



City Council Committee Meeting Agenda

Community Development Committee

This meeting will be conducted by telephone and online,
connection information will be posted on the City Website –
<https://www.stanwoodwa.org>

Thursday January, 4, 2024, at 5:00 PM

1. Stanwood Municipal Code Titles 10, 11, & 14
2. Street and Utility Standards Amendments
3. Year-In-Review

Community Development Committee



**CITY OF STANWOOD
COMMUNITY DEVELOPMENT COMMITTEE
AGENDA STAFF REPORT**

DATE: January 4, 2024
SUBJECT: January CDC Agenda Topics
FROM: Patricia Love, Community Development Director

Stanwood Municipal Code Titles 10, 11 and 14

Included in the next batch of Municipal Code Amendments is:

- Title 10 – Vehicles and Traffic
- Title 11 – Streets and Public Right-of-Ways
- Title 14 – Buildings and Construction

These Titles have been grouped together for review as they have direct code correlations. In general, these titles and chapters have also been reorganized for better flow and readability with similar topics being grouped together. Attached are the scoping memos for each Title which outline the proposed approach to the redrafts. After the approach memos are approved, the Consultant will begin drafting the actual code language for each Title.

Title 10 – Vehicles and Traffic, is the general traffic enforcement code for the City and is generally enforced by the Police and Public Works Departments. As most of Title 10 is significantly outdated, it is recommended to eliminate the majority of this Title and adopt by reference the Washington State Model Traffic Ordinance (MTO).

The State MTO is a set of uniform laws used by local governments to manage the use of roadways and enforce vehicle traffic consistently throughout the state. Per the Washington Administrative Code 308-330 the MTO is not intended to deny any local authority its legislative power, but rather to enhance safe and efficient movement of traffic throughout the state by having current, uniform traffic laws available. Cities may exclude any section of the MTO which they do not want to include in their local traffic ordinance.

Amendments to Title 10 include:

Chapter 10.01 – General Provisions: This chapter will contain provisions applicable to the entire Title, including definitions, enforcement authority, authority to erect signage and severability.

Chapter 10.10 – Rules of the Road: Adopt the Model Traffic Ordinance by reference for rules and regulations applicable to vehicles and traffic.

Chapter 10.20 – Speed Limits: Adopt default speed limits for streets and school zones.

Chapter 10.30 – Bicycles: Create a consolidated chapter dedicated to bicycles, scooters, skateboards and other non-motorized vehicles.

Chapter 10.40 – Parking: Addresses parking of vehicles, towing, impoundment and enforcement.

City Dock Regulations – Move to Title 6 and update to address the motorized and non-motorized boat launch at Hamilton Landing Park.

Title 11 – Streets and Right-of-Ways, is a new Title of the Municipal Code containing city regulations pertaining to the permitting of uses and construction in City right-of-way. These code sections have been de-coupled from the Building Code Title for clarity and better flow of the code.

Chapter 11.02 – General Provisions: Contain provisions applicable to the entire Title such as definitions, administrator of the code, and severability.

Chapter 11.04 – Right-of-Way Uses: Address permitting of allowed uses and activities in the right-of-way that does not include groundbreaking work.

Chapter 11.06 – Construction: Address permitting and regulation of construction work / activities in city right-of-way.

Chapter 11.08 – Maintenance and Obstruction of Right-of-Ways: Establishes both maintenance requirements and standards for uses, debris, and obstructions of city streets.

Chapter 11.10 – Vacation of Streets and Alleys: Readopt existing code with minor code reference updates in new Title.

Chapter 11.12 – Complete Streets: Complete streets regulations prioritizing the needs of all users include pedestrians, bicycles and not just vehicles. The standards are intended to address the mobility needs of all users regardless of age, ability, or income.

Title 14 – Building and Construction, Contain adopted building, fire, and construction codes.

Chapter 14.02 – Building Code: Contains the adopted International Building Codes, including the building, residential, mechanical, plumbing, energy, fuel gas, swimming pool, and maintenance codes.

Chapter 14.06 – Fire Code: Adopt a standalone fire code, de-coupling it from the building code for ease of use and reference.

Chapter 14.08 – Street and Utility Standards: Adopt the City's civil development standards by reference with updates.

Street and Utility Standards Amendments

Title 14 includes the adoption of the City's street and utility standards. These standards are adopted and updated by Council Resolution to keep up with changing engineering standards and city conditions. The Standards are divided into 6 chapters:

- Chapter 1: General Street and Utility Specifications
- Chapter 2: Transportation and Streets
- Chapter 3: Stormwater Management
- Chapter 4: Water
- Chapter 5: Sanitary Sewer
- Chapter 6: Transportation Standard Details Index

City Engineer, Alan Lytton has reviewed the current standards has proposed the following changes.

Section	Proposed Amendments
Chapter 1: General Streets and Utility Specifications	
Modification to Standards	Deleted the introductory section of the general modifications section and renumbered the chapter. The request for modification sections remains in place and applies broadly to the entire set of specifications, not just those initially listed.
Inspections	Numerical hours were added to supplement the notification days listed. Example: It is the responsibility of the developer, contractor, or their agents to notify the City two working days (48 hours) in advance of the commencement of any authorized work.
Road Closures	The following changes were added to the traffic control section regarding road closures: When road closures and detours cannot be avoided the contractor/developer shall notify the Public Works Department. The City requires a detour plan, including closure duration, to be prepared, submitted and approved prior to closing any portion of a City roadway.
Asbuilts	Asbuilt submittal requirements for project close out was changed to delete multiple paper copies and mylars as asbuilts are now required to be submitted electronically.
Chapter 2: Transportation and Streets	
Private Streets	Changed the paved street width serving 4 or fewer lots from 24 feet to 22 feet – essentially 11-foot travel lanes consistent with the road profile cross section.
Road Surfacing Requirements	Updated surfacing depth dimension requirements for roadway construction based on roadway designation type.

Section	Proposed Amendments
Cuts for Newly Paved Streets	Require pavement resurfacing of 50 feet from roadway cuts.
Mailboxes	Requires the postmaster to approve the location of mailboxes.
Chapter 3: Stormwater Management	
Conveyance	Included new language which states that storm drainage systems shall not impact sanitary sewer flows.
Chapter 4: Water	
Water Main Construction General Notes	Minor wordsmithing: Detectable marking tape shall conform to WSDOT/APWA Standard Specifications. In addition, all pipes and services shall be installed with 14 gauge coated copper wire wrapped around the pipe, brought up with three feet of loose wire and tied off at valve body, meter box or as directed by the inspector. All existing asbestos cement pipes shall be handled and disposed of according to State and Federal statutes.
Main Line	New language added regarding fastenings and joint restraint requirements. All fittings for ductile iron pipe shall be ductile iron fittings conforming to AWWA C 153. All shall be cement mortar lined conforming to AWWA C 104. All fittings shall be connected by flanges or mechanical joints. All pipes and fittings shall be fastened using stainless steel hardware. Joint restraint required on all watermain greater than or equal to 15% slope, or if any fill section.
Hydrants	Added a new requirement for the placement of fire hydrants: Where possible install hydrants at the end of dead-end lines.
Valves	New cast iron valve box specifications to carry the load of vehicles: Valve Box. All valve boxes shall be cast iron per WSDOT/APWA Standards. In areas where valve box falls in road shoulder, the ditch and shoulder shall be

Section	Proposed Amendments
	graded before placing asphalt or concrete pad. Valve Box and lid shall be 940 with 940 deep skirt lid with ears. Lid to be labeled "Water".
Service Connection	Material coating change: Service saddle shall be all epoxy coated with stainless steel straps and shall be Romac style 202S or approved equal. All clamps shall have rubber gasket and iron pipe threaded outlets.
Hydrostatic Tests	Meet WSDOT testing specifications: Prior to the acceptance of the work, the installation shall be subjected to a hydrostatic pressure test in accordance with WSDOT/APWA Standards. Mains shall hydrostatically tested using chlorinated water per WSDOT standards. Mains shall be flushed after pressure testing. The main shall be tested between valves. Insofar as possible, no hydrostatic pressure shall be placed against the opposite side of the valve being tested. Test pressure shall be maintained while the entire installation is inspected. The contractor shall provide all necessary equipment and shall perform all work connected with the tests. Tests shall be made after all connections have been made and the roadway section is constructed to subgrade. This is to include any and all connections as shown on the plan. The contractor shall perform the test to assure that the equipment to be used for the test is adequate and in good operating condition and the air in the line has been released before requesting the City to witness the test. Test pressure shall be 225 PSI for 15 minutes.
Disinfection and Flushing	Updated testing times: The sample can only be taken on Mondays, Tuesdays, Wednesdays, and Thursdays until 2:00 PM.
Sanitary Sewer	
Testing	Updated WSDOT specification standards section number.
Connection to Existing System	Added requirement to notify city of plug removal. At connection to existing system, all new sewer connections shall be physically plugged until all tests have been completed and the City approves the removal of the plug. City to receive verification of plug removal.

Section	Proposed Amendments
	Requires developers to provide the city 72 hours notification prior to tapping into the sewer line versus 48 hours.
Grease Traps and Substance Interceptors	New standard requiring cleaning of grease traps per original equipment manufacturers specifications: Traps and interceptors shall be cleaned according to OEM requirements.
Design Standards for Lift Standards	Updated standards to lift standards: The design of any lift station shall conform to City standards, Department of Ecology's "Criteria of Sewage Works Design" and applicable standards as set forth herein. In addition, the plans shall include the following: 1. The design of the lift station, including layout, building, equipment, and control systems shall be equal to the City's existing Copper Station Lift Station unless otherwise approved by the Public Works Director. 2. A lift station emergency bypass connection shall be provided per Standard Details. 3. Lift stations shall be designed for peak design flow with the largest pump out of service 4. Lift stations shall be designed for a 20-year design life. 5. All existing and future lift stations shall be constructed to comply with the following minimum standards. a. All structures will be non-combustible, where practical b. All buildings will have adequate heating, cooling, ventilation, insulation, lighting, and workspaces necessary for on-site operation and repair c. Sites shall be fenced d. Each station shall be equipped with a flow meter and all necessary instrumentation to assist personnel in operating and troubleshooting e. Emergency power capability shall be provided at all lift stations f. Each station shall be equipped with a bypass to allow manual control g. Each station shall address corrosion control h. Each station shall include an intrusion alarm system

Section	Proposed Amendments
	6. Pumps shall be operated automatically, with flexibility in pump start/stop settings 7. Pumps shall be submersible Wemco-Hidrostal Prerostal pre-rotation pumping system unless otherwise approved by the Public Works director 8. Stations shall be operated with the provision for at least two methods of control to minimize system vulnerability 9. An overall site illustration of the lift station showing the location of all components including elevations. 10. Service size, voltage and enclosure type and location in relation to the pump station. 11. A list of specific materials used including quantity description and manufacturer name. 12. A schematic and line diagram of the service and motor control center and lift station. 13. The electrical shall be designed to meet state and local electrical code requirements. 14. The plans shall show all required telemetry installation with schematics. 15. An operation and maintenance manual from the lift station manufacturer shall be supplied. 16. City shall receive at minimum 4 hours of training on new lift station operations.
Design Specification Sheets	
Updated Spec Sheets	D-01 – Changed fence height from 10’ to 6’ T-01 – Added Labels to show minor/major intersections T-04 – Added note 3 and 4 T-05 – Added note 3 and 4 T-06 – Added general notes 1 and 2 T-10 – Added cross walk detail T-16 – Changed max height from 6’ – 4’ T-22 New Spec W-01 – Changed setter to a re-setter, added dimensions W-02 New Spec W-03 New Spec W-04 – Changed manholes to aluminum access hatch W-10 – Added notes showing racer wire routing outside riser W-18 New Spec Updated Fire Turn Around Options

Section	Proposed Amendments
	Added Community Transit Bus Shelter Pad

Year in Review

At the beginning of each year, staff presents to the Community Development Committee a year in review summary of the work accomplished and a preview of the upcoming work plan. The Community Development Committee work plan is established based on state mandated requirements, the preceding years Docket items, and city priorities.

The Community Development Committee is an advisory commission to the City Council. Their responsibilities include making recommendations to the City Council on Comprehensive Plan Amendments and Zoning Regulations / Municipal Code Amendments. In addition, the Community Development Committee provides a forum for public review of development projects outside of the formal public hearing process.

During 2023 the Community Development Departments workload included:

Parks:

- Conducted a parks survey for the Parks Plan Update
- Drafted the Parks Plan update
- Initiated the design of the downtown park on 84th Avenue.

Long Range Planning:

- Staffed the Planning Commission
- Updated the Park and Traffic Impact Fees
- Adopted the following amendments to the Stanwood Municipal Code:
 - Title 1 – General Regulations
 - Title 2 – Personnel
 - Title 3 – Revenue and Finance
 - Title 4 – Administration
 - Title 5 – Business Licenses and Regulations
 - Title 6 – Parks and Public Spaces
 - Title 7 – Noise Ordinance Portion only
 - Title 9 – Public Peace, Morals and Safety
 - Title 13 – Civil Enforcement
- Drafted Comprehensive Plan Elements as part of the 2024 Update
 - Land Use, Economic Development, Parks, Utilities, Transportation, Natural Resources, and Shorelines
- Adopted the Housing Action Plan
- Hosted 4 booth days at the summer farmer's market

Economic Development/City Beautification:

- Staffed the Economic Development Board
- Implemented the new Storefront Improvement Program
- Processed 5 Storefront Improvement Programs agreements
- Implemented the 88th Avenue Arch banner project

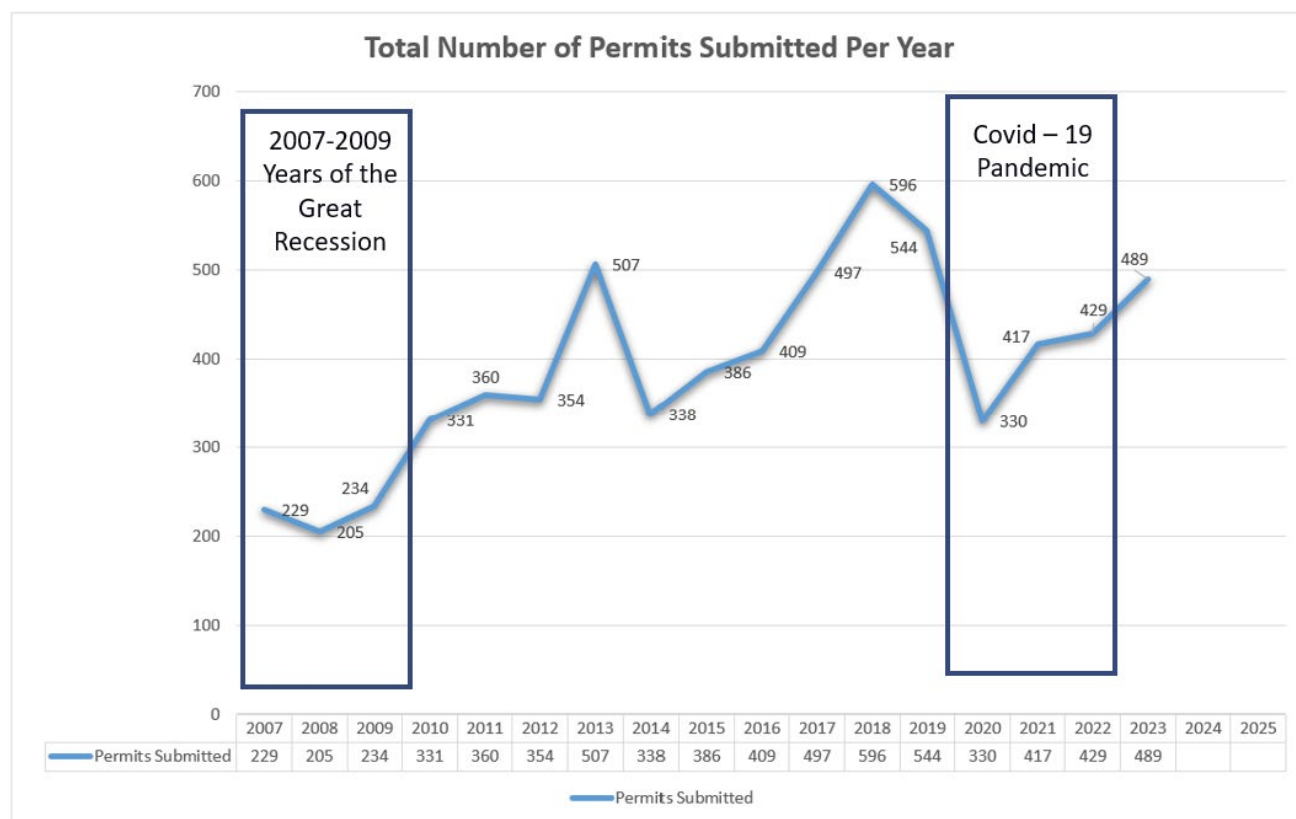
- Finalized the plans and constructed the 92nd Avenue Intersection improvement project
- Began the design concepts for the east end traffic calming projects
- Staffed, processed, and / or participated in approximately 23 special events including: summer concerts series, movies in the park, national night out, touch-a-truck, parades, car show, ghouls night out, light up your holidays, glass quest, 5-K runs, the historic site tour and the Camano arts tour.
- Supported business ribbon cutting events

Current Planning:

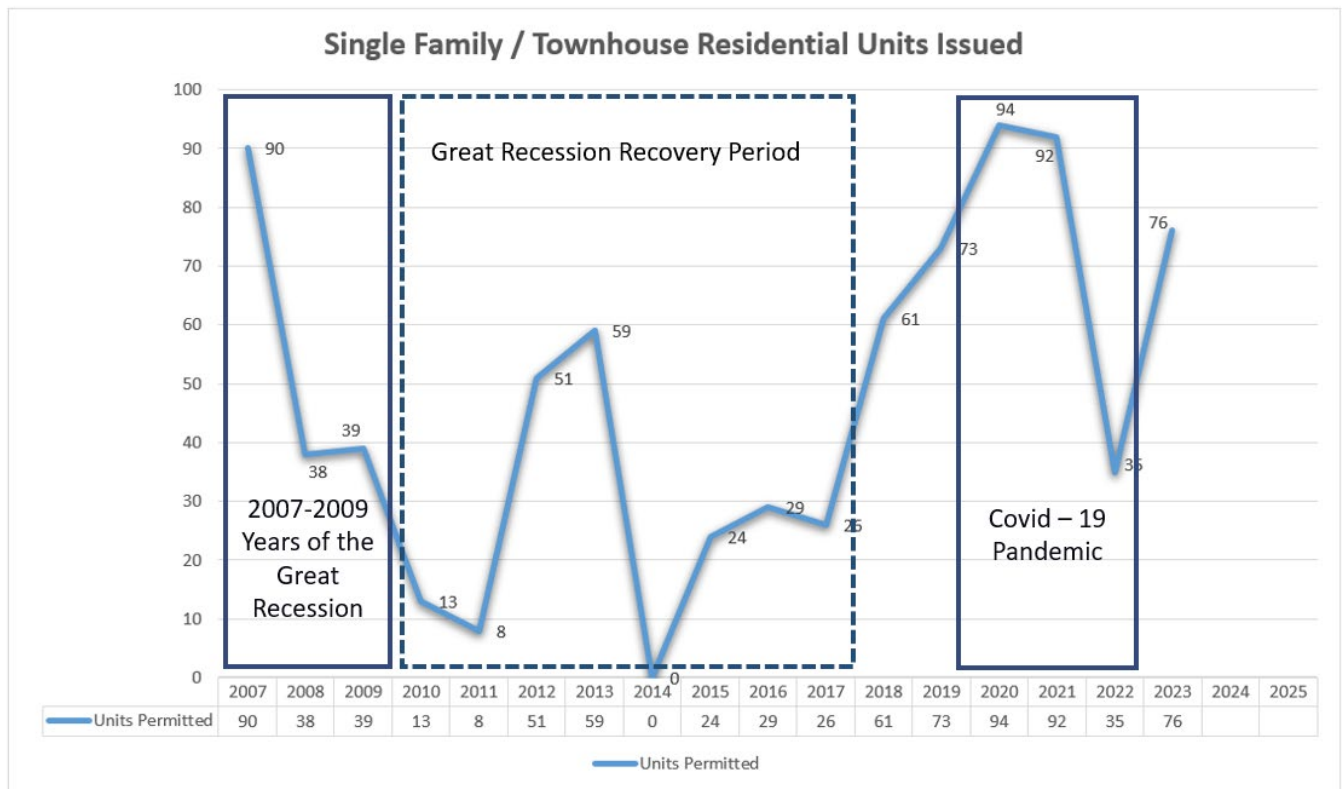
- Processed two preliminary plat applications, with one reaching receiving plat approval
- Processed the Country Store street vacation application
- Issued the Cedarside Development Agreement SEPA decision and held the review hearing with the Hearing Examiner
- The City issued 66 new single-family homes, 4 accessory dwelling units, and 10 townhouses this year.

Permit Activity Review:

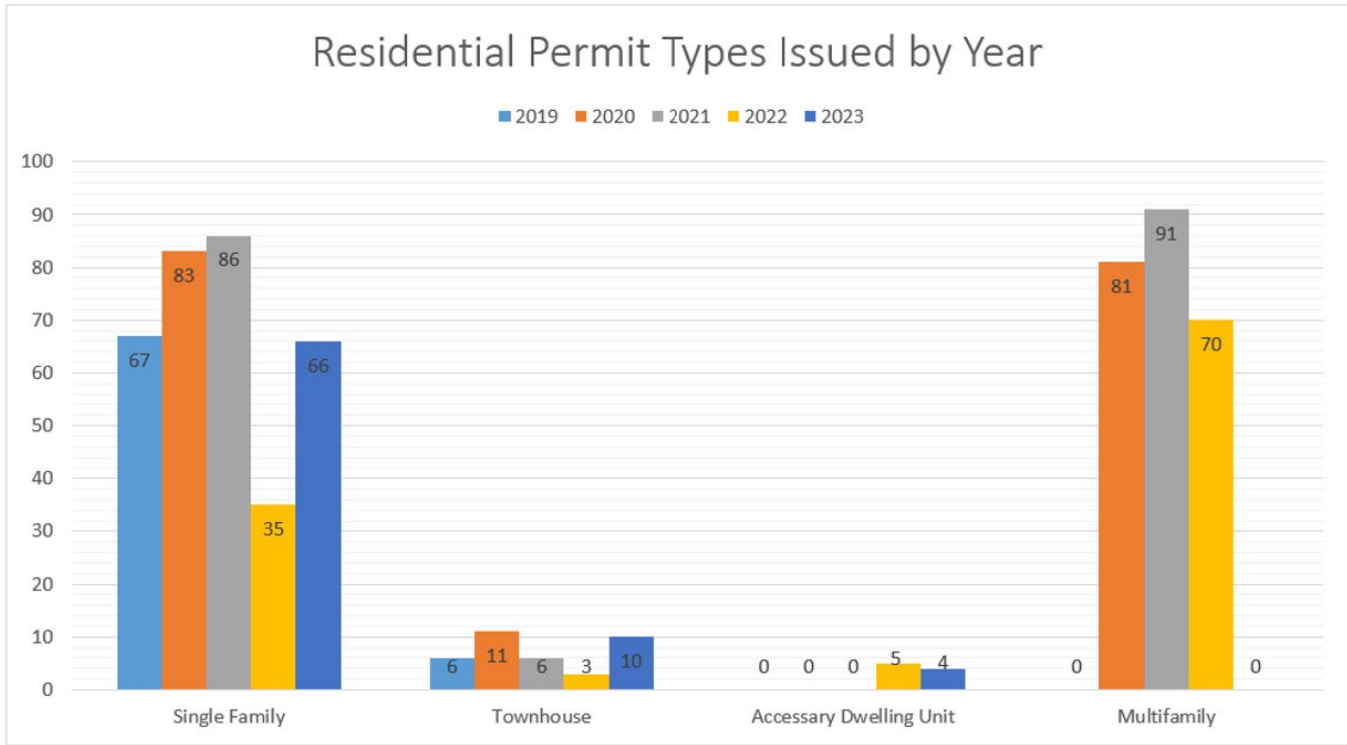
The number of permits submitted per year reflects the Community Development Departments workload: each permit submitted is processed and reviewed by city planners, the building official and / or the City engineering team. Coming out of the pandemic, the city has seen a consistent increase in permit activity over the past three years.



The City also tracks the number of residential units issued per year. Submitted and issued permits are not the same number, as several permits cross over years between when they are submitted and when they are issued. In 2022 there was a dip in the number of residential units built due to a lack of platted lots. As expected, 2023 saw an increase in residential permitting with the plat of Chandlers Reserve being finalized. 2024 should see a similar number of residential units built as there are approximately 76 lots currently under construction in approved plats. There is also one large multi-family / mixed use application in the permitting stage.



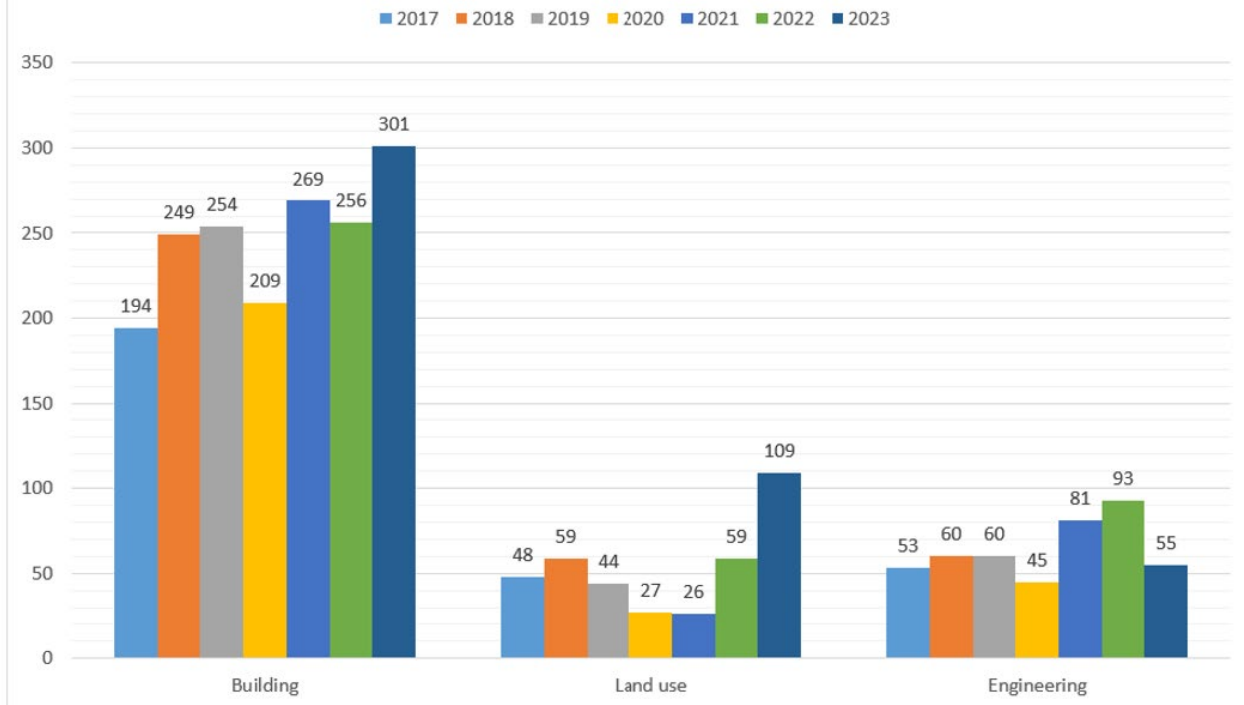
Residential units by type are another measurement of the City’s growth and is used to track if the City is growing per the Comprehensive Plan growth targets. The following table shows the number of residential units by type issued over the last four years.



The following table represents the types of permits submitted by year.

- Building Permits:** the city receives around 247 building permits per year – based on a 7-year average. 2023 had the highest number of building permits submitted within this recording period. The most common building permit type continues to fall within the following four categories: mechanical permits, single family residential permits, plumbing permits and remodels. Even with the increase in the number of building permits this year, the review time has remained about two weeks per permit.
- Land Use Permits:** the city receives around 44 land use permits per year: 2023 doubled that amount. Floodplain permits continue to be the most common requested land use permit.
- Engineering Permits:** the City receives on average 63 engineering permits per year; right-of-way permits are the most common requested engineering permit. 2023 was slightly under the average.

Permit Activity Comparison by Year



**CITY OF STANWOOD
WASHINGTON**

ORDINANCE NO. ____

**AN ORDINANCE OF THE CITY OF STANWOOD, WASHINGTON, AMENDING
STANWOOD MUNICIPAL CODE (SMC) TITLE 10, VEHICLES AND TRAFFIC, AND
ESTABLISHING SEVERABILITY AND AN EFFECTIVE DATE.**

WHEREAS, the City of Stanwood has begun a process to comprehensively update its municipal code to conform to current law and practice; and

WHEREAS, the purpose of this code amendment is to eliminate conflicts, improve clarity and overall function of the municipal code, and reflect current city and best practices; and

WHEREAS, Title 10 adopts the City's regulations for vehicles and traffic; and

WHEREAS, the amendments were reviewed for consistency with the state model ordinance and city's review procedures; and

WHEREAS, the amendments update the city's rules regarding vehicles and traffic and the city dock; and

WHEREAS, the City of Stanwood SEPA Responsible Official has reviewed the proposed amendments to the Stanwood Municipal Code, determined that the amendments are categorically exempt from SEPA, and memorialized those conclusions under file number ____; and

WHEREAS, the Stanwood Advisory Group reviewed the draft ordinance at their ____ meeting, and has recommended that the City Council adopt the ordinance as presented; and

WHEREAS, the Stanwood Planning Commission reviewed the draft ordinance at their ____ meeting and has recommended that the City Council adopt the ordinance as presented; and

WHEREAS, the City Council held a public meeting and first reading of the draft code amendment on ____, a second reading on ____, and accepted public comment; and

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF STANWOOD,
WASHINGTON, DOES ORDAIN AS FOLLOWS:**

Section 1. Stanwood Municipal Code Title 10, Vehicles and Traffic, is repealed in its entirety and replaced with the new Title 10 provided in Exhibit "A" attached to this ordinance and incorporated herein by reference as if set forth in full.

Section 2. Stanwood Municipal Code Chapter 6.80, City Docks, is adopted to read as provided in Exhibit "B" attached to this ordinance and incorporated herein by reference as if set forth in full.

Section 3. Severability. The various parts, sections and clauses of this ordinance are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

Section 4. Authority to Make Necessary Corrections. The City Clerk and the codifiers of this Ordinance are authorized to make necessary corrections to this Ordinance including, but not limited to, the correction of scrivener's clerical errors, references, ordinance numbers, section/subsection numbers and any references thereto.

Section 5. Effective Date. This Ordinance shall take effect five days after its passage and publication as required by law.

PASSED and APPROVED this ____ day of _____, 2024.

CITY OF STANWOOD:

Sid Roberts, Mayor

Attest:

Lisa Sokolik, City Clerk

Approved as to Form:

Nikki Thompson, City Attorney

Date of Publication: _____

Effective Date: _____

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Title 10 Vehicles and Traffic

i This is a heavy rewrite and complete reorganization of existing SMC Title 10. This draft proposes Stanwood adopt by reference [WAC Chapter 308-330](#), the Model Traffic Ordinance (the "MTO"), and eliminate most of the customized chapters in this title.

i The following existing code chapters appear to be sufficiently covered by the MTO, and therefore are not included in this rewrite of Title 10:

- Chapter 10.24 Traffic-Control Devices (covered by WAC 308-330-800 incorporating by referencing multiple provisions of state law); not addressed is “play streets,” which we and Stanwood's city attorney recommend excluding
- Chapter 10.52 Processions (covered by WAC 308-330-466-472)
- Chapter 10.16 Obedience (covered by WAC 308-330-220)
- Chapter 10.54 DUI and 10.56 Intoxication Test (covered by WAC 308-330-425, incorporating by reference RCW 46.61.502 et seq)
- Chapter 10.64 Pedestrians (mostly covered by WAC 308-330-415 incorporating RCW 46.61.230 et seq.)
- Chapter 10.84 Toy Vehicles
- Chapter 10.94 All-Terrain vehicles (covered by WAC 308-330-197 incorporating RCW 46.09) except existing SMC 10.94.030

i We originally proposed a dedicated chapter for bicycling, but because the city declined mandatory helmets and licensing, we now propose to simply rely on the bicycling rules in WAC 308-330-545 through 560, which are part of the MTO.

i Note that the MTO incorporates by reference [RCW 46.61.725](#) regulating and allowing for neighborhood electric vehicles. Existing SMC 10.84 regulating toy vehicles is not included in this draft; instead we rely on the MTO rules.

Chapter 10.01 General Provisions

i This is a new chapter.

10.01.010 Purpose

The purpose of this title is to regulate the conduct of vehicles and other users on city streets and parking lots.

10.01.020 Administration

(1) The Director of Public Works is principally authorized to administer this title.

(2) The police department is authorized to enforce this title.

10.01.030 Definitions

The definitions in RCW Chapter 46.04 are incorporated by reference and apply to terms used in this title.

10.01.060 Savings

Nothing contained in this title may be construed as abating any action now pending under or by virtue of any ordinance of the city herein superseded; or as discontinuing, abating, modifying or altering any penalty accrued or to accrue, or as affecting the liability of any person, firm or corporation, or as waiving any right of the city under any ordinance or provision thereof in force at the time of passage of the ordinance codified in this title.

10.01.070 Severability

The various chapters, sections, and clauses of the ordinances codified in this title are hereby declared to be severable. If any part, sentence, paragraph, section, or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the title must not be affected.

Chapter 10.10 Rules of the Road

10.10.010 Applicability

(1) This chapter applies to all vehicles used on any public street or highway within the City of Stanwood.

i This section is based on Port Townsend Municipal Code 10.24.020.

! City feedback was uncertain about inclusion of this provision.

(2) This chapter applies to all parking lots open to the public, including those owned or controlled by the City of Stanwood, other municipal corporations, and private persons or entities.

i Next line implements existing SMC 10.48.

(3) This chapter does not apply to an authorized emergency vehicle when responding to an emergency or when in the pursuit of an actual or suspected violator of the law so long as the driver does not endanger life or property.

10.10.020 Adoption by reference

(1) [WAC Chapter 308-330](#), Washington Model Traffic Ordinance (the "MTO"), is hereby adopted by reference, except as described below.

(a) Deletions. The following sections of the MTO are not adopted:

- (i) WAC 308-330-210 through 308-330-245, relating to a traffic division of the police department;
- (ii) WAC 308-330-275, creating a Traffic Safety Commission;
- (iii) WAC 308-330-500 through 540 related to bicycle licensing.

(b) Amendments. The following sections of the MTO are amended as follows:

- (i) Reserved.

(2) [WAC Chapter 173-62](#), Motor Vehicle Noise Performance Standards, is hereby adopted by reference.

10.10.030 Scooters

 Implements existing SMC 10.90 except for the seizure provisions.

- (1) Per RCW [46.61.715](#), a motorized foot scooter may be operated on city streets except:
 - (a) on city streets with a speed limit greater than 25 mph;
 - (b) by a person less than 16 years old;
 - (c) on city-owned property, city parks, upon designated walkways, pathways, sidewalks, or any other place where motorized vehicles are expressly prohibited;
 - (d) anytime during one half-hour after sunset to one half-hour before sunrise without reflectors of a type approved by the state patrol;
 - (e) with a passenger.
- (2) A motorized foot scooter must be equipped so that the drive motor is engaged through a switch, lever, or other mechanism that, when released, will cause the drive motor to disengage or cease to function.
- (3) A motorized foot scooter may not be operated in a negligent manner upon any city street. For the purpose of this section, “to operate in a negligent manner” means to operate a motorized foot scooter in such a manner as to endanger or be likely to endanger any person or property or to obstruct, hinder or impede the lawful course of travel of any motor vehicle or the lawful use by any pedestrian of public streets, sidewalks, alley, parking areas, trails or public parks within the city of Stanwood.
- (4) It is unlawful for any parent, guardian, or other person having control or custody of a minor child to allow said minor to operate a motorized foot scooter in violation of this section.
- (5) A violation of this section is a class 3 civil infraction.

10.10.035 Toy Vehicles

 Implements existing SMC 10.20.010 and supplants existing SMC chapter 10.84.

- (1) No person upon roller skates, or riding in or by means of any coaster, toy vehicle, or similar device, may travel upon any street except while crossing the street in a crosswalk and, when so crossing, such person must be granted all of the rights and shall be subject to all of the duties applicable to pedestrians.
- (2) A violation of this section is a class 4 civil infraction.

10.10.040 Compression Brakes

 This section is based on Port Townsend Municipal Code Chapter 10.30.

- (1) Except for emergency vehicles, no driver may use motor vehicle brakes within city limits that are in any way activated or operated by the compression of the engine of the motor vehicle or any unit or part thereof unless the brakes are muffled.
- (2) The public works director is authorized and directed to post appropriate signage consistent with the provisions of this chapter.
- (3) A violation of this section is a class 2 civil infraction.

10.10.060 Excessive Idling

i This section is based on Port Townsend Municipal Code Chapter 10.08.

- (1) This section applies to all public property and all private property that is open to the general public.
- (2) No driver, while operating a vehicle within city limits, may cause or permit a vehicle's internal combustion engine to idle for more than three minutes, except for the following kinds of idling:
 - (a) Idling while stopped:
 - (i) For an official traffic control device;
 - (ii) For an official traffic control signal;
 - (iii) At the direction of a police officer.
 - (b) Idling as needed for the health or safety of a driver or passenger, including police K-9 or other service animals or when the temperature is at or below 30 degrees Fahrenheit or at or above 85 degrees Fahrenheit.
 - (c) Idling as needed for authorized emergency or law enforcement vehicles to operate equipment.
 - (d) Idling as needed for repair, maintenance, or inspection of the vehicle.
 - (e) Idling as needed for the period recommended by the manufacturer for efficient operations of a turbocharged heavy-duty vehicle. This includes building air pressure in air brake systems, among other requirements.
 - (f) Idling as needed to operate auxiliary equipment for which the vehicle was primarily designed or equipped, such as: emergency equipment, refrigeration unit, lift, crane, pump, drill, hoist, or ready mixed equipment, except a heater or air conditioner.
- (3) A violation of this section is a class 4 civil infraction.

10.10.080 One-Way Traffic

- (1) The street segments listed in Table 10.10.080-1 are designated one-way streets and traffic is permitted only in the direction specified.
- (2) Consistent with RCW 46.61.135, it is unlawful to drive in a direction contrary to that specified in Table 10.10.080-1.

i Staff please verify these segments are correct.

Table 10.10.080-1

Street	Segment	Direction
Augusta St	Between SR-532 and 2870th St NW	Southbound
270th St NW	Between 90 ft west of 99th Ave NW to a point 75 ft west	Westbound
Alley between 270th St NW and 271st St NW	Between Florence Rd and 88th Ave NW	Westbound

10.10.100 Truck Routes

 Does the City want to designate truck routes, e.g., Arlington MC 12.44 or Anacortes MC 10.24?

Chapter 10.20 Speed Limits

 Does the City want to identify school zones in this chapter, per RCW 46.61.440?

10.20.020 Generally

 Implements existing SMC 10.28.010.

- (1) The maximum speeds declared in this chapter have been determined upon the basis of engineering and traffic investigation.
- (2) It is unlawful for any person to drive a vehicle at a speed in excess of any speed declared in this chapter.

10.20.040 Default Speed Limits

 Note proposed new default speed limit in alleys.

- (1) Except as provided otherwise, the speed limit within the City of Stanwood is 25 mph, as established by RCW 46.61.400.
- (2) The speed limit in city alleys is 10 mph.

10.20.050 Increased Speed Limits on City Streets

Reserved.

10.20.060 Decreased Speed Limits on City Streets

 Implements existing SMC 10.28.040.

The speed limits for the following street segments are decreased to those shown in Table 10.20.060-1.

Table 10.20.060-1

Street	Segment	Speed Limit
272nd St NW (Husby St)	Between 78th Ave NW and 72nd Street NW (Lindstrom Rd)	20 mph
285th St	Between 68th Ave NW and 71st Drive NW	20 mph

10.20.080 Decreased Speed Limits on State Highways

i Implements existing SMC 10.28.020.

! Note changes from speed limits in existing code based on PWD comments.

The speed limits for the following street segments of state highways are decreased to those shown in Table 10.20.080-1.

Table 10.20.080-1

Street	Segment	Speed Limit
SR-532	Between MP 3.80 (.06 mi. west Jct. 104th Drive NW) and MP 4.25 (Jct. 98th Drive NW/99th Ave NW)	35
SR-532	Between MP 4.25 (Jct. 98th Drive NW/99th Avenue NW) to MP 5.91 (.01 mi. east Jct. 72nd Avenue NW)	45
SR-530	Between the south city limits to the intersection with SR 532	35
SR-530	Between 85th Dr NW and the north city limits	30

Chapter 10.40 Parking

Article I. General Provisions

10.40.110 Short Title

This chapter may be known and cited as the “City of Stanwood Parking Code.”

10.40.120 Applicability

- (1) This chapter applies to public streets and highways, city rights-of-way, and city-owned parks and parking lots within the City of Stanwood.
- (2) This chapter does not apply to an authorized emergency vehicle when responding to an emergency or when in the pursuit of an actual or suspected violator of the law.

10.40.130 Definitions

- (1) The following additional definitions apply to the terms used in this chapter:

"Bike lane" means the area within any public right-of-way specially designated for the use of bicycles and signed or marked as such, excluding travel lanes marked with sharrows.

"Fire lane" means the area within any public right-of-way, easement, or private property designated for fire trucks and/or emergency vehicles to use, place emergency equipment upon, travel upon, or park, which includes any curb painted red or any other area marked for that purpose.

“Junk vehicle” has the meaning found in RCW 46.55.010.

“Landowner” includes a legal owner of private property, a person with possession or control of private property, or a public official having jurisdiction over public property.

“Passenger car” has the meaning found in RCW Chapter 46.04 and includes pickup trucks.

"Right-of-way" means the area of real property, in which the city holds a property interest for public travel and other street and utility purposes, including that portion of the roadway ordinarily used for vehicular travel, the parking strip, the planting strip, sidewalk, and other unimproved portions.

"Street block" means the section of one side of a street that lies between two intersecting streets or between an intersecting street and the street end.

"Street segment" means a portion of a street bounded by two points.

"Street" has the meaning of "city street" found in RCW Chapter 46.04.

"Vehicle" has the meaning found in RCW Chapter 46.04 and includes trailers, vehicle hulks, and portable moving and storage containers.

"Vehicle hulk" means the remnant or remains of a motor vehicle which is inoperative and cannot be made mechanically operative without the addition of vital parts or mechanisms and the application of a substantial amount of labor to effect repairs.

10.40.140 Administration

i Based on existing SMC 10.46.110.

- (1) The Director of Public Works is authorized to administer parking regulations and establish time, duration, and direction parking restrictions on street segments.
 - (a) It is the responsibility of the Director of Public Works to provide signage or curb painting in accordance with the parking limits as described in this chapter, except for the general prohibitions described in SMC 10.40.310.
 - (b) New signage erected after January 1, 2024, must include the relevant Stanwood Municipal Code citation (not the ordinance number) governing the parking restriction, if any.
- (2) The Police Department is authorized to enforce parking regulations.

10.40.160 Owner Liability

The registered owner of any vehicle or trailer parked contrary to the provisions of this chapter may be deemed to have allowed such vehicle or trailer to be parked in violation hereof.

10.40.190 Severability.

If any section, subsection, sentence, clause, phrase, or word of this chapter is held invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality thereof may not affect the validity or constitutionality of any other section, subsection, sentence, clause, phrase, or word of this chapter.

Article II. Parking Regulations

10.40.200 Parking Must Conform to Official Signs

It is unlawful to park in a manner inconsistent with the restrictions on official parking signs.

10.40.220 Methods of Parking

i Implements existing SMC 10.46.050 and 055.

- (1) Parallel parking.

- (a) Except as otherwise specified in this chapter or unless otherwise permitted by duly erected traffic control signs or markings, all parking on streets must be what is known as “parallel parking.”
- (b) In any place where parallel parking is permitted or required, every vehicle stopped or parked upon a roadway where there is an adjacent curb or edge of abutting parking strip must be so stopped or parked with the right hand wheels of such vehicle parallel to and within 12 inches of the right hand curb or edge of abutting parking strip.

(2) Angle parking.

i Implements existing SMC 10.46.065.

- (a) Where designated by angle striping or signage, parking must be by “diagonal parking,” with the right front wheel of the vehicles within twelve inches of the curb or edge of parking strip and at an angle of 30 degrees with said curb or edge or parking strip.
- (b) In any place where angle parking is required, it is unlawful to angle park a vehicle that exceeds 20 feet in length.

10.40.240 General Time Limit

i Implements existing SMC 10.46.090.

- (1) It is unlawful to park for a continuous period in excess of 72 hours on any street block.

! The following line is a new provision that provides some exception for one's own vehicle in front of one's own house. Does the City want to include it?

- (2) Exception. A vehicle is not limited by subsection (1) if the vehicle:
- (a) is a passenger car;
 - (b) is not a junk vehicle;
 - (c) is operable in its current state;
 - (d) has a current state registration and license plate tabs; and
 - (e) has a registered owner corresponding to an abutting property owner or resident.

10.40.260 General Prohibitions

i This section mostly based on existing SMC 10.46.100.

- (1) Adoption by reference. The following provisions of the Revised Code of Washington as presently constituted or hereinafter amended are adopted by reference:
- (a) RCW 46.19.050, regulating use of parking spaces for persons with disabilities.
 - (b) RCW 46.61.570, prohibiting parking in specified places.
 - (c) RCW 46.61.575, regulating motorcycle parking.
 - (d) RCW 46.61.581, regulating parking spaces for persons with disabilities.
 - (e) RCW 46.08.185, regulating parking in electric vehicle charging spaces.
- (2) It is unlawful to park:

- (a) in any place marked with official signs as no-parking;
- (b) in any alley, except that trucks or properly marked commercial vehicles may park in an alley for a time not exceeding 15 minutes, as may be necessary for the expeditious loading or unloading of such vehicles or the delivery or pickup of articles or materials;
- (c) in any loading zone except for a time not exceeding 15 minutes, as may be necessary for the expeditious loading or unloading of such vehicle or the delivery or pickup of articles or materials or passengers;
- (d) in the travel lane of a street;
- (e) in a bike lane;
- (f) in a fire lane or exit;
- (g) within any cul-de-sac;
- (h) on any sidewalk;
- (i) in the area between a sidewalk and the curb of a street;

i Next line based on existing SMC 10.46.095.

- (j) alongside of or in front of any portion of any private driveway or curb cut or sidewalk that has been sloped from the property line down to the level of the street;
- (k) in such a manner as to obstruct a 5-ft area on either side of a street-accessed mailbox between the hours of 8:00 a.m. and 6:00 p.m., except Sundays and holidays;
- (l) on any bridge, overpass, underpass, trestle or approaches thereto;
- (m) within 30 feet of the nearest rail of a railroad crossing;
- (n) on any portion of a street or right-of-way for use as a place of abode;

i Next line based on existing SMC 10.46.090(2).

- (o) for the purpose of storage, display, sale or abandonment of any type vehicle, including farm vehicles.
- (3) It is unlawful to disassemble, construct, reconstruct, repair, or service vehicles of any kind upon any street, except for emergency service which may not last more than two hours and may not interfere with or impede the flow of traffic.

10.40.280 Oversize Vehicle Parking

! Set time limit for oversize vehicles to 48 hours per advisory group comments.

- (1) It is unlawful to park a vehicle, together with any fixtures or accessories affixed thereto, that measures 8 feet or more in width, 7.5 feet or more in height, or 22 feet or more in length on any city street for more than 48 hours.
- (2) Exception. The following vehicles are not subject to the time limitation in subsection (1), but continue to be subject to all other parking regulations in this chapter:
 - (a) A vehicle that is associated with an adjacent delivery or with machinery or equipment associated with adjacent construction.
 - (b) A vehicle that has obtained a temporary permit from the Director of Public Works.

10.40.290 Parking in City Parks

It is unlawful to park a vehicle in the parking lot for any city park outside of the officially posted park hours.

10.40.295 Parking in City Parking Lots

- (1) The Director of Public Works may establish time limits, hours of allowed parking, and other restrictions in city-owned parking lots.
- (2) It is unlawful to park in any city-owned parking lot in a manner inconsistent with posted regulations.

Article III. Permit Parking Areas

10.40.300 Residential Permit Parking Areas

i Consolidated inconsistent use of "permit parking" and "restricted parking area " to "permit parking area."

! Do you want to remove one of these permit areas? See PW comment in list of potential amendments.

- (1) Established. The street segments in Table 10.40.300-1 are hereby established as residential permit parking areas.

Table 10.40.300-1

Street	Segment	Side
76th Drive NW	Between 272nd St and 276th St	Both
273rd St NW	Between 76th Drive NW and 78th Ave NW	Both
78th Ave NW	Between 273rd St NW and 276th St Nw	Both

- (2) Restrictions.
 - (a) It is unlawful to park in a permit parking area Monday through Friday between the hours of 7:00 a.m. and 5:00 p.m., without a valid permit, issued pursuant to this section, displayed as follows so as to be legible from the outside of the vehicle:
 - (i) hung over the rear-view mirror with the face of the permit visible through the windshield; or
 - (ii) placed on the vehicle dashboard with the face of the permit visible through the windshield.
 - (b) Exceptions. The following are not subject to the restriction in this subsection:

i Added Christmas Eve to this list because it's also a day lots of people get together to park illegally.

- (i) Vehicles parked during the following holidays: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving, Christmas Eve, and Christmas Day.
- (ii) A vehicle authorized by RCW 46.16.381 for special parking privileges for disabled persons.
- (iii) A service vehicle not owned by a resident of the permit parking area, with conspicuous identification of the service it provides permanently affixed to the vehicle, that is used for the purpose of providing short-term repair, construction, landscaping services, delivery, utility, refuse, health commodities, life support or emergency service for a residence within the permit parking area. Personal vehicles used by domestic employees, such as housekeepers or childcare providers, are not considered service vehicles.

- (c) Parking with a permit is still subject to all other parking rules in this chapter.
- (d) The Director of Public Works must post appropriate signs in each permit parking area to give notice of the parking restrictions imposed by this section.

(3) Types of permits.

(a) Resident parking permit.

- (i) A parking permit may be issued only for a specific address and is nontransferable to any vehicle or any individual who is not a resident of the address for which the permit was issued within the permit parking area.
- (ii) One permit may be issued for each vehicle that meets the criteria set forth above, up to a maximum of three permits per residence.
- (iii) A permit is valid for one calendar year or as otherwise established by the city clerk or upon termination of residency in the permit parking area, whichever occurs first.

 Staff please verify there is no distinction between "guest" and "temporary" parking permits in existing practice. Please verify you wish to retain the 15-day limitation.

(b) Guest parking permit.

- (i) A resident within the permit parking area may apply for a temporary guest parking permit in conjunction with a standard parking permit.
- (ii) A guest parking permit is transferable among vehicles of guests of residents of the permit parking area and must be displayed as required by this section.
- (iii) A guest permit expires 15 days after issuance.

(4) Issuance of permits.

(a) Application and initial issuance. The city clerk may issue a permit or guest permit upon receipt of a complete and valid application consistent with this subsection.

- (i) The applicant for a parking permit must submit a complete application to the City Clerk on forms provided by the City.
- (ii) The applicant must sign the application attesting to the accuracy of the information provided and acknowledging the terms and conditions of permit privileges.
- (iii) The applicant must provide one of the following at the time of application as evidence of residency within the permit parking area:
 - (A) a registration certificate for a vehicle to be parked in the restricted parking area showing the name of the applicant and the applicant's address within the permit parking area; or
 - (B) a lease agreement, rental agreement or current utility bill establishing applicant's residency in the permit parking area; or
 - (C) government-issued picture identification, such as a driver's license.
- (iv) The applicant must pay any fee for permit parking as established in the City's fee schedule, including any annual fee or reissuance fee. All permit application fees are nonrefundable.

(b) Reissuance. An eligible resident of the permit parking area may request reissuance of a permit that has been lost, damaged, or stolen. The resident may be required to sign a declaration regarding the circumstances leading to the reissuance request and stating that, when possible, the original permit has been removed or otherwise destroyed.

- (c) Expiration and Renewal. Permits may be renewed upon expiration. Permit fees may not be prorated.
- (d) Revocation. The city clerk may revoke a parking permit for any of the following reasons:
 - (i) any material misrepresentation on a permit application;
 - (ii) any unauthorized transfer of a permit to any unauthorized vehicle or to any individual who is not an eligible resident of the restricted parking zone;
 - (iii) any other unauthorized use of a permit.

Article IV. Parking During Construction and Special Events

10.40.420 Parking in Construction Zones

It is unlawful to park in any area that has been signed as no-parking for the purpose of construction.

10.40.440 Parking Along Parade Routes or Street Fair Areas

- (1) It is unlawful to park along any street that has been approved by the City as a parade route or for a street fair during the times specified in the no-parking signs posted per subsection (2).
- (2) No-parking signs for the event:
 - (a) must be posted at least 24 hours in advance of the event;
 - (b) must consist of at least four temporary signs on each side of every street block in which parking is prohibited;
 - (c) must designate the time period during which parking is prohibited.
- (3) Where compliance with subsection (2) is achieved for a relevant street block, the Police Department may impound any vehicle that is parked in violation of this section.

10.40.460 Parking During Major Events

The Director of Public Works is authorized to suspend enforcement of specified elements of the parking regulations established in this chapter during major events where additional parking is required to support the event.

Article V. Towing and Impoundment

10.40.520 Impoundment—Generally

- (1) Per RCW 46.55.240(1), applicable provisions of RCW Chapter 46.55 are adopted by reference, including the definitions in RCW 46.55.010.
- (2) A presumption that a notice required by this Article has been "securely attached and conspicuously displayed" exists when the notice is secured by placing it on the vehicle windshield, under the vehicle windshield wiper blade or otherwise securely attached.
- (3) Prior to impounding a vehicle under this Chapter, a police officer must make a reasonable determination as to whether the vehicle is currently being used as a residence and make written note of the factors that led to that determination. If the vehicle is being used as a residence, the provisions of SMC 10.40.650 apply.

10.40.530 Impound After Notice.

- (1) Except as provided in SMC 10.40.540 and .550, a vehicle may be impounded after notice of such proposed impoundment has been securely attached to and conspicuously displayed on the vehicle for a period of 24

hours prior to impoundment if such vehicle is parked or used in violation of any law, ordinance, or regulation.

(2) The notice must comply with the provisions of RCW 46.55.085.

10.40.540 Impound Without Notice.

(1) Except as provided in SMC 10.40.550, the Police Department may impound any vehicle, with or without citation and without giving prior notice to the owner as required in SMC 10.40.530 when:

- (a) the vehicle is unattended and is impeding or is likely to impede the normal flow of vehicular, pedestrian, or bicycle traffic; or
- (b) the vehicle is illegally occupying a truck, commercial load zone, construction zone, street closed by order of the City Council, restricted parking zone, bus, loading, hooded-meter, taxi, or other similar zone where parking is limited to designated classes of vehicles or is prohibited during certain hours, on designated days, or at all times, and where such vehicle is interfering with the proper and intended use of such zones and where such zone is clearly and conspicuously marked; or
- (c) the vehicle is parked within no parking zones specified in RCW 46.61.570;
- (d) the vehicle is parked in violation of SMC 10.40.260; or
- (e) the vehicle without a special license plate, card, or decal indicating that the vehicle is being used to transport a disabled person as defined under Chapter 46.16 RCW, as now or hereafter amended, is parked in a stall or space clearly and conspicuously marked under RCW 46.61.581 when such space is on public property or provided on private property without charge; or
- (f) the vehicle parked in violation of this chapter that has unpaid parking tickets per SMC 10.40.680;
- (g) the vehicle is parked in such a manner as to constitute a traffic hazard; or
- (h) the vehicle poses an immediate danger to the public safety; or
- (i) a police officer has probable cause to believe that the vehicle is stolen; or
- (j) a police officer has probable cause to believe that the vehicle constitutes evidence of a crime or contains evidence of a crime, if impoundment is reasonably necessary in such instance to obtain or preserve such evidence; or
- (k) the vehicle is parked in a publicly owned or controlled parking facility, properly posted under RCW 46.55.070; or
- (l) the vehicle is parked on private, nonresidential property, properly posted under RCW 46.55.070; or
- (m) the vehicle is left unattended on residential property without consent of the property owner or agent;
- (n) the vehicle is a junk vehicle and is parked on a street, alley, or way open to the public, or on municipal or other public property;
- (o) the vehicle is parked in a public right-of-way or on other publicly owned or controlled property in violation of any law, ordinance, or regulation and there are four or more parking infractions issued against the vehicle for each of which a person has failed to respond, failed to appear at a requested hearing, or failed to pay an adjudicated parking infraction for at least 45 days from the date of the filing of the notice of infraction;
- (p) any part of the vehicle is leaking material other than stormwater onto the street or any other part of the municipal separate storm sewer system.

(2) Nothing in this section may be construed to authorize seizure of a vehicle without a warrant where a warrant would otherwise be required.

10.40.550 Impound of Vehicle Used as a Residence

- (1) If a police officer who impounds a vehicle determines that the vehicle is currently being used as a residence:
 - (a) the vehicle may be impounded pursuant to the processes described in this chapter;
 - (b) if the registered owner of the vehicle is not a resident of the vehicle, and the vehicle is not redeemed per SMC 10.40.660, the City may sell or destroy the vehicle;
 - (c) if the registered owner of the vehicle is a resident of the vehicle, the City may impose fines for the impoundment and associated costs of storage and redemption, limited to the lesser of the actual costs or the amount the vehicle owner has the ability to reasonably pay.

10.40.560 Redemption of Impounded Vehicle—Sale at Auction

RCW 46.55.120, governing redemption of impounded vehicles, is incorporated by reference.

Article VI. Enforcement and Penalties

10.40.610 Enforcement of parking regulations.

- (1) The parking regulations in this chapter may be enforced by the city's police officers and the city's parking enforcement officers, who have the authority to issue a notice of parking infraction when the parking infraction is committed in the officer's presence.
- (2) If any vehicle is found parked in violation of this chapter or otherwise violates the provisions of this chapter, the officer finding the vehicle must take its license plate number and may take any other information displayed on the vehicle which may identify its user, and must conspicuously affix to the vehicle a notice of parking infraction.
- (3) A notice of parking infraction represents a determination that a parking violation has been committed. The determination will be final unless contested as provided in this chapter.
- (4) An officer responsible for the enforcement of the parking regulations of the city is authorized to identify such parked vehicles to facilitate enforcement of this chapter. Such identification may be by electronic recording of the vehicle license plate, chalk upon the vehicle tires, or by some other convenient method, but may not be injurious to or damage the vehicle. It is unlawful for any person other than an officer, parking enforcement officer to interfere with, conceal, obliterate, or erase any such physical marks.

10.40.620 Penalties for violations of this chapter.

 These fees are ones I thought reasonable ...but have no other basis. Please review. If each are contained within the city's unified fee schedule, we can simply replace with a reference to the fee schedule (although note some fee amounts, such as for EV and disabled parking, are set by statute).

- (1) Unless otherwise specified elsewhere in this chapter, the penalties for each type of violation of this chapter are as follows:
 - (a) parking in excess of time limits: \$20; unless paid by the close of business on the 10th day following the citation, then \$10;
 - (b) parking in alley: \$25;
 - (c) parking in a bike lane, over a sidewalk, or blocking mailbox: \$25;
 - (d) parking in other areas where prohibited at all times: \$50;
 - (e) parking in a residential parking zone: \$50;

- (f) interfering with, concealing, obliterating or erasing marks: \$50;
 - (g) parking in an electric vehicle parking space: \$124;
 - (h) parking in disabled space: \$250 and an additional \$200 assessment pursuant to RCW 46.19.050 for a total of \$450;
 - (i) all other parking violations: \$20.
- (2) For a subsequent additional violation within one year of a preceding violation, an additional penalty applies as follows:
- (a) First additional violation: \$10;
 - (b) Second and third additional violation: \$25;
 - (c) Fourth through sixth violations: \$50;
 - (d) Seventh and additional violations: \$100.
- (3) Payment of all parking infractions must be made to the municipal court and at such other locations as designated by the court. Proceeds from parking infractions must be paid into the City's general fund, except as otherwise required by state law, including for penalties and assessments related to disabled parking infractions which must be retained by the city or distributed in accordance with RCW 46.19.050.

10.40.630 Responsibility for Violation—Presumptions

- (1) Every person in whose name a vehicle is registered is responsible for any violation of this chapter caused by the parking of the vehicle in violation. It is not a defense that the vehicle was parked illegally by another, unless proof is presented that the vehicle had been stolen and had not been returned to the registered owner by the date of the violation.
- (2) Except as provided in subsection (3), proof that the vehicle described in the notice of parking infraction was parked in violation of this chapter, together with proof that the person named in the notice of parking infraction was at the time of the violation the registered owner of the vehicle, constitutes in evidence a prima facie presumption that the registered owner of the vehicle was the person who parked or placed the vehicle at the point where, and for the time during which, the violation occurred.
- (3) In the case of a registered owner transferring vehicle ownership who has complied with the provisions of state law prior to the date of the violation, proof that the vehicle described in the notice of parking infraction was parked in violation of any such provision of this chapter, together with proof that the person named in the notice of parking infraction was at the time of the violation the person to whom the vehicle's ownership had been transferred, constitutes in evidence a prima facie presumption that the person to whom ownership was transferred was the person who parked the vehicle at the point where, and for the time during which, the violation occurred. Any notice in this chapter required to be sent to the registered owner must instead be sent to the person to whom ownership has been so transferred.

10.40.640 Notice of Infraction—Form—Determination final unless contested.

- (1) A notice of parking infraction represents a determination that an infraction has been committed. That determination will be final unless contested as provided in this chapter.
- (2) The form for the notice of parking infraction must include substantially the following information:
 - (a) A statement that the notice represents a determination that a parking infraction has been committed and that the determination is final unless contested as provided in this chapter;
 - (b) A statement of the specific section of the parking code for which the notice was issued;
 - (c) A statement of monetary penalty established for the parking infraction;

- (d) A statement that a parking infraction is a non-criminal offense for which imprisonment may not be imposed but that the penalty for a parking infraction may include non-renewal of the vehicle license;
- (e) A statement of the options provided in this chapter for responding to the notice and the procedures necessary to exercise these options;
- (f) A statement that at any hearing to contest the determination the city has the burden of proving, by a preponderance of the evidence, that the infraction was committed; and that the person may subpoena witnesses including the officer who issued the notice of infraction;
- (g) A statement that at any hearing requested for the purpose of explaining mitigating circumstances surrounding the commission of the infraction the person will be deemed to have committed the infraction and may not subpoena witnesses;
- (h) A statement that the person must respond to the notice as provided in this chapter or the person's vehicle license may not be renewed by the Department until any penalties imposed pursuant to this chapter have been satisfied;
- (i) A statement that failure to appear at a hearing requested for the purpose of contesting the determination or for the purpose of explaining mitigating circumstances may result in the refusal of the Department of Licensing to renew the person's vehicle license until any penalties imposed pursuant to this chapter have been satisfied.

10.40.650 Response to notice of parking infraction—Hearing—Failure to respond or appear.

- (1) A person who receives a notice of parking infraction must respond to the notice as provided in this section within 30 calendar days of the violation date on the notice.
- (2) If the person determined to have committed the infraction does not contest the determination, the person must respond by completing the appropriate portion of the notice of infraction and submitting it, either by mail or in person, to the city as specified on the notice. A check or money order in the amount of the penalty prescribed for the infraction must be submitted with the response. When a response that does not contest the determination is received, an appropriate order must be entered and, when appropriate, a record of the response and order must be furnished to the Department of Licensing.
- (3) If the person determined to have committed the infraction wishes to contest the determination, the person must respond by completing the portion of the notice of infraction requesting a hearing and submitting it, either by mail or in person, to the city as specified on the notice. The court must notify the person in writing of the time, place and date of the hearing, and that date must not be sooner than seven calendar days from the date of notice, except by agreement.
- (4) If the person determined to have committed the infraction does not contest the determination but wishes to explain mitigating circumstances surrounding the infraction, the person must respond by completing the portion of the notice of infraction requesting a hearing for that purpose and submitting it, either by mail or in person, to the court as specified on the notice. The court must notify the person in writing of the time, place, and date of the hearing.
- (5) If any person cited with a notice of parking infraction fails to respond to the notice of parking infraction as required by this section, or fails to appear at a hearing requested as provided by this section, the court must enter an appropriate order assessing the monetary penalty prescribed for the parking infraction and any other penalty authorized by this chapter and must notify the Department of Licensing, in accordance with RCW 46.20.270, of the failure to respond to the notice of infraction or to appear at a requested hearing.
- (6) The Department of Licensing may not renew the vehicle registration of any person for whom the court has entered an order(s) for two or more violations until any penalties imposed pursuant to this chapter have been satisfied.

10.40.660 Failure to comply with notice of parking infraction.

- (1) If no response or payment is made within 30 calendar days of the violation date on the notice of infraction, a \$25 delinquency fine will be imposed and a delinquency notice will be mailed to the registered owner of the vehicle to which the notice was affixed.
- (2) If no response or payment is made within 30 calendar days of the date of mailing of the delinquency notice, additional penalties may be assessed to the infraction, a notice may be sent to the Department of Licensing as provided in RCW 46.20.270, and the city may pursue such other remedies as provided by law.

10.40.670 Collection authorized.

The city is authorized to remit any unpaid penalties or fines issued pursuant to this chapter to collection.

10.40.680 Impoundment of vehicles with unpaid infractions.

A vehicle parked in violation of this chapter that has four or more unpaid parking infractions issued against the vehicle for each of which a person has failed to respond, failed to appear at a requested hearing, or failed to pay an adjudicated parking infraction for at least forty-five days from the filing of the notice of infraction, may be impounded without notice, per SMC 10.40.540.

EXHIBIT B

Chapter 6.80 City Docks

- i** The City Dock regulations in existing SMC Chapter 10.80 do not neatly fit into Title 10 that mostly concerns streets and cars. This draft incorporating these regulations into Title 6, Parks and Public Places.
- i** We would rewrite to make this applicable to motorized and non-motorized boat launches at Hamilton Park.

! Existing 10.80.20 sets forth a fee schedule for use of the city dock, but is eliminated here because of the City preference for including all fees in its unified fee schedule, adopted by resolution.

6.80.010 Applicability

This chapter applies to city-owned docks and boat launches at Hamilton Park.

6.80.020 Definitions

The definitions in RCW 53.08.310 are incorporated by reference.

6.80.030 Administration

This chapter may be administered by the director of public works.

6.80.040 Time Limits

- i** Added a limitation on repeat stays to aid enforceability of the time limits. Note change in daily use limit, which was not consistent with the daily time limit.

- (1) A vessel is subject to the following maximum stays at a city dock as follows:
 - (a) No charge: eight hours in a 24-hour period;
 - (b) Daily rate: three days in a 7-day period;
 - (c) Weekly rate: seven days in a 14-day period;
 - (d) Monthly rate: 30 days in a 60-day period.
- (2) Weekly and monthly rates are available only when dock facilities are not required for short-term use as determined by the public works director;
- (3) Renewals of weekly and monthly facilities are allowed on a first-come first-served basis only;
- (4) Payment of daily, weekly or monthly rates does not guarantee exclusive use if the vessel leaves then returns.

6.80.060 Payment

- (1) Daily Fees.
 - (a) A lockbox and deposit envelopes must be provided on the dock for deposit of daily fees.
 - (b) The police department is directed to check the lockbox for payments by craft using the dock and transmit the payment envelopes to the city treasurer.

(2) Weekly and Monthly Fees.

- (a) Weekly and monthly fees must be paid to the city treasurer.
- (b) The city treasurer must transmit a copy of the receipt showing the boat and time of stay to the police department.

6.80.080 Violations

- (1) A violation of this chapter is a class 2 civil infraction and may also be enforced per SMC Title 13.
- (2) A vessel that is a nuisance, in danger of sinking or creating other damage, or owing port charges may be managed pursuant to RCW 53.08.320 governing moorage facilities.

Title 11 – Uniform Codes

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Title 11 Streets and Public Rights-of-Way

i This is a new Title. It will be home to all the right-of-way and street-related permitting requirements and procedures that were previously in Title 14.

Chapter 11.02 General Provisions

11.02.010 Applicability.

This chapter applies to all provisions of this Title.

11.02.020 Definitions.

The following definitions apply in this Title:

“Complete streets” means the same as in RCW 47.04.010(10).

11.02.030 Administration.

Unless otherwise stated in this Title, the Public Works Director or designee (hereafter referred to as “Public Works Director”) is the administrator of this Title, and is authorized to review and issue permits, inspect work, and approve or disapprove of work undertaken according to an approved permit.

11.02.040 Severability

If any section, sentence, clause, or phrase of this Title is held invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality may not affect the validity or constitutionality of any other section, sentence, clause, or phrase of this title.

Chapter 11.04 Right-of-Way Uses

11.04.010 Purpose.

The purpose of this Chapter is to allow the use and encroachment of public rights-of-way only when they:

- (1) Encourage economic development and vitality.

- (2) Contribute to an active public realm.
- (3) Ensure accessible and navigable paths and streets free of hazards.

11.04.020 Applicability.

- (1) This Chapter applies to the uses and permits identified in Table 11.04.020(A), Applicable Permits by Right-of-Way Use.
- (2) Uses that break the pavement or surface of the right-of-way may also be required to obtain a construction permit, as established in SCM 10.06, Construction in the Right-of-Way.

Table 11.04.020(A) Applicable Permits by Right-of-Way Use

Applicable Permit	Example Uses (Including but not limited to)	Applicable Requirements
General Right-of-Way Use Permit	• Retail displays • Street Eateries • Restaurant tables in the sidewalk	SMC 11.04.040, General Right-of-Way Uses
Encroachment Permit	• Sidewalk repairs • Utility connections and installations • Fence installation	SMC 11.04.050, Encroachment Permit
Special Event Permit	• Street closures for farmers markets • Block Parties • Parades	SMC 5.06, Special Events

11.04.030 Permit procedures.

 Encroachment permits are currently regulated as a Type I administrative decision by the Community Development Director. However, most of the standards in this Title are administered by the Public Works Director. This version maintains the Community Development Director as the administrator for use-based permits but let us know if this should be changed to Public Works.

- (1) The Community Development Director is responsible for administering, reviewing, and deciding on the permits in this Chapter, under a Type I administrative decision.
- (2) Permit applications must use the forms established and provided by the City. The forms and application must include:
 - (a) A description of the proposed use or encroachment.
 - (b) Site plan showing private property lines, right-of-way location, and the location dimensions of the proposed use or encroachment. A site plan is not required for temporary signs.
 - (c) A statement signed by the applicant holding the City harmless from damages to private property or grounds is included in the proposal.
- (3) All permit fees must be paid at the time of submittal. Permit fees are established by City Council resolution.
- (4) Approval Criteria. The permit may be granted by the Community Development Director if it meets the following criteria:
 - (a) The encroachment or use does not impair public use or access.
 - (b) Any proposed structures or improvement do not obstruct traffic or create safety hazards. They also may not conflict with future City improvement plans.

- (c) The use or encroachment can be removed if the City needs to use the right-of-way.

 FYI: References to Title 17 will need to be updated when we start adopting updates to that Title.

- (d) The use is allowed or appropriate for the underlying zone or use standards, as established in Title 17.

11.04.040 General right-of-way use permit.

- (1) A general right-of-way use permit is required for any proposed use that falls within the right-of-way. Such a use generally involves temporary or moveable fixtures, such as chairs, tables, or displays.
- (2) General Standards.
 - (a) Any proposed display, table, or other furniture for business or retail uses must be stowed out of the right-of-way during non-business hours.
 - (b) The proposed must not create an obstruction, as regulated in SCM 11.08, Maintenance and Obstructions on Right-of-Ways.

11.04.050 Encroachment permit.

 This section adapts the requirements of 14.42, Encroachment Permits to be clearer. The existing encroachment code has an amortization clause for structures existing as of 2010. This was removed as it is no longer necessary.

- (1) This permit applies to the erection, construction or maintenance of signs, structures, other property, or improvements on or over City rights-of-way. (Ord. 1271 § 1, 2010).
- (2) General Standards.
 - (a) The Director may impose limitations and restrictions such as size, location, type of improvement, duration of the permit, or other limitations to ensure adequate access and passage in rights-of-way.
 - (b) The permit may be revoked, and improvements required to be removed at no cost to the City if the right-of-way needs to be improved or used for public purposes. Such improvements may include road widening, utilities, signage, and maintenance of sight triangle clearance.
 - (c) A temporary sign encroachment permit may be required for temporary use of the public right-of-way for banners and similar community and special event signage, subject to applicable sign regulations under SMC 17.110, Sign Standards.

Chapter 11.06 Construction in the Right-of-Way

11.06.010 Purpose.

The purpose of this chapter is to reduce impacts and connectivity disruptions due to construction activities in rights-of-way and to establish standards for construction activities in rights-of-way.

11.06.020 Applicability.

 This applies a new applicability criterion. It also consolidates text from the existing SMC 14.26.010, Permits.

- (1) This chapter applies to any activity that breaks the surface of the right-of-way. This includes, but is not limited to, activities in a right-of-way such as:

- (a) Construction or reconstruction.
- (b) Repair or alteration.
- (c) Grading in a right-of-way.
- (d) Cutting upon or over.
- (e) Drilling or boring under or through.

 **City Staff:** are there other types of fixtures or activities that should be exempted in the list below?

- (2) The following activities are exempt from the standards in this chapter.
 - (a) Boring small holes in a right-of-way to install an approved signpost.
 - (b) Drilling to attach approved benches, planters, fencing, or other similar fixtures to the right-of-way.
- (3) Compliance with this chapter does not exempt compliance with other applicable permits and standards. The adopted construction standards in Stanwood's Street and Utility Standards apply.

11.06.030 Permit procedures.

 This is a new code section that consolidates text from SMC 14.26.020 Applications, .030 Fees, .080 Administration, and .090 Appeal. SMC 14.26.100 Affected adjacent property, has been found to be problematic and was removed.

- (1) The permit application must be made on forms provided by the Public Works Department. The form and application must contain:
 - (a) Information necessary to demonstrate compliance with SCM 11.06.050, Approval Criteria.
 - (b) A plan showing the extent of the proposed construction work. The plan must indicate all locations and dimensions of the work in the right-of-way.
 - (c) All fees must be paid upon submission of the application and related documentation. Permit fees are established by City Council resolution.

 The following standard is new.

 Additional details could be added here, such as what type of noticing should be required? Written notice? Verbal notice? What is considered adjacent? How does the Director determine notice is required?

- (2) Notice.
 - (a) If the application identifies that temporary street closures are necessary, or there will be traffic and access limitations due to construction, the Public Works Director may require notice to be provided to adjacent property owners.
 - (b) The applicant must then provide mailed notice to property owners within 300 feet from the site at least 14 days prior to the expected impacts.
 - (c) The Director may waive noticing may be waived for circumstances that require emergency repairs.

i The following standard on appeals has been rewritten for grammatical clarity and code consistency.

- (3) Appeal. The decision of the Public Works Director on a construction permit may be appealed to the Hearing Examiner. The appeal process must follow the appeal process established in SMC 17.80.390. The appealing party must pay the applicable fee, as established by City Council resolution.

11.06.040 Bonding and Indemnification.

i This City/City Attorney should consider whether they want to update the dollar amounts or establish these amounts outside of code. Also, section (1) cross references the subdivision code (SMC 16.30.030) for security mechanisms. Would it be easier to apply if the security mechanisms were in Title 11? Do these bonding provisions work? What would staff change? Does it make it easier to apply if it is in this section of code vs. subdivisions? We have only updated wording for clarity, not substance.

- (1) Security. When any portion of the project located in the public right-of-way exceeds \$100.00 in value, the Public Works Director has the authority to require a performance security, augmented performance security, and/or maintenance security to be filed with the permit application, unless waived in accordance with SMC 16.30.030 Security mechanisms. The amount of the security is determined in SMC 16.30.030. Such work must be conducted according to the City's standards for municipal construction and include a guarantee for the maintenance, repair, or replacement in accordance with SMC 16.30.030. (Ord. 1399 § 1, 2015; Ord. 970 § 1, 1996).

i The following standards were added from 14.26.050, Indemnity, and 14.26.120, Form of surety.

- (2) Indemnity. The Public Works Director has the authority to require an applicant to file a bond to indemnify the City from all claims, damages, or injury to other persons caused by the work or alteration. Alternatively, the applicant may provide satisfactory evidence of adequate liability and insurance in the amount of \$100,000 and \$300,000 for personal injury or death, and \$50,000 for property damage. (Ord. 970 § 1, 1996).
- (3) Surety. In cases where a bond is required, in lieu of the surety bond required, an applicant may file with the Public Works Department a cash deposit, or other negotiable security in form and substance approved by the City Attorney, to guarantee the performance by applicant of his/her obligations to the City. (Ord. 970 § 1, 1996).

11.06.050 Approval criteria.

i This section was adapted from 14.26.060, Standards for issuance of permits. The standard on "health and welfare" was removed, as it was not clear on how this would be demonstrated—if the applicant follows the required codes, then they should already be maintaining health and welfare through code compliance.

The Public Works Department will review the application. To be approved, the application must meet all the following criteria:

- (1) The application form is complete with the required documentation included.
- (2) The plans for the proposed project provide sufficient detail to estimate the general costs and nature of the project, showing it to be in the public interest.
- (3) The work will be accomplished according to all adopted and applicable building and street standards.
- (4) The applicant demonstrates that the project will not unreasonably interfere with vehicular and pedestrian traffic, the demand and necessity for parking spaces, and reasonable means of ingress and for affected properties.

Chapter 11.08 Maintenance and Obstructions on Rights-of-Way

11.08.010 Purpose and applicability.

- (1) The purpose of this chapter is to maintain safety by ensuring that rights-of-way are free from obstructions and are easily accessible for both pedestrians and vehicular traffic.
- (2) This chapter applies to all rights-of-way in the City.

11.08.020 Construction debris standards.

i This section is adapted from the existing 14.30.010, Daily removal.

- (1) Anyone depositing dirt, mud, rocks, debris, or any material on public property or municipal facilities must promptly clean up these deposits daily during and at the end of their operations.
- (2) Adequate equipment must be available during each day of operation to ensure quick and timely removal of any debris or deposits. The equipment available may include a power broom or other means approved by the Public Works Director.
- (3) All right-of-way surfaces catch basins, culverts, or other municipally owned improvements affected by the deposits must be cleaned.
- (4) Stop work order.
 - (a) In the event anyone fails to comply, the Public Works Director may issue a notice of violation and order all work to cease. The notice must be delivered to a person of suitable age at the job site.
 - (b) Work may not resume until so authorized by the Public Works Director. (Ord. 970 § 1, 1996).
 - (c) Failure to comply with a stop work order would result in further penalties, as established by SMC 11.08.040.

11.08.030 Street and sidewalk obstruction standards.

i This is a new section of code. This code has been loosely inspired by the City of Duvall (8.02) and the City of Spokane (12.02.0202).

- (1) Property owners abutting a right-of-way or sidewalk must keep the pathway clear and safe for travel by promptly removing any obstructions.
- (2) Streets, lanes, alleys, or other public roadways must be free from overhanging trees or vegetation. A minimum of 14 feet of clearance height must be maintained clear from obstructions.
- (3) Sidewalks
 - (a) Sidewalks must be free from obstructions may including but not limited to vegetation, brushes, snow, mailboxes, or other fixtures.
 - (b) A minimum of five feet in width and eight feet in clearance height must be maintained clear from obstructions to ensure direct passage.
 - (c) Placement of fixtures along sidewalks and right of ways, may be allowed, provided that the sidewalk maintains direct passage, as established in (2) of this section.

 Staff: would you like a listed time limit for violation, as stated below? 10 days was listed as a placeholder.

(4) Notice of violation. Should any abutting property owner fail, neglect or refuse to comply with this section, the Public Works Director may serve the owner a notice to clear, repair, or renew any sidewalk or passage within 10 days. The notice must include:

- (a) A reasonable time limit for resolving the obstruction.
- (b) Penalties for failure to comply.

11.08.040 Penalty for violation.

 New enforcement language for consistency across the code. Staff, the existing code has a penalty of a fine of \$1,000 and/or 90 days in jail. This amount would be greater than the class 1 civil infraction now adopted under the new Code Enforcement framework. Considering the first offense for a Building Code violation is currently a class 3 infraction, a class 1 may be disproportionate. Is there a level of infraction that you think would be most appropriate?

Violation of this section/chapter is a class 1 civil infraction and may also be enforced per SMC Title 13.

Chapter 11.10 Vacation of Streets and Alleys

 This Chapter of code has been edited for clarity, language, and organization to make it easier to read. Procedural and approval standards have been maintained.

11.10.010 Purpose.

This chapter establishes the procedures and criteria that the City uses to decide upon vacation of streets, alleys, and other types of public easements relating to street, pedestrian, or travel purposes. (Ord. 1476 § 1, 2019).

11.10.020 Applicability.

- (1) The procedures and standards in this chapter apply to any petition to vacate a street, alley, or right-of-way in the City.
- (2) If a proposed street vacation is part of a proposed vacation of a subdivision or short subdivision, then the procedure for vacation of subdivisions under RCW 58.17.212 must be used and complied with, and the street vacation procedure under this chapter may not be used. (Ord. 1476 § 1, 2019).

11.10.030 Pre-application procedure.

- (1) Prior to submitting a petition for the vacation of any street or alley, any abutting property owner may submit a written request to the Public Works Director for a pre-application meeting to discuss the proposal.
 - (a) The request must include:
 - (i) A description of the right-of-way for which vacation is intended to be sought,
 - (ii) A statement of the applicant's reasons for requesting vacation,
 - (iii) A statement as to how the requested vacation meets the criteria for granting a vacation as set forth in SMC 11.10.110.
 - (b) No fee is required for the pre-application meeting.

- (2) The Public Works Director will schedule a pre-application meeting, upon request from the applicant.
- (3) The Public Works Director may provide a preliminary determination on whether there appear to be any granting criteria that the proposal cannot meet. This preliminary determination is not final or binding.
- (4) If the applicant decides to proceed with a street vacation petition after the pre-application meeting, all provisions of this chapter apply. (Ord. 1476 § 1, 2019).

11.10.040 Petition procedure.

i Adapted from SMC 14.48.020, Petition-Fee-Subdivision vacation. This section has been reformatted. No substantive changes made. Standard on subdivision (existing 14.48.020(3)) moved to the applicability section.

- (1) Any owner of a property abutting a street or alley may petition the City Council for the vacation the street or alley.
- (2) Petition must be made on forms established by the City. The petition and forms must contain all the following:
 - (a) A fee in an amount established by resolution of the City Council. Until all fees have been paid in full, no action may be taken.
 - (b) A full and correct legal description.
 - (c) Vicinity map showing the property seeking a vacation.
 - (d) Signatures of adjacent property owners. The application must be signed by the owners of more than two-thirds of the property abutting the street or alley to be vacated.

11.10.050 Review of petition.

i Adapted from SMC 14.48.040. This section has been reformatted and edited for clarity.

- (1) The City Clerk must notify the Public Works Director of all proposed vacations.
- (2) Prior to the presentation of the petition to the City Council, the Public Works Director must review the petition and create a report that includes:
 - (a) Ownership of the property abutting on the street or portion sought to be vacated. Proof of ownership of abutting property by the title insurance or certificates may be required, such proof to be furnished by, and at the expense of, the petitioners.

i The following requirement on verifying the location and legal description was moved to be under the staff report and edited for clarity. The existing standard was vague. If this does not meet the intent of the standard, let BHC know.

- (b) Verification of the location and general legal description of the street or alley proposed for vacation. (Ord. 1476 § 1, 2019).
- (c) Whether and in what respect the public may be benefited or harmed by the vacation.
- (d) Whether the public benefit of the area's use is insufficient to justify the cost of maintenance.
- (e) Which property or properties will be directly benefited or adversely affected by the vacation, and in what way.

- (f) What effect the vacation will or may have upon property served or which might be served the vacated street, and whether the street has been opened or constructed, and if so, to what standard.
 - (g) How the street relates to other streets and highways, and whether other portions of the subject street or alley have already been vacated.
 - (h) Whether the substitution of an alternative way would be more useful to the public.
 - (i) Whether future changes in conditions may increase public use or need.
 - (j) How and when the street or alley sought to be vacated became a public right-of-way.
 - (k) Whether any utilities now exist in the street, or whether such street may be reasonably necessary for future utility uses.
 - (l) The necessity or desirability of the City retaining an easement or the right to exercise and grant easements for emergency vehicle access and construction, repair, and maintenance of public utilities and services over the land sought to be vacated.
 - (m) Whether any abutting owner would become landlocked or its access substantially impaired; i.e., whether there is an alternative motive ingress and egress, even if less convenient.
 - (n) If the right-of-way abuts a body of water, how the proposed vacation would or would not comply with the requirements set forth in RCW 35.79.035.
 - (o) Whether there is compliance with the comprehensive plan, transportation plan and future road alignments.
 - (p) Any other matters relevant to the vacation of the street or alley.
- (3) Upon receiving a petition and fee payment for the vacation of a City street or alley, and upon completion of the report referenced in SMC 11.10.050(2), the Public Works Director will place the matter upon the agenda of a meeting of the City Council.
- (4) The City must notify petitioners in writing of the date and time when the Council hears the petition.

11.10.060 Setting the Council hearing by resolution.

- (1) The City Council is responsible for determining whether to adopt a resolution setting a public hearing on the proposed vacation. In its determination, the Council must consider:
- (a) The report of the Public Works Director.
 - (b) If the vacation requires that the City be compensated as a condition of the vacation. The Council will generally determine whether the City will need to be compensated before it adopts the resolution. However, the Council retains the discretion to review its determination following the public hearing.
- (2) For both petition and council-initiated vacations proposed for public hearing, the City Council must adopt a resolution setting a time for the hearing. The hearing date must be set between 20 and 60 days from the resolution's date of passage. (Ord. 1476 § 1, 2019).

11.10.070 Compensation.

The City Council may require the petitioners to compensate the City of Stanwood, prior to the vacation becoming effective, in accordance with the following criteria:

- (1) Except as otherwise provided, the vacation ordinance may not become effective until the City is compensated. This amount may not exceed one-half the appraised value of the area to be vacated.

- (2) When the street or alley has been part of a dedicated public right-of-way for 25 years or more, or when the street or alley or portions thereof were acquired at public expense, the compensation amount may not exceed the full appraised value of the area vacated.
- (3) Compensation may be waived or reduced either when the vacation is initiated by the City of Stanwood or when the City Council deems it to be in the best interest of the City in accordance with the following criteria:
 - (a) When the abutting property is owned by a governmental entity or by a nonprofit corporation whose purpose is for the necessary support of the poor or infirm.
 - (b) When the street or alley was vacated by the provisions of Section 32, Chapter 19, Laws of 1889-90 (as described in SMC 11.10.100).
 - (c) When the street or alley (right-of-way) vacated is traded for property of greater or approximately equal value.
 - (d) When the street or alley (right-of-way) vacated is abutting residential properties and is 1,500 square feet or less, the appraisal required under SMC 11.10.000 may be waived and the value calculated as a percentage of the average Snohomish County assessor assessed value of the abutting properties.
 - (e) When the street or alley (right-of-way) vacated is de minimis, under 500 square feet, or otherwise has little to no assessed value. (Ord. 1476 § 1, 2019).

11.10.080 Appraisal for compensation.

i This section was adapted from 14.48.090 Appraisal – Survey – Fees.

- (1) The area proposed for vacation must be appraised in all cases where the City Council requires compensation for the vacated right-of-way.
- (2) The appraisal must be by a professional appraiser selected by the City, unless otherwise determined by the Public Works Director. The applicant is responsible for paying the cost of the appraisal. The petition may be denied for nonpayment of fee or failure to submit appraisal.
- (3) The petitioner may select the appraiser by either choosing:
 - (a) From a list of appraisers approved by the City.
 - (b) A Washington State certified and licensed real estate appraiser who is familiar with the local market conditions. The appraiser must have a reputation for respecting the rules and regulations applicable to appraisers. The petitioner must submit the appraiser's name and credentials to the City and receive prior written approval by the Public Works Director.
- (4) The petitioners must provide the City with an accurate, professional survey of the property proposed for vacation, with the boundaries of the proposed vacation marked on the ground and an accurate legal description by a licensed surveyor at the applicant's expense.
- (5) No action may take place on the petition until fees have been paid in full. Therefore, if the application fee is not paid by the petitioner, and the professional survey, legal description, and the appraisal are not received by the City within 12 months of the petition filing date, the petition must be denied. The petitioner/applicant/owner will be required to reapply and pay a new filing fee. (Ord. 1476 § 1, 2019).
 - (a)

11.10.090 Public hearing notice – Fifty percent objection.

i This section was moved slightly in the chapter and adapted from 14.48.080, Public hearing notice – Fifty percent objection. The text was edited for reading ease and comprehension. No substantive changes were made.

- (1) Notice. Upon the passage of the petition resolution, the City Clerk must give 20 days' notice of the pendency of the petition by a written notice posted in three of the most public places in the City and a like notice in a conspicuous place on the street or alley sought to be vacated.
 - (a) The notice must contain a statement that a petition has been filed to vacate the street or alley described in the notice, together with a statement of the time and place fixed for the hearing of the petition.
- (2) Mailed Notice. In addition to the standards under (1), mailed notice is required for all cases where the proceeding is initiated by resolution of the City without a signed petition by the owners of more than two-thirds of the property abutting the proposed part of the street or alley to be vacated.
 - (a) The mailed notice must be delivered at least 15 days before the date fixed for the hearing.
 - (b) The notice must be sent to the owners, or reputed owners, of all lots, tracts, or parcels of land or other property abutting, or within 300 feet of, any part of the proposed street or alley vacation, as shown on the rolls of the county treasurer, directed to the addresses shown on the record.
 - (c) Where the current address of applicable property owners is not a matter of public record, failure to send notice by mail to applicable property owners may not invalidate any proceedings in connection with the proposed street vacation.
- (3) The costs of the notice must be borne by the applicant.
- (4) In all cases, the City may not proceed with the street vacation process if 50% or more of the abutting property owners file a written objection to the proposed vacation with the City Clerk prior to the time of hearing. (Ord. 1476 § 1, 2019).

11.10.100 Nonuser statute.

! Staff: The existing code in this section (SMC 14.48.070) seemed to restate state law rather than provide additional standards or actionable regulations. We have simplified it. If the existing context on state law was intentional, let us know and we can add it back into the code here.

- (1) The following state laws on the nonuser statute apply:
 - (a) Section 32, Chapter 19, Laws 1889-90
 - (b) RCW 36.87.090
- (2) Although the nonuser statute applies without regard to the City's street vacation process under Chapter 35.79 RCW, property owners who abut a street vacated under the nonuser statute may apply to the City to "formally" vacate the street by ordinance.
 - (a) Abutting property owners may use this method to clear title to right-of-way vacated under the nonuser statute rather than filing a quiet title action in superior court, which can be more costly and cumbersome than the street vacation ordinance process.
 - (b) The City will consider petitions to formally vacate streets or alleys that have been vacated by operation of the nonuser statute, if these streets or alleys were dedicated and unopened as county roads for five years prior to the 1909 proviso and if the City has not acquired the streets or alleys by prescription/adverse possession, purchase, eminent domain, or other means.

- (c) The burden is on the property owner requesting vacation to provide all necessary title and historical information to the City to demonstrate that the nonuser statute operates to vacate the subject property. (Ord. 1476 § 1, 2019).

11.10.110 Granting criteria.

- (1) The City Council may not vacate any street, alley, or any parts thereof, if any portion abuts a body of saltwater or freshwater, except when both:
 - (a) The vacation is being sought to enable the City or state to acquire the property for port purposes, boat moorage or launching sites, park, viewpoint, recreational, educational purposes, or other public uses; and
 - (b) The proposal complies with the requirements of RCW 35.79.030 and this chapter.
- (2) City Council must use the following criteria when deciding on a street vacation petition:
 - (a) The vacation will provide a public benefit, and/or will be for a public purpose, which public benefit may consist of economic and business support derived by the community from the petitioners.
 - (b) The right-of-way vacation will not adversely affect the street pattern or circulation of the immediate area or the community as a whole.
 - (c) Public needs are not adversely affected.
 - (d) The right-of-way is not contemplated or needed for future public use.
 - (e) No abutting owner will become landlocked, or their access will not be substantially impaired. For example, there must be an alternative motive ingress and egress, even if less convenient.
 - (f) That provision has been made for utility easements, when needed for the right to construct, repair, and maintain public utility facilities. (Ord. 1476 § 1, 2019).

11.10.120 Right to reserve easements.

- (1) The City Council may, at the time of its public hearing, determine that the City may retain an easement or right to exercise and grant easements in respect to the vacated land for:
 - (a) The construction, repair, and maintenance of public utilities and services.
 - (b) Public utilities and services.
 - (c) Pedestrian trail purposes.
 - (d) Any other type of easement relating to the City's right to control, use and manage rights-of-way. (Ord. 1476 § 1, 2019).

11.10.130 Vacation ordinance.

i The following code was adapted from SMC 14.48.120 and edited for clarity and readability alone.

- (1) If the City Council determines to grant such petition, or any part thereof, the Council must authorize the vacation by adopting an ordinance.
- (2) The ordinance may retain City easements or rights on the vacated land for construction, repair, and maintenance of public utilities and services.
- (3) Compensation payment. If the City Council determines that compensation must be paid as a condition of the vacation, then the ordinance may not be published or become effective until all compensation and fees and

costs have been paid in full by the petitioners and all conditions imposed by the City Council have been complied with.

- (a) When there are multiple properties which are adjacent to right-of-way which is petitioned for vacation, any one or more of the applicants may pay the total compensation, fees, and costs in order to complete the vacation and to cause the ordinance to be published and become effective.
- (b) Such payment may not affect the vacated right-of-way vesting of the adjacent property owner.
- (c) If the compensation is not paid and the conditions are not complied with within one year from adoption of the ordinance, then the ordinance is void. However, the City Council may extend this deadline by one year by ordinance. (Ord. 1476 § 1, 2019).

11.10.140 Notice of action to auditor and appraiser.

- (1) A certified copy of the ordinance vacating any street or alley, or part thereof, must be filed with the Snohomish County Auditor's office. Following the recording of the ordinance, a certified copy must be sent to the Snohomish County treasurer's office. (Ord. 1476 § 1, 2019).

11.10.150 Use of proceeds of vacation.

- (1) One-half of the revenue received by the City as compensation for area vacated under this chapter must be dedicated to the acquisition, improvement, development, and related maintenance of public open space or transportation capital projects within the City. (Ord. 1476 § 1, 2019).

11.10.160 Title to vacated street or alley.

- (1) Pursuant to RCW 35.79.040, and regardless of who pays the compensation, fees, and expenses of vacation, the vacated streets or alleys belong to the abutting property owners, one-half to each, provided, that:
 - (a) When only part of the street or alley is requested to be vacated, only that portion of the adjacent right-of-way up to the center line may belong to the abutting owner.
 - (b) When the street or alley requested to be vacated is wholly contained within a subdivision and is part of the boundary of the subdivision, the entire street must belong to the owner or owners of the property within the vacated subdivision, in compliance with RCW 58.17.212.
 - (c) When dictated by the circumstances of the situation, ownership of the underlying fee of a street or alley may be allocated by the City as equally and fairly as possible.
- (2) The ownership of the vacated street or alley must be set in the street vacation ordinance in accordance with subsection (1) of this section. (Ord. 1476 § 1, 2019).

Chapter 11.12 Complete Streets Program

 This Chapter of code is new, adopting a Complete Streets Program in Stanwood.

11.12.010 Purpose.

 If staff have other objectives that they would like to see achieved under the Complete Streets Ordinance, these can be included here. This section serves as a vision for why Stanwood wants to implement complete streets.

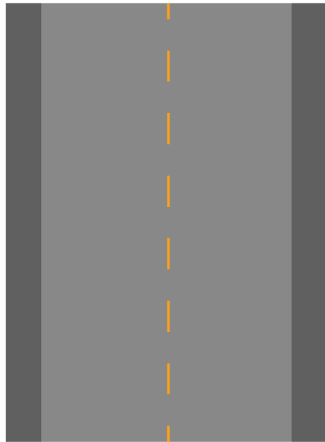
- (1) The Complete Streets Program is intended as a policy framework directing the City to take a holistic approach to transportation planning in its street improvements. The purpose of Stanwood's Complete Streets Program is to:
 - (a) Support different modes of travel, while respecting and enhancing Stanwood's rural and small-town setting.
 - (b) Encourage multimodal transportation infrastructure for all users, including pedestrians, bicyclists, automobiles, freight, and emergency services.
 - (c) Improve public safety, health, and efficient travel for all ages, abilities, and economic levels, which benefits not only each user but the vitality of the local economy.
 - (d) Ensure the safety of Stanwood's most vulnerable transportation facility users, such as elderly and children.
 - (e) Improve the public health of Stanwood's community members by encouraging active transportation modes.
 - (f) Reduce traffic and congestion and foster cleaner air quality by enabling alternative transportation modes.

 Staff: we have includes some example graphics below, but we may want to discuss street typologies for more appropriate section illustrations based on Transpo's work on the TMP.

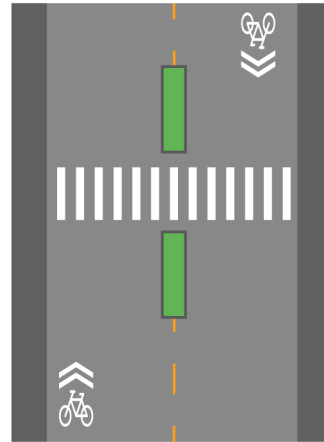
- (2) Complete Streets do not necessarily intend to expand facilities and pavement. Rather, Complete Streets intend to find solutions that make transportation facilities comfortable for all users, from vehicles to pedestrians. The following, Figures, 11.12.010(A) and Figure 11.12.010(B), show examples of what this could look like.

Figure 11.12.010(A) Local Complete Street Example

Incomplete Street Example



Complete Street Example



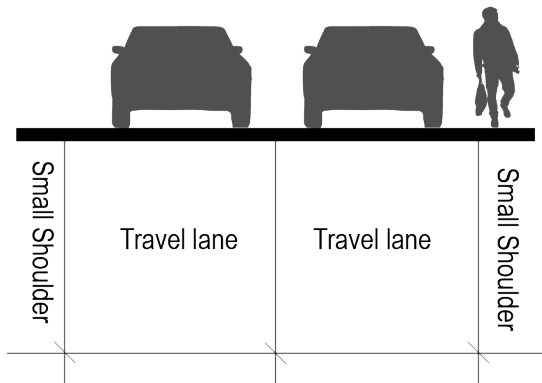
Complete Streets may involve upgrades to existing infrastructure that does not change roadway dimensions, but increase the comfort of non-vehicular users on existing streets. The complete street example above adds markings and signage to increase driver awareness of other users, along with a median to slow traffic and provide an island for crossing pedestrians.

No scale

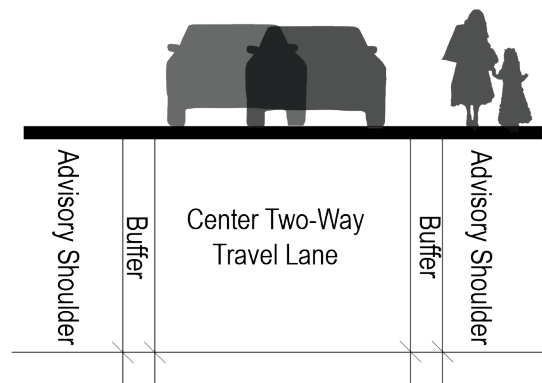
BHC Consultants

Figure 11.12.010(B) Local Complete Street Example

Incomplete Street Example



Complete Street Example



An example of a rural, low traffic flow local street, both “incomplete” and “complete.” The complete example maintains the pavement width, but allows more space for non-vehicular users. Vehicles still have space to travel in the complete example, but the narrower, shared travel lane slows traffic speeds and provides more comfort for pedestrians.

No scale

BHC Consultants

11.12.020 Applicability.

- (1) The standards in this chapter apply to:

- (a) All City-owned transportation facilities in the public right-of way.
- (b) Privately owned streets, sidewalks, alleys, and parking lots may also be required to adhere to this policy if funding and development review requires it.

11.12.030 Exceptions.

Facilities for pedestrians, bicyclists, transit users and/or people of all abilities are not required to be provided under the following circumstances:

- (1) Where their establishment would:
 - (a) Hinder public health or safety.
 - (b) Adversely impact critical areas.
- (2) For routine maintenance of the street that does not change the roadway geometry or operations, such as mowing, snowplowing, sweeping, spot repair, joint or crack sealing, or pothole filing.
- (3) When the cost would be disproportionate to the current need or probable future uses, as determined by the Public Works Director.
- (4) There is a documented absence of current or future needs, as established in City plans and future travel demand forecasts.

11.12.040 Implementation.

i In other City codes, they will often reference implementing non-motorized Transportation plans as part of the implementation plan. For example, implementing the Chapter as part of the Bike or Pedestrian Master Plan.

- (1) The City of Stanwood must plan for, design, and construct new street and public right-of-way facilities to provide accommodation for pedestrians, bicyclists, and people of all ages and abilities. This includes:
 - (a) Using context-sensitive designs and best practices that both provide safety to all users while respecting and enhancing the City's small town scale and rural placement.
 - (b) Implementing multi-modal project priorities, as adopted by the City's Transportation Master Plan
 - (c) Seeking multiple forms of funding, including grants, to fund improvements.
 - (d) Considering non-infrastructure based improvements to ensure existing facilities support all modes, for example reducing traffic speeds.

i Following standard is adapted from Langley (15.01.465), which allows flexibility for implementing the program incrementally or through individual projects.

- (2) Complete Streets may be implemented through identified projects as part of capital improvement planning or the Transportation Master Plan or incrementally through smaller improvements as part of maintenance activities over time.

i This section adopts by reference current best practices and design standards from other agencies. We also propose drafting the following details to Stanwood's Street and Utility Standards: chicanes for traffic calming, and sharrow pavement markings.

- (3) Design standards.
 - (a) Street construction standards are adopted under SMC 14.04, Street and Utility Standards.

i The complete streets grant program requires “sound engineering principles” from peer-reviewed, context sensitive solution guides, reports, and publications. Referencing the following meets this requirement.

