

**CONTRACT AND BONDS DOCUMENTS
FOR W. HAYES STREET IMPROVEMENTS PROJECT**

**PUBLIC WORKS DEPARTMENT
CITY OF WOODBURN, OREGON**



W. HAYES STREET IMPROVEMENTS PROJECT

BID NUMBER:	2022-07
PROJECT NUMBER:	2015-001-20
BID OPENING DATE:	April 27, 2022
BID OPENING TIME:	2:00 PM
SUBSTANTIALLY COMPLETION DATE:	April 30, 2023
COMPLETION DATE	June 30, 2023

**WEST HAYES STREET
IMPROVEMENTS PROJECT
BID DOCUMENTS
MARCH 2022**



**These Documents are the Property of the City of
Woodburn**

**190 Garfield Street
Woodburn, OR 97071
(503) 982-5240**

**CONTRACT AND BONDS
FOR SEWER MAIN
CONSTRUCTION**

W. HAYES STREET IMPROVEMENTS PROJECT

**PROJECT No. 2015-001-20
BID NO. 2022-07**

**CITY OF WOODBURN
PUBLIC WORKS DEPARTMENT
WOODBURN, OREGON**

ERIC SWENSON	MAYOR
DEBBIE CABRALES	COUNCIL WARD 1
ALI SWANSON	COUNCIL WARD 2
ROBERT CARNEY	COUNCIL WARD 3
SHARON SCHAUB	COUNCIL WARD 4
MARY BETH CORNWELL	COUNCIL WARD 5
BEN PUENTE JR.	COUNCIL WARD 6

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INVITATION TO BID

By the
CITY OF WOODBURN
for
W. HAYES STREET IMPROVEMENTS PROJECT

PROJECT No. 2015-001-20
BID No. 2022-07

Sealed bids for the construction of **“W. Hayes Street Improvements Project”** will be received by the City of Woodburn, OR at City Hall Annex, 190 Garfield St. until **2:00 PM, Wednesday, April 27, 2022** and will thereafter be publicly opened and read.

Proposals shall be addressed to the Public Works Director, City of Woodburn, and 190 Garfield St., Woodburn, OR 97071. Bids shall be submitted in a plain sealed envelope bearing the Bidder's name, the name of the project and the date and time of the Bid opening, and shall be marked "**Bid No. 2022-07**" and bidders shall indicate on the Form of Proposal that ***“Bidder will comply with the provisions of Chapter 279C.800 through 279C.870, Oregon Revised Statutes”***.

The major items of work are estimated (approximate) quantities as follows:

1. Street reconstruction, 3,434 tons of asphaltic concrete, 4,455 cubic yards of aggregate base, 6,421 foot of concrete curb.
2. Sidewalk and driveway reconstruction, 36,833 square feet of concrete.
3. Traffic Signal with Intelligent Transportation System Technology
4. Rectangular Rapid Flashing Beacon
5. Street lighting
6. Storm drainage improvements, 2,442 LF of different pipe sizes and materials, 22 concrete inlets, six 48” concrete manholes, one bioretention pond.

Plans and specifications may be examined at the City Engineer's Office, City Hall Woodburn, OR on or after **Friday, March 25, 2022.** Copies of the Bid Documents may be obtained from the City Engineer's Office upon deposit of a non-refundable fee of fifty dollars (\$50.00) for each set. Additionally, electronic plan sets are available for viewing and downloading on the Engineering Division's website at: <http://www.ci.woodburn.or.us/?q=blog-categories/bids-and-rfps> and/or have been downloaded by the following plan centers.

DJC Plan Center – Portland, OR
Contractor’s Plan Center – Clackamas, OR
Salem Contractor’s Exchange – Salem, OR

There is no pre-bid conference scheduled. Those not familiar with the project can visit the site at the Street sites as indicated on the Location Map of the Drawings.

Bidders must be pre-qualified in accordance with the laws of the State of Oregon. Completed pre-qualification forms or proof of pre-qualification shall conform to the Special Provisions. Only bids from pre-qualified Bidders will be opened.

No bid for a construction contract shall be received or considered unless the bidder is registered with the Construction Contractors Board. The Contractor and every Subcontractor must have a Public Works Bond filed with the CCB before starting work on the project.

Bidders on this project need not be licensed for asbestos handling pursuant to ORS 468A.720. Each bidder must indicate on the bid form whether they are a resident or nonresident bidder as defined in ORS 279A.120 (b).

All proposals shall be made on the proposal forms. All proposals shall be accompanied by a Bid Bond, equal to ten percent (10%) of the total bid. Bid Bond shall be forfeited to the City if the Contractor fails to execute the contract within time allotted under the specifications.

Pursuant to ORS 279C.370, bidders on public works projects with a contract value of \$100,000 or more are required to disclose, 2-hours after bid opening, the bidders first-tier subcontractors. The bidder shall provide the information as required on City of Woodburn first-tier disclosure form, provided in the contract documents.

At the discretion of the Project Manager, Addenda (um) and Contract clarifications shall either be posted on the City, Engineering Division website or delivered to Plan Holders via facsimile. Potential Bidders should check the website on a daily basis until the Bid Opening date. The website can be found at <http://www.ci.woodburn.or.us/?q=blog-categories/bids-and-rfps>. Addenda must be signed and submitted with the Bid Proposal to be considered a responsive offer.

Although contract award is expected to be made by the City Council on **Monday, May 9, 2022** the City of Woodburn reserves the right to reject any and all bids not in compliance with prescribed bidding procedures and requirements, and may reject for good cause any and all bids upon a finding of the Agency if it is in the public interest to do so. The three (3) lowest bidders may not withdraw or modify his bid prior to the lapse of 35-days after the bid opening.

This project must be substantially completed not later than April 30, 2023.

All project work shall be completed by June 30, 2023.

Heather Pierson
City Recorder
City of Woodburn, OR 97071

INSTRUCTIONS TO BIDDERS
BID #2022-07

1. GENERAL:

- A. SPECIFICATIONS – The Specifications that is applicable to the Work on this Project is the 2021 edition of the “Oregon Standard Specifications for Construction” and as modified by Special Provisions.
- B. This is a formal procure. Faxed bids will not be accepted.
- C. Bidding requirements and obligations shall comply and conform to Part 00100 of the General Conditions of the Standard Specifications or as modified by the Special Provisions or herein.

2. SECURING CONTRACT DOCUMENTS:

- A. Copies of the Contract Documents are on file with the Public Works Department - Engineering Division, located at:

City Hall Annex
190 Garfield Street
Woodburn, OR 97071.

- B. Questions regarding bidding, materials or technical requirements should be directed to the Project Manager at:

Dago Garcia, City Engineer
190 Garfield St.
Woodburn, OR 97071
Phone: 503.982.5248
Email: dago.garcia@ci.woodburn.or.us

- C. Bidder is responsible for completing and returning all page(s), attachment(s) which require a response.
- D. Plan Holder’s List – An electronic copy of the “Plan Holders List” is provided on the Agency website and will be periodically updated. Contractors, suppliers and others wishing to be added to this list should contact the Project Manager as identified in 2.B.
- E. Project Notifications – Addenda, clarifications, etc. shall be posted on the Agency website and are the responsibility of the Contractor to download before submission of bids. Contractor shall sign and submit with offer all Addenda associated (posted on website) with the project.

3. PROJECT FINANCING:

- A. This project is financed and paid for by the City of Woodburn Urban Renewal.
- C. The Engineer's cost estimated range for the construction of this project is between: \$3,000,000 and \$4,500,000.
- D. This project is subject to the prevailing wages rates under the Oregon Prevailing Wages Law (BOLI).
- E. This project is subject to prevailing wage rates available at:

<https://www.oregon.gov/boli/employers/pages/prevailing-wage.aspx>
and listed as "[Prevailing Wage Rates for Public Works Contracts in Oregon effective January 1, 2022](#)".

4. CONSTRUCTION AGREEMENT

- A. The construction contract between Owner and Contractor shall be provided by The City of Woodburn. A sample Agreement is included in these documents.

5. PREBID CONFERENCE:

- B. No pre-bid conference is required nor scheduled for this project.

6. AWARD OF THE CONTRACT:

- A. Award of the Contract, by the Contract Review Board (City Council), will be by recommendation of the Public Works Department, based on the lowest cost offer of the responsive and responsible Bidder in accordance with Section 00130 of the Oregon Standard Construction Specifications and all modifications by Special Provisions.

7. SPECIAL CONCERNS:

- A. Provide access to all businesses, schools, and residents at all times.
- B. Provide access to first responders at all times.
- C. Services, such as delivery, waste management, mail, shall be maintained all times throughout all construction activities.

8. TIME OF COMPLETION:

- A. The project shall be substantially completed not later than April 30, 2023.
- B. All project work shall be completed by June 30, 2023.

PART II – BID FORMS

CERTIFICATION PAGE

Each Bidder (offeror) must read and comply with the following Sections. Failure to do so may result in bid/proposal (offer) rejection.

RESIDENCY INFORMATION

ORS 279A.120 (2) states "For the purposes of awarding a public contract, a contracting agency shall: (a) Give preference to goods or services that have been manufactured or produced in this state if price, fitness, availability and quality are otherwise equal; and (b) Add a percent increase to the bid of a nonresident bidder equal to the percent, if any, of the preference given to the bidder in the state in which the bidder resides."

"Resident bidder" means a bidder that has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the bid, has a business address in this state and has stated in the bid whether the bidder is a "resident bidder" [ORS 279A.120(1)(b)].

"Non-resident bidder" means a bidder who is not a "resident bidder" as defined above [ORS 279A.120 (1) (b)].

Check one: Bidder is a RESIDENT bidder NON-RESIDENT bidder.

CERTIFICATION OF COMPLIANCE WITH DISCRIMINATION LAWS

By my signature in Form of Proposal, I hereby attest or affirm under penalty of perjury that I am authorized to act on behalf of Contractor in this matter, and to the best of my knowledge the Contractor has not discriminated against minority, women or emerging small business enterprises certified under ORS 200.055, in obtaining any required subcontract or against a business enterprise that is owned or controlled by or that employs a disable veteran as defined in ORS 408.225.

CERTIFICATION OF COMPLIANCE WITH OREGON TAX LAWS

By my signature in Form of Proposal, I hereby attest or affirm under penalty of perjury that I am authorized to act on behalf of Contractor in this matter that I have authority and knowledge regarding the payment of taxes, and that Contractor is, to the best of my knowledge, not in violation of any Oregon Tax Laws.

For purposes of this certificate, 'Oregon Tax Laws' means those programs listed in ORS 305.380(4) which is incorporated herein by this reference. Examples include the state inheritance tax, personal income tax, withholding tax, corporation income and excise taxes, amusement device tax, timber taxes, cigarette tax, other tobacco tax, 9-1-1 emergency communications tax, the homeowners and renters property tax relief program and local taxes administered by the Department of Revenue.

VERIFICATION OF RESPONSIBILITY

The City reserves the right, pursuant to ORS 279C.375 and OAR 137-049-0390, to investigate and evaluate, at any time prior to award and execution of the contract, the lowest bidder's (apparent successful offeror's) ability to perform the contract. Submission of a signed offer shall constitute approval for the City to obtain any information the City deems necessary to conduct the evaluation. The City shall notify the apparent successful offeror, in writing, of any other documentation required. Being a responsible bidder may include having the appropriate financial, material, equipment, facility and personnel resources and expertise, or ability to obtain the resources and expertise to perform the contract. Contractor shall have a satisfactory record of contract performance. The Contractor shall also have a satisfactory record of integrity. An unsatisfactory record of integrity may include previous violations of state environmental laws or a false certifications made to any Public Agency. The Contractor is to be qualified legally to contract with the City of Woodburn. Failure to promptly provide any requested information may result in bid/proposal rejection.

The City may postpone the award of the contract after announcement of the apparent successful offeror in order to complete its investigation and evaluation. Failure of the apparent successful offeror to demonstrate responsibility, as required under ORS 279C.375 and OAR 137-049-0390, may render the offeror non-responsible and shall constitute grounds for offer rejection.

DRUG TESTING POLICY CERTIFICATION

DRUG-TESTING POLICY CERTIFICATION:

By my signature in Form of Proposal, I hereby attest or affirm under penalty of perjury that I am authorized to act on behalf of Contractor in the matter, and to the best of my knowledge the Contractor has a drug-testing program in place which applies to all employees. Contractor shall maintain a drug-testing program at all times during the performance of the Contract awarded. Failure to maintain such a program shall constitute a material breach of contract. [ORS 279C.505J

FORM OF PROPOSAL
For
W. HAYES STREET IMPROVEMENTS PROJECT

PROJECT No. 2015-001-20
Bid No. 2022-07

Honorable Mayor and City Council
City Hall
Woodburn, Oregon 97071

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that the Proposal is in all respects fair and without fraud, which it is made without any connection or collusion with any person making another Proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the proposed improvements; that he has personally inspected the site; that he has satisfied himself as to the quantities of materials, items of equipment, and conditions or work involved, including the fact that the description of work and materials as included herein, is brief and is intended only to indicate the general nature of such items and to identify the said quantities with the detailed requirements of the Contract Documents; and that this Proposal is made according to the provisions and the terms of the Contract Documents, which Documents are herein attached and are hereby made a part of this Proposal.

The Bidder further agrees to complete construction of all work in all respects in accordance with the Special Provisions incorporated herein.

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit set under Specifications of this document or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the City of Woodburn, Oregon, using the rate formula outlined in the Special Provisions, and not less than \$150.00 per day, until the work shall have been finished, as provided by the Contract Documents.

The Bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved, that they represent a true measure of the labor and material required to perform the work, including all allowance for overhead and profit for each type and unit of work called for in these Contract Documents.

The amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.

It is declared that the Bidder will comply with all provisions of ORS 279C.840. The workmen on the project will be paid Oregon Prevailing Wage Rates (also called "PWR").

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the bid security in the sum of:

(In Words): _____

(In Numbers): \$ _____

deposited herewith according to the conditions of the Advertisement for Bids and Information to Bidders, shall be retained by the City of Woodburn, Oregon, as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the City of Woodburn will sustain in case the Bidder shall fail or refuse to enter into the contract for the said work and to furnish the Performance Bond as specified in the Contract Documents. Bid security in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction contract on this proposal, the surety who will provide the Performance Bond will be:

_____ Whose address is:

_____, _____, _____
Street City State Zip

Agents Name: _____ Phone No. _____

The address for all communications concerned with this Proposal and where the Contract shall be sent is:

Contractor: _____ doing business at:

_____, _____, _____
Street City State Zip

**BID SCHEDULE
WEST HAYES STREET IMPROVEMENTS PROJECT**

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	Mobilization (00210)	LS	ALL	\$	\$
2	Temporary Protection and Direction of Traffic (00225)	LS	ALL	\$	\$
3	Flagger (00225)	HR	250	\$	\$
4	Temporary Striping (00225)	LF	946	\$	\$
5	Stripe Removal (00225)	LF	946	\$	\$
6	Erosion Control (00280)	LS	ALL	\$	\$
7	Concrete Washout Facility (00280)	EA	2	\$	\$
8	Sediment Fence, Unsupported (Orange) (00280)	LF	4,500	\$	\$
9	Inlet Protection (00280)	EA	36	\$	\$
10	Construction Survey Work (00305)	LS	ALL	\$	\$
11	Removal of Structures and Obstructions (00310)	LS	ALL	\$	\$
12	Clearing and Grubbing (00320)	LS	ALL	\$	\$
13	General Excavation (00330)	CY	6,325	\$	\$
14	Subgrade Stabilization (00331)	CY	250	\$	\$
15	Subgrade Geotextile (00350)	SY	11,568	\$	\$
16	10 Inch PVC Storm Sewer Pipe, 0'-10' (00445)	LF	67	\$	\$
17	12 Inch C900 Storm Sewer Pipe, 0'-10' (00445)	LF	1,327	\$	\$
18	12 Inch DIP Storm Sewer Pipe, 0'-10' (00445)	LF	617	\$	\$
19	15 Inch PVC Storm Sewer Pipe, 0'-10' (00445)	LF	231	\$	\$
20	Roof Drain Connections (00445)	LF	200	\$	\$
21	Concrete Inlet, Type CG-2 (00470)	EA	4	\$	\$
22	Concrete Inlet, Type CG-48 (00470)	EA	10	\$	\$
23	Concrete Inlet, Type CG-48MH (00470)	EA	8	\$	\$
24	Concrete Manhole, 48" Flat Top (00470)	EA	6	\$	\$
25	Major Adjustment of Manholes (00490)	EA	11	\$	\$
26	Extra for Manholes Over Existing Structures (00490)	EA	4	\$	\$
27	Connection To Existing Structures (00490)	EA	2	\$	\$

28	Inserta Tee (00490)	EA	2	\$	\$
29	Cold Plane Pavement Removal, 2 Inches Deep (00620)	SY	1,426	\$	\$
30	Aggregate Base (00641)	CY	4,455	\$	\$
31	Level 3, 1/2" Dense ACP Mixture (00744)	TONS	3,434	\$	\$
32	Extra for Asphalt Approaches (00749)	SF	1,678	\$	\$
33	Concrete Curbs, Standard Curb and Gutter (00759)	LF	5,961	\$	\$
34	Concrete Curbs, Standard Curb (00759)	LF	460	\$	\$
35	Concrete Islands (00759)	SF	568	\$	\$
36	Concrete Driveways (00759)	SF	9,910	\$	\$
37	Concrete Walks (00759)	SF	26,030	\$	\$
38	Concrete Walks, Reinforced (00759)	SF	325	\$	\$
39	Extra for New Curb Ramps	EA	25	\$	\$
40	Truncated Domes on New Surfaces (00759)	SF	370	\$	\$
41	Bi-Directional Yellow Type I Markers (00855)	EA	170	\$	\$
42	Thermoplastic, Extruded or Sprayed, Surface, Non-profiled (00865)	LF	21,920	\$	\$
43	Pavement Legend, Type AB: Arrows (00867)	EA	13	\$	\$
44	Pavement Legend, Type B-HS: Bicycle Lane Stencil (00867)	EA	19	\$	\$
45	Pavement Bar, Type B-HS: Stop Bar (00867)	SF	74	\$	\$
46	Pavement Bar, Type B-HS: Continental Crosswalk (00867)	SF	120	\$	\$
47	Curb Marking, Paint (00869)	LF	76	\$	\$
48	Crosswalk Closed Support (00902)	EA	10	\$	\$
49	Remove Existing Signs (00905)	LS	ALL	\$	\$
50	Perforated Steel Square Tube Anchor Sign Supports (00930)	LS	ALL	\$	\$
51	Signs, Standard Sheeting, Extruded Aluminum (00940)	SF	186	\$	\$
52	36 Inch Diameter Signal Support Drilled Shaft (00963)	LF	36	\$	\$
53	Pole Foundations (00970)	LS	ALL	\$	\$
54	Lighting Poles and Arms (00970)	LS	ALL	\$	\$
55	Luminaires, Lamps, and Ballasts (00970)	LS	ALL	\$	\$
56	Switching, Conduit, and Wiring (00970)	LS	ALL	\$	\$

57	Telecommunications, Material (00987)	LS	ALL	\$	\$
58	Telecommunications, Installation (00987)	LS	ALL	\$	\$
59	Telecommunications, Splicing and Testing (00987)	LS	ALL	\$	\$
60	Traffic Signal Installation, N Settlemier Rd (00990)	LS	ALL	\$	\$
61	Rectangular Rapid Flashing Beacon Installation, Midblock Crossing (00990)	LS	ALL	\$	\$
60	Bioretention Pond (01011)	LS	ALL	\$	\$
61	Permanent Seeding (01030)	SF	16,020	\$	\$
62	Topsoil (01040)	CY	198	\$	\$
63	Deciduous Trees, 2 inch Caliper (01040)	EA	4	\$	\$
64	Mailbox Cluster Units (01070)	EA	4	\$	\$
65	Hydrant Assemblies (01160)	EA	3	\$	\$
			Total:	\$	_____

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

(If Sole Proprietor or Partnership)

In witness hereto the undersigned has set his (its) hand this _____ day of _____, 20____.

Signature of Bidder

Title (If Corporation)

In witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officer this _____ day of _____, 20____.

Name of Corp: _____

Oregon Corp. No: _____

By: _____

Title: _____

CCB No: _____

Attest: _____

Secretary

"Bidder will comply with the provisions of Oregon Revised Statutes (ORS) 279C.840".

Initial

Attest: _____

Bidder

CITY OF WOODBURN, OR
FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT NAME:	W. Hayes Street Improvements Project		
PROJECT No:	2015-001-20	BID No:	2022-07
BID CLOSING DATE:	April 27, 2022	TIME:	2:00 PM
DISCLOSURE DEADLINE DATE:	April 27, 2022	TIME:	4:00 PM

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date with in two working hours after the advertised bid closing.

List below the name of each subcontractor that will be furnishing labor or materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "None" if there are no subcontractors that need to be disclosed. (IF NEEDED, ATTACH ADDITIONAL SHEETS.)

	<u>NAME</u>	<u>DOLLAR VALUE</u>	<u>CATEGORY OF WORK</u>
1		\$	
2		\$	
3		\$	
4		\$	
5		\$	

The above listed first-tier subcontractor(s) are providing labor and/or materials with a Dollar Value equal to or greater than:

- a. 5% of the total contract price or \$15,000 (including all alternates), whichever is greater; or
- b. \$350,000.00 regardless of the percentage of the total Contract Price.

FAILURE TO SUBMIT THIS FORM FILLED OUT BY THE DISCLOSURE DEADLINE WILL RESULT IN A NON-RESPONSIVE BID. A NON-RESPONSIVE BID WILL NOT BE CONSIDERED FOR AWARD.

Form Submitted by (Bidder Name): _____
Contact Name: _____ **Phone No:** _____
Deliver Form to Agency: _____ CITY OF WOODBURN
Person Designated to Receive Form: _____ CITY ENGINEER
Agency's Address: _____ 190 Garfield Street, Woodburn, OR 97071

**UNLESS OTHERWISE STATED IN THE ORIGINAL SOLICITATION,
THIS DOCUMENT SHALL NOT BE FAXED.**

BID SUBMITTAL CHECKLIST

The following is a checklist of the items that shall be submitted with the Bidder's bid Proposal

- Form of Proposal
- Bid Bond
- First Tier Subcontractor Disclosure Form (Submit within two hours after bid opening time)
- Certification Page

PART III – CONTRACT FORMS

CONSTRUCTION AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2022, by and between _____, hereinafter called "CONTRACTOR" and the CITY OF WOODBURN, an Oregon Municipal Corporation, hereinafter called "City" or "Owner".

The Contractor, for the consideration hereinafter named, does hereby agree to furnish all materials, equipment, labor and necessary implements for the construction of **W. Hayes Street Improvements Project** and doing such other work as is necessary to make an appropriate and complete improvement.

All of said work shall be done according to the terms, conditions, and requirements of the Contract Documents including the: Advertisement of Bids, Contractor's signed Proposal, information to bidders, special specifications, general conditions, standard specifications, general specifications, and plans and Addendum Nos. () for said improvement, which Contract Documents by this reference are made a part of this agreement.

Said improvement shall be completed by the date specified in said Contract Documents and if not so completed, unless said time for completion is extended, as provided in the Contract Documents, or if extended, if the same is not completed within time extended, the City will suffer liquidated damages as specified in the Contract Documents, which liquidated damages shall be retained out of any monies due or to become due under this agreement.

Payments shall be made as provided in the Contract Documents. The contract amount, as approved by the Council on **May 9, 2022**, and agreed by the Contractor, is **\$x,xxx,xxx.xx**.

The City will pay the required fee to the Bureau of Labor and Industries equal to one-tenth of one percent (0.1 percent) of the price of this contract, minimum fee in the amount of \$250.00 and maximum fee of \$7,500.00.

The Contractor will pay the prevailing wage rates in accordance with ORS279C.830 and as amended by Davis Bacon and all current amendments as set forth in the Contract.

NOW, THEREFORE, in consideration of the faithful performance of the covenants and agreements hereinbefore made by the Contractor, the City hereby covenants and agrees to pay the Contractor as in said Contract Documents provided.

IN WITNESS WHEREOF, the respective parties hereto have each caused these presents to be executed in duplicate the day and year first above written.

CITY OF WOODBURN, OREGON

ATTESTED: _____
Heather Pierson, *CITY RECORDER* Eric Swenson, *MAYOR*

CONTRACTOR: _____
Organization

By: _____ . Title: _____

DRAFT

NOTICE OF CONTRACT AWARD

PROJECT DESCRIPTION: **W. Hayes Street Improvements Project**
FILE No: **2015-001-20**
BID No: **2022-07**

The Owner has considered the bid submitted by you on **April 27, 2022** for the above described work in response to its Invitation to Bid.

You are hereby notified that on **May 9, 2022** the City Council accepted your bid for construction of the work in the amount of **\$xxx,xxx,xxx.xx**

You are required under the terms of the Notice Inviting Bids and the Information for Bidders to execute the Agreement and furnish bonds and certificates of insurance within **14-calendar days** from the date of this Notice to you.

If you fail to execute said Agreement and furnish said bonds and certificates of insurance within 14-days of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid to be abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this **X** of **XXXX, 2022**

By _____ Title _____

Contractor shall fill in all information below this line and return original signed copy

ACCEPTANCE OF NOTICE

Receipt of the foregoing Notice of Award is hereby acknowledged

By: _____

Title: _____

This: _____ day of _____ 2022.

Bond No. _____
Solicitation _____
Project BID#: **2022-07**

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that, _____,
as the Principal, and _____, a corporation organized and
existing under the laws of the State of Oregon, and duly authorized to transact a surety
business in the State of Oregon, as Surety, are held and firmly bound unto the City of
Woodburn, a municipal corporation of the State of Oregon, in the penal sum of
\$_____ Dollars \$_____, lawful money of the United States of
America, for the payment whereof well and truly to be made, we and each of us, jointly
and severally, bind ourselves, our and each of our heirs, executors, administrators
successors and assign, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the City of Woodburn,
the plans, specifications, terms and conditions of which are contained in the above-
referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable
plans, standard specifications, special provisions, schedule of performance, and
schedule of contract prices, are made a part of this Performance Bond by reference,
whether or not attached to the contract (all hereafter called the "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with
the terms, conditions, requirements, plans and specifications, and all authorized
modifications of the Contract which increase the amount of the work, the amount of the
Contract, or constitute an authorized extension of the time for performance, notice of any
such modifications hereby being waived by the Surety,

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH:

That if the Principal herein shall faithfully and truly observe and comply with the
terms, conditions and provisions of the Contract, in all respects, and shall well and truly
and fully do and perform all matters and things undertaken by Contractor to be performed
under the Contract, upon the terms set forth therein, and within the time prescribed
therein, or as extended as provided in the Contract, with or without notice to the Sureties,
and shall indemnify and save harmless the City of Woodburn, the, its officers, employees
and agents, against any direct or indirect damages or claim of every kind and description
that shall be suffered or claimed to be suffered in connection with or arising out of the
performance of the Contract by the Principal or its subcontractors, and shall in all respects
perform said contract according to law, then this obligation is to be void; otherwise, it shall
remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the City of
Woodburn, be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapter 279C, the provisions of which hereby are incorporated into this bond and made a part hereof.

Contractor

BY: _____

TITLE: _____

Surety

By: _____

Attorney-In-Fact

DRAFT

Bond No. _____
Solicitation: _____
Project Bid#: **2022-07**

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that, _____,
as the Principal, and _____, a corporation organized and
existing under the laws of the State of Oregon, and duly authorized to transact a surety
business in the State of Oregon, as Surety, are held and firmly bound unto the City of
Woodburn, a municipal corporation of the State of Oregon, in the penal sum of
\$_____ Dollars \$_____, lawful money of the United States of
America, for the payment whereof well and truly to be made, we and each of us, jointly
and severally, bind ourselves, our and each of our heirs, executors, administrators
successors and assign, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the City of Woodburn,
the plans, specifications, terms and conditions of which are contained in the above-
referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable
plans, standard specifications, special provisions, schedule of performance, and
schedule of contract prices, are made a part of this Payment Bond by reference, whether
or not attached to the contract (all hereafter called the "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with
the terms, conditions, requirements, plans and specifications, and all authorized
modifications of the Contract which increase the amount of the work, the amount of the
Contract, or constitute an authorized extension of the time for performance, notice of any
such modifications hereby being waived by the Surety,

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH:

That if the Principal shall faithfully and truly observe and comply with the terms,
conditions and provisions of the Contract, in all respects, and shall well and truly and fully
do and perform all matters and things by it undertaken to be performed under said
Contract and any duly authorized modifications that are made, upon the terms set forth
therein, and within the time prescribed therein, or as extended therein as provided in the
Contract, with or without notice to the sureties, including the conditions listed in ORS
279.310 to 279.320, and shall indemnify and save harmless the City of Woodburn, its
officers, employees and agents, against any claim for direct or indirect damages of every
kind and description that shall be suffered or claimed to be suffered in connection with or
arising out of the performance of the Contract by the Contractor or its Subcontractors,
and shall promptly pay all persons supplying labor, materials or both to the Principal or
its Subcontractors for prosecution of the work provided in the Contract; and shall promptly
pay all contributions due the State Industrial Accident Fund and the State Unemployment
Compensation Fund from the Principal or its Subcontractor in connection with the
performance of the Contract; and shall pay over to the Oregon Department of Revenue

all sums required to be deducted and retained from the wages of employees of the Principal and its Subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the City of Woodburn on account of any labor or materials furnished; and shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the City of Woodburn, be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapter 279C, the provisions of which hereby are incorporated into this bond and made a part hereof.

Contractor

BY: _____

TITLE: _____

Surety

By: _____

Attorney-In-Fact

DRAFT

Bond No. _____

Solicitation _____

Project Bid No. 2022-07

Project Name: **W. Hayes Street Improvements Project**

MAINTENANCE/WARRANTY BOND

KNOW ALL MEN BY THESE PRESENTS that, _____
, as the Principal, and _____, a corporation organized and existing under the laws of the State of Oregon, and duly authorized to transact a surety business in the State of Oregon, as Surety, are held and firmly bound unto the City of Woodburn, a municipal corporation of the State of Oregon, in the penal sum of \$ _____ Dollars \$ _____, lawful money of the United States of America, for the payment whereof well and truly to be made, we and each of us, jointly and severally, bind ourselves, our and each of our heirs, executors, administrators successors and assign, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the City of Woodburn, the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Maintenance/Warranty Bond by reference, whether or not attached to the contract (all hereafter called the "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety,

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH:

That the Principal agrees to warrant to the City of Woodburn that the construction is, and will remain for a period of one (1) year from the date of acceptance, free from defects in materials and workmanship.

That if the Principal herein shall faithfully and truly observe the terms, provisions, conditions, stipulations, directions, and requirements of the Contract and shall in all respects, whether the same be enumerated herein or not, faithfully comply with the same and shall assume the defense of indemnify and save harmless the City of Woodburn, its officers, agents, and employees from all claims, liabilities, loss, damage or injury which may have been suffered or claimed to have been suffered to persons or property directly

or indirectly resulting from or arising out of the operations or conduct of the Principal or any subcontractor in the performance of the work under the Contract and shall indemnify and make whole the City for any injury or damage to any street, highway, avenue, or road or any part thereof, resulting from the operations or conduct of the Principal or any subcontractor in connection with performance or conduct of the work under the Contract, and shall in all respects faithfully keep and observe all of said terms, provision, conditions, stipulations, directions, and requirements, then this obligation is void, otherwise, it shall remain in full force and effect.

WITNESS our hand and seals this _____ day of _____, 2019.

Name: _____

BY: _____

TITLE: _____

Surety

By: _____

Attorney-In-Fact

DRAFT

NOTICE TO PROCEED

**PUBLIC WORKS DEPT.
ENGINEERING DIV.**



PROJECT NAME:	W. Hayes Street Improvements Project		
BID #:	2022-07	PROJECT No #:	2015-001-20
AMOUNT:	\$	BEGIN DATE:	
CONTRACTOR:		CCB #:	
ADDRESS:			

You are hereby notified to commence work on the referenced contract and shall substantially complete all of the work of said contract not later than April 30, 2023.

The substantially completion date is therefore: **not later than April 30, 2023.**

The completion date is therefore: **June 30, 2022.**

The contract provides for the assessment of liquidated damages for each consecutive calendar day after the above-established contract completion date that the work remains incomplete in the amount of: \$ per day.

PM for THE CITY OF WOODBURN: Dago Garcia

DATE: _____

Contractor: *Complete items below this line and return Document to Owner within seven (7) days:*

CONTRACTOR'S ACCEPTANCE OF THIS NOTICE

Receipt of the foregoing Notice to Proceed is hereby acknowledged:

SIGNED: _____

TITLE: _____

DATE: _____

**PART IV – TECHNICAL SPECIFICATIONS &
SPECIAL PROVISIONS**

Oregon Standard Specifications for Construction,
2021 Edition

W. Hayes Street Improvements

Bid No. 2022-01

SPECIAL PROVISIONS

WORK TO BE DONE

The Work to be done under this Contract consists of the following:

1. Construct Roadway Improvements including, Asphalt Concrete Road, Curb, and Sidewalk.
2. Construct Storm Drainage Improvements.
3. Install Traffic Signal and Interconnect.
4. Install Street Lighting.
5. Install Landscaping.
6. Perform additional and Incidental Work as called for by the Specifications and Plans.

AUTHORITY OF CONSULTANT

The consultant will be directly in charge of the Project. However, the consultant's authority on this Project is as designated in the official "Consultant Agreement" for this Project, and as designated by the Engineer. This does not include authority to approve Contract changes or semifinal and Final Inspection of the Project.

APPLICABLE SPECIFICATIONS

The Specifications that are applicable to the Work on this Project is the 2021 edition of the "Oregon Standard Specifications for Construction", as modified by these Special Provisions. All Sections in Part 00100 apply, whether or not modified or referenced in the Special Provisions.

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

CLASS OF PROJECT

This is a City of Woodburn Project.

