TODAY'S DATE:	March 3, 2025		
MEETING DATE:	March 12, 2025		
то:	MAYOR AND CITY COUNCIL		
FROM:	Holly Ellis, Public Works Director		
SUBJECT:	Information in Preparation for Special Meeting for the Cedar Street Reconstruction Preliminary Design		

Project Description:

This project will reconstruct Cedar Street between Division Avenue and Lincoln Avenue including new road base and subbase, asphalt pavement, stormwater conveyance and treatment, sidewalk, and street tree planting. Notably, no parking, no shoulders, and no dedicated bicycle lanes are proposed. There is also an undersized, 6-inch diameter, watermain along the project. The City will take this opportunity to upsize this watermain to 8-inch diameter and relocate it under Cedar Street roadway.

The current design is in alignment with City Standards, featuring 12' shared lanes for vehicles and bikes (sharrows), 6' sidewalks, and planter strips that accommodates snow storage and stormwater treatment.

Project Need:

In 2020, the City commissioned Infrastructure Management Services (IMS), an independent specialist, to conduct a Pavement Condition Report for all city streets. Using a van equipped with laser sensors, IMS objectively assessed pavement and sub-surface conditions, assigning each street a Pavement Condition Index (PCI) ranging from 0 (very poor) to 100 (excellent). The report revealed that the percentage of streets in Sandpoint classified as "poor" or "very poor" is nearly double the national average. The City prioritizes street investments by balancing preventive maintenance (to extend pavement life) with reconstruction of failed streets.

The PCI for Cedar Street between Division and Lincoln ranges from poor to fair, with significant pavement deterioration and road base failure, including alligator and fatigue cracking. This degradation is attributed to aging infrastructure and inadequate stormwater management, making reconstruction essential.

On December 7, 2022, the City Council adopted Ordinance 1399, implementing a voter-approved measure to extend the city's tourist tax through December 31, 2035, increasing it from 7% to 14%. The additional revenue is designated for street and pedestrian network improvements, with Cedar Street identified as a priority project.

Street Classification & Design Standards:

Roads are classified based on their function, traffic volume, and connectivity within a transportation network. This functional classification is based on the actual daily traffic counts. The adopted Multimodal Transportation Master Plan designates Cedar Street as a collector road, as it services as a key east-west connection between downtown Sandpoint, residential neighborhoods, the library, and parks on the west end of town.

In 2009, the City Council adopted the Urban Area Transportation Plan (UATP), developed in collaboration with Dover, Ponderay, Kootenai, and the Independent Highway District. The UATP serves as the officially adopted standard for design criteria, specifying 12-foot travel lanes as the City's standard for Collectorclass roadways.

Sandpoint owns and operates snowplows that range from 10 to 12 ft in blade width. A 12 ft lane allows adequate space for plowing without encroaching into adjacent lanes, reducing the risk of damaging curbs and signs while ensuring efficient snow removal.

An Autoturn analysis was conducted using a delivery truck (DL-23) design vehicle and Sandpoint's fire truck (SU-30). The delivery truck (DL-23) was selected as a representative design vehicle because it reflects the typical size and maneuverability of delivery trucks and service vehicles commonly navigating local streets. Its inclusion ensures that the design can accommodate routine commercial and municipal operations. The analysis confirmed that the proposed design provides adequate turning space and clearance for both the delivery truck and the fire truck, ensuring safe and efficient access.

Concerns about vehicle speeds and safety can be addressed through various traffic-calming measures. While narrowing travel lanes to 9-10ft is one method, it is not recommended for this project. Instead, options like enhanced pavement markings, signages, speed tables or raised crosswalks could be considered to address potential safety concerns.

Multimodal Improvements:

On December 15, 2010 (Resolution 10-75), the City Council formally adopted its Complete Streets Policy in 2010, committing streets to be designed and operated to enable safe access for all modes of transportation. In accordance with this policy, bicycles and pedestrian ways should be considered with new construction and reconstruction projects.

Bicycle Accommodation:

The Multimodal Transportation Master Plan (MTMP) establishes a Bicycle Priority Network to direct investments to the most critical areas. This segment of Cedar Street is not part of that priority network. Given this consideration, rather than implementing a multiuse path or dedicated bike lanes, the design features sharrows (shared lane markings) to enhance cyclist visibility and remind motorists of their presence. Sharrows signal that bicyclists are expected on the roadway and should ride directly over the markings. They are commonly used in locations where space constraints prevent the inclusion of separate bike lanes.

Under Idaho Code §49-721, cyclists are also permitted to ride on sidewalks, providing additional flexibility. The American Association of State Highway and Transportation Officials (AASHTO) recommends a minimum shared lane width of 12 feet, ensuring sufficient space for both vehicles and bicycles to safely coexist.

Pedestrian Accommodation:

The design intends to provide 6 ft sidewalk on both sides of the street, in alignment with the City's adopted Sidewalk Standard.

Planter Strip:

The planter strip between the sidewalk and roadway serves multiple functions, including providing space for street trees, managing stormwater, and storing snow. With Sandpoint's population projected to exceed 10,000 in the next census, the city will be required to obtain a National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit under the Clean Water Act. In preparation for this Municipal Separate Storm Sewer System (MS4) requirement, the planter strip will be designed to treat stormwater and help prevent pollution from entering natural water bodies. This space will accommodate for future improvements if additional treatment becomes necessary.

Additionally, the planter strip will create a buffer between pedestrians and traffic, improving safety and walkability. It will also support the city's urban forestry program by providing space for street tree planting, contributing to shade, aesthetics, and environmental benefits. Furthermore, this area will be used for snow storage, preventing snow from being plowed onto sidewalks and support effort to clear pedestrian pathways during winter months.

Public Feedback:

The public was invited to participate in a workshop with staff during the preliminary design phase. As part of the engagement process, the Pedestrian and Bicycle Advisory Committee conducted a site walk with staff while reviewing the preliminary design drawings. Similarly, the Urban Forestry Commission also walked the project site with staff and reviewed the preliminary plans. During their review, the Urban Forestry Commission expressed the importance of preserving the large silver maple located on the south side of Cedar Street between Madison and Monroe.

Staff evaluated tree preservation feasibility following the City's typical tree protection practices. However, preservation was deemed infeasible due to the inability to shift the roadway alignment sufficiently to prevent excavation within the Critical Root Zone (CRZ), the shallow root system characteristic of silver maples, the requirement for road profiles to be free of organic material to prevent settlement, the long-term stability risks if significant roots are cut, the high cost of tree protection measures, anticipated to exceed \$10,000 due to potential root disturbance and soil compaction risks. Sandpoint's adopted Urban Forestry Management Plan notes, "An American Forests article published in the early 80's stated that an oak or maple tree is capable of living up to 400 years in the forest, up to 80 years on a college campus, up to 30 years in a heavily used park, up to 20 years along a city street and about 4 years in a downtown planting pit".

If tree preservation remains a priority, a protection plan must be implemented to maximize the chances of maintaining the tree while allowing necessary road reconstruction. Regular monitoring and adaptive management will be essential for long-term tree health. Tree protection measures would be prescribed by the engineer and a certified arborist and <u>may</u> include the following measures:

- Arborist Oversight: A certified arborist must conduct a pre-construction tree health assessment and oversee protection measures throughout construction.
- Root Mapping: Air excavation (Air Spade) may be used to map critical root locations before excavation. If significant roots (typically over 4 inches in diameter) are encountered, adjustments to excavation limits should be considered, though options are limited due to the narrow right-of-way.
- Tree Protection Zone (TPZ): A TPZ should be established based on arborist recommendations. Typically, this is 1 foot per inch of DBH (43 feet) or, at minimum, a 10-foot radius from the trunk. A protective fence must be installed at the TPZ boundary, with signage stating: "Tree Protection Zone – No Entry. No Equipment, No Storage, No Excavation."
- Excavation Limits: A no-excavation zone should be determined, typically at a very minimum restricting excavation within 5 feet of the tree trunk.
- Low-Impact Digging: Hand-digging or air excavation may be required for any work within the TPZ.
- Root Pruning: If roots over 2-4 inches in diameter must be cut, they should be pruned cleanly with sharp tools and treated immediately with a root growth stimulant.
- Soil & Root Recovery Treatments: Mycorrhizal inoculation and soil aeration should be applied to encourage root recovery.
- Irrigation Plan: Deep watering should be conducted once per week for the first 12 months postconstruction, unless adequate rainfall occurs.
- Post-Construction Monitoring: The tree should be monitored quarterly for the first three years after construction. A certified arborist should conduct a final assessment three years post-construction to evaluate the tree's long-term health.
- Design Modifications: To enhance preservation efforts, potential design changes should be considered, including shifting the roadway away from the tree, using alternative curb designs, installing permeable pavement to improve root health, incorporating geogrid reinforcement as an alternative to deep excavation, allowing for a stable road base with minimal root disturbance.

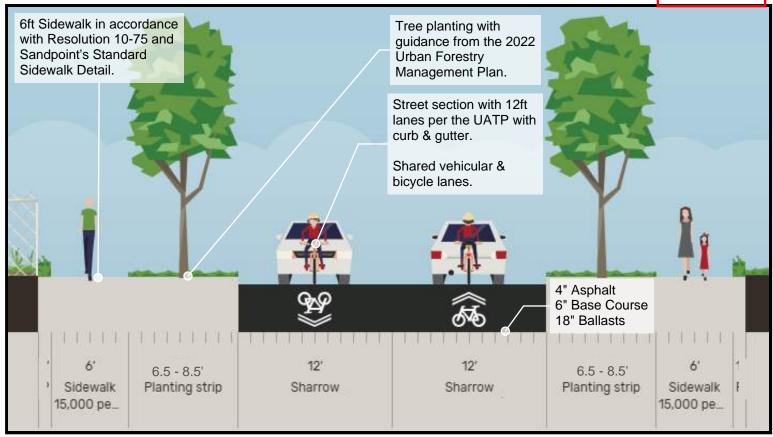
Attachments:

•	Attachment 1	Cedar Street Concept
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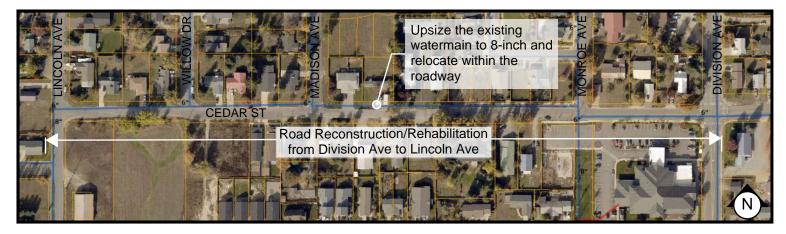
Attachment 2 Cedar Street Preliminary Design Sketch

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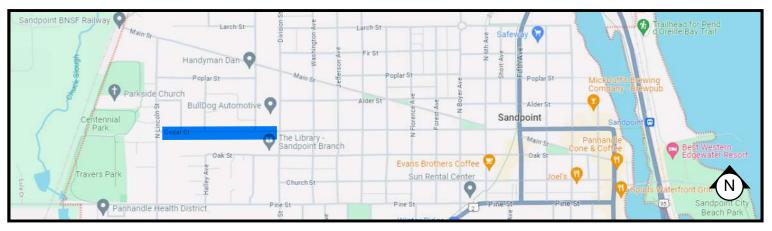
- MTMP Bicycle Priority Network
- Attachment 4 MTMP Existing Street Classifications and Intersection Levels of Service
- Attachment 5 UATP Typical Section
- Attachment 6 Resolution 10-75 Sandpoint's Complete Streets Policy
- Attachment 7 Resolution 06-53 Sidewalk Performance Design Standards Amendment
- Attachment 8 Sandpoint's Standard Sidewalk Detail
- Attachment 9 Cedar Street Auto turn Analysis
- Attachment 10 Tree Plotter Inventory Silver Mape on Cedar Street
- Attachment 11 USDA NRCS Plant Guide Silver Maple
- Attachment 12 Cedar Street Public Comments