- (b) The latest and best design guidelines and practices from the following must also be used.
 - (i) American Association of State Highway Officials (AASHTO)
 - (ii) Washington State Department of Transportation (WSDOT)
 - (iii) Institute of Transportation Engineers (ITE)
 - (iv) National Association of Transportation Officials (NACTO)
 - (v) Americans with Disabilities Act (ADA)

11.12.050 Performance standards.

i The following standard is adapted from Battle Ground's Complete Streets Code (BMC 12.117.070). However, further details on what constitutes adequate performance measures have also been included under (2).

- (1) Annual review of success. The Public Works Director must maintain a summary of transportation projects undertaken within the prior year and planned projects within the coming six-year period. Each listed project must demonstrate how it has met the objectives of this policy.
- (2) As part of the annual review, qualitative and quantitative data must be used to assess the performance of Complete Streets projects. Such performance measures to assess projects under the Complete Streets Code may include, but are not limited to the following:
 - (a) Change in Vehicle Miles Travelled.
 - (b) Reduced Level of Traffic Stress (LTS), as established by WSDOT.
 - (c) Public participation.
 - (d) Miles of bicycle facilities or sidewalks added.
 - (e) Number of ADA accommodations built.
 - (f) Number of exemptions from this policy approved.

**CITY OF STANWOOD
WASHINGTON**

ORDINANCE NO. 1518

AN ORDINANCE OF THE CITY OF STANWOOD, WASHINGTON, AMENDING STANWOOD MUNICIPAL CODE CHAPTER 14.04, UNIFORM CODES, TO ADOPT THE INTERNATIONAL BUILDING AND FIRE CODES AS ADOPTED BY THE STATE OF WASHINGTON AND ESTABLISHING SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the state legislature has mandated, per RCW 19.27.031, that cities enforce the State Building Code as adopted and amended by the State Building Code Council; and

WHEREAS, the State Building Code Council, pursuant to RCW 19.27.074, reviewed and adopted the updated versions of the International Building Code, International Residential Code, International Mechanical Code and International Fire Code as published by the International Code Council, Inc. and the Uniform Plumbing Code and Uniform Plumbing Code Standards as published by the International Association of Plumbing and Mechanical Officials; and

WHEREAS, Stanwood currently is administering the 2018 International Building Codes; and

WHEREAS, the Stanwood City Council desires to update its building and fire codes consistent with state mandates; and

WHEREAS, these revised codes will take affect statewide on March 15, 2024; and

WHEREAS, the Responsible Official has determined that the adoption of building codes is exempt from the State Environmental Policy Act (SEPA) under administrative actions containing no substantive standards respecting use or modification of the environment per WAC 197-11-800(19), Procedural Actions; and

WHEREAS, the proposed code amendment is not a “development regulation” as defined as RCW 36.70A.030(7) and is therefore exempt from State of Washington Department of Commerce noticing requirements; and

WHEREAS, the City Council Community Development Committee reviewed the proposed language and amendments set forth in this Ordinance at their January 4, 2024, meeting; and

WHEREAS, the City Council held their first reading of the draft code amendment on February 22, 2024 and their second and final reading on March 7, 2024; and

WHEREAS, the City Council of Stanwood has authority under Title 35A, RCW to adopt plans and regulations related to development and operations within the City of Stanwood; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF STANWOOD, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Code Revisions. Stanwood Municipal Code Title 14, Building and Construction, is amended as provided in Exhibit "A" attached to this ordinance and incorporated herein by reference as if set forth in full.

Section 2. Severability. The various parts, sections and clauses of this ordinance are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

Section 4. Authority to Make Necessary Corrections. The City Clerk and the codifiers of this Ordinance are authorized to make necessary corrections to this Ordinance including, but not limited to, the correction of scrivener's clerical errors, references, ordinance numbers, section/subsection numbers and any references thereto.

Section 5. Effective Date. This Ordinance shall take effect on **March 15, 2024**, as required by law.

PASSED AND APPROVED by the Stanwood City Council this th day of 2023.

CITY OF STANWOOD

Sid Roberts, Mayor

ATTEST:

By: _____
Lisa Sokolik, City Clerk

APPROVED AS TO FORM:

By: _____
Nikki Thompson, City Attorney

Date of Publication: _____

Effective Date: _____

Titles 14 – Uniform Codes

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Title 14 Adopted Building and Construction Codes

Chapter 14.02 General Provisions

14.02.010 Fees and building valuation costs

Fees are to be established by resolution of the City Council.

14.02.015 Penalties

Violation of this section/chapter is a class 3 civil infraction for a first offense and a class 1 civil infraction for a second offense. Violations may also be enforced per SMC Title 13.

14.02.020 Documents available for public inspection

The codes, appendices, and standards in this Title must be kept on file with the City Clerk and made available for use and examination by the public pursuant to RCW 35A.12.140.

14.020.030 Conflicting standards

If there are conflicting terms, provisions, or conditions between the codes set forth in this Title and any other section of the Stanwood Municipal Code, the more restrictive requirements must prevail.

14.02.040 Severability

If any section, sentence, clause, or phrase of this Title is held invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality may not affect the validity or constitutionality of any other section, sentence, clause, or phrase of this Title.

Chapter 14.04 Building Code

14.04.010 Adoption of international codes

The following international codes, which have been adopted with amendments by the State Building Code Council pursuant to Chapter 19.27 RCW, are herewith adopted by reference as though fully set forth in this chapter:

(1) International Building Code 2021 Edition, as published by the International Code Council, together with Washington State amendments as set forth in Chapter 51-50 WAC, together with Appendix E and Appendix J, Sections 101 through 111, together with all Washington State amendments as contained in Chapter 51-50 WAC, and together with the applicable references to the National Fire Protection Association (NFPA), current edition as amended, except that:

(a) Section 105.2 shall be modified to add the following:

#1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided that the floor area is not greater than 200 square feet.

#14. Platforms not more than 30 inches above the grade and not over any basement or story below;

#15. Replacement of nonstructural siding on IRC structures except for veneer, stucco, or exterior finish and insulation systems (EIFS);

#16. In-kind window replacement for IRC structures where no alteration of structural members is required and which the window U values meet the prescriptive requirements within the Washington State Energy Code;

#17. Job shacks that are placed at a permitted job site during construction may be allowed on a temporary basis and shall be removed upon final approval of construction;

#18. In-kind reroofing of one and two family dwellings provided roof sheathing is not removed or replaced.

(b) delete section 105.1.1 Annual permit.

i. Instead of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, the building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

(c) delete section 105.1.2 Annual permit records.

i. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such records at all times or such records shall be filed with the building official as designated.

(d) Section 105.3.2 shall be amended to add the following:

i. Applications for which no permit is issued within 12 months following the date of application shall expire by limitation and plans and other data submitted for review may thereafter be returned to the applicant or destroyed in accordance with state law;

ii. Applications may be cancelled for inactivity, if an applicant fails to respond to the department's written request for revisions, corrections, actions or additional information within 90 days of the date of request. The building official may extend the response period beyond 90 days; and

(e) Section 105.5 is replaced with a new section, "Time limitation on building permits," to read as follows:

i. Every permit issued shall expire two years from the date of issuance. The building official may approve a request for an extended expiration date where a construction schedule is provided by the applicant and approved prior to permit issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

(f) Section 109.4 shall be amended to add the following:

i. Any person who commences any work on a building, structure, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee equal to the amount of the permit fee required by this chapter and said fee shall be in addition to the required permit fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

(g) Section 113 shall be amended to add the following:

i. 113.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(2) International Residential Code, published by the International Code Council, 2021 Edition, together with Washington State amendments as set forth in Chapter 51-51 WAC as hereby adopted, except that:

(a) Section 112 shall be amended to add the following:

i. 112.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(b) Table R301.2(1) shall be amended to add the following:

Table R301.2(1)
Climatic and Geographic Design Criteria

Ground Snow Load	25 (roof snow load shall also be 25psf unless proven otherwise by the structural engineer of record)
Wind Speed	110 mph
Topographic Effects	No
Seismic Design Category	D2
Weathering	Moderate
Frost line depth	12"

Termites	Slight to moderate
Winter Design Temp ^e	27°
Ice Barrier Underlayment Required	No
Flood Hazards	See SMC 17.120
Air Freeze Index	175
Mean Annual Temp	50.5°

MANUAL J DESIGN CRITERIAN

Elevation	Elevation shall be specific to site
Latitude	Latitude shall be specific to site
Winter heating	See footnote n for all other values indicated in this table
Summer cooling	See footnote n for all other values indicated in this table
Altitude correction factor	--
Indoor design temperature	--
Design temperature cooling	--
Heating temperature difference	--
Cooling temperature difference	--

Wind velocity heating	--
Wind velocity Cooling	--
Coincident wet bulb	--
Daily range	--
Winter humidity	--
Summer humidity	--

n. The applicable code to regulate the use and conservation of energy is the Washington State Energy Code-Residential (WSEC-R)

(3) International Existing Building Code, published by the International Code Council, 2021 Edition.

(a) Section 112 shall be amended to add the following:

i. 112.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(4) International Mechanical Code, published by the International Code Council, 2021 Edition, together with Washington State amendments as set forth in Chapter 51-52 WAC.

(a) Section 113 shall be amended to add the following:

i. 113.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(5) Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials, IAPMO, 2021 Edition, together with Washington State amendments as set forth in Chapter 51-56 WAC, are hereby adopted.

(a) Section 107 shall be amended to add the following:

i. 107.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(7) Washington State Energy Code, published by the Washington State Building Code Council, 2021 edition, together with Washington State amendments as set forth in Chapters 51-11C and 51-11R WAC.

(a) Section C110 shall be amended to add the following:

i. C109.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(b) Section R110 shall be amended to add the following:

i. R110.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(8) International Fuel Gas Code, published by the International Code Council, 2021 Edition, together with Washington State amendments as set forth in Chapter 51-52 WAC. Is hereby adopted, except that:

(a) Section 113 shall be amended to add the following:

i. 113.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(9) International Swimming Pool and Spa Code, published by the International Code Council, 2021 Edition, as set forth in Chapters 51-50-3109 WAC and 51-51-0327, is hereby adopted, except that:

(a) All other “water recreation facilities” as defined in RCW 70.90.110 are regulated under Chapters 246-260 and 246-262 WAC. Public swimming pool barriers are regulated by WAC 246-260-031(4).

(b). Section 111 shall be amended to add the following:

i. 111.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(10) International Wildland Urban Interface Code, published by the International Code Council, 2021 Edition, together with Washington State amendments as set forth in Chapter 51-55 WAC, is hereby adopted, except that:

(a) Section 106 shall be amended to add the following:

1. 106.3 Work exempt from permit.

#1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided that the floor area is not greater than 200 square feet.

#2. Fences not over 7 feet (1829 mm) high.

(b) Section 113 shall be amended to add the following:

i. 113.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

Chapter 14.06 Fire Code

14.06.010 Adoption of international codes

The following international codes, which have been adopted with amendments by the State Building Code Council pursuant to Chapter [19.27](#) RCW, are herewith adopted by reference as though fully set forth in this chapter:

(1) International Fire Code, published by the International Code Council, 2018 Edition, together with Appendices B, C, D, E, F, and G, and together with all Washington State amendments as contained in Chapter 51-54A WAC, are hereby adopted, except that:

(a) Section 111 shall be amended to add the following:

111.1 Appeals. All appeals of orders, decisions, interpretations, or determinations made by the building official relative to the application and interpretation of the IBC shall be to the City of Stanwood hearing examiner in accordance with Chapter 17.87 SMC. The hearing examiner shall have no authority to waive requirements of this code.

(b) Section 903 shall be amended to read:

i. 903.2.1.1 Group A-1.

An automatic sprinkler system shall be provided throughout stories containing Group A-1 occupancies and throughout all stories from the Group A-1 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 8,000 square feet
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multiple-theater complex

ii. 903.2.1.3 Group A-3.

An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 8,000 square feet
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

iii. 903.2.1.4 Group A-4.

An automatic sprinkler system shall be provided throughout stories containing Group A-4 occupancies and throughout all stories from the Group A-4 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 8,000 square feet
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

iii. 903.2.4 Group F.

An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds 8,000 square feet.
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 8,000 square feet.
4. Where a Group F-2 fire area exceeds 8,000 square feet.

iv. 903.2.7 Group B or Group M.

An automatic sprinkler system shall be provided throughout buildings containing a Group B or Group M occupancy where one of the following conditions exists:

1. A Group B or Group M fire area exceeds 8,000 square feet (1115 m²).
2. A Group B or Group M fire area is located more than three stories above grade plane.
3. The combined area of all Group B or Group M fire areas on all floors, including any mezzanines, exceeds 8,000 square feet (2230 m²).

v. 903.2.9 Group S.

An automatic sprinkler system shall be provided throughout all buildings containing a Group S occupancy where one of the following conditions exists:

1. A Group S fire area exceeds 8,000 square feet.
2. A Group S fire area is located more than three stories above grade plane.
3. The combined area of all Group S fire areas on all floors, including any mezzanines, exceeds 8,000 square feet (2230 m²).
4. A Group S fire area used for the storage of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 m²).
5. In all Group S mini-storage occupancies.

vi. 903.2.9.1 Repair garages.

An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with Section 406.8 of the International Building Code, as shown:

1. Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 8,000 square feet (929 m²).
2. Buildings not more than one story above grade plane, with a fire area containing a repair garage exceeding 8,000 square feet (1115 m²).
3. Buildings with repair garages servicing vehicles parked in basements.
4. Group S-1 fire area used for the repair of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 m²).
5. Repair garages where the use of open flame or welding is conducted with a fire area exceeding 3,000 square feet.

vii. 903.2.9.2 Bulk storage of tires.

Buildings and structures where the area for the storage of tires exceeds 8,000 cubic feet (566 m³) shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Chapter 14.08 Street and Utility Standards

14.08.010 Adoption

The city of Stanwood "Street and Utility Standards" are hereby adopted for regulating the construction, maintenance, and operation of all public works/planning projects within the City as part of the Municipal Code as if fully set forth herein. Amendments shall be updated by Council Resolution as needed.



Stanwood Street and Utility Standards



STANWOOD STREET AND UTILITY STANDARDS

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CHAPTER 1

1.000 GENERAL STREET AND UTILITY AND SPECIFICATIONS

1.010 Standard Specifications

Design detail, workmanship and materials shall be in accordance with the current edition of the Standard Specifications for Road, Bridge and Municipal Construction, the APWA Amendments to Division One, and the Standard Plans for Road, Bridge and Municipal Construction, all written and promulgated by the Washington State Chapter of the American Public Works Association and Washington State Department of Transportation except where these standards provide otherwise.

The following specifications shall be applicable when pertinent, when specifically cited in the standards, or when required by a higher funding authority.

- A. Conditions and standards as set forth in current version of the Stanwood Comprehensive Plan.
- B. Conditions and standards as set forth in the City of Stanwood Comprehensive Water System Plan, most current edition.
- C. Conditions and standards as set forth in the City of Stanwood Comprehensive Sanitary Sewer Plan and Wastewater Facilities Plan, most current edition.
- D. Conditions and standards as set forth in the current version of the Stanwood Comprehensive Flood Plan.
- E. Rules and regulations as adopted in the Stanwood Municipal Code.
- F. Conditions and standards as set forth in the North Snohomish County Coordinated Water System Plan, except where this plan is in direct conflict with the Growth Management Act.
- G. Criteria set forth in the Local Agency Guidelines as amended and approved by Washington State Department of Transportation.
- H. Conditions and standards as set forth in the Washington State Department of Transportation Design Manual as amended and approved by Washington State Department of Transportation.
- I. US Department of Transportation Manual on Uniform Traffic Control Device (MUTCD), as amended and approved by the Washington State Department of Transportation.
- J. DOT Construction Manual as amended and approved by Washington State Department of Transportation.
- K. Rules and regulations of the State Board of Health regarding public water supplies as published by the State Department of Health.
- L. Conditions and standards as set forth in the most current edition of the State of Washington Department of Ecology Criteria for Sewage Works Design.
- M. Conditions and standards as set forth in the State of Washington Department of Labor and Industries.

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- N. Design criteria of federal agencies including Department of Housing and Urban Development and the Federal Housing Administration.
- O. Requirements as outlined by the Department of Ecology's Stormwater Management Manual for Western Washington, 2005 edition, except as amended by these standards.
- P. Other specifications not listed above, may apply when required by the City of Stanwood.

1.020 Shortened Designation

The Stanwood Street and Utility Standards shall be cited routinely in the text as the "Standards".

1.030 Applicability

The Standards shall govern all new construction and upgrading of public and private transportation and transportation related facilities; storm drainage facilities; sewer and water improvements; and park, recreation and open space facilities. These standards apply to construction, maintenance and operation of all public works and planning projects within the City.

1.040 Definitions and Terms

Average Daily Traffic or ADT - The average number of vehicles passing a specified point during a 24-hour period. Annual average daily traffic (AADT) denotes that daily traffic that is averaged over one calendar year.

City Engineer - The City employee designated by the Public Works and Community Development Directors as the Washington state licensed professional engineer who represents the City on reviewing projects.

Developer - Any person; firm; partnership; association; joint venture; or corporation or any other entity responsible for a given project.

Director of Community Development - The City employee who administer the Community Development Department and is responsible for implementation of these Standards for projects.

Director of Public Works - The City employee who administers the Public Works Department and is responsible for implementation of these Standards for projects.

Easement - The right to use a defined area of property for specific purpose/purposes as set forth in the easement document, on a plat or short plat, or as required for purposes as set forth herein.

Engineer - Any Washington State licensed professional engineer who represents the developer.

Half street - A Street constructed along an edge of development with improvements from the road centerline to the development constructed to the Standards herein. The road on the other side of the road centerline constructed with a 12-foot wide driving lane with pavement section constructed to the Standards herein.

Interceptor - The sewer that receives flow from a number of mains or trunk sewers, force mains, etc.

Lateral - That section of the sewer line extending from the City's main to the right-of-way or easement line (i.e., the side sewer) that has no other common sewers discharging into it.

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SMC - Stanwood Municipal Code.

Lot of Street Frontage - The distance between the two points where the lot lines intersect the boundary of public street right-of-way or private street tract.

Plans - The plans; profiles; cross sections; elevations; details; and supplementary specifications; signed by a licensed professional engineer which show the location, character, dimensions, and details of the work to be performed.

Private Sewer - Shall be that portion of the system located on private property where no easements are granted to the City. Maintenance of a private sewer shall be the responsibility of the property owner(s).

Private Street - Private vehicular access provided for by an access tract serving no more than four dwelling units that is privately owned and maintained.

Project(s) - General term encompassing all phases of the work to be performed and is synonymous to the term “improvement” or “work”.

Public Sewer - Shall be that portion of the system located within public rights-of-way or easements and which are operated and maintained by the City.

Public Street - Publicly owned and maintained street.

Right-of-Way - A general term denoting public land, property, or interest therein (e.g., and easement) acquired for or devoted to a public street, public access or public use.

Road - Used interchangeably with street.

Sewer Main or Trunk - Shall be a sewer that receives flow from one or more mains.

Side Sewer - The pipe and appurtenances that convey sewage between the point of connection two feet outside a building wall/foundation and the connection to the public sewer main that are the responsibility of the property owner(s).

Street - Used interchangeably with road.

Use of Pronoun - As used herein, the singular shall include the plural and the plural the singular; any masculine pronoun shall include the feminine or neuter gender and vice versa; and the term “person” includes natural person or persons, firm, partnership, corporation or association, or combination thereof.

Utility - A company providing public service including, but not limited to, gas; oil; electric power; street lighting; telephone; telegraph; water; sewer; storm drainage; or cable television; whether or not such company is privately owned or owned by a governmental entity.

Water Main - Pipe and appurtenances used for conveying and distributing water within the City's water system. The City shall own and maintain water mains within public rights-of-way or easements dedicated to the City.

Water Meter - A device used to measure the quantity of water passing through a particular outlet. Ownership and maintenance of the first water meter on a water service line shall be the City of Stanwood, and all sub-metering beyond that shall be owned and maintained by the property owner(s), unless otherwise agreed upon in writing.

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Water Service Line – The pipe and appurtenances that convey water from a water main to a building. Ownership and maintenance of the water service between the water main and the first water meter shall be the City of Stanwood, all other water service lines shall be owned and maintained by the property owner(s).

~~1.050—Amendments to Standards~~

~~From time to time, amendments may be needed to modify the provisions of these Standards. Amendments shall be processed as a Type V application by ordinance by the City Council consistent with SMC 17.80.130, following public notification and hearing consistent with SMC 17.85.~~

~~1.055 Modifications to Standards~~

~~Modifications may be considered only as authorized in the text as set forth in the following sections:~~

- ~~1. Section 1.140 A. Utility Locations~~
- ~~2. Section 2B.070 Right of Way widths~~
- ~~3. Section 2B.100 Hammerhead turnaround~~
- ~~4. Section 2B.140 Intersections~~
- ~~5. Section 2B.150 Driveways~~
- ~~6. Section 2B.190 D. Hot mix asphalt longitudinal joints~~
- ~~7. Section 2C.020 Minimum standards for sidewalks~~
- ~~8. Section 2C.040 Cement concrete curb and gutter.~~
- ~~9. Section 4.040 Water Main~~
- ~~10. Section 4.070 Hydrants~~

~~Applications for Modification of Standards shall be processed as a Type I Application consistent with SMC 17.80.130.~~

An application for modification shall be made by the owner of the property or his authorized agent. The application shall be made on a form provided by the city, and shall be submitted to the Community Development Department separately or as part of a concurrent application for site development review or right of way use permit/construction permit as applicable. Each modification request shall require a separate application and fee.

A fee consistent with SMC 3.30 shall be submitted upon application.

The applicant shall clearly and in detail state what adjustment of requirements is requested and the reasons that such adjustment is warranted. The application shall be accompanied by supplemental data, such as sketches, surveys, and statistical information, as is deemed necessary by the City to support the adjustment.

The Public Works Director upon recommendation of the city engineer shall have the authority to consider and act upon an application to modify standards. The Director may approve, modify, or deny the requested adjustment, based on all of the following findings.

1. The adjustment would not be contrary to a significant public interest, and
2. The adjustment would be in keeping with and preserve the intent of the Standards, and
3. Literal enforcement of the Standards would be impracticable and would result in an unreasonable and unnecessary hardship, and

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4. The modification is consistent with other chapters and sections of the Stanwood Municipal Code as determined relevant by the reviewing official.

In reviewing an application for modification the City may consider whether the modification is necessary to implement Federal or State requirements and when this consideration is relevant this consideration shall be included in the findings for approval.

The Director shall report on any approved modifications quarterly to the City Council subcommittee reviewing public works projects, and shall provide an annual report summarizing such modifications to the City Council.

~~1.060050~~ Severability

If any part of these Standards are found invalid, all other parts shall remain in effect.

~~1.065055~~ Applicable Permits

These standards will be used to evaluate projects requiring the following permit processes:

- A. Right of Way Use/Construction Permit (See SMC 14.26)
Applicable to construction in or alteration to any existing public street, sidewalk or alley, or to temporary lane or street closures.
- B. Site Development Permit (See SMC 17.80.030)
Applicable to development of:
 - a) all new public or private infrastructure including streets, sewers, water systems, stormwater systems or parks needed to serve development, and
 - b) connection of any private infrastructure to a public system that triggers a right of way use/construction permit except when no grading is required.
- C. Grading Permit (SMC 17.80.080) Land clearing, fill and grade permits are required for all construction projects over 50 cubic yards or within 2 feet of a property line. A strict inventory and erosion control plan is required for all land clearing and grading permits.
- D. Building plumbing and electrical permits (SMC 14.04) A building permit is required for most construction work including tenant improvements, alteration, repairs and demolition.
- E. Demolition permits (SMC 14.04)
- F. Subdivision of land and changes in lot or right of way boundaries including short plats, long plats binding site plans, boundary line adjustments, and street vacations. (SMC Title 16)

~~1.070060~~ Plan requirements

- A. Plans and profile illustrations must be submitted to the City for plan review and approval prior to the commencement of any construction or alteration of all proposed transportation related improvements; street illumination; traffic signalization; storm drainage facilities; and sewer and water improvements. For specific minimum requirements see the City's Checklist for each permit
- B. Plans for construction projects using these Standards, shall be prepared by a licensed engineer, registered in the State of Washington. All plans must be signed and stamped by

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the applicant's engineer prior to submittal for plan review. On occasion, the scope of a project (i.e., relocating hydrant) may not require engineered plans and can instead be handled via a right-of-way use/construction permit.

- C. Final plans for construction of infrastructure shall be approved by the Public Works Director or City Engineer prior to the start of construction.
- D. Specifications shall be required and submitted with the plans if General Notes do not adequately cover the project requirements.

1.080070 Plan Review

All plans are to be submitted to the Stanwood Community Development Department in accordance with Stanwood Municipal Code Section 14.26 Right of Way Use/Construction Permit, Title 16 Subdivisions and Title 17 Zoning.

1.090080 Construction Control

Work performed for the construction or improvement of City roads and utilities whether by or for a private developer, by City forces, or by a City contractor, shall be done to the satisfaction of the City and in accordance with approved plans. No work shall be started until such plans are approved. The City shall approve any revision to such plans before being implemented. Failure to receive the City's approval can result in removal or modification of construction at the contractor or developer's expense to bring it into conformance with approved plans.

1.100090 Inspection

All work performed within the public right-of-way or easements, or as described in these Standards, whether by or for a private developer, by City forces, or by a city contractor, shall be inspected by the City and done to the satisfaction of the City and in accordance with any approved plans and these Standards. The City must approve any revision to construction plans in writing.

It is the responsibility of the developer, contractor, or their agents to notify the City two working days ~~(48 hours)~~ in advance of the commencement of any authorized work. A preconstruction meeting and/or field review shall be required before the commencement of work.

Inspections shall be requested by the developer, contractor or their agents a minimum of three (3) ~~businessworking~~ days ~~(72 hours)~~ prior to the scheduled appointment.

It is the responsibility of the developer, contractor or their agents to have an approved set of plans and any necessary permits on the job site whenever work is being accomplished.

The City shall have authority to enforce these Standards as well as other referenced or pertinent specifications. The City will appoint project engineers, assistants and inspectors as necessary to inspect the work and they will exercise such authority as the Community Development Director or Public Works Director may delegate.

All specific inspections, test measurements or actions required of all work and materials are set forth in their respective chapters herein. Tests shall be performed at the developer or contractor's expense.

Failure to comply with the provisions of these Standards may result in stop work orders, removal of work accomplished, or other penalties as established by ordinance.

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No water meters shall be released for any lot or building served by a project until final acceptance has been granted.

1.140100 Fees

Fees shall be as set forth in SMC 3.30.

1.140110 Utility Locations

- A. Utilities within a right-of-way or easement on new roads or in roadways where existing utilities are not in conflict, shall be located as shown in typical street sections on Transportation Standard Details. Where existing utilities are in place, new utilities shall conform to these standards as nearly as practical and yet be compatible with the existing installations. The Public Works Director may approve modifications of location consistent with Section 1.055. Existing utilities shall be shown using the best information available. This verification may require exploration/excavation (potholing) if utilities are in conflict with proposed design.

The contractor/developer shall be responsible for utility locations in conjunction with their project until final Public Works approval is given.

- B. All new utilities located on right-of-way within a subdivision or on easements within a subdivision shall be installed underground and new and existing facilities shall comply with provisions as set forth in these standards and as directed by the Public Works Director. Easements for public utilities shall be as set forth in franchise agreements between the City and the utility.

Utilities converted from overhead to underground on existing roadways may be located within the right-of-way.

- C. A right-of-way use/construction permit is required of any utility, except City-owned facilities and utilities, who hold a franchise agreement with the City for any work done within the right-of-way and shall comply with all provisions of these Standards.

1.150120 Easements

- A. Where public utilities and/or their conveyance systems cross private lands, an easement must be granted to the City. The Community Development Department will process, record and file all easements. If the property is platted the easement may be conveyed when the short plat or final plat is filed. A licensed land surveyor or engineering firm capable of performing such work must prepare all easements not shown on a plat.
- B. Width for permanent easements shall be 15 feet for a single utility and 20 feet for dual utilities. Construction easements shall be 30 feet minimum in total width, including the permanent easement. When trench depths dictate or where pipe diameter or vault widths exceed four feet, a wider easement may be required by the City Engineer.
- C. Easements are required to be submitted in draft, unsigned for review and approval prior to plan approval. Signed copies are required prior to plan approval. Any change in design which places an amenity, (i.e., water, sewer, sidewalk, etc.,) outside of the easement may necessitate stopping of construction until plans and easements can be resubmitted and approved. Easements will be filed by the City upon satisfactory completion of the work.

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1.~~160~~130 Latecomers Agreements

Latecomer Agreements shall be in accordance with Stanwood Municipal Code Section 12.50.

1.~~170~~140 Utility Extension

Utility mains shall be extended to and through the extremes of the property being developed for loop closures and/or future development as determined by the City.

1.~~190~~150 Traffic Control

- A. The developer/contractor shall be responsible for interim traffic control during construction on or along traveled roadways. Traffic control shall follow the guidelines of the WSDOT/APWA Standards. All barricades, signs and flagging shall conform to the requirements of the MUTCD.

City utilities constructed within Snohomish County right-of-way shall follow all traffic control requirements as set forth by Snohomish County Department of Public Works and MUTCD.

Signs must be legible and visible and should be removed at the end of each work day if not applicable after construction hours.

- B. When road closures and detours cannot be avoided the contractor/developer shall notify the Public Works Department. The City ~~may require~~requires a detour plan, including closure duration, to be prepared, submitted and approved prior to closing any portion of a City roadway.
- C. A right-of-way use/construction permit may be required before work in the road can commence.

1.~~200~~160 Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility easements. The utilities on-call Underground Location Center phone number is 1-800-424-5555 or 811.

1.~~210~~170 As-builts

As-builts shall be provided to the City for approval by the City prior to final plat approval for plats or before building occupancy approval for other site development permits. The as-builts shall include the following information:

- Each sheet of the as-built drawing plans shall include the following statement along with the engineer's or surveyor's professional stamp (signed and dated): "These plans are as-built drawings and the information shown accurately reflects field conditions as of this date _____."
- It shall be the contractor's responsibility to record the location, by centerline station, offset, and depth below pavement, of all existing utilities uncovered or crossed during his work as covered under this project.
- It shall be the contractor's responsibility to have his surveyor locate by centerline station, offset and elevation, each major item of work done under this contract. Items of work shall be

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defined to include such items as: Fittings, Valves, Pipe, Hydrants, Services, Manholes, Catch Basins, Vaults, Structures, PRVs, Air/Vacs, Blowoffs.

- Sanitary Sewer: Plans and profiles including line size, slope and length. All manholes shall include location, type, rim/invert elevations, inside and outside drops. Side sewer shall be located and compared with the TV report.
- Water: Size, length and type of material shall be shown.
- Drainage: Survey and volume computations for the retention/detention pond shall be prepared and stamped by a professional engineer. Information for the system shall include plans and profiles including line size, slope, length and location. All manholes and catch basins shall include location, type, and rim/invert elevation.
- Streets: Information shall include monument locations, slopes, roadway limits and profiles. Center line slopes, bearings and curve data (vertical and horizontal). Driveway locations and widths. Right-of-way location and widths. Location of illumination, service cabinets, junction boxes, and signalization.

After the as-built drawings have been approved by the City Engineer, the following items must be provided for prior to final plat approval or issuance of the Certificate of Occupancy:

- ~~Three (3)~~ One (1) full-size paper copies;
- ~~One (1) Mylar copy;~~
- Electronic files of as-built drawings in AutoCAD format;
- Electronic files of as-built drawings in portable document file (PDF) format.

~~1.220~~180 Appeals

Appeals to decisions resulting from application of the Standards and Standard Details shall be made in accordance with SMC 17.80.09.

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CHAPTER 2

2.000 TRANSPORTATION AND STREETS

2A GENERAL CONSIDERATIONS

2A.010 General

The overall goal of this chapter is to encourage the uniform development of an integrated, fully accessible, public transportation system that will facilitate present and future travel demand with minimal environmental impact to the community as a whole.

This chapter provides minimum development standards supplementing the applicable standards as set forth in Chapter 1.

2B STREETS

2B.010 General

Street design must provide for the maximum loading conditions anticipated. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity.

2B.020 Design Standards

The design of streets and roads shall depend upon their type and usage. Standard design structures are shown in the City's Standard Details.

The layout of streets shall provide for the continuation of existing principal streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided. Minor streets, which serve primarily to provide access to abutting property, shall be designed to discourage through traffic (see the table of the Minimum Street Design Standards).

- A. Alignment. Alignment of arterials, major collectors and minor collectors shall conform with that shown in the Comprehensive Plan.
- B. Grade. Street grade should conform closely to the natural contour of the land. The minimum allowable grade shall be 0.5 percent. The maximum allowable grade shall be 14 percent, depending upon the street classifications.
- C. Width. The pavement and right-of-way width depend upon the street classification. The table of Minimum Street Design Standards show the minimum widths allowed.

Street widths shall be measured from face of curb to face of curb on streets with cement concrete curb and gutter.
- D. The General Notes that follow this page shall be included on any plans dealing with street design.

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MINIMUM STREET DESIGN STANDARDS

Design Standard	Arterial	Commercial/Neighborhood Major Collector	Neighborhood Minor Collector	Local Access/Cul-De-Sac
Transportation Standard Detail #	T-2	T-3	T-4	T-5/T-6
ROW Width (minimum)	86-98 ft.	57 ft.	49 ft.	49 ft.
Street Width (minimum)	48-60 ft. plus two 5 ft. bike lanes	36 ft.	28 ft.	28 ft.
Curb Requirements	Cement concrete curb (6") & gutter, both sides	Cement concrete curb (6") & gutter, both sides	Cement concrete curb (6") & gutter, both sides	Cement concrete curb (6") & gutter, both sides
Planter Width (minimum)	8.5 ft. wide both sides	5 ft. wide both sides	5 ft. wide both sides	5 ft. wide both sides
Sidewalk Requirements (minimum)	5 ft. wide both sides	5 ft. wide both sides	5 ft. wide both sides	5 ft. wide both sides
Utility Easements	10 ft. both sides	10 ft. both sides	10 ft. both sides	10 ft. both sides
Minimum-Maximum Grade	.50% to 7%	.50% to 12%	.50% to 12%	.50% to 14%
Intersection Curb Radius	30 ft.	30 ft.	30 ft.	25 ft.
Design Speed (MPH)	45	35	35	25
Stopping Sight Distance	360 ft.	250 ft.	250 ft.	155 ft.
Intersection (Entering) Sight Distance	500 ft., driver's eye 15 ft. back from edge of traveled way and 3.5 ft. above pavement	390 ft., driver's eye 15 ft. back from edge of traveled way and 3.5 ft. above pavement	390 ft., driver's eye 15 ft. back from edge of traveled way and 3.5 ft. above pavement	280 ft., driver's eye 15 ft. back from edge of traveled way and 3.5 ft. above pavement
Utility Easements	10' each side of street	10' each side of street	10' each side of street	10' each side of street
Parking	none	8' each side	8' one side	8' one side
Daily Traffic Volume	> 3000 ADT	1001-3000 ADT	250-1000 ADT	< 250 ADT

2B.030 Street Construction General Notes

1. All workmanship and materials shall comply with the Stanwood Street and Utility Standards and Standard Details and the most current copy of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction.
2. The contractor shall be responsible for all traffic control in accordance with MUTCD. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for approval. No work shall commence until all approved traffic control is in place.
3. A licensed engineering or surveying firm shall stake all curb and gutter, street grades, sidewalk grades and any other vertical and/or horizontal alignment.

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4. Where new asphalt joins existing, the existing asphalt shall be cut to a neat vertical edge and tacked with Asphalt Emulsion type, CSS-1, in accordance with the Standard Specifications. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grade AR-4000W paving asphalt.
5. Compaction of subgrade, rock and asphalt shall be in accordance with the Standard Specifications.
6. Form and subgrade inspection by the City is required before pouring concrete. Twenty-four hours notice is required for form inspection.
7. See the Stanwood Street and Utility Standards Chapter 2 for testing and sampling frequencies.
8. Prior to issuance of a Certificate of Occupancy, the Developer shall provide and install all street name, regulatory, warning and guide signs.

2B.040 Functional Classifications

City streets are divided into arterials, major collectors, minor collectors, and local access streets in accordance with regional transportation needs and the functional use each serves. Function is the controlling element for classification and shall govern right-of-way, road width and road geometrics. The City of Stanwood Comprehensive Plan provides street category definitions and street classifications. Streets not included in the Comprehensive Plan will be classified by the Public Works Director.

2B.050 Street Naming/Addressing

Streets and roads shall be named according to specific criteria. All streets lying in Stanwood are designated northwest (NW). "Avenues" run north – south and are numbered with the exception of certain long-standing historical names. "Streets" run east – west and are also numbered except for certain historical names. "Drives" are irregular or diagonal streets over two grid blocks in length not conforming to the grid pattern. "Places" shall be east - west streets, parallel to but between "Streets". "Ways" shall be north - south streets parallel to but between "Avenues". "Courts" shall be cul-de-sacs which cannot be extended. Courts are to be named or numbered and carry the number of the preceding street or avenue. "Loops" shall be small loop-type streets to carry the name of the street from which they originate. "Lanes" shall be private streets.

Note that a few exceptions to the "Place" rule exist within the City. "Manor Place", "Village Place" and "Country Place" function like "Ways". They are addressed as such.

An address number will be assigned to all new buildings at the time the building permit is issued. It is then the owner's responsibility to see that the house numbers are placed clearly and visibly at the main entrance to the property or at the principal place of egress.

The developer must check with the Community Development Director regarding the naming of streets and assigning house numbers. This should be done at the time the preliminary plat is submitted and again upon approval of the final plat. The Community

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Development Department will insure that the name assigned to a new street is consistent with policies of the City.

2B.060 Signing

The developer is responsible for providing all traffic control signs. Traffic control signing shall comply with the provisions as established by the US Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD).

Street signs for any private street shall have a white background with green lettering.

2B.070 Right of Way

Right of way widths shall be per the minimum Street Design Standards Table and Transportation Standard Details.

Right-of-way requirements may be increased if additional lanes; pockets; transit lanes; bus loading zones; operational speed; bike lanes; utilities; schools or other factors are required as determined by the Public Works Director.

Right-of-way shall be conveyed to the City on a recorded plat or by right-of-way dedication deed.

2B.080 Private Streets

See definition of private streets in Chapter 1.

Private streets may be allowed under the following conditions:

1. Permanently established by tract providing legal access to serve no more than four dwelling units, and have a minimum ~~24~~22-foot paved surface with curb and gutter, and have a sidewalk, on one side of the private street 5 feet in width of such a design that prevents parking upon the sidewalk. All sidewalks will meet ADA requirements.
2. Accessible at all times for emergency and public service vehicle use.
3. Will not result in land locking of present or future parcels nor obstruct public street circulation.
4. Covenants have been approved, recorded and verified with the City which provide for maintenance of the private streets and associated parking areas by the owner or homeowners association or other legal entity.
5. A private street shall have a minimum length of 50 feet and a maximum length of 400 feet.
6. Multi-family and mixed use complexes may have private streets that serve up to 4 units as ingress/egress and parking.

2B.090 Street Frontage Improvements

- A. All commercial and residential (including multi-family) developments, plats, and short plats shall install street frontage improvements at the time of construction.

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Such improvements shall include curb and gutter; sidewalk; street storm drainage; street lighting system; traffic signal modification, relocation or installation; utility relocation; landscaping and irrigation and street widening all per these Standards. Plans shall be prepared and signed by a licensed civil engineer registered in the State of Washington.

- B. All frontage improvements shall be made across full frontage of property, including curb, gutter and sidewalk fronting the property and half street improvements. These improvements shall include a half-street overlay of an existing frontage road and repairing existing damaged pavement and/or subgrade.
- C. Frontage improvements include installation of street illumination in accordance with the requirements of these Standards. Street lighting may be installed on existing utility poles should they exist, otherwise new street lighting poles shall be provided.
- D. Deferral of improvements If the Public Works Director and Community Development Director deem that the above such improvements cannot be accomplished at the time of building construction, a recorded agreement on forms approved by the City Attorney shall be completed which provide for these improvements to be installed at a specific date by the applicant. Financial hardship shall not be considered as a reason for delaying improvements.

2B.100 Cul-de-sac

Streets designed to have one end permanently closed shall have a minimum length of 50 feet and a maximum length of 400 feet. At the closed end, there shall be a widened “bulb” having a minimum paved traveled radius as shown in the Standard Detail. Cul-de-sac length shall be measured along the centerline of the cul-de-sac road from the extension of the intersecting right-of-way line extended to the center of the cul-de-sac bulb. Hammerhead turnarounds may be considered through the modification process in Section 1.055.

2B.110 Temporary Dead Ends

Where a street is temporarily dead ended, turn around provisions must be provided where the road serves more than one lot.

2B.120 Half Street

A half street may be permitted subject to approval by the Public Works Director when:

- A. The half street will be located near the edge of a development and there is a reasonable assurance of obtaining the prescribed additional right-of-way from the adjoining property suitable for completion of a full-section roadway, and
- B. Such alignment is consistent with or will establish a reasonable circulation pattern, and

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- C. The right-of-way width shall be half of the required right-of-way width per these Standards plus sufficient right-of-way to install a 12-foot lane for two-way traffic and appurtenant drainage components, and
- D. A minimum 12-foot paved lane is constructed adjacent to the half street improvements consistent with these Standards for two-way traffic. The edge of said lane shall be finished with permanent curb and gutter to insure proper drainage, bank stability and traffic safety.

2B.130 Medians

A median shall be in addition to, not part of, the specified roadway. Medians shall be designed so as not to limit turning radius or sight distance at intersections.

2B.140 Intersections

- A. Traffic control will be as specified in the Manual on Uniform Traffic Control Devices (MUTCD) or as modified by the City Engineer as a result of appropriate traffic engineering studies. Modification to this standard may be considered pursuant to Section 1.055.
- B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. Sharp angled intersections shall be avoided. For reasons of traffic safety, a “T” intersection (three-legged) is preferable to the crossroad (four-legged) intersection for local access streets. For safe design, the following types of intersection features should be avoided:
 - 1. Intersections with more than four intersecting legs;
 - 2. “Y” type intersections where streets meet at acute angles;
 - 3. Intersections adjacent to bridges and other sight obstructions.
- C. Spacing between adjacent intersecting streets, whether crossing or “T” should be as follows:

Arterial	300 feet
Major Collector	200 feet
Minor Collector	200 feet
Local Access Street	150 feet

When different class streets intersect, the higher standard shall apply on curb radii and intersection spacing. Modification to this standard may be considered pursuant to Section 1.055.

- D. On sloping approaches at an intersection, landings shall be provided with grade not to exceed one foot difference in elevation for a distance of 30 feet approaching any arterial, or 20 feet approaching a collector or local access street, measured from nearest right-of-way line (extended) of intersecting street.

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- E. Intersection improvements that occur on State Route 532 shall also be reviewed and approved by the Washington State Department of Transportation.

2B.150 Driveways

A. General

1. All abandoned driveway areas on the same frontage shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored.
2. All driveways shall be constructed of portland cement concrete (PCC) or of hot mix asphalt (HMA) and shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction. PCC driveways for uses other than single-family residential shall have a compressive strength of not less than 4,000 pounds per square inch (PSI).
3. Joint-use driveways serving two adjacent parcels may be built on their common boundary upon formal written agreement by both property owners and approval of the City. The agreement shall be a recorded easement for both parcels of land specifying joint usage.
4. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve.
5. No commercial driveway shall be approved where backing onto the sidewalk or street will occur.
6. Driveway access shall not be allowed within 100 feet of a collector intersection or within 50 feet of a local access intersection. This distance shall be measured from nearest edge of proposed driveway access to edge of intersecting road pavement or to the point at which the sidewalk curves at the intersection.
7. Driveways shall be aligned with existing driveways on the opposite side of the street on two or three lane streets. Where the driveways cannot be aligned, the driveways shall be separated in accordance with the Standard Detail.
8. Driveways shall be offset a minimum of 100 feet from existing driveways on the opposite side of streets with four or more lanes.
9. Driveways constructed in areas where vertical curb and gutter frontage improvements are required shall be constructed as drop curb driveways.
10. Residential driveways shall have a minimum separation of ten feet between the nearest edges of the access points.

B. Width

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1. Residential driveways for single-family dwellings or duplexes shall have a minimum width of 10 feet and a maximum width of 30 feet.
2. One-way commercial driveways accessing the public right-of-way shall have a minimum width of 15 feet and maximum width of 30 feet. See Stanwood Municipal Code Section 17.105.120 (6) for parking aisle widths requirements from the driveway.
3. Two-way commercial driveways shall have a minimum width of 25 feet and a maximum width of 40 feet. See Stanwood Municipal Code Section 17.105.120 (6) for parking aisle widths requirements from the driveway.
4. A road approach or wider driveway width may be approved by the City Engineer where a substantial percentage of oversized vehicle traffic exists, where divisional islands are desired, or where multiple exit or entrance lanes are needed.
5. Parking lot circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a one way parking lot flow.
6. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as part of the sign development review process. Tapers shall be designed per Institute of Transportation Engineers specifications.

C. Access to State Route 532 and Adjoining Streets

Access to State Route 532 and adjoining City Streets shall comply with Washington Administrative Code Sections 468-51 and 468-52. Fees for processing, review and inspection of projects in areas where Stanwood controls access management shall be in accordance with City of Stanwood City Code in lieu of those listed in the Washington Administrative Code.

2B.160 Sight Obstruction

The following sight clearance requirements take into account the proportional relationship between speed and stopping distance.

The sight distance area is a clear view triangle formed on all intersections by extending two lines of specified length (A) and (B) as shown below from the center of the intersecting streets along the centerlines of both streets and connecting those endpoints to form the hypotenuse of the triangle. The area within the triangle shall be subject to said restrictions to maintain a clear view on the intersection approaches. Refer to Standard Detail T-1 for additional information.

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Sight Distance Triangle:

A. Stop or Yield Controlled Intersection

	Sight Distance (Feet)	
	(A)	(B)
Speed Limit	Major Street	Minor Street
20 mph	200	*
25 mph	250	*
30 mph	300	*
35 mph	350	*
40 mph	400	*

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*Sight distance measured from a point on the minor road 15 feet from the edge (extended) of the major road pavement and measured from a height of eye at 3.50 feet on the minor road to height of object at 4.25 feet on the major road.

B. Uncontrolled Intersection

	Sight Distance (Feet)	
	(A)	(B)
Speed Limit	Major Street	Minor Street
20 mph	90	90
25 mph	110	110
30 mph	130	130
35 mph	155	155
40 mph	180	180

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- C. The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3 feet and 10 feet above the existing surface of the street.
- D. Exclusions. Sight obstructions that may be excluded from these requirements include: fences in conformance with this chapter; utility poles; regulatory signs; trees trimmed from the base to a height of 10 feet above the street; places where the contour of the ground is such that there can be no cross visibility at the intersection; saplings or plant species of open growth habits and not in the form of a hedge which are so planted and trimmed as to leave at all seasons a clear and unobstructed cross-view; buildings constructed in conformance with the provisions of appropriate zoning regulations; and preexisting buildings.

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2B.170 Surfacing Requirements

Surfacing requirements shall be determined by a geotechnical investigation of the existing soils and pavement design by a licensed engineer. The pavement cross-section shall meet the following minimum requirements.

- A. Collector Streets
 - Surfacing: 4" Hot Mix Asphalt, PG 64-22
 - Top course: 2" crushed surfacing top course
 - Base: ~~4~~12" ballast
 - Alternate-
 - Surfacing: 4" Hot Mix Asphalt, PG 64-22
 - Top course: 4" asphalt treated base
 - Base- 2" crushed surfacing base course
- B. Local Access Street
 - Surfacing: ~~3~~2" Hot Mix Asphalt, PG 64-22
 - ~~4~~4" Asphalt Treated Base
 - Top course: 2" crushed surfacing top course
 - Base: ~~8~~6" ballast
 - Alternate:
 - Surfacing: ~~3~~2" Hot Mix Asphalt, PG 64-22
 - Top course ~~3~~4" asphalt treated base
 - 2" crushed Surfacing top course
 - Base: 2" crushed surfacing base course
- C. City-Owned Parking Lot
 - Surfacing: 3" Hot Mix Asphalt, PG 64-22
 - Top course: 2" crushed surfacing top course
 - Base: 8" ballast
 - Alternate-
 - Surfacing: ~~3~~2" Hot Mix Asphalt, PG 64-22
 - Top course ~~2~~4" asphalt treated base
 - Base: 2" crushed surfacing base course
- D. Sidewalks
 - Surfacing: 4" commercial concrete
 - Base: 4" crushed surfacing top course

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Asphalt sidewalks will not be permitted unless otherwise approved by the Public Works Director.

- E. Class I Bikeway
 - Surfacing: Commercial concrete
 - Base: 2" crushed surfacing top course
 - Alternate-
 - Surfacing: 2" Hot Mix Asphalt, PG 64-22
 - Base: 4" ballast

2B.175 Prohibition on Cuts for Newly Paved Streets

The City does not allow street cuts on streets that have been newly paved or resurfaced for a period of three (3) years unless an emergency to public health and safety exists. If a newly paved street is cut for any reason, the required asphalt repairs will be per the Public Works Director or City Engineer. In most cases, the street will need to be entirely resurfaced with a minimum two (2) inch overlay from curb to curb ~~in 50' from~~ the area of work. The Public Works Director or City Engineer may allow tunneling as an alternative to street cuts as long as there is enough space outside the paved surface to accommodate the tunneling operation. Tunneling will not be allowed if the asphalt pavement surface will be impacted. All damage caused during the work shall be repaired in kind within five (5) working days from the completion of the work.

2B.180 Temporary Street Patching

Temporary restoration of trenches shall be accomplished by using 0.17 feet Hot Mix Asphalt, PG 64-22 when available or 0.17 feet medium curing (MC-250) Liquid Asphalt (cold mix), 0.17 feet Asphalt Treated Base (ATB), or steel plates.

ATB used for temporary restoration may be dumped directly into the trench, bladed and rolled. After rolling, the trench must be filled flush with asphalt to provide a smooth riding surface.

All temporary patches shall be maintained by the contractor until such time as the permanent pavement patch is in place.

Temporary patches will be completed within the same day as opened unless the Public Works Director has approved other arrangements.

If the contractor is unable to maintain a patch for whatever reason, the City will patch it at actual cost plus overhead and materials.

2B.190 Trench Backfill and Restoration

Trench restoration shall be patch plus half-street overlay meeting the following requirements:

- A. All trench and pavement cuts shall be made by spade bladed jackhammer or sawcuts. The cuts shall be a minimum of 1 foot outside the trench width.

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- B. All trenching shall be backfilled with bank run gravel for trench backfill conforming to the WSDOT/APWA Standards. The trench bedding and backfill shall be compacted to 95 percent maximum density, as determined by ASTM D1557.

Existing material may be used for backfill only outside of the roadway section if it is determined by the City to be suitable for backfill. The contractor may use the native material except that the top 8 inches of trench shall be 2-1/2 inches minus ballast. All trench backfill materials shall be compacted to 95 percent density as determined by ASTM D1557.

Backfill compaction shall be performed in 6 inch lifts.

Replacement of the asphalt pavement or Portland Concrete Cement shall be of existing depth plus 1 inch or 3 inches total, whichever is greater.

- C. Tack shall be applied to the existing pavement and edge of cut and shall be emulsified asphalt grade CSS-1 as specified in the WSDOT/APWA Standards. Tack coat shall be applied as specified in the WSDOT/APWA Standards.
- D. Hot Mix Asphalt, PG 64-22 shall be placed on the prepared surface by an approved paving machine whenever available or as directed by the DPW and shall be in accordance with the applicable requirements of the WSDOT/APWA Standards, except that longitudinal joints between successive layers of asphalt shall be displaced laterally a minimum of 12 inches unless approved as a modification pursuant to Section 1.055. Fine and coarse aggregate shall be in accordance with WSDOT/APWA Standards. Asphalt over 2 inches thick shall be placed in equal lifts not to exceed 2 inches each.

All street surfaces, walks or driveways within the street trenching areas affected by the trenching shall be feathered and shimmed to an extent that provides a smooth-riding connection and expeditious drainage flow for the newly paved surface. Shimming and feathering as required by the City Engineer shall be accomplished by raking out the oversized aggregates from the PG 64-22 mix as appropriate or by using a finer mix.

Surface smoothness shall be per the WSDOT/APWA Standards. The paving shall be corrected by removal and repaving of the trench only.

- E. All joints shall be sealed using paving asphalt AR4000W.
- F. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition.
- G. The final patch shall be completed as soon as possible however no longer than 30 days after first opening the trench. This time frame may be adjusted if delays are due to inclement paving weather, or other adverse conditions that may exist. However, delaying of final patch or overlay work is allowable only subject to the City Engineer's approval. The City Engineer may deem it necessary to complete the work within the 30 days time frame and not allow any time

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extension. If this occurs, the Contractor shall perform the necessary work as directed by the City Engineer.

- H. A half-street overlay shall be provided for all travel lanes affected by utility installation when the utility is installed in any manner that is not perpendicular to the road centerline. Existing road edges to remain shall be ground down to accept the asphalt overlay and provide an appropriate centerline and road edge.

2B.200 Staking

- A. All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- B. The minimum staking of streets shall be as follows: Stake top back of curb every 50 feet in tangent sections and 25 feet in curved sections plus grade breaks, PVCs, PVTs, high point and low points, with cut or fill to finished grade.

2B.210 Testing

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT/APWA Standards.

At a minimum, one slump test and two test cylinders shall be taken once per day for concrete construction. Asphalt compaction tests are required as follows:

Under 50 square feet = one

50 - 100 square feet = two

100 - 300 square feet = three

Over 300 square feet = one every 200 sq feet or every 100 lineal feet of trench if applicable

2C SIDEWALKS, CURBS AND GUTTERS

2C.010 General

All properties within commercial zones of the City, properties abutting arterial streets or collector streets and properties upon which there are to be buildings open to the public (e.g. stores), shall, in conjunction with new construction on such properties or alterations or improvements which constitute 25 percent or more of the assessed value of the existing structures on the property, have sidewalks constructed along abutting streets. Curbs and gutters must also be constructed along the abutting street when the conditions of drainage require curbs and gutters.

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2C.020 Design Standards

Plans for the construction of sidewalks, curbs and gutters are to be submitted as part of the street plans when applicable.

The following minimum standards must be met in the design and construction of sidewalks, curbs and gutters. These standards may be modified pursuant to Section 1.055.

2C.030 Sidewalks

Sidewalks shall be constructed of commercial concrete four inches thick. When the sidewalk, curb and gutter are contiguous, the width of the sidewalks shall be measured from back of curb and gutter to back of sidewalk. Concrete mix for sidewalks, curb and gutters shall be no less than Class 3000 as outlined in WSDOT/APWA Standards.

- A. Arterial Streets. Sidewalks, curbs and gutters shall be required on both sides of all arterial streets interior to the development. Sidewalks, curbs and gutters shall also be required on both sides of streets contiguous to said development, with provisions made for latecomer agreements. Arterial streets for purposes of this subsection shall include major arterials, secondary arterials and collector streets and defined in the SMC.
- B. Local Access Streets. Sidewalks shall be required on both sides of local access streets interior to the development and on the development side of local access streets abutting the exterior of said development including cul-de-sacs.
- C. The design and construction of all sidewalks, curbs, gutters and walkways shall meet the following minimum standards:

The width of sidewalks shall be as shown in the street design illustrations. Those walkway and bike trails designated in the bike plan of the City as bike paths shall, in addition, meet the minimum width requirements established for said bike paths. The design of all sidewalks shall provide for a gradual rather than an abrupt transition between sidewalks of different widths or alignments.
- D. Form and subgrade inspection by the City are required before sidewalk is poured.
- E. Monolithic pour of curb, gutter and sidewalk will not be allowed, except in pedestrian curb ramp areas.

2C.040 Curb and Gutter

Cement concrete curb and gutter shall be used for all street edges unless otherwise approved by the Public Works Director based on the modification criteria in Section 1.055. All curbs and gutters shall be constructed of Class 3000 Concrete as shown in the Standard Details. No rolled curb will be allowed.

Concrete extruded curb and gutter per WSDOT/APWA Standards is allowed.

Form and subgrade inspection by the City are required before curb and gutter are poured.

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2C.050 Handicap Ramps

All sidewalks must be constructed to provide for handicap ramps in accordance with the Federal American Disability Act Requirements.

Handicap ramps shall be constructed of Class 3000 Concrete. Form and subgrade inspection by the City are required before handicap ramp is poured.

2C.060 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington.

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

The minimum staking of curb, gutter and sidewalk shall be as directed by the City Engineer or as follows:

Stake top back of curb every 50 feet in tangent sections and 25 feet in curved sections plus grade breaks, PVCs, PVTs, high point and low points, with cut or fill to finished grade.

2C.070 Testing

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT/APWA Standards.

At a minimum, one slump test and two test cylinders shall be taken once per day.

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

2D BIKEWAYS

2D.010 Urban Trail

Bikeway or Urban Trail construction is required in conjunction with any new development or redevelopment where the estimated cost of improvements on such properties exceeds 25 percent of the value of the existing structures, or plat or short plat approval, when the need for such a bikeway is indicated in the Stanwood Comprehensive Plan and/or the Snohomish County Area Bicycle Plan.

2D.020 Design Standards

The design of bicycle paths shall depend upon their type and usage.

Normally, bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use. Bikeways are categorized as follows:

- A. Class I Bike Path. A separate trail for use principally by bicyclists, but may be shared with pedestrians. These facilities are separated from motor vehicle roadways.

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- B. Class II Bike Lane. A portion of a road that is designated by signs and/or pavement markings for bicycle use. These facilities are usually adjacent to the motor vehicle roadway.
- C. Class III Bike Route. A road that is designated with signs as a bicycle route, where bicycle usage is shared with motor vehicles on the street or, less desirable, with pedestrians on a sidewalk or walkway.
- D. Class IV Shared Roadway. A facility within commercial and high-density urban centers where sidewalk bicycling is not permitted. No special designations or design criteria are directed toward bicycle use. A 14-foot outside travel lane is required when a roadway is designated a shared bikeway.
- E. Class I, II, III, or IV Bikeways, as appropriate, shall be provided when traffic analysis or traffic planning indicates substantial bicycle usage which would benefit from a designated bicycle facility as determined by the City except where noted herein.

2D.030 Staking and Testing

Staking and testing shall be done in accordance with street staking and testing requirements.

2E ILLUMINATION

2E.010 General

All new commercial or residential subdivisions, short plats or property development shall provide street lights for public streets in accordance with the Standards for such improvements of the City and they shall be owned and operated by the City. Illumination is required on frontage streets as well as within developments.

2E.020 Design Standards

A street lighting plan shall be required for all street light installations. Type of installation shall be as set forth in WSDOT/APWA Standards and WSDOT Standard Plans and as directed by the City except where noted herein. Period lighting is required and must be approved by the City.

All public street light designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All developments shall submit the lighting plan on a separate sheet. After system is completed and approved, a set of "as built" mylars or reproducibles shall be submitted to the City as a permanent record.

Calculations should include illuminance spacing; illumination level; uniformity ratio; line losses; power source; and other necessary details for the electrical and physical installation of the street lighting system. The lighting engineer shall use the WSDOT/APWA Standards and the following table regarding Illumination Levels.

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Illumination Levels

Street Classification	Horizontal Foot Candles	Uniformity Ratio (average to minimum)
Arterials	1.5 FC	3:1
Commercial/Industrial Collectors	1.0 FC	3:1
Residential Collectors	0.7 FC	3:1
Local Access Residential Streets	0.3 FC	None; 300-foot maximum spacing

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All street lights shall be on two hundred forty volt (240v), single phase systems. The exact location of the power source should be indicated together with the remaining capacity of that circuit. System continuity and extension should be considered.

Contractor cabinets equipped with electrical meters, time clocks, circuit breakers, and other required components are required on commercial installations of five or more street lights.

All street lighting, wiring and service connectors shall be located underground except in residential areas where power distribution poles exist.

Particular attention shall be given to locating luminaries near intersections, at all street ends and at pedestrian, bicycle, and/or equestrian crossings.

Period lighting shall be required by the Public Works Director consistent with the Comprehensive Plan.

The following General Notes shall be included on any plans dealing with street design in addition to all applicable requirements as set forth in Chapter 1.

2E.030 Street Light Construction General Notes

1. All workmanship, materials and testing shall be in accordance with the most current Washington State Department of Transportation/American Street and Utility Association Standard Specifications for Road, Bridge, and Municipal Construction, National Electrical Code and Street and Utility Construction Standards unless otherwise specified below. In cases of conflict, the most stringent guideline shall apply. When the most stringent guideline is not clear, the City Engineer will make the determination. The Electrical Contractor shall be familiar with all above stated publications and guidelines as they will be strictly enforced by the City.
2. All safety standards and requirements shall be complied with as set forth by the State of Washington, Department of Labor and Industries.
3. The contractor shall be responsible for all traffic control in accordance with the Manual on Uniform Traffic Control Devices. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for

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approval (See WSDOT/APWA Standards Plans K2-K21). No work shall commence until all approved traffic control is in place.

4. A pre-construction meeting shall be held with the City of Stanwood construction inspectors and the utility provider prior to the start of construction.
5. All approvals and permits required by the City of Stanwood shall be obtained by the contractor prior to the start of construction.
6. It shall be the responsibility of the contractor to have a copy of an approved set of plans on the construction site at all times.
7. All surveying and staking shall be done by a surveying or engineering firm licensed in the State of Washington.
8. Temporary erosion control/water pollution measures shall be required in accordance with the WSDOT/APWA Standards and the Stormwater Management Manual for Western Washington. At no time will silts and debris be allowed to drain into an existing or newly installed facility.
9. If construction is to take place in the County right-of-way, the contractor shall notify the County and obtain all the required approvals and permits.
10. The contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate Line, at 1-800-424-5555, a minimum of 48 hours prior to any excavation. The contractor will also be responsible for maintaining all locate marks on the utilities lines that have been located.
11. Electrical permits and inspections are required for all street lighting installations within the City. The contractor is responsible for obtaining said permits prior to any type of actual construction. These permits are available from the Department of Labor and Industry which is also responsible for inspection.
12. Prior to installation of any materials, the Electrical Contractor shall submit for approval by the City, two copies of material catalog cuts, specifications, shop drawings and/or wiring diagrams. Any materials purchased or labor performed prior to such approval shall be at the contractor's risk.
13. Any modification to approved lighting plans shall be reviewed and approved by the City prior to installation. Any approved modifications shall be shown on a mylar as-built supplied to the City after the lighting installation is completed and before final acceptance. It shall be the responsibility of the Electrical Contractor to ensure these as-builts are provided to the City.

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2E.040 Staking

An engineering or surveying firm capable of performing such work shall perform all surveying and staking. The engineer or surveyor directing such work shall be licensed by the State of Washington.

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

The minimum staking of luminaries shall be as follows:

- A. Location and elevation to the center of every pole base.
- B. Location and elevation of each service disconnect.

2E.050 Testing

All illumination systems shall be subject to an electrical inspection which shall include megger testing and functional test. Lamp, photocell and fixture shall be under warranty for a period of one year.

2F SIGNALS

2F.010 General

Signals shall be installed per the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system of controllers, signals and appurtenances as required by the City.

2F.020 Design Standards

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT/APWA Standards and WSDOT Design Manual unless otherwise authorized by the City.

All public signal designs shall be prepared by an engineering firm capable of performing such work. The Engineer shall be licensed by the State of Washington. All applicable requirements shall be set forth in the Standards.

2F.030 Induction Loops

Induction loops shall be constructed per WSDOT/APWA Standards Specifications and the following:

- A. Loops shall not be cut into final lift of new asphalt.
- B. Loops shall be preformed in crushed surfacing top course (CSTC) before paving or shall be cut in existing asphalt or leveling course to subbase before intersection is overlaid.

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2F.040 Staking

An engineering or surveying firm capable of performing such work shall perform all surveying and staking. The State of Washington shall license the engineer or surveyor directing such work.

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

A minimum staking of signals shall be as follows:

- A. Location, with cut or fill to center of all pole bases.
- B. Location of junction box.
- C. Location of all corners of controller base.
- D. Location of service disconnect.

2F.050 Testing

All signals shall be subject to any necessary electrical inspections as well as requirements as set forth in the WSDOT/APWA Standards and WSDOT Design Manual.

A signal system shall not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30-day "check out" period as outlined below.

WSDOT District 1 laboratory and/or the City of Stanwood may require controller and cabinet testing. All specifications and material samples shall be submitted to the City for review and approval prior to installation.

2F.060 Check-Out Procedure

The contractor shall call for an intersection check-out after completing the controller cabinet installation along with all other signal equipment, complete with wiring connections. All parts and workmanship shall be warranted for one year from the date of acceptance.

New signals shall operate without any type of failure for a period of 90 days. The contractor shall have a person available to respond to system failure within 24 hours during the 30-day check-out period.

Failure of any control equipment or hardware within the checkout period shall restart the 30-day check-out period.

2G ROADSIDE FEATURES

2G.010 General

Miscellaneous features included herein shall be developed and constructed to encourage the uniform development and use of roadside features wherever possible.

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2G.020 Design Standards

The design and placement of roadside features included herein shall adhere to the specific requirements as listed for each feature, and when applicable, to the appropriate standards as set forth in Chapter 1.

2G.030 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington.

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

2G.040 Testing

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT/APWA Standards and with a frequency as specified in the WSDOT Construction Manual.

2G.050 Survey Monuments

- A. All existing survey control monuments which will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by a professional land surveyor licensed by the State of Washington. All applicable RCWs and WACs will be complied with. The monuments shall be replaced with the proper type; as outlined in B, or C, below, at the expense of the responsible builder or developer.
- B. Street type: arterial, bus routes and truck routes.
A pre-cast concrete monument with cast iron monument case and cover, installed per Standards, is required.
- C. Street type: commercial collector, neighborhood collector and local.
A poured-in-place concrete surface monument, per Standards, is required.
- D. Monument Locations.

Appropriate inner visible monuments as outlined in B or C above shall be placed:

- 1. At all street intersections.
- 2. At the PC and PT's of all horizontal curves or at the PI if it lies in the traveled roadway.
- 3. At all DLC corners, section corners, quarter corners and sixteenth corners that fall within the subdivision. Where these points fall outside of the pavement or sidewalks, a poured-in-place monument per Standards shall be

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set so that the top of the monument is one foot below the surface of the ground.

- E. The monument case shall be installed after the final course of surfacing has been placed.

2G.060 Bus Shelter and Amenities

For all new developments, the developer shall coordinate with the City, the Stanwood School District and Community Transit, regarding locations of new bus stops and bus shelters.

2G.070 Mailboxes

- A. During construction, existing mailboxes shall be accessible for the delivery of mail or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the US Postal Service. The mailboxes shall be reinstalled at the original location or, if construction has made it impossible, to a location as outlined below and approved by the US Postal Service.
- B. Location
 1. The bottom or base of the box shall be 36 to 42 inches above the road surface.
 2. The front of the mailbox shall be 6 inches behind the vertical curb face or the outside edge of shoulder.
 3. New developments. Clustered mailboxes are required. Contact the US Postal Service for details. Mailboxes in the public right of way require an encroachment permit. -Postmaster approval shall be submitted to the City prior to plan approval.
- C. Mailboxes shall be set on posts strong enough to give firm support, but not to exceed 4 x 4-inch wood or one 1 ½-inch diameter pipe, or material and design with comparable breakaway characteristics.

2G.080 Guard Rails

For purposes of design and location, all guard rails along roadways shall conform to the criteria of the "Washington State Department of Transportation Design Manual" as may be amended or revised.

2G.090 Retaining Walls

- A. Walls over four feet high or walls to be constructed in unstable soil conditions require a structural wall designed and stamped by a professional engineer qualified in retaining wall design. Structural walls require issuance of a building permit prior to construction. The City Building Official may require review of the retaining wall design by the City Engineer.

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- B. Rock walls may be used for erosion protection of cut or fill embankments up to a maximum height of eight feet in stable soil conditions which will result in no significant foundation settlement or outward thrust upon the walls.
- C. Any rock wall over 30 inches high in a fill section shall require an engineered design by a geotechnical engineer. The geotechnical engineer shall continuously inspect the installation of the wall as it progresses.

2G.100 Street Trees

Street trees shall be planted in accordance with the Stanwood Municipal Code.

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CHAPTER 3

3.000 STORMWATER MANAGEMENT

3.010 General

The standards established by this chapter are intended to represent the minimum standards for the design and construction of storm drainage facilities.

All storm drainage retention and detention, water quality and erosion control shall conform to the Washington State Department of Ecology's Stormwater Management Manual for Western Washington, 2005 edition (Stormwater Manual), except as modified herein.

All newly constructed and/or annexed stormwater facilities shall be owned and maintained by the City with the exception of commercial and multi-family developments which shall be located within easements that allow emergency maintenance by the City.

3.020 Design Standards

The design of storm drainage facilities shall depend on the system type and local site conditions. The design elements of storm drainage systems shall comply with the requirements identified in Stanwood Municipal Code Section 17.140 Stormwater Management Performance Standards, the applicable Standard Details incorporated in this document, and the following additional criteria.

- A. Retention/detention facilities may not be located in an area that is used to satisfy an open space requirement unless the design includes a vault or other approved underground system.

The City shall make the sole determination whether the proposed underground stormwater facilities are compatible with open space and satisfy the intent of the City for open space amenities.
- B. New detention facilities with slopes greater than 3:1 shall be fenced. Fencing posts, rails, chain-link mesh and accessories for facilities shall be black vinyl coated. Landscaping shall be provided around the perimeter of the fence in accordance with the requirements of the Stanwood Municipal Code Section 17.145.030.
- C. Stormwater facilities shall comply with the requirements identified in Stanwood Municipal Code Section 17.140. Stormwater Management Performance Standards
- D. Maximum catch basin spacing shall be 200 feet on grades to 3 percent, 300 feet for grades >3 percent. 500 feet may be acceptable for distances between access structures. No surface water shall cross any roadway.
- E. The General Notes that follow shall be included on any plans dealing with storm systems.

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3.030 Storm Drain Construction General Notes

1. All workmanship and materials shall be in accordance with City of Stanwood standards and the most current copy of the “State of Washington Standard Specifications for Road, Bridge and Municipal Construction” (WSDOT/APWA).
2. Temporary erosion/water pollution measures shall be required in accordance with the Stormwater Management Manual for Western Washington.
3. Comply with all other permits and other requirements by the City of Stanwood or other governing authority or agency.
4. A preconstruction meeting shall be held with the City prior to the start of construction.
5. All storm mains and retention/detention areas shall be staked for grade and alignment by an engineering or surveying firm capable of performing such work.
6. Storm drain pipe shall meet the following requirements:
 - A. Corrugated Polyethylene storm sewer pipe conforming to WSDOT/APWA standard specifications.
 - B. Reinforced concrete pipe conforming to the requirements of AASHTO M 170.
 - C. PVC pipe conforming to ASTM D 3034 SDR 35 or ASTM F 679 with joints and gaskets conforming to ASTM D 3212 and ASTM F 477.
 - D. Ductile iron pipe conforming to the requirements of AWWA C 151, thickness class as shown on the plans.
7. Special structures, oil/water separators and outlet controls shall be installed per plans and manufacturers’ recommendations.
8. All trenches located in the R.O.W. shall be backfilled with select material.
9. All storm drain pipe and services shall be installed with detectable marking tape installed 18” above the pipe crown, or 12” below finished grade (whichever is deeper). Detectable marking tape shall conform to WSDOT/APWA Standard Specifications, with message conveying “Storm Drain” and be colored coded green. In addition, all curvilinear pipes shall be installed with 14 gauge coated copper wire wrapped around the pipe, brought up bared and wrapped three times around the manhole ring or catch basin frame. Tape and installation shall be per WSDOT/APWA Standards. The contractor shall furnish and install the tape and wire.
10. Provide traffic control plan(s) as required in accordance with MUTCD.
11. Call Underground Utilities at 1-800-424-5555 a minimum of 48 hours prior to any excavations.

3.040 Conveyance

Stormwater conveyance systems and pavement drainage shall be designed in accordance with the applicable sections of the Washington State Department of Transportation’s Hydraulics Manual, latest edition.

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Catch Basins: At a minimum, catch basins shall be spaced no greater than 150 feet for grades less than one percent, 200 feet for grades between one and three percent; and 300 feet for grades three percent and greater. Catch basins shall be placed at intersections to prevent runoff from flowing through street intersections.

Provide Type 2 catch basins where the depth to the invert of the pipe exceeds 5 feet.

Unless otherwise specified, vaned grates shall be used with standard frame in the traveled way, gutter, or shoulder. Vaned grates shall not be located within crosswalks.

At sag vertical curves, on the end of downgrade cul-de-sacs, or before intersections with a grade four percent or greater, an analysis shall be done to assure that typical catch basin grates will collect the surface runoff. Through-curb inlet frames on vertical curbs shall be provided as necessary to collect excessive volumes of runoff or protect against plugged grates and overflow situations.

Pipe: Storm drain pipe within a public right-of-way or easement shall be sized to carry the maximum anticipated runoff from the possible contributing area.

The minimum main size shall be 12 inches in diameter. Cross street lateral lines may be 8 inches in diameter. Nothing shall preclude the City from requiring the installation of a larger-sized main if the City determines a larger size is needed to serve adjacent areas or for future service.

All storm drain pipe and culvert material except ductile iron shall be covered by a minimum two feet of cover. All ductile iron storm drain pipe and culvert material shall be covered by a minimum of one foot of cover.

Channels: Any open channels proposed to be located within public right-of-way shall be maintained by the developer/property owner.

General: Roof and yard drains, or other concentrated flow from adjacent property shall not discharge over the surface of roadways, sidewalks, walkways, or shoulders. Storm drainage shall not impact sanitary sewer flows.

3.050 Staking

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

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

The minimum staking of storm sewer systems shall be as directed by the City Engineer as follows:

- A. Stake centerline alignment every 50 feet with cut or fill to invert of pipe.
- B. Stake location of all catch basins, manholes and other fixtures for grade and alignment with cut or fill to rim and invert of all pipes.
- C. Grade stake or slope stake (as appropriate) at intervals, sufficient to control location, size and depth of retention/detention facilities.

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3.060 Trench Excavation

Trench excavation shall be in accordance with WSDOT/APWA Standards and these Standards in Chapter 2 Transportation and Streets.

3.070 Backfilling

Backfilling shall be in accordance with WSDOT/APWA Standards and these Standards in Chapter 2 Transportation and Streets.

3.080 Street Patching and Restoration

Street patching and restoration shall be per WSDOT/APWA Standards, these Standards in Chapter 2 Transportation and Streets and specific requirements of the agency with jurisdiction.

3.090 Stormwater Manual Revisions for Projects in Stanwood

Minimum Requirement #7: Flow Control:

For projects that drain to the Irvine Slough strictly through man-made conveyance components, the existing conditions shall be those that existed on the site as of December 31, 1992 and Flow Control BMPs shall be designed using the Santa Barbara Urban Hydrograph (SBUH) hydrologic analysis sized as follows:

- Limit the developed 2-year, 24-hour peak flow to the existing 2-year, 24-hour peak flow;
- Limit the developed 10-year, 24-hour peak flow to the existing 10-year, 24-hour peak flow;
- Limit the developed 100-year, 24-hour peak flow to the existing 100-year, 24-hour peak flow;
- Volume Correction Factor: A volume correction factor of shall be applied to the volume of the BMP without changing the depth or the design of the outlet structure. The correction factor shall be determined as follows:

Correction Factor = $1.11 + 0.0039 * \text{site impervious area in percentage}$.

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CHAPTER 4

4.000 WATER

4.010 General

Any extension of the Stanwood Water System must be approved by the City and must conform to Washington State Department of Health guidelines, North Snohomish County Coordinated Water System Plan, City of Stanwood Comprehensive Water System Plan, and Stanwood Fire Department requirements.

In designing and planning for any development, it is the developer's responsibility to see that adequate water for both domestic use and fire protection is attainable. The developer must show, in the proposed plans, how water will be supplied and whether adequate water pressure and fire flows will be attained in case of fire. A hydraulic analysis of the system will be performed by the City to ensure necessary improvements are being provided.

Anyone who wishes to extend or connect to the City's water system shall contact the Community Development Department. The proposed extension/connection will be reviewed in the context of the applicable permit process for the proposed development and is subject to the submission requirements and fees, including connection and plant investment fees, for that process. The Community Development Department will coordinate the required review with other City Departments through the permit process.

Questions about existing service improvements, repairs or temporary water use should be directed to Public Works. Prior to the release of any water meters, all improvements must be completed and approved including granting of right-of-way or easements, and all applicable fees must be paid.

4.020 Design Standards

The design of any water extension/connection shall conform to City Standards and any applicable standards set forth herein.

The layout of extensions shall provide for the future continuation and/or "looping" of the existing system as determined by the City.

The General Notes on the following pages shall be included on any plans dealing with water system design.

4.030 Water Main Construction General Notes

1. All workmanship and material shall be in accordance with City of Stanwood standards and the most current copy of the State of Washington Standard Specifications for Road, Bridge, AWWA Standards, APWA and Municipal Construction.
2. A preconstruction meeting shall be held with the City prior to the start of construction.
3. Water mains shall be ductile iron cement mortar lined thickness Class 52.

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4. Gate valves shall be resilient wedge, NRS (Non Rising Stem) with O-ring seals. Valve ends shall be mechanical joint or ANSI flanges. Gate valves shall have stainless steel bonnet and gland bolts. Gate valves shall have electrostatically applied fusion-bonded epoxy-resin coating meeting or exceeding AWWA C550. Valves shall conform to AWWA C509 or C515. Gate valves shall be Mueller, M & H, AVK, or Waterous. Existing valves to be operated by City employees only.
5. Hydrants shall be M & H Reliant Style 929, or Clow F-2500 or Waterous Pacer. Hydrants shall be bagged until system is approved. Hydrants will come complete with Storz adapters.
6. All lines shall be chlorinated and tested in conformance with the above referenced specification (Note 1).
7. All water pipes and services shall be installed with detectable marking tape installed 18" above the pipe crown, or 12" below finished grade (whichever is deeper). Detectable marking tape shall conform to WSDOT/APWA Standard Specifications. In addition, all ~~non-metallic~~ pipes and services shall be installed with 14 gauge coated copper wire wrapped around the pipe, brought up with three feet of loose wire and tied off at valve body, meter box or as directed by the inspector. The contractor shall furnish and install the tape and wire.
8. Provide traffic control plan(s) as required in accordance with MUTCD.
9. All water mains shall be staked for grades and alignment by an engineering or surveying firm capable of performing such work.
10. All existing ~~cement~~ asbestos cement pipes shall be handled and disposed of according to State and Federal statutes.
11. Call Underground Locate at 1-800-424-5555 a minimum of 48 hours prior to any excavations.
12. The City will be given 72 hours notice prior to scheduling a shutdown. Shutdowns shall not occur on Mondays, Fridays, City holidays, or the day before or after a City holiday. Where connections require "field verification", connection points will be exposed by contractor and fittings verified 48 hours prior to distributing shutdown notices.
13. At any connection to an existing line where a new valve is not installed, the existing valve must be pressure tested to City standards prior to connection. If an existing valve fails to pass the test, the contractor shall make the necessary provisions to test the new line prior to connection to the existing system or install a new valve.
14. All water pipe and appurtenances shall be lead free in accordance with the Safe Drinking Water Act, Section 1417.

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4.040 Main Line

- A. Water mains shall be sized to provide adequate domestic plus fire flow at minimum residual pressure of 20 psi. The quantity of water required shall not be less than as outlined in the Stanwood Comprehensive Water System Plan, unless adequate fire flow requirement calculations are provided. Maximum allowed velocity will be 8 feet per second.
- B. The minimum water main size shall be 8 inches diameter as long as fire flow requirements can be met. Larger size mains are required in specific areas outlined in the Stanwood Comprehensive Water System Plan. Nothing shall preclude the City from requiring the installation of a larger sized main in areas not addressed in the Comprehensive Water System Plan if the City determines a larger size is needed to meet fire protection requirements or provide future service.
- C. Where practical, mains shall be looped to increase reliability and fire flow capacity. Dead end 8-inch mains shall not be longer than 400 lineal feet unless approved modification pursuant to Section 1.055.
- D. For any new water main installation or replacement of any existing mains, a soil study to determine the corrosive properties of the soil within the project location shall be required at the developer's expense.
- E. If the City Engineer or designated representative determines soil conditions or other protection measures require PVC piping, then PVC pipe with 32#D5 Ultramag High Potential Magnesium anodes at all fittings shall be required. All pipes and fittings shall be fastened using stainless steel bolts.
- F. Except as required by section E above, all pipe for water mains shall have flexible gasket joints and shall be Ductile Iron Pipe. Ductile iron pipe shall conform to AWWA C 151 Class 52 and have a cement mortar lining conforming to AWWA C 104. Non-restrained joints shall be push-on type or mechanical joint, conforming to AWWA C 111.
- G. All fittings for ductile iron pipe shall be ductile iron fittings conforming to AWWA C 153. All shall be cement mortar lined conforming to AWWA C 104. All fittings shall be connected by flanges or mechanical joints. -All pipes and fittings shall be fastened using stainless steel hardware
- H. The maximum cover for all water mains from top of pipe to finish grade shall be 48 inches and the minimum cover shall be 36 inches, unless otherwise approved by modification pursuant to Section 1.055.4.050 Connection to Existing Water Main
- I. Joint restraint required on all watermain greater than or equal to 15% slope, or if any fill section

The developer's engineer shall be responsible for determining the scope of work for connection to existing water mains.

It shall be the Contractor's responsibility to field verify the location and depth of the existing main and the fittings required to make the connections to the existing mains.

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4.050 Service Interruption

The contractor shall give the City a minimum of 72 hours notice of any planned connection to an existing pipeline. This includes all cut-ins and live taps. Notice is required so any disruptions to existing services can be scheduled. The City will notify customers involved or affected by the water service interruption. The contractor shall make every effort to schedule water main construction with a minimum interruption of water service. In certain situations, the City may dictate scheduling of water main shutdowns so as not to impose unnecessary shutdowns during specific periods to existing customers.

4.060 Hydrants

- A. The lead from the service main to the fire hydrant shall be ductile iron cement mortar lined Class 52 no less than 6 inches in diameter up to 50 feet in length. Over 50 feet in length shall be sized to meet the fire flow requirement.
- B. Fire hydrants shall have two, 2½-inch outlets and one 4½ inch pumper port outlet. All outport threads shall be National Standard thread. The valve opening shall be 5¼-inch diameter. The hydrant shall have a positive and automatic barrel drain and shall be of the “safety” or breakaway style. All hydrants shall have Storz fittings. Hydrants shall be M & H Reliant Style 929, Clow F-2500 or Waterous Pacer. All hydrants shall be bagged until system is approved.
- C. The Public Works Department and Stanwood Fire Department work together to ensure that adequate hydrant spacing and installation are achieved.

Unless otherwise required by the governing authority, the following guidelines shall apply for hydrant number and location.

- 1. At least one hydrant shall be installed at all intersections.
 - 2. Hydrant spacing of 600 feet shall be required in all areas servicing single family and duplex residential areas. All single family lots shall be within 300 feet from a fire hydrant, as measured along the path of vehicular access.
 - 3. Fire hydrants serving any use other than detached single family dwellings or duplex dwelling on individual lots will be located not more than 300 feet on center, and will be located so that at least one hydrant is located within 150 feet of all structures, but not closer than 50 feet, unless approved by the Stanwood Fire Department.
 - 4. Hydrants located in dead-end areas or cul-de-sacs shall service an area of no more than 120,000 square feet.
- D. For requirements regarding use, size and location of a fire department connection (FDC) and/or post indicator valve, contact Stanwood Water Department. Location of FDC shall be shown on water plans.
- E. Where needed, the Public Works Department or Stanwood Fire Department may require hydrants to be protected by two or more posts, each 4 inches in diameter by 5 feet in height made of either reinforced concrete or steel.
- F. Fire hydrants must be installed, tested, and accepted prior to the issuance of a building permit.

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- G. Fire hydrants shall be red and white with the body of the hydrant red and the caps and top white. Hydrants shall either be provided by the factory with the required color scheme or shall be painted by the developer with two coats anti-rust, oil base enamel.

H. Where possible install hydrants at the end of dead end lines

4.070 Valves

All valves and fittings shall be ductile iron with ANSI flanges or mechanical joint ends. All valves shall have stainless steel bolts for bonnets and glands, approved by the manufacturer. All existing valves shall be operated by City employees only.

Valves shall be installed in the distribution system at sufficient intervals to facilitate system repair and maintenance, but in no case shall there be less than one valve every 1000 feet. There shall be a minimum three valves on each tee and four valves on each cross. Specific requirements for valve spacing will be made at the plan review stage.

- A. Gate Valves, 2-inch to 12-inch. The design, materials and workmanship of all gate valves shall conform to AWWA C509 or AWWA C515, latest revision. Gate valves shall be resilient wedge non-rising stem (NRS) with two internal O-ring stem seals. Gate valves shall be Mueller, M & H, AVK, or Waterous.

Gate valves shall be used on all 2-inch to 12-inch lines.

- B. All valves larger than 12 inches shall be approved as determined by the Public Works Director. Butterfly valves shall be used on all lines 14 inches or larger.
- C. Valve Box. All valve boxes shall be cast iron per WSDOT/APWA Standards. In areas where valve box falls in road shoulder, the ditch and shoulder shall be graded before placing asphalt or concrete pad. Valve Box and lid shall be 940 with 940 deep skirt lid with ears. Lid to be labeled "Water"
- D. Valve Markers. Valve markers shall be Carsonite CRM 08-66 utility markers or approved equivalent. Markers shall be 3 3/4-inch total width with a minimum length of 66 inches. Markers shall be blue and shall include a 3-inch x 3-inch hi-intensity white reflective sheeting, a Carsonite 116CW caution water valve decal, and a prong at the base to prevent pull-out.

4.080 Casing

Steel casing pipe shall be schedule 20 steel or equal. Pipe spacers shall be Calpico Model PX or equal with at least eight runners. Casing pipe and spacers shall be sized for pipe being installed. Install minimum of three spacers per section of pipe. Cap ends with end seals equal to APS Model Wrap Around End Seal.

4.090 Air and Vacuum Release Valve

Air and vacuum release valves (ARV) shall be per WSDOT Standard Plans. Air and vacuum release valve shall be equal to Apco 145C.

The installation shall be set at the high point of all water mains when required. Where possible, pipes are to be graded to prevent the need for an air release valve.

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ARV valves shall be marked with Carsonite CRM 08-66 utility markers or approved equivalent. Markers shall be 3 3/4-inch total width with a minimum length of 66 inches and include a prong at the base to prevent pull-out. Markers shall be blue and shall be stenciled or affixed with the letter "V" and lettering indicating valve size and distance in feet and inches to the valve on the face of the marker. Such lettering shall be in permanent black marker, black paint, or black industrial decals and shall be 2-inches in height.

4.100 Blowoff Assembly

Blowoff assemblies shall be set at the low points and dead-ends of all water mains, unless a fire hydrant is located at the low point or dead-end of the water main.

If a fire hydrant is not located at the end of a dead end main, a blowoff assembly shall be required. On water mains which will be extended in the future, the valve which operates the blowoff assembly shall be the same size as the main and provided with a concrete thrust block. The pressure rating for blowoff assemblies shall be 200 psi.

Blowoff assemblies shall be marked with Carsonite CRM 08-66 utility markers or approved equivalent. Markers shall be 3 3/4-inch total width with a minimum length of 66 inches and include a prong at the base to prevent pull-out. Markers shall be blue and shall be stenciled or affixed with the letters "BO" and lettering indicating distance in feet and inches to the blowoff on the face of the marker. Such lettering shall be in permanent black marker, black paint, or black industrial decals and shall be 2-inches in height.

4.110 Sampling Station

A sampling station, per the standard details, shall be installed in all new developments.

4.120 Backflow Prevention

The installation of all backflow devices is required to protect the existing water system and users from possible contamination.

The Stanwood Public Works will monitor the test of the fire line and obtain the certificate for underground piping. The fire line portion of the underground piping will not be tested until the Public Works Department has tested and approved their main up to the fire line.

4.130 Service Connection

- A. All service connections relating to new development shall be installed and tested by the developer at the time of mainline construction. Testing shall include main and service line up to meter setter. After the lines have been constructed, tested, and approved, the owner may apply for a water meter. The City will install a water meter after the application has been made and all applicable fees have been paid. Water meters will be set only after system is inspected and approved.
- B. When water is desired to a parcel fronting an existing main but not served by an existing setter, an application must be made to the City. Upon approval of the application and payment of all applicable fees, the applicant will tap the main, and install the meter box, and setter. The City will inspect and approve the installation and then install the water meter.

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- C. Service lines shall be 1 inch IPS high density polyethylene pipe, minimum pressure class 200 psi per WSDOT/APWA Standards. No glued joints will be accepted. Service lines shall be installed 22.5 degrees off the main. Tracer tape and fourteen gauge coated copper wire wrapped around the pipe shall be installed on all service lines.

Service saddle shall be all ~~bronze~~epoxy coated with stainless steel straps and shall be Romac style 202S or approved equal. All clamps shall have rubber gasket and iron pipe threaded outlets.

Corporation stop shall be all bronze and shall be Ford type F1101, with ribbed insert brass only or approved equal with iron pipe threads conforming to AWWA C 800. Stainless steel inserts shall be used with pack joints and polyethylene pipe.

- D. An approved backflow prevention system must be installed in conjunction with any master meter. Master meters will not be allowed for service to more than one per building. Mixed-use buildings shall have separate meters for residential service and commercial service. Commercial service shall have separate meters for the different classifications of commercial users. All meters shall be owned, operated and maintained by the City of Stanwood.
- E. Individual pressure reducing valves shall be installed on all service connection lines where the distribution line static pressure is 80 PSI or greater. Pressure reducing valves shall be installed between the meter and building (typically installed inside the building). Such individual pressure reducing valves shall be owned, operated and maintained by the building or home owner.

4.140 Water Main/Sanitary Sewer Crossings

The contractor shall maintain a minimum of 18 inches of vertical separation between the crown of sanitary sewers and the bottom of water mains. The minimum horizontal separation shall be 10 feet.

The longest standard length of water pipe shall be installed so that the joints will fall equidistant from any sewer crossing. In some cases where minimum separation cannot be maintained, it may be necessary to encase the water pipe and/or sewer service in pipe or concrete. The casing shall extend a minimum of 10 feet on either side of the crossing. No concrete shall be installed unless specifically directed by the City.

The contractor shall comply all other requirements identified in the *Criteria for Sewage Works Design* prepared by the Department of Ecology, October 2006 Edition, Chapter C1, Section C1-9.

4.150 Irrigation

All irrigation systems shall be installed with an approved backflow prevention assembly approved by AWWA and the Snohomish County Health District. The minimum required is a double check valve assembly.

Irrigation sprinklers shall be situated so as to not wet any public street or sidewalk.

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4.160 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington.

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

The minimum staking of waterlines shall be as directed by the City Engineer or as follows:

- A. Stake centerline alignment every 50 feet with cut or fill to invert of pipe maintaining a minimum cover required over pipe. Cuts are normally not required when road grade has been built to subgrade elevation.
- B. Stake alignment of all fire hydrants, tees, water meters, setters and other fixtures and mark cut or fill to hydrant flange finished grade.

4.170 Trench Excavation

- A. Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City and/or governing agencies. Debris resulting from the clearing and grubbing shall be disposed of by the owner or contractor in accordance with the terms of all applicable permits.
- B. Trenches shall be excavated to the line and depth designated by the City to provide a minimum of 36-inches of cover over the pipe. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space as allowed by the governing agency. The trench shall be kept free from water until joining is complete. Surface water shall be diverted so as not to enter the trench. The owner shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out.
- C. The contractor shall perform all excavation of every description and whatever substance encountered and boulders, rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth of 6 inches below water main grade. Where materials are removed from below water main grade, the trench shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.
- D. Trenching and shoring operations shall not proceed more than 100 feet in advance of pipe laying without approval of the City, and shall be in conformance with Washington Industrial Safety and Health Administration (WISHA) and Office of Safety and Health Administration (OSHA) Safety Standard.
- E. The bottom of the trench shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint.

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4.180 Thrust Blocking

Location of thrust blocking shall be shown on plans. Thrust block concrete shall be Class 3000 poured against undisturbed earth. A plastic barrier shall be placed between all thrust blocks and fittings.

4.190 Backfilling

Backfilling and surface restoration shall closely follow installation of pipe so that not more than 100 feet is left exposed during construction hours without approval of the City. Selected import backfill material shall be placed and compacted around and under the water mains by hand tools to a height of 6 inches above the top of the water main. The remaining backfill shall be select material and shall be compacted to 95 percent of the maximum density in traveled areas, 90 percent outside traveled areas. The use of native material for backfill shall only be allowed outside of the road section and as approved by the City. Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction. All trench backfill material placed in any traveled way shall conform with WSDOT/APWA Standards for backfilling the trench.

4.200 Street Patching and Restoration

Requirements regarding street patching and trench restoration shall be per WSDOT/APWA Standards, the Transportation Chapter of these standards, and specific requirements of ~~agency with jurisdiction.~~
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4.210 Hydrostatic Tests

Prior to the acceptance of the work, the installation shall be subjected to a hydrostatic pressure test in accordance with WSDOT/APWA Standards. ~~No main~~Mains shall ~~be~~ hydrostatically tested ~~until the lines are using chlorinated water per WSDOT standards. Mains shall be~~ flushed ~~of chlorine after pressure testing.~~ The main shall be tested between valves. Insofar as possible, no hydrostatic pressure shall be placed against the opposite side of the valve being tested. Test pressure shall be maintained while the entire installation is inspected.

The contractor shall provide all necessary equipment and shall perform all work connected with the tests. Tests shall be made after all connections have been made and the roadway section is constructed to subgrade. This is to include any and all connections as shown on the plan. The contractor shall perform the test to assure that the equipment to be used for the test is adequate and in good operating condition and the air in the line has been released before requesting the City to witness the test. Test pressure shall be 225 PSI for 15 minutes.

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4.220 Disinfection and Flushing

Disinfection of water mains shall be accomplished by the contractor in accordance with the requirements of WSDOT/APWA Standards and the Snohomish County Health District in a manner satisfactory to the City. At no time shall chlorinated water from a new main be flushed into a body of fresh water. This is to include lakes, rivers, streams, drainage ways, and any and all other waters where fish or other natural water life can be expected.

When a chlorine concentration has been established throughout the line, the valves shall be closed and the line left undisturbed for 24 hours. The line shall then be thoroughly flushed to a location approved by the City and water samples taken by the City at least 24 hours after flushing and disinfecting for approval by the local health agency. Should the initial treatment result in an unsatisfactory bacteriological test, the original chlorination procedure shall be repeated by the contractor until satisfactory results are obtained. The sample can only be taken on Mondays, Tuesdays, Wednesdays, and Thursdays until ~~noon~~ 2:00 PM. Testing and sampling shall take place after all underground utilities are installed and compaction of the roadway section is complete.

Polypigging is required for flushing 12-inch and larger water mains. Mains that are polypigged shall be chlorinated after the pigging process is complete.

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CHAPTER 5

5.000 SANITARY SEWER

5A GENERAL CONSIDERATIONS

5A.010 General

Sanitary sewerage refers to waste water derived from domestic, commercial and industrial pretreated waste to which storm, surface, and ground water are not intentionally admitted. Pretreatment shall follow all the requirements as set forth by DOE.

Any extension of Stanwood's sanitary sewer system must be approved by the City and must conform to the City of Stanwood Comprehensive Sanitary Sewer Plan, City of Stanwood Wastewater Facilities Plan, Department of Ecology (DOE), and Snohomish County Health District requirements.

Anyone who wishes to extend or connect to the City's sewer system for new development should contact the Community Development Department. The proposed extension/connection will be reviewed in the context of the applicable permit process for the proposed development and is subject to the submission requirements and fees, including connection and plant investment fees, for that process. The Community Development Department will coordinate the required review with other City Departments through the permit process.

Questions about existing service improvements or repairs should be directed to Public Works. Prior to the release of any water meters, or occupancy, all improvements must be completed and approved, and all applicable fees must be paid in full.

5A. 015 Requirements for Connection to the Sanitary Sewer

Within the corporate city limits where a public sewer is available, it must be used. Connection to the public sewer shall occur when mandated by the Department of Health and/or Stanwood Municipal Code.

5A.020 Marking Side Sewers

The location of side sewers at the property line shall be marked by the Contractor with a 2-inch by 4-inch wooden stake 6-feet long buried in the ground a depth of 3-feet. The low end shall have a 2 by 4-inch cleat nailed to it to prevent withdrawal of the stake. The exposed end shall be painted green and the depth to the side sewer or tee shall be indicated in black paint on the 2 by 4. In addition, a length of 12-gage galvanized wire shall be provided to extend from the plugged end of the side sewer or tee. The upper end shall emerge at the 4-foot stake, but shall not be fastened to it.

5A.030 Sanitary Sewer/Water Main Crossings.

See Water Chapter 4.

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5A.040 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The State of Washington shall license the engineer or surveyor directing such work as a professional engineer or professional land surveyor.

A preconstruction meeting shall be held with the City prior to commencing staking. The City shall inspect all construction staking prior to construction.

The minimum staking of sewer lines shall be as directed by the City Engineer or as follows:

- A. Stake location of mainline pipe and laterals every 50 feet with cut or fill to invert of pipe.
- B. Stake location of all manholes for alignment and grade with cut or fill to rim and invert of pipes.

5A.050 Trench Excavation.

See Water Chapter 4, except for the reference to the 36-inches of cover.

5A.060 Backfilling

See Transportation and Streets Chapter 2 and sewer details for requirements regarding trench backfill.

Where native soils are excavated from trenches and replaced with bedding that is more pervious (e.g. clay replaced with granular bedding), CDF or clay trench dams shall be provided every 300 feet along the sewer alignment to prevent the transport of groundwater.

5A.070 Street Patching and Restoration

See Transportation and Streets Chapter 2 for requirements regarding street patching and trench restoration.

5A.080 Testing

Prior to acceptance and approval of construction, the following tests shall apply to each type of construction:

A. Gravity Sewer

1. Air Test

Prior to acceptance of the project, the gravity sewer pipe shall be subject to a low-pressure air test per WSDOT/APWA Standards- 7-14.3(2). The contractor shall furnish all equipment and personnel for conducting the test under the observation of the City inspector. The testing equipment shall be subject to the approval of the City. The construction plans shall reflect the air test parameters and requirements.

The contractor shall make an air test for his own purposes prior to notifying the City to witness the test. The acceptance air test shall be made after trench is backfilled and compacted and the roadway section is completed to subgrade.

All wyes, tees and end of side sewer stubs shall be plugged with flexible joint caps, or acceptable alternates, securely fastened to withstand the internal test pressures. Such

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plugs or caps shall be readily removable and their removal shall provide a socket suitable for making a flexible jointed lateral connection or extension.

Immediately following the pipe cleaning, the pipe installation shall be tested with low-pressure air. Tests shall be conducted per WSDOT Standards.

2. Television Inspection

Testing of the sewer main shall include a television inspection by the contractor. Television inspection shall be done after the air test has passed and before the roadway is paved. Immediately prior to a television inspection, enough water shall be run down the line so it comes out the lower manhole. A copy of the videotape and written report shall be submitted to the City. Acceptance of the line will be made after the tape has been reviewed and approved by the inspector. Any tap to an existing system needs to be televised as well.

3. Water Test or Vacuum Test

A water test of all manholes is also required. The water test shall be made by the contractor first by filling the manhole up with water and letting it sit for 24 hours to allow the water to saturate the concrete. After 24 hours the manhole shall be filled to the top of the cone. The water cannot drop more than 0.05 gallons in 15 minutes per foot of head above invert to pass. Upon completion of the water test, the water shall be pumped out of the manhole and not allowed to be released to the system. Vacuum testing, in accordance with ASTM C-1244-93, may be used in lieu of water testing.

4. Deflection Test

A deflection test in accordance with the Standard Specifications shall be required on all sewers except laterals.

B. Force Main

1. Prior to acceptance of the project, the pressure line and service lines shall be subjected to a hydrostatic pressure test of 150 pounds for four hours and any leaks or imperfections developing under said pressure shall be remedied by the contractor WSDOT/APWA Standards. No air will be allowed in the line. The main shall be tested between valves. Insofar as possible, no hydrostatic pressure shall be placed against the opposite side of the valve being tested. The pressure test shall be maintained while the entire installation is inspected.

The contractor shall provide all necessary equipment and shall perform all work connected with the tests.

Tests shall be made after all connections have been made. This is to include any and all connections as shown on the plan. The contractor shall perform all tests to assure that the equipment to be used for the test is adequate and in good operating condition and the air in the line has been released before requesting the City to witness the test.

2. A water test for all wet wells in accordance with the manhole water test for gravity sewer shall be required.
3. Pump operation, alarms, controls and electrical inspection of all lift stations is required.

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4. The contractor shall provide all necessary equipment and shall perform all work connected with the tests. Tests shall be made after all connections have been made. The contractor shall perform all tests to assure that the equipment to be used for the test is adequate and in good operating condition.

5B GRAVITY SEWER

5B.010 General

All sewers shall be designed as a gravity sewer whenever physically feasible or as approved by the Public Works Director.

5B.020 Design Standards

The design of any sewer extension/connection shall conform to City Standards, Department of Ecology's "Criteria of Sewage Works Design", and any applicable standards as set forth herein.

The layout of extensions shall provide for the future continuation of the existing system as determined by the City.

New gravity sewer systems shall be designed on the basis of an average daily per capita flow of sewage of not less than 100 gallons per day. Generally, laterals and submain sewers should be designed to carry, when running full, not less than 400 gallons daily per capita contributions of sewage. When deviations from the foregoing per capita rates are used, a description of the procedure used for sewer design shall be submitted to the Department of Public Works for review and approval.

The General Notes that follow shall be included on any plans dealing with sanitary sewer design.

5B.030 Sanitary Sewer Construction General Notes

1. All workmanship and materials shall be in accordance with City of Stanwood standards and the most current copy of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction (WSDOT/APWA).
2. The contractor, prior to the start of construction, shall obtain all approvals and permits required by the City of Stanwood.
3. If construction is to take place in the County right-of-way, the contractor shall notify the County and obtain all the required approvals and permits.
4. A preconstruction meeting shall be held prior to the start of construction.
5. The Stanwood Public Works Department shall be notified a minimum of 72 hours in advance of a tap connection to an existing main. The City shall be present at the time of the tap.
6. The contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate Line at 1-800-424-5555 a minimum of 48 hours prior to any excavation.
7. Gravity sewer main shall be PVC, ASTM D 3034 SDR 35.

