

ORDINANCE NO. 13735

AN ORDINANCE implementing changes to the Thurston County Comprehensive Plan, including the Grand Mound Subarea Plan, by amending the Grand Mound Development Guidelines, and Thurston County Road Standards.

The Board of County Commissioners of Thurston County enters the following findings:

I. GENERAL FINDINGS

1. This ordinance implements changes to the Thurston County Comprehensive Plan enacted by Resolution No. 13734. The findings entered in Resolution No. 13734 are incorporated by this reference.
2. Public hearings on these amendments have been held before the Thurston County Planning Commission and Board of County Commissioners, and separate worksessions have been held by each body.
3. The measures adopted by this ordinance comply with the GMA and other governing laws and are reasonably related to the public health, safety and welfare.

II. FINDINGS RELATING TO THE GRAND MOUND SUBAREA PLAN

4. Grand Mound Development Guidelines – Landscape Guidelines Chapter: Planter strip options in the Grand Mound UGA are included to provide a less costly and easier to maintain stormwater collection system and provide greater and safer separation between vehicles and pedestrians.
5. Thurston County Road Standards –Urban Features Chapter: Amended road standards for the Grand Mound UGA including, an update to the sidewalk section to reflect a planter strip option; a text amendment to update bikeways section to reflect new bike lane terminology; and an additional section on Illumination to include street lighting which is a typical requirement in an urban area.
6. Thurston County Road Standards – Appendices: Update Appendix A, Cement Concrete Driveway, Appendix F, Curb Ramps Type "A" and "B", Appendix 16-G through 16-L, Curb Ramp Type "C" through "G" to reflect American Disabilities Act requirements; update Appendix 16-P, Class II Bikeway to reflect new bike lane terminology; update Appendix 16-R, Minor Collector and Roadway Section, 16-S, Collector Roadway Section, and Appendix 16-T, Arterial Roadway Section, to clarify curb and gutter widths and sidewalk location; replace Appendix 16-U, Elderberry Access Detail to reflect additional access updates to State Route 12 to meet 20-year

anticipated growth need.

7. A determination of non-significance was issued for the changes contained in this ordinance to the Grand Mound UGA on October 3, 2006.

NOW, THEREFORE, BE IT ORDAINED by the Board of Thurston County Commissioners, as follows:

Section 1. The Grand Mound Development Guidelines, Landscape Guidelines Chapter, are hereby amended as shown in Attachment A.

Section 2. Thurston County Road Standards, Urban Features Chapter and associated Appendices, are hereby amended as shown in Attachment B.

Section 3. Severability. If any section, subsection, sentence, clause, phrase, or other portion of the Ordinance, or its application to any person is, for any reason, declared invalid, illegal, or unconstitutional, in whole or in part by any court or agency of competent jurisdiction, said decision shall not affect the validity of the remaining portions hereof.

Section 4. Effectiveness. This Ordinance shall take effect immediately upon adoption.

ADOPTED: December 20, 2006

ATTEST:

L. Bonita J. Brown
Clerk of the Board

APPROVED AS TO FORM:

EDWARD G. HOLM
PROSECUTING ATTORNEY

Allen T. Miller
Allen T. Miller, Jr.
Deputy Prosecuting Attorney

BOARD OF COUNTY
COMMISSIONERS
Thurston County, Washington

David Macleod
Chairman

Barry Stacey
Commissioner

Marie Chequib
Commissioner

ATTACHMENT A

Grand Mound Development Guidelines

I. INTRODUCTION

A. Intent

1. The intent of these guidelines is:
 - a. To encourage the development of visually attractive commercial, industrial and multifamily residential developments that will give Grand Mound its own cohesive identity and distinguish it from other interchange areas along the I-5 corridor;
 - b. To promote high quality developments that will protect and enhance property values; and
 - c. To mitigate the impacts of urban development through enhanced design.

B. Applicability

1. These guidelines apply to properties within the Grand Mound Urban Growth Area, as defined in the Grand Mound Subarea Plan, within the following zoning districts:
 - a. Arterial commercial;
 - b. Planned Industrial Park;
 - c. Light Industrial; and
 - d. Residential 4-16 Units/Acre District.
2. These guidelines apply to the following development:
 - a. New residential developments with five or more dwelling units, with the exception of detached single family residences;
 - b. New construction of buildings, structures (including signs) or parking lots; and
 - c. Additions, expansions or remodeling of existing buildings and structures within any twelve month period when:
 - (i) The cost of additions, expansions or remodeling exceeds fifty (50) percent of the assessed value of the real property improvements; and
 - (ii) The existing layout of the building foundation does not preclude

compliance with these guidelines;

provided, that all guidelines that can be met shall be met in full or in part;

- d. When a nonconforming sign is structurally altered, it ceases to be a legal nonconforming sign and must conform with these guidelines. "Structural alteration" means any action that changes the height, size or shape of the sign or any action that affects the base or supports of the sign; provided however, that the repair or restoration of any nonconforming sign to its original condition where such sign is damaged by fire, explosion, wind act of nature or other accidental cause shall not be considered a "structural alteration" if the cost of such repair or restoration does not exceed fifty (50) percent of its replacement cost.

C. How To Use These Guidelines

These guidelines function as standards and supplement the development regulations of the underlying zoning districts (Chapters 20.21A, 20.25, 20.27 and 20.28), the sign, parking and landscaping regulations (Chapters 20.40, 20.44 and 20.45) and other applicable chapters of the Thurston County Zoning Ordinance (Title 20). Where these guidelines conflict with the requirements of Title 20, these guidelines shall apply.

Together with Title 20 and other applicable county codes, these guidelines serve to implement the adopted Grand Mound Subarea Plan.

