District:	3
Neighborhood:	North Indian Trail
Project Extent:	Shawnee Avenue and Farmdale Street Intersection
	Estimate: $288,000

Problem Statement: Residents of North Indian Trail neighborhood raised concerns about pedestrian crossing safety at the Shawnee Avenue/Farmdale Street intersection. The primary concern was for school children walking to Woodridge Elementary School located on the northwest corner of the intersection. The intersection is currently stop-controlled on Farmdale Street, with free-flowing traffic on Shawnee Avenue. There are standard crosswalk markings on the north and south legs of the intersection and continental crosswalk markings on the east and west legs of the intersection. Both Shawnee Avenue and Farmdale Street are two-lane facilities with 25 mph speed limits. Shawnee Avenue is classified as an urban minor arterial. Farmdale Street is classified as an urban local access street. An aerial photo of the intersection is provided below.

Traffic Analysis

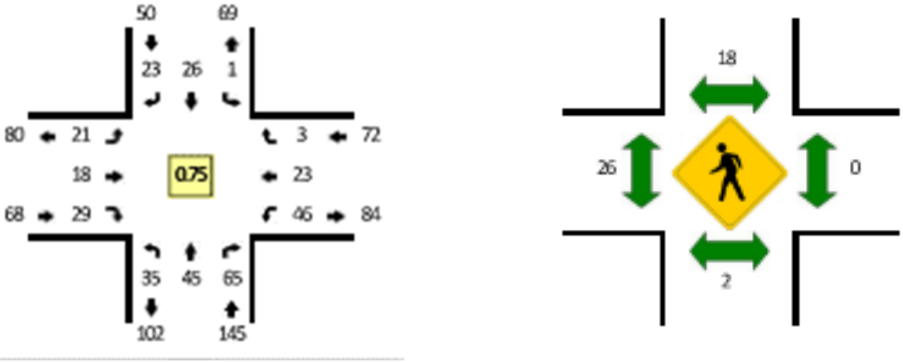
The table below shows 2022 daily traffic volumes and 85th percentile speeds on Shawnee Avenue along the study corridor (count conducted near Woodridge Drive). There are 1,862 per day with an 85th percentile speed of 29 miles per hour (4 mph higher than the 25 mph posted speed limit).

2022 Daily Traffic and 85th Percentile Speeds on Shawnee Avenue

Direction	# Lanes	2022 Daily Traffic (Vehicles per day) [a]	85th Percentile Speed (mph)	Posted Speed (mph)
EB	1	931	29	25
WB	1	931	29	25
Both Dir.	2	1,862	29	25

[a] Traffic data collected in May 2022.

No crashes were observed at the intersection of Shawnee Avenue and Farmdale Street over the last five years. The figure below shows the existing PM peak hour traffic volumes (left) and pedestrian volumes (right) at the Shawnee Avenue and Farmdale Street intersection, based on a traffic count from November 2, 2022.



PM Peak Hour Traffic and Pedestrian Count at Shawnee Avenue and Farmdale Street

The need for enhanced pedestrian crossing treatments (across Shawnee Avenue) was analyzed based on the National Cooperative Highway Research Program (NCHRP) Report 562.1 This report uses four main criteria to identify appropriate crossing treatment: peak hour pedestrian volumes, conflicting vehicle volumes, conflicting vehicle speed, and crossing distance/number of travel lanes to be crossed. The recent count shows 26 pedestrians crossing Shawnee Avenue during the PM peak hour. Pedestrian volumes are likely much higher during the hour before school starts and the hour after school ends. Based on NCHRP 562, a marked crosswalk is the preferred treatment, and no additional crossing treatment would be required.