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8. Precast manholes shall meet the requirements of ASTM C 478. Manholes shall be Type 1-48" manhole unless otherwise specified on the plans. Joints shall be rubber gasketed conforming to ASTM C 443 and shall be routed from the inside. Lift holes shall be grouted from the outside and inside of the manhole.
9. Side sewer services shall be PVC, ASTM D 3034 SDR 35 with flexible gasketed joints. Side sewer connections shall be made by a tap to an existing main or a wye branch from a new main connected above the springline of the pipe.
10. All sewer mains shall be field staked for grades and alignment by a licensed engineering or surveying firm qualified to perform such work.
11. All sewer pipe and services shall be installed with detectable marking tape installed 18" above the pipe crown, or 12" below finished grade (whichever is deeper). Detectable marking tape shall conform to WSDOT/APWA Standard Specifications. In addition, force mains and curvilinear sewers shall be installed with 14 gauge coated copper wire wrapped around all plastic pipe, brought up and tied off at valve body. On a curvilinear sewer, the wire shall be brought up, bared and wrapped three times around the manhole ring. Tape shall be per WSDOT/APWA Standards. The contractor shall furnish and install the tape and wire.
12. All buried power for pump systems shall be installed with continuous tracer tape installed 12" above the buried power. The marker shall be plastic non-biodegradable, metal core backing marked "power". Contractor shall furnish tape per WSDOT/APWA Standards.
13. Bedding of the sewer main and compaction of the backfill material shall be required in accordance with WSDOT/APWA Standards.
14. A three-foot square by six-inch thick concrete pad shall be installed around all cleanouts that are not in a pavement area.
15. Temporary street patching shall be allowed for as approved by the City Engineer. Temporary street patching shall be provided by placement and compaction on one-inch maximum asphalt concrete cold mix. Contractor shall be responsible for maintenance as required.
16. Erosion control measures shall be taken by the contractor during construction to prevent infiltration of existing and proposed storm drainage facilities and roadways.
17. Provide traffic control plan(s) in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) as required.
18. It shall be the responsibility of the contractor to have a copy of these approved plans on construction site at all times.
19. Any changes to the design shall first be reviewed and approved by the project engineer and the City of Stanwood.
20. All lines shall be high velocity cleaned and pressure tested prior to paving in conformance with WSDOT/APWA Standards. Hydrant flushing of lines is not an acceptable cleaning method. Testing of the sanitary sewer main shall include TVing of the main by the contractor. Immediately prior to TVing, enough water shall be run down the line so it comes out the lower manhole. A copy of the videotape shall be

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submitted to the City of Stanwood. Acceptance of the line will be made after the tape has been reviewed and approved by the inspector. A water or vacuum test of all manholes in accordance with Stanwood standards is also required. Testing shall take place after all underground utilities are installed and compaction of the roadway subgrade is completed.

21. All pressure mains shall be hydrostatically tested in conformance with the WSDOT/APWA Standards. In addition, all pressure mains shall be pigged or flushed in the presence of the City Inspector prior to placing pressure main in service.
22. Prior to backfill all mains and appurtenances shall be inspected and approved by the City of Stanwood Construction Inspector. Approval shall not relieve the contractor for correction of any deficiencies and/or failures as determined by subsequent testing and inspections. It shall be the contractor's responsibility to notify the City of Stanwood for the required inspections.

5B.040 Main Line Gravity

- A. Size. Sewer mains shall be sized for the ultimate development of the tributary area. Nothing shall preclude the City from requiring the installation of a larger sized main if the City determines a larger size is needed to meet the requirements for future service.

The minimum size for submains and mains shall be 8-inch inside diameter. The minimum size for a lateral shall be 4 inches.

A 6-inch diameter minimum lateral is required for all commercial or general business applications or for multifamily connections.

The design is subject to all other design requirements as noted in this Chapter.

- B. Material. Sewer main shall be PVC, ASTM D 3034, SDR 35 with joints and rubber gaskets conforming to ASTM D 3212 and ASTM F 477.
- C. Depth. Gravity sewer will typically have a minimum depth of 5 feet to provide gravity service to adjoining parcels, adequate head room within manholes for maintenance personnel and vertical clearance between water and sewer lines. Actual depth will be determined by slope, flow, velocity and elevation of existing system.
- D. All building side sewer connections to the main shall be made with a wye connection. All new mains connecting to existing mains shall require the installation of a new manhole if not made at an existing manhole.

5B.050 Connection to Existing System

- A. At connection to existing system, all new sewer connections shall be physically plugged until all tests have been completed and the City approves the removal of the plug. City to receive verification of plug removal.
- B. Connection of new pipelines to existing manholes shall be accomplished by using provided knockouts. Where knockouts are not available, the manhole shall be core drilled for connection. The transition of connecting channels shall be constructed so as not to interrupt existing flow patterns.

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- C. Connection of a pipeline to a system where a manhole is not available shall be accomplished by pouring a concrete base and setting manhole sections. The existing pipe shall not be cut into until approval is received from the City.
- D. Connections where an existing stub out is not available or where a new building side sewer is the same size as the existing main shall be accomplished by the installation of a new manhole.
- E. Taps shall not be allowed to protrude into the existing main. The Public Works Department shall be notified ~~48~~72 hours prior to any tap of a City sewer. A City representative shall be present to witness the tap.

5B.060 Manholes

Precast manholes shall meet the requirements of ASTM C 478 with either a precast base or a cast-in-place base made from minimum 3000-psi structural concrete. Manholes shall be Type 1, 48-inch diameter minimum. The minimum clear opening in the manhole frame shall be 24 inches. Joints shall be rubber gasketed conforming to ASTM C 443 and shall be grouted from the inside. Lift holes shall be grouted from the outside and inside of the manhole. Eccentric manhole cone shall be offset so as not to be located in the tire track of a traveled lane.

Manhole frames and covers shall be cast iron casting marked "Sewer" conforming to the requirements of ASTM A-30, Class 25, and shall be free of porosity, shrink cavities, cold shuts or cracks, or any surface defects which would impair serviceability. Repairs of defects by welding or by the use of smooth-on or similar material will not be permitted. Manhole rings and covers shall be machine finished or ground-on seating surfaces so as to assure non-rocking fit in any position and interchangeability. Manholes located in areas subject to inflow shall be equipped with a sewer guard watertight manhole insert.

Where lock-type castings are called for, the casting device shall be such that the cover may be readily released from the ring and all movable parts shall be made of non-corrosive materials and otherwise arranged to avoid possible binding.

All castings will be coated with a bituminous coating prior to delivery to the job site.

Safety steps shall be fabricated of polypropylene conforming to an ASTM D-4101 specification, injection molded around a ½ inch ASTM A-615 grade 60 steel reinforcing bar with anti-slip tread. Steps shall project uniformly from the inside wall of the manhole. Steps shall be installed to form a continuous vertical ladder with rungs equally spaced on 12-inch centers.

Generally, gravity sewers shall be designed with straight alignment between manholes.

Manholes shall be provided at a maximum of 400 foot intervals for 8-inch to 15-inch sewers, 500 foot intervals for 18-inch to 30-inch sewers, at intersections, and at changes in direction, grade or pipe size. Greater spacing may be permitted in larger sewers.

Minimum slope through the manhole shall be 1/10th of a foot from invert in to invert out.

Manhole sizing shall be determined by the following criteria:

- A. 48" Manhole
 - 1. 2 connecting pipes, 8-inch to 12-inch diameter
 - 2. 3 connecting pipes, 8-inch to 10-inch diameter, perpendicular

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3. 4 connecting pipes, 8-inch diameter, perpendicular

B. 54" Manhole

1. 2 connecting pipes, 8-inch to 12-inch with more than 45° deflection
2. 3 connecting pipes, 10-inch to 12-inch diameter, perpendicular
3. 4 connecting pipes, 10-inch to 12-inch diameter, perpendicular

C. 72" Manhole

1. 2 connecting pipes, 15-inch to 18-inch diameter with less than 45° deflection
2. 3 connecting pipes, 15-inch diameter, perpendicular
3. 4 connecting pipes, 15-inch diameter, perpendicular

In the above criteria "deflection" refers to the angle between any 2 pipe channels in the manhole.

For other pipe configurations, the City shall approve the size of the manhole.

The above configurations will provide adequate shelves and room for maintenance and performing TV inspections.

5B.070 Slope

All sewers shall be designed and constructed to give mean velocities, when flowing full, of not less than 2.0 feet per second based on Mannings formula using an "n" value of 0.013. The City may permit use of other practical "n" values if deemed justifiable on the basis of research or field data submitted. The following minimum slopes should be provided however slopes greater than these are desirable. Sewers shall be laid with uniform slope between manholes

Sewer Size in Inches	Minimum % Slope % (Feet per 100')
6	1.00 (0.0100 Ft/Ft)
8	0.40 (0.0040 Ft/Ft)
10	0.28 (0.0028 Ft/Ft)
12	0.22 (0.0022 Ft/Ft)
14	0.17 (0.0017 Ft/Ft)
15	0.15 (0.0015 Ft/Ft)
16	0.14 (0.0014 Ft/Ft)
18	0.12 (0.0012 Ft/Ft)
21	0.10 (0.0010 Ft/Ft)
24	0.08 (0.0008 Ft/Ft)
27	0.07 (0.0007 Ft/Ft)
30	0.06 (0.0006 Ft/Ft)
36	0.05 (0.0005 Ft/Ft)

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5B.080 Increasing Size

Manholes shall be provided where pipe size changes occur.

Where a smaller sewer joins a larger one, the invert of the larger sewer should be lowered sufficiently to maintain the same energy gradient. An approximate method for securing these results is to place the 0.8 depth point of both sewers at the same elevation.

5B.090 High Velocity Protection

Where velocities greater than 15 feet per second are expected, special provisions such as thrust blocking and piping materials shall be made to protect against displacement by erosion and shock.

5B.100 Drops

Straight grades between invert out of last manhole and connection to existing are preferred over drops whenever possible. Care must be taken when designing steep grades so as not to create a situation of excessive velocity or excavation.

An outside drop connection shall be provided for a sewer entering a manhole at an elevation of 24 inches or more above the manhole invert. Where the difference in elevation between the incoming sewer and the manhole invert is less than 24 inches, the invert shall be filleted to prevent solids deposition.

The City will not allow an inside drop connection unless otherwise approved by the Public Works Director. If approved, a larger manhole will be required.

5B.110 Cleanouts

Cleanouts are not an acceptable substitute for manholes; however, they may be used in lieu of manholes at the end of 6 or 8 inch diameter lines of not more than 150 feet in length. This does not include a 6-inch building side sewer to serve one or two single-family dwellings. Location of cleanout for building side sewers is governed by the Uniform Plumbing Code (UPC) as adopted by SMC.

All cleanouts in City right-of-way shall be extended to grade and a 3-foot square by 4-inch concrete pad shall be installed around all cleanouts that are not in pavement area.

5B.120 Side Sewers

Prior to a building being connected to public sewer, a connection permit must be obtained from the City. Materials and design criteria for a building side sewer shall comply with the UPC as adopted by the City of Stanwood and this chapter. Inspections of the side sewer construction shall be performed by the City as required by the permit.

When a new main is being installed in front or alongside of existing properties, side sewers shall be stubbed to the property line for all existing properties pursuant to Stanwood Municipal Code.

5B.140 Grease Traps and Substance Interceptors

Grease traps and substance interceptors shall be installed in accordance with the most recent edition of the Uniform Plumbing Code and any other requirements by the ~~city~~City as set forth in this chapter when deemed necessary by the public works director. Plumbing permits are processed by the Community Development Department. The Community Development Department will

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coordinate the required review with other City Departments through the permit process. Users who operate restaurants, cafes, lunch counters, cafeterias, bars or clubs, or hotel, hospital, factory or school kitchens, butcher shops, grocery stores or any other establishment where grease or other harmful ingredient may be introduced into the sewer system shall have a grease trap or substance interceptor to prevent the discharge of fat, oil, grease and/or other harmful waste. Such pretreatment facilities shall be either a grease trap or substance interceptor located outside the building and installed in the wastewater line leading from the sinks, drains or other fixtures where grease may be discharged. A plumbing permit is required.

Substance interceptors that include dishwasher effluent shall be sized to allow sufficient detention time to allow for cooling of the effluent. Sanitary facilities will not be allowed to connect upstream of any substance interceptor. Grease traps inside the building shall only be allowed upon approval by the City under special circumstances which may include but are not limited to insufficient space to install an outside interceptor, cost of retrofitting existing facilities, and single service businesses with limited menus.

Traps and interceptors shall be cleaned according to OEM requirements.

5C LIFT STATIONS

5C.010 General

All lift stations will be designed to serve the appropriate basin as identified in the Stanwood Wastewater Facilities Plan.

5C.020 Design Standards

The design of any lift station shall conform to City standards, Department of Ecology's "Criteria of Sewage Works Design" and applicable standards as set forth herein. In addition, the plans shall include the following:

1. The design of the lift station, including layout, building, equipment, and control systems shall be equal to the City's existing Copper Station Lift Station unless otherwise approved by the Public Works Director.
2. A lift station emergency bypass connection shall be provided per Standard Details.
3. Lift stations shall be designed for peak design flow with the largest pump out of service
4. Lift stations shall be designed for a 20-year design life.
5. All existing and future lift stations shall be constructed to comply with the following minimum standards.
 - a. All structures will be non-combustible, where practical
 - b. All buildings will have adequate heating, cooling, ventilation, insulation, lighting, and workspaces necessary for on-site operation and repair
 - c. Sites shall be fenced
 - d. Each station shall be equipped with a flow meter and all necessary instrumentation to assist personnel in operating and troubleshooting
 - e. Emergency power capability shall be provided at all lift stations

STANWOOD STREET AND UTILITY STANDARDS

- ~~f. Each station shall be equipped with a bypass to allow manual control~~
- ~~g. Each station shall address corrosion control~~
- ~~h. Each station shall include an intrusion alarm system~~
- ~~6. Pumps shall be operated automatically, with flexibility in pump start/stop settings~~
- ~~7. Pumps shall be submersible Wemco-Hidrostal Prerostal pre-rotation pumping system unless otherwise approved by the Public Works director~~
- ~~8. Stations shall be operated with the provision for at least two methods of control to minimize system vulnerability~~
- ~~4-9.~~ An overall site illustration of the lift station showing the location of all components including elevations.
- ~~2-10.~~ Service size, voltage and enclosure type and location in relation to the pump station.
- ~~3-11.~~ A list of specific materials used including quantity description and manufacturer name.
- ~~4-12.~~ A schematic and line diagram of the service and motor control center and lift station.
- ~~5-13.~~ The electrical shall be designed to meet state and local electrical code requirements.
- ~~6-14.~~ The plans shall show all required telemetry installation with schematics.
- ~~7-15.~~ An operation and maintenance manual from the lift station manufacturer shall be supplied.
- ~~8-16.~~ ~~City shall receive at minimum 4 hours of training on new lift station emergency by-pass connection shall be provided per Standard Details.operations.~~

A design report shall be submitted with each lift station demonstrating its conformance with the standards as outlined above and shall address the following items:

Pump Data

- size and type
- horsepower
- pump curves
- head capacity
- velocity

Motor

- size and type
- cycle length
- type of mount
- controls
- type

Telemetry

- alarm system (must be compatible with City system)

STANWOOD STREET AND UTILITY STANDARDS

Housing

- size and type
- ventilation
- humidity control
- interior lighting
- access

Auxiliary Power

- An auxiliary generator will be required.

Well Sizing

- type
- storage capacity

Maintenance

- warranty
- tools and equipment required

Electrical Service

- size and type
- source

Corrosion Protection

- type of materials
- coatings
- linings
- maintenance

Site Layout

- location of lift station on property

Testing

- operational
- pressure

Pipes and Valves

- size and type
- bypass

Water Service

- 2-inch water service
- Double-check valve assembly

STANWOOD STREET AND UTILITY STANDARDS

- Heat Enclosure (Hot Box or equivalent)

5D PRESSURE SEWER (FORCE MAIN)

5D.010 General

Low pressure systems may be considered for situations where high ground water table or topography make gravity sewer impractical.

5D.020 Design Standards

The design of any sewer extension/connection shall conform to City standards, Department of Ecology's "Criteria of Sewage Works Design", and any applicable standards as set forth herein.

The layout of extensions shall provide for the future continuation of the existing system as determined by the City. In addition, main extensions shall be extended to and through the side of the affected property fronting the main.

New sewer systems shall be designed by methods in conjunction with the basis of per capita flow rates. Methods shall include the use of peaking factors for the contributing area, allowances for future commercial and industrial areas, and modification of per capita flow rates based on specific data. Documentation of the alternative method used shall be provided along with plans.

5D.030 Force Main

- A. Material. Force mains for sizes up to 12 inches shall be ductile iron AWWA C151, Class 50 PVC C900 with ductile iron fittings and gasketed joints, or AWWA C906 HDPE. For 14 to 24 inch mains, pipe shall be ductile iron AWWA C151 Class 50 or PVC C905 with ductile iron fittings and gasketed joints. A more rigid pipe may be required where unlimited trench widths occur.
- B. Depth. Force mains shall have a minimum 36 inches of cover to top of pipe. See Water Chapter for sanitary sewer/water main crossing requirements.
- C. Velocity. The minimum velocity allowed is 2 feet per second (fps) at average Dry Weather Flow. 2 fps is required to maintain solids in suspension although 3 fps is desired to scour settled solids. Maximum velocity allowed shall be 8 fps.

5D.040 Air/Vacuum Valves

Air release valves and air/vacuum valves shall be located at the high points of the line within a standard 48-inch manhole or a comparable sized approved vault. Air release valves shall be fitted with an activated carbon canister to absorb compounds with disagreeable odors prior to releasing the air to the surrounding area. Grades shall be designed to minimize the need for air/vacuum valves when practical. Vehicular access to valve is required for maintenance.

5D.050 Force Main Drain

Provisions to drain a force main to facilitate repairs or to temporarily remove force main from service shall be provided. This may be accomplished through the use of a valved tee connected to a drain line at the low point of the line. A manhole shall be set over the force main at the valved tee.

STANWOOD STREET AND UTILITY STANDARDS

5D.060 Thrust Blocking

Location of thrust blocking shall be shown on plans. Thrust block concrete shall be Class 3000 poured against undisturbed earth. A plastic barrier shall be placed between all thrust blocks and fittings.

5D.070 Force Main Termination

Hydrogen sulfide odor (H_2S) and the buildup of sulfuric acid (H_2SO_4) occur in the operation of a force main. To mitigate these conditions some type of control method(s) shall be used. This may include chemical addition at the pump station and/or the reaeration of the wastewater at or near the terminus. Reaeration may include the following:

1. Construction of a vault housing and aspiration assembly.
2. The use of hydraulic fall (vertical siphon) within the terminal manhole.
3. High velocity discharge with smooth transition so as to not cause splashing of force main into the downstream gravity sewer.

These methods would all require an adequate source of fresh air at the vault or manhole. At a minimum, the manhole at the terminus and the first manhole downstream of the terminus shall be coated with Tnemec 120 vinyl ester, Quantum polymorphic resin or approved equal, which is resistant to sulfuric acid and hydrogen sulfide.

5D.080 Individual Pressure Sewer Services

Pump systems for individual pressure sewer systems shall be positive displacement pumps equal to Environment One. The pressure sewer systems shall be designed by a licensed engineer. Each pressure sewer service pump shall have its own discharge to a gravity sewer and shall not share a common force main. The specifics shall be reviewed by the City.

CHAPTER 5

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CITY OF STANWOOD

TRANSPORTATION STANDARD DETAILS INDEX

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City of Stanwood

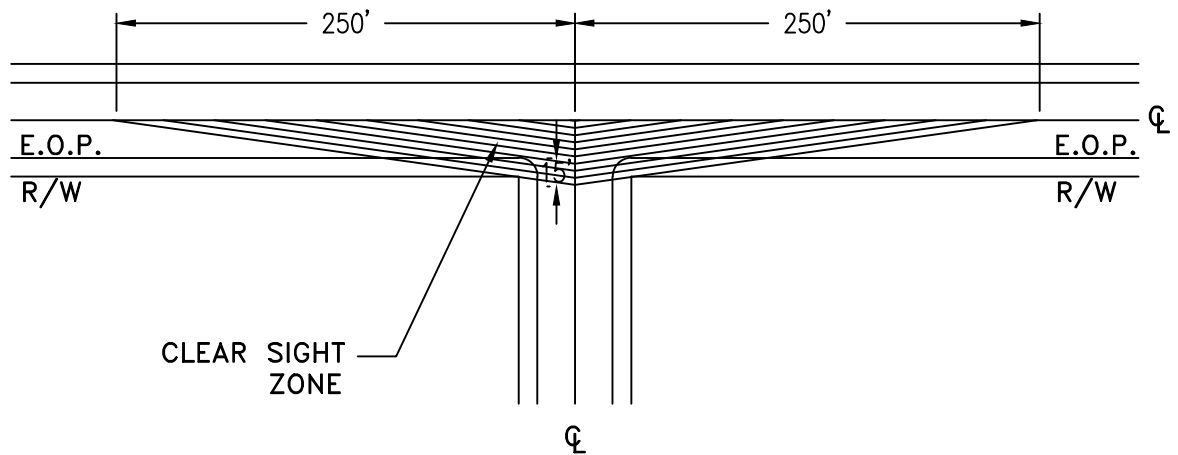


TRANSPORTATION STANDARD DETAIL

TRANSPORTATION STANDARD DETAILS INDEX

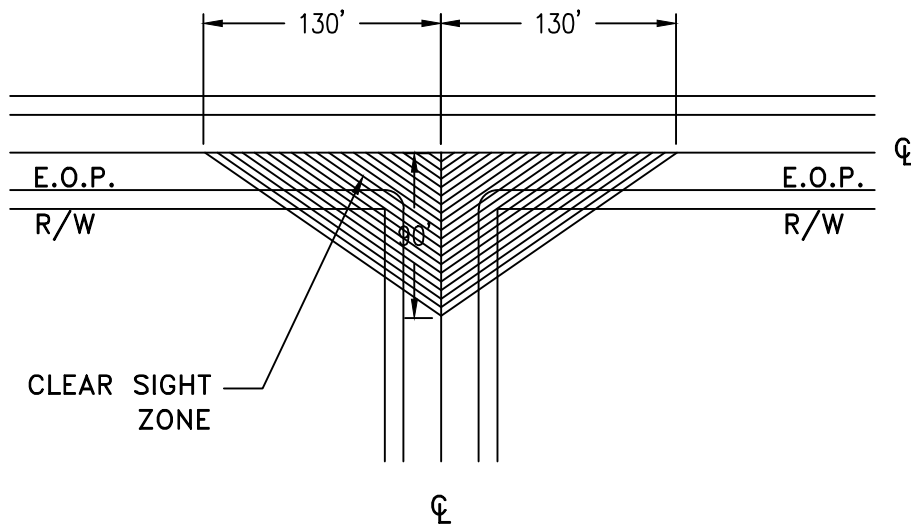
STOP OR YIELD CONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 25 M.P.H.



UNCONTROLLED INTERSECTIONS

EXAMPLE: MINOR STREET SPEED LIMIT = 20 M.P.H.



GENERAL NOTES:

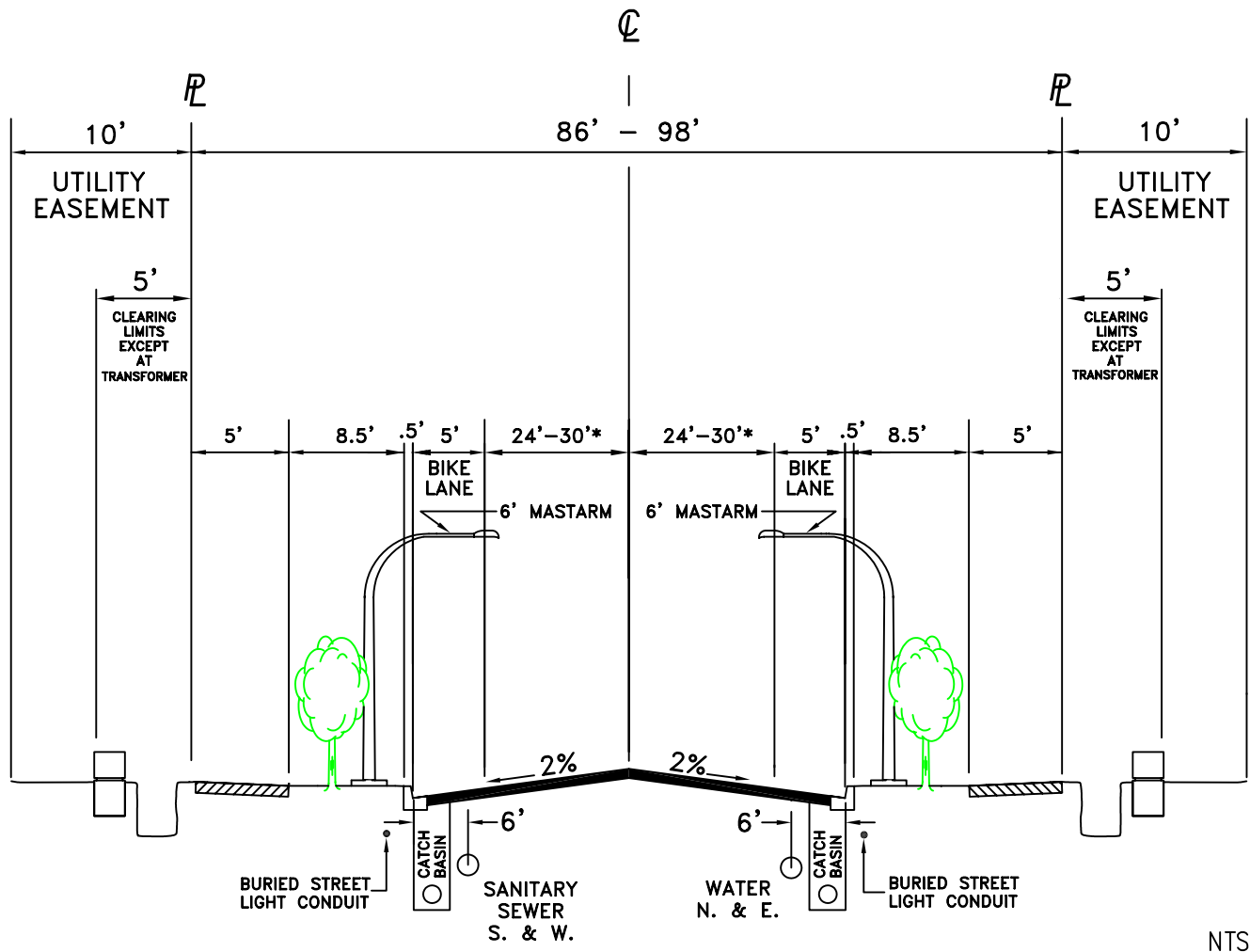
1. SEE SECTION 2B.160 OF THE DEVELOPMENT GUIDELINES FOR MORE INFORMATION ON THE VERTICAL CLEARANCE WITHIN THE CLEAR SIGHT ZONE.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

SIGHT OBSTRUCTION



* 24' WITH 4 LANES
30' WITH 5 LANES

GENERAL NOTES:

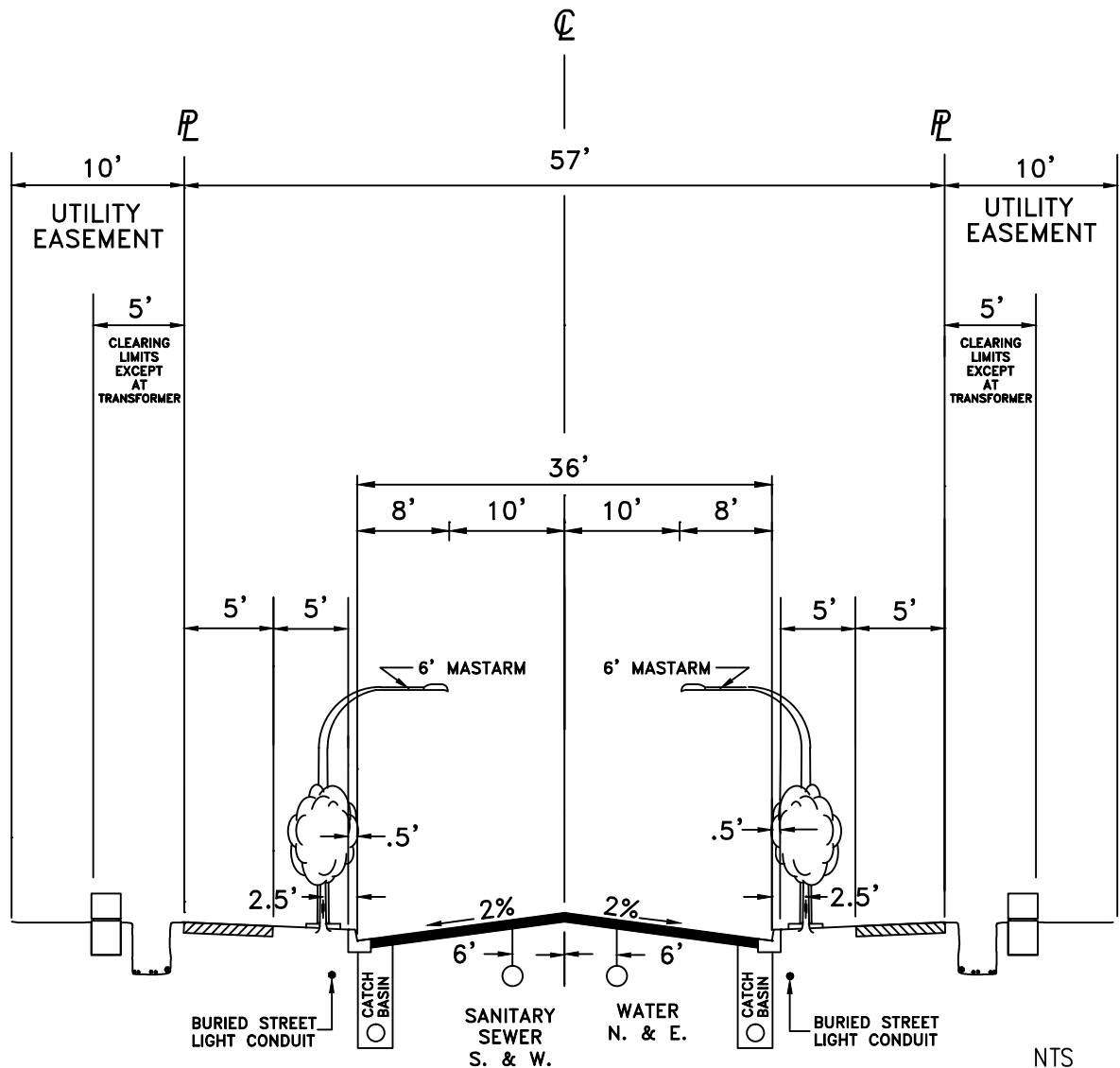
1. NO ON-STREET PARKING PERMITTED.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

STREET DESIGN - ARTERIAL



GENERAL NOTES:

1. THE SECTION INCLUDES A 10 FT TRAVEL LANE AND 8 FT PARKING LANE ON EACH SIDE OF THE ROW CENTERLINE.
2. IF THE ROAD IS A DESIGNATED BIKEWAY ROUTE, BICYCLE LANES MAY BE REQUIRED IN ADDITION TO THE PARKING LANES.
3. INDUSTRIAL/COMMERCIAL ROADS SERVING SIGNIFICANT VOLUMES OF TRUCK TRAFFIC MAY REQUIRE ADDITIONAL WIDTH.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

STREET DESIGN - COMMERCIAL AND
NEIGHBORHOOD COLLECTOR/MAJOR COLLECTOR

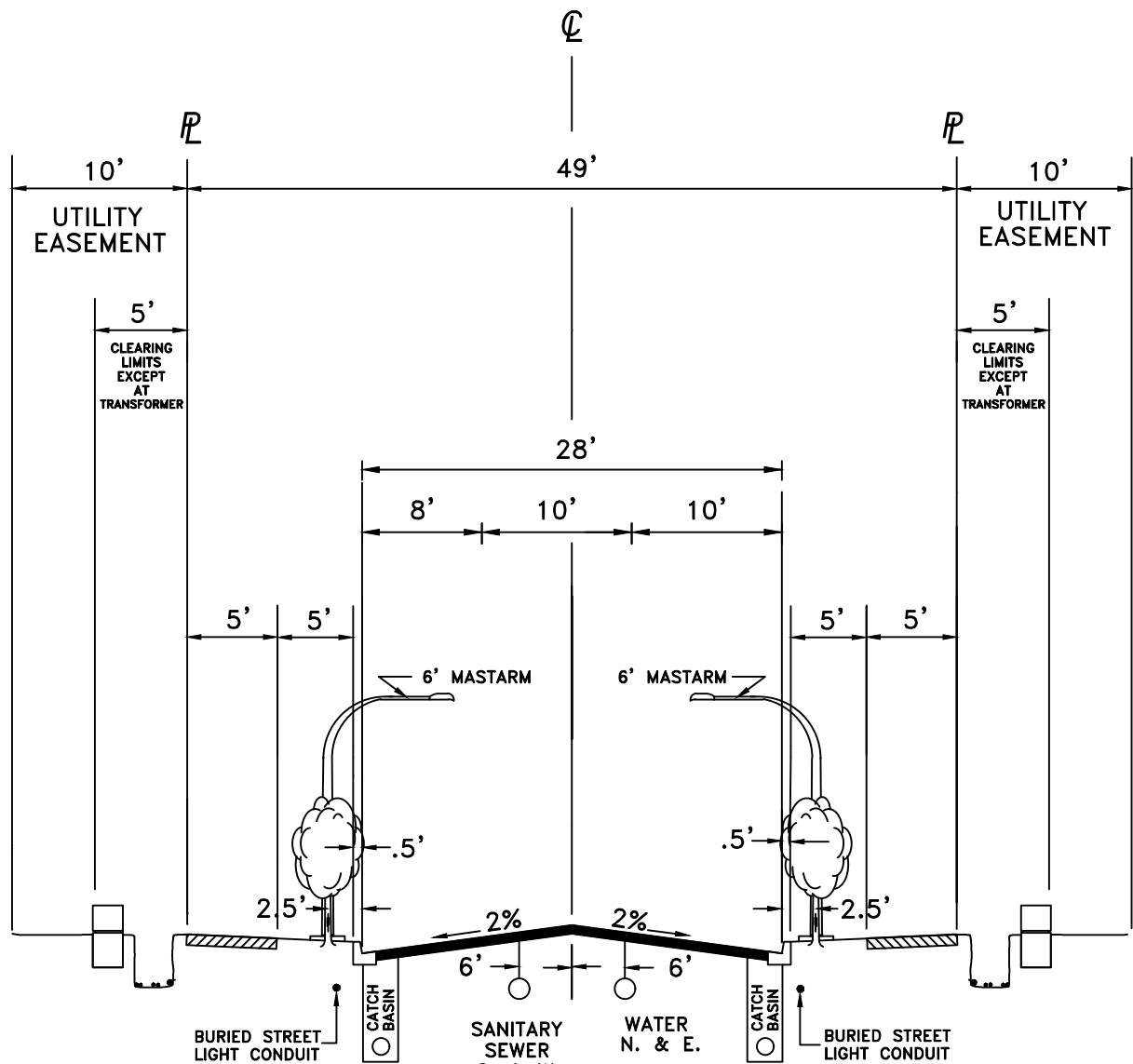
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Revised: Dec. 12, 2013

Printed: Jan. 10, 2014

DRAWING NO.

T-3



NTS

GENERAL NOTES:

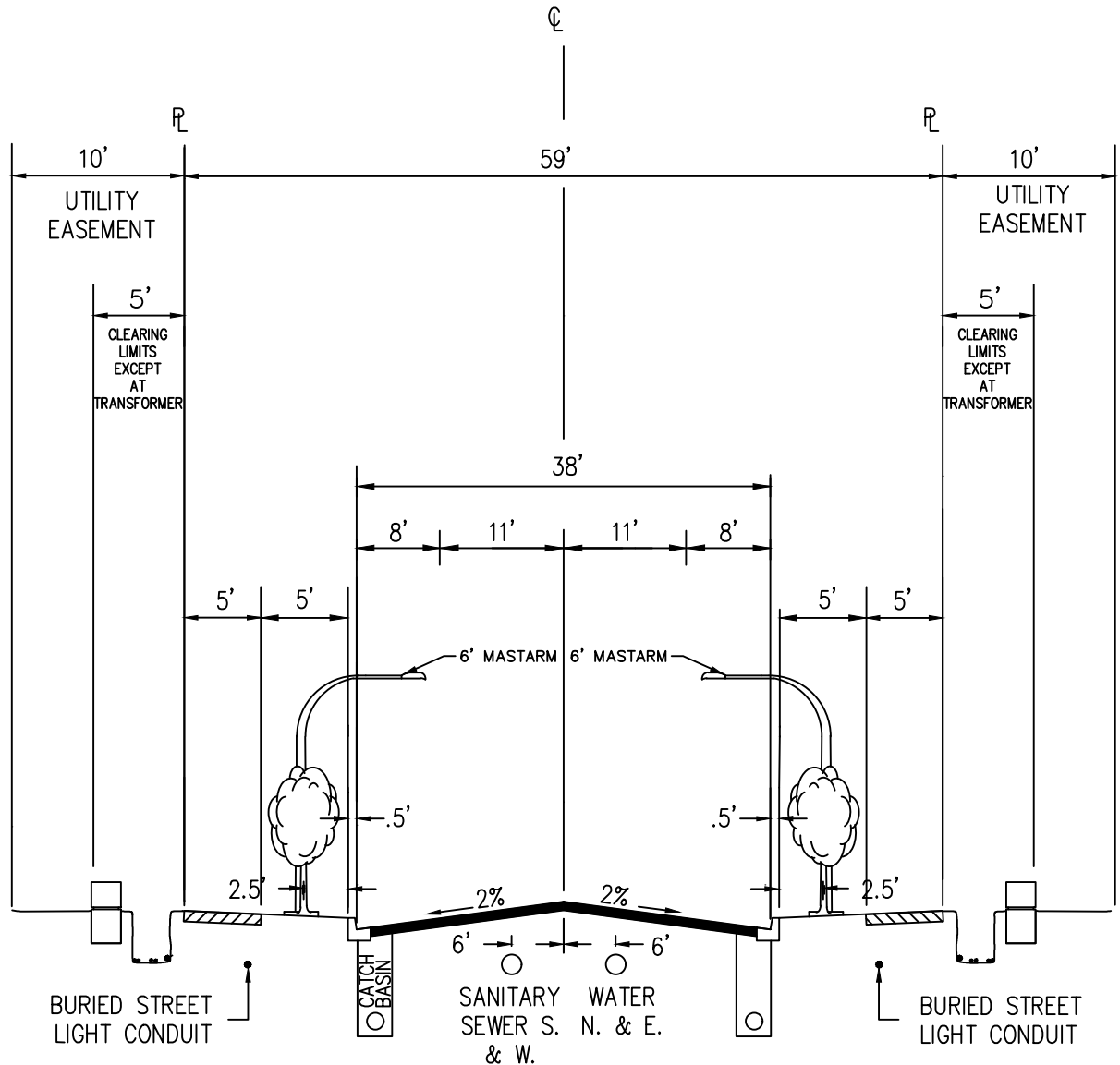
1. THE SECTION INCLUDES TWO 10 FT TRAVEL LANES AND ONE 8 FT PARKING LANE.
2. IF THE ROAD IS A DESIGNATED BIKEWAY ROUTE, BICYCLE LANES MAY BE REQUIRED IN ADDITION TO THE PARKING LANE.
3. PLANTER STRIPS SHALL BE MAINTAINED BY THE DEVELOPER/PROPERTY OWNER.
4. NO PARKING SIGNS REQUIRED ON FIRE HYDRANT SIDE OF ROAD

City of Stanwood



TRANSPORTATION STANDARD DETAIL

STREET DESIGN -
NEIGHBORHOOD COLLECTOR/ MINOR COLLECTOR



GENERAL NOTES:

1. THE SECTION INCLUDES TWO 11 FT TRAVEL LANES AND TWO 8 FT PARKING LANES.
2. IF THE ROAD IS A DESIGNATED BIKEWAY ROUTE, BICYCLE LANES MAY BE REQUIRED IN ADDITION TO THE PARKING LANE.
3. PLANTER STRIPS SHALL BE MAINTAINED BY THE DEVELOPER/PROPERTY OWNER.
4. NO PARKING SIGNS REQUIRED ON FIRE HYDRANT SIDE OF ROAD

NTS

City of Stanwood



TRANSPORTATION STANDARD DETAIL

STREET DESIGN -
LOCAL ACCESS AND CUL-DE-SAC APPROACH

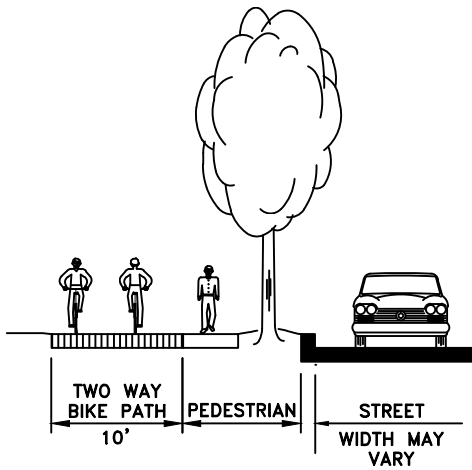
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Revised:Jun. 17, 2021

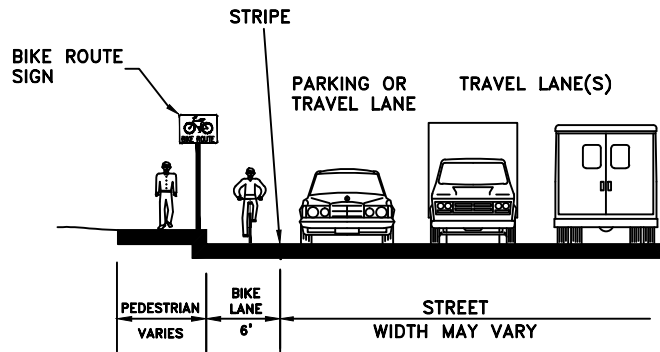
Printed:Jun. 17, 2021

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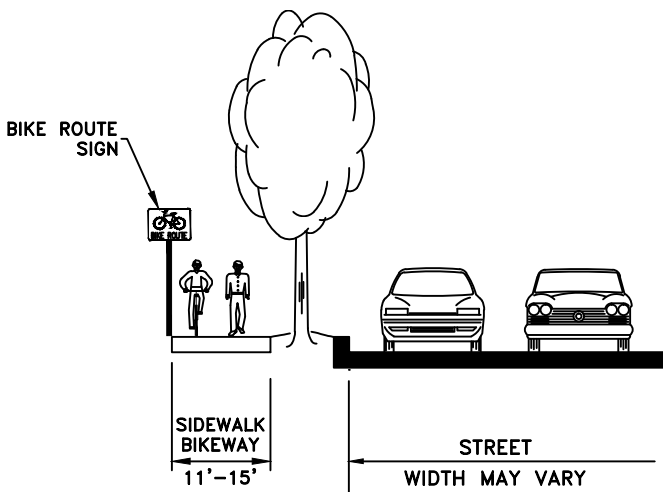
T-5



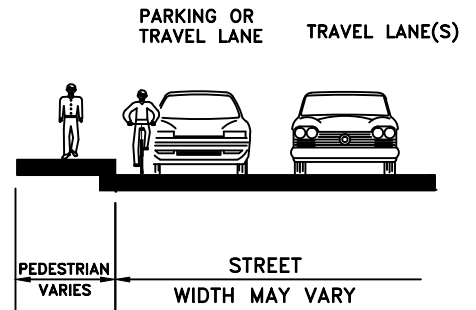
CLASS I BIKE PATH



CLASS II BIKE PATH



CLASS III BIKE ROUTE



CLASS IV SHARED ROADWAY

City of Stanwood



TRANSPORTATION STANDARD DETAIL

BIKEWAY CLASSES

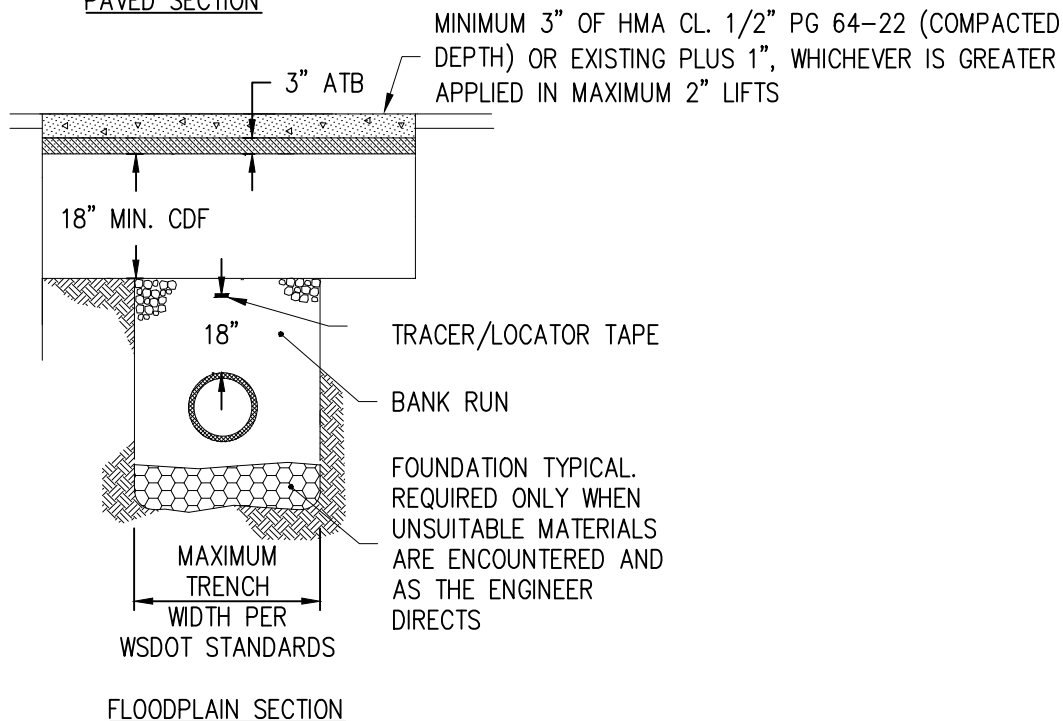
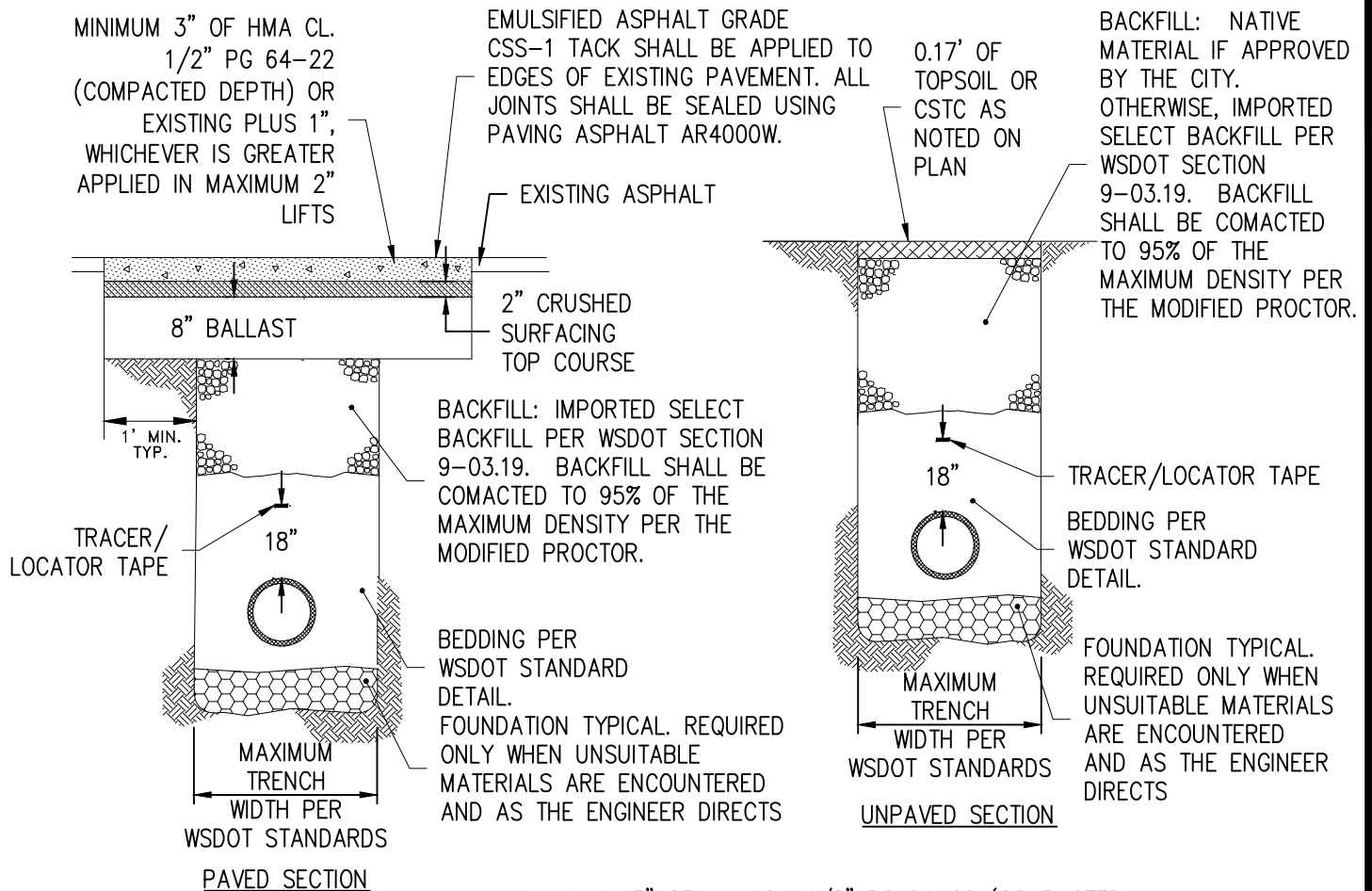
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Revised: Dec. 12, 2013

Printed: Jan. 10, 2014

DRAWING NO.

T-7



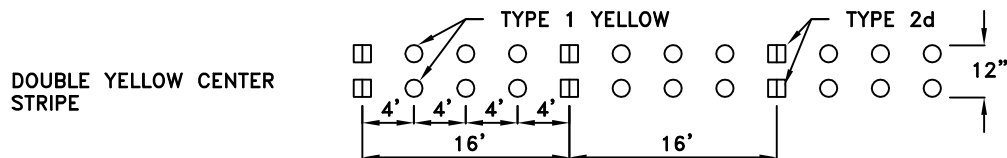
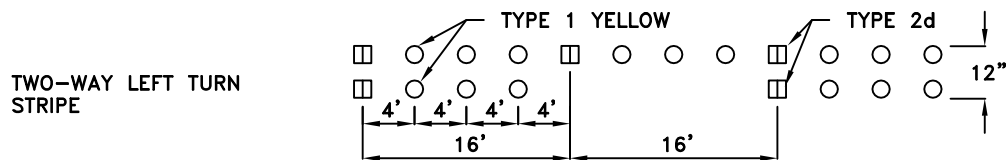
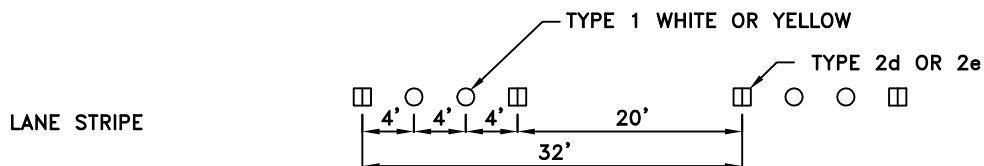
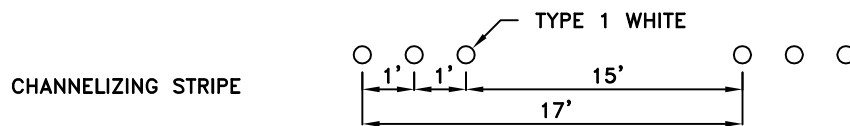
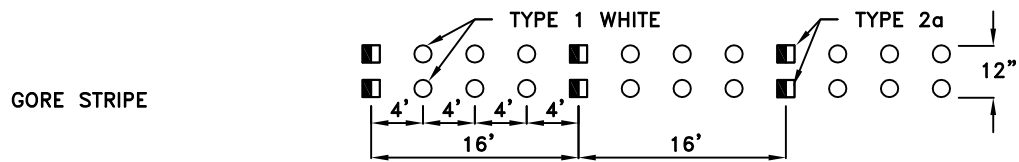
City of Stanwood



TRANSPORTATION STANDARD DETAIL

TRENCH RESTORATION

PAVEMENT MARKING DETAILS



LANE MARKERS

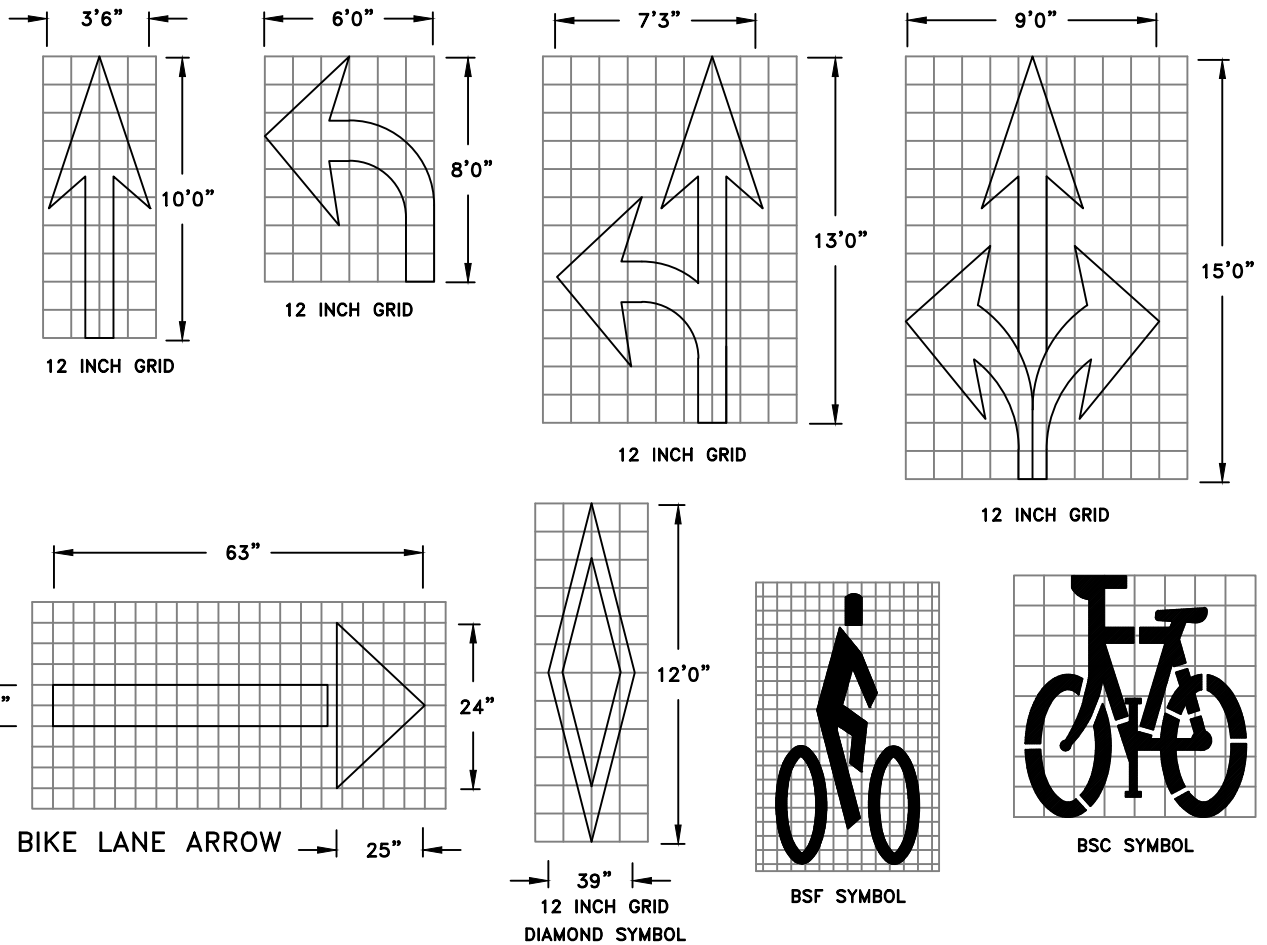
- TYPE 1 LANE MARKERS, WHITE OR YELLOW
- TYPE 2a REFLECTIVE LANE MARKER, WHITE AND RED
- TYPE 2d REFLECTIVE LANE MARKER, YELLOW AND YELLOW
- TYPE 2e REFLECTIVE LANE MARKER, WHITE—ONE SIDE ONLY

City of Stanwood

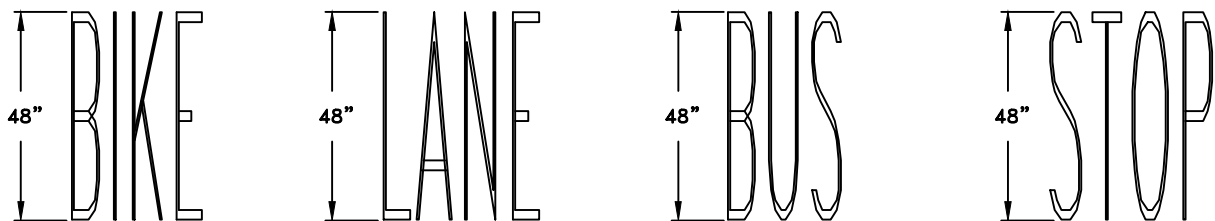


TRANSPORTATION STANDARD DETAIL

STRIPING DETAIL

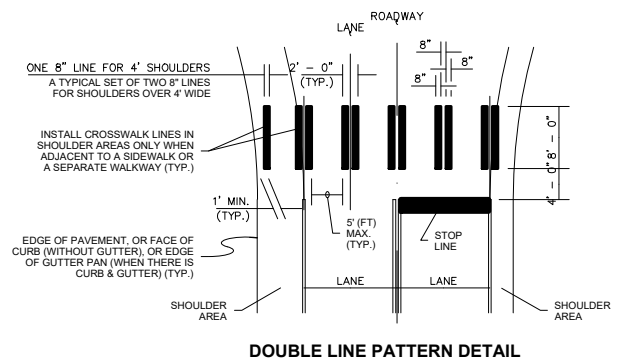


COMPLETE WORD STENCILS



GENERAL NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC OR METHACRYLIC RESIN.
2. ALL MARKINGS SHALL MEET FEDERAL METRIC STANDARDS.

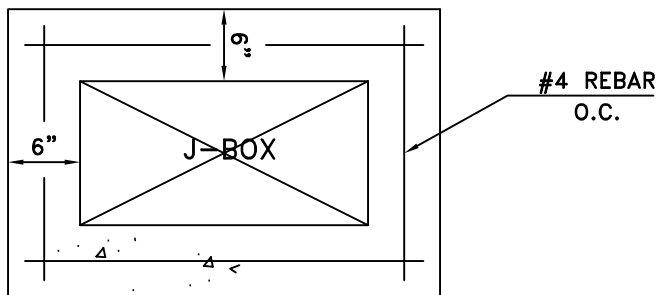
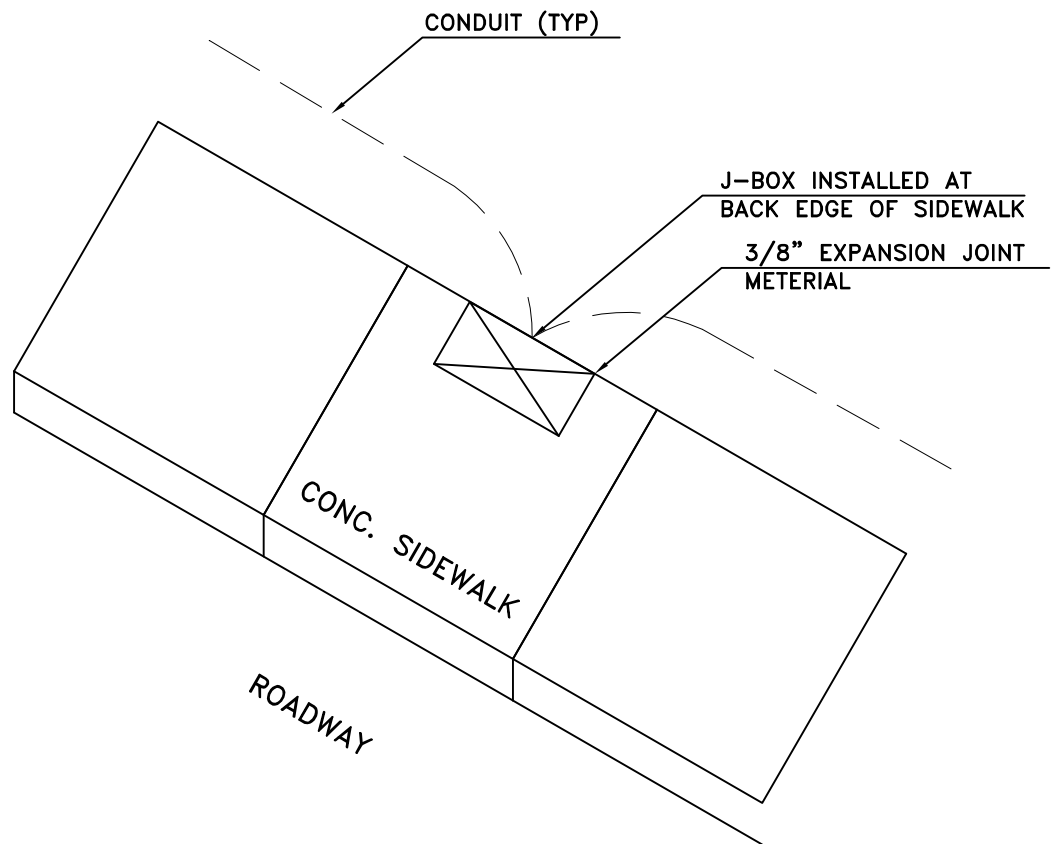


City of Stanwood



TRANSPORTATION STANDARD DETAIL

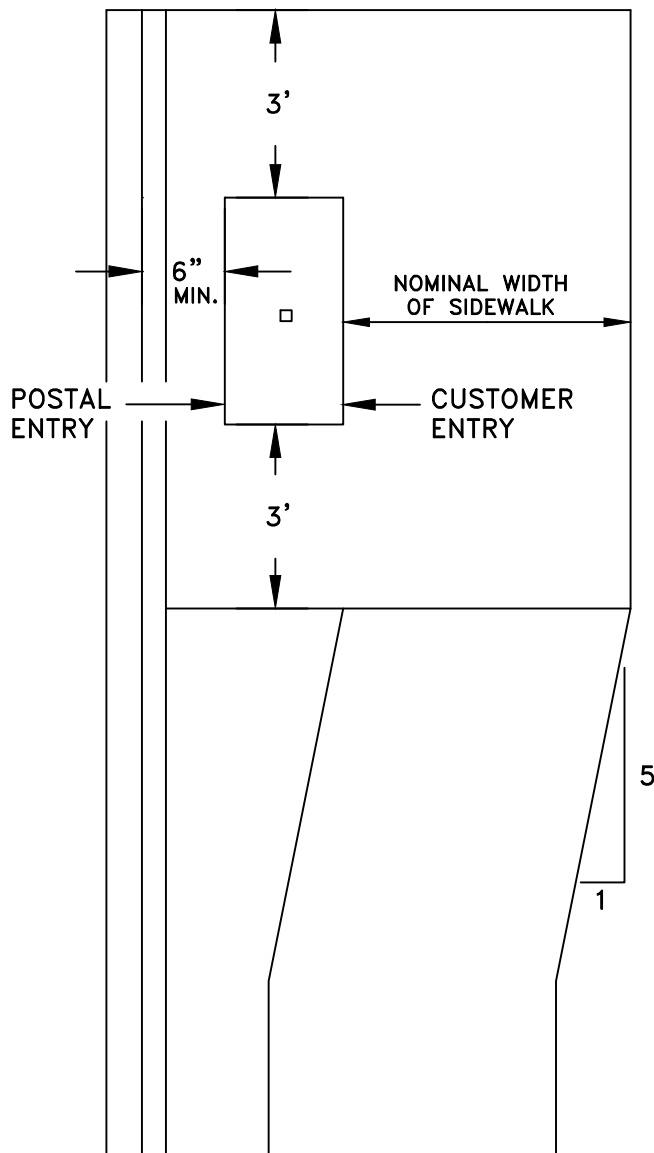
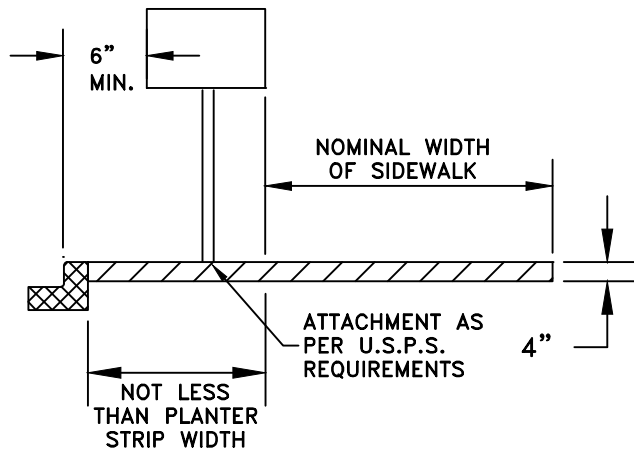
PAVEMENT MARKINGS



J-BOX PAD

NOTES:

1. WHERE NO SIDEWALKS EXIST A CONCRETE PAD SHALL BE CONSTRUCTED 6" THICK, 6" WIDE, COMPLETELY SURROUNDING J-BOX, WITH ONE #4 REBAR ON CENTER EACH SIDE AND TIED AT CORNERS.
2. J-BOX SHALL SET ON A 6" PAD OF CRUSHED SURFACING TOP COURSE OR WELL GRADED SAND



GENERAL NOTES:
1. SEE DEVELOPMENT GUIDELINE 4G.070 FOR ADDITIONAL REQUIREMENTS.

City of Stanwood



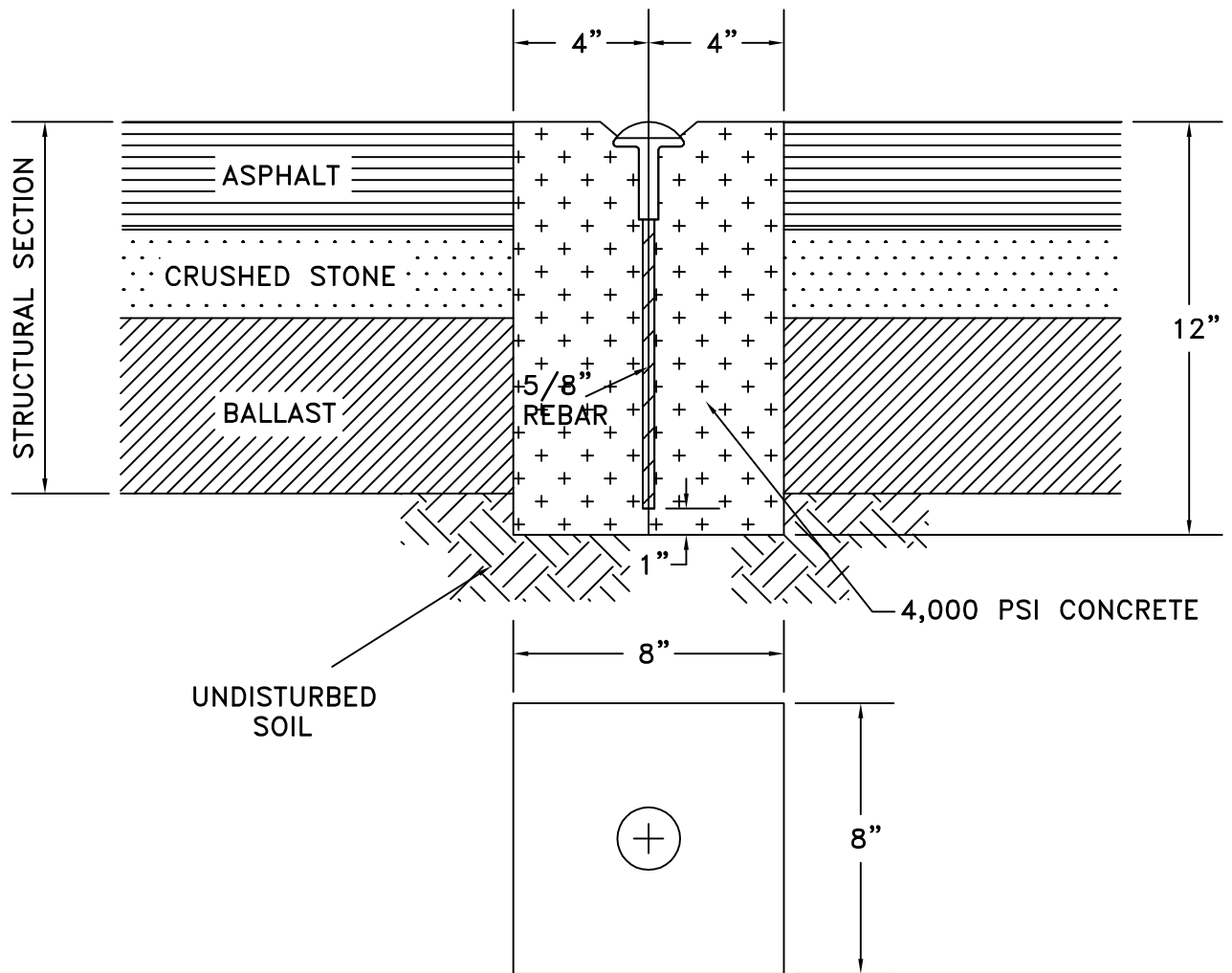
TRANSPORTATION STANDARD DETAIL

MAIL BOX
CLUSTER STYLE

File:STADETT12 Revised:Dec. 12, 2013 Printed:Jan. 10, 2014

DRAWING NO.

T-12



GENERAL NOTES:

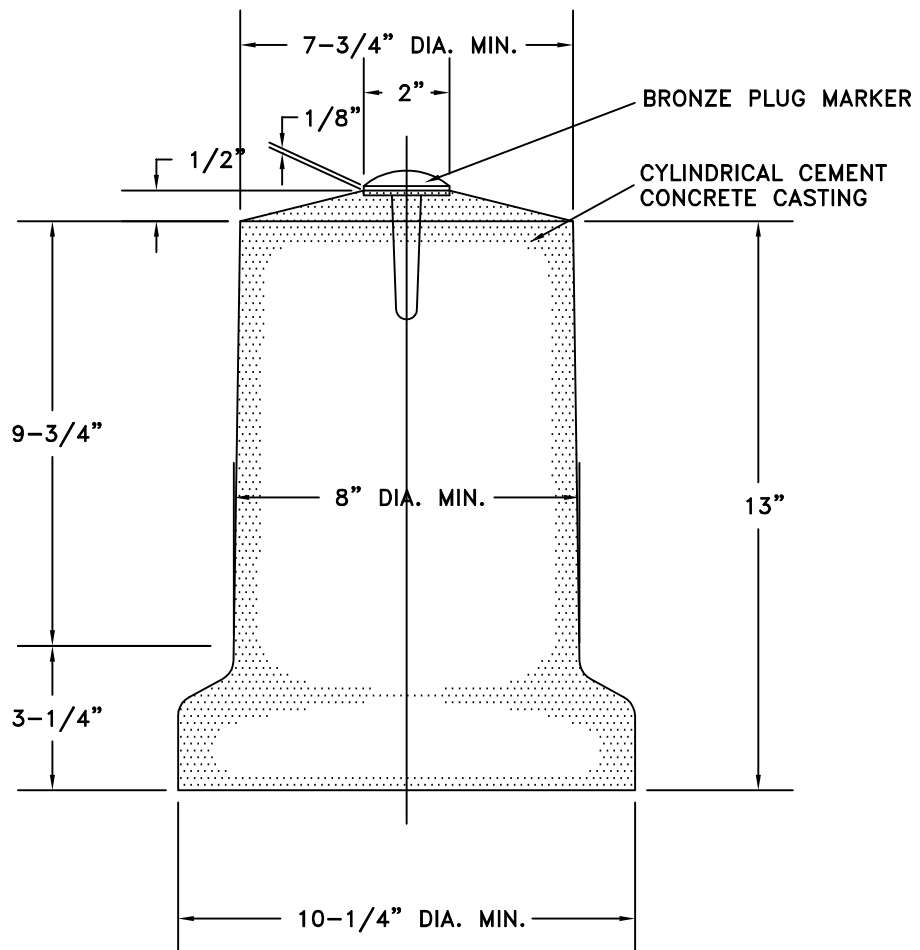
1. THIS MOUNUMENT TO BE USED PRIMARILY ON BITUMINOUS OR ASPHALT CONCRETE PAVEMENT FOR USE PRIMARILY IN SUBDIVISIONS AND MINOR ARTERIALS.
2. CONCRETE BASE DIMENSIONS SHOWN ARE MINIMUM. CONCRETE BASE NEED NOT BE FORMED.
3. CAP SHALL BE "BERNTSEN RB SERIES" OR BRASS PLUG MARKER.
4. CONCRETE TO BE PLACED ON A FIRM AND UNYIELDING FOUNDATION.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

CAST IN PLACE MONUMENT



GENERAL NOTES:

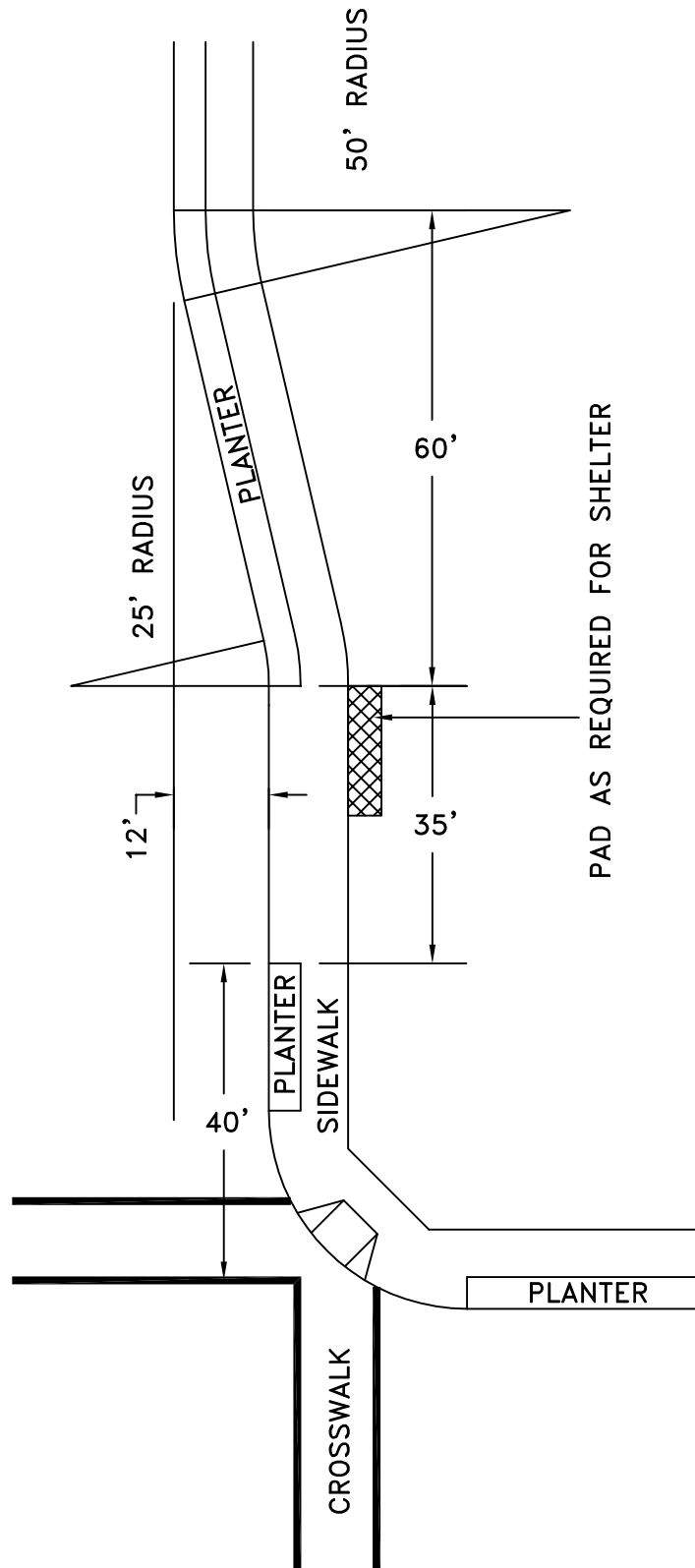
1. MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE CASTING AT 28 DAYS - 3000#. MAXIMUM AGGREGATE SIZE TO BE 1".
2. USE WITH CASE AND COVER PER WSDOT STANDARD PLAN H-7

City of Stanwood



TRANSPORTATION STANDARD DETAIL

PRECAST CONCRETE MONUMENT



City of Stanwood



TRANSPORTATION STANDARD DETAIL

FARSIDE BUS PULLOUT

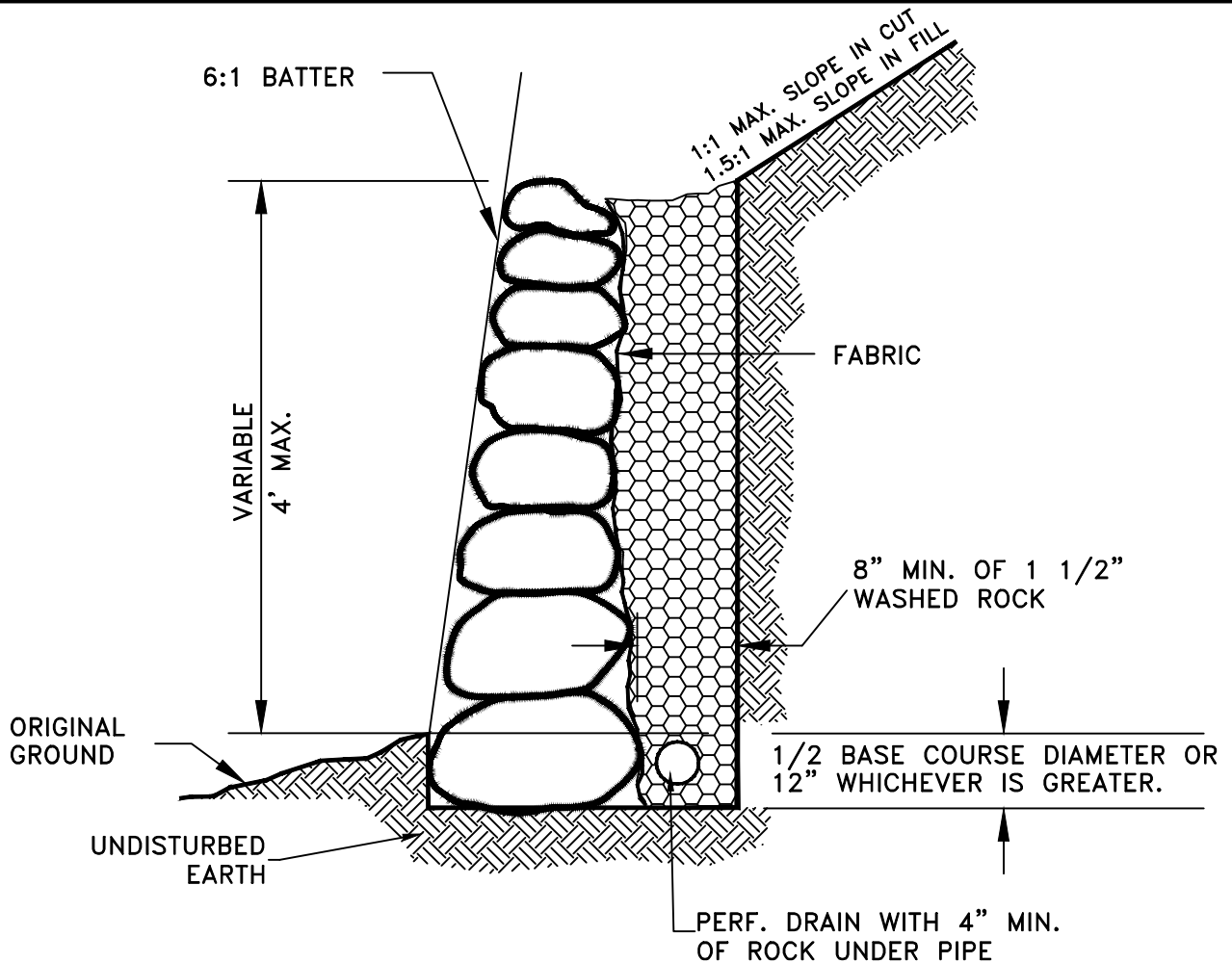
File: STADETD15

Revised: OCT 14, 2003

Printed: OCT 14, 2003

DRAWING NO.

T-15



GENERAL NOTES:

1. ROCKERIES OF 4' OR LOWER SHALL BE CONSTRUCTED OF 3-MAN TO 2-MAN FROM BOTTOM TO TOP. ROCK SIZE CATEGORIES SHALL INCLUDE:

TWO-MAN ROCKS (300 TO 600 POUNDS), 13 INCHES IN LEAST DIMENSION;

THREE-MAN ROCKS (800 TO 1200 POUNDS), 16 INCHES IN LEAST DIMENSION;

FOUR-MAN ROCKS (1500 TO 2200 POUNDS), 18 INCHES IN LEAST DIMENSION;

FIVE-MAN ROCKS (2400 TO 3400 POUNDS), 24 INCHES IN LEAST DIMENSION.

2. THE ROCKERY SHALL BE INSTALLED WITH A SMOOTH FACE.

3. THE LONG DIMENSION OF THE ROCKS SHALL EXTEND INTO THE EARTH TO PROVIDE MAXIMUM STABILITY.

4. THE ROCK SHALL BE PLACED SO AS TO LOCK INTO TWO ROCKS IN THE LOWER TIER.

5. CALL FOR INSPECTION PRIOR TO BASE COURSE BEING PLACED (FOR VERIFICATION OF ROCKERY HEIGHT, FOUNDATION MATERIAL AND ROCK SIZE).

6. DESIGN VARYING FROM THOSE INDICATED SHALL CARRY THE SEAL OF A CIVIL ENGINEER EXPERIENCED IN SOIL MECHANICS.

7. ROCK WALLS OVER FOUR FEET IN HEIGHT SHALL BE REVIEWED AND APPROVED BY THE BUILDING DEPARTMENT.

City of Stanwood



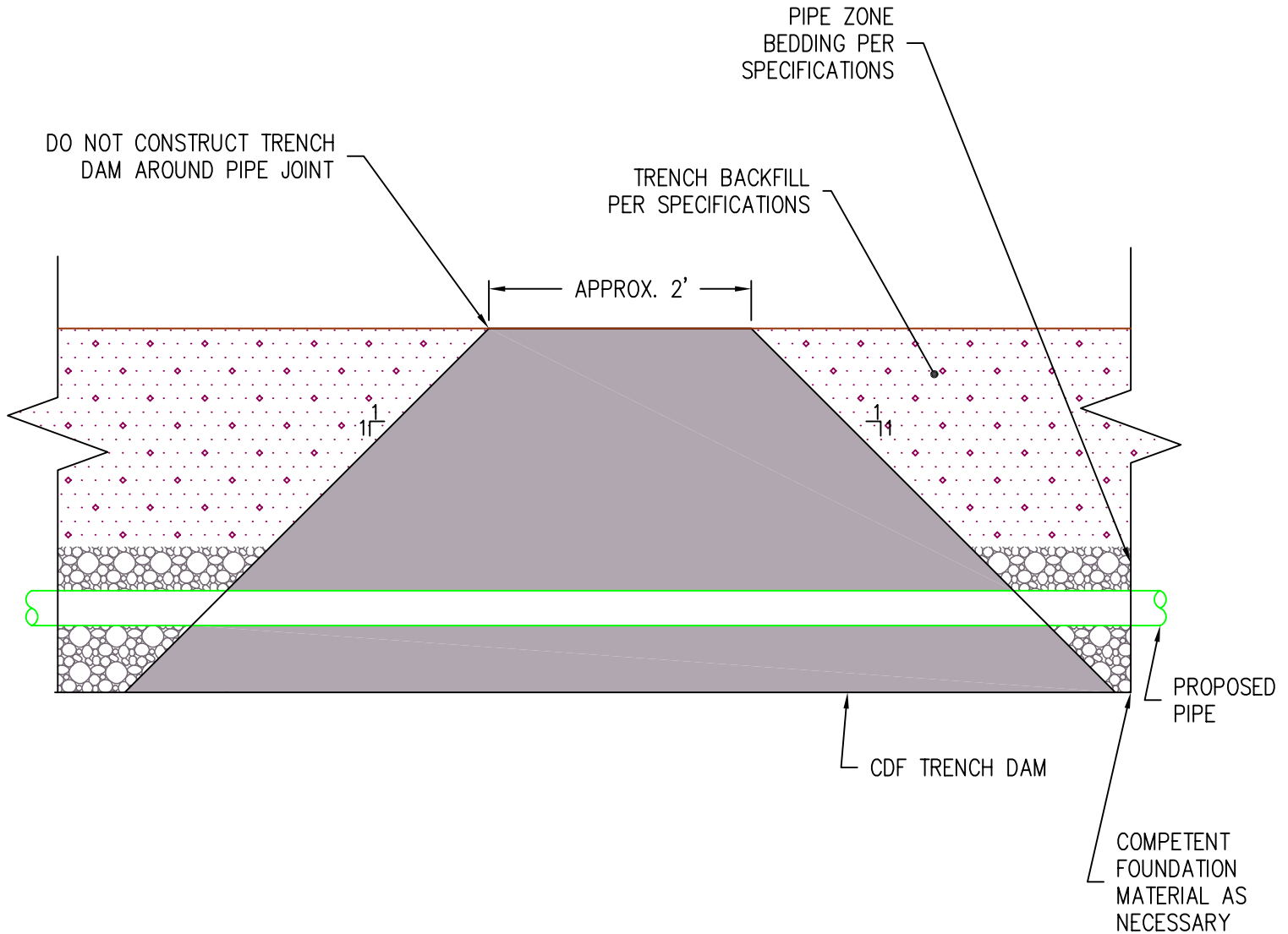
TRANSPORTATION STANDARD DETAIL

ROCK RETAINING WALL

NOTE:

TRENCH DAM SHALL EXTEND FROM BOTTOM OF EXCAVATED TRENCH THROUGH BEDDING MATERIAL AND TO THE TOP OF THE TRENCH BACKFILL AND SHALL EXTEND COMPLETELY TO THE EDGES OF THE TRENCH. TRENCH DAM SHALL BE CONSTRUCTED OF CONTROLLED DENSITY FILL (CDF).

TRENCH DAM DRAINAGE SHALL BE PROVIDED.



City of Stanwood



TRANSPORTATION STANDARD DETAIL

TRENCH DAM DETAIL

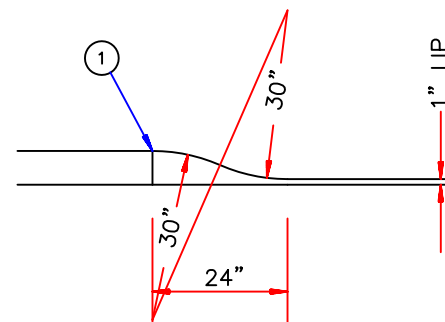
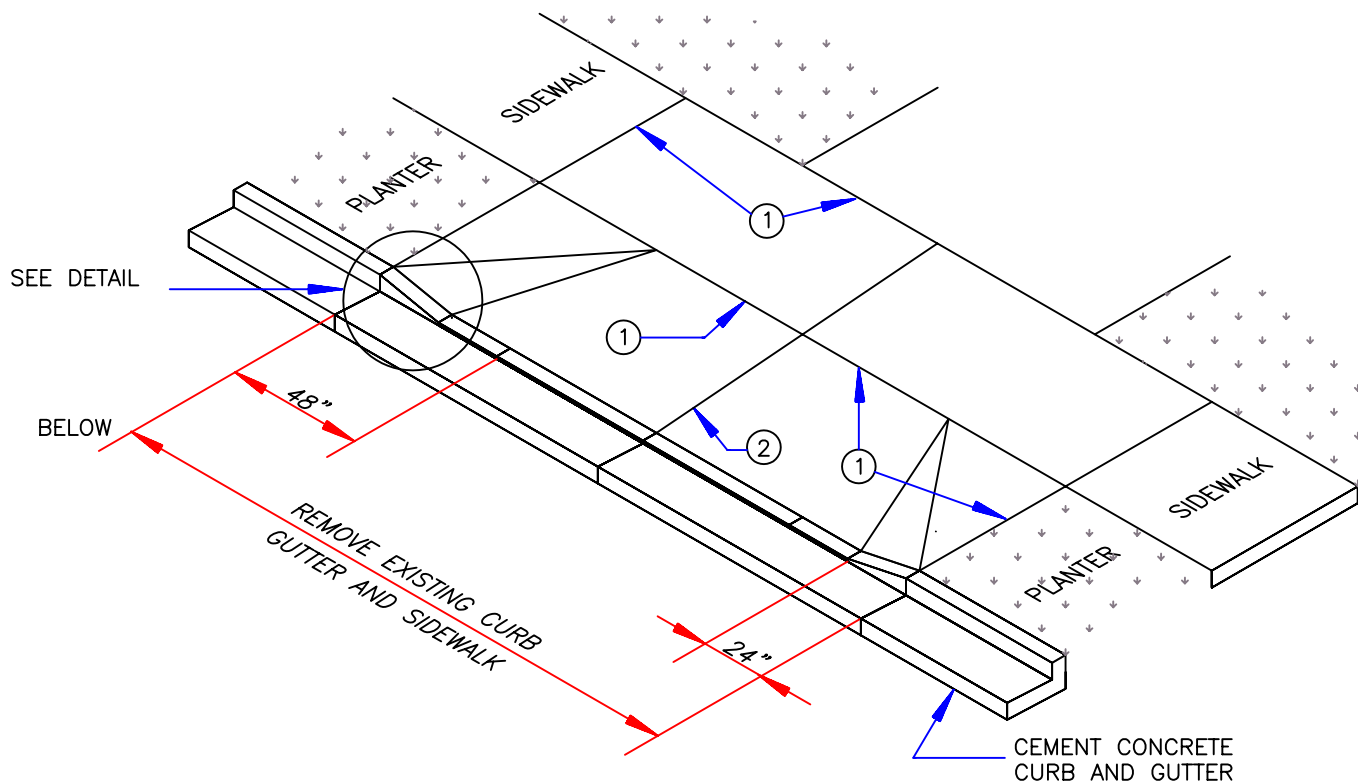
File: STADETT17

Revised: JUL 14, 2006

Printed: JUL 14, 2006

DRAWING NO.

T-17



NOTES:

1. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.
2. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS IF WIDTH OF DRIVEWAY IS 15 FEET OR GREATER.
3. DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH ASPHALT OR CONCRETE.
4. DRIVEWAY CEMENT CONCRETE DEPTH SHALL BE A MINIMUM OF 6" AND PLACED ON COMPACTED GRADE.
5. CONCRETE SHALL BE COMMERCIAL CLASS CONCRETE PER WSDOT/APWA SPECIFICATIONS.
6. CLEAN AND EDGE ALL JOINTS.

DROP CURB TRANSITION DETAIL

City of Stanwood



TRANSPORTATION STANDARD DETAIL

DROP CURB DRIVEWAY ENTRANCE

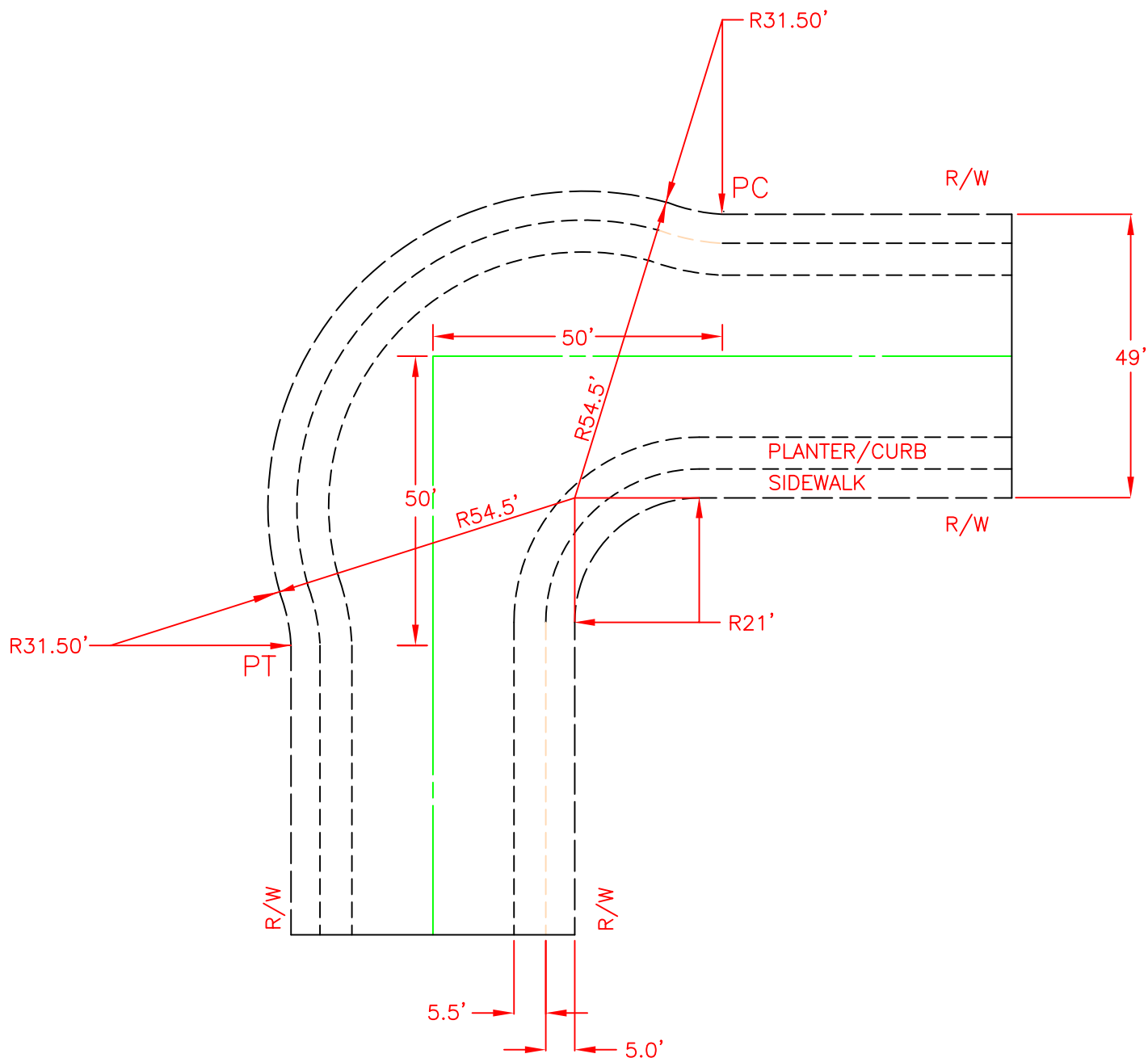
File: STADETT18

Revised: MAY 1, 2006

Printed: MAY 1, 2006

DRAWING NO.

T-18



NOTES:

1. INTERSECTION BULBS MAY BE USED IN LIEU OF HORIZONTAL CURVES FOR CERTAIN LOW-SPEED DESIGNS.
2. A MINIMUM 50' TANGENT IS REQUIRED FROM THE POINT OF INTERSECTION OF THE CENTERLINES.
3. INTERSECTION ANGLE SHALL BE 90 DEGREES $\pm$ 10 DEGREES.
4. RADII SHOWN APPLY FOR A 49-FOOT LOCAL ROAD R/W.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

90° INTERSECTION

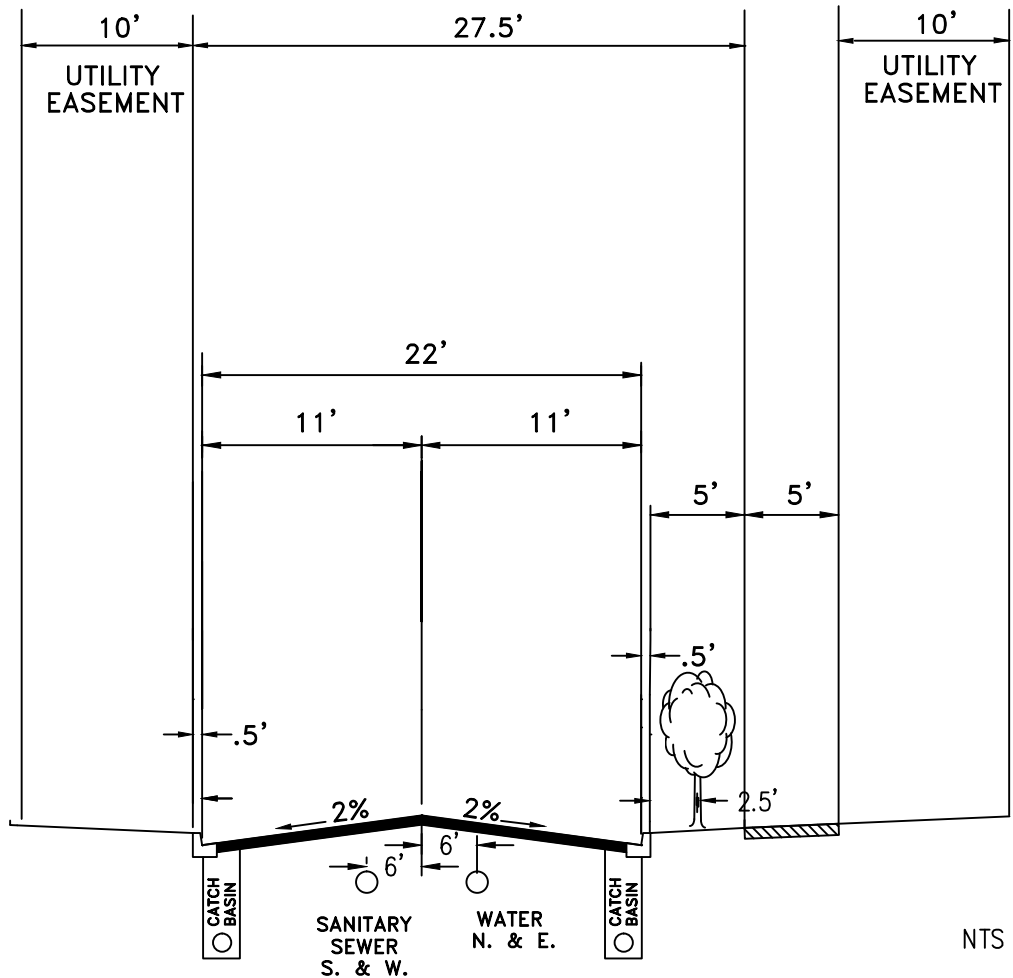
File: STADETT18

Revised: MAY 1, 2006

Printed: MAY 1, 2006

DRAWING NO.

T-19



NOTES:

1. PRIVATE STREETS SHALL BE ESTABLISHED BY TRACT TO ALLOW LEGAL ACCESS TO NO MORE THAN 4 DWELLING UNITS.
2. UTILITIES LOCATED IN THE ACCESS TRACT OR EASEMENT SHALL ALSO HAVE UTILITY EASEMENTS.
3. PRIVATE ROADS WITH A TWO PERCENT CROSS SLOPE INSTEAD OF THE CROWNED ROAD SHOWN ARE ALSO ACCEPTABLE.
4. IF THE PRIVATE ROAD IS LONGER THAN 150 FEET, EMERGENCY VEHICLE ACCESS/TURNAROUND SHALL BE PROVIDED.
5. SURFACING REQUIREMENTS:
 SURFACING: 2" OF HOT MIX ASPHALT, CLASS 1/2 INCH PG 64-22.
 TOP COURSE: 4" OF CSTC
 NATIVE SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TO A FIRM AND UNYIELDING SURFACE.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

STREET DESIGN -
PRIVATE ROAD

File:STADETT20 Revised:Dec. 12, 2013 Printed:Jan. 10, 2014

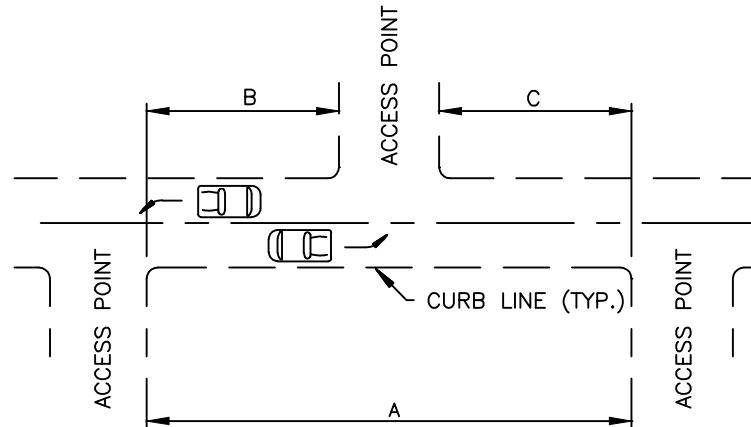
DRAWING NO.