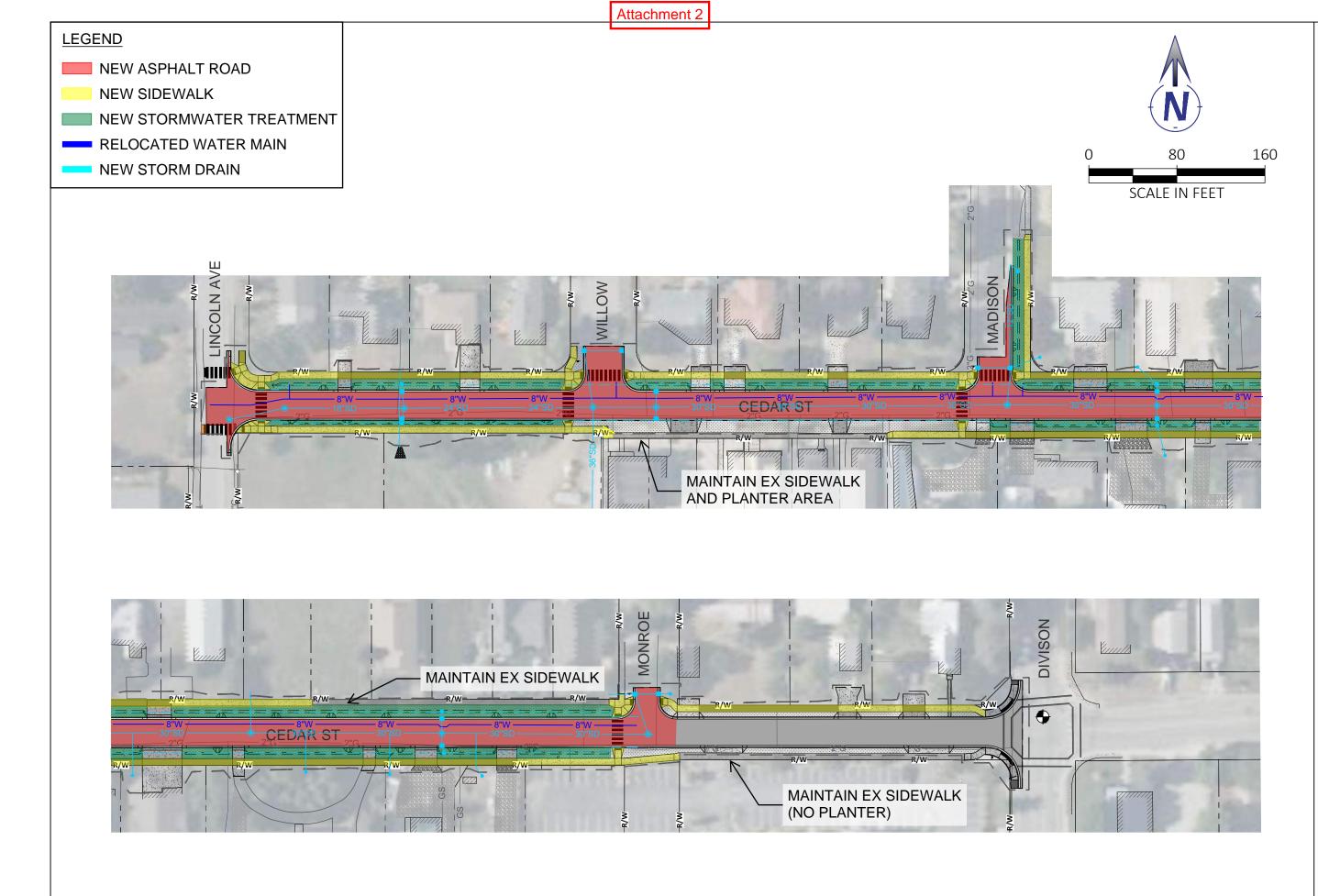
Cedar Street Reconstruction - Typical Street Concept



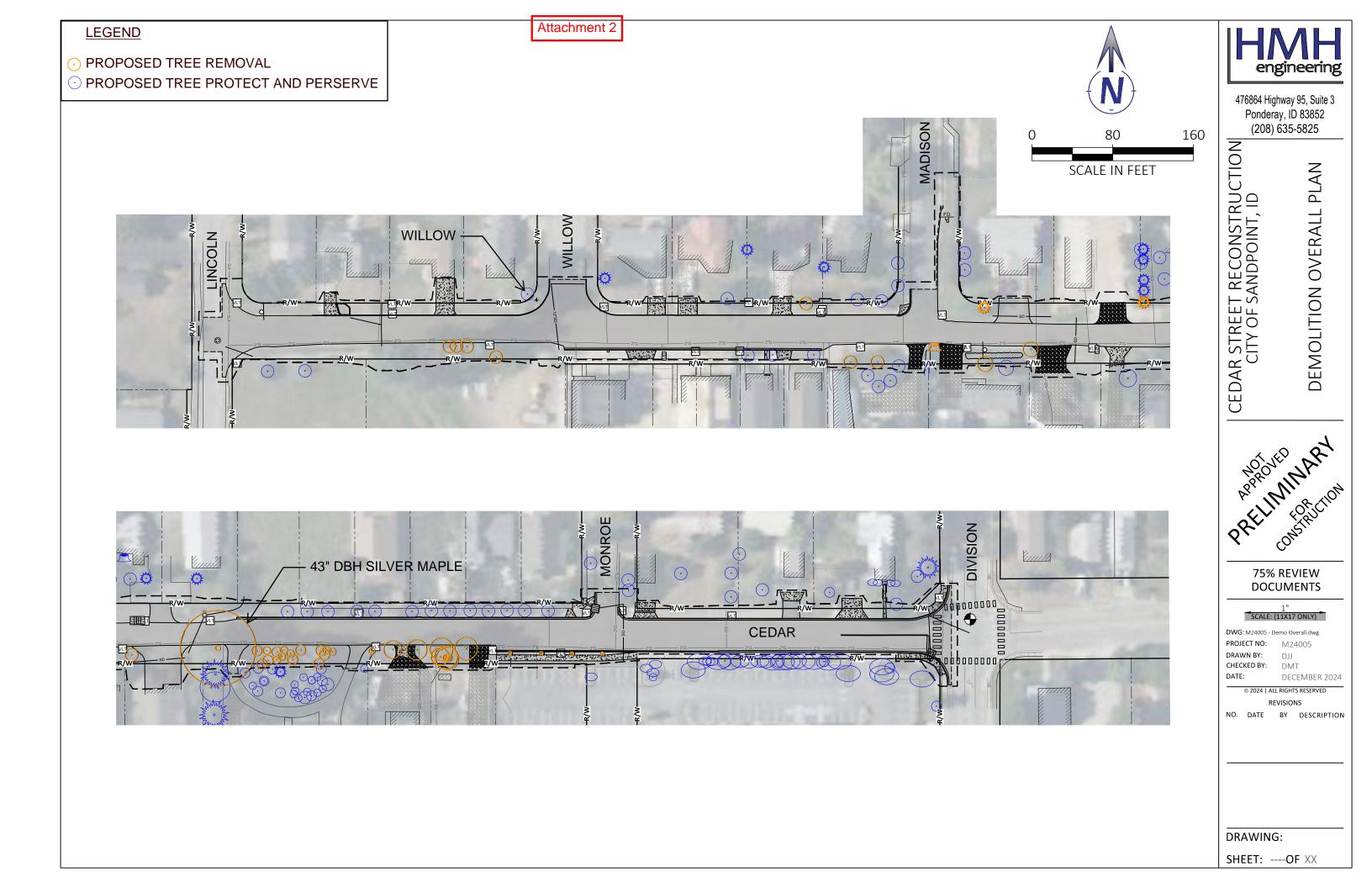
Cedar Street Reconstruction - Plan Concept



Vicinity Map







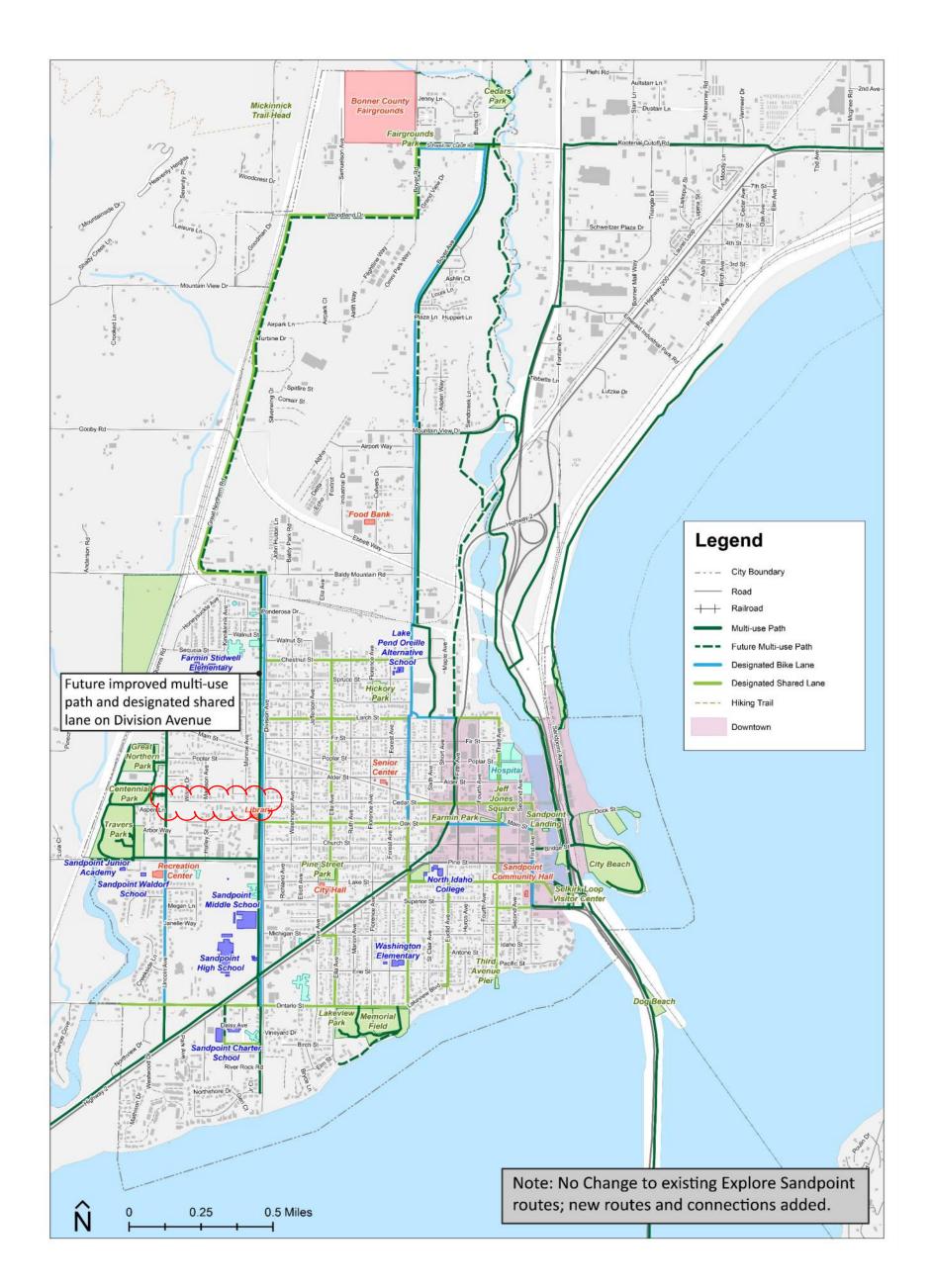


Figure 16 Bicycle Priority Network



Final, Adopted May 5, 2021

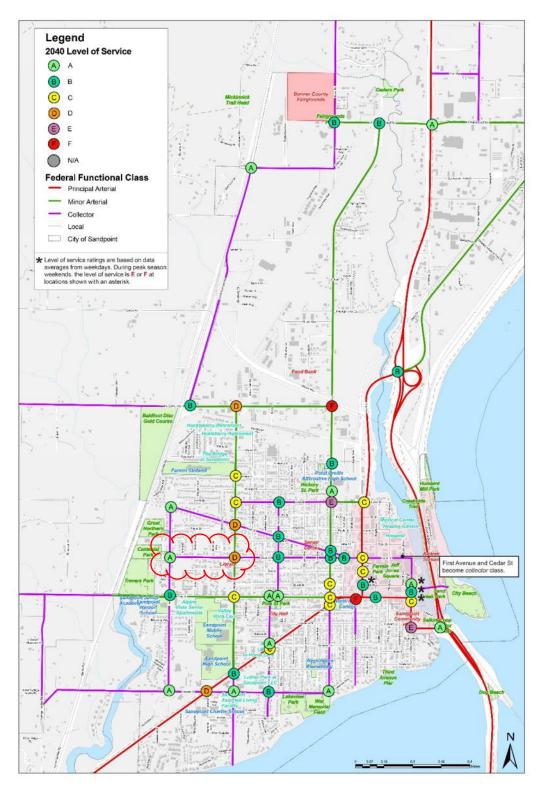


Figure 6 Existing Street Classifications and Intersection Levels of Service (2018/2020)

| 41

Urban Area Transportation Plan

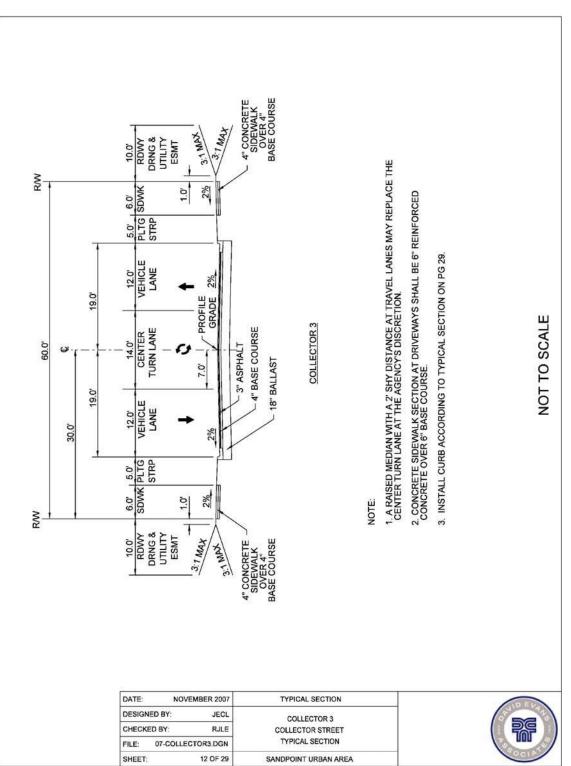


Figure 7-N. Collector 3



No: 10-75 Date: December 15, 2010

RESOLUTION OF THE CITY COUNCIL CITY OF SANDPOINT

TITLE: SANDPOINT COMPLETE STREETS POLICY

- WHEREAS: The National Complete Streets Coalition defines "complete" streets as streets that are designed and operated to enable safe access for all users;
- WHEREAS: The Sandpoint Pedestrian Advisory Committee ("PAC") and Sandpoint Bicycle Advisory Committee ("BAC") have drafted a Complete Streets Policy for the City of Sandpoint; and
- WHEREAS: The City Council agrees with PAC and BAC that Sandpoint's streets, intersections, bridges and transit stops should be designed, constructed, reconstructed, operated and maintained so that all users, pedestrians, bicyclists, transit riders, motorists, and people with disabilities can travel safely and independently to and from their respective destinations.
- NOW, THEREFORE, BE IT RESOLVED THAT: The Sandpoint Complete Streets Policy, a copy of which is attached hereto and made a part hereof by reference, is hereby adopted by the City of Sandpoint.

