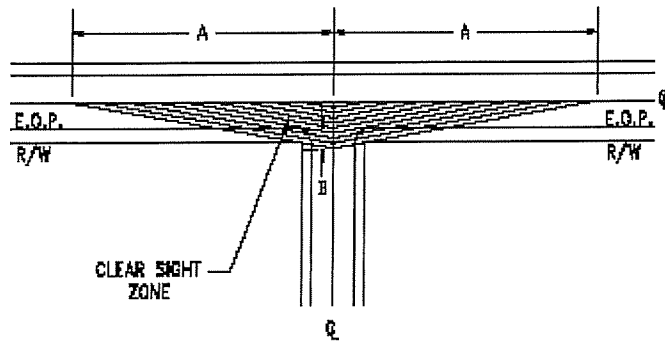
accessory buildings shall be protected by approved automatic sprinkler systems. When the number of ADTs reaches 1,000, two separate and approved access roads shall be required regardless of whether the buildings are equipped with an approved automatic sprinkler system.

5C.100 Sight Distance Requirements

The criteria in this chapter shall be used as a reference for streetscape amenities such as signs, trees, fences, bus shelters, etc. Use AASHTO Design standards to determine sight distance criteria for all road and intersection designs. Use WSDOT design standards for access to State highways. Intersections may include public and private driveways and pedestrian crossings. See Chapter 5C.120 for intersection definition.

The area within the sight distance triangle shall be subject to restrictions to maintain a clear view on the intersection approach. The ultimate roadway width (number of lanes) per the most current version of the City’s Transportation Plan shall be used to calculate the dimensions of the sight distance triangle.

STOP OR YIELD CONTROLLED INTERSECTIONS



The centerline of the road is the actual physical centerline regardless of the number of lanes. Sight distance B is 15 feet measured from the near edge of travelled way to the eye of the driver on the minor road. The following table shall apply to both vertical and horizontal sight distance.

Posted Speed (mph)	Minimum Distance "A" (in feet)*							Multiplier
	20	25	30	35	40	45	50	
Residential Streets	200	250	300	350	400	450	500	10
Collectors and Arterials	240	300	360	420	480	540	600	12

*Based on Sight of Distance per 10 mph for Design Vehicle "P" Crossing Arterial.

If your speed is not shown above, use the following formula for distance A:

$$\text{Multiplier} \times \text{posted speed} = \text{sight distance A}$$

On roadways with 5 or more lanes or roadways with medians more than 20 feet wide, use AASHTO Design Standards. WSDOT design standards shall be used for access to State highways.

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3 feet and 8 feet above the existing surface of the street.

Exclusions: Sight obstructions that may be excluded from these requirements include: fences in conformance with this chapter, utility poles, regulatory signs, trees trimmed from the base to a height of 8 feet above the street, places where the contour of the ground is such that there can be no cross visibility at the intersection, saplings or plant species of open growth habits and not in the form of a hedge which are so planted and trimmed as to leave at all seasons a clear and unobstructed cross view, buildings constructed in conformance with the provisions of appropriate zoning regulations and pre-existing buildings.

5C.110 Illumination

All new commercial or residential subdivisions, short plats, binding site plans shall provide street lights in accordance with the standards for such improvements of the City and they shall be owned and operated by the City. All improvements shall be provided and constructed as detailed in Section Eleven – Street Illumination.

5C.120 Intersections

An intersection may be any access point, whether a public street or a public or private driveway, onto a public street. See Chapter 5C.100 for Access Management criteria and for intersections as they relate to functional classification.

Street intersections shall be as nearly at right angles as is practicable and street jogs with offsets of less than one hundred twenty-five feet between centerlines are not allowed.

For safe design, the following types of intersection features shall be avoided unless approved by the City Engineer:

1. Intersections with more than four intersection streets;
2. "Y" type intersections where streets meet at acute angles;
3. Intersections adjacent to bridges and other sight obstructions.

5C.130 Driveways

All abandoned driveway areas along the frontage of redeveloped property shall be removed and the curbing, planter strip, sidewalk, or shoulder and ditch section shall be properly restored. All driveway approaches shall be constructed of Commercial Concrete and shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction.

Joint use driveways serving two adjacent parcels are encouraged whenever feasible. A joint use driveway serving two adjacent parcels is required if contiguous property is under the same ownership unless joint access is not feasible due to topography constraints, as determined by the City Engineer. An easement and a maintenance agreement shall be recorded for both parcels specifying maintenance and joint usage in perpetuity.

A. Residential Driveways

Residential driveways shall be those driveways constructed on private property to serve up to three single-family residential structures or a duplex. A driveway to multiple residences must be upon a 20-foot easement and must have fire department approval, but will generally consist of 12-foot width of all-weather surfacing and a maximum grade of 12%. Driveway easement documentation shall be as per these standards. Regardless of access, all lots must front upon a platted public street or private road. In all cases, the portion of the driveway within the right-of-way shall be asphalt surface.

1. All residential driveways shall meet the sight distance requirements of Chapter 5C.100.
2. Maximum grade for a driveway to a single residence shall be 18%.
3. A driveway to multiple residences must provide an emergency vehicle turnaround as per these standards.
4. The maximum residential driveway width onto an arterial or major collector roadway shall be 25 feet. The maximum residential driveway width onto a local or minor collector roadway shall be 25 feet; minimum width shall be 10 feet (net flat width without transition ramp).
5. No more than one access shall be permitted onto an arterial or major collector roadway, regardless of the frontage. Not more than one access shall be permitted for a frontage of 75 feet or less on a local or minor collector roadway. Two accesses on a local or minor collector may be permitted for frontage of 75 feet to 150 feet. The two accesses may be combined into a single access of up to 35 feet net flat width.
6. Driveway parking space shall not interfere with pedestrian traffic on sidewalks.

B. Public Driveways

Public Driveways are those driveways constructed on private property to serve commercial, industrial and multi-family projects. Public Driveways shall be curb cuts. A traffic engineer shall design public driveways with safety being the primary design criteria. The following criteria shall apply to all public driveways:

1. Commercial properties shall provide internal connections between neighboring properties. Developments must give priority to internal access before access to the public roadway system is permitted. Cross access allows vehicles to circulate between commercial properties without having to re-enter the public street system.
2. Public driveways shall meet the sight distance requirement of Chapter 5C.100.
3. No public driveway shall be approved where backing onto the sidewalk or street will occur.
4. Parking lot circulation and signing shall be met on site. The public right-of-way shall not be utilized as part of the parking lot flow. Alleys may be utilized with the approval of the City Engineer.
5. The maximum driveway width for a two-way, public driveway with curb returns shall be the same as listed for curb cut. A wider public driveway may be approved by the City Engineer where a substantial percentage of oversized vehicle traffic exists, where divisional islands are desired, or where multiple exit or entrance lanes are needed.
6. The maximum one-way public driveway width for a curb cut or a driveway with curb return shall be 14 feet for multi-family residential and 20 feet for commercial and industrial uses. The storage length of a driveway must be adequate to prevent vehicles from waiting in thru lanes to enter the site or causing unsafe conflicts with on-site circulation and parking. General standards appear below but these requirements will vary according to the projected volume of the individual driveway. The length shall be measured from the face of curb into the site.

Adequate Driveway Storage Lengths	
Development Type	Minimum Driveway Throat Length
Commercial Center > 150,000 GLA ⁽¹⁾	200 feet
Smaller Project < 150,000 GLA ⁽¹⁾	40-95 feet ⁽²⁾
Signalized Driveway	Based on operational analysis for 95% queue

⁽¹⁾ Gross Leasable Area

⁽²⁾ Distance confirmed by City Engineer

7. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the City Engineer.

Tapers shall be designed per the ITE (Institute of Transportation Engineers) publication, *Transportation and Land Development*, latest edition.

C. Residential Driveway Access Spacing

1. Residential access to a public street shall be limited to one driveway for each parcel of property separately owned.
2. In new construction, residential driveways shall not be permitted to access arterials, major collectors, or minor collectors unless the property has no other reasonable access to the general street system.
3. If an existing residential parcel abuts an arterial, major collector or minor collector, no residential access shall be allowed to those streets within 150-feet of the nearest right-of-way line of an intersecting street.
4. Corner lots shall access the roadway with the lower functional classification.

If the above standards cannot be met, the developer's engineer must design the most appropriate access with safety being the primary design criteria.

D. Public Driveway Access Spacing

1. Access to a public street shall be limited to one public driveway connected to the lowest classified roadway for each parcel of property separately owned. Property fronting more than one public street may be permitted an access to each public street if the Traffic Impact Analysis supports multiple accesses. Two or more public driveways accessing a public street will only be allowed with the approval of the City Engineer. Properties contiguous to each other and owned by the same person are considered to be one parcel.
2. If all other access management techniques have been exhausted, the City will permit public driveways utilizing the following minimum corner clearance requirements. Corner clearance is the distance between a private access and the nearest cross road intersection and is applicable to all roadway classifications. Corner Clearance is necessary to provide adequate perception-reaction time to reduce potential downstream conflicts and is aimed at preventing the location of driveways within the functional area of an intersection. Minimum driveway setback and corner clearance requirements shall meet the most current ITE standard. The minimum corner clearance setbacks are shown in the following table.

Minimum Corner Clearance		
Distance (in feet) from Near Side of Street to		
Near Side of Access Driveway		
Posted Speed (mph)	Major Traffic Generator	Minor Traffic Generator
30	200	150
35	260	215
40	330	260
45	395	310
50	460	345

Reference: *Traffic Engineering Handbook*

Major traffic generators are developments that require or would be required to complete a Traffic Impact Analysis per City of Chelan TIA Guidelines.

5C.140 Private Roads

Private roads shall meet the definition as given in this section and shall be allowed in the following instances:

1. As part of a Planned Development District (Zone P-D);
2. As permanently established by plat or easement providing legal access to serve two, three, or four single-family dwelling units and conforming to design standards in Table 5C.030;
3. For access to multifamily housing, subject to approval by the City Engineer.

Private roads must meet all of the following conditions:

1. Said road shall be accessible at all times for emergency and public service use.
2. Private roads shall have covenants which provide for the maintenance of the private roads by the owners, homeowners association, or other legal entity, and are recorded with the Chelan County Auditor’s Office.
3. Private streets will not landlock present or future parcels nor obstruct public street circulation. If there is the ability for a future roadway connection, a private street will not be allowed.
4. The design and construction of sidewalks along private streets shall meet all applicable standards as for sidewalks along public roadways as specified in Chapter 5D.040.

Acceptance of private roads as public streets will be considered only if the road(s) meet all applicable public street and utility standards.

5C.150 Gated Access

A. Gated Residential Access

Gates to neighborhoods or gated communities shall be allowed only on private streets. Private streets shall meet all the conditions as set forth in Chapter 5C.140. In addition the following conditions shall apply:

1. A minimum stacking distance as shown in the table below shall be required:

Intersecting Public Street Classification	Minimum Stacking Distance
Arterial	If only one access, use 5-feet per PM peak hour trip. Minimum stacking distance shall be 100 feet.
Major and Minor Collector	1-foot per PM peak hour trip. Minimum stacking distance shall be 20 feet.
Local and Private	0.5-foot per PM peak hour trip. Minimum stacking distance shall be 10 feet.

2. A turn around shall be provided on the public right-of-way side of the gate.
3. Mailboxes meeting U.S. Postal standards shall be located on the public side of the gate.
4. Gates shall be equipped with an emergency pre-emption system capable of operating from the public side of the gate to facilitate immediate entry of emergency vehicles into the development and shall have the concurrence of emergency services. This system must be maintained in proper working order by the owners of the development or the proper homeowners or business owners association, whichever shall be the case. A copy of the access key, code, or combination shall be provided to the City to facilitate access.

B. Gated Commercial Access

Gated access in commercial or industrial projects shall follow the standards as set forth in 5C.150.A. The stacking distance shall be based on vehicle length, access street classification, and entering volumes in the PM peak hour. A Traffic Impact Analysis shall be used to determine an appropriate stacking distance.

5C.160 Cul-de-Sacs

To encourage connectivity, cul-de-sacs shall be discouraged. Cul-de-sacs may be allowed with the approval of the City Engineer where geographical, topographic or environmental conditions preclude connection. When these conditions preclude street connections, continuous non-vehicular connections should still be attempted.

Cul-de-sacs may also be allowed for short subdivisions bordered on three sides by properties developed to their maximum use. Dead ends or a shared access may be required for subdivisions where the potential for future connectivity exists due to the proximity of under-developed properties.

Streets designed to have one end permanently closed shall typically be no longer than 600 feet as measured from the intersecting right-of-way line extended, to the center of the cul-de-sac. At the closed end, there shall be a widened bulb having a minimum paved traveled radius as shown in the Cul-de-Sac Plan Detail. Where the total number of ADTs generated by residences served by the cul-de-sac is between 300 and 1,000, the limitations on length and on number of lots served may be waived if additional access cannot be installed due to topography, waterways, non-negotiable grades, or other similar conditions. If the limitation on length, number of lots served, or both is waived, all dwelling units and accessory buildings shall be protected by approved automatic sprinkler systems. A cul-de-sac may not serve an area generating 1,000 ADTs or more without providing additional access, whether or not the buildings are equipped with approved automatic sprinkler systems.

5C.170 Dead End Roadways

Where a street is temporarily dead ended, turn around provisions and a Type III red and white barricade the full width of the roadway must be provided where the road

serves more than one lot. Hammerheads or L turnarounds may be used in lieu of a cul-de-sac only upon approval of the City Engineer and shall be designed in accordance with details in the Standard Details Section. Permanent dead ends shall be properly signed per Section 3C-4 of the MUTCD.

At the end of a sidewalk to be extended in the future, a red and white type II barricade the full width of a sidewalk is required.

5C.180 Alleys

Alleys, where provided at the rear of lots, shall have a minimum right-of-way width of twenty feet and shall be designed in accordance with the alley detail in the Standard Details section. Dead-end alleys and alleys with sharp changes in direction are prohibited. Alleys as a primary access are encouraged, subject to the following standards:

1. The alley right-of-way must be at least twenty feet wide; and
2. The alley must be paved; and
3. Alley access shall be subject to approval by the City Engineer. The City Engineer's review shall include, but not be limited to, review of provisions for trash collection and snow removal, and access by fire trucks and other emergency service vehicles.

Existing lots that have no alternative access may be exempted from the standards by the City Engineer.

5C.190 Fire Access Roads

Roads which are designated as fire access roads shall conform to the minimum street standards for new construction as shown in Section 5C.030 of the Development Standards or shall be designed and installed per the most current adopted edition of the Fire Code as adopted and amended by the Chelan Municipal Code.

5C.200 Naming

Streets and roads shall be named according to specific criteria. "Avenues" run east-west, and "Streets" generally run north-south. All avenues lying east of Columbia St. are designated east (E) and west of Columbia Street are designated west (W). Streets north of Woodin Avenue are designated north (N) and south of Woodin Avenue are designated (S).

An address number will be assigned to all new buildings at the time of final plat, site plan review, or at the time the building permit is issued. This will be done by the Building Official per CMC 12.08.

The developer must check with the Building Official regarding the naming of streets. This should be done at the time the subdivision is submitted and again upon

approval of the subdivision. The Building Official will insure the name assigned to a new street is consistent with policies of the City.

Street signs for public and private roadways, including poles and hardware, will be supplied and installed by the developer. A signage plan will be required with the project submittal. The City Public Works Department will have final approval over materials and types of signs.

All sign types and installations shall meet MUTCD standards and City standard details.

5C.210 Traffic Control - Construction

The contractor shall be responsible for all traffic control in accordance with the *WSDOT/AWA Standard Plans for Road, Bridge and Municipal Construction*, "K" plan sheets, and the *Manual on Uniform Traffic Control Devices (MUTCD)*. Prior to the disruption of any traffic, a traffic control plan shall be prepared and submitted to the City for approval. At no time shall a roadway be blocked without the approval of the City Engineer. No work shall commence until the City has approved the plan and the traffic control is in place. A street closure permit is required if a roadway is to be closed or restricted.

There shall be no restrictions or interruptions to traffic on Saturdays, Sundays or holidays. In addition, there shall be no restrictions or interruptions to traffic after 12:00 noon on the day prior to a holiday or holiday weekend.

There shall be no restrictions or interruptions to traffic on arterial roadways during the peak traffic hours of 7:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 6:00 p.m. Monday through Friday, except when deemed necessary by the City. If the City determines the peak hours differ from those specified, the contractor will be required to adjust his working hours accordingly.

Work shall comply with all applicable state and local noise regulations. Construction hours in or adjacent to a residential zone shall be in accordance with hours specified in the Chelan Municipal Code.

The City may require roadway work to commence at night when it is in the best interest of the public.

Two-way traffic shall be maintained at all times unless specifically approved in the traffic control plan. Flaggers shall be shown on the traffic control plan except for emergency situations. The developer is responsible for traffic control signing per Chapter 5E.090.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans, these specifications, the MUTCD, and the *WSDOT Standard Plans*. If the City determines that lane restrictions are causing

congestion, the contractor will be required to open any lanes, as determined by the City, until the congestion is eliminated.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens.

The contractor shall maintain pedestrian access through or around the project site at all times without having pedestrians enter the travel lane.

Flaggers shall possess a current flagging card issued by the State of Washington prior to performing any traffic control work on a project. Workers engaged in flagging shall wear reflective clothing and hard hats in accordance with the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction*. Flagger's paddles shall meet MUTCD standards.

5D NON-MOTORIZED TRANSPORTATION

5D.010 General

All properties, with the exception of an individual single family residence, abutting public streets shall, in conjunction with new construction on such properties where the estimated cost of the alterations or improvements constitute 25% or more of the value of the existing structures on the property according to current Assessor records, have sidewalks constructed along abutting streets. Curbs and gutters must also be constructed along the abutting street when the City Engineer determines that the conditions of drainage require curbs and gutters.

In cases where a sidewalk exists adjacent to the curb, the sidewalk must be moved back to accommodate a new planter strip.

Upon approval of the City Engineer, sidewalk construction may be deferred as described in 5C.040.E, although the necessary right-of-way shall be granted to facilitate future construction of the sidewalk.

Building footings shall not be located under a public sidewalk. Footings may be located under a sidewalk if the sidewalk is in an easement and not in the public right-of-way. If building footings are to be located under a sidewalk located within an easement, all the private utilities located within that easement and under that sidewalk shall be located within conduit.

5D.020 Design Standards

The City has set forth minimum standards as shown in the Standard Details which must be met in the design and construction of sidewalks, curbs and gutters. Because they are minimum standards, they may be modified by the City Engineer should the City Engineer feel circumstances require increased or decreased widths. Plans for the construction of sidewalks, curbs and gutters are to be submitted as part of the street plans when applicable.

5D.030 Curb and Gutter

Commercial concrete curb and gutter per the detail in the Standard Details Section shall be used for all street edges unless otherwise approved by the City Engineer. Form and subgrade inspection by the City are required before curb and gutter are poured.

The face or top of all new curbs shall be embossed to denote the location of water and sewer services crossings. Water services shall be marked ¼-inch into concrete with a "W" and side sewers shall be marked with an "S".

5D.040 Sidewalks

All public streets shall have sidewalks on both sides of the street as shown on the roadway details in the Standard Details Section. Sidewalks, when necessary because of topographic constraints, may be required on only one side, upon approval of the City Engineer. Sidewalk widths may vary based on plans and studies adopted by the City but, except as provided in this section, shall not be less than those shown in the Standard Detail Section. The design and construction of all sidewalks, curbs and gutters shall be in accordance with the details shown in the Standard Detail Section.

- A. If sidewalk widening is required, it shall be accomplished with a monolithic width pour. This may require removal of an existing sidewalk.
- B. The City Engineer may reduce the sidewalk width for sidewalks over six feet wide if the City Engineer does not anticipate probable pedestrian traffic through the horizon year indicated by the traffic analysis. If the width of the sidewalk is reduced, the right-of-way width shall not be reduced. Instead, the planter width shall be increased accordingly.
- C. Monolithic pour of curb, gutter and sidewalk may be allowed with approval of the City Engineer.
- D. Sidewalks that dead-end at the project property line shall be designed as shown on the details in the Standard Details Section.

5D.050 Pathways and Trails

Trails and pathways should be developed in accordance with the City's Comprehensive Plan, including the Open Space and Recreation Sub-Element, the Transportation Element, the Parks and Recreation Comprehensive Plan, the Lake Chelan Valley Trails Master Plan, the Lakeside Trail Study, the Non-Motorized Transportation Implementation Plan, and any other plans or studies adopted as components of the Comprehensive Plan.

5D.060 Bicycle Facilities

Bicycle facilities should be developed in accordance with the City's Comprehensive Plan, including the Open Space and Recreation Sub-Element, the Transportation

Element, the Parks and Recreation Comprehensive Plan, the Lake Chelan Valley Trails Master Plan, the Lakeside Trail Study, the Non-Motorized Transportation Implementation Plan, and any other plans or studies adopted as components of the Comprehensive Plan.

When the need for a bikeway is identified in approved Planning documents, bikeway construction is required in conjunction with any new development or redevelopment where the estimated cost of improvements on such properties exceeds 25% of the value of the existing structures, or subdivision or short subdivision approval.

The design of bikeways shall depend upon their type and usage. Bike lanes and shared roadways shall be surfaced the same as the adjacent motor vehicle roadway.

In general, all bikeway facilities shall be signed per the MUTCD or as specified herein. The bike lane stripes and pavement markings shall be as shown on the details in the Standard Details Section.

5D.070 Staking

All surveying and staking shall be as set forth in Chapter 5C.080.

5D.080 Testing

Testing shall be required per Chapter 5C.090. In addition, the City shall be notified before each phase of sidewalk, curb and gutter construction commences.

5E ROADSIDE FEATURES

5E.010 General

Miscellaneous features included in this section shall be developed and constructed to encourage the uniform development and use of roadside features wherever possible. The design and placement of roadside features shall adhere to the specific requirements as listed for each feature, and, where applicable, to the appropriate standards as set forth in Chapters 5B.010 and 5B.030.

5E.020 Survey Monuments

All existing survey control monuments which will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by or at the direction of a Professional Land Surveyor licensed by the State of Washington. All applicable RCWs and WACs will be complied with, including but not limited to, WAC 332-120, WAC 332-130, RCW 58.09, and RCW 58.24.040. The monuments shall be replaced with the proper type at the expense of the responsible builder or developer.