T-20

MINIMUM ACCESS POINT SPACING – COMMERCIAL/INDUSTRIAL/MULTI-RESIDENTIAL (FEET)

① ⑥

ROADWAY SPEED (MPH) ②	DIMENSION A ③		DIMENSION B ⑤		DIMENSION C ⑤	
	ARTERIALS ③	NON-ARTERIALS ④	ARTERIALS	NON-ARTERIALS	ARTERIALS	NON-ARTERIALS
25	105	35	105	75	105	35
30	125	40	125	75	125	40
35	150	45	150	75	150	45
40	185	50	185	75	185	50
45	230	50	230	75	230	50
50	275	50	275	75	275	50



PLAN

NTS

NOTES:

1. ACCESS POINT SPACING ONLY. FOR PUBLIC STREET SPACING, SEE SECTION 2B.140.
2. REFERS TO POSTED SPEED OR OPERATING SPEED, WHICHEVER IS GREATER.
3. BETWEEN THE NEAREST EDGES OF TWO-WAY ACCESS POINTS. DISTANCES BETWEEN ADJACENT, ONE-WAY ACCESS POINTS (WITH THE INBOUND ACCESS UPSTREAM) CAN BE ONE-HALF THE DISTANCES SHOWN ABOVE.
4. BETWEEN THE NEAREST EDGES OF ONE OR TWO-WAY ACCESS POINTS.
5. ACCESS POINTS DIRECTLY OPPOSITE FROM EACH OTHER ARE MOST DESIRABLE. WHERE THIS IS NOT POSSIBLE, THESE DIMENSIONS WILL APPLY.
6. IN CASES WHERE ACCESS POINT SPACING IS NOT ATTAINABLE BECAUSE EXISTING FRONTAGES ARE NARROW, ACCESS POINTS SHOULD BE LOCATED AS CLOSE TO THE TABULATED VALUES SHOWN ABOVE AS POSSIBLE. WHEN THIS OCCURS, THE ENGINEER MAY REQUIRE ANALYSIS TO DETERMINE IF LEFT TURNS SHOULD BE PROHIBITED INTO OR OUT OF THE ACCESS POINT.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

COMMERCIAL/INDUSTRIAL/MULTI-RESIDENTIAL
ACCESS POINT SPACING

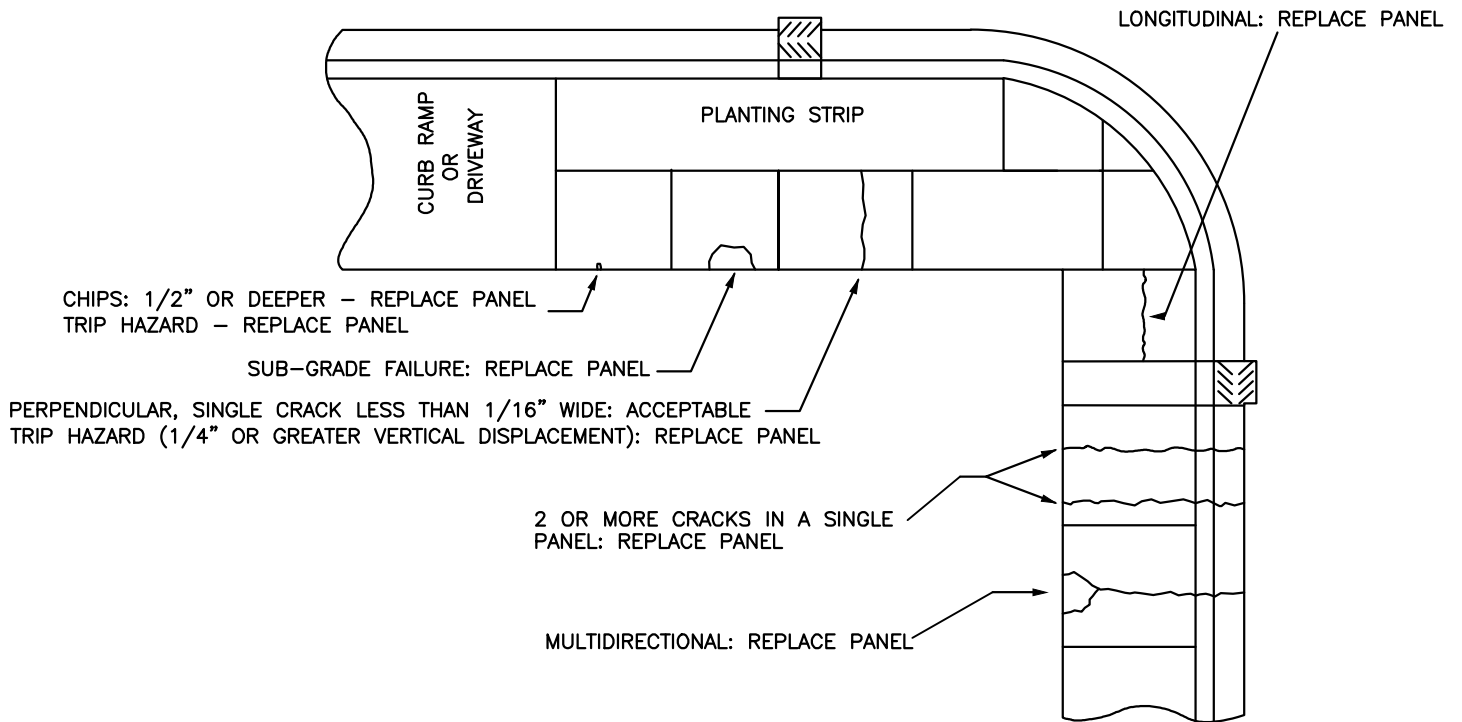
File:STADETT21

Revised: Dec. 12, 2013

Printed: Jan. 10, 2014

DRAWING NO.

T-21



NOTES:

1. PANEL EDGES ARE DEFINED BY EXPANSION JOINTS OR DUMMY JOINTS.
2. PANEL REPLACEMENT AT DUMMY JOINTS SHALL BE SAWCUT.
3. "PANEL" REFERS TO DRIVEWAY RAMPS, CURB & GUTTER, AND SIDEWALK.

City of Stanwood



TRANSPORTATION STANDARD DETAIL

**SIDEWALL REPLACEMENT
REQUIREMENTS**

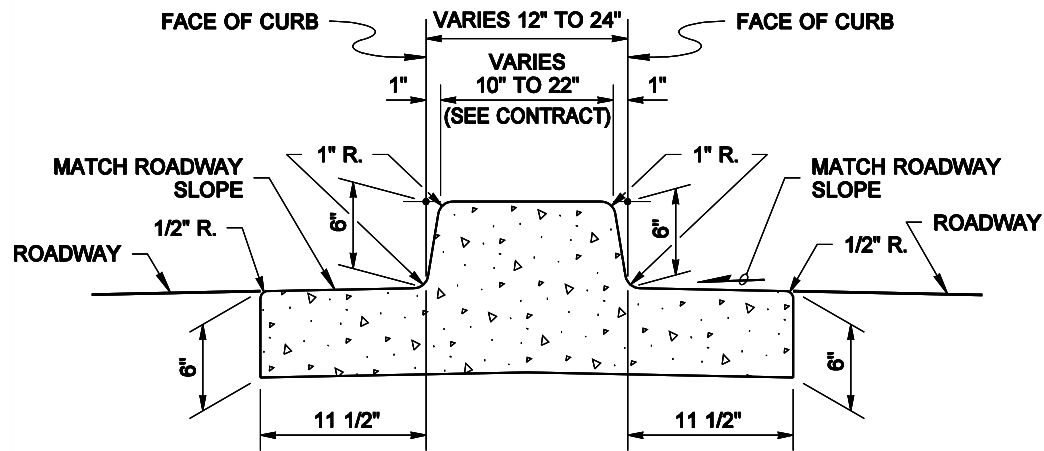
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Revised: Jun 17, 2021

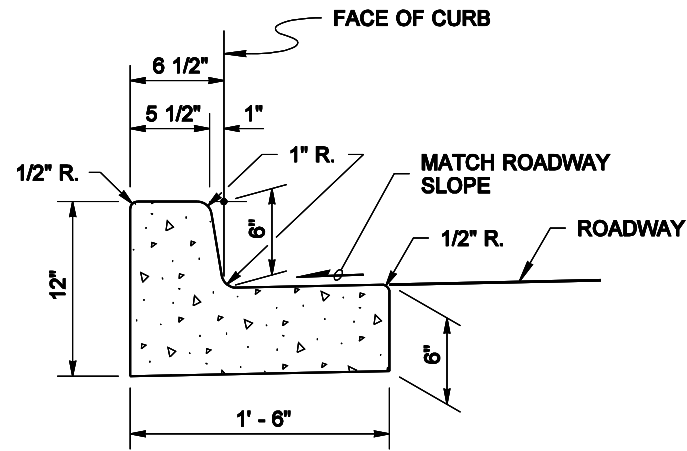
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DRAWING NO.

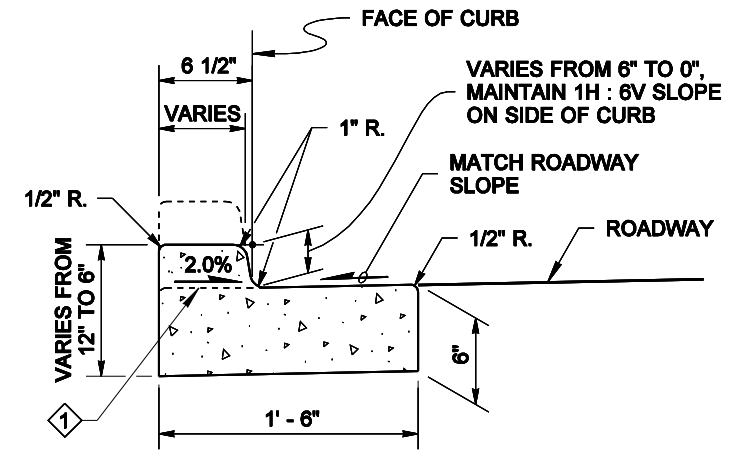
T-22



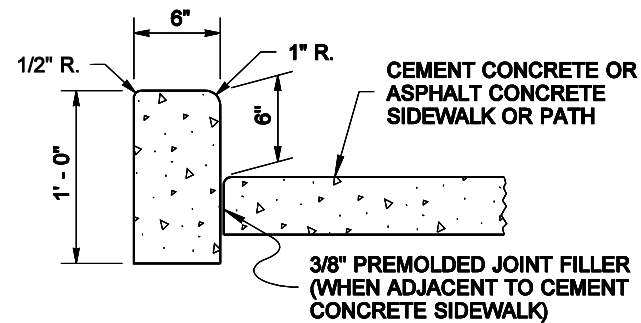
**DUAL-FACED CEMENT CONCRETE
TRAFFIC CURB AND GUTTER**



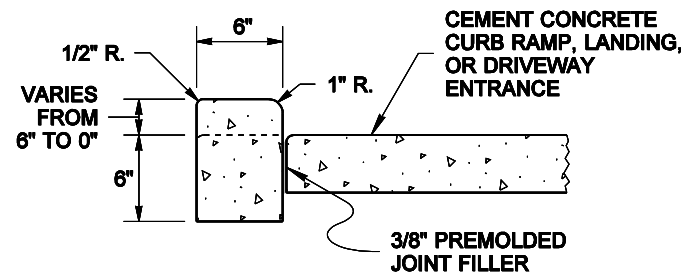
**CEMENT CONCRETE
TRAFFIC CURB AND GUTTER**



**DEPRESSED CURB SECTION
AT CURB RAMPS AND
DRIVEWAY ENTRANCES**



CEMENT CONCRETE PEDESTRIAN CURB



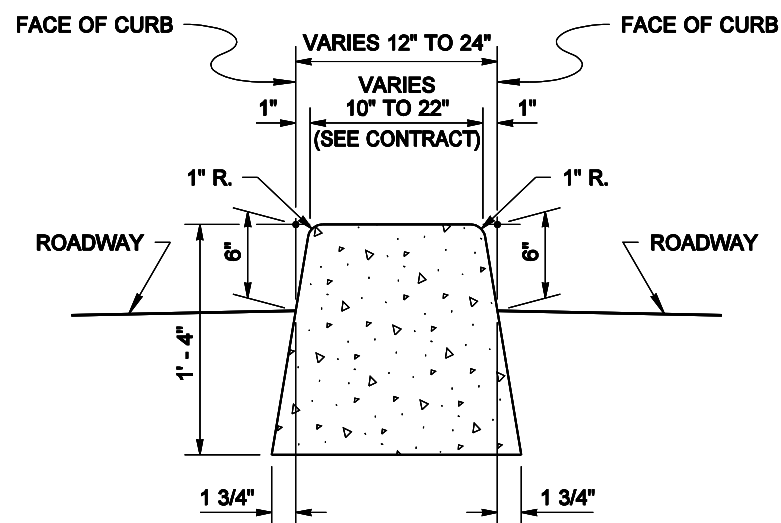
**CEMENT CONCRETE PEDESTRIAN CURB
AT CURB RAMPS, LANDINGS,
AND DRIVEWAY ENTRANCES**

NOTE

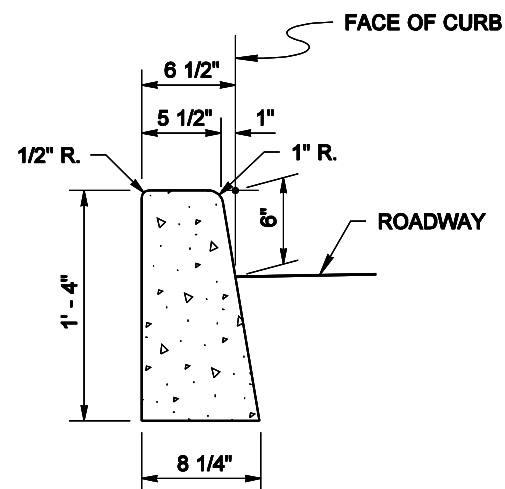
1. See **Standard Plan F-30.10** for Curb Expansion and Contraction Joint spacing.

1 FLUSH WITH GUTTER PAN AT CURB
RAMP ENTRANCE ~ 1/2" VERTICAL LIP
AT DRIVEWAY ENTRANCE

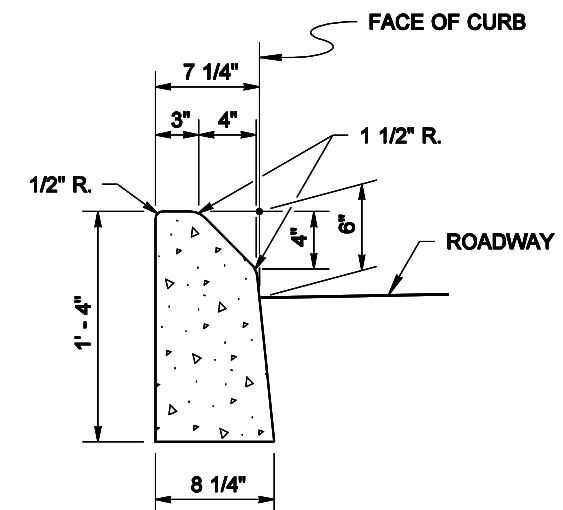
DRAWN BY: FERN LIDDELL



**DUAL-FACED CEMENT
CONCRETE TRAFFIC CURB**



**CEMENT CONCRETE
TRAFFIC CURB**



**MOUNTABLE CEMENT
CONCRETE TRAFFIC CURB**



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CEMENT CONCRETE CURBS

STANDARD PLAN F-10.12-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III 06-16-11

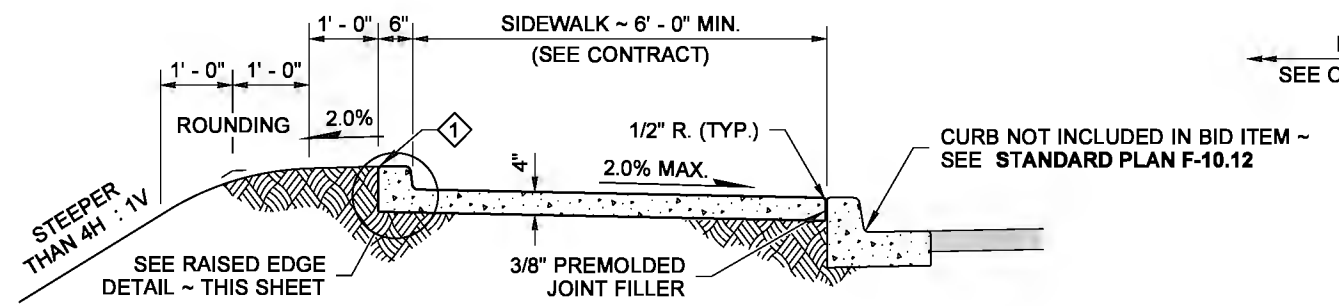
STATE DESIGN ENGINEER

DATE

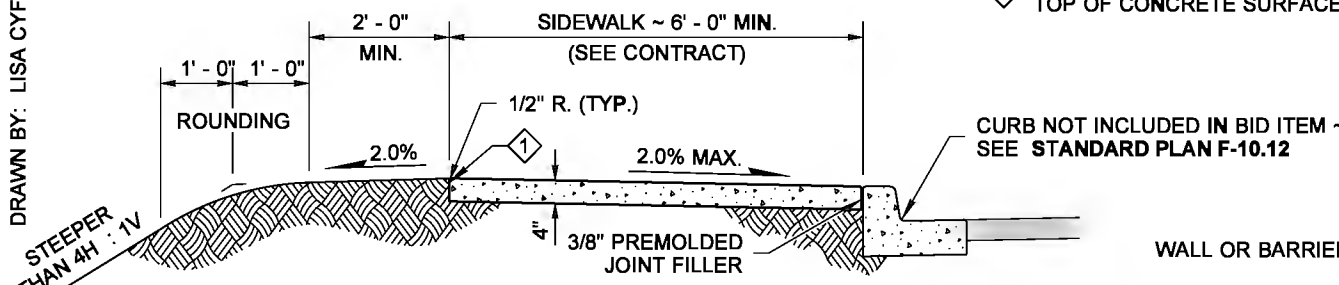


Washington State Department of Transportation

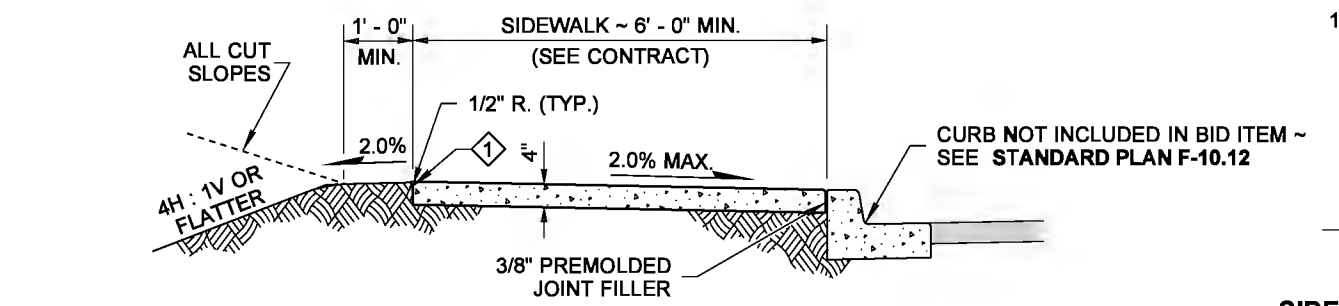
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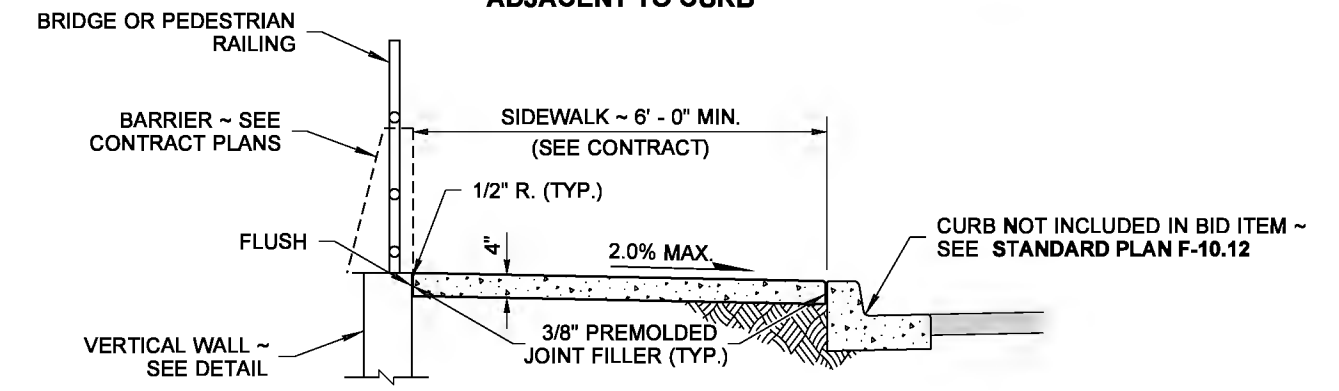
WITH RAISED EDGE



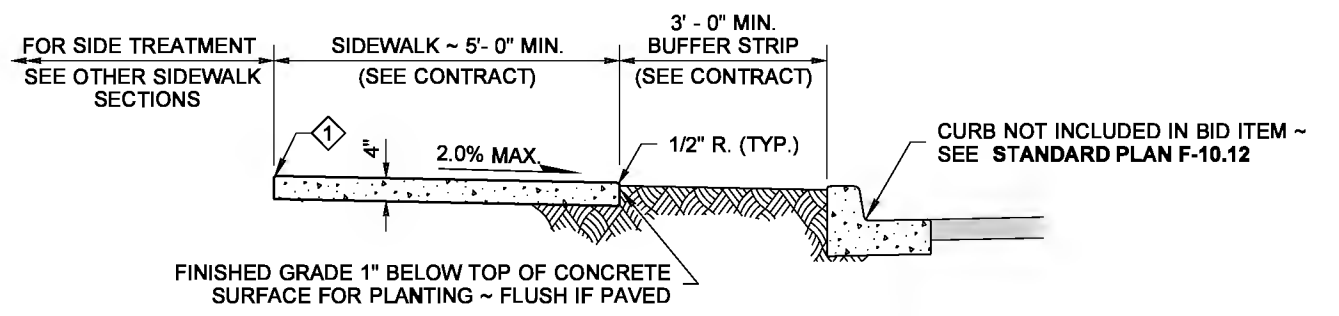
ADJACENT TO CURB
(STEEP FILL SLOPES)



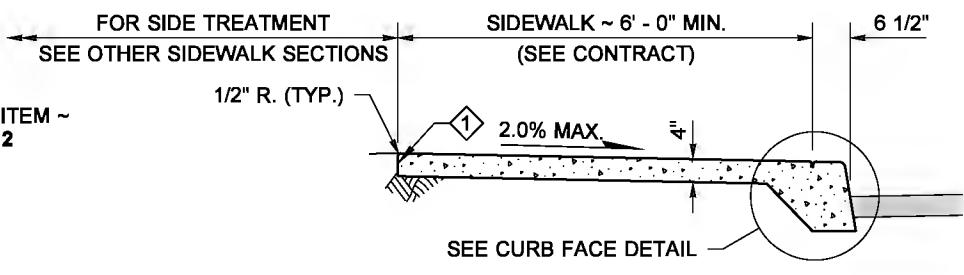
ADJACENT TO CURB
(STEEL RAILING OR WALL)



ADJACENT TO CURB AND RAILING OR WALL



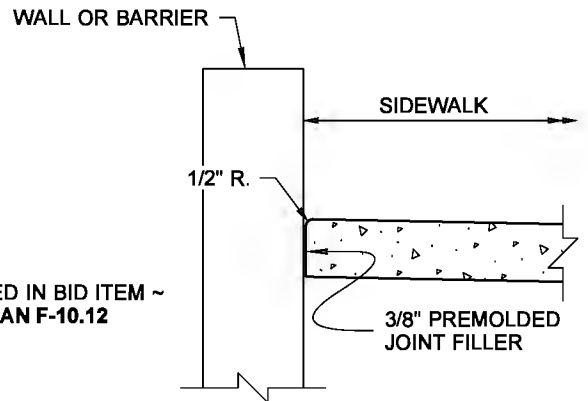
ADJACENT TO BUFFER STRIP



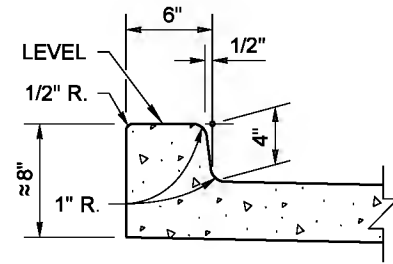
MONOLITHIC CEMENT CONCRETE
CURB AND SIDEWALK

NOTE

1. Four feet of the sidewalk width shall be the minimum pedestrian accessible route free of vertical and horizontal obstructions. Gratings, Access Covers, Junction Boxes, Cable Vaults, Pull Boxes and other appurtenances within the sidewalk must have slip resistant surfaces, be flush with surface, and match grade of the sidewalk.

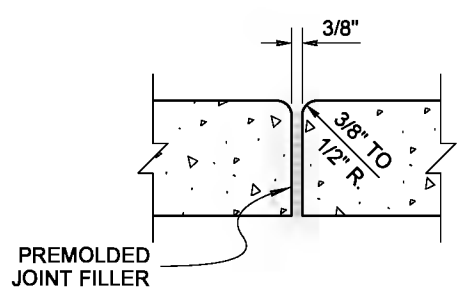


SIDEWALK ADJACENT TO WALL DETAIL

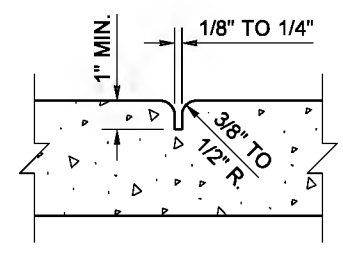


RAISED EDGE DETAIL

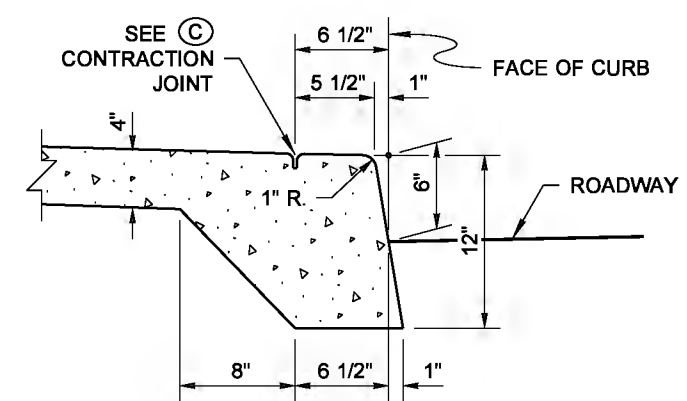
EXTEND SIDEWALK TRANSVERSE JOINTS TO INCLUDE RAISED EDGE



EXPANSION JOINT

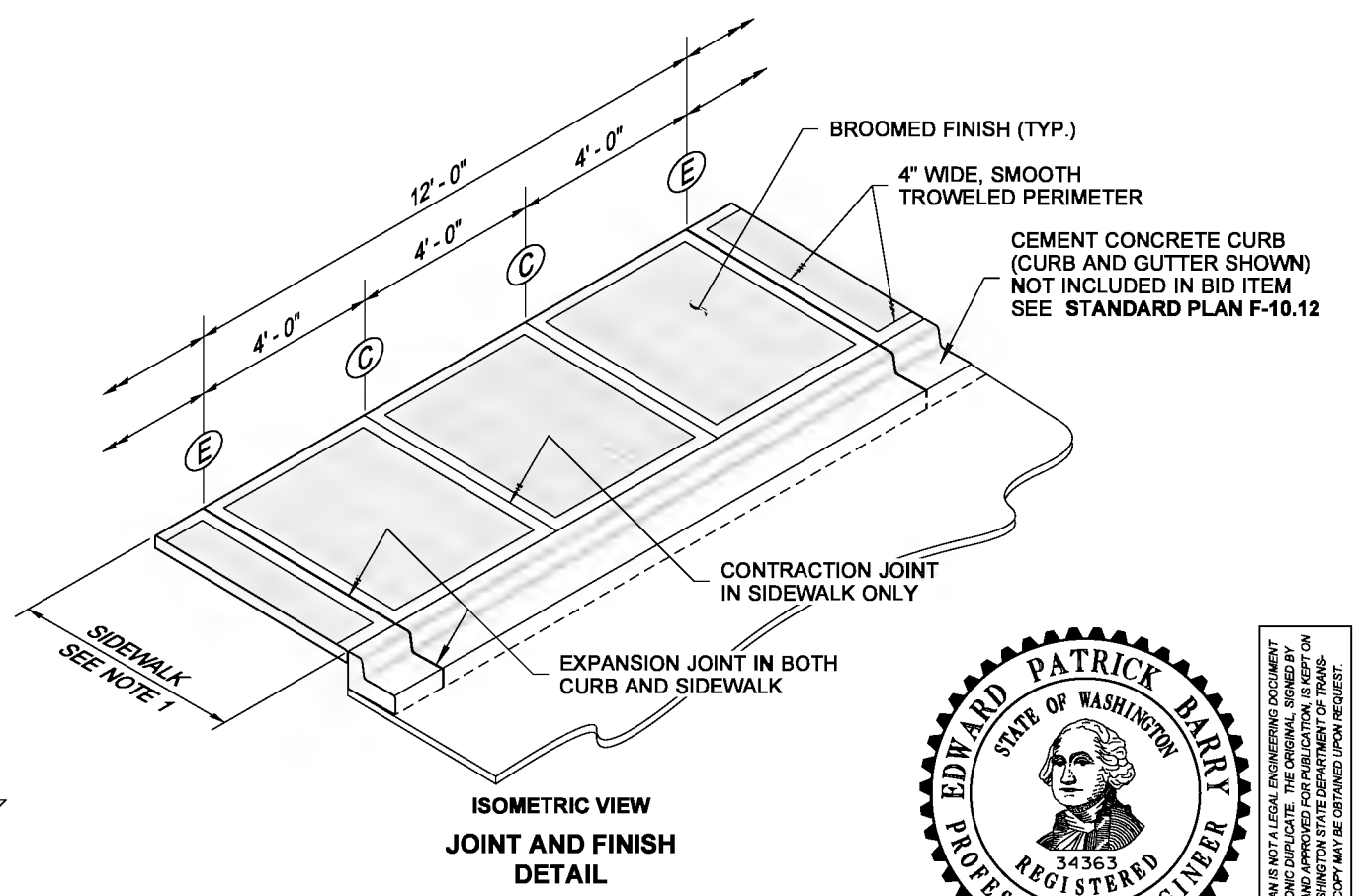


CONTRACTION JOINT

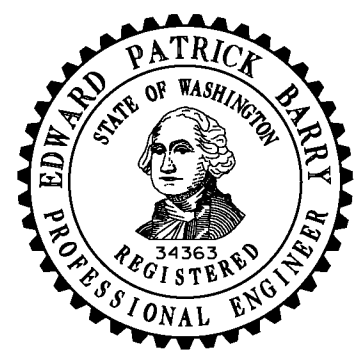


CURB FACE DETAIL

EXTEND SIDEWALK TRANSVERSE EXPANSION JOINTS TO INCLUDE CURB (FULL DEPTH)



ISOMETRIC VIEW
JOINT AND FINISH
DETAIL



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**CEMENT CONCRETE
SIDEWALK**
STANDARD PLAN F-30.10-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

STATE DESIGN ENGINEER

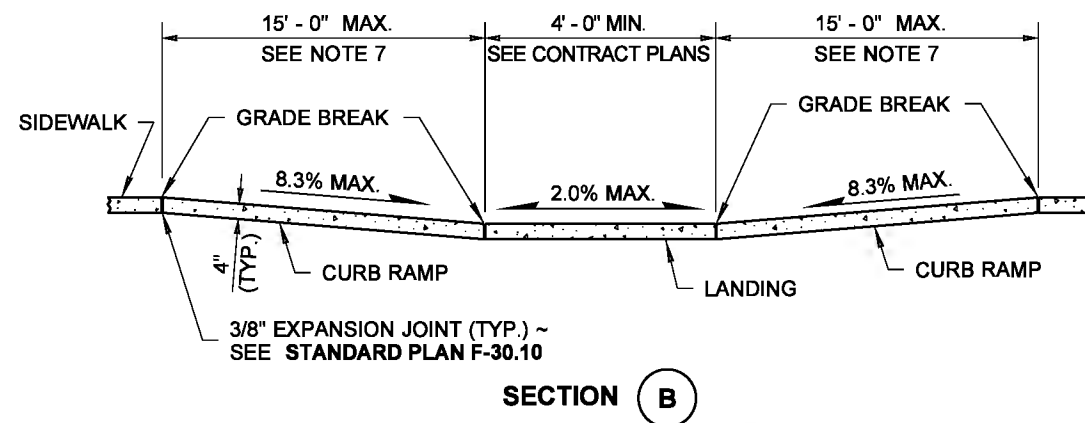
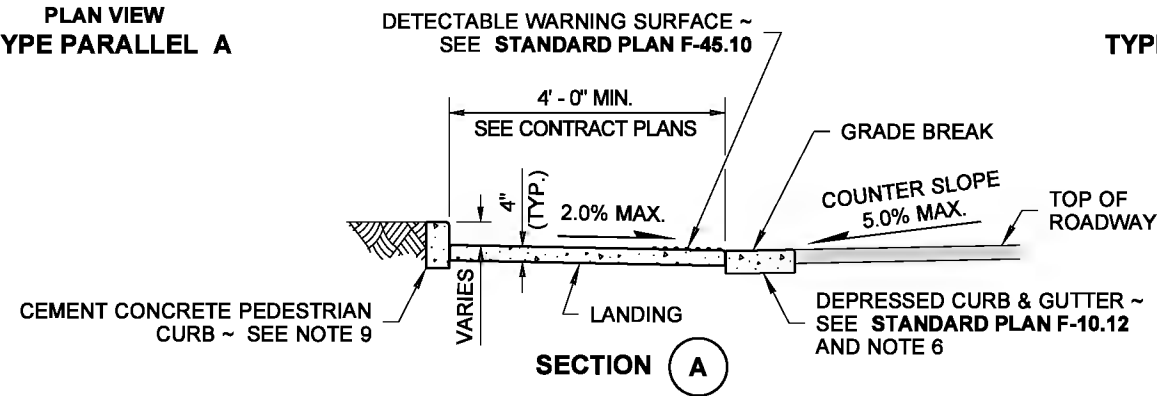
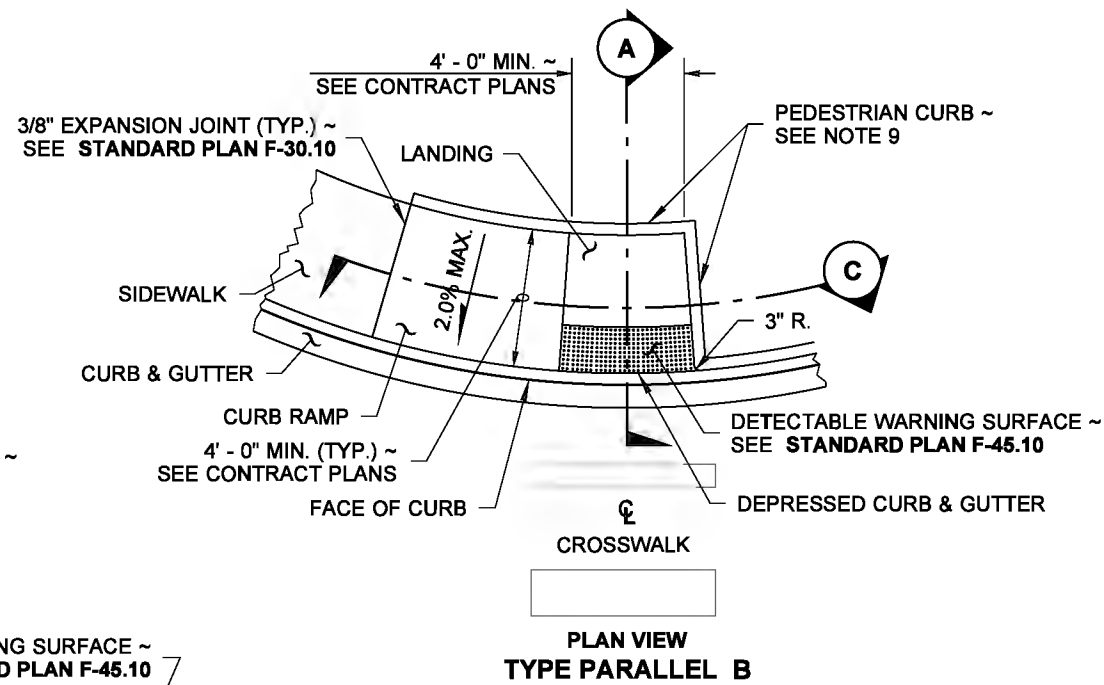
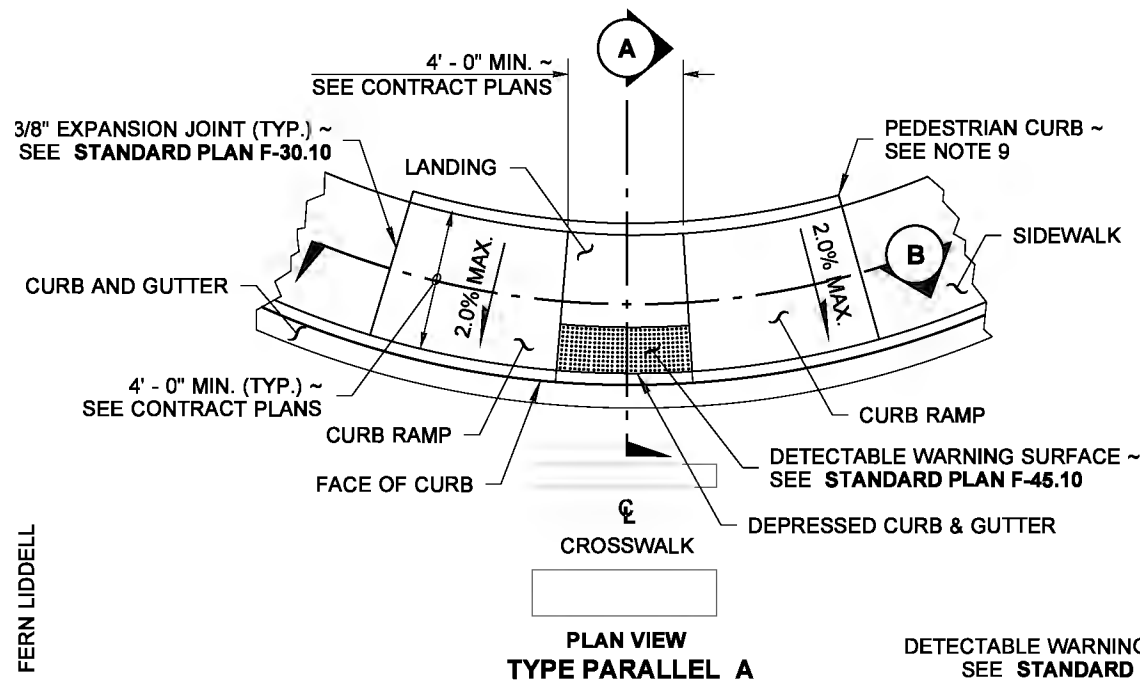
6/20/13

DATE

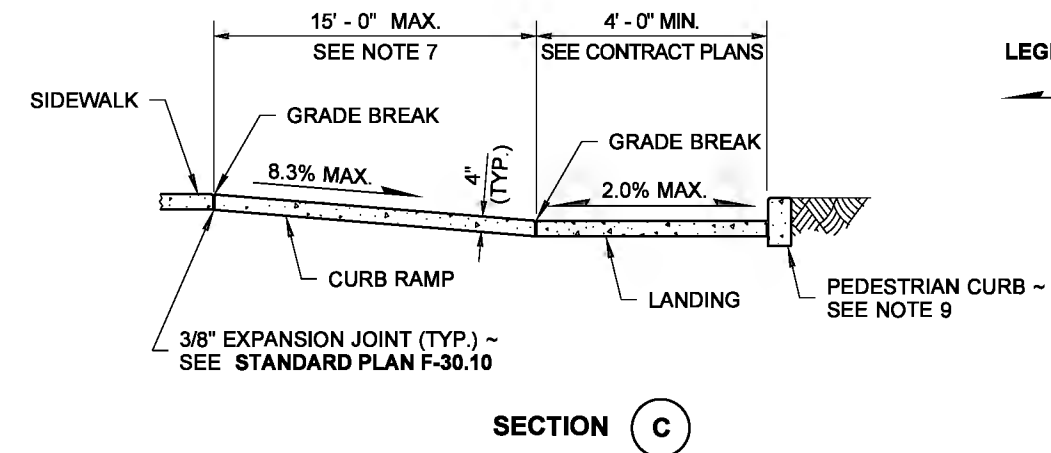
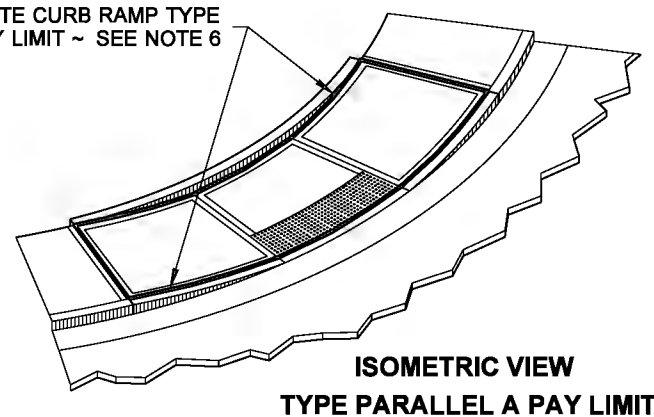


Washington State Department of Transportation

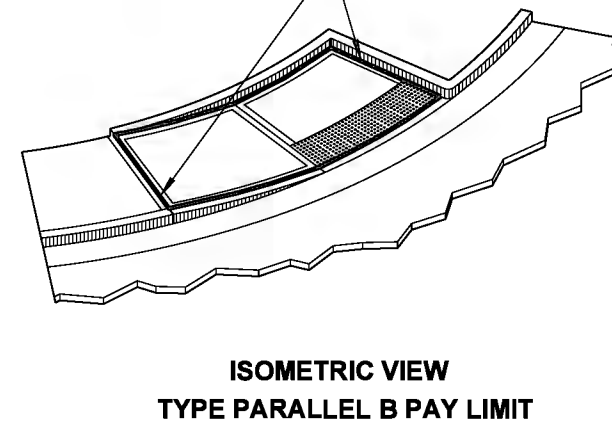
DRAWN BY: FERN LIDDELL



"CEMENT CONCRETE CURB RAMP TYPE PARALLEL A" PAY LIMIT ~ SEE NOTE 6



"CEMENT CONCRETE CURB RAMP TYPE PARALLEL B" PAY LIMIT ~ SEE NOTE 6



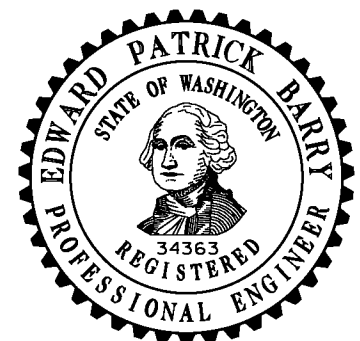
NOTES

1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk, or as shown in the Contract Plans.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances in front of the Curb Ramp or on any part of the Curb Ramp or Landing.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp maximum running slope shall not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15-foot max. length, the running slope of the curb ramp shall be as flat as feasible.
8. Curb Ramp, Landing, and Flares shall receive broom finish. See **Standard Specifications 8-14**.
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.

LEGEND



SLOPE IN EITHER DIRECTION



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PARALLEL CURB RAMP STANDARD PLAN F-40.12-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

STATE DESIGN ENGINEER

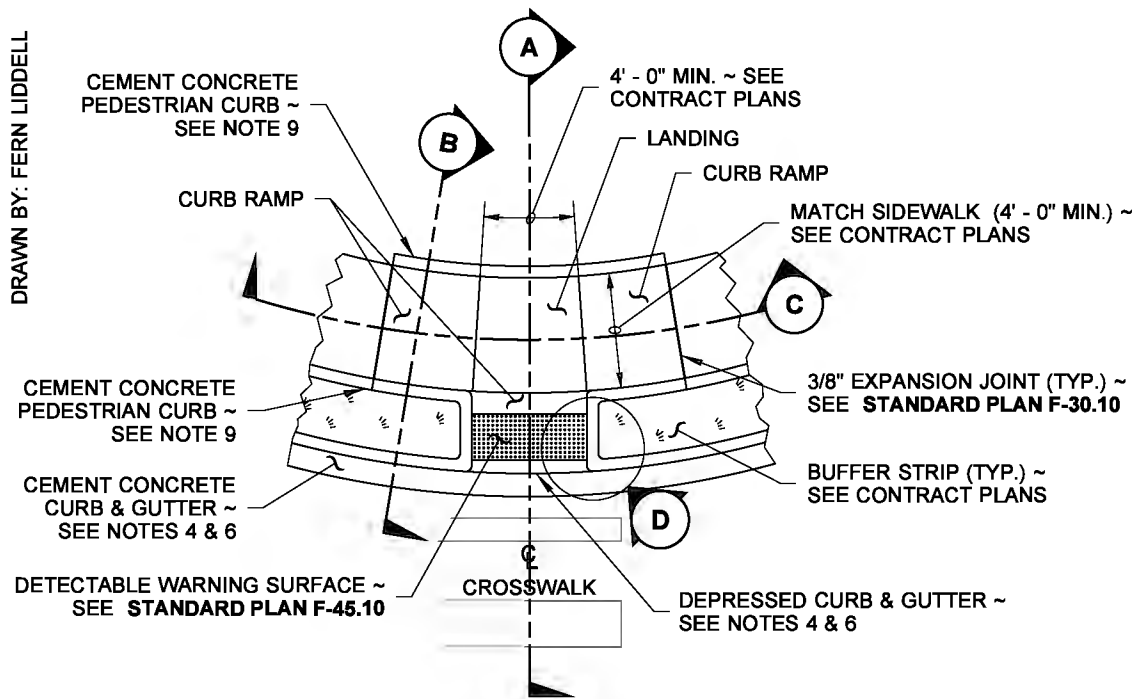
6/20/13

DATE

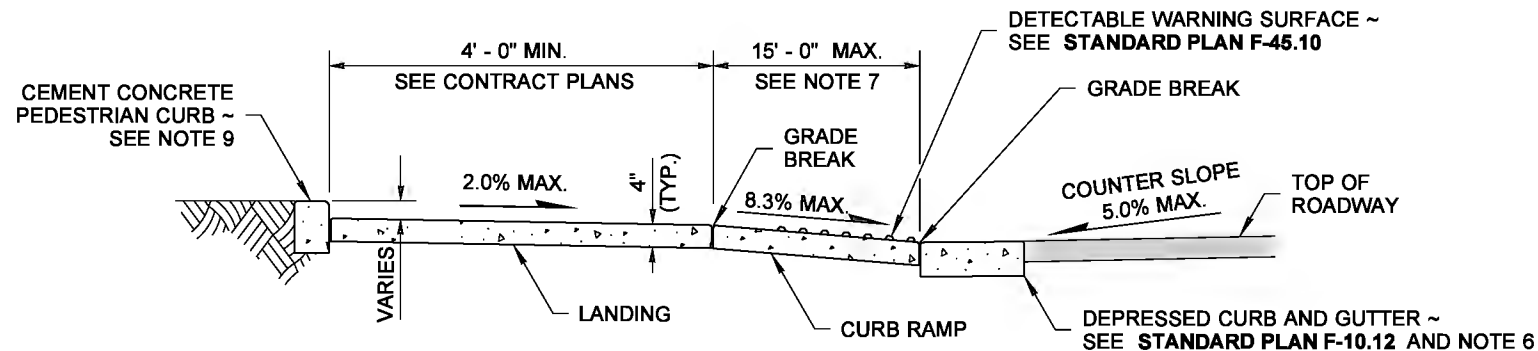


Washington State Department of Transportation

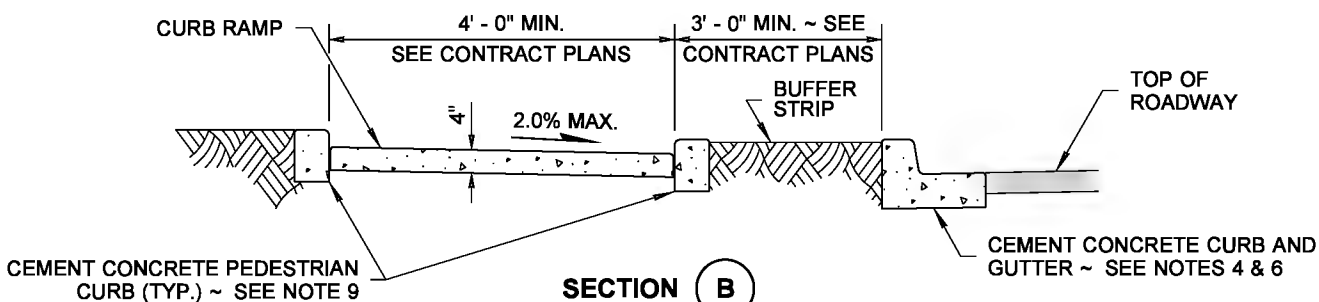
DRAWN BY: FERN LIDDELL



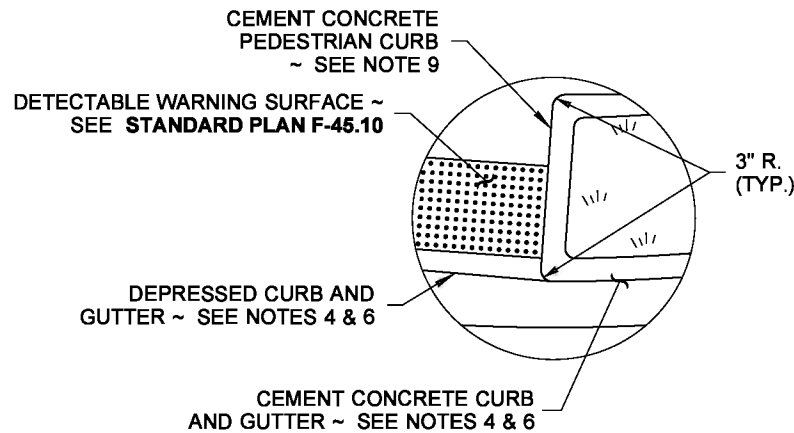
PLAN VIEW
TYPE COMBINATION
WITH BUFFER



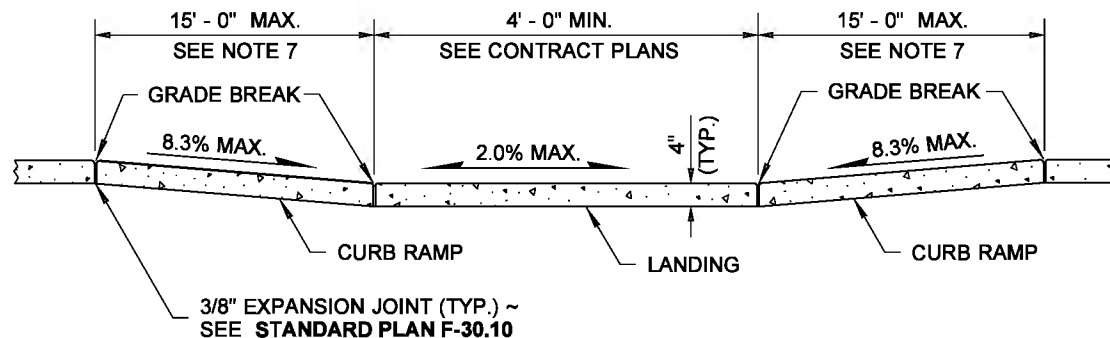
SECTION A



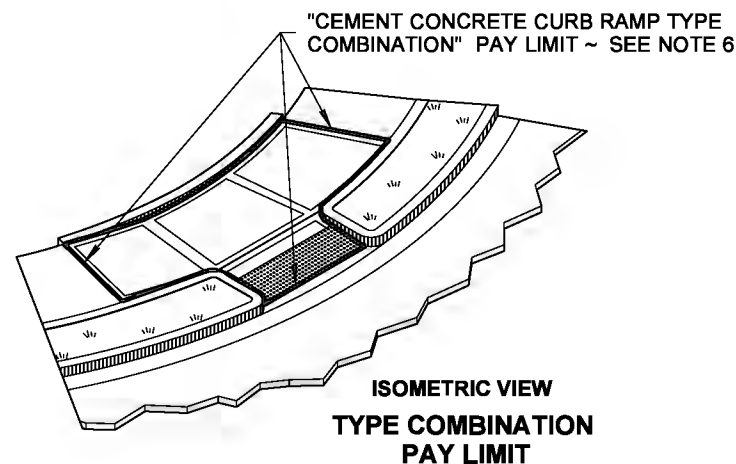
SECTION B



DETAIL D
CURB RADIUS DETAIL



SECTION C

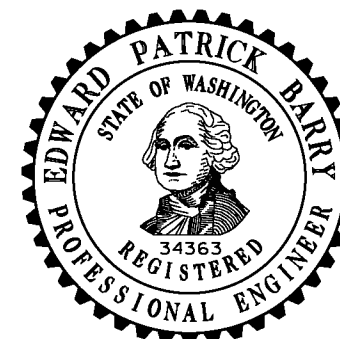


NOTES

1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk or as shown in the Contract Plans.
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8. Curb Ramp, Landing and Flares shall receive broom finish. See **Standard Specifications 8-14**.
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.

LEGEND

— SLOPE IN EITHER DIRECTION



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COMBINATION CURB RAMP STANDARD PLAN F-40.14-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

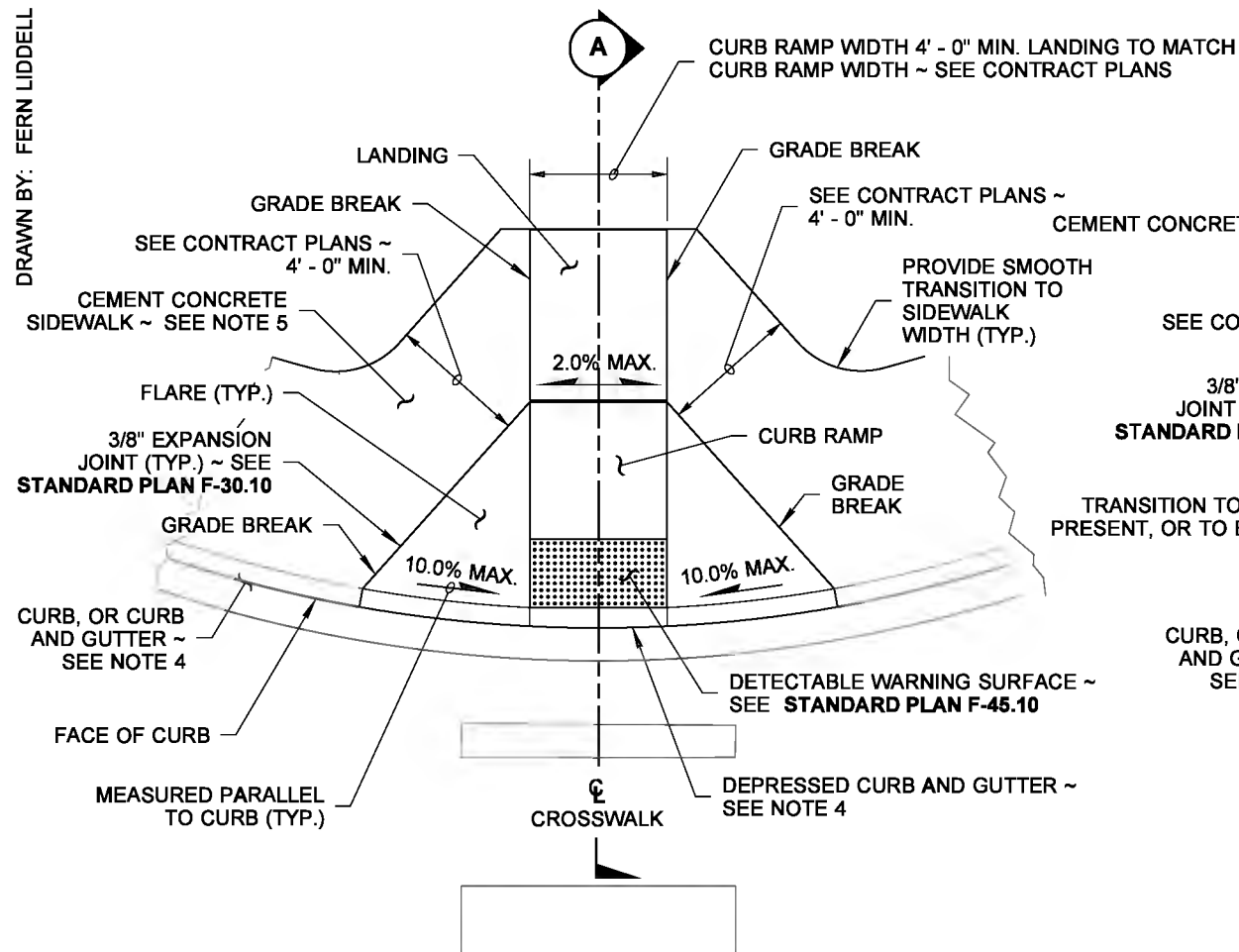
STATE DESIGN ENGINEER

6/20/13

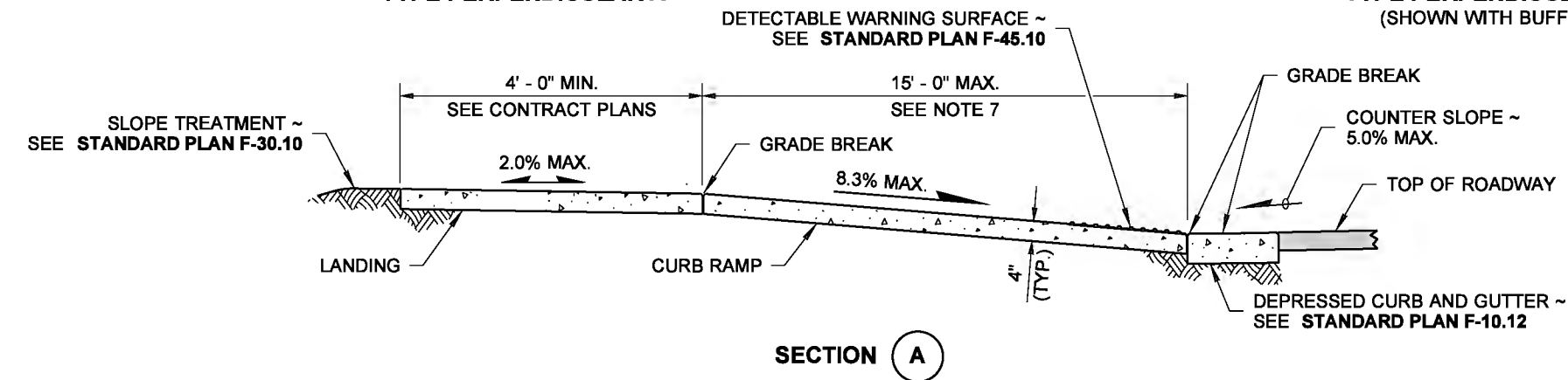
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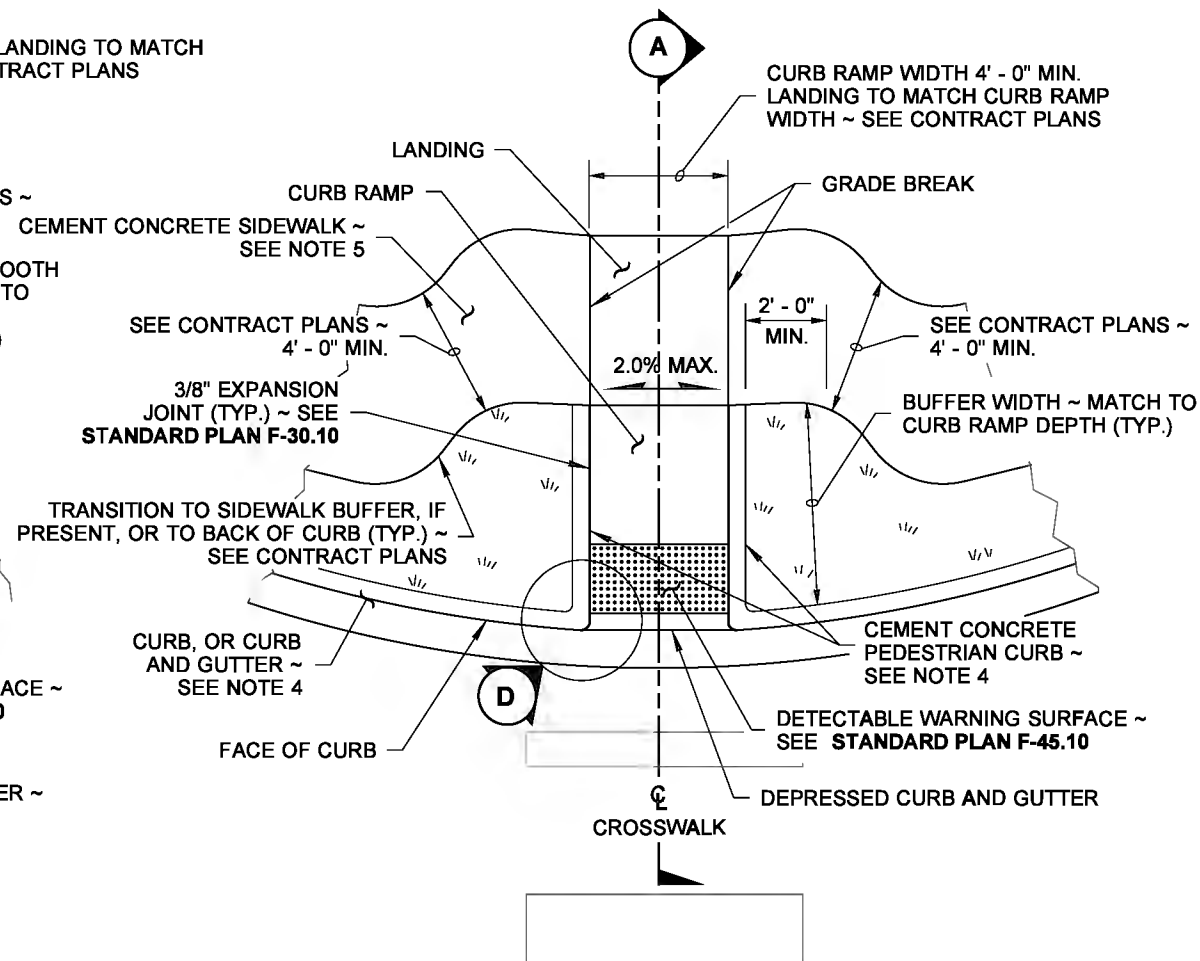
Washington State Department of Transportation



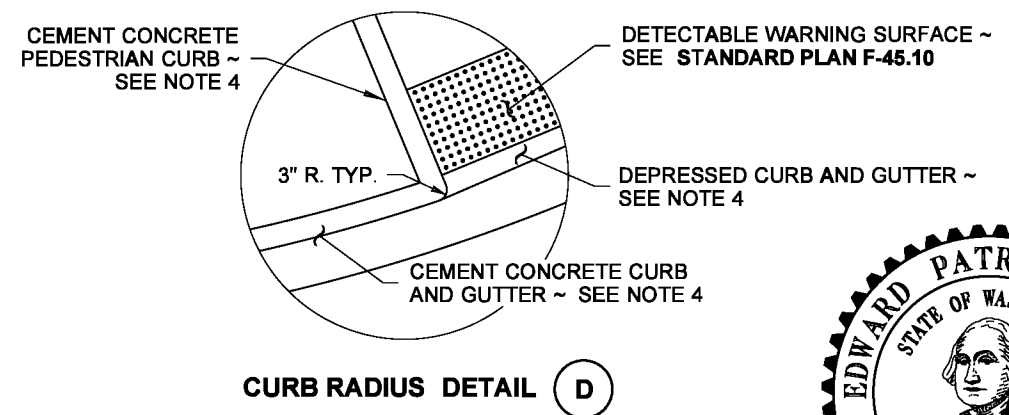
PLAN VIEW
TYPE PERPENDICULAR A



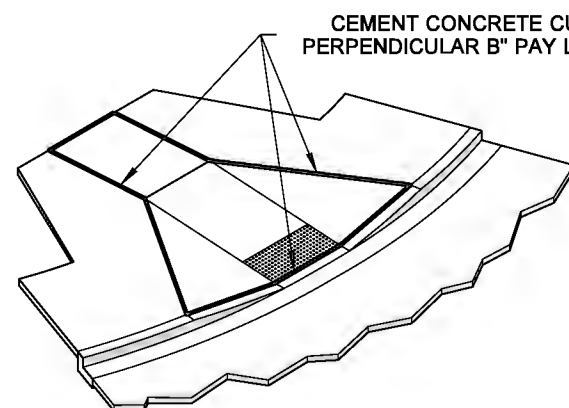
SECTION **(A)**



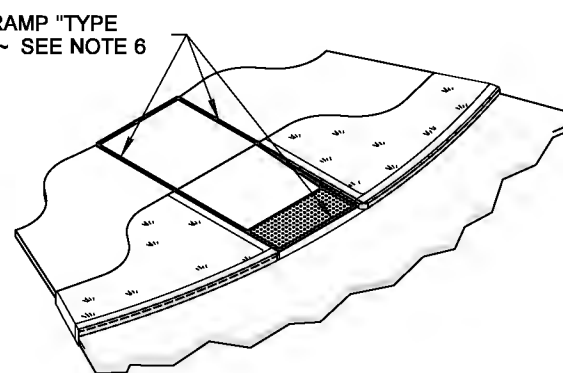
PLAN VIEW
TYPE PERPENDICULAR B
(SHOWN WITH BUFFER)



CURB RADIUS DETAIL (D



ISOMETRIC VIEW
TYPE PERPENDICULAR A PAY LIMIT



ISOMETRIC VIEW
TYPE PERPENDICULAR B PAY LIMIT

- ## NOTES

1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk or as shown in the Contract Plans.
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8. Curb Ramp, Landing, and Flares shall receive broom finish. See **Standard Specifications 8-14.**

LEGEND



SLOPE IN EITHER DIRECTION



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PERPENDICULAR CURB RAMP

STANDARD PLAN F-40.15-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

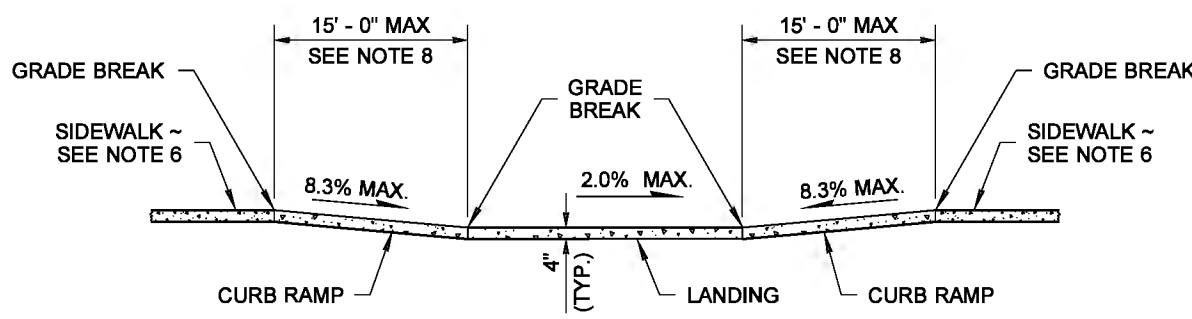
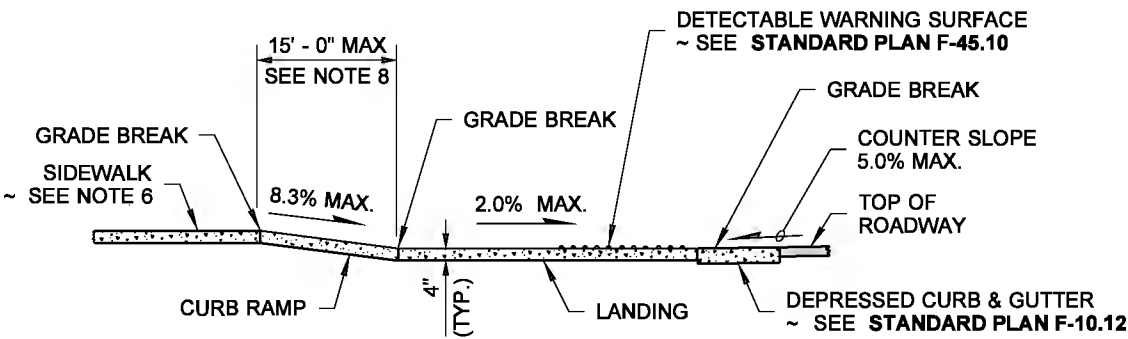
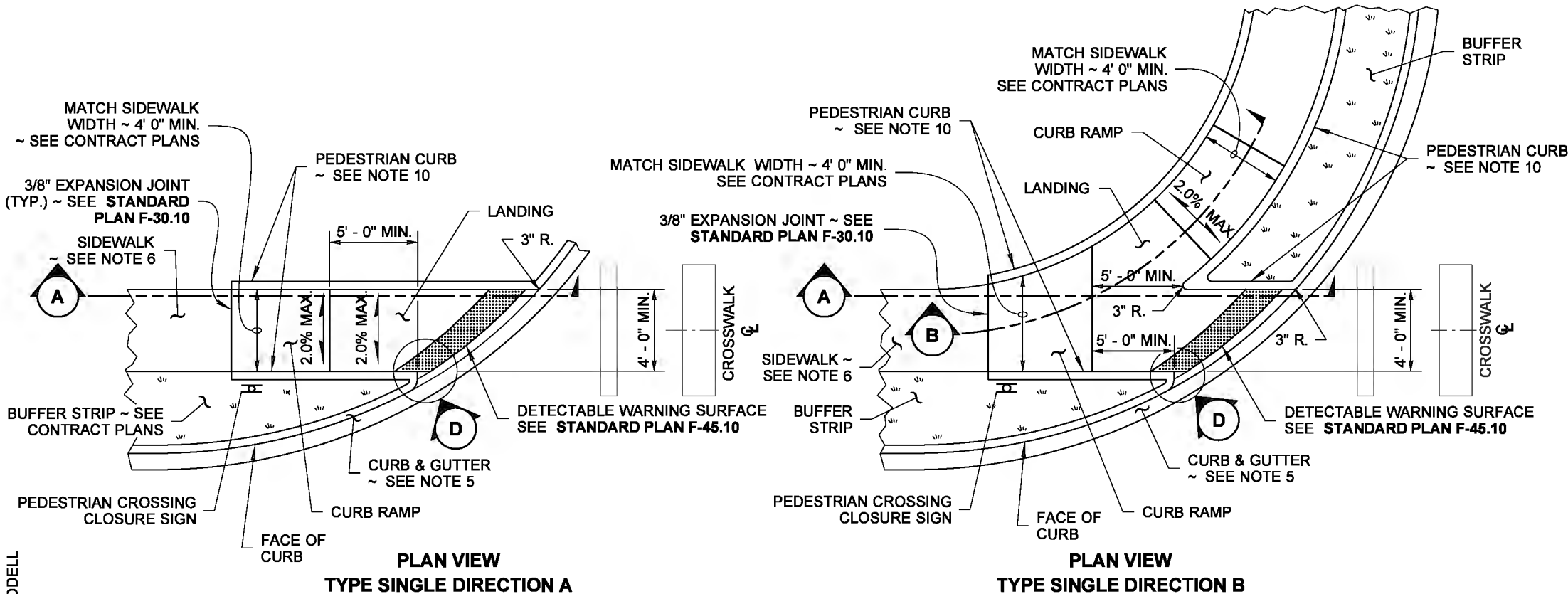
6/20/13

STATE DESIGN ENGINEER

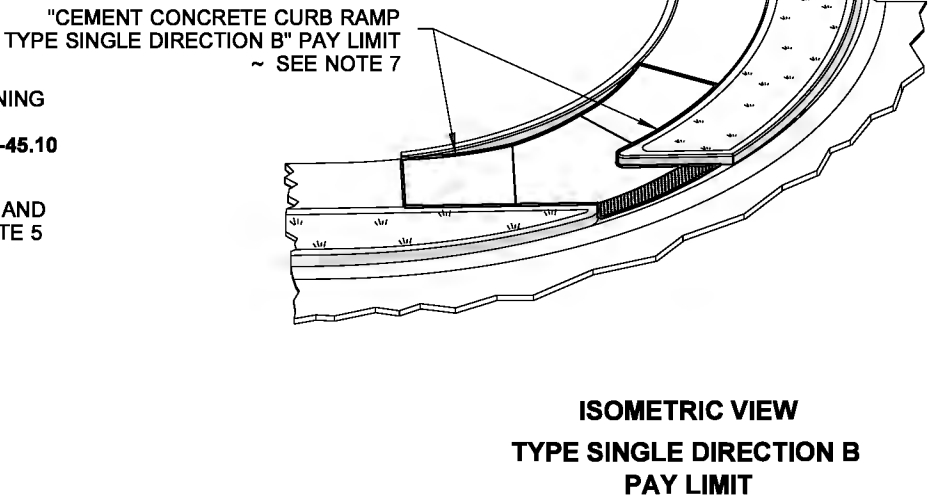
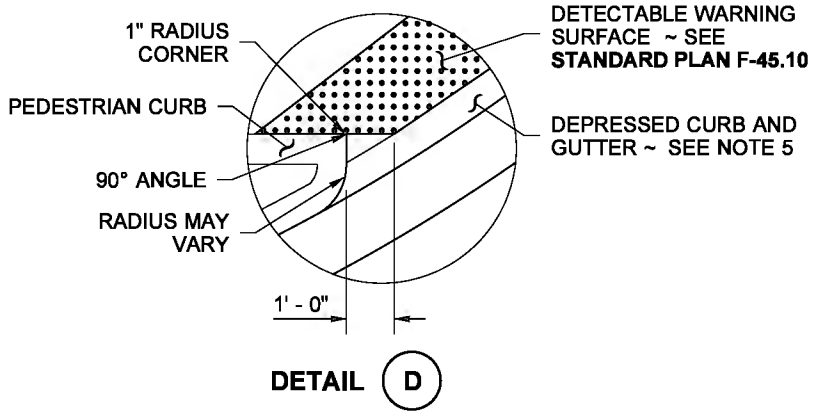
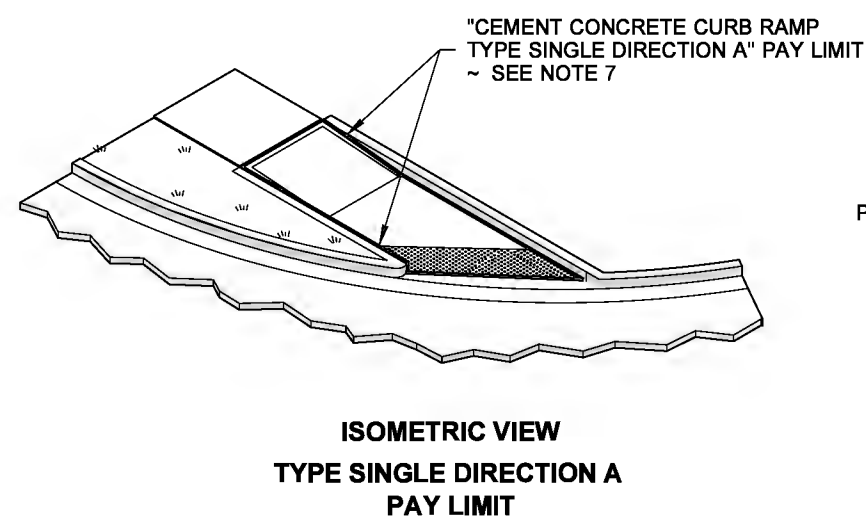
DATE _____

 Washington State Department of Transportation

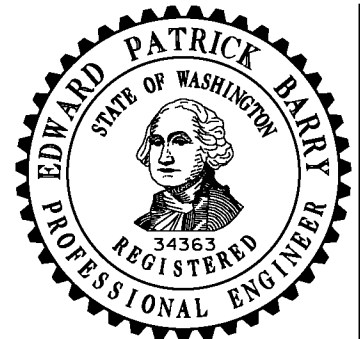
DRAWN BY: FERN LIDDELL



LEGEND
SLOPE IN EITHER DIRECTION



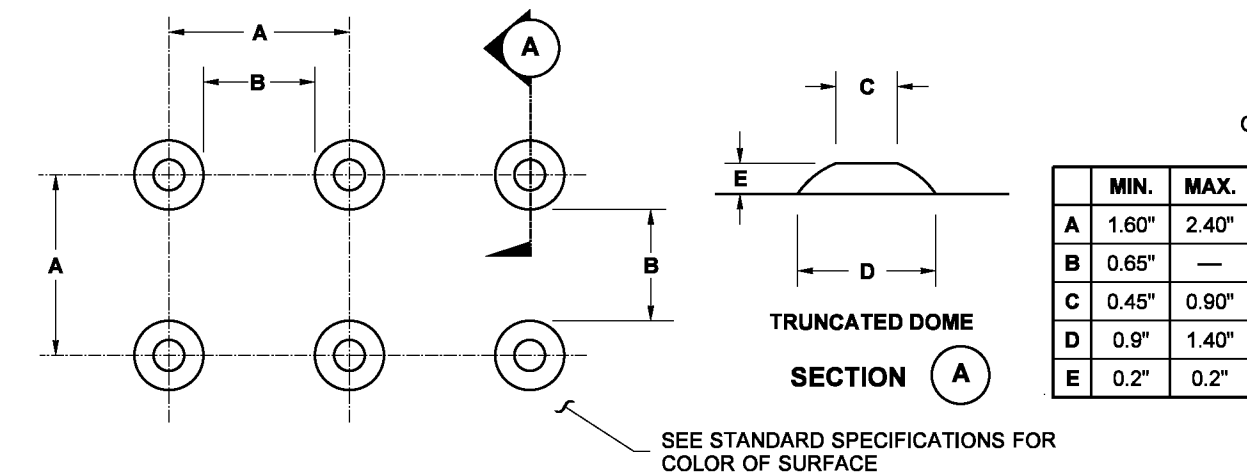
- NOTES**
1. This plan is to be used where pedestrian crossing in one direction is not permitted.
 2. Curb ramp location shall be placed within the width of the associated crosswalk, or as shown in the Contract Plans.
 3. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
 4. Do not place gratings, junction boxes, access covers or other appurtenances in front of the curb ramp or on any part of the curb ramp or landing.
 5. See the Contract Documents for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter and Pedestrian Curb details.
 6. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See contract plans for width and placement of sidewalk.
 7. The bid item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb or (Curb and Gutter), Depressed Curb and Gutter, Pedestrian Curb or Sidewalk, or the pedestrian crossing closure sign.
 8. The curb ramp maximum running slope shall not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15 foot maximum length, the running slope of the curb ramp shall be as flat as feasible.
 9. Curb ramps and landings shall receive broom finish. See **Standard Specifications 8-14**.
 10. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.



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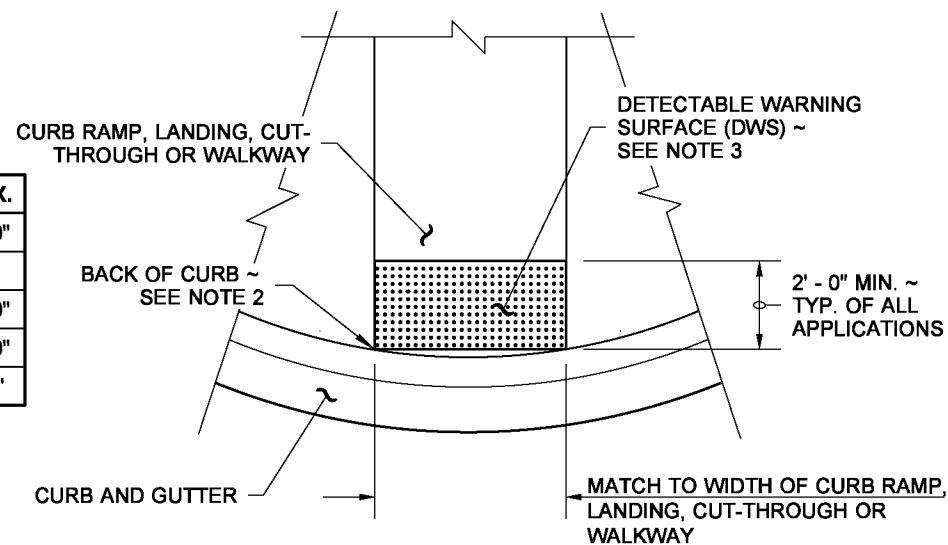
SINGLE DIRECTION CURB RAMP
STANDARD PLAN F-40.16-02
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 6/20/13
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation



TRUNCATED DOME SPACING
SEE NOTE 3

TRUNCATED DOME DETAILS

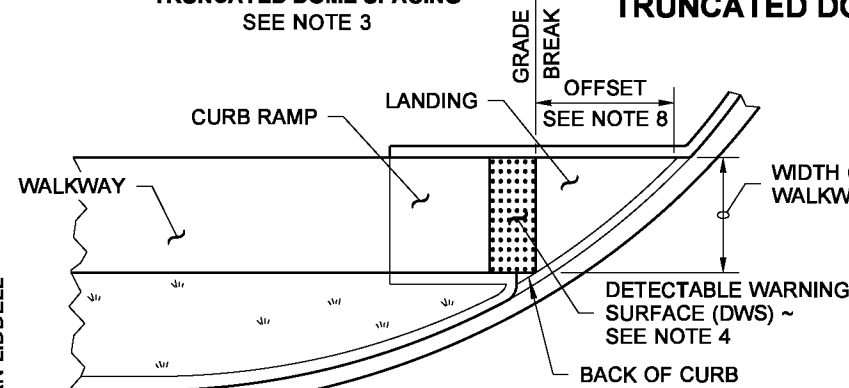


DETECTABLE WARNING SURFACE DETAIL

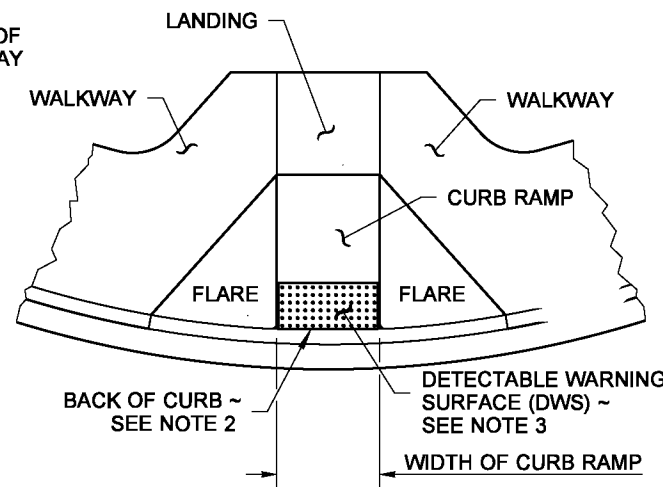
NOTES

1. The Detectable Warning Surface (DWS) shall extend the full width of the curb ramp (exclusive of flares) or the landing.
2. The Detectable Warning Surface shall be placed at the back of curb, and need not follow the radius.
3. The rows of truncated domes shall be aligned to be perpendicular to the grade break at the back of curb.
4. The rows of truncated domes shall be aligned to be parallel to the direction of travel.
5. If curb and gutter are not present, such as a shared-use path connection, the Detectable Warning Surface shall be placed at the pavement edge.
6. See **Standard Plans** for sidewalk and curb ramp details.
7. If a curb ramp is required, the location of the Detectable Warning Surface must be at the bottom of the ramp and within the required distance from the rail.
8. When the grade break between the curb ramp and the landing is less than or equal to 5 ft. from the back of curb at all points, place the Detectable Warning Surface on the bottom of the curb ramp.

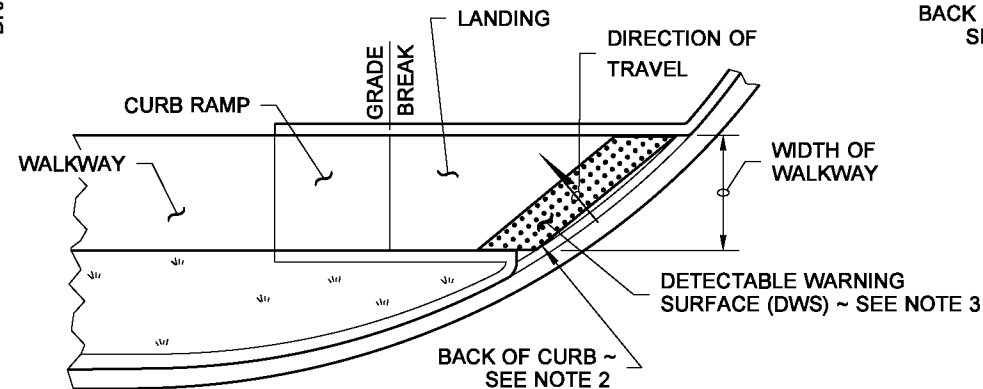
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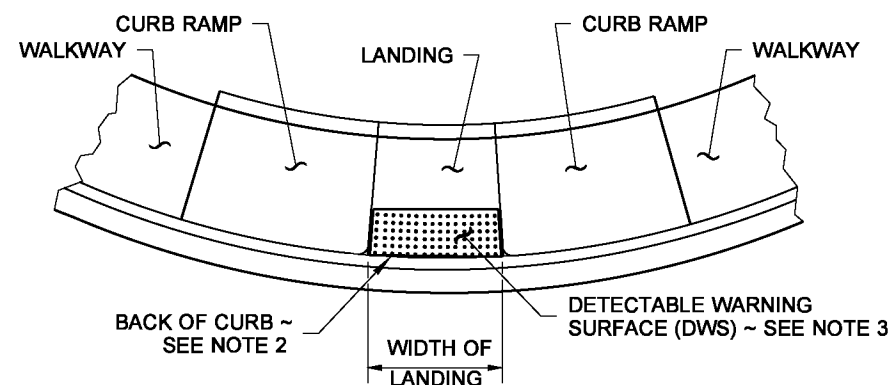
SINGLE DIRECTION CURB RAMP
(GRADE BREAK BETWEEN CURB AND LANDING ≤ 5 FT. FROM BACK OF CURB)
(SEE NOTE 6)



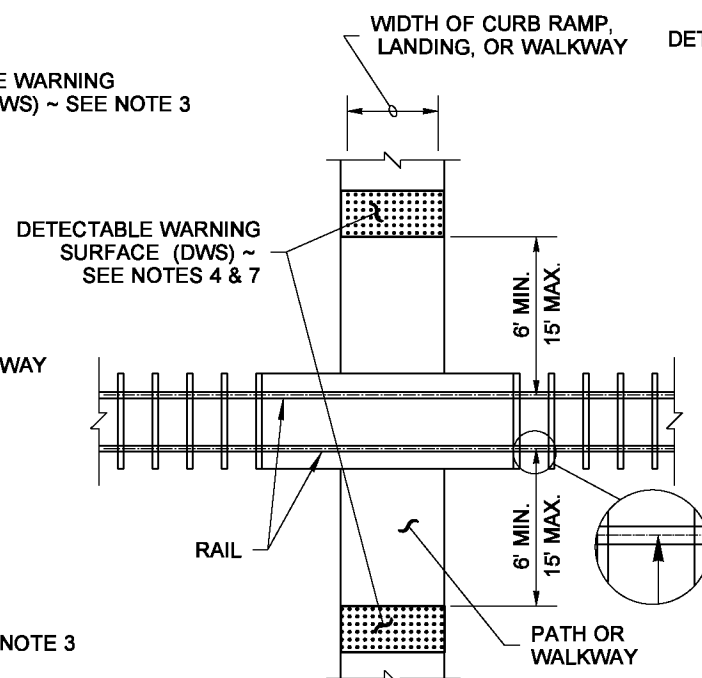
PERPENDICULAR CURB RAMP
(SEE NOTE 6)



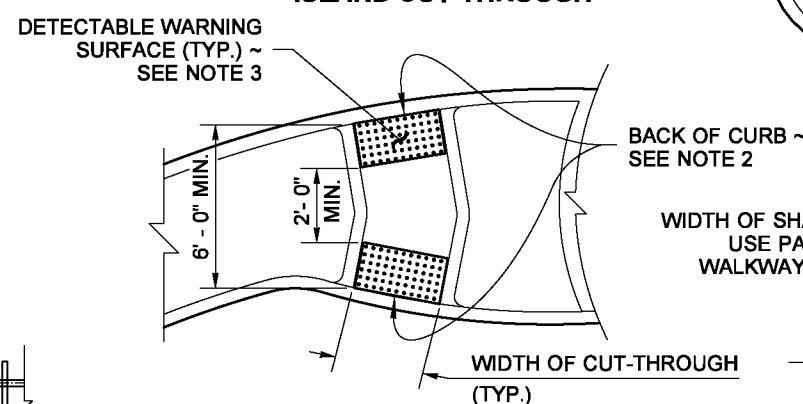
SINGLE DIRECTION CURB RAMP
(GRADE BREAK BETWEEN CURB AND LANDING > 5 FT. FROM BACK OF CURB)
(SEE NOTE 6)



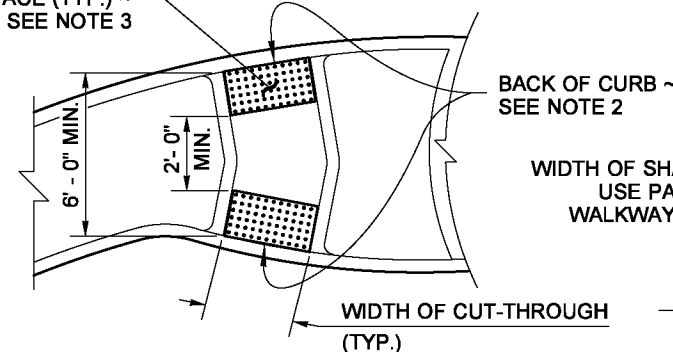
PARALLEL CURB RAMP
(SEE NOTE 6)



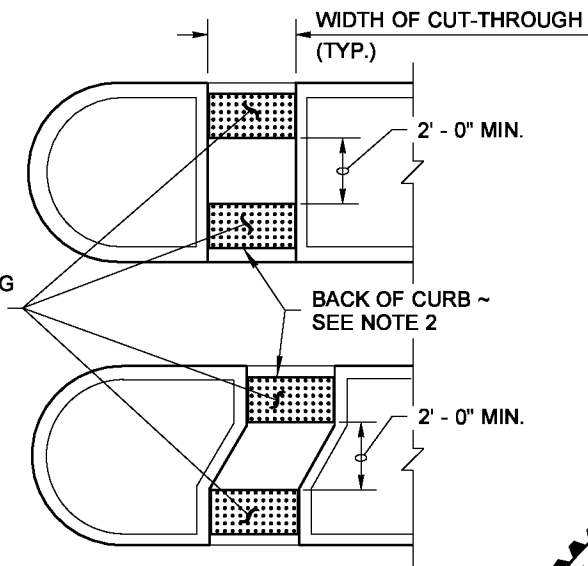
PEDESTRIAN RAILROAD CROSSING



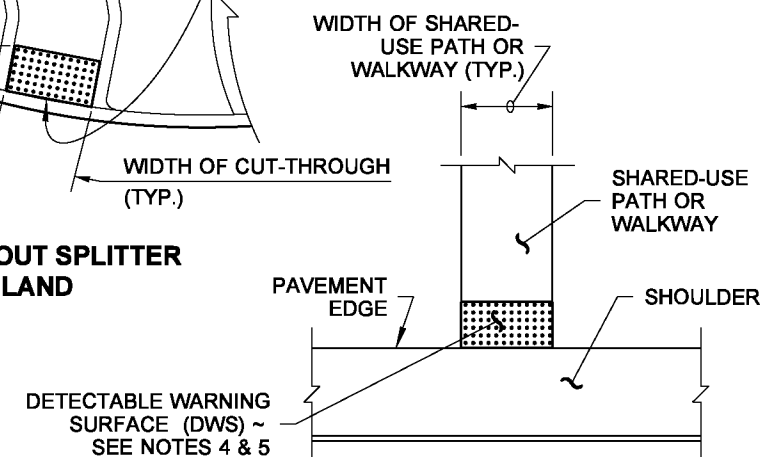
ISLAND CUT-THROUGH



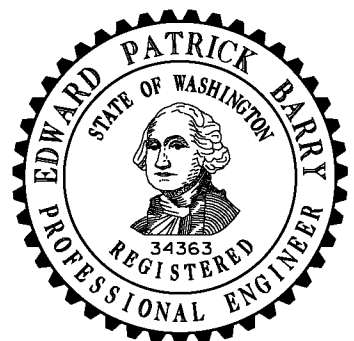
ROUNDABOUT SPLITTER ISLAND



MEDIAN CUT-THROUGH



SHARED-USE PATH CONNECTION

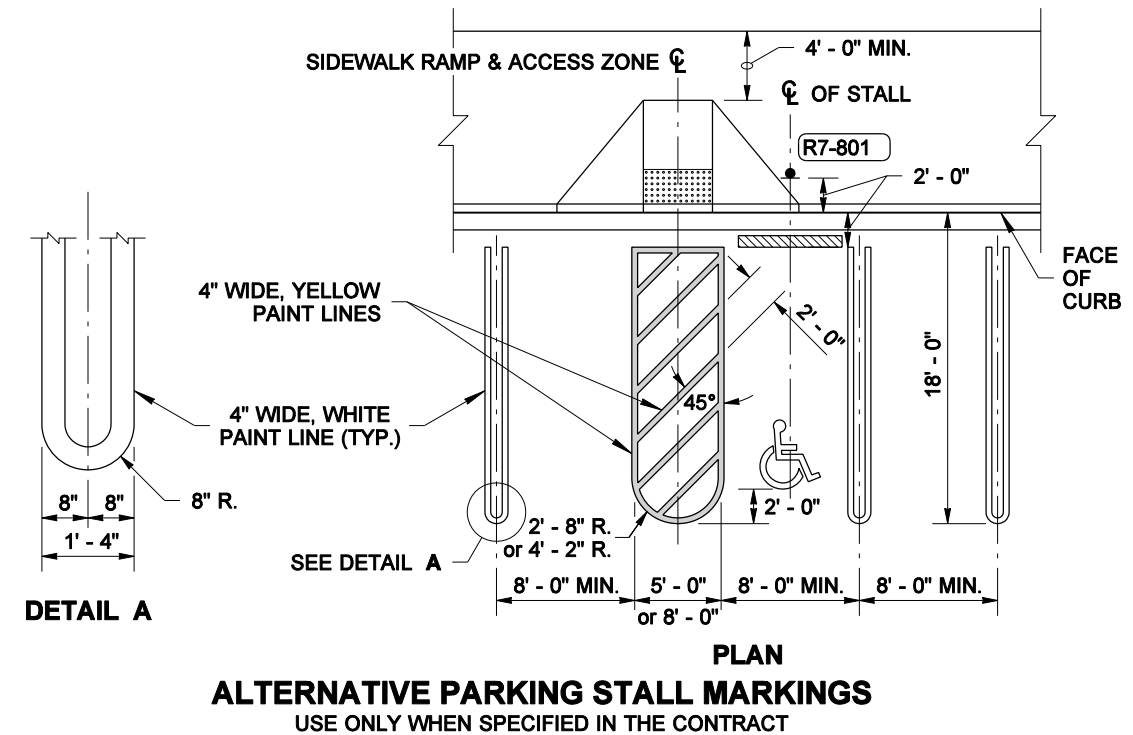
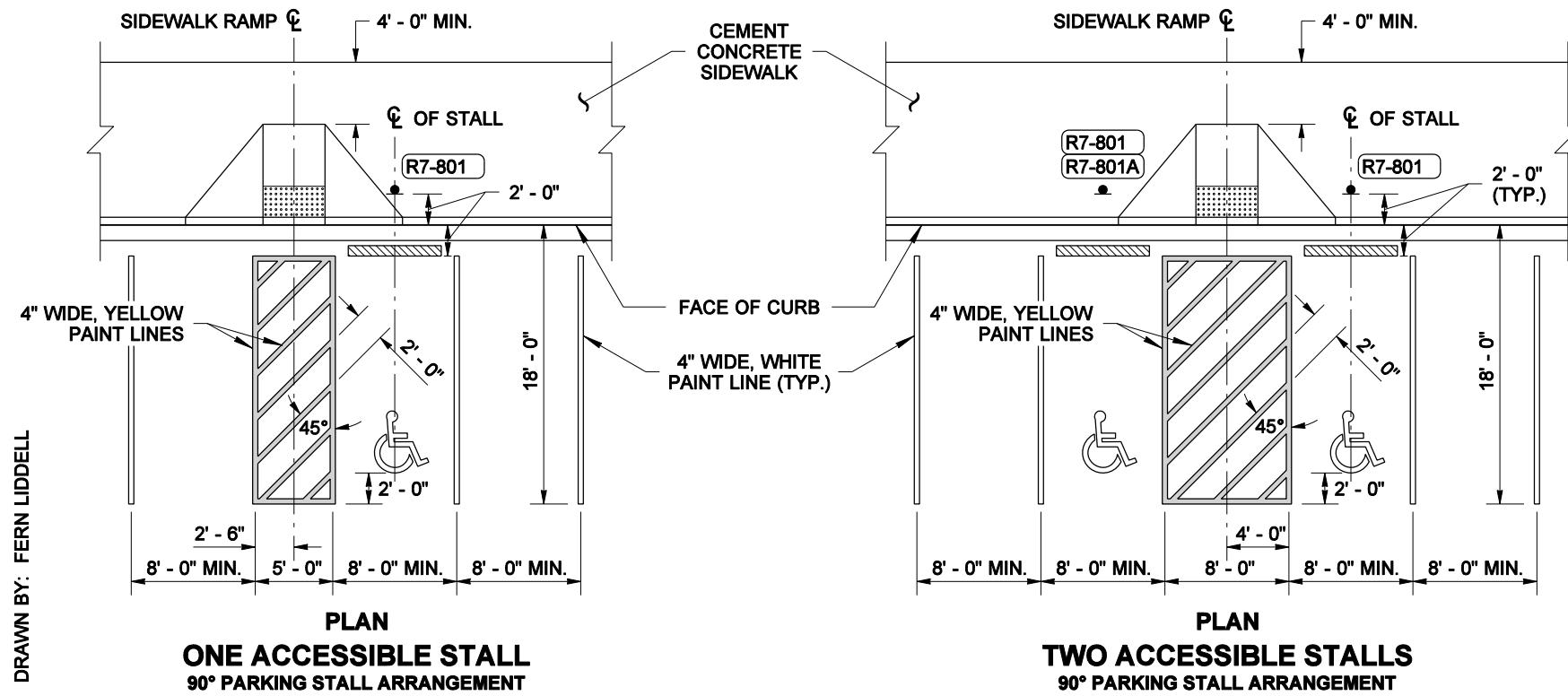


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DETECTABLE WARNING SURFACE
STANDARD PLAN F-45.10-01
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 06/21/12
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

DRAWN BY: FERN LIDDELL

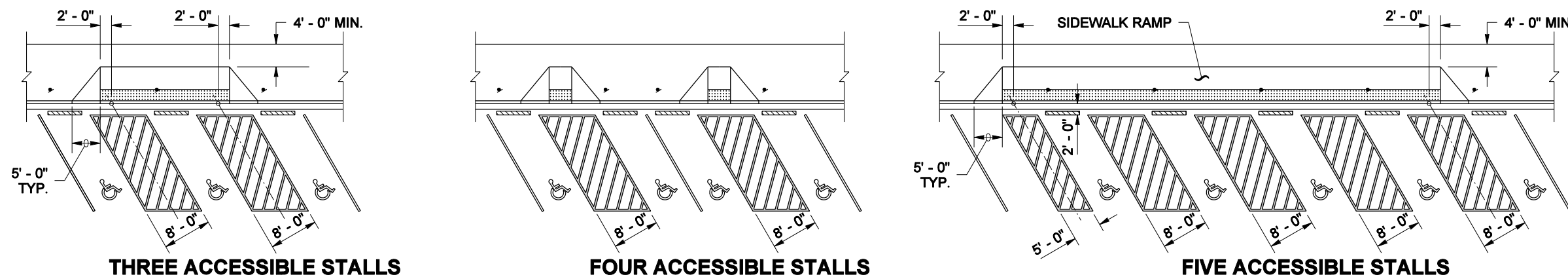
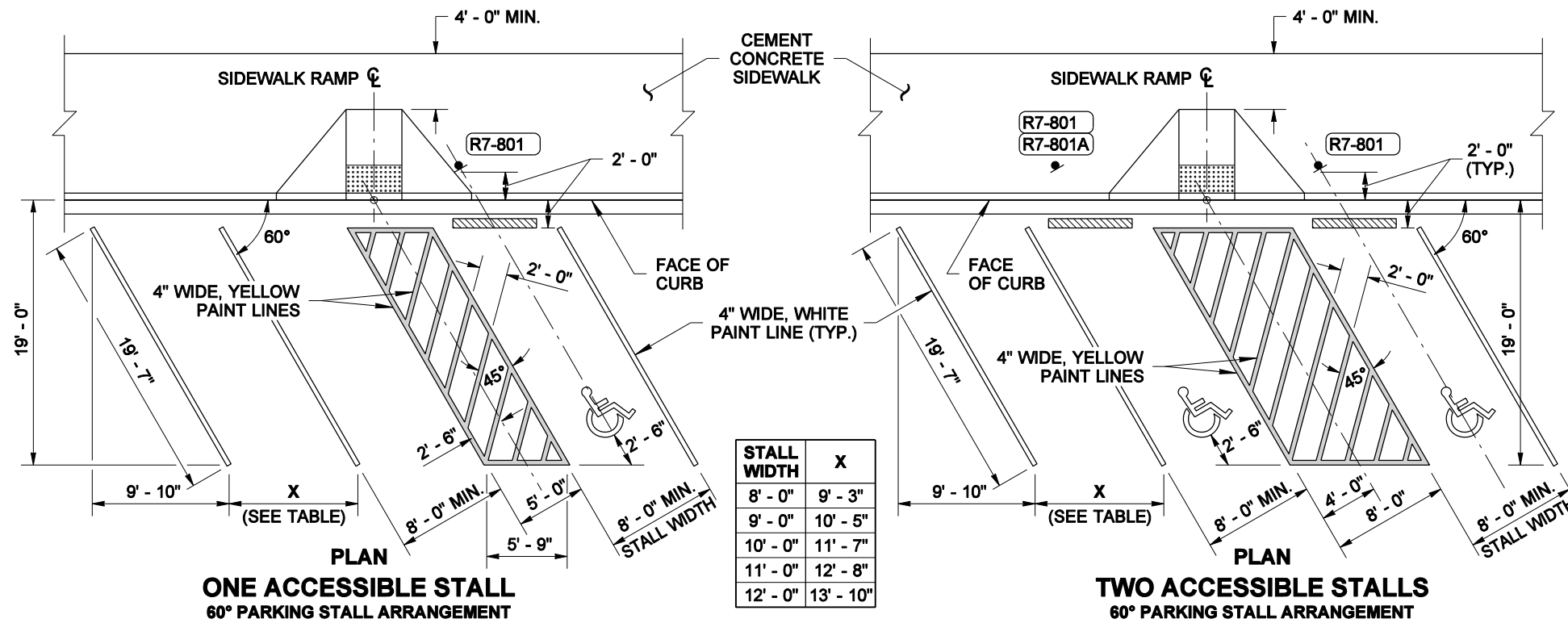


NOTES

- Three, four and five accessible stall arrangements may be either 60° (angled) or 90° (perpendicular) parking arrangements. See Contract.
- An Access Parking Space Symbol is required for each accessible parking stall. A blue background and white border are required when the symbol is installed on a cement concrete surface.
- All accessible stalls shall have wheel stops. Place wheel stops in other stalls when specified in the contract. Wheel stops shall be approximately 6" high and a minimum of 6' long.
- Refer to the Standard Plans for sidewalk ramp, detectable warning pattern, and curb details.

