



Technical Memorandum #7



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Subject: Street and Driveway Crossings

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This design memorandum presents criteria, recommendations, and other relevant information for project consideration on the above referenced subject.

Acknowledgement:

Significant discussion and agency comments during review are incorporated and reflected by date-revision, when shown. Information presented herein represents final concurrence and direction on referenced subject.	<u>Otak</u>	<i>initials</i>
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	Kirk Harris, Commissioner	

Introduction

The purpose of this technical memorandum is to present design considerations and recommendations for crossing of streets and private driveways.

Existing Required Crossings

The proposed improvements will be within existing Redmond-Fall City Road (SR 202) right-of-way. Along the project alignment, there are local streets crossings as well as several individual driveways to properties having direct ingress/egress access to SR 202. From the westerly project limits at SE 40th Street easterly to 324th Avenue SE, a 6-foot wide asphalt path is proposed. In this section, there is one street crossing (323rd Avenue SE) and one private driveway. From 324th Avenue SE, easterly to the east project limits at SE 42nd Street, a 12-foot asphalt trail is proposed. In this section, there are three street crossings and 12 private driveways.

All four streets are asphalt surfaced at non-signalize intersections with stop control to the free-flowing traffic on SR 202. Three streets are in public right-of-way serving residential neighborhoods and the fourth street is a private access road into Chief Kanim Middle School. This private road is the only street with curb & gutter and none of the four streets have delineated crosswalks.

All the individual private property driveways serve parcels having existing structures, although three parcels have two drive entries each. Driveway widths range between 10' to 30' and the configuration of the approaches within the right-of-way vary greatly. Driveway surfacing consists of either asphalt or gravel, however most has an asphalt approach extending off the SR 202 pavement. Where necessary to maintain roadside ditch drainage, some driveway locations have drainage pipes crossing beneath them.

Street and Driveway Crossing Considerations

General Considerations

- Street Crossings
 - Locate street crossings at intersections for safe crossing and in conformance with current ADA crosswalk standards.
 - Reconstruct existing street pavement as necessary to achieve ADA compliant crossings of the street intersections.
 - Install curbs or curb & gutter and ADA compliant curb ramps at intersection corners adjoining trail crossing to increase vehicular safety.
 - Install pavement markings to delineate the crosswalk at the intersection.
 - To promote trail-user awareness, construct wider areas of concrete and/or contrasting pavements in approaches leading to the street crossings.
 - Install signage along proposed trail in advance of street crossings to alert users.
- Private Property Driveways
 - Reconstruct all driveway entry areas within the right-of-way for uniformity to WSDOT standards and compatibility with proposed trail.
 - Driveway entry surfacing within the right-of-way will be HMA, in accordance with WSDOT standards.
 - To promote awareness to both property owners and trail users, delineate trail crossing area of driveway with a treatment or pavement markings.
 - Reconstruct driveway widths to closely match existing, or to the minimum and maximum width, per WSDOT standards.
 - Drive entries will not be provided for any properties within the project limits that do not currently have an existing entry.

Crossing locations and Improvements

Table 1 - Street Crossings

1	Location: 323 rd Avenue SE (Public)	Surfacing (Crossing Width): Asphalt (30')
	Consideration: <ul style="list-style-type: none"> • 2-lane street • No curbs and non-uniform pavement edge turning radii • No sidewalk, ramps, or delineated crosswalk 	Proposed Improvements: <ul style="list-style-type: none"> • Reconstruct pavement edge and install curbs with uniform radii to standards • Install asphalt landing with tactile/curb breaks; relocate stop bar; and delineate crosswalk

2	Location: 324 rd Avenue SE (Public)	Surfacing (Crossing Width): Asphalt (48')
	Consideration: <ul style="list-style-type: none"> • 2-lane street • No curbs and non-uniform pavement edge turning radii • No sidewalks, ramps, or delineated crosswalk 	Proposed Improvements: <ul style="list-style-type: none"> • Reconstruct pavement edge and install curbs with uniform radii to standards • Install asphalt landing with tactile/curb breaks on SW corner where path ends • Install full curb ramp and landing on SE corner where trail begins • Relocate stop bar and delineate crosswalk
3	Location: Chief Kanim MS (Private Rd.)	Surfacing (Crossing Width): Asphalt (60')
	Consideration: <ul style="list-style-type: none"> • 3-lane street: 1 ingress and both LT & RT-turn egress lanes • No sidewalks, ramps, or delineated crosswalk • Long curb radii and wide RT-turn lane at entry 	Proposed Improvements: <ul style="list-style-type: none"> • Remove and reconstruct narrower east side pavement return to better align crosswalk • Install curb & gutter and curb ramps • Relocate stop bar and delineate crosswalk
4	Location: 332 nd Avenue SE (Public)	Surfacing (Crossing Width): Asphalt (45')
	Consideration: <ul style="list-style-type: none"> • 2-lane street • No curbs and non-uniform pavement edge turning radii • No sidewalks, ramps, or delineated crosswalk 	Proposed Improvements: <ul style="list-style-type: none"> • Remove, re-grade, and replace portion of street paving south of intersection to achieve ADA compliant street cross slopes • Reconstruct pavement edges with uniform radii to standards • Install curb & gutter and curb ramps • Relocate stop bar and delineate crosswalk