- A. An iron cased monument and lid shall be installed per City of Chelan standard details

- B. Monument locations. Appropriate intervisible monuments shall be placed:
1. At all intersections. At intersections with arterials or collectors, the centerline of the minor street may be monumented at the edge of the arterial or collector right-of-way.
 2. At the PC, PT, PCC, and PRC of horizontal curves, or at the PI if it lies within the travel roadway. The City Engineer may waive monument requirement at a particular location if sufficient intervisible monumentation is provided. The City Engineer may also require additional monumentation such as POT or POC to ensure intervisibility of monumentation.

5E.030 Mailboxes

Mailboxes shall generally be located per City of Chelen Development Standard Details. New developments shall utilize cluster mailboxes and must receive US Postal Service and Public Works approval as to their specific type and location.

During construction, existing mailboxes shall be accessible for the delivery of mail, or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the U.S. Postal Service. The mailboxes shall be reinstalled at the original location or, if construction has made it impossible, to a location as approved by the U.S. Postal Service.

On existing improved frontages with on-street parking, new mailboxes for infill lot development and/or existing homes shall be clustered to maximize on-street parking availability. Specific location and layout shall be approved by the U.S. Postal Service and City Engineer.

5E.040 Bus Pads, Shelters and Amenities

Different population densities dictate the number and placement of bus stops. The location of LINK Transit and/or Lake Chelan School District (LCSD) bus pads, shelters, or amenities will be evaluated on a case-by-case basis for each project. LINK Transit and LCSD shall make every effort to coordinate the location of bus stops and shall work with the City Public Works Department to determine the best location for the required amenity.

The first consideration in locating any bus stop or amenity shall be safety. The following considerations shall also be considered in determining a bus stop or amenity: operational efficiency, integration with non-motorized facilities, and minimizing impacts to adjacent property. Bus pullouts may be required if road geometry requires, such as determined by the City, LINK Transit and LCSD.

Shelters, pavement markings and signs shall be provided and installed by the developer

LINK Transit shelters shall be maintained by LINK Transit. School bus stop shelters shall be maintained by the subdivision's Homeowner's Association or apartment owner, whichever is appropriate.

Developments enclosed by walls or fences shall provide openings or gates for walkways to provide direct access between developments and bus facilities.

The City and Lake Chelan Public Schools will use the following criteria in placement and design of school bus stops:

1. A school bus stop shall be required for each new residential subdivision or apartment complex where school children are to be boarding or deboarding unless it is determined by Lake Chelan School District (LCSD) that a new bus stop is not required because adjacent facilities already exist for the site.
2. School bus facilities shall meet the same design standards as specified for Link Transit except that the contractor shall install the required school bus amenities. School bus facilities shall also meet safety design guidelines of the LCSD.
3. Placement shall be determined by LCSD and the City.

5E.050 Retaining Walls in Right-of-Way

Poured-in-place concrete, mechanically stabilized earth (MSE) walls, gabion walls, rock, concrete building block, or other approved material may be used for erosion protection of cut or fill embankments, for structurally retaining embankments, or as desired for aesthetic purposes. Retaining walls may be subject to design review.

The height of a retaining wall is that distance as measured from the top of the footing, regardless of whether the footing is buried or exposed, to the top of the wall. Structural walls on private property require the issuance of a Building Permit prior to construction, and fall under the jurisdiction of the Building Official, per CMC 17.04.077.

Retaining walls over 4 feet in height located on a public right-of-way shall meet or exceed WSDOT design standards and be designed by a Washington State Licensed Professional Engineer, and be approved by the City Engineer.

5E.060 Street Trees

Blank.

5E.070 Planter Strips/Islands

Blank.

5E.080 Parking Lots

Access and drainage issues are governed by the Public Works Department. Contact the City of Chelan Planning Department to determine if the parking lot requires a site

plan review process. The configuration of the stalls shall be as outlined in the Standard Details Section of these Standards.

The storm drainage system must be designed by a licensed professional engineer. Plans and specifications as required by Storm Water development standards, shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on-site retention or detention, matching street and/or sidewalk grades, access locations, parking layout and to check for future street improvement conformity and zoning regulations.

5E.090 Traffic Signs

Traffic control and street name signs shall be provided and installed by the developer in accordance with the current edition of the MUTCD Manual, and as directed by the City Engineer.

5E.100 Guard Rails

Guard rails may be required by the City Engineer where deemed appropriate in the interest of public safety, health and welfare. All guard rails shall conform to the criteria in the WSDOT Design Manual as may be amended or revised.

5E.110 Hand Rails

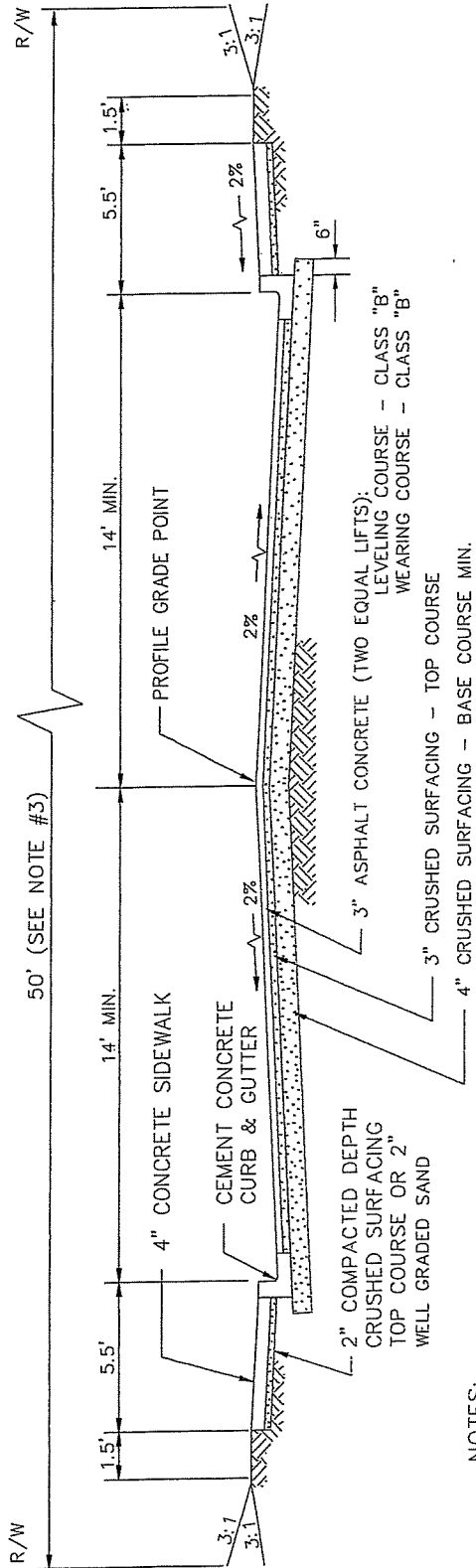
A hand rail or fence is required to be constructed along the back of the sidewalk if required by the current Building Code adopted by the City of Chelan.

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LOCAL/PRIVATE ACCESS STREET DESIGN

LOCAL, PRIVATE



NOTES:

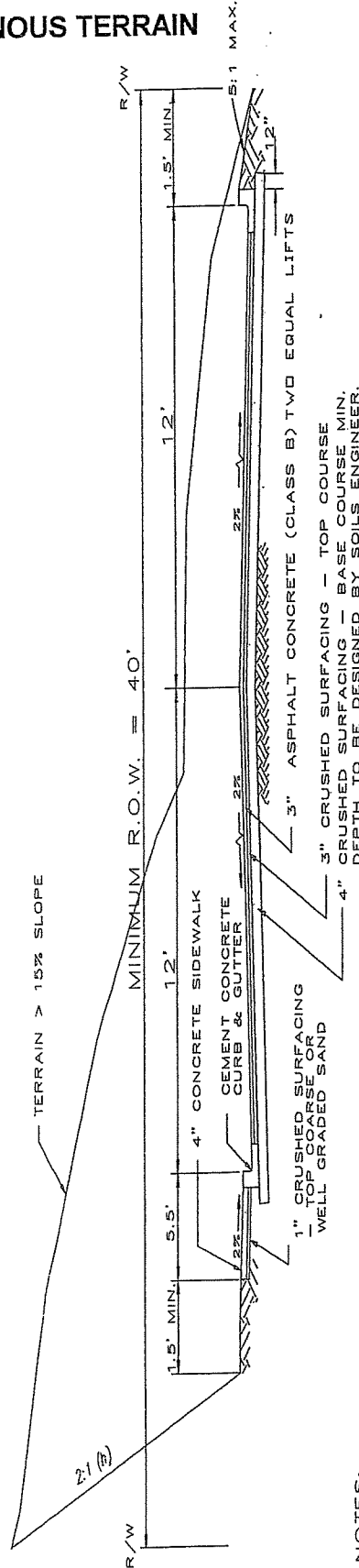
1. ALL THICKNESSES ARE COMPACTED DEPTHS
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS.
3. PRIVATE ROADS SHALL BE APPROVED BY CITY ENGINEER (WIDTHS MAYBE MODIFIED).
4. CITY ENGINEER MAY REQUIRE THE GREENWAY BETWEEN SIDEWALK AND CURB.

EXISTING STANDARD

ID-073

LOCAL STREET IN MOUNTAINOUS TERRAIN

ID-028



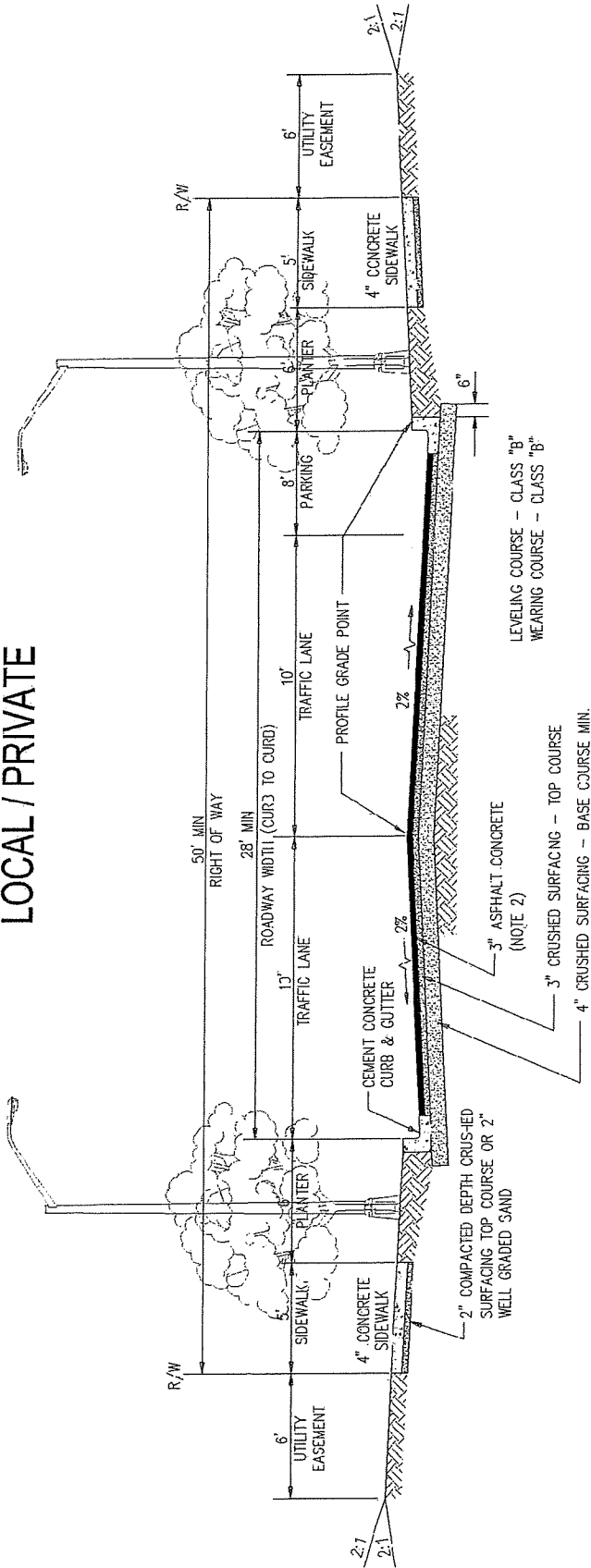
- NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS
 2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO LIFTS.
 3. CITY ENGINEER MAY REQUIRE THICK CURB.
 4. CITY ENGINEER MAY INCREASE ROW BECAUSE OF CATCH POINTS.

LOCAL STREET IN MOUNTAINOUS TERRAIN

N.T.S.

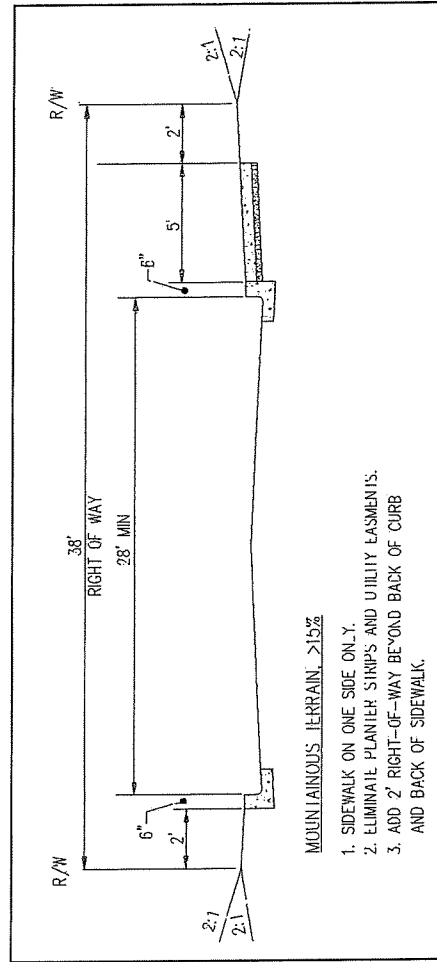
EXISTING STANDARD

LOCAL / PRIVATE



NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) EQUAL LIFTS, UNLESS PERMISSION IS GRANTED BY CITY ENGINEER TO PAVE IN ONE LIFT.
3. PRIVATE ROADS SHALL BE APPROVED BY CITY ENGINEER (WIDTHS MAY BE MODIFIED).



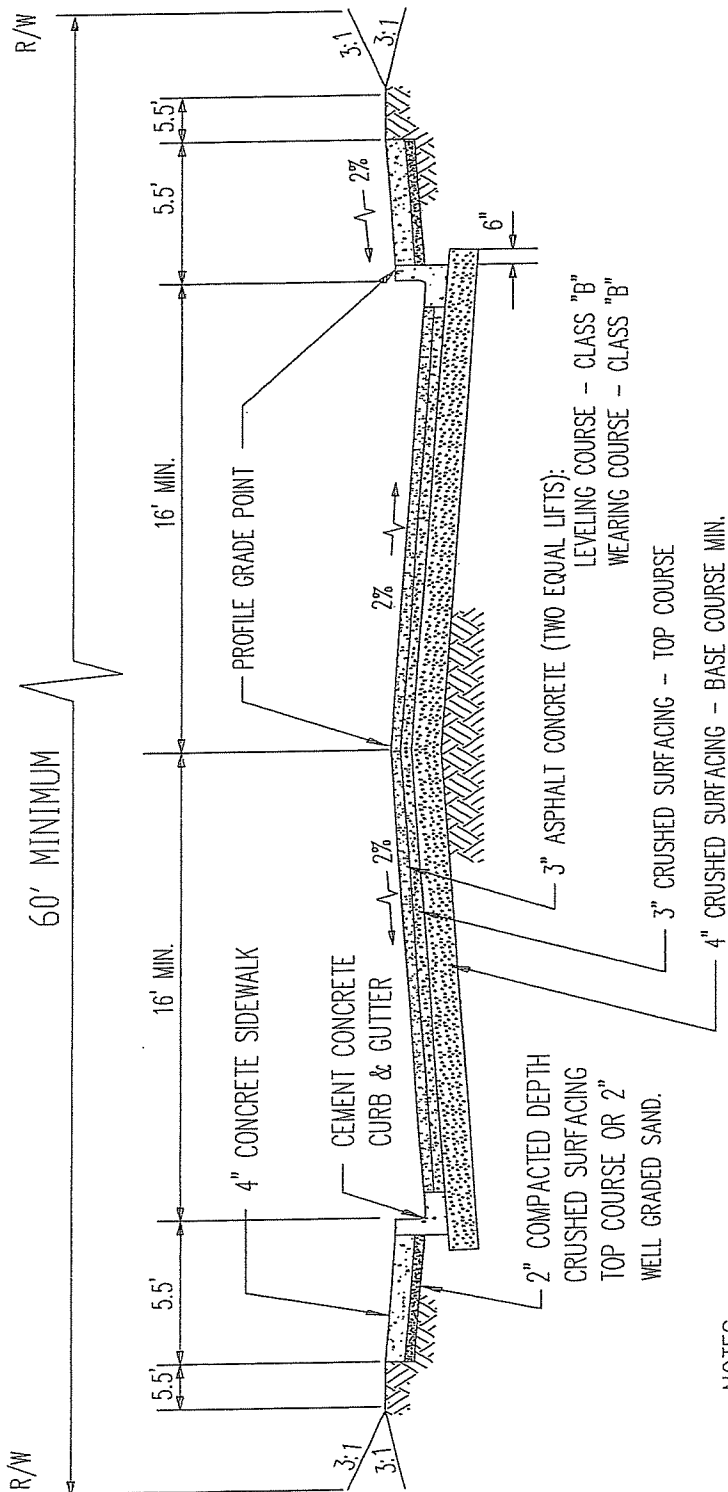
MOUNTAINOUS TERRAIN, >15%

1. SIDEWALK ON ONE SIDE ONLY.
2. ELIMINATE PLANTER STRIPS AND UTILITY EASEMENTS.
3. ADD 2' RIGHT-OF-WAY BEYOND BACK OF CURB AND BACK OF SIDEWALK.

PROPOSED STANDARD

MINOR COLLECTOR STREET DESIGN

MINOR COLLECTOR



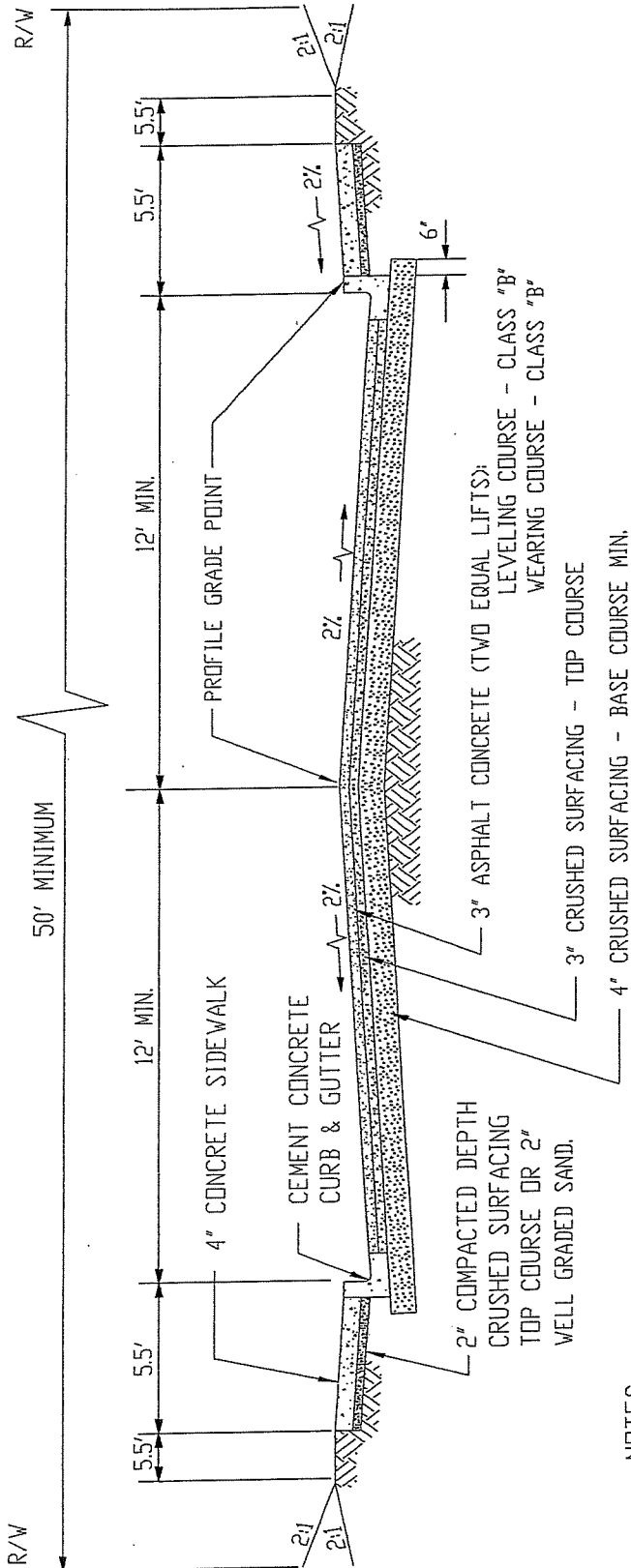
NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS
3. ENGINEER MAY REQUIRE THE GREENWAY BETWEEN SIDEWALK AND CURB

ID-071

EXISTING STANDARD

MINOR COLLECTOR IN MOUNTAINOUS TERRAIN



- NOTES:**
1. ALL THICKNESSES ARE COMPACTED DEPTHS
 2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS
 3. ENGINEER MAY REQUIRE THE GREENWAY BETWEEN SIDEWALK AND CURB
 4. ENGINEER MAY INCREASE MINIMUM ROW BECAUSE OF CATCH POINTS

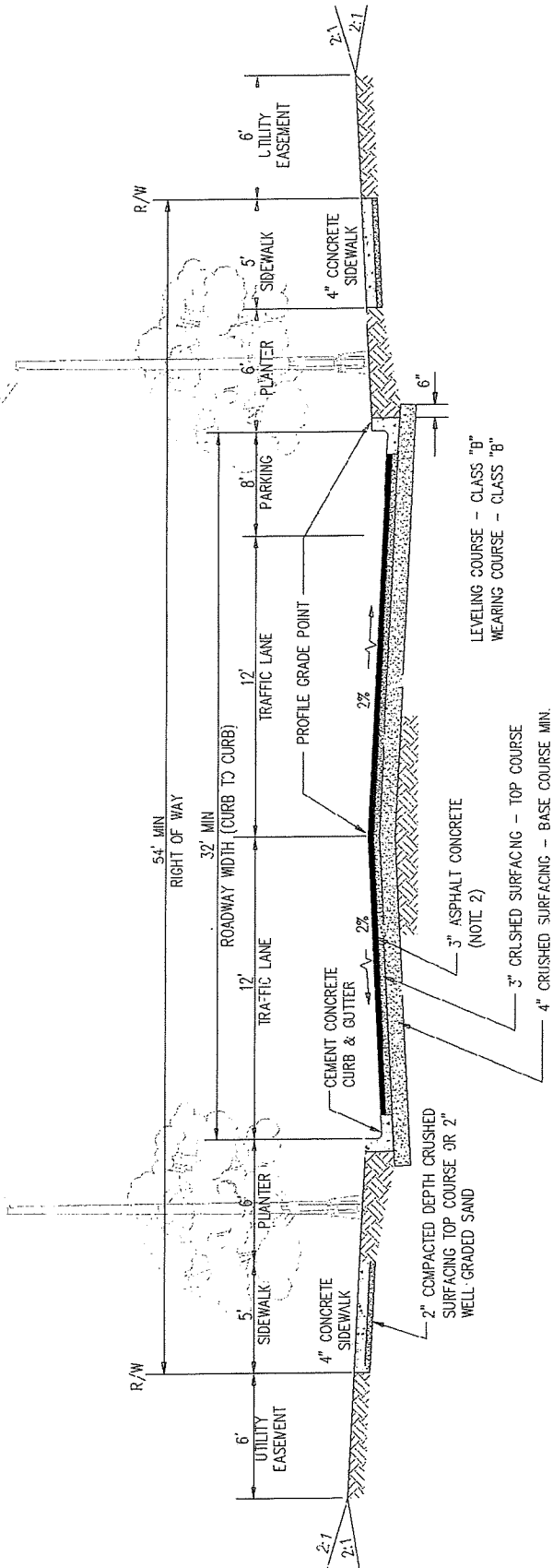
MINOR COLLECTOR IN MOUNTAINOUS TERRAIN

N.T.S.