LEGEND

- R7-801 Reserved Parking Sign and post with R7-801A Plaque, if indicated (See Sign Fabrication Manual)
- Access Parking Space Symbol
- Manufactured wheel stop
- Detectable Warning Pattern



EXPIRES AUGUST 9, 2009

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PARKING SPACE LAYOUTS

STANDARD PLAN M-17.10-02

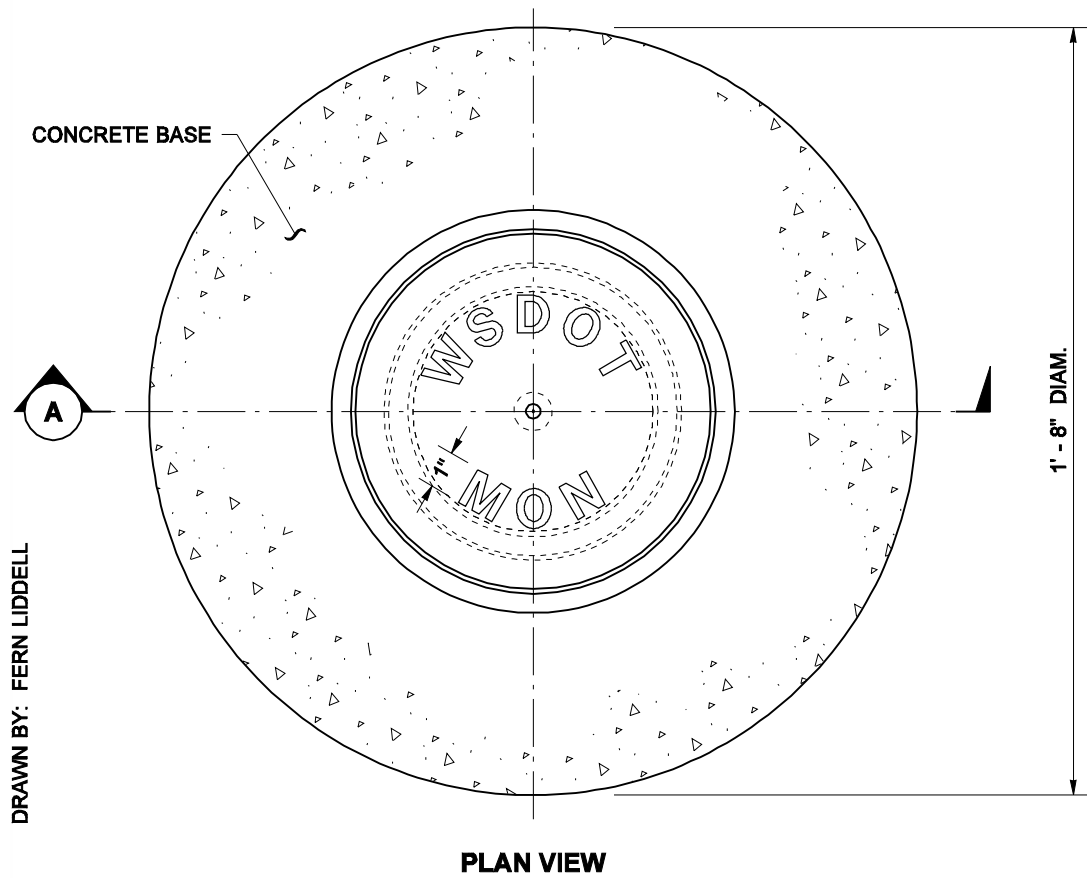
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

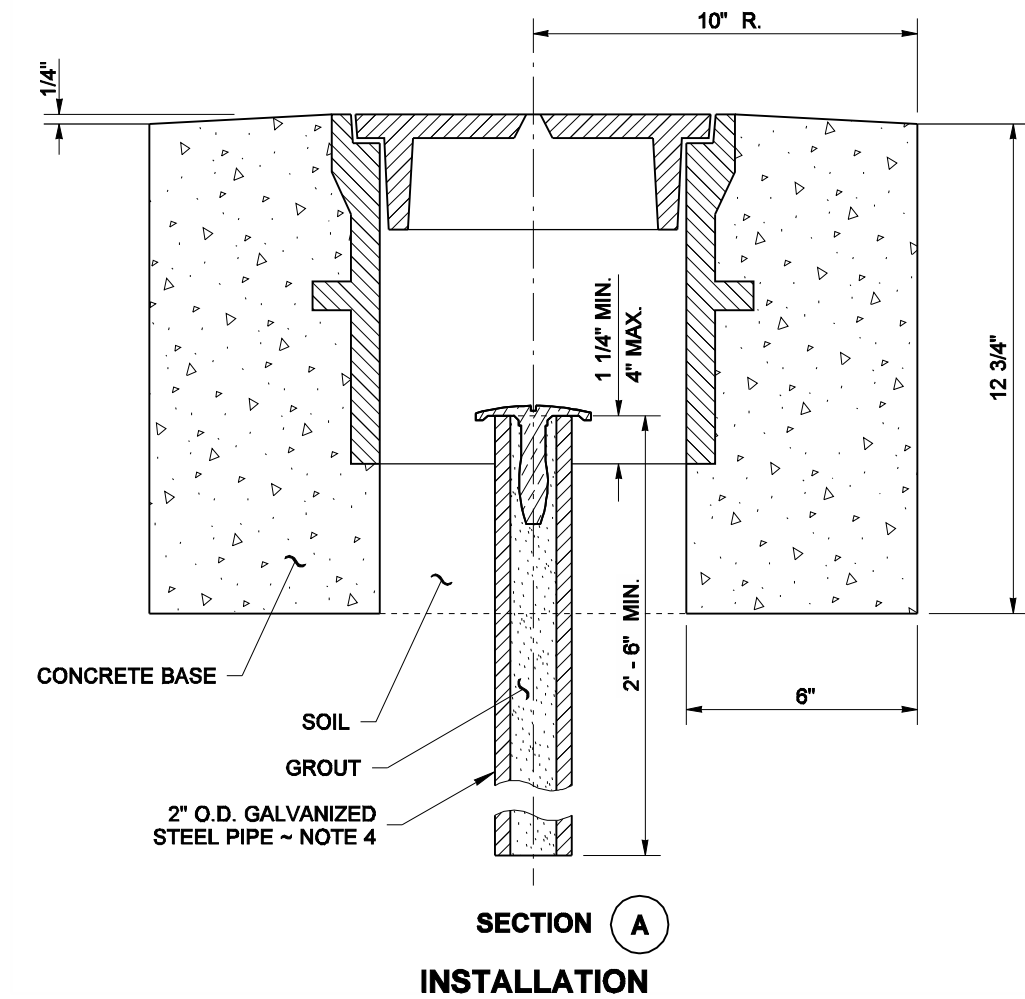
Pasco Bakotich III 07-03-08
STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

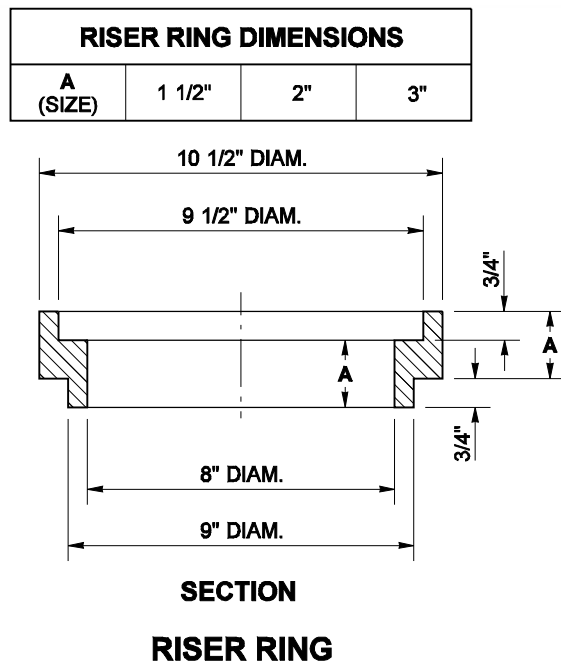
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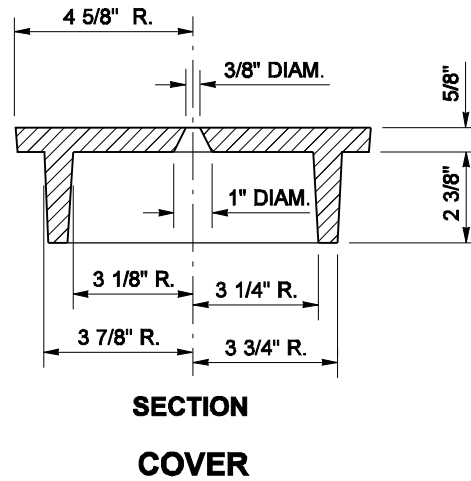
PLAN VIEW



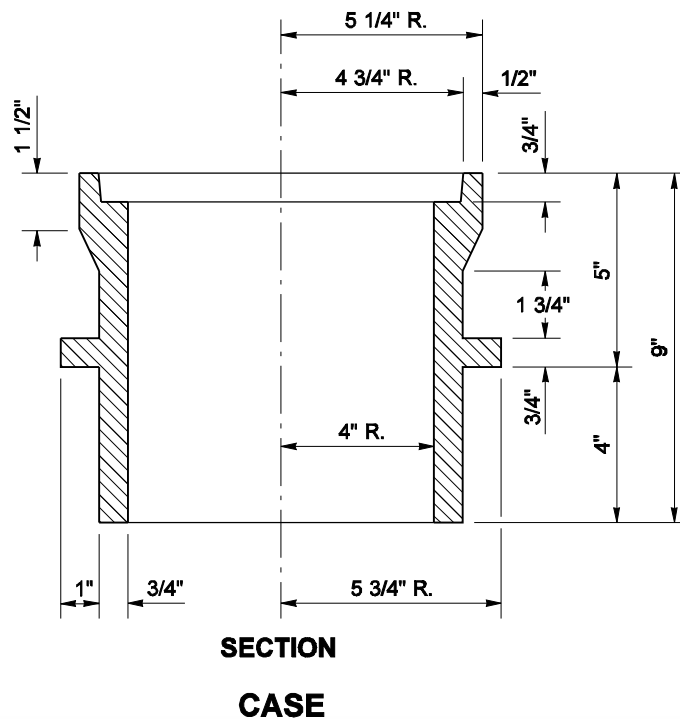
SECTION A
INSTALLATION



SECTION
RISER RING



SECTION
COVER

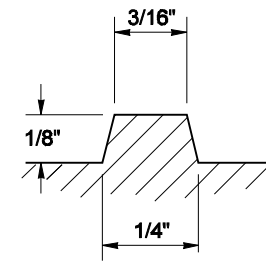


SECTION
CASE

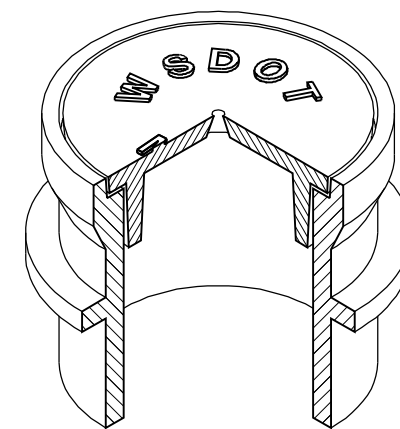
NOTES

1. Dimensions may vary according to manufacturer.
2. Base to be placed on a well compacted foundation.
3. Monument case to be installed by contractor.
4. See Standard Plan A-10.20 for Monument (brass disc) type to place in 2" O.D. galvanized pipe.

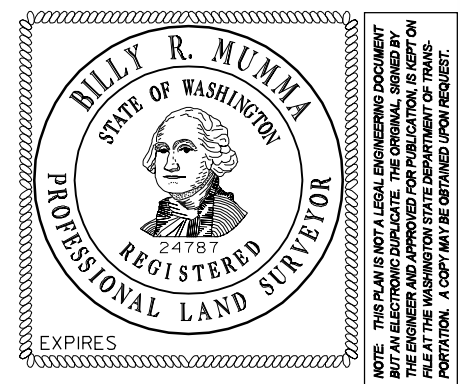
APPROXIMATE WEIGHTS	
CASE	60 LBS
COVER	19 LBS
TOTAL	79 LBS



SECTION OF LETTER



ISOMETRIC



**MONUMENT CASE
AND COVER**
STANDARD PLAN A-10.30-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

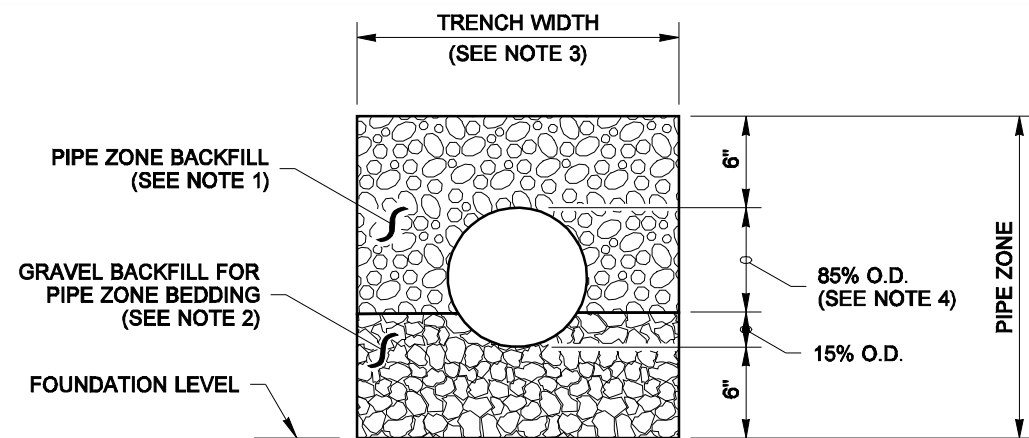
Pasco Bakotich III **10-05-07**

STATE DESIGN ENGINEER

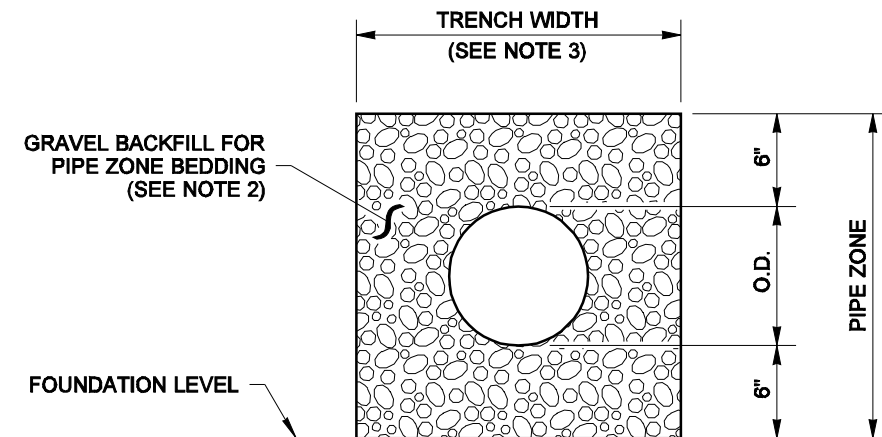
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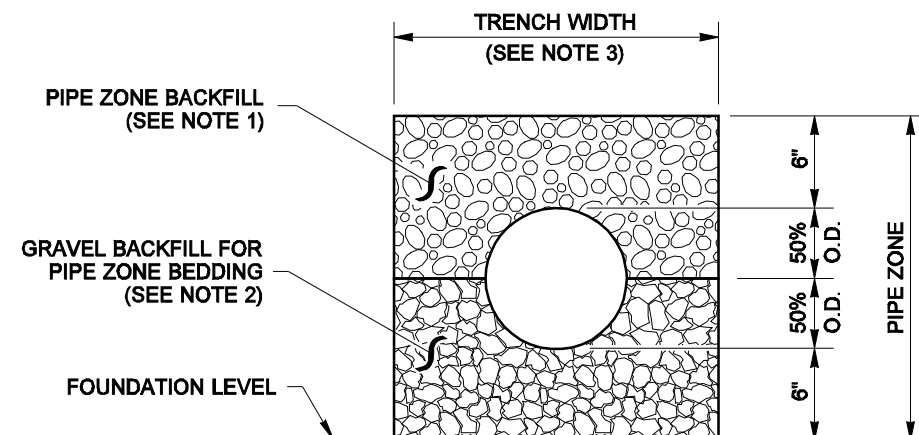
Washington State Department of Transportation



CONCRETE AND DUCTILE IRON PIPE



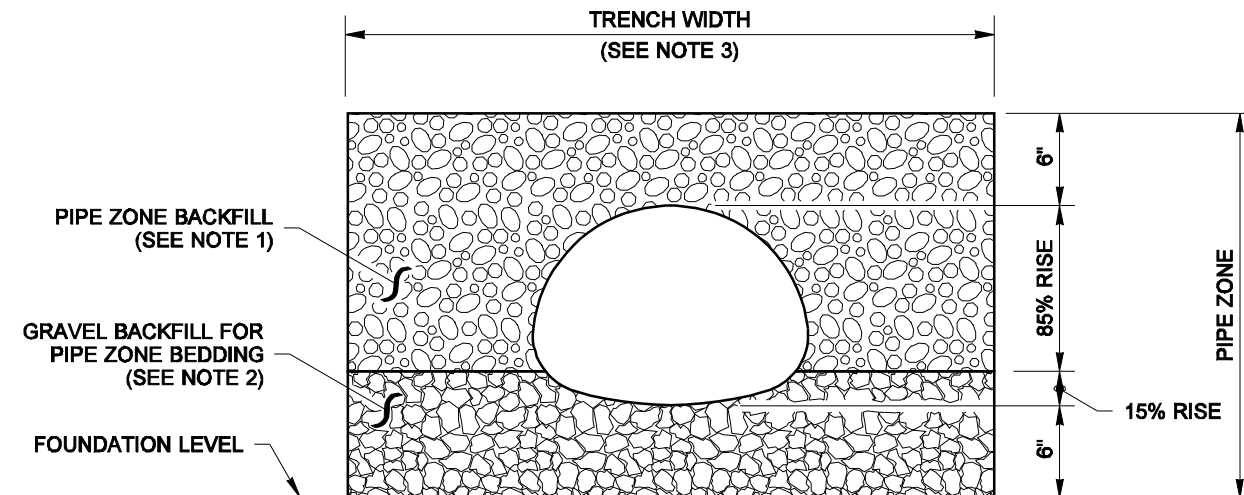
THERMOPLASTIC PIPE



METAL PIPE

NOTES

1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. /2
	102" to 180"	48"
PIPE ARCH (SPAN) METAL ONLY	18" to 36"	12"
	43" to 142"	SPAN /3
	148" to 200"	48"



EXPIRES JULY 1, 2007

PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-01-06**

STATE DESIGN ENGINEER

DATE



Washington State Department of Transportation

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CITY OF STANWOOD

STORM SYSTEM STANDARD DETAILS INDEX

STANDARD DETAILS

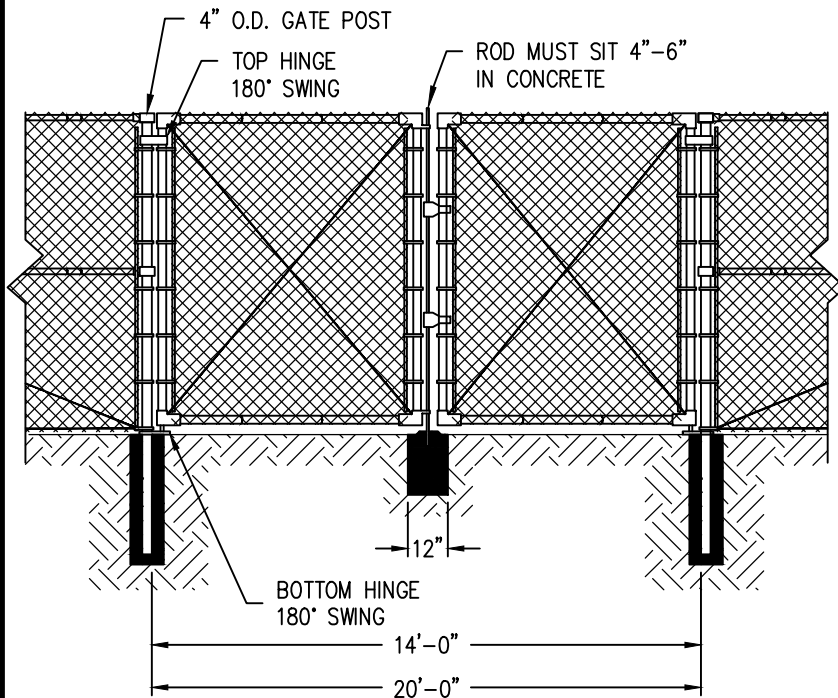
D-1	CHAIN LINK FENCE DETAIL FOR STORM FACILITIES
WSDOT B-5.20-00	CATCH BASIN TYPE 1
WSDOT B-5.40-00	CATCH BASIN TYPE 1L
WSDOT B-5.60-00	CATCH BASIN TYPE 1P
WSDOT B-10.20-00	CATCH BASIN TYPE 2
WSDOT B-30.90-01	MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES
WSDOT B-30.20-01	RECTANGULAR SOLID METAL COVER
WSDOT B-30.10-00	RECTANGULAR FRAME (REVERSIBLE)
WSDOT B-30.30-00	RECTANGULAR VANED GRATE
WSDOT B-30.40-00	RECTANGULAR BI-DIRECTIONAL VANED GRATE
WSDOT B-30.50-00	RECTANGULAR HERRINGBONE GRATE
WSDOT B-10.40-00	CATCH BASIN TYPE 2 WITH FLOW RESTRICTOR
WSDOT B-10.60-00	CATCH BASIN TYPE 2 WITH BAFFLE TYPE FLOW RESTRICTOR
WSDOT B-55.20-00	PIPE ZONE BEDDING AND BACKFILL
WSDOT B-15.20-00	MANHOLE TYPE 1
WSDOT B-15.40-00	MANHOLE TYPE 2
WSDOT B-30.70-01	CIRCULAR FRAME (RING) AND COVER
WSDOT B-25.60-00	CONCRETE INLET
WSDOT I-30.10-00	SILT FENCE
WSDOT I-40.20-00	STORM DRAIN INLET PROTECTION
WSDOT I-30.50-00	STRAW BALE BARRIER
WSDOT I-80.10-00	MISCELLANEOUS EROSION CONTROL DETAILS

City of Stanwood

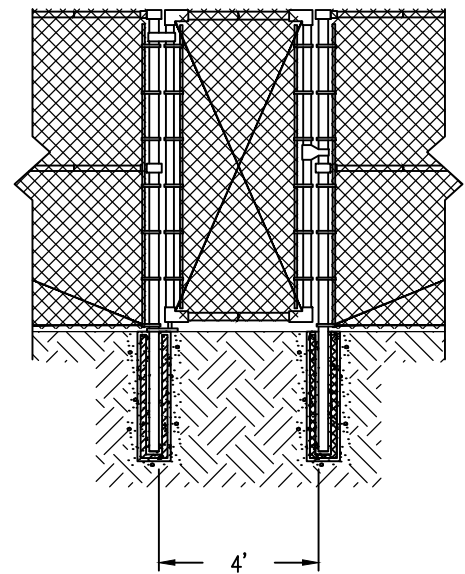


STORM SYSTEM STANDARD DETAIL

STORM SYSTEM STANDARD DETAILS
INDEX



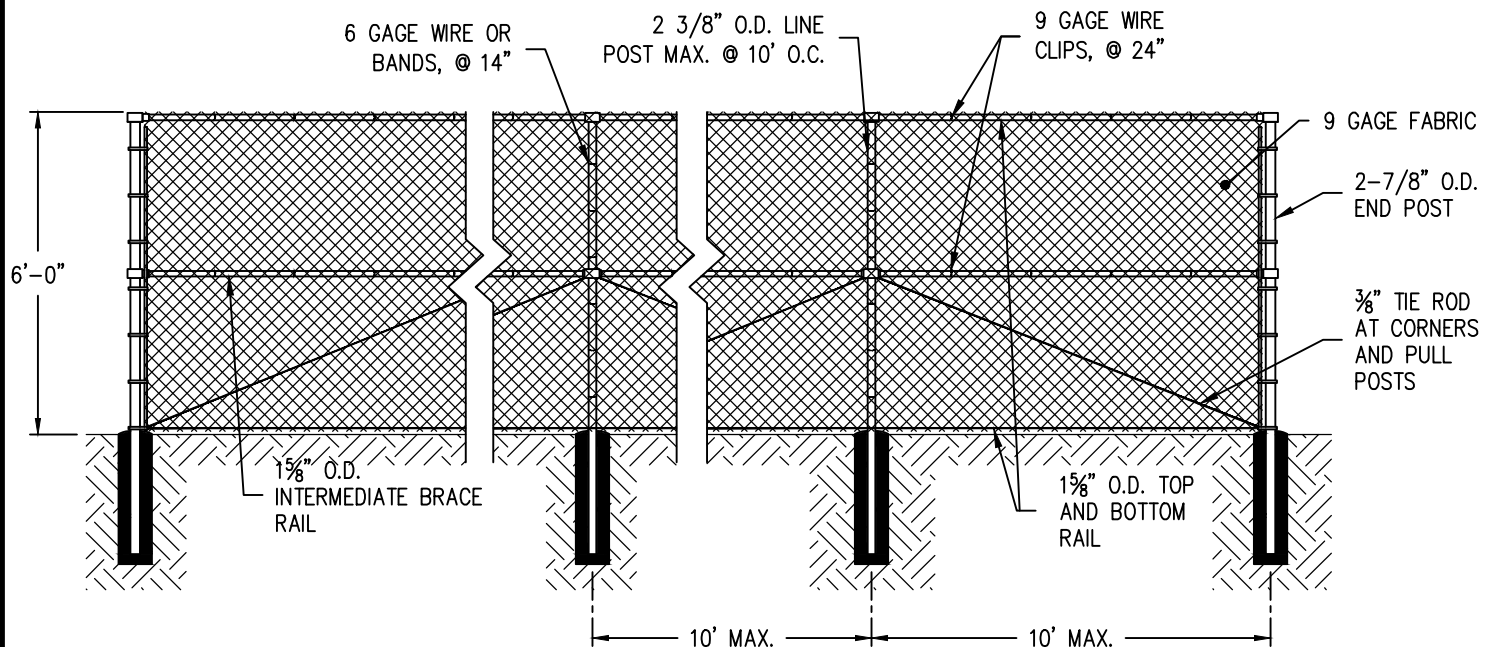
VEHICLE GATE DETAIL



PERSONNEL GATE DETAIL

POST HOLE CONCRETE:	
END POSTS	LINE POSTS
MINIMUM DEPTH=36"	30"
MINIMUM DIAMETER=12"+POSTØ	10"
MINIMUM 3" BELOW POST	MIN. 3" BELOW POST

NOTE: FENCING MATERIALS SHALL BE BLACK VINYL COATED



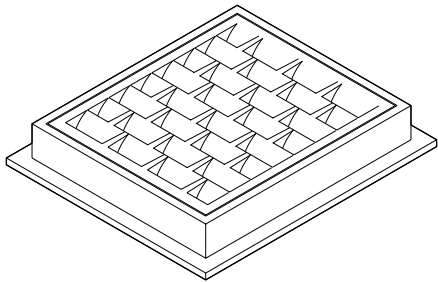
CHAIN LINK FENCE DETAIL

City of Stanwood

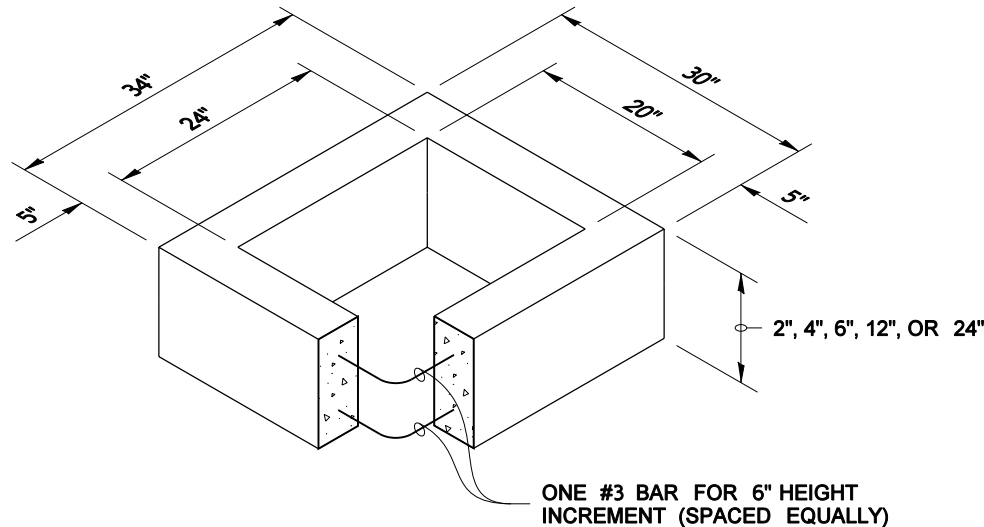


STORM SYSTEM STANDARD DETAIL

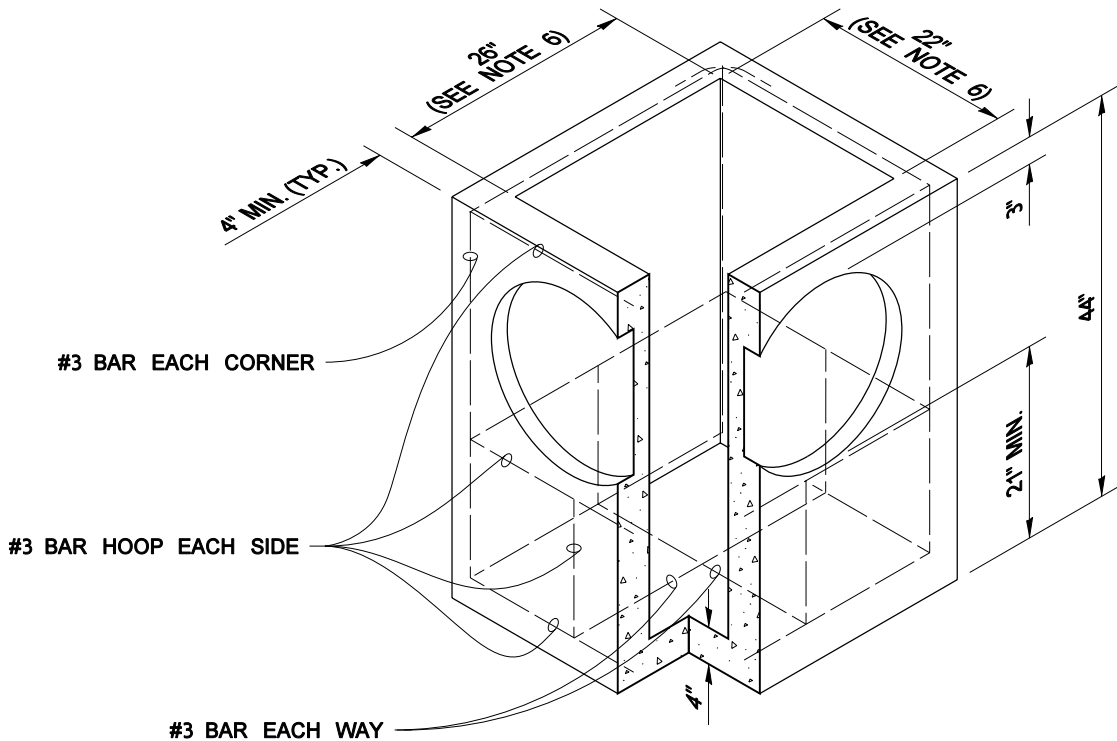
**CHAIN LINK FENCE DETAIL FOR
STORM FACILITIES**



FRAME AND VANED GRATE



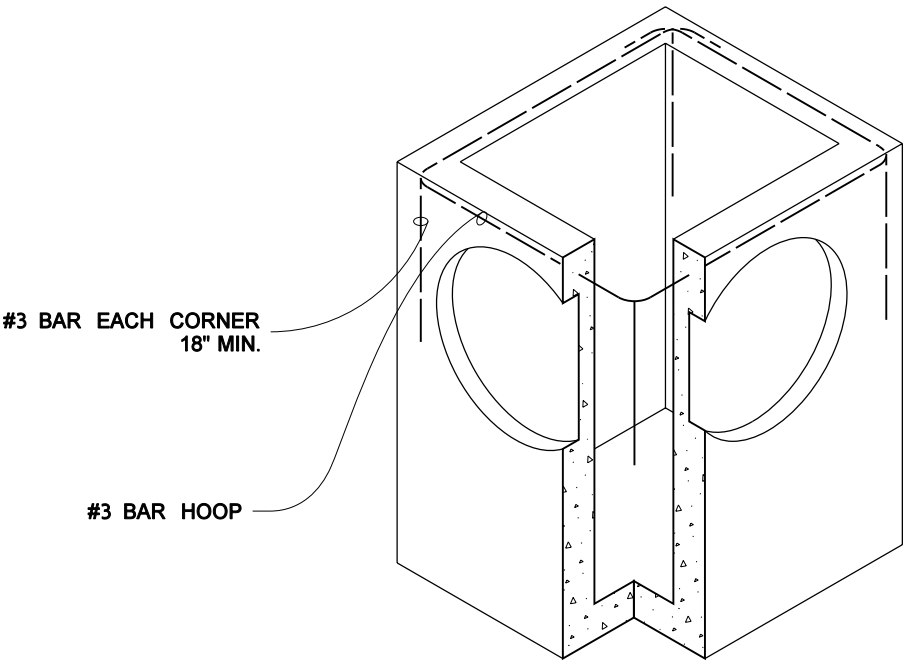
RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE



(SEE NOTE 1)
ALTERNATIVE PRECAST BASE SECTION

NOTES

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



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CATCH BASIN TYPE 1
STANDARD PLAN B-5.20-01

SHEET 1 OF 1 SHEET

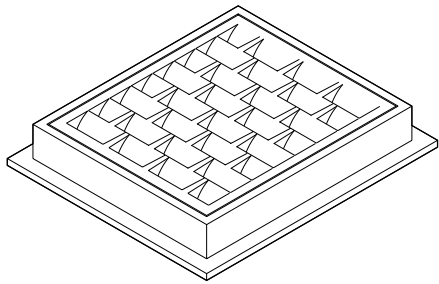
APPROVED FOR PUBLICATION

Pasco Bakotich III
STATE DESIGN ENGINEER

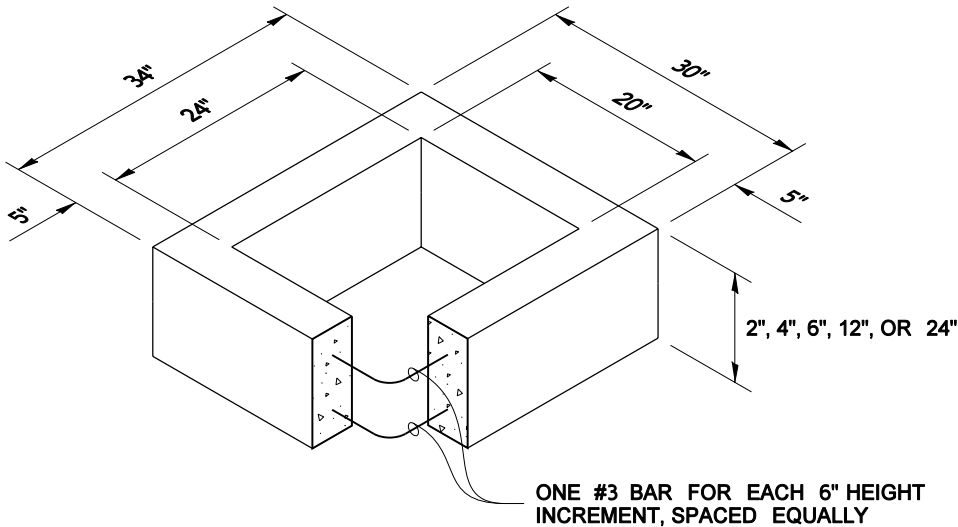
06-16-11
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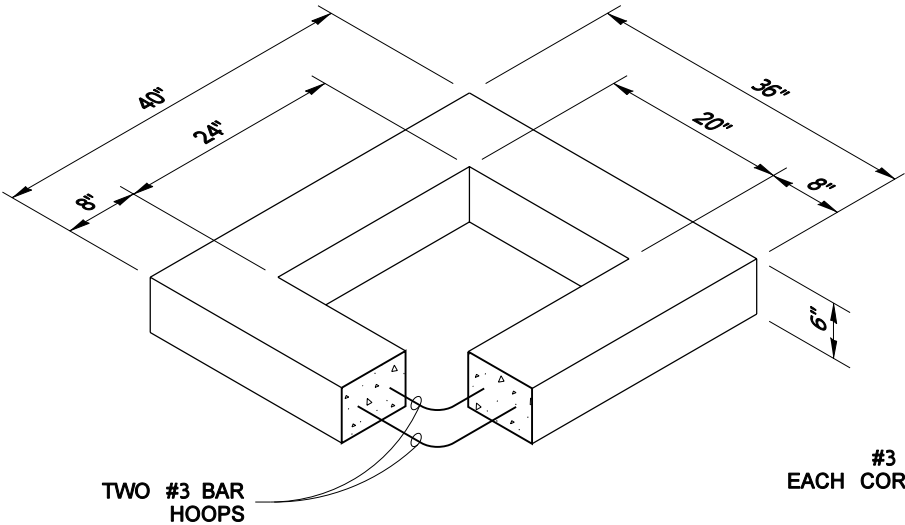
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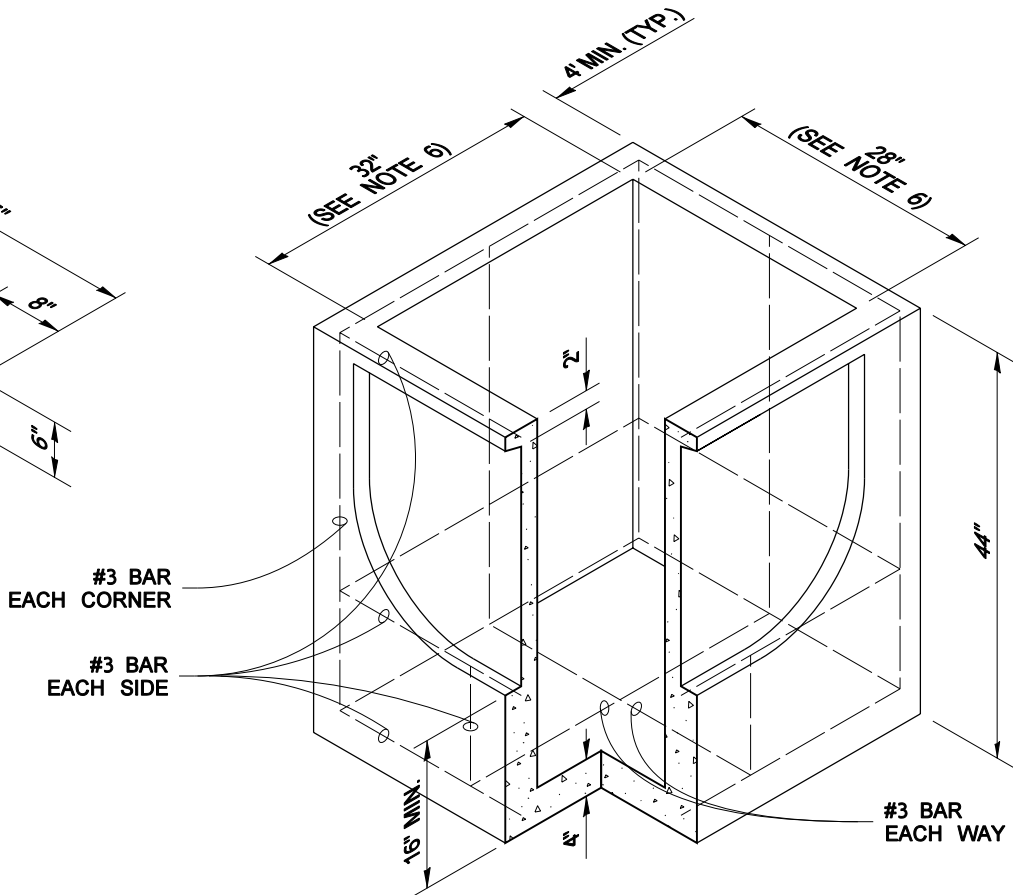
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



REDUCING SECTION



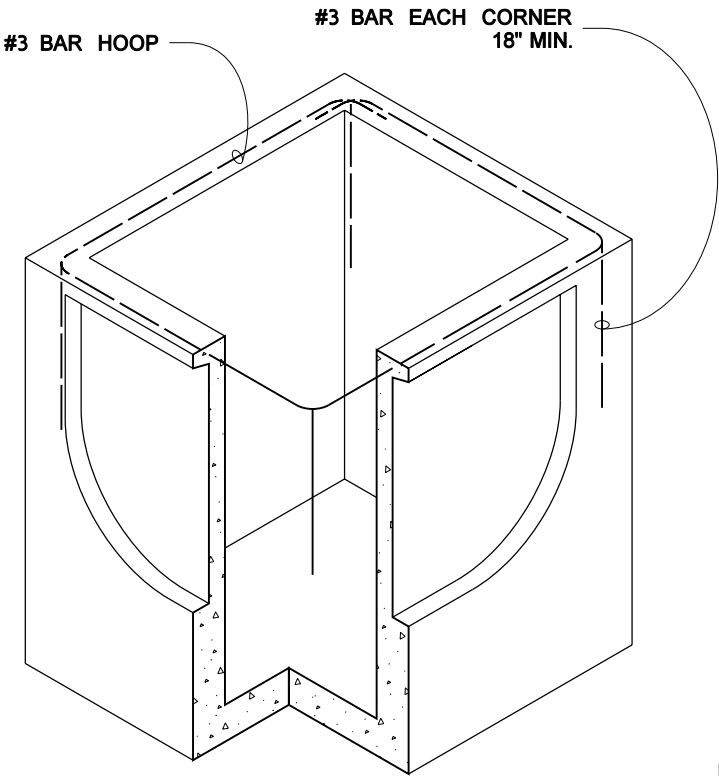
PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot, shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
- The knockout shall not be greater than 26", in any direction. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3**.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
- The frame and grate may be installed with the flange down or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION



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CATCH BASIN TYPE 1L

STANDARD PLAN B-5.40-01

SHEET 1 OF 1 SHEET

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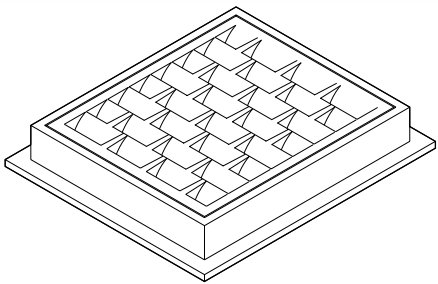
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06-16-11

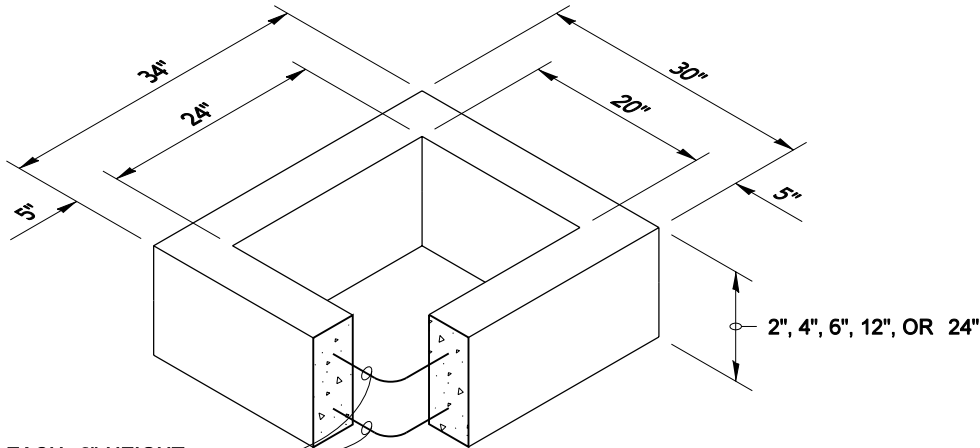
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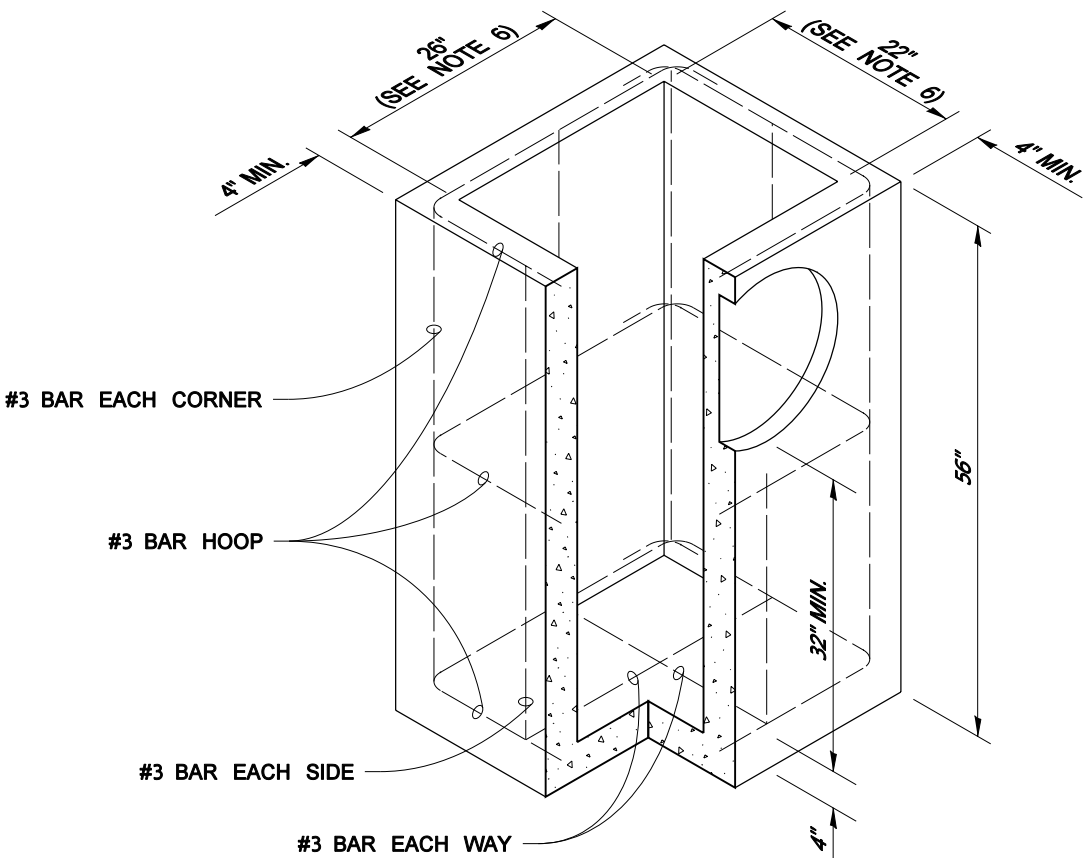
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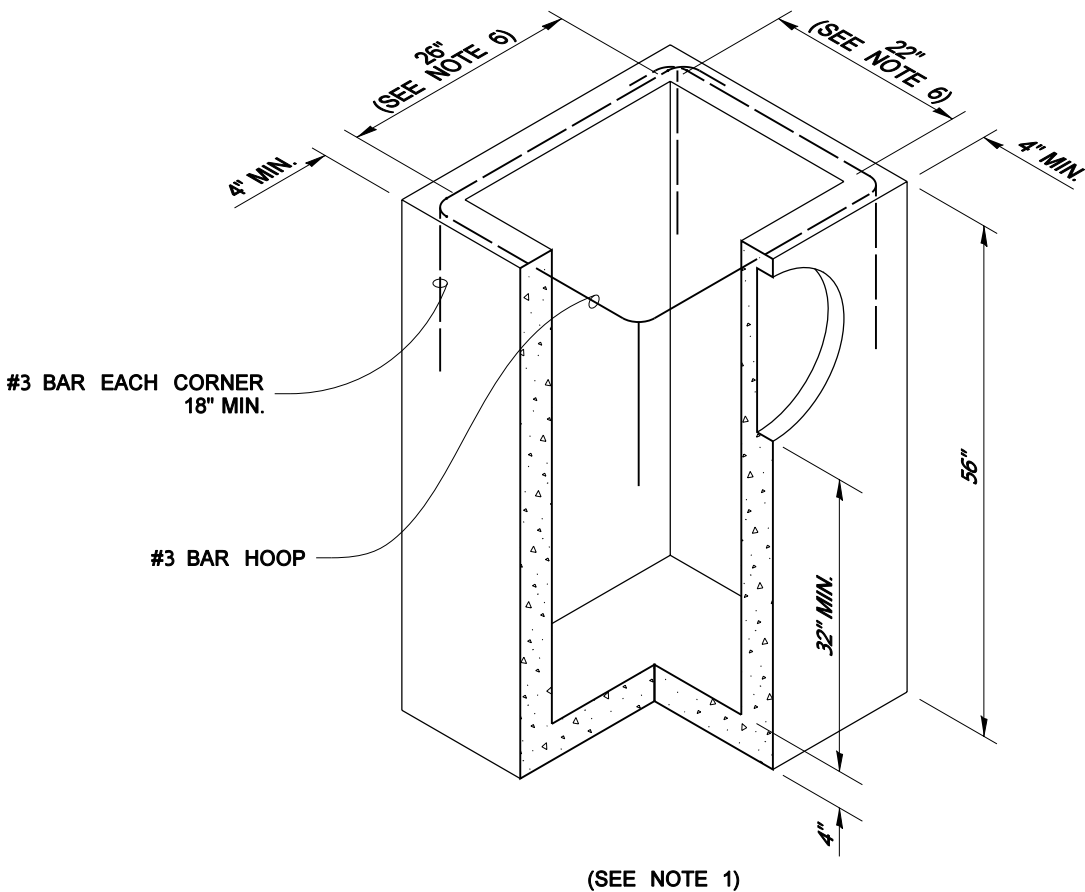
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot, shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 18". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



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**CATCH BASIN TYPE 1P
(FOR PARKING LOT)**

STANDARD PLAN B-5.60-01

SHEET 1 OF 1 SHEET

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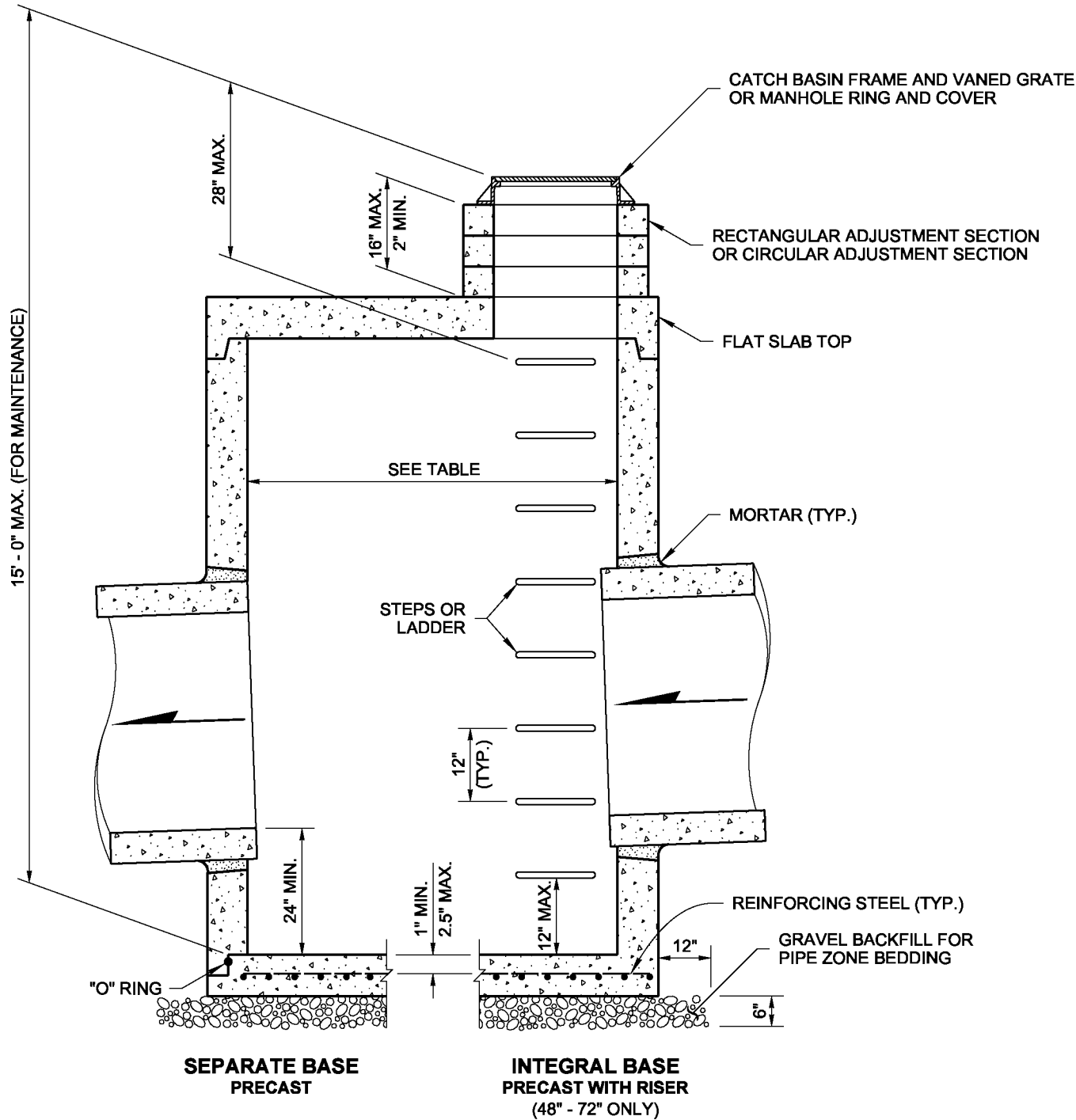
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06-16-11

DATE



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NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3**.

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ①	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

① Corrugated Polyethylene Storm Sewer Pipe (**Standard Specification 9-05.20**)
② (**Standard Specification 9-05.12(1)**)
③ (**Standard Specification 9-05.12(2)**)



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CATCH BASIN TYPE 2

STANDARD PLAN B-10.20-01

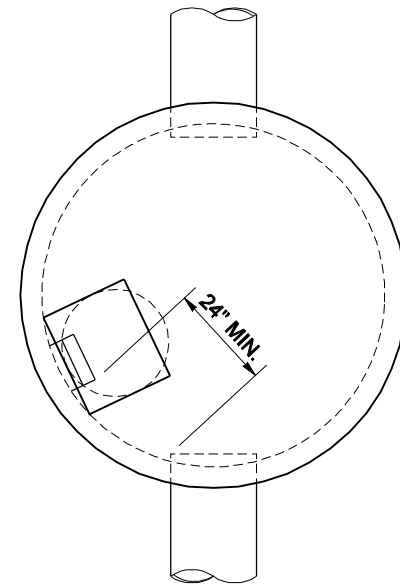
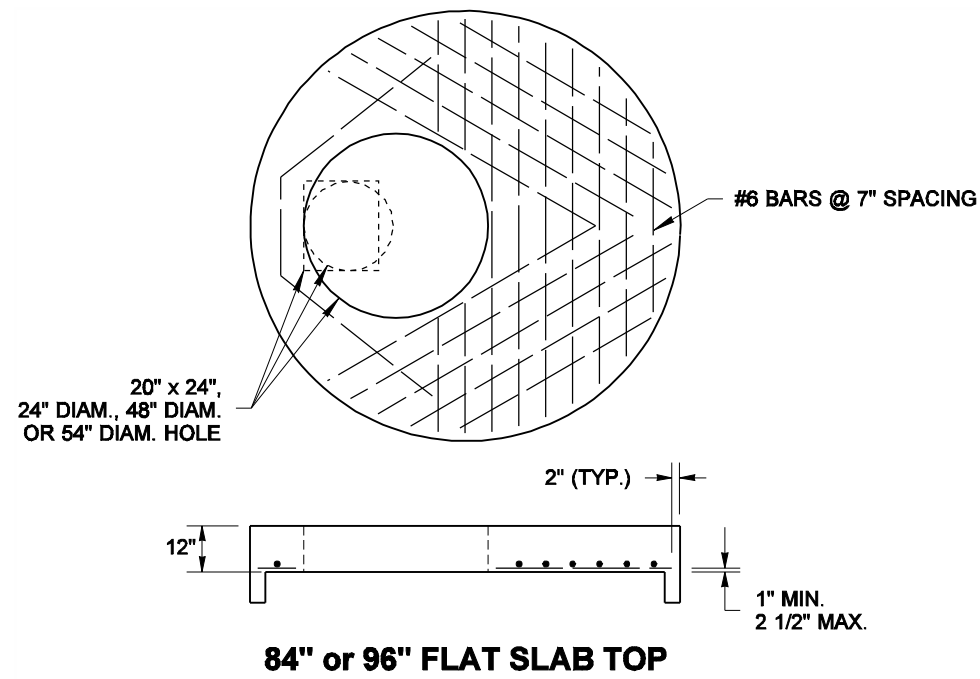
SHEET 1 OF 1 SHEET

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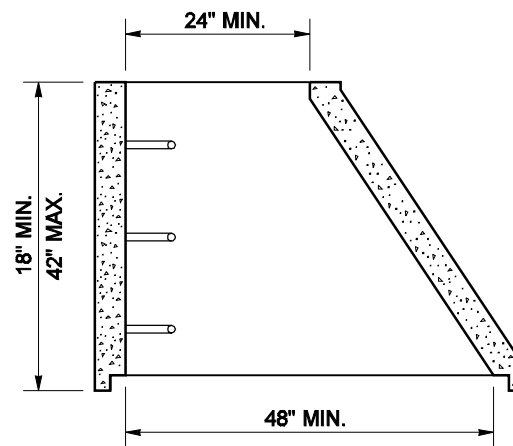
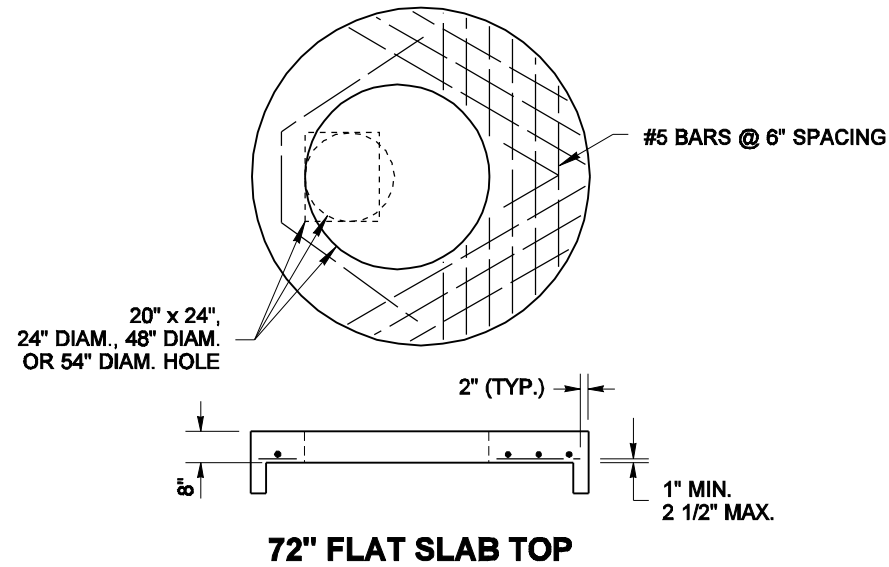
Pasco Bakotich III 02-07-12

STATE DESIGN ENGINEER DATE

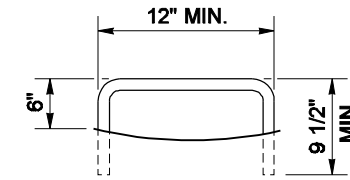
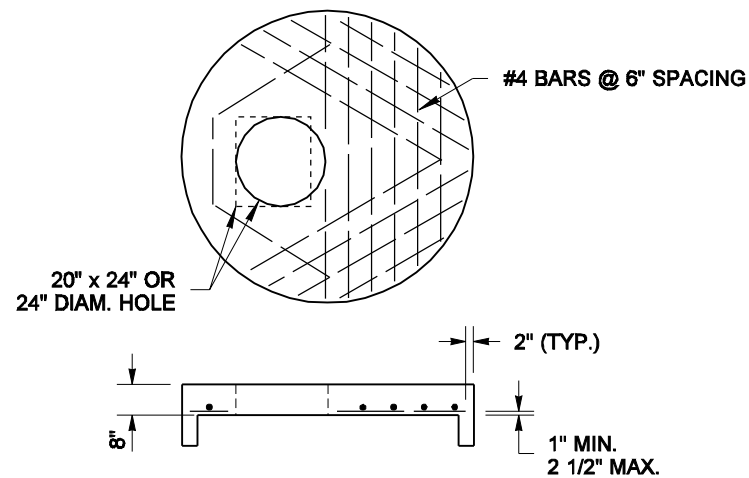
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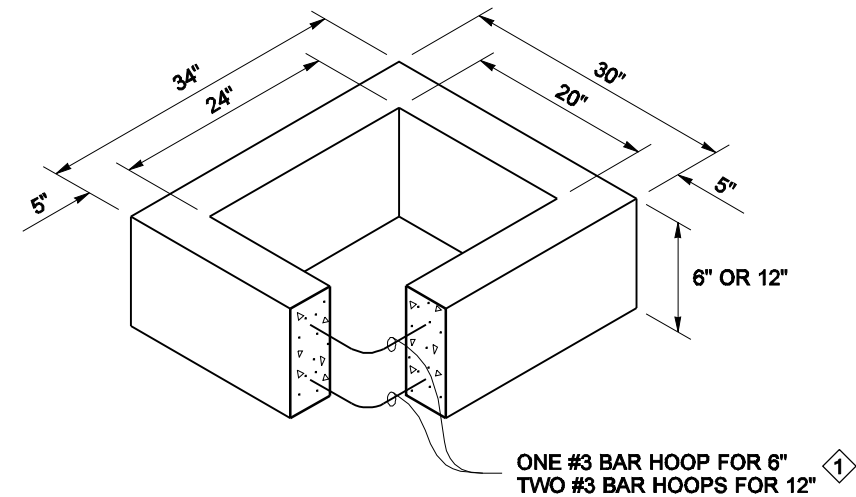
**TYPICAL ORIENTATION
FOR ACCESS AND STEPS**



ECCENTRIC CONE SECTION

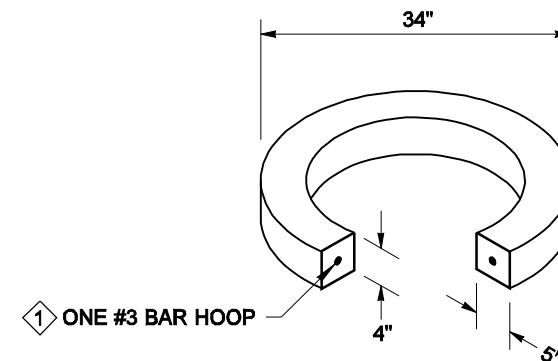


STEP



RECTANGULAR ADJUSTMENT SECTION

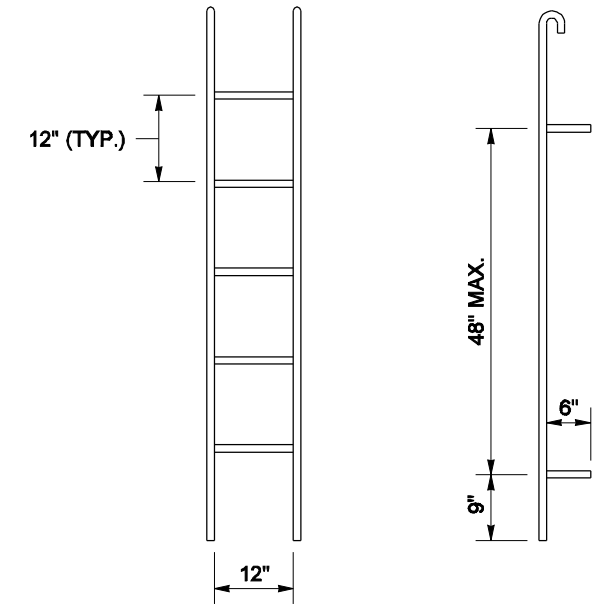
- 1 As an acceptable alternative to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.



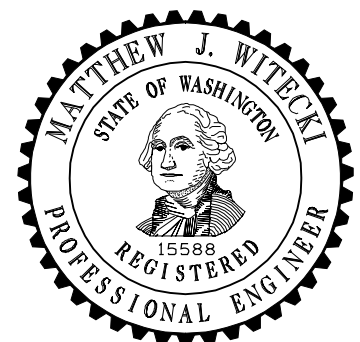
CIRCULAR ADJUSTMENT SECTION

NOTE

Ladder rungs for manholes and catch basins shall meet the requirements of AASHTO M 199.



PREFABRICATED LADDER



EXPIRES JULY 1, 2009

**MISCELLANEOUS DETAILS
FOR
DRAINAGE STRUCTURES
STANDARD PLAN B-30.90-01**

SHEET 1 OF 1 SHEET

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Pasco Bakotich III 09-20-07

STATE DESIGN ENGINEER

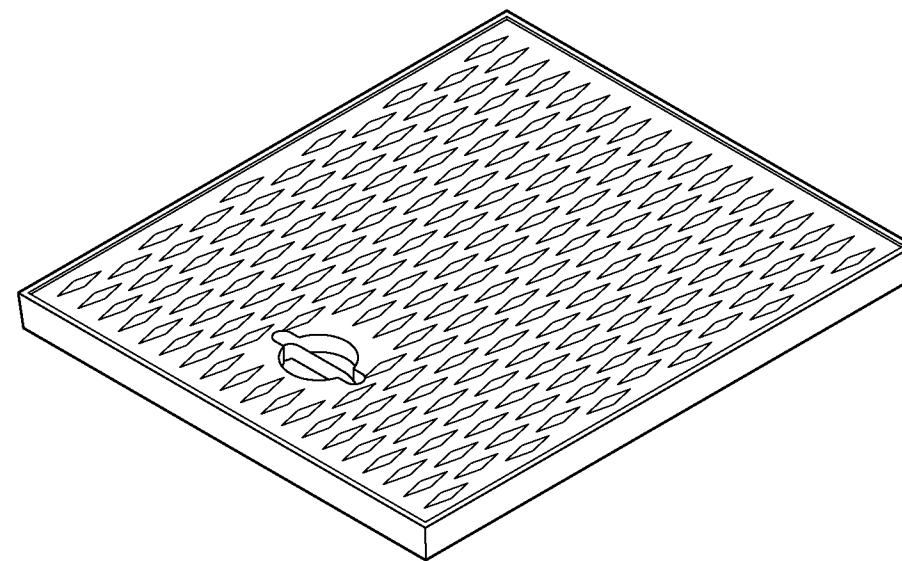
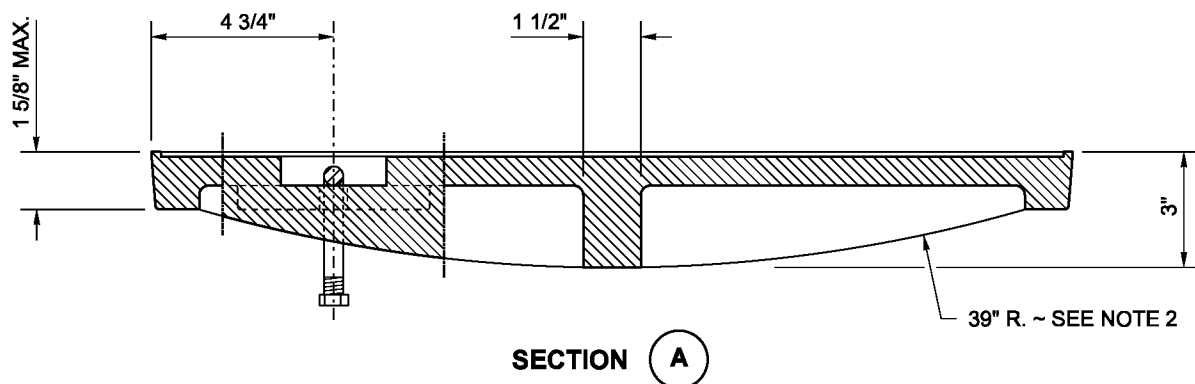
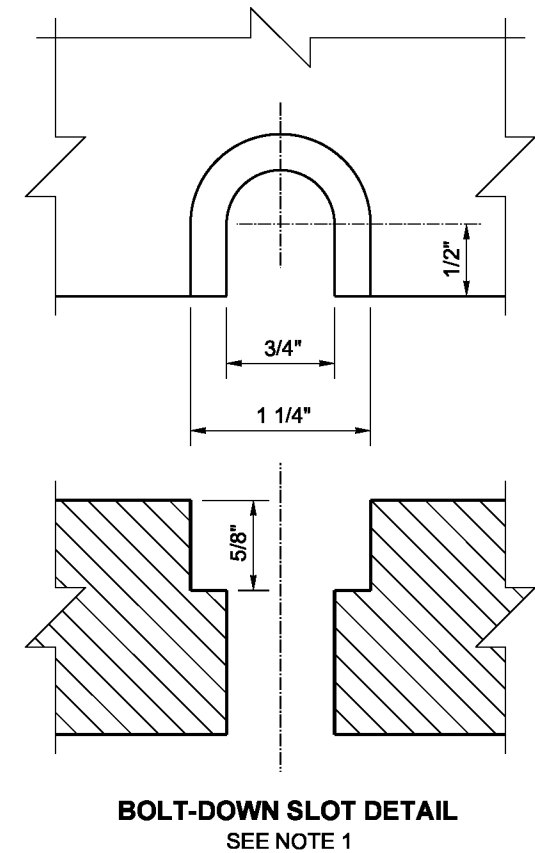
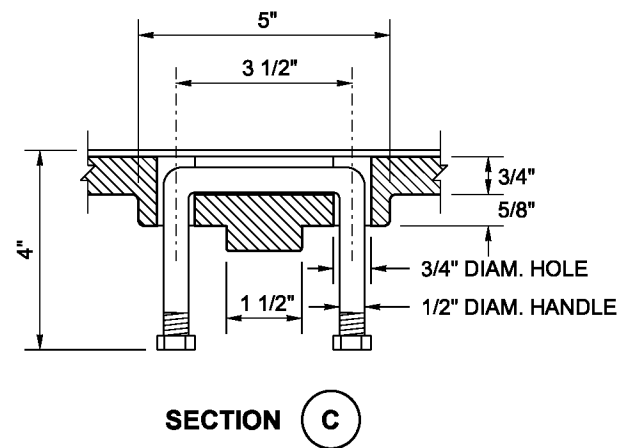
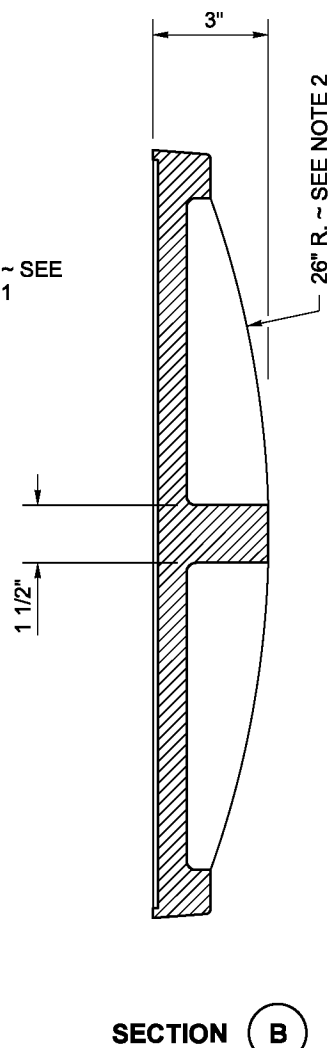
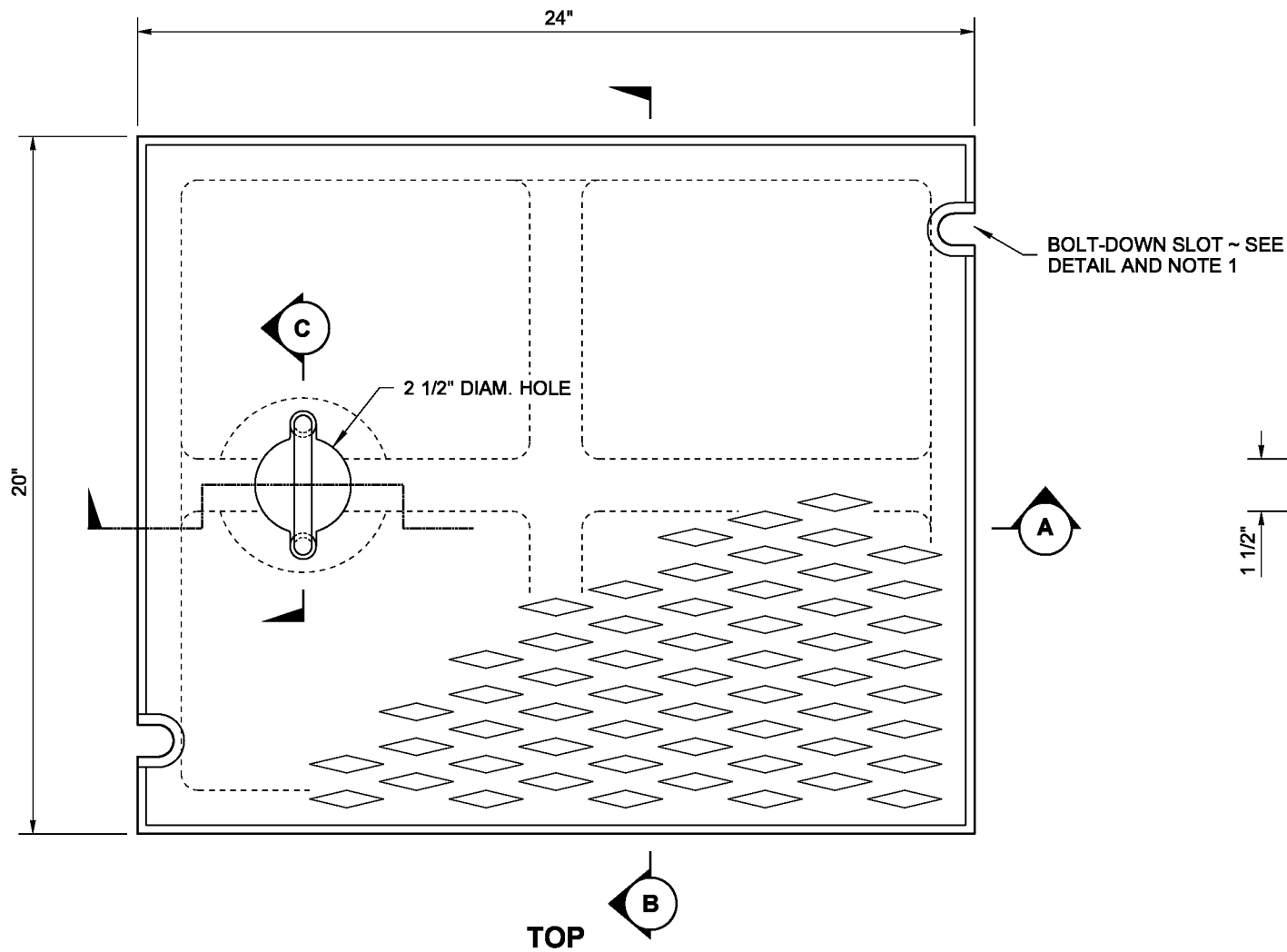
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DRAWN BY: LISA CYFORD



ISOMETRIC

NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Alternative reinforcing designs are acceptable in lieu of the rib design.
3. Refer to **Standard Specification 9-05.15(2)** for additional requirements.
4. For frame details, see **Standard Plan B-30.10**.



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RECTANGULAR SOLID METAL COVER

STANDARD PLAN B-30.20-02

SHEET 1 OF 1 SHEET

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Pasco Bakotich III

STATE DESIGN ENGINEER

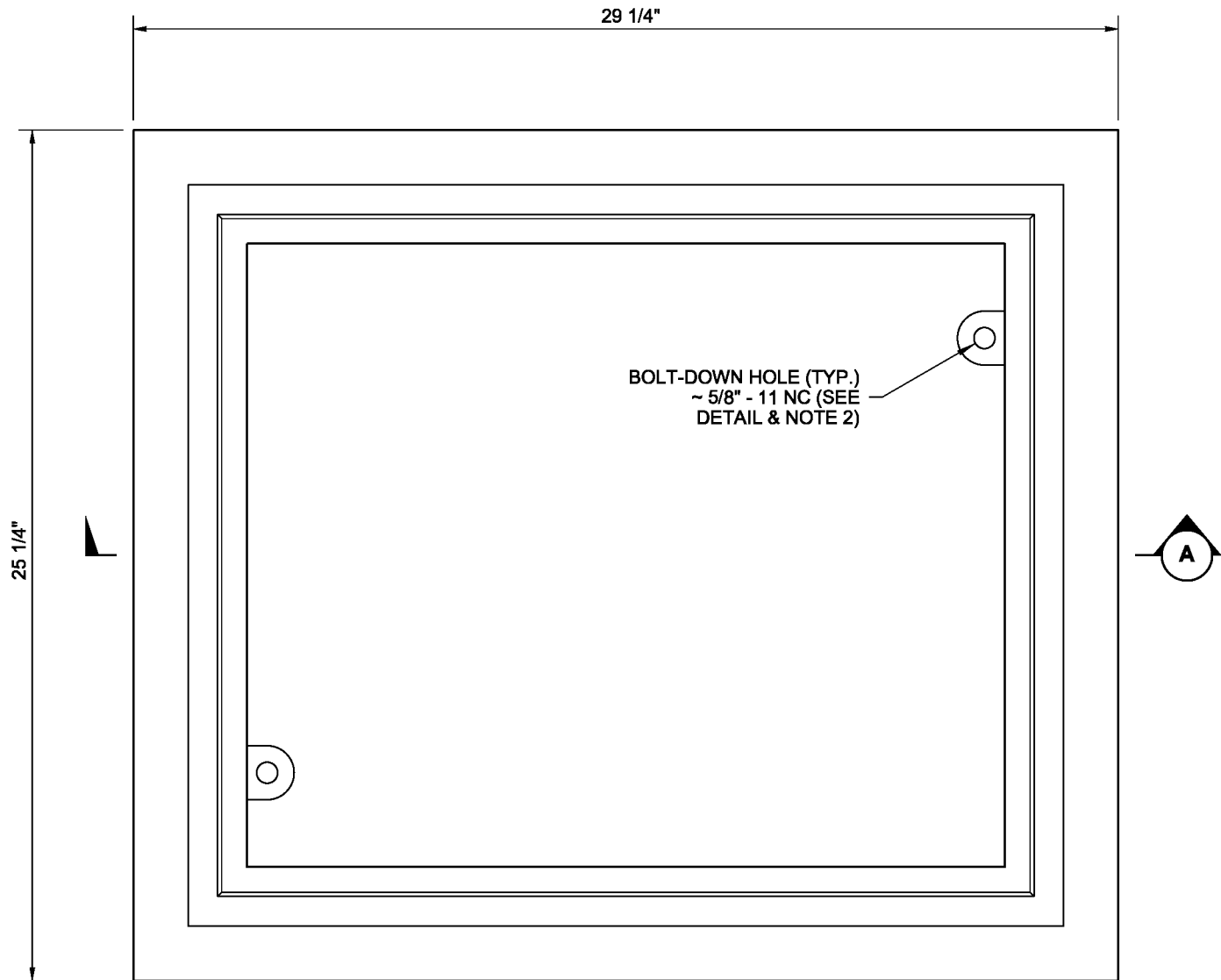
04/26/12

DATE

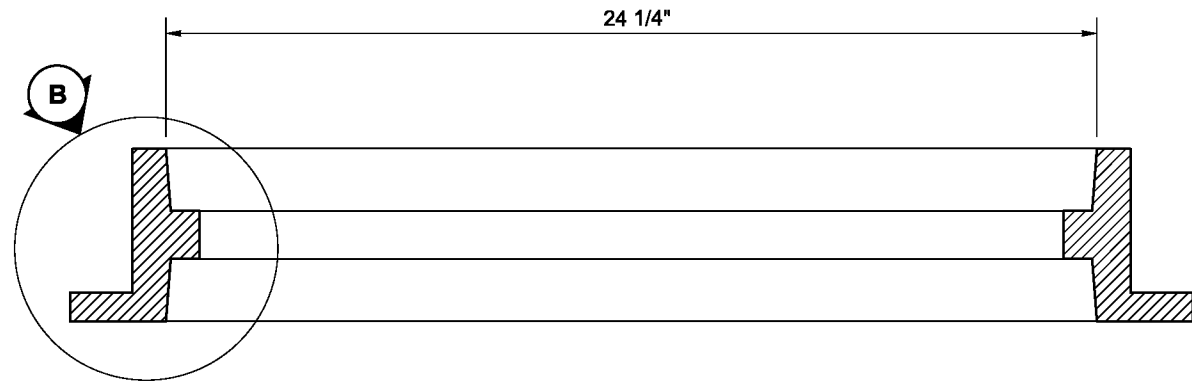


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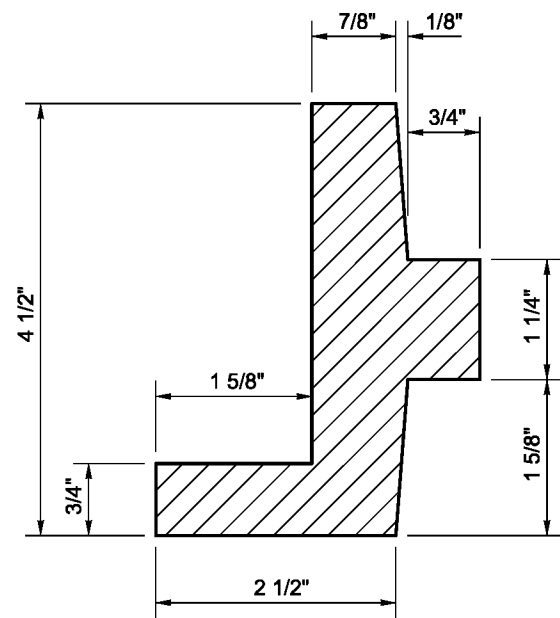
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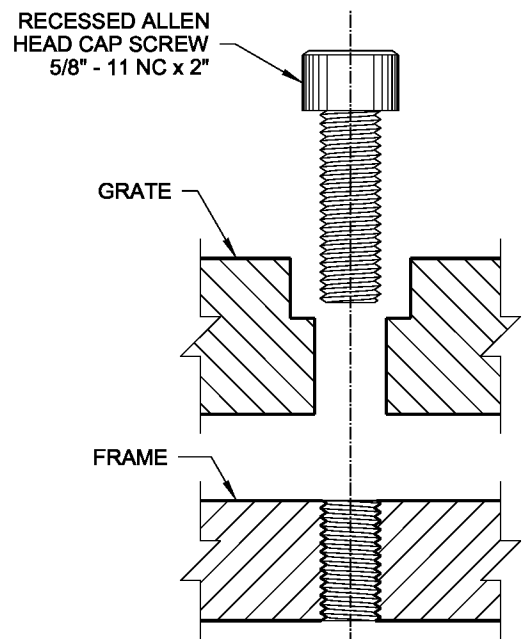
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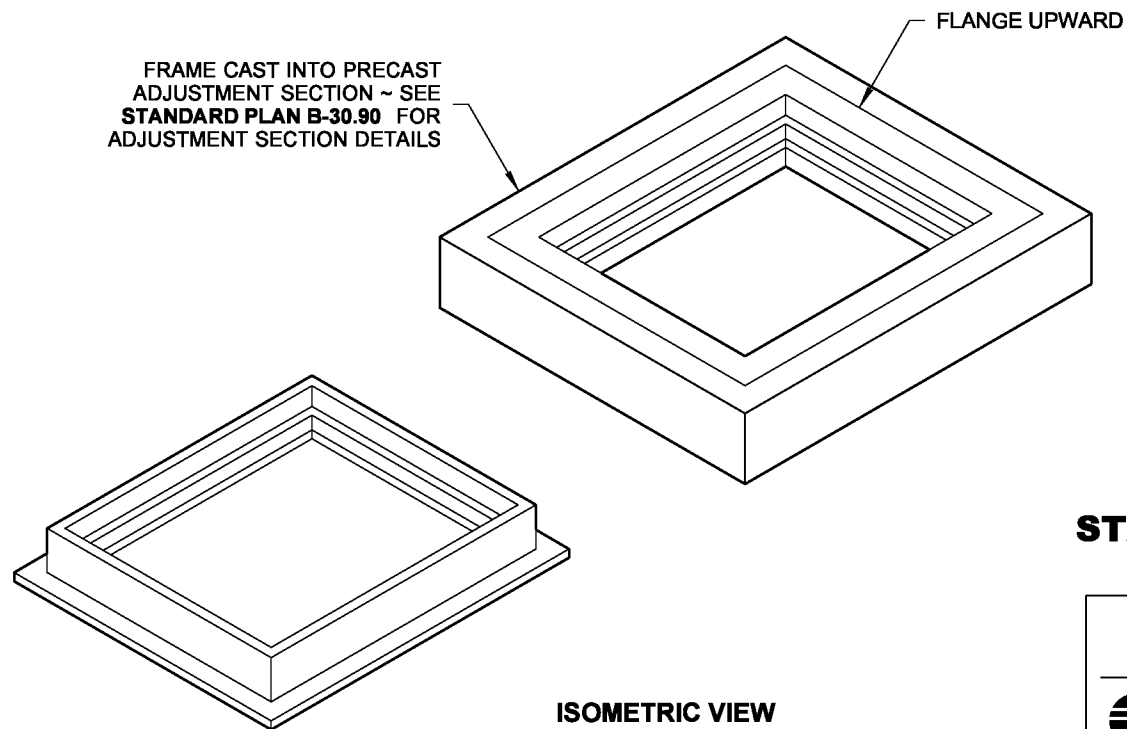
SECTION A



DETAIL B



SECTION
BOLT-DOWN DETAIL
SEE NOTE 2



ISOMETRIC VIEW
SHOWING THE VARIATIONS

NOTES

1. This frame is designed to accommodate 20" x 24" grates or covers as shown on Standard Plans **B-30.20**, **B-30.30**, **B-30.40**, and **B-30.50**.
2. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
3. Refer to **Standard Specification 9-05.15(2)** for additional requirements.



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**RECTANGULAR FRAME
(REVERSIBLE)**
STANDARD PLAN B-30.10-01

SHEET 1 OF 1 SHEET

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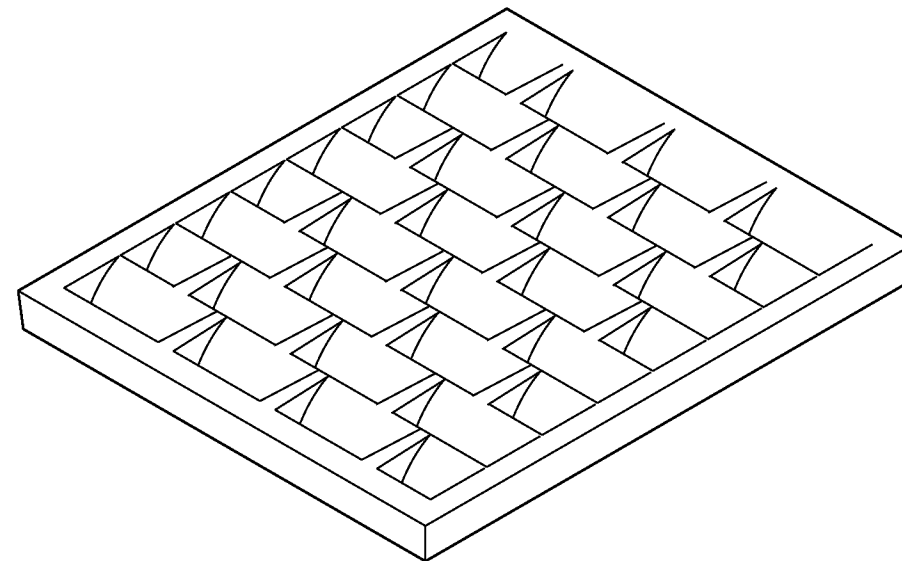
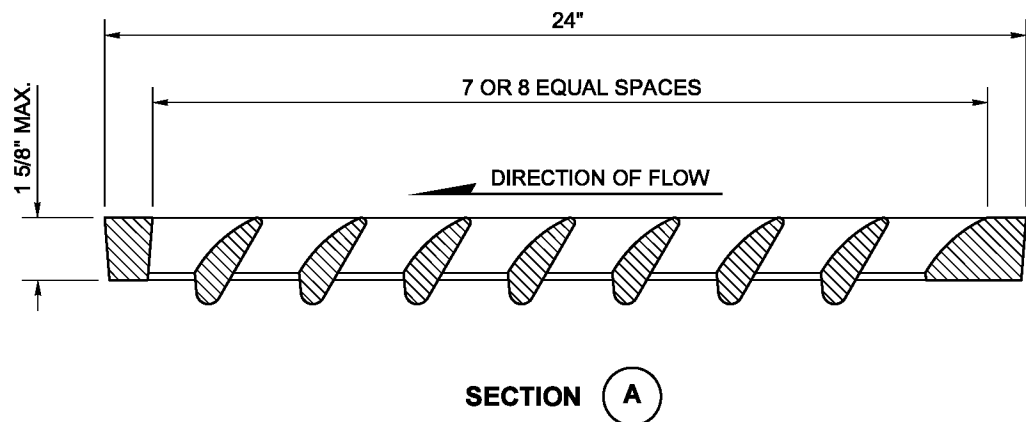
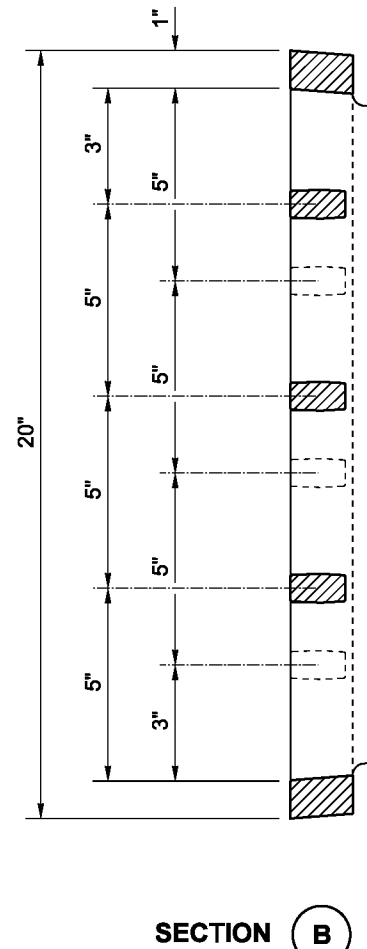
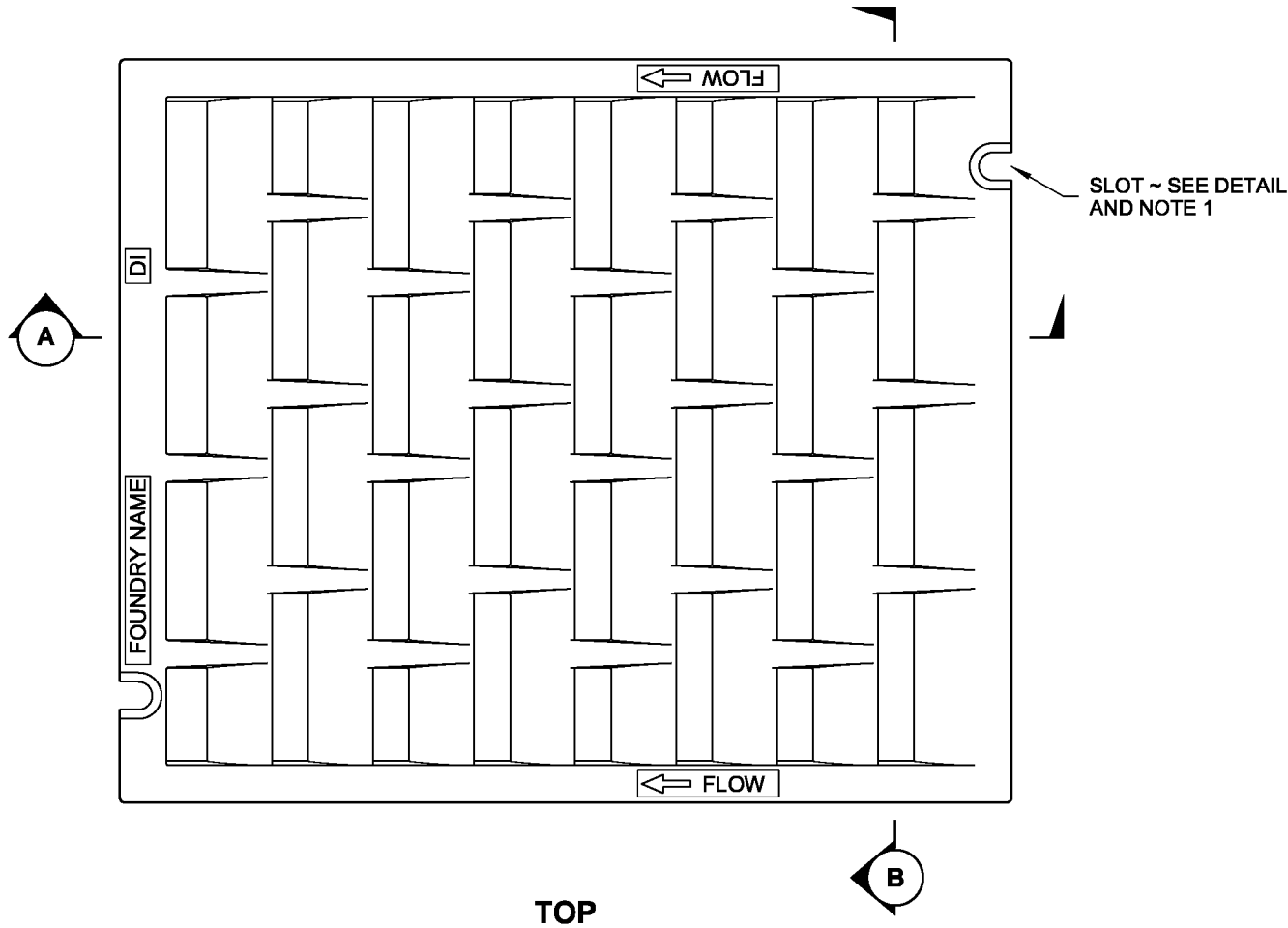
STATE DESIGN ENGINEER

04/26/12

DATE



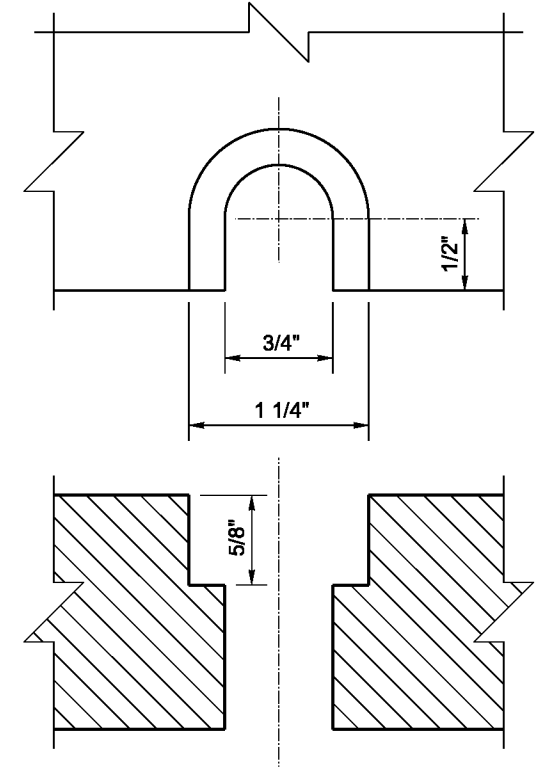
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ISOMETRIC

NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. For frame details, see **Standard Plan B-30.10**.
3. Refer to **Standard Specification 9-05.15(2)** for additional requirements.



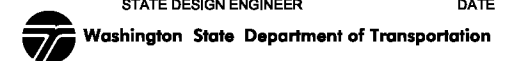
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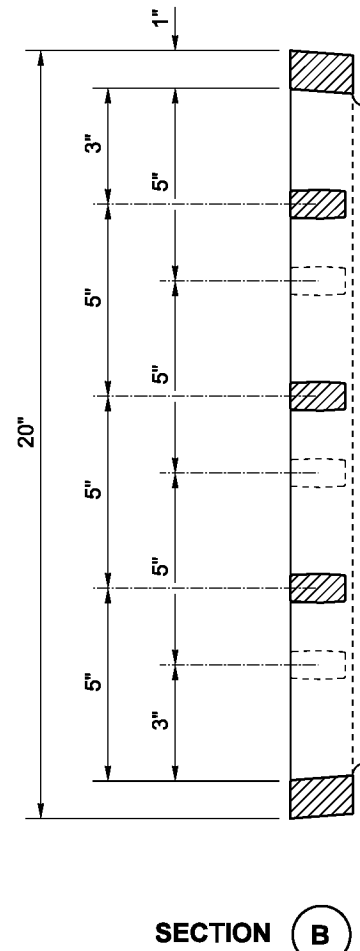
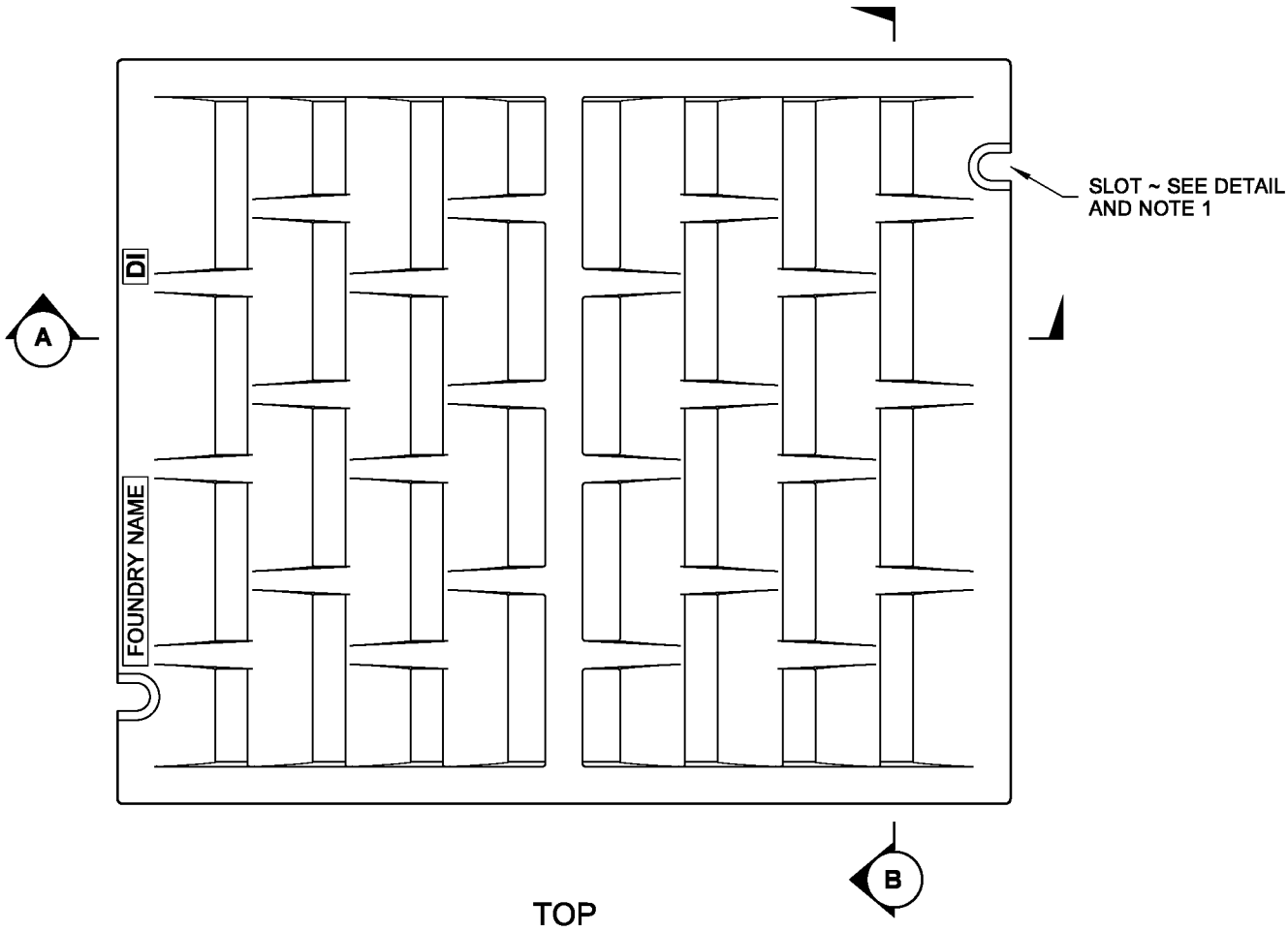
RECTANGULAR VANED GRATE
STANDARD PLAN B-30.30-01

SHEET 1 OF 1 SHEET

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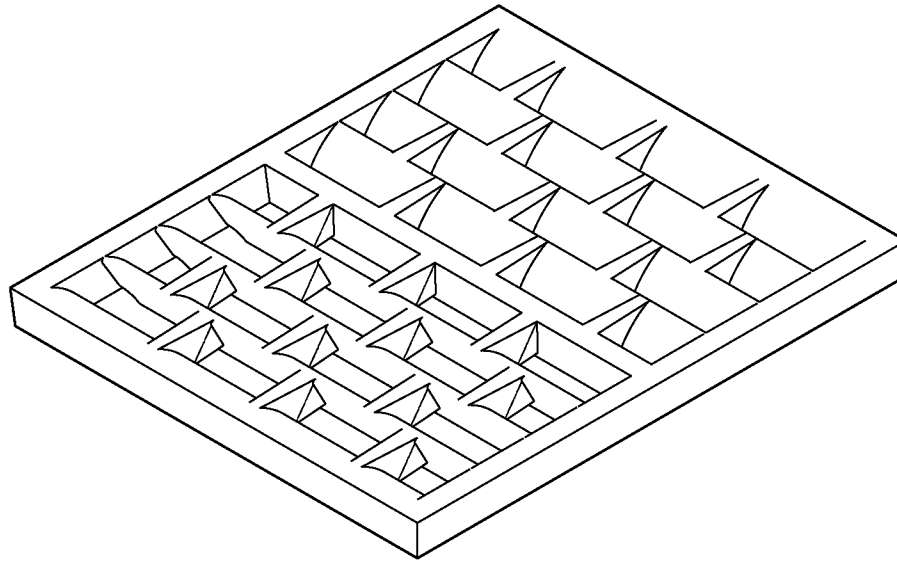
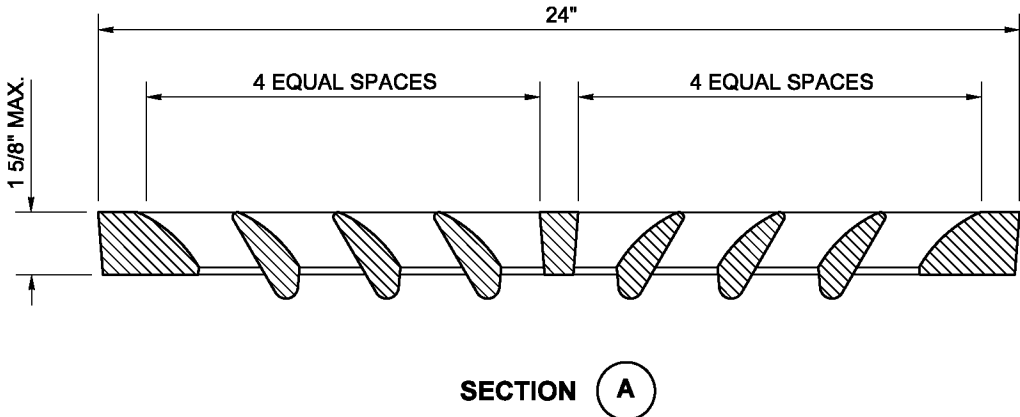
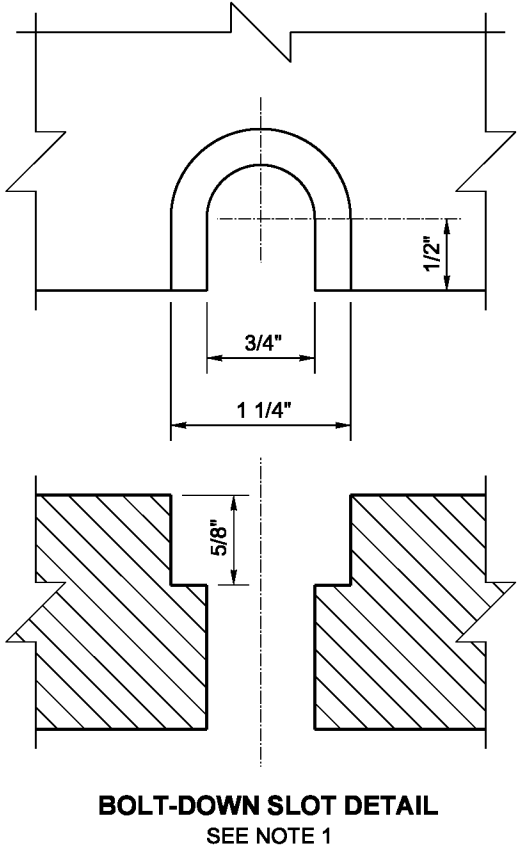
Pasco Bakotich III 04/26/12
STATE DESIGN ENGINEER DATE





NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Refer to **Standard Specification 9-05.15(2)** for additional requirements.
3. For frame details, see **Standard Plan B-30.10**.



