

Spokane Traffic Calming Master Plan

District:	3
Neighborhood:	Audubon – Downriver
Project Extent:	Wellesley Avenue Near Pauline Flett Middle School (At Hartley Street)
	Estimate: \$1,531,000

Problem Statement: Residents of the Audubon – Downriver neighborhood raised concerns about safe routes to school along Wellesley Avenue near the new Pauline Flett Middle School at Hartley Street. In addition, the resident also raised concerns about potential cut through traffic on King Court and Royal Court to the school diverting from Assembly Street.

Traffic Analysis

Within the study area, Wellesley Avenue west of Assembly Street and Hartley Street are classified as local streets with posted speed limit of 25 miles per hour. Assembly Street and Wellesley Avenue east of Assembly Street are classified as major arterial with posted speed limit of 30 miles per hour. Wellesley Avenue and Hartley Street both provide two lanes with on-street parking, without striped shoulder or dedicated bike lanes. Assembly Street to the north provides four lanes, and two lanes with two-way-left-turn lane to the south, without bike lanes but marked shoulder is provided. The sidewalk network in the study corridor is predominately complete, however there is no sidewalk west of Hartley Street and eastbound west of North King Court (0.3 miles east of Hartley Street). On Wellesley Avenue, Hartley Street intersection is unsignalized with a yield sign on the south leg and a stop sign on the north leg. Assembly intersection is all-way stop controlled with red light flashers. There is no crosswalk provided at Hartley Street, the nearest crosswalk is located 0.44 miles to the east at Assembly Street.

The following tables show the estimated 2022 daily traffic volumes and 85th percentile speeds on Wellesley Avenue west of Rustle Street (0.6 miles east of Hartley Street). The daily volume on Wellesley Avenue was 3,984 vehicles west of Rustle Street. The highest 85th percentile speed was 35 miles per hour (5 miles per hour greater than the posted speed limit)

2022 Estimated Daily Traffic and 85th Percentile Speeds on Wellesley Avenue

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day) ^a	85 th Percentile Speed (mph)	Posted Speed (mph)
West of Rustle Street				
EB	1	2,132		
WB	1	1,852		
Both Dir.	2	3,984	35	30

^a Traffic data collected on April 19, 2012. Traffic volumes were grown at a 1.0% annual growth rate, to estimate 2022 traffic conditions.

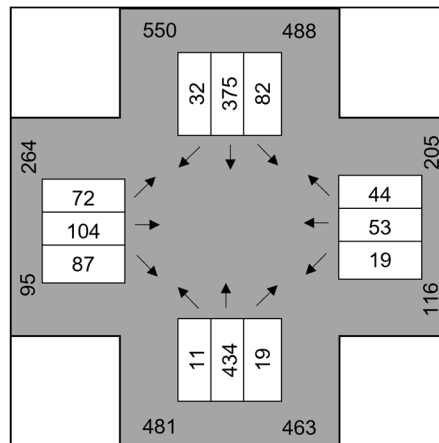
Spokane Traffic Calming Master Plan

There are no crashes recorded at the intersection of Wellesley Avenue and Hartley Street. The table below shows the severity and types of crashes occurring on Wellesley Avenue from Hartley Street and Rustle Street (0.65 miles) over the last five years (excluding intersection crashes at the east and west ends). There was a total of 16 crashes on Wellesley Avenue, including four injury crashes. Collision related to moving vehicles and stationary objects or vehicle were the most common crash type (representing 37 percent of all crashes).

Crashes on Wellesley Avenue (2017 to 2021)

Crash Type	Crash Severity					Total
	Fatal	Minor Injury	Possible Injury	Property Damage Only	Unknown	
Rear End	-	-	1	2	-	3
Angle	-	1	1	3	-	5
Turning	-	-	1	-	-	1
Stationary Object or Car	-	-	-	5	1	6
From Same Direction	-	-	-	1	-	1
Total	0	1	3	11	1	16

Multiple driveways are located on Wellesley Avenue near Assembly Street, with the closest driveway 70 feet to the south, 110 feet to the east, 160 feet to the west, and 350 feet to the north of Assembly Street. Such characteristic will likely encourage traffic cut through to local neighborhood to avoid delay at the intersection. The figure below shows the existing PM peak hour traffic volumes at the Wellesley Avenue and Assembly Street intersection, based on a traffic count from July 12, 2017, factored up to 2022.



PM Peak Hour Traffic at Wellesley Avenue and Assembly Street

Spokane Traffic Calming Master Plan

The need for enhanced pedestrian crossing treatments across Wellesley Avenue at Hartley Street and Assembly Street were 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. Based on the findings, marked crosswalks are preferred treatment if there are 20 or more pedestrian crossings during the peak hour. Although pedestrian data is not available, it is assumed the 20 or more pedestrian crossing threshold is met given the middle school and the surrounding urban neighborhood on Wellesley Avenue. The study corridor west of Rustle Street has existing conditions of moderate traffic (shared facility) per the Bicycle Facility Classification in the City's Bicycle Master Plan. The segment has a future plan of bike lane implementation per the Bicycle Master Plan.

Recommended Solution:

The following traffic calming elements are recommended to improve pedestrian safety and reduce the potential for cut through traffic in the neighborhood.

The installation of curb extensions and marked pedestrian crossing is recommended on Wellesley Avenue at Hartley Street and Royal Court to narrow the roadway and provide a safer crossing. Curb extensions are expected to decrease the 85th percentile speed by three miles per hour².

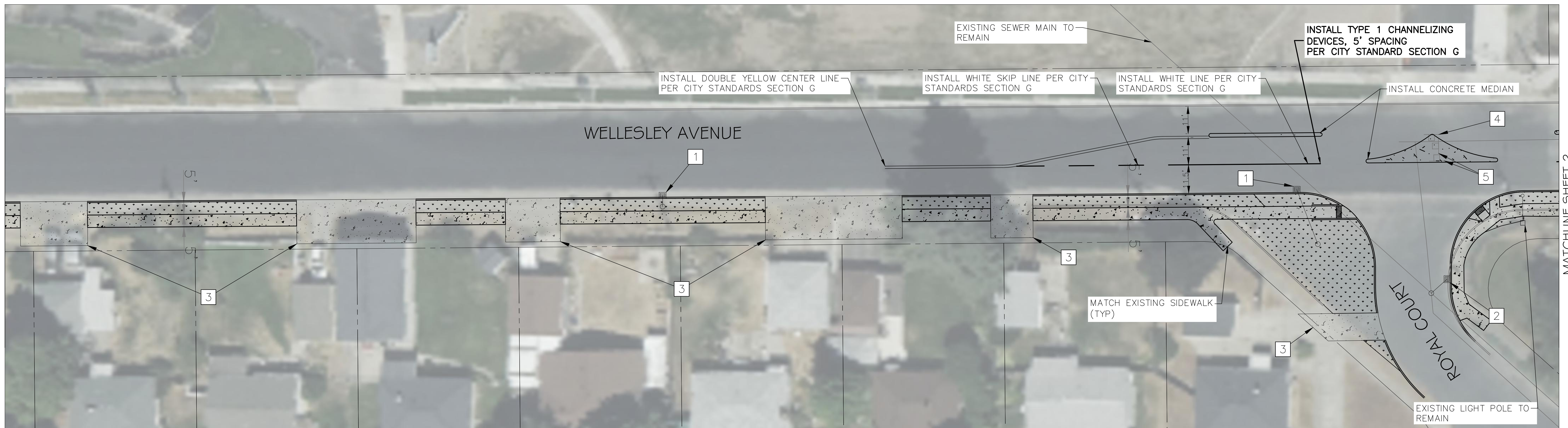
The installation of sidewalks on the south side of Wellesley Avenue between King Court and Hartley Street is recommended to provide a safer environment for people walking and support the safe route to school program.