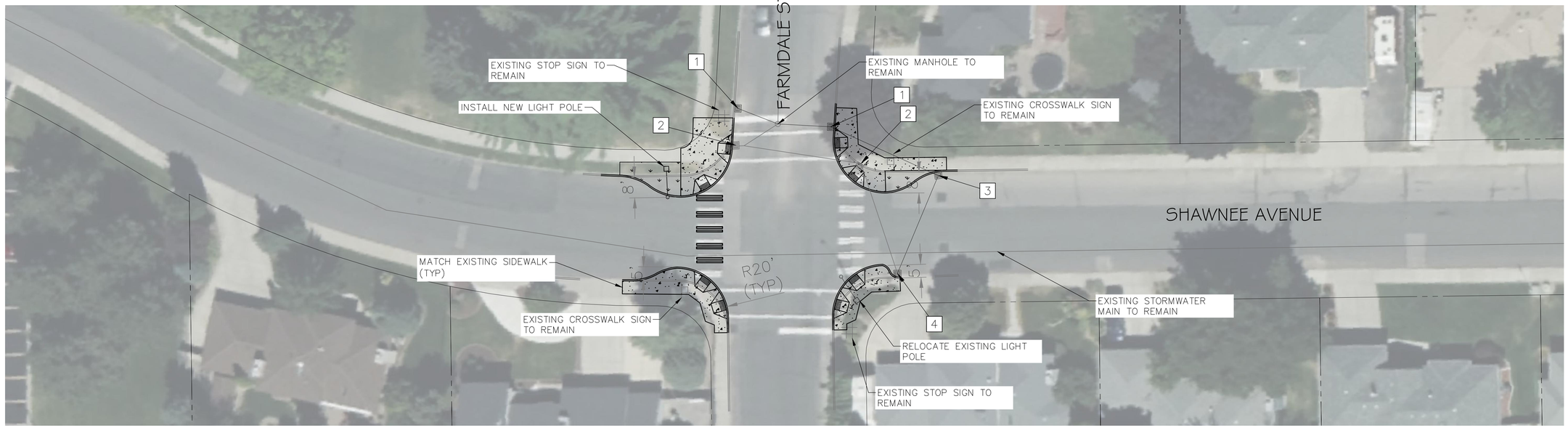
Recommended Solution:

The installation of curb extensions is recommended at the Shawnee Avenue/Farmdale Street intersection on the north and south sides of Shawnee Avenue at both crosswalks to narrow the roadway crossing width. Curb extensions are expected to decrease the 85th percentile speed by 3 miles per hour.[2]

The removal of the existing crosswalk on the east leg is recommended since count data shows there is little to now crossing demand and the installation of a curb extension at that location is not recommended.

[1] *NCHRP Report 562: Improving Pedestrian Safety and Unsignalized Crossings.* National Cooperative Highway Research Program, 2006. https://nacto.org/wp-content/uploads/2010/08/NCHRP-562-Improving-Pedestrian-Safety-at-Unsignalized-Crossings.pdf

[2] Engineering Speed Management Countermeasures: A Desktop Reference of Potential Effectiveness in Reducing Speed. Federal Highway Administration. July 2014.



LEGEND

- PROPERTY LINE
- EXISTING CURB
- EXISTING CONCRETE SIDEWALK
- EXISTING INLET
- INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
- INSTALL NEW CURB PER COS STD PLAN F-106B
- INSTALL LANDSCAPING STRIP
- INSTALL CROSSWALK PER COS STD PLAN G-61
- INSTALL CURB RAMP PER COS STD PLAN F-105

CONSTRUCTION NOTES

1. INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING MANHOLE WHERE SHOWN.
2. REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.
3. INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO NEW CATCH BASIN WHERE SHOWN.
4. REPLACE EXISTING CURB INLET WITH NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO NEW CATCH BASIN WHERE SHOWN.

NORTH

PRELIMINARY

NOT FOR CONTRUCTION

1
1 of 5

DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	E.F.N. - U.S.N.	FROM	TO	COUNCIL ACCEPT DATE	FROM	TO	ORD. NO.	DATE	FILE NO.
REVISIONS				AS BUILT							GRADE ORDINANCE LIST				

NAVD88 = (OLD CBM ELEV.) - (13.13) — AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCH MARK LOCATION: None Given

NAVD88 ELEV.: None Given

CBM NO.: None Given

NAVD88 DATUM

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

HORIZONTAL PLAN/PROFILE: 1" = 20'

VERTICAL PROFILE ONLY: N/A

SCALE

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	BY	DATES
DRAWN:	DRV	01/2023
REVISED:	DRV	05/2023
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APPROVED:	AM	01/2023

CITY OF SPOKANE, WASHINGTON
DEPARTMENT OF ENGINEERING SERVICES
808 WEST SPOKANE FALLS BLVD.
SPOKANE, WASHINGTON 99201-3343
(509) 625-6300