EXISTING STANDARD

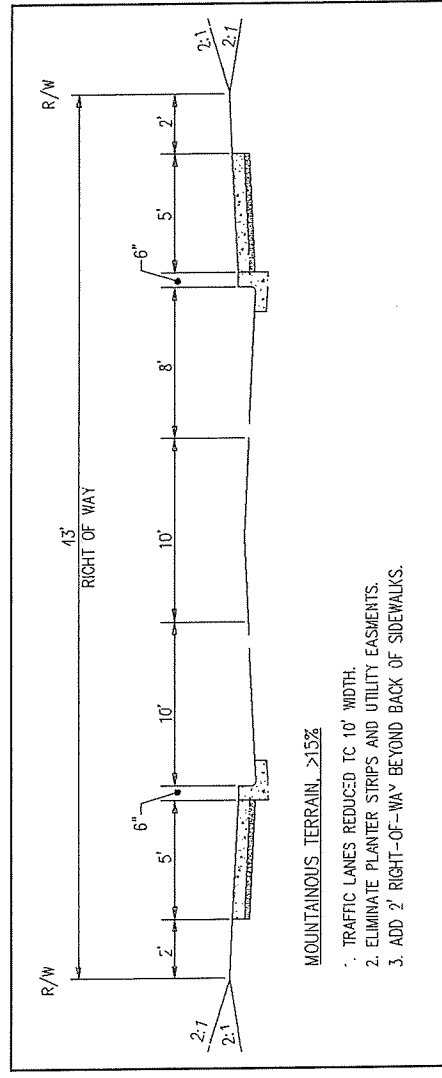
ID-027

MINOR COLLECTOR



NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) EQUAL LIFTS, UNLESS PERMISSION IS GRANTED BY CITY ENGINEER TO PAVE IN ONE LIFT.



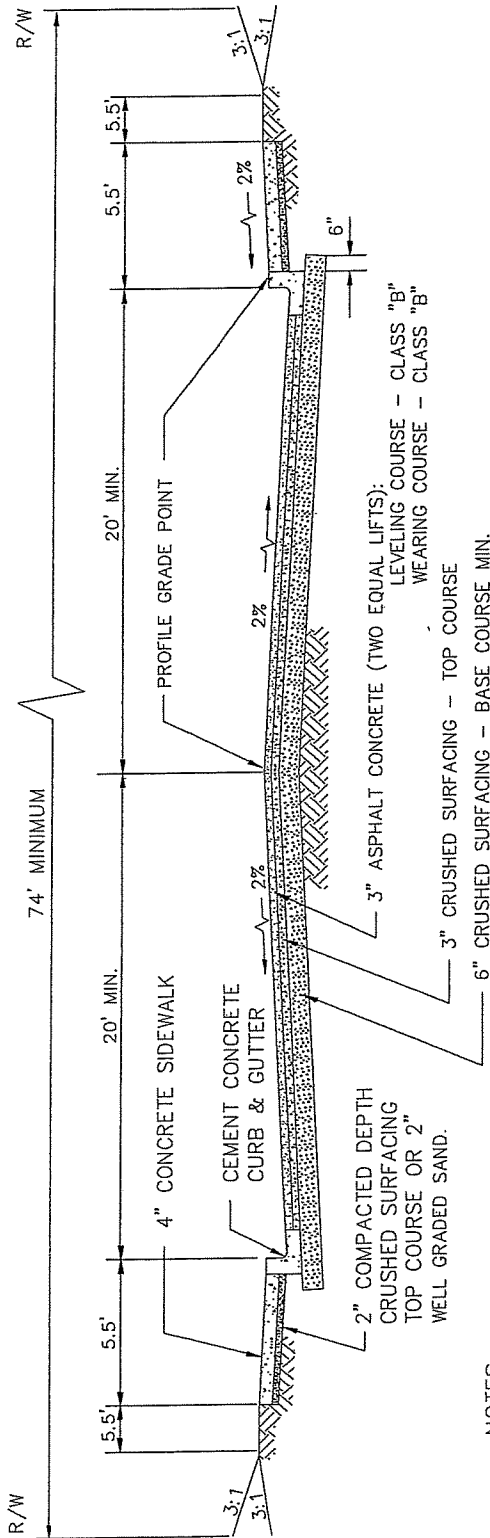
MOUNTAINOUS TERRAIN, >15%

1. TRAFFIC LANES REDUCED TO 10' WIDTH.
2. ELIMINATE PLANTER STRIPS AND UTILITY EASEMENTS.
3. ADD 2' RIGHT-OF-WAY BEYOND BACK OF SIDEWALKS.

PROPOSED STANDARD

MAJOR COLLECTOR STREET DESIGN

MAJOR COLLECTOR



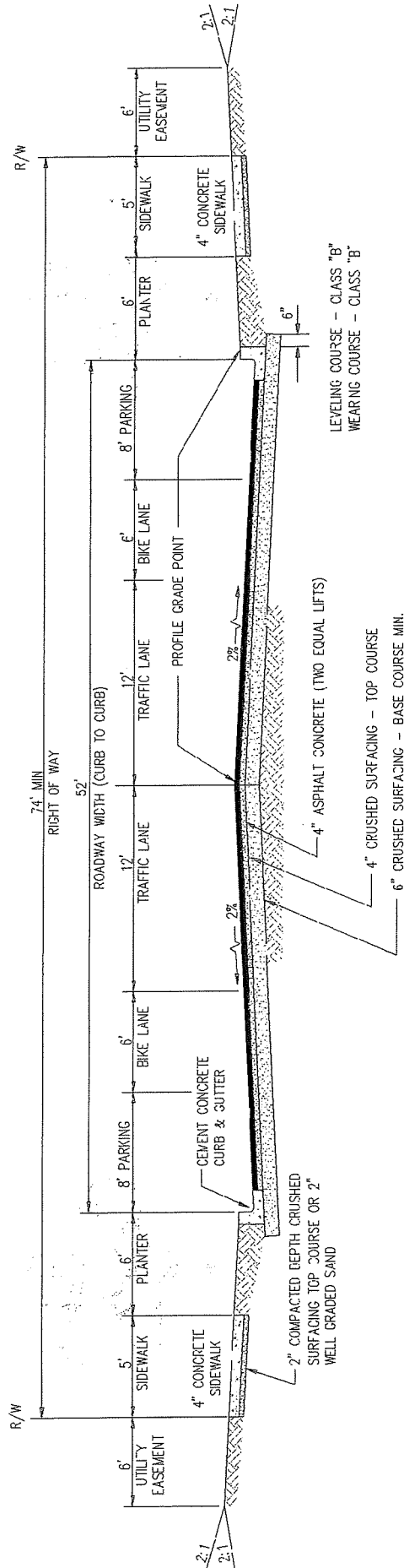
NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS.

EXISTING STANDARD

ID-072

MAJOR COLLECTOR



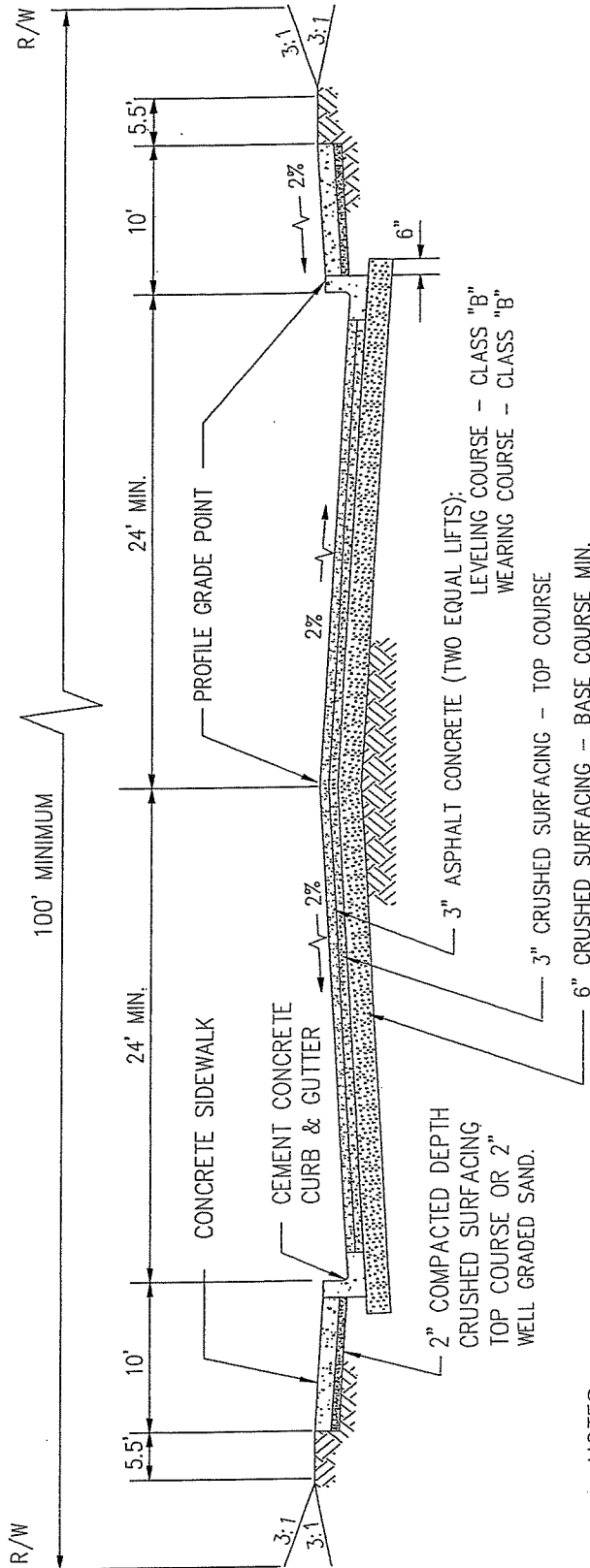
NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) EQUAL LIFTS, UNLESS PERMISSION IS GRANTED BY CITY ENGINEER TO PAVE IN ONE LIFT.

PROPOSED STANDARD

ARTERIAL STREET DESIGN

ARTERIAL



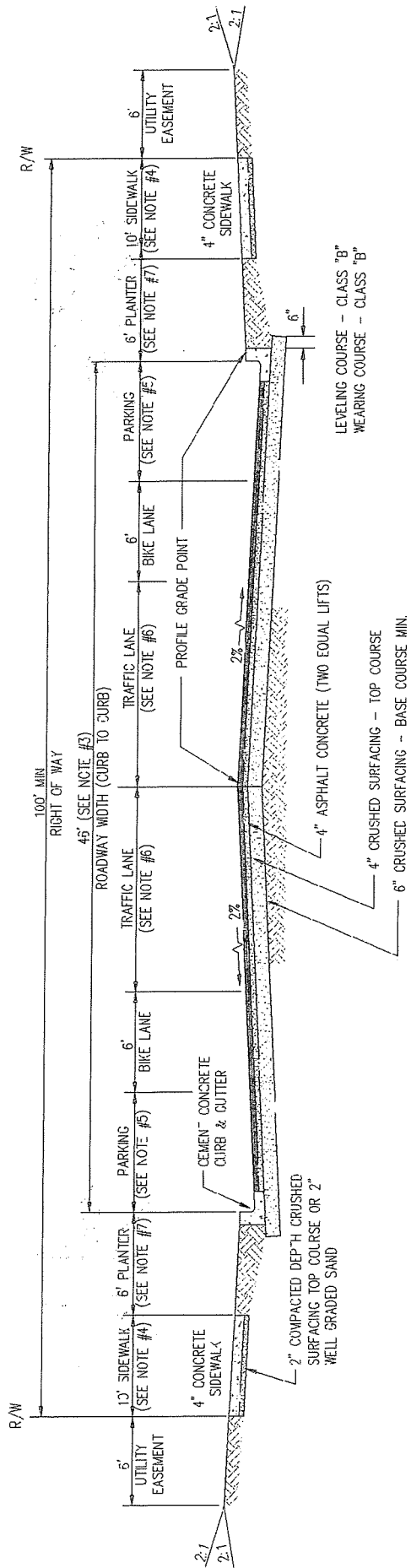
NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS.

EXISTING STANDARD

ID-025

PRINCIPAL ARTERIAL



NOTES:

1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) LIFTS.
3. TWO 11-FOOT LANES, ONE 12-FOOT CENTER LANE, AND TWO 6-FOOT BIKE LANES. ACTUAL WIDTH WILL BE DETERMINED BY NUMBER OF TRAVEL LANES BASED ON THE PROJECTED VOLUME OF TRAFFIC.
4. THE MINIMUM SIDEWALK WIDTH WILL BE SIX FEET FOR ALL OTHER AREAS NOT DESIGNATED WITHIN CITY PLANNING DOCUMENTS.
5. PARKING LANE REQUIRED IN DESIGNATED AREAS PER APPROVED PLANNING DOCUMENTS.
6. ACTUAL WIDTH WILL BE DETERMINED BASED ON TWO-FIVE TRAVEL LANES DEPENDING ON PROJECTED VOLUME OF TRAFFIC USING THE FACILITY. (REFER TO TRANSPORTATION PLAN.)
7. PLANTER STRIPS WILL BE REQUIRED FOR ALL AREAS WHERE THE SIDEWALK WIDTH IS BETWEEN 5-8 FEET; OTHERWISE, STREET TREES MAY BE INCLUDED WITHIN THE 10-FOOT SIDEWALK WIDTH. THE CITY ENGINEER WILL MAKE THE FINAL DETERMINATION.

PROPOSED STANDARD

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PARKING STANDARDS**Off-Street Parking -General Requirements**

The provisions of this chapter shall not apply to the C-H High Density Commercial District zone unless otherwise stated herein. Every building hereafter constructed, reconstructed, expanded or occupied, or use of property hereafter established or modified shall be provided with off-street parking as provided in this chapter, and such parking areas shall be made permanently available and maintained for parking purposes. No building permit shall be issued until plans showing provisions for the required off-street parking have been submitted and approved as conforming to the standards of this chapter.

Required Stalls Location

All parking stalls required to be on-site shall be independently maneuverable, shall not be double stacked, and shall not back out onto a public right of way except as provided herein.

Variance to these Standards

An application for a variance to the number of parking spaces required shall follow the procedures outlined in Chapter 17.64 of the Chelan Municipal Code, as the same exists now or may hereafter be amended.

Reduction in Required On-site Parking

In return for improvement of on-street parking, in accordance with present City standards, credit shall be given for one parking space per each ten feet of street frontage when angle parking is used, and one space for each twenty feet of street frontage when parallel parking is used. Street frontage improvement means curb, gutter, sidewalk, and catch basins if needed. Credit given shall be limited to 50% of total on-site parking spaces required.

Changes in Occupancy

Whenever the occupancy classification of a building is changed, the minimum standards for off street parking for the new occupancy classification shall be applicable; provided, that if the existing occupancy had established a legal nonconforming status with respect to off-street parking requirements, no additional off street parking shall be required for the new occupancy unless said new occupancy is in a classification requiring more parking than that which would have been required for the existing occupancy if it had been subject to the provisions of this chapter. If strict application of this section is not feasible due to existing site conditions such as building or parking size, shape or layout, a variance may be granted by the hearing examiner in accordance with Chapter 17.64 of the Chelan Municipal Code, as the same exists now or may hereafter be amended.

Site Plan Required

A site plan for every new or enlarged off street parking lot or motor vehicle sales area shall be approved by the planning department prior to construction. The site plan shall be drawn utilizing a common engineering scale (e.g. 1"=20', 1"=30', 1"=40') and will show the proposed/existing development, locations, size, shape, and design of the parking spaces, curb cuts, lighting, landscaping, irrigation, parking lot circulation, drainage and other features of the proposed parking lot including all easements.

Improvement of Parking Spaces in all Districts

Any parking facility for ten or more vehicles shall be improved in accordance with the following requirements:

- A. Off-street parking requirements shall not apply to the C-H High Density Commercial District zone except for the following uses which are auto dependant:
 - 1. Radio and Television sales and repair shops,
 - 2. Upholstery shops,
 - 3. Newspaper and lithography establishments where production occurs onsite,
 - 4. Radio and T.V. Studios,
 - 5. Hotels,
 - 6. Household Appliance and Repair Facilities,
 - 7. Mortuaries,
 - 8. Gasoline Service Station,
 - 9. Brewpub,
 - 10. Any conditional use where the minimum requirements state that off-street parking shall be required.

- B. Off-street parking facilities shall be hard-surfaced, shall be graded and drained so as to dispose of surface water to the satisfaction of the City engineer, and shall be maintained in good condition free of weeds, dust, trash and debris.

- C. The director of public works shall have authority to fix the location, width and manner of approach of vehicular ingress and/or egress from a building or parking area to a public street and to alter existing ingress and egress as may be required to control traffic in the interest of the public safety and general welfare. The City may require ingress and egress (curb cuts) to be located between parcels and constructed as joint ingress and egress when required to control traffic in the interest of the public safety and general welfare.

- D. Any lighting used to illuminate any off-street parking facility shall be so arranged as to reflect light away from any adjoining residential premises. Night lighting must be provided where stairs, curbs, ramps, or other abrupt

changes occur in walk direction. Lighting shall be arranged so as to reflect light away from any adjoining residential premises.

Any parking facility for less than 10 vehicles shall be graveled or have such other surface as approved by the Public Works Director.

Standards and Requirements

The minimum required parking spaces for the respective uses shall be as follows. Where square feet are specified, the area measured shall be the total gross floor area of the entire use, structure, or area.

1. Adult Entertainment Facilities: one space per one hundred square feet.
2. Bakery: one space per one hundred fifty square feet of floor area.
3. Banks, businesses or professional offices: one space for three hundred square feet of floor area.
4. Barber/Beauty Shops: 1.5 parking spaces per work station.
5. Bowling alleys: six spaces for each lane.
6. Businesses that provide services outside of their primary location shall provide one parking space per employee.
7. Church, mortuary, funeral home, auditorium, gymnasium, club, lodge hall: one space per four seats or eight feet of bench length in the chapel.
8. Drive-in eating or drinking establishment serving customers outside the building only: no less than fifteen parking spaces on site.
9. Eating and drinking establishments serving both within and without the building: one space for each fifty square feet of floor area, with not less than fifteen spaces.
10. Eating and drinking establishments with no service outside the building: one space for one hundred square feet of floor area.
11. Gasoline stations with a convenience store: one space per one hundred fifty square feet.
12. Hospitals: one space per three beds plus one space per each shift doctor and one space per three employees.
13. Malls including business and commercial centers that have multiple spaces available for a variety of tenant uses shall provide one parking space per

two hundred fifty square feet.

14. Manufacturing/Assembly, Industrial : one space per employee.
15. Marinas: 1.5 spaces per boat moorage stall; provided, that .5 spaces per boat moorage stall shall be sufficient where no boat launching facilities are provided, except for boat launching facilities provided and used solely for the private use of a marina operator and to which the public has no access.
16. Medical or dental office: one space per two hundred square feet of floor area.
17. Mixed occupancies: in the case of mixed uses, the total requirements for off-street parking facilities shall be the sum of the requirements for the various uses computed separately. Off-street parking facilities for one use shall not be considered as providing required facilities for any other use except as hereinafter specified for a joint use.
18. Motel or hotel: 1.2 spaces for each room or suite plus required spaces for accessory uses and one space per boat moorage stall.
19. Multi-family building, Condominiums, Timeshares, and Apartments: 1.5 per one and two bedroom and two spaced per three or more bedrooms. Developments within the Tourist Accomodation Zoning District shall provide 120% of the required parking to accommodate boats and trailers.
20. Newspaper publication, TV and Radio Studios: one space per five hundred square feet.
21. Open air market used car lot: one space per fifteen hundred square feet of land.
22. Places of Public Assembly:
 1. Library, museum, art gallery, private athletic club, government buildings: one space per four hundred square feet of floor area.
 2. Preschool, nursery, day nursery, kindergarten: two spaces per teacher or adult supervisor.
 3. Elementary or junior high school: three spaces per classroom.
 4. High school or college: eight spaces per classroom.
 5. Parks, Playgrounds, Golf Courses, Ball Fields, Outdoor Recreation Amenities: one space per five thousand square feet of area including structures.
23. Public Swimming Pools including Private Community Pools: one space per fifty square feet of enclosed/fenced pool area.
24. Retail store (exclusive of those listed below): one space per two hundred

square feet of floor area.