IV. LANDSCAPE GUIDELINES

A. General Provisions

1. A landscape plan shall be prepared by a Registered Landscape Architect, Washington-certified nurseryman, or Washington-certified landscape technician. Verification of professional status shall be submitted with the plan.
2. Landscape plans shall be drawn to scale on the proposed site plan. The landscape plan shall show all landscape materials (existing and proposed), significant trees and proposed topographic elevations.
3. Irrigation of landscaped areas is required and an irrigation plan shall be submitted along with the landscape plan. Irrigation plans shall be drawn to scale and shall show all necessary elements to implement a fully operational automatic (timer controlled) underground irrigation system. The irrigation plan shall be prepared by a Registered Landscape Architect, Professional Engineer or Washington-certified landscape technician. Verification of professional status shall be submitted with the plan.
4. Permitted Plant Types. The applicant shall utilize plant materials which are adaptable to local climatic conditions, including drought conditions. Any vegetation retained or planted must consist of non-invasive plant species. An invasive plant species is a non-native plant species that escaped into the wild and displaces native vegetation. Noxious weeds are prohibited.
5. In required landscaping areas, the applicant shall retain significant trees which will not constitute a safety hazard. A 'significant tree' is defined as a tree sixteen (16) inches in diameter measured twelve (12) inches above grade which forms a continuous canopy.
6. The property owner shall replace any unhealthy or dead plant materials in conformance with the approved landscape

plan and shall maintain all landscape material and irrigation systems.

Submittal Requirements

Kinnickinnick	Rugosa	Rose
Oak	Honey Locust	
Barberry	Snowberry	
Serviceberry	Euonymus	
Potentilla	Fountain Grass	
Pines	Gingko	
Cotoneaster	Blue Fescue	
Salal	Barberries	

Examples of Permitted Plant Types

Significant Tree

installed prior to the issuance of certificate of occupancy, the applicant shall provide a surety in a form acceptable to the County in the amount of one hundred (100) percent of the cost of plant material plus installation, to ensure that the landscape and irrigation improvements are installed in accordance with the approved landscape and irrigation plans within a period of nine (9) months from the date of issuance of final certificate of occupancy. One three-month extension may be granted by the development services director for delays due to adverse weather conditions or other problems beyond the control of the applicant.

Landscape Features

8. Landscape Features. Landscape features such as decorative paving, sculptures or fountains are permitted in the required landscape areas in lieu of required plant material. The area devoted to such features may not exceed twenty-five (25) percent of the required landscape area.
9. An area around the base of utility poles and other utility fixtures shall be landscaped to enhance the overall appearance of the area. This landscaping shall consist of live groundcovers and shrubs.
10. Landscaping located within the vision clearance triangle shall be planted and maintained in conformance with the Thurston County Zoning Ordinance Appendix Figure 13. This shall also apply to driveway accesses.

Vision Clearance Triangle

B. Landscaping Adjacent to Public Roadways

1. Properties along Arterial Roads and/or abutting State Route 12:
 - a. Developments shall have a minimum ten (10) foot landscape buffer strip along all arterial roads and abutting State Route 12. The ten foot landscaping buffer strip may be all or partly in planter strip between the curb and sidewalk. Landscaping buffer strip ten foot width may be combined with stormwater facilities as long as the

7. Performance assurance. If the landscaping and irrigation is not fully

county approves the tree locations with the needed access to maintain the stormwater facilities. The adjacent property owner or homeowners association will be responsible for maintaining all landscaping and stormwater facilities.

- b. Street trees shall be planted on thirty-five (35) foot centers within the required landscape buffer strip in accordance with the following table:

<u>Roadway</u>	<u>Street Tree Species</u>
Old Highway 99	Northern Red Oak (<i>Quercus rubra</i>)
Elderberry Street (from SR 12 to 196th)	Northern Red Oak (<i>Quercus rubra</i>)
196th Avenue (from Elderberry to Sargent)	Northern Red Oak (<i>Quercus rubra</i>)
Sargent Road (from 196th to 191st)	Northern Red Oak (<i>Quercus rubra</i>)
State Route 12	Pin Oak (<i>Quercus palustris</i>)

Where overhead utility lines are located along the roadway, the required street tree shall be Hedge Maple (*Acer campestre*) on the side of the street where the utilities are located, to avoid potential conflicts between street trees and utility lines.

Street trees shall be a minimum two (2) inches in diameter measured six (6) inches above grade at the time of planting.

- c. Significant trees retained within the landscape buffer strip may substitute for street trees at a one to one ratio.
- d. Other plantings within the required landscape buffer strip shall be any combination of live groundcovers/shrubs, earthen berms, and other landscape features; provided that the resultant effect is to provide partial screening and to soften the appearance of parking lots and structures. The size and spacing of plant material and landscape features

shall be selected and maintained so that the entire landscape area is covered within five (5) years.

2. Properties along Collector Roads

- a. A minimum five (5) foot landscape buffer strip shall be required along all collector roads.

The five foot landscaping buffer strip may be all or partly in a planter strip between the curb and sidewalk. Landscaping buffer strip five foot width may be combined with stormwater facilities as long as the county approves the tree locations with the needed access to maintain the stormwater facilities. The adjacent property owner or homeowners association will be responsible for maintaining all landscaping and stormwater facilities.

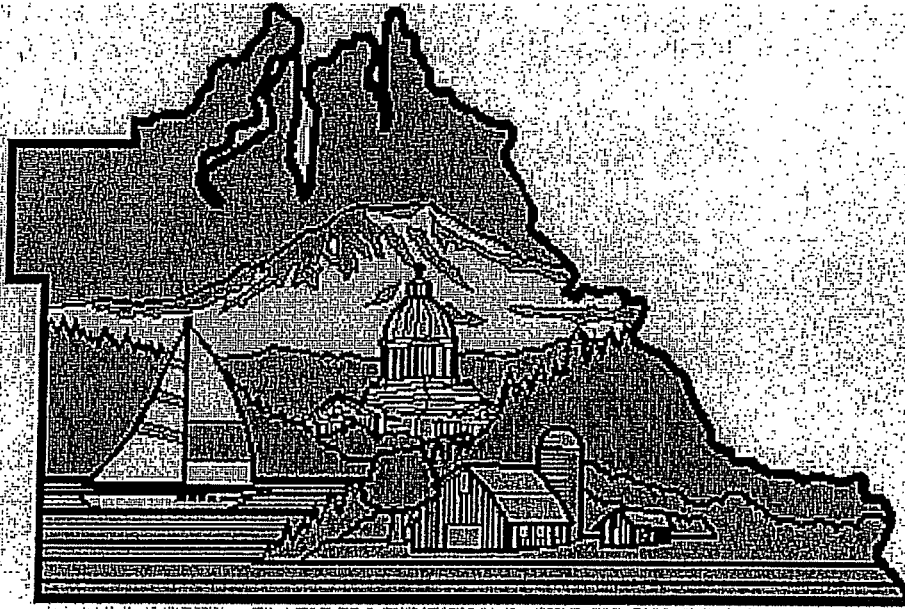
- b. Street trees shall be planted within the required landscape buffer strip at a ratio of one street tree per thirty-five (35) linear feet of street frontage. Street trees may be planted at equal spacing, unequal spacing or in groups. At time of planting, deciduous trees