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN

SEGMENT LIMITS: SHAWNEE STREET AND FARMDALE AVENUE

PROJECT LIMITS: NORTH INDIAN TRAIL NEIGHBORHOOD

TYPE OF IMPROVEMENT: TRAFFIC

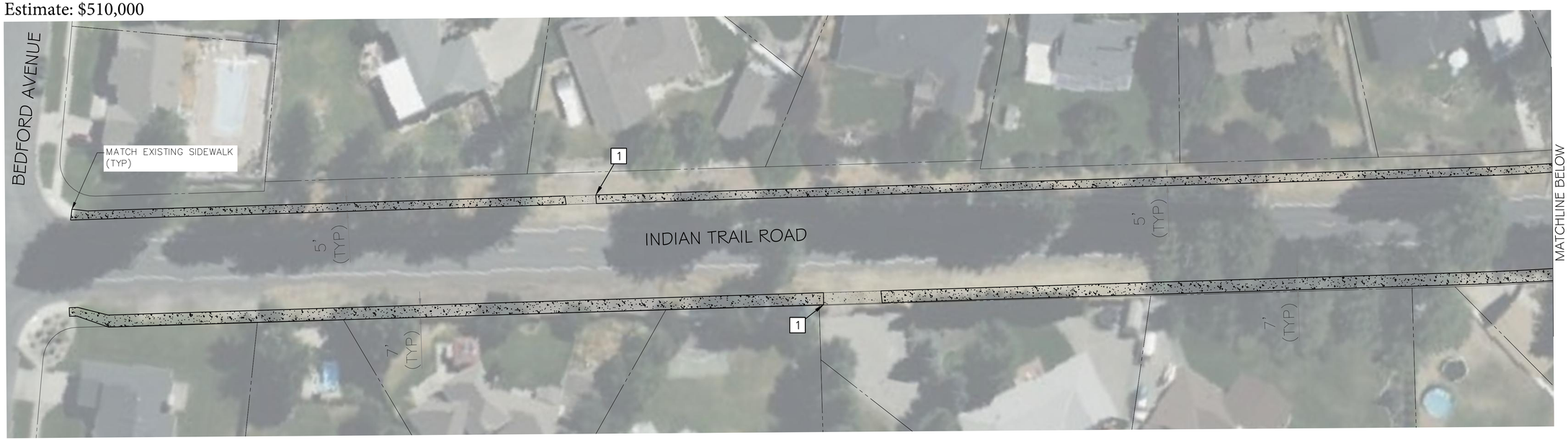
CITY PROJECT NUMBER

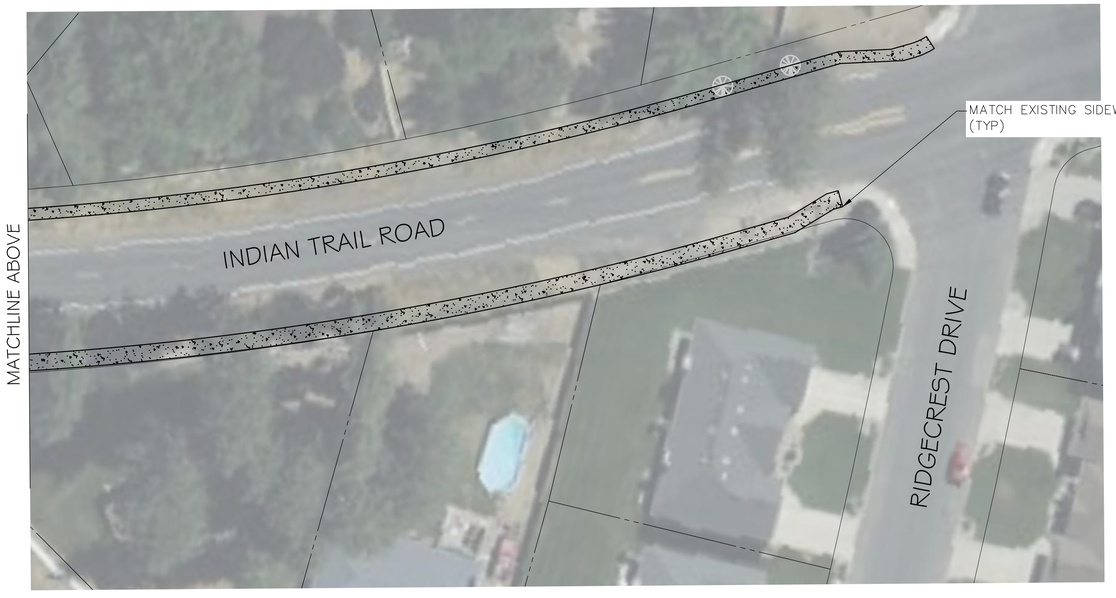
CITY PLAN NUMBER

EFN: TRAFFIC DESIGN

CALL BEFORE YOU DIG 1-800-424-5555

District 3, North Indian Trail: Indian Trail Road from Ridgecrest Drive to Bedford Avenue
Estimate: $510,000