The Royal Court approach to Wellesley Avenue is located across from the school driveway and should be restricted to right-in/right-out traffic movements with a center raised median to discourage school related trips cutting through the neighborhood.

The King Court approach to Wellesley Avenue should be considered for restricted right-in/right-out/left-out traffic movements with a center raised median to restrict northbound and southbound through movements at the intersection and discourage school related trips cutting through the neighborhood. The north leg of the intersection (Independence Drive) provides access to the VA Medical Center and should be considered in the design of access restrictions.

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

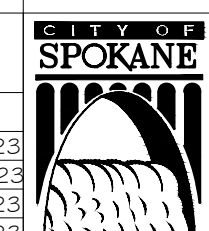
	PROPERTY LINE		INSTALL LANDSCAPING STRIP
	EXISTING CURB		INSTALL CROSSWALK PER COS STD PLAN G-G-1
	PROPOSED INLET		INSTALL CURB RAMP PER COS STD PLAN F-1-05
	INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-1-02B		
	INSTALL NEW CURB PER COS STD PLAN F-1-06B		

CONSTRUCTION NOTES

- 1 INSTALL NEW DRYWELL IN LANDSCAPING STRIP. INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO NEW DRYWELL.
- 2 INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING SEWER MANHOLE.
- 3 INSTALL CONCRETE DRIVEWAY TYPE 2 PER COS STD PLAN F-1-03A
- 4 INSTALL PROPOSED KEEP LEFT SIGN R04-08B
- 5 INSTALL PROPOSED NO LEFT TURN SIGN R03-02

DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	F.P.N.	U.S.N.	FROM	TO	COUNCIL ACCEPT DATE	FROM	TO	ORD. NO.	DATE	FILE NO.
			AS BUILT													

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BENCH MARK LOCATION	None Given
NAVD88 ELEV.	None Given
CBM NO.	None Given
BAR IS ONE INCH ON ORIGINAL DRAWING.	HORIZONTAL PLAN/PROFILE 1" = 20'
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	VERTICAL PROFILE ONLY N/A
	SCALE

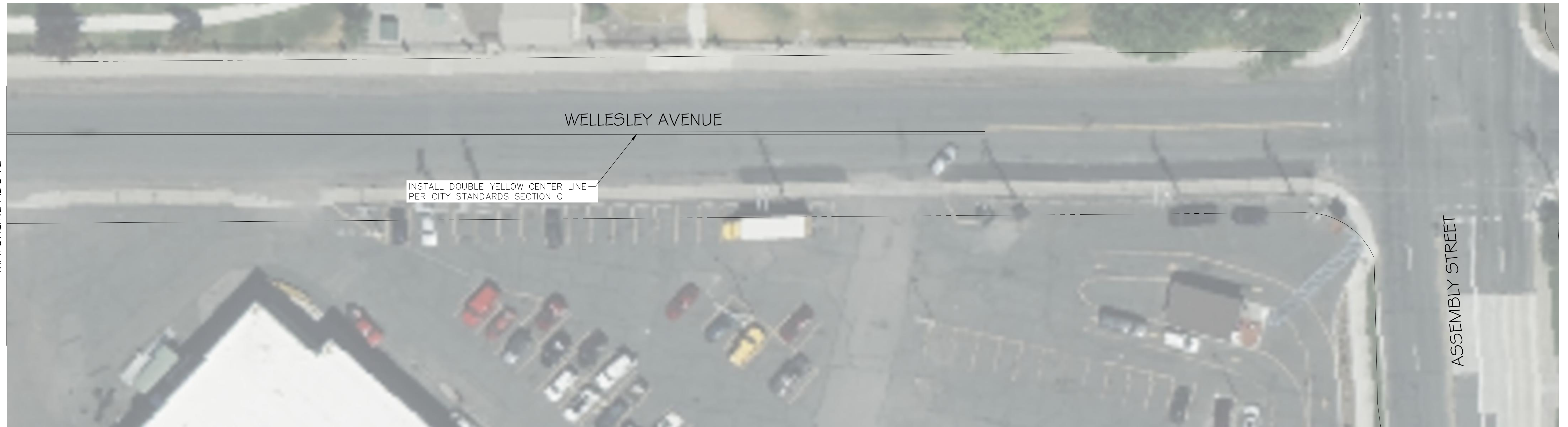
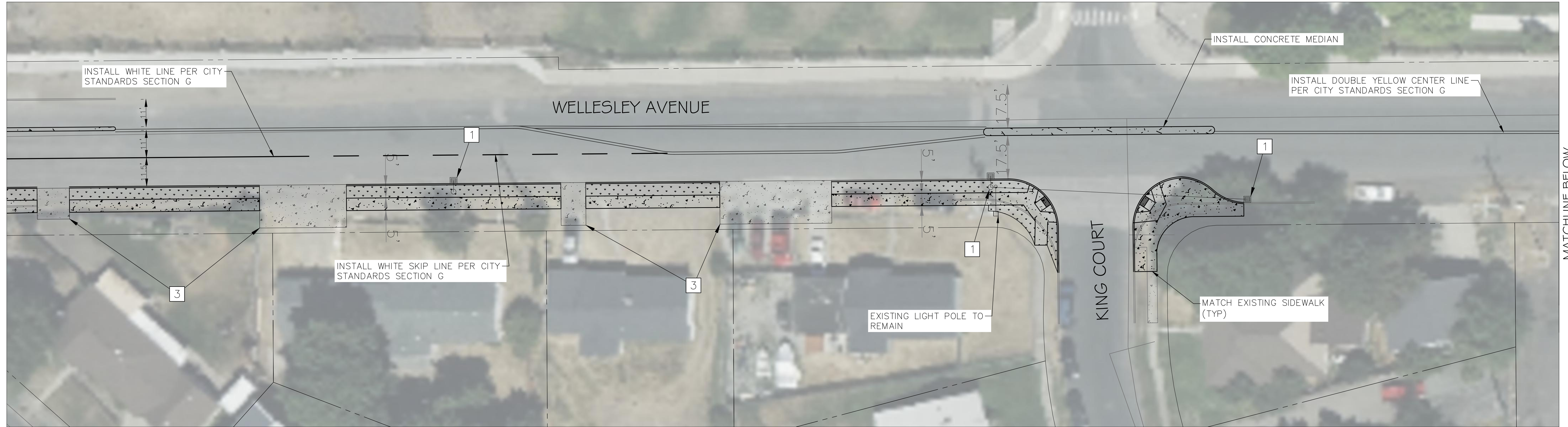