ATTACHMENT B

THURSTON COUNTY

WASHINGTON

SINCE 1852



ROAD STANDARDS

JANUARY 1999

CHAPTER 16 URBAN FEATURES

16.00 URBAN FEATURES

- 16.01 General
- 16.02 Design Standards
- 16.03 Sidewalks, Curb and Gutter
- 16.04 Cement Concrete Curb and Gutter
- 16.05 Curb Access Ramps
- 16.06 Staking
- 16.07 Testing
- 16.08 Bikeways
- 16.09 Illumination

- Appendix 16 – A Cement Concrete Driveway
- Appendix 16 – B Sidewalk
- Appendix 16 – C Cement Concrete Curb, Gutter and Walk
- Appendix 16 – D Expansion Joint and Score Marks
- Appendix 16 – E Curb Ramp Samples
- Appendix 16 – F Curb Ramps Type "A" and "B"
- Appendix 16 – G Curb Ramp Type "C"
- Appendix 16 – H Curb Ramp Type "D1"
- Appendix 16 – I Curb Ramp Type "D2"
- Appendix 16 – J Curb Ramp Type "E"
- Appendix 16 – K Curb Ramp Type "F"
- Appendix 16 – L Curb Ramp Type "G"
- Appendix 16 – M Cement Concrete Curb and Gutter
- Appendix 16 – N Typical Cross-Walk Dimensions
- Appendix 16 – O Far-side Bus Pullout
- Appendix 16 – P Class II Bikeway
- Appendix 16 – Q Entry/Exit Detail
- Appendix 16 – R Minor Local & Local Roadway Section
- Appendix 16 – S Collector Roadway Section
- Appendix 16 – T Arterial Roadway Section
- Appendix 16 – U Elderberry Access Detail

16.00 URBAN FEATURES

16.01 General

All properties within the Grand Mound Urban Growth Area shall have cement concrete curb, gutter and sidewalks constructed along the abutting private and public roads as shown on the typical roadway cross sections. Bikeways shall also be constructed in locations shown on the Comprehensive Bike Plan. New construction, alterations and improvements which constitute 25 percent or more of the value of the existing real property improvements shall also have cement concrete curb, gutter, sidewalks and bikeway (if applicable) constructed along the abutting private and public roads. All existing and proposed accesses onto the roadways within the Grand Mound Urban Growth Area shall be evaluated for conformance with these Standards.

16.02 Design Standards

Plans for the construction of sidewalks, curb and gutters shall be submitted as part of the plans when applicable.

The County has set forth minimum Standards for the Grand Mound Urban Growth Area as outlined in Appendices 16-A through 16-U which shall be met in the design and construction of sidewalks, cross-walks, bus pullouts, bikeways, cement concrete curb and gutter. Because these are minimum Standards, they may be modified by the engineer when it is felt that circumstances require increased or decreased widths.

16.03 Sidewalks, Curb and Gutters

Sidewalks shall be constructed of air entrained Type II Portland Cement Class 3000 in accordance with the requirements of Section 6-02 of the Standard Specifications. The thickness of the sidewalk shall be 6 inches in driveway locations and 4 inches in all other areas. The width of the sidewalk shall be measured from the back face of the curb and gutter or the edge of the planter strip to the back of the sidewalk.

- A. Arterial, Collector and Local Roads. Sidewalks, curb and gutters shall be required on both sides of all roads interior to the development, including cul-de-sacs. Sidewalks, curb and gutters shall also be required on all roads abutting the development.
- B. The design and construction of all sidewalks, curb and gutters shall meet the Standards set forth in Appendices 16-A through 16-U.

The width of the sidewalks shall be shown in the road design drawings. The Engineer shall require that the design of all sidewalks provides for

gradual rather than abrupt transitions between sidewalks of different widths or alignments.

- C. Form and subgrade inspection by the County is required before the sidewalk is poured.
- D. Monolithic pour of curb and sidewalk will not be allowed.

16.04 Cement Concrete Curb and Gutter

Cement concrete curb and gutter shall be used for all road edges unless otherwise approved by the Engineer. All curb and gutters shall be constructed of Type II Portland Cement Class 3000 as shown in Appendix 16-M.

Extruded curb and gutter per Standard Specifications is allowed.

Form and subgrade inspection by the County is required before the curb and gutter is poured.

16.05 Curb Access Ramps

All sidewalks must be constructed to provide for access ramps in accordance with the Standards of State Law.

Curb access ramps shall be constructed of Type II Portland Cement Class 3000. Form and subgrade inspection by the County is required before the handicap ramp is poured.

16.06 Staking

All surveying and staking shall be performed by an engineer or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington.

A preconstruction meeting shall be held with the County prior to commencing staking. All construction staking shall be inspected by the County prior to construction.

The minimum staking of curb, gutter and sidewalk shall be as follows:

Stake top back of sidewalk or top back of curb at a consistent offset for vertical and horizontal alignment every 25 feet or 50 feet in tangent sections.

16.07 Testing

Testing shall be required at the applicant's or contractor's expense on all materials and construction as specified in the Standard Specifications. At a minimum, one slump test and 2 test cylinders shall be taken once per day.

In addition, the County shall be notified before each phase of sidewalk and curb construction commences.

16.08 Bikeways

The minimum design Standards for Bikeways shall be defined in the "WSDOT" Design Manual", Section 1020, Facilities for Non-motorized Transportation.

~~Class II Bike Paths~~ Bike lanes are required within the Grand Mound Urban Growth Area as shown on the Comprehensive Bike Plan. ~~Class II Bike Paths~~ Bike lanes are those in which a portion of the motor vehicle roadway is designated by signs and pavement markings for bicycle use. These facilities are adjacent to the motor vehicle roadway.