LEGEND

- PROPERTY LINE
- INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-102B
- INSTALL NEW CURB PER COS STD PLAN F-106B
- INSTALL LANDSCAPING STRIP

CONSTRUCTION NOTES

1. INSTALL CONCRETE DRIVEWAY TYPE 2 PER COS STD PLAN F-103A

PRELIMINARY
NOT FOR CONTRUCTION

2
2 of 5

DATE	BY	PROJ.	DESCRIPTION	FROM	TO
REVISIONS					

DATE	BY	PROJ.	E.F.N. - U.S.N.	FROM	TO
AS BUILT					

COUNCIL ACCEPT DATE

FROM	TO	ORD. NO.	DATE	FILE NO.
GRADE ORDINANCE LIST				

NAVD88 = (OLD CBM ELEV.) - (13.13) | AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCH MARK LOCATION: None Given

NAVD88 ELEV: None Given

CBM NO.: None Given

NAVD88 DATUM

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

HORIZONTAL PLAN/PROFILE 1" = 40'
VERTICAL PROFILE ONLY N/A

SCALE

CURRENT C.O.S. DESIGN STANDARDS ADOPTED FEB. 2007

	BY	DATES
DRAWN:	SEA	12/2022
REVISED:	DRV	05/2023
CHECKED:	RAS	12/2022
APPROVED:	AM	12/2022

CITY OF SPOKANE

CITY OF SPOKANE, WASHINGTON
DEPARTMENT OF ENGINEERING SERVICES
808 WEST SPOKANE FALLS BLVD.
SPOKANE, WASHINGTON 99201-3343
(509) 625-6300

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN

SEGMENT LIMITS: INDIAN TRAIL ROAD
RIDGECREST DRIVE TO BEDFORD AVENUE

PROJECT LIMITS: NORTH INDIAN TRAIL NEIGHBORHOOD

TYPE OF IMPROVEMENT: TRAFFIC

CITY PROJECT NUMBER | CITY PLAN NUMBER

EFN: TRAFFIC DESIGN

CALL BEFORE YOU DIG 1-800-424-5555

District:	3
Neighborhood:	North Indian Trail
Project Extent:	Pamela Street from Barnes Road to Pacific Park Drive
	Estimate: $114,000

Problem Statement: Residents of the North Indian Trail neighborhood raised concerns over speeding on Pamela Street from Barnes Road to Pacific Park Drive (0.5 miles). Pamela Street is classified as local street with speed limit of 25 miles per hour. Sections of Pamela Street are identified as a Bike Friendly Route in the Spokane Bicycle Master Plan. The street provides two lanes with on-street parking.

Traffic Analysis

The table below shows daily traffic volumes and 85th percentile vehicle speeds Pamela Street between Barnes Road and Pacific Park Drive. The 85th percentile vehicle speeds on Pamela Street within the study area is 29 miles per hour (4 miles per hour higher than the posted speed limit).

2022 Daily Traffic and 85th Percentile Speeds on Pamela St Between Barnes Rd and Pacific Park Dr

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day) [a]	85th Percentile Speed (mph)	Posted Speed (mph)
NB	1	214	29	
SB	1	180	29	
Both Dir.	2	394	29	25

[a] Traffic data collected in November 2022.

No crashes were reported on Pamela Street between Barnes Road and Pacific Park Drive, excluding intersection crashes at the north and south endpoints over the last five years.

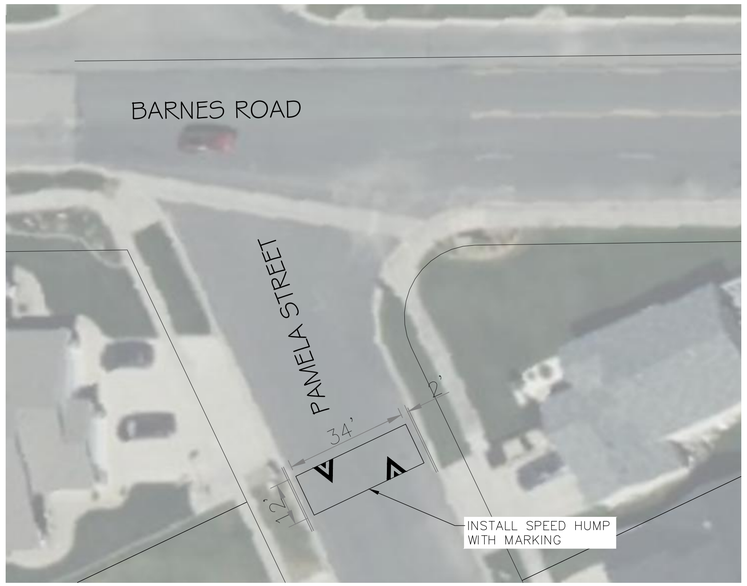
Recommended Solution:

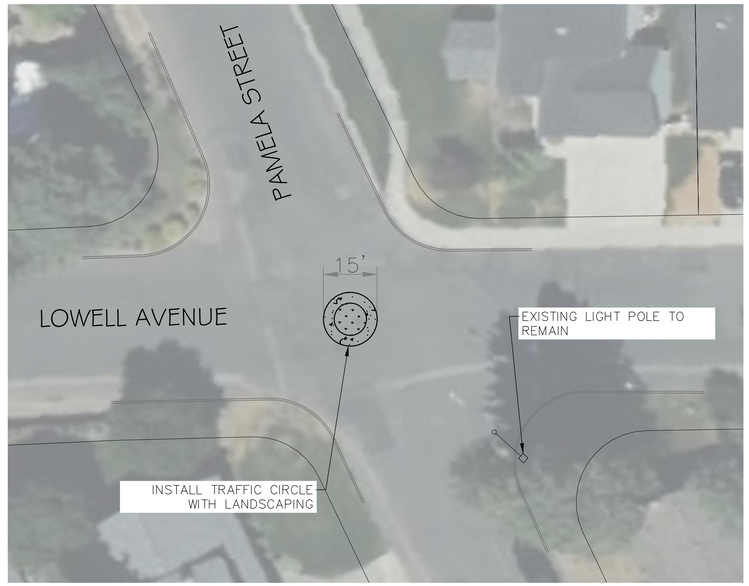
The installation of speed bumps is recommended to slow speeds on this residential street. This street connects Barnes Road and Pacific Park Drive in a direct path, allowing for cut-through traffic to drive through the neighborhood at a faster speed than the posted speed. To be an effective traffic calming strategy, it is recommended that the speed bumps be installed at the entrance to the neighborhood just south of Barnes Road, on either end of Lowell Avenue, and north of Pacific Park Drive. Speed bumps are recommended pending Fire Dept review and approval. Speed bumps are expected to decrease the 85th percentile speed by 8 miles per hour.[3]

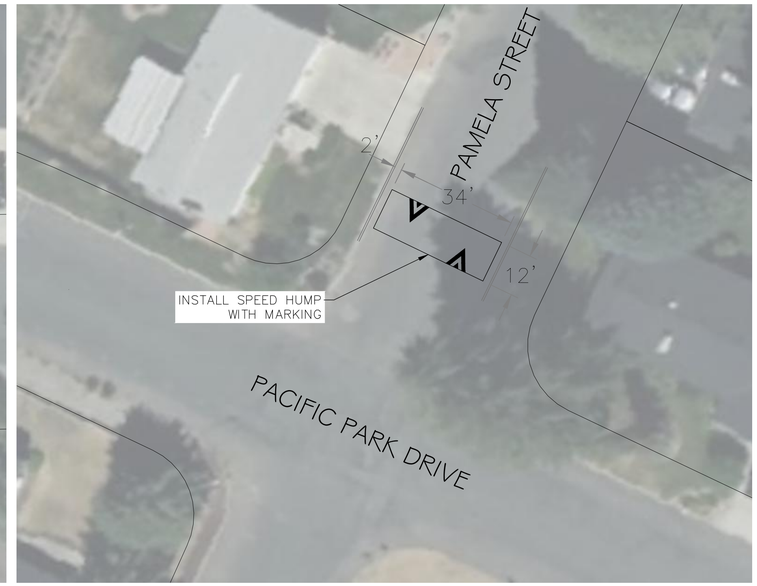
In addition, Pamela Street is the uncontrolled approach at each intersection on the study corridor. The installation of a traffic circle at the Pamela Street/Lowell Avenue intersection (middle of the study corridor) should be considered to reduce vehicle speeds. A traffic circle is expected to decrease the 85th percentile speed by 3 miles per hour.[4]

[3] Engineering Speed Management Countermeasures: A Desktop Reference of Potential Effectiveness in Reducing Speed. Federal Highway Administration. July 2014.

[4] Engineering Speed Management Countermeasures: A Desktop Reference of Potential Effectiveness in Reducing Speed. Federal Highway Administration. July 2014.