W. Hayes Street Improvements

Bid No. 2022-01

SECTION 00110 - ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND DEFINITIONS

Comply with Section 00110 of the Standard Specifications modified as follows:

00110.05(e) Reference to Websites - Add the following bullet list to the end of this subsection:

- American Traffic Safety Services Association (ATSSA)
www.atssa.com
- BidExpress
www.bidx.com
- EquipmentWatch
www.equipmentwatch.com
- Executive Order 21-29
www.oregon.gov/gov/Documents/executive_orders/eo_21-29.pdf
- ODOT Construction Section
www.oregon.gov/odot/construction/pages/index.aspx
- ODOT Construction Section - Qualified Products List (QPL)
www.oregon.gov/ODOT/Construction/Pages/Qualified-Products.aspx
- ODOT Construction Surveying Manual for Contractors
www.oregon.gov/ODOT/ETA/Documents_Geometronics/Construction-Survey-Manual-Contractors.pdf
- ODOT Electronic Bidding Information Distribution System (eBids)
(Also referred to as ODOT eBids website)
<https://ecmnet.odot.state.or.us/ebidse>
- ODOT Estimating
www.oregon.gov/ODOT/Business/Pages/Steel.aspx
- Oregon Legislative Counsel
www.oregonlegislature.gov/lc
- ODOT Procurement Office - Conflict of Interest Guidelines and Disclosure Forms
www.oregon.gov/ODOT/Business/Procurement/Pages/PSK.aspx

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- ODOT Procurement Office - Construction Contracts Unit Notice of Intent
www.oregon.gov/ODOT/Business/Procurement/Pages/NOI.aspx
- ODOT Procurement Office - Construction Contracts Unit prequalification forms
www.oregon.gov/odot/business/procurement/pages/bid_award.aspx
- Oregon Secretary of State: State Archives
sos.oregon.gov/archives/Pages/default.aspx
- ODOT Traffic Control Plans Unit
www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx
- ODOT Traffic Standards
www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx

SECTION 00140 - SCOPE OF WORK

Comply with Section 00140 of the Standard Specifications.

SECTION 00150 - CONTROL OF WORK

Comply with Section 00150 of the Standard Specifications modified as follows:

00150.15(b) Agency Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

The Engineer will perform the Agency responsibilities described in the *Construction Surveying Manual for Contractors*, Chapter 1.5 (see Section 00305).

The Contractor shall perform slope staking including intersections and set stakes defining limits for clearing which approximate Right-of-Way and easements.

00150.50(c) Contractor Responsibilities – Replace the bullet that begins "Protect from damage or disturbance any Utility that remains..." with the following bullet:

- Protect from damage or disturbance any Utility that remains within the area in which Work is being performed. Maintain and re-establish location marks according to OAR 952-001-0090(3)(a). Coordinate re-establishment of the location marks with the associated Utility;

Replace the bullet that begins "Determine the exact location before excavating within ..." with the following bullet:

- Determine the exact location before excavating within the tolerance zone according to OAR 952-001-0090(3)(c);

W. Hayes Street Improvements

Bid No. 2022-01

Replace the bullet that begins " In addition to the notification required in OAR 952-001-0090(5), notify the Engineer..." with the following bullet:

- In addition to the notification required in OAR 952-001-0090(6), notify the Engineer and the Utility as soon as the Contractor discovers any previously unknown Utility conflicts or issues. Contrary to the OAR, stop excavating until directed by the Engineer and allow the Utility a minimum of two weeks to relocate or resolve the previously unknown Utility issues; and

Add the following bullet to the end of the bulleted list:

- Hold a Utility scheduling meeting and monthly Utility coordination meetings (see also 00180.42)

Add the following subsection:

00150.50(g) Utility Information (Anticipated Relocations):

The organizations listed in Table 00150-2 may be adjusting Utilities within the limits of the Project during the period of the Contract with relocation work estimated to be completed by the following dates and times:

Table 00150-2

Utility	Contact Person's Name, Address, Email, and Phone Number
NW Natural	Darrell Hammond NW Natural – Field Engineering Technician T: 503.585.6611 x8035 C: 541.981.0164 d5h@nwnatural.com
PGE	Alison Baziak Design Project Manager Lighting Services T: 503-463-4381 C: 503-367-8505 Alison.Baziak@pgn.com
Datavision	Jason Riggs Construction Coordinator T: 503-792-3611 C: 503-932-2727 jriggs@datavision.coop
Wavebroadband	Jerry Benson Technical Operations Construction Coordinator 1 2500 National Way Suite 1 Woodburn, OR 97071 C: (503) 307-0350 Jbenson@wavebroadband.com

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Lumen Technologies	Josh Fallin Engineer 2 Salem, Keizer & Woodburn 740 State St., Room 407 Salem, OR 97301 T: 503-399-4931 C: 503-798-1009 josh.fallin@lumen.com
Comcast Cable	Phillip Curtis C: 971-777-0933 Phillip_Curtis@comcast.com

The Contractor shall notify, in writing, the Utilities listed above, with a copy to the Engineer, at least 14 Calendar Days before beginning Work on the Project.

In the event of an emergency, and in addition to the calls required by the Utilities notification system, the Contractor shall call:

- Northwest Natural Gas 1-800-882-3377

The Contractor shall notify the Power Supplier(s) in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the power line(s).

SECTION 00160 - SOURCE OF MATERIALS

Comply with Section 00160 of the Standard Specifications.

SECTION 00165 - QUALITY OF MATERIALS

Comply with Section 00165 of the Standard Specifications.

SECTION 00190 - MEASUREMENT OF PAY QUANTITIES

Comply with Section 00190 of the Standard Specifications modified as follows:

00190.20(f)(2) Scale Without Automatic Printer - Replace the sentence that begins "The Contractor shall inform the Engineer of ..." with the following sentence:

The Contractor shall inform the Engineer of its intent to use a scale without an automatic printer at least 3 working days before weighing begins or before the Contractor changes to a scale that does not have an automatic printer.

SECTION 00195 - PAYMENT

Comply with Section 00195 of the Standard Specifications modified as follows:

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00195.10 Payment For Changes in Materials Costs - Replace this subsection with the following subsection:

00195.10 Asphalt Cement Material Price Escalation/De-escalation - An asphalt cement escalation/de-escalation clause will be in effect during the life of the Contract.

The Agency reserves all of its rights under the Contract, including, but not limited to, its rights for suspension of the Work under 00180.70 and its rights for termination of the Contract under 00180.90, and this escalation/de-escalation provision shall not limit those rights.

(a) Monthly Asphalt Cement Material Price (MACMP) - The Monthly Asphalt Cement Material Price (MACMP) will be established by the Agency each month and will be based on the published prices of PG 64-22 asphalt cement furnished by Poten & Partners, Inc. The Portland, Oregon area prices will be used as the basis of the MACMP. The area selected as the basis of the MACMP, once chosen, will become the sole area to be used as the basis for all asphalt cement used on the Project. Each MACMP for a given month will be the average of the published prices for that MACMP for each Friday in that month.

For information regarding the calculation of the MACMP, and for the actual MACMP, go to the Agency website at:

<https://www.oregon.gov/ODOT/Business/Pages/Asphalt-Fuel-Price.aspx>

If the Agency-selected index ceases to be available for any reason, the Agency in its discretion will select and begin using a substitute price source or index to establish the MACMP each month. The MACMP will apply to all asphalt cement including but not limited to paving grade, polymer modified, and emulsified asphalts, and recycling agents. The Agency does not guarantee that asphalt cement will be available at the MACMP.

(b) Base Asphalt Cement Material Price (Base) - The base asphalt cement material price for this Project is the MACMP published on the Agency website for the month immediately preceding the Bid Opening date.

(c) Monthly Asphalt Cement Adjustment Factor - The monthly asphalt cement adjustment factor will be determined each month as follows:

- If the MACMP is within $\pm 5\%$ of the Base, there will be no adjustment.
- If the MACMP is more than 105% of the Base, then:

$$\text{Adjustment Factor} = (\text{MACMP}) - (1.05 \times \text{Base})$$

- If the MACMP is less than 95% of the Base, then:

$$\text{Adjustment Factor} = (\text{MACMP}) - (0.95 \times \text{Base})$$

(d) Asphalt Cement Price Adjustment - A price adjustment will be made for the items containing asphalt cement listed below. The price adjustment as calculated in (c) above will use the MACMP for the month the asphalt is incorporated into the Project. The price

W. Hayes Street Improvements

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adjustment will be determined by multiplying the asphalt incorporated during the month for subject Pay Items by the Adjustment Factor.

(e) **Asphalt Binder Conversion:** For the purpose of asphalt material escalation, it is assumed that a conversion rate of .06 tons of Binder per ton of ACP.

The Pay Items for which price adjustments will be made are:

Pay Item(s)

Level 3, ½" Dense ACP

Emulsified Asphalt for Tack Coat

SECTION 00196 - PAYMENT FOR EXTRA WORK

Comply with Section 00196 of the Standard Specifications.

SECTION 00197 - PAYMENT FOR FORCE ACCOUNT WORK

Comply with Section 00197 of the Standard Specifications.

SECTION 00199 - DISAGREEMENTS, PROTESTS, AND CLAIMS

Comply with Section 00199 of the Standard Specifications modified as follows:

00199.40(c) Step 2: Agency Level Review - Replace the paragraph that begins "If the Contractor does not accept the Step 2 ..." with the following paragraph:

If the Contractor does not accept the Step 2 decision, the Contractor may, within 10 Calendar Days of receipt of the written decision, request in writing through the Engineer that the claim be advanced to Step 3 or 4 (see (d) and (e) below), as applicable. For purposes of determining which process to use for claims under Step 3 or 4 concerning a combination of additional compensation and Contract Time or for Contract Time only, the value of the claim or portion of the claim for Contract Time will be assumed to be the appropriate Liquidated Damages as provided in 00180.85 multiplied by the number of Calendar Days in question. If applicable, advancement of the claim is subject to the provisions of 00199.60 regarding waiver and dismissal of the claim or portions of the claim.

SECTION 00210 - MOBILIZATION

Comply with Section 00210 of the Standard Specifications.

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SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

Comply with Section 00220 of the Standard Specifications modified as follows:

00220.02(a) General Requirements - Add the following bullets to the end of the bullet list:

- Before activating a modified traffic signal, revising lane usage, implementing new roadway geometry, or removing a "STOP" sign, protect traffic by installing "NEW TRAFFIC PATTERN AHEAD" (W23-2) signing according to 00222.40. Keep the signs in place for 30 Calendar Days after completing the modifications.
- When an abrupt edge is created by excavation, protect traffic according to the "Excavation Abrupt Edge" and the "Typical Abrupt Edge Delineation" configurations shown on the Standard Drawings.
- When paving operations create an abrupt edge, protect traffic by installing a "DO NOT PASS" (R4-1) sign before the Work Area at sign spacing "A" from the TCD Spacing Table" shown on the Standard Drawings. Alternate "ABRUPT EDGE" (CW21-7) signs with appropriate (CW21-8) rider and "DO NOT PASS" (R4-1) signs at 1/2 mile spacings. Install a "BUMP" (W8-1) sign 100 feet prior to the transverse paving edge.
- Protect pedestrians in pole base excavation areas by placing approved covers over all pole base excavations. Place a minimum of two B(II)LR barricades adjacent to and on either side of the excavated area, facing pedestrian traffic, or place covers and barricades as directed.

00220.02(b) Temporary Pedestrian Accessible Route Plan - Add the following bullet to the end of the bullet list:

- For an active Work Area controlled at each end by flaggers and pilot car, provide transportation for pedestrians and bicyclists through the active Work Area according to Section 00223 and Section 00228.

Single Lane Closures – One Traffic Lane in each direction on Settlemier may be closed during the following times:

- Daily, Monday through Thursday, between 9:00 a.m. and 4:00 p.m.
- Friday between 9:00 a.m. and 3:00 p.m.

One Traffic Lane may be closed on all other adjacent Roadways within the Project Site not listed above, when allowed, shown, or directed during the following periods of time except as specified in 00220.40(e)(2):

- Daily, Monday through Thursday, between 9:00 a.m. and 4:00 p.m.
- Friday, between 9:00 a.m. and 3:00 p.m.
- Nightly, Sunday night through Friday morning, between 6:00 p.m. and 7:00 a.m.

00220.40(e)(2)(b) Special Events - Add the following to the end of this subsection:

W. Hayes Street Improvements

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The following special events will occur during this Project:

- Last day of classes – June 15th, 2022
- First day of classes – August 29th, 2022

SECTION 00221 - COMMON PROVISIONS FOR WORK ZONE TRAFFIC CONTROL

Comply with Section 00221 of the Standard Specifications modified as follows:

00221.03 Traffic Safety and Operations - Replace the bullet that begins “When paving operations create...” with the following bullet:

- When paving operations create an abrupt or sloped edge drop off greater than 1 inch, protect traffic by installing signing according to the "2 Lane, 2 Way Roadway Overlay Area" detail shown on the Standard Drawings. Protect longitudinal and transverse Pavement joints by placing and maintaining an asphalt concrete wedge according to 00221.07(c)(1).

00221.07(c)(1) Paving - Replace this subsection, except subsection number and title, with the following:

When the longitudinal joint is greater than 1 inch in height, install additional TCD according to 00221.03. Complete the placing of ACP and construction of paving joints according to 00735.48, 00735.49, 00743.45, 00744.44, 00744.45, 00745.47, and 00745.48, as applicable.

00221.90(b) Temporary Protection and Direction of Traffic - Delete the bullet that begins “Moving temporary barrier to and from Contractor’s stockpile areas”.

Replace the bullet that begins "When the Schedule of Items does not include ..." with the following bullet:

- Preparing and signing the daily “Traffic Control Inspection Report”, when a TCS is not included in the Schedule of Items or when a TCS is not onsite for a work shift.

SECTION 00222 – TEMPORARY TRAFFIC CONTROL SIGNS

Comply with Section 00222 of the Standard Specifications modified as follows:

00222.40(e) Temporary Sign Placement - Add the following to the end of the bullet list:

- Place a “WAIT FOR FLAGGER” (CR4-23) sign approximately 50 feet in advance of each flagger station, facing incoming pedestrian traffic. Install the sign on a conical marker or other temporary sign support, as shown or as directed. Do not allow the sign installation height or location to block the visibility of the flagger for incoming public traffic.
- At least ten Calendar Days before closing the sidewalks within the project limits, place a “SIDEWALK CLOSED, Full Time” (CW11-4) sign in advance of each future closure

W. Hayes Street Improvements

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point. Locate the sign so it is legible from the nearest alternate pedestrian pathway facing incoming pedestrian traffic. The sign may be mounted between the panels of a Type II barricade or on a single-post TSS. Do not place the sign or sign support such that it narrows the pedestrian pathway to a width of less than 4 feet.

- Before opening the TPAR, place TPAR signing and other TCM as shown, or as directed. Maintain the "SIDEWALK CLOSED, Full Time" (CW11-4) signs while the TPAR is open to pedestrian traffic.
- Install "ROAD WORK AHEAD" (W20-1-48) signs with a 36 by 24-inch "FINES DOUBLE" (R2-6aP) rider as shown on the plans, according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans except do not install the "FINES DOUBLE" rider on concrete barrier mounted signs.
- Install beyond each end of the Project, facing outgoing traffic, an "END ROAD WORK" (CG20-2A-24) sign a distance of $(A \div 2)$ according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans.
- Install two sign flag boards, as shown on the Standard Drawings, above the following detour and road closed advance warning signs, where applicable:
 - "DETOUR AHEAD", "DETOUR XXXX FT", "DETOUR X/X MILE" (W20-2) signs.
 - "ROAD CLOSED AHEAD", "ROAD CLOSED XXXX FT", "ROAD CLOSED X/X MILE" (W20-3) signs.
- For each leg of the intersection affected by the new traffic signal, install the following warning signs:
 - A "Signal Ahead" (W3-3) symbol sign approximately 150 feet in advance of the intersection, shown on the Standard Drawings or as modified by the Plans.
 - A "NEW TRAFFIC PATTERN AHEAD" (W23-2) sign approximately 100 feet in advance of the "Signal Ahead" sign. Keep the "NEW TRAFFIC PATTERN AHEAD" signs in place 30 Calendar Days after installing the "Signal Ahead" sign.

SECTION 00225 - TEMPORARY PAVEMENT MARKINGS

Comply with Section 00225 of the Standard Specifications modified as follows:

00225.40 Temporary Pavement Markers - Replace the paragraph that begins "Unless otherwise shown..." and the three bullets with the following paragraphs and bullets:

Install temporary flexible overlay pavement markers for temporary centerline marking as follows:

- Place and maintain one temporary flexible overlay pavement marker on 40 foot spacing in tangent and curve sections except as below.
- Place and maintain one temporary flexible overlay pavement marker on 20 foot spacing in curved alignment sections identified by a speed rider displaying less than the posted speed and channelization areas.

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Establish alignment for placing the temporary flexible overlay pavement markers as follows:

- Control markers at:
 - 200 foot intervals on tangents
 - 50 foot intervals on curves
 - 40 foot intervals on curves with speed rider
- Use string line or other appropriate means to maintain proper alignment of the markers. Adjust placement to avoid straddling a longitudinal joint, while maintaining a suitable alignment of markers.
- Remove and replace misaligned markers at no additional cost to the Agency.

SECTION 00228 - TEMPORARY PEDESTRIAN AND BICYCLIST ROUTING

Comply with Section 00228 of the Standard Specifications modified as follows:

00228.00 Scope - Replace this subsection, except subsection number and title, with the following:

In addition to the requirements of Section 00221, this Work consists of furnishing, installing, operating, maintaining, inspecting, and removing temporary devices for accommodating pedestrians and bicyclists through a work zone.

00228.80(a) Length Basis - Replace this subsection, except subsection number and title, with the following:

Pedestrian channelizing devices and bicycle channelizing devices will be measured on the length basis upon delivery to the Project. The quantities will be limited to those in the approved TCP.

SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

00280.00 Scope - Add the following paragraph to the end of this subsection:

The Project’s NPDES 1200-CN Permit is applicable to the Project.

00280.48 Emergency Materials - Add the following paragraphs after the paragraph that begins "Provide, stockpile, and protect...":

Provide and stockpile the following emergency materials on the Project site:

Item	Quantity
Sediment Fence	100 LF
Inlet Protection	10

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00280.62 Inspection and Monitoring - Replace this subsection, except for the subsection number and title, with the following:

Inspect the Project Site and all ESC devices for potential erosion or sediment movement on a weekly basis and when 1/2 inch or more of rainfall occurs within a 24-hour period, including weekends and holidays.

If a significant noncompliance or serious water quality issue occurs that could endanger health or the environment, verbally report it to the Engineer within 24 hours.

00280.90 Payment - In the paragraph that begins "Item (a) includes..." delete the bullet that specifies "providing the Erosion and Sediment Control Manager".

SECTION 00290 - ENVIRONMENTAL PROTECTION

Comply with Section 00290 of the Standard Specifications.

SECTION 00305 - CONSTRUCTION SURVEY WORK

Comply with Section 00305 of the Standard Specifications modified as follows:

00305.00 Scope – Add the following to the end of this subsection:

In addition to the requirements of the ODOT *Construction Surveying Manual for Contractors*, establish Engineering Stationing at 50 foot intervals for the length of the project along the shoulder of the highway. Maintain the stationing so it is visible throughout construction of the project.

SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Comply with Section 00310 of the Standard Specifications.

SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications.

SECTION 00330 - EARTHWORK

Comply with Section 00330 of the Standard Specifications modified as follows:

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00330.03 Basis of Performance - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section on the excavation basis.

00330.14 Selected Granular Backfill - Delete the sentence that begins "Reclaimed glass meeting the requirements of Section 02695..."

00330.15 Selected Stone Backfill - Delete the sentence that begins "Reclaimed glass meeting the requirements of Section 02695..."

00330.41(a)(7) Abandoned Pipes and Miscellaneous Matter - Replace this subsection, except for the subsection number and title, with the following:

Remove and dispose of all abandoned pipe, Structures, and miscellaneous matter:

- Encountered in the work
- Located within 2 feet below subgrade
- Located within 2 feet of finished slope

Remove remaining abandoned pipes and structures, or completely fill abandoned pipes and structures with CLSM that meets the requirements of 00442.

Perform removal Work as part of the earthwork. Dispose of waste materials according to 00290.20.

00330.41(a)(9) Excavation Below Grade - Delete subsection 00330.41(a)(9)(c).

00330.80 Measurement - Add the following after the bulleted list:

No field measurement of earthwork items will be performed. The quantity will be the theoretical neat line volume constructed and accepted for each item. If changes are ordered, only the quantity included in the ordered changes will be measured.

00330.91(b) Foundation Excavation - Add the following bulleted item:

- When foundation excavation is not included in the Schedule of Items, foundation excavation will be paid according to 00331.90.

00330.91(d) General Excavation - Replace the last sentence of the fourth bulleted item with the following:

When such excavation is not part of a continuous operation, the roadway excavation is complete, and the Contractor is required to move Equipment in to perform the excavation, the excavation will be paid according to 00331.90.

00330.91(d) General Excavation - Delete the bullet that begins "Includes Unsuitable Material...".

00330.92 Kinds of Incidental Earthwork - Add the following bullet to the end of the bullet list:

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- Earthwork required for driveways and road approaches. Earthwork for driveways and road approaches will be that which is outside the Neat Line limits shown on the typical sections.

00330.94 Embankment Basis Payment - Delete the paragraph that begins "Excavation of unstable...".

SECTION 00331 - SUBGRADE STABILIZATION

Comply with Section 00331 of the Standard Specifications.

SECTION 00350 - GEOSYNTHETIC INSTALLATION

Comply with Section 00350 of the Standard Specifications.

SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL

Comply with Section 00405 of the Standard Specifications modified as follows:

00405.90 Payment - Add the following paragraph to the end of this subsection:

When the Contract Schedule of Items does not indicate payment for Work performed under this Section, no separate or additional payment will be made. Payment will be included in payment made for the appropriate items under which this Work is required.

SECTION 00415 - VIDEO PIPE INSPECTION

Comply with Section 00415 of the Standard Specifications modified as follows:

00415.40 (f) Recording Format and Labeling – Replace this subsection with the following:

00415.40 (f) Recording Format and Labeling – Record the video inspection using the latest version of NASSCO's PACP/MACP.

Furnish recordings on NASSCO PACP/MACP program and inventory sheets on CD including a test file to indicate the project number and name, date of inspection, pipe segment number, Contractor's name and whether it is a pre-construction or post-construction video, filenames, and description of the file contents.

SECTION 00440 - COMMERCIAL GRADE CONCRETE

00440.12 Properties of Commercial Grade Concrete - Replace the bullet that begins "**Slump** - 5 inches..." with the following bullets:

- **Slump** - 5 inches or less
 - For concrete sidewalks, ramps, driveways, or other hand finished surface applications, and when using a high range water reducing admixture, provide a slump of 8 inches or less as approved by the Engineer.

00440.13 Field-Mixed Concrete - Replace the subsection, except for subsection number and title, with the following:

CGC Work items listed in 00440.14(a) may be field-mixed conventionally, or by volumetric/mobile mixers conforming to ASTM C685. When approved, concrete sidewalks, concrete curb ramps, concrete driveways, and other flat concrete surfaces may be field-mixed using volumetric/mobile mixers conforming to ASTM C685, request approval prior to placement. For all other CGC applications, submit written request to the Engineer for approval to use volumetric/mobile mixers conforming to ASTM C685 at least 21 Days prior to placement.

Pre-packaged dry blended concrete from the QPL may be used for Work items listed in 00440.14(a).

00440.40(b) Placing - Add the following bullet to the end of the bullet list:

- When haul time or placement conditions warrant exceeding the time of discharge, submit a detailed breakdown of the estimated time needed from batching to discharge of a load along with the measures that will be taken to ensure slump, temperature and uniformity will be maintained. Submit in advance to establish a new time limit at the Engineer's discretion.

SECTION 00445 - SANITARY, STORM, CULVERT, SIPHON, AND IRRIGATION PIPE

Comply with Section 00445 of the Standard Specifications modified as follows:

00445.02 Contractor's Options - Replace this subsection, except for the subsection number and title, with the following:

No Pipe Data sheet has been provided and the Contractor has the option of using different kinds of pipe material. The Contractor may substitute pipe of equal or stronger strength, larger diameter, and higher quality material at any installation location, provided the substitution is approved and is made at no additional cost to the Agency.

00445.01 Definitions and Descriptive Terms - Add the following:

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Roof or Field Drains - Private drain pipe up to 8 inches in diameter constructed of PVC, clay, concrete, or HDPE.

Add the following subsection:

00445.49 Roof or Field Drain Connections - Connect existing roof, lot or field drain pipe to the curb or nearest storm drain line as directed. Provide pipe, cleanouts and fittings meeting the requirements of the Standard Specifications as specified herein, and match existing pipe size. Use a manufactured tee to connect to storm drain with an approved coupling connection to the existing pipe, and install a tracer wire with the drain line.

Use PVC meeting the requirements of ASTM D3034 SDR 35, with a diameter matching existing pipe size. Approximate location and size of possible roof and field drains will be shown on the plans when locations are known. Additional roof and field drains encountered during construction will be paid for at the Contract unit price.

00445.91 Payment - Add the following:

Pay Items	Unit of Measurement
(m) Roof or Field Drain Connections	foot

Payment for item (m) includes cleanouts and fittings. No separate or additional payment will be made for earthwork, ditch excavation, or connection to inlet structure.

SECTION 00470 - MANHOLES, CATCH BASINS, AND INLETS

Comply with Section 00470 of the Standard Specifications modified as follows:

00470.41(c) Grates, Frames, Covers and Fittings - Replace this subsection, except for the subsection number and title, with the following:

Set metal frames for manholes on full non-shrink grout beds to prevent infiltration of surface water or groundwater between the frame and the concrete of the manhole section. If concrete is to be poured around the frames, coat the portion of the frame that will contact the concrete with hot asphalt before placing the concrete. Set frames, covers and grates true to the locations and grades established. Clean bearing surfaces and provide uniform contact. The use of a bolt adjustment system for frames from the QPL is allowed. Secure all fastenings. Construct all mortared, sanitary sewer manhole necks and all riser ring joints made with non-shrink grout using an approved commercial concrete bonding agent applied to all cured concrete surfaces being grouted.

00470.42 Precast Concrete Catch Basins and Inlets - Add the following sentence to the end of this subsection:

Grade adjustments using a bolt system from the QPL is allowed.

SECTION 00490 - WORK ON EXISTING SEWERS AND STRUCTURES

Comply with Section 00490 of the Standard Specifications.

SECTION 00620 - COLD PLANE PAVEMENT REMOVAL

Comply with Section 00620 of the Standard Specifications modified as follows:

00620.40(e) Warning Signs - Replace this subsection, except for the subsection number and title, with the following:

Provide warning signs as required where abrupt or sloped drop-offs occur at the edge of the existing or new surface according to Sections 00221 and 00222.

00620.43 Maintenance Under Traffic - Replace this subsection, except for the subsection number and title, with the following:

Traffic will be allowed on the cold planed surface up to 14 Calendar Days after removing the existing surface. Sweep and clean the cold planed surface before opening to traffic.

Before beginning paving operations, make repairs to the existing cold planed surface as directed. Payment for the repairs will be made according to 00195.20.

SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS

Comply with Section 00641 of the Standard Specifications modified as follows:

00641.10(a) Base and Shoulder Aggregate - In the paragraph that begins "Aggregate for bases...", add the following sentence after the first sentence:

Base aggregate shall be either 1"-0 or 3/4"-0 size.

00641.12 Limits of Mixture - Add the following after the first sentence:

Water can be added to aggregate on grade to achieve optimum moisture and compaction. Care must be taken not to segregate the fine materials from the rock in the aggregate.

00641.41 Mixing, Hauling, and Placing - Replace the sentence that begins "Add water to the Aggregate..." with the following two sentences:

Add water to the aggregate while mixing to provide a moisture content according to 00641.12 and paragraph (a) of this subsection. Water can be added to aggregate on grade to achieve optimum moisture and compaction. Care must be taken not to segregate the fine materials from the rock in the aggregate.

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00641.44(a-1) Dense-graded Aggregates - Replace this subsection, except for the subsection number and title, with the following:

Begin compaction of each layer of dense-graded Aggregates immediately after the Material is spread. Continue compaction to achieve a minimum of 100% of maximum density. Determine maximum density according to AASHTO T 99, Method D, and coarse particle correction according to AASHTO T 224. Test in place density according to AASHTO T 310. Determine in place compaction of non-density testable Material according to ODOT TM 158.

00641.41 Mixing, Hauling, and Placing - Replace the sentence that begins "Add water to the Aggregate..." with the following two sentences:

Add water to the Aggregate while mixing to provide a moisture content according to 00641.12 and subsection 00641.41(a). Road mix is not allowed on this Project.

00641.80 Volume Basis - Replace this subsection, except for the subsection number and title, with the following:

When measurement is by volume, quantities will be the theoretical Neat Line quantity constructed and accepted, plus the field measured quantity constructed and accepted, as identified below.

The aggregate base quantity shown in the Contract Schedule of Items is the sum of the following quantities:

- 3,725 cubic yards shown in the Typical Sections (theoretical Neat Line)
- 165 cubic yards for sidewalks (theoretical Neat Line)
- 215 cubic yards for driveways (theoretical Neat Line)
- 250 cubic yards for Subgrade stabilization (allowance for field measurement)
- 100 cubic yards for ordered changes (allowance for field measurement)

Except for approved Subgrade stabilization, backfill below elevations shown, and ordered changes, field measurement of the quantity will not be performed. A quantity allowance is included in the Contract Schedule of Items for field measurement of Subgrade stabilization, backfill below elevations shown, and ordered changes.

00641.90 Payment - Add the following to the end of this subsection:

No separate or additional payment will be made for Aggregate Base shown but not included in the theoretical Neat Line quantities listed in 00641.80.

SECTION 00730 - EMULSIFIED ASPHALT TACK COAT

Comply with Section 00730 of the Standard Specifications modified as follows:

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00730.11 Emulsified Asphalt - In the paragraph that begins "Obtain samples according to AASHTO T 40..." replace the words "AASHTO T 40" with the words "AASHTO R 66".

00730.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

No separate or additional payment will be made for Emulsified Asphalt tack coat. Approximately 4.5 Tons of Emulsified Asphalt in tack coat will be required on this Project.

SECTION 00744 - ASPHALT CONCRETE PAVEMENT

Comply with Section 00744 of the Standard Specifications modified as follows:

00744.11(a) Asphalt Cement - Add the following to the end of this subsection:

Provide PG 64-22 or PG 70-22 grade asphalt cement for this Project.

Add the following subsection:

00744.51 Opening Sections to Traffic - Schedule work so that, during the same shift, the surfaces being paved are paved full width and length through the wearing Course before opening to traffic.

00744.80 Measurement- Replace this subsection, except for the subsection number and title, with the following:

When measurement is by volume or weight, quantities will be the theoretical Neat Line quantity constructed and accepted, plus the field measured quantity constructed and accepted.

SECTION 00759 - MISCELLANEOUS PORTLAND CEMENT CONCRETE STRUCTURES

Comply with Section 00759 of the Standard Specifications modified as follows:

00759.03(b) Curb Ramp Plan - Replace the bullet that begins "Compliance with Working Drawings and details..." with the following bullet:

- Comply with Working Drawings and details submitted under 00759.03(a)

Add the following subsection:

00759.03(d) Corrective Action Plan - Unless otherwise approved, notify the Engineer before performing corrective action. Include TPAR necessary to complete corrective action work.

At least 21 Calendar Days before concrete Structures Work is scheduled to begin, submit a corrective action plan. The corrective action plan shall address procedures to correct deficient

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Structures through minor corrective action or replacement according to 00759.55(a), and include:

- List of minor corrective actions that will be used to correct deficiencies, according to 00759.50 and 00759.55.
- Procedures for performing corrective action.
- Proposed concrete grinding Equipment and method of grinding.
- Proposed concrete repair Material used for resurfacing ground concrete surfaces according to Section 02015.
- Construction activities, Equipment and staging necessary to complete corrective action Work.

The Engineer will review the corrective action plan(s) and provide a response to the Contractor within 5 Days after receiving the plan. Do not begin concrete Structure Work until the corrective action plan is approved by the Engineer.

Add the following subsection:

00759.23 Concrete Resurfacing Equipment - Furnish power-operated scarifying Equipment capable of uniformly removing and preparing the existing surface to depths required. For concrete grinding operations, furnish 12 segment grinders, fine-toothed scarifying Equipment, or other approved grinding Equipment.

00759.46 Concrete - Replace this subsection, except for the subsection number and title, with the following:

Construct the Structures between suitable forms or by the extrusion method. Place concrete according to the Plans, Section 00440, and this Section.

00759.50(a) General - Add the following paragraphs to the end of this subsection:

Install truncated domes as shown. Place according to the manufacturer's recommendation. Install abutting truncated dome panels with no more than 1/4 inch spacing. Install anchors along cut edges of truncated dome panels according to manufacturer's recommendations.

In addition, finish concrete surfaces of Structures to be within the established Slopes and dimensions allowed by the Standard Drawings and Plans. Repair or remove and replace Structures not meeting the Standard Drawings and Plans at no additional cost to the Agency.

Submit a corrective action plan for each non-compliant Structure after receiving notice of non-compliance from the Engineer. Perform correction of defects according to 00759.55.

00759.50(c) Driveways, Walks, and Surfacing - Replace this subsection, except for the subsection number and title, with the following:

Prevent segregation of the concrete during placement. Strike-off the concrete to the grade shown, and float the surface smooth. After the water sheen disappears, edge the joints and remove edging tool marks prior to final finishing. Lightly cross-broom the surface to a uniform texture. Do not trowel joints or edges after brooming surface.

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The 24 inch smart level will be used to measure driveway and sidewalk cross slopes on the Pedestrian Access Route.

00759.50(d) Curb Ramps - Replace this subsection, except for the subsection number and title, with the following:

Prevent segregation of the concrete during placement. Strike-off the concrete to the grade shown and float the surface smooth. After the water sheen disappears, edge the joints and remove edging tool marks prior to final finishing. Lightly cross-broom the surface to a uniform texture. Do not trowel joints or edges after brooming surface.

The 6 inch smart level will be used to measure curb running slope. The 6 inch smart level will be used to measure slopes on portions of the curb ramp, gutter pan, or adjacent surfaces that cannot accommodate a 24 inch smart level. All other curb ramp locations will use a 24 inch smart level to measure slopes.

Add the following subsection:

00759.55 Correction of Deficient Structures - Unless otherwise approved, notify the Engineer before performing corrective action. Correct deficiencies at no additional cost to the Agency. Perform corrective actions as directed, according to the approved corrective action plan, and according to the following:

(a) Minor Corrective Action - Submit Equipment and procedure for minor corrective action to the Engineer for approval. Minor corrective action can be performed to correct a deficiency up to 1 square foot per panel. Limit minor corrective action to one area per panel. Perform minor corrective action according to the following:

(1) Concrete Grinding - Grinding to correct high area deficiencies is limited to 3/16 inch. Use equipment meeting the requirements of 00759.23. Resurface all ground concrete surfaces according to 00759.55(a)(2).