Bikeways may also be required when the traffic analysis or traffic planning indicates substantial bicycle usage which would benefit from a designated bicycle facility as determined by the Engineer except where noted herein.

| 16.09 Illumination

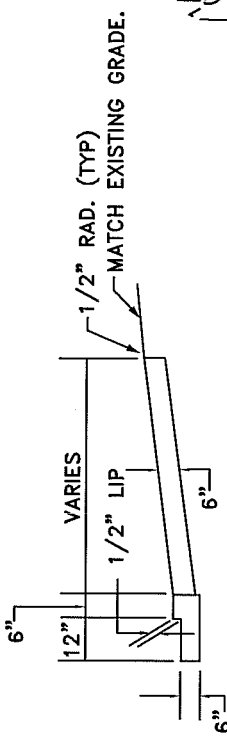
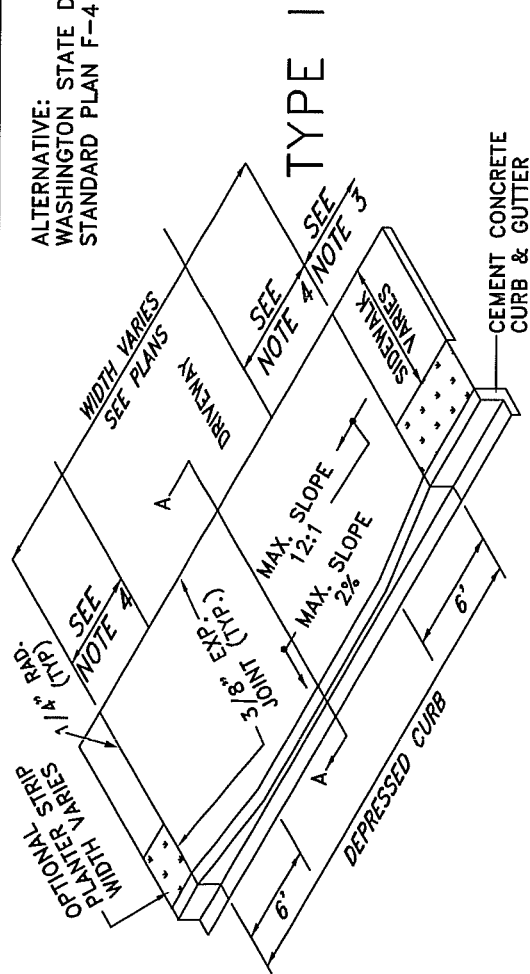
ILLUMINATION STANDARDS

<u>ROAD CLASS</u>	<u>STREET WIDTH</u> (FEET)	<u>LUMINAIRE HPS</u> (WATT)	<u>MOUNTING HEIGHT</u> (FEET)	<u>ARM TYPE</u>	<u>CURB OVERHANG</u> (FEET)	<u>MAXIMUM SPACING</u>	
						<u>ONE SIDE</u> (FEET)	<u>BOTH SIDES OPPOSITE</u> (FEET)
Minor Collector and Local Road:							
	26	100	25	Single	5.0	170	—
RES	14/12/14	200	30	Single	5.0	—	180
IND	14/12/14	200	30	Single	5.0	—	180
COM	14/12/14	200	30	Single	5.0	—	180

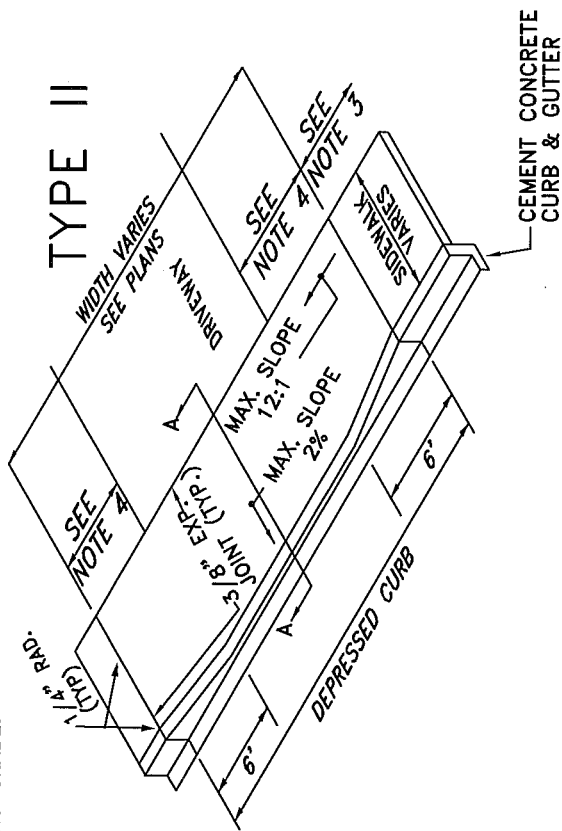
On curvilinear roadways where the above illumination standards cannot be met, design calculations must be provided.

| All illumination per current WSDOT "Design Manual", "Standard Plans" and "Standard Specifications".