25. Retail store exclusively handling bulky merchandise such as furniture or appliances: one space per six hundred square feet of floor area.
26. Service or repair shop: one space per six hundred square feet of floor area. Each actual vehicle repair bay area space located inside or outside of a building may be counted as a parking space to attain compliance with this requirement.
27. ~~_____ Dwellings: one space for the first unit and 1.5 spaces for each additional dwelling unit with fractions to be rounded up. Single Family Residence: one space minimum.~~
28. Unspecified uses: in the case of a use not specifically mentioned, the requirements for off-street parking facilities shall be the same as the above-mentioned use which is most similar.
29. Veterinary hospitals and clinics: one space per four hundred square feet of floor area provided that a minimum of five spaces shall be required.

Conditions for Joint Use

- A. Joint use of parking facilities - Spaces required. For joint use of parking facilities, the minimum total number of required parking spaces may be reduced by up to ten percent and the minimum number of required parking spaces may be further reduced by the following amounts in the following circumstances:
 1. Up to fifty percent of the parking spaces required for a theater, bowling alley, tavern, restaurant, or other enterprise which is primarily a nighttime or Sunday use may be supplied by the off-street parking spaces allocable to other types of uses which are not primarily nighttime or Sunday uses.
 2. Up to fifty percent of the parking spaces required for a bank, business office, retail store, personal service shop, household equipment or furniture shop or other enterprise which is primarily a daytime and non-Sunday use may be supplied by the off-street parking space allocable to other types of uses which are primarily nighttime or Sunday uses.
- B. The building or use for which application is being made to utilize the off-street parking facilities provided by another building or use shall be located within 500 feet of such parking facilities and, in addition:
 1. The off-site parking facilities must be on the same side of the street as the business that is requesting the joint use parking facilities;
 2. The applicant shall show that there is no substantial conflict in the principal operating hours of the two buildings or uses for which joint use of off-street

parking facilities is proposed;

3. Parties concerned in the joint use of off street parking facilities shall submit a proper legal instrument defining the conditions of the joint use for review and approval of the Community Development Director and the City Attorney; and
4. In the event of a change in ownership or use, the joint use instrument may

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PARKING STANDARDS

Off-Street Parking - General Requirements

The provisions of this chapter shall not apply to the boundary depicted in Figure A. Area Exempt from Off-Street Parking Requirements Storefront Streets (CMC 17.14.020 B Regulating Map) District unless otherwise stated herein. Every building hereafter constructed, reconstructed, expanded or occupied, or use of property hereafter established or modified shall be provided with off-street parking as provided in this chapter, and such parking areas shall be made permanently available and maintained for parking purposes. No building permit shall be issued until plans showing provisions for the required off-street parking have been submitted and approved as conforming to the standards of this chapter.

INSERT MAP HERE- FIGURE A.

Required Stalls Location

All parking stalls required to be on-site shall be independently maneuverable, shall not be double stacked, and shall not back out onto a public right of way except as provided herein.

Variance to these Standards

An application for a variance to the number of parking spaces required shall follow the procedures outlined in Chapter 17.64 of the Chelan Municipal Code, as the same exists now or may hereafter be amended.

Reduction in Required On-site Parking

In return for improvement of on-street parking, in accordance with present City standards, credit shall be given for one parking space per each ten feet of street frontage when angle parking is used, and one space for each twenty feet of street frontage when parallel parking is used. Street frontage improvement means curb, gutter, sidewalk, and catch basins if needed. Credit given shall be limited to 50% of total on-site parking spaces required.

Changes in Occupancy

Whenever the occupancy classification of a building is changed, the minimum standards for off street parking for the new occupancy classification shall be applicable; provided, that if the existing occupancy had established a legal nonconforming status with respect to off-street parking requirements, no additional off street parking shall be required for the new occupancy unless said new occupancy is in a classification requiring more parking than that which would

3. Development Regulations Amendments: A

have been required for the existing occupancy if it had been subject to the provisions of this chapter. If strict application of this section is not feasible due to existing site conditions such as building or parking size, shape or layout, a variance may be granted by the hearing examiner in accordance with Chapter 17.64 of the Chelan Municipal Code, as the same exists now or may hereafter be amended.

Site Plan Required

A site plan for every new or enlarged off street parking lot or motor vehicle sales area shall be approved by the planning department prior to construction. The site plan shall be drawn utilizing a common engineering scale (e.g. 1"=20', 1"=30', 1"=40') and will show the proposed/existing development, locations, size, shape, and design of the parking spaces, curb cuts, lighting, landscaping, irrigation, parking lot circulation, drainage and other features of the proposed parking lot including all easements.

Improvement of Parking Spaces in all Districts

Any parking facility for ten or more vehicles shall be improved in accordance with the following requirements:

- A. Off-street parking requirements shall not apply to ~~the storefront streets~~the boundary depicted in Figure A except for the following uses which are auto ~~dependant~~dependent:
 - 1. Hotels,
 - 2. Mortuaries,
 - 3. Gasoline Service Station,
 - 4. Any conditional use where the minimum requirements state that off-street parking shall be required.
 - 5. Mixed-Use Residential/Commercial Buildings except between Johnson Avenue/Wapato Avenue and Columbia/Saunders. ~~may reduce the required residential parking by fifty percent if Public Works finds that joint use facilities as permitted in the chapter are not available.~~

- B. Off-street parking facilities shall be hard-surfaced, shall be graded and drained so as to dispose of surface water to the satisfaction of the City engineer, and shall be maintained in good condition free of weeds, dust, trash and debris.

- C. The director of public works shall have authority to fix the location, width and manner of approach of vehicular ingress and/or egress from a building or parking area to a public street and to alter existing ingress and egress as may be required to control traffic in the interest of the public safety and general welfare. The City may require ingress and egress

3. Development Regulations Amendments: A

(curb cuts) to be located between parcels and constructed as joint ingress and egress when required to control traffic in the interest of the public safety and general welfare.

- D. Any lighting used to illuminate any off-street parking facility shall be so arranged as to reflect light away from any adjoining residential premises. Night lighting must be provided where stairs, curbs, ramps, or other abrupt changes occur in walk direction. Lighting shall be arranged so as to reflect light away from any adjoining residential premises.

Any parking facility for less than 10 vehicles shall be graveled or have such other surface as approved by the Public Works Director.

Standards and Requirements

The minimum required parking spaces for the respective uses shall be as follows. Where square feet are specified, the area measured shall be the total gross floor area of the entire use, structure, or area.

1. Adult Entertainment Facilities: one space per one hundred square feet.
2. Bakery: one space per two hundred fifty square feet of floor area.
3. Banks, businesses or professional offices: one space for three hundred square feet of floor area.
4. Personal Services: one space per two hundred fifty square feet of floor area.
5. Bowling alleys: one space per three hundred square feet of floor area.
6. Businesses that provide services outside of their primary location shall provide one parking space per employee.
7. Church, mortuary, funeral home, auditorium, gymnasium, club, lodge hall: one space per four seats or eight feet of bench length in the chapel.
8. Drive-in eating or drinking establishment with outside customer seating only: no less than fifteen parking spaces on site; or if no outside seating: two spaces.
9. Eating and drinking establishments serving both within and without the building: one space for each one hundred square feet of floor area including outside seating area, with not less than fifteen spaces.
10. Eating and drinking establishments with no service outside the building:

3. Development Regulations Amendments: A

one space for each one hundred square feet of floor area.

11. Emergency/Transitional Housing: In addition to any parking required for the primary use, one off-street parking space, plus one off-street parking space per non-resident service provider (including non-resident volunteers), plus one off-street parking space for every six transitional adults permitted, is required.
12. Gasoline stations with a convenience store: one space per one hundred fifty square feet.
13. Hospitals: one space per three beds plus one space per each shift doctor and one space per three employees.
14. Malls including business and commercial centers that have multiple spaces available for a variety of tenant uses shall provide one parking space per two hundred fifty square feet.
15. Manufacturing/Assembly, Industrial : one space per employee.
16. Marinas: 1.5 spaces per boat moorage stall; provided, that 0.5 spaces per boat moorage stall shall be sufficient where no boat launching facilities are provided, except for boat launching facilities provided and used solely for the private use of a marina operator and to which the public has no access.
17. Medical or dental office: one space per two hundred square feet of floor area.
18. Mixed occupancies: in the case of mixed uses, the total requirements for off-street parking facilities shall be the sum of the requirements for the various uses computed separately. Off-street parking facilities for one use shall not be considered as providing required facilities for any other use except as hereinafter specified for a joint use.
19. Motel or hotel: 1.2 spaces for each room or suite plus required spaces for accessory uses and one space per boat moorage stall.
20. Multi-family building, condominiums, timeshares, and apartments: 1.5 per one and two bedroom and two spaces per three or more bedrooms. Developments within the Tourist Accommodation Zoning District shall provide 120% of the required parking to accommodate boats and trailers.
21. Newspaper publication, TV and Radio Studios: one space per five hundred square feet.

3. Development Regulations Amendments: A

22. Open air market used car lot: one space per fifteen hundred square feet of land.
23. Places of Public Assembly:
 1. Library, museum, art gallery, private athletic club, government buildings: one space per four hundred square feet of floor area.
 2. Preschool, nursery, day nursery, kindergarten: two spaces per teacher or adult supervisor.
 3. Elementary or junior high school: three spaces per classroom.
 4. High school or college: eight spaces per classroom.
 5. Parks, playgrounds, golf courses, ball fields, outdoor recreation amenities: one space per five thousand square feet of area including structures.
24. Public swimming pools, including private community pools: one space per fifty square feet of enclosed/fenced pool area.
25. Retail store (exclusive of those listed below): one space per two hundred square feet of floor area.
26. Retail store exclusively handling bulky merchandise such as furniture or appliances: one space per six hundred square feet of floor area.
27. Service or repair shop: one space per six hundred square feet of floor area. Each actual vehicle repair bay area space located inside or outside of a building may be counted as a parking space to attain compliance with this requirement.
28. Single family residence: one space minimum.
29. Unspecified uses: in the case of a use not specifically mentioned, the requirements for off-street parking facilities shall be the same as the above-mentioned use which is most similar.
30. Veterinary hospitals and clinics: one space per four hundred square feet of floor area, provided that a minimum of five spaces shall be required.

Figure A.
Area Exempt from Off Street-Parking Requirements



SECTION ONE - WATER STANDARDS CITY OF CHELAN

DOMESTIC WATER MAIN EXTENSIONS

GENERAL :

INTRODUCTION :

The items herein contained are the domestic water main extension and repair Standards, Conditions, and Specifications for the City of Chelan. These are minimums only when they exceed the minimums required in the Washington State DOH Standard (Department of Health "Water System Design Manual"), and may be increased or altered at the discretion of the Public Works Director to fit particular situations, but in no event shall said standards be reduced below the DOH standard. In the event of conflicting standards the higher standard shall control.

STANDARDS AND CONDITIONS

- A. When extension of the existing water distribution system is required for service, an Agreement for Domestic Water Main Extension in the form which is attached hereto and incorporated herein by this reference as Appendix B, Exhibit 1, shall be entered into between the Developer and the City.
- B. To initiate the Water Main Extension process the Developer shall submit a water plan designed by a registered professional engineer licensed in the State of Washington. Final plan and profile drawings shall be stamped by the same.
- C. The licensed professional engineer shall certify that the design and construction of the water distribution system meets or exceeds all applicable standards, to include backflow prevention and cross connection control.
- D. Obtaining necessary permits will be the responsibility of the Developer.
- E. Where franchises, easements or deeds to property are required it shall be the responsibility of the Developer to obtain and provide the same and submit appropriate documentation to the City.
- F. Easements shall be as per Section 10 of this code.
- G. All developments shall be required to provide sufficient water storage for fire protection which shall be in addition to those water supplies required for domestic purposes.

SECTION ONE - WATER STANDARDS CITY OF CHELAN

- H. A development containing forty lots or more shall contain at least two water supply routes, completing a system loop.
- I. In a development where lot size is larger than one acre, fire hydrants shall be spaced no further than one thousand feet apart and in subdivisions where lot size is less than one acre, fire hydrants shall be spaced no further than six hundred feet apart. Where multiple family housing developments are developed within a subdivision, fire hydrant spacing shall be no further than five hundred feet apart, with additional fire hydrants located as may be necessary to permit all sides of a building to be reached by hose outlays of no greater than three hundred feet. In industrial or commercial areas, hydrants will be installed at three hundred (300) foot spacing. Typically, hydrants will be installed on alternating sides of the street. The size, type and location of fire hydrants shall meet the approval of Fire District 7. Fire hydrants shall conform with the Uniform Fire Code as adopted by the City.
- J. ~~The minimum size water main permitted shall be six inch (6") diameter when an adequate grid is provided. An adequate grid shall be defined as a piping system that measures no more than six hundred feet on one side and the sum of the two sides shall not exceed nine hundred feet. Hydraulic calculations shall be submitted where required to validate designs involving two or more pressure zones, a booster pump, or a reservoir, as required by the engineer. Where an adequate grid is not established, pipe size shall be eight inch (8") diameter or larger as required to transport peak daily demand plus fire flow.~~
- J. The minimum size water main permitted shall be eight inch (8") diameter. Hydraulic calculations shall be submitted where required to validate designs involving two or more pressure zones, a pressure reducing station, a booster pump, or a reservoir. Six inch (6") pipe shall be allowed at the discretion of the City Engineer, when hydraulic analysis shows it will be adequate to transport peak daily demand plus fire flow.
- K. The Developer shall supply an "as-built" drawing on approved mylar film and electronic CD format as an AutoCAD file.
- L. The Developer is required to supply bonding and insurance as per the Section on "Bonding and Liability Insurance."
- M. The Developer shall notify the City 48 hours prior to connection between the City's existing system and the new water distribution system.

SECTION ONE - WATER STANDARDS CITY OF CHELAN

- N. All main lines must be designed to provide proper circulation of water and fire flow to all lands serviced by the development. Extensions shall be required through and to the extremes of the property for future service as determined by the City. Fire flow demand shall be in accordance with the Uniform Fire Code Appendix Table III-A as now exists or as may be amended.
- O. Hydrostatic testing (see page 4-14) 1-13 shall be accomplished by the developer on lines before completion of backfilling, with the pipe joints accessible for examination. Sufficient backfill material shall be placed over the pipe barrel between joints to prevent movement.
- P. Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The City shall not be barred from requiring the Developer to reimburse the City for the removal, adjustment, replacement, repair or disposal of any unauthorized or defective work or material or from recovering costs for any such work or material within two years.
- Q. Meters smaller than 2" shall be furnished and set by the City. Meters shall not be activated prior to payment by water user of all applicable hook-up fees. The City owns and maintains only appurtenances from and including the water meter to the water main.
- R. Water Main Extension projects shall be conveyed to the City for operation and maintenance upon final project acceptance.
- S. Installation and testing shall be in conformance with the current edition of APWA (American Public Work Association) specifications, Division IV. The City must supervise the owner taking necessary samples for bacteriological tests. The system shall not be placed into service until the City provides written permission.
- T. For existing platted lots, the City may enter into Latecomer Agreements with Developers, prior to installation of water mains and appurtenances, in order to provide for the reimbursement to Developers for a pro-rata share of the cost of construction pursuant to Chelan Municipal Code Chapter 13.36 and Chapter 12.28 as now exists or as may hereafter be amended.
- U. Interim Water Systems
1. Individual or small group domestic wells are allowed in unincorporated areas (i.e., outside city limits) within the City's Urban Growth Area where domestic

SECTION ONE - WATER STANDARDS CITY OF CHELAN

water service is not available within 750 feet in the following cases only:

- a. In the case of single family residential land divisions, provided:
 - i. The parcel to be divided shall be at least 20 acres in size;
 - ii. The parcel may be divided into no more than four lots; and
 - iii. Each lot must be at least five acres in size.
 - b. To serve agricultural tourism uses and small-scale craft beverage production uses.
- ~~2. Any approval for a domestic well shall include the condition that the well will be decommissioned and the property connected to the city water system within ninety days of water availability, defined as when the water system is extended to within 200 feet of the closest property line.~~
 3. Domestic wells shall meet all applicable requirements of the Chelan-Douglas Health District, the Washington State Department of Health, and the Washington State Department of Ecology, including compliance with Chapter 173-160 WAC.
 4. Domestic wells for agricultural tourism uses and small-scale craft beverage production uses must be decommissioned in accordance with Chapter 173-160 WAC if the agricultural tourism or small-scale craft beverage production use is discontinued.
 5. The property owner shall sign an agreement not to protest a future local improvement district (LID), later comer agreement or other pro rata sharing of costs to construct and extend public water to the property.
 - a. Said agreement shall describe the property, shall be recorded with the Chelan County auditor's office, and shall constitute a covenant running with the property. The agreement and all provisions of the on-site well approval shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.
 - b. In addition to the cost of constructing and extending public water to the property, the owner shall be required to pay all applicable General Facilities Charges.
 6. The property owner shall sign an agreement not to protest annexation of the property to the city. Said agreement shall allow the city to execute a petition for annexation on behalf of the owner if the owner does not do so when requested by the city; and shall describe the property, be recorded with the Chelan County auditor's office, and constitute a covenant running with the property. The agreement and all provisions of the on-site well approval shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.
 7. Future roadway development.
 - a. In the case of land divisions, the layout of the parcels shall accommodate future urban growth, providing for road access to all parcels created by the division and to neighboring properties.

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SECTION ONE - WATER STANDARDS CITY OF CHELAN

- b. In all cases, building setbacks from the front and, where applicable, side property lines must be adequate to accommodate future development of a street meeting the City's standards, which may include sidewalks, parking lanes, bicycle lanes, planter strips, and utility easements.
 - c. The City may impose requirements for future urban development, including requiring dedication of easements for future roadway and utility development.
 - d. The property owner shall sign an agreement not to protest a future LID or other pro rata sharing of costs to construct and extend public streets to and adjacent to the property. Said agreement shall describe the property, shall be recorded with the Chelan County auditor's office, and shall constitute a covenant running with the property. The agreement shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.
8. The property owner shall comply with all requirements of the city's comprehensive land use plan, zoning and building codes, and development standards when dividing, developing, or redeveloping the property. In particular:
- a. Domestic wells must comply with Chapter 14 CMC, Critical Areas.
 - b. The property owner shall improve the city right-of-way adjacent to the property in conformance with the City's standards or, in cases in which concurrent street improvement is not required (e.g., where access via private driveway is allowed), shall execute a waiver of protest for an LID to construct any street improvements required for access to or through adjacent property.

SECTION ONE - WATER STANDARDS

CITY OF CHELAN

wrench which measures the torque applied. Required torque for mechanical joints shall be as follows:

4" - 24" pipe size 3/4" bolts 60-90# torque.

Installation of push-on-joint (Tyton) pipe shall be in accordance with the manufacturer's instructions.

PVC PIPE:

PVC pipe shall be AWWA C900-81 high pressure water pipe, class 200, and shall meet the requirements of DR 14.

The gasketed joint assembly shall conform to ASTM D3139 with gaskets conforming to ASTM F477.

The Developer shall furnish written certification from the manufacturer of the pipe and gasket being supplied that the inspections and all of the specified tests have been made and the results thereof comply with the requirements of this standard.

PVC PIPE INSTALLATION:

PVC pipe shall be installed in accordance with AWWA M23 and the manufacturers recommendation.

The bottom of the trench shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint.

TRACER WIRES

The Contractor shall install a tracer wire, in addition to the location ribbon, over all non-metallic water mains. The tracer wire shall be 14 gauge copper wire with blue coded UF insulation. The tracer wire shall be installed as shown on the City of Chelan Standard Drawing. Bare wire contact points shall be provided at valve boxes, air release and blow off installations.

DETECTABLE MARKING TAPE:

Detectable Marking Tape (S.9-15.18) shall be installed ~~twelve inches (12") below finished grade~~ **12" to 18" above pipe crown** over all PVC pipe located within public street right-of-ways. Pipe locator ribbon shall be two inches wide, plastic coated aluminum and shall be clearly marked, "CAUTION BURIED WATER LINE" continuously along the length of the ribbon with minimum 1-1/2 inch letters. The ribbon shall be blue in color **for water pipe**. ~~For combined utility ditch requirements see Section 10.~~

GATE VALVES:

Gate Valves shall be used in all applications unless otherwise specified by the City Engineer. They shall conform to the Standards of AWWA G-509 C-515 . Buried gate valves shall be iron body, bronze mounted, resilient wedge, nonrising stem, operating stems equipped with Standard two (2) inch operation nut, and O-ring stem seals, suitable for installation with the type and class of pipe being installed. Ends to be as specified.

Valves not buried shall be so specified.

BUTTERFLY VALVES:

When specified, butterfly valves shall conform to AWWA Standard C504, Class 150, with cast iron short body and O-ring stem seal. Valves in chambers shall have a manual crank operation. Buried valves shall have stem extension with AWWA 2-inch operation nut. Full cycle open and close shall be confirmed after installation but prior to backfill. **Butterfly valves shall not be directly connected to C900 pipe.**

CHECK VALVES:

Check valves shall be for 150 psi working pressure, unless otherwise specified. Valve shall have adjustable tension lever and spring to provide non-slamming action under all conditions unless otherwise specified. Check valves shall be equal to Empire Fig. 230 single increasing lever and spring.

AIR AND VACUUM RELEASE VALVES:

Air and vacuum release valves shall be APCO - Valve and Primer Corporation, "Heavy-Duty", combination air release valve, or equal.

Installation shall be as shown on the Standard Detail, Section Two, page 5.

Piping and fittings shall be copper or brass. The installation shall be set at the high point of the line. Water line must be constructed so the air release valve may be installed in a convenient location.

VALVE INSTALLATION:

The valve and valve box shall be set plumb with the valve box centered on the valve. Valve boxes shall be set flush in pavement and in gravel roads as required by the City. An area around the top shall be black topped in unimproved roads for 2 feet. Where valve operation nut is more than 3 feet below finished grade, a stem extension shall be installed conforming to the Standard Detail, Section 2, pg 2-6.

VALVE BOXES:

Valve boxes shall be cast iron, two-piece with tabs, for 42-inch trench with

extension, Tyler 7126 top and 7100 bottom.

VALVE MARKER INSTALLATION:

When specified, concrete marker posts painted with two coats, Rust-Oleum yellow paint shall be set for all valves except auxiliary hydrant valves. The post shall be set at right angles to the road from the valve and shall be situated in a safe and reasonably conspicuous location, normally on the property line. Distance to valve shall be neatly stenciled on the post with two inch numerals. Valve markers shall be installed in unimproved or unpaved areas.