CITY OF SPOKANE, WASHINGTON
 DEPARTMENT OF ENGINEERING SERVICES
 808 WEST SPOKANE FALLS BLVD.
 SPOKANE, WASHINGTON 99201-3343
 (509) 625-6300

PRELIMINARY
NOT FOR CONSTRUCTION

1
 1 of 6

PROJECT NAME:	SPOKANE TRAFFIC CALMING MASTER PLAN	
SEGMENT LIMITS:	WELLESLEY AVENUE PAULINE FLETT MIDDLE SCHOOL	
TYPE OF IMPROVEMENT:	TRAFFIC	
CITY PROJECT NUMBER:		
CITY PLAN NUMBER:		
PROJECT LIMITS:	AUDUBON-DOWNRIVER NEIGHBORHOOD	
EPN:	TRAFFIC DESIGN	



LEGEND

	PROPERTY LINE		INSTALL LANDSCAPING STRIP
	EXISTING CURB		INSTALL CROSSWALK PER COS STD PLAN G-6.1
	PROPOSED INLET		INSTALL CURB RAMP PER COS STD PLAN F-1.05
	INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-1.02B		
	INSTALL NEW CURB PER COS STD PLAN F-1.06B		

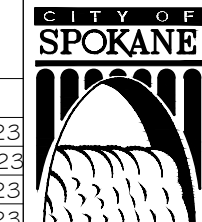
CONSTRUCTION NOTES

- 1 INSTALL NEW DRYWELL IN LANDSCAPING STRIP. INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO NEW DRYWELL.
- 2 INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO EXISTING SEWER MANHOLE.
- 3 INSTALL CONCRETE DRIVEWAY TYPE 2 PER COS STD PLAN F-1.03A
- 4 INSTALL PROPOSED KEEP LEFT SIGN R04-08B
- 5 INSTALL PROPOSED NO LEFT TURN SIGN R03-02

**PRELIMINARY
NOT FOR CONSTRUCTION**

DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	F.P.N.	U.S.N.	FROM	TO	COUNCIL ACCEPT DATE
			AS BUILT								

NAVD88 = (OLD CBM ELEV.) - (1.3.13)		AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)	
BENCH MARK LOCATION: None Given			
NAVD88 ELEV.	None Given	HORIZONTAL PLANIMETER	1" = 20'
CBM NO.	None Given	VERTICAL PROFILE ONLY	N/A
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			
SCALE		SCALE	



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		TYPE OF IMPROVEMENT: TRAFFIC	
SEGMENT LIMITS: WELLESLEY AVENUE PAULINE FLETT MIDDLE SCHOOL		CITY PROJECT NUMBER: _____ CITY PLAN NUMBER: _____	
PROJECT LIMITS: AUDUBON-DOWNRIVER NEIGHBORHOOD		EPA: TRAFFIC DESIGN	

Spokane Traffic Calming Master Plan

District:	3
Neighborhood:	Audubon - Downriver
Project Extent:	Northwest Boulevard from T.J. Meenach Drive to Assembly Street
	Estimate: 573,000

Problem Statement: Residents of the Audubon – Downriver neighborhood raised concerns over speeding and pedestrian crossing safety along Northwest Boulevard from T.J. Meenach Drive to Assembly Street (1.69 miles). Specifically, the residents expressed the crossing difficulties due to width of Northwest Boulevard.

Funded Improvements:

The following improvement projects are funded:

- marked crosswalk on Northwest Boulevard at I Street and Lacrosse Avenue
- installing a pedestrian hybrid beacon on Northwest Boulevard north of Audubon Elementary, replacing old overhead crosswalk light

Traffic Analysis

Northwest Boulevard within the study area is classified as major arterial with posted speed limit of 30 miles per hour. The roadway from Assembly Street to Audubon Street (1.26 miles east of Assembly Street) provides two lanes with a two-way-left-turn lane, and the roadway from Audubon Street to T.J. Meenach Drive contains four lanes. Along the study corridor, Alberta Street (1.59 miles east of Assembly Street) and T.J. Meenach Drive are intersections controlled with a traffic signal and protected crossings. Striped crosswalks and warning signs are provided at Audubon Street and Milton Street, and a marked crosswalk is provided at E Street. The nearest controlled crosswalk from Assembly Street is located 525 feet north/west at Wellesley Avenue (outside of study area), and the next nearest crosswalk is located 1 mile east at E Street. Speed feedback signs were installed on Northwest Boulevard between H Street and E Street

The table below shows the estimated 2022 daily traffic volumes and 85th percentile speeds on Northwest Boulevard along the study corridor. As shown in the table, the highest daily volume on Northwest Boulevard was 11,844 vehicles west of G Street. The highest 85th percentile speed was 40 miles per hour (10 miles per hour greater than the posted speed limit).

Spokane Traffic Calming Master Plan

2022 Daily Traffic and 85th Percentile Speeds on Northwest Boulevard

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day) ^a	85 th Percentile Speed (mph)	Posted Speed (mph)
West of G Street				
EB	1	6,431		
WB	1	5,413		
Both Dir.	3	11,844	33	30
West of Rustle Street				
EB	1	6,404		
WB	1	5,398		
Both Dir.	3	11,802	40	30

^a Traffic data collected in June 2022.

The table below shows the severity and types of crashes occurring on Northwest Boulevard from Assembly Street to T.J. Meenach Drive from 2017 through 2021(excluding intersection crashes at the east and west ends). There were 44 total crashes, including 15 injury crashes. Angle collision were the most common crash type (representing 34 percent of all crashes).