YES

Gretchen A. Hellar, Mayor

ATTEST:

Maree' Peck, City Clerk

City Council Members:

1. Snedden Motion Х Х

2. Logan Reuter 3. Second

- Х Oailvie Х 4.
- 5. Davis
- Х Schuck Х 6.

NO

ABSTAIN ABSENT

SANDPOINT COMPLETE STREETS POLICY

Introduction and Vision

A "complete" street addresses the needs of all users. In so doing, it furthers implementation of the transportation section of the Sandpoint Comprehensive Plan. People driving, walking, cycling and riding transit, of all ages and abilities, can be safely accommodated within the overall street network. Making streets attractive to "active users" will promote public health and fitness in Sandpoint's youth and for adults of all ages. Planning for this diverse user group requires many of the following elements:

- 1. Appropriately-sized travel lanes for cars, trucks and delivery/emergency service vehicles consistent with desired vehicle speeds
- 2. Sidewalk space for pedestrians
- 3. Bike signals, lanes, sharrows, signed bike routes or separated pathways
- 4. Transit facilities and routes
- 5. On-street parking, where applicable
- 6. Medians, used for traffic flow, safety and pedestrian refuge
- 7. Adequate buffer areas for pedestrian safety, utility placement, snow storage and landscaping, including trees
- 8. Visually appealing landscaping or hardscaping to add shade and pedestrian protection
- 9. Land uses that generate and warrant such treatment
- 10. Frequent, safe crossings for people walking and bicycling

The City of Sandpoint recognizes that all streets are different and that not all streets will necessarily incorporate all elements described above. Streets within the City will be designed to meet user needs, provide connectivity, and incorporate elements that match the land use context.

Through contextually-sensitive design, a "complete" street can accomplish greater public benefits, improve safety, increase transportation options, encourage active lifestyles, strengthen the overall benefit of transportation investments, and enhance air quality.

The City of Sandpoint is committed to carrying out the charge of "complete streets". With funding for roadway construction becoming scarce, it is in the best interest of the public and private sectors to plan and construct streets that address the needs of the community as a whole. The inclusion of all needed facilities in the early planning phases of roadway construction in both residential and commercial development and redevelopment reduces the complexity and costs of attempting to retrofit years later. The City encourages and supports the creation of "complete" streets by providing the following policies.

Policy Statements

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects unless significant safety or other challenges making

bicycle and pedestrian facilities dangerous to potential users cannot be overcome. Where a determination is made that providing pedestrian and/or bicycle facilities would be unsafe, alternative considerations will be planned to offset any deficiencies.

- 2. All facilities for people walking, including sidewalks, shared use paths, street crossings (including over and under crossings), pedestrian signals, signs, transit facilities and all connections, shall be designed, constructed, operated, and maintained so that children, the elderly, and people with disabilities have safe access.
- 3. The design and development of the transportation infrastructure shall improve conditions for all likely users through the following steps:
 - a. Plan projects for the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities should anticipate future demand for bicycling, walking and transit facilities and not preclude the provision of future improvements except as outlined in Section 1.
 - b. Coordinate with adjacent municipalities to provide regional connectivity. Future bicycle, pedestrian and transit facilities shall connect to pedestrian, bicycle and transit facilities in adjacent municipalities to provide regional connectivity.
 - c. Address the need for bicyclists and pedestrians to cross corridors as well as travel along them. Even where bicyclists and pedestrians may not commonly use a particular travel corridor that is being improved or constructed, they need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections, roundabouts, interchanges and overpasses shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.
 - d. Consider enhancements, such as landscaped medians and buffer areas, pedestrian lighting, seating and on-street parking, in new construction and reconstruction projects. Landscaping, on-street parking and the other features mentioned will not be appropriate for all streets and corridors. These features should be considered when supported by adjacent land uses. Safe access for people with disabilities should be carefully considered in areas where landscaping, parking or other enhancements are placed within or near pedestrian ways.
 - e. Design facilities based on recognized standards for all users. Published standards, such as those from the City of Sandpoint, the American Association of State Highway and Transportation Officials (AASHTO), the Access Board, and the Manual on Uniform Traffic Control Devices (MUTCD), should be used in the design of pedestrian, bicycle, motor vehicle and transit facilities.

Guiding Principle

Streets, intersections, bridges and transit stops within Sandpoint should be designed, constructed, reconstructed, operated and maintained so that all users, pedestrians, bicyclists, transit riders, motorists, and people with disabilities can travel safely and independently to and from their respective destinations.

No: 06-53 Date: July 19, 2006

RESOLUTION OF THE CITY COUNCIL CITY OF SANDPOINT

SIDEWALK PERFORMANCE/DESIGN STANDARDS AMENDMENT TITLE:

- WHEREAS: The city of Sandpoint adopted Ordinance No. 1083 on May 21, 2003, amending Title 7 Chapter 3 and Title 10 Chapter 1 of the Municipal Code; and,
- Ordinance No. 1083 provides for the adoption of specifications and design WHEREAS: standards for sidewalks; and,
- The City of Sandpoint adopted Sidewalk Performance/Design Standards by WHEREAS: Resolution No. 03-33.
- NOW, THEREFORE, BE IT RESOLVED by the Mayor and City Council that the City of Sandpoint hereby amends the Sidewalk Performance/Design Standards by the following:

Section 1.

The Sidewalk Performance/Design Standards adopted by Resolution No. 03-33 are hereby repealed.

Section 2.

The attached Sidewalk Performance/Design Standards dated July 19, 2006 are hereby adopted.

Section 3.

This resolution shall be effective upon its passage and approval.

YES

Raymond P. Miller, Mayor

ATTEST:

Maree Peck, City Clerk

City Council Members:

NO

ABSTAIN

ABSENT

- 1. Boge
- 2. Elliott Second 3.
- Spickelmire 4. Lamson
- 5. Lockwood Motion
- XXXXXXX 6. Newton

City of Sandpoint Sidewalk Performance/Design Standards July 19, 2006

Road Type	Principal	Minor		Local
(FHWA	Arterial	Arterial	Collector	Residential
Classification)#	(NHS)			
Typical ROW	100 - 120	60 - 120	50 - 80	40 - 80
Typical Roadway	36 - 100	36 - 40	28 - 34	26 - 34
Width				
With planting	6'	6'	5'*	5'*
strip buffer				
With street trees	10'	10'	8'	
no buffer			· · · · · · · · · · · · · · · · · · ·	
Urban Center	Full available	Full available		
	ROW to curb	ROW to curb		
	when buildings	when buildings		
	abut ROW	abut ROW		
Planting Buffer Width - The space between the sidewalk located on the edge of the ROW line and the curb				
* If obstructions are located within the sidewalk, provide a minimum clear width of 4'				

I. The recommended Minimum Widths for Sidewalks are as follows:

II. A. Common Elements: Sidewalks on both sides of the street; curb ramps at intersections; approved driveway and alley apron designs; cross slope a maximum of 2% (1/4" per foot) toward the street; slope in direction of travel 8.3% (1" per foot); approved street trees installed whenever practical; 8' minimum vertical clearance. Minimum 4' of sidewalk width to be completely clear of obstructions. Sidewalks shall be constructed along the right-of-way side of the property line. As much as possible, they will align with adjoining sidewalks.

B. In general, the width of a sidewalk or walkway needs to comfortably accommodate the volume of pedestrians normally using or anticipated to use it. The goal is to produce usable, accessible pedestrian facilities that serve users of all abilities and ages. Sidewalks may need to be wider than the minimum where there are designated Safe Routes to School walking routes, parks, recreation centers, transit stops, or other common pedestrian origins and destinations. The PW Director, Planning Commission or City Council may make that determination.

C. Sidewalks shall be constructed at grade with the top of the curb, unless approved by the City Engineer. The PW Director, Planning Commission or City Council may authorize deviation from the recommended minimum widths for compelling reasons, including, but not limited to, topography, available right of way, or existing building setbacks.

D. If necessary, roots of street trees should be buffered from the sidewalk to prevent future heave and buckle. Sidewalks may circumvent mature trees or outstanding landscaping features to the satisfaction of the City Engineer and landowner. Giving tree roots room helps prevent future maintenance problems. Trees are a desirable pedestrian amenity and efforts should be made to accommodate preexisting ones in or near the right of way and plant them in buffer strips. Sidewalk may veer onto adjoining private property if needed to avoid trees. E. Existing subdivisions with existing 4' sidewalks are exempted from the 5' width requirement and allowed to remain 4': Northshore; Ponderosa Park and Ponderosa Park 1st Addition; and Sand Creek Place.

F. Where wider sidewalks are being constructed which abut a narrower sidewalk, the new sidewalk shall transition to the narrower sidewalk at an angle or curve approved by the Public Works Director.

III. The City adopts the # 2010 Sandpoint Urban Area and Functional Classification Map (signed by Federal Highway Administration representative, 1/14/04) which designates the following road types in Sandpoint:

A. Principal Arterials/National Highway System (NHS):

Highway 2 Cedar St. (1st to 5th) 5th Ave. (Pine to City of Ponderay) 1st Ave. (Superior to Cedar) Pine St. (1st to Highway 2) Superior (Long Bridge to 1st Ave.)

B. Minor arterials:

Baldy Mountain Road Boyer Ave. (Highway 2 to Schweitzer Cutoff Road) Division Ave (North of Hwy 2) Pine St. (between Highway 2 and Division)

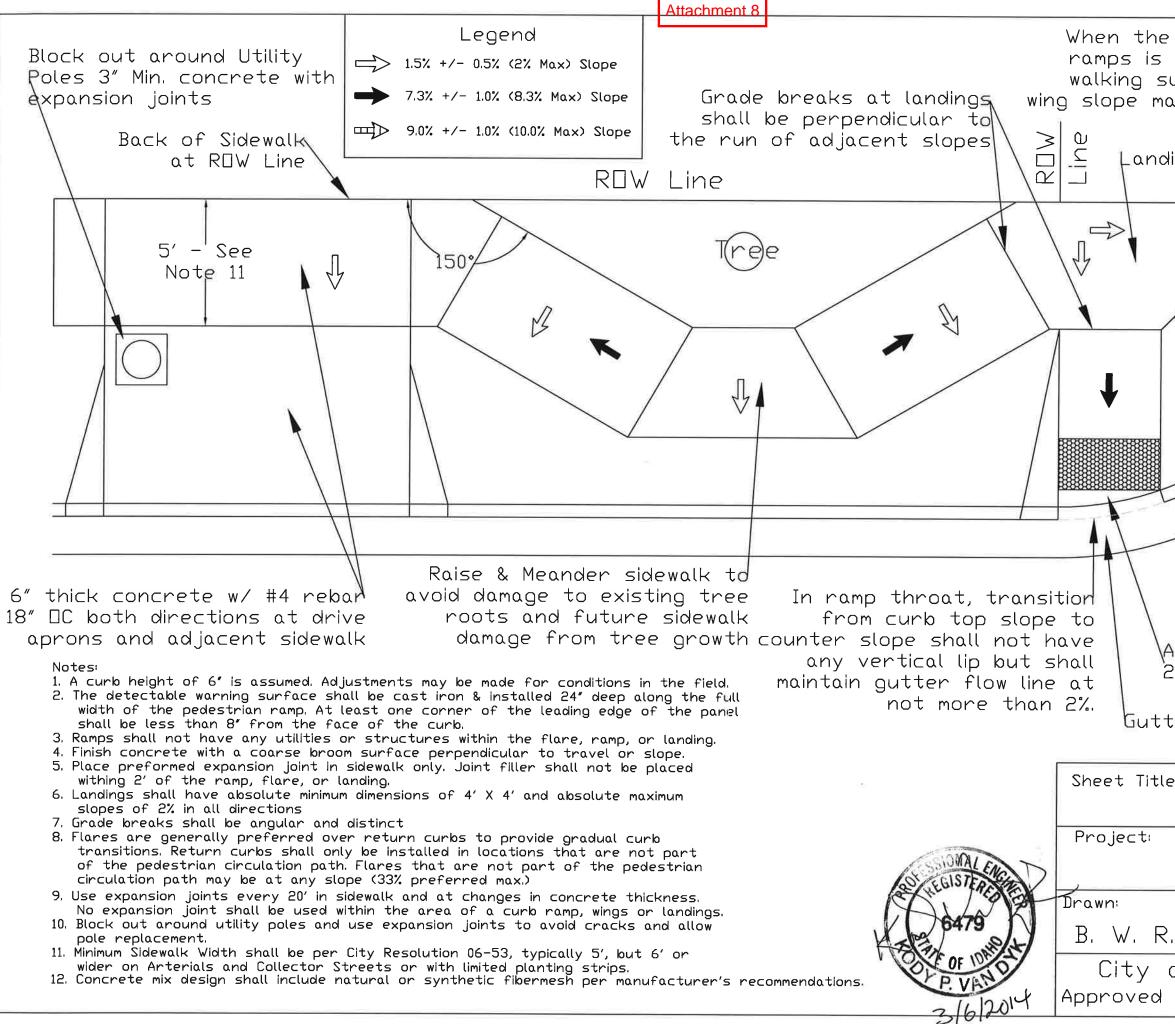
C. Collectors:

Boyer Ave. (south of Highway 2) N. Boyer Ave. Bridge St. Cedar St. (west of 5th) Division Ave. (South of Highway 2) Ella Ave. (Pine to Larch) Euclid Ave Great Northern Road Larch St. (between Boyer and Division) Lincoln Ave. Main St. (between 5th and Division) Olive Ave. Ontario St. Woodland Drive

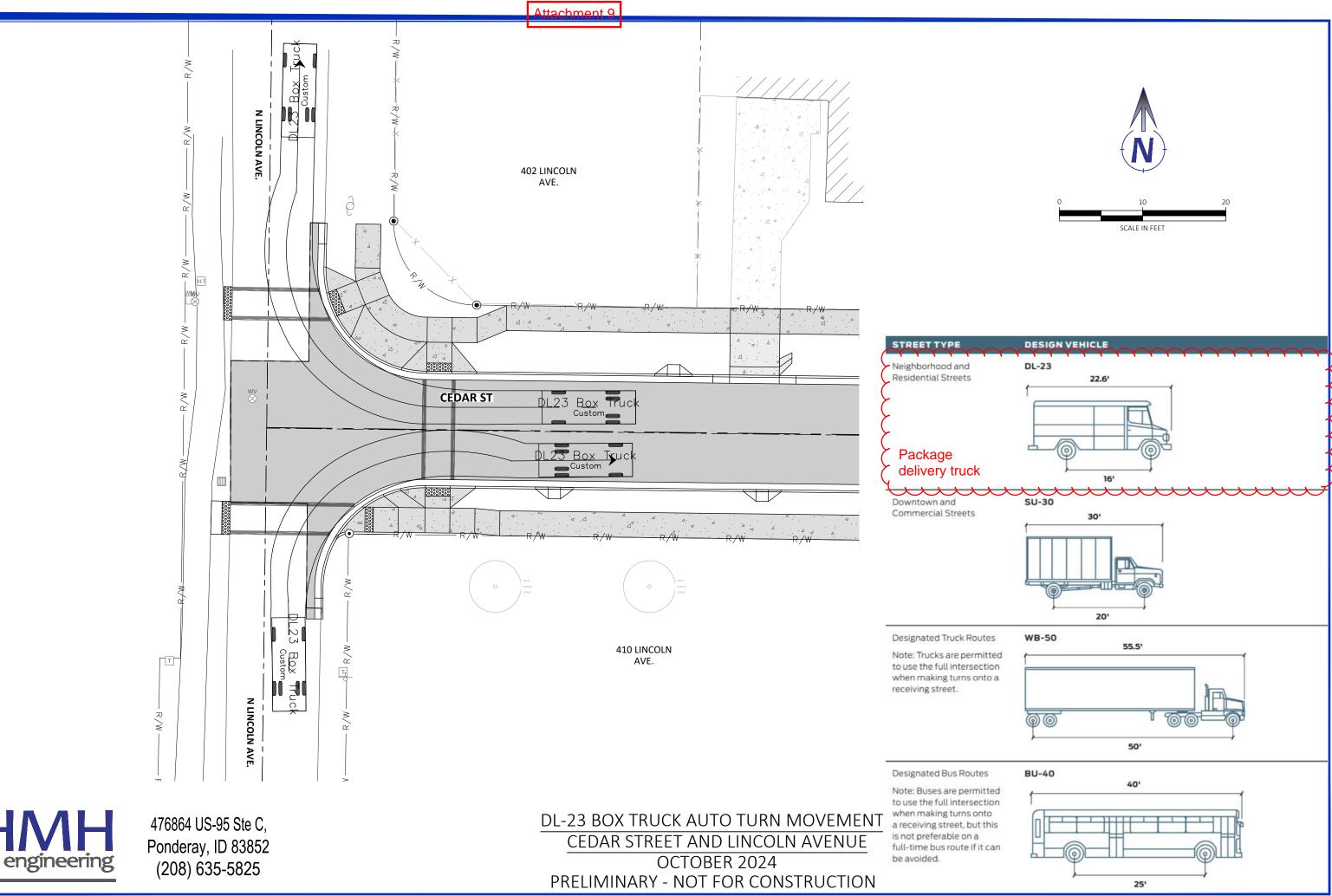
D. Local Residential:

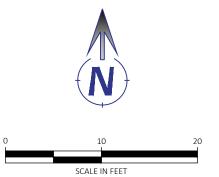
All other roads

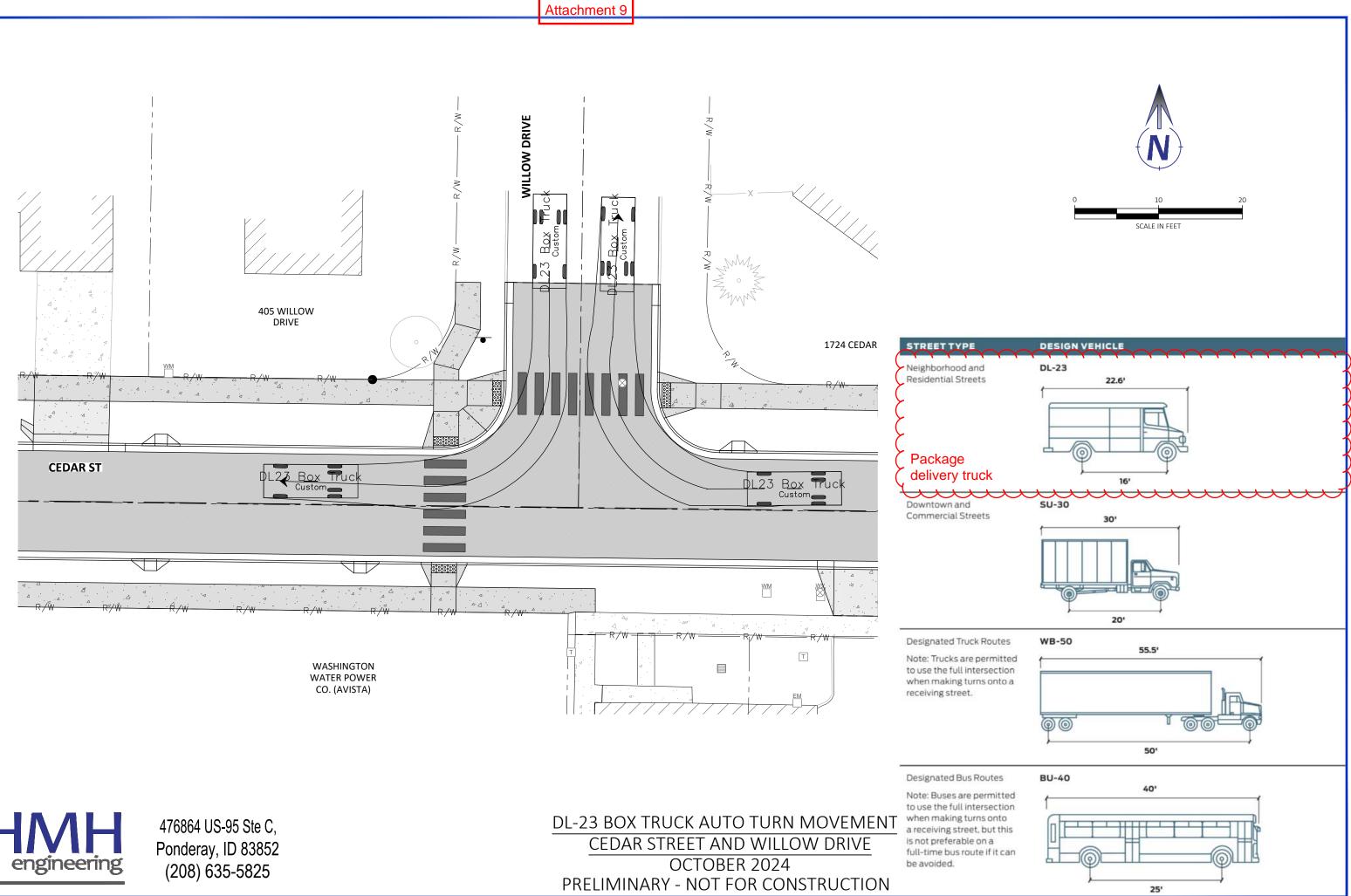
PAC Adopted 6/2006

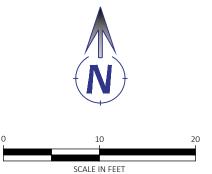


area around grass (not a urface), ramp ay exceed 10%
ling See Note 6 1'-6"
Minimum Curb height 3"
If the area next to a ramp is concrete (a walking surface) 1:10 max. wing slope
No expansion joint material at ramps, wings or landings
Area betweem dome panels and curb 2% slope max. in any direction
ter counter slope 5% max. at ramp
" Std. Sidewalk Details
Checked: Date: . K. P. V. 3/5/14 Sht. 1 of 1
of Sandpoint, Public Works by Sandpoint City Council 3/5/2014