Valve marker posts shall be reinforced concrete posts, 4" x 4" on one end, 42 inches long. Fogtite Meter Seal Co. or equal.

FIRE HYDRANTS:

Fire hydrants shall have a minimum valve opening of 5-1/4" O-ring stem seal, two 2 1/2" N.S.T. hose nozzle connections, and one 4 1/2" N.S.T. pumper connection. The shoe connection shall be 6" mechanical joint or flanged. The operation nut shall be 1 1/4" pentagonal. Hydrants shall be Mueller Centurion or approved equal, with approved breakaway features and Storz fitting. A minimum of one field re-build kit will be supplied by the Developer. On large projects, one kit will be supplied for every ten hydrants installed.

HYDRANT GUARDS:

When required by City engineer, hydrant guards shall consist of individually designed curbed planters. Hydrant guards shall be required where hydrants are susceptible to potential vehicle contact as determined by the City.

SERVICE CONNECTION:

Connections shall be installed with pipe saddles and corporation stops on C900 PVC, asbestos cement, and steel, and by direct tap into Class 52 or thicker ductile. Installation shall be as shown in the Standard Details. Minimum size tap is 1 inch.

METER BOX:

Meter box shall be complete with full lid. Lid shall have a hole for Sensus Touch Read. One inch service box shall be Mueller/McCullough thermal-coil meter box 18" diameter 48" depth equipped with inlet angle meter stop with lockwing, dual angle check valve outlet and insulating pad. 1 1/2" and 2" meter boxes shall be concrete H 2 precast 2019.

PLASTIC SERVICE PIPE AND CONNECTIONS:

SECTION TWO - WATER DESIGNS

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*Change page numbers and make details so
services and blocking details are together.*

SECTION THREE - SEWER STANDARDS CITY OF CHELAN

SEWER MAIN EXTENSIONS

GENERAL :

INTRODUCTION :

The items herein contained are the sewerage system standards, conditions, and specifications of the City of Chelan. These are minimums only and may be increased or altered to fit particular situations. Any material, design, standard, or testing not specifically addressed within this document shall be as per the current edition of American Public Works Association Standard Specifications for Road, Bridge, and Municipal Construction and/or Washington State D.O.E. Criteria for Sewage Works Design which are hereby adopted by this reference as if fully set forth herein. (See CMC 13.06.050 F)

STANDARDS AND CONDITIONS :

- A. When extension of the existing sewer system is required for service, an Agreement for Sewer Main Extension shall be entered into between the Developer and the City, substantially in the form which is attached hereto and incorporated herein by this reference as Appendix B, Exhibit 1.
- B. To initiate the Developer Extension process the Developer shall submit a sewer plan prepared by a Professional Civil engineer licensed in the State of Washington. Plan/Profile drawing shall be produced on mylar copy and CD electronic format.
- C. The licensed professional civil engineer shall certify that the design and construction of the sewerage collection system meets or exceeds all applicable standards.
- D. Obtaining necessary permits will be the responsibility of the Developer.
- E. Where franchises, easements or deeds to property are required it shall be the responsibility of the Developer to provide same and submit appropriate documentation to the City.
- F. Easements shall be as per Section 10 of this code.
- G. The Developer shall supply a certified "As-built" drawing meeting all standards established in Appendix B

SECTION THREE - SEWER STANDARDS CITY OF CHELAN

- H. The Developer is required to supply insurance and bonding as per Section 13 of this code.
- I. Connection between the City's existing system and the new sewerage collection system shall be made by the Developer at the expense of the Developer.
- J. All main lines must be designed to provide for proper collection of sewerage from all lands served by the development. Extensions shall be required through and to the extremes of the property for future service as determined by the City.
- K. Pressure and leakage testing shall be accomplished as per specifications contained herein before final acceptance.
- L. Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The City shall not be barred from requiring the developer to reimburse the City for the removal, adjustment, replacement, repair or disposal of any unauthorized or defective work or material or from recovering costs for any such work or material.
- M. Sewer hook-ups shall be made by the lot owner. Sewer service shall not begin prior to payment by of all applicable hook-up fees.
- N. Sewer Main Extension projects shall be conveyed to the City for operation and maintenance upon final project acceptance.
- O. For existing platted lots, the City may enter into latecomer agreements with Developers prior to installation of sewer mains and appurtenances, to provide for the reimbursement of a pro-rata share of the cost of construction by the sewer service users of any real estate who have not contributed to the original cost of such facilities and who subsequently connect to the sewerage collection system, pursuant to Chapter 12.28 of the Chelan Municipal Code as it now exists or as may be hereafter amended.
- P. Interim On-Site Septic Systems
 - 1. On-site septic systems are allowed in unincorporated areas (i.e., outside city limits) within the City's Urban Growth Area where a public, sanitary or combined sewer is not available within 750 feet of the property line in the following cases only:
 - a. In the case of single family residential land divisions, provided:
 - i. The parcel to be divided shall be at least 20 acres in size;
 - ii. The parcel may be divided into no more than four lots; and
 - iii. Each lot must be at least five acres in size.

SECTION THREE - SEWER STANDARDS CITY OF CHELAN

- b. To serve agricultural tourism uses and small-scale craft beverage production uses.
- ~~2. On-site septic systems must comply with Chapter 13.06, Sewer System, of the Chelan Municipal Code, including the requirement to abandon the building sewer and connect the building sewer to the public sewer system within ninety days of official notice to do so, which will be given when the sewer system is extended to within 200 feet of the closest property line.~~
3. On-site septic systems for agricultural tourism uses and small-scale craft beverage production uses must be abandoned if the agricultural tourism or small-scale craft beverage production use is discontinued.
4. The property owner shall sign an agreement not to protest a future local improvement district (LID), late comer agreements or other pro rata sharing of costs to construct and extend public sewer to the property.
- a. Said agreement shall describe the property, shall be recorded with the Chelan County auditor's office, and shall constitute a covenant running with the property. The agreement and all provisions of the on-site septic system approval shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.
- b. In addition to the cost of constructing and extending public sewer to the property, the owner shall be required to pay all applicable General Facilities Charges.
5. The property owner shall sign an agreement not to protest annexation of the property to the city. Said agreement shall allow the city to execute a petition for annexation on behalf of the owner if the owner does not do so when requested by the city; and shall describe the property, be recorded with the Chelan County auditor's office, and constitute a covenant running with the property. The agreement and all provisions of the on-site septic system approval shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.
6. Future roadway development:
- a. In the case of land divisions, the layout of the parcels shall accommodate future urban growth, providing for road access to all parcels created by the division and to neighboring properties.
- b. In all cases, building setbacks from the front and, where applicable, side property lines must be adequate to accommodate future development of a street meeting the City's standards, which may include sidewalks, parking lanes, bicycle lanes, planter strips, and utility easements.
- c. The City may impose requirements for future urban development, including requiring dedication of easements for future roadway and utility development.
- d. The property owner shall sign an agreement not to protest a future LID

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SECTION THREE - SEWER STANDARDS CITY OF CHELAN

or other pro rata sharing of costs to construct and extend public streets to and adjacent to the property. Said agreement shall describe the property, shall be recorded with the Chelan County auditor's office, and shall constitute a covenant running with the property. The agreement shall bind the owner and all other persons subsequently acquiring any right, title or interest in or to the property.

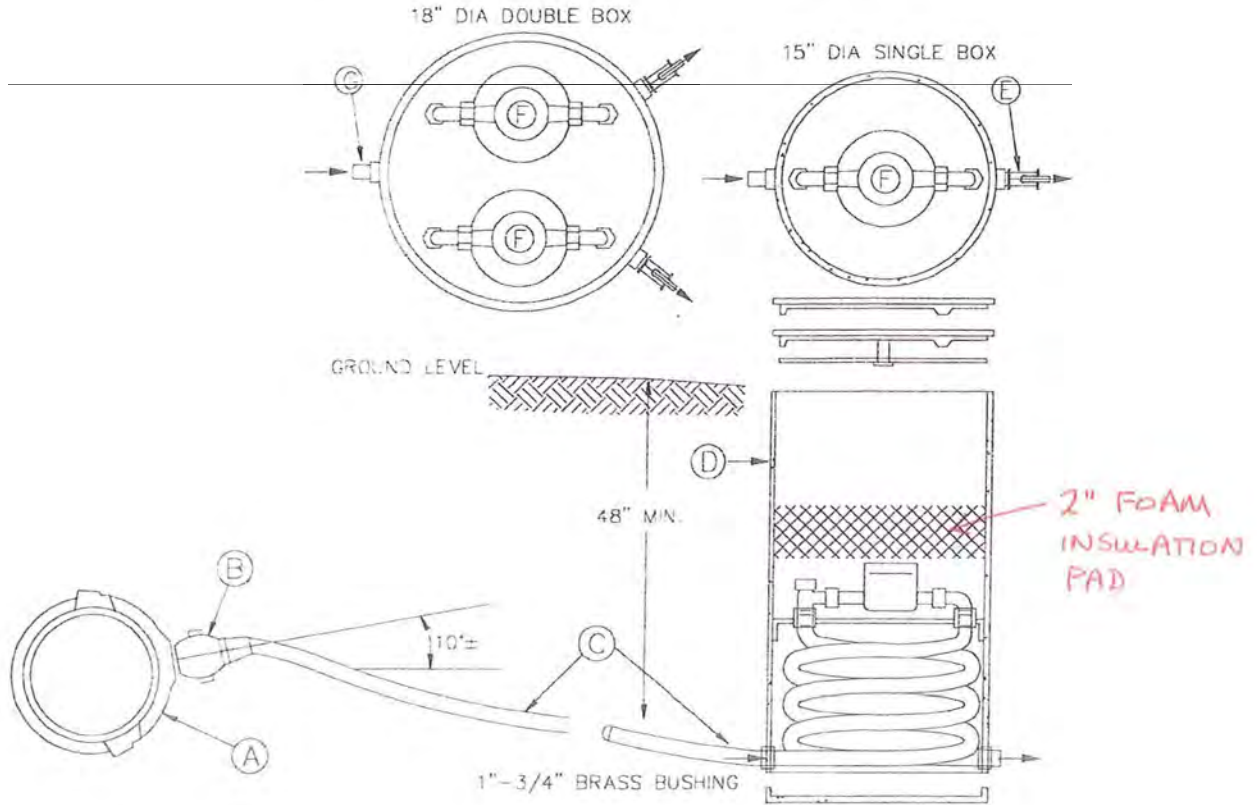
7. The property owner shall comply with all requirements of the city's comprehensive land use plan, zoning and building codes, and development standards when dividing, developing, or redeveloping the property. In particular:
 - a. On-site septic systems must comply with Chapter 14 CMC, Critical Areas.
 - b. The property owner shall improve the city right-of-way adjacent to the property in conformance with the City's standards or, in cases in which concurrent street improvement is not required (e.g., where access via private road is allowed), shall execute a waiver of protest for an LID to construct any street improvements required for access to or through adjacent property.

SECTION TWO - WATER DESIGNS

CITY OF CHELAN

3/4"-1" SINGLE and DOUBLE WATER SERVICE

1" - 3/4" WATER METER SERVICE



- A. 1" SADDLE, ROMAC 101S OR 202S OR EQUAL.
- B. 1" CORPORATION STOP, MUELLER OR APPROVED EQUAL.
- C. 1" HOPE COPPER TUBE SIZE WITH A WORKING PRESSURE OF 200 PSI OR EQUAL.
- D. 3/4" MUELLER METER COIL BOX.
- E. BALL VALVE OR STOP AND WAIST VALVE TO BE INSTALLED BY PROPERTY OWNER **DOWNSTREAM OF METER.**
- F. SENSUS GALLON READ TRPO.
- G. DOUBLE METER, 1 1/2" SUPPLY LINE AND FITTINGS.
- H. **ALL HARDWARE SUPPLIED BY DEVELOPER UNLESS OTHERWISE NOTED.**

NOTES:

1. MATERIAL SUBSTITUTIONS OR DETERMINATION OF EQUAL ARE DISCRETION OF THE PUBLIC WORKS DIRECTOR.
2. SERVICE LINE TO BE 90° OF MAIN.
3. ALUMINUM BACKED LOCATE TAPE OVER SERVICE LINE FOR LOCATION AND TONING WIRE.
4. DRAWING NOT TO SCALE.
5. CORRELATE WITH PAGE 2-9.

10-019

IDENTIFYING DETECTABLE MARKING TAPE:

Identifying tape shall be installed ~~twelve inches (12") below finished grade~~ **12" to 18" above pipe crown** over all **PVC** pipe located within public street right-of-ways. Pipe locator ribbon shall be two inches (2") wide, plastic coated aluminum and shall be clearly marked, "CAUTION BURIED SEWER LINE" continuously along the length of the ribbon with minimum 1-1/2 inch letters. The ribbon shall be green in color **for sewer pipe**.

METHODS OF CONSTRUCTION:**PIPE LAYING:**

1. Pipe laying shall be in accordance with the latest edition of APWA Construction Manual for Municipal Public Works, Volume 3.
2. The first section of pipe not less than 300 feet in length installed by each crew shall be tested in order to qualify the crew and/or material. Successful installation of this section as determined by the City shall be a prerequisite to further pipe installation of said crew.
3. Each pipe shall be laid with bells upgrade with the invert of the pipe to the alignment and grade shown on the plans. Care shall be exercised to insure close concentric joints and a smooth invert. Open ends of pipe or fittings shall be temporarily blocked and covered when laying is not in progress.
4. Trench shall be kept dewatered during pipelaying.
5. Adjustment to the line and grade shall be done by scraping away or filling in and tamping approved pipe bedding material under the body of the pipe. Adjustment to the line and grade by wedging and blocking shall not be permitted.
6. The pipe shall be lowered into the trench by means of ropes, tripod, crane or any other suitable means. The pipe shall not be dropped or handled roughly. The pipe shall be checked for cracks and defects prior to use, and any defective pipe shall be rejected.
7. Wyes shall be installed as shown on the Standard Details as contained herein and at such locations as are shown on the plans or as otherwise directed by the City. These items shall not be covered until the City has recorded their exact location.
8. Pipe laying shall start from the lowest point unless otherwise approved by the City.

SECTION FIVE - STREET STANDARDS

CITY OF CHELAN

- F. A pre-construction meeting shall be held with the City of Chelan Public Works Department a minimum of 72 hours prior to the start of construction.
- G. The contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate line at 1-800-424-5555 a minimum of two business days prior to any excavation.
- H. It shall be the responsibility of the contractor to have a copy of an approved set of plans on the construction site at all times.
- I. All surveying and staking shall be performed per the corresponding sections of the City of Chelan Development Standards Manual.

5C.020 Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is a specialized study of the impacts that development will have on the surrounding transportation system. The TIA is an integral part of the development impact review process. It is specifically concerned with the generation, distribution, and assignment of traffic from the ~~new development~~. *New development is defined as a "site action that triggers SEPA requirements."* "New development" shall not include individual one or two-family residential lots within plats. *as defined in Appendix A.*

In accordance with the City of Chelan Traffic Impact Analysis Guideline, a full or partial TIA may be required if:

1. The new development generates 20 or more new PM peak hour trips; or
2. The project requires a SEPA review; or
3. The new development will generate more than 50 peak hour trips at a time other than the PM peak hour.

The TIA Guidelines are provided in Appendix D of the Development Standards Manual.

Defining development as that which triggers SEPA is limiting; the definition in Appendix A is more complete.

5C.030 Minimum Street Design Standards

Functional Classification		Local/ Private	Minor Collector	Major Collector	Principal Arterial
Minimum horizontal curve radius on inside face of curb	Terrain ≤ 15% Mountainous > 15%	80' 80'	100' 80'	150' N/A	300' N/A
Maximum Grade in %	Terrain ≤ 15% Mountainous > 15%	10% 12%	10% 12%	10% N/A	8% N/A
Minimum roadway width, curb face to curb face	Terrain ≤ 15% Mountainous > 15%	28' 28'	32' 28'	52' N/A	46' (Note 4) N/A
Sidewalk minimum width (add 0.5' for curb) (see note 1)	Terrain ≤ 15% Mountainous > 15%	5' both sides 5' one side	5' both sides 5' both sides	5' both sides N/A	10' both sides (Note 5) N/A
Bank Slope (h:v)	Terrain ≤ 15% Mountainous > 15%	2:1 2:1	2:1 2:1	2:1 N/A	2:1 N/A
Minimum Right of Way	Terrain ≤ 15% Mountainous > 15%	50' (Note 2) 38' (Note 3)	54' 43' (Note 3)	74' N/A	100' N/A
Parking Lane	Terrain ≤ 15% Mountainous > 15%	1 @ 8' 1 @ 8'	1 @ 8' 1 @ 8'	2 @ 8' N/A	Note 6 N/A
Bike Lanes	Terrain ≤ 15% Mountainous > 15%	N/A N/A	N/A N/A	2 @ 6' N/A	2 @ 6' N/A
Traffic Lanes	Terrain ≤ 15% Mountainous > 15%	2 @ 10' 2 @ 10"	2 @ 12' 2 @ 10'	2 @ 12' N/A	Note 7 N/A
Planter Strip	Terrain ≤ 15% Mountainous > 15%	2 @ 6' N/A	2 @ 6' N/A	2 @ 6' N/A	2 @ 6' (Note 8) N/A
Utility Easement (See Note 9)	Terrain ≤ 15% Mountainous > 15%	2 @ 6' N/A	2 @ 6' N/A	2 @ 6' N/A	2 @ 6' N/A
Road Surface (See Note 10)		3" asphalt, 3" top course, 4" base	3" asphalt, 3" top course, 4" base	4" asphalt, 4" top course, 6" base	4" asphalt, 4" top course, 6" base

Notes to Table:

- 10' width in commercial or industrial areas as required by City engineer.
- Private road right-of-way width may be reduced to 40' at discretion of City engineer.
- For mountainous terrain, an additional 2 feet of right-of-way is provided behind the back of curb and/or sidewalk.
- Based on two 11-foot lanes, one 12-foot center lane, and two 6-foot bike lanes. Actual width will be determined by number of travel lanes based on the projected volume of traffic, and by on-street parking requirements.
- The minimum sidewalk width for arterials will be six feet for all other areas not designated within City planning documents.
- Parking lane required in designated areas per approved planning documents.
- Actual width will be determined based on two-five travel lanes depending on projected volume of traffic using the facility. (Refer to Transportation Plan.)
- Planter strips will be required for all areas where the sidewalk width is between 5-8 feet; otherwise, street trees may be included within the 10-foot sidewalk width. The City engineer will make the final determination.
- Utility easement strips will be located immediately adjacent to the back of sidewalk and/or street right-of-way edge. For mountainous terrain areas, non-City utilities will be located within the roadway prism at the location approved by the City engineer. The easement strips are provided for all non-City utilities and snow removal.
- Base course depths may require a design depth by a soils engineer if determined by the City engineer.

5C.035 Minimum Street Design Standards for the Downtown Planning Area

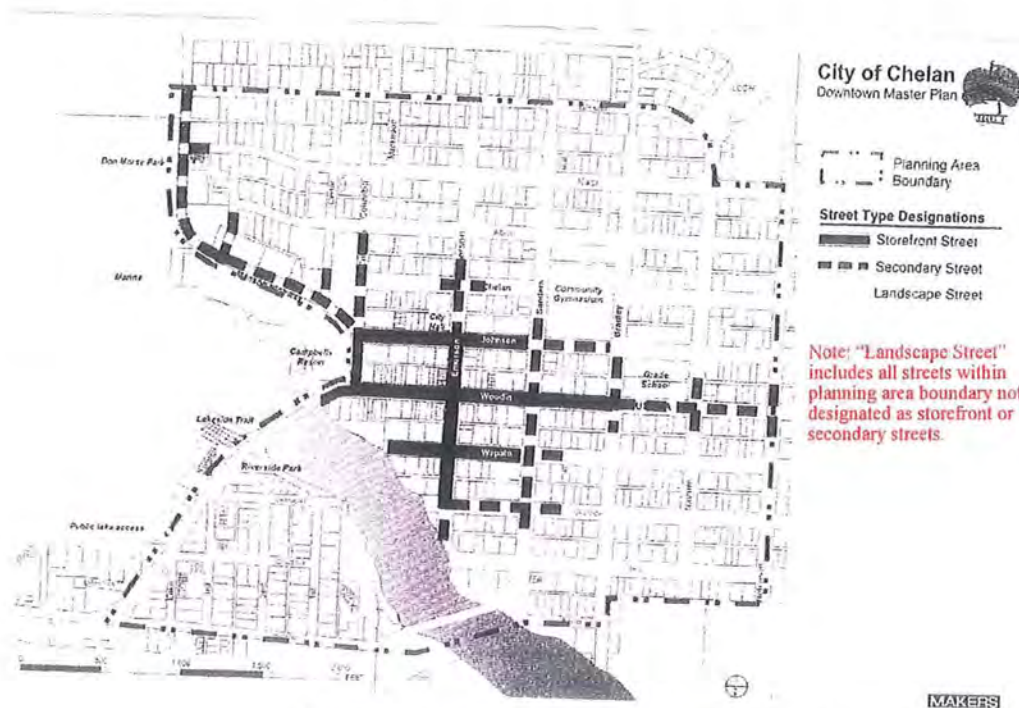


Figure 1. Downtown Planning Area and street type designations.

- A. All streets within the Downtown Planning Area (see figure 1 above) shall comply with the Minimum Street Design Standards as set forth in subsection 5C.030 above, with the following exceptions:
1. **Compliance with the Non-motorized Transportation Improvement Plan.** Street improvements shall comply with provisions in the Non-Motorized Transportation Improvement Plan, except where more recent and detailed improvements have been adopted for a specific street or streets.
 2. **Compliance with the goals and policies of the Downtown Master Plan.** Street improvements shall comply with the goals and policies of the Downtown Master Plan, except where more recent and detailed improvements have been adopted for a specific street or streets.
 3. **Compliance with adopted street improvement plans.** Street improvements shall comply with detailed improvement plans adopted by the City for specific streets.
 4. **Designated Storefront Streets.** Designated storefront streets shall include minimum 12-foot wide sidewalks on both sides of the street with trees placed in grates every 30 feet on average towards the curb edge. Tree grates may be up to 6 feet square provided there is a minimum unobstructed walking

surface of 8 feet (space between the tree **edge of tree grate** and outside edge of sidewalk). On-street parking is required. Curb extensions at all intersections are required in order to reduce street crossing widths for pedestrians and improve the visual appearance and character of the streets. Curb extension design shall be approved by the City engineer.