(2) Concrete Resurfacing - Resurfacing to correct low area deficiencies is limited to 3/16 inch depth. Existing concrete is to be at least 7 Days old prior to resurfacing. Resurface repair areas according to the following:

a. **Keyway** - Sawcut a keyway at the boundaries of repair areas that are not already defined by panel control joints. Sawcut is to be 1/8 inch wide by 1/4 inch deep. Bevel inside edge of keyway at a 45 degree angle.

b. **Surface Preparation** - Prepare limits of repair area by grinding using Equipment from 00759.23. After grinding, sandblast the surface of the repair area. Clean the surface using a low pressure washer, less than 5,000 psi.

c. **Presoak** - Presoak the repair area for a minimum of 30 minutes to saturated surface dry. Prior to resurfacing, ensure there is no ponding water on the surface.

d. **Resurface** - Provide concrete resurfacer from the QPL according to 02015.60; refer to QPL remarks to select an appropriate material based on allowable installation depths. Furnish resurfacer in a color that closely matches the color of

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surrounding concrete surfaces. Mask boundaries of the repair area. Use hand tools to work resurfacer into keyways and match existing grade at boundaries. Apply a light broom-finish to achieve non-slip surface.

e. **Curing and Return to Traffic** - Wet cure for a minimum of 1 hour or per the manufacturer's recommendation, whichever is more restrictive. Follow manufacturer's recommendation for return to traffic time.

(3) ACP Grinding - Taper grind to match existing Pavement with a minimum grinding width of 1 foot for each 1/4 inch of ACP removed.

(b) Acceptance of Structures - Once the corrective work or replacement has been completed, acceptance will be based on the Engineer's inspection and approval of the Structure.

00759.90 Payment - Replace the paragraph that begins " Item (k) includes the additional Work required ..." with the following paragraph:

Item (k) includes the additional Work required to construct a curb ramp or replace an existing curb ramp. Payment for the area of the curb ramp will be made under the concrete walks Pay Item.

Replace the paragraph that begins "No separate or additional payment will be..." with the following paragraph and bullet list:

No separate or additional payment will be made for:

- curb ramp Working Drawings
- curb ramp plan,
- preplacement conference
- concrete form verification
- any necessary repair or removal and replacement of curb ramps
- providing supervisory personnel who have an active ODOT ADA Certification for Contractors to directly supervise the curb ramp Work
- developing corrective action plans

SECTION 00850 - COMMON PROVISIONS FOR PAVEMENT MARKINGS

Comply with Section 00850 of the Standard Specifications.

SECTION 00855 - PAVEMENT MARKERS

Comply with Section 00855 of the Standard Specifications.

SECTION 00865 - LONGITUDINAL PAVEMENT MARKINGS - DURABLE

Comply with Section 0865 of the Standard Specifications.

SECTION 00867 - TRANSVERSE PAVEMENT MARKINGS - LEGENDS AND BARS

Comply with Section 00867 of the Standard Specifications.

SECTION 00869 - CURB AND NON-TRAVERSABLE MEDIAN MARKINGS

Section 00869, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00869.00 Scope - In addition to the requirements of Section 00850, 00860, and 00865, install curb markings and non-traversable median markings according to the following Specifications.

Labor

00869.31 Manufacturer-Certified Installers - Provide certified installers according to 00850.31 for thermoplastic applications.

Construction

00869.45 Installation - Apply curb markings and non-traversable median markings only when the following conditions are met:

- The ambient temperature is at least 50 °F and rising
- The pavement has been dry for at least 48 hours
- 30 Calendar Days of cure time for new concrete curb or median.

Apply the Material to the pavement according to the manufacturer's installation instructions to the full height and width of curb or median as shown in the Plans.

Apply one or more of the following marking material types:

- **Paint** - Apply according to 00860.45 along full height of curb face and along full width of top of curb or non-traversable median.
- **Thermoplastic, Sprayed** - Apply according to 00865.45, using Method B Spray Markings to the full height of curb face and along full width of top of curb or non-traversable median.
 - Apply each application of painted thermoplastic marking at a thickness of 60 mils.

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Measurement

00869.80 Measurement - The quantities of non-traversable median markings will be measured on the area basis. The quantities of curb markings will be measured on the length basis.

Payment

00869.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

Pay Item

Unit of Measurement

(a) Curb Marking, Paint..... Foot

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

SECTION 00902 - CROSSWALK CLOSURE SUPPORTS

Section 00902, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00902.00 Scope - This Work consists of constructing crosswalk closure supports and associated signs as shown.

Materials

00902.10 Materials - Furnish Materials meeting the following requirements:

Commercial Grade Concrete 00440
Steel 01070.10 and 01070.12
Signs..... 00940

Construction

00902.40 General - Install crosswalk closure supports and associated signs as shown or directed.

Measurement

00902.80 Measurement - The quantities of crosswalk closure supports will be measured on the unit basis. No separate measurement will be made for signs attached to crosswalk closure supports.

Payment

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00902.90 Payment - The accepted quantities of Work done under this Section will be paid for at the Contract unit price, per each, for the item "Crosswalk Closure Supports".

Payment will be payment in full for furnishing and placing all Materials, including signs, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

SECTION 00905 - REMOVAL AND REINSTALLATION OF EXISTING SIGNS

Comply with Section 00905 of the Standard Specifications.

SECTION 00930 - METAL SIGN SUPPORTS

Comply with Section 00930 of the Standard Specifications modified as follows:

00930.80 Measurement - Add the following to the end of this subsection:

The estimated quantities of structural steel are as follows:

Item	Estimated Quantity (Pound)
Minor Sign Supports	
Perforated Steel Square Tube Anchor Sign Supports	1,415

SECTION 00940 - SIGNS

Comply with Section 00940 of the Standard Specifications.

SECTION 00960 - COMMON PROVISIONS FOR ELECTRICAL SYSTEMS

Comply with Section 00960 of the Standard Specifications modified as follows:

00960.30 Licensed Electricians - Replace the paragraph that begins "According to the Oregon Administrative Rule ..." with the following paragraph:

According to the Oregon Administrative Rule 918-282-0120(1), no person or entity shall allow any individual to perform electrical work for which the individual is not properly registered or licensed. Every person who installs electrical systems on the Project shall submit a copy of their electrical license or apprentice registration to the Engineer prior to performing any Work. They must be licensed as an S or a J under Oregon Administrative Rule 918-282.

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Field test according to 00987 for Intelligent Transportation Systems (ITS).

Table 00960-1 contains Utility contact information to arrange for the Utility to make electrical hookups:

Table 00960-1

Location	Utility	Utility Contact Person's Name, Email and Phone Number
BMCL	Power	Alison Baziak Design Project Manager Lighting Services T: 503-463-4381 C: 503-367-8505 Alison.Baziak@pgn.com

Furnish and install a meter base approved by the serving Utility (with cover by the Utility), where shown.

Electrical energy costs will be billed to the Agency for permanent installations.

SECTION 00962 - METAL ILLUMINATION AND TRAFFIC SIGNAL SUPPORTS

Comply with Section 00962 of the Standard Specifications modified as follows:

00962.05(a) Traffic Signal Mast Arm Supports - Add the following to the end of this subsection:

The following standard signal mast arm pole drawings are prequalified for use on the Project:

Valmont Industries Inc. Drg. DB00719 page 1, Rev. P, 6/8/18
Drg. DB00719 page 2, Rev. P, 6/8/18
Drg. DB00719 page 3, Rev. P, 6/8/18
Drg. DB00719 page 4, Rev. P, 6/8/18
Drg. DB00719 page 5, Rev. P, 6/8/18
Drg. DB01290 page 1, Rev. D, 9/22/20
Drg. DB01290 page 2, Rev. D, 9/22/20
Drg. DB01290 page 3, Rev. D, 9/22/20
Drg. DB01290 page 4, Rev. D, 9/22/20

Ameron Pole Products Division Drg. OR13TR10, Rev. E, 8/27/18
Drg. OR13TR11, Rev. F, 8/27/18
Drg. OR13TR12, Rev. G, 8/27/18
Drg. OR13TR13, Rev. C, 8/27/18

00962.05(c) Illumination Supports - Add the following to the end of this subsection:

Provide lighting equipment as specified in the Special Provisions, the project plans or from the PGE Approved Street Lighting Equipment List in effect on the date the Project is advertised.

SECTION 00963 - SIGNAL SUPPORT DRILLED SHAFTS

Comply with Section 00963 of the Standard Specifications.

SECTION 00970 - HIGHWAY ILLUMINATION

Comply with Section 00970 of the Standard Specifications modified as follows:

00970.00 Scope - Add the following:

This Work includes furnishing and installing Clackamas County approved materials, providing a roadway illumination system on signal poles and separate illumination poles, and meeting the requirements and standards of Portland General Electric (PGE) Schedule 32 or Schedule 95 Option B as shown on the plans. If there is a conflict between PGE standards and these specifications, the more stringent standard shall control.

Provide lighting equipment as specified in the Special Provisions, the project plans or from the PGE Approved Street Lighting Equipment List in effect on the date the Project is advertised.

Add the following subsection:

00970.11 LED Street Lighting - For Projects with LED street lighting, provide the following pre-approved Equipment from the PGE Approved Street Lighting Equipment List and as noted on the contract plans.

SECTION 00987 - TELECOMMUNICATIONS

Section 00987, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00987.00 Scope - This Work consists of furnishing and installing fiber optic cabling for the telecommunications of signalized intersection devices.

00987.01 Regulations, Standards, and Codes - Comply with the following standards where applicable:

- Telecommunications Industry Association (TIA/EIA)
 - EIA-455-3A (FOTP-3) Procedure to Measure Temperature Cycling Effects on Optical Fibers, Optical Cable, and Other Passive Fiber Optic Components
 - TIA-455-8 (FOTP-8) Measurement of Splice or Connector Loss and Reflectance Using an OTDR

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- TIA-526-7 (OFSTP-7) Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant
- EIA-455-25 (FOTP-25) Impact Testing of Optical Fiber Cables
- EIA-455-33 (FOTP-33) Fiber Optic Cable Tensile Loading and Bending Test
- EIA-455-41 (FOTP-41) Compressive Loading Resistance of Fiber Optic Cables
- EIA-455-81 (FOTP-81) Compound Flow (Drip) Test for Filled Fiber Optic Cable
- EIA-455-82 (FOTP-82) Fluid Penetration Test for Fluid Blocked Fiber Optic Cable
- EIA-455-104 (FOTP-104) Fiber Optic Cable Cyclic Flexing Test
- EIA-455-171 (FOTP-171) Attenuation by Substitution Measurement for Short-Length Multimode Graded-Index and Single Mode Optical Fiber Cable Assemblies
- EIA/TIA-568-B.3 Optical Fiber Cabling Components
- EIA/TIA-758 Customer Owned Outside Plant Telecommunications Cabling
- EIA-598-B Optical Fiber Cable Color Coding
- American National Standards Institute/Insulated Cable Engineers Association (ANSI/ICEA)
 - ANSI/ICEA S-87-640 Standard for Optical Fiber Outside Plant Communications Cable
- International Telecommunication Union - Telecommunication Standardization Sector (ITU-T)
 - G.652 (11/09) Characteristics of a single-mode optical fiber and cable Telecommunications Industry Association (TIA)
 - G.652 (11/16) Characteristics of a single-mode optical fiber and cable

00987.02 Submittals - Within 30 Calendar Days after the execution of the Contract, submit the following:

- Outside plant fiber optic cable according to 00987.10
- Fiber optic jumper/patch cables according to 00987.11.
- Splice closures and installation instructions according to 00987.12
- Splice trays according to 00987.13.
- Fiber Optics Installer or Fiber Optics Technician Certification according to 00987.30.
- OSP cable installation procedure according to 00987.40(a)
- Fiber optic cable test plan according to 00987.41(a)
- Factory testing according to 00987.41(b)
- Arrival on-site testing according to 00987.41(c)
- Fiber optic cable testing according to 00987.41(d) and (f)

Include the manufacturer's name, model numbers, catalog sheets and other descriptive literature of proposed materials. Provide the catalog sheets and literature including technical data, physical properties and operational description in sufficient detail to demonstrate the Equipment meets these specifications.

Materials

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00987.10 Outside Plant Fiber Optic Cable - Furnish and install outside plant (OSP) single mode fiber optic (SMFO) cable containing single mode dual window (1310 nm and 1550 nm) fibers.

(a) Optical Fiber - Meet optical, mechanical and environmental requirements for all usable fibers in buffer tubes.

(b) Fiber Characteristics and Tests - Meet the requirements in Table 00987-1 for single mode fibers:

Table 00987-1

Fiber Characteristic Table	
Parameters:	Single Mode
Type:	Step Index
Core diameter:	8.3 μm (nominal)
Cladding diameter	125 $\mu\text{m} \pm 1.0 \mu\text{m}$
Core to cladding offset:	$\leq 1.0 \mu\text{m}$
Coating:	dual layer, UV-cured acrylate strippable mechanically or chemically without damaging fibers
Optical fibers:	doped silica core with concentric silica cladding
Coating diameter:	250 $\mu\text{m} \pm 15 \mu\text{m}$
Cladding non-circularity defined as:	$\leq 2.0\%$ $[1 - (\text{min. cladding dia} \div \text{max. cladding dia.})] \times 100$ FOP cable: all dielectric, gel-filled or water blocking tape, duct-type
Proof/Tensile Test:	345 MPa, min
Attenuation at 1310 nm:	$\leq 0.4 \text{ dB/km}$
Attenuation at 1550 nm:	$\leq 0.4 \text{ dB/km}$
Design Standard:	ANSI/ICEA S-87-640
Test cable according to:	EIA-455-25 (FOTP-25) EIA-455-33 (FOTP-33 Condition II) EIA-455-41 (FOTP-41) EIA-455-81 (FOTP-81) EIA-455-82 (FOTP-82) EIA-455-104 (FOTP-104 Conditions I and II)
Test optical fiber according to:	EIA-455-3A (FOTP-3)
Attenuation at the Water Peak:	$\leq 2.1 \text{ dB/km @ } 1383 \pm 3 \text{ nm}$
Chromatic Dispersion	
Zero Dispersion Wavelength:	1301.5 to 1321.5 nm
Zero Dispersion Slope:	$\leq 0.092 \text{ ps}/(\text{nm}^2 \cdot \text{km})$
Maximum Dispersion:	$\leq 3.3 \text{ ps}/(\text{nm}^2 \cdot \text{km})$ for 1285 – 1330 nm $\leq 0.092 \text{ ps}/(\text{nm}^2 \cdot \text{km})$ for 1550 nm
Cut-Off Wavelength:	$< 1250 \text{ nm}$
Mode Field Diameter	$9.3 \pm 0.5 \mu\text{m}$ at 1310 nm

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Petermann II	10.5 ± 1.0 μm at 1550 nm
--------------	--------------------------

(c) Color Coding - Distinguish each fiber from others in the same tube or cable by means of color coding according to the following:

- | | |
|----------------|-----------------|
| 1. Blue (BL) | 7. Red (RD) |
| 2. Orange (OR) | 8. Black (BK) |
| 3. Green (GR) | 9. Yellow (YL) |
| 4. Brown (BR) | 10. Violet (VL) |
| 5. Slate (SL) | 11. Rose (RS) |
| 6. White (WT) | 12. Aqua (AQ) |

Target colors according to the Munsell color shades and comply with EIA/TIA-598.

The color formulation needs to be compatible with the fiber coating and the buffer tube filling compound, be heat stable, not fade, smear, be susceptible to migration, and it must not affect the transmission characteristics of the optical fibers and not cause the fibers to stick together.

(d) Cable Construction - Furnish fiber optic cables with the following components:

(1) Buffer Tubes - Furnish clearance in the loose buffer tubes with fibers and the inside of the tube to allow for expansion without constraining the fiber. The fibers are to be loose or suspended within the tubes. Do not adhere the fibers to the inside of the buffer tube. Do not exceed a maximum of 12 fibers in each buffer tube. Furnish the number of fibers per cable as shown.

Extrude loose buffer tubes from a material having a coefficient of friction sufficiently low to allow free movement of the fibers. Furnish material that is tough and abrasion resistant to furnish mechanical and environmental protection of the fibers, yet designed to permit safe intentional "scoring" and breakout, without damaging or degrading the internal fibers.

Furnish buffer tube filling compound that is a water blocking tape or gel based filling compound with anti-oxidant additives to prevent water intrusion and migration homogenous hydrocarbon. Furnish filling compound that is non-toxic, dermatologically safe to exposed skin, as well as chemically and mechanically compatible with all cable components, non-nutritive to fungus, non-hygroscopic and electrically non-conductive. Furnish filling compound free from dirt and foreign matter and be readily removable with conventional nontoxic solvents.

Strand buffer tubes around a central member by a method, such as reverse oscillation stranding process that will prevent stress on the fibers when the cable jacket is placed under strain.

(2) Central Member - Furnish a central member that functions as an anti-buckling element that is a glass reinforced plastic rod with similar expansion and contraction characteristic as the optical fibers and buffer tubes. To ensure the proper spacing between buffer tubes during stranding, a symmetrical linear overcoat of polyethylene may be applied to the central member to achieve the optimum diameter.

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(3) Filler Rods - Fillers may be included in the cable to maintain the symmetry of the cable cross section. Furnish filler rods that are solid medium or high-density polyethylene. Filler rods are to be the same diameter as the outer diameter of the buffer tubes.

(4) Stranding - Strand completed buffer tubes around the over-coated central member using stranding methods, lay lengths and positioning such that the cable meets mechanical, environmental and performance specifications. A polyester binding is to be applied over the stranded buffer tubes to hold them in place. Apply binders with sufficient tension to secure the buffer tubes to the central member without crushing the buffer tubes. Furnish a binder that is non-hygroscopic, non-wicking, and dielectric with low shrinkage.

(5) Core and Cable Flooding - Furnish a cable core that contains a water blocking tape material to prevent water ingress and migration. Furnish water blocking tape material that is either a polyolefin-based compound, which fills the cable core interstices, or an absorbent polymer, which fills voids and swells to block the ingress of water. The flooding compound or material needs to be homogeneous, non-hygroscopic, non-conductive, and non-nutritive to fungus. Furnish compound or material that is nontoxic, dermatologically safe and compatible with other cable components.

(6) Tensile Strength Member - Furnish tensile strength by high tensile strength aramid yarns or fiberglass, which are helically stranded evenly around the cable, core and not adhere to other cable components.

(7) Ripcord - Furnish cable that contains at least one ripcord under the jacket for easy sheath removal.

(8) Outerjacket - Furnish jacket that is free of holes, splits, and blisters and be medium or high density polyethylene, or medium density cross linked polyethylene with minimum nominal jacket thickness of $1 \text{ mm} \pm 0.076 \text{ mm}$. Apply jacketing material directly over the tensile strength members and water blocking materials and not adhere to the aramid strength material. The polyethylene needs to contain carbon black to provide ultraviolet light protection and not promote the growth of fungus.

Mark the jacket or sheath with the manufacturer's name, the words "Optical Cable", the number of fibers, "SM", year of manufacture, and sequential measurement markings every meter. The marking is to be of contrasting color to the cable jacket.

(e) Packaging and Shipping Requirements - Pack completed cable on reels for shipment. Wrap cable in weather and temperature resistant covering. Seal both ends of cable to prevent ingress of moisture. Secure each cable end to the reel to prevent the cable from coming loose during transit. Have at least 6 feet of cable length accessible for testing purposes.

Label each cable reel with a durable, weatherproof label showing manufacturer's name, cable type, actual length of cable on the reel, Contractor's name, contract number, and reel number. Include a shipping record in a weatherproof envelope showing the above information and include the date of manufacturer, cable characteristics (size, attenuation,

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bandwidth), factory test results, cable identification number and any other pertinent information.

Minimum hub diameter of reel needs to be at least thirty times the cable diameter. Fiber optic cable is to be continuous length on each reel. Mark reel indicating direction reel should be rolled to prevent loosening of cable.

Furnish installation procedures and technical support information at delivery.

00987.11 Fiber Optic Jumpers/Patch Cable - Furnish a minimum of 2 duplex or 4 simplex jumper cables in each cabinet that has new or modified fiber optic cable installation. Use jumpers of simplex or duplex design. Use duplex jumpers of duplex round cable construction. Use jumpers that are at least 6 feet in length, sufficient to avoid stress and allow orderly routing. Use an outer jacket of duplex jumpers that is yellow in color. Use the two inner simplex jackets that are contrasting colors to provide easy visual identification of polarity. Store jumpers within the cabinets. The Agency will connect at the time of commissioning.

Use connectors that are ceramic ferrule for single mode fiber with ultra-physical contact (UPC) polishing, type as shown. Furnish connector body housing that is glass-reinforced polymer. The associated coupler is to be of the same material as the connector housing. Each connector is not to exceed 0.75 dB loss as specified by EIA/TIA-568-B.3.

00987.12 In Handhole Splice Closures - Enclose the fiber optic field splices in splice closures, complete with splice organizer trays, brackets, clips, cable ties, seals and sealant, as needed. Furnish splice closures suitable for direct burial application. Supply the Manufacturer's installation instructions to the Engineer prior to the installation of any splice closures. Furnish splice closures that meet the following requirements:

- Non-filled thermoplastic case
- Rodent proof, waterproof, re-enterable and moisture proof
- Expandable from 2 cables per end to 8 cables per end by using adapter plates if necessary
- Cable entry ports that accommodate 10 mm to 25 mm diameter cables
- Multiple grounding straps
- Accommodate the splicing of all fibers of the largest cable plus 12 additional splices
- Suitable for "butt" or "through" cable entry configurations
- Place no stress on finished splices within the splice trays

Attach the splice closure to the inside wall of the handhole.

00987.13 Splice Trays - Furnish splice trays that accommodate a minimum of 12 fusion splices and allow for a minimum bend radius of 1-3/4 inches. Loop individual fibers one full turn within the splice tray to allow for future splicing. Do not apply stress on the fiber when it is located in its final position. Secure buffer tubes near the entrance of the splice tray. Secure buffer tubes with channel straps.

Furnish splice trays of the same manufacturer as the splice closure or fiber distribution panel depending on use.

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00987.14 Warning Tags - Furnish warning tags with a long life material, orange in color, and marked in a permanent and consistent manner with black lettering.

Include the text "CAUTION FIBER OPTIC CABLE" on all warning tags and show the cable fiber count.

Attach warning tags to fiber optic cables using UV-resistant zip ties according to the manufacturer's recommendations. Do not affix in a manner that causes damage to the fiber.

Attach warning tags to the cables in at least two locations in junction boxes and handholes, and at least one location in cabinets.

00987.15 Labels - Use labels to identify cables and jumpers and patch cords at all termination points, junction boxes, handholes, and cabinets. Use labels to identify all communications equipment and devices in junction boxes, handholes, and cabinets. Use yellow or white colored labels with permanent black lettering. Mechanically imprint labels, do not use handwritten labels.

Use tubular plastic labels on cables and jumpers and patch cords. Label duplex jumpers to provide a visual distinction between the two fibers. Provide labels with the following information:

- Owner
- Number of fibers
- Fiber number
- Cable origin
- Cable destination

Labor

00987.30 Fiber Optic Work - Individuals performing fiber optic installation are to possess either a Fiber Optics Installer or Fiber Optics Technician Certification recognized by the Electronics Technicians Association (ETA) or a Fiber Optics for ITS certificate from the International Municipal Signal Association (IMSA). Submit a copy of certification to the Engineer prior to performing any work.

Construction

00987.40 Fiber Optic Cable Installation and Setup:

(a) OSP Cable Installation - Submit a fiber optic cable installation plan including the manufacturer's recommended procedures for pulling fiber optic cable for review 30 Calendar Days of execution of the Contract. Use mechanical aids to install cable. Place tension measuring device or breakaway swivel between ends of cable grip and pull rope to ensure tension does not exceed 80 percent of recommended tension or 500 pounds, whichever is less. Use cable grips with a ball bearing swivel for installing fiber optic cable to prevent cable from twisting during installation.

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During installation, maintain a minimum bend radius of 20 times the outside diameter of the cable per EIA/TIA-568-B.3. Do not stress the cable beyond the minimum bend radius. Install fiber optic cable using cable pulling lubricant as recommended by the manufacturer. Use a non-abrasive pull tape. Station personnel at each splice vault and hand hole to lubricate the cable and prevent kinking or other damage. Install fiber optic cable without splices, except as specifically allowed for on the plans, as described herein, or as directed. Divide slack equally on each side of splice closures. Following installation of cable in conduit, seal all entrances in cabinets, junction boxes and vaults with duct sealing compound to keep out moisture, foreign materials, and rodents.

(b) Splicing - Use fusion type splices for all optical fibers that do not exceed a maximum optical attenuation of 0.3 dB per splice as required by EIA/TIA-568-B.3. Place completed splices in a splice tray. Place splice tray in a splice closure unless using a splice enclosure. Protect all splices with a thermal shrink sleeve.

(c) Cable Terminations - At the splice closure, the cable jacket of the SMFO cable is to be removed exposing the aramid yarn, filler rods, and buffer tubes. The exposed length of the buffer tubes needs to be at least the length recommended by the splice closure manufacturer which allows the tubes to be secured to the splice trays. Secure each buffer tube to the splice tray in which it is to be spliced. Remove the remainder of the tube to expose sufficient length of the fibers in order to properly install in the splice tray.

Splice and secure fiber optic cable with tie warps and route to its appropriate fiber distribution unit location.

When applicable, the moisture blocking gel is to be removed from the exposed buffer tubes and fibers. The transition from the buffer tube to the bundle of jacketed fibers is to be treated by an accepted procedure for sleeve tubing, shrink tube and silicone blocking of the transition to prevent future gel leak. Follow manufacturer's installation instructions to ensure that throughout the specified temperature range gel will not flow from the end of the buffer tube if using gel filled fiber optic cable. Strip and prepare the cable for splicing.

All fibers of the fiber distribution panel are to be labeled within the cabinet.

Make a transition with flexible tubing, to isolate each fiber to protect the individual coated fibers. The final transition from bundle to individual fiber tube is to be secured with an adhesive heat shrink sleeve.

00987.41 Fiber Optic Testing:

(a) Test Plan - Prior to beginning testing, submit for approval copies of installation and test plan detailing methods of installation and testing for all materials, equipment, and systems. At the same time, submit the associated schedule of activities. Notification of approval or rejection will be made within 28 Calendar Days. If the test plan is rejected, submit a revised test plan within 28 Days. Do not begin testing until receiving approval of the test plan by the Engineer. Submit all test results, including results of failed tests or re-tests to the Engineer. Supply all test equipment.

Provide 48 hours notice of intent to proceed prior to commencing each functional or subsystem test. In the notice, provide location(s) of test(s). Conduct environmental tests of field equipment as part of the functional tests. Subsystem testing and inspections are

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to include visual inspection from damaged or incorrect installation, adjustments, alignments, and measurement of parameters and operating conditions.

(b) Factory Testing - Documentation of compliance with the fiber specifications as listed herein is to be supplied by the original equipment manufacturer. Before shipment, but while on the shipping reel, test 100 percent of all fibers for attenuation. Maintain copies of the results on file by the manufacturer with a file identification number, attached to the cable reel in a waterproof envelope, and submitted to the Contractor and Engineer.

(c) Arrival On-Site Testing - Physically inspect each cable upon delivery. Attenuation test 100 percent of the fibers to confirm that the cable meets the requirements at wavelengths of both 1310 nm and 1550 nm with the Optical Time Domain Reflectometer (OTDR) test equipment. The failure of any single fiber in the cable is cause for rejection of the entire reel. Record test results and compare and file with the copy accompanying the shipping reel in a waterproof envelope. Do not install the cable until completion of this test sequence and the Engineer provides written approval. Submit copies of traces and test results to the Engineer. If the tests are unsatisfactory, the reel of cable is considered unacceptable and all records corresponding to that reel are to be marked accordingly. Replace the unsatisfactory reels of cable with new reels of cable. Test the new reels of cable to demonstrate acceptability. Submit copies of the test results to the Engineer.

(d) Fiber Optic Cable Testing - Testing is to include the tests on elements of the passive fiber optic components: (1) at the factory; (2) after delivery to the project site, but prior to installation; (3) after installation, but prior to connection to any other portion of the system. Provide all personnel, Equipment, instrumentation, and Materials necessary to perform all on-site testing.

Provide documentation of all test results to the Engineer at most 3 Days after the test is completed. At least 21 Calendar Days prior to the arrival of cable on site, provide detailed field testing procedures. In the procedures include the test involved and method by which tests are to be conducted. Include in the notification the model, manufacturer, configuration, calibration, and alignment procedures for all proposed test equipment

(e) Outdoor Splices - Verify insertion loss quality of each splice prior to sealing splice closure.

(f) Cable Verification:

(1) OTDR Testing - Once the cabling system has been installed and is ready for splicing, test all fiber links with the OTDR test equipment for attenuation at wavelengths of both 1310 nm and 1550 nm. Index matching gel is not allowed in connectors during testing. Record, date and compare test results and file with previous copies. Submit hard copy printout of traces and test results to the Engineer. Use OTDR test equipment capable of recording and displaying anomalies of at least 0.02 dB. Calibrate the OTDR with traceability to a national metrology unit such as the National Institute of Standards and Technology (NIST).

(2) Power Meter and Light Source Testing - At the conclusion of the OTDR testing, 100 percent of the fiber links are to be tested end to end with a power meter and light source, according to FOTP-171 and in the same wavelength specified for the OTDR tests. Conduct tests in one direction. Calculate the insertion. Record test results,

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compared, and filed with the other recordings of the same links. Submit test results to the Engineer. Use a power meter that was calibrated with traceability to the National Institute of Standards and Technology (NIST).

(3) Test Failures -

If the link loss measured from the power meter and light source exceeds the calculated link loss, or the actual location of the fiber ends does not agree with the expected location of the fiber ends (as would occur with a broken fiber), the FO link will be rejected. Replace the unsatisfactory segments of cable, or splices with a new segment of cable or splice. Complete the OTDR testing, power meter and light source testing for the repair to determine acceptability. Submit copies of the test results to the Engineer. The removal and replacement of a segment of cable will be interpreted as the removal and replacement of a single continuous length of cable connecting two splices, two connectors. The removal of only the small section containing the failure and therefore introducing new unplanned splices is not allowed.

If the attenuation measured after installation does not match the attenuation measured on-site before installation then the fiber optic link will be rejected. Replace the unsatisfactory segments of cable with a new segment of cable. Complete the OTDR testing for the repair to determine acceptability. Submit copies of the test results to the Engineer. The removal and replacement of a segment of cable will be interpreted as the removal and replacement of a single continuous length of cable. The removal of only the small section containing the failure and therefore introducing new unplanned splices is not allowed.

(4) Allowed Loss - Evaluate fiber optic cable tests based on the following maximum allowable loss per EIA/TIA-568-B.3:

- Fiber on-reel: 0.40 dB/km at 1310nm and 0.30 dB/km at 1550nm
- Installed fiber: 0.40 dB/km at 1310nm and 0.30 dB/km at 1550nm
- Per connector: 0.75 dB bi-directional average
- Per splice: 0.30 dB bi-directional average

Losses exceeding the above limits are only allowed with written approval from the Engineer.

Measurement

00987.80 Measurement - No measurement of quantities will be made for Work performed under this Section.

Payment

00987.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

Pay Item

Unit of Measurement

- (a) Telecommunications, Material Lump Sum

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- (b) Telecommunications, Installation Lump Sum
- (c) Telecommunications, Splicing and Testing Lump Sum

Item (a) includes furnishing outside plant fiber optic cable, fiber optic jumpers, fiber optic patch cable, splice closures, splice trays, and all other Incidental items necessary to complete the Work.

Item (b) includes installation of all materials as shown or specified.

Item (c) includes fiber optic cable splicing and fiber optic testing as shown or specified.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

No separate or additional payment will be made for required submittals and documentation.

No separate or additional payment will be made for replacement of disturbed earthwork, base, and surfacing.

SECTION 00990 - TRAFFIC SIGNALS

Comply with Section 00990 of the Standard Specifications modified as follows:

Add the following subsection:

00990.10 Materials - Furnish Materials meeting the following requirements:

Crosswalk Closure Support..... 00902.10

00990.90 Payment - Delete Pay Item (c) from the pay item list.

Delete the paragraph that begins "Item (c) includes furnishing and installing..."

Replace the paragraph that begins "In Items (a), (b), (c), (d), (f) ..." with the following paragraph:

In Items (a), (b), (d), (f) and (g), the intersection location will be inserted in the blank.

Replace the paragraph that begins "Item (b) includes furnishing and replacing..." with the following paragraph:

Item (b) includes furnishing and replacing or installing items for an existing traffic signal installation and the detection system.

Replace the paragraph that begins "Mast arm pole and strain pole foundations ..." with the following paragraph:

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Drilled shaft foundations for traffic signal 15 foot through 55 foot mast arm supports will be paid for according to 00963.90. Drilled shaft foundations for traffic signal 60 foot through 75 foot mast arm supports will be paid for according to 00921.90.

Crosswalk closure supports will be paid for according to 00902.90.

SECTION 01011 - STORMWATER CONTROL, PONDS

Section 01011, which is not a Standard Specification, is included for this Project by Special Provision.

Description

01011.00 Scope - This Work consists of furnishing and installing stormwater ponds as shown.

Materials

01011.10 Materials - Furnish Material meeting the following requirements:

Granular Drain Backfill	00430.11
Manholes, Catch Basins, and Inlets	00470.11
Riprap	00390.11
Storm Sewer Pipe	00445.11
Subsurface Drain Pipe	00430.10
Water Quality Seeding	01030.13

01011.12 Water Quality Mixture - Furnish medium compost meeting the requirements of Section 03020. Furnish soil meeting the following gradation requirements:

Sieve Size	Percent Passing (by Weight)
No. 4	100
No 10	95 - 100
No. 40	40 - 60
No. 100	10 - 25
No. 200	5 - 10

Sample soil according to AASHTO R 90. Determine sieve analysis according to AASHTO T 27 and AASHTO T 11.