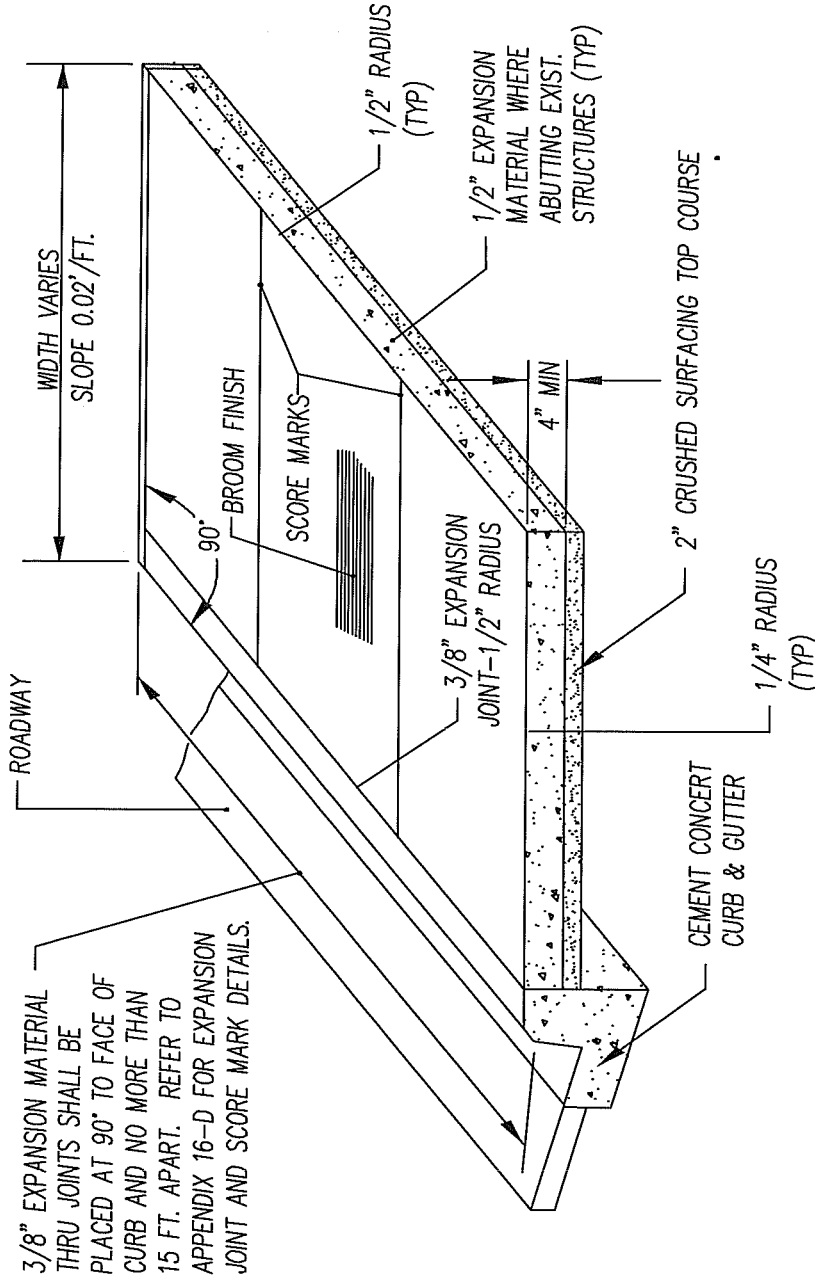
ALTERNATIVE:
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
STANDARD PLAN F-4



SECTION A-A



- NOTES:
1. WHERE D/W EXCEEDS 16' WIDTH AN EXPANSION JOINT SHALL BE PLACED TRANSVERSELY, CENTERED IN DRIVEWAY.
 2. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PRE MOLDED JOINT FILLER FULL THICKNESS.
 3. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE PLACING CONCRETE.
 4. TRANSITION WIDTH WILL VARY DEPENDING ON DRIVEWAY SLOPE. MAINTAIN 12:1 TRANSITION SLOPE 6' MIN. SPACING REQUIRED TO NEXT DRIVEWAY
 5. DRIVEWAY WIDTH AT THE THROAT SHALL NOT EXCEED 11' WIDE IN CUL-DE-SACS.
 6. WHEN CHECKED WITH A 10 FOOT STRAIGHTEDGE, GRADE SHALL NOT DEVIATE MORE THAN 1/8 INCH, AND ALIGNMENT SHALL NOT VARY MORE THAN 1/4 INCH.
 7. BROOM FINISH LONGITUDINALLY WITH LIGHT BROOM FINISH INCLUDING CURB FACE.
 8. MINIMUM GUTTER LINE GRADE SHALL BE 0.50%.



NOTES:

1. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING.
2. CONCRETE SHALL BE AIR ENTRAINED TYPE II PORTLAND CEMENT CLASS 3000.
3. BROOM FINISH SHALL BE PERPENDICULAR TO FACE OF CURB.
4. JOINTS SHALL BE TROWEL FINISHED, AFTER BROOMING.
5. ALL EDGES AND JOINTS SHALL BE FINISHED.
6. WHEN CHECKED WITH A 10 FOOT STRAIGHTEDGE, GRADE SHALL NOT DEVIATE MORE THAN 1/8 INCH, AND ALIGNMENT SHALL NOT VARY MORE THAN 1/4 INCH.

urban4.dwg



THURSTON COUNTY
ROADS AND
TRANSPORTATION
SERVICES
DEVELOPMENT
REVIEW

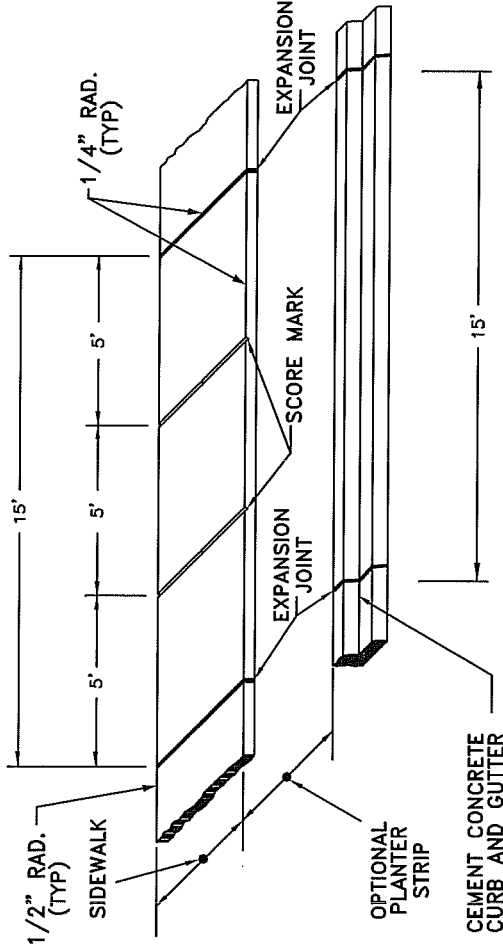
ROADWAY
STANDARDS

CEMENT
CONCRETE
CURB, GUTTER
AND WALK

APPENDIX 16 - C

REVISIONS

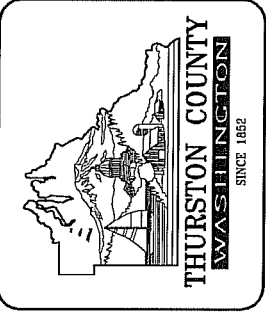
DATE



GENERAL NOTES:

1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING CONCRETE.
3. SCORE MARKS SHALL BE $\pm 1/8"$ WIDE BY $\pm 1/4"$ DEEP. FOR SIDEWALKS OVER 8' IN WIDTH, A LONGITUDINAL SCORE MARK SHALL BE MADE ALONG CENTER OF WALK.
4. EXPANSION JOINTS SHALL BE INSTALLED IN CURB AND GUTTER AND IN SIDEWALK AT PC AND PT AT ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB AND GUTTER, UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.
5. PLANTER STRIP TO BE MAINTAINED BY ADJACENT PROPERTY OWNER.