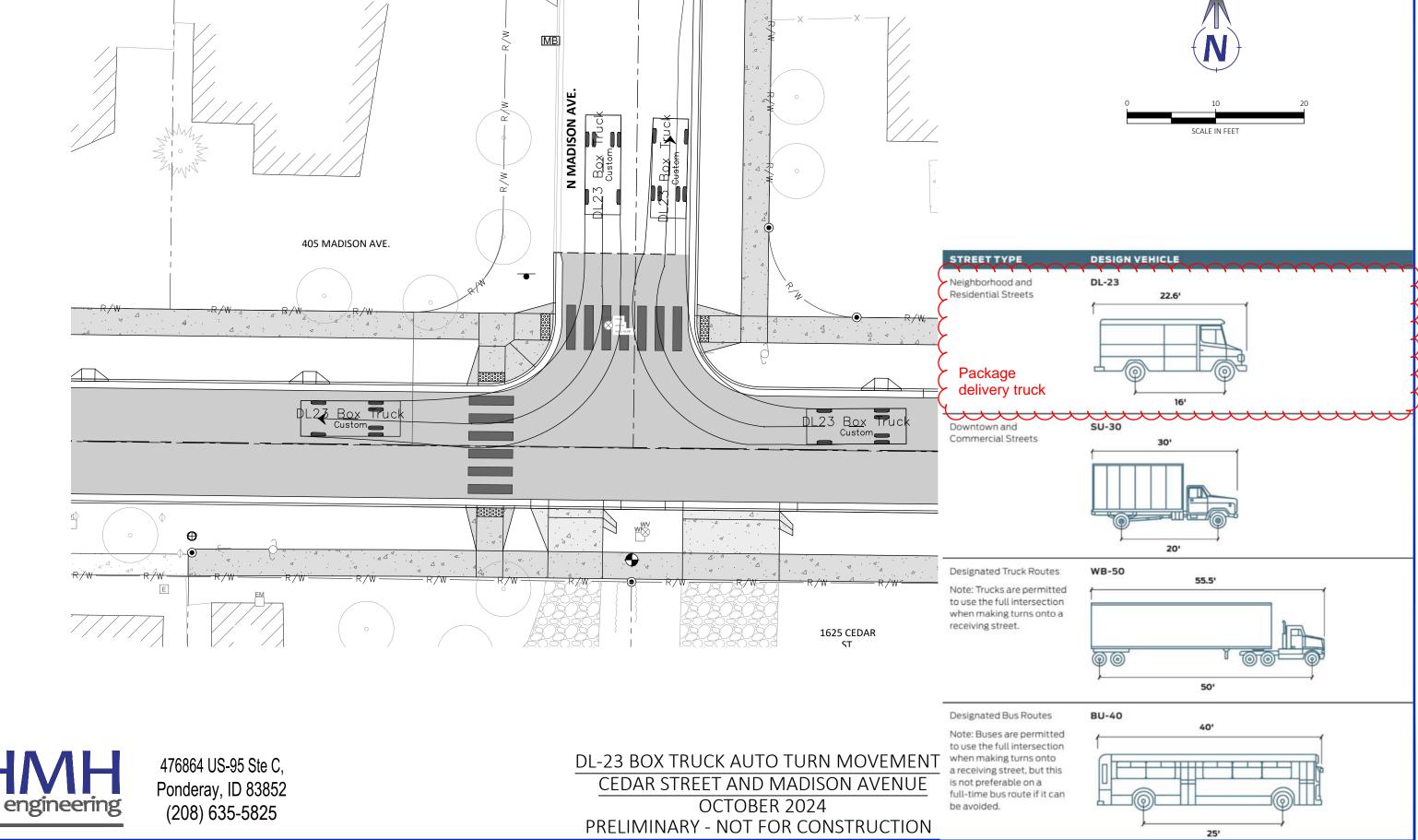


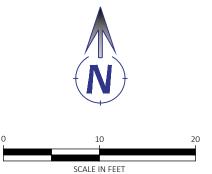


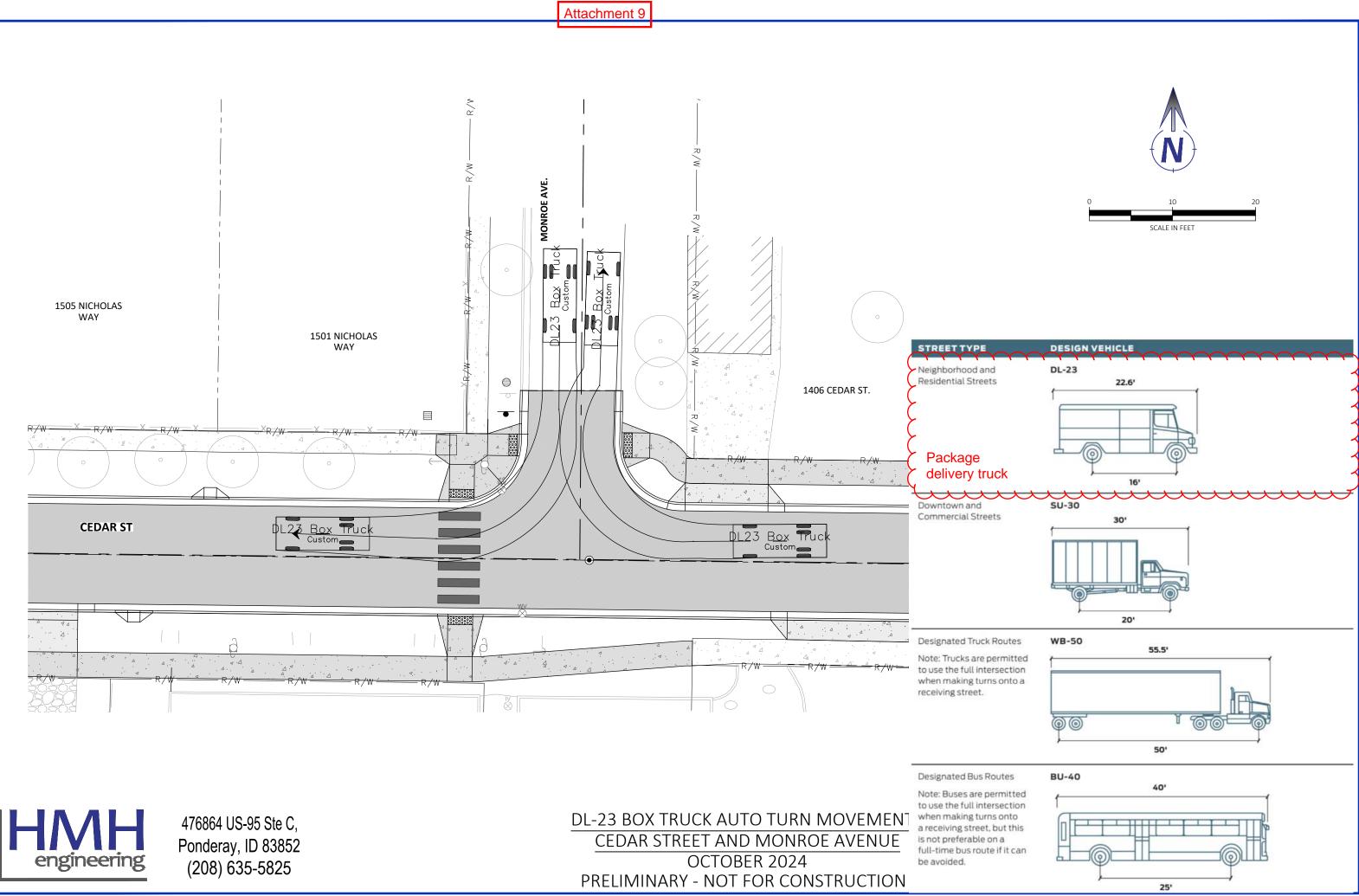


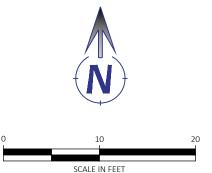


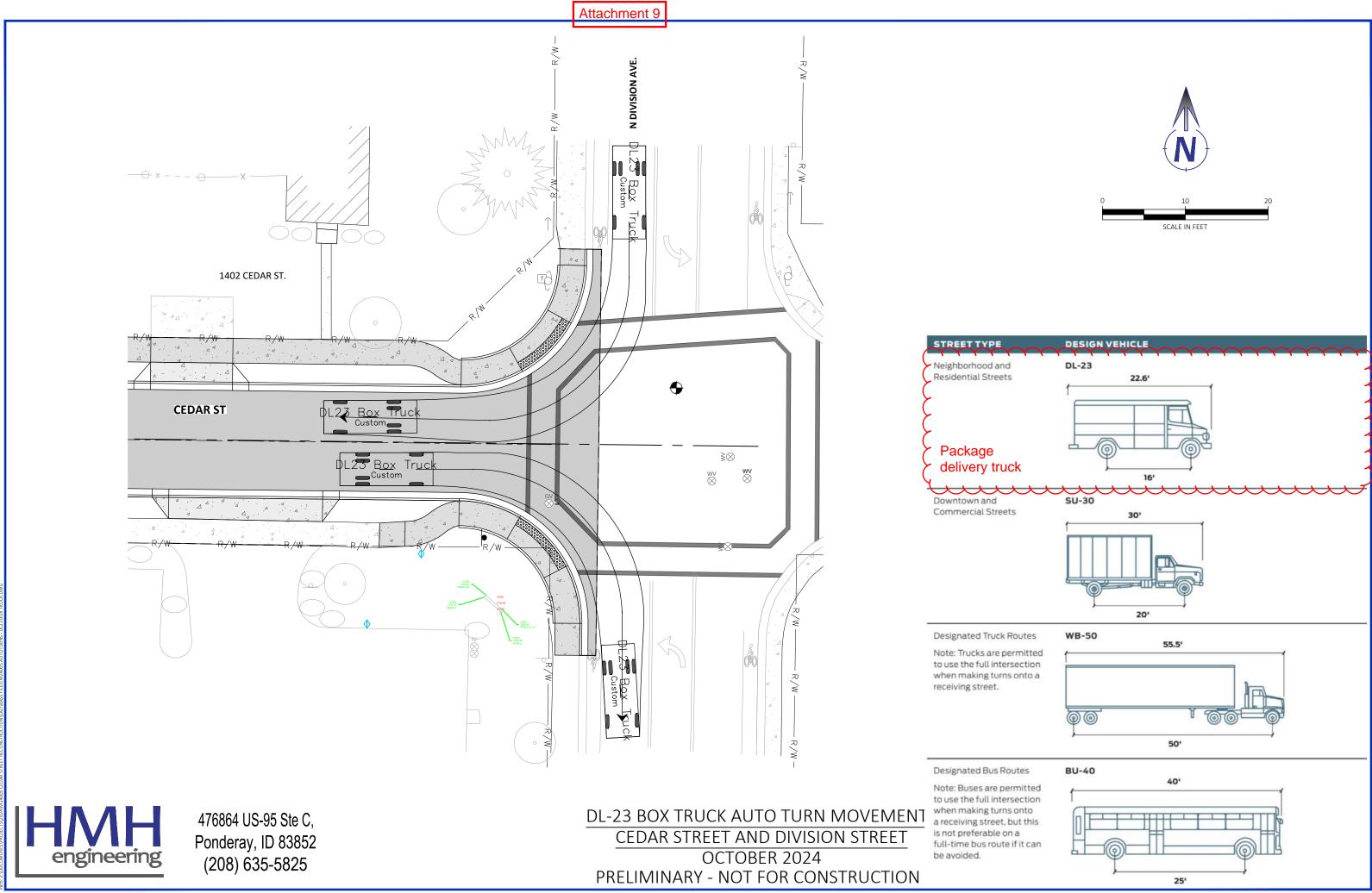


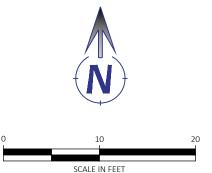


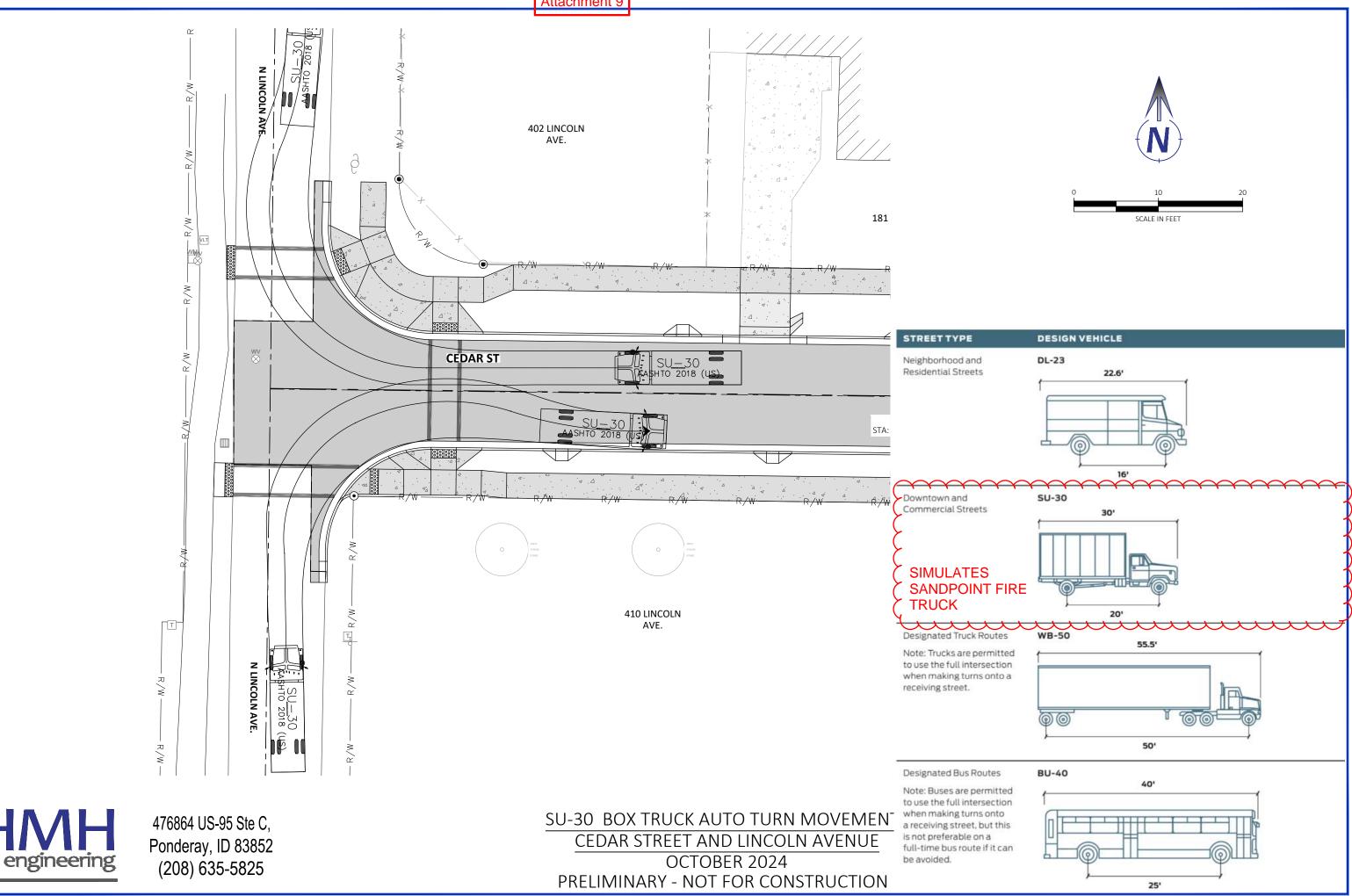


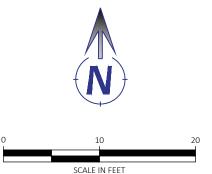


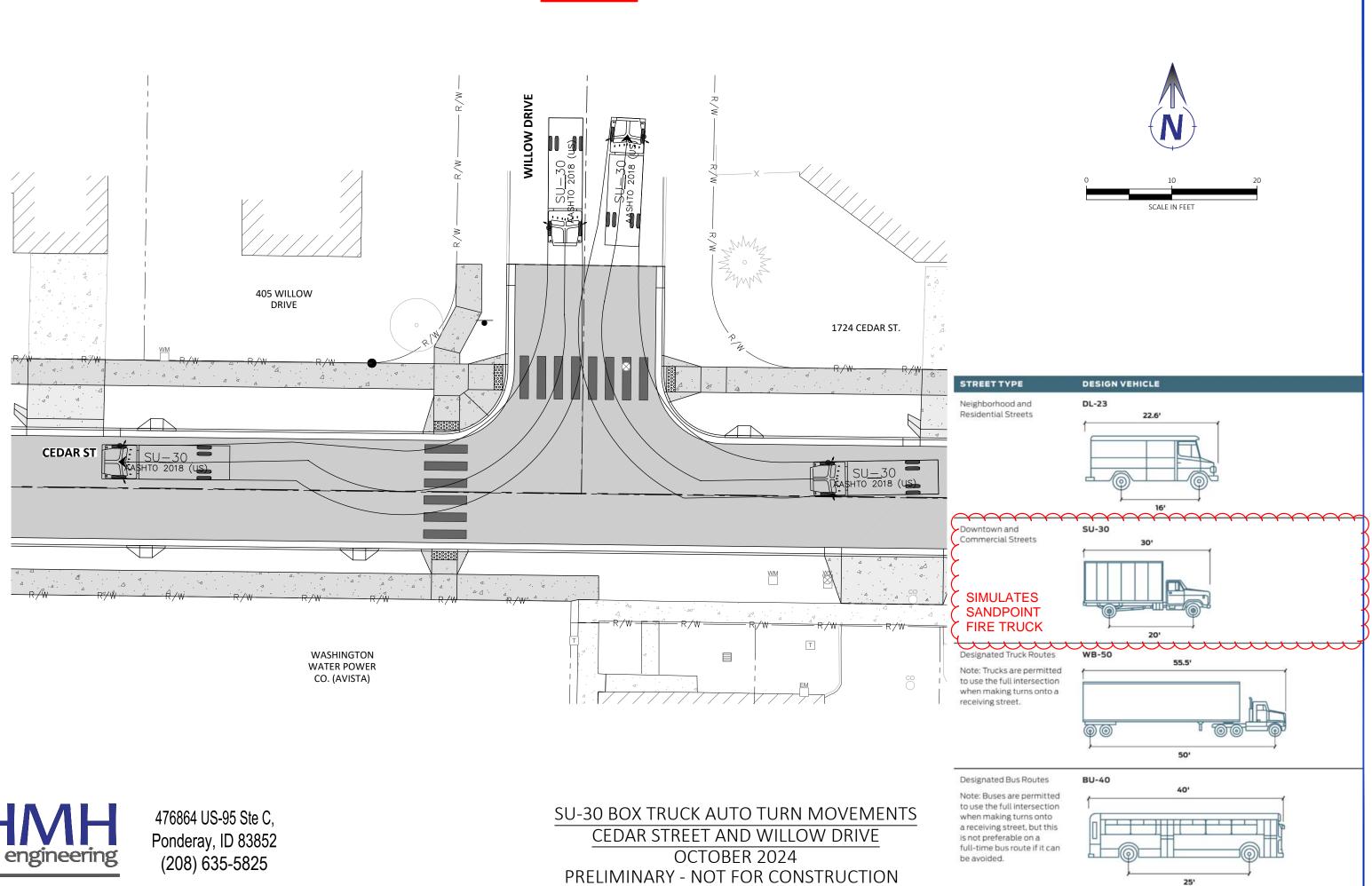




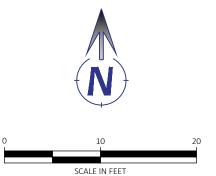




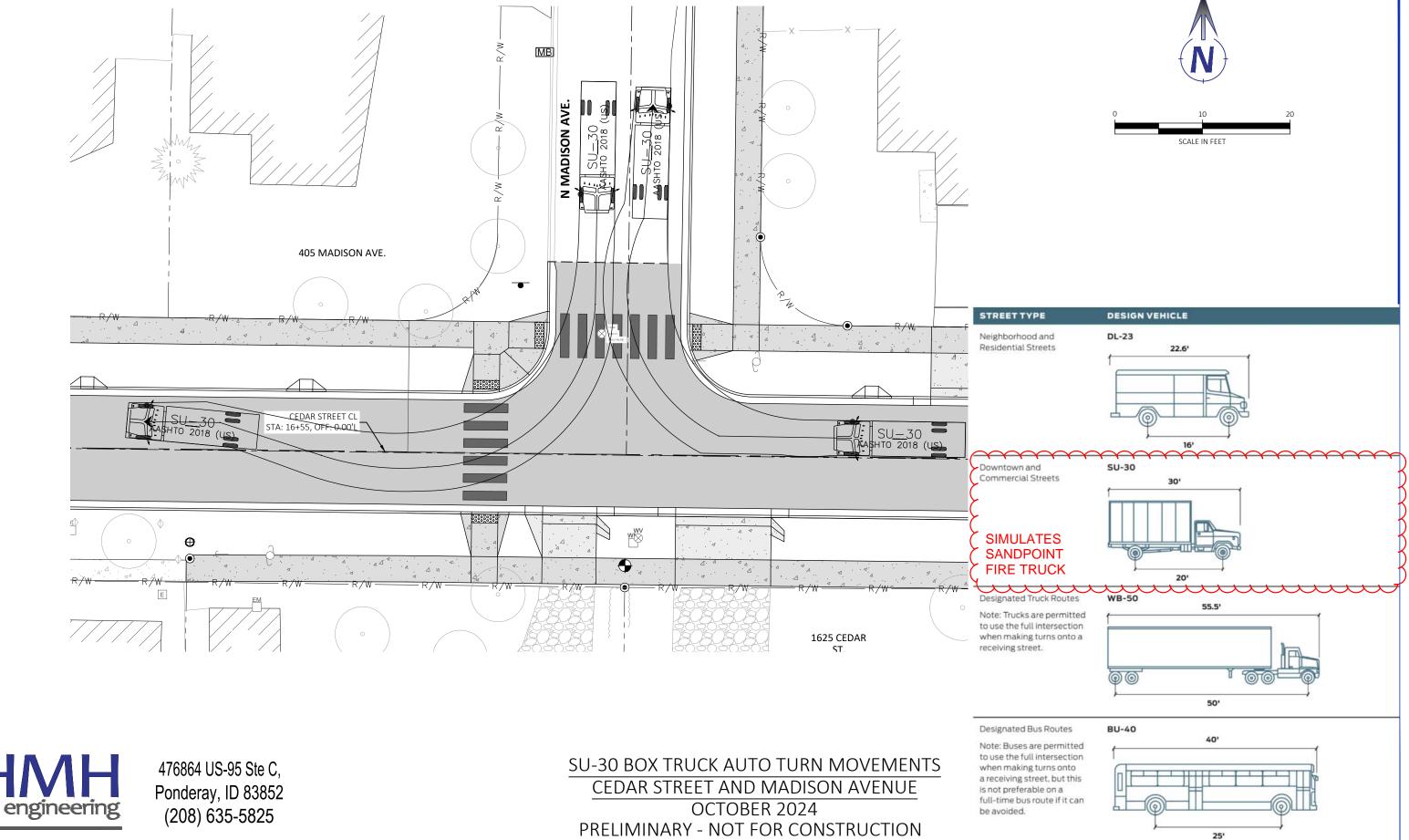




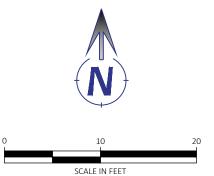
PRELIMINARY - NOT FOR CONSTRUCTION

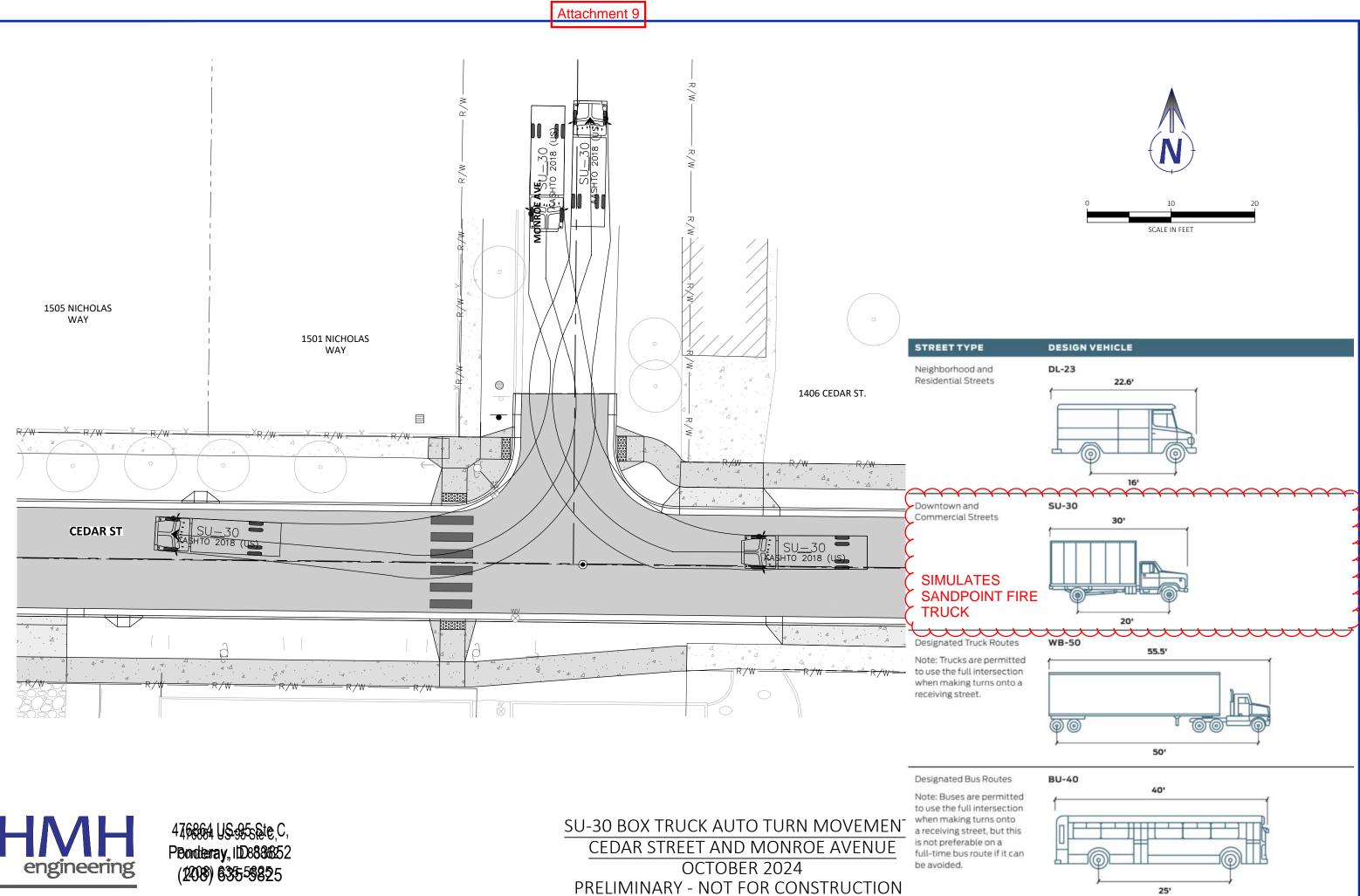


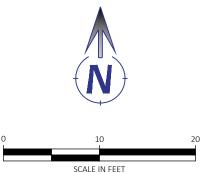


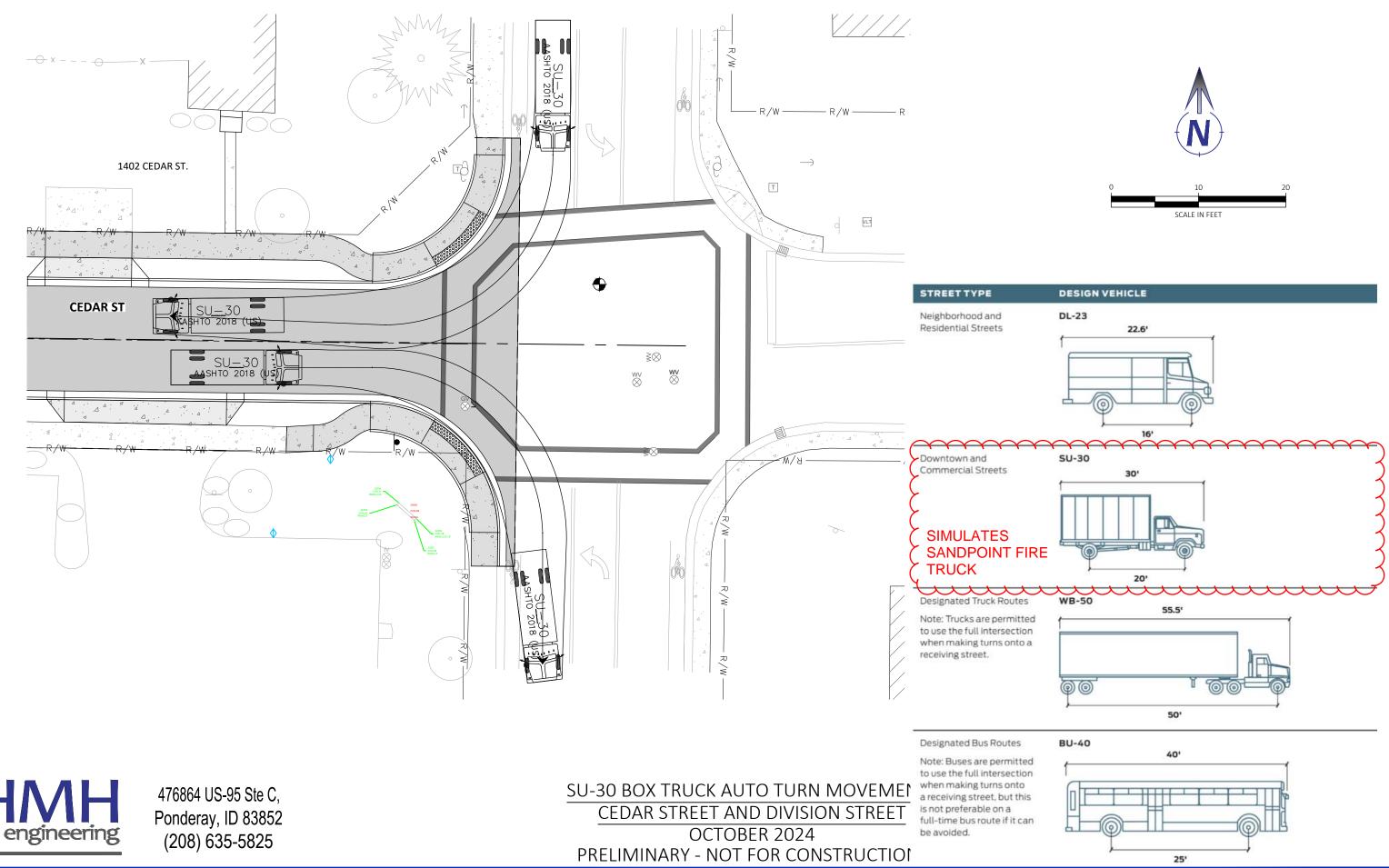


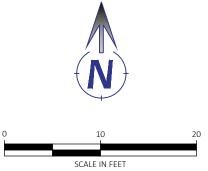
PRELIMINARY - NOT FOR CONSTRUCTION













Silver Maple	Tree ID #235597
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Location Information		
Address:		
Address Number:	1525	
Address Street:	Cedar	
City:	Sandpoint	
Street the tree is on?:	Cedar	
Property Owner:	Northwest	
Date Assessed:		
City Managed:	False	
Land Use:		
Location on Site:		
Tree Number:		
Growing Space:		
Park Name:		
Planting Site Width:		
Tree Source:		
Latitude:	48.27570000000015	
Longitude:	-116.5707000000002	

Tree Information	
Tree Id:	1236
Latin Name:	Acer saccharinum
Common Name:	Silver Maple
Cultivar:	
Genus:	Acer
Code:	ACSA1
Status:	Alive
Year Planted:	
DBH:	43
DBH Range:	>30in
Tree Height:	
Number of Stems:	
Condition:	Good - No Apparent Problems

Photos

There are no saved photos for this feature.

Street View



Мар



Eco-Benefits	
Overall Monetary Benefit:	\$3.34
Stormwater Monetary Benefit:	\$0.09
Runoff Avoided:	1.33 (ft³)
Interception:	270.75 (ft ³)
Air Quality Monetary Benefit:	\$0.05
Pollutants Removed:	2.52 (lbs)

2/28/25, 10:34 AM

Percent Dieback:	
Crown Class:	
Clearance Confilicts:	
Observations:	
Stock Type:	
Tree Comments:	Minor deadwood. Some decay.
Family:	Sapindaceae
Has Ecobenefits:	Yes
Last Modified:	07/11/2016
Upload ID:	upld_577586771111a
User - Upload:	
Last Inspection:	
Next Inspection:	
Inspection Cycle:	
Crown Light Exposure:	
Archived:	No
Tree Protection Zone(TPZ):	
Critical Root Zone(CRZ):	
TPZ Ratio:	
CRZ Ratio:	

Management Needs		
Primary Maintenance:		
Secondary Maintenance:		
Wires:	Present and Conflicting	
Watch This Tree? :	No	
Maintenance Comments:		
Organization:	Sandpoint	
User:		

Work Records, Work History

No results

Tree Inspections

Tree Report Detailed

Attachment 10

Carbon Monetary Benefit:	\$3.21
Carbon Storage:	8705.74 (lbs)
CO ₂ Storage:	31921.04 (lbs)
CO ₂ Sequestered:	137.98 (lbs)

Most Recent Changes to this Tree There is no history for this feature.



SILVER MAPLE Acer saccharinum L. Plant Symbol = ACSA2

Contributed by: USDA NRCS Manhattan Plant Materials Center & Kansas State University, Forestry Research



Figure 1. Photo Courtesy of R. Brewster (2010), Mississaugua Country Golf and Country Club, Mississaugua, Ontario, CAN

Alternate Names

Soft maple, silverleaf maple, white maple, river maple, swamp maple, water maple

Uses

Biofuels: The species is one of a few that has the growth rate for serious consideration for biofuel production. Though shrub willow and poplar hybrids are currently receiving greater attention, silver maple has been tested for this use in the Midwest (Geyer and Walawender, 1996; Geyer, 2004).

Ethnobotanic: Native Americans used the sap for many physical remedies - - coughs, cramps, dysentery, sore eyes, measles, running sores, diuretics, and venereal diseases.

As a food source sap was used for sugar, intoxicants, and bread (Moreman, 1998). Other uses include basketry, dyes, furniture.