Blend the medium compost and soil so that the mixture:

- Is composed of between 20 percent and 25 percent medium compost material and between 75 percent and 80 percent soil material.
- Has a pH between 5.5 and 8.0.
- Does not have clumps greater than 3 inches in any direction.

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Construction

01011.40 General - Construct storage facility as shown. Perform excavation and fine grading work only when the facility area is dry and only from the top of the pond area. Do not stockpile material in the facility area.

01011.41 Storage Pond - Scarify the subsoil area a minimum 12 inches deep. After scarification, place the water quality mixture in maximum 12 inch Lifts. Compact each Lift with a water filled landscape roller.

01011.42 Bioretention Pond:

(a) **Scarify** - Scarify the subsoil area a minimum 12 inches deep.

(b) **Laying Pipe** - Lay the pipe according to Section 00445. Place pipe with perforations down unless otherwise directed.

(c) **Joining Pipe** - Fasten pipes together with coupling fittings or bands as specified for the type of pipe used. Cap the upstream end of the pipe.

(d) **Inspection and Repair** - Place Type 2 water quality mixture only after all the pipe is laid, joined, and inspected. Remove and reinstall or replace all pipe that is out of alignment, has settled, or is damaged at no additional cost to the Agency.

(e) **Placement of Water Quality Mixture** - Place water quality mixture in maximum 12 inch Lifts. Compact each Lift by using a water filled roller.

01011.43 Facility Field Markers - Install field markers as shown and according to Section 00842.

Maintenance

01011.70 Cleaning - If a stormwater control facility is used for erosion and sediment control, remove all accumulated sediment and debris before completing the facility.

Measurement

01011.80 Measurement - No measurement of quantities will be made for Work performed under this Section. The estimated quantities of Materials are:

Bioretention Pond Quantities:

Item	Quantity
Excavation	215 Cu. Yd.
Loose Riprap, Class 50.....	2 Cu. Yd.
Water Quality Mixture	41 Cu. Yd.
Catch Basin, Ditch Inlet.....	1 Each
10 Inch Storm Sewer Pipe	30 Foot

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12 Inch Storm Sewer Pipe	29 Foot
8 Inch Subsurface Drain Pipe	12 Foot
Sloped Pipe End.....	2 Each
Connection to Existing Structure.....	1 Each
Water Quality Seeding.....	2,655 Sq. Ft.
Access Grid.....	725 Sq. Ft.

Payment

01011.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item:

Pay Item

Unit of Measurement

(a) Bioretention Pond..... Lump Sum

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

SECTION 01030 - SEEDING

Comply with Section 01030 of the Standard Specifications modified as follows:

01030.13(c) Pure Live Seed - Replace this subsection, except subsection number and title, with the following subsection:

Use the PLS specified rate listed in 01030.13(f) for determining PLS application rates. Ensure the PLS application rate meets the PLS specified rate. Apply pre blended seed mixes, with multiple species, at a PLS application rate ensuring all species meet or exceed the PLS specified rate for each species in the seed mix.

PLS application rate for an individual seed species is determined as follows:

- PLS specified rate is listed in 01030.13(f)
- PLS factor is obtained by multiplying the seed label germination percentage times the seed label purity percentage. Use the purity and germination percentages from the label on actual bags of seed to be used on the Project.
- PLS application rate is obtained by dividing the PLS specified rate by the PLS factor.

For a seed mix, make this calculation for each seed species in the mix and then adjust as follows:

- Using the seed tag, determine the weight of each seed species in the bag and use this information to find the percentage, by weight, of each seed species is in 1 pound for the pre-blended mix.
- Divide the percentage by weight of each seed species, per pound, for the pre-blended mix, by the PLS application rate for that specific seed species.

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Determine the highest application rate in the seed mix and apply the seed mix at that application rate.

01030.13(f) Types of Seed Mixes - Add the following to the end of this subsection:

Provide the following seed mix formulas:

• **Lawn Seeding:**

Name	PLS Specified Rate (lb/acre)	_____	_____	_____
Fine Fescue**	8.0	_____	_____	_____
Perennial Ryegrass**	53.4	_____	_____	_____
Kentucky Bluegrass**	152.5	_____	_____	_____

** Acceptable varieties (All of these varieties are trademarked):

Fine Fescues:

Creeping Red Fescue: Fortress, Ensylva
Chewings Fescue: Banner, Highlight, Koket, and Jamestown. Pennlawn and Cascade are acceptable only in Eastern Oregon.

Perennial Ryegrass:

Citation, Derby, Diplomat, Manhattan, Omega, Pennfine, Regal, and Yorktown II. Only Manhattan and Pennfine are acceptable east of the Cascades.

Kentucky Bluegrass:

Adelphi, Baron, Ben-Sun, Birka, Bonnieblue, Fylking, Galaxy, Glade, Majestic, Merion, Monopoly, Primo, Sydsport, and Victa.

01030.13(g) Availability - Add the following sentence to the end of this subsection:

Submit the seed and seed mixes to be used on the project according to 00150.37.

SECTION 01040 - PLANTING

Comply with Section 01040 of the Standard Specifications.

SECTION 01070 - MAILBOX SUPPORTS

Comply with Section 01070 of the Standard Specifications.

SECTION 01140 - POTABLE WATER PIPE AND FITTINGS

Comply with Section 01140 of the Standard Specifications modified as follows:

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01140.90 Payment - In the paragraph that begins “No separate or additional payment will be...”, add the following bullet to the bullet list:

- pipe reconnections

SECTION 01150 - POTABLE WATER VALVES

Comply with Section 01150 of the Standard Specifications modified as follows:

01150.10 Materials - Delete “Ball Valves” from the list of materials.

01150.90 Payment - Replace the paragraph that begins “No separate or additional...” with the following paragraph:

No separate or additional payment will be made for:

- earthwork not covered under other Pay Items
- jointing
- blocking of valves
- protective coatings
- valve boxes
- valve box extensions
- valve operator extensions
- valve reconnections
- hydrostatic testing

SECTION 01160 - HYDRANTS AND APPURTENANCES

Comply with Section 01160 of the Standard Specifications modified as follows:

01160.90 Payment – Add the following paragraph to item (a) of this subsection:

Also, Includes 6” D.I. spool pipe (between the “tee” at the water main and Fire Hydrant), blue bi-direction raised pavement marker, valve box, valve box lid, thrust blocks, pipe restraints, backfill material, bedding, pressure testing, disinfection, materials, equipment, tools, labor, fittings, appurtenances and other incidentals required to complete the work as specified.

SECTION 01170 - POTABLE WATER SERVICE CONNECTIONS, 2 INCH AND SMALLER

Comply with Section 01170 of the Standard Specifications.

SECTION 02001 - CONCRETE

Comply with Section 02001 of the Standard Specifications modified as follows:

02001.02 Abbreviations and Definitions: Replace the sentence that begins “**Pozzolans** - Fly ash, silica fume...” with the following sentence:

Pozzolans - Fly ash, natural Pozzolans, silica fume, and high-reactivity Pozzolans.

Replace the sentence that begins “**Supplementary Cementitious Materials** - Fly ash, silica fume...” with the following sentence:

Supplementary Cementitious Materials - Pozzolans and ground granulated blast furnace slag.

02001.15(a) Current Mix Designs - Replace this subsection, except for the subsection number and title, with the following:

Mix designs that meet the requirements for the specified class of concrete and are currently being used or have been used within the past 24 months on any project, public or private, may be submitted for review. Provide individual test results that comprise the average if more than one data point exists. For paving designs the flexural strength testing must be from within the last two years. For HPC designs the length change and permeability tests must be from within the last two years.

02001.20(a) Strength - Replace Table 2001-1 with the following Table 2001-1:

Table 02001-1

Concrete Strength and Water/Cementitious Material (w/cm) Ratio		
Type of Concrete	Strength f'_c (psi)	Maximum w/cm Ratio
Structural	3300	0.50
	3300 (Seal)	0.45
	4000	0.48
	4000 (Drilled Shaft)	
	HPC4500	0.40
	HPC(IC)4500	
5000 +		
Paving	4000	0.44
	5000	0.48

W. Hayes Street Improvements

Bid No. 2022-01

PPCM's (with cast-in-place decks and no entrained air)	5500	0.44
	6000 +	0.42

02001.30(e)(1) HPC Coarse Aggregate Content - Delete the paragraph that begins "Two or more Aggregate products or sources..."

SECTION 02030 – SUPPLEMENTARY CEMENTITIOUS MATERIALS

Comply with Section 02030, of the Standard Specifications modified as follows:

02030.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

This Section includes the requirements for fly ash, natural pozzolans, silica fume, ground granulated blast furnace slag and high reactivity pozzolans used in portland cement concrete.

02030.10 Fly Ash - Replace this subsection, except for the subsection number and title, with the following:

Furnish Class C and Class F fly ash from the QPL and conforming to AASHTO M 295 (ASTM C618).

Add the following subsection:

02030.15 Natural Pozzolans - Furnish Class N natural pozzolans from the QPL and conforming to AASHTO M 295 (ASTM C618).

02030.50 Metakaolin - Replace this subsection with the following:

02030.50 High Reactivity Pozzolans - Furnish high-reactivity pozzolans from the QPL and conforming to AASHTO M 321.

SECTION 02050 - CURING MATERIALS

Comply with Section 02050 of the Standard Specifications modified as follows:

02050.10 Liquid Compounds - Replace the paragraph that begins "Furnish liquid membrane-forming curing..." with the following paragraph:

Furnish liquid membrane-forming curing compounds from the QPL and meeting the requirements of ASTM C309. Before use, submit a one quart sample from each lot for testing. Samples will be tested according to ODOT TM 721. Samples are not required for curing compounds used on Commercial Grade Concrete.

SECTION 02415 - PLASTIC PIPE

Comply with Section 02415 of the Standard Specifications modified as follows:

02415.40 Polypropylene Pipe - Replace the sentence that begins "Dual wall polypropylene pipe ..." with the following sentence:

Dual wall polypropylene pipe and fittings ASTM F2764

SECTION 02560 - FASTENERS

Comply with Section 02560 of the Standard Specifications modified as follows:

02560.30(b) High Strength Tie Rods, Anchor Bolts and Anchor Rods - Add the following paragraph to the end of this subsection:

End stamp all ASTM F1554, Grade 105 according to ASTM F1554 Supplementary Requirements S2 and S3. If the end of the bolt is to be embedded in concrete, the projecting end from the concrete shall be the marked end.

SECTION 02690 - PCC AGGREGATES

Comply with Section 02690 of the Standard Specifications modified as follows:

02690.20(e) Grading and Separation by Sizes for Prestressed Concrete - Replace this subsection with the following subsection:

02690.20(e) Grading and Separation by Sizes - Sampling shall be according to AASHTO R 90. Sieve analysis shall be according to AASHTO T 27 and AASHTO T 11. Provide aggregates meeting the gradation requirements of Table 02690-1 for structural concrete. Provide a CAgT to perform sampling and testing when required.

Table 02690-1

Gradation of Coarse Aggregates
Percent passing (by Weight)

W. Hayes Street Improvements

Bid No. 2022-01

Size Number	Nominal Size Square Openings	Sieve Size											
		(2½ in.)	(2 in.)	(1½ in.)	(1 in.)	(¾ in.)	(½ in.)	(¾ in.)	(No. 4)	(No. 8)	(No. 16)	(No. 50)	(No. 200)
3	(2 to 1 in.)	100	90 to 100	35 to 70	0 to 15	—	0 to 5	—	—	—	—	—	**
357*	(2 in. to No. 4)	100	95 to 100	—	35 to 70	—	10 to 30	—	0 to 5	—	—	—	**
4	(1½ to ¾ in.)	—	100	90 to 100	20 to 55	0 to 15	—	0 to 5	—	—	—	—	**
467*	(1½ to No. 4)	—	100	95 to 100	—	35 to 70	—	10 to 30	0 to 5	—	—	—	**
5	(1 to ½ in.)	—	—	100	90 to 100	20 to 55	0 to 10	0 to 5	—	—	—	—	**
56	(1 to ¾ in.)	—	—	100	90 to 100	40 to 85	10 to 40	0 to 15	0 to 5	—	—	—	**
57	(1 to No. 4)	—	—	100	95 to 100	—	25 to 60	—	0 to 10	0 to 5	—	—	**
6	(¾ to ½ in.)	—	—	—	100	90 to 100	20 to 55	0 to 15	0 to 5	—	—	—	**
67	(¾ to No. 4)	—	—	—	100	90 to 100	—	20 to 55	0 to 10	0 to 5	—	—	**
68	(¾ to No. 8)	—	—	—	100	90 to 100	—	30 to 65	5 to 25	0 to 10	0 to 5	—	**
7	(½ to No. 4)	—	—	—	—	100	90 to 100	40 to 70	0 to 15	0 to 5	—	—	**
78	(½ to No. 8)	—	—	—	—	100	90 to 100	40 to 75	5 to 25	0 to 10	0 to 5	—	**
8	(¾ to No. 8)	—	—	—	—	—	100	85 to 100	10 to 30	0 to 10	0 to 5	—	**
89	(¾ to No. 16)	—	—	—	—	—	100	90 to 100	20 to 55	5 to 30	0 to 10	0 to 5	**

* Use two or more separated sizes which when combined meet these gradation limits.

** See 02690.20(a). Do Not evaluate material passing the No. 200 sieve according to 00165.40.

02690.20(f) Grading and Separation by Sizes for Other Concrete - Delete this subsection.

02690.30(g) Grading - In the paragraph that begins "Sampling shall be according to...", replace the words "AASHTO T 2" with the words "AASHTO R 90".

SECTION 02926 - HIGHWAY ILLUMINATION MATERIALS

Comply with Section 02926 of the Standard Specifications modified as follows:

Add following subsection:

02926.41(f) Electrical Splice Materials - Furnish electrical splice materials meeting the following requirements:

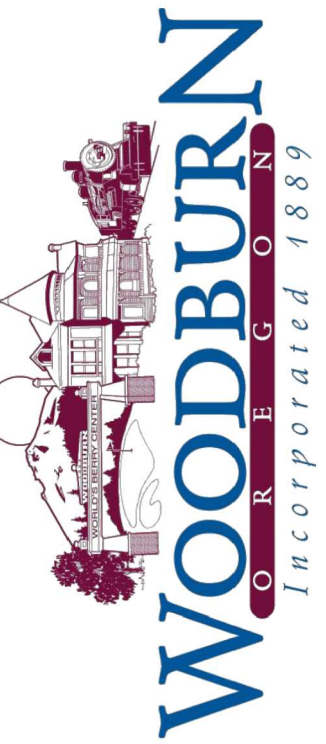
- **Split bolt** - Made of silicon bronze to securely join the wires both mechanically and electrically.
- **Heat-shrink tubing** - Split-resistant and adhesive-lined tube made of polyolefin complying with UL 224 or UL 486D, temperature range -67 °F to 230 °F, with 600 V rated inner melting wall or liner to provide void-free encapsulated insulation.
- **Insulating rubber tape** - Electrical grade, nondrying, rubber based, elastic type complying with ASTM D4388.
- **Insulating vinyl plastic tape** - Low temperature (0 °F) resistant, vinyl chloride plastic, electrical insulating tape with pressure-sensitive adhesive. Comply with ASTM D3005.

PART V – PLANS

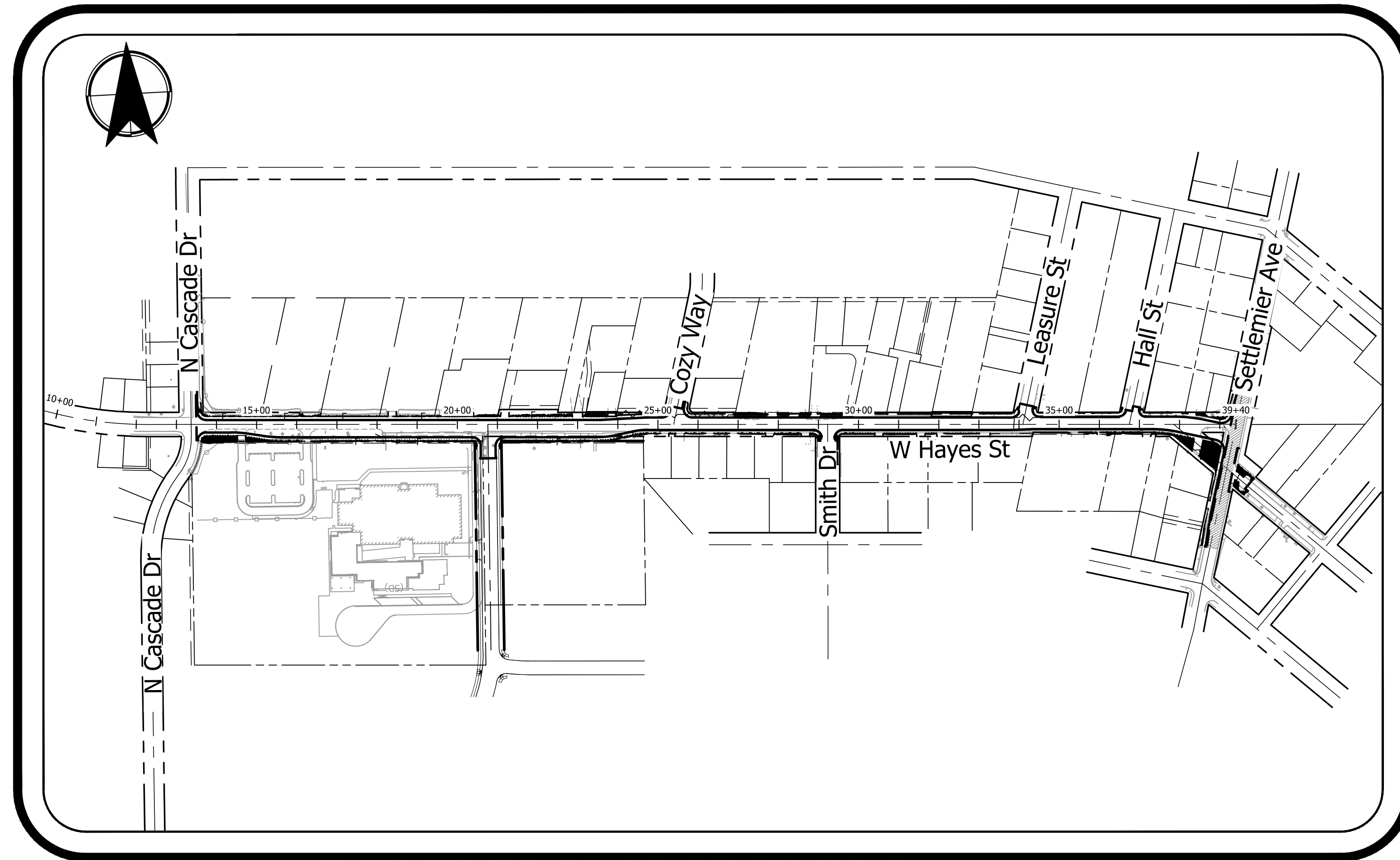
W. Hayes Street Improvement Project

GRADING, PAVING, ROADSIDE DEVELOPMENT, SIGNING, PAVEMENT MARKINGS, SIGNALS

PREPARED FOR:
City of Woodburn
 Project Number: 2015-001-20
 March 7, 2022

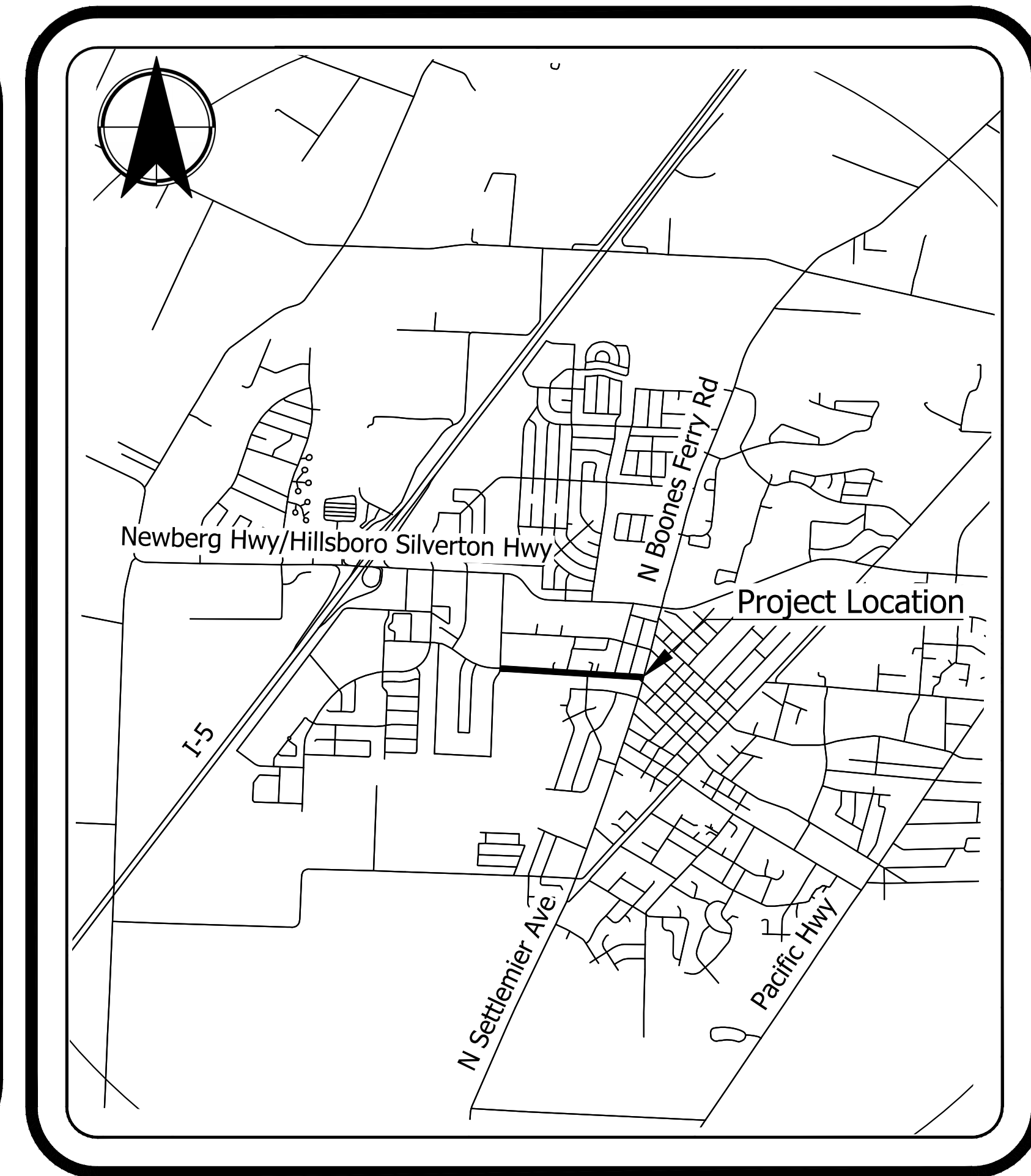


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SITE MAP

SCALE: NTS



VICINITY MAP

SCALE: NTS

BASIS OF STATIONING:

The centerline of west Hayes St was derived by holding the found monument marking the southwest corner of the George Leasure Donation Land Claim (DLC) #78, and found monuments as noted at stations 25+02.72/30.00' LT, 26+91.12/20.00' LT, 30+70.15/30.00' LT, 32+82.80/30.00' LT, and 36+38.18/30.00' RT. The centerline was extended easterly to the centerline of Settlemier St.

DATUM:

HORIZONTAL DATUM
 The Oregon North State Plane coordinate system, (Zone 3601) NAD83 (2011) with a combined scale factor of 1.0001106037 international feet, based on information provided to the City of Woodburn by AKS Engineering and Forestry.

VERTICAL DATUM

Elevations are based on Marion County Control Point No. 9428, a brass disk in a monument box at the centerline-centerline intersection of W. Hayes Street and Cascade Drive. Benchmark Elevation = 186.42 feet (NAVD 88). Per the City of Woodburn requirements, project datum is to be on the NGVD 29 datum. Using NGS Vertcon software benchmark elevation = 183.07 (NGVD 29). All elevations shown are based on the NGVD 29 datum.

SITE INFORMATION:

Located in SE Quarter Of Section 12, Township 5 South, Range 2 West, And In SW Quarter Of Section 7, Township 5 South, Range 1 West, Willamette Meridian, City Of Woodburn, Marion County, Oregon

UTILITY NOTIFICATION:

ATTENTION: Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Notification Center Is (503) 232-1987.)

PROJECT CONTACTS

OWNER
 CITY OF WOODBURN
 CONTACT: Dago Garcia, P.E.
 ADDRESS: 190 Garfield Street
 Woodburn, OR 97071
 PHONE: 503.982.5248
 EMAIL: dago.garcia@ci.woodburn.or.us

ENGINEER
 KITTELSON & ASSOCIATES, INC.
 CONTACT: Fred Wismer, P.E.
 ADDRESS: 851 SW 6th Avenue, Suite 600
 Portland, OR 97204
 PHONE: 503.535.7440
 EMAIL: fwisner@kittelson.com

ORS 92.044

This Design Complies With ORS 92.044 (7) In That No Utility Infrastructure Is Designed To Be Within One Foot Of A Survey Monument Location Shown On A Subdivision Or Partition Plat. No Design Modification Nor Final Field Location Change Shall Be Permitted If It Would Cause Any Utility Infrastructure To Be Placed Within The Prohibited Area.

Index of Sheets

Sheet Number	Sheet Title	Sheet Number	Sheet Title
1	Cover Sheet	2E Thru 2E-14	Detailed Grading and Dimensioning
1A	Legend and Abbreviations	2G	Water Quality Plans
2A Thru 2A-2	Typical Sections	3 Thru 12	Street Plans
2B Thru 2B-6	Details	SS Thru SS-12	Signing and Striping
2C Thru 2C-6	Traffic Control Plans	TS Thru TS-6	Signal and RRFB Plans
2D Thru 2D-7	Grading and Erosion Plan	IC-1 and IC-2	Interconnect Plan
		IL Thru IL-5	Illumination



#	DATE	REVISION	APP'D.

Submission Date: 03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

COVER SHEET

SHEET NO. 1

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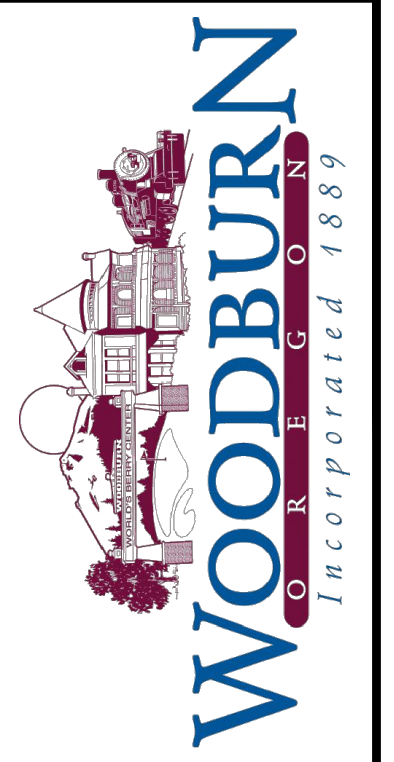
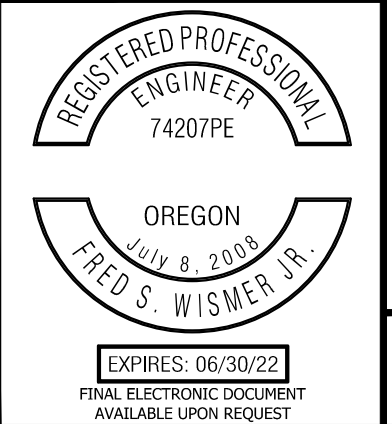
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ABBREVIATIONS

Δ	Delta Angle	MJ	Mechanical Joint
AC	Asphalt Concrete	NO.	Number
ACP	Asphalt Concrete Pavement	NOM.	Nominal
AD	Area Drain	N.T.S./NTS	Not to Scale
ADA	American Disabilities Act	ODOT	Oregon Department of Transportation
BC	Bottom of Curb	OSSC	Oregon Standard Specifications for Construction
BVC	Begin Vertical Curve	PC	Point of Curvature
BW	Back of Sidewalk	PCC	Point of Compound Curvature
CB	Catch Basin	PE	Plain End
CI	Curb Inlet	PGE	Portland General Electric
COMP.	Composite	PI	Point of Inflection
DI	Ductile Iron	PSUE	Public Slope & Utility Easement
DWG.	Drawing	PRC	Point of Reverse Curvature
Elec	Electrical	PT	Point of Tangency
Ea.	Each	PUE	Public Utility Easement
EAC	Edge of Asphalt Concrete	PVC	Poly Vinyl Chloride
ELEV	Elevation	PVI	Point of Vertical Inflection
EVC	End Vertical Curve	R	Radius
Extg.	Existing	RCP	Reinforced Concrete Pipe
F.L./FL	Flow Line	ROW	Right-of-Way
FLG	Flange	Rt.	Right
FT	Feet	S	Slope
G	Gas	Sta.	Station
GV	Gas Valve	SD	Storm Drain
IE	Invert Elevation	Sht.	Sheet
Len	Length	T	Telecom
LF	Linear Feet	TC	Top of Curb
Lt.	Left	THKN.	Thickness
LVC	Length of Vertical Curve	VC	Vertical Curve
Max.	Maximum	W	Water
MH	Manhole	WQ	Water Quality
Min.	Minimum	WQMH	Water Quality Manhole

LEGEND

	Existing Minor Contour		Existing Sanitary Manhole		Proposed Right Of Way
	Existing Major Contour		Existing Storm Manhole		Proposed Minor Contour
	Existing NW Natural High Pressure Gas Main		Existing Storm Catch Basin		Proposed Major Contour
	Existing Telephone Line		Existing Storm Curb Inlet		Proposed Curb/Gutter
	Existing Sanitary Line		Existing Water Valve		Proposed Lighting Conduit
	Existing Sanitary Forced Main Line		Existing Fire Hydrant		Proposed Storm Sewer Pipe
	Existing Waterline		Existing Water Meter		Proposed Sawcut Line
	Existing Overhead Wires		Existing Street Light		Proposed Grading Daylight - Fill
	Existing Underground Power Lines		Existing Utility Pole		Proposed Grading Daylight - Cut
	Existing Underground Traffic Signal Lines		Existing Guy To Utility Pole		Proposed Storm Manhole
	Existing Fiber Optic Line		Existing Gas Meter		Proposed Storm Inlet
	Existing Wire Fence Line		Existing Gas Valve		Proposed Signal Pole
	Existing Right Of Way		Existing Sign		Proposed Utility Pole Mounted Street Light
	Existing Storm Sewer Line		Existing Mail Box		Proposed Pedestrian Signal Pole
	Existing NW Natural Gas Line		Existing Telephone Junction Box (Riser)		Proposed Junction Box
	Existing Public Easement		Existing Telephone Manhole		Proposed Sidewalk
	Existing Berm Top of Bank		Existing Signal Controller Cabinet		Proposed Sidewalk
	Remove/Abandon Existing Pipe		Existing Signal Junction Box		Proposed Sidewalk
	Existing Deciduous/Coniferous Tree		Existing Survey Monument		Proposed Sidewalk



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NO.	REVISION	DATE	APP'D.