REVISIONS	DATE



THURSTON COUNTY
ROADS AND
TRANSPORTATION
SERVICES
DEVELOPMENT
REVIEW

ROADWAY
STANDARDS

EXPANSION
JOINT &
SCORE MARKS

APPENDIX 16 – D

- urban12.dwg

REVISIONS	DATE

Diagram illustrating a proposed street layout for a 25-foot wide road. The layout includes a 5-foot sidewalk on both sides, two 13-foot traffic lanes, and a 5-foot area for a transit stop. A car is shown in the first traffic lane, a bus in the second, and two pedestrians on each sidewalk. The total width is 25 feet.

DESIGN SPEED	20 TO 25 M.P.H.
MAXIMUM ROAD GRADE	12%
MINIMUM ROAD GRADE	0.5%
MINIMUM SURFACING WIDTH	22'
MINIMUM ROADWAY WIDTH	22'
MINIMUM DESIGN LOAD	HS 20-44
RIGHT-OF-WAY WIDTH	50' MIN.
ROADWAY GEOMETRICS	PER AASHTO AND WSDOT STDs.
MINIMUM REQUIRED:	
ASPHALT CONCRETE PAVEMENT	0.20 COMPACTED DEPTH
CRUSHED SURFACING, TOP COURSE	0.17' COMPACTED DEPTH
GRAVEL BASE	0.75' COMPACTED DEPTH
VERTICAL CLEARANCE	16.5'

R/W WIDTHS MAY BE REDUCED WHERE THE COUNTY ENGINEER HAS DETERMINED THAT ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE PRIVATE MAINTENANCE OF WALKWAYS, TRAILS, BIKEWAYS AND SWALES.

THE USE OF ROADSIDE SWALES FOR STORMWATER TREATMENT, BIO-FILTRATION, MAY REQUIRE ADDITIONAL R/W WIDTH. SWALES CAN BE IN PLANTER STRIP BETWEEN CURB & SIDEWALK IF MAINTAINED BY ADJACENT PROPERTY OWNERS.

ADDITIONAL R/W MAY BE REQUIRED TO ACCOMMODATE ADDITIONAL LANES. CLEAR ZONE REQUIREMENTS AS OUTLINED IN THE LOCAL AGENCY GUIDELINES AND APPENDIX 6-7 SHALL BE COMPLIED WITH.

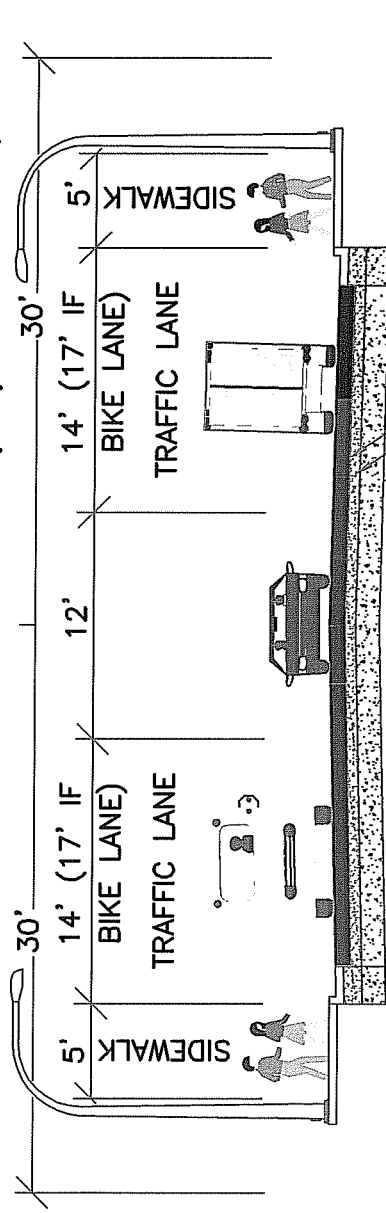
STRUCTURAL ROADWAY SECTION TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN WASHINGTON

APPENDIX 16 - R

GRAND MOUND ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: COLLECTOR

20-YR. PROJECTED AVERAGE DAILY TRAFFIC (ADT): 2,000 TO 15,000



DESIGN CRITERIA

DESIGN SPEED _____ 25 TO 35 M.P.H.
 MAXIMUM ROAD GRADE _____ 10%
 MINIMUM ROAD GRADE _____ 0.5%
 MINIMUM SURFACING WIDTH _____ 24'
 MINIMUM ROADWAY WIDTH _____ 24'
 MINIMUM DESIGN LOAD _____ HS 20-44
 RIGHT-OF-WAY WIDTH _____ 60' MIN.
 ROADWAY GEOMETRICS _____ PER AASHTO AND WSDOT STDS.
 MINIMUM REQUIRED:
 ASPHALT CONCRETE PAVEMENT _____ 0.25' COMPACTED DEPTH
 CRUSHED SURFACING, TOP COURSE _____ 0.17' COMPACTED DEPTH
 GRAVEL BASE _____ 0.75' COMPACTED DEPTH
 VERTICAL CLEARANCE _____ 16.5'

NOTES:

CENTER MEDIAN MAY TAKE THE FORM OF A TWO-WAY LEFT TURN LANE, LEFT TURN POCKET AT MAJOR INTERSECTION/DRIVEWAYS, OR RAISED MEDIAN

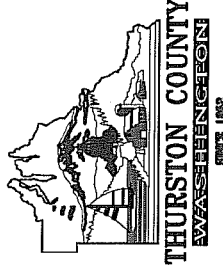
R/W WIDTHS MAY BE REDUCED WHERE THE COUNTY ENGINEER HAS DETERMINED THAT ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE PRIVATE MAINTENANCE OF WALKWAYS, TRAILS, BIKEWAYS AND SWALES.

ADDITIONAL R/W MAY BE REQUIRED TO ACCOMMODATE ADDITIONAL LANES. CLEAR ZONE REQUIREMENTS AS OUTLINED IN THE LOCAL AGENCY GUIDELINES AND APPENDIX 6-7 SHALL BE COMPLIED WITH.

STRUCTURAL ROADWAY SECTION TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN WASHINGTON
 THE USE OF ROADSIDE SWALES FOR STORMWATER TREATMENT, BIO-FILTRATION, MAY REQUIRE ADDITIONAL R/W WIDTH. SWALES CAN BE IN PLANTER STRIP BETWEEN CURB & SIDEWALK IF MAINTAINED BY ADJACENT PROPERTY OWNER.