Conservation/Forest Buffers: Silver maple is ideal for riparian forest buffer installations due to its common presence in such sites. It should be planted because of its

Plant Guide

rapid growth and early maturity. However, when silver maple is present in nearby stands, seed dispersal will provide copious volunteers, so planting is unnecessary. It is much preferred to box elder in a planting.

Industry: Silver maple on good sites can be managed for timber – it is often cut and sold with red maple as "soft maple" lumber. Silver maple sap can be used to make good, light syrup, although the sugar content of the sap is the lowest of the maple species used for syrup production (Koelling and Heiligmann, 1996).

Wood characteristics: The wood of silver maple is fairly hard, even texture, rather brittle, and easily worked (Panshin and deZeeuw, 1980). It is used for furniture, cabinetry, paneling, flooring, woodturning, veneer, musical instruments, boxes and crates, tool handles, wagons, carts, and rails. The wood is moderately heavy (SpGr 0.44-0.49 green and 0.51-0.55 ovendry). Old heartwood develops a swirled pattern that is sold as "bird's eye maple."

Ornamental: Silver maple has been heavily planted as an ornamental in many urban areas because of its ease of transplanting and establishment, adaptability to a wide range of sites, rapid growth, and good form. The species also has been used for vegetative rehabilitation of surface mined lands as well as for bottomland reforestation (Gabriel, 2010).

Wildlife: The abundant seeds of silver maples are eaten by many birds, including evening grosbeaks, finches, wild turkeys, ducks, and other game birds, and small mammals, especially squirrels and chipmunks. The buds are an important food for squirrels when stored food is depleted, particularly in late winter and early spring (Reichard, 1976). The bark is a food source for beavers and deer, and rabbits browse the foliage. Silver maple tends to develop cavities that are used by cavity-nesting birds and mammals and provide shelter and breeding habitat for many other species, including raccoons, opossums, squirrels, owls, woodpeckers, and many other birds.

Because of its abundance and the wide distribution of silver maple, its early-produced pollen may be important to the biology of bees and other pollen-dependent insects. Most references describe silver maple as wind pollinated, but insect pollination may be important, as many insects, especially bees, visit the flowers.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Weediness

Seeds production is prolific in some years; may be a problem in urban settings. Hand removal or herbicides may be used to remove plants.

Description

General: Maple Family (Aceraceae): A native tree reaching to mature heights of 90-140 ft, usually with a short, thick trunk and spreading, open, irregular crown of long, curving branches with pendulous branchlets turning up at the ends; twigs produce a slightly unpleasant odor when crushed; bark gray and thin, becoming furrowed into long, shaggy, scaly ridges on older trunks and branches (Stephens, 1973). The National Registry of Big Trees reports a specimen in Michigan that is 115 feet tall with a circumference of 347 inches (American Forests, 2010). Silver maples can live to 130 years or longer.

The leaves are deciduous, opposite, 4-6 in long and nearly as wide, long-petioles, deeply 5-lobed and long-pointed (middle lobe often 3-lobed) with

V-shaped sinuses, doubly toothed, with three main veins from the base, dull green above, silvery-white beneath, usually turning pale yellow or soft gold in the autumn, occasionally scarlet and crimson (perhaps reflecting hybridization with red maple).