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 LEGEND & ABBREVIATIONS

SHEET NO. 1A

#	DATE	REVISION	APP'D

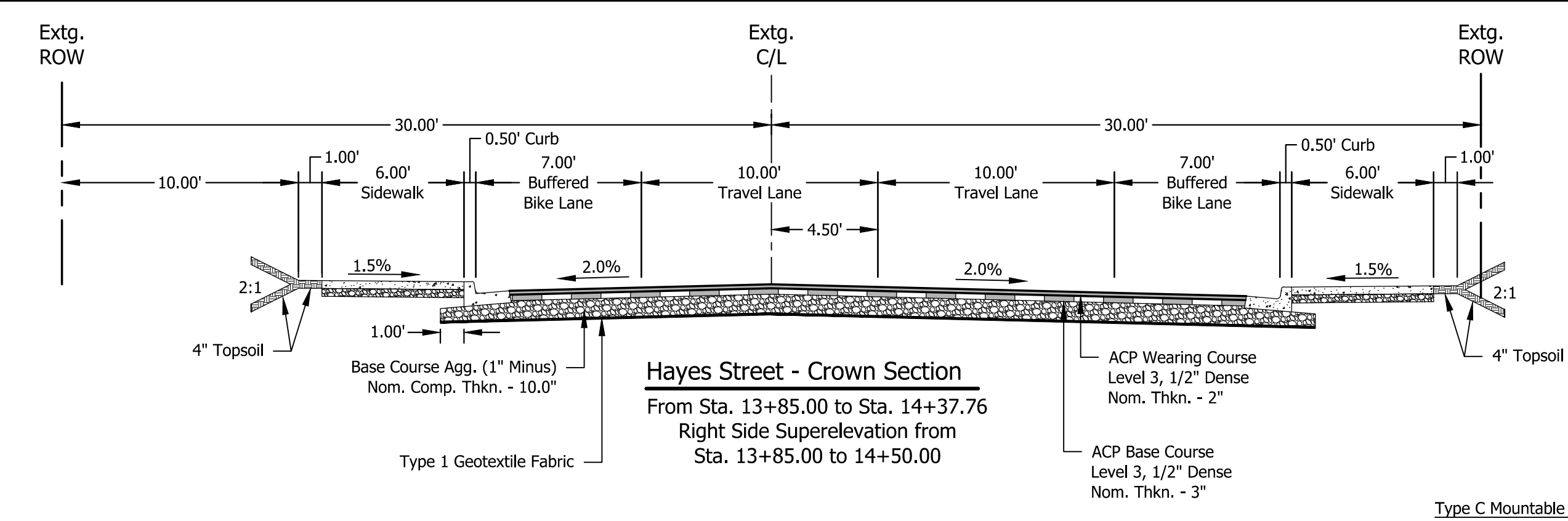
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PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

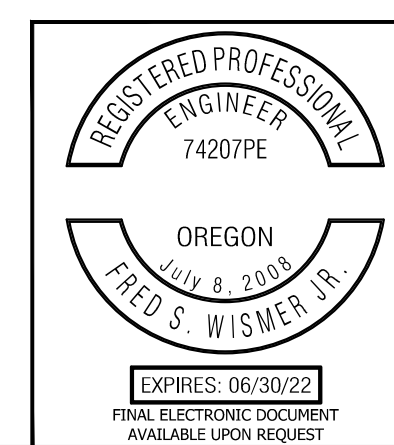
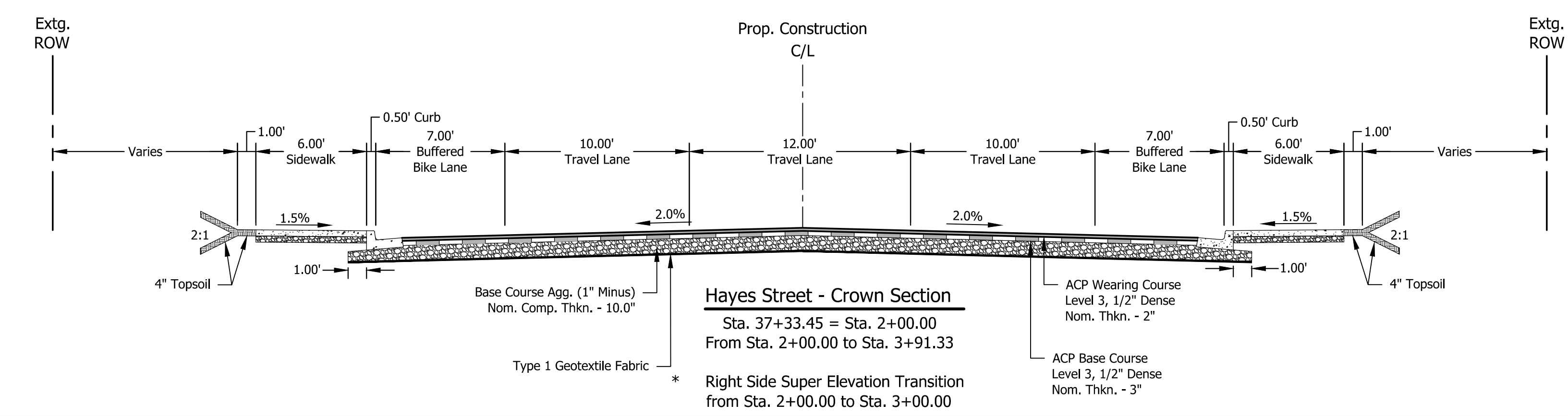
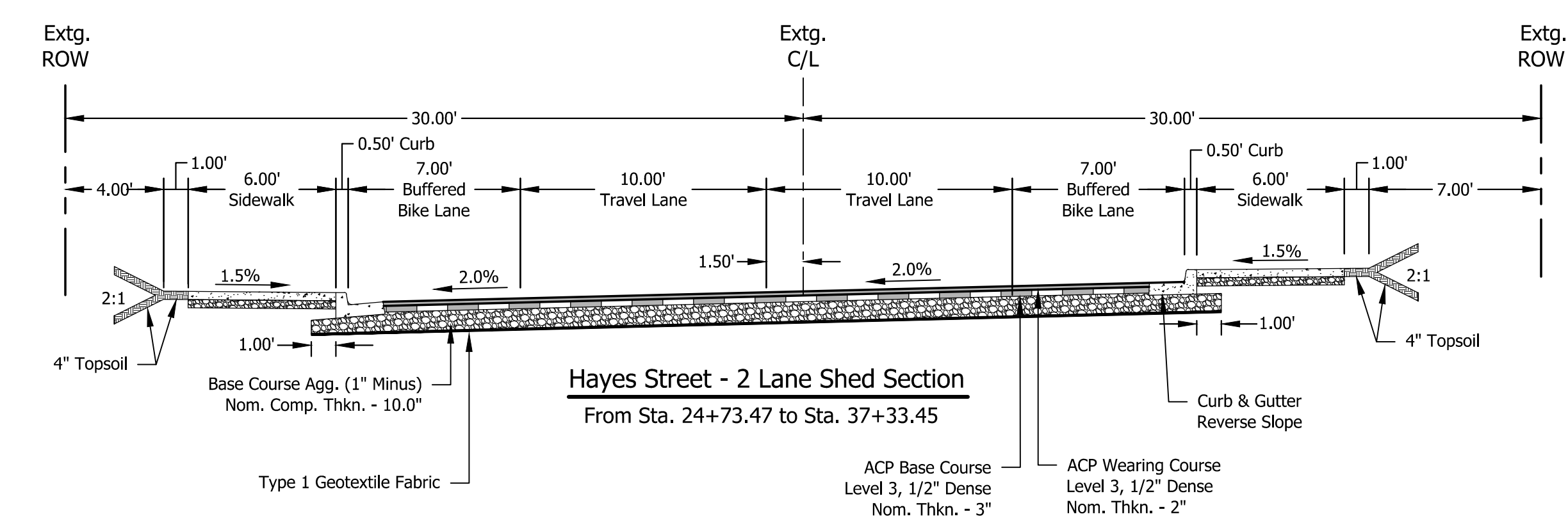
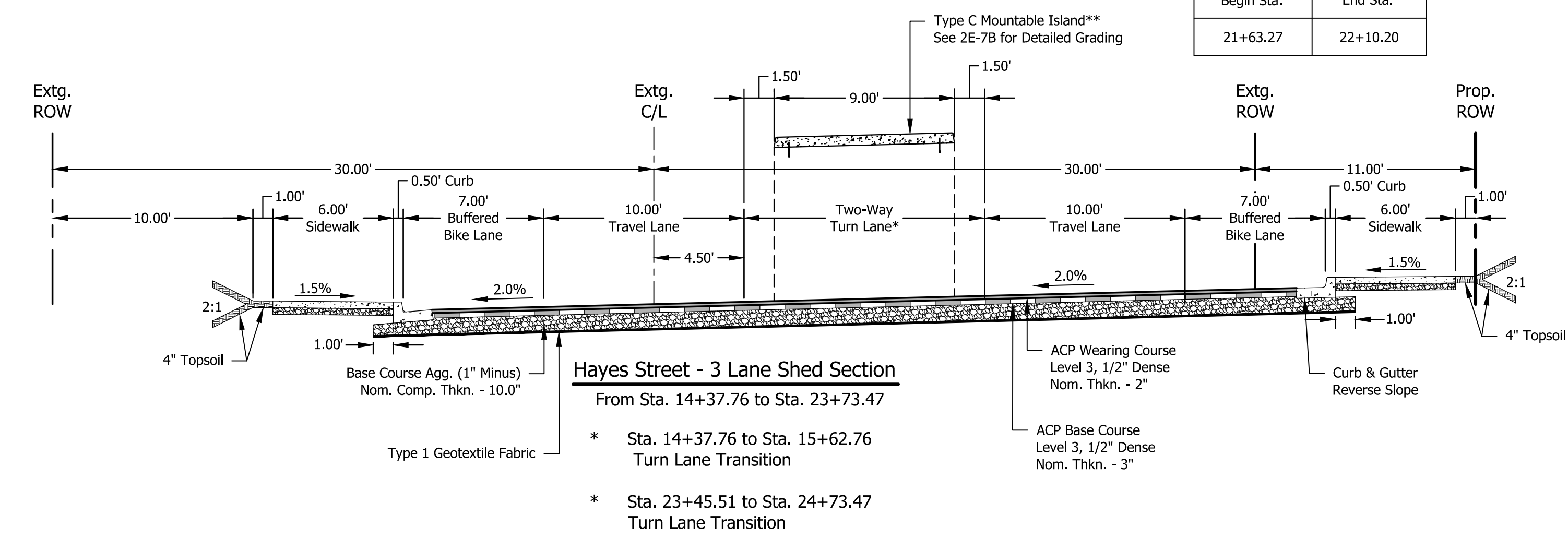
TYPICAL SECTIONS

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2A

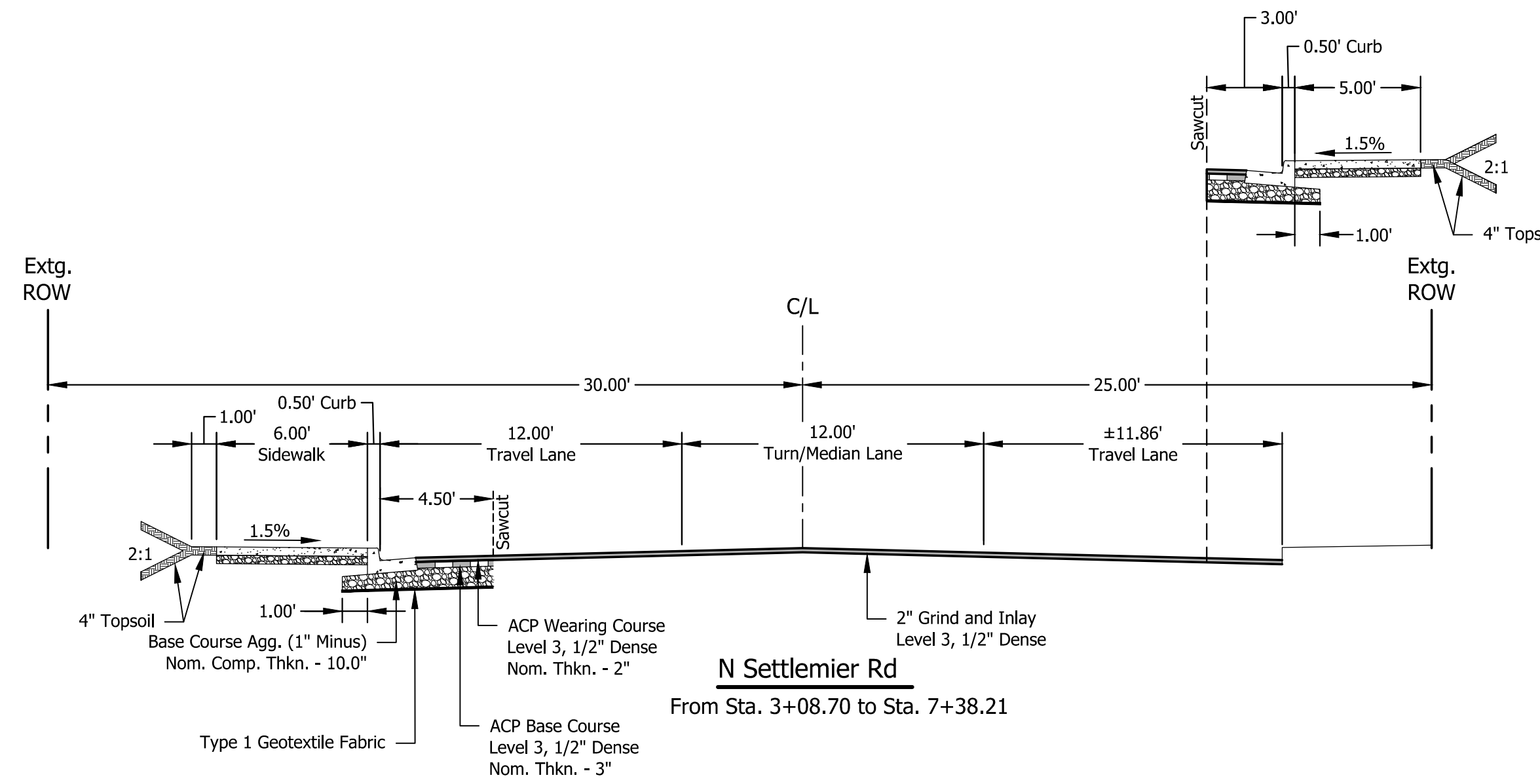


Type C Mountable curb - Center

Begin Sta.	End Sta.
21+63.27	22+10.20

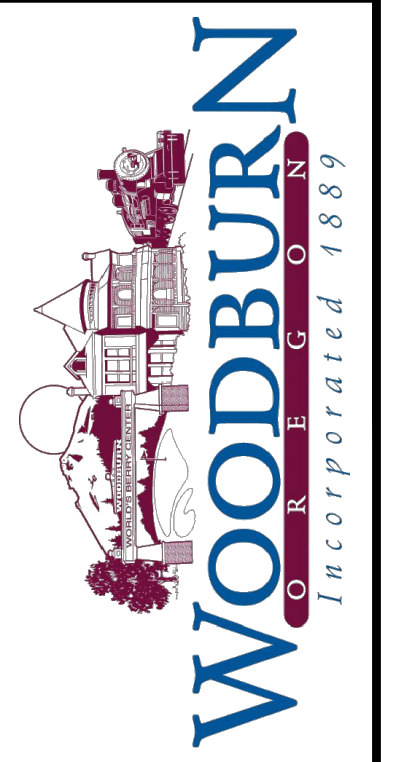
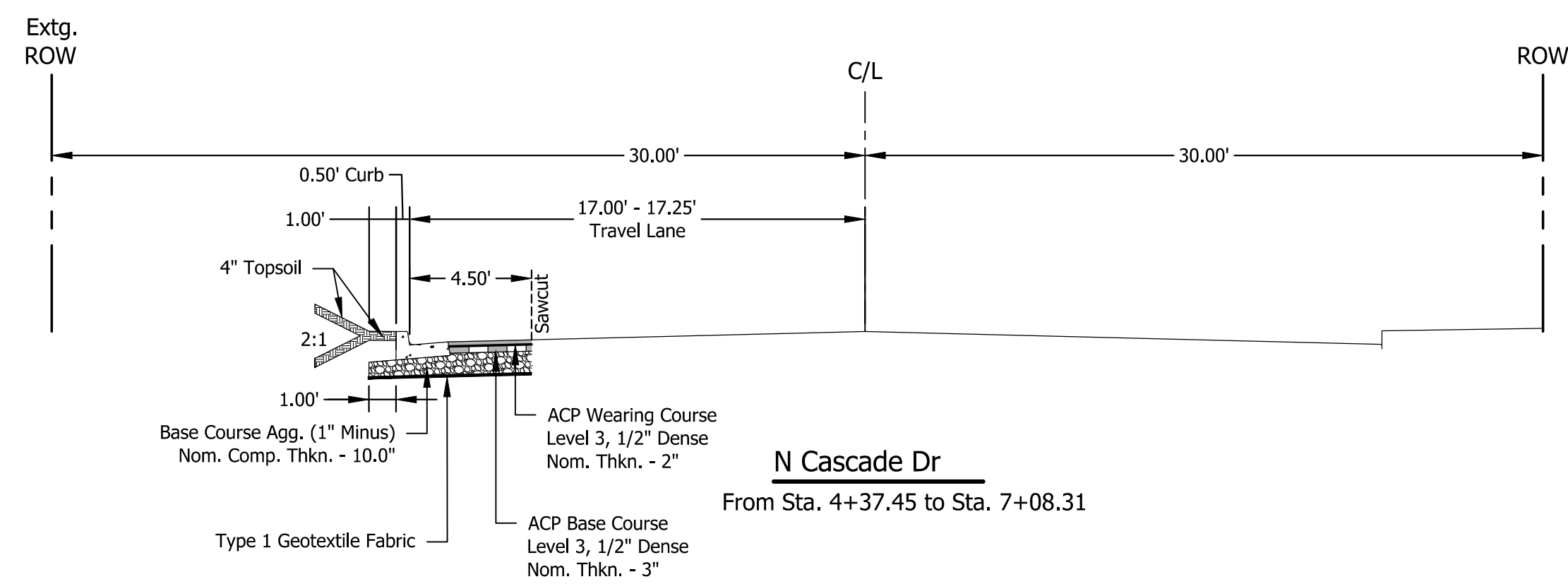


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Sidewalk Replacement - Right

Begin Sta.	End Sta.
4+62.29	5+26.20
5+36.69	5+65.69
6+28.83	6+44.84



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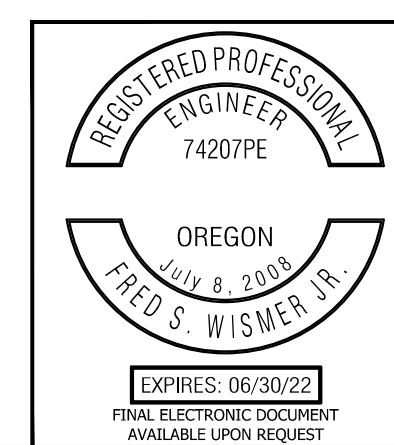
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Submission Date: 03/07/2022
 Drawn: JCB/RMM | Designed: NRS/JBK | Checked: FSW

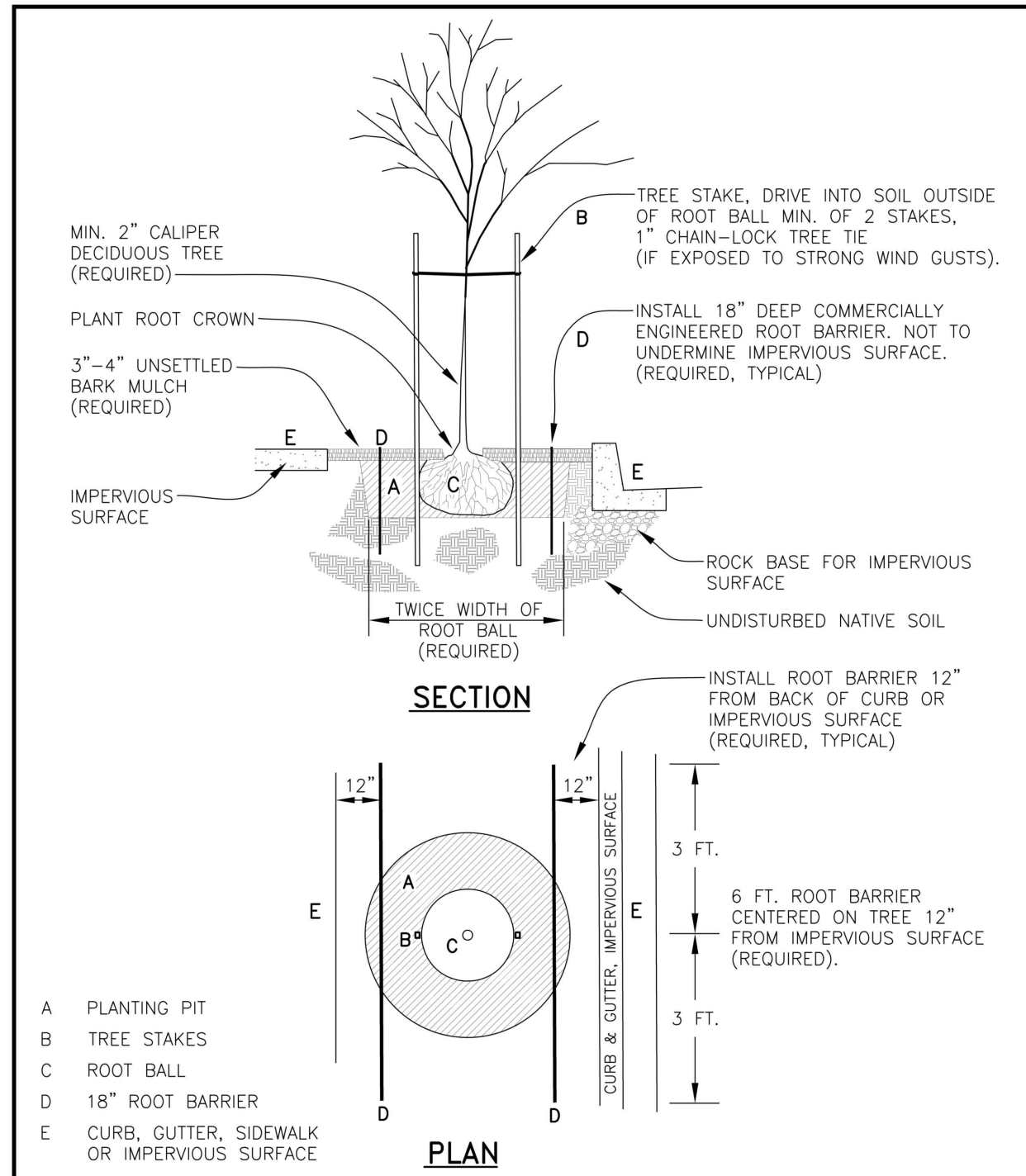
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

TYPICAL SECTIONS



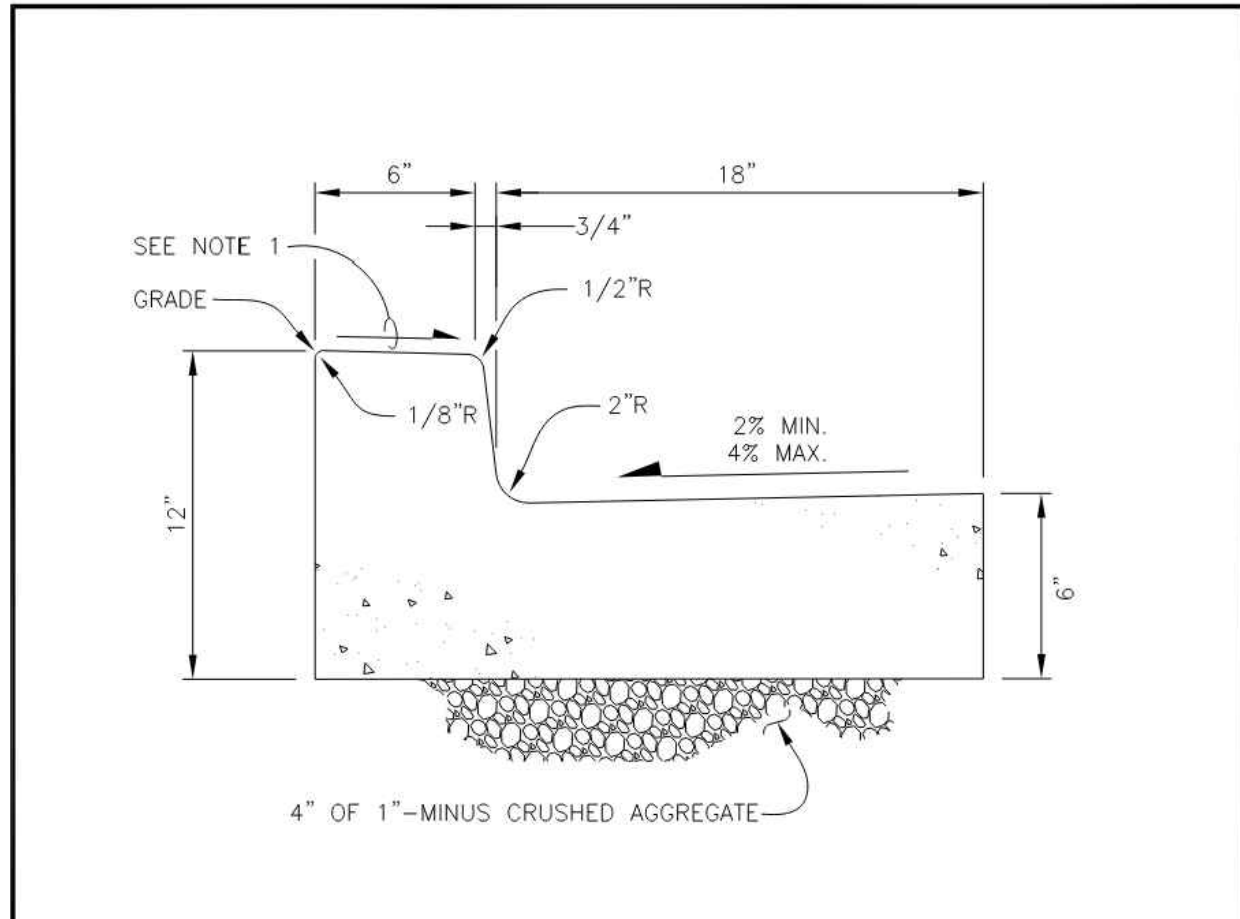
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 ENGINEERING DIVISION

**STREET TREE PLANTING
 NEW CONSTRUCTION**

REV: AUG. 2020
 SCALE: NTS
 DWG No. 1



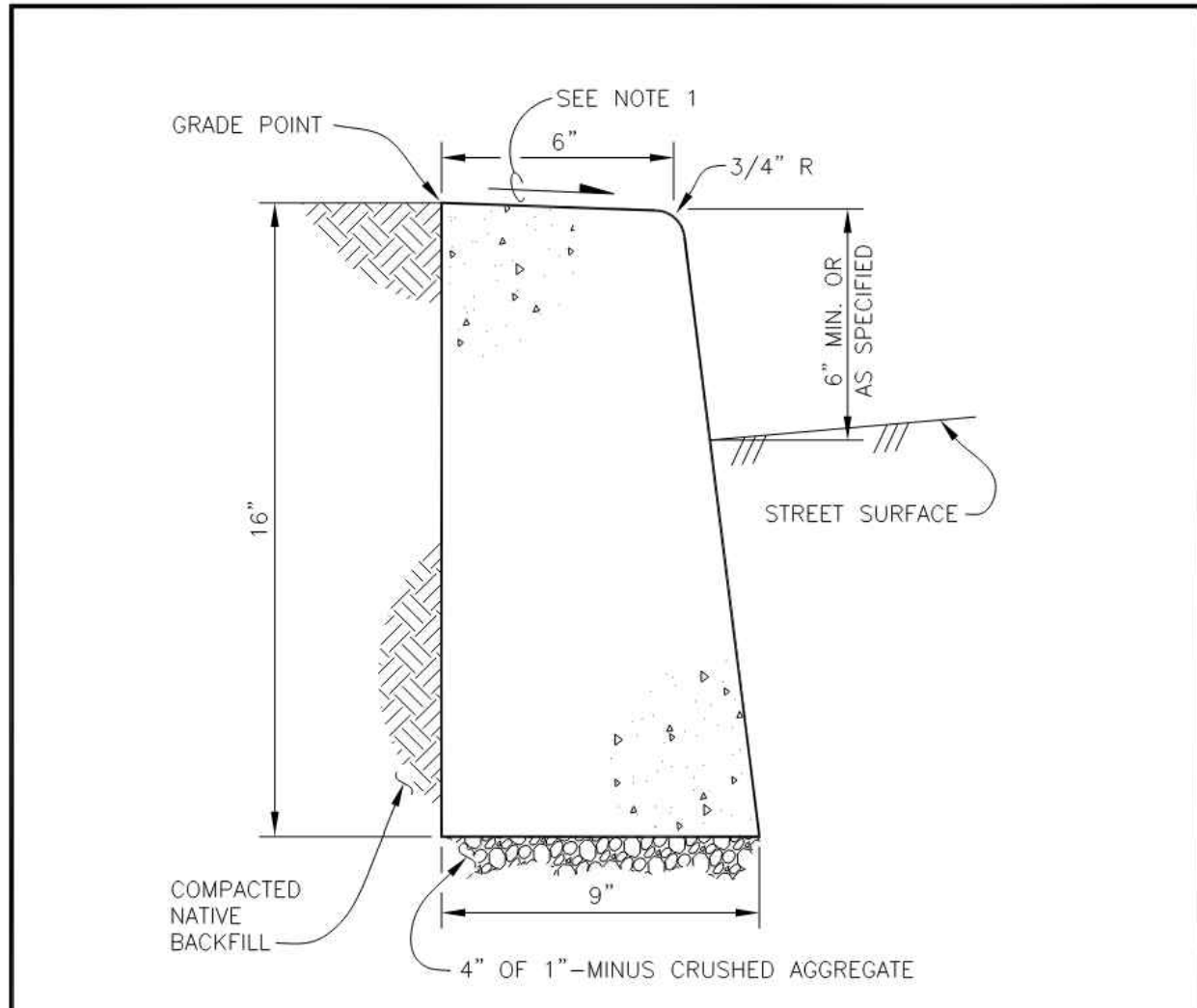
NOTES:

1. SLOPE CURB 0.02 FT/FT TO CURB FACE.
2. MATERIAL - 3500 PSI CONCRETE AT 28 DAYS.
3. REFERENCE TECHNICAL SPEC. SECTIONS 2000, 2300 AND 4100.
4. PLACE CONTRACTION JOINTS AT 15' MAX. INTERVALS AND SHALL EXTEND AT LEAST 50% THROUGH CURB.

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**TYPE 'A' CURB
 AND GUTTER**

REV: DEC. 2007
 SCALE: NTS
 DET No. 4100-1



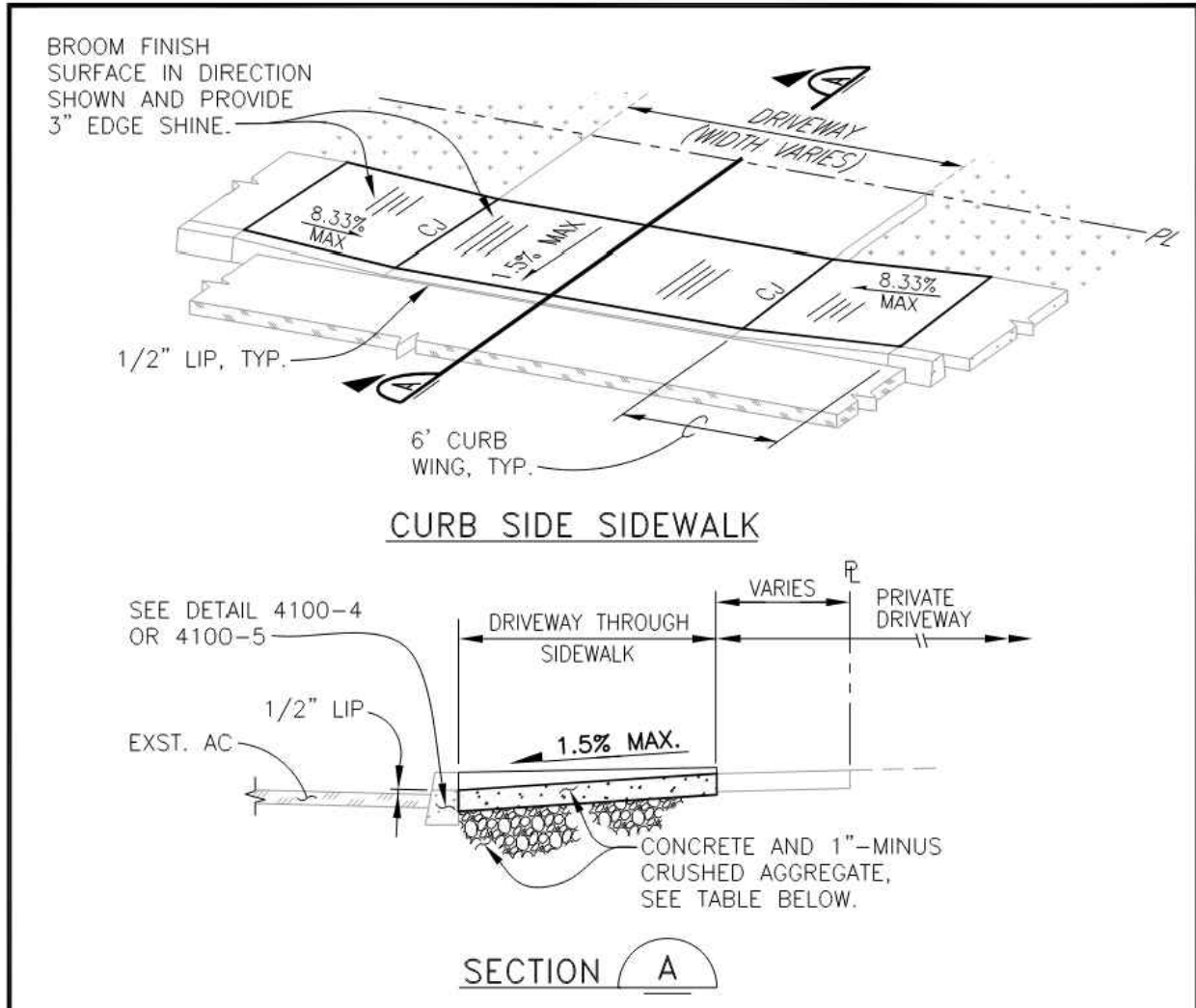
NOTES:

1. SLOPE CURB 0.02 FT/FT TO CURB FACE.
2. MATERIAL - 3500 PSI CONCRETE AT 28 DAYS.
3. REFERENCE TECHNICAL SPEC. SECTIONS 2000, 2300 AND 4100.
4. PLACE CONTRACTION JOINTS AT 15' MAX. INTERVALS AND SHALL EXTEND AT LEAST 50% THROUGH CURB.

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 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

TYPE 'C' CURB

REV: DEC. 2007
 SCALE: NTS
 DET No. 4100-2



CONCRETE/AGGREGATE BASE THICKNESS AND REINFORCEMENT.

USE	CONC.	1"-MINUS CRUSHED AGGREGATE	REBAR
SINGLE FAMILY RESIDENTIAL	6"	4"	NONE
ALL OTHER	8"	6"	No.4 @ 12"O.C. EACH WAY

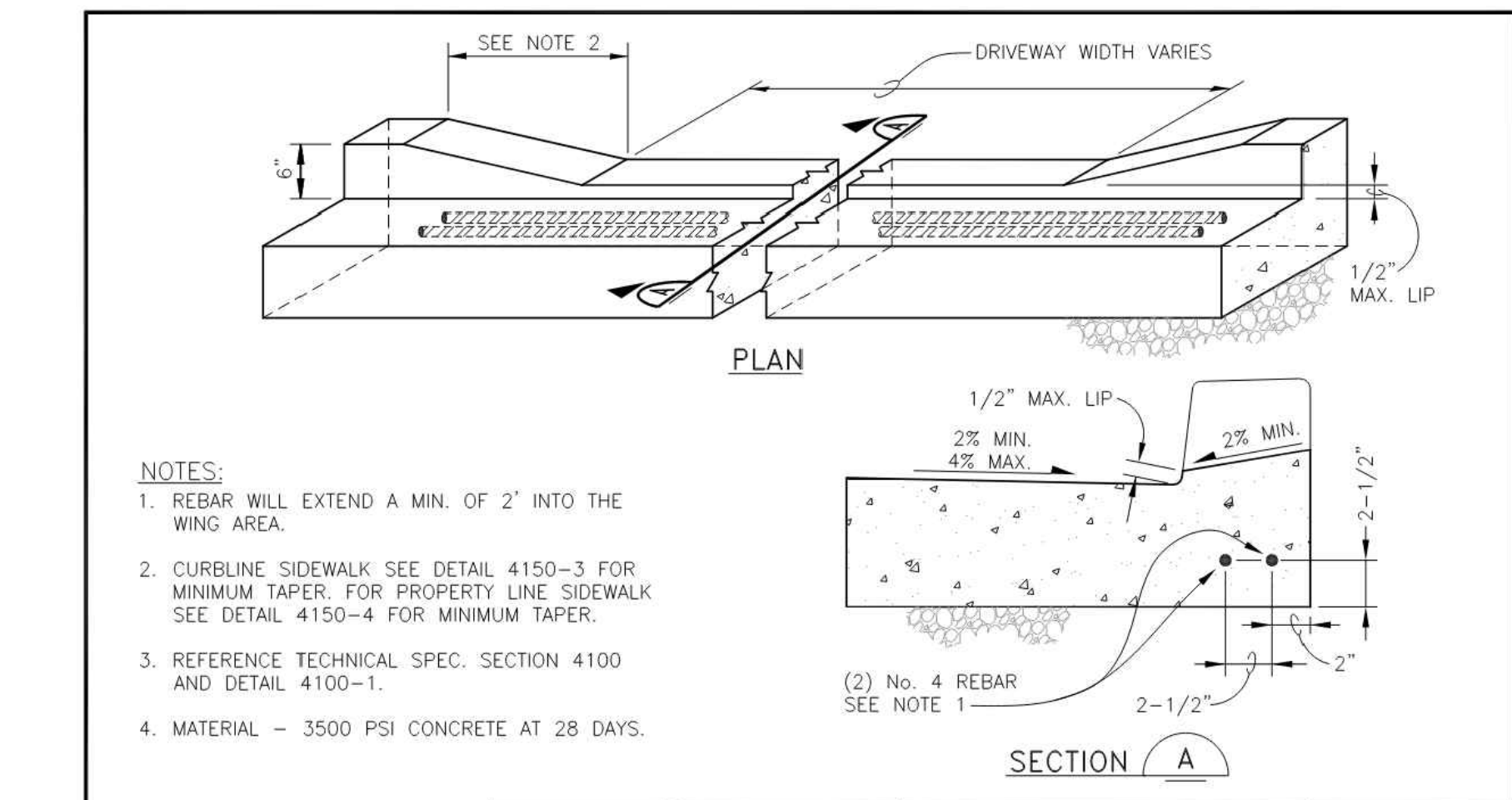
NOTES:

1. REFERENCE TECHNICAL SPEC. SECTION 4150.
2. PLACE CONSTRUCTION JOINTS AT 5' INTERVALS 1/3 THICKNESS.
3. MATERIAL - 3500 PSI CONCRETE AT 28 DAYS.

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 ENGINEERING DIVISION

**CURBSIDE
 SIDEWALK
 AT DRIVEWAY**

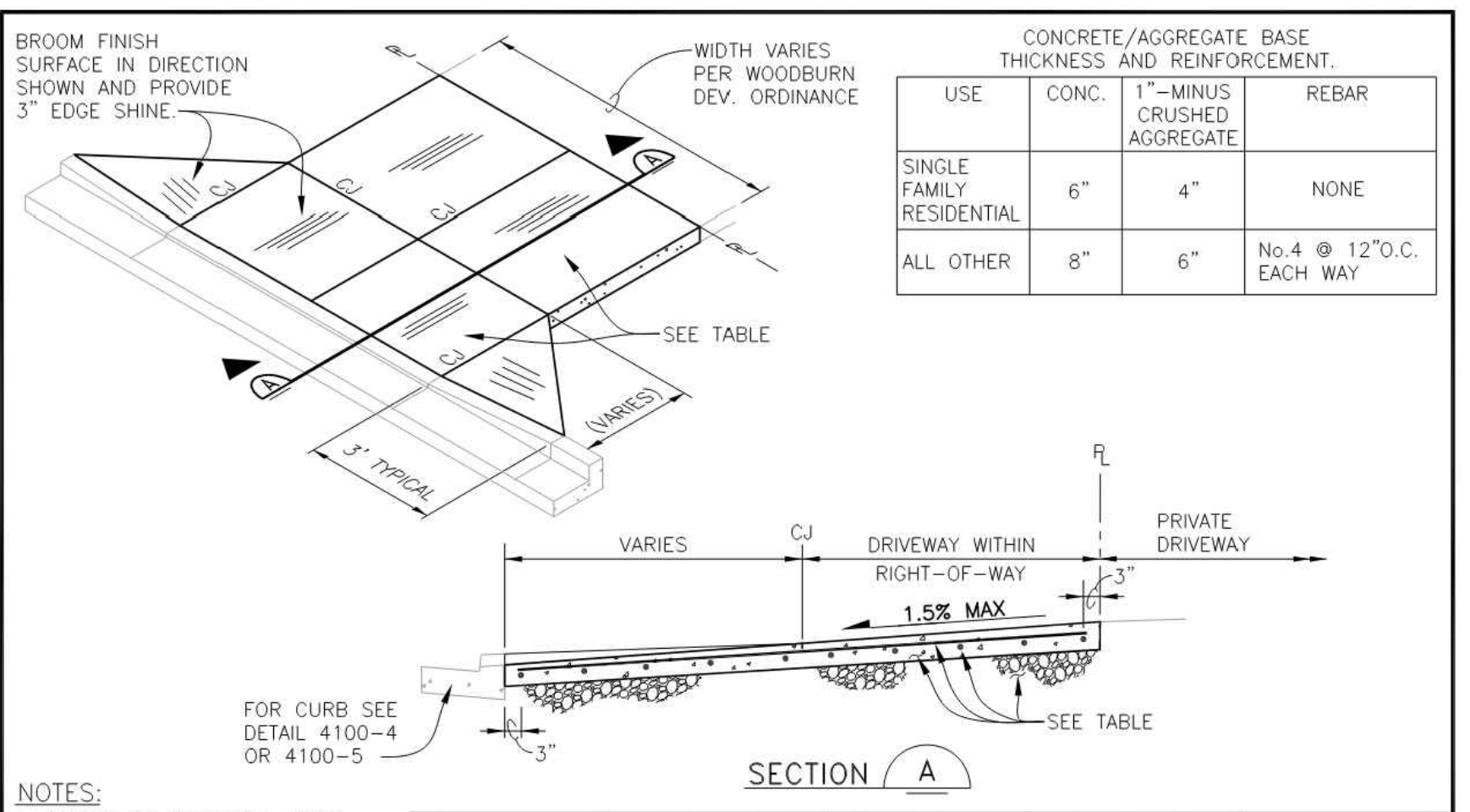
REV: MAY 2019
 SCALE: NTS
 DET No. 4150-3



WOODBURN
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 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

**TYPE 'A' CURB
 AT DRIVEWAY**

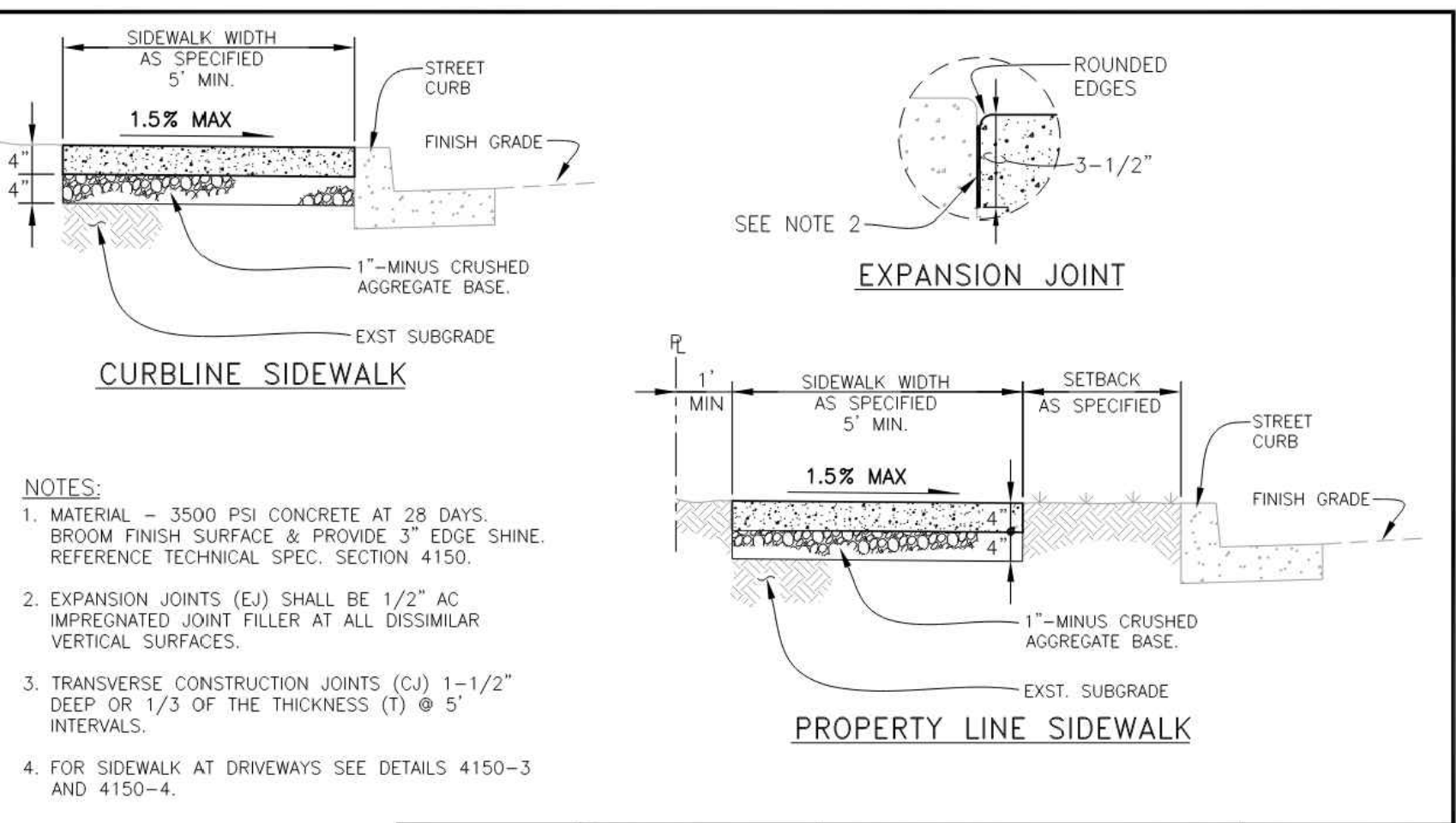
REV: DEC. 2007
 SCALE: NTS
 DET No. 4100-4



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 ENGINEERING DIVISION

**DRIVEWAY
 APPROACH**

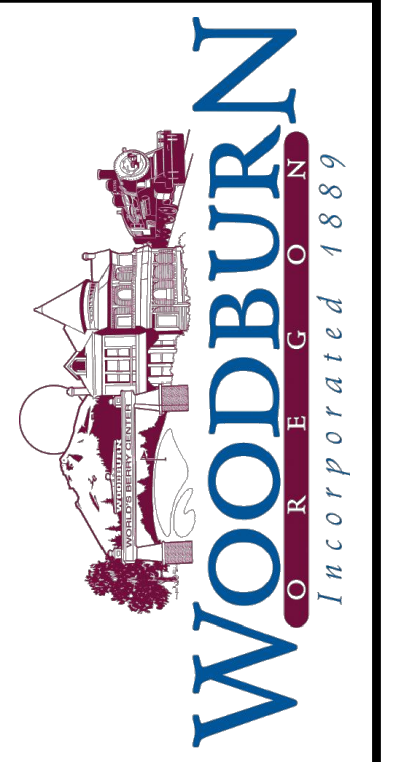
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 SCALE: NTS
 DET No. 4150-1



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 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

SIDEWALKS

REV: JULY 2018
 SCALE: NTS
 DET No. 4150-8

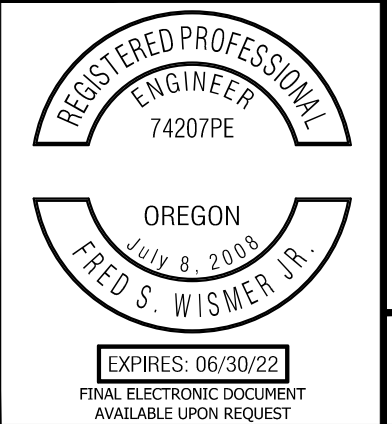


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 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

REVISION	DATE	#	APP'D

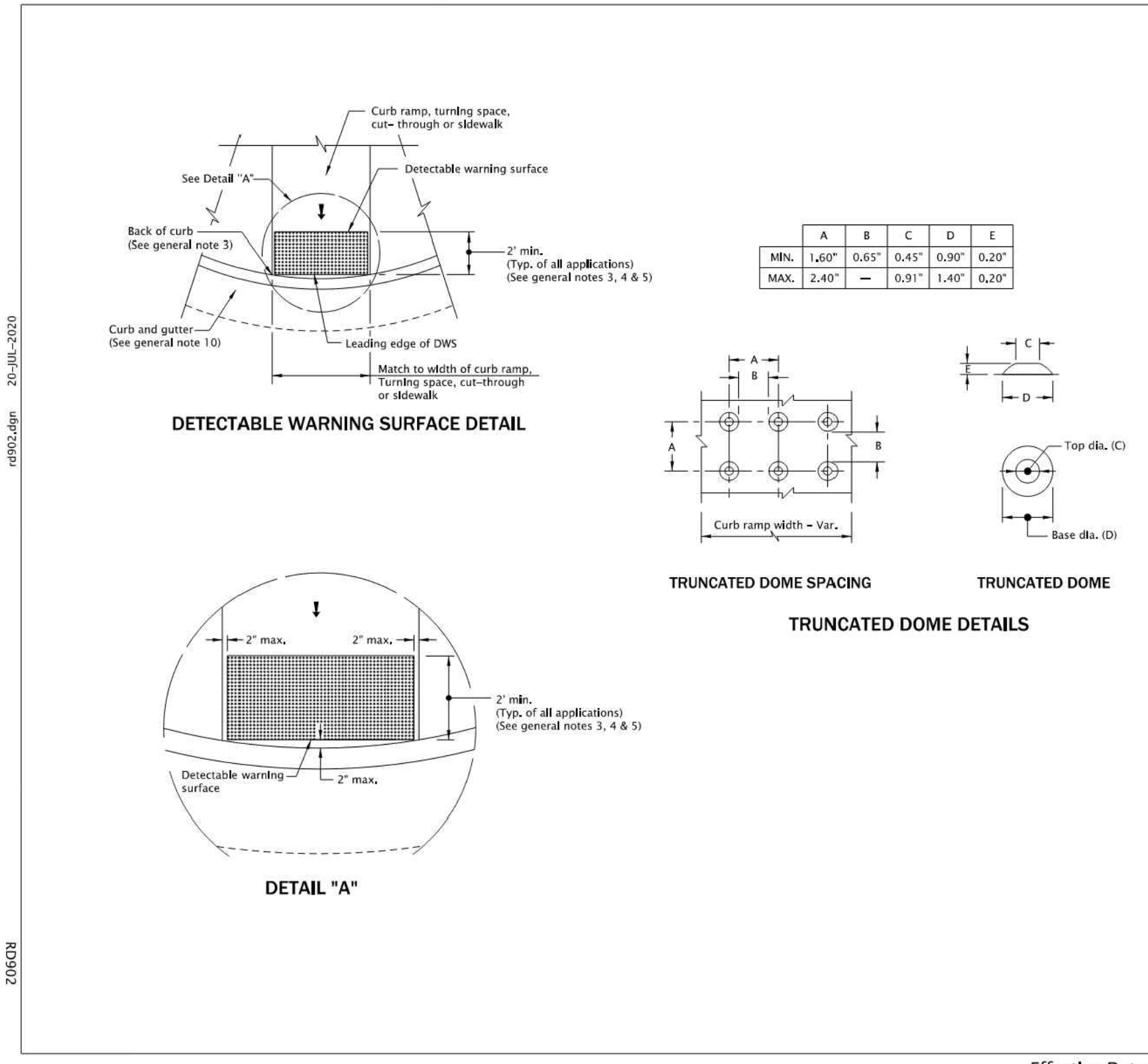
Submission Date: 03/07/2022
 Drawn: JCB/RMM
 Designed: NRS/JBK
 Checked: FSW
 PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 ROADWAY DETAILS
 SHEET NO. 2B



Plot Stamp: 3/4/2022 9:14:16 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD-Details-24512.dwg

Plot Stamp: 3/4/2022 9:14:24 AM - Fred Wismer
 File: H:\24\2412 - W. Hayes Street\design\CD\CD-Details-2412.dwg



GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Detectable warning surface details & locations are based on applicable ODOT Standards.
- See project plans for details not shown. See Std. Dwg. RD700 & RD701 for curbs.
- The detectable warning surface shall extend the full width of the curb ramp opening, shared use path, blended transition, turning space, or other roadway entrance as applicable. A gap of up to 2 inches on each side of the detectable warning surface is permitted (measured at the leading edge of the detectable warning surface panels).
- Detectable warning surface shall be placed at the back of curb for a minimum depth of 2' in the direction of pedestrian travel at curb ramps that are adjacent to traffic. Detectable warning surface may be radial or rectangular, but must comply with the truncated dome size and spacing standards. Detectable warning surface may be cut to meet necessary shape as shown in plans. Detectable warning surface across a grade break is prohibited.
- Color to be safety yellow if no color specified in construction note. Alternative colors require a design exception on or along state highways.
- Detectable warning surface shall be used in the following locations:
 - Curb ramps at street crossings.
 - Crossing Islands (Accessible Route Islands).
 - Rail crossings.
- Where public transportation stations (rail, bus, etc.) use platform boarding, detectable warning surface shall be placed along the full edge length of the station, when not protected by platform screens or guards, (see Std. Dwg. RD908).
- Detectable warning surface shall not be used on the following locations:
 - End of sidewalk transitions that are not at a crosswalk, (see Std. Dwg. RD950, RD952 & RD950).
 - Driveways, unless constructed with curb return or are signalized.
 - Parking lots, access aisles and passenger loading zones where curb ramp does not lead to vehicular way.
- Where no curb is present, the detectable warning surface shall be placed at the edge of the roadway.
- On or along state highways, curb and gutter is required at curb ramps.

LEGENDS:

- Detectable warning surface
- Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
- Running slope 7.5% max. (Max. 8.3% finished surface slope)

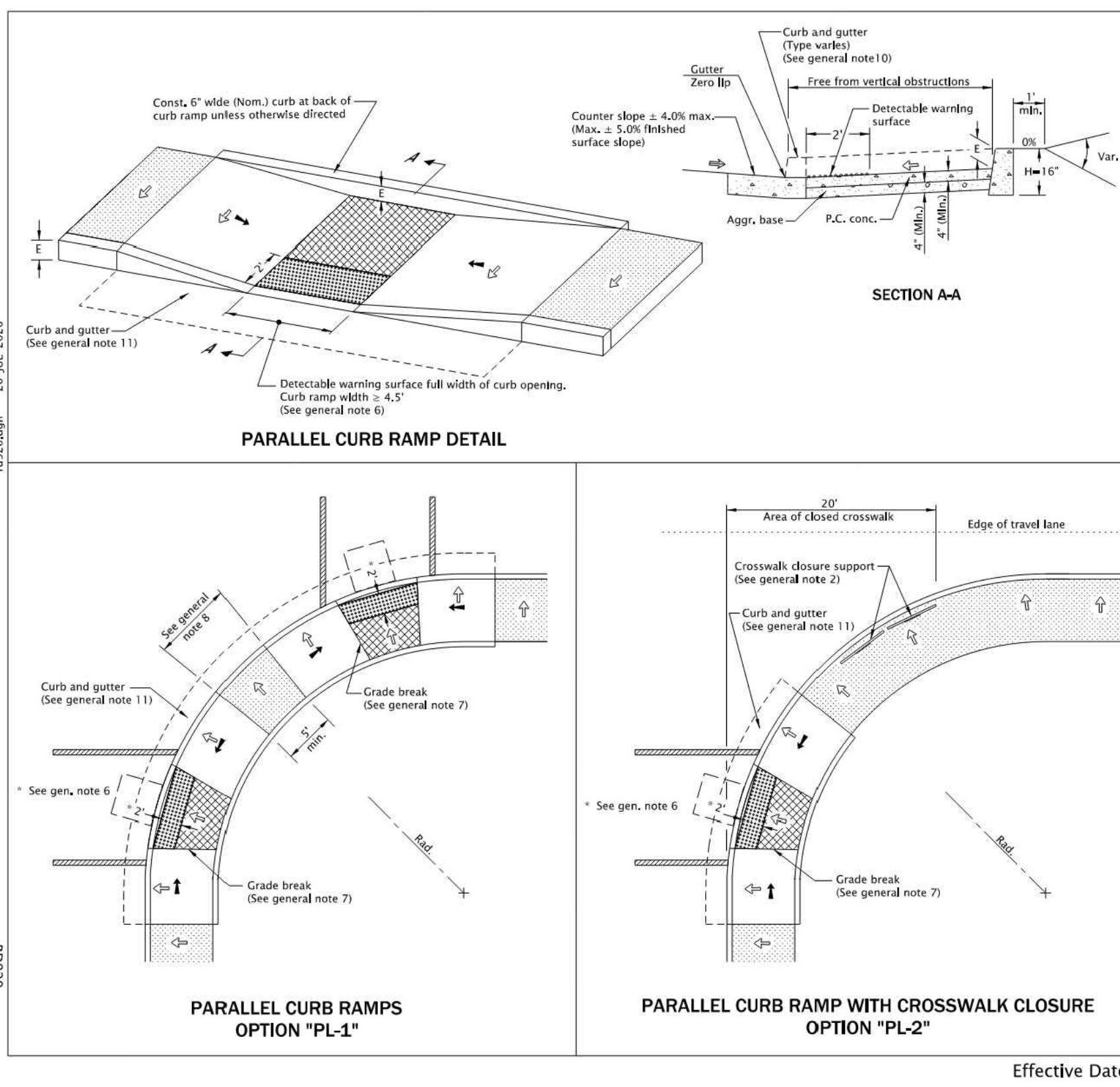
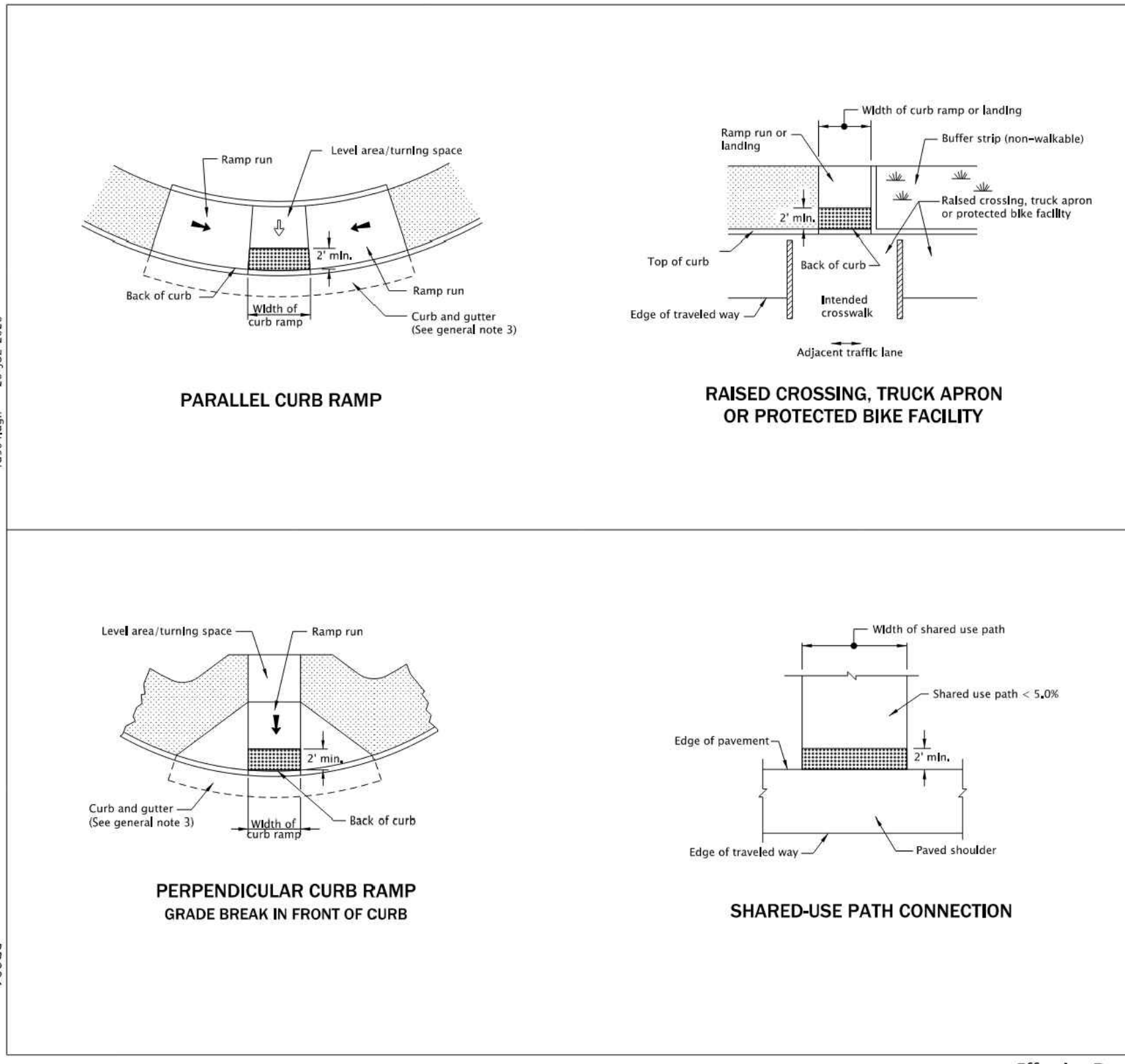
CALC. BOOK NO. N/A SDR DATE 20-JULY-2020

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS
DETECTABLE WARNING SURFACE DETAILS

DATE 2021

Effective Date: December 1, 2020 – May 31, 2021 RD902



REVISION

NO.	DATE	DESCRIPTION

Submission Date: 03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

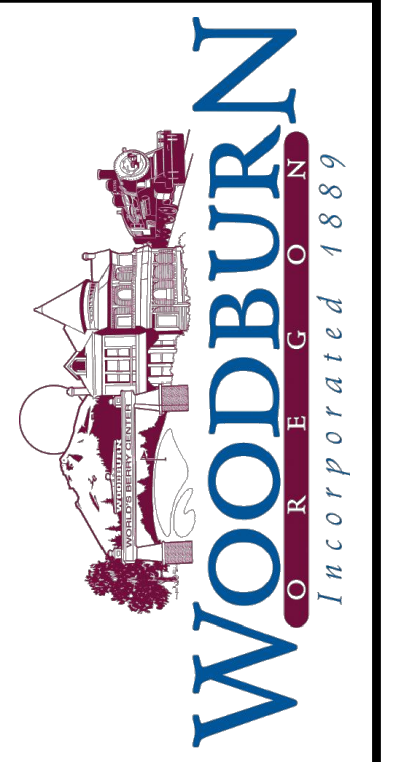
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

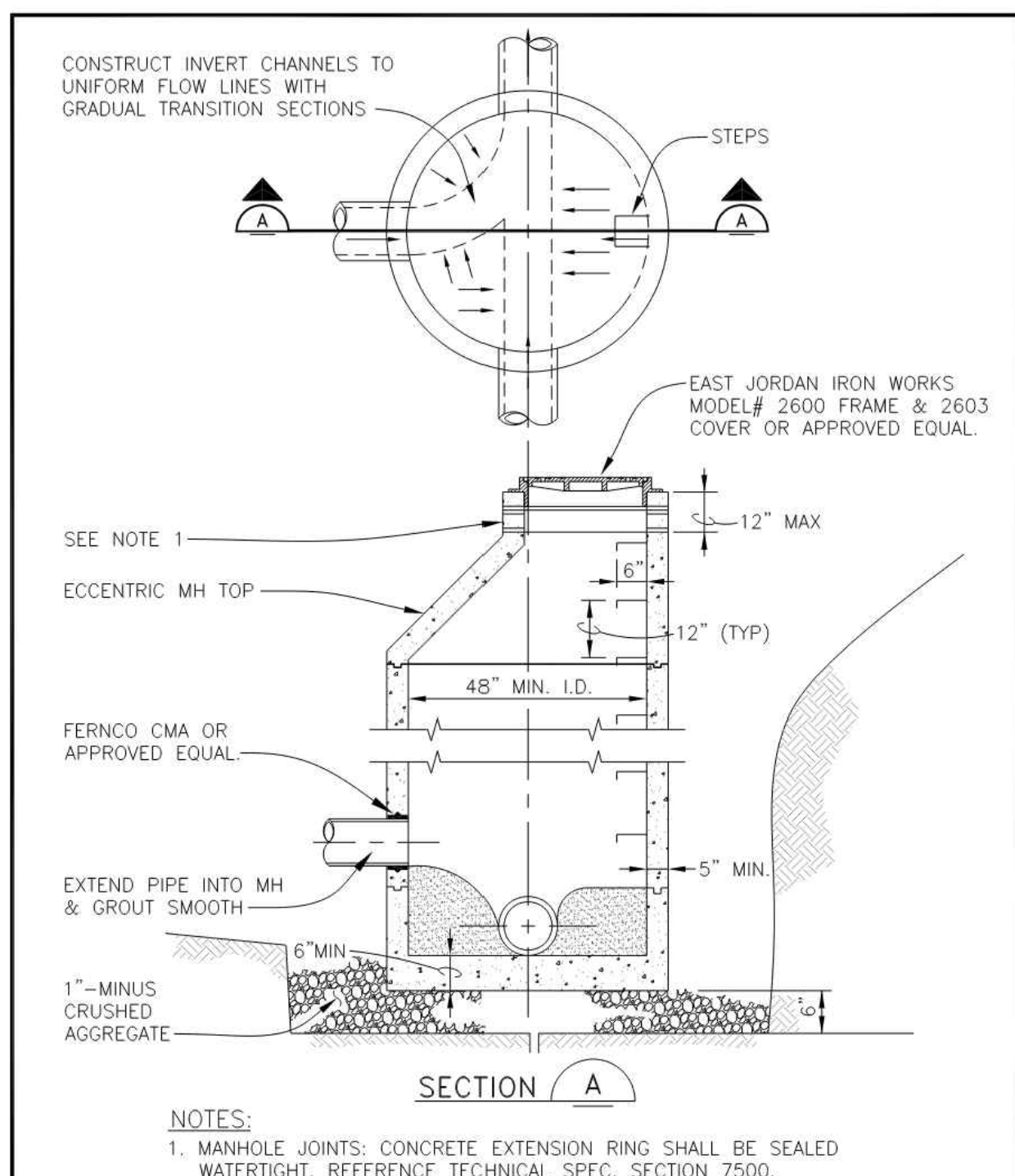
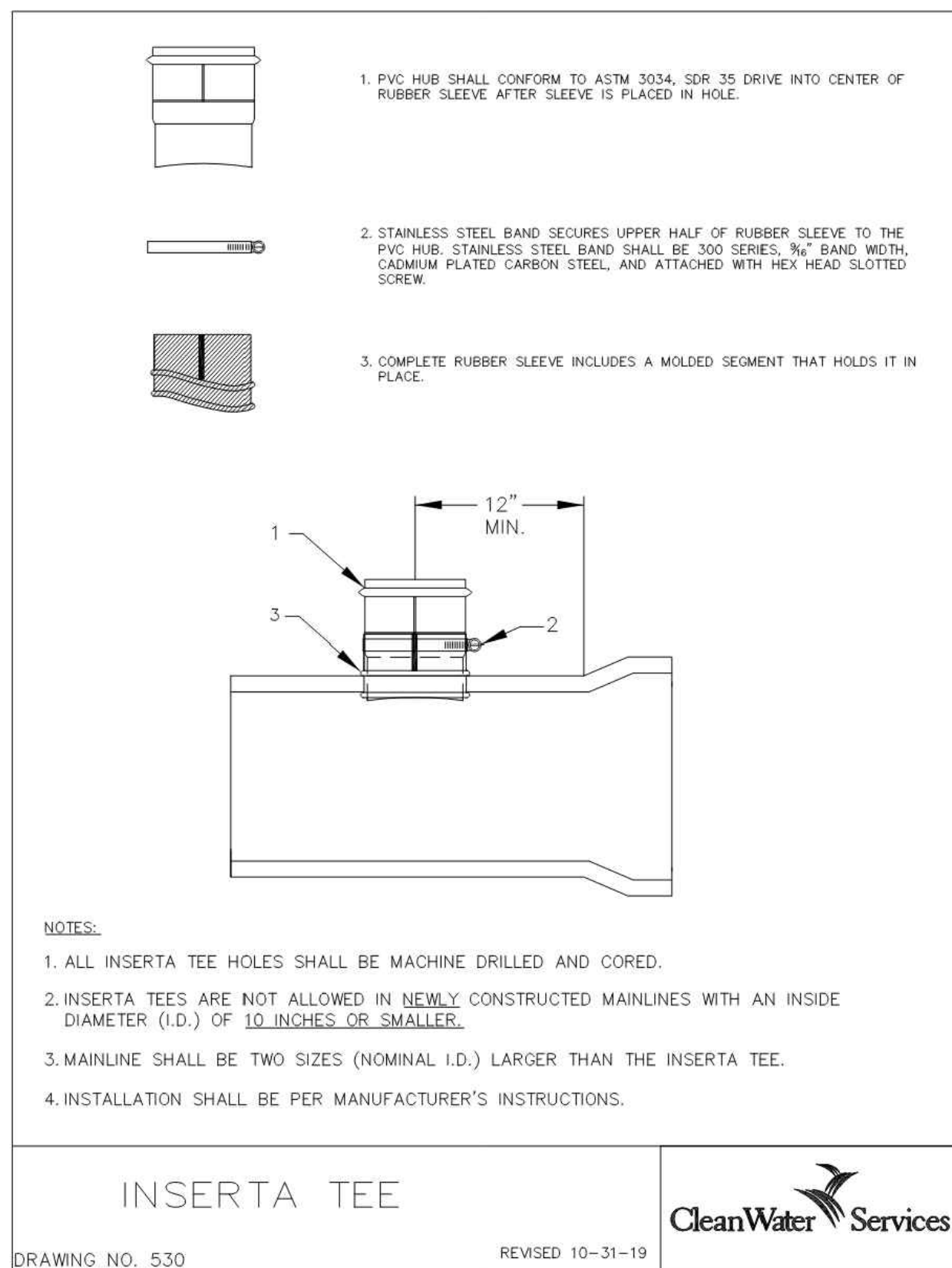
CURB RAMP DETAILS

SHEET NO. 2B-3

REGISTERED PROFESSIONAL ENGINEER 74207PE
 OREGON JULY 8, 2008
 FRED S. WISMER JR.
 EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST



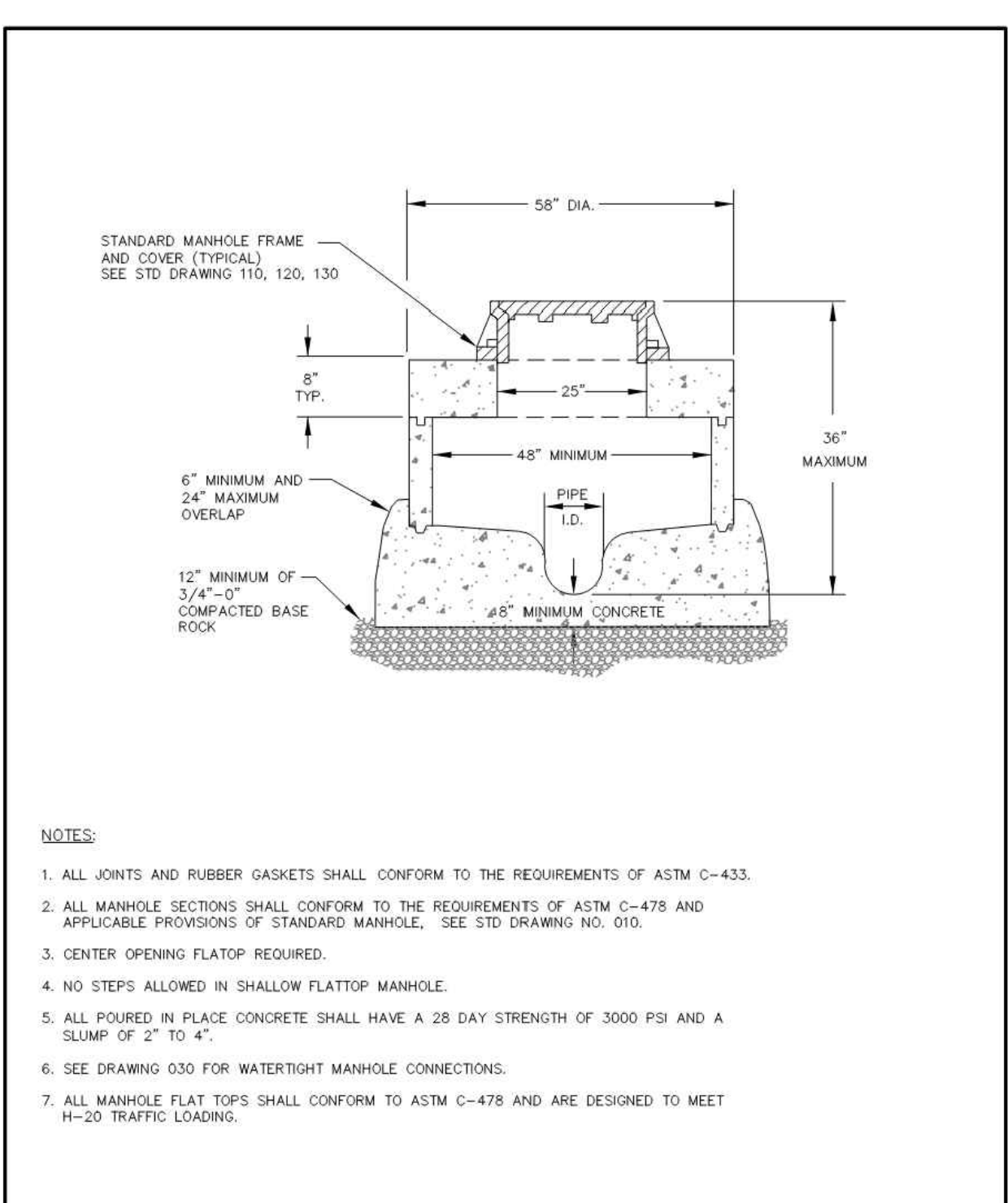
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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

STORM SEWER MANHOLE

REV: DEC. 2007
SCALE: NTS
DET No. 7500-1

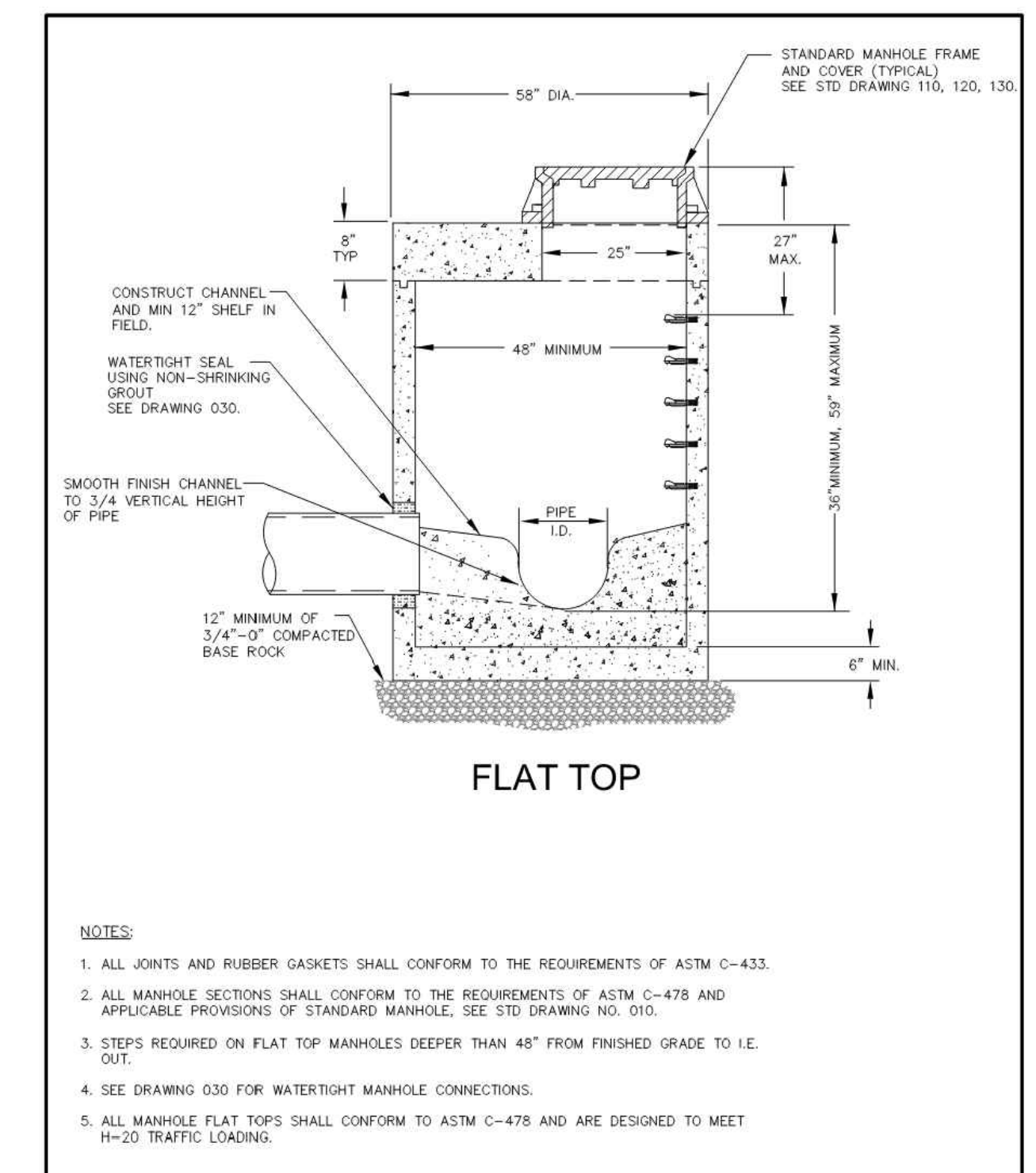


SHALLOW FLAT TOP MANHOLE

DRAWING NO. 040

REVISED 10-31-19

CleanWater Services

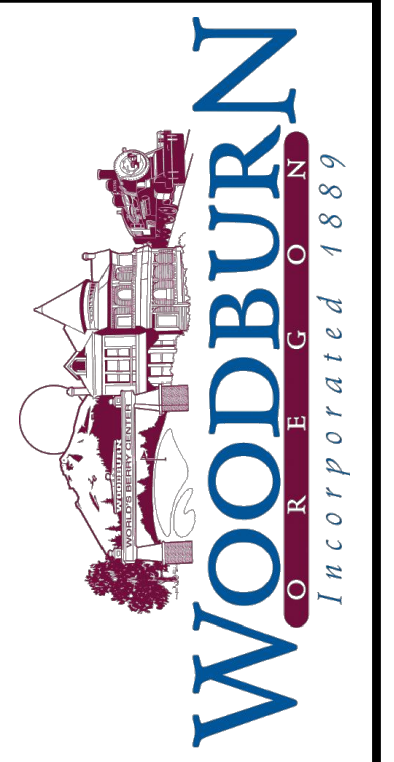
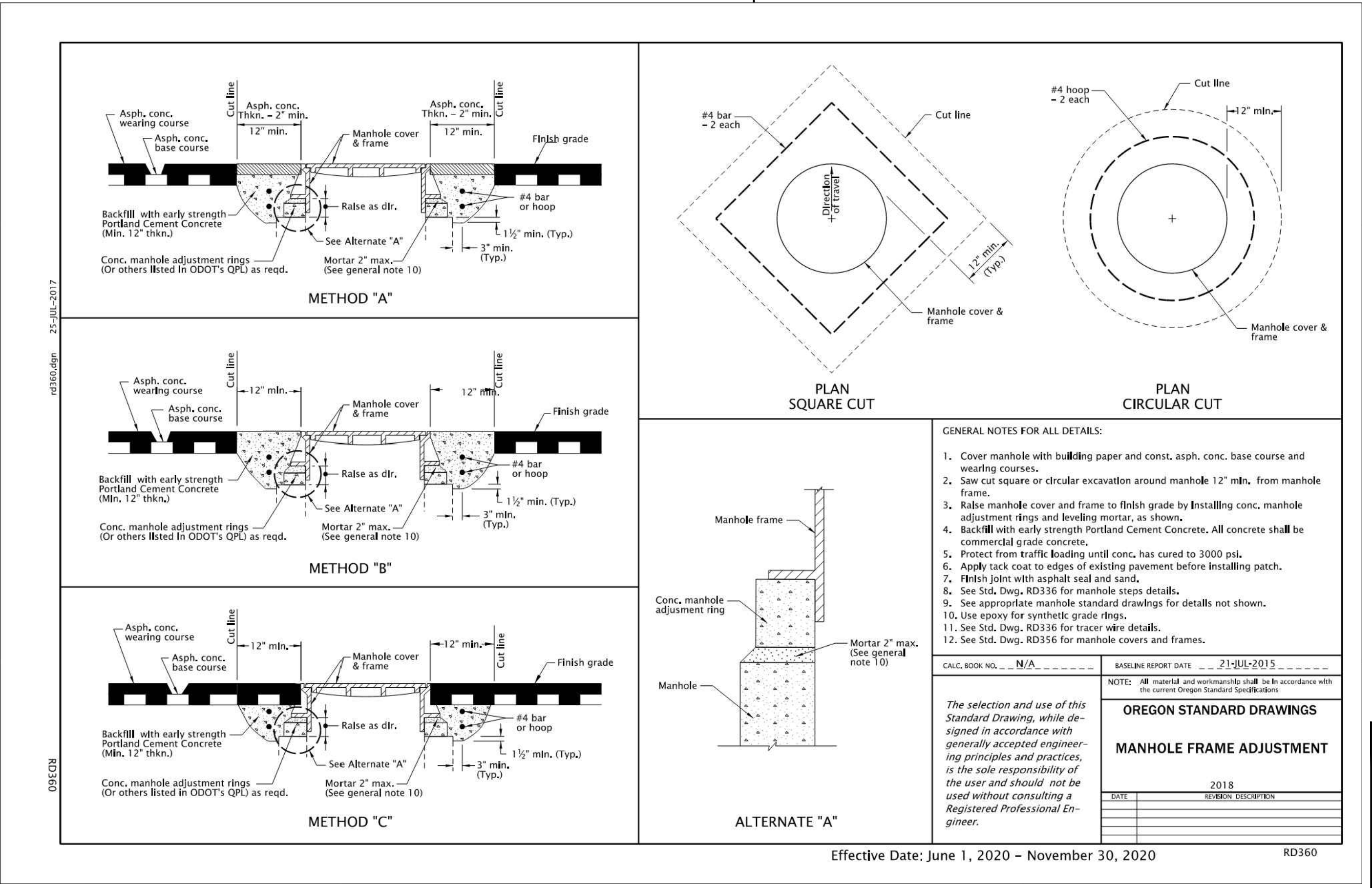


FLAT TOP MANHOLE

DRAWING NO. 050

REVISED 10-31-19

CleanWater Services



KITTELSON & ASSOCIATES

851 SW 6TH AVENUE, SUITE 600
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#	DATE	REVISION	APP'D

Submission Date: 03/07/2022

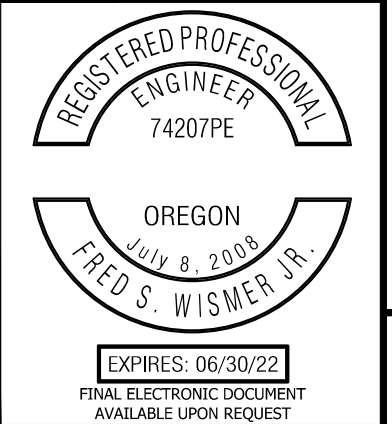
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

STORM DETAILS

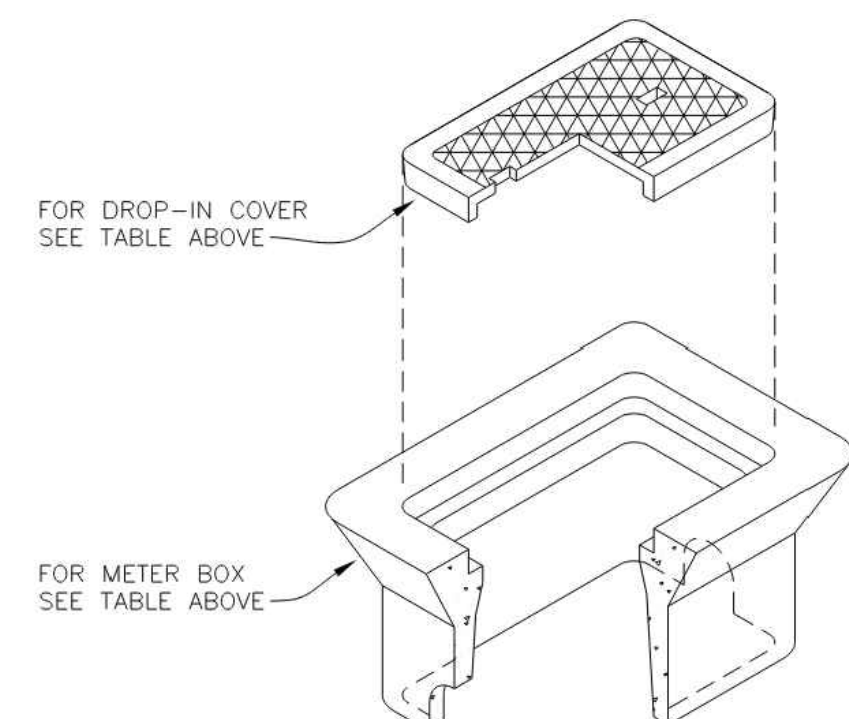
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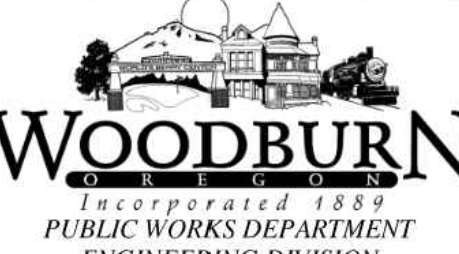
BROOKS PRODUCTS		
COVER	MODEL NO.	METER BOX
1"	No. 37-T CAST IRON COVER*	No. 37 MB-BODY*
2"	No. 65-TF STEEL COVER (FLUSH)*	No. 65 MB-BODY*

* OR APPROVED EQUAL



FOR DROP-IN COVER SEE TABLE ABOVE

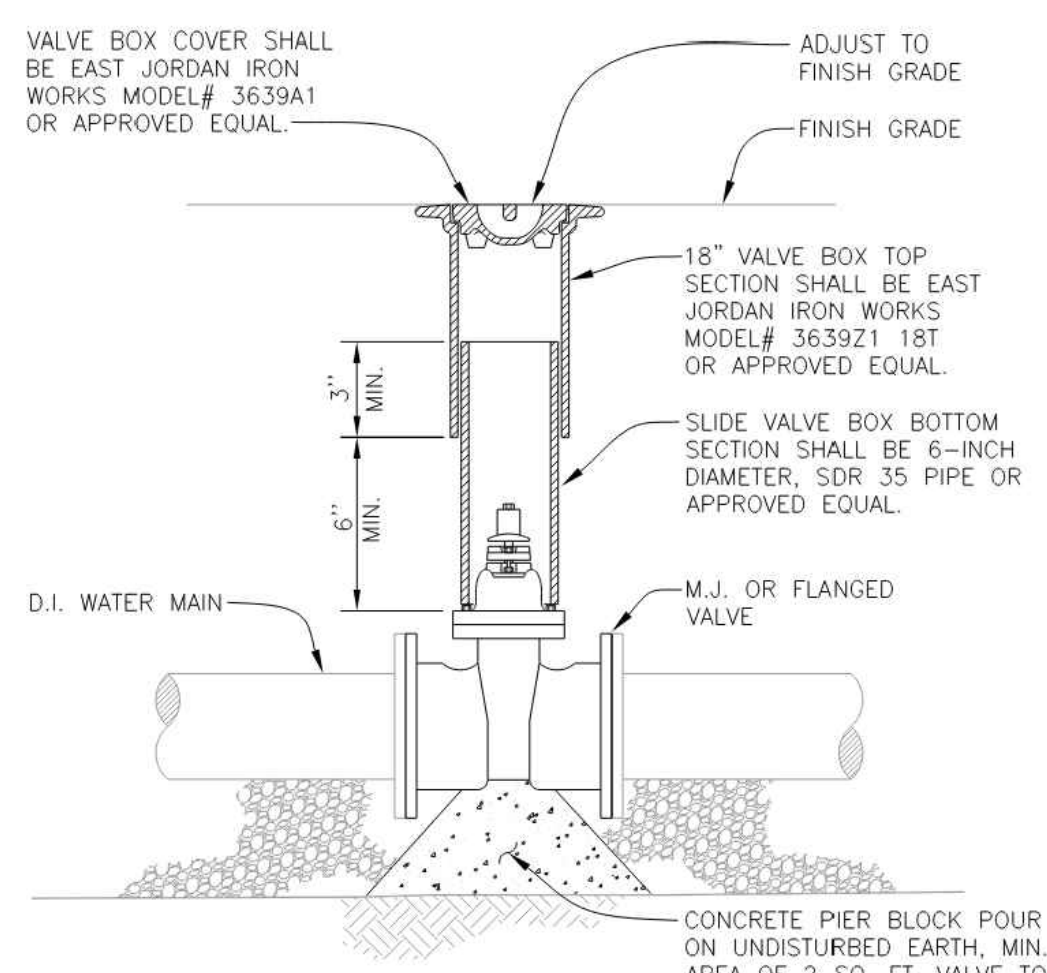
FOR METER BOX SEE TABLE ABOVE



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ENGINEERING DIVISION

METER BOX

REV:	FEB 2020
SCALE:	NTS
DET No.	5050-1



VALVE BOX COVER SHALL BE EAST JORDAN IRON WORKS MODEL# 3639A1 OR APPROVED EQUAL.

ADJUST TO FINISH GRADE

FINISH GRADE

18" VALVE BOX TOP SECTION SHALL BE EAST JORDAN IRON WORKS MODEL# 3639Z1 18" OR APPROVED EQUAL.

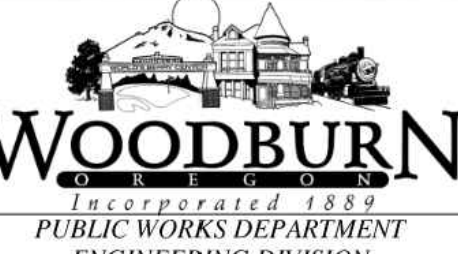
SLIDE VALVE BOX BOTTOM SECTION SHALL BE 6-INCH DIAMETER, SDR 35 PIPE OR APPROVED EQUAL.

D.I. WATER MAIN

M.J. OR FLANGED VALVE

CONCRETE PIER BLOCK POUR ON UNDISTURBED EARTH. MIN. AREA OF 2 SQ. FT. VALVE TO HAVE TEMPORARY BLOCKING DURING CURE.

NOTES:
1. REFERENCE TECHNICAL SPEC. SECTION 5050.

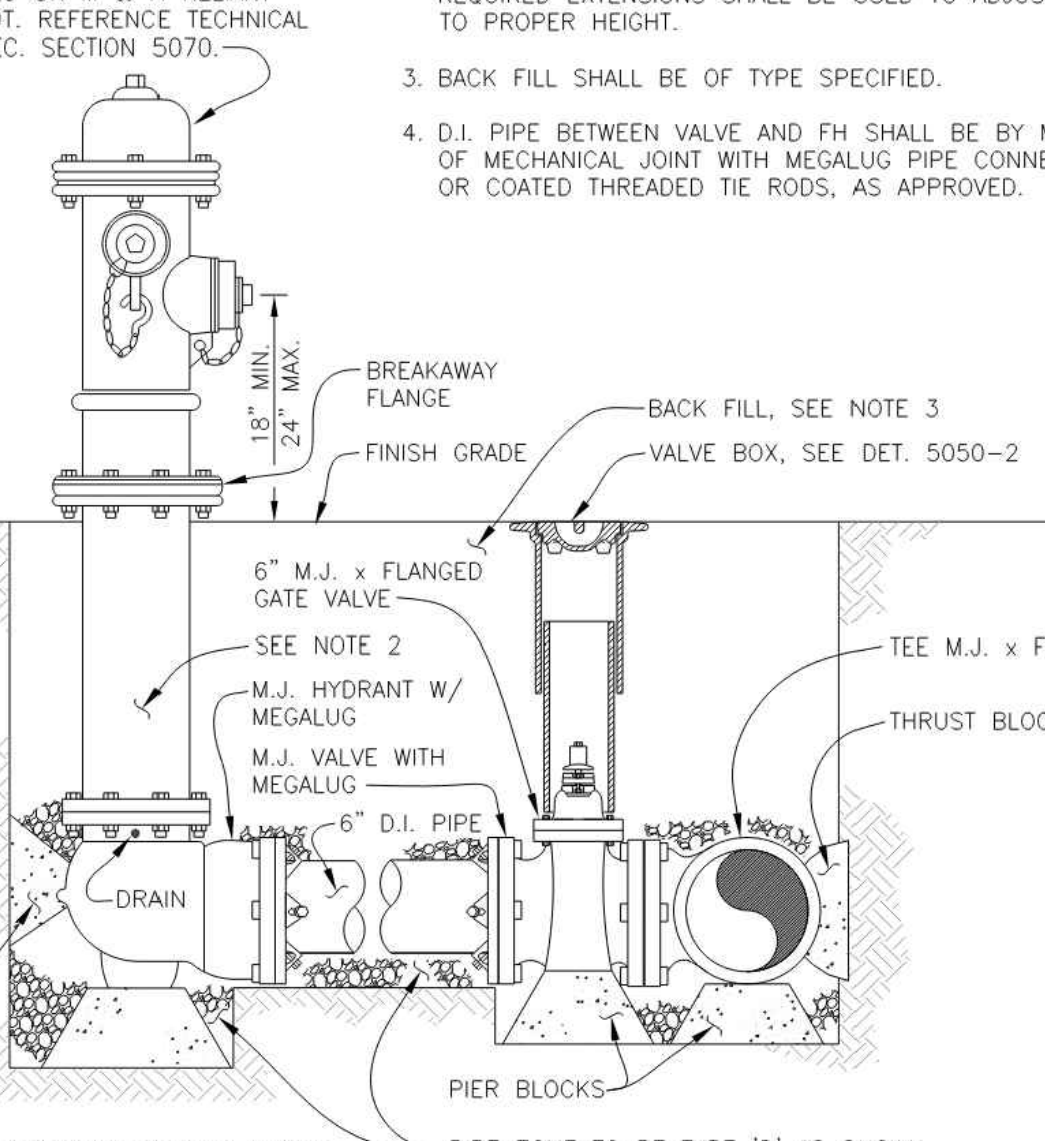


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ENGINEERING DIVISION

VALVE ASSEMBLY

REV:	FEB 2020
SCALE:	NTS
DET No.	5050-2

NOTES:
1. BED PIPE WITH 1"-MINUS SO AS TO CARRY LOAD OF PIPE EVENLY WITHOUT FIXING LOAD ON PIER BLOCKS DIG OUT BELOW BED FOR PIER BLOCKS, AS DIRECTED.
2. BURY HEIGHT: 3-1/2 TO 4 FEET. IF GREATER DEPTH IS REQUIRED EXTENSIONS SHALL BE USED TO ADJUST FH TO PROPER HEIGHT.
3. BACK FILL SHALL BE OF TYPE SPECIFIED.
4. D.I. PIPE BETWEEN VALVE AND FH SHALL BE BY MEANS OF MECHANICAL JOINT WITH MEGALUG PIPE CONNECTORS OR COATED THREADED TIE RODS, AS APPROVED.



HYDRANT: MUELLER CENTURION A423 OR M & H RELIANT 929T. REFERENCE TECHNICAL SPEC. SECTION 5070.

18" MIN. 24" MAX.

BREAKAWAY FLANGE

FINISH GRADE

BACK FILL, SEE NOTE 3

VALVE BOX, SEE DET. 5050-2

6" M.J. x FLANGED GATE VALVE

SEE NOTE 2

M.J. HYDRANT W/ MEGALUG

M.J. VALVE WITH MEGALUG

6" D.I. PIPE

PIER BLOCKS


CONCRETE THRUST BLOCK SEE DETAILS 5000-1 & 2

PIPE ZONE TO BE TYPE 'D' AS SHOWN IN STANDARD DETAIL 3800-2.

TEE M.J. x FLANGED

THRUST BLOCK

DRAIN



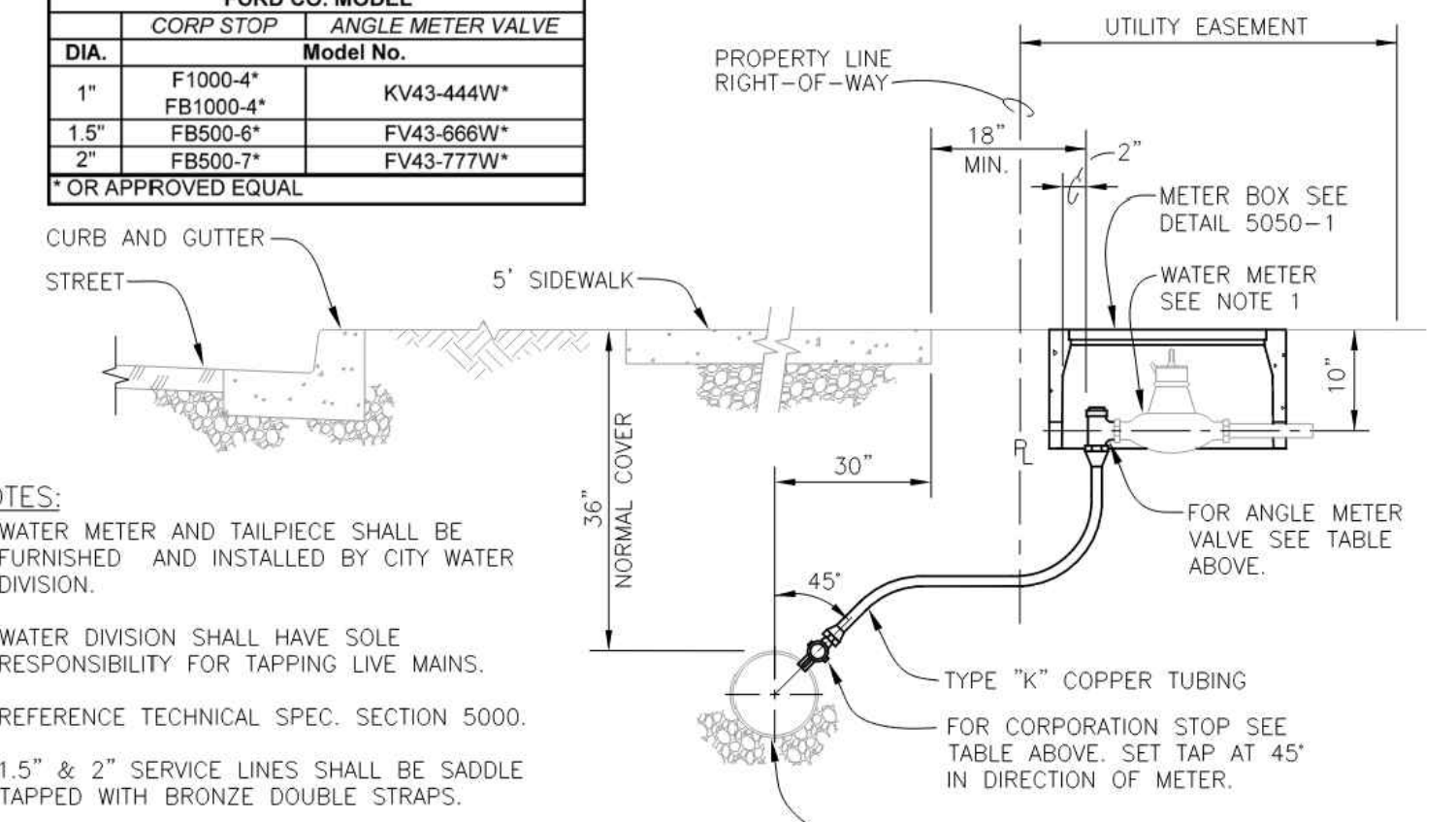
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ENGINEERING DIVISION

FIRE HYDRANT ASSEMBLY

REV:	FEB 2020
SCALE:	NTS
DET No.	5070-1

FORD CO. MODEL		ANGLE METER VALVE
DIA.	CORP STOP	Model No.
1"	F1000-4*	KV43-444W*
1.5"	FB500-6*	FV43-666W*
2"	FB500-7*	FV43-777W*

* OR APPROVED EQUAL



PROPERTY LINE RIGHT-OF-WAY

UTILITY EASEMENT

18" MIN.

2"

METER BOX SEE DETAIL 5050-1

WATER METER SEE NOTE 1

FOR ANGLE METER VALVE SEE TABLE ABOVE.

TYPE "K" COPPER TUBING

FOR CORPORATION STOP SEE TABLE ABOVE. SET TAP AT 45° IN DIRECTION OF METER.

D.I. WATER MAIN, TYP.

36" NORMAL COVER

5' SIDEWALK

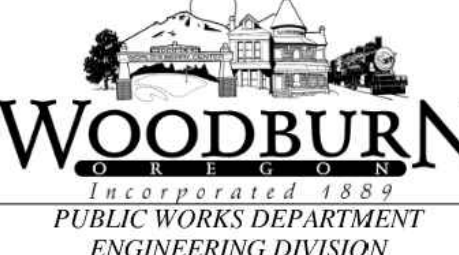
30"

45°

30"

10"

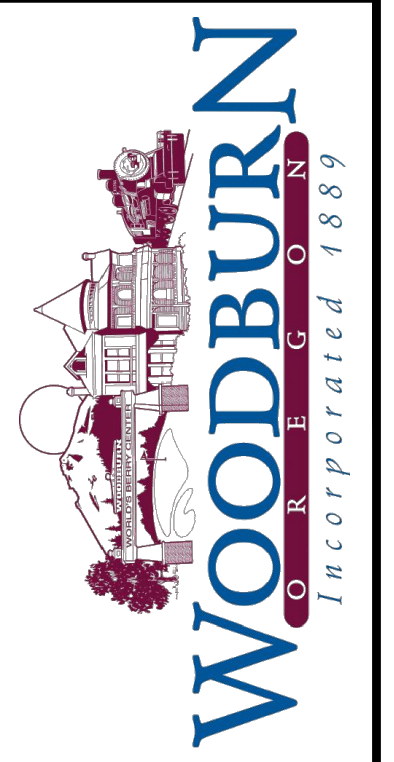
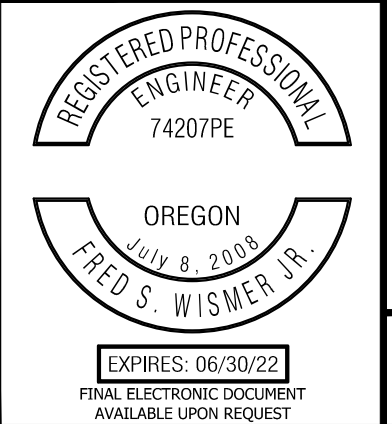
NOTES:
1. WATER METER AND TAILPIECE SHALL BE FURNISHED AND INSTALLED BY CITY WATER DIVISION.
2. WATER DIVISION SHALL HAVE SOLE RESPONSIBILITY FOR TAPPING LIVE MAINS.
3. REFERENCE TECHNICAL SPEC. SECTION 5000.
4. 1.5" & 2" SERVICE LINES SHALL BE SADDLE TAPPED WITH BRONZE DOUBLE STRAPS.



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WATER SERVICE CONNECTION

REV:	MAY 2011
SCALE:	NTS
DET No.	5000-4



KITTELSON & ASSOCIATES

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#	DATE	REVISION	APP'D

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Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

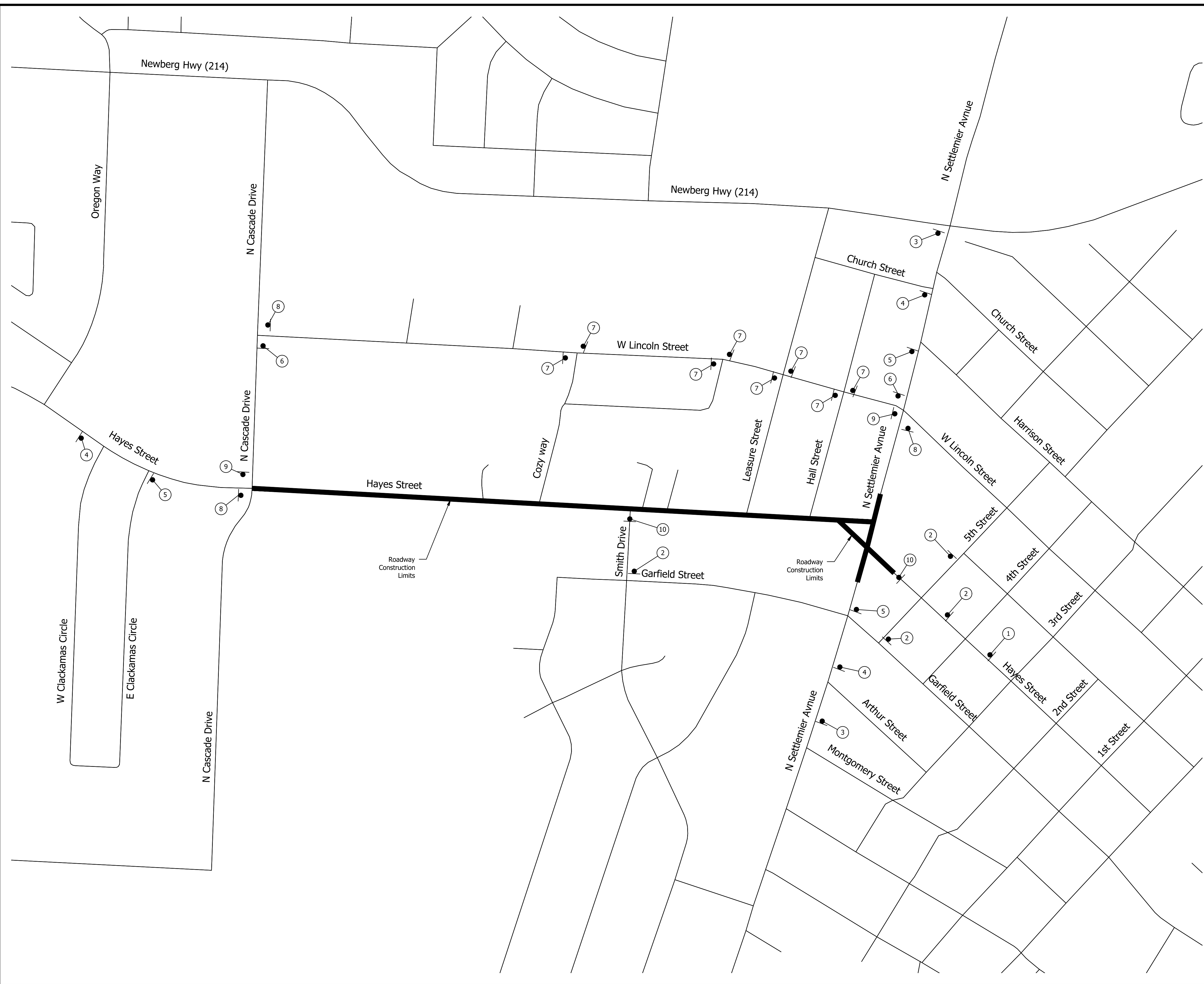
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

WATER DETAILS

SHEET NO. 2B-6

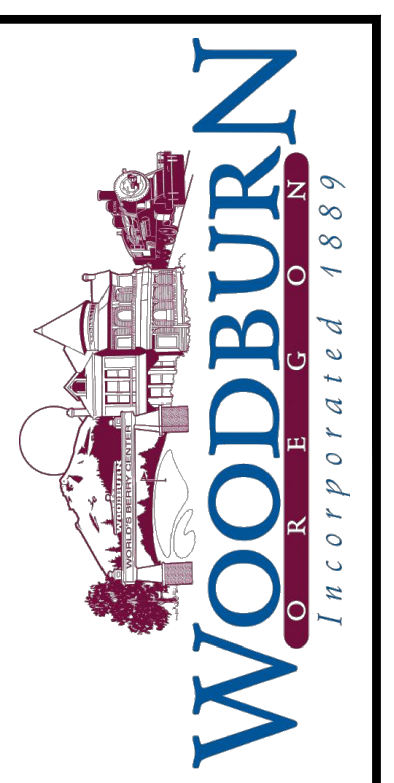
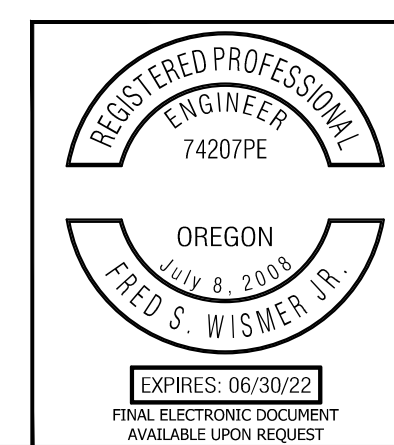
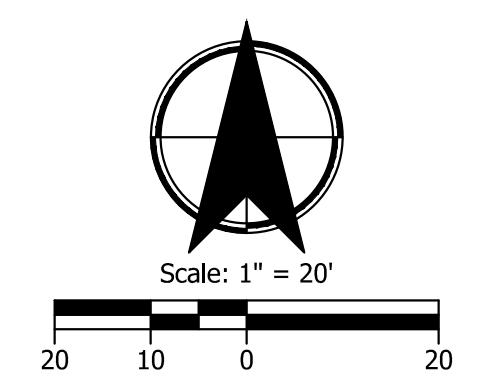
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- GENERAL TRAFFIC CONTROL NOTES**
1. ALL SIGNS ARE TYPE "O4" UNLESS OTHERWISE NOTED ON PLANS.
 2. PLACE TEMPORARY SIGN SUPPORT (TSS) APPROXIMATELY 10' BEHIND BARRICADE.
 3. MAINTAIN ALL EXISTING REGULATORY AND WARNING SIGNS IN WORK AREA ON TEMPORARY SIGN SUPPORT (TSS) AS DIRECTED BY THE ENGINEER.
 4. ALL TRAFFIC CONTROL IS TO BE IN ACCORDANCE WITH THE CURRENT MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
 5. NIGHT WORK NOT ALLOWED.
 7. CONTRACTOR TO MAINTAIN DRIVEWAY ACCESSES.
 8. CONTRACTOR TO USE ABRUPT EDGE DETAIL ODOT STANDARD DRAWING TM800 FOR SHOULDER DROP OFF.
 9. SEE 2C-3 THRU 2C-7 FOR PROJECT LEVEL CONSTRUCTION LIMITS AND ADDITIONAL TRAFFIC CONTROL SIGNS REQUIRED.

TRAFFIC CONTROL SIGN LEGEND

① ROAD CLOSED 500 FT W20-3 36" x 36" Hayes Street 42" x 18"	② ROAD CLOSED 250 FT W20-3 36" x 36" Hayes Street 42" x 18"
③ ROAD CLOSED 750 FT W20-3 36" x 36" Hayes Street 42" x 18" DETOUR M4-8 24x12 AHEAD M4-8 24x12	④ ROAD CLOSED 500 FT W20-3 36" x 36" Hayes Street 42" x 18" DETOUR M4-8 24x12 AHEAD M4-8 24x12
⑤ ROAD CLOSED 250 FT W20-3 36" x 36" Hayes Street 42" x 18" DETOUR M4-8 24x12 AHEAD M4-8 24x12	⑥ Hayes Street 42" x 18" DETOUR M4-9R 30" x 24"
⑦ Hayes Street 42" x 18" DETOUR M4-9S 30" x 24"	⑧ Hayes Street 42" x 18" DETOUR M4-9L 30" x 24"
⑨ Hayes Street 42" x 18" END DETOUR M4-6a 24" x 18"	⑩ R11-4 60" x 30"



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PROJECT NO. 2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 TRAFFIC CONTROL DETOUR PLAN
 SHEET NO. 2C

#	DATE	REVISION	APP'D.

Submission Date:	03/07/2022
Drawn:	JCB/RMM
Designed:	NRS/JBK
Checked:	FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

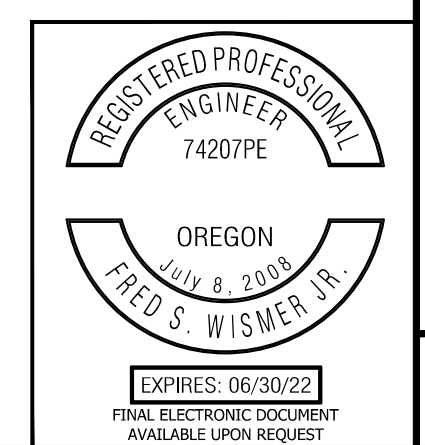
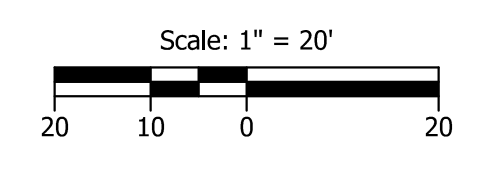
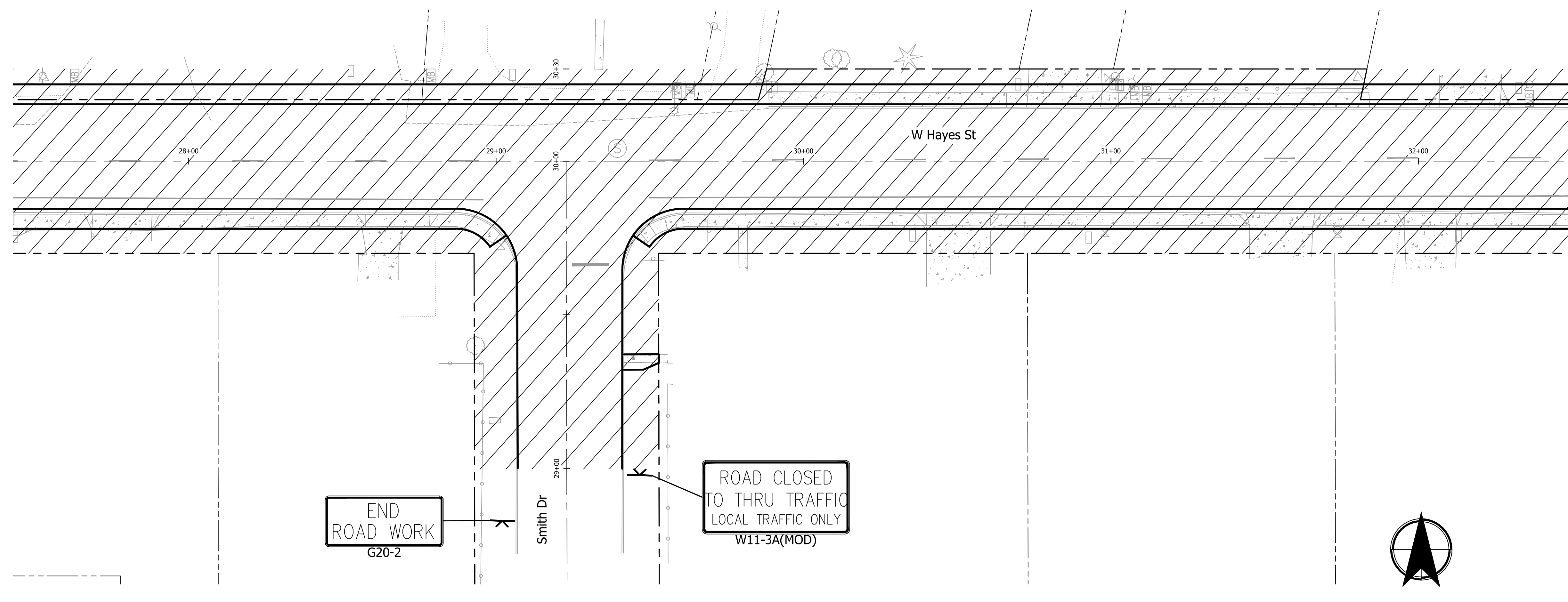
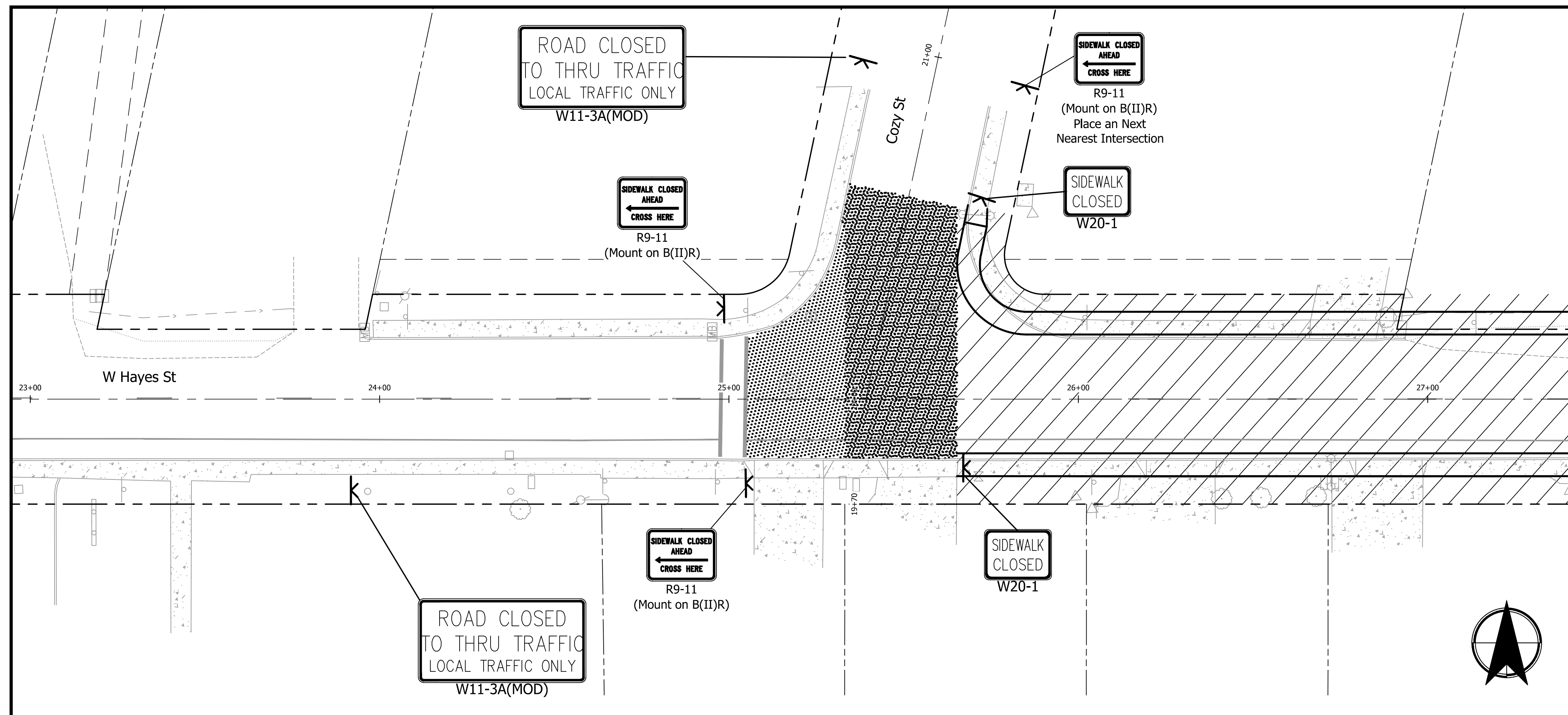
TRAFFIC CONTROL PLANS - STAGE 1

GENERAL NOTES

1. ALL SIGNS ARE TYPE "O4" UNLESS OTHERWISE NOTED ON PLANS.
2. PLACE TEMPORARY SIGN SUPPORT (TSS) APPROXIMATELY 10' BEHIND BARRICADE.
3. MAINTAIN ALL EXISTING REGULATORY AND WARNING SIGNS IN WORK AREA ON TEMPORARY SIGN SUPPORT (TSS) AS DIRECTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL IS TO BE IN ACCORDANCE WITH THE CURRENT MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
5. NIGHT WORK NOT ALLOWED.
6. REMOVE EXISTING CONFLICTING STRIPING AND MARKERS.
7. CONTRACTOR TO MAINTAIN DRIVEWAY ACCESSES.
8. CONTRACTOR TO USE ABRUPT EDGE DETAIL ODOT STANDARD DRAWING TM800 FOR SHOULDER DROP OFF.
9. STAGE SIDEWALK CONSTRUCTION TO BE ONE SIDE OF THE STREET AT A TIME.

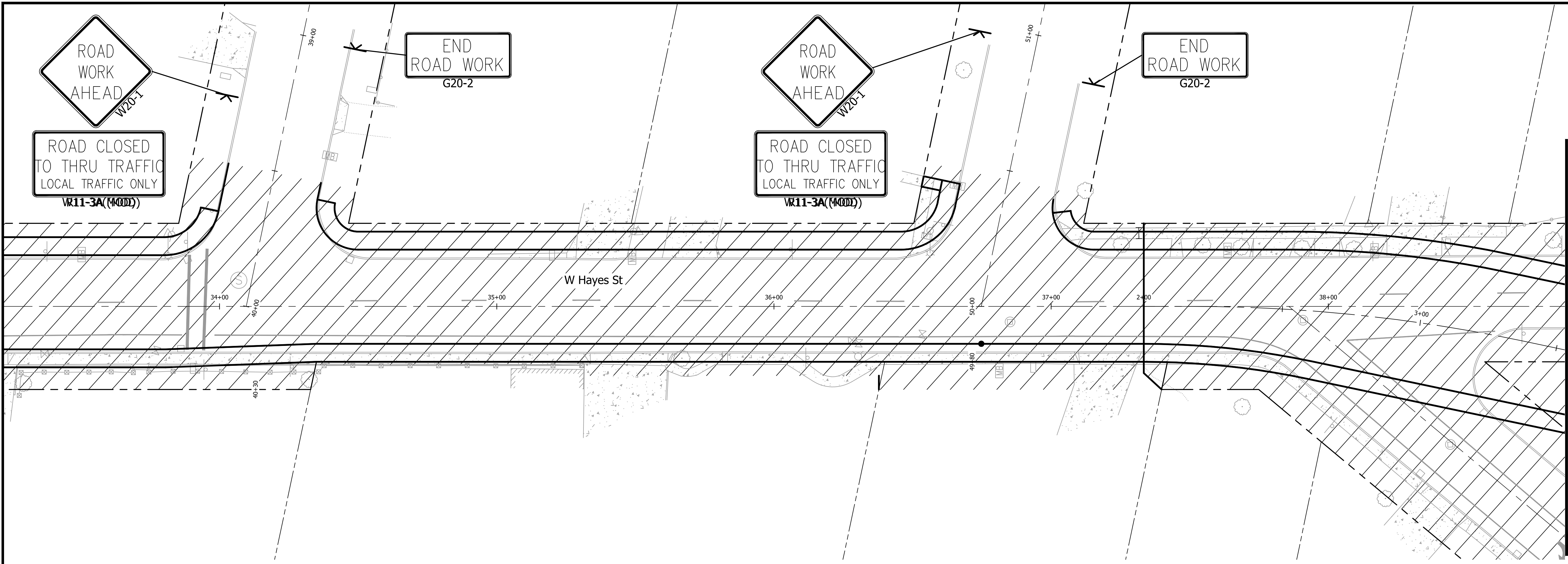
LEGEND

- UNDER TRAFFIC
- UNDER CONSTRUCTION
- 28" TUBULAR MARKERS WITH 20' SPACING & 10' SPACING ON TANGENTS, TAPERS AND RADII
- TYPE III BARRICADE
- TSS SIGN SUPPORT AS SHOWN ON ODOT STANDARD DRG. TM821
- PORTABLE SIGN SUPPORT
- POST MOUNTED CONSTRUCTION SIGN
- DIRECTION OF TRAFFIC (ARROWS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY)



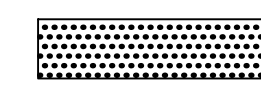



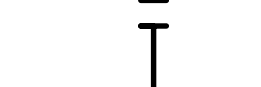

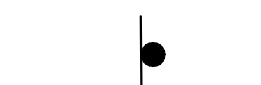

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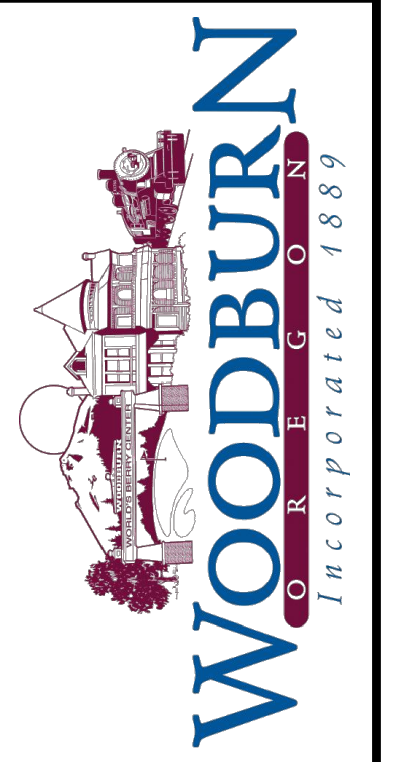
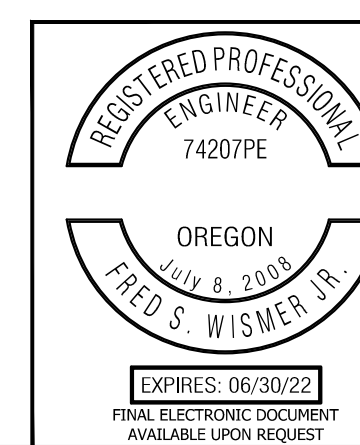
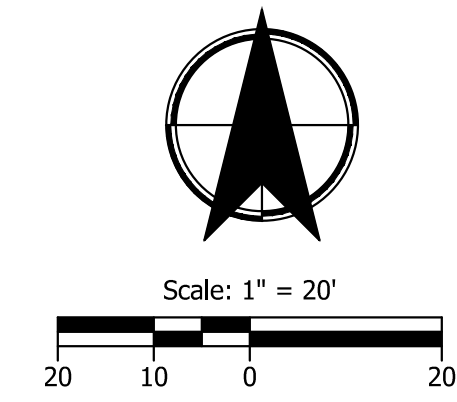
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MATCH LINE
SEE SHT 2C-3

LEGEND

-  UNDER TRAFFIC
-  UNDER CONSTRUCTION
-  28" TUBULAR MARKERS WITH 20' SPACING & 10' SPACING ON TANGENTS, TAPERS AND RADII
-  TYPE III BARRICADE
-  TSS SIGN SUPPORT AS SHOWN ON ODOT STANDARD DRG. TM821
-  PORTABLE SIGN SUPPORT
-  POST MOUNTED CONSTRUCTION SIGN
-  DIRECTION OF TRAFFIC (ARROWS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY)



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W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 TRAFFIC CONTROL PLANS - STAGE 1

SHEET NO.
2C-3

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022

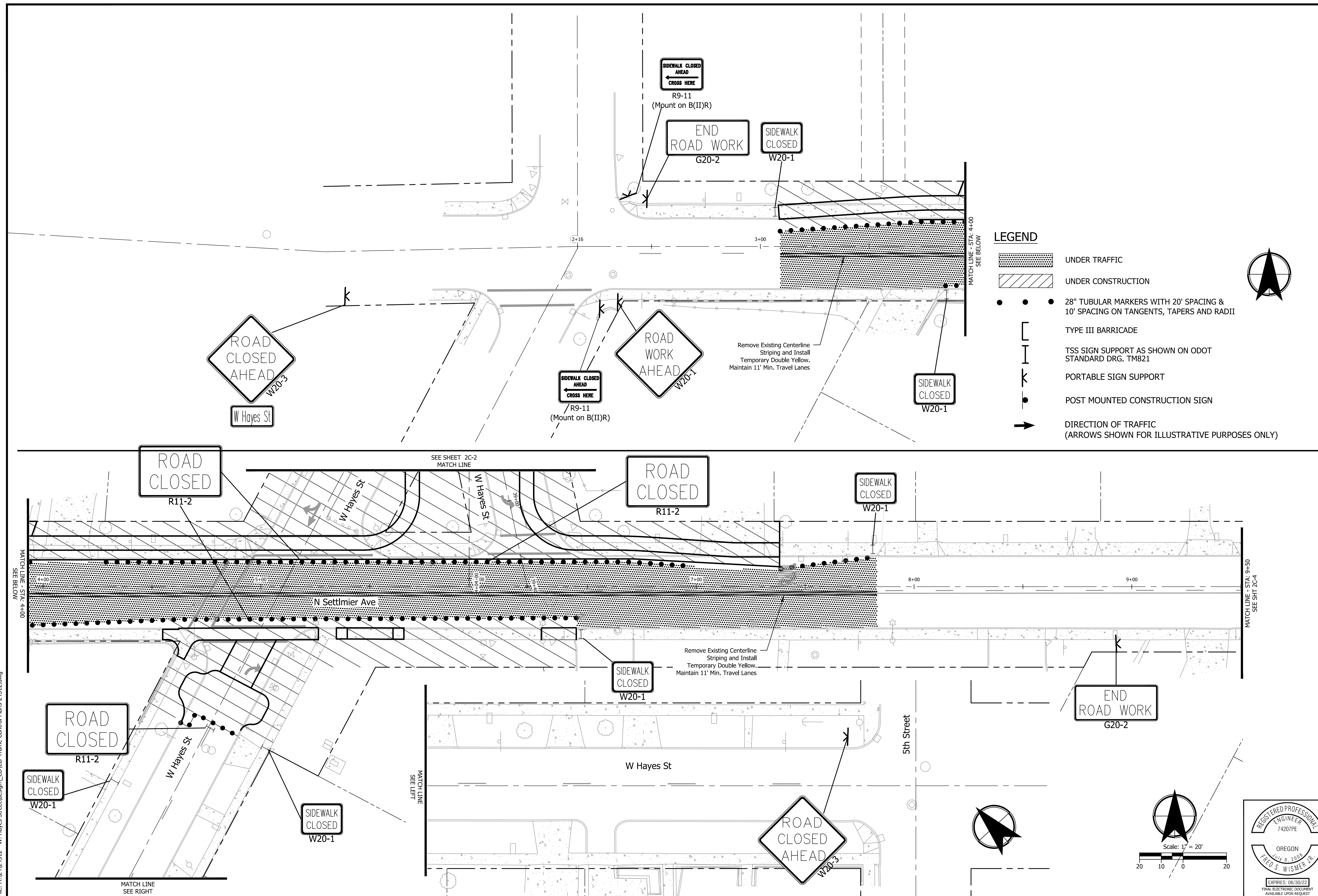
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PROJECT NO. 2015-001-20

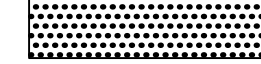
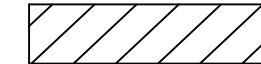

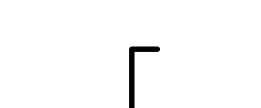
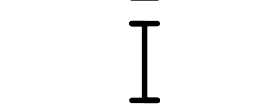
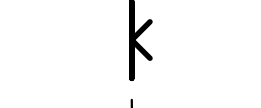


W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

TRAFFIC CONTROL PLANS - STAGE 1

SHEET NO. 2C-4



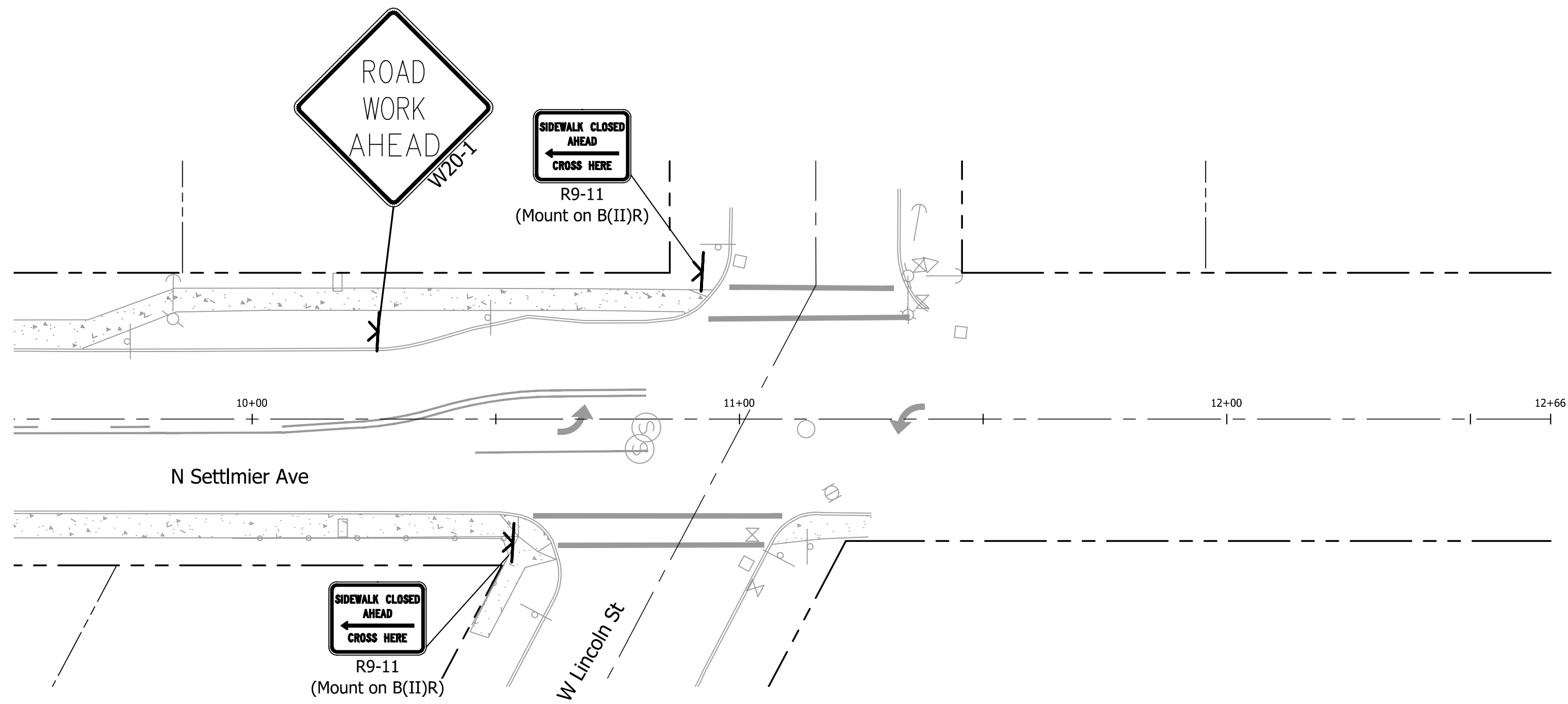
LEGEND

-  UNDER TRAFFIC
-  UNDER CONSTRUCTION
-  28" TUBULAR MARKERS WITH 20' SPACING & 10' SPACING ON TANGENTS, TAPERS AND RADII
-  TYPE III BARRICADE
-  TSS SIGN SUPPORT AS SHOWN ON ODOT STANDARD DRG. TM821
-  PORTABLE SIGN SUPPORT
-  POST MOUNTED CONSTRUCTION SIGN
-  DIRECTION OF TRAFFIC (ARROWS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY)

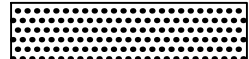







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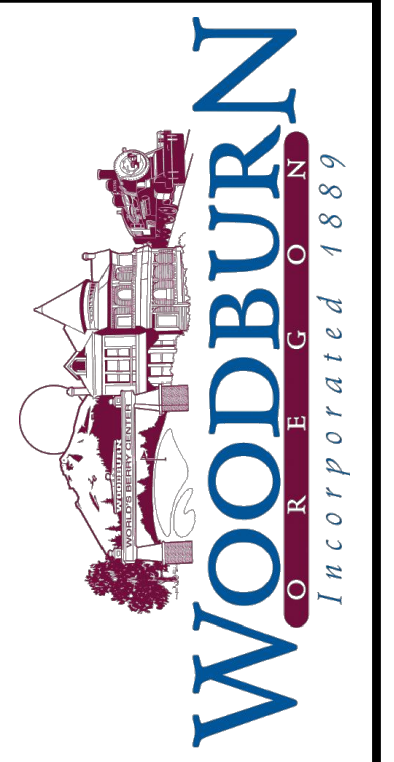
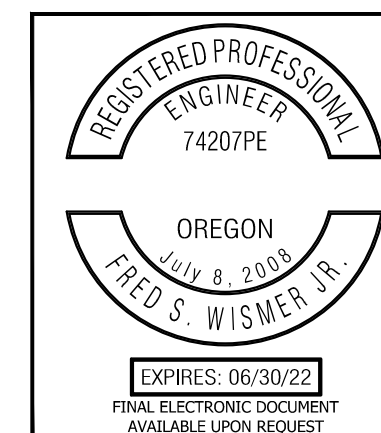
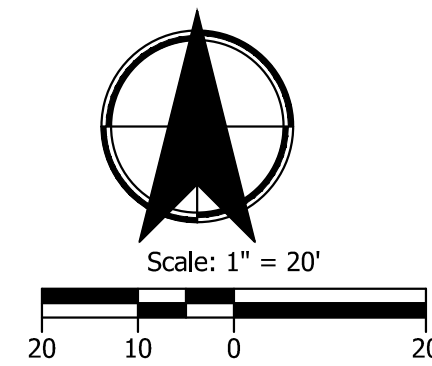
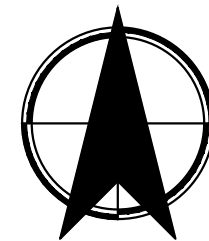


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LEGEND

-  UNDER TRAFFIC
-  UNDER CONSTRUCTION
-  28" TUBULAR MARKERS WITH 20' SPACING & 10' SPACING ON TANGENTS, TAPERS AND RADII
-  TYPE III BARRICADE
-  TSS SIGN SUPPORT AS SHOWN ON ODOT STANDARD DRG. TM821
-  PORTABLE SIGN SUPPORT
-  POST MOUNTED CONSTRUCTION SIGN
-  DIRECTION OF TRAFFIC (ARROWS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY)



KITTELSON & ASSOCIATES
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 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 TRAFFIC CONTROL PLANS - STAGE 1

SHEET NO. 2C-5

#	DATE	REVISION	APP'D