LEGEND

PROPERTY LINE

EXISTING CURB

PRELIMINARY

NOT FOR CONTRUCTION

3

3 of 5

DATE	BY	PROJ.	DESCRIPTION
REVISIONS			

DATE	BY	PROJ.	E.F.N. - U.S.N.	FROM	TO
AS BUILT					

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NAVD88 = (OLD CBM ELEV.) - (13.13) — AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCH MARK LOCATION: None Given

NAVD88 ELEV.: None Given

CBM NO.: None Given

NAVD88 DATUM

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HORIZONTAL PLAN/PROFILE: 1" = 20'

VERTICAL PROFILE ONLY: N/A

SCALE

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CITY OF SPOKANE, WASHINGTON

DEPARTMENT OF ENGINEERING SERVICES

808 WEST SPOKANE FALLS BLVD.
SPOKANE, WASHINGTON 99201-3343
(509) 625-6300

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN

SEGMENT LIMITS: PAMELA STREET AND LOWELL AVENUE

PROJECT LIMITS: NORTH INDIAN TRAIL NEIGHBORHOOD

TYPE OF IMPROVEMENT: TRAFFIC

CITY PROJECT NUMBER

CITY PLAN NUMBER

EFN TRAFFIC DESIGN

CALL BEFORE YOU DIG 1-800-424-5555

District:	3
Neighborhood:	North Indian Trail
Project Extent:	Indian Trail Road Corridor
	Estimate: $669,000

Problem Statement: Residents of the North Indian Trail neighborhood raised particular concern regarding bicyclist network connectivity along the Indian Trail Road Corridor (2.24 miles) within the neighborhood.

Funded Improvements:

The following improvement project is funded:

- installing a pedestrian hybrid beacon on Indian Trail Road at Lowell Avenue (north of study corridor)

Traffic Analysis

North Indian Trail Road is classified as minor arterial north of Shawnee Road and major arterial south of Shawnee Road. The City's Bike Plan identifies the corridor is planned for a shared use path or bike lanes in the future. The corridor north of Bedford Avenue has a speed limit of 45 miles per hour and 35 miles per hour south of Bedford Avenue. The study corridor north of Ridgecrest Drive has two-lane facilities with marked and paved shoulders on both sides. The corridor between Ridgecrest Drive and Barnes Street has no shoulder and contains two lanes with a two-way-left-turn lane and sidewalk. The corridor between Barnes Street and Lowell Avenue has an additional lane southbound, and an additional lane on northbound south of Lowell Avenue. There are three traffic signals on the corridor located at Shawnee Avenue, Barnes Road, and Strong Road/Pacific Park Drive.

The table below shows estimated 2022 daily traffic volumes and 85th percentile speeds on North Indian Trail Corridor. As shown in the table, the highest daily volume on the corridor was estimated to be up to 16,181 vehicles south of Strong Road/Pacific Park Drive on the five-lane section. The 85th percentile speeds ranged from 43 to 46 miles per hour, indicating high speeding condition (8 to 11 miles per hour greater than the posted speed limit).

2022 Daily Traffic and 85th Percentile Speeds on North Indian Trail Corridor

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day) [a]	85th Percentile Speed (mph)	Posted Speed (mph)
North of Shawnee Avenue				
NB	1	3,809	44	
SB	1	3,866	42	35
Both Dir.	3	7,675	43	
North of Barnes Road				
NB	2	4,843	45	
SB	2	4,976	43	35
Both Dir.	5	9,819	44	
North of Lowell Avenue				

NB	1	6,741	41	
SB	2	6,566	45	35
Both Dir.	4	13,307	43	
South of Strong Road/Pacific Park Drive				
NB	2	8,439	44	
SB	2	7,742	48	35
Both Dir.	5	16,181	46	

[a] Traffic data collected in May 2022.

The table below shows the severity and types of crashes occurring on North Indian Trail Corridor within the neighborhood over the last five years. There was a total of 28 crashes, with 18 injury crashes and one fatal crash (angle crash). Rear-end crashes were the most common, representing 39 percent of all crashes. There were two noted crashes involving pedestrians or cyclists.