Figure 2. Leaves dull green above, silvery-white beneath Photo Courtesy of Village of Waterford, Virginia (2010).



Figure 3. Silver maple's gray, thin bark. Photo Courtesy of Dave Hansen (2010).

Flowering and Fruiting: Silver maple flowers in March-April before the leaves, usually before red maple. All flowers on one tree are nearly synchronous. Fruiting occurs in April-June, maturing about 3 weeks after pollination and all released over a short period, usually less than 2 weeks (Burns and Honkala, 1990).

The flowers are usually greenish or yellow from reddish buds, about .2 inches long, the male (staminate) flowers fascicled, the female (pistillate) flowers in drooping racemes, the flowers functionally male or female. Individual trees commonly have all male or all female flowers (the species essentially dioecious) or some trees may have more of one type than the other, and scattered flowers may be functionally bisexual (the species technically polygamo-dioecious) (Burns and Honkala, 1990).

The fruits are winged nutlets (samaras) 1.6-2.4 inches long; light brown with pink veins, in a long-stalked, wide-spreading pair. The common name refers to the silvery appearance of the underside of the leaves (Harlow et al., 1979).



Figure 4. Maturing samaras. Photo Courtesy of Ohio Public Library Information Network, Oplin.org (2001).

Variation within the species: Red maple forms natural hybrids with silver maple (*A. saccharinum*): *Acer* X *freemanii* E. Murray. The hybrids, however, are nearly sterile.

Distribution: Silver maple grows over most of the eastern half of the United States and immediately adjacent Canada, except along major portions of the Gulf and Atlantic coastal plains (Burns and Honkala, 1990). The natural range extends from Maine, New Brunswick, and southern Quebec, west to Minnesota and southeastern South Dakota, eastern Nebraska, Kansas, and Oklahoma, and south to Louisiana, Mississippi, Alabama, northwestern Florida, and central Georgia. It is relatively uncommon in the southern part of its range and absent at higher elevations in the Appalachians. Its abundance in natural habitats has decreased due to conversion of bottomland forests for agriculture but increased in urban areas due to planting. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Silver maple has been introduced to the western United States as an ornamental and to areas of the Black Sea coast of the Soviet Union and various parts of Europe.

Habitat: The species is found on stream banks, flood plains, and lake edges where it grows best on betterdrained, moist alluvial soils (Hosner, 1960) at elevations of 328 to 6,463 feet (Gabriel, 1990). Silver maple can grow on sites where soils are usually saturated most of the growing season. Seedlings have survived 60 days of continuously saturated soils. In the Upper Mississippi River Valley, silver maple trees survived 1 year of constant inundation (due to reservoir formation) but died after the second. It ranges from moderately shade-tolerant (good sites) to intolerant (poor sites). Silver maple dominance is usually in forest types that are pioneer to intermediate in succession and maintained only with management or disturbance, particularly flooding. It will quickly invade abandoned agricultural clearings and other cutover areas. Although it does not compete well with other species in upland sites, silver maple grows vigorously under a wide variety of conditions when planted as an ornamental.

Adaptation

Silver maple is adapted wherever adequate moisture is assured. It cannot generally compete with other species in an upland environment (Gabriel, 2010). As a pioneer species, silver maple is shade intolerant.