Crashes on Northwest Boulevard, between Assembly Street and T.J. Meenach Drive (2017 to 2021)

Crash Type	Crash Severity					Total
	Fatal	Major Injury	Minor Injury	Possible Injury	Property Damage Only	
Rear End	-	-	-	4	6	10
Angle	-	-	3	4	8	15
Turning	-	-	1	-	-	1
Sideswipe	-	-	-	1	3	4
Stationary Object or Car	-	-	1	1	10	12
From Same Direction	-	-	-	-	2	2
Total	0	0	5	10	29	44

The need for enhanced pedestrian crossing treatments across Northwest Boulevard was analyzed based on NCHRP Report 562, using collected crossing data at various locations on the corridor. Based on the findings, active or enhanced pedestrian crossing treatments would be appropriate given the high existing traffic volumes and speeds on the study corridor. The study corridor was evaluated to determine the best placement for an enhanced pedestrian crossing with consideration for fronting land use, location of bus stops, estimated crossing demand and spacing from existing protected crossings. F Street was selected to connect the adjacent restaurants and bus stops to the nearby neighborhoods.

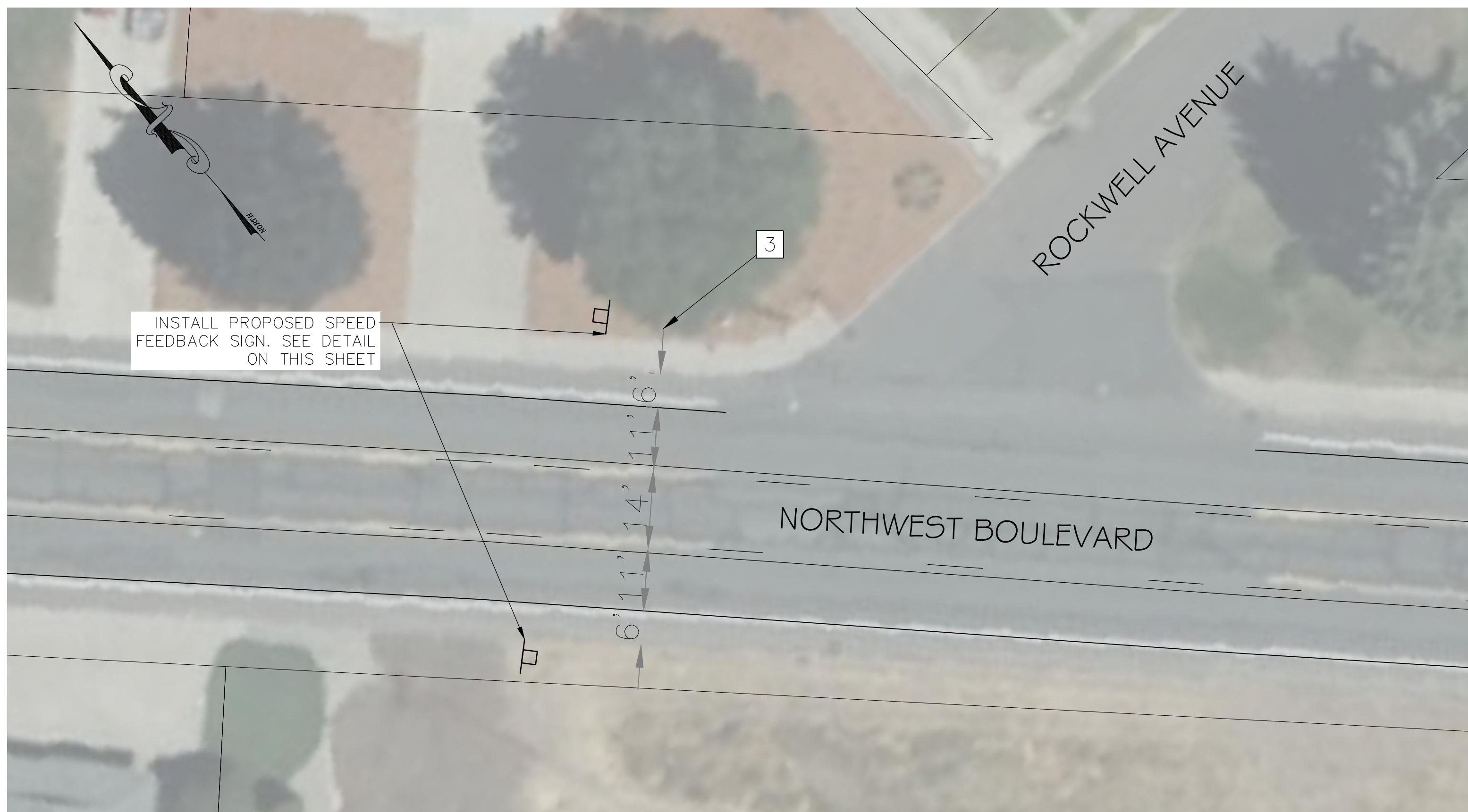
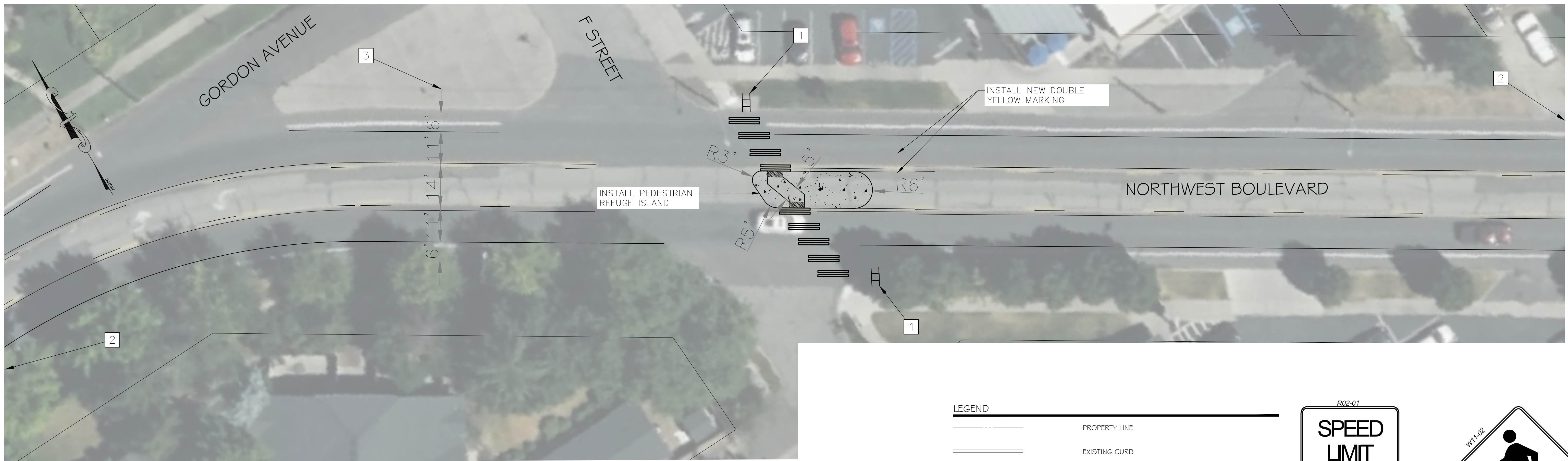
Recommended Solution:

The installation of a marked pedestrian crossing with rectangular rapid flashing beacons (RRFB) is recommended at the east leg of the Northwest Boulevard/F Street intersection. The existing marked crossing at E Street (one block east) should be removed due to its lack of protection.