ISOMETRIC

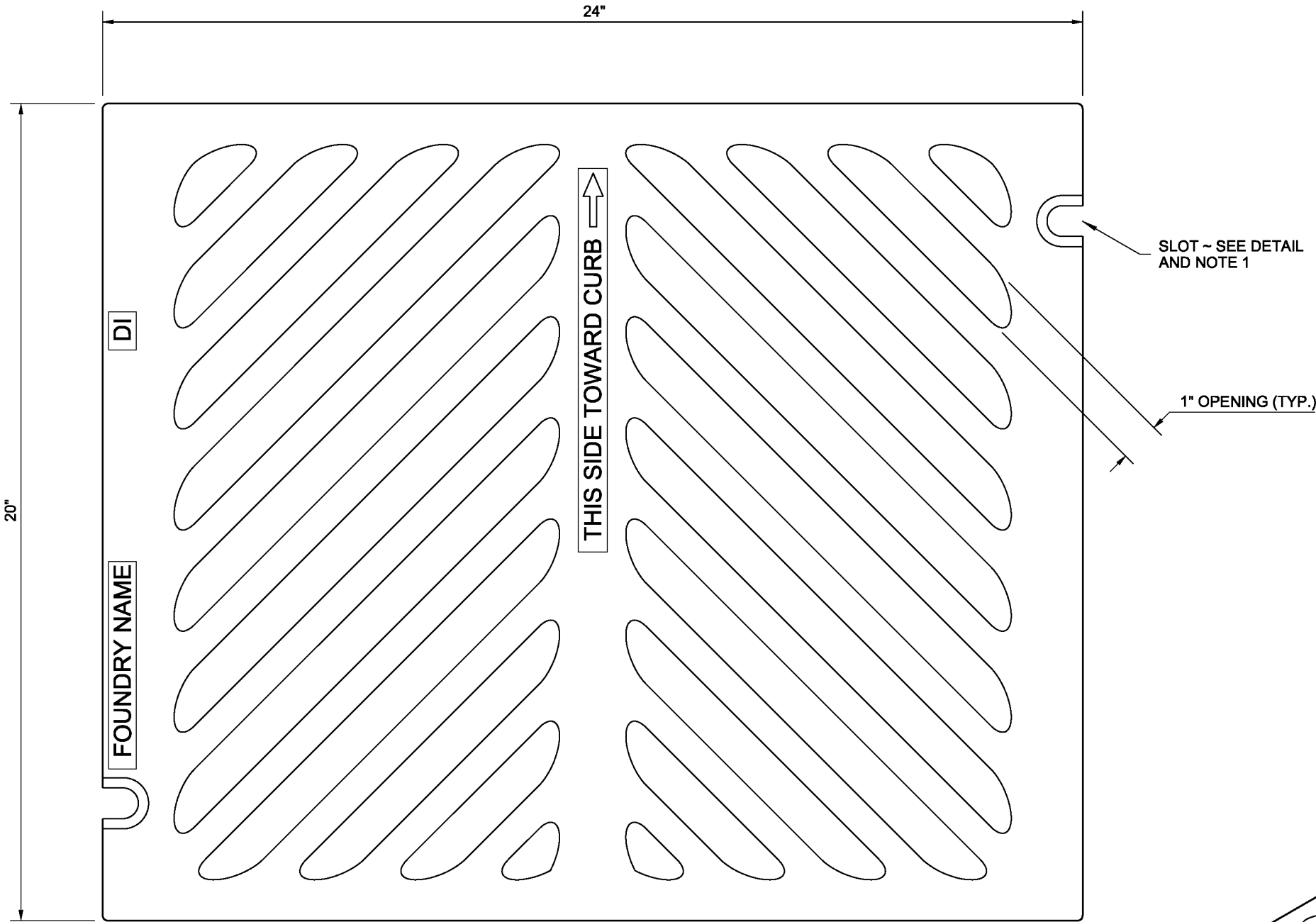


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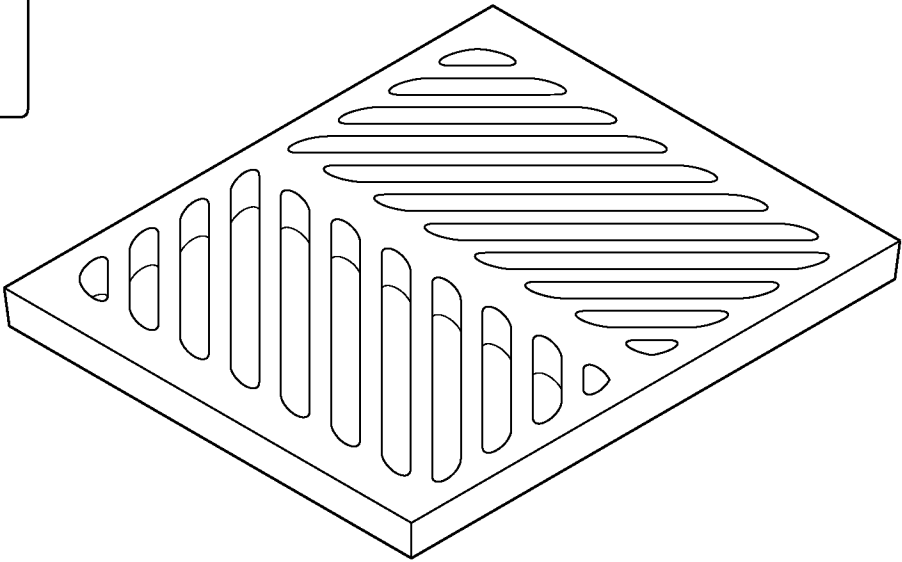
**RECTANGULAR
BI-DIRECTIONAL
VANED GRATE
STANDARD PLAN B-30.40-01**

SHEET 1 OF 1 SHEET

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STATE DESIGN ENGINEER	DATE
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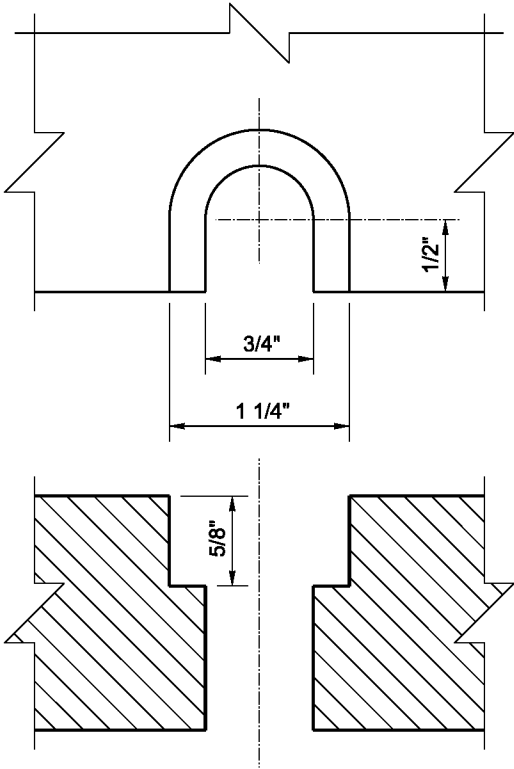
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ISOMETRIC

NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Refer to **Standard Specification 9-05.15(2)** for additional requirements.
3. For frame details, see **Standard Plan B-30.10**.
4. The thickness of the grate shall not exceed 1 5/8".



BOLT-DOWN SLOT DETAIL
SEE NOTE 1



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**RECTANGULAR
HERRINGBONE GRATE**
STANDARD PLAN B-30.50-01

SHEET 1 OF 1 SHEET

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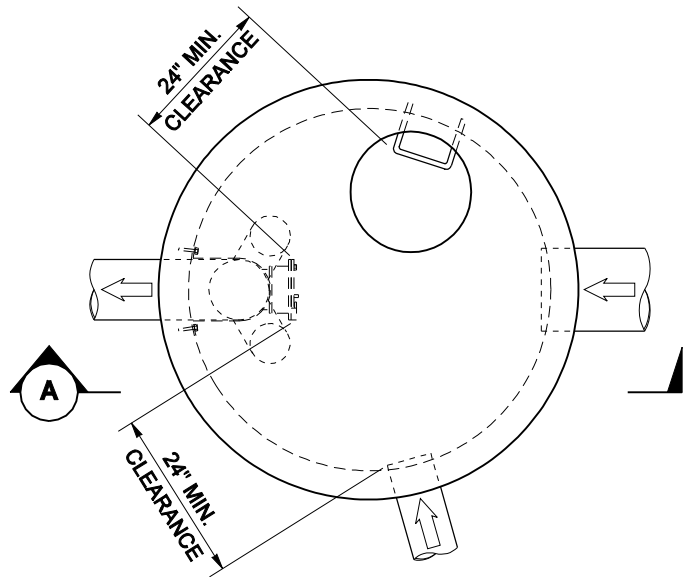
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04/26/12

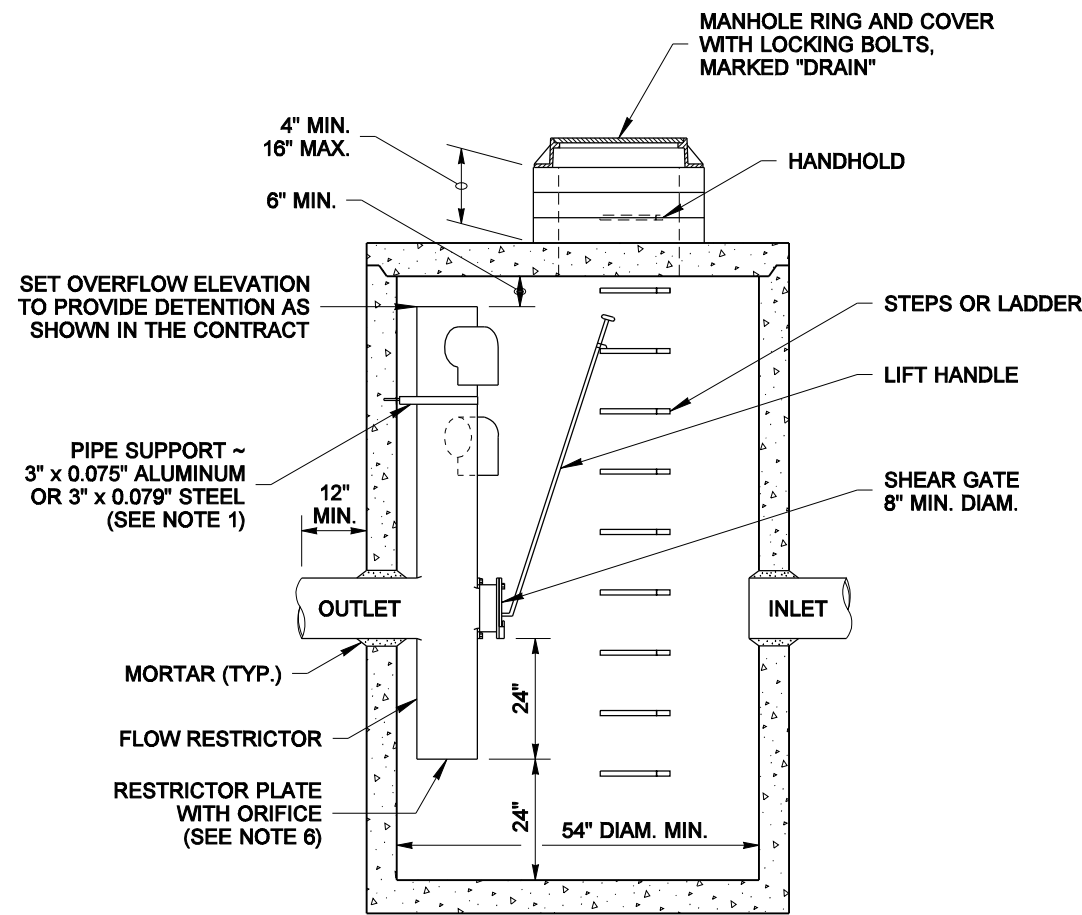
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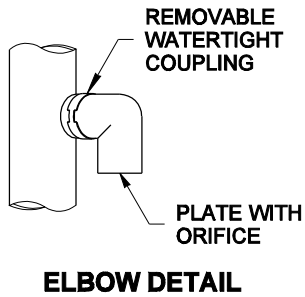
Washington State Department of Transportation



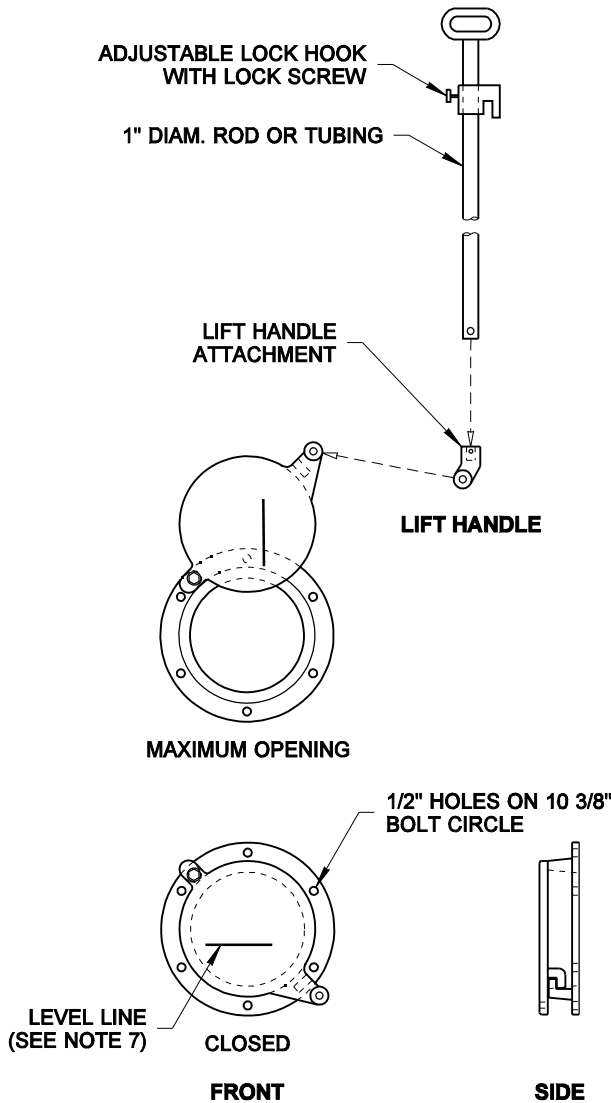
PLAN VIEW



VIEW A



ELBOW DETAIL



SHEAR GATE DETAILS

NOTES

1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36". Attach the pipe supports to the manhole with 5/8" stainless steel expansion bolts or embed the supports into the manhole wall 2".
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 8".
3. The flow restrictor shall be fabricated from one of the following materials:
 - 0.060" Corrugated Aluminum Alloy Drain Pipe
 - 0.064" Corrugated Galvanized Steel Drain Pipe with Treatment 1
 - 0.064" Corrugated Aluminized Steel Drain Pipe
 - 0.060" Aluminum alloy flat sheet, in accordance with ASTM B 209, 5052 H32 or EPS
 - High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that: the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the frame is clear of the curb.
5. The multi-orifice elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation ZG32A; or cast iron in accordance with ASTM A 48, Class 30B.

The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion), it may be of solid rod or hollow tubing, with adjustable hook as required.

A neoprene rubber gasket is required between the riser mounting flange and the gate flange.

Install the gate so that the level-line mark is level when the gate is closed.

The mating surfaces of the lid and the body shall be machined for proper fit.

All shear gate bolts shall be stainless steel.
8. The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
9. Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches.



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**CATCH BASIN TYPE 2
WITH FLOW RESTRICTOR
STANDARD PLAN B-10.40-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso 06-01-06

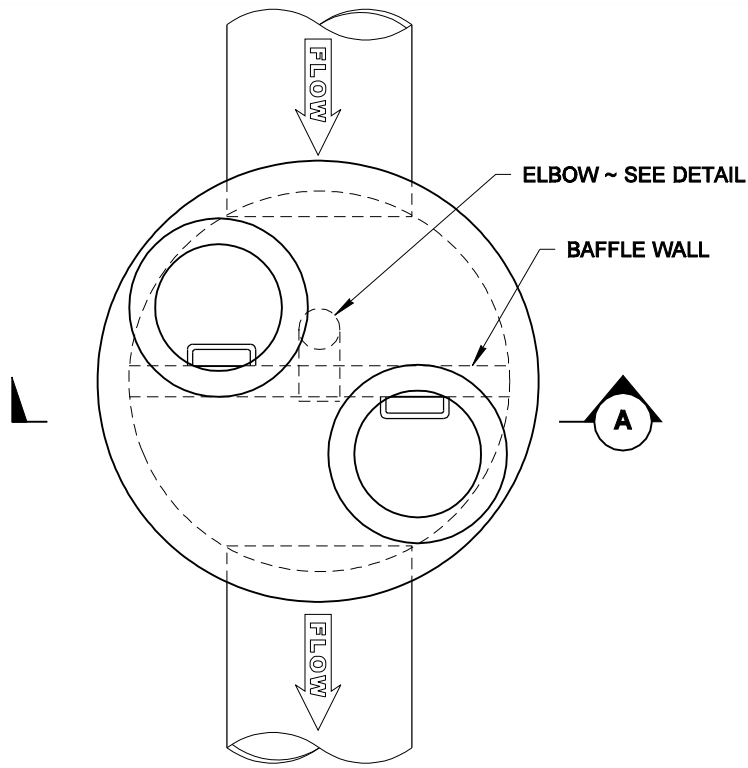
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DATE

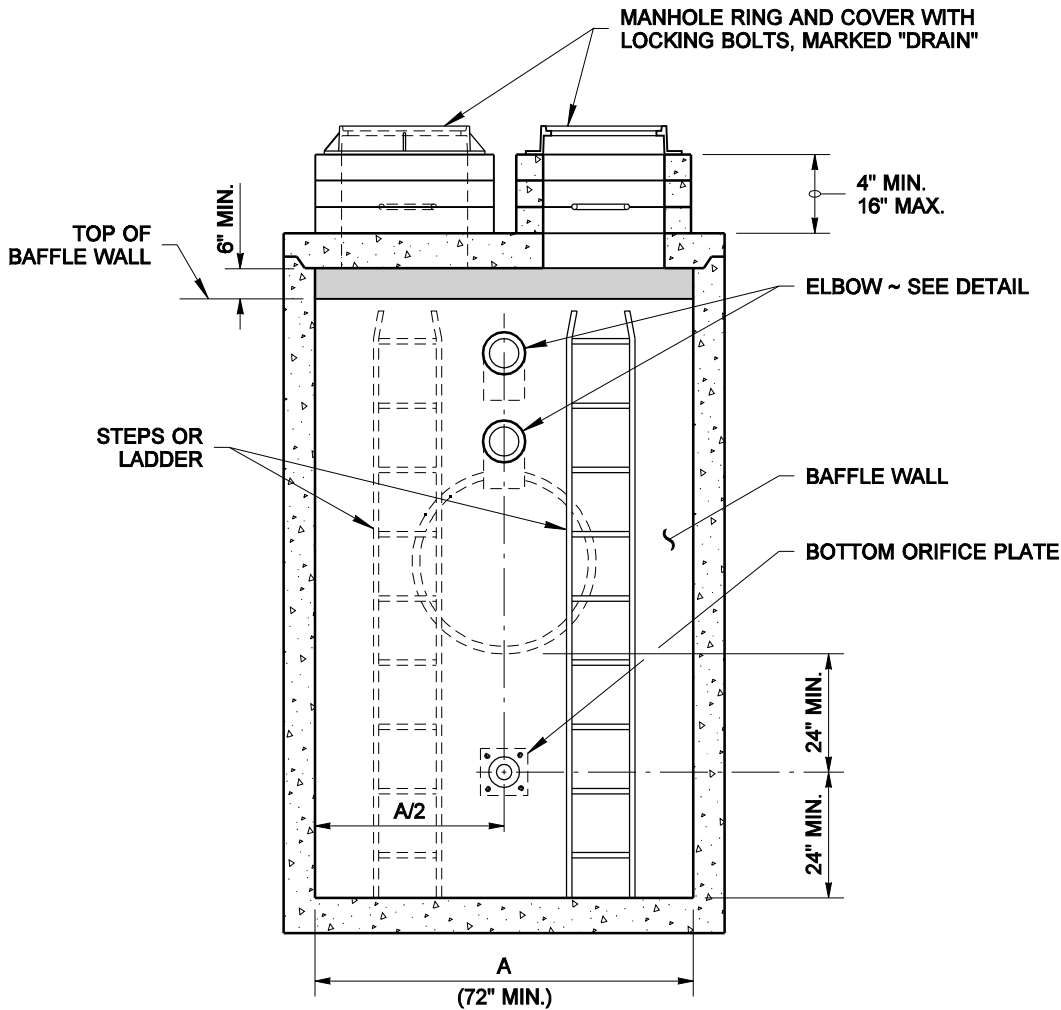


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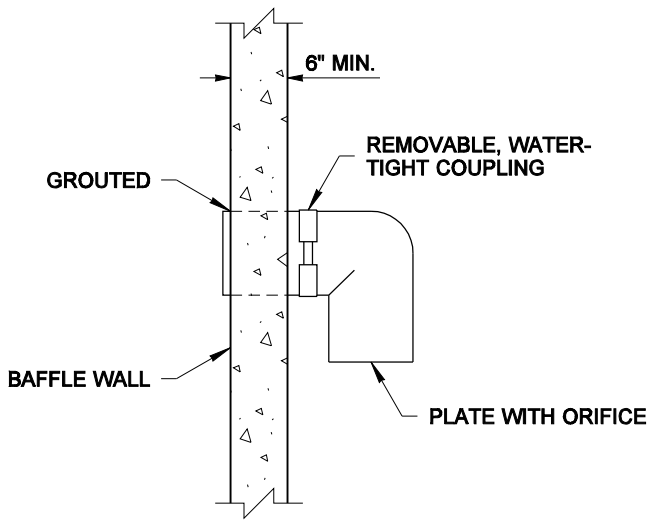
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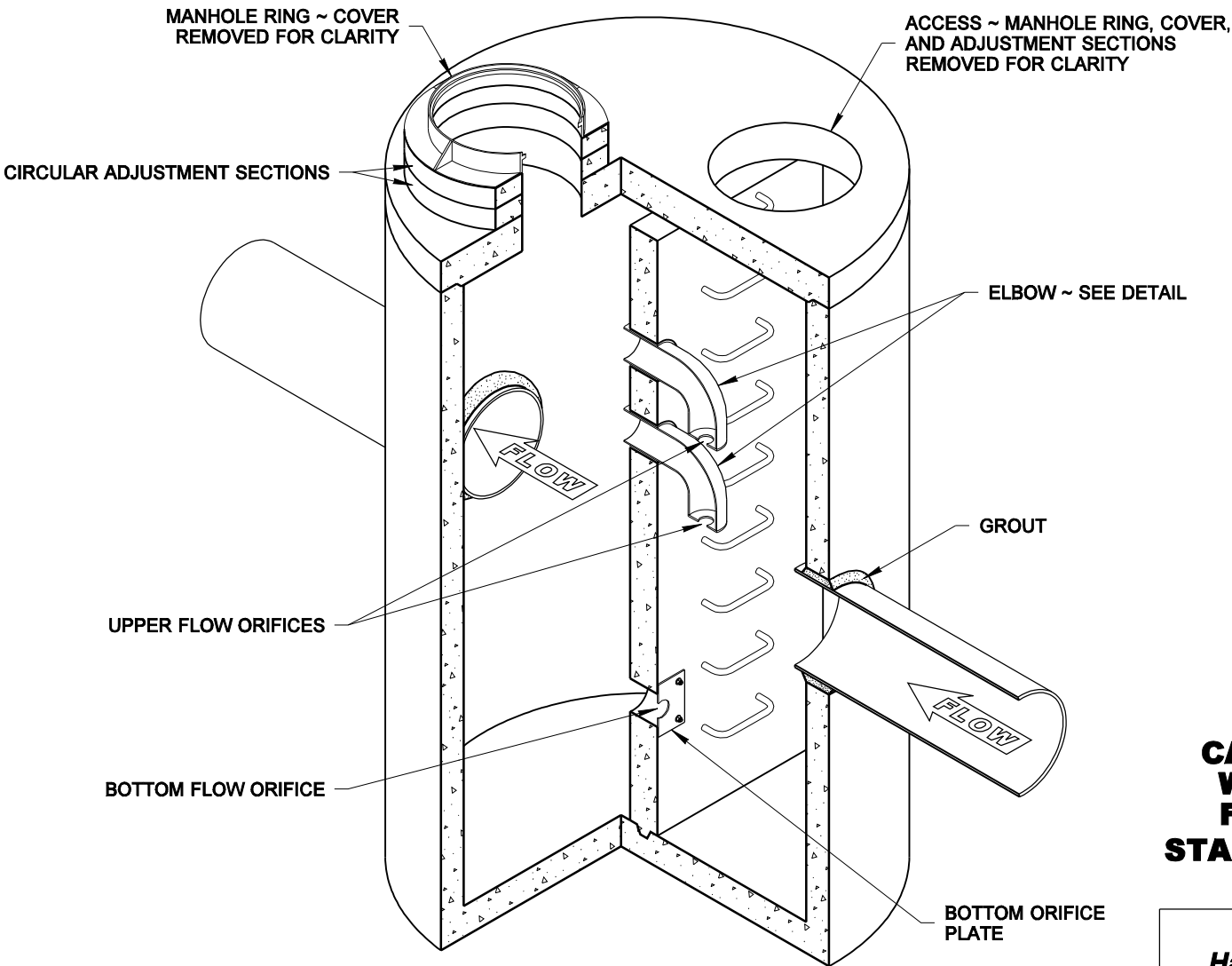
PLAN



SECTION A



ELBOW DETAIL



ISOMETRIC CUTAWAY

NOTES

1. See Contract for size and location of all pipes and orifices.
2. Baffle wall shall have #4 Bar at 12" spacing each way.
3. Precast baffle shall be keyed and grouted in place.
4. Bottom orifice plate shall be galvanized steel with a minimum thickness of 1/4". Attach orifice with 1/2" stainless steel bolts.
5. Upper flow orifice plates and elbows shall be aluminum, aluminized steel or galvanized steel. Galvanized steel shall have Treatment 1.



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**CATCH BASIN TYPE 2
WITH BAFFLE TYPE
FLOW RESTRICTOR
STANDARD PLAN B-10.60-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

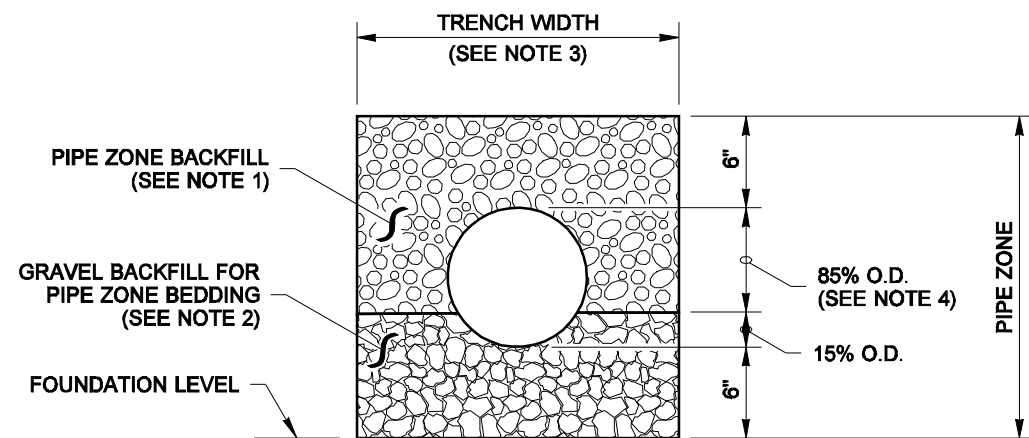
Harold J. Peterfeso 06-08-06

STATE DESIGN ENGINEER

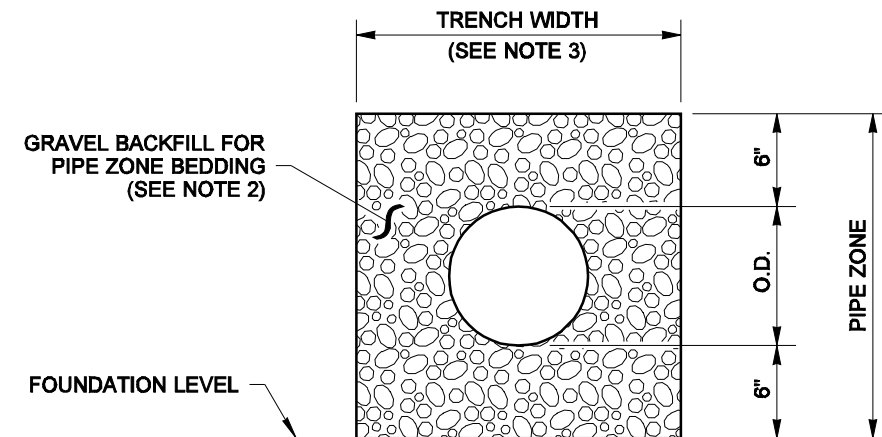
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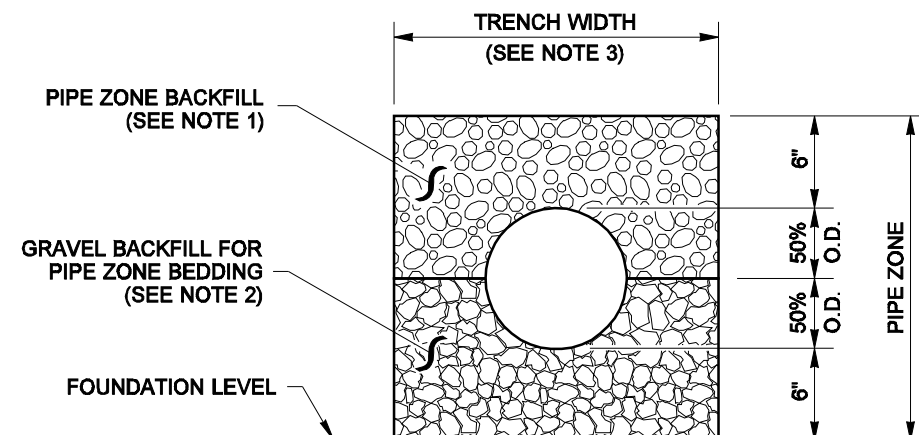
Washington State Department of Transportation



CONCRETE AND DUCTILE IRON PIPE



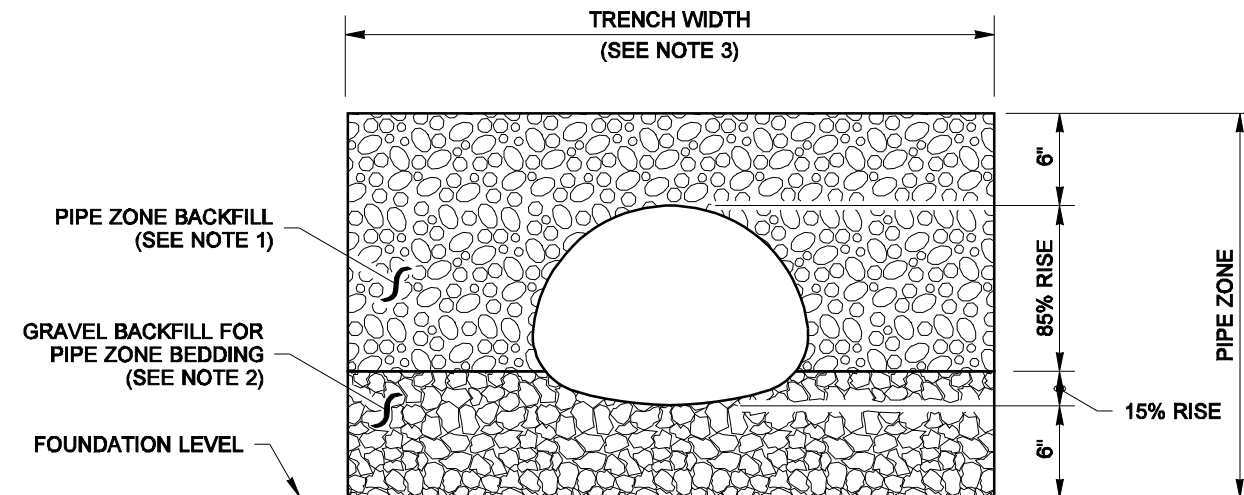
THERMOPLASTIC PIPE



METAL PIPE

NOTES

1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. /2
	102" to 180"	48"
PIPE ARCH (SPAN) METAL ONLY	18" to 36"	12"
	43" to 142"	SPAN /3
	148" to 200"	48"



EXPIRES JULY 1, 2007

PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-01-06**

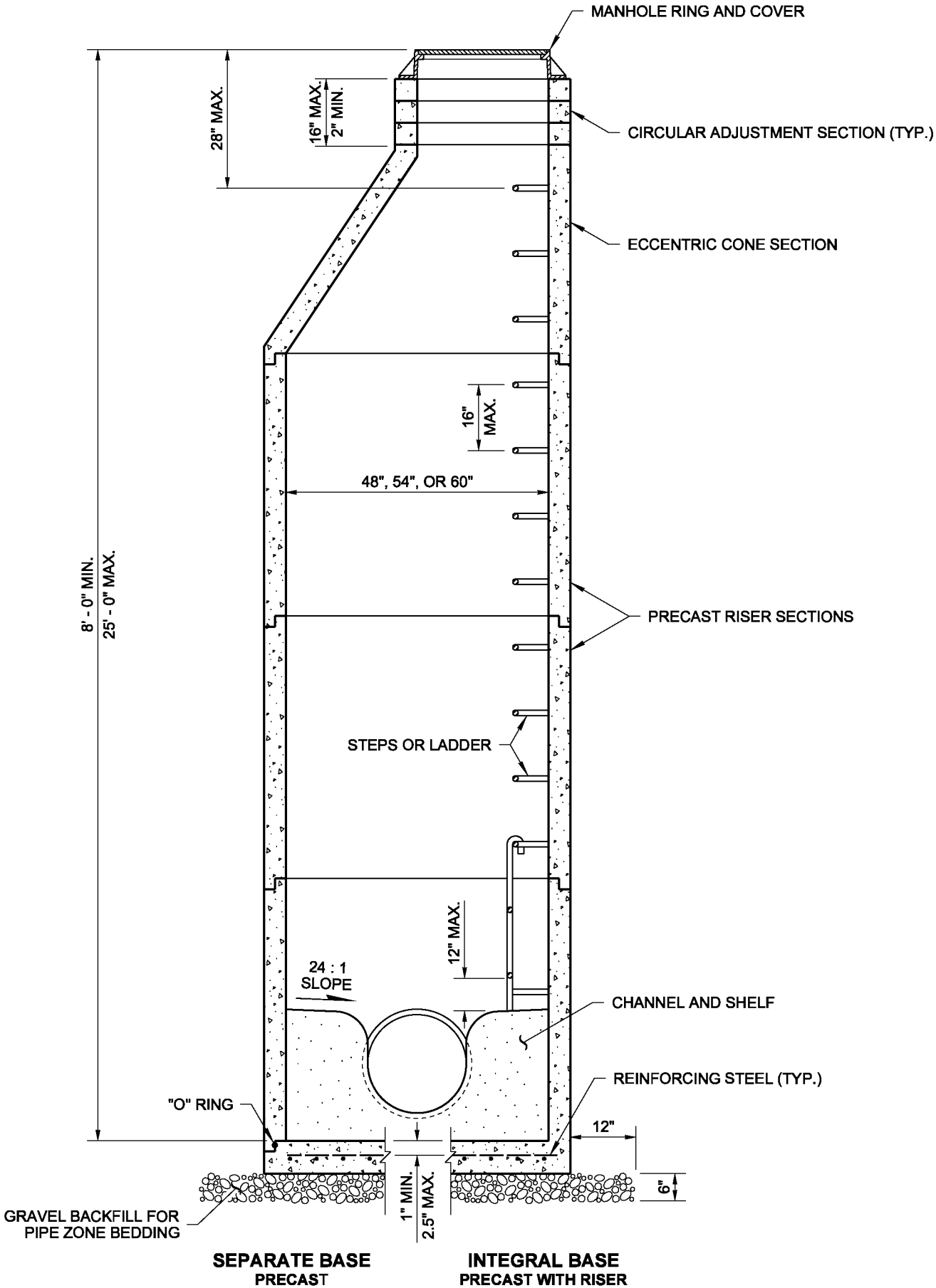
STATE DESIGN ENGINEER

DATE



Washington State Department of Transportation

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NOTES

- Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum.
- For pipe allowances, see **Standard Plan B-10.20**.

MANHOLE DIMENSION TABLE				
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"



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MANHOLE TYPE 1

STANDARD PLAN B-15.20-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

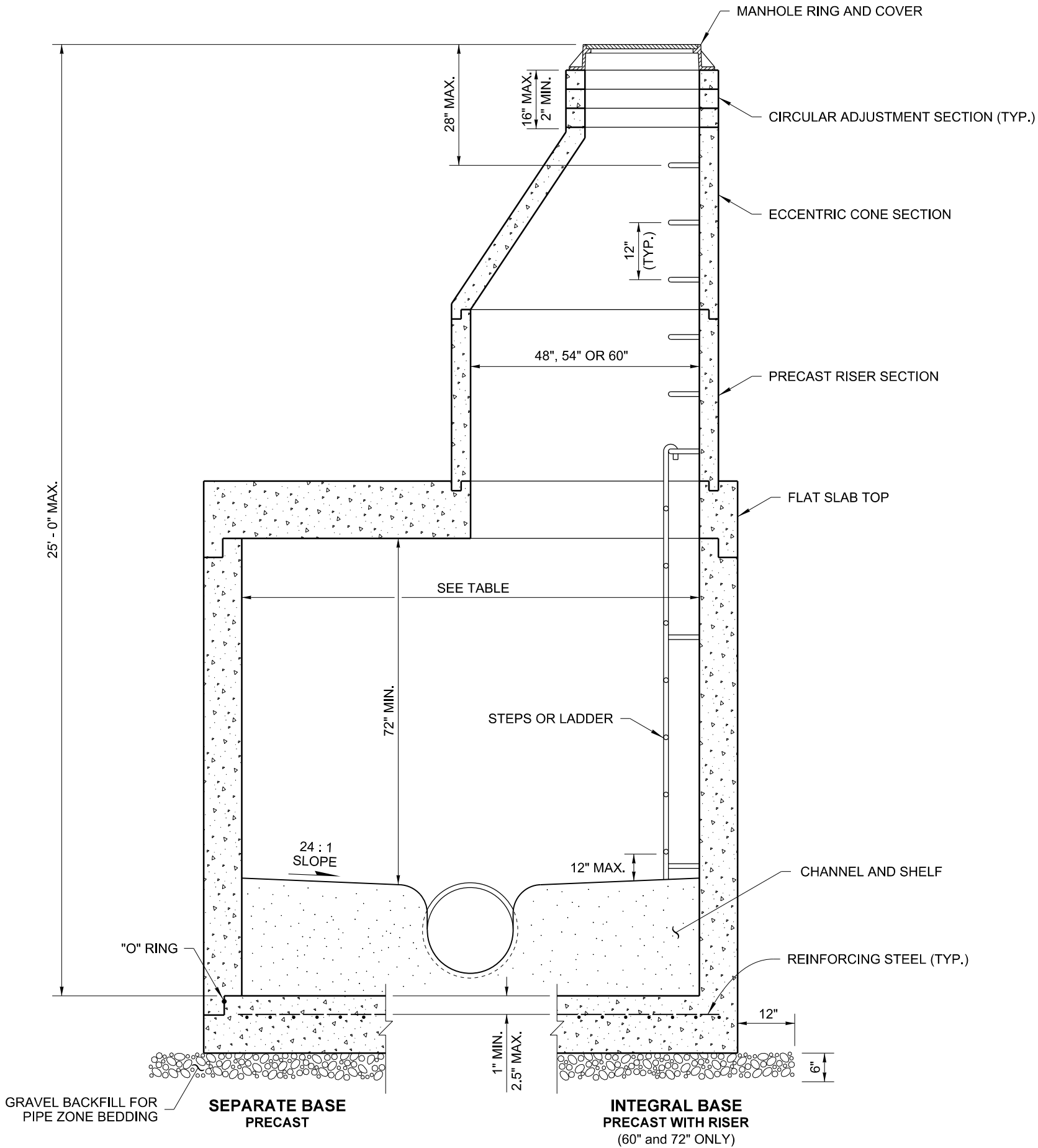
Pasco Bakotich III

02-07-12

STATE DESIGN ENGINEER

DATE

Washington State Department of Transportation



NOTES

- Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum.
- For pipe allowances, see **Standard Plan B-10.20**.

MANHOLE DIMENSION TABLE				
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"



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MANHOLE TYPE 2

STANDARD PLAN B-15.40-01

SHEET 1 OF 1 SHEET

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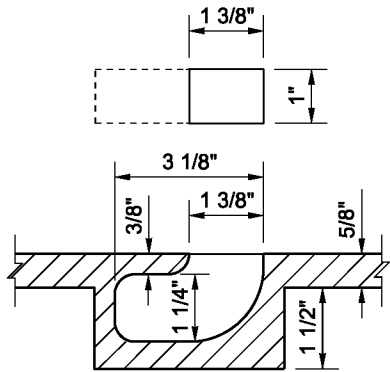
Pasco Bakotich III

STATE DESIGN ENGINEER

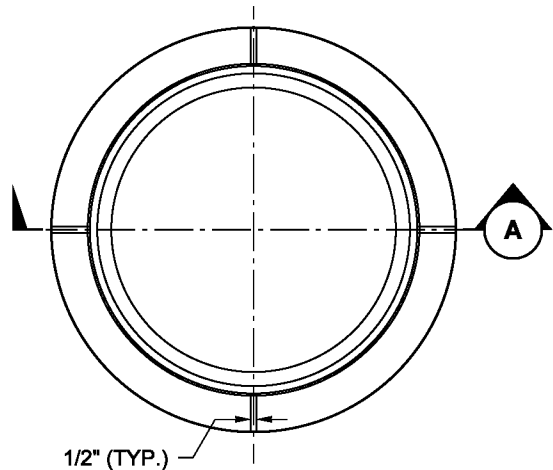
02-07-12

DATE

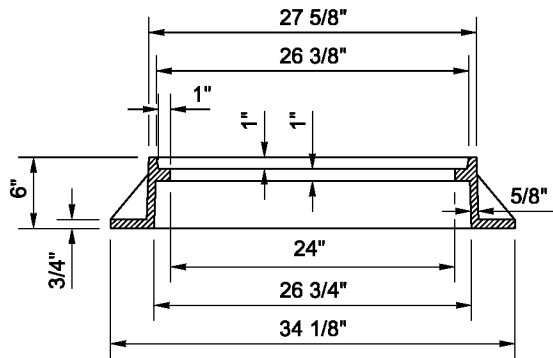
Washington State Department of Transportation



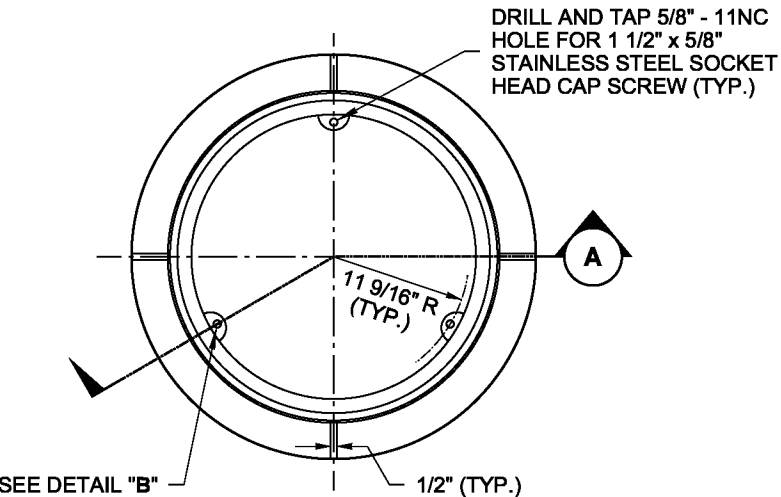
BLIND PICK NOTCH
DETAIL "A"



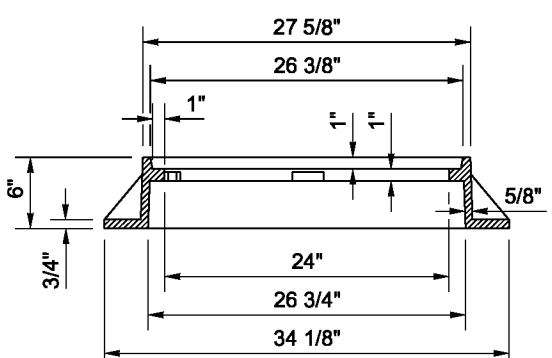
RING PLAN



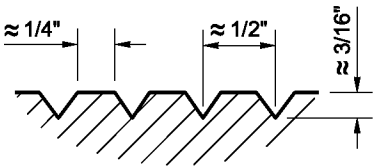
RING SECTION A



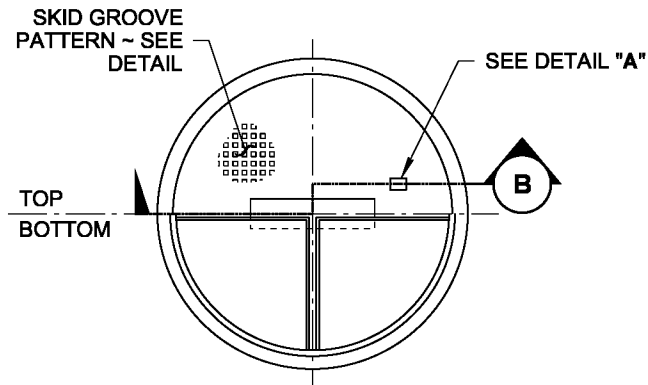
RING PLAN



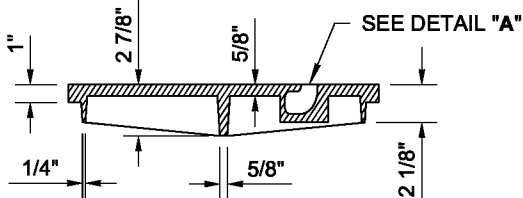
RING SECTION A



SKID GROOVE PATTERN
DETAIL



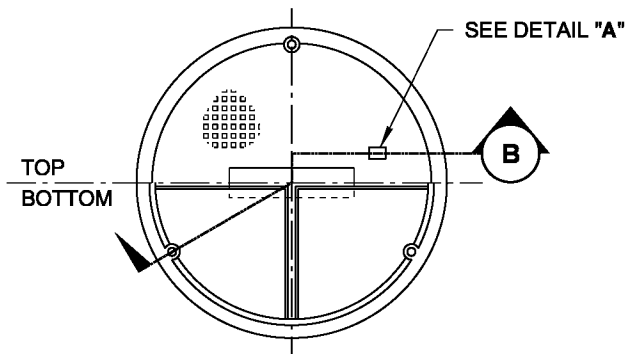
COVER PLAN



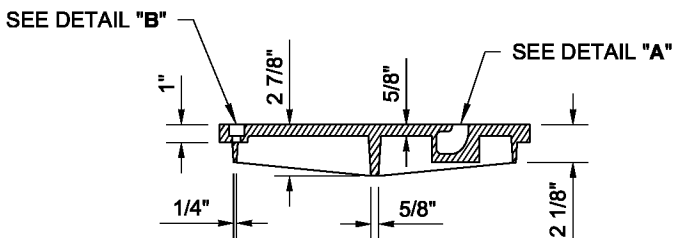
COVER SECTION B

(SEE NOTE 7)

STANDARD
TYPE 1



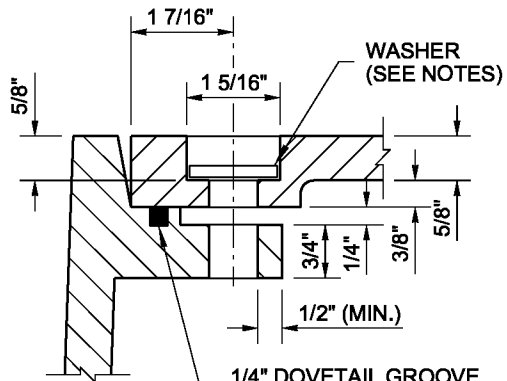
COVER PLAN



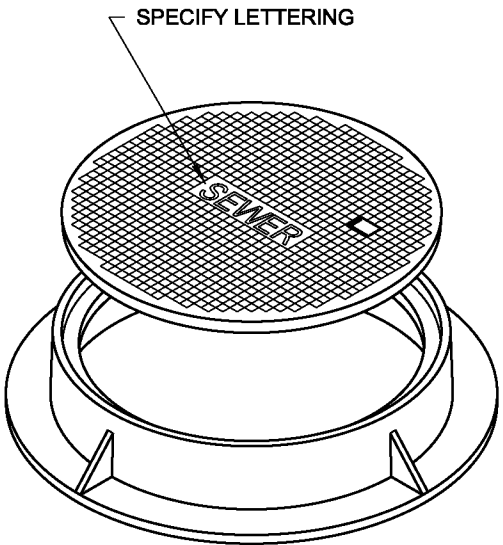
COVER SECTION B

(SEE NOTE 7)

BOLT-DOWN / WATERTIGHT
TYPE 2



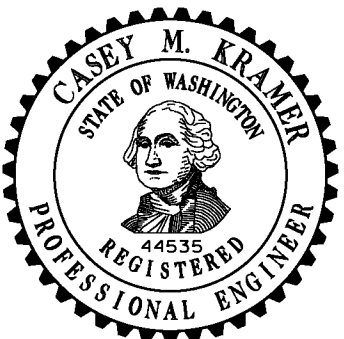
BOLT-DOWN / WATERTIGHT
DETAIL "B"



ISOMETRIC VIEW

NOTES

1. The gasket and groove may be in the seat (frame) or in the underside of the cover. The gasket may be "T" shaped in section. The groove may be cast or machined.
2. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 3 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" - 1 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt down holes varies by manufacturer.
3. For bolt-down manhole ring and covers that are not designated "Watertight," the neoprene gasket, groove, and washer are not required.
4. Washer shall be neoprene (Detail "B").
5. In lieu of blind pick notch for manhole covers, a single 1" pick hole is acceptable. Hole location and number of holes may vary by manufacturer.
6. Alternative reinforcing designs are acceptable in lieu of the rib design.
7. For clarity, the vertical scale of the Cover Section has been exaggerated, it is 1.5 times the horizontal scale (1H:1.5V).



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**CIRCULAR FRAME (RING)
AND COVER**
STANDARD PLAN B-30.70-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

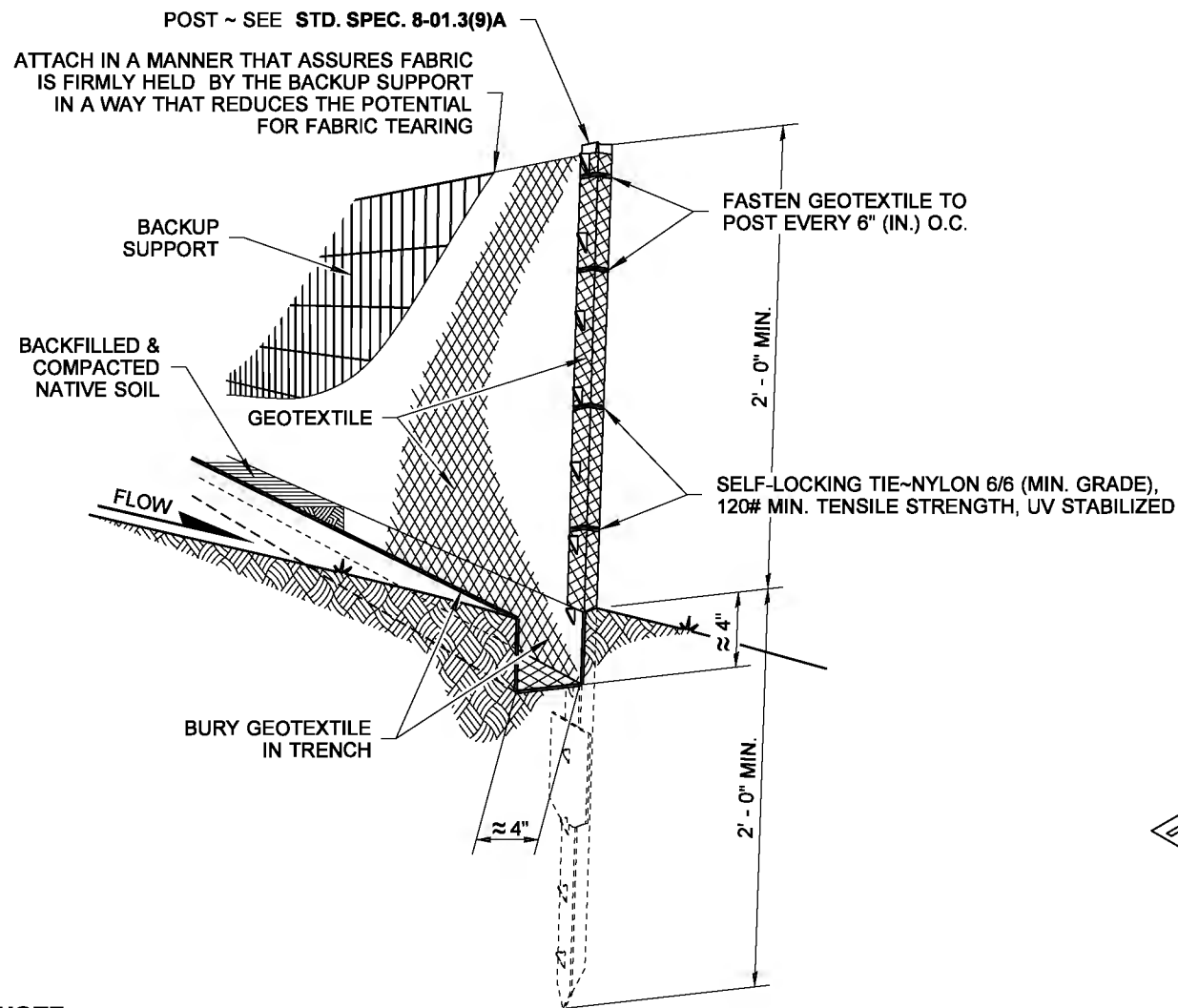
STATE DESIGN ENGINEER

04/26/12

DATE



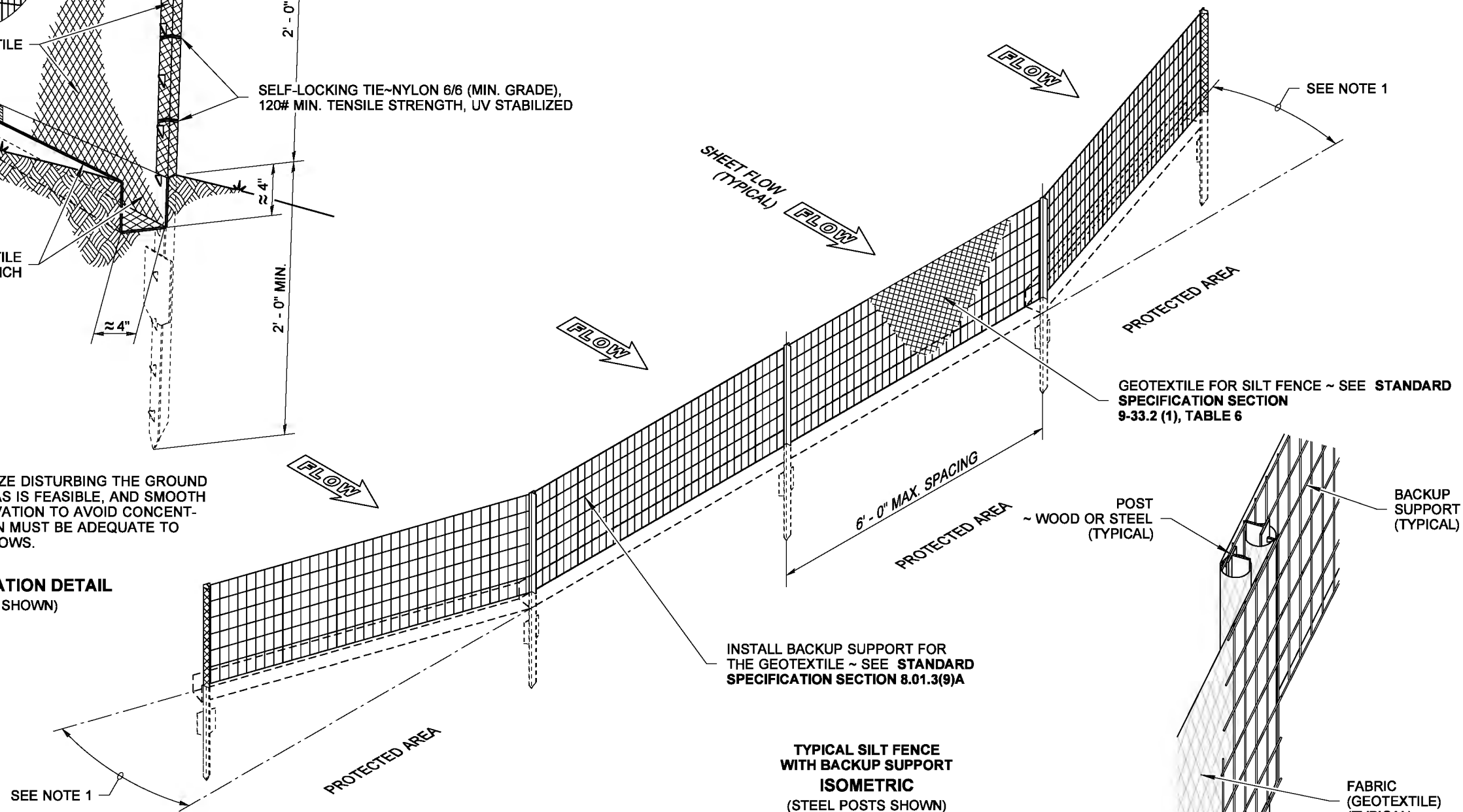
Washington State Department of Transportation



NOTE

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENT-RATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL
(STEEL POSTS SHOWN)



NOTES

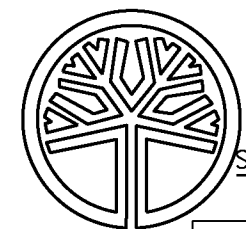
1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

GEOTEXTILE FOR SILT FENCE ~ SEE **STANDARD SPECIFICATION SECTION 9-33.2 (1), TABLE 6**

POST ~ WOOD OR STEEL (TYPICAL)

BACKUP SUPPORT (TYPICAL)

FABRIC (GEOTEXTILE) (TYPICAL)



STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

SANDRA L. SALISBURY
CERTIFICATE NO. 000860

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SILT FENCE WITH BACKUP SUPPORT STANDARD PLAN I-30.10-02

SHEET 1 OF 1 SHEET

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Pasco Bakotich III

STATE DESIGN ENGINEER

3/22/13

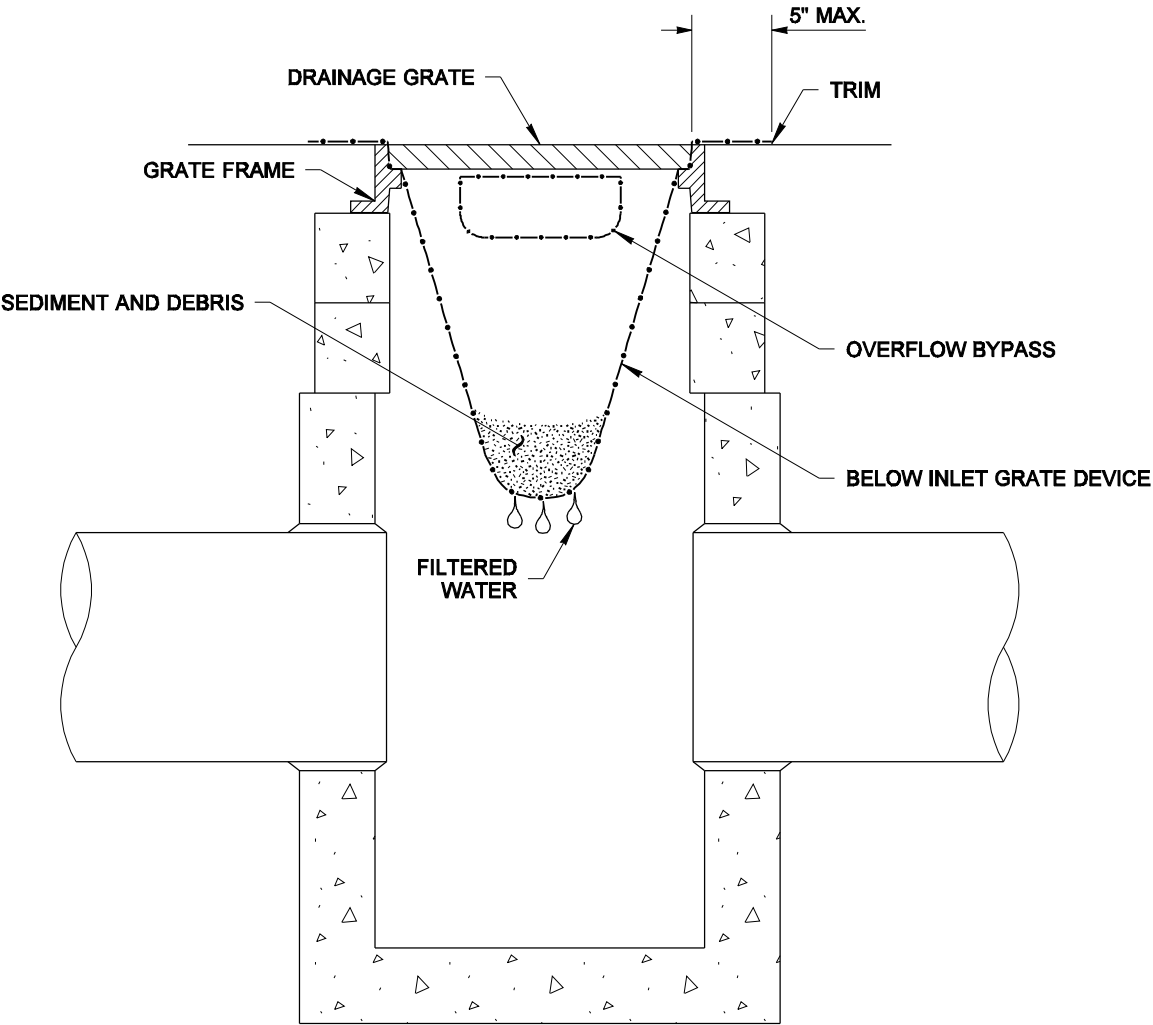
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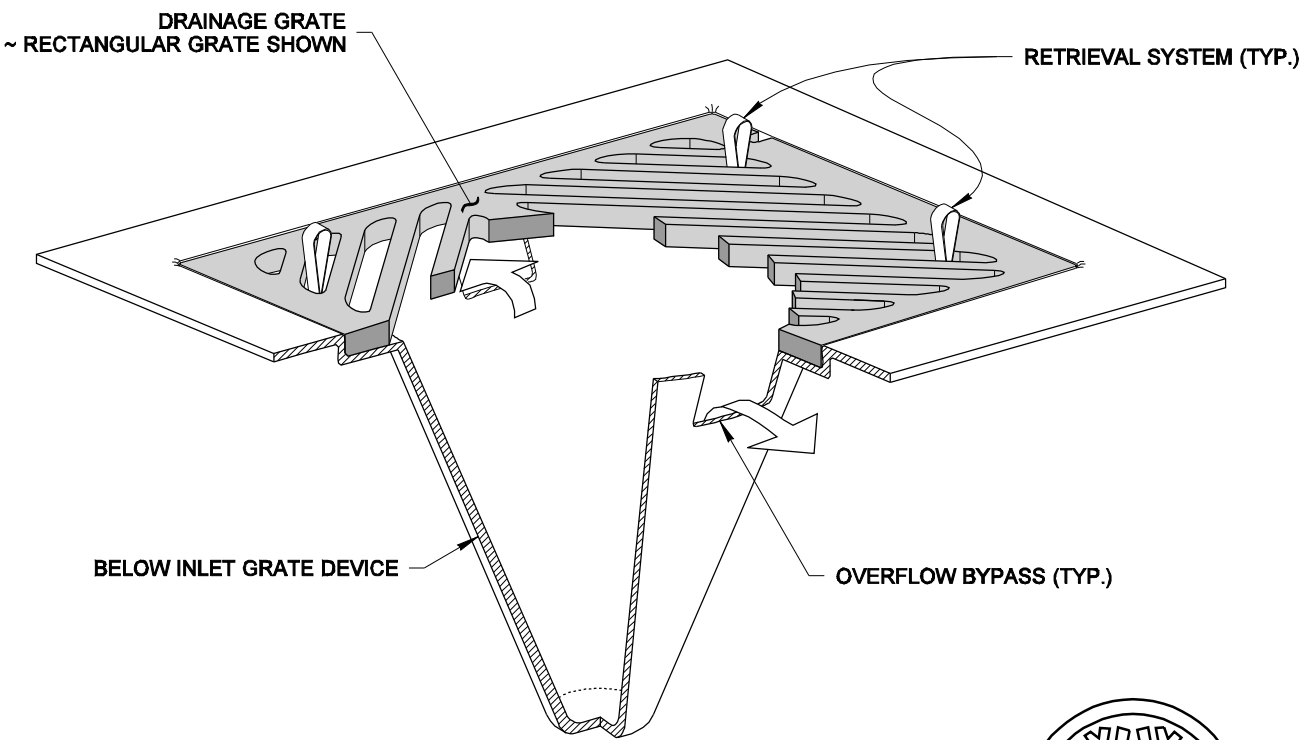
Washington State Department of Transportation

SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

SPLICE DETAIL
(STEEL POSTS SHOWN)



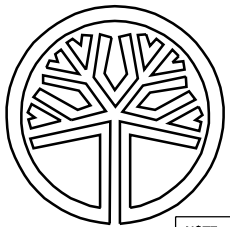
SECTION VIEW
NOT TO SCALE



ISOMETRIC VIEW

NOTES

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



STATE OF
WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

MARK W. MAURER
CERTIFICATE NO. 000598

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**STORM DRAIN
INLET PROTECTION
STANDARD PLAN I-40.20-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

STATE DESIGN ENGINEER

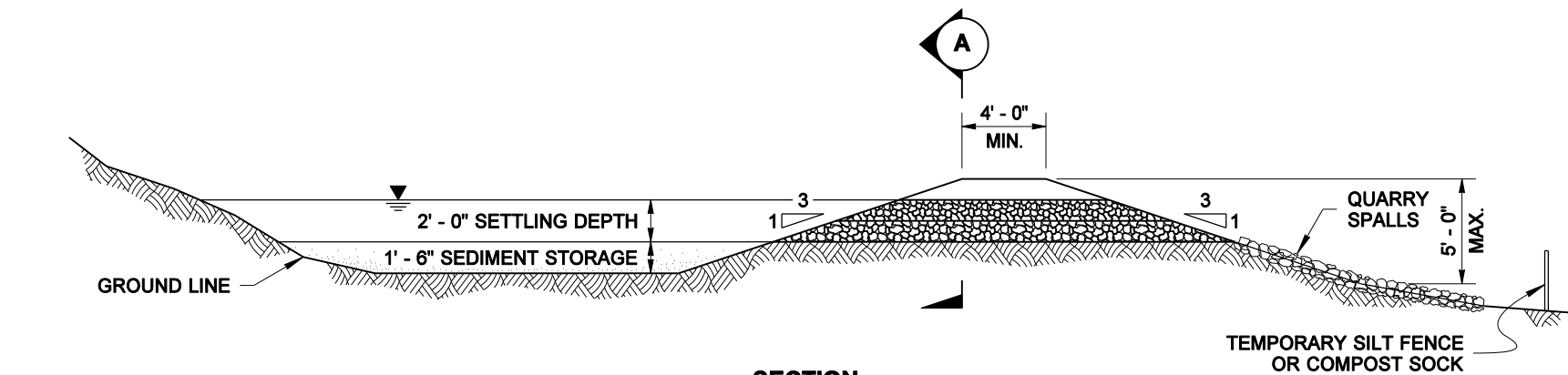
09-20-07

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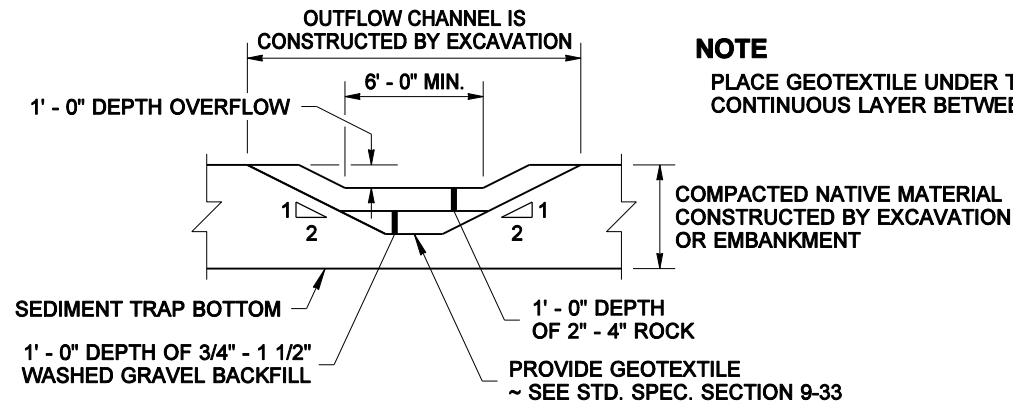


Washington State Department of Transportation

DRAWN BY: BILL BERENS



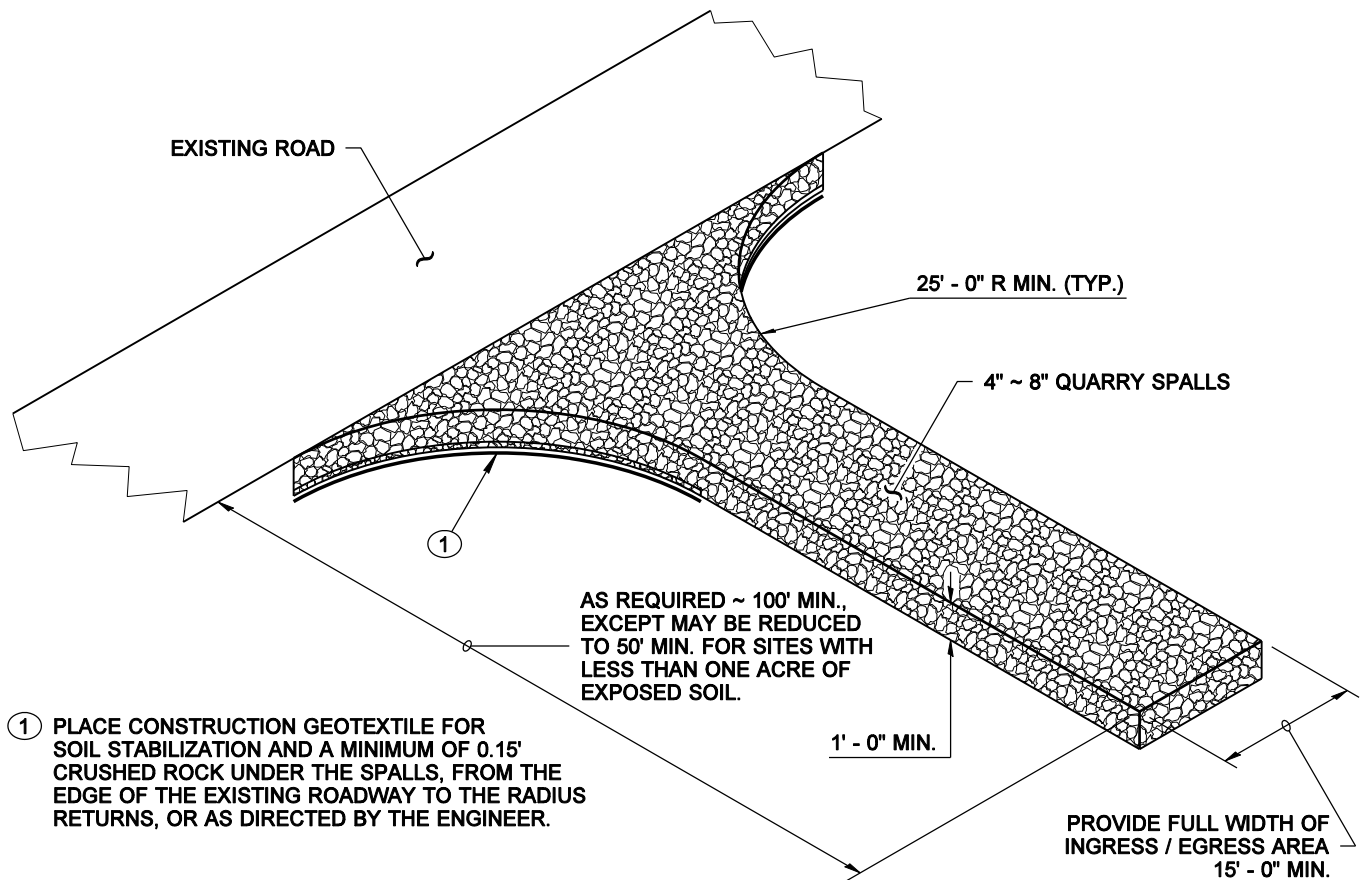
SECTION



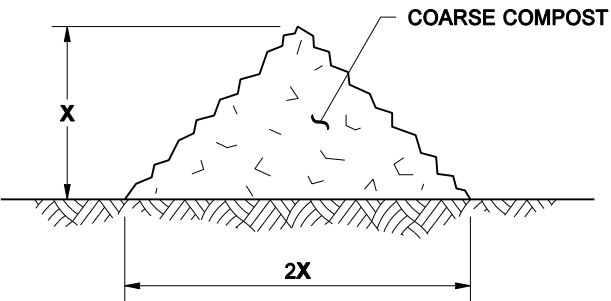
NOTE
PLACE GEOTEXTILE UNDER THE SPILLWAY AND SIDE SLOPES. PROVIDE A CONTINUOUS LAYER BETWEEN THE GRAVEL/ROCK AND THE NATIVE EARTHEN MATERIAL.

SECTION A

TEMPORARY SEDIMENT TRAP

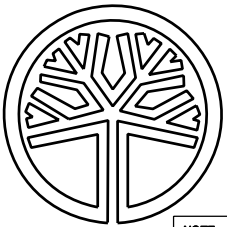


ISOMETRIC VIEW
STABILIZED CONSTRUCTION ENTRANCE



X = 1' - 0" FOR SLOPES 4H:1V OR FLATTER
X = 1' - 6" FOR SLOPES STEEPER THAN 4H:1V

TYPICAL SECTION
COMPOST BERM DETAIL



STATE OF
WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

MARK W. MAURER
CERTIFICATE NO. 000598

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**MISCELLANEOUS
EROSION CONTROL DETAILS
STANDARD PLAN I-80.10-01**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

STATE DESIGN ENGINEER

08-11-09

DATE



Washington State Department of Transportation



CITY OF STANWOOD

WATER SYSTEM STANDARD DETAILS INDEX

STANDARD DETAILS

W-1	5/8" SINGLE METER SERVICE
W-2	5/8" DOUBLE METER SERVICE
W-3	1 1/2", 2" METER SERVICE
W-4	3" METER ASSEMBLY
W-5	TYPICAL METER PLACEMENT
W-6	SINGLE SERVICE DOUBLE CHECK VALVE ASSEMBLY W/FDC
W-7	DUAL SERVICE DOUBLE CHECK VALVE ASSEMBLY W/FDC
W-8	FIRE HYDRANT
W-9	TAPPING METHODS
W-10	STANDARD VALVE BOX
W-11	VALVE MARKER POST & HYDRANT BOLLARD DETAIL
W-12	PRESSURE REDUCING STATION
W-13A	PRESSURE REDUCING STATION DETAILS
W-13B	PRESSURE RELIEF DISCHARGE PIPING
W-14	WATER SAMPLING STATION
W-15	INDIVIDUAL SERVICE PRESSURE REDUCING VALVE
W-16	CATHODIC PROTECTION
W-17	2-INCH BLOWOFF ASSEMBLY
W-18	POLY PIG RETRIEVAL STUB
WSDOT B-55.20-00	PIPE ZONE BEDDING AND BACKFILL
WSDOT B-90.30-00	COMBINATION AIR RELEASE / AIR VACUUM VALVE ASSEMBLY
WSDOT B-90.50-00	CONCRETE THRUST BLOCK FOR CONVEX VERTICAL BENDS
WSDOT B-90.40-00	CONCRETE THRUST BLOCK
WSDOT B-90.20-00	2 INCH BLOWOFF ASSEMBLY

City of Stanwood



WATER SYSTEM STANDARD DETAIL

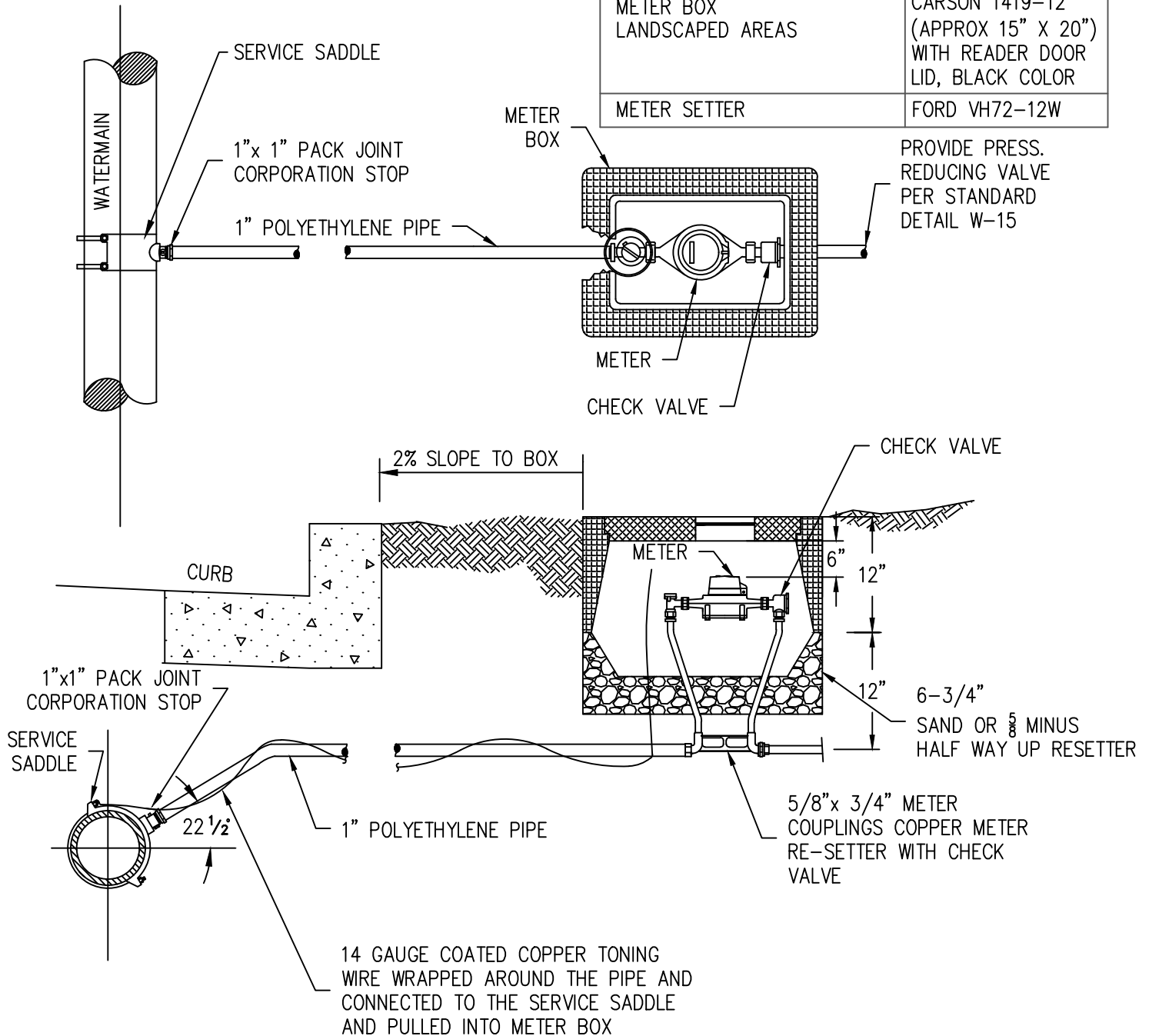
WATER SYSTEM STANDARD DETAILS
INDEX

NOTES:

1. STAINLESS STEEL INSERTS REQUIRED FOR ALL PACK JOINTS.
2. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND I.P. THREADS.
3. FITTINGS SHALL BE BRASS.
4. SERVICE MATERIALS SHALL BE PER WSDOT 9-30.6 UNLESS NOTED OTHERWISE.

MATERIALS

SERVICE SADDLE	FORD FS202
CORPORATION STOP	FORD F1101
METER BOX SIDEWALKS AND LANDSCAPED AREAS	CARSON MSBCF1118 -13" X 24" WITH DUCTILE IRON READER LID
METER BOX LANDSCAPED AREAS	CARSON 1419-12 (APPROX 15" X 20") WITH READER DOOR LID, BLACK COLOR
METER SETTER	FORD VH72-12W



City of Stanwood



WATER SYSTEM STANDARD DETAIL

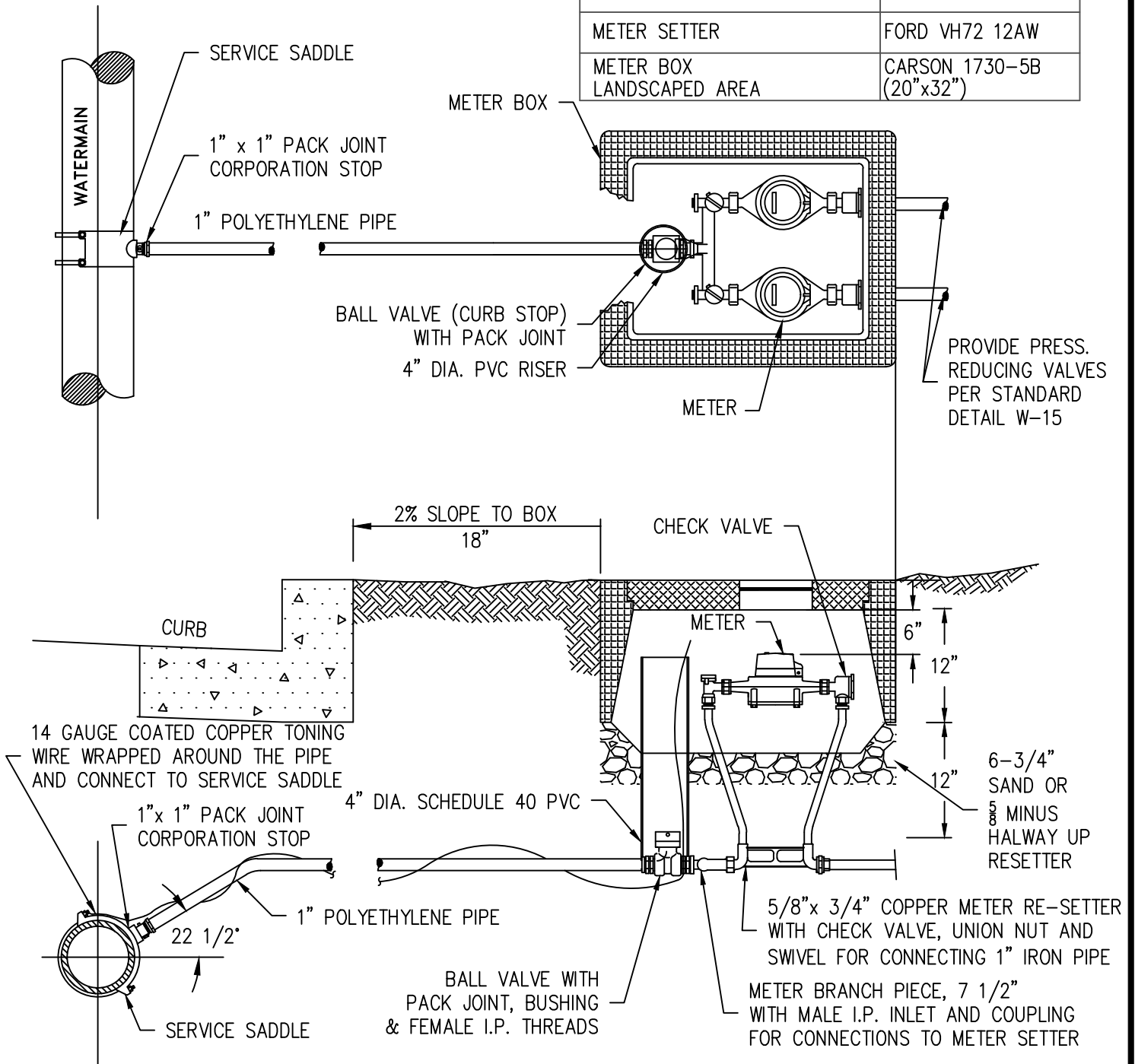
5/8" - 1" SINGLE METER SERVICE

NOTES:

1. STAINLESS STEEL INSERTS REQUIRED FOR ALL PACK JOINTS.
2. GASKET AND I.P. THREADS.
ALL SERVICE SADDLES SHALL HAVE RUBBER
3. FITTINGS SHALL BE BRASS.
4. SERVICE MATERIALS SHALL BE PER WSDOT 9-30.6 UNLESS NOTED OTHERWISE.

MATERIALS

SERVICE SADDLE	FORD FDS202
CORPORATION STOP	FORD F1101
METER BRANCH	FORD U88-43
METER BOX, SIDEWALKS, TRAFFIC	CARSON MSBCF1730-12XL (APPROX 17"x30") W/ DUCTILE IRON READER LID
BALL VALVE	FORD B61-344
METER SETTER	FORD VH72 12AW
METER BOX LANDSCAPED AREA	CARSON 1730-5B (20"x32")



City of Stanwood



WATER SYSTEM STANDARD DETAIL

5/8" DOUBLE METER SERVICE

File: STADETW02

Revised: Jun. 17, 2012

Printed: Jun. 17, 2021

DRAWING NO.

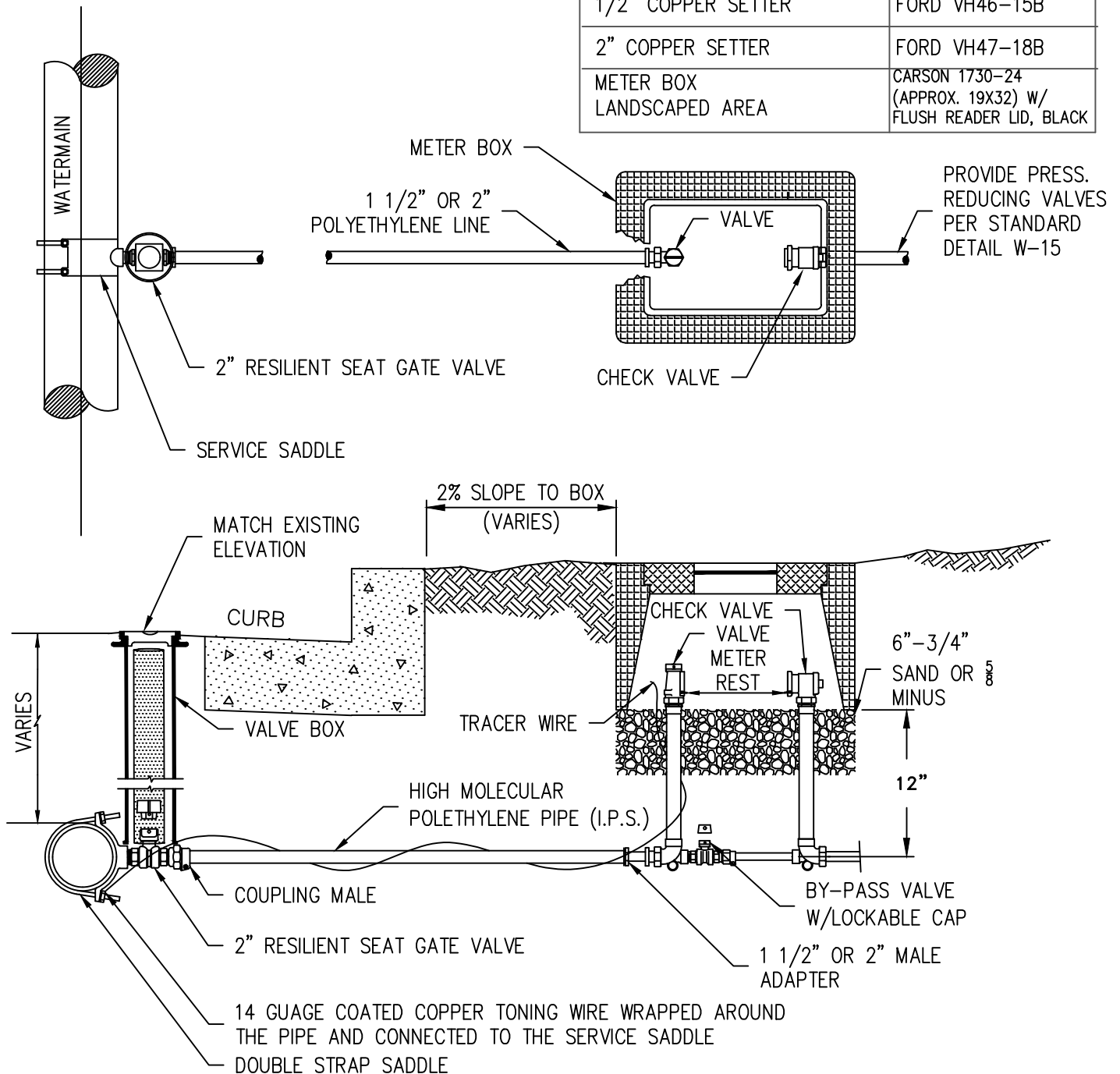
W-2

NOTES:

1. STAINLESS STEEL INSERTS REQUIRED FOR ALL PACK JOINTS.
2. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND I.P. THREADS.
3. FITTINGS SHALL BE BRASS.
4. SERVICE MATERIALS SHALL BE PER WSDOT 9-30.6 UNLESS NOTED OTHERWISE.

MATERIALS

SERVICE SADDLE	FORD FS202
CORPORATION STOP	FORD F1101
METER BOX, SIDEWALKS, TRAFFIC	CARSON MSBCF1730-12XL (APPROX 17"X30") W/ DUCTILE IRON READER LID
BALL VALVE	FORD B61-666 OR B61-777
1/2" COPPER SETTER	FORD VH46-15B
2" COPPER SETTER	FORD VH47-18B
METER BOX LANDSCAPED AREA	CARSON 1730-24 (APPROX. 19X32) W/ FLUSH READER LID, BLACK



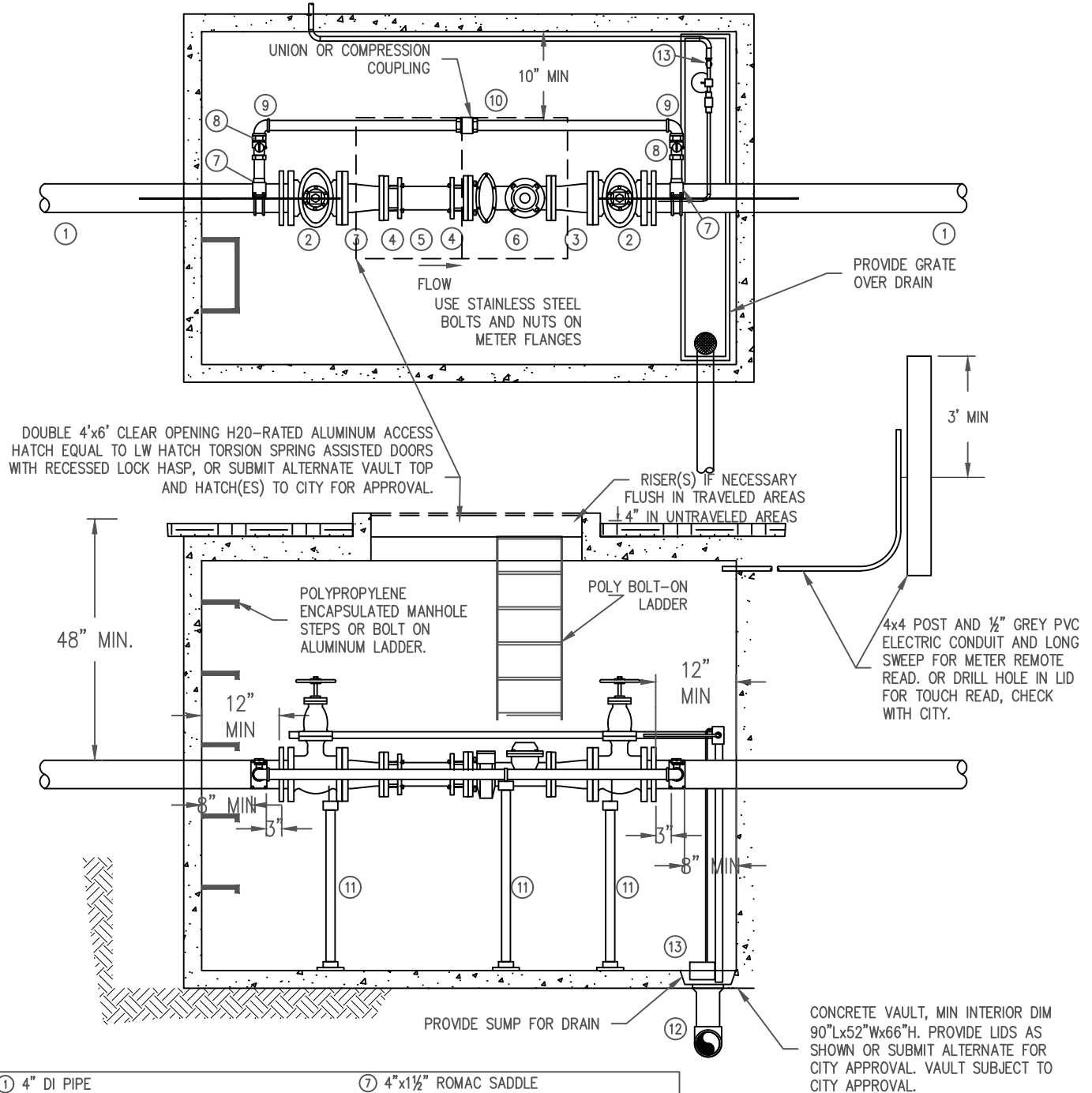
City of Stanwood



WATER SYSTEM STANDARD DETAIL

1 1/2", 2" METER SERVICE

NOTE: CRACKED OR OTHERWISE DAMAGED VAULTS WILL BE REJECTED AT THE DISCRETION OF THE CITY



- ① 4" DI PIPE
- ② 4" RS GATE VALVE (FLxMJ) w/HANDWHEEL
- ③ 4" x 3" DI REDUCER (FLxFL)
- ④ 3" FCA, DO NOT "PUSH HOME" PIPE
- ⑤ 3" DI PIPE, 12" LENGTH (PExPE)
- ⑥ 3" TURBINE METER BY CITY
BADGER 12.0" LAY LENGTH
STRAINER (IF REQUIRED BY CITY) 6"

- ⑦ 4"x1½" ROMAC SADDLE
- ⑧ 1½" BALL VALVE w/PADLOCK WING OR LOCK CAP
- ⑨ 1½" BRASS OR GALV 90° BEND
- ⑩ 1½" BRASS OR GALV PIPE
- ⑪ STANDON OR GRINNELL PIPE SUPPORT
- ⑫ 4" DRAIN PIPE TO DAYLIGHT UNLESS OTHERWISE APPROVED. 1% SLOPE MIN.
- ⑬ HYDROMATIC PUMP GC SYSTEMS MODEL #996633-51-2 W/FLOAT SWITCH (REQUIRED IF NO GRAVITY DRAIN, SEE DET. W-13 FOR EXTERIOR PIPING)

PROVIDE SINGLE FLANGED SPOOL BETWEEN GATE VALVES TO ASSURE ALIGNMENT OF INLET AND OUTLET PIPES PRIOR TO INSTALLATION OF METER AND EQUIPMENT.