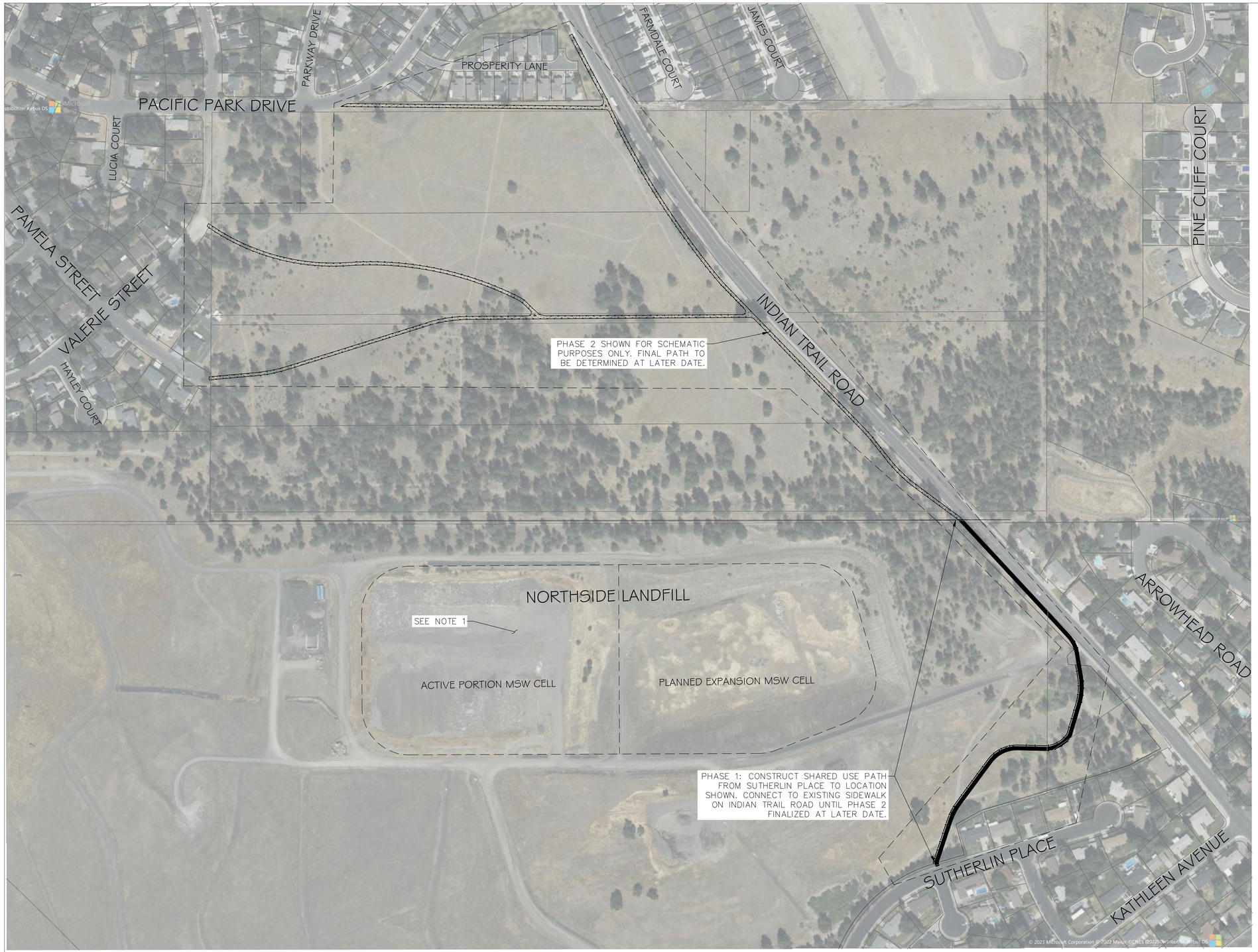
Crashes on Northwest Boulevard, between Cochran Street and Monroe Street (2017 to 2021)

Crash Type	Crash Severity					Total
	Fatal	Major Injury	Minor Injury	Possible Injury	Property Damage Only	
Rear End	-	-	2	6	3	11
Angle	1	-	1	3	1	6
Turning	-	-	1	-	-	1
Sideswipe	-	-	-	-	1	1
Stationary Object or Car	-	-	-	1	4	5
From Same Direction	-	-	-	1	-	1
Pedestrian/Bike	-	1	-	2	-	3
Total	1	1	4	13	9	28

The study corridor north of Shawnee has existing conditions of moderate traffic (shared facility), and heavy traffic (shared facility) south of Shawnee Road per the Bicycle Facility Classification in the City's Bicycle Master Plan. However recent counts indicate the segment north of Shawnee may be in the heavy traffic classification now. Both do not contain bike lanes currently, and instead bicyclists need to share a lane with auto vehicles. The segment south of Shawnee Road has a future plan of bike lane and/or shared use path implementation per the Bicycle Master Plan.