It is recommended that speed feedback signs be added on Northwest Boulevard near Rockwell Street to alert drivers of the posted speed limit.

Spokane Traffic Calming Master Plan

The three-lane section of Northwest Boulevard between Assembly Street and Audubon Street/Alice Avenue has a curb-to-curb width of approximately 48 to 50 feet which would allow for a restriping improvement to reduce vehicle lanes to lower travel speeds and provide wider bike lanes on the corridor. The cross-section would provide at a minimum two 6-foot-wide bike lanes, two 11-foot-wide vehicle lanes and a 14-foot-wide center turn lane.

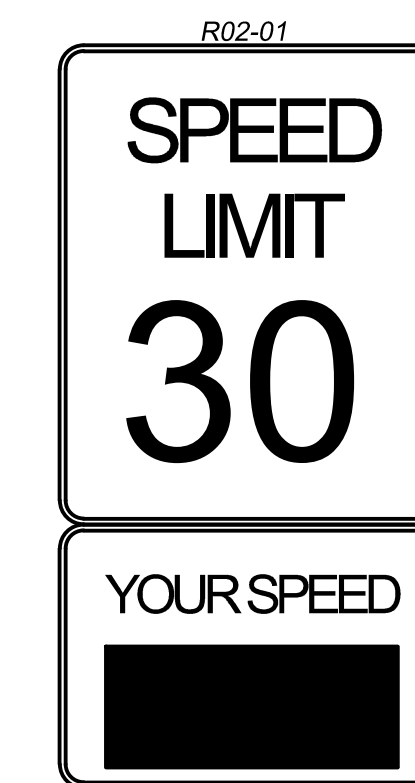


LEGEND

- PROPERTY LINE
- EXISTING CURB
- INSTALL NEW CONCRETE PEDESTRIAN ISLAND
- INSTALL NEW CURB PER COS STD PLAN F-106B
- PROPOSED SIGN
- INSTALL CURB RAMP PER COS STD PLAN F-105

CONSTRUCTION NOTES

- 1 INSTALL RRFB AND PROPOSED RRFB SIGNAGE
- 2 INSTALL PROPOSED SIGNAGE 2 APPROXIMATELY 375 FT IN ADVANCE OF CROSSWALK.
- 3 INSTALL 6 FT BIKE LANES, 11 FT THROUGH LANES, AND 14 FT TWO WAY LEFT TURN LANE TYPICAL SECTION FROM AUDUBON STREET TO ASSEMBLY STREET



PROPOSED SPEED FEEDBACK SIGN



PROPOSED RRFB SIGNAGE



PROPOSED SIGNAGE 2

**PRELIMINARY
NOT FOR CONSTRUCTION**

NAVD88 = (OLD CBM ELEV.) - (13.13) AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)									
BENCHMARK LOCATION: None Given									
NAVD88 ELEV: None Given									
CBM NO: None Given									
BAR IS ONE INCH ON ORIGINAL DRAWING. HORIZONTAL PLANS/PROFILE 1" = 16' VERTICAL PROFILE ONLY N/A									
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. SCALE									
CURRENT C.O.S. DESIGN STANDARDS ADOPTED FEB. 2007									
CITY OF SPOKANE 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: NORTHWEST BOULEVARD ASSEMBLY STREET TO AUDUBON STREET									
PROJECT LIMITS: AUDUBON-DOWNRIVER BOULEVARD									
TYPE OF IMPROVEMENT: TRAFFIC									
CITY PROJECT NUMBER: CITY PLAN NUMBER:									
EPN: TRAFFIC DESIGN									

Spokane Traffic Calming Master Plan

District:	3
Neighborhood:	Audubon – Downriver
Project Extent:	Wellesley Avenue and Alberta Street
	Estimate: \$64,000

Problem Statement: Residents of the Audubon – Downriver raised concerns about pedestrian-vehicle conflicts at Wellesley Avenue and Alberta Street intersection.

Traffic Analysis

Wellesley Avenue within the intersection is classified as major arterial and Alberta Street is classified as minor arterial, both with posted speed limit of 30 miles per hour. Wellesley Avenue provides four lanes with a raised median and Alberta Street contains two lanes with a two-way-left-turn lane. Marked shoulder and bike lanes are not provided within the network. The intersection is signalized with marked pedestrian crossings, as shown below.



Wellesley Avenue and Alberta Street Intersection

The table below shows the 2022 daily traffic volumes and 85th percentile speeds on Wellesley Avenue around the study intersection. The highest daily volume on Wellesley Avenue was 13,067 west of Belt Street (east leg of the intersection). The highest 85th percentile speed was 40 miles per hour (10 miles per hour greater than the posted speed limit) west of Milton Street.

Spokane Traffic Calming Master Plan

2022 Daily Traffic and 85th Percentile Speeds on Wellesley Avenue

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day) ^a	85 th Percentile Speed (mph)	Posted Speed (mph)
West of Belt Street				
EB	2	7,119	37	
WB	2	5,948	31	
Both Dir.	4	13,067	34	30
West of Milton Street				
EB	2	4,613	39	
WB	2	3,977	41	
Both Dir.	4	8,590	40	30

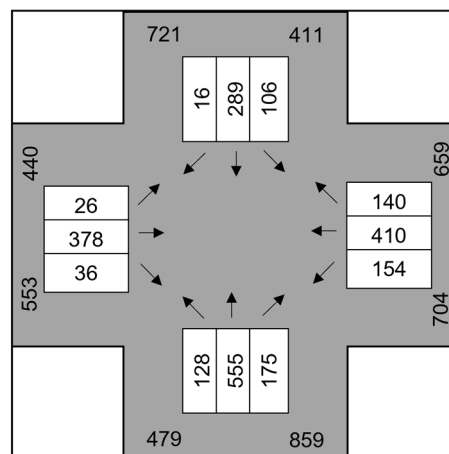
^a Traffic data collected in May 2022.

The table below shows the severity and types of crashes occurring at Wellesley Avenue and Alberta Street intersection from 2017 through 2021. There were 19 total crashes, including four injury crashes. Rear-end collisions were the most common crash type (representing 32 percent of all crashes).