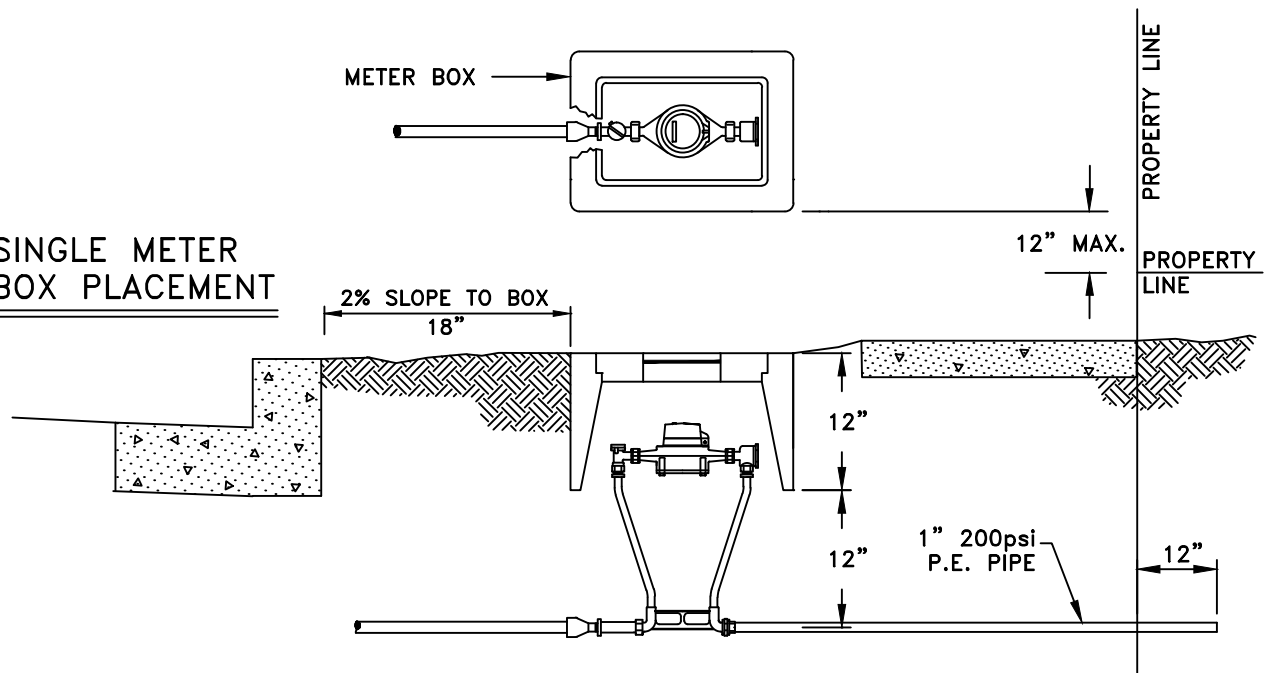
City of Stanwood



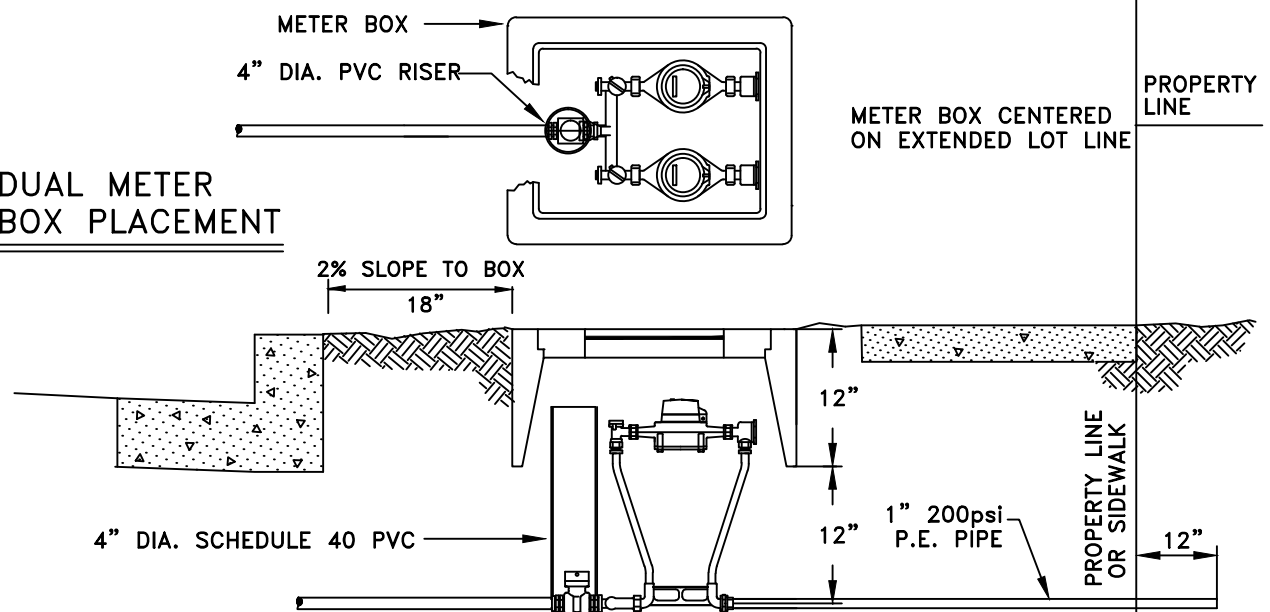
WATER SYSTEM STANDARD DETAIL

3" METER ASSEMBLY

SINGLE METER BOX PLACEMENT



DUAL METER BOX PLACEMENT



City of Stanwood



WATER SYSTEM STANDARD DETAIL

TYPICAL METER PLACEMENT

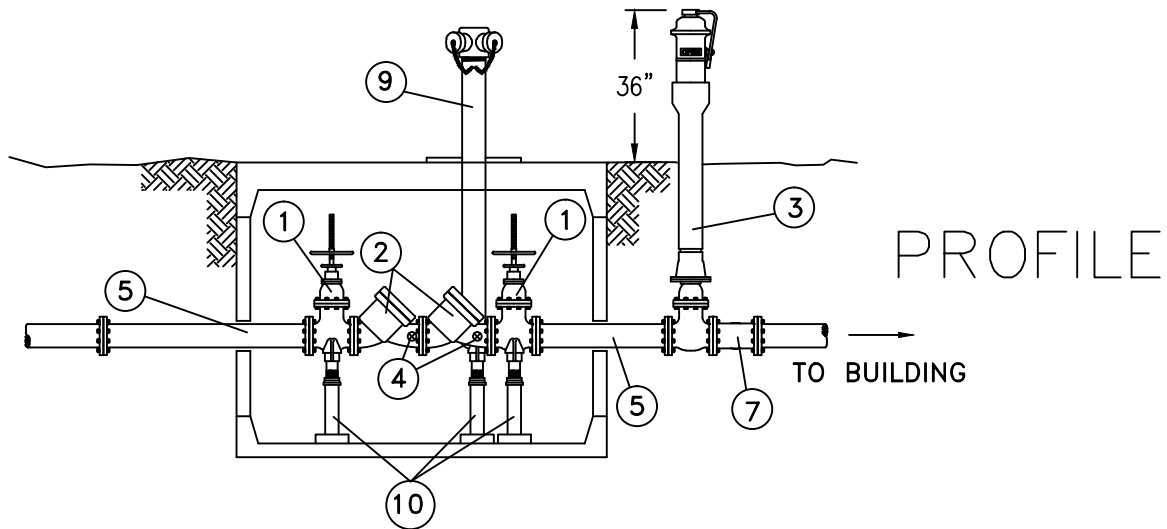
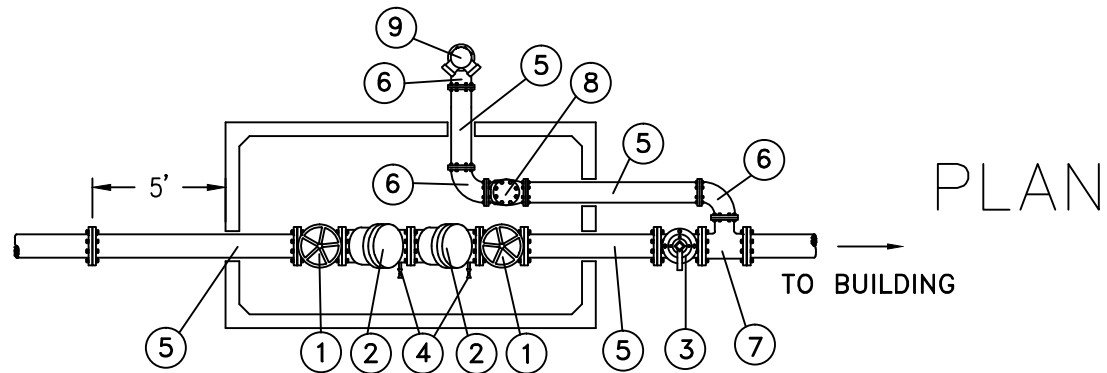
File: STADETW05

Revised: Mar 11, 2009

Printed: Mar. 10, 2009

DRAWING NO.

W-5

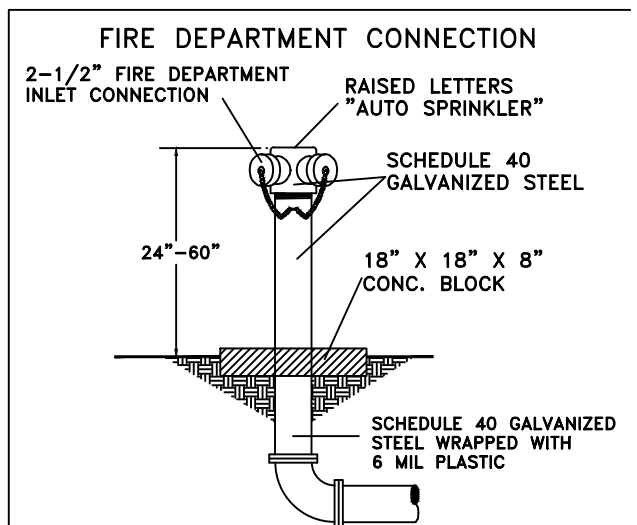


MATERIAL LIST:

1. OS&Y GATE VALVE W/HANDWHEEL FL X FL
2. DOUBLE DETECTOR (DSHS APPROVED) CHECK VALVE FL X FL
3. POST INDICATOR VALVE
4. 3/4" BALL VALVE (TEST COCK)
5. CLASS 52 DI WALL PIPE FL X FL
6. CLASS 52 DI 90° BEND FL X FL
7. CLASS 52 DI TEE FL X FL
8. SWING CHECK VALVE W/BALL DRIP ASSEMBLY
9. FIRE DEPARTMENT CONNECTION
10. VALVE STANDS
11. WHERE PIPING PASSES THROUGH CONCRETE WALL PROVIDE 2" CLEARANCE W/ WATERPROOF MASTIC OR FLEXIBLE SEALANT

GENERAL NOTES:

- A. PIPE FROM VAULT TO BUILDING SHALL BE CLASS 52 DI.
- B. TAMPER SWITCHES SHALL BE INSTALLED ON 1 AND 3 CONNECTED TO BUILDING FIRE ALARM SYSTEM.
- C. INSTALL PLUGS ON ALL TEST COCKS. FINGER TIGHTEN.
- D. ALL PIPING SHALL BE A MINIMUM OF 4" DIA. AS PER NFPA13.

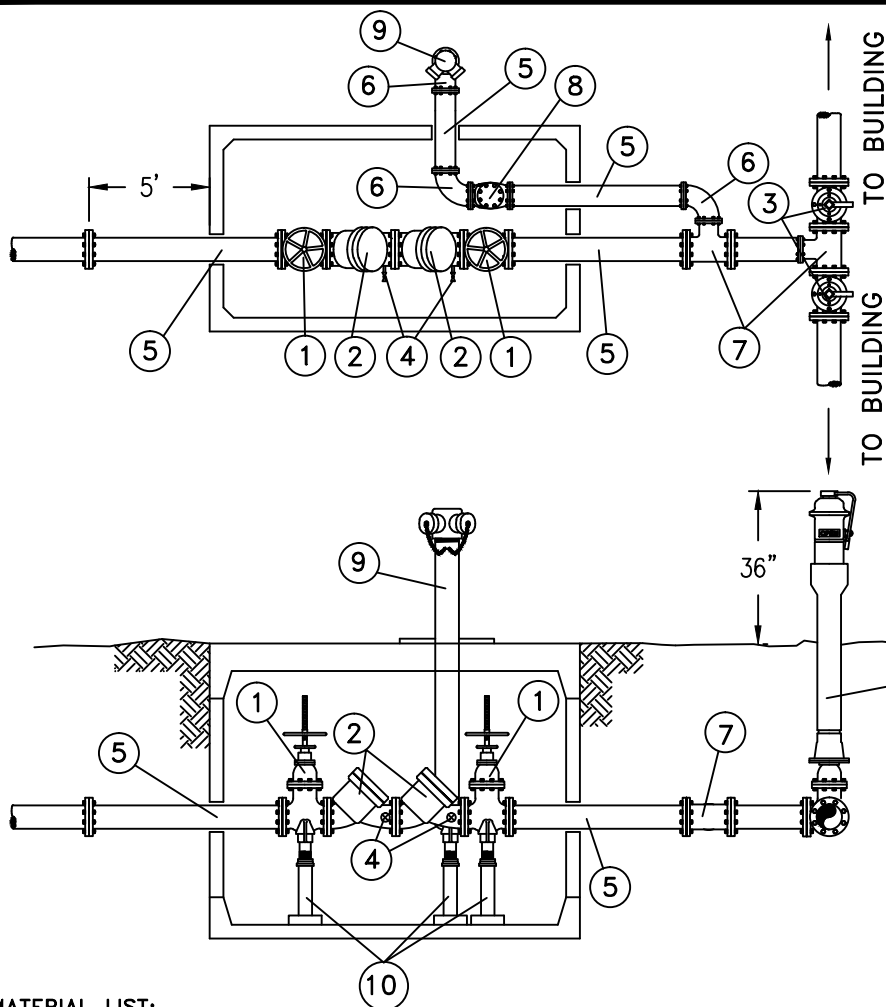


City of Stanwood



WATER SYSTEM STANDARD DETAIL

SINGLE SERVICE DOUBLE CHECK VALVE
ASSEMBLY W/FDC

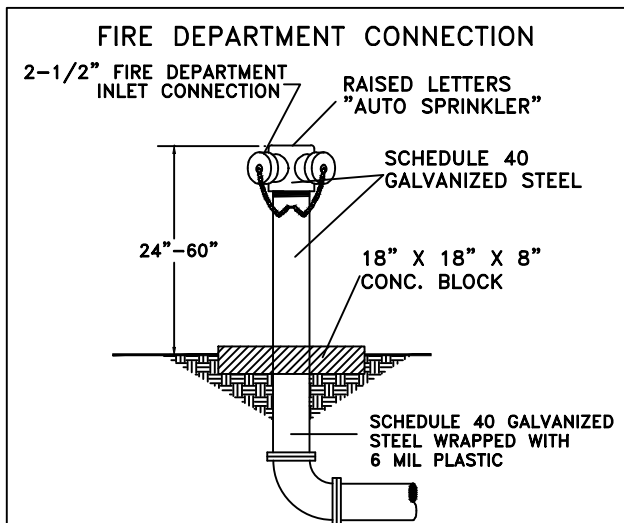


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City of Stanwood



WATER SYSTEM STANDARD DETAIL

DUAL SERVICE DOUBLE CHECK VALVE ASSEMBLY W/FDC

NOTE: PAINT SHALL BE
EQUAL TO KELLY MOORE

PAINT WHITE

PAINT RED

CONCRETE PAD
TO BE 3'X3' OR
3'X5' IF LOCATED
IN PLANTER STRIP

2 $\frac{1}{2}$ " HOSE CONNECTIONS
WITH THREADS, CAPS TO
BE PAINTED WHITE

4 $\frac{1}{2}$ " STEAMER CONNECTION WITH
NST THREADS & 5" STORZ
ADAPTER STYLE S-37 W/ SC
CAP

SEE VALVE BOX AND VALVE
STEM DETAIL W-10

BLUE DOT MARKER
ON STREET

TO SUIT
TRENCH
DEPTH

8"

3' MIN.

MJ PIPE JOINT 6"
#1106 EBAA IRON,
INC. MEGALUG

6" CLASS 52 DUCTILE
IRON LENGTH TO FIT

6" GATE VALVE, FL X MJ

VARIES

4"X8"X16" CONCRETE BLOCK

BACKFILL TO TOP OF DRAIN RING HOUSING
BOLTS WITH 2" WASHED ROCK AS SHOWN

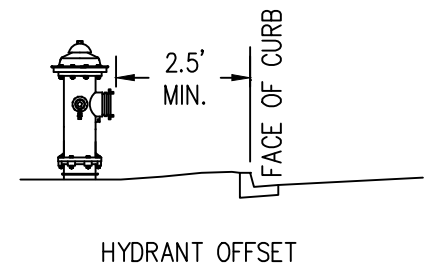
CONCRETE THRUST BLOCK BEARING AREA = 6
SQ FT. DO NOT DISTURB DRAIN RINGS.

6' X 6' SHEET OF 11 MIL. PLASTIC OR CON- STRUCTION
FABRIC, COVERING 2" WASHED ROCK

DUCTILE IRON FITTING
WITH 6" FLANGE SIDE
OUTLET

PLASTIC BARRIER
BETWEEN THRUST
BLOCK AND TEE

CONCRETE THRUST BLOCK
CAST-IN-PLACE AGAINST
FITTING ONLY



NOTES

1. A MINIMUM THREE FOOT OF RADIUS UNOBSTRUCTED
WORKING AREA SHALL BE PROVIDED AROUND ALL
HYDRANTS.

2. HYDRANT SHALL BE WATEROUS PACER, M & H
RELIANT STYLE 929, OR CLOW F-2500.

3. GATE VALVES SHALL BE RESILIENT WEDGE NRS WITH
O-RING SEALS. VALVE ENDS SHALL BE MECHANICAL
JOINT BY ANSI FLANGES. VALVES SHALL CONFORM TO
AWWA 509-80. VALVES SHALL BE MUELLER, M&H, AVK,
OR WATEROUS SERIES 500.

City of Stanwood



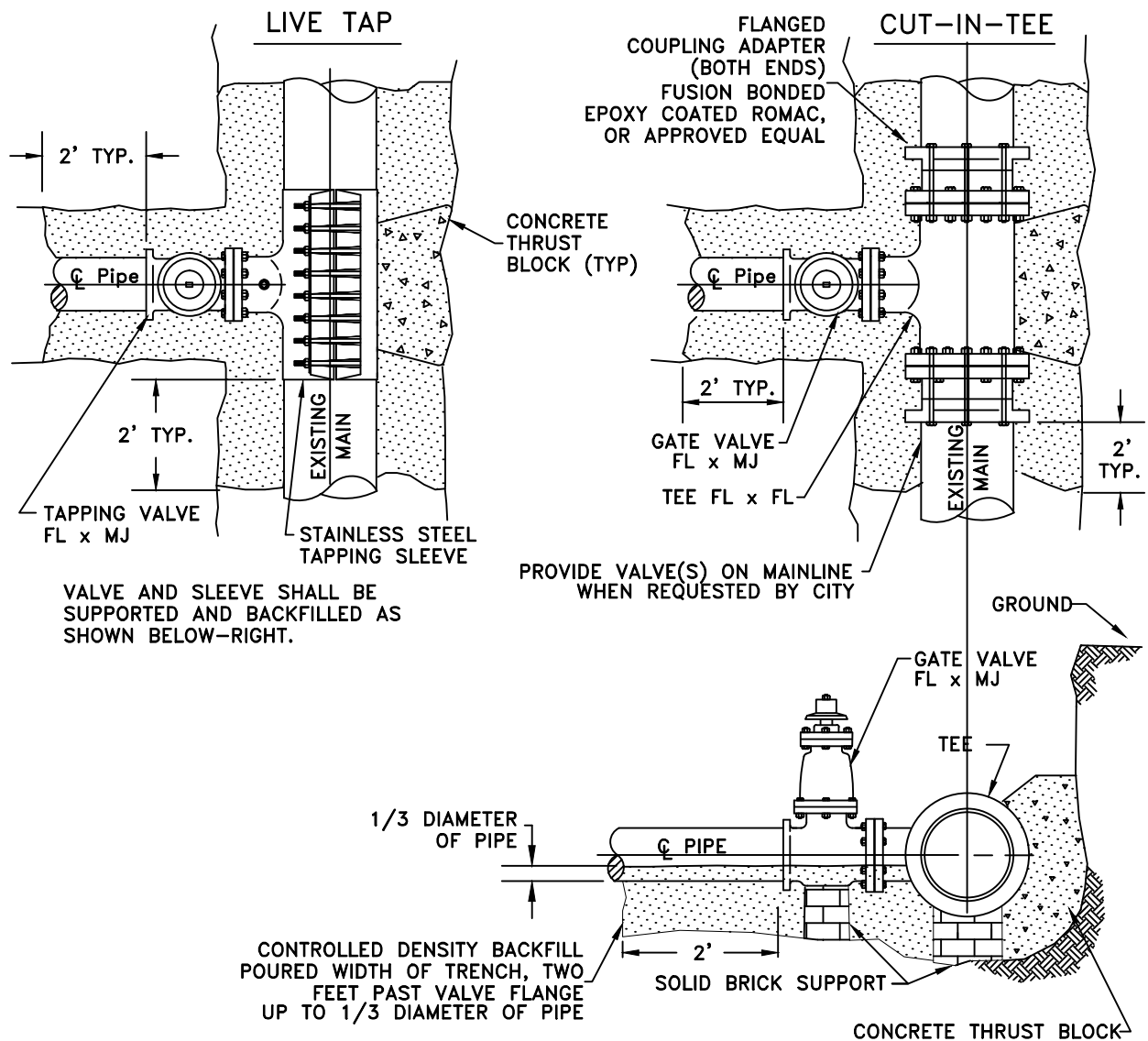
WATER SYSTEM STANDARD DETAIL

FIRE HYDRANT

File: STADETW08 Revised: Oct. 8, 2015 Printed: Oct. 12, 2015

DRAWING NO.

W-8



NOTES:

1. 11 MIL PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCK AND BACKFILL ARE POURED.
2. CONTROLLED DENSITY BACKFILL EQUAL TO WSDOT 2-09.3(1)E.
3. MJ CUT IN TEES SHALL NOT BE PERMITTED.
4. SUPPORT VALVE AND SLEEVE CONTINUOUSLY THROUGH INSTALLATION.
5. TEST TAPPING SLEEVE PRIOR TO CUTTING EXISTING MAIN.

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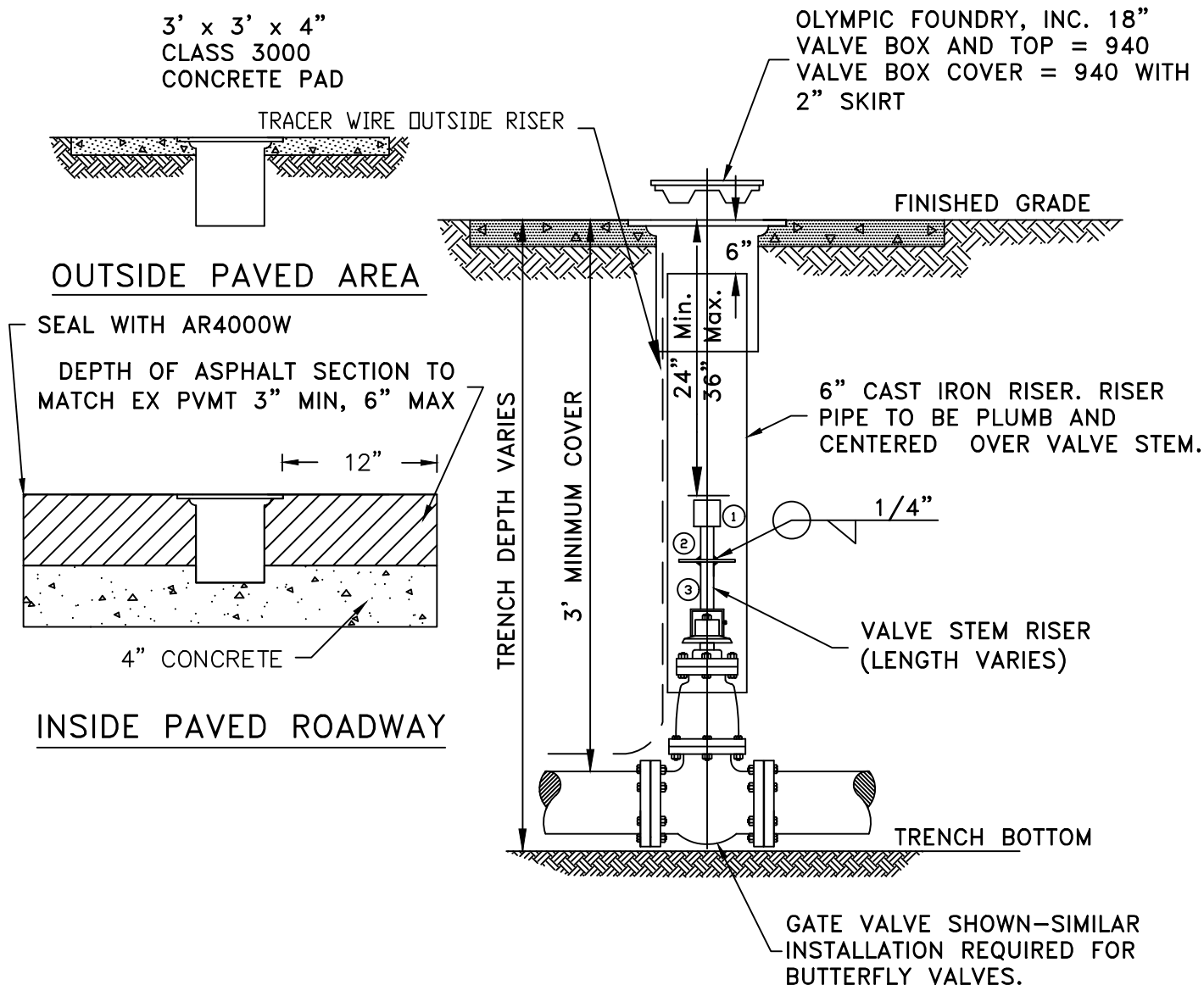
WATER SYSTEM STANDARD DETAIL

TAPPING METHODS

File: STADETW09 Revised: Mar 11, 2009 Printed: Mar. 10, 2009

DRAWING NO.

W-9



VALVE STEM EXTENSION LEGEND

- ① VALVE OPERATING NUT OR 1 7/8"
X 1 7/8" X 2" HIGH GRADE STEEL
WELDED TO GUIDE PLATE.
- ② 3/16" Thk X 5 1/5" DIA
STEEL GUIDE PLATE WELDED TO
RISER SHAFT.
- ③ 2"X2"X 3/16" SQUARE
STRUCTURAL STEEL TUBING TO FIT
OPERATING NUT. LENGTH AS
REQUIRED.

NOTE:

ALL WELDS TO SHAFT SHALL BE FILLET
WELD ALL AROUND, AS SPECIFIED
ABOVE

ALL VALVES MUST HAVE 14 GAUGE
COATED COPPER TRACER WIRE TIED OFF
AT VALVE BODY, EXTENDED OUTSIDE
RISER BASE THEN EXTENDED INSIDE
VALVE CAN TOP ONE FOOT TO TOP OF
VALVE BOX

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WATER SYSTEM STANDARD DETAIL

STANDARD VALVE BOX

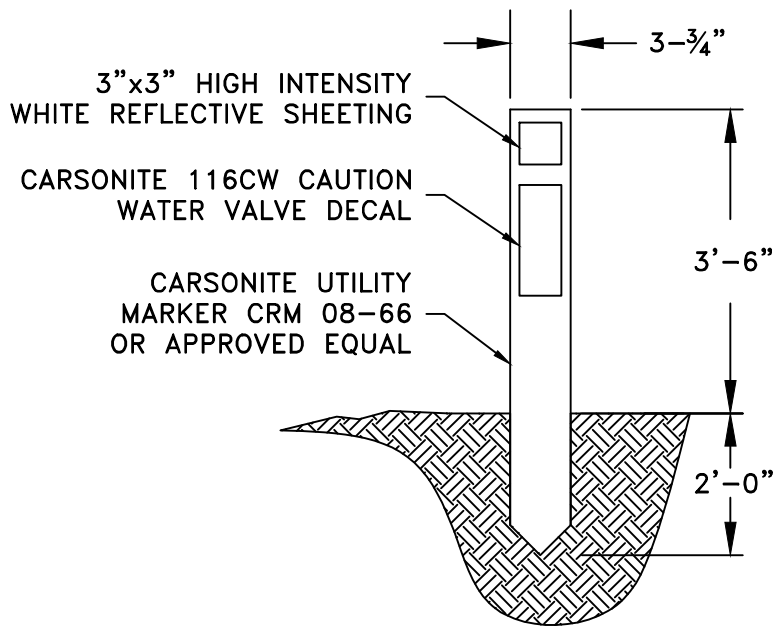
File:STADETW10

Revised: Sep. 30, 21

Printed: Sep. 30, 21

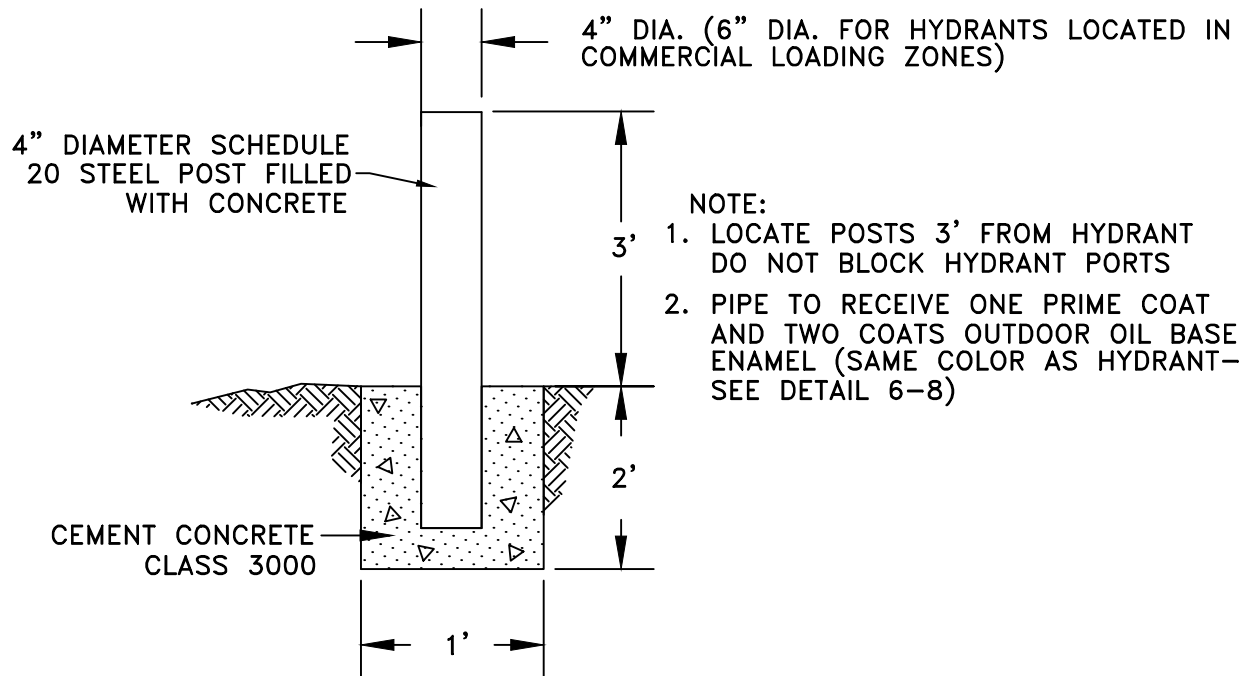
DRAWING NO.

W-10



FRONT

VALVE MARKER



HYDRANT BOLLARD

City of Stanwood



WATER SYSTEM STANDARD DETAIL

VALVE MARKER POST & HYDRANT
BOLLARD DETAIL

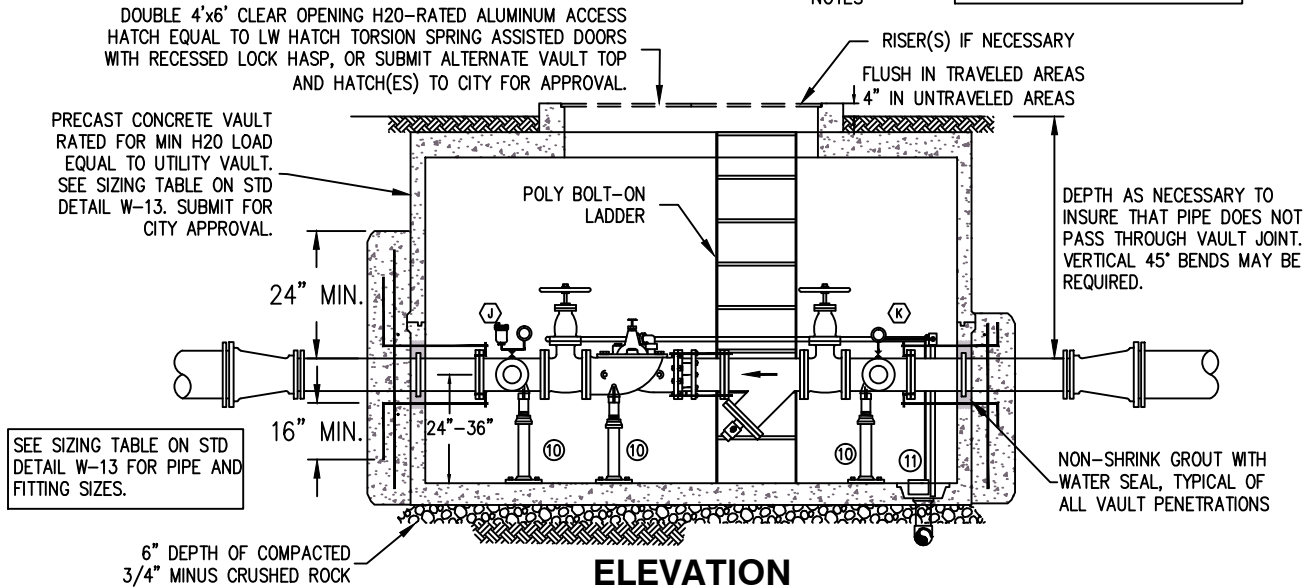
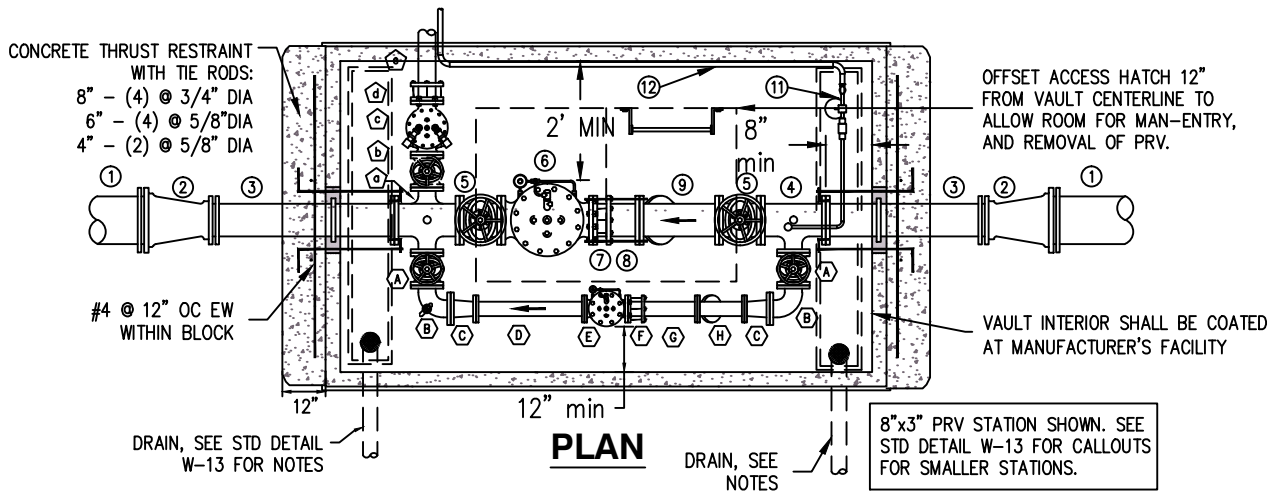
File:STADETW11

Revised: Oct. 8, 2015

Printed: Oct. 12, 2015

DRAWING NO.

W-11



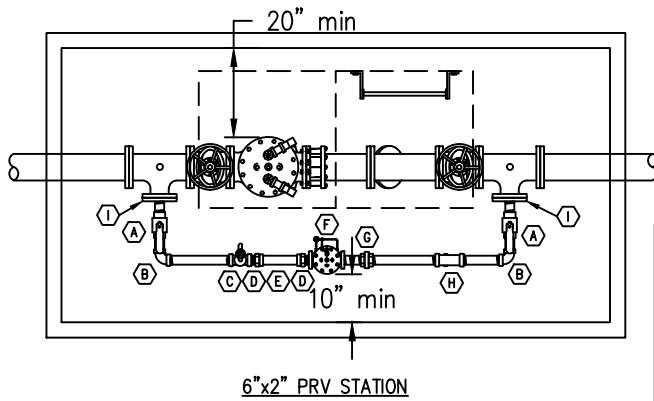
- | | | |
|---|--|--|
| ① DI PIPE, LENGTH TO FIT | ⑩ ADJUSTABLE SADDLE PIPE SUPPORT, RISER PIPE, AND BASE EQUAL TO GRINNEL FIGURE 264. ALSO PROVIDE (1) UNDER BYPASS LINE | Ⓐ 4" RS GATE VALVE (FL) |
| ② DI REDUCER (MxMJ) | | Ⓑ 4" DI 90° BEND (FL) |
| ③ DI SPOOL WITH COLLAR (FLxPE) LTF, OR LINK-SEAL | | Ⓒ 4"x3" DI REDUCER |
| ④ DI REDUCING TEE (FLxFLx4"FL) w/1" TAP ON TOP | ⑪ HYDROMATIC PUMP GC SYSTEMS MODEL #996633-51-2 W/FLOAT SWITCH (IF REQUIRED, SEE W-13) | Ⓓ 3" DI PIPE (FL) 36" LENGTH |
| ⑤ RS GATE VALVE (FLxFL) w/HAND WHEEL | ⑫ 1" GALVANIZED PUMP DISCHARGE PIPE SECURED TO VAULT WALL | Ⓔ CLA-VAL 90G-01ABS PRESSURE REDUCING VALVE (FLxFL) OR CITY APPROVED EQUAL*. EPOXY LINING, VALVE POSITION INDICATOR. |
| ⑥ CLA-VAL 90G-01ABCS PRESSURE REDUCING VALVE (FLxFL), EPOXY LINING, VALVE POSITION INDICATOR. | Ⓐ SAME AS ④ OR REDUCING CROSS (FL) FOR PRESSURE RELIEF VALVE. | Ⓕ FCA |
| ⑦ FCA w/SHACKLE RESTRAINT | Ⓑ RS GATE VALVE (FLxFL) | Ⓖ 4" DI PIPE (FLxPE) LTF |
| ⑧ DI PIPE (FLxPE) APPROX. 12" LENGTH | Ⓒ CLA-VAL 50G-01 PRESSURE RELIEF VALVE (FLxFL) OR CITY APPROVED EQUAL*, EPOXY LINING, VALVE POSITION INDICATOR, POLY PILOT LINES | Ⓖ STRAINER (FL) EQUAL TO WATTS 77F-D-FDA AND BRONZE BALL VALVE FOR BLOW OUT |
| ⑨ STRAINER (FLxFL) EQUAL TO WATTS 77F-D-FDA, EPOXY LINED AND BRASS BALL VALVE FOR BLOW OUT | Ⓓ FCA | Ⓖ PRESSURE GAUGE AND AIR VALVE, SEE W-13 |
| | Ⓕ DI PIPE | Ⓖ PRESSURE GAUGE, SEE W-13 |
- NOTE: ITEMS a - e ARE USED ONLY IF A PRESSURE RELIEF VALVE IS TO BE INSTALLED. DETERMINATION OF WHEN TO INSTALL AND SIZING WILL BE BY THE CITY ON A PER PROJECT BASIS.
 * CITY APPROVED EQUALS MUST BE SUBMITTED TO THE CITY FOR REVIEW. APPROVAL OR REJECTION SHALL BE DETERMINED BY THE CITY.

City of Stanwood

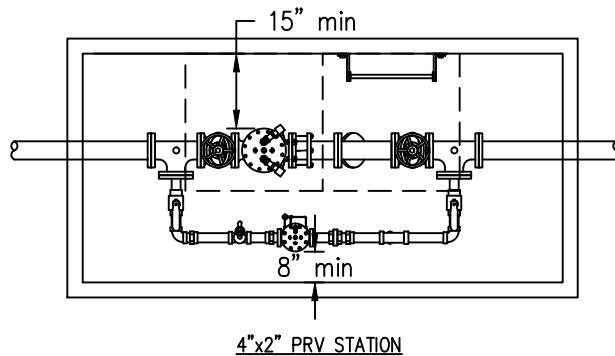


WATER SYSTEM STANDARD DETAIL

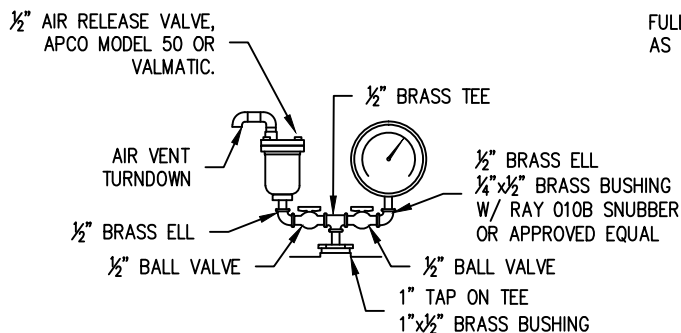
PRESSURE REDUCING STATION



SIZING TABLE			
Main Line	Main PRV	Bypass Line	Utility Vault
12"	8"	3"	712-LA
10"	8"	3"	712-LA
8"	6"	2"	612-LA
6"	4"	2"	5106-LA

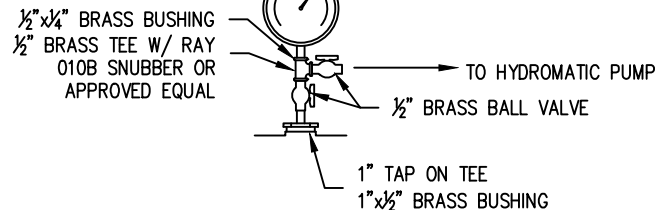


1. SEE STD DETAIL 6-16 FOR ADDITIONAL STATION INFORMATION.
2. PREP ALL SURFACES PER PAINT MANUFACTURER'S INSTRUCTIONS PRIOR TO APPLICATION. REMOVE ALL DIRT, GREASE, SCALE AND RUST. FACTORY COATINGS SHALL BE ROUGHENED TO PROVIDE ADEQUATE PROFILE FOR TOP COATS.
3. COAT INTERIOR WALLS, DI PIPE, FITTINGS AND STEEL FASTENERS WITH POLYIMIDE EPOXY PAINT, 2 COATS AT 5 DRY MILS EACH. COLORS: OFF WHITE FOR WALLS, LIGHT BLUE FOR PIPE. PIPE SHALL BE EMPTY DURING COATING.
4. VAULT INTERIOR SHALL BE COATED AT MANUFACTURER'S FACILITY.
5. PROVIDE VAULT DRAINAGE EITHER BY:
 - a) 4" SCH 40 PVC DRAIN TO DAYLIGHT OR STORM SYSTEM, or
 - b) GC SYSTEMS HYDROMATIC (WATER-POWERED) PUMP MODEL #996633-51-2
6. IF RESTORED SURFACE GRADE IS TO BE GREATER THAN 2%, VAULT ACCESS SHALL INCLUDE ADJUSTMENT RISERS TO MATCH GRADE.
7. ALL BALL VALVES AND CURB STOP SHALL BE FULL-PORT.
8. ALL FASTENERS SHALL BE STAINLESS STEEL.



GAUGE & AIR VALVE

PRESSURE GAUGE w/4 1/2" FACE, OVERALL ACCURACY $\pm 1/2\%$ OF FULL SCALE. RANGE 0-200 psi OR AS OTHERWISE APPROVED BY CITY.



GAUGE

NOTE, BRASS NIPPLES NOT CALLED OUT, PROVIDE AS NECESSARY.

- | | |
|--|---|
| (A) 2" BRASS BALL VALVE (THREADED) | (F) CLA-VAL 90G-01ABS PRESSURE REDUCING VALVE (THREADED) OR CITY APPROVED EQUAL*. EPOXY LINING, VALVE POSITION INDICATOR, POLY PILOT LINES. |
| (B) 2" BRASS 90° BEND (THREADED) | (G) 2" BRASS UNION |
| (C) 2" BRASS TEE (THREADED)
3/4" HOSE BIB | (H) STRAINER (THREADED) EQUAL TO WATTS 777S AND BRONZE BALL VALVE FOR BLOW OUT |
| (D) 2" BRASS THREADxSWEAT ADAPTER | (I) 4" DI BLIND FLANGE w/2" TAP |
| (E) 2" COPPER PIPE, LTF | |

USE THREADED BRASS NIPPLES (NOT CALLED OUT) ON BYPASS PIPING. USE CLOSE NIPPLES WHEREVER POSSIBLE.

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City of Stanwood

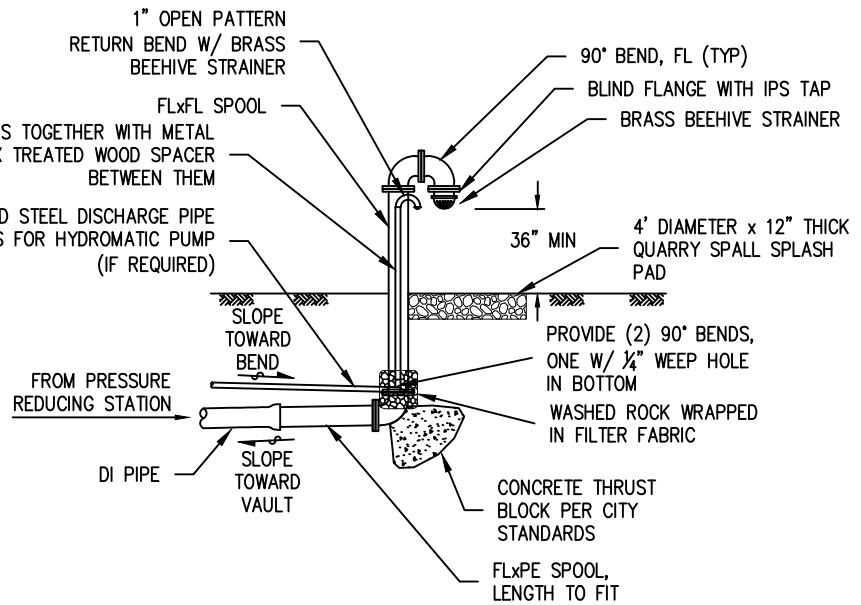


WATER SYSTEM STANDARD DETAIL

PRESSURE REDUCING STATION DETAILS

NOTES

1. PIPING SHALL BE SIZED AND LOCATED BY THE CITY FOR EACH INDIVIDUAL PROJECT.
2. DI PIPING SHALL BE CLASS 52 CEMENT LINED DUCTILE IRON.
3. PAINT ALL EXPOSED PIPING AND FITTINGS ABOVE GRADE RUSTOLEUM SAFETY YELLOW. BASE No. 288-14, COLOR CODE AX-6732, T-4432, OR PER CITY ENGINEER.



City of Stanwood



WATER SYSTEM STANDARD DETAIL

PRESSURE RELIEF DISCHARGE PIPING

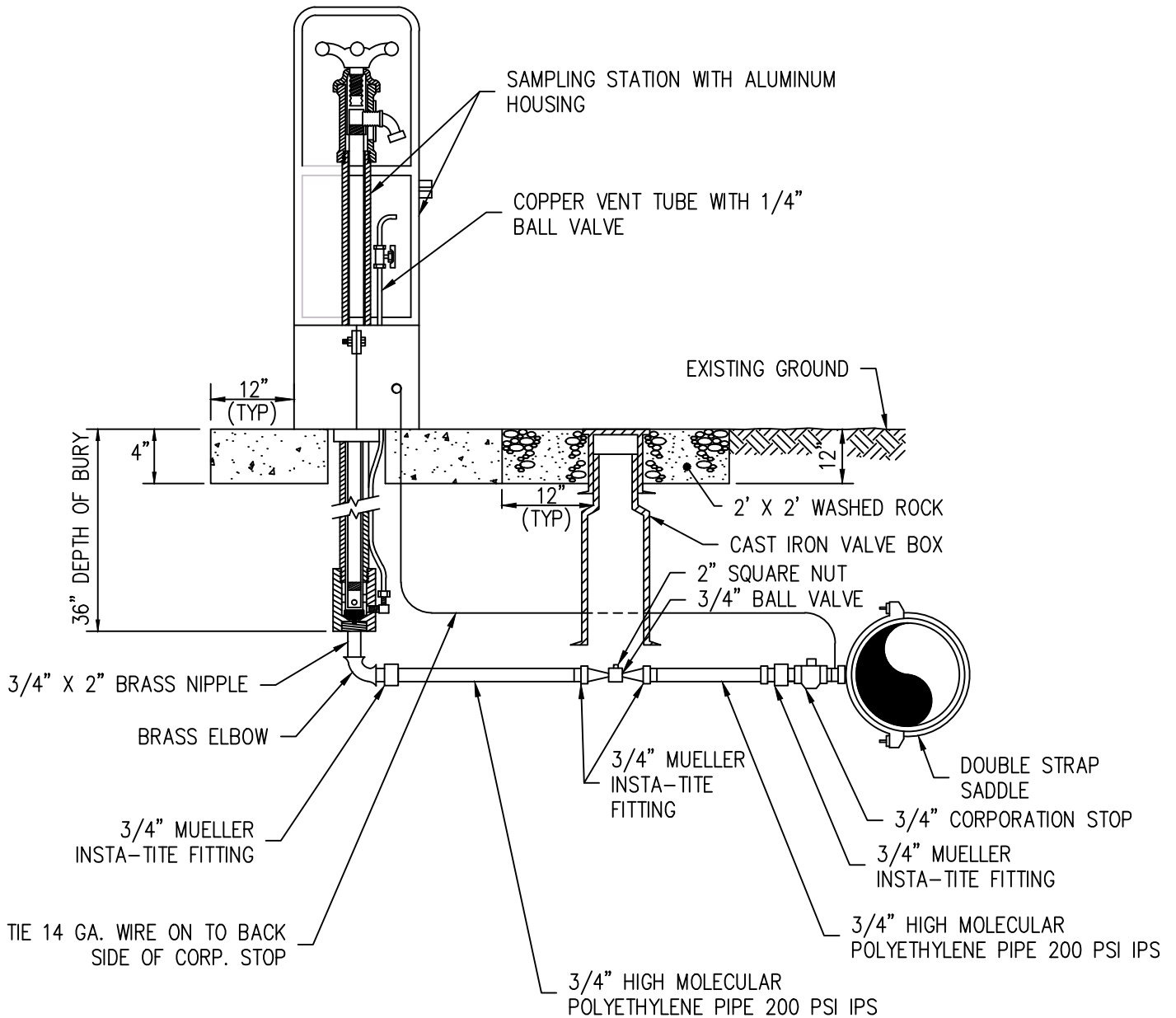
File:STADETW13B Revised: Mar 11, 2009 Printed: Mar. 10, 2009

DRAWING NO.

W-13B

MATERIALS

SERVICE SADDLE	ROMAC 202S
CORPORATION STOP	FORDF1101
SAMPLING STATION	KUPFERLE ECLIPSE MODEL NO. 88



City of Stanwood



WATER SYSTEM STANDARD DETAIL

WATER SAMPLING STATION

INSTALLATION

THE PRESSURE REDUCING VALVE SHALL BE LOCATED ON THE CUSTOMER'S PROPERTY "DOWNSTREAM" OF THE METER BOX. RESPONSIBILITY FOR PROPER INSTALLATION, OPERATION, AND MAINTENANCE OF THE VALVE SHALL BE ASSUMED BY THE CUSTOMER.

MATERIALS



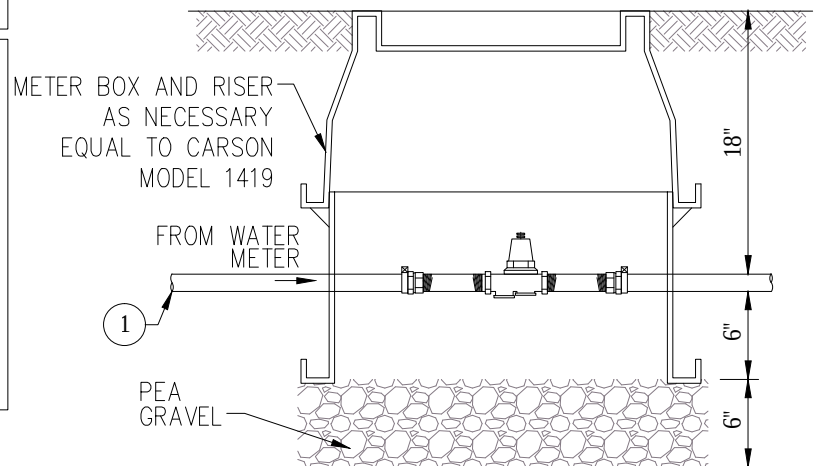
3/4" PRESSURE REDUCING VALVE
ZURN WILKINS REGULATOR
MODEL #600XL OR EQUAL



3/4" ADAPTER. ONE END FOR
THREADED BRASS, OTHER END AS
NECESSARY FOR SERVICE
CONNECTION.



3/4" BRASS NIPPLE, APPROX.
4" LONG. IPT BOTH ENDS



SERVICE PRESSURE REDUCER

- ① CONNECTIONS FROM METER TO PRV SHALL BE BRASS OR COPPER, AWWA TYPE K

FUNCTION

THE FUNCTION OF A PRESSURE REDUCING VALVE IS TO REDUCE HIGH-WATER PRESSURES IN THE SERVICE CONNECTION TO AN ACCEPTABLE RANGE OF 25 TO 75 PSI. INSTALLATION OF A PRESSURE REDUCING VALVE IS REQUIRED WHERE THE SERVICE CONNECTION PRESSURE EXCEEDS 80 PSI IN ACCORDANCE TO THE UNIFORM PLUMBING CODE.

City of Stanwood



WATER SYSTEM STANDARD DETAIL

INDIVIDUAL SERVICE PRESSURE
REDUCING VALVE

File:STADETW15

Revised: Nov 23, 2015

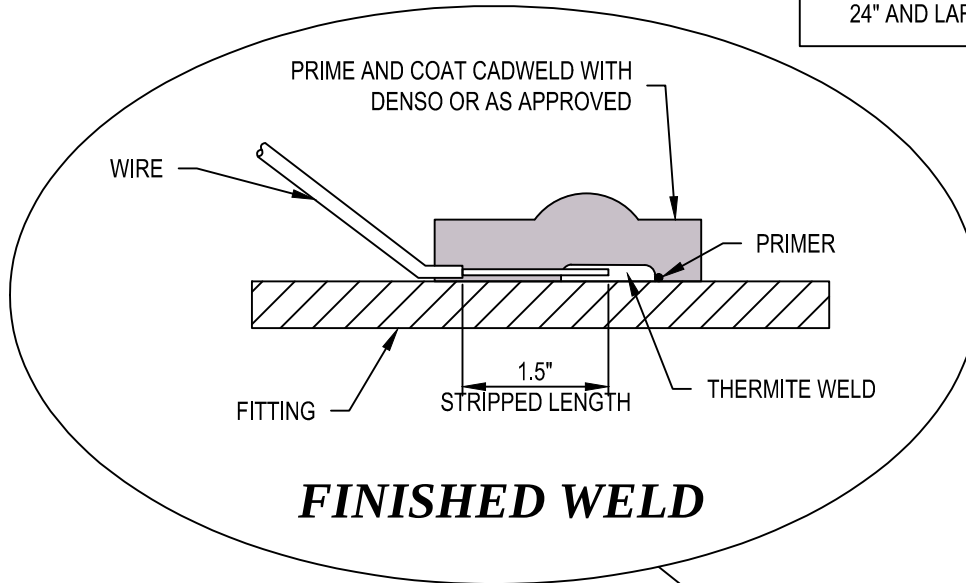
Printed: Mar. 10, 2009

DRAWING NO.

W-15

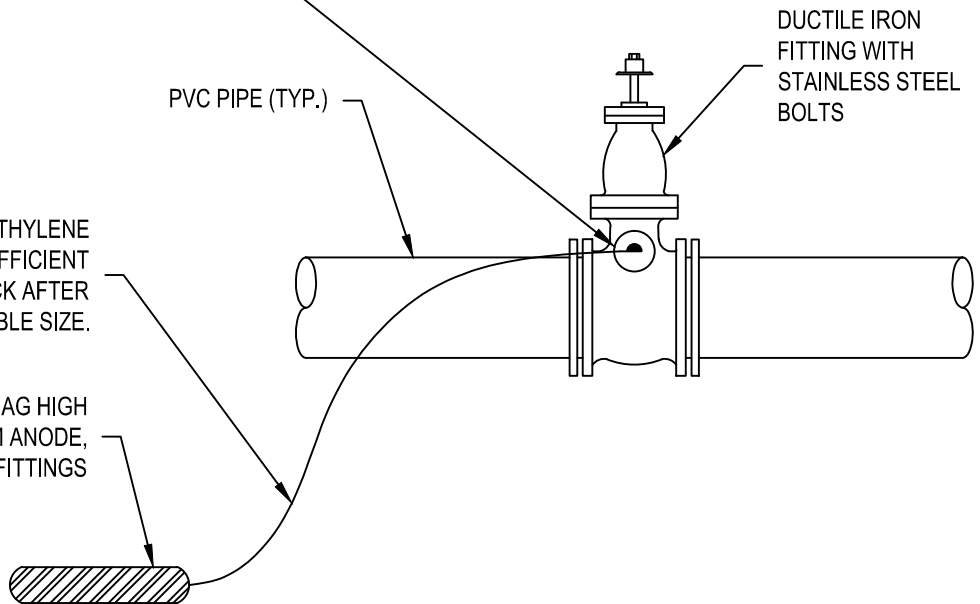
BONDING CABLE SIZES FOR DUCTILE IRON FITTINGS

FITTING SIZE	CABLE SIZE
6" AND SMALLER	#8 AWG/HMWPE
6" TO 20"	#4 AWG/HMWPE
24" AND LARGER	#2 AWG/HMWPE



HIGH MOLECULAR WEIGHT POLYETHYLENE
(HMWPE) BONDING CABLE OF SUFFICIENT
LENGTH TO MAINTAIN SLACK AFTER
INSTALLATION. SEE TABLE FOR CABLE SIZE.

32# D5 ULTRAMAG HIGH
POTENTIAL MAGNESIUM ANODE,
TYP. ALL FITTINGS



City of Stanwood



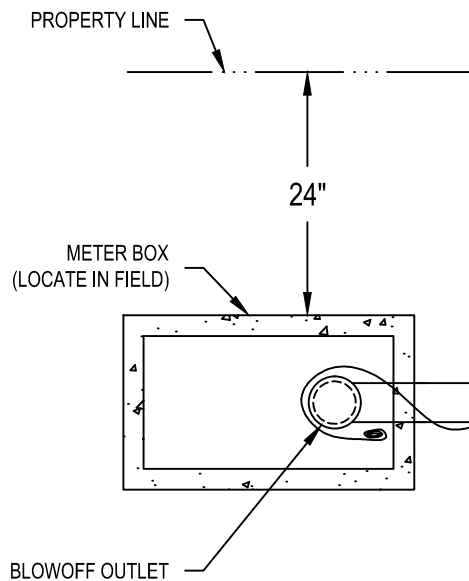
WATER SYSTEM STANDARD DETAIL

CATHODIC PROTECTION

File: STADETW16 Revised: Oct. 8, 2015 Printed: Oct. 12, 2015

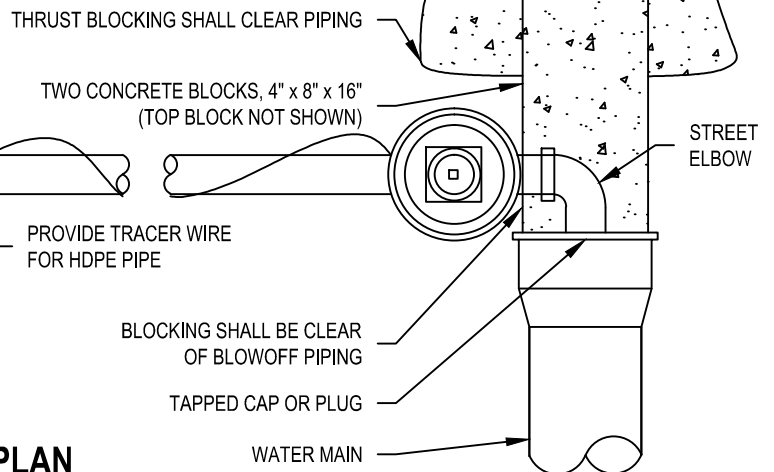
DRAWING NO.

W-16

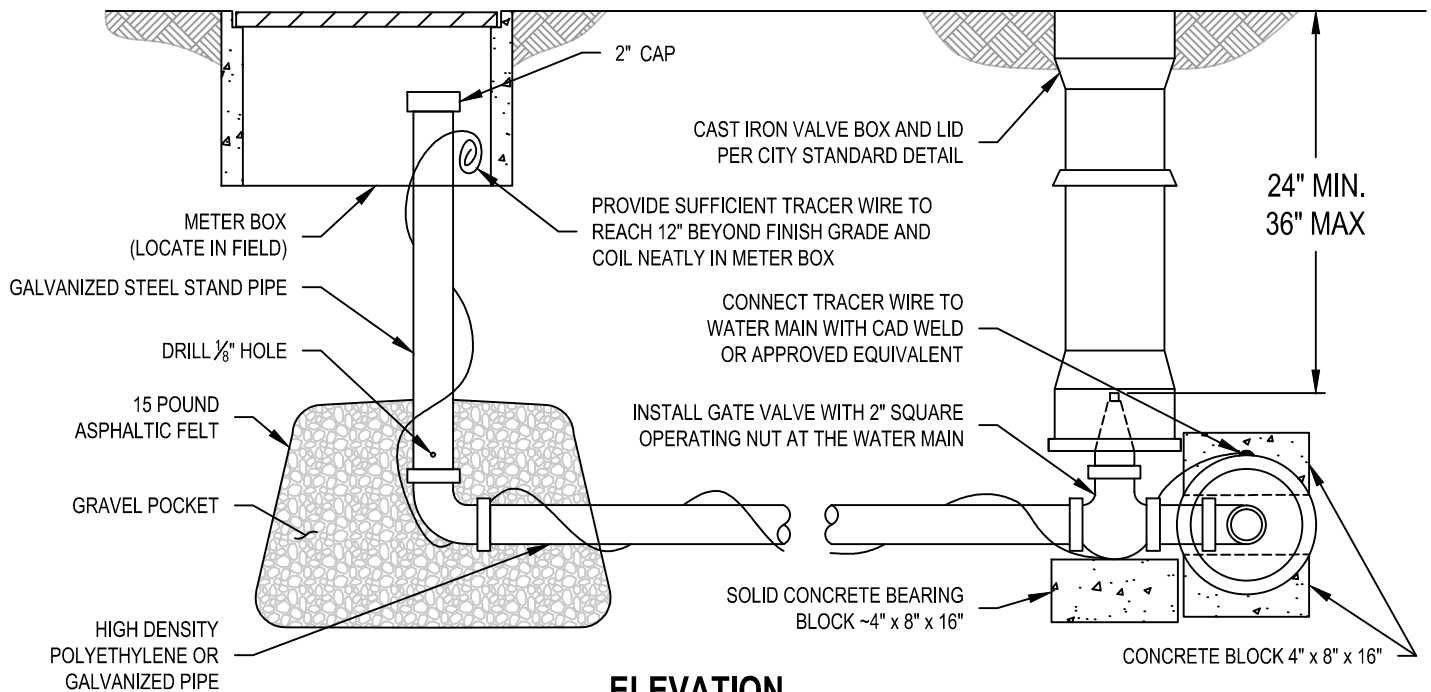


NOTES

1. COAT THE PIPE THREADS WITH ASPHALT AFTER ASSEMBLY.
2. STAND PIPE SHALL BE GALVANIZED STEEL.
3. VALVE AND PIPING TO VALVE SHALL BE 2" UNLESS OTHERWISE NOTED IN THE CONTRACT.
4. LOCATE BLOWOFF OUTLET NEAR PROPERTY CORNER IF POSSIBLE.
5. HIGH DENSITY POLYETHYLENE PIPE IS ACCEPTABLE BETWEEN GATE VALVE AND STAND PIPE.



PLAN



ELEVATION

City of Stanwood



WATER SYSTEM STANDARD DETAIL

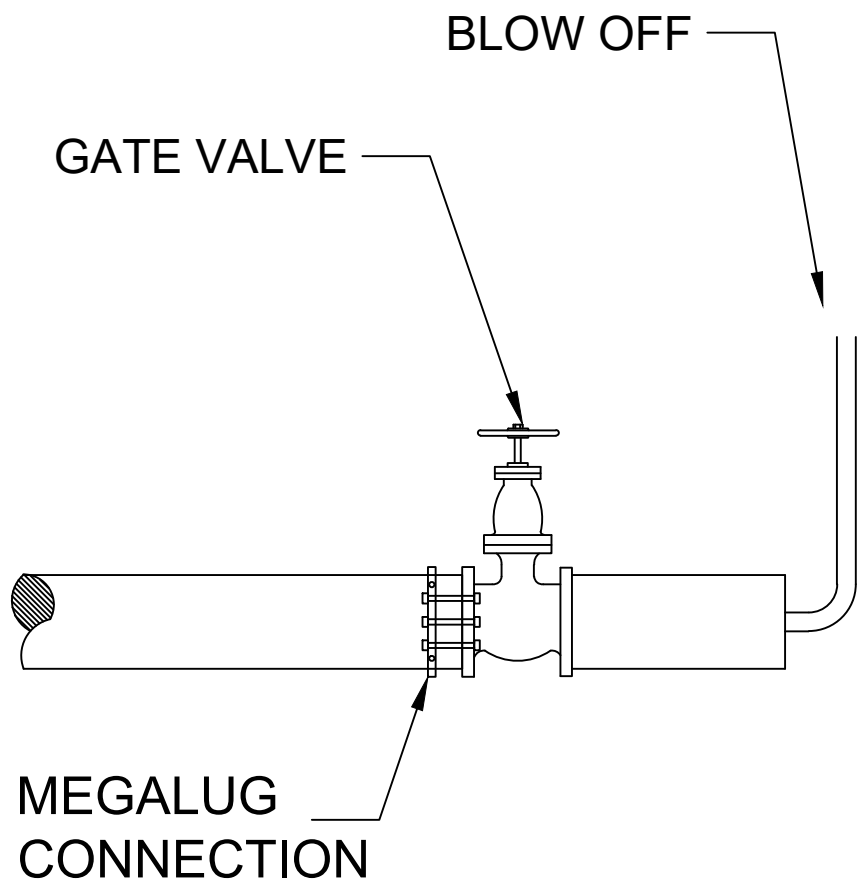
2-INCH BLOWOFF ASSEMBLY

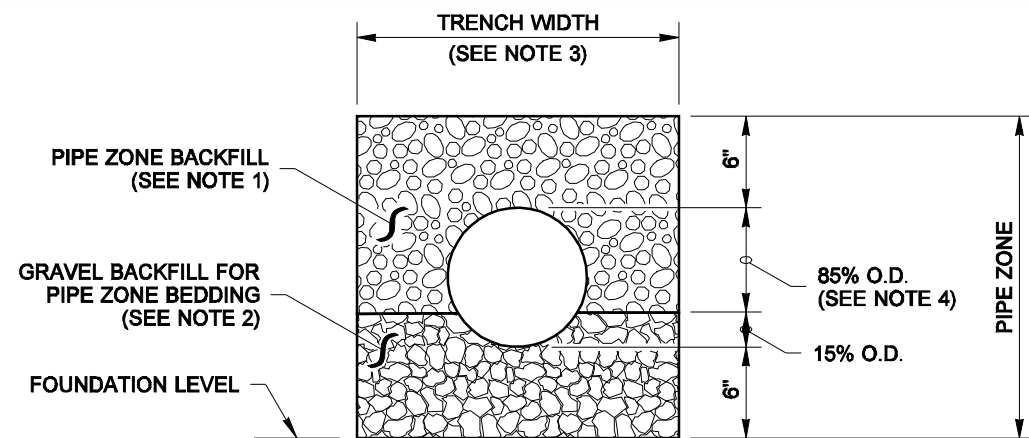
File: STADETW17 Revised: Oct. 8, 2015 Printed: Oct. 12, 2015

DRAWING NO.

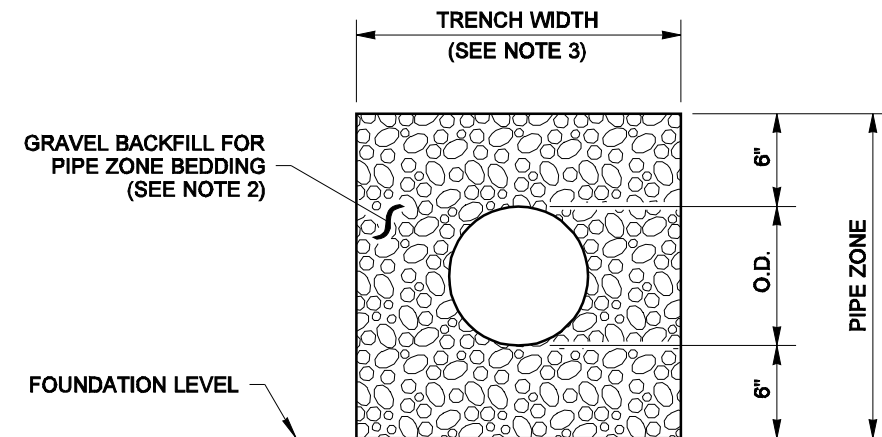
W-17

NOTES:
VALVE WITH BLOW
OFF ASSEMBLY
SUPPLIED FOR
TEMPORARY USE TO
RETRIEVE CLEANING
PIG

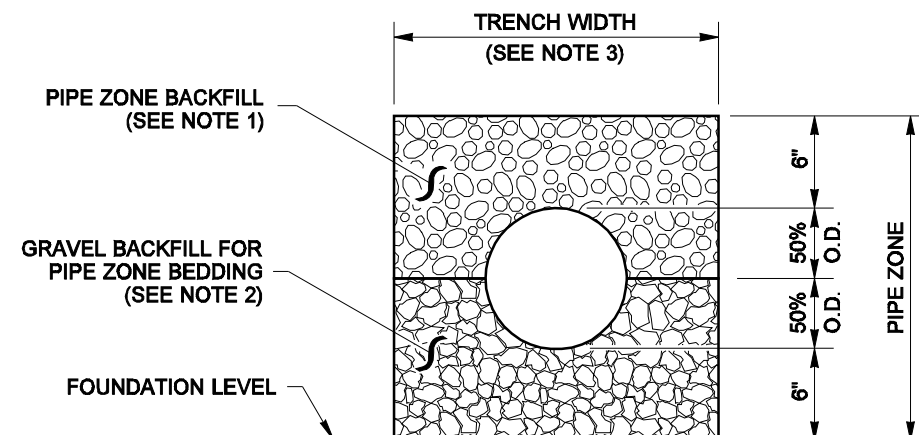




CONCRETE AND DUCTILE IRON PIPE



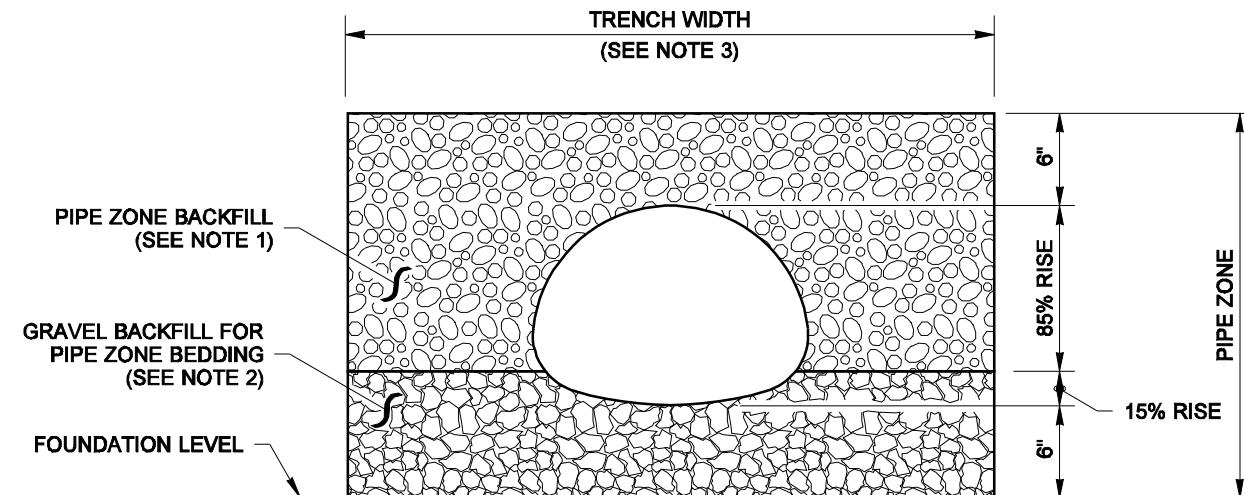
THERMOPLASTIC PIPE



METAL PIPE

NOTES

1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. /2
	102" to 180"	48"
PIPE ARCH (SPAN) METAL ONLY	18" to 36"	12"
	43" to 142"	SPAN /3
	148" to 200"	48"



EXPIRES JULY 1, 2007

PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-01-06**

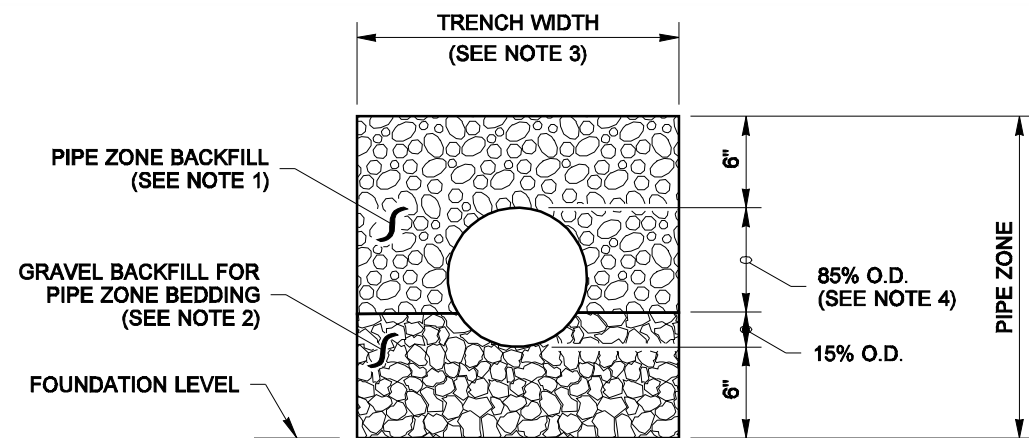
STATE DESIGN ENGINEER

DATE

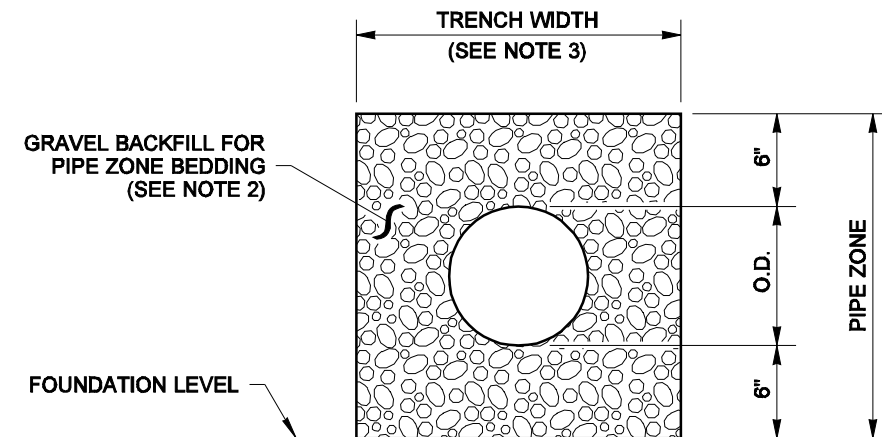


Washington State Department of Transportation

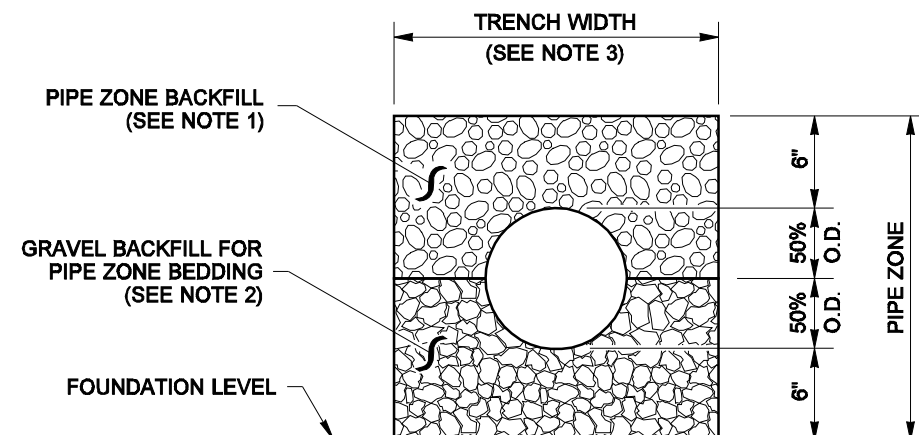
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CONCRETE AND DUCTILE IRON PIPE



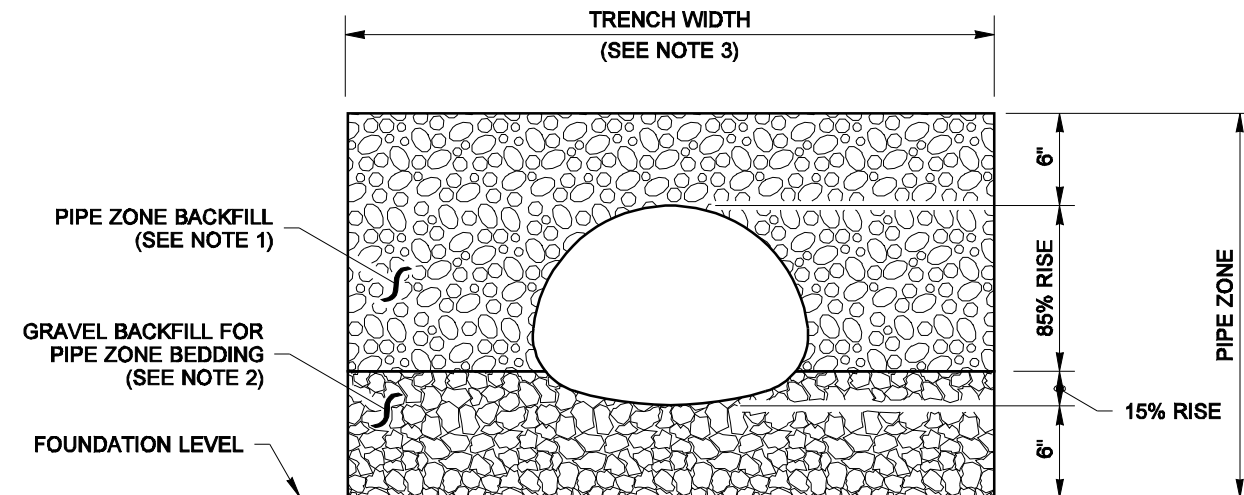
THERMOPLASTIC PIPE



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PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-01-06**

STATE DESIGN ENGINEER

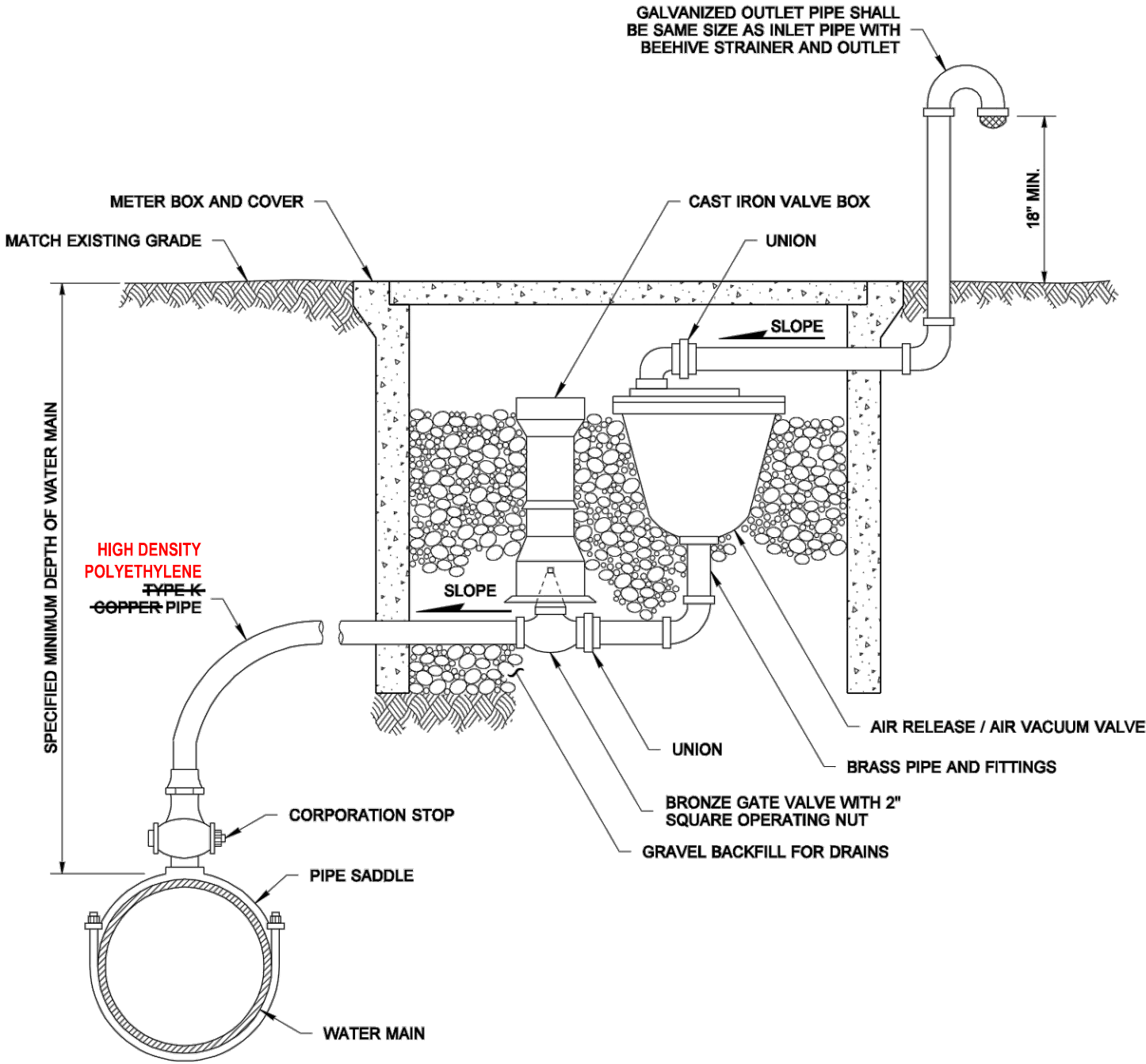
DATE



Washington State Department of Transportation

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DRAWN BY: ADAM COCHRAN



NOTES

1. The size of the combination air release / air vacuum valve shall be specified in the Contract. The piping and valves shall be the same size as the combination air release / air vacuum valve.
2. Locate at the high point of the main, tap top of main.



EXPIRES JULY 1, 2007

**COMBINATION
AIR RELEASE / AIR VACUUM
VALVE ASSEMBLY
STANDARD PLAN B-90.30-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-08-06**

STATE DESIGN ENGINEER DATE

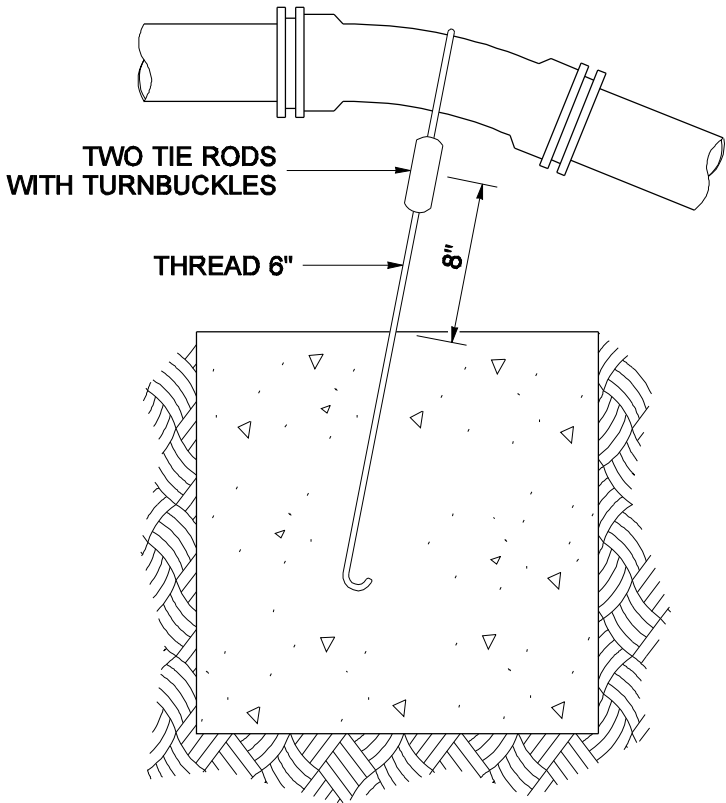


Washington State Department of Transportation

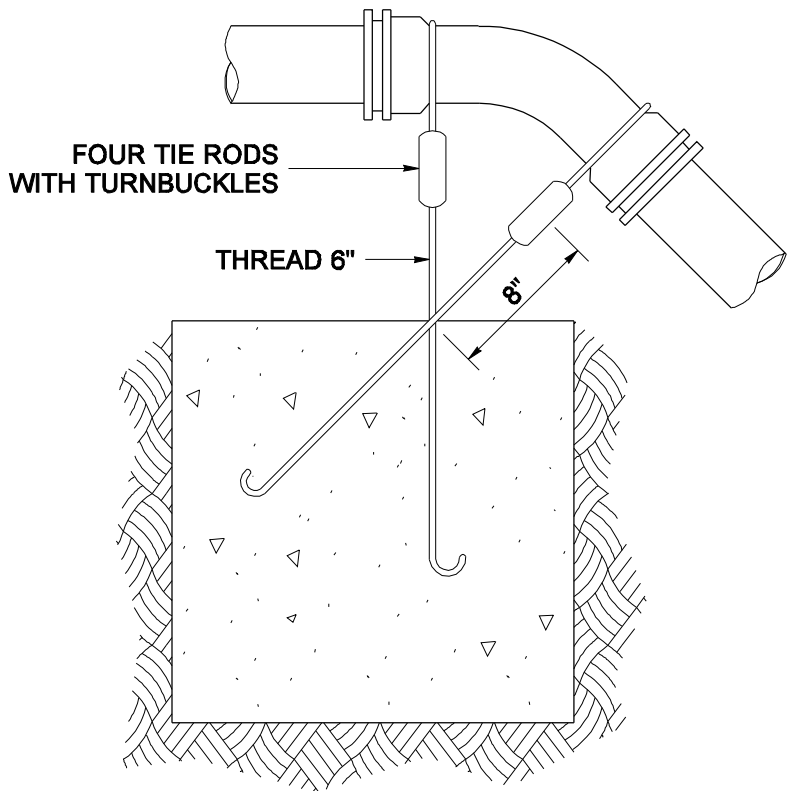
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NOTE

Steel tie rods to be heavily coated with asphalt after installation.



BLOCKING FOR 11.25° OR 22.5° VERTICAL BENDS



BLOCKING FOR 45° VERTICAL BENDS

DIMENSION TABLE						
PIPE DIAM.	TEST PRESSURE (PSI)	BEND ANGLE	CONCRETE VOLUME (Ft³)	CUBE SIZE (Ft)	TIE ROD DIAM.	TIE ROD EMBEDMENT
4"	250	11.25°	6	1.8	5/8"	17"
		22.5°	12	2.3		
		45°	22	2.8		
6"	250	11.25°	14	2.4	5/8"	17"
		22.5°	27	3.0		
		45°	50	3.7		
8"	250	11.25°	25	2.9	5/8"	17"
		22.5°	48	3.6		
		45°	89	4.5		
10"	250	11.25°	38	3.4	5/8"	17"
		22.5°	75	4.2		
		45°	139	5.2		
12"	250	11.25°	55	3.8	5/8"	17"
		22.5°	108	4.8		
		45°	200	5.8	7/8"	24"
14"	250	11.25°	75	4.2	5/8"	17"
		22.5°	147	5.3	3/4"	20"
		45°	272	6.5	1"	27"
16"	250	11.25°	98	4.6	5/8"	17"
		22.5°	192	5.8	7/8"	24"
		45°	355	7.1	1 1/8"	30"



EXPIRES JULY 1, 2007

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CONCRETE THRUST BLOCK
FOR CONVEX
VERTICAL BENDS
STANDARD PLAN B-90.50-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

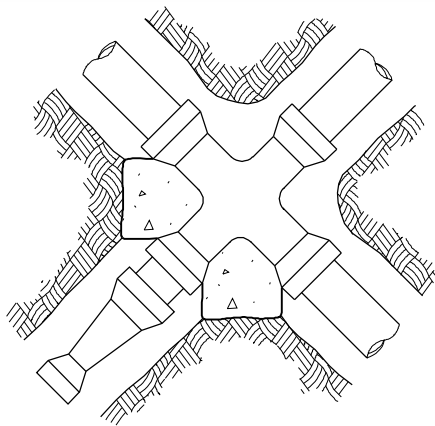
Harold J. Peterfeso 06-08-06

STATE DESIGN ENGINEER

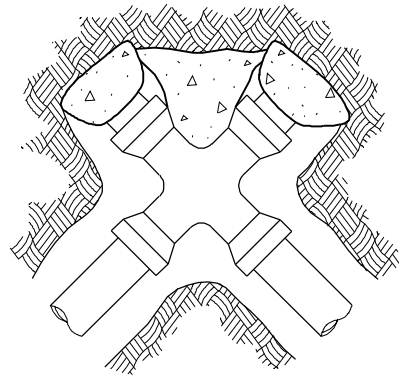
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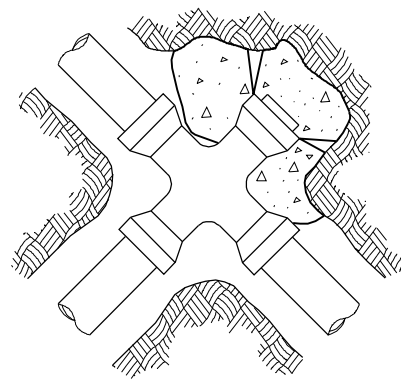
Washington State Department of Transportation



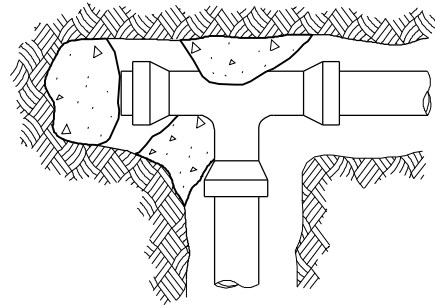
PLAN VIEW
UNBALANCED CROSS
(USE COLUMN A)



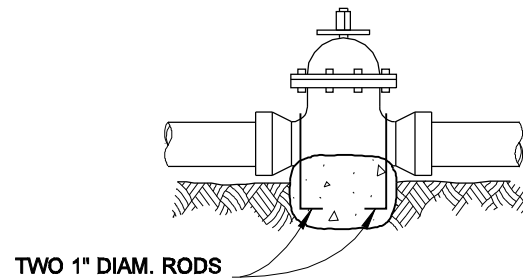
PLAN VIEW
PLUGGED CROSS
(USE COLUMN B)



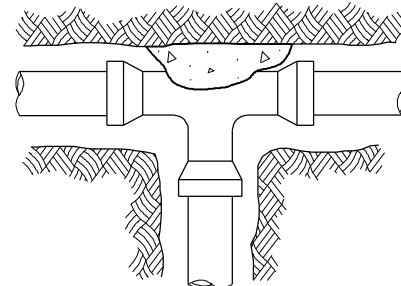
PLAN VIEW
PLUGGED CROSS
(USE COLUMN A)



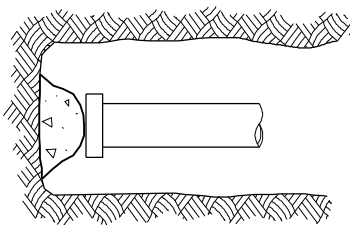
PLAN VIEW
PLUGGED TEE
(USE COLUMN B)



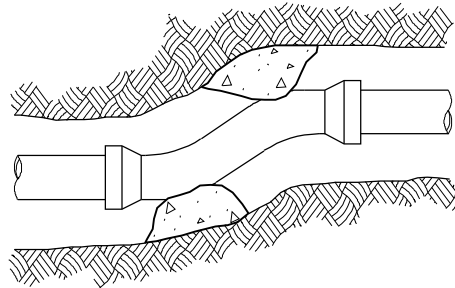
PROFILE VIEW
VALVE
(USE COLUMN A)



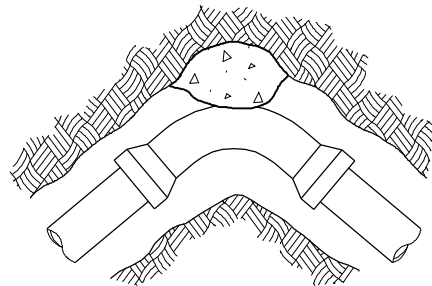
PLAN VIEW
TEE



PLAN VIEW
DEAD END



OFFSET
(USE COLUMNS B ~ E)



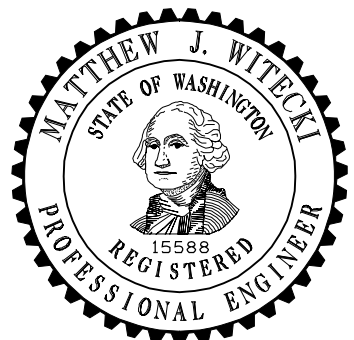
BEND

NOTES

- Contractor to provide blocking adequate to withstand full test pressure.
- Divide thrust by safe bearing load to determine required area (in square feet) of concrete to distribute load.
- Areas to be adjusted for other pressure conditions.
- Provide two 1" minimum diameter rods on valves up through 10" diameter. Valves larger than 10" require special tie rod design.

SIZE	TEST PRESSURE (PSI)	THRUST AT FITTINGS IN POUNDS				
		A	B	C	D	E
		TEE AND DEAD ENDS	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	250	3,140	4,440	2,405	1,225	615
6"	250	7,070	9,995	5,410	2,760	1,385
8"	250	12,565	17,770	9,620	4,905	2,465
10"	250	19,635	27,770	15,030	7,660	3,850
12"	250	28,275	39,985	21,640	11,030	5,545
14"	250	38,485	54,425	29,455	15,015	7,545
16"	250	50,265	71,085	38,470	19,615	9,855

SOIL TYPE	SAFE BEARING LOAD (PSF)
MUCK, PEAT, ETC.	0
SOFT CLAY	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000



EXPIRES JULY 1, 2007

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CONCRETE THRUST BLOCK

STANDARD PLAN B-90.40-00

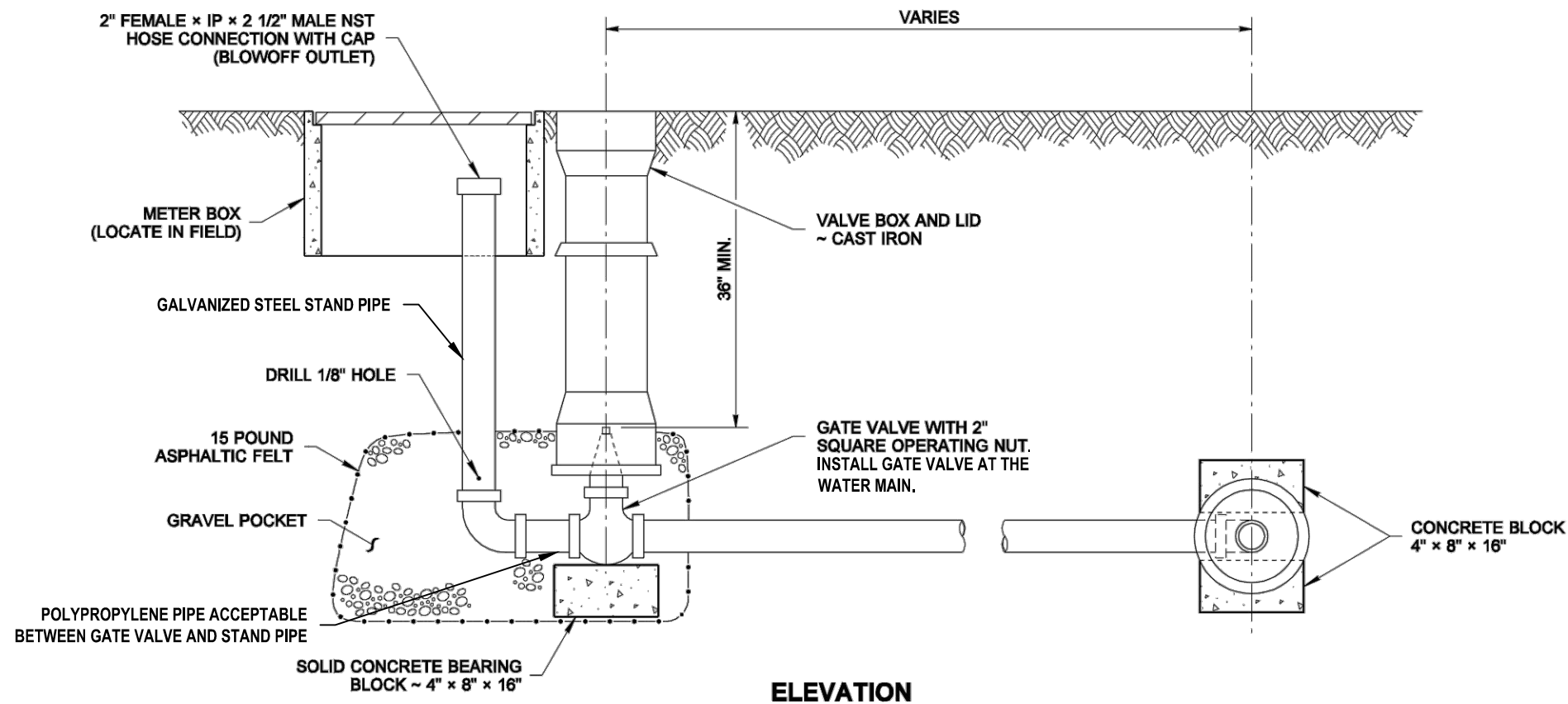
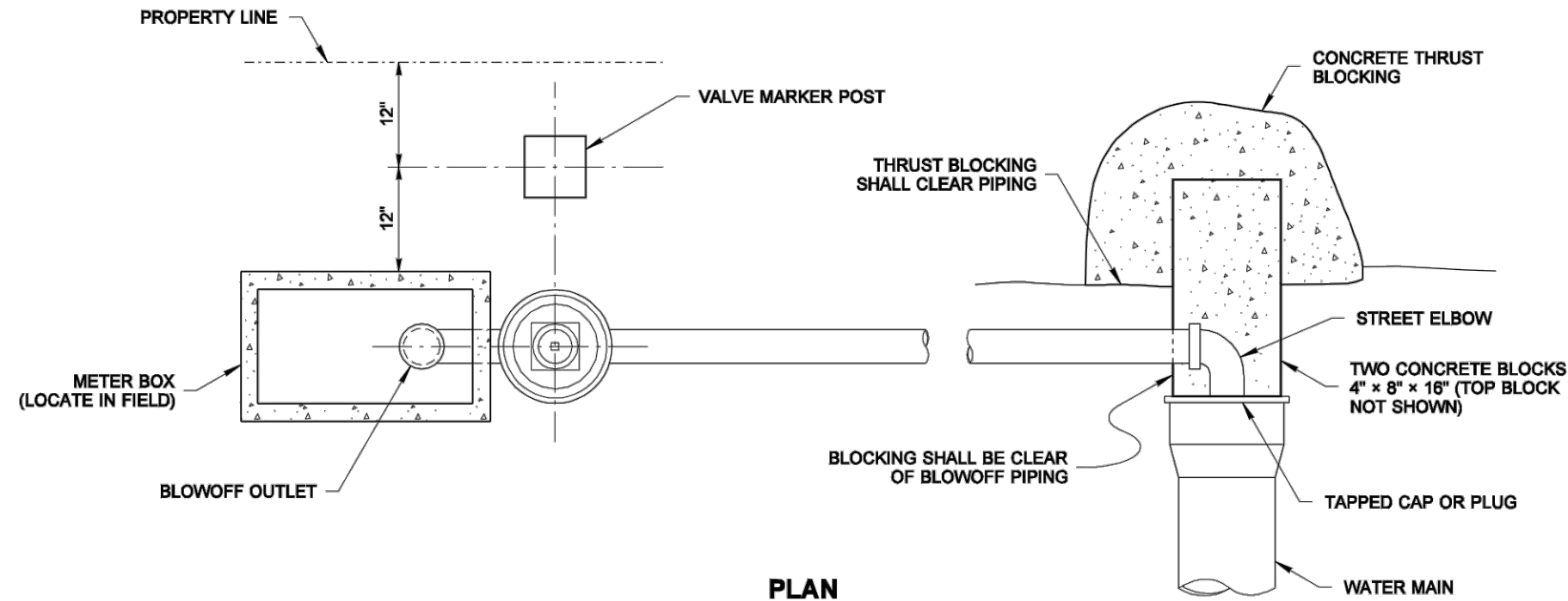
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-08-06**

STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

DRAWN BY: MARK SUJKA



NOTES

1. Coat the pipe threads with asphalt after assembly.
Stand pipe
2. ~~All piping shall be galvanized steel.~~
3. Valve and piping to valve shall be 2" unless otherwise noted in the Contract.
4. Locate blowoff outlet near property corner if possible.
5. Polypropylene pipe is acceptable between gate valve and stand pipe.