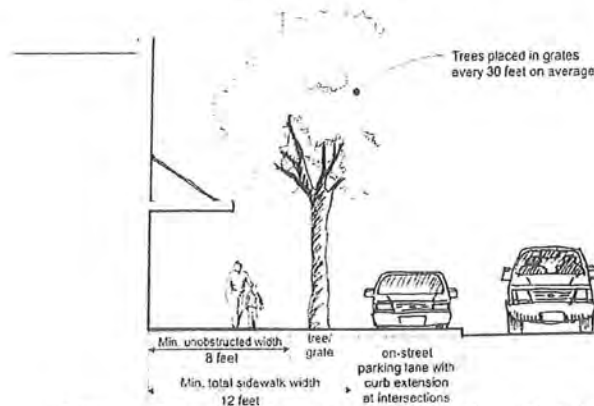


Figure 2. Standards for designated Storefront Streets.

5. **Manson Highway** (portion within Downtown Planning Area): Provide bicycle and pedestrian improvements as set forth in the Non-Motorized Transportation Improvement Plan and any subsequent adopted improvement plans, At minimum, street trees shall be included along both sides of the street edge spaced every 30 feet on average. Unobstructed sidewalk widths shall be at least 8 feet on the north/east side of the street.
6. **Designated Secondary Streets (except Manson Highway)**. Where street improvements are required in conjunction with new development, the following requirements or options apply:
 - a) On portions of these streets containing storefront development, sidewalks on both sides of the street shall be a minimum of 10 feet in width with trees placed in grates every 30 feet on average towards the curb edge. Tree grates may be up to 6 feet square provided there is a minimum unobstructed walking surface of 6 feet (space between the **edge of tree grate** and outside edge of sidewalk). Exceptions: 4' x 4' planting strips may be used in place of tree grates at the discretion of the City engineer. Alternatively, continuous planting strips may be used along the curb edge instead of trees within grates, provided the sidewalks and planting strips are at least 6 feet wide each.
 - b) For non-storefront developments, sidewalks and planting strips shall be at least 6 feet wide each.
 - c) On-street parking is required on all streets, except where provided in adopted improvement plans.
 - d) Curb extensions **returns** are required on all street corners, except where provided in adopted improvement plans. Curb extension design

5C.040 Street Frontage Improvements

A. All commercial and residential (including multi-family) development (**except single-family residences and owner-occupied duplexes**), subdivisions, short subdivisions and binding site plans shall install street frontage improvements at the time of construction as required by the Public Works Department. For new proposals which fall under the definition of development in Appendix A, if Site Plan Review (SPR) approval is necessary, frontage improvements shall be required. If an existing use is being altered or improved, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, or SPR approval per CMC 19.01, and
2. The site has more than 100 feet of total frontage, and
3. The project meets the threshold requirements as determined by all applicable CMCs.

Per the Site Plan Review approval, such improvements include but are not limited to: curb and gutter; sidewalk; street storm drainage; street lighting system; holiday lighting features; traffic signal modification, utility conduit, traffic control devices, signal interconnect, relocation or installation; public transit amenities, street signing; utility relocation; planter strips; landscaping and irrigation; and street widening all per these Standards. Plans shall be prepared and signed by a licensed engineer registered in the State of Washington.

B. All frontage improvements shall be made across full frontage of property to include full street section with sidewalk on development side of street only. Off project site frontage improvements may be required if determined by the City for public safety.

C. Utility relocations shall follow the requirements as outlined in Section 10, Utility Designs, in these Standards.

D. If contiguous parcels are under the same ownership, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, or SPR approval, and
2. The contiguous sites have more than 100 lineal feet of combined frontage, and,
3. The project meets the threshold requirements as determined by all applicable CMCs.

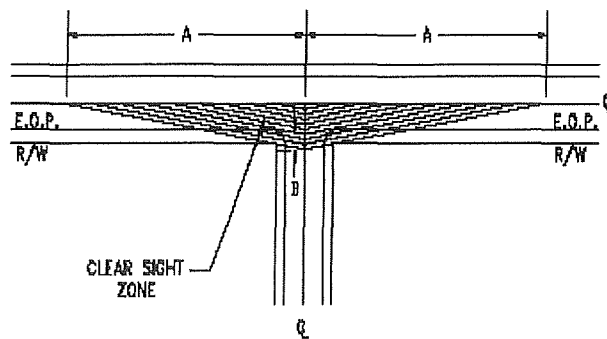
E. Exceptions. When the City engineer deems the above such improvements cannot be accomplished at the time of building construction, frontage improvements may be deferred, modified or waived. These exceptions shall be made a condition of Site Plan Review approval or as a condition of subdivision, short subdivision, binding site plan, and conditional use permit approval.

5C.100 Sight Distance Requirements

The criteria in this chapter shall be used as a reference for streetscape amenities such as signs, trees, fences, bus shelters, etc. Use AASHTO Design standards to determine sight distance criteria for all road and intersection designs. Use WSDOT design standards for access to State highways. Intersections may include public and private driveways and pedestrian crossings. See Chapter 5C.120 for intersection definition.

The area within the sight distance triangle shall be subject to restrictions to maintain a clear view on the intersection approach. The ultimate roadway width (number of lanes) per the most current version of the City's Transportation Plan shall be used to calculate the dimensions of the sight distance triangle.

STOP OR YIELD CONTROLLED INTERSECTIONS



The centerline of the road is the actual physical centerline regardless of the number of lanes. Sight distance B is 15 feet measured from the near edge of traveled way to the eye of the driver on the minor road. The following table shall apply to both vertical and horizontal sight distance.

Posted Speed (mph)	Minimum Distance "A" (in feet)*							Multiplier
	20	25	30	35	40	45	50	
Residential Streets	200	250	300	350	400	450	500	10
Collectors and Arterials	240	300	360	420	480	540	600	12

*Based on Sight of Distance per 10 mph for Design Vehicle "P" Crossing Arterial.

If your speed is not shown above, use the following formula for distance A:

$$\text{Multiplier} \times \text{posted speed} = \text{sight distance A}$$

On roadways with 5 or more lanes or roadways with medians more than 20 feet wide, use AASHTO Design Standards. WSDOT design standards shall be used for access to State highways.

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3 feet and 8 feet above the existing surface of the street.

1. Commercial properties shall provide internal connections between neighboring properties. Developments must give priority to internal access before access to the public roadway system is permitted. Cross access allows vehicles to circulate between commercial properties without having to re-enter the public street system.
2. Public driveways shall meet the sight distance requirement of Chapter 5C.100.
3. No public driveway shall be approved where backing onto the sidewalk or street will occur.
4. Parking lot circulation and signing shall be met on site. The public right-of-way shall not be utilized as part of the parking lot flow. Alleys may be utilized with the approval of the City engineer.
5. The maximum driveway width for a two-way, public driveway with curb returns shall be the same as listed for curb cut, per Section 6-20. A wider public driveway may be approved by the City engineer where a substantial percentage of oversized vehicle traffic exists, where divisional islands are desired, or where multiple exit or entrance lanes are needed.
6. The maximum one-way public driveway width for a curb cut or a driveway with curb return shall be ~~14~~ 20 feet for multi-family residential, and 20 feet for commercial, and industrial uses. The storage length of a driveway must be adequate to prevent vehicles from waiting in thru lanes to enter the site or causing unsafe conflicts with on-site circulation and parking. General standards appear below but these requirements will vary according to the projected volume of the individual driveway. The length shall be measured from the face of curb into the site.



The fire department requires a 20' wide access.

Adequate Driveway Storage Lengths	
Development Type	Minimum Driveway Throat Length
Commercial Center > 150,000 GLA ⁽¹⁾	200 feet
Smaller Project < 150,000 GLA ⁽¹⁾	40-95 feet ⁽²⁾
Signalized Driveway	Based on operational analysis for 95% queue

⁽¹⁾ Gross Leasable Area

⁽²⁾ Distance confirmed by City engineer

7. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the City engineer. Tapers shall be designed per the ITE (Institute of Transportation Engineers) publication, Transportation and Land Development, latest edition.

C. Residential Driveway Access Spacing

1. ~~Residential access to a public street shall be limited to one driveway for each parcel of property separately owned.~~ *This conflicts with Sec 5C.130.A.5*
1. In new construction, residential driveways shall not be permitted to access arterials, major collectors, or minor collectors unless the property has no other reasonable access to the general street system.
2. If an existing residential parcel abuts an arterial, major collector or minor collector, no residential access shall be allowed to those streets within 150-feet of the nearest right-of-way line of an intersecting street.
3. Corner lots shall access the roadway with the lower functional classification.

If the above standards cannot be met, the developer's engineer must design the most appropriate access with safety being the primary design criteria.

D. Public Driveway Access Spacing

1. Access to a public street shall be limited to one public driveway connected to the lowest classified roadway for each parcel of property separately owned. Property fronting more than one public street may be permitted an access to each public street if the Traffic Impact Analysis supports multiple accesses. Two or more public driveways accessing a public street will only be allowed with the approval of the City engineer. Properties contiguous to each other and owned by the same person are considered to be one parcel.
2. If all other access management techniques have been exhausted, the City will permit public driveways utilizing the following minimum corner clearance requirements. Corner clearance is the distance between a private access and the nearest cross road intersection and is applicable to all roadway classifications. Corner Clearance is necessary to provide adequate perception-reaction time to reduce potential downstream conflicts and is aimed at preventing the location of driveways within the functional area of an intersection. Minimum driveway setback and corner clearance requirements shall meet the most current ITE standard. The minimum corner clearance setbacks are shown in the following table.

Minimum Corner Clearance Distance (in feet) from Near Side of Street to Near Side of Access Driveway		
Posted Speed (mph)	Major Traffic Generator	Minor Traffic Generator
30	200	150
35	260	215
40	330	260
45	395	310
50	460	345

Reference: Traffic Engineering Handbook

Standard Details Section. Permanent dead ends shall be properly signed per Section 3C-4 of the MUTCD.

At the end of a sidewalk to be extended in the future, a red and white type II barricade the full width of a sidewalk is required.

5C.180 Alleys

Alleys, where provided at the rear of lots, shall have a minimum right-of-way width of twenty feet. ~~and shall be designed in accordance with the alley detail in the Standard Details section.~~ Dead-end alleys and alleys with sharp changes in direction are prohibited. Alleys as a primary access are encouraged, subject to the following standards:

→ No alley detail exists.

1. The alley right-of-way must be at least twenty feet wide; and
2. The alley must be paved; and
3. Alley access shall be subject to approval by the City engineer. The City engineer's review shall include, but not be limited to, review of provisions for trash collection and snow removal, and access by fire trucks and other emergency service vehicles.

Existing lots that have no alternative access may be exempted from the standards by the City engineer.

Alleys immediately north and south of Woodin Avenue between Columbia and Sanders Streets are also subject to the following design provisions:

1. Storage areas shall be enclosed within the building or by 5-foot minimum tall screens made of durable material as determined by the City (chain link is not acceptable.)
2. 6-foot wide elevated (at least 4-inches high) platforms located outside of the required clearance area are required for waste receptacles. Where more than one dumpster is needed, the platform must be sized to allow for a minimum 2-foot clearance between dumpsters for service vehicles.
3. Lighting over all entries facing the alley is required.
4. Lights, hanging baskets, canopies, or other overhead features within the alley right-of-way shall be at least 15 feet above the ground to accommodate service vehicles.
5. All businesses shall provide at least one sign along the alley. Permitted sign types include a wall sign, a projecting sign or suspended sign, and a window sign. See CMC Chapter 17.58 for applicable sign standards.
6. Alley design amenity toolbox. New buildings and Level III Additions [per CMC 17.14.010 (B)] shall incorporate at least two amenity features. Level I and II Remodels/Additions [per CMC 17.14.010 (B)] shall incorporate at least one feature. All other existing or new businesses occupying existing buildings are encouraged to incorporate one or more amenity features from the list.
 - a. Transparent windows occupying at least 15 percent of the facade,
 - b. Decorative light fixtures.
 - c. Decorative signage

The City may require roadway work to commence at night when it is in the best interest of the public.

Two-way traffic shall be maintained at all times unless specifically approved in the traffic control plan. Flaggers shall be shown on the traffic control plan except for emergency situations. The developer is responsible for traffic control signing per Chapter 5E.090.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans, these specifications, the MUTCD, and the WSDOT Standard Plans. If the City determines that lane restrictions are causing congestion, the contractor will be required to open any lanes, as determined by the City, until the congestion is eliminated.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens.

The contractor shall maintain pedestrian access through or around the project site at all times without having pedestrians enter the travel lane.

Flaggers shall possess a current flagging card issued by the State of Washington prior to performing any traffic control work on a project. Workers engaged in flagging shall wear reflective clothing and hard hats in accordance with the WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction. Flagger's paddles shall meet MUTCD standards.

5D. NON-MOTORIZED TRANSPORTATION

5D.010 General

All properties, with the exception of an individual single family residence or owner-occupied duplex, abutting public streets shall, in conjunction with new construction on such properties where the estimated cost of the alterations or improvements constitute 25% 50% or more of the value of the existing structures on the property according to current Assessor records, have sidewalks constructed along abutting streets. Curbs and gutters must also be constructed along the abutting street when the City engineer determines that the conditions of drainage require curbs and gutters.

revised to be consistent with the definition of "development".
~~In cases where a sidewalk exists adjacent to the curb, the sidewalk must be moved back to accommodate a new planter strip.~~

Upon approval of the City engineer, sidewalk construction may be deferred as described in 5C.040.E, although the necessary right-of-way shall be granted to facilitate future construction of the sidewalk.

Building footings shall not be located under a public sidewalk. Footings may be located under a sidewalk if the sidewalk is in an easement and not in the public right-of-way. If building footings are to be located under a sidewalk located within an easement, all the

private utilities located within that easement and under that sidewalk shall be located within conduit.

5D.020 Design Standards

The City has set forth minimum standards as shown in the Standard Details which must be met in the design and construction of sidewalks, curbs and gutters. Because they are minimum standards, they may be modified by the City engineer should the City engineer feel circumstances require increased or decreased widths. Plans for the construction of sidewalks, curbs and gutters are to be submitted as part of the street plans when applicable.

5D.030 Curb and Gutter

Commercial concrete curb and gutter per the detail in the Standard Details Section shall be used for all street edges unless otherwise approved by the City Engineer. Form and subgrade inspection by the City are required before curb and gutter are poured.

The face or top of all new curbs shall be embossed to denote the location of water and sewer services crossings. Water services shall be marked ¼-inch into concrete with a "W" and side sewers shall be marked with an "S".

5D.040 Sidewalks

All public streets shall have sidewalks on both sides of the street as shown on the roadway details in the Standard Details Section. Sidewalks, when necessary because of topographic constraints, may be required on only one side, upon approval of the City engineer. Sidewalk widths may vary based on plans and studies adopted by the City but, except as provided in this section, shall not be less than those shown in the Standard Detail Section. The design and construction of all sidewalks, curbs and gutters shall be in accordance with the details shown in the Standard Detail Section.

- A. If sidewalk widening is required, it shall be accomplished with a monolithic width pour. This may require removal of an existing sidewalk.
- B. The City engineer may reduce the sidewalk width for sidewalks over six feet wide if the City engineer does not anticipate probable pedestrian traffic through the horizon year indicated by the traffic analysis. If the width of the sidewalk is reduced, the right-of-way width shall not be reduced. Instead, the planter width shall be increased accordingly.
- C. Monolithic pour of curb, gutter and sidewalk may be allowed with approval of the City engineer.
- D. Sidewalks that dead-end at the project property line shall be designed as shown on the details in the Standard Details Section **extend not more than 15 feet beyond the project line and shall transition to existing grade, unless otherwise specified by City Engineer.**

5D.050 Pathways and Trails

Trails and pathways should be developed in accordance with the City's Comprehensive Plan, including the Open Space and Recreation Sub-Element, the Transportation Element, the Parks and Recreation Comprehensive Plan, the Lake Chelan Valley Trails Master Plan, the Lakeside Trail Study, the Non-Motorized Transportation Implementation Plan, and any other plans or studies adopted as components of the Comprehensive Plan.

5D.060 Bicycle Facilities

Bicycle facilities should be developed in accordance with the City's Comprehensive Plan, including the Open Space and Recreation Sub-Element, the Transportation Element, the Parks and Recreation Comprehensive Plan, the Lake Chelan Valley Trails Master Plan, the Lakeside Trail Study, the Non-Motorized Transportation Implementation Plan, and any other plans or studies adopted as components of the Comprehensive Plan.

When the need for a bikeway is identified in approved Planning documents, bikeway construction is required in conjunction with any new development or redevelopment where the estimated cost of improvements on such properties exceeds 25% of the value of the existing structures, or subdivision or short subdivision approval.

The design of bikeways shall depend upon their type and usage. Bike lanes and shared roadways shall be surfaced the same as the adjacent motor vehicle roadway.

In general, all bikeway facilities shall be signed per the MUTCD or as specified herein. The bike lane stripes and pavement markings shall be as shown on the details in the Standard Details Section.

5D.070 Staking

All surveying and staking shall be as set forth in Chapter 5C.080 ~~070~~.

5D.080 Testing

Testing shall be required per Chapter 5C.090 ~~080~~. In addition, the City shall be notified before each phase of sidewalk, curb and gutter construction commences.

5E. ROADSIDE FEATURES**5E.010 General**

Miscellaneous features included in this section shall be developed and constructed to encourage the uniform development and use of roadside features wherever possible. The design and placement of roadside features shall adhere to the specific requirements as listed for each feature, and, where applicable, to the appropriate standards as set forth in Chapters 5B.010 and 5B.030.

5E.020 Survey Monuments

All existing survey control monuments which will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by or at the direction of a Professional Land Surveyor licensed by the State of Washington. All applicable RCWs and WACs will be complied with, including but not limited to, WAC

SECTION FIVE - STREET STANDARDCITY OF CHELAN

The storm drainage system must be designed by a licensed professional engineer. Plans and specifications as required by Storm Water development standards, shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on-site retention or detention, matching street and/or sidewalk grades, access locations, parking layout and to check for future street improvement conformity and zoning regulations.

5E.090 Traffic Signs

~~Traffic control and street name signs shall be provided and installed by the developer in accordance with the current edition of the MUTGD Manual, and as directed by the City engineer.~~

1. All street name and traffic directional signs shall be provided and installed by developer. Sign materials, lettering and placement shall be in accordance with the current edition of the "Manual on Uniform Traffic Control Devices" published by the Federal Highway Administration, and as directed by the City Engineer.
2. Crosswalk bars, stop bars, and arrows and wording on asphalt shall be preformed thermoplastic, Premark or approved equal.
3. All costs for signage shall be paid by the proponent and installation shall be complete prior to final plat approval.
4. The naming of all streets shall receive approval from the City of Chelan Building Department to assure consistency and elimination of confusing or inconsistent address numbers. Address number shall be assigned to all new lots prior to recording any plat. The Building Official shall review addresses prior to recording to insure that the addresses are consistent with City policies.

This section now contains verbiage from Section 10.

5E.100 Guard Rails

Guard rails may be required by the City engineer where deemed appropriate in the interest of public safety, health and welfare. All guard rails shall conform to the criteria in the WSDOT Design Manual as may be amended or revised.

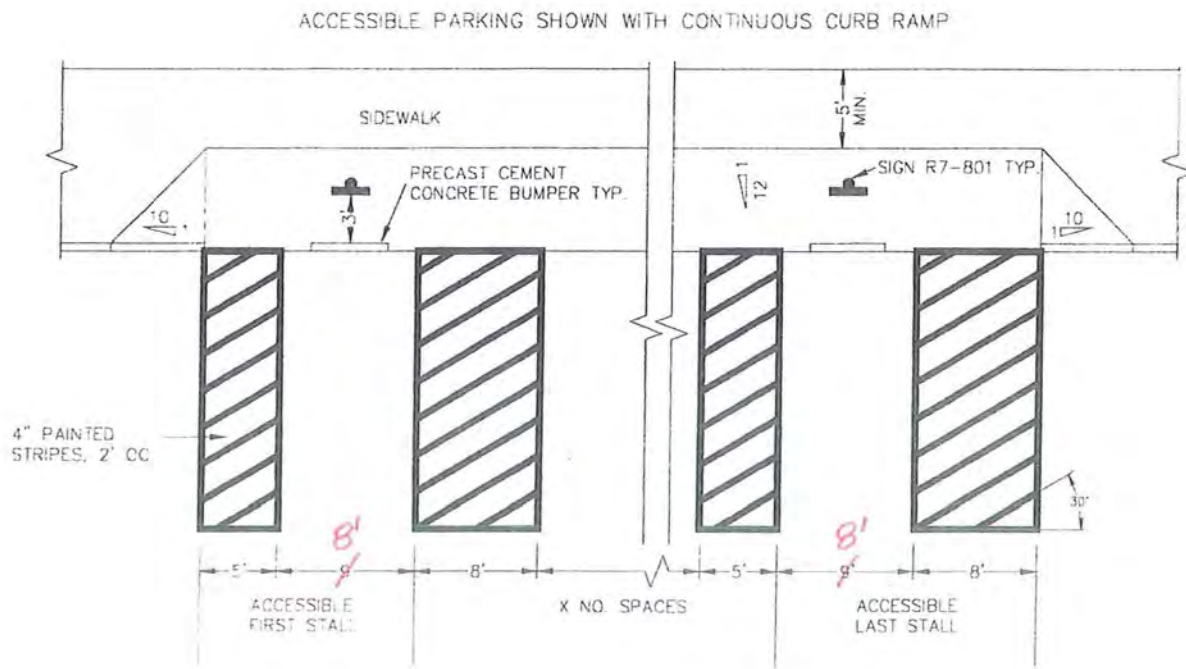
5E.110 Hand Rails

A hand rail or fence is required to be constructed along the back of the sidewalk if required by the current Building Code adopted by the City of Chelan.

SECTION SIX - STREET DESIGN

CITY OF CHELAN

ACCESSIBLE PARKING WITH CONTINUOUS CURB RAMP



10-122

8' wide accessible parking stalls are allowed by the International Building Code, as adopted by the City of Chelan.

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Works determines that the proposal meets all of conditions A, B and C.

- A. Will not seriously and adversely impact the water quality conditions of any affected receiving bodies of water.
- B. Will not substantially alter the drainage pattern or increase the peak discharge.
- C. Will not cause run-off exceeding the available capacity of the existing drainage system where such system was designed to serve the proposed development area.