Crashes at Wellesley Avenue and Alberta Street Intersection (2017 to 2021)

Crash Type	Crash Severity					Total
	Fatal	Minor Injury	Possible Injury	Property Damage Only	Unknown	
Rear End	-	-	2	4	-	6
Angle	-	1	-	1	1	3
Turning	-	-	-	3	2	5
Sideswipe	-	-	-	2	-	2
Stationary Object or Car	-	-	-	2	-	2
Pedestrian/Bike	-	1	-	-	-	1
Total	0	2	2	12	3	19

The figure below shows the existing PM peak hour traffic volumes at the Wellesley Avenue and Alberta Street intersection, based on a traffic count from May 17, 2017, factored up to 2022.



PM Peak Hour Traffic at Wellesley Avenue and Alberta Street

Spokane Traffic Calming Master Plan

Recommended Solution:

The signal timing at the Wellesley Avenue and Alberta Street intersection should be updated to provide a leading pedestrian interval (LPI) to provide pedestrians the opportunity to enter the crosswalk at an intersection 3 to 7 seconds before vehicles are given a green light indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left.



LEGEND

-  PROPERTY LINE
-  PROPOSED SIGN
-  EXISTING SERVICE CABINET


CONSTRUCTION NOTES

- 1** FOR TRAFFIC SIGNAL CABINET AND CONTROLLER MAKE MODIFICATIONS AS NECESSARY TO IMPLEMENT LEADING PEDESTRIAN INTERVAL



**PRELIMINARY
NOT FOR CONSTRUCTION**

4
4 of 6

										NAVD88 = (OLD CBM ELEV.) - (1.3.13) AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)										CURRENT C.O.S. DESIGN STANDARDS ADOPTED FEB. 2007																				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: WELLESLEY AVENUE AND ALBERTA STREET PROJECT LIMITS: AUDUBON-DOWNRIVER NEIGHBORHOOD										TYPE OF IMPROVEMENT: TRAFFIC CITY PROJECT NUMBER: _____ CITY PLAN NUMBER: _____ EPN: TRAFFIC DESIGN									
BENCHMARK LOCATION: None Given										NAVD88 ELEV: None Given										HORIZONTAL PLANS/PROFILE: 1" = 10' VERTICAL PROFILE ONLY: N/A										DRAWN: DRV 02/2023 REVISED: DRV 05/2023 CHECKED: JS 02/2023 APPROVED: AM 02/2023										NAVD88 DATUM										SCALE																			
REVISIONS										AS BUILT										GRADE ORDINANCE LIST										NAVD88 DATUM										SCALE																													

Spokane Traffic Calming Master Plan

District:	3
Neighborhood:	Audubon – Downriver
Project Extent:	Northwest Boulevard and T.J. Meenach Drive Intersection
	Estimate: \$86,000

Problem Statement: Residents of the Audubon – Downriver raised concerns over pedestrian and bicyclist crossing safety at Northwest Boulevard and T.J. Meenach Drive intersection. As shown in the figure below, this study intersection is a skewed intersection, where the north leg connects to Cochran Street and Cleveland Avenue is located 70 feet to the south on the west.



Northwest Boulevard and T.J. Meenach Drive Intersection

Traffic Analysis

Northwest Boulevard and T.J. Meenach Drive (south leg) within the study area are classified as major arterial and the north leg of the intersection (Cochran Street) is classified as minor arterial, all with posted speed limit of 30 miles per hour. Cleveland Avenue is classified as local street with posted speed limit of 25 miles per hour. Northwest Boulevard to the west provides four lanes and contains an additional two-way-left-turn left to the east. T.J. Meenach Drive provides four lanes while Cochran Street is one-way street and provides two lanes. Cleveland Avenue provides two lanes with on-street parking. There is no marked shoulder or bike lanes around the study intersection. Sidewalks are provided on Northwest Boulevard but not consistent on T.J. Meenach Drive and Cochran Street, with the mixed of paved, unpaved, separated, and curb tight sidewalks. A dedicated right turn channel is provided on the south leg of the intersection.

Spokane Traffic Calming Master Plan

The table below shows the 2022 daily traffic volumes and 85th percentile speeds on Northwest Boulevard around the study intersection. As shown in the table, the highest daily volume on Northwest Boulevard was 28,904 vehicles west of Belt Street. The highest 85th percentile speed was 41 miles per hour (six miles per hour greater than the posted speed limit).

2022 Daily Traffic and 85th Percentile Speeds on Northwest Boulevard

Direction	# Lanes	2022 Estimated Daily Traffic (Vehicles per day)	85 th Percentile Speed (mph)	Posted Speed (mph)
West of Belt Street ^a (0.3 miles east of study intersection)				
EB	2	14,637	42	
WB	2	14,267	40	
Both Dir.	5	28,904	41	35
West of Audubon Street ^b (0.4 miles west of study intersection)				
EB	1	7,340		
WB	1	4,096		
Both Dir.	3	11,436	34	30

^a Traffic data collected in June 2022.

^b Traffic data collected in August 2014. Traffic volumes were grown at a 1.0% annual growth rate, to estimate 2022 traffic conditions.

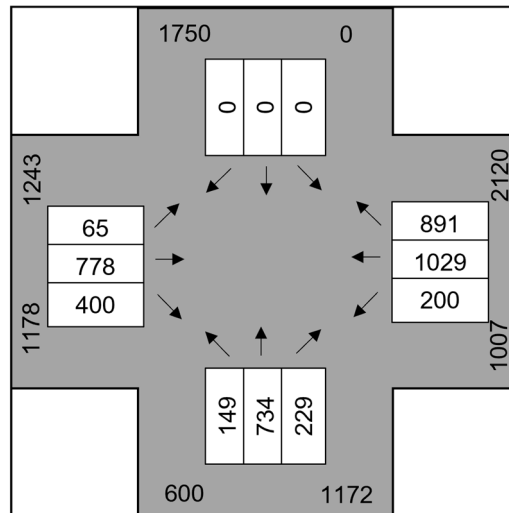
The table below shows the severity and types of crashes occurring at Northwest Boulevard and T.J. Meenach Drive from 2017 through 2021. There were 25 total crashes, including 14 injury crashes. Rear-end collision were the most common crash type (representing 48 percent of all crashes).

Crashes at Northwest Boulevard and T.J. Meenach Drive Intersection (2017 to 2021)

Crash Type	Crash Severity					Total
	Fatal	Major Injury	Minor Injury	Possible Injury	Property Damage Only	
Rear End	-	-	-	6	6	12
Angle	-	-	-	3	3	6
Turning	-	-	-	2	-	2
Sideswipe	-	-	-	1	1	2
Stationary Object or Car	-	-	1	-	-	1
From Same Direction	-	-	-	-	1	1
Pedestrian/Bicycle	-	-	-	1	-	1
Total	0	0	1	13	11	25

Spokane Traffic Calming Master Plan

The following figure shows the existing PM peak hour traffic volumes at the Northwest Boulevard and T.J. Meenach Drive intersection, based on a traffic count from June 7, 2017, factored up to 2022.