EXPIRES JULY 1, 2007

2 INCH BLOWOFF ASSEMBLY

STANDARD PLAN B-90.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso 06-08-06

STATE DESIGN ENGINEER

DATE



Washington State Department of Transportation

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CITY OF STANWOOD

SEWER SYSTEM STANDARD DETAILS INDEX

STANDARD DETAILS

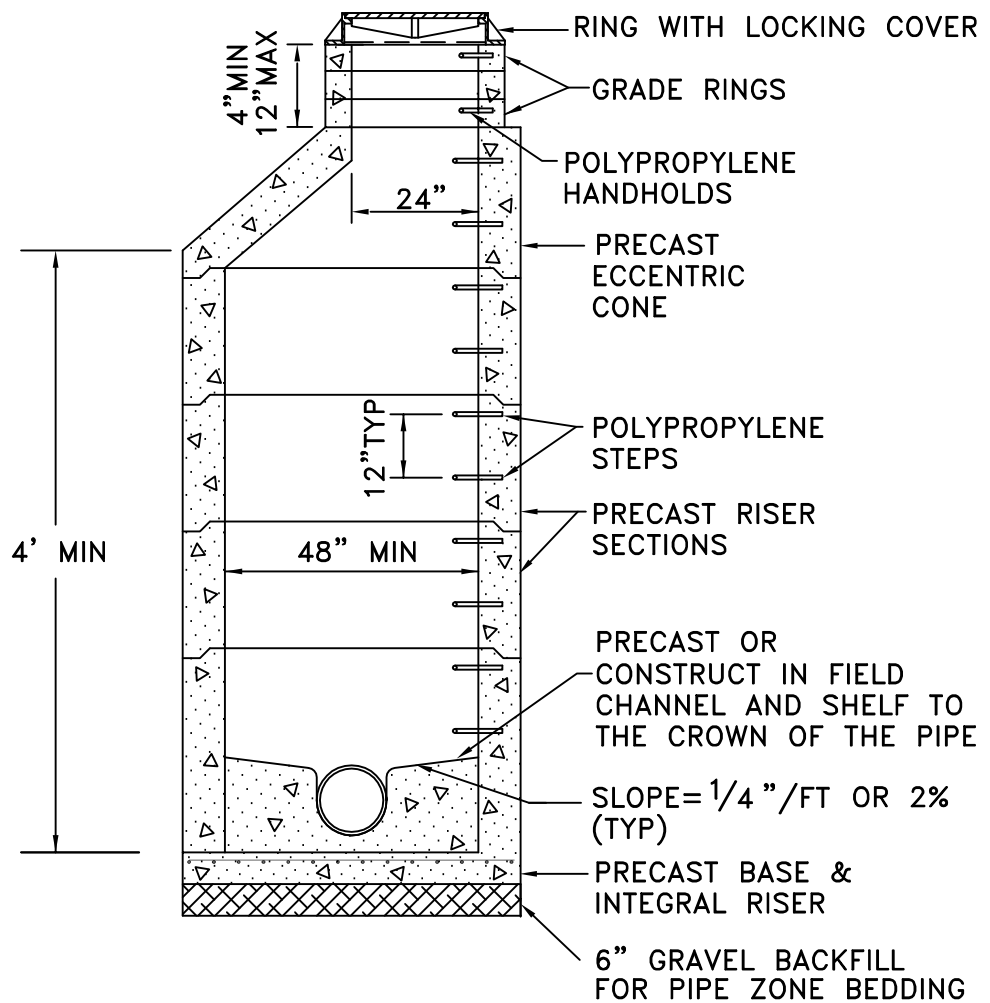
S-1	TYPE 1 MANHOLE
S-2	FLAT TOP MANHOLE
S-3	MANHOLE COLLAR
S-4	CLEANOUT
S-5	FORCE MAIN AIR RELEASE ASSEMBLY
S-6	LIFT STATION EMERGENCY BYPASS CONNECTION
S-7	TYPICAL PRESSURE SEWER SERVICE DETAIL
S-8	TYPICAL E-1 GRINDER PUMP INSTALLATION
S-9	GRINDER PUMP INSTALLATION CONCRETE BALLAST
S-10	LOW PRESSURE FORCE MAIN CLEANOUT DETAIL
S-11	GREASE INTERCEPTOR
S-12	INDOOR GREASE TRAP
WSDOT B-85.50-01	DROP CONNECTION FOR SANITARY SEWERS
WSDOT B-85.20-00	SIDE SEWER CONNECTION
WSDOT B-90.40-00	CONCRETE THRUST BLOCK
WSDOT B-55.20-00	PIPE ZONE BEDDING AND BACKFILL

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

SEWER DETAILS INDEX



NOTES:

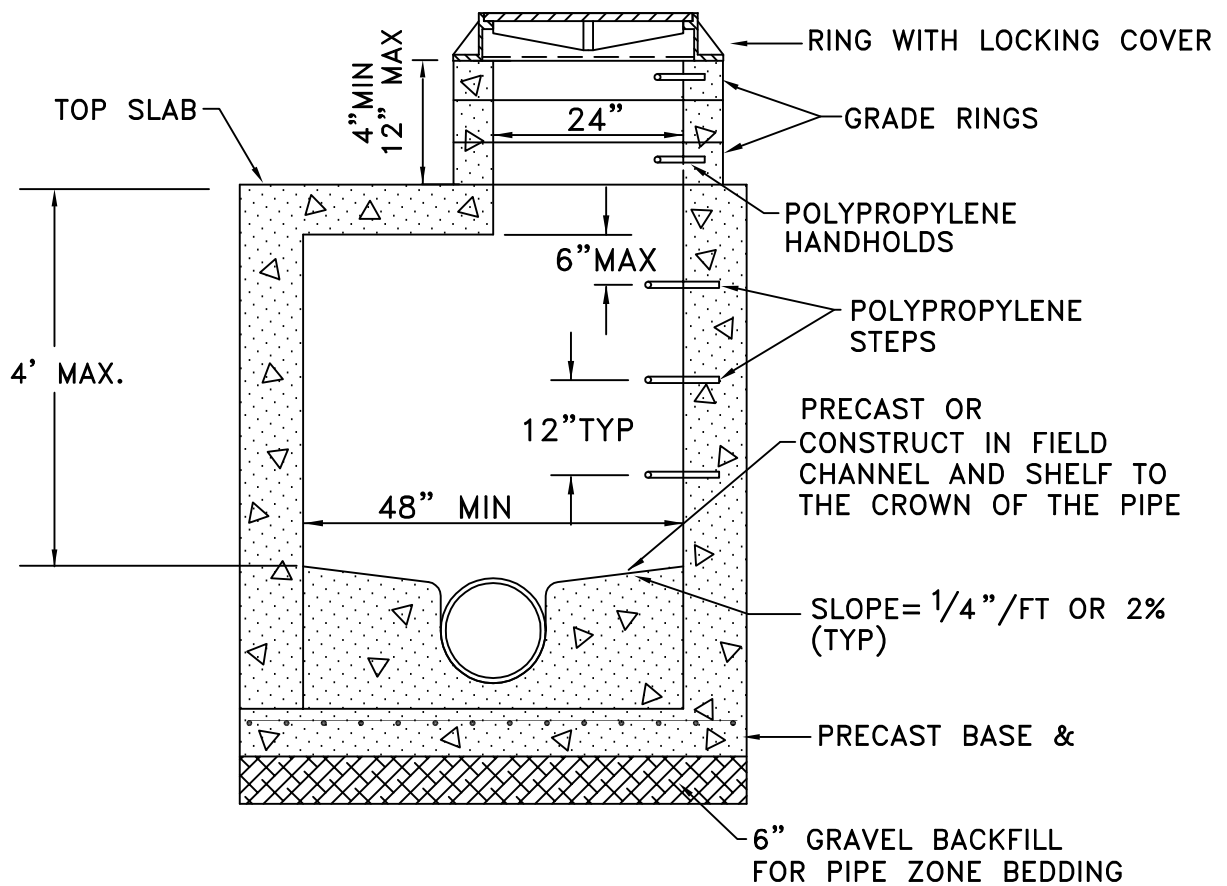
1. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C478. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO ASTM C443 AND SHALL BE GROUTED FROM THE INSIDE. LIFT HOLES SHALL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE.
2. STEPS IN MANHOLE SHALL HAVE 6" MINIMUM CLEARANCE. HANDHOLES IN ADJUSTMENT SECTION SHALL HAVE 3" MINIMUM CLEARANCE THE FIRST STEP OR HANDHOLD SHALL BE A MAXIMUM OF 12" FROM THE TOP OF THE COVER.
3. CONNECTION TO MANHOLE SHALL BE MADE BY KOR-N-SEAL BOOT, SAND COLLAR OR A-LOCK GASKET.
4. SEE DETAIL S-3 FOR MANHOLE COLLAR INSTALLATION.
5. A SEWER GUARD SHALL BE INSTALLED IN ANY MANHOLE SUBJECT TO FLOODING.

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

TYPE 1 MANHOLE



NOTES:

1. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C478. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO ASTM C443 AND SHALL BE GROUTED FROM THE INSIDE. LIFT HOLES SHALL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE.
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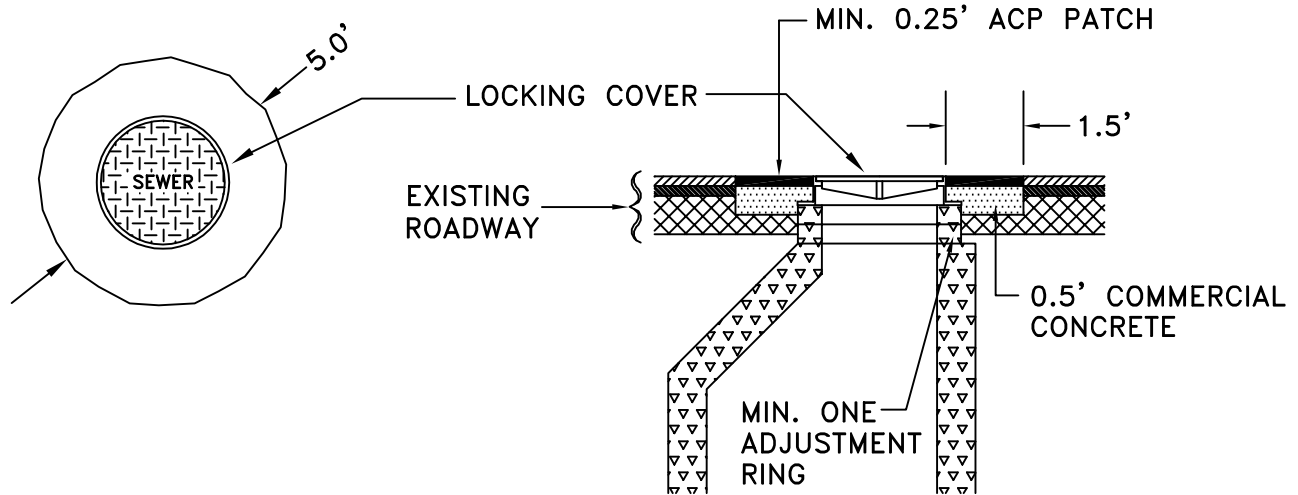
City of Stanwood



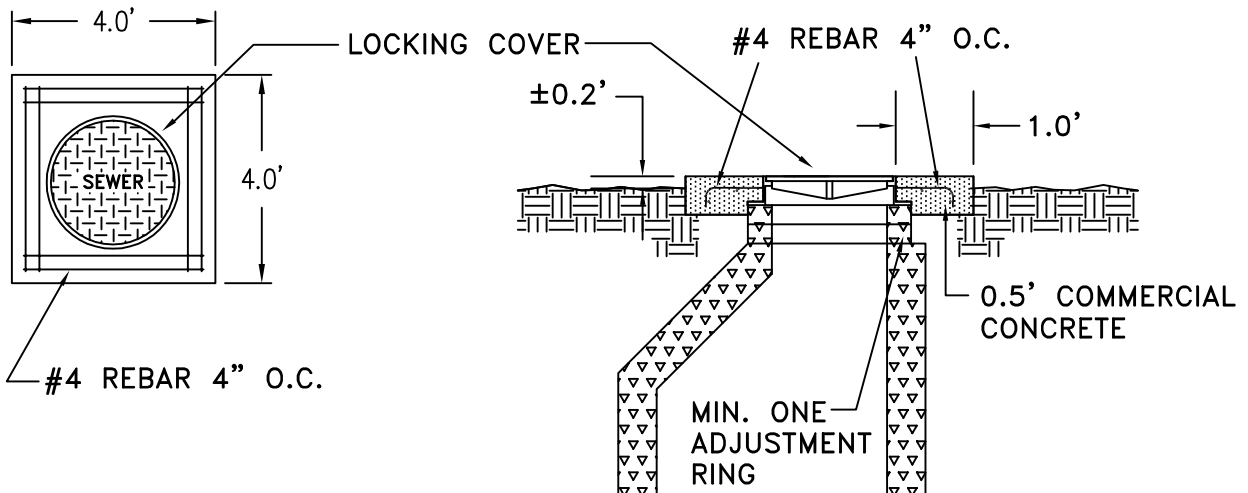
SEWER SYSTEM STANDARD DETAIL

FLAT TOP MANHOLE

MANHOLE IN ASPHALT



MANHOLE OUTSIDE ASPHALT



NOTE:

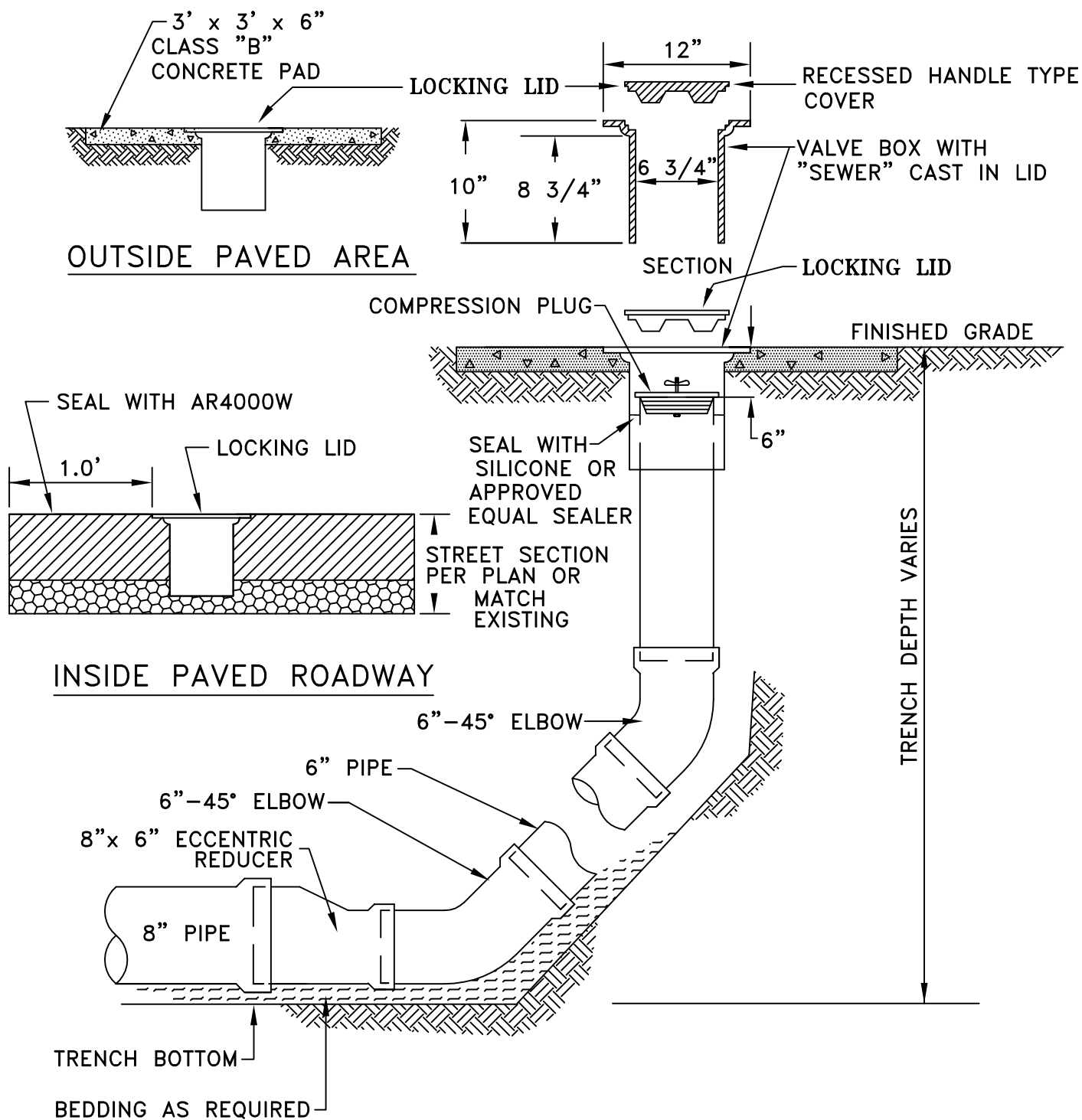
1. ON MANHOLE OUTSIDE ASPHALT ADD REINFORCING STEEL AS SHOWN ABOVE. DEFORMED BAR TO MEET ASTM A615 GRADE 60 FY=60,000 P.S.I.

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

MANHOLE COLLAR



NOTE:

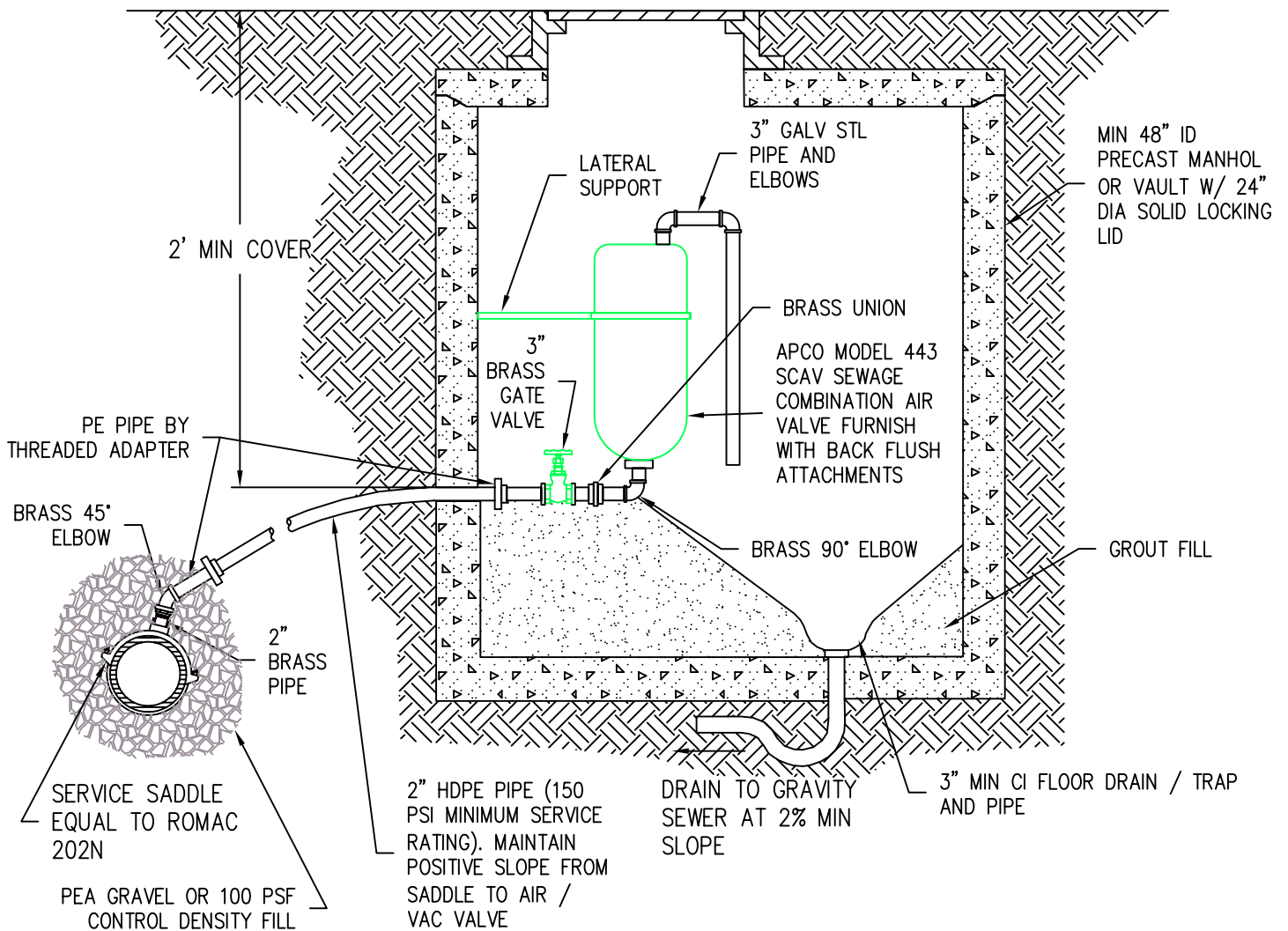
ALL SEWER PIPE SHALL BE ASTM 3034
SDR 35.

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

CLEANOUT



NOTE:

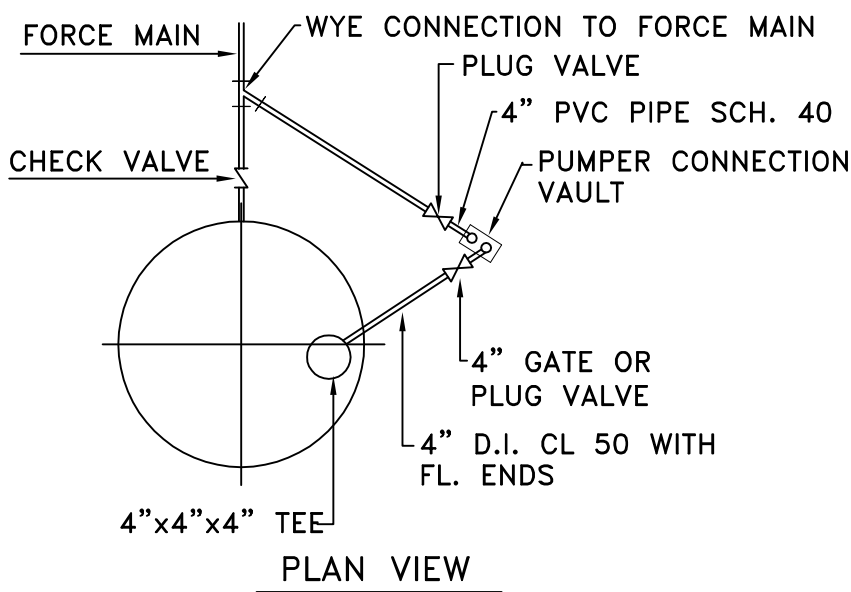
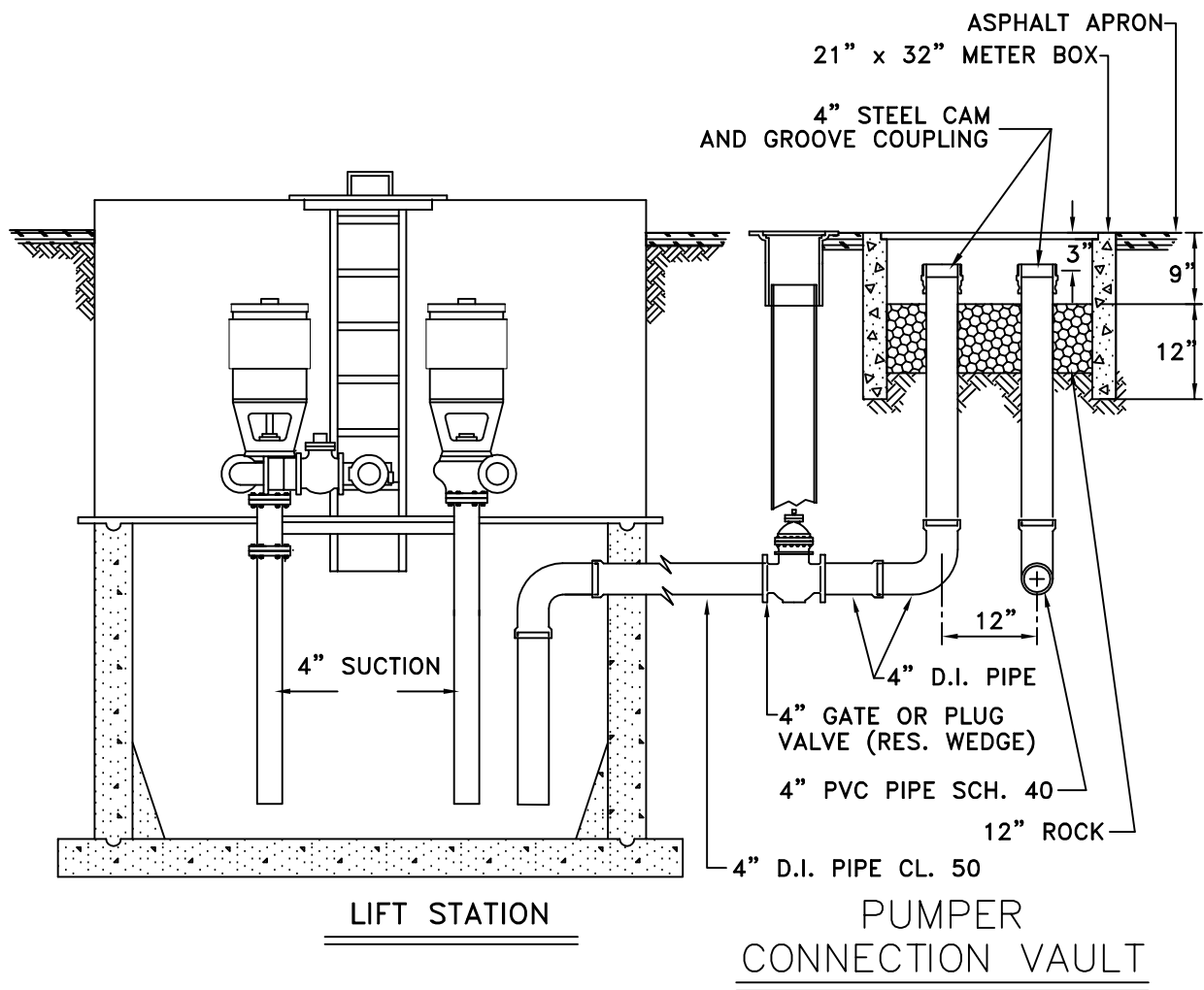
1. LOCATE AIR RELEASE ASSEMBLY IN SIDEWALK WHEN POSSIBLE.

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

FORCE MAIN AIR RELEASE ASSEMBLY



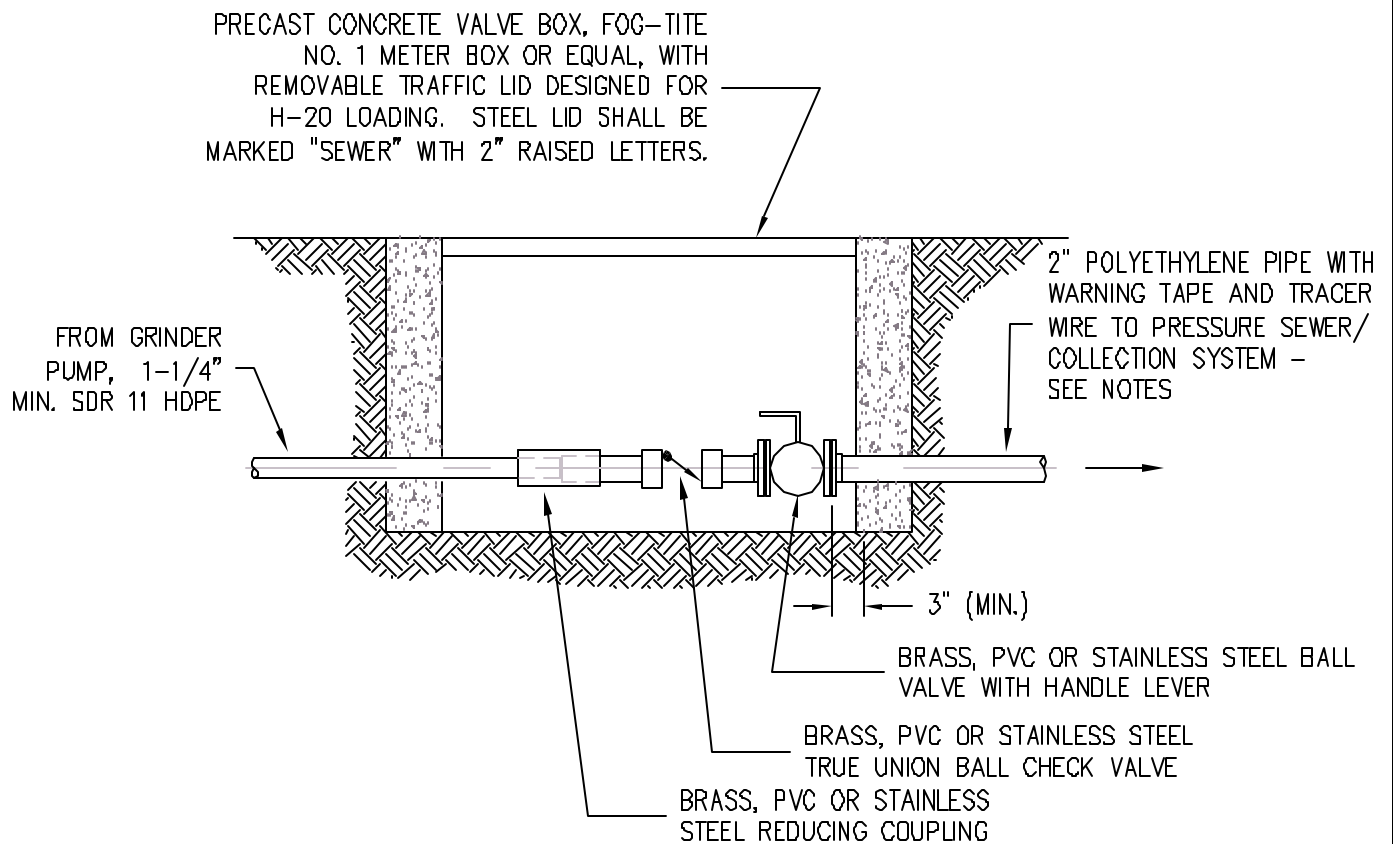
NOTE:
ENGINEER TO REVISE
PIPE SIZING AS REQUIRED
FOR SPECIFIC APPLICATIONS

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

LIFT STATION EMERGENCY BYPASS
CONNECTION

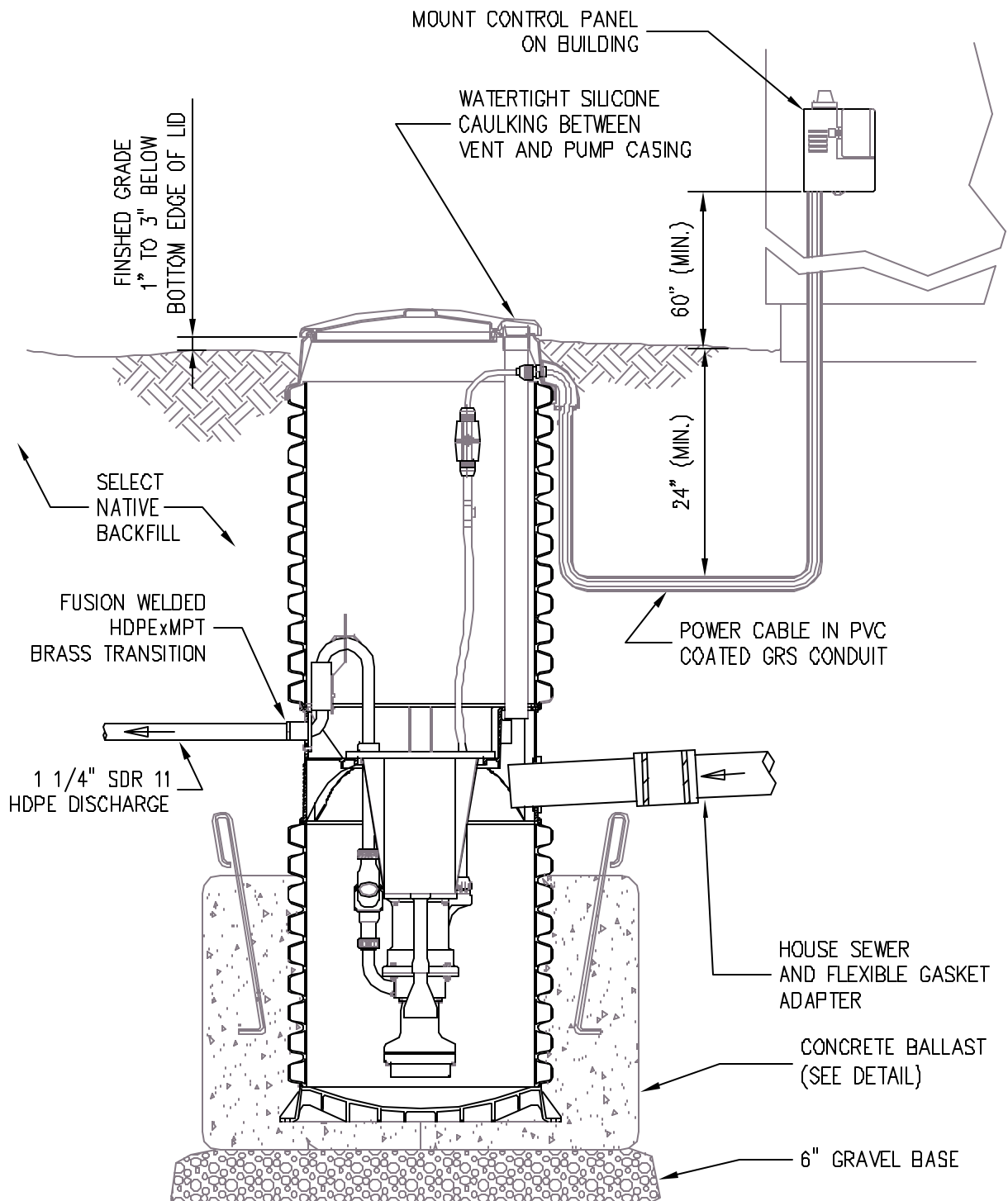


NOTES:
 CONNECTION TO THE FORCE MAIN SHALL BE BY FUSION WELDED SADDLE OR ROMAC SERVICE SADDLE WITH STAINLESS STEEL STRAPS. CONNECTION TO A 2-INCH FORCE MAIN MAY ALSO BE MADE BY A BRASS, COPPER, STAINLESS STEEL OR PVC SCH 40 COMPRESSION TEE AND FITTING.

City of Stanwood



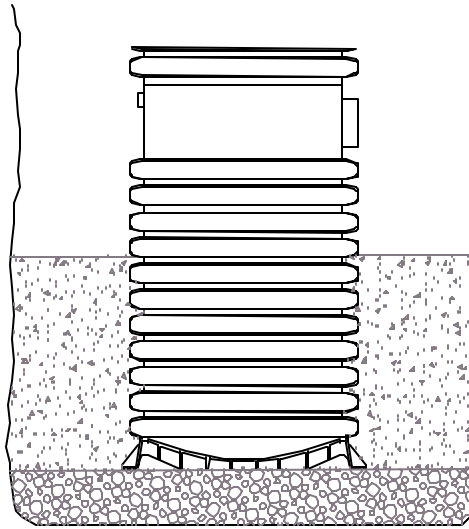
SEWER SYSTEM STANDARD DETAIL
 TYPICAL PRESSURE SEWER SERVICE DETAIL



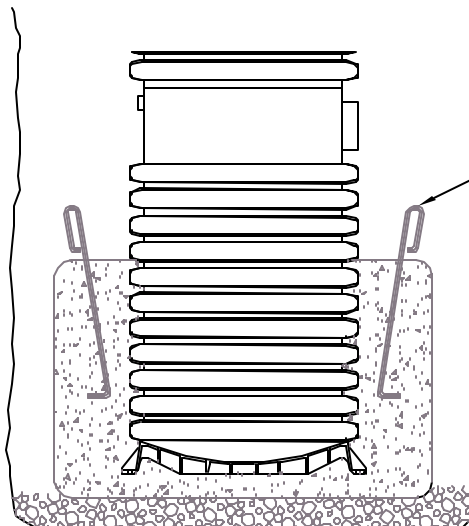
City of Stanwood



SEWER SYSTEM STANDARD DETAIL
TYPICAL E-1 GRINDER PUMP INSTALLATION



POURED IN PLACE



LIFTING EYES,
CONTRACTOR TO
SIZE AS REQUIRED

PRECAST

NOTES

1. THE FOLLOWING QUANTITIES OF CONCRETE ARE NECESSARY TO ANCHOR THE TANKS:
2. ENVIRONMENT ONE MODEL NO. 2010 REQUIRES 370 lbs. (2.5 CU.FT.) PER FOOT OF TOTAL STATION HEIGHT.
3. ENVIRONMENT ONE MODEL NO. 2012 REQUIRES 400 lbs. (2.7 CU.FT.) PLUS 370 lbs. FOR EACH FOOT OF TOTAL STATION HEIGHT.

City of Stanwood



SEWER SYSTEM STANDARD DETAIL

**GRINDER PUMP INSTALLATION
CONCRETE BALLAST**

1. ALL INTERCEPTORS SHALL BE SIZED ACCORDING TO THE UNIFORM PLUMBING CODE, APPENDIX IN EACH, OR OTHER ACCEPTABLE SIZING METHOD.
2. INTERCEPTOR SHALL BE A MINIMUM SIZE OF 500 GALLONS OF LIQUID CAPACITY. THE INLET COMPARTMENT SHALL HAVE 2/3 THE TOTAL CAPACITY OF THE INTERCEPTOR.
3. PLACE INTERCEPTOR IN LOCATION THAT ALLOWS FOR PUMP TRUCK MAINTENANCE ACCESS.
4. SANITARY SEWER SHALL BE CONVEYED BY A SEPARATE LINE DOWNSTREAM OF THE INTERCEPTOR. ONLY GRAY-WATER SHALL BE ROUTED THROUGH THE INTERCEPTOR.
5. INTERCEPTOR UNIT SHALL BE RATED FOR H20-44 AASHTO LOADING (CERTIFIED).
6. A CENTER MANHOLE IS REQUIRED IN SHALL HAVE STANDARD 24" BOLT DOWN LID.
7. SAMPLING TEE SHALL BE PLACED WITHIN 5' OF OUTLET OF THE VAULT.
8. POSITION ADJUSTMENT RINGS TO ALLOW FOR ACCESS AND ENTRY.
9. INTERCEPTOR SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS.
10. CENTER MANHOLE MUST BE CENTERED OVER THE CROSSOVER TEE.

SIZING CALCULATION

$$\text{NUMBER OF MEALS PER PEAK HOUR} \times \text{WASTE FLOW RATE} \times \text{RETENTION TIME} \times \text{STORAGE FACTOR} = \text{CAPACITY IN GALLONS}$$

Waste Flow Rate

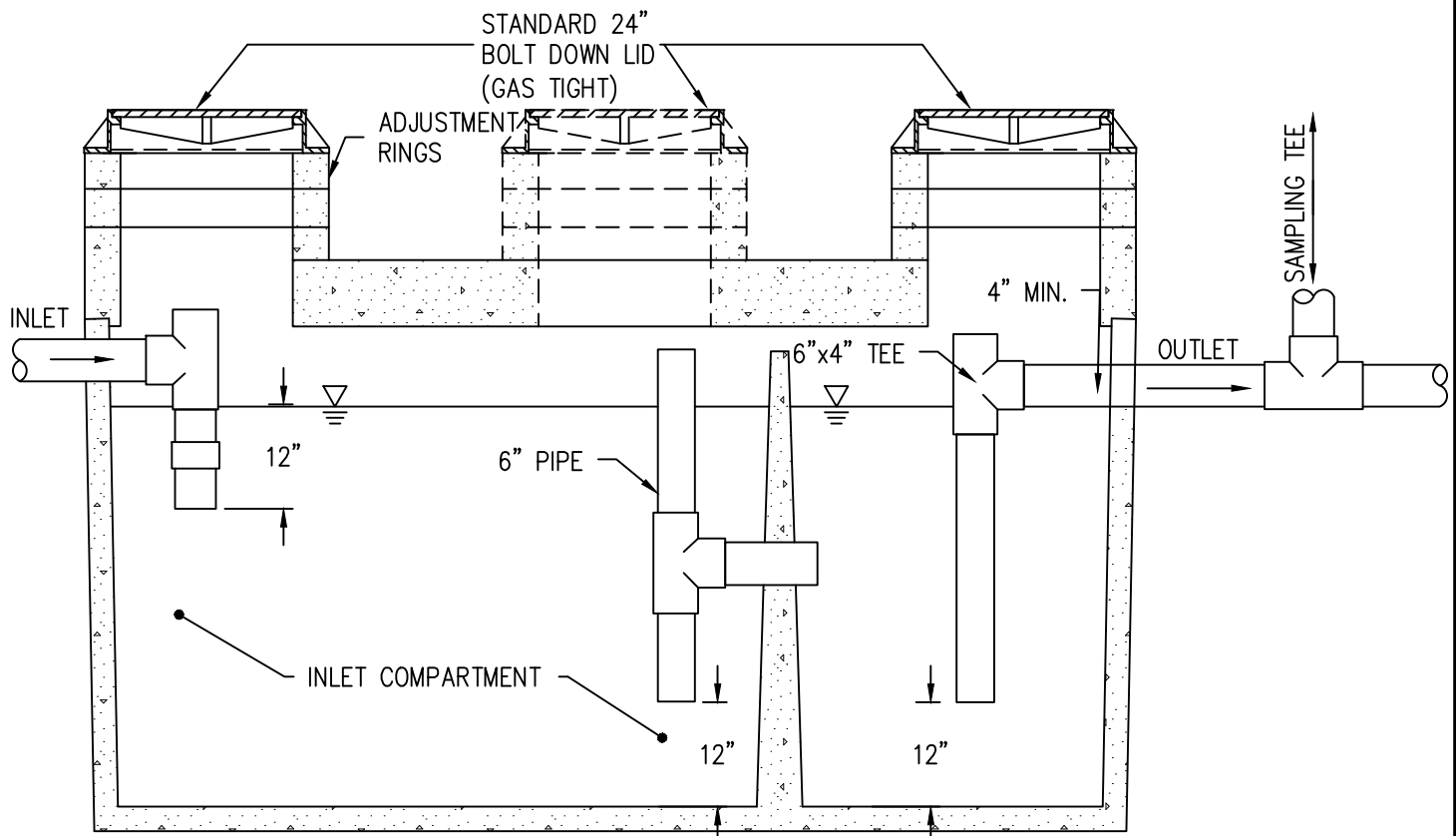
With dishwasher.....	6 gallon
Without dishwasher.....	5 gallon
Single service kitchen.....	2 gallon
Food waste disposer.....	1 gallon

Retention Times

Commercial kitchen waste dishwasher.....	2.5 hours
Single service kitchen single serving.....	1.5 hours

Storage factors

Fully equipped commercial kitchen, 8 hour operation.....	1
Fully equipped commercial kitchen, 16 hour operation.....	2
Fully equipped commercial kitchen, 24 hour operation.....	3
Single service kitchen.....	1.5



City of Stanwood



SEWER SYSTEM STANDARD DETAIL

GREASE INTERCEPTOR

File:STADETS11 Revised:Dec. 12, 2013 Printed:Jan. 10, 2014

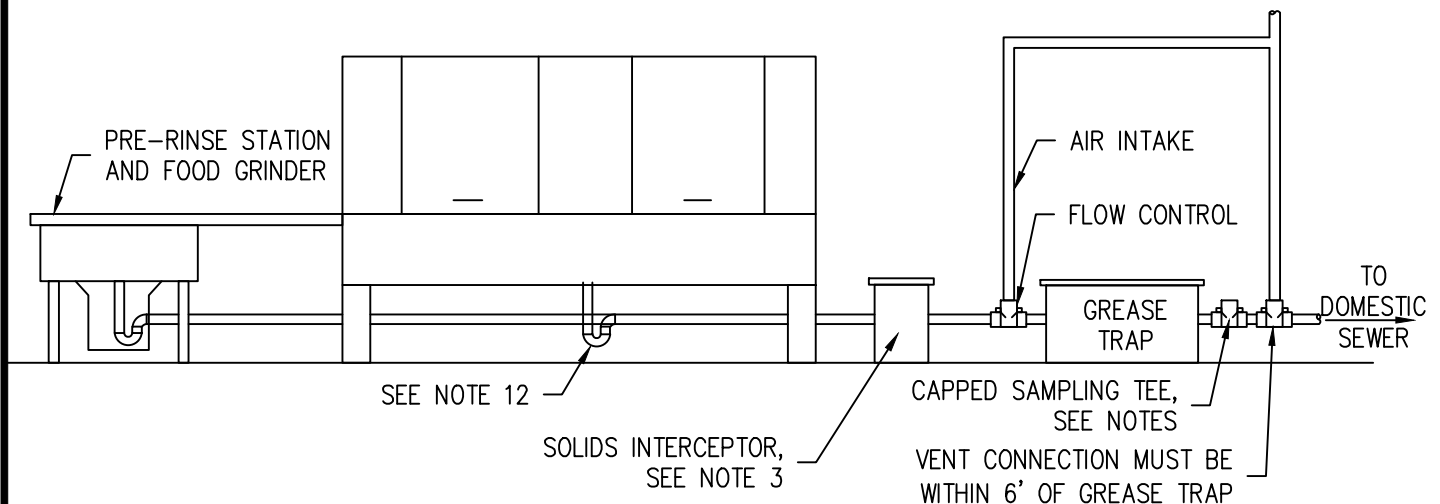
DRAWING NO.

S-11

NOTES:

1. GREASE TRAPS INSTALLED IN LIEU OF EXTERNAL INTERCEPTORS ARE ONLY ALLOWED WITH WRITTEN PERMISSION OF THE PUBLIC WORKS DIRECTOR.
2. ALL TRAPS WILL BE APPROPRIATELY SIZED TO THE UNIFORM PLUMBING CODE OR OTHER ACCEPTABLE METHOD.
3. TRAPS WILL HAVE A SOLIDS INTERCEPTOR INSTALLED PRIOR TO THE FLOW CONTROL DEVICE IF A GARBAGE DISPOSAL IS CONNECTED.
4. EACH PLUMBING FIXTURE CONNECTED TO A GREASE TRAP SHALL BE PROVIDED WITH AN APPROVED TYPE OF VENTED FLOW CONTROL LOCATED IN A READILY ACCESSIBLE AND VISIBLE PLACE.
5. FOOD WASTE DISPOSALS MUST BE CONNECTED TO THE GREASE TRAP.
6. ONLY 'GRAY WATER' SHALL BE CONVEYED TO THE TRAP. DOMESTIC (SANITARY) WATER SHALL BE CONVEYED BY A SEPARATE LINE DOWNSTREAM OF THE TRAP.
7. ALL WASTE SHALL ENTER THE TRAP THROUGH AN INLET PIPE ONLY.
8. DISHWASHER WASTE MUST NOT PASS THROUGH THE TRAP.
9. NOT MORE THAN FOUR (4) SEPARATE FIXTURES SHALL BE CONNECTED TO OR DISCHARGE INTO ANY ONE GREASE TRAP.
10. PLACE THE TRAP IN A LOCATION THAT ALLOWS FOR MAINTENANCE. TOP CLEARANCE SHALL PROVIDE TWO TIMES THE PHYSICAL DEPTH.
11. SAMPLING TEE MUST BE LOCATED IN AN ACCESSIBLE LOCATION DOWNSTREAM OF THE TRAP.
12. IF A SOLIDS INTERCEPTOR IS NOT REQUIRED, A WATER SEAL MUST BE PROVIDED BETWEEN GREASE TRAP AND FIXTURES.

Total of Fixtures Connected	Required Rate of Flow per Minute, gallons	Grease Retention Capacity, pounds
1	20	40
2	25	50
3	35	70
4	50	100



City of Stanwood



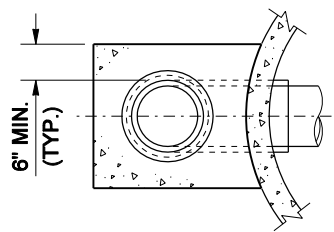
SEWER SYSTEM STANDARD DETAIL

INDOOR GREASE TRAP

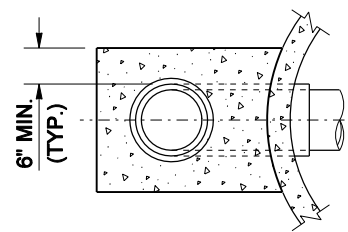
File:STADETS12 Revised: Dec. 12, 2013 Printed: Jan. 10, 2014

DRAWING NO.

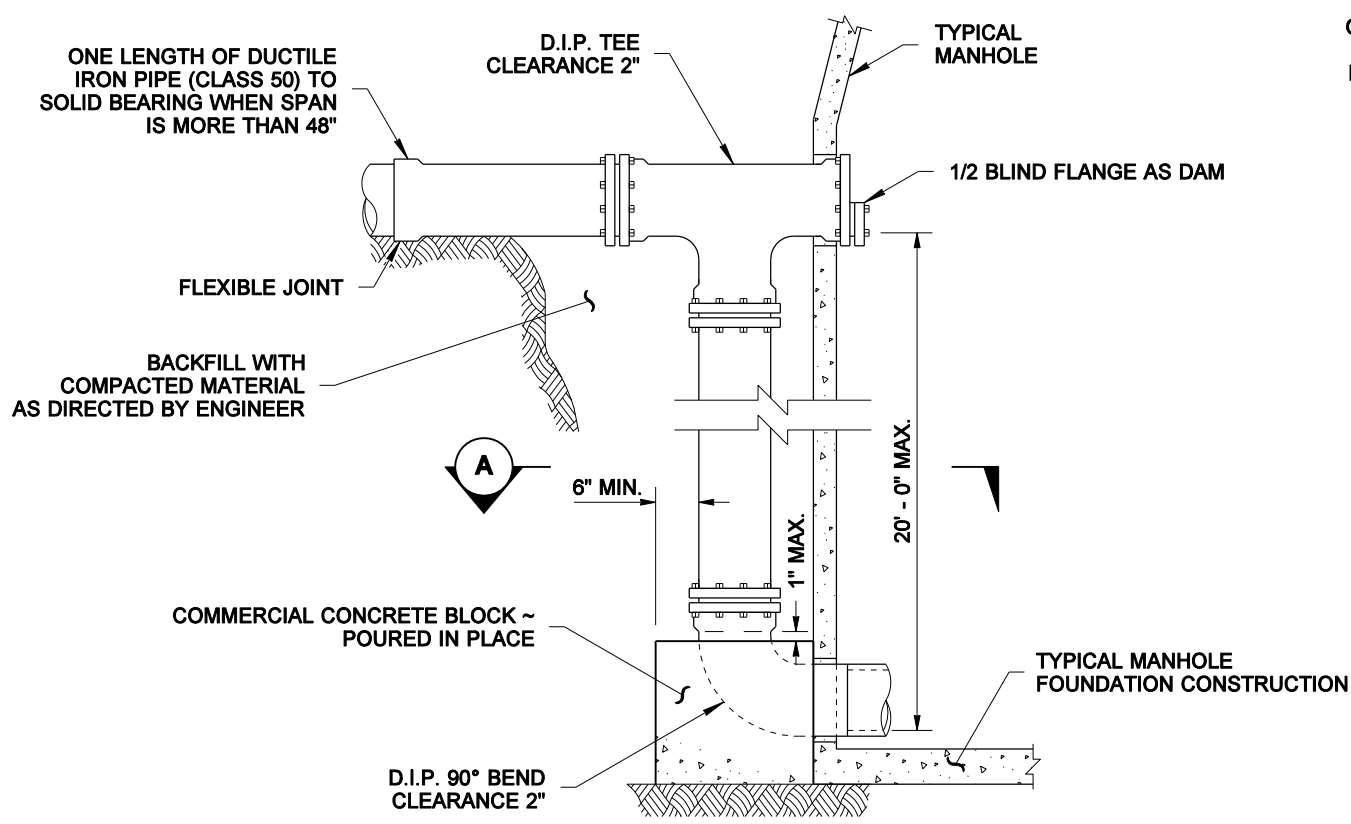
S-12



SECTION A

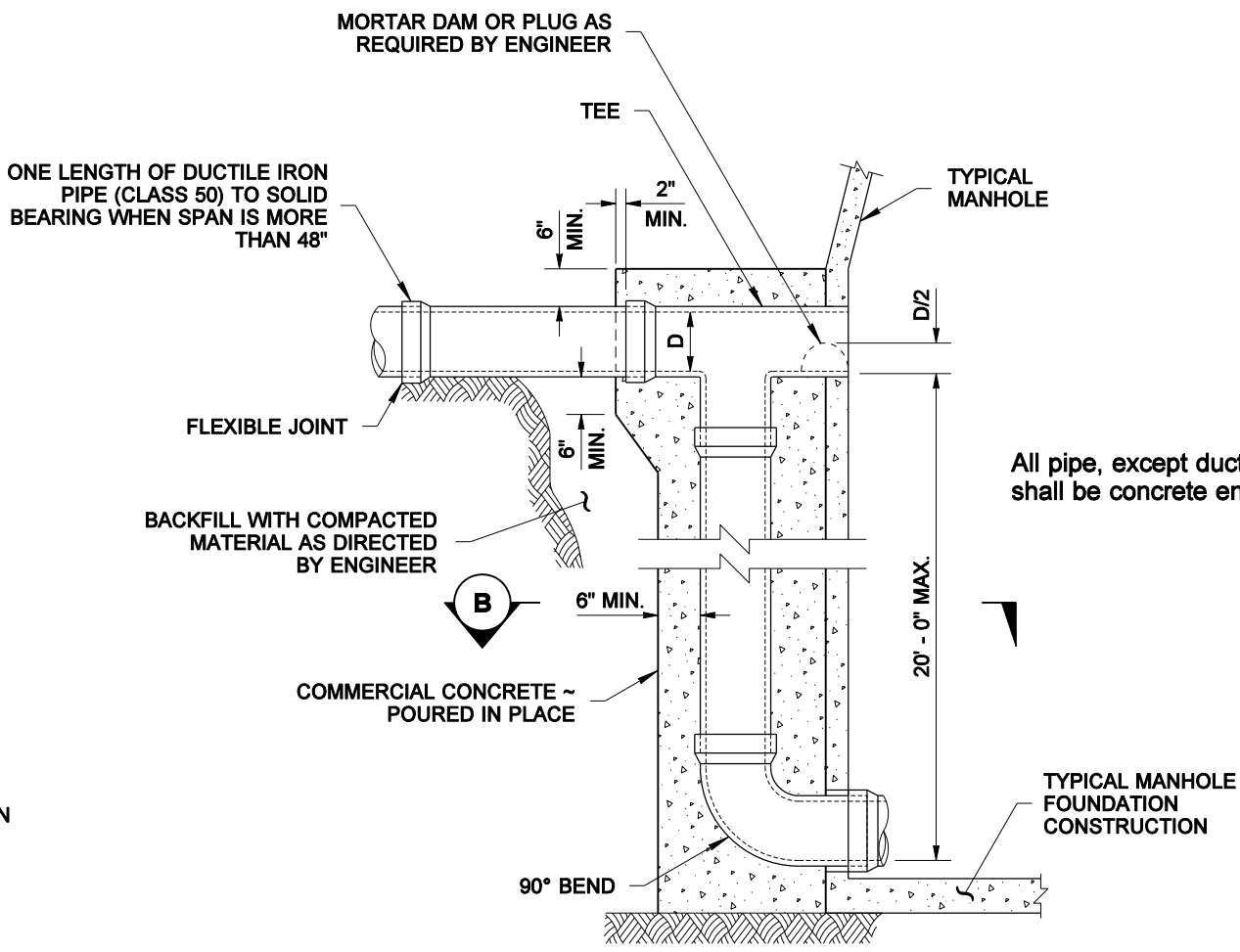


SECTION B



ELEVATION

DUCTILE IRON
DROP CONNECTION



ELEVATION

CONCRETE ENCASED
DROP CONNECTION

All pipe, except ductile iron pipe,
shall be concrete encased.

FOR SANITARY SEWER USE



EXPIRES JULY 1, 2009

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DROP CONNECTIONS

STANDARD PLAN B-85.50-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III

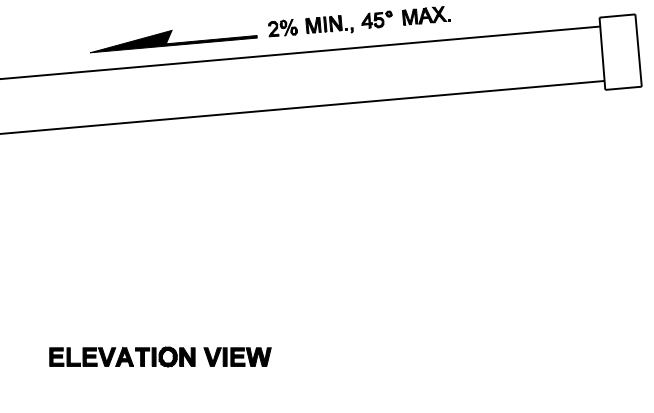
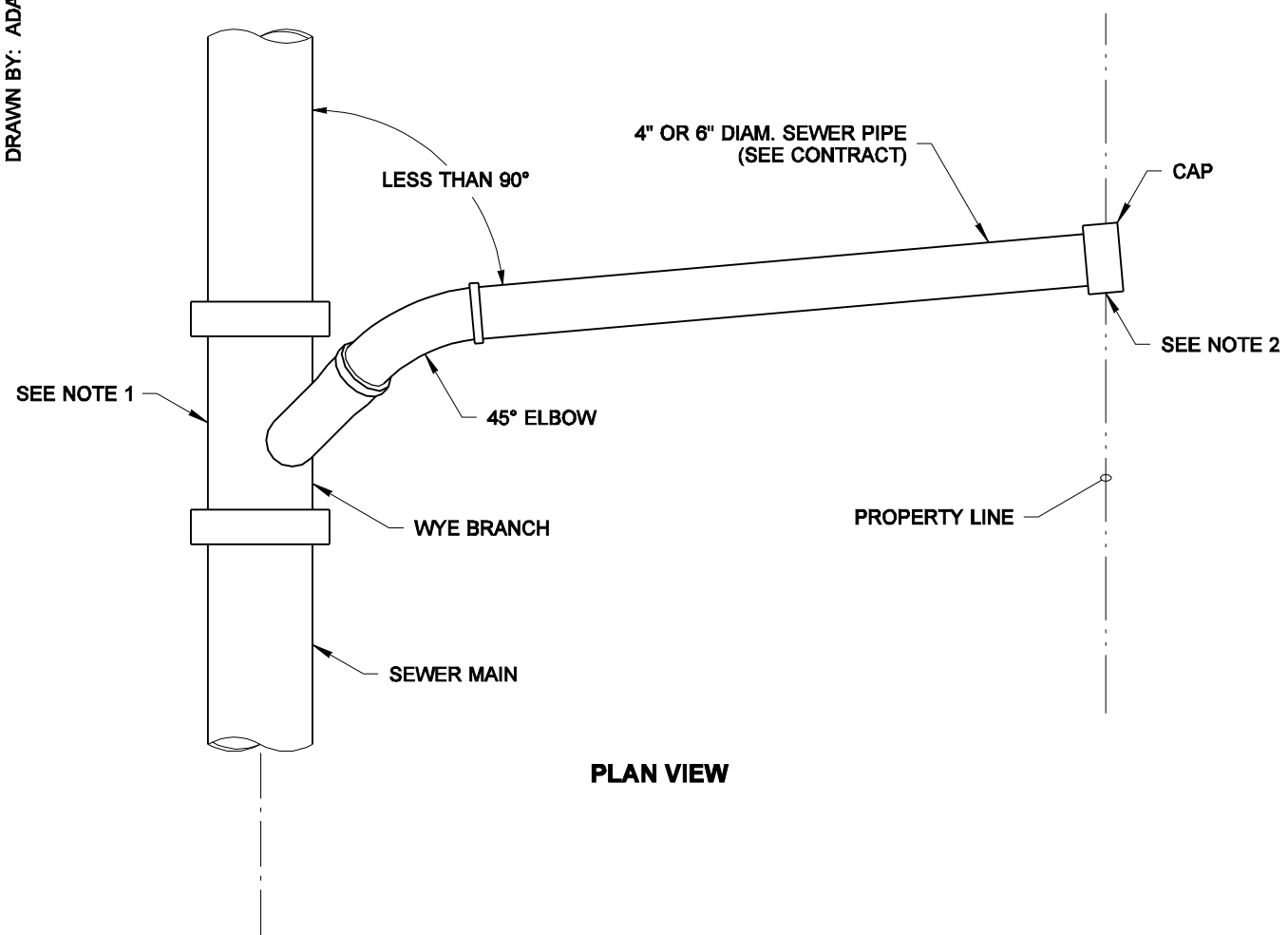
STATE DESIGN ENGINEER

06-10-08

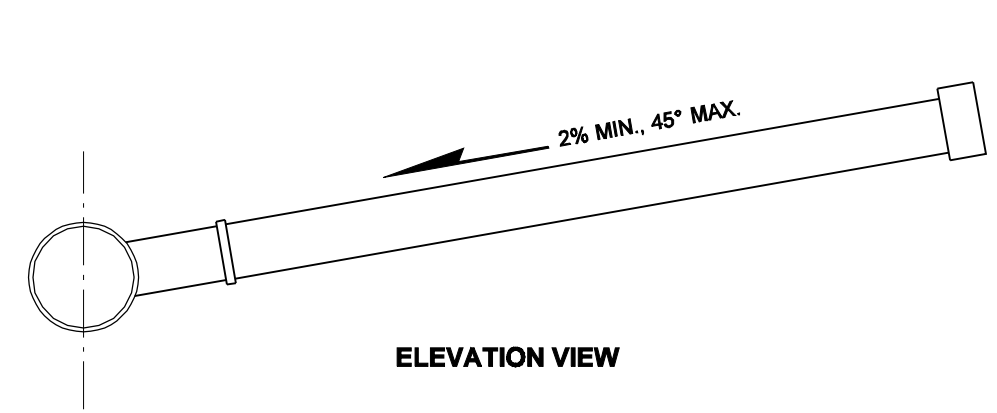
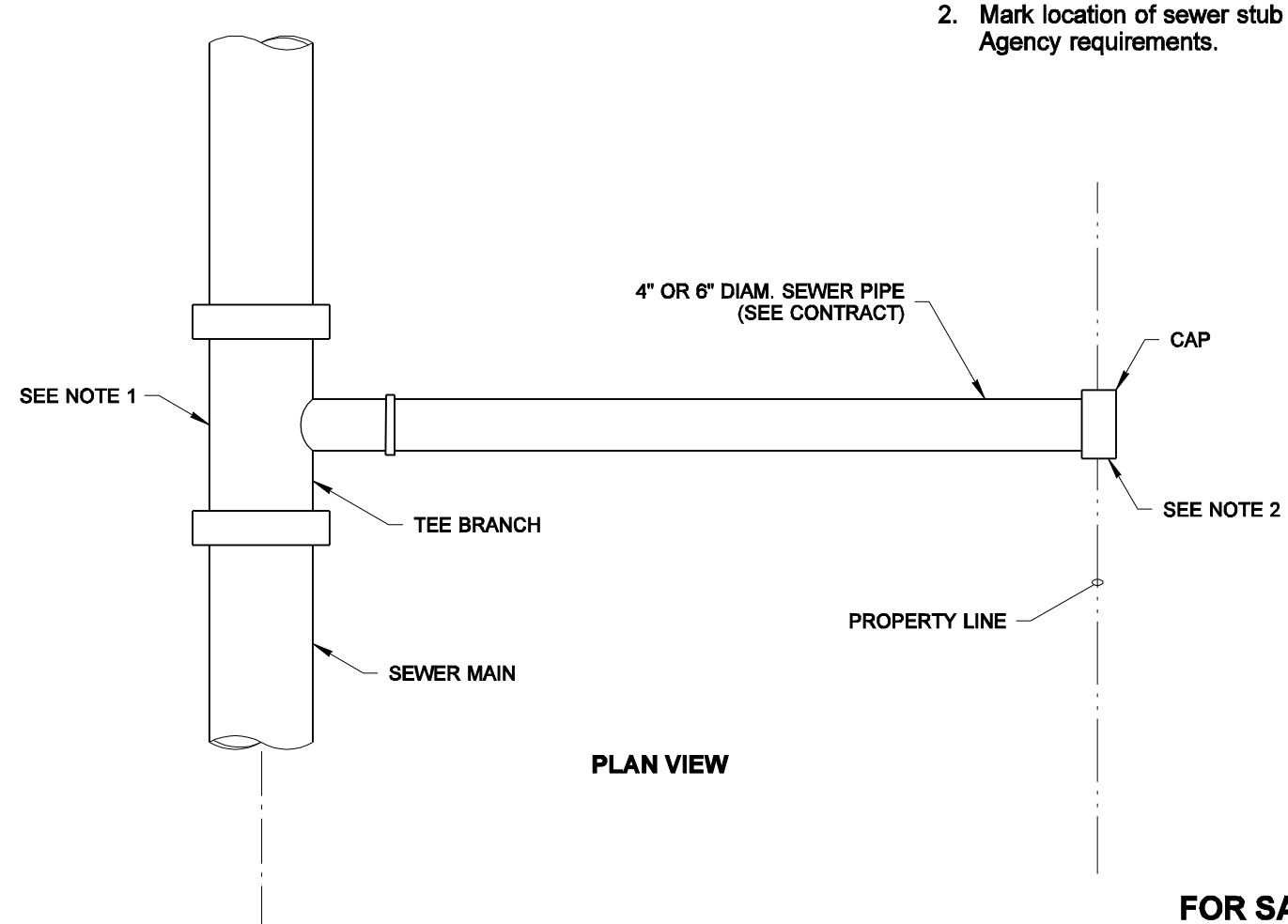
DATE



Washington State Department of Transportation



WYE CONNECTION



TEE CONNECTION

NOTES

1. Install sewer saddle with gasket and stainless steel clamps for connection to existing sewers. Install wye or tee sewer fitting with gaskets for new sewer installations.
2. Mark location of sewer stub in accordance with Contracting Agency requirements.

FOR SANITARY SEWER USE



EXPIRES JULY 1, 2007

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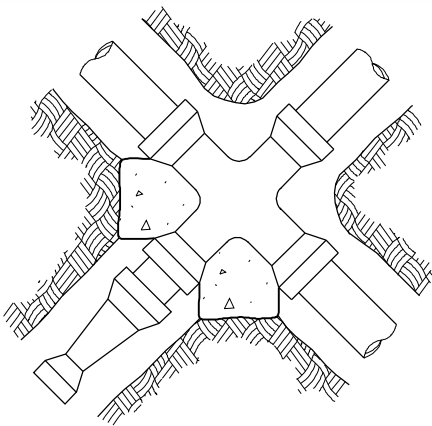
SIDE SEWER CONNECTION
STANDARD PLAN B-85.20-00

SHEET 1 OF 1 SHEET

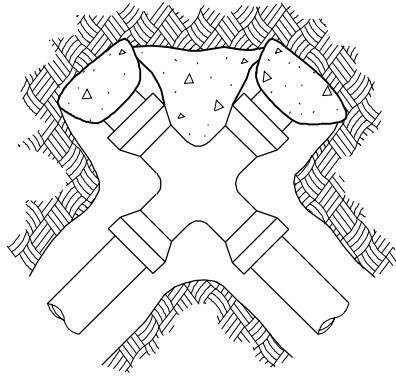
APPROVED FOR PUBLICATION

Harold J. Peterfeso 06-01-06
STATE DESIGN ENGINEER DATE

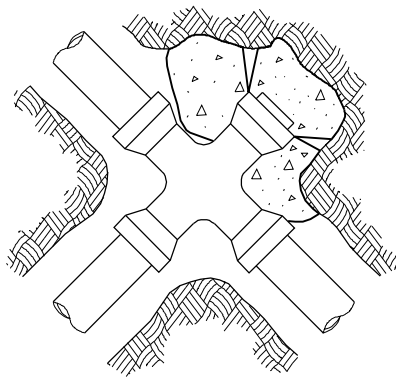




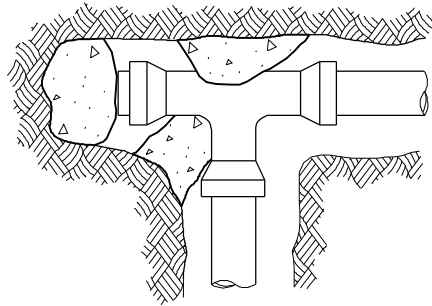
PLAN VIEW
UNBALANCED CROSS
(USE COLUMN A)



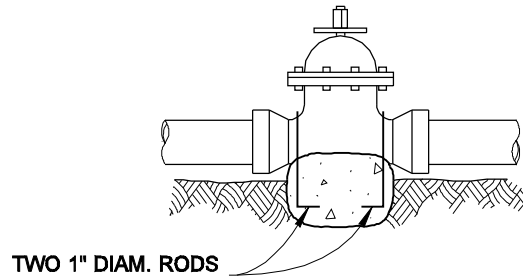
PLAN VIEW
PLUGGED CROSS
(USE COLUMN B)



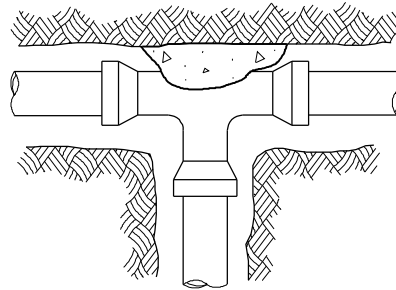
PLAN VIEW
PLUGGED CROSS
(USE COLUMN A)



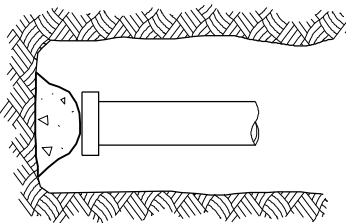
PLAN VIEW
PLUGGED TEE
(USE COLUMN B)



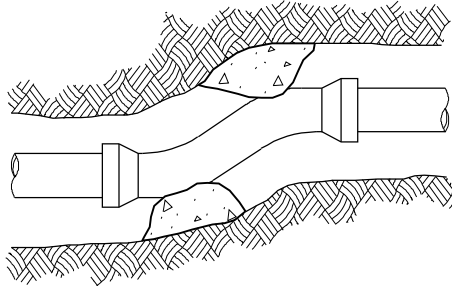
TWO 1" DIAM. RODS
(SEE NOTE 4)
PROFILE VIEW
VALVE
(USE COLUMN A)



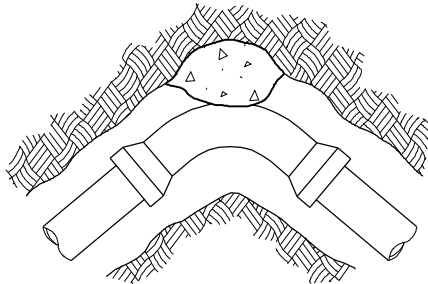
PLAN VIEW
TEE



PLAN VIEW
DEAD END



OFFSET
(USE COLUMNS B ~ E)



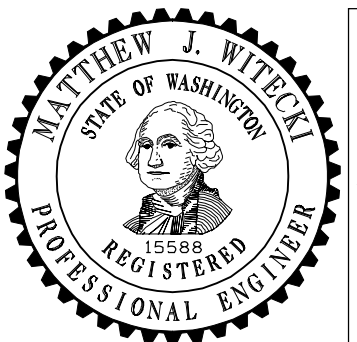
BEND

NOTES

- Contractor to provide blocking adequate to withstand full test pressure.
- Divide thrust by safe bearing load to determine required area (in square feet) of concrete to distribute load.
- Areas to be adjusted for other pressure conditions.
- Provide two 1" minimum diameter rods on valves up through 10" diameter. Valves larger than 10" require special tie rod design.

SIZE	TEST PRESSURE (PSI)	THRUST AT FITTINGS IN POUNDS				
		A TEE AND DEAD ENDS	B 90° BEND	C 45° BEND	D 22.5° BEND	E 11.25° BEND
4"	250	3,140	4,440	2,405	1,225	615
6"	250	7,070	9,995	5,410	2,760	1,385
8"	250	12,565	17,770	9,620	4,905	2,465
10"	250	19,635	27,770	15,030	7,660	3,850
12"	250	28,275	39,985	21,640	11,030	5,545
14"	250	38,485	54,425	29,455	15,015	7,545
16"	250	50,265	71,085	38,470	19,615	9,855

SOIL TYPE	SAFE BEARING LOAD (PSF)
MUCK, PEAT, ETC.	0
SOFT CLAY	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000



EXPIRES JULY 1, 2007

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CONCRETE THRUST BLOCK

STANDARD PLAN B-90.40-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

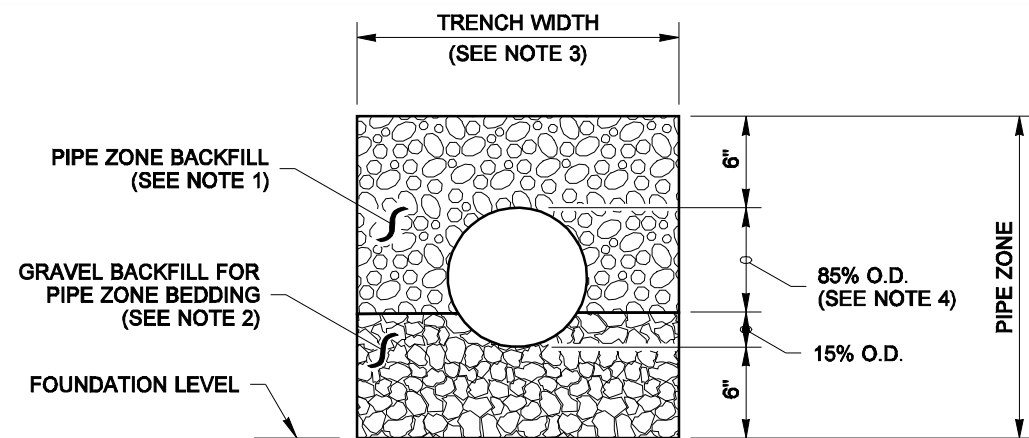
Harold J. Peterfeso **06-08-06**

STATE DESIGN ENGINEER

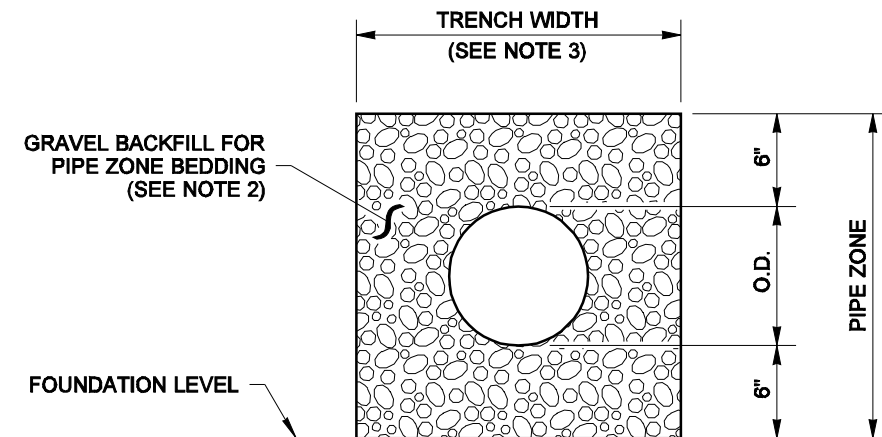
DATE



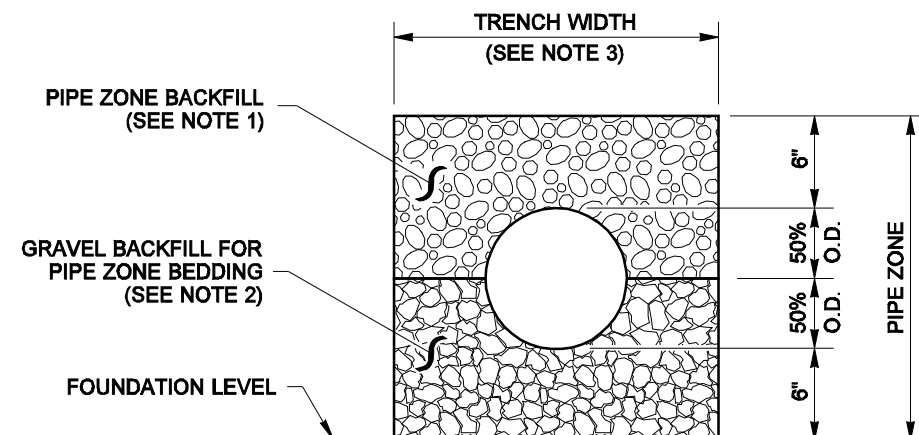
Washington State Department of Transportation



CONCRETE AND DUCTILE IRON PIPE



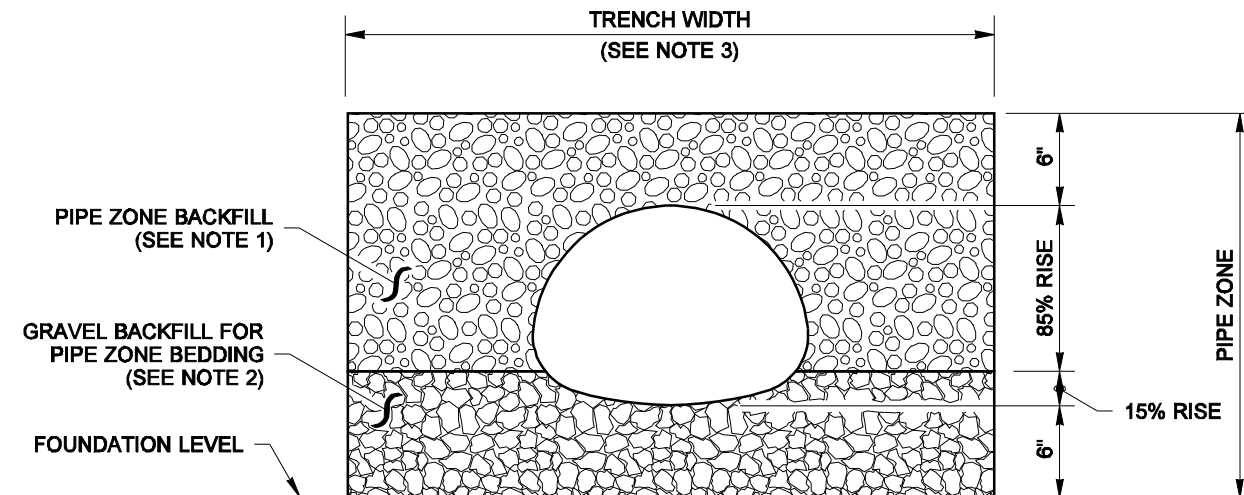
THERMOPLASTIC PIPE



METAL PIPE

NOTES

1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. /2
	102" to 180"	48"
PIPE ARCH (SPAN) METAL ONLY	18" to 36"	12"
	43" to 142"	SPAN /3
	148" to 200"	48"



EXPIRES JULY 1, 2007

PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso **06-01-06**

STATE DESIGN ENGINEER

DATE

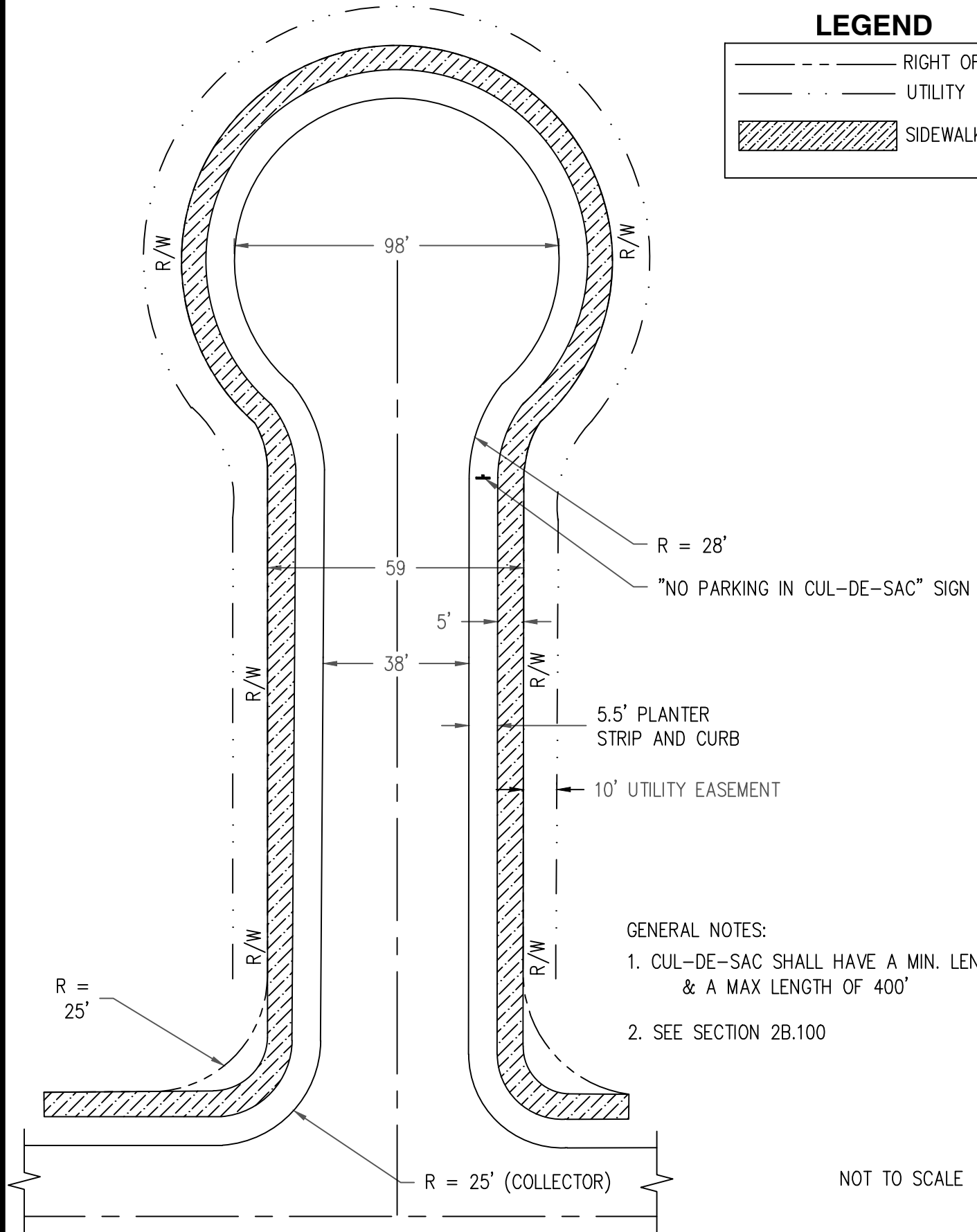


Washington State Department of Transportation

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LEGEND

— — — — —	RIGHT OF WAY
— . . . —	UTILITY
	SIDEWALK



GENERAL NOTES:

1. CUL-DE-SAC SHALL HAVE A MIN. LENGTH OF 50' & A MAX LENGTH OF 400'
2. SEE SECTION 2B.100

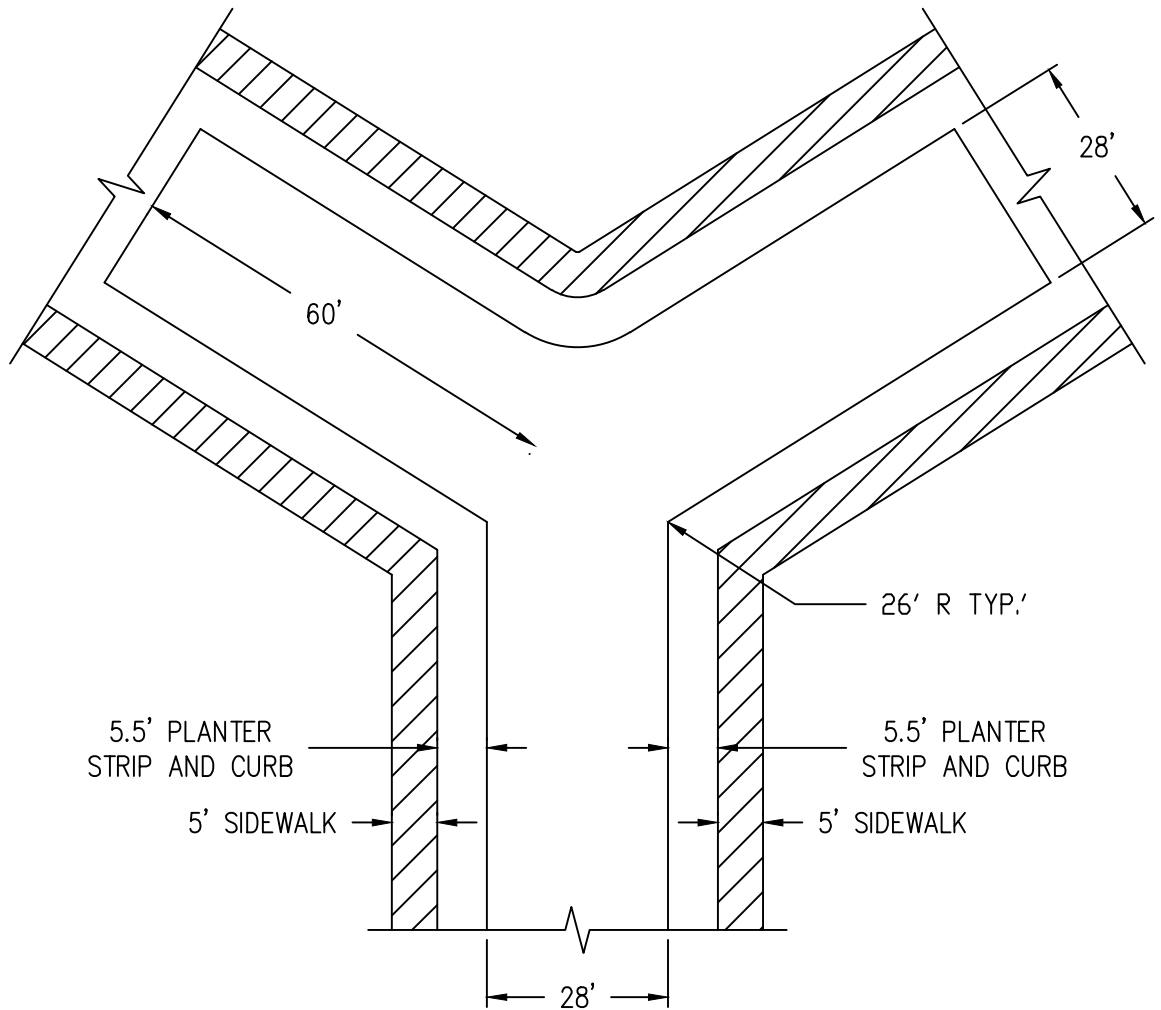
NOT TO SCALE

City of Stanwood



TRANSPORTATION STANDARD DETAIL

TYPICAL CUL-DE-SAC

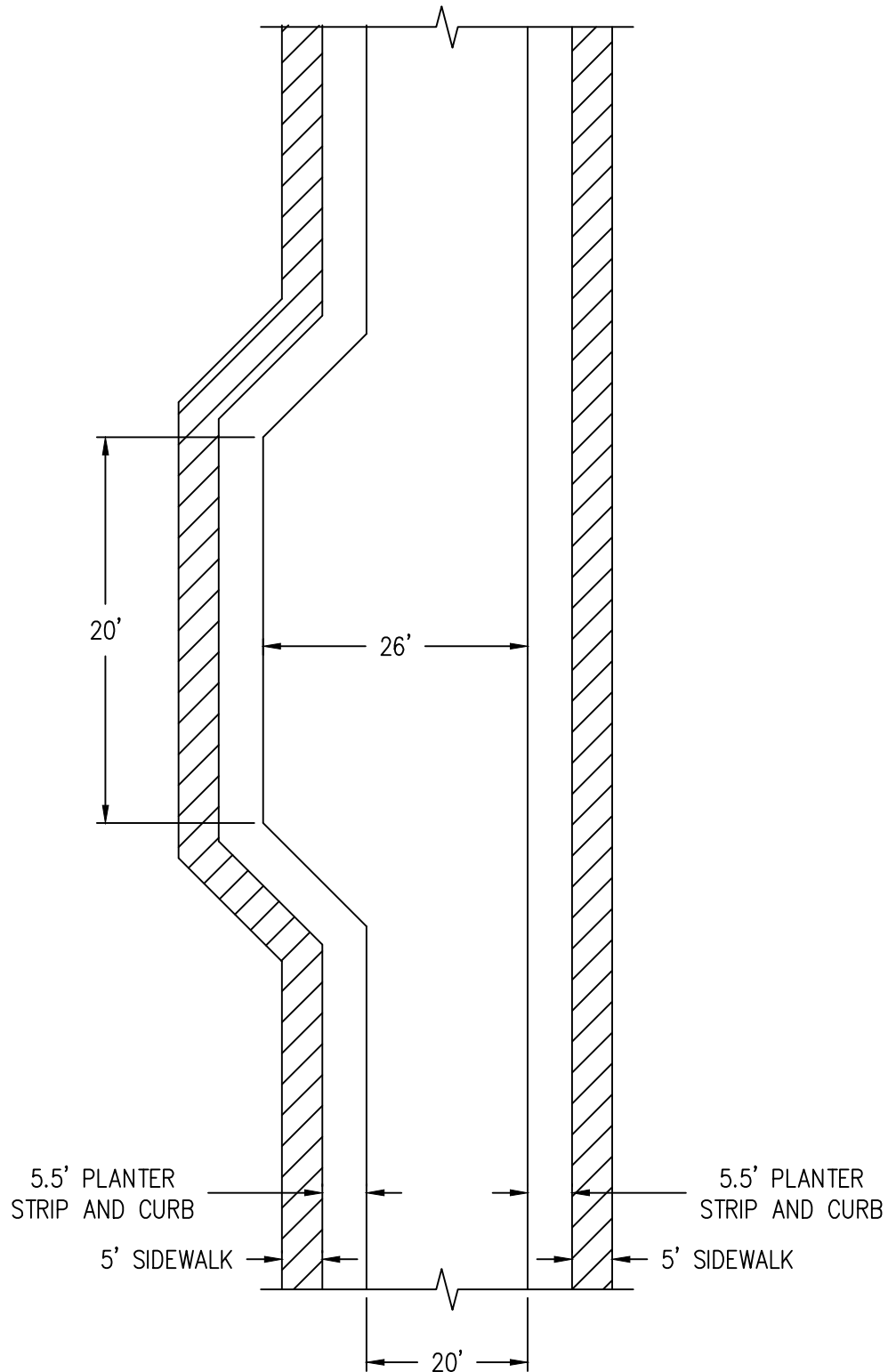


City of Stanwood



TRANSPORTATION STANDARD DETAIL

60 - FOOT "Y"

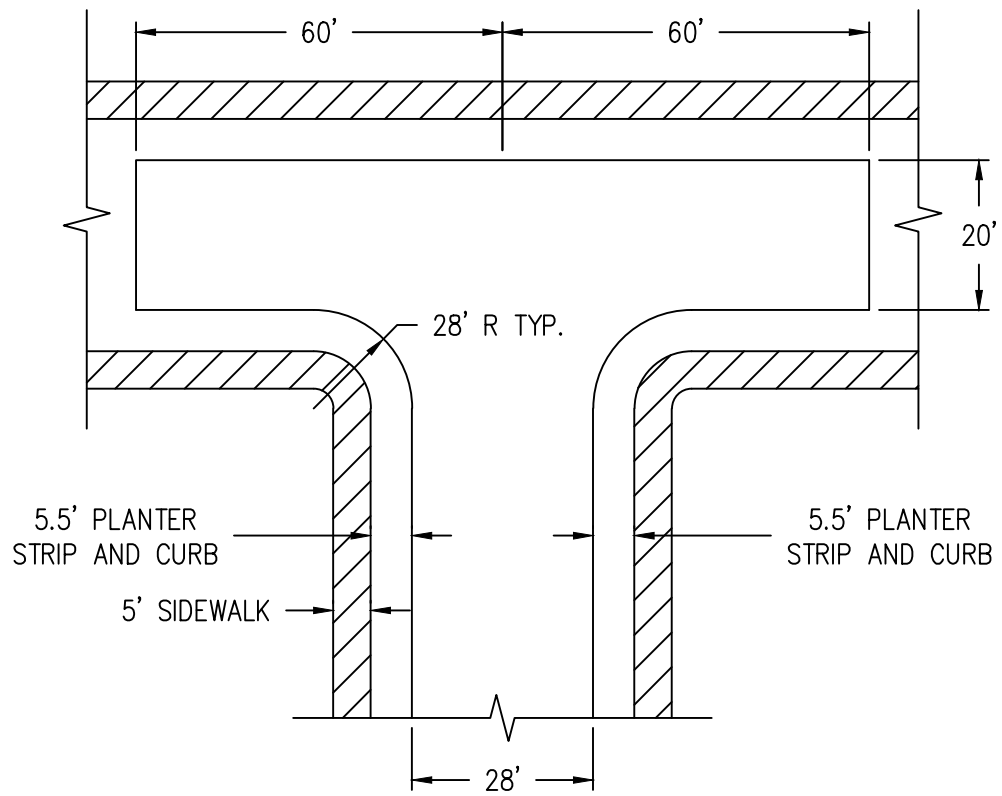


City of Stanwood



TRANSPORTATION STANDARD DETAIL

MINIMUM CLEARANCE
AROUND A FIRE HYDRANT



City of Stanwood



TRANSPORTATION STANDARD DETAIL

120' HAMMERHEAD

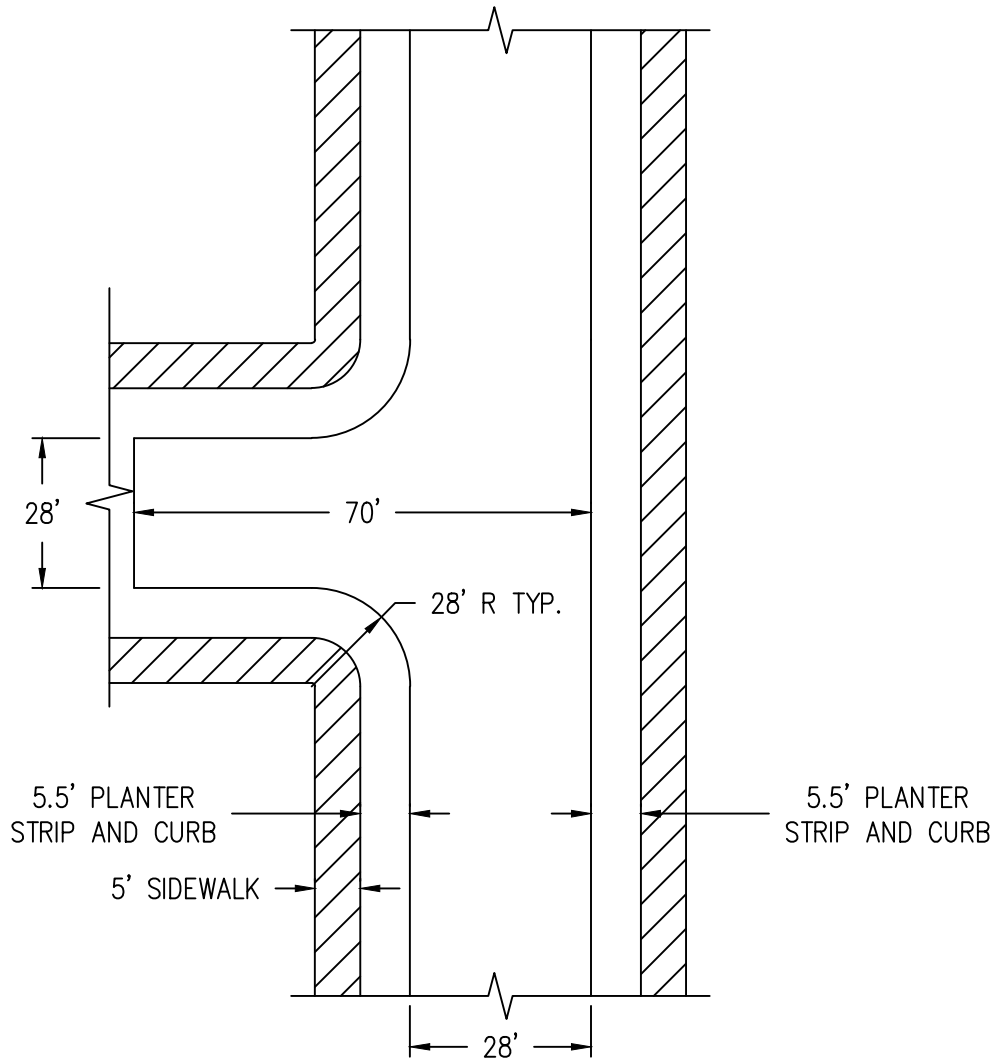
File:STADETT26

Revised: Mar 21, 2023

Printed: FEB 3, 2023

DRAWING NO.

T-26



City of Stanwood



TRANSPORTATION STANDARD DETAIL

ACCEPTABLE ALTERNATIVE
TO 120' HAMMERHEAD

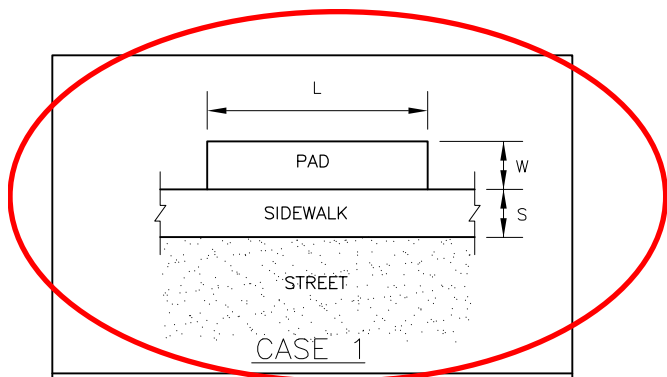
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Revised: Mar 21, 2023

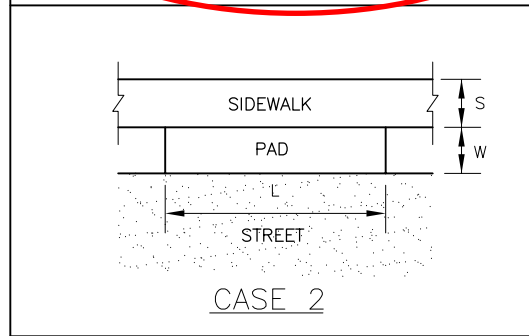
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DRAWING NO.

T-27



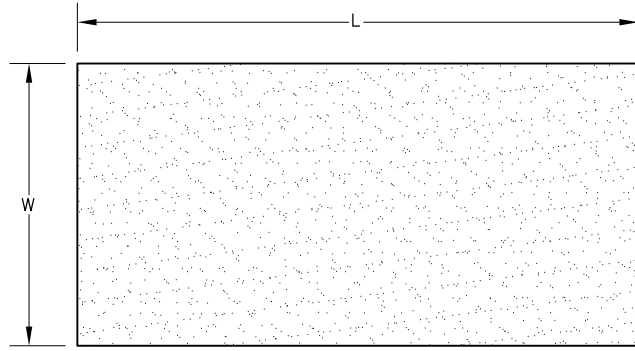
CASE 1



CASE 2

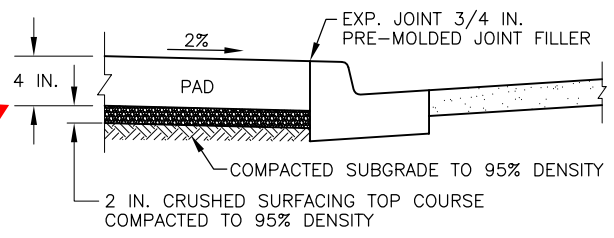
Minimum 4 inches, preference is 6 inches

L = 10 ft

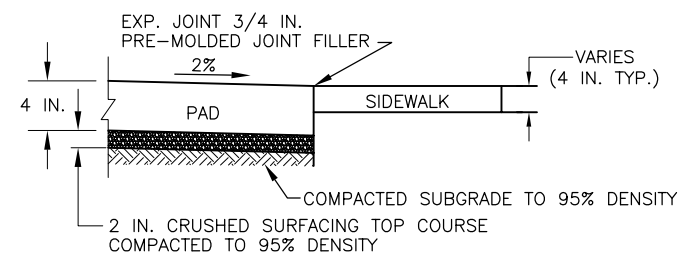


W = 4 ft

CONCRETE PAD PLAN VIEW



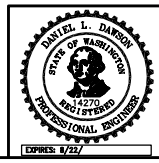
CONCRETE PAD/CURB CROSS SECTION



CONCRETE PAD/SIDEWALK CROSS SECTION

GENERAL NOTES:

1. ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH SNOHOMISH COUNTY STANDARDS. CLEARING AND GRUBBING LIMITS SHALL BE EQUAL TO THE SHELTER PAD WIDTH + 5FT, AND SHELTER PAD LENGTH + 5FT.
2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH DOE, WSF&W, AND SNOHOMISH COUNTY EROSION CONTROL REQUIREMENTS. SILT FENCES SHALL BE INSTALLED AROUND THE PERIMETER OF THE CLEARING AND GRUBBING LIMITS WHEN EXISTING GRADES ARE OVER 10%.
3. AFTER THE CONCRETE SHELTER HAS BEEN CONSTRUCTED, EXPOSED SOIL SHALL BE HAND SEEDING AND STABILIZED.
4. THE CONTRACTOR SHALL CONSTRUCT THE SPECIFIED SHELTER PAD AS STAKED BY THE COMMUNITY TRANSIT REPRESENTATIVE. THE COMMUNITY TRANSIT REPRESENTATIVE WILL ONLY BE REQUIRED TO STAKE THE SHELTER CENTERLINE (C).
5. THE CONCRETE SHELTER PAD SHALL BE CONSTRUCTED OUT OF 3,000 PSI CONCRETE. THE CONCRETE SHELTER PAD SHALL BE SLOPED 2% TOWARDS THE STREET. THE CONCRETE SHELTER PAD SHALL HAVE A LIGHT BROOM FINISH.
6. ALL EDGES AND JOINTS ARE TO BE EDGED WITH 1/4 IN. RADIUS.
7. FOR DIMENSIONS S,W&L AND SHELTER LOCATION ON PAD SEE PROJECT SPECIFICATIONS.
8. FOR SHELTER INSTALLATION ON EXISTING CONCRETE PAD THE CONCRETE SHALL BE IN SOUND CONDITION AND BE A MINIMUM OF 3 1/2" THICK.
9. ANCHOR BOLTS SHALL BE ITW, RED HEAD, TRU BOLT, 1/2"Øx1 7/8" EMBEDMENT DEPTH IN 304SS. (OR EQUAL) INSTALL (4) ANCHOR BOLTS PER SUPPORT POST.
10. ANCHOR BOLTS SHALL BE PLACED NOT CLOSER THAN 9IN. TO EDGE OF SLAB.



DESIGNED BY:
DAN DAWSON
DRAWN BY:
JEFF FRYE
DATE
APRIL 9, 2007

CONCRETE BUS
SHELTER PAD



STD. PLAN P-1