Establishment

Silver maple may begin producing seed as early as 11 years old. Viable seed may be produced through selfpollination and large seed crops are produced annually. The seeds are primarily wind dispersed but are sometimes carried by water. Germination usually occurs in the spring shortly after dispersal – the seeds require no pretreatment or stratification (although seedlings require a considerable length of chilling to break dormancy). Natural regeneration by seed is most successful on moist mineral soil or moist litter with considerable organic matter (Weitzman and Hutnik, 1965).

Silver maple can be vegetatively propagated from cuttings and bud grafts and by layering. Seeds are abundant but seedlings are highly variable. Sprouts from the stump or root crown are prolific. The best sprouting occurs from younger trees with stumps less than 12 inches in diameter. Forest plantings should be on a 6 x 8-14 foot spacing depending on weed control equipment. Flood energy breaks off aboveground portions of silver maple – the remaining stems sprout vigorously and may vary in number after such damage.

Management

Despite its usefulness in urban plantings, especially on poor sites, silver maple has significant limitations and is now not recommended. It has been over-planted. It often grows to a larger size than anticipated and the brittle branches are easily broken in winter storms and wind storms. Pruning is often required to develop good form and to remove broken branches and old, multi-trunk trees often require cabling. Relatively soft wood renders silver maple susceptible to a number of wood rotting fungi and it is susceptible to various leaf molds and wilts (e.g., anthracnose, verticillium wilt, leaf spot, and tar spot). Its large, vigorous, shallow-rooted root system can damage sidewalks and driveways, clog drain pipes, and penetrate septic systems and sewer pipes.

Silver maple is susceptible to fire damage because of its thin bark, soft wood, and shallow/surface roots; surface fires kill seedlings and saplings and wound larger trees, exacerbating the tendency to rot (Sullivan, 1994). Prescribed fire is not recommended where silver maple is a desirable species. Silver maple can be managed on good sites for saw timber and on poor or wet sites for pulp or cordwood.

Pests and Potential Problems

Like other maples, silver maple is susceptible to a wide range of insect and disease problems (Dirr, 1977). Gray mold spot is a foliage disease. A host of root and trunk rots attack silver maple. Because of its brittle wood properties, it is highly susceptible to ice damage (Gabriel, 2010).

Environmental Concerns

The brittle nature of its wood limits the longevity of the species where high winds or heavy ice accumulations are common.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Seeds and Plant Production

Seed ripening and dispersal over the range of the species begins in April and ends in June. Silver maples are the largest seed of any maple species in the United States (Schopmeyer, 1974).

Cultivars, Improved and Selected Materials (and area of origin)

At least 58 cultivars have been named, encompassing variation in leaf form and color, branching pattern, and crown shape (Santamour and McArdle, 1982). At least one fruitless (male) strain has been selected. There is enough genetic variability to warrant selection (Wright, 1954).

References

- American Forests. 2010. National Register of Big Trees: *Acer saccharinum* (http://americanforests .org/resources/bigtrees/register.php?detail). [online:cited January 2010].
- Dirr, M.A. 1977. Manual of Woody Landscape Pants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses. 50-52. Stipes Publishing L.L.C. Champaign. IL

Brewster, R. 2010. Silver maple. www.mississauguagolf/images/site [online: accessed January 2010].

- Burns, R.M. and B.H. Honkala. 1990. Silvics of Forest Trees of the United States. Agriculture Handbook No. 271. USDA Forest Service, Washington D.C. 875p.
- Gabriel, W.J. 1990. Acer saccharinum L. Silver maple. Pp. 70-77, In R.M. Burns and B.H. Honkala (tech. coords.). Silvics of North America. Volume 2. Hardwoods. USDA, Forest Service Agric. Handbook 654, Washington, D.

- Gabriel, W.J. 2010. Silver maple. http://www.na.fs.fed.us/pubs/silvics_manual/ volume_2/acer/sacchar... [online: cited October 2010].
- Geyer, W. and W. Walawender 1996. Biomass properties and gasification behavior of young silver maple. Wood & Fiber Sci. 29(1) pp.85-90.
- Geyer, W. 2004. Biomass production in the central Great Plains USA under various coppice regimes Energy and Biomass Jour.30:778-783.
- Hansen, D. 2010. Tree Identification Acer saccharinum - Silver Maple. Minnesota Tree Care Advisors http://www.mntca.org/resources/treeid/tree_dec_opp _map_silver.html [online: accessed 27 October 2010].
- Harlow, W.H., E.S. Harrar, and F.M. White.1979. In *textbook of Dendrology*. Sixth Edition. McGraw-Hill Book Co. 510p.
- Hosner, G.H. 1960. Relative tolerance to complete inundation of fourteen bottom land tree species. Forest Science 6:246-251.

Koelling, M.R. & R.B. Heiligmann (eds.) 1996. North American maple syrup producers manual. Ohio State Univ. Extension Bull. 856. AUG00. <http://www.ag.ohiostate.edu/~onioline/b856/index.html>

- Moreman, D.E. 1998. Native American Ethnobotany. Timber Press. Portland. London. 927pp.
- OPLIN.org. 2001. Silver Maple. Ohio Public Library Information Network. http://www.oplin.org/tree/fact%20pages/maple_silver /maple_silver.html [online: assessed October 2010].

Panshin, A.J. and C. deZeeuw. 1980. *Textbook of wood technology*, 4th Edition. McGraw-Hill

- Series in Forest Resources. McGraw-Hill Book Co., New York. 722p.
- Reichard, T.A. 1976. Spring food habits and feeding behavior of fox squirrels and red squirrels. American Midland Naturalist 96:443A50.
- Schopmeyer, C.S., tech. coord. 1974. Seeds of woody plants in the Unites States. USDA Handbook 450. Washington D.C. 883p.
- Santamour, F.S. and A.J. McArdle. 1982. Check list of cultivated maples. Iv. Acer saccharinum L. Jour. Arborculture 8(10):277-280.
- Stephens, H.A. 1973. Woody Plants of the North Central States. Univ. Kansas, Lawrence. 250p.
- Sullivan, J. 1994. Acer saccharinum. In W.C. Fischer (compiler). The fire effects information system [data base]. USDA, Forest Service, Intermountain Research Station, Intermountain Fire Sciences Laboratory, Missoula, Montana.
- Village of Waterford, Virginia Web Site. 2010. Maple trees. http://www.waterfordvillage.org/naturegarden/trees-maples.htm [online: assessed January 2010].
- Weitzman, S. and R.J. Hutnik. 1965. Silver maple (*Acer saccharinum* L.). In Silvics of forest trees in the

United States. P.63-65. H. A. Fowells, comp. U.S. Department of Agriculture, Agriculture Handbook 271. Washington, DC.

Wright, J.W. 1954. Racial variation and individual tree selection in the Northeast. In Proceedings, First Northeastern Forest Tree Improvement Conference. P. 20-25. Northeastern Forest Experiment Station, Upper Darby, PA.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District at <u>http://www.nrcs.usda.gov/</u> and visit the PLANTS Web site at <u>http://plants.usda.gov/</u> or the Plant Materials Program Web site <u>http://plant-materials.nrcs.usda.gov</u>.

PLANTS is not responsible for the content or availability of other Web sites.

Cedar Street Reconstruction

Public Comments from Open House, November 14, 2024

If you do trees – please do a better job of educating proper care.

Nice job – full sidewalk connectivity – bulbouts – good! Trees – good!

I am in support of the Cedar Street renovation project. I love on Monroe and frequently walk to travers. I never walk on Cedar due to no/few sidewalk & higher speed. I like the green space would like to see trees in the green spaces too

I recommend a 32' paved section (not 24') to provide two 12' travel lanes and one 8' on street parking lane; sidewalk and planting strip along south side only (a sidewalk/planting strip on north side is redundant).

Cedar green ROW & other trees to remain. Rec protection plan be included in contract docs. Boul. Ground cover, consider xeriscape for lawn maintenance long term.

I'm in support of the decision for the street improvements. I would like to see speed limits reduced below those enforced to the east of Division.

Do not want to lose the forest. Would like the sidewalk to meander through. No need for strip. I have existing trees.

Raise crosswalks for safety and traffic calming.

This looks fantastic! I am a local resident with a dog and two children. We walk regularly to the library along Cedar between Lincoln and Division and are very much looking forward to improved pedestrian safety.

I live at XXXX Cedar St right next to the library. I understand you want to compliment the community, but my heart is broken that you are going to cut down my beautiful maple tree in my front yard.

Please evaluate and consider widening the intersection where Monroe Ave meets Cedar Street. Monroe is very narrow and making a right turn onto Monroe Ave going west on Cedar is many times impossible if another car us at the stop sign wanting to turn left onto Cedar from Monrow. If new sidewalks would make it even narrower, it would be a big problem. As it is, it is a problem – making it wider would be ideal.

Please keep sidewalk in plan. Very happy this street is getting fixed. It has been bad for several years. Thank you!

Sidewalk to access the library is essential.

I live at XXXX Cedar St and I'm very concerned on the narrowing of the street. Certain times of day this intersection (Cedar & Division) is very congested with traffic and pedestrians. Along with the library traffic (which is a lot) it gets to be a tight squeeze as it is. Also I think making this intersection a 4 way stop is necessary.

I am in support of the Cedar Street renovation project. I live on Monroe and frequently walk to travers. I never walk on Cedar dur to no/few sidewalks and high speed. I like the green spaces, would like to see trees in the green spaces too.

I recommend that a 32' wide paved section be provided in order to accommodate on-street parking. A 24' wide paved section has been designed which will not accommodate on-street parking. One, 8-foot wide parking lane will at least provide some on-street parking. Note that when a vehicle is currently parked on-street, two vehicles cannot pass. (Cedar Street currently averages about 24 feet in width.) Emergency vehicle access is restricted. I further recommend that this additional paved section width be designed in lieu of the redundant north side sidewalk and planting strip. A south side sidewalk and planting strip is already proposed. A north side sidewalk and planting strip across the street from the proposed south side sidewalk and planting strip is not necessary, is impractical and is not as critical as is a wider paved section to accommodate some on-street parking.



Holly Ellis

From:Marty Taylor <martytaylor1959@gmail.com>Sent:Friday, February 28, 2025 12:00 PMTo:Holly EllisSubject:Re: Cedar Street Reconstruction Project (Our 2/24/25 meeting)

[Caution] This email originated from outside the City of Sandpoint organization. Do not click on links or open attachments unless you recognize the sender and know it's safe. When in doubt contact the IT Department

2/28/25 Friday

Hi Holly.

Just a quick follow up to make sure you received my 2/25/25 email. Please confirm receipt. Thanks.

Marty

On Tue, Feb 25, 2025 at 1:31 PM <<u>martytaylor1959@gmail.com</u>> wrote:

2/25/25

Hi Holly:

I appreciate you taking the time to meet with me 2/24/25 to discuss the draft plans set for the subject reconstruction project.

As I mentioned, occasionally I need to temporarily park my 25' long travel trailer in front of my 1816 Cedar Street house while connected to my 20' long truck while I prep the RV for an upcoming trip. The 45' long truck and trailer combo are only parked in front of the house within the right of way for maybe three nights preparatory to each trip and for maybe two nights upon returning from each trip. I take about 3 trips per years (maybe April, June and October, give or take). I understand that as designed, on-street parking will be prohibited anywhere along

Cedar Street where the paved section is limited to 24' in width. This prohibition would preclude the ability to park my trailer in front of my house. Yikes! I have no other options.

Based on your practical suggestions and my need to temporarily occupy the right of way as noted, it would make sense to position the north curbline an additional 8' north of the alignment shown on the draft plans set and expand the pavement section from 24' to 32' to the north along the south boundary of my lot. You mentioned widening this paved section not just in front of my lot, but perhaps for the entire block between Willow Drive and Lincoln Ave. This makes *more* sense than only widening the paved section in front of my lot. Stormwater can simply be hard piped along this widened paved section as it is presently, and as it is shown on the plans set.

Additionally, you mentioned past cooperative agreements between the city and homeowners regarding driveway reconstruction associated with road projects. On the December 2024 draft plans set that you provided 2/24/25, note how the entire driveway (within the right of way *and* on private property) accessing 1812 Cedar Street is slated for reconstruction right up to the garage face. Also note how my driveway approach is substandard in that it's only 12' wide versus 18' wide. I'd like my driveway to be reconstructed to a width of 18' within the right of way and 10' utility easement (the "construction limits"), *and* extend that 18' wide rebuild all the way to my garage face. That would not only make my driveway approach compliant, but will also serve to remove that angle point in my driveway that is a hinderance to ingress and egress. I realize that I'd be responsible for paying for some of these improvements located on my lot. (As an aside, is the owner of 1812 Cedar Street paying for any of the improvements located on this lot? If not, why not? Just wondering.)

To this end, I'm requesting that the plans set be revised to include:

- 1. A 32' wide paved section adjacent to and in front of my lot (or the entire block as you see fit); and
- 2. An 18' wide driveway from the north right of way boundary to the face of my garage and the construction limits revised accordingly.

Let me know your thoughts, and if I've missed anything. Also, when do you plan on sharing my comments with Project Engineer Dan Tadic? Just wondering when I might be able to pick up a revised plans set.

Thanks again for your valuable input.