COLLECTOR.DWG

REVISIONS DATE



THURSTON COUNTY
ROADS AND
TRANSPORTATION
SERVICES
DEVELOPMENT
REVIEW

ROADWAY
STANDARDS

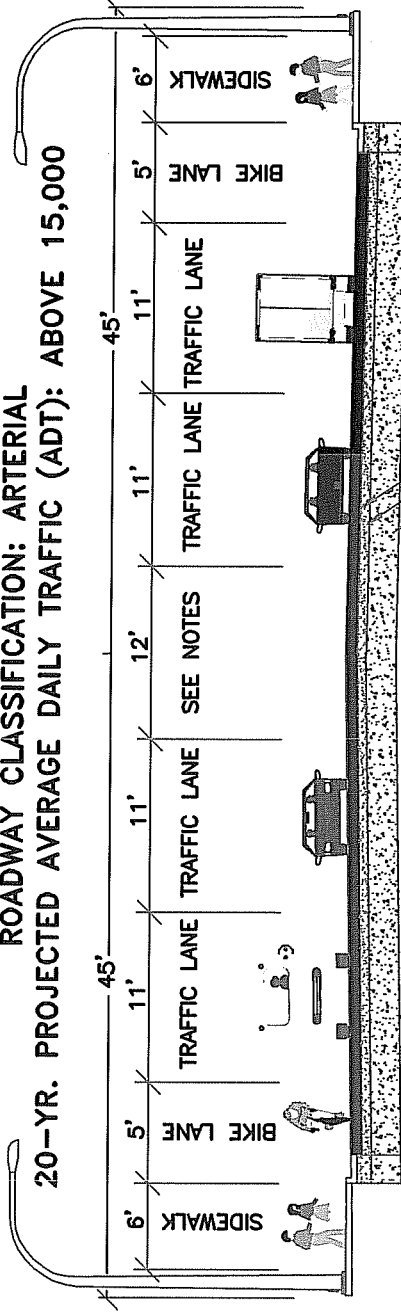
COLLECTOR
ROADWAY
SECTION

APPENDIX 16 - S

GRAND MOUND ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: ARTERIAL

20-YR. PROJECTED AVERAGE DAILY TRAFFIC (ADT): ABOVE 15,000



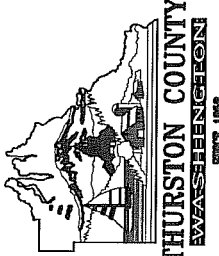
DESIGN CRITERIA

DESIGN SPEED	30 TO 45 M.P.H.
MAXIMUM ROAD GRADE	8%
MINIMUM ROAD GRADE	0.5%
MINIMUM SURFACING WIDTH	44' PLUS TWO 5' CLASS II BIKE LANES
MINIMUM ROADWAY WIDTH	54'
MINIMUM DESIGN LOAD	HS 20-44
RIGHT-OF-WAY WIDTH	90' MIN.
ROADWAY GEOMETRICS	PER AASHTO AND WSDOT STDS.
MINIMUM REQUIRED:	
ASPHALT CONCRETE PAVEMENT	0.33' COMPACTED DEPTH
CRUSHED SURFACING, TOP COURSE	0.17' COMPACTED DEPTH
GRAVEL BASE	0.75' COMPACTED DEPTH
VERTICAL CLEARANCE	16.5'

NOTES:

- CENTER MEDIAN MAY TAKE THE FORM OF A TWO-WAY LEFT TURN LANE, LEFT TURN POCKET AT MAJOR INTERSECTION/DRIVEWAYS, OR RAISED MEDIAN
- R/W WIDTHS MAY BE REDUCED WHERE THE COUNTY ENGINEER HAS DETERMINED THAT ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE PRIVATE MAINTENANCE OF WALKWAYS, TRAILS, BIKEWAYS AND SWALES.
- ADDITIONAL R/W MAY BE REQUIRED TO ACCOMMODATE ADDITIONAL LANES. CLEAR ZONE REQUIREMENTS AS OUTLINED IN THE LOCAL AGENCY GUIDELINES AND APPENDIX 6-7 SHALL BE COMPLIED WITH.
- STRUCTURAL ROADWAY SECTION TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN WASHINGTON
- THE USE OF ROADSIDE SWALES FOR STORMWATER TREATMENT, BIO-FILTRATION, MAY REQUIRE ADDITIONAL R/W WIDTH. SWALES CAN BE IN PLANTER STRIP BETWEEN CURB & SIDEWALK IF MAINTAINED BY ADJACENT PROPERTY OWNER.