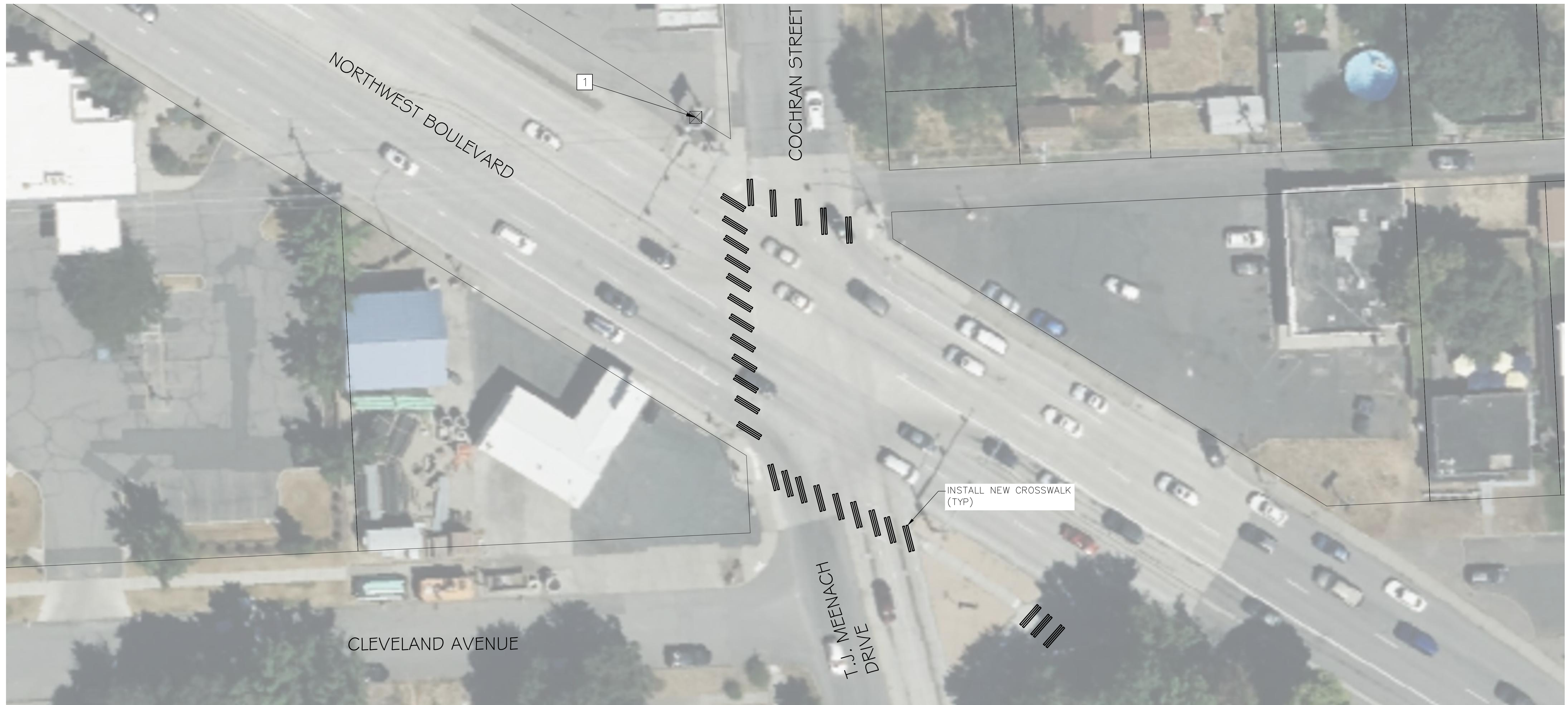
PM Peak Hour Traffic at Northwest Boulevard and T.J. Meenach Drive Intersection

Skewed intersections tend to limit user sight distances and require longer pedestrian crossing distances. It is more than 100 feet to cross Northwest Boulevard at this intersection. The crossing distance on the south leg is reduced by the channelized right turn lane. There is no marked crosswalk on the east leg, crossings are provided on the west leg only. Treatments need to be implemented to improve the intersection performance given the high crash rate. The City of Spokane has a planned construction project to add sidewalk on Cochran Street north of the intersection.

Recommended Solution:

The signal timing at the intersection should be updated to provide a leading pedestrian interval (LPI) to provide pedestrians the opportunity to enter the crosswalk at an intersection 3 to 7 seconds before vehicles are given a green light indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. The planned sidewalk on Cochran Street will likely increase pedestrian crossing demand at the study intersection.

There are numerous intersections and driveways closely spaced to the Northwest Boulevard and T.J. Meenach Drive intersection that can contribute to vehicle conflicts with pedestrians and cyclists. The alley intersection with Cochran Street is spaced very close to Northwest Boulevard and should be considered for closure to vehicles.



LEGEND

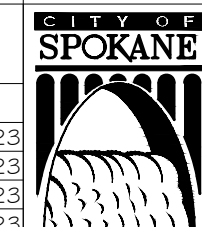
- PROPERTY LINE
- INSTALL CROSSWALK PER COS STD PLAN G-6 I
- EXISTING SERVICE CABINET

CONSTRUCTION NOTES

- 1** FOR TRAFFIC SIGNAL CABINET AND CONTROLLER MAKE MODIFICATIONS AS NECESSARY TO IMPLEMENT LEADING PEDESTRIAN INTERVAL

DATE	BY	PROJ.	DESCRIPTION	DATE	BY	PROJ.	F.P.N.	U.S.N.	FROM	TO	COUNCIL ACCEPT DATE
REVISIONS											
AS BUILT											

NAVD88 = (OLD CBM ELEV.) - (1.3.13)		AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)	
BENCH MARK LOCATION: None Given			
NAVD88 ELEV:	None Given	HORIZONTAL PLUMBOFFSET:	1" = 16'
CBM NO:	None Given	VERTICAL PROFILE ONLY:	N/A
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			
NAVD88 DATUM		SCALE	