A single family residence development with less than 5,000 square feet of impervious surfaces is exempt from plan requirements. However, all buildings with down spouts or other point sources shall provide a drainage plan.

GENERAL REQUIREMENTS:

All persons proposing land development and/or approvals as outlined above shall provide a drainage plan for surface water flows entering, flowing within and leaving the subject property. The plan is to conform to the following standards and requirements:

- A. When required, plans for storm water management shall be prepared by a registered Civil Engineer currently licensed by the State of Washington and qualified by experience and education in the field of hydraulics, hydrology, or a closely related field. Storm drainage plans or revisions to any approved plan shall be reviewed and approved by Public Works prior to any construction.
- B. On-site storm drainage improvements must be sufficient to mitigate impacts on runoff, erosion, sedimentation and pollution.
- C. All drainage system elements must be designed to allow for adequate maintenance and accessibility at all times.
- D. Developer shall meet all applicable laws for water quality prior to discharge to any wetland, stream, or lake.
- E. In no case shall storm sewers be allowed to connect to sanitary sewers.
- F. Storm sewer systems shall generally conform to sanitary sewer design standards. City engineer may specify ductile iron pipe in special circumstances.
- G. No drainage originating inside of a building or structure shall be connected to the storm drainage of surface water systems, **with the exception of parking**

garages.

- H. Drainage systems shall be designed to meet applicable State and Federal requirements for water quality prior to discharge to any wetland, stream, or lake. The developer shall be responsible for obtaining any Local, State, Or Federal construction or discharge approvals or permits.

BASIC REQUIREMENTS:

- A. Discharge at Natural Location: All surface and storm water runoff from a proposed development that would construct new or modify existing drainage facilities should be discharged at the natural location. Diversions may be allowed if it corrects an existing problem.
- B. Tributary Area Analysis: Proposed developments should identify the upstream tributary drainage area and provide an analysis of the pre-existing drainage volume and quality and an analysis of the impact of the proposal on the drainage system. The post development peak rate runoff shall not exceed the pre-development peak rates for the site. The methods of peak rate runoff control may include detention, retention and/or infiltration. On site bio-filtration in combination with infiltration systems is the preferred method for management of on-site storm water and shall be considered before transporting storm water off-site.
- C. Existing System Assessment: For all proposed development requiring a drainage conveyance system, the conveyance system must be analyzed, designed and constructed to handle existing off-site tributary flows and on-site storm drainage flows caused by development of the project.
- D. Erosion & Sediment Control: Developments involving clearing and grading and which require new or modification of existing drainage facilities must include an erosion/sedimentation control plan meeting DOE requirements and providing suitable measures to prevent sediment-laden runoff from leaving the site during construction.
- E. Maintenance and Operation: The long-term maintenance & operation of the proposed drainage facilities must be addressed in the plan (who, when & how).
- F. Adequate easements shall be provided for operation and maintenance of all drainage facilities located on private property.

DRAFTING STANDARDS AND CONTENTS:

Construction plans for drainage systems shall be prepared in conformance with the City of Chelan's adopted construction plan standards.

DESIGN CRITERIA:

1. Runoff Control

- A. Developments shall be designed and constructed to provide control of the quality and quantity of storm water runoff both during and after construction. Erosion and sedimentation control plans shall be submitted and approved by the City of Chelan prior to the beginning of any construction. Please note that a permit from the DOE is required if 5 or more acres are disturbed. Peak discharge control and detention facilities shall be provided in accordance with the Development Standards.
- B. Maximum allowable release rates from storm water detention systems shall be based upon the pre-development runoff from the development site as described in section below. The allowable release rate shall be determined as specified, and may be modified on a case-by-case basis due to constraints in the drainage system downstream of the point of discharge. Storm precipitation distribution and runoff modeling will conform to the Soil Conservation Service Technical Report 55 or other acceptable method. The "Rational method" used by licensed professional engineers may be used for runoff modeling on parcels under 2 acres, not subject to upstream runoff. T_c minimum shall be 0.1 hours.

Allowable Release Rate:

- 1. For sites with tributary basins greater than 5 acres or sites less than 5 acres in area which are deemed by Public Works to have significant impacts due to runoff quantity, the discharge shall be limited to the capacity of the receiving conveyance system. Peak runoff rate shall be computed using the Soil Conservation Service TR-55 method, modified Santa Barbara Urban Hydrograph Method or other appropriate models.
- 2. Should the proponent desire to discharge at higher flowrates than provided above, then he shall provide for improvements of the downstream conveyance system.
- C. The on-site drainage system including conveyance, flow restriction, detention, pollution control, and emergency overflow elements must be properly designed and sized to handle runoff from the site and conveyance through the site. The design should be carefully analyzed for potential problems, flow impediments, construction or maintenance difficulties, and potential erosion or other property damage. Catch basins shall be required at every intersection and shall be spaced a maximum of :

Spacing	Grade
150'	0.5% to 1.5% and 12.0% and greater
200"	1.5% to 3.0% and 8.0% to 12.0%
300'	3.0% to 8.0%

<u>SPACING (ft)</u>	<u>GRADE (S)</u>
150	S<1.5% or S>12.0%
200	S=1.5% to 3.0% or S=8.0% to 12.0%
300	3%< S < 8%

- D. Impoundment structures shall be designed to the 100 year (3.0"/24hrs.) event. Conveyance structures shall be designed to the 25 year (2.5"/24 hrs.) event.

2. Water Quality Protection

All storm water discharge shall be treated prior to release using best management practices. The applicant should consider the use of vegetative or other natural filtration means. Effluent discharges from any oil removal treatment device to the storm sewer or surface water system shall be in compliance with State Department of Ecology regulations for discharge to storm drains or surface waters. Whenever paved parking is provided for more than 10 vehicles, or for any paved parking or access roadway draining to an open waterway or stream, a City approved oil/grease separation device shall be installed by the Owner. It shall be located at a point where it can be easily maintained and where it will intercept floating contaminants flowing off road rights of way, parking lots, and other sources of pollutants. Selection and sizing of oil separation device type shall be subject to approval of Public Works.

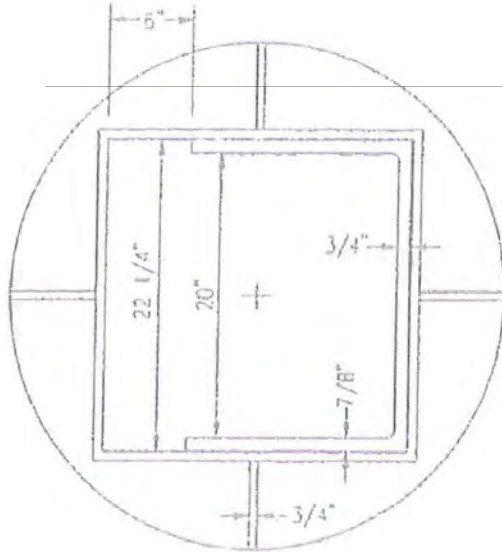
- A. The property owner assumes full responsibility and liability for proper maintenance and operation of the oil separator, unless the separator is a part of a publicly operated drainage system. This statement must appear on the recorded drawings for the development.
- B. Access to the separator shall be maintained.

3. Detention Facilities

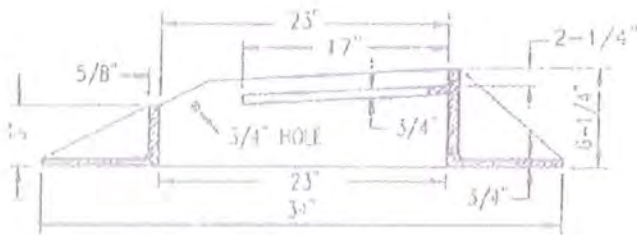
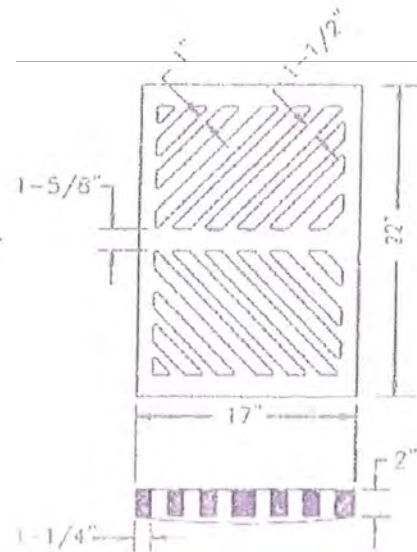
- A. Detention facilities will be required when the downstream capacity is inadequate to convey the runoff. All storm water runoff originating from

CATCH BASIN FRAME AND GRATE

*Move detail from Section 10 (Utilities)
to Section 7 (Storm)*

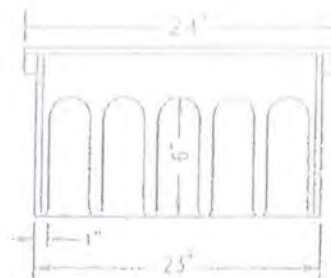
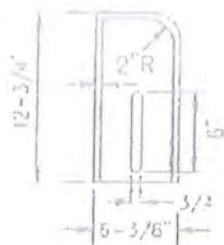


TYPE "A" FRAME

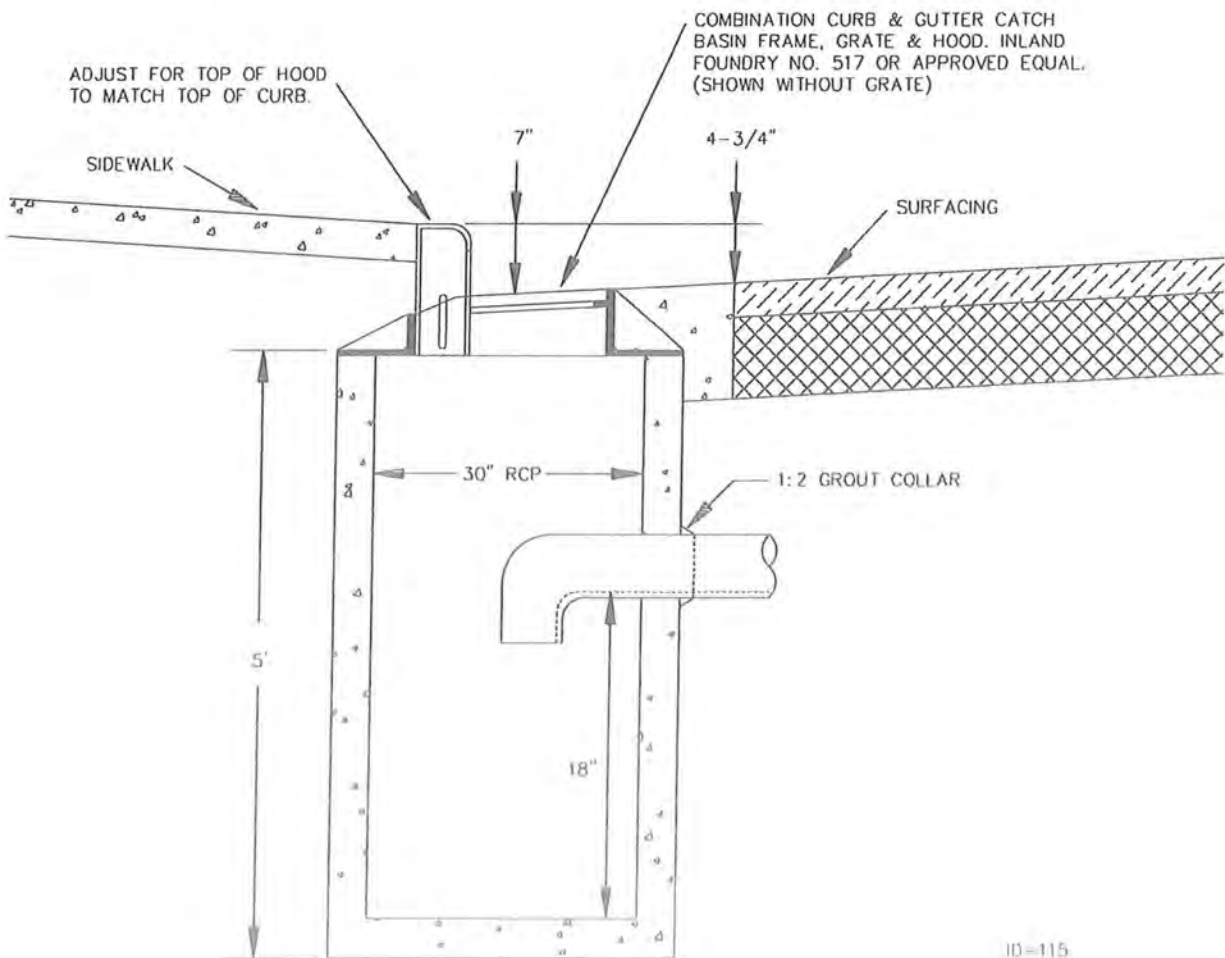
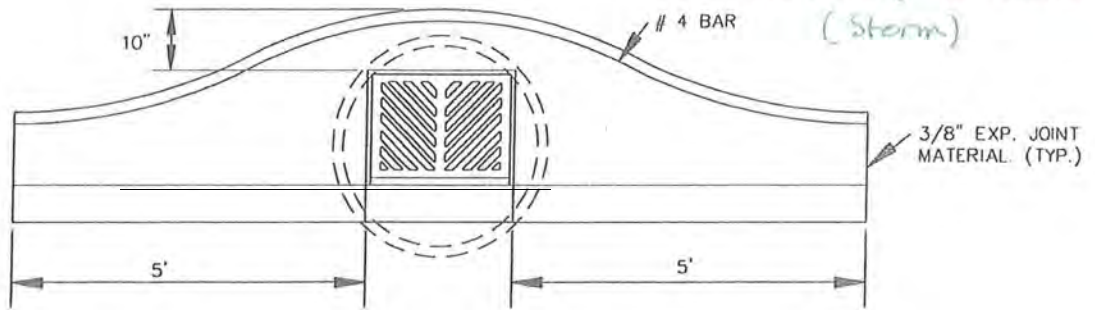


TYPE "A" FRAME

NOTE: THE FRAME, GRATE AND HOOD SHALL BE INLAND FOUNDRY CO. NO 517 OR APPROVED EQUAL.



Move detail from Section 10 (Utilities) to Section 7 (Storm)



Barrier Free Parking

Included in the number of required parking spaces outlined in this section, parking shall be provided and designed in accordance with the Washington State Barrier Free Design Regulations, as the same exist now or may hereafter be amended.

Compact Parking Spaces

- A. Compact parking spaces may comprise up to forty percent of the required minimum number of off-street parking spaces for commercial property uses and for multi-family property uses consisting of greater than four dwelling units.
- B. Every compact parking space shall be clearly identified as such by painting the word "COMPACT" in upper case block letters, using white paint, on the pavement within the space.
- C. Each individual compact parking space shall be at least eight feet by sixteen feet in size.

Angled or "Head-In" Parking on Public Right of Way

- A. All parking shall be 0°, 60° or 90° parking.
- ~~B. Any angled (60°) or "head-in" (90°) parking in the public right of way shall only be allowed in commercially zoned areas, serving commercial uses, and shall only be allowed on streets classified as minor collector or less.~~
- B. Any angled or "head-in" parking on the public right of way shall be located so that the minimum distance from the center line of the street to the property line shall be 50 feet. The front of each parking space shall be a minimum of 40 feet from the center line of the street for angled or "head-in" parking.
- C. For those streets that do not have 100 feet of width, property owners may dedicate additional width to the City or create an unrestricted parking easement in favor of the City to allow the necessary width.

Parking Delineation

Hard-surfaced parking areas shall use paint or other similar devices to delineate parking stalls and directional arrows.

Wheel Stops

Wheel stops shall be installed as per drawing 9-10 where designed parking will likely cause vehicles to overhang and encroach on adjoining private or public right-of-way, land, or alleys.

Requirement no longer in Chelan Municipal Code, and angled parking is now utilized on Johnson Ave, an arterial.

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"Street Name & Traffic Signs" has been revised and moved to Section 5E.090.

Details 10-13 and 10-14 have been moved to Section 7 (Storm Water)

Detail 10-18 has been eliminated; this is now addressed in Section 5E.100.

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GENERAL CONDITIONS

Construction shall be in accordance with the current City development standards and APWA/WSDOT Standard Specifications; except as specifically superseded by the approved plans or special condition of the permit. The following conditions or restrictions must be followed:

Should any damage be done to the roads during the time of construction and installation or in the maintenance and/or operations of said facilities, the road(s) shall be restored by the permittee(s), their successors or assigns, to as good a condition as it was before such damage occurred. Should the grade, width or location of the road(s) be changed or altered in any way so as to require the removal of said facilities, the permittee(s), their successors or assigns, shall forthwith move and relocate said facilities without any redress against the City.

The permittee shall indemnify, defend and hold harmless the City, its officers, agents and employees, from and against any and all claims, losses or liability, including attorneys fees, arising from injury or death to persons or damage to property occasioned by the construction, installation, operation, location, maintenance, or any other cause related to the improvement for which this permit is granted. With respect to this permit and to claims against the City, its officers, agents and employees, the permittee expressly waives its immunity under Title 51 of the Revised Code of Washington, the Industrial Insurance, Act, for injuries to any employee the permittee may have, and agrees that the obligation to indemnify, defend and hold harmless provided for in this paragraph extends to any claim brought by or on behalf of any employee of the permittee. This waiver has been mutually negotiated by the parties as part of the permitting process and is given, as is the indemnification agreement contained within this paragraph, as consideration for issuance of a right-of-way use permit by the City. This paragraph shall not apply to any damage or injury resulting from the sole negligence of the City, its agents or employees. The extent any of the damages or injuries referenced by this paragraph were caused by or resulted from the concurrent negligence of the City, its agents or employees, this obligation to indemnify, defend and hold harmless is valid and enforceable only to the extent of the negligence of the permittee, its officers, agents or employees, if any.

The acceptance of the conditions upon which this permit is granted shall be evidenced by the beginning of the installation of said facilities as set forth herein.

CONSTRUCTION REQUIREMENTS AND GENERAL SPECIFICATIONS

1. No open cut crossing of City roads or streets shall be made without the approval of the City engineer (notice of two ~~five~~ working days required). Borings will generally be required. ~~Depending on location, boring may be required.~~
2. Signing, flagging and traffic control shall be in accordance with the Manual of Uniform Traffic Control Devices. One lane of traffic shall remain open at all times. ~~The road shall be restored with asphalt surface to two-way traffic at the end of each~~

~~working day.~~ Roadway shall be open for two-way traffic at the end of each day, with temporary surfacing as approved by the City Engineer. Should a total road closure appear necessary, application for a road closure permit must be filed with the Public Works office at least ~~two (2)~~ five (5) working days prior to the anticipated closure. Application must be accompanied with dust control plan, detour plans, hours of closure, and signing/traffic control plans.

3. Asphalt shall be cut in a solid straight line. After excavating trench and installing utility, all backfill material must be free draining granular material, free of debris and clay. This material to be compacted by a mechanical compactor (approved by the City engineer) to 95% of maximum density (modified protor) in six inch lifts followed by placement of six (6) inches in 5/8" minus crushed stone top course. After placing a tack coat on the edges of the existing pavement, three (3) inches of class B shall be placed and compacted to match the existing surface. Pavement sections are subject to a two year workmanship warranty; to be replaced if excessive settling or mechanical breakdown develops.
4. When the excavation is located in a graveled shoulder, backfill shall be placed and compacted as specified in paragraph 4 above, and surfaced with a minimum of six (6) inches of compacted 5/8" minus crushed stone surfacing.
5. When multiple open cut utility crossings are proposed at intervals of 200 feet or less, between adjacent crossing, a full width ~~chip-coat~~ asphalt resurfacing of the roadway pavement section will be required for the entire length of roadway between crossing extending to ten (10) feet either side of crossings. Existing crossing will be considered when establishing overlay requirements in addition to work contemplated under current utility permit application.
6. Existing drainage ditches, culverts, etc. shall be kept clean at all times. Temporary diversion of any drainage system will not be permitted without the consent of the City engineer. Any drainage culvert tile, catch basins, manholes, etc., disturbed by excavation shall be replaced with new material or repaired as directed by the City engineer. Temporary erosion/sedimentation control measures shall be employed to protect adjacent property and storm drain facilities.
7. If in the opinion of the City engineer, weather conditions are so bad as to make the traveled roadways unsafe for the traveling public or detrimental to the restoration of the roads, excavation shall cease immediately and clean up shall be promptly accomplished.
8. Maximum amount of open trench on streets shall be 200 lineal feet unless authorized otherwise by the City engineer. At the end of each day, all ditches must be backfilled or covered with steel plates and barricaded with flashing warning lights to prevent people or animals from falling into the trench.
9. All pipe or other material strung along City right-of-way must be placed a safe

of any easement.

UTILITIES EASEMENTS

Easements for all facilities such as high voltage electric transmission lines, drainage canals, pondage areas, etc., shall be of such width as is adequate for the purpose. Minimum linear easement width shall be 20 feet unless directed otherwise by the City engineer. Easement for utilities at greater depths than 7 feet may require greater width.

UTILITIES

Undergrounding: Utility lines, including but not limited to those for electricity, communications and street lighting, serving and located within the subdivision, shall be placed underground.

Public: Where alleys are not provided, easements for public utilities shall be provided along rear lot lines and side lot lines where necessary including any necessary access easement. Where easements are necessary, they shall be a minimum of twenty feet in width, *unless directed otherwise by the City Engineer*. For safety concerns, where possible, the width of rear and side lot line easements shall be equally shared by abutting lots and shall be continuous and aligned from block to block within the subdivision and with adjoining subdivisions. Additional width will be required where multiple utilities or depth and separation so require.

UTILITY SERVICES

1. All utility lines including electric, telephone, fire alarm and television cables shall be placed underground prior to paving.
2. Easements for maintenance of all utilities, both on and off site, shall be provided to the City, to the satisfaction of the City Engineer prior to final plat approval.

COMMON UTILITY TRENCHES

Common Utility trenches shall generally not be allowed with water, sewer, and storm lines. Utility lines shall generally be located as per drawing 10-11. Common trenches may be allowed for phone, electric, cable TV, gas, and other non-City utilities if approved by each individual utility. Water and sewer lines shall be separated as required by the *D.O.H. Department of Ecology and the Department of Health*.

Under extreme unusual conditions, common trenches may be necessary and allowed as approved by the City engineer. Crossings and connections with existing lines may also require individual evaluation for variation approval by the City engineer.