REVISIONS	DATE



THURSTON COUNTY
ROADS AND
TRANSPORTATION
SERVICES
DEVELOPMENT
REVIEW

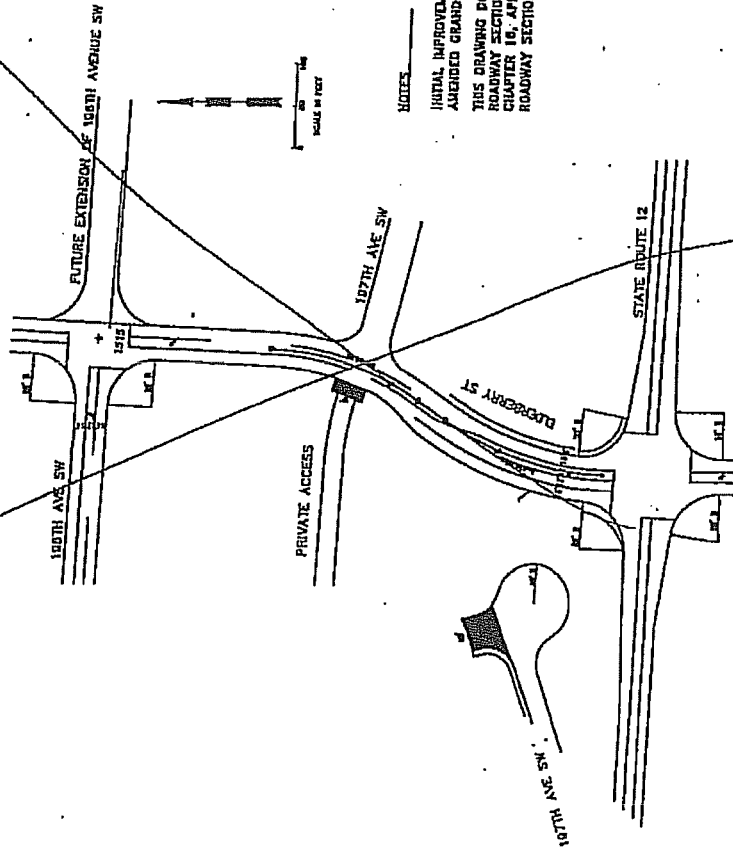
ROADWAY
STANDARDS

ARTERIAL
ROADWAY
SECTION

GRAND MOUND ROADWAY DESIGN STANDARDS

ELDERBERRY STREET ACCESS CONFIGURATION
AFTER INITIAL IMPROVEMENTS ARE COMPLETED

*REPLACE BY
NEW 16-4
ATTACHED.*



NOTES

INITIAL IMPROVEMENTS ARE DESCRIBED IN THE 1977
AMENDED GRAND MOUND SUBAREA PLAN
THIS DRAWING DOES NOT DEPICT FULL ARTERIAL
ROADWAY SECTION FOR ELDERBERRY ST. REFER TO
CHAPTER 16, APPENDIX 16 - " FOR THE ARTERIAL
ROADWAY SECTION

ELDERBERRY.DWG

REVISIONS	DATE



THURSTON COUNTY
ROADS AND
TRANSPORTATION
SERVICES
DEVELOPMENT
REVIEW

ROADWAY
STANDARDS

ELDERBERRY
ACCESS
DETAIL

APPENDIX 16 - U

ELDERBERRY
ACCESS
DETAIL

APPENDIX 16-U

ROADWAY
STANDARDS

THURSTON COUNTY
TRAFFIC
ENGINEERING



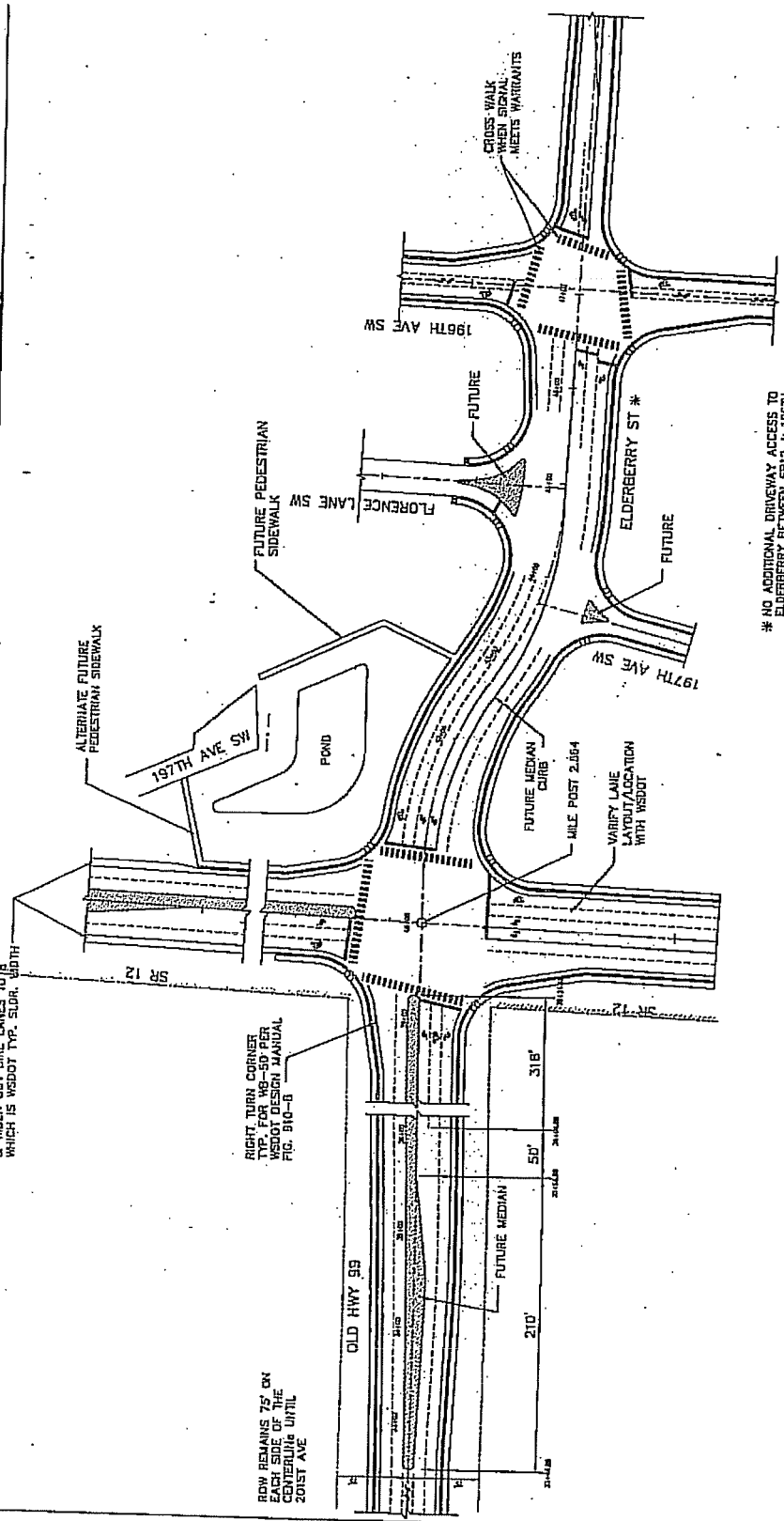
REVISIONS	DATE

ELIMINATE SIDEWALKS EAST
INTERSECTION RADIUS RETURNS
& WIDEN OUT BIKE LANES TO 8'
WHICH IS WSDOT TYP. SLDR. WIDTH

SCALE IN FEET
0 30 100

RIGHT TURN CORNER
RTP FOR 90-30 PER
WSDOT DESIGN MANUAL
FIG. B10-B

ROW REMAINS 75' ON
EAST SIDE OF THE
CENTERLINE UNTIL
201ST AVE



* NO ADDITIONAL DRIVEWAY ACCESS TO
ELDERBERRY BETWEEN SR12 & 196TH