Table 2 - Individual Private Driveway Crossings

5	Location: Sta. 12+40 (Busser-047)	Surfacing (Width @ R/W): Asphalt (10')
	Consideration: <ul style="list-style-type: none"> • Non-uniform entry transitions 	Proposed Improvements: <ul style="list-style-type: none"> • Remove and replace asphalt within proposed path crossing limits
6	Location: Sta. 22+26 (Tridco LLC-027)	Surfacing (Width @ R/W): Gravel (10')
	Consideration: <ul style="list-style-type: none"> • Non-uniform entry transitions 	Proposed Improvements: <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W
7	Location: Sta. 23+45 (Bhend-076)	Surfacing (Width @ R/W): Asphalt (18')
	Consideration: <ul style="list-style-type: none"> • Excessively wide non-uniform entry transitions 	Proposed Improvements: <ul style="list-style-type: none"> • Construct 18-foot wide HMA drive entry within R/W
8	Location: Sta. 25+20 (Bhend-076)	Surfacing (Width @ R/W): Asphalt (18')
	Consideration:	Proposed Improvements:

	<ul style="list-style-type: none"> • Second entry to single parcel • Non-uniform entry transitions 	<ul style="list-style-type: none"> • Construct 18-foot wide HMA drive entry within R/W
9	<p>Location: Sta. 26+55 (Krueger-010)</p>	<p>Surfacing (Width @ R/W): Asphalt (8')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Part gravel entry within right-of-way • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W
10	<p>Location: Sta. 27+65 (Krueger-010)</p>	<p>Surfacing (Width @ R/W): Gravel (10')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Second entry to single parcel • All gravel entry within right-of-way • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W
11	<p>Location: Sta. 28+65 (Merle-121)</p>	<p>Surfacing (Width @ R/W): Asphalt (30')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Location very near to Chief Kanim MS private road • Part gravel entry within right-of-way • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Limit drive entry to 20-foot wide to provide space for curb ramp and landing for trail crossing of the private road • Construct entry in concrete (lies within the trail approach leading to the street crossing)
12	<p>Location: Sta. 31+05 (Sanchez-180)</p>	<p>Surfacing (Width @ R/W): Asphalt (20')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Wide non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 20-foot wide HMA drive entry within R/W
13	<p>Location: Sta. 32+68 (Derrick-009)</p>	<p>Surfacing (Width @ R/W): Asphalt (12')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Part gravel entry within right-of-way • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W
14	<p>Location: Sta. 35+47 (Knisely-160)</p>	<p>Surfacing (Width @ R/W): Asphalt (20')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • Single entry splits to two driveways • Part gravel entry within right-of-way • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 20-foot wide HMA drive entry within R/W
15	<p>Location: Sta. 38+48 (McCoy-140)</p>	<p>Surfacing (Width @ R/W): Gravel (20')</p>
	<p>Consideration:</p> <ul style="list-style-type: none"> • All gravel entry within right-of-way (entry contiguous with Mills entry) • Non-uniform entry transitions 	<p>Proposed Improvements:</p> <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W

16	Location: Sta. 38+95 (Mills-145)	Surfacing (Width @ R/W): Gravel (10')
	Consideration: <ul style="list-style-type: none"> • All gravel entry within right-of-way (entry contiguous with McCoy entry) • Non-uniform entry transitions 	Proposed Improvements: <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W
17	Location: Sta. 39+65 (Mills-145)	Surfacing (Width @ R/W): Gravel (16')
	Consideration: <ul style="list-style-type: none"> • Second entry to single parcel • All gravel entry within right-of-way • Wide non-uniform entry transitions 	Proposed Improvements: <ul style="list-style-type: none"> • Construct 14-foot wide (WSDOT min.) HMA drive entry within R/W

Conclusions and Recommendations

1. Coordinate with WSDOT early in final design to confirm:
 - Legality of existing permitted driveway connections on SR 202, specifically for those properties having more than one access to a single parcel.
 - Verify if a Channelization Plan will be required for approval associated with proposed curb modifications on street intersections at SR 202.
2. Coordinate with property owners early in final design to confirm proposed entry location/configuration, particularly parcel 1524079121 (Merle), viewing to have the greatest alteration (width, location, and surface material).
3. Tridco LLC, King Co. parcel #1524079027, at this time has a plat application into King County for a proposed development which indicates no drive access on to SR 202. During final design, confirm the status of this development and existing SR 202 driveway.
4. At final design, confirm that no new additional driveways have been constructed for those parcels along SR 202 currently not having a driveway.

Exhibit ____

Significant Discussion Topics during Agency (Client) Memorandum Review

The below summary represent relevant discussion occurring during agency memorandum review in validating presented information and incorporating memorandum changes to reflect final agency direction.

[To be completed at time of final concurrence]