Recommended Solution:

The installation of bike lanes or a multi-use path is the long-range recommendation in the City's Bicycle Plan. The majority of the corridor frontage is development and provides inadequate right-of-way to add bicycle facilities unless a vehicle travel lane is removed. A detailed alternatives analysis should be conducted to determine feasible solutions to adequately accommodate multimodal needs on the corridor. Refer to North Indian Trail concept design for shared-use path from Sutherlin Place to Northside Landfill.



LEGEND

- PROPERTY LINE
- SHARED USE PATH - PHASE 1
- SHARED USE PATH - PHASE 2

NOTES

1. NORTHSIDE LANDFILL IS NO LONGER AN EPA SUPERFUND SITE. CITY OF SPOKANE SOLID WASTE SERVICES DISPOSES OF MUNICIPAL WASTE IN THE ACTIVE PORTION MSW CELL. SHARED USE PATHWAY WILL BE CONSTRUCTED FURTHER NORTH DUE TO CONCERNS WITH NOISE, DUST, AND ACTIVE LANDFILL USE.

PRELIMINARY

NOT FOR CONTRUCTION

NORTH

4
4 of 5

DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	E.F.N., U.S.N.	FROM	TO	COUNCIL ACCEPT DATE	FROM	TO	ORD. NO.	DATE	FILE NO.
REVISIONS				AS BUILT							GRADE ORDINANCE LIST				

NAVD88 = (OLD CBM ELEV.) - (13.13) — AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCH MARK LOCATION: None Given

NAVD88 ELEV.: None Given

CBM NO.: None Given

NAVD88 DATUM

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

HORIZONTAL PLAN/PROFILE: 1" = 150'

VERTICAL PROFILE ONLY: N/A

SCALE

CURRENT C.O.S. DESIGN STANDARDS ADOPTED FEB. 2007

	BY	DATES
DRAWN:	DRV	01/2023
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CITY OF SPOKANE

CITY OF SPOKANE, WASHINGTON
DEPARTMENT OF ENGINEERING SERVICES
808 WEST SPOKANE FALLS BLVD.
SPOKANE, WASHINGTON 99201-3343
(509) 625-6300

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN

SEGMENT LIMITS: INDIAN TRAIL ROAD
SUTHERLIN PLACE TO NORTHSIDE LANDFILL

PROJECT LIMITS: NORTH INDIAN TRAIL NEIGHBORHOOD

TYPE OF IMPROVEMENT: TRAFFIC

CITY PROJECT NUMBER | CITY PLAN NUMBER

EFN: TRAFFIC DESIGN

CALL BEFORE YOU DIG 1-800-424-5555

LEGEND

PROPERTY LINE

SHARED USE PATH - PHASE 1

NORTH

PRELIMINARY

NOT FOR CONTRUCTION

5
5 of 5

DATE	BY	PROJ.	DESCRIPTION	FROM	TO
REVISIONS					

DATE	BY	PROJ.	E.F.N., U.S.N.	FROM	TO
AS BUILT					

COUNCIL ACCEPT DATE

FROM	TO	ORD. NO.	DATE	FILE NO.
GRADE ORDINANCE LIST				

NAVD88 = (OLD CBM ELEV.) - (13.13)

AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCH MARK LOCATION: None Given

NAVD88 ELEV.: None Given

CBM NO.: None Given

NAVD88 DATUM

BAR IS ONE INCH ON ORIGINAL DRAWING.

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HORIZONTAL PLAN/PROFILE: 1" = 75'

VERTICAL PROFILE ONLY: N/A

SCALE

CURRENT C.O.S. DESIGN STANDARDS ADOPTED FEB. 2007

	BY	DATES
DRAWN:	DRV	01/2023
REVISED:	DRV	05/2023
CHECKED:	AM	01/2023
APPROVED:	AM	01/2023

CITY OF SPOKANE

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DEPARTMENT OF ENGINEERING SERVICES
808 WEST SPOKANE FALLS BLVD.
SPOKANE, WASHINGTON 99201-3343
(509) 625-6300

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN

SEGMENT LIMITS: INDIAN TRAIL ROAD
SUTHERLIN PLACE TO NORTHSIDE LANDFILL

PROJECT LIMITS: NORTH INDIAN TRAIL NEIGHBORHOOD

TYPE OF IMPROVEMENT: TRAFFIC

CITY PROJECT NUMBER

CITY PLAN NUMBER

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CALL BEFORE YOU DIG 1-800-424-5555