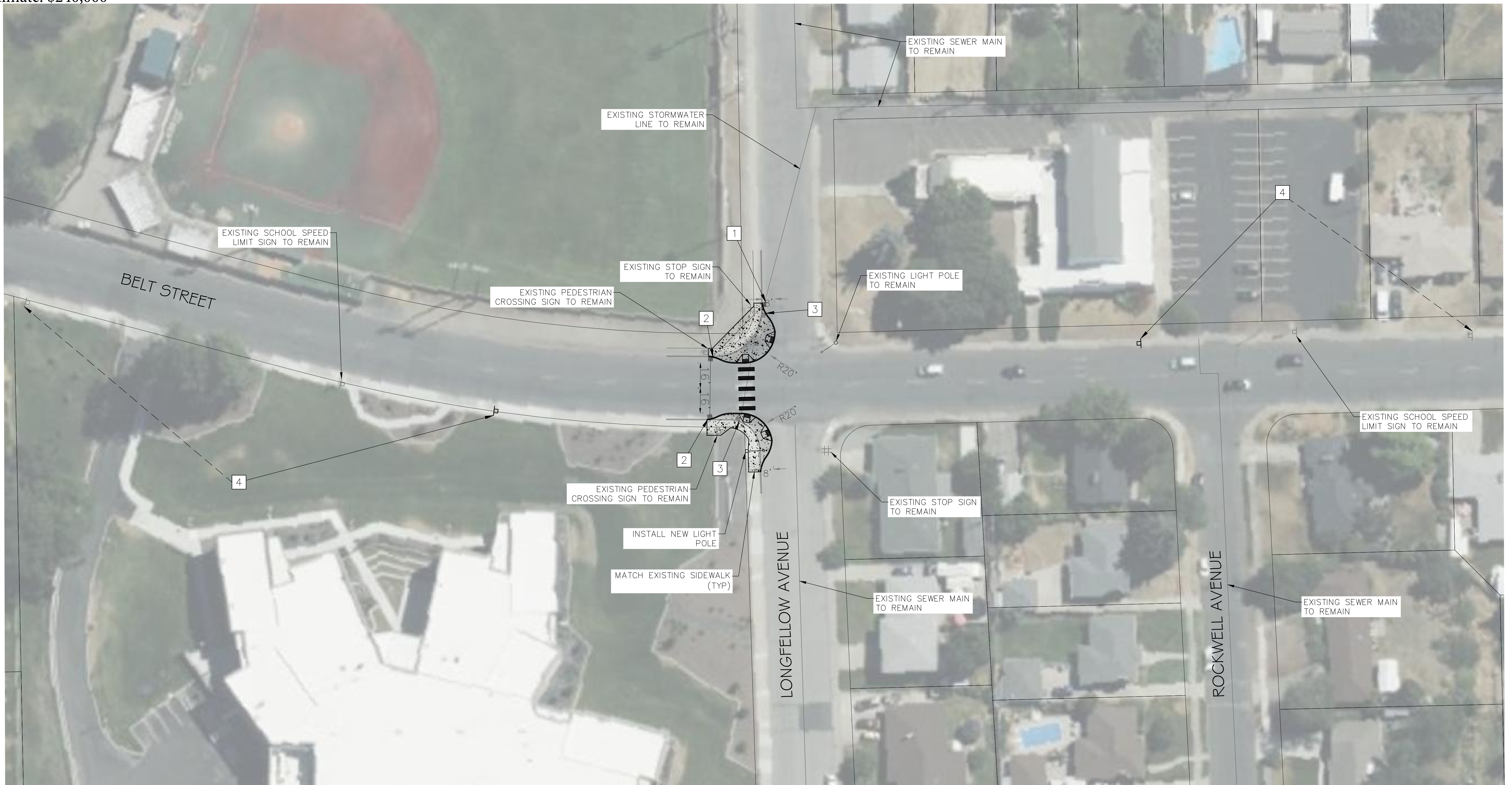
CITY OF SPOKANE, WASHINGTON
 DEPARTMENT OF ENGINEERING SERVICES
 808 WEST SPOKANE FALLS BLVD.
 SPOKANE, WASHINGTON 99201-3343
 (509) 625-6300

PRELIMINARY
NOT FOR CONSTRUCTION

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5 of 6

PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN		TYPE OF IMPROVEMENT: TRAFFIC	
SEGMENT LIMITS: NORTHWEST BOULEVARD AND T.J. MEENACH DRIVE		CITY PROJECT NUMBER	
PROJECT LIMITS: AUDUBON-DOWNRIVER NEIGHBORHOOD		CITY PLAN NUMBER	
EPN: TRAFFIC DESIGN		CALL BEFORE YOU DIG 1-800-424-5555	





LEGEND

	PROPERTY LINE		INSTALL CROSSWALK PER COS STD PLAN G-61
	EXISTING CURB		PROPOSED SIGN
	PROPOSED INLET		INSTALL CURB RAMP PER COS STD PLAN F-1 05
	INSTALL NEW CONCRETE SIDEWALK PER COS STD PLAN F-1 02B		
	INSTALL NEW CURB PER COS STD PLAN F-1 06B		

CONSTRUCTION NOTES

- 1 INSTALL NEW CATCH BASIN TYPE 1. CONNECT NEW CATCH BASIN TO EXISTING PIPE.
- 2 INSTALL NEW CATCH BASIN TYPE 1 AND 8" DIAM. PIPE AS NECESSARY. CONNECT TO NEW CATCH BASIN TYPE 1.
- 3 REMOVE EXISTING INLET. PLUG AND ABANDON EXISTING PIPE.
- 4 RELOCATE EXISTING SCHOOL CROSSING AHEAD SIGN TO BE AFTER EXISTING SCHOOL SPEED LIMIT SIGN

**PRELIMINARY
NOT FOR CONSTRUCTION**

6
6 of 6

<p>NAVDS8 = (OLD CBM ELEV.) - (1.3.13) AS OF JANUARY, 2000 USE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)</p> <p>BENCH MARK LOCATION: None Given</p> <p>NAVDS8 ELEV: None Given</p> <p>CEM NO: None Given</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING.</p> <p>HORIZONTAL PLAN PROFILE: 1" = 30'</p> <p>VERTICAL PROFILE ONLY: N/A</p> <p>SCALE</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>										<p>CITY OF SPOKANE</p> <p>CITY OF SPOKANE, WASHINGTON</p> <p>DEPARTMENT OF ENGINEERING SERVICES</p> <p>808 WEST SPOKANE FALLS BLVD.</p> <p>SPOKANE, WASHINGTON 99201-3343</p> <p>(509) 625-6300</p>			<p>PROJECT NAME: SPOKANE TRAFFIC CALMING MASTER PLAN</p> <p>SEGMENT LIMITS: BELT STREET AND LONGFELLOW AVENUE</p> <p>PROJECT LIMITS: AUDUBON-DOWNRIVER NEIGHBORHOOD</p>		<p>TYPE OF IMPROVEMENT: TRAFFIC</p> <p>CITY PROJECT NUMBER</p> <p>CITY PLAN NUMBER</p>						
<p>DATE BY PROJ. DESCRIPTION DATE BY PROJ. E.P.N. U.S.N. FROM TO COUNCIL ACCEPT DATE FROM TO ORD. NO. DATE FILE NO.</p>										<p>REVISIONS</p>		<p>AS BUILT</p>		<p>GRADE ORDINANCE LIST</p>		<p>NAVD88 DATUM</p>		<p>APPROVED: AM</p>		<p>CALL BEFORE YOU DIG 1-800-424-5555</p>	