~~STREET NAME AND TRAFFIC SIGNS~~ → Moved to Section 5

SECTION TEN - UTILITY DESIGNS

CITY OF CHELAN

- ~~1. All street name and traffic directional signs shall be provided and installed by the developer. Sign materials, lettering and placement shall be in accordance with the current edition of the "Manual on Uniform Traffic Control Devices" published by the Federal Highway Administration.~~
- ~~2. All cost for signage shall be paid by the proponent and installation shall be complete prior to final plat approval.~~
- ~~3. The naming of all streets shall receive approval from the Department of Public Works to assure consistency and elimination of confusing or inconsistent address numbers. Address numbers shall be assigned to all new lots prior to recording any plat. The Building Official shall review addresses prior to recording to insure that the addresses are consistent with City policies.~~

PROJECT REVIEW AND INSPECTION

Whenever the City Engineer and/or the Public Works Director determine that the magnitude and/or complexity of any public improvement being constructed by a private developer, as a condition of a land use permit or approval, requires full or part-time on-site inspection, the City Engineer and/or the Public Works Director shall have the authority to provide or contract with a duly qualified inspector to provide inspection services for the City in connection with such construction. All costs of such inspection services incurred by the City shall be paid by the developer. The fee must be deposited in advance with the City prior to issuance of a construction permit.

City personnel shall strive to assist developers with such information as is readily available or easily obtained. Costs for investigative research or project review requiring more than two man hours, or which will require an outside consultant (such as City attorney, or City consulting engineer) shall be borne by the requesting developer. Prior to performing such research or review, the City may require the developer to execute a reimbursement agreement.

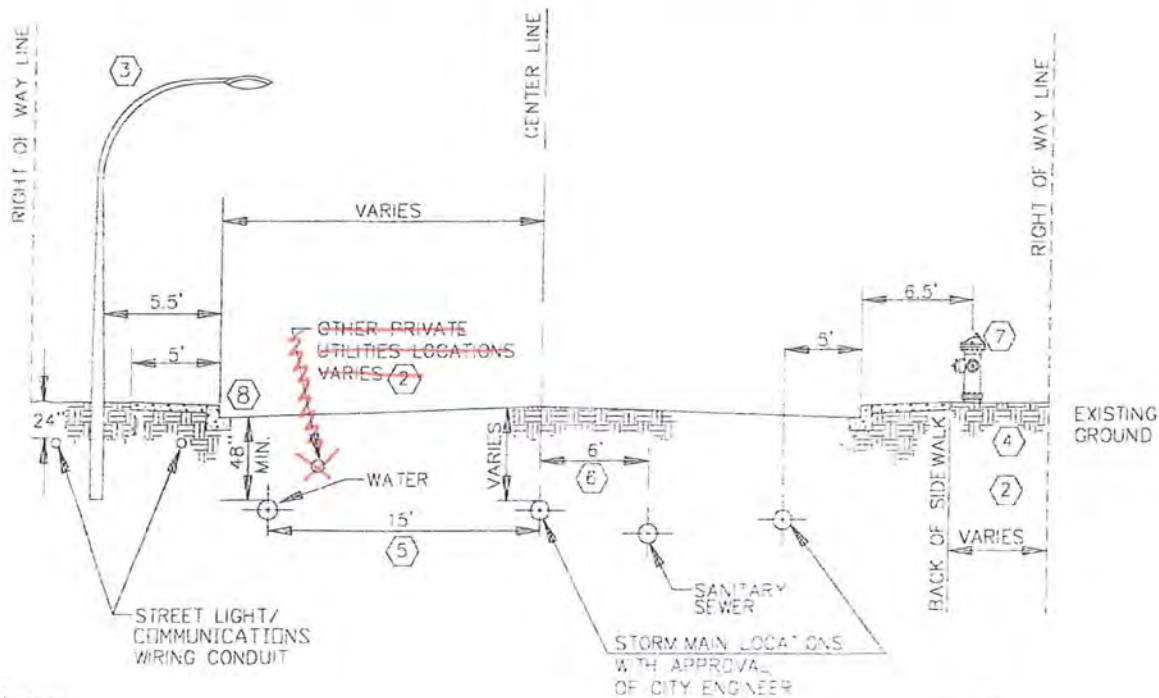
SOLID WASTE REQUIREMENTS

- 1. All multi-family and commercial development must provide recycling facilities.
- 2. Multifamily housing shall be served by commercial solid waste containers (dumpsters) at a ratio not less than 0.15 CY per ERU per living unit.
- 3. Commercial solid waste containers or Commercial Accounts with four or more 30-gallon cans must be placed on a fenced concrete slab (**fenced if required by City Engineer**) easily accessible to the solid waste packer truck. The location shall provide side drive-by and side loading, no back-in locations will be allowed. See City of Chelan Standard Detail "Dumpster Pad and Enclosure" for typical construction details.

SECTION TEN - UTILITY DESIGNS

CITY OF CHELAN

TYPICAL CITY UTILITY LOCATION FOR NEW STREET CONSTRUCTION



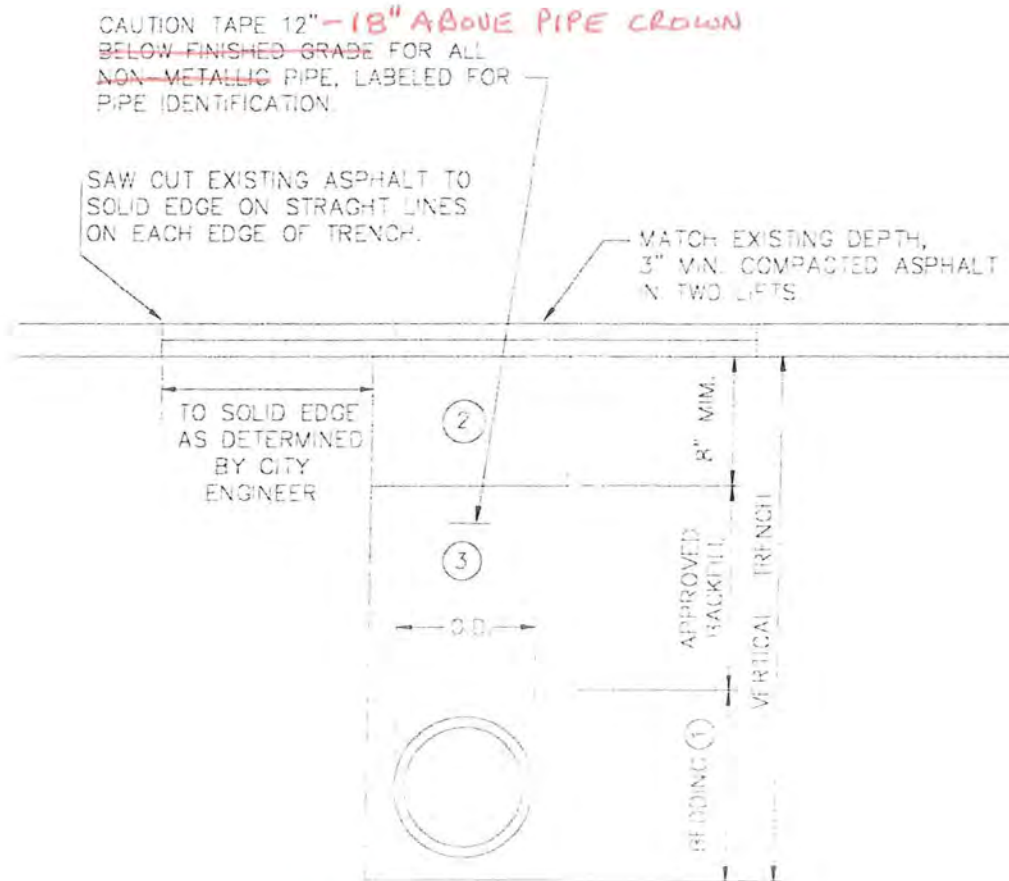
Notes:

1. Developer or contractor is required to call Utility Locate at (800) 424-5555 a minimum of 48 hours prior to digging within the limits of City right-of-way for the location marking of all underground utilities.
2. Typical locations for other proposed public utilities shall be in greenway behind sidewalk, City engineer may approve exceptions. A minimum horizontal separation of 3 feet shall be maintained from City water mains and a minimum 5 foot horizontal separation shall be maintained from City sewer and storm sewer mains.
3. Street light poles typically will be installed on alternating sides of the street and spaced as indicated on detail page 11-9.
4. Water meter boxes will be installed at the back of new or existing sidewalks.
5. Potable water lines typically shall be installed 15 feet from and parallel to the centerline of the right-of-way on the north or east side.
6. Sanitary sewer line typically shall be installed 6 feet from and parallel to the centerline of the right-of-way on the south or west side.
7. Fire hydrants typically will be installed on alternating sides of the street on 300-foot spacing in industrial and commercial areas and on 600-foot spacing in residential areas. *and spaced per requirements of Section 1 of these standards.*
8. If conflicts require alternate water or sewer main locations, approval shall be obtained from the City Engineer for the location. A minimum 3 foot separation from the face of curb is required.

SECTION TEN - UTILITY DESIGNS

CITY OF CHELAN

UTILITY TRENCH REPAIR STANDARD



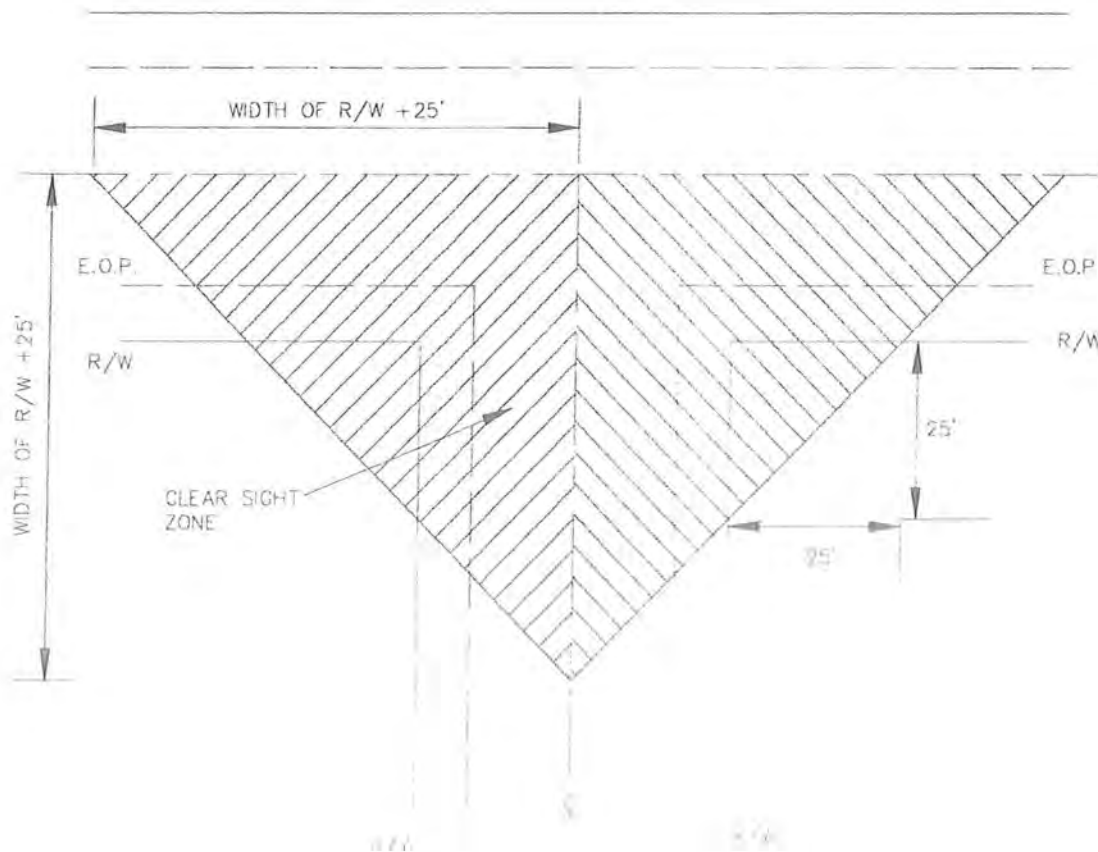
- NOTES:
1. BEDDING FOR FLEXIBLE PIPE SHALL BE 4" MINIMUM THICKNESS OF 4" UNDER THE PIPE AND 6" OVER THE CROWN
 2. CRUSHED SURFACING TOP COURSE
 3. SELECT BACKFILL SHALL BE 3/4" DOLIMITED ROCK (CONTROLLED DENSITY PER (2004) MAY BE REQUIRED BY THE CITY ENGINEER AS NEEDED.
 4. BACKFILL MECHANICALLY COMPACTION TO 95% MAX DENSITY IN 6" LIFTS, ~~OR EQUIVALENT~~
 5. 4" MIN COVER ON ALL WATER AND SLURRY MAINS
 6. TRENCH EXCAVATION SHALL EXCEED 48" DEPTH (INSURE ALL SAFETY AND HEALTH ACT)
 7. TOP SHALL CONSIST OF:
 - 1.5" BACK SEVEN
 - 1.5" 3/4" PEAGRADE
 - 1.5" 1/2" SAND
 - 6" 2" MIN WEIGHT WATER REDUCING AGENT
 - 4" TO 6" LIFTS

TOP SHALL BE APPROVED BY THE CITY ENGINEER FOR BACKFILLING AND USE

SIGHT OBSTRUCTION

It is unlawful to construct, plant, or place and maintain any trees, shrubs, structure, objects, walls, or fences of more than three feet in height from the ground for a distance of 25' from any street corner property line in order to permit good visibility at said street corners and intersections.

Detail eliminated - this is now addressed in Section 5C.100



STREET ILLUMINATION

All new commercial or residential subdivisions, short plats, building site plans shall provide street lights in accordance with the standards for such improvements of the City, ~~and they shall be owned and operated by the City~~ **unless exempted from this requirement by the City Engineer, in which case underground improvements shall be installed for future lighting. Street illumination shall be owned and operated by the City.**

A street lighting plan submitted by the applicant and approved by the Public Works Director shall be required for all street light installations. Type of installation shall be as set forth in the current edition of the WSDOT/APWA Standard Specifications and as directed by the City except where noted herein.

All public street light designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All developments shall submit the lighting plan on a separate sheet. After the system is completed and approved, a set of "as built" mylars shall be submitted to the City as a permanent record.

All street intersections shall have provisions for lighting, so as to provide minimum illumination as set forth in WSDOT Publication M51-02 (Traffic Manual).

All developments shall include conduit installed so as to provide adequate capacity for future installation of complete street lighting as set forth in these standards and in WSDOT Publication M51-02. Positioning of conduit shall be determined by the City engineer. All conduit installed solely to comply with future street lighting upgrade requirements shall have at least a single ground conductor (minimum #10AWG copper stranded type) installed.

All street light electrical installations including wiring conduit and power connections shall be located underground.

The General Notes below need to be included on any plans dealing with street design.

General Notes (Street Light Construction)

1. All workmanship, materials and testing shall be in accordance with the current edition of the WSDOT/APWA, MUTCD, National Electrical Code (NEC) or City of Chelan Development Guidelines unless otherwise specified below. In cases of conflict, the most stringent guideline shall apply.
2. Electrical permits and inspections are required for all street lighting installations within the City of Chelan. The contractor is responsible for obtaining said permits prior to any type of actual construction. These permits

APPENDIX A - DEFINITIONS

CITY OF CHELAN

APWA - American Public Works Association

AWWA - American Water Works Association

As-Built Drawing - A neat and legibly marked set of full size construction drawings accurately showing the final location along with changes made during construction and the final location of buried or concealed items. Said drawings shall be to scale.

Alley - A public thoroughfare abutting the rear property lines of adjacent parcels and having a width of ~~not less than sixteen feet nor more than twenty feet~~, for the use of vehicles, bicycles, and/or pedestrians. An alley may afford either primary or secondary access to abutting property and may also accommodate utilities and service vehicles.

Alley definition now agrees with Section 5C.180

Bedding Materials - Sand applied as per standard trench detail and good construction practice providing support and strength to pipe lines laid.

Best Management Practices - The most effective method, technique or product available which is generally accepted in the field, and which is demonstrated to be reliable and effective.

City - City of Chelan

~~Court - A short street, usually no through traffic.~~

Street types now defined by Building Department

Cul-de-sac - A short dead-end street or court not exceeding ~~2000~~ **600** feet and having one end open to traffic and the other temporarily or permanently terminated by a vehicle turnaround.

Cul-de-sac definition now agrees with Section 5C.160

Developer(s) - Any person or other entity who undertakes any activity regulated by these standards.

Development - The formation of a lot, subdivision, plat or short plat with potential for construction; and/or construction that requires infrastructure improvements or a building permit. (Building permits for "development" shall exclude remodels other than reconstruction that directly affects specific elements of these standards, which element will be considered development only as it applies to the specific category.) Remodels exceeding 50% of the assessed evaluation shall require that development standards apply.

Development Permit - A permit issued by the city to perform any work regulated by these standards.

Development Standards - Design, construction methods, and materials adopted by ordinance as required for infrastructure installation.

Driveway - A private access to one, two, or three single-family residences.

APPENDIX A - DEFINITIONS

CITY OF CHELAN

~~Half-width street - A street constructed along the edge of a development, using a portion of the regular width of right-of-way and permitted as an interim facility pending construction of the remainder of the street improvement by the adjacent owner(s).~~

Half-width street no longer allowed.

Impervious Surfaces - Hard surfaces made of portland concrete or asphaltic concrete as per City standards.

Improved Street - Street section constructed to City standards including sidewalks, curb, gutter and storm drainage.

Infrastructure Facilities and Improvements - Any improvement required by a development permit except for improvements estimated to cost less than \$5,000 in the reasonable estimation of the City engineer.

~~Lane - A short street, or a street with branching places or lanes. A lane is a minor residential street, and usually there is no through traffic between two streets of a higher classification.~~

Street types now defined by Building Department

Maintenance Bond - A bond posted with the City for the guarantee of the public works improvements in a specified amount of the estimated cost of the improvements for a period of two years after the completed job is accepted by the City.

Path - a surfaced facility designed for pedestrians. Paths shall be a minimum of five feet in width with at least one and one-half feet of clearance to obstructions on both sides and a 10 feet vertical clearance. Paths shall be designed and located to avoid drainage and erosion problems.

Performance Bond - A bond posted with the City assuring construction in a specified amount.

~~Place - A short street, cul-de-sac, or court. A place has a very limited destination and deadends with no apparent future need for extension. A place cannot exceed three hundred fifty feet in length.~~

Street types now defined by Building Department

Private Road - A privately owned and maintained access provided for by a tract, easement or other legal means.

Public Street - A publically-owned facility providing access, including the roadway and all other improvements inside the right-of-way.

Public Works - means the Public Works Director or his/her designee.

Right-of-Way - land dedicated to the City for purposes of public circulation and/or utilities.

Sewerage Collection System - The collection of sewer mains and sewer service lines required to provide sewer service to each customer in a development.

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→ *Replace outdated Excavation Permit with
new, updated Excavation Permit*

PERMIT #: _____ DATE: _____ EXPIRES: _____

PROJECT ADDRESS _____

OWNER _____ PHONE _____

Address _____

Plans Attached

Improvement Evaluation Summary Sheet Attached

CONTRACTOR _____ PHONE _____

Address _____

State Registration # _____ Expires _____ City Business License _____

"Additional Insured" Endorsement: Yes _____ No _____ Expires _____

Project Start: _____ Project Complete: _____

RIGHT-OF-WAY PERMIT

Sidewalk

Street/Curb Cut, Driveway Access

Water - Main

Water - Service

Water - Fireline

Sewer - Main

Sewer - Service

Storm

Dry Utility, (Specify) _____

REQUEST FOR INSPECTION - (509) 682-8030

24 hour notice required. Failure to call for inspection prior to performing backfilling, pouring or other inspection obstructions will result in required removal of the improvement.

72 HOUR NOTICE REQUIRED TO UTILITIES NOTIFICATION CENTER: (800) 424-5555

The contractor agrees, at his expense, to barricade, compact, backfill and replace street base, surfacing, and/or curb and sidewalk, according to the City of Chelan Standards. Applicant hereby certifies that the information given herein is true and accurate and further agrees to perform work authorized by the permit in accordance with all applicable ordinances and statutes. Any deviation from this original application causes the permit to become null and void. Applicant and contractor shall defend, indemnify, and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with activities or operations performed by the Applicant or on the Applicant's behalf out of issuance of this Permit. Applicant also agrees to comply with all federal, state, and local regulations in the performance of the permitted work, as identified in City Municipal Code, Title 12, Streets and Sidewalks, and Title 25, City Development Standards, **AND AS NOTED ON REVERSE SIDE OF THIS FORM.**

Contractor _____ Date _____

Owner _____ Date _____

Traffic Control Plan Approved? Y N NA

Dust Control Plan Approved? Y N NA

*Bond Required: _____
(Evaluation Summary Sheet B-13)

*Inspection Fee: _____

Application Approved By _____ Date _____

Inspection By _____ Date/Comment _____

* These fees are for inspection and bonding only. They do not include connection/service fees.

1. Site Controls

a. Permittee is responsible for providing a safe work environment for its employees in accordance with OSHA/WISHA Standards. Additionally, permittee is responsible for safety of general public and vehicular and pedestrian traffic transiting the work zone and safeguarding of attractive nuisances both during work hours and after hours.

b. All traffic control plans, actions, and construction signage shall comply with current *Manual on Uniform Traffic Control Devices (MUTCD)*. Work zone flaggers shall possess a current Traffic Control Flagger card issued by Washington State or a recognized reciprocal state.

c. Permittee is responsible for protection of existing utilities, adjacent foundations, and other improvements, both public and private, and for repair of same if damaged during the work.

2. Insurance and Bonding

a. Permittee's insurance carrier shall provide certificate of insurance naming City of Chelan as additional insured. Minimum coverage shall be \$1,000,000 combined single limit coverage per occurrence and \$2,000,000 general aggregate. Bonding shall be as per Title 25, CMC.

3. Asphalt Restoration

a. Asphalt patching shall be performed by a contractor specializing in such work. Unless authorized by City Engineer, general contractors or excavation contractors shall not perform asphalt patching within the public right-of-way.

4. Notifications

a. Permittee is responsible for notifying adjacent property owners of proposed work. Notification shall be a minimum of 72 hours prior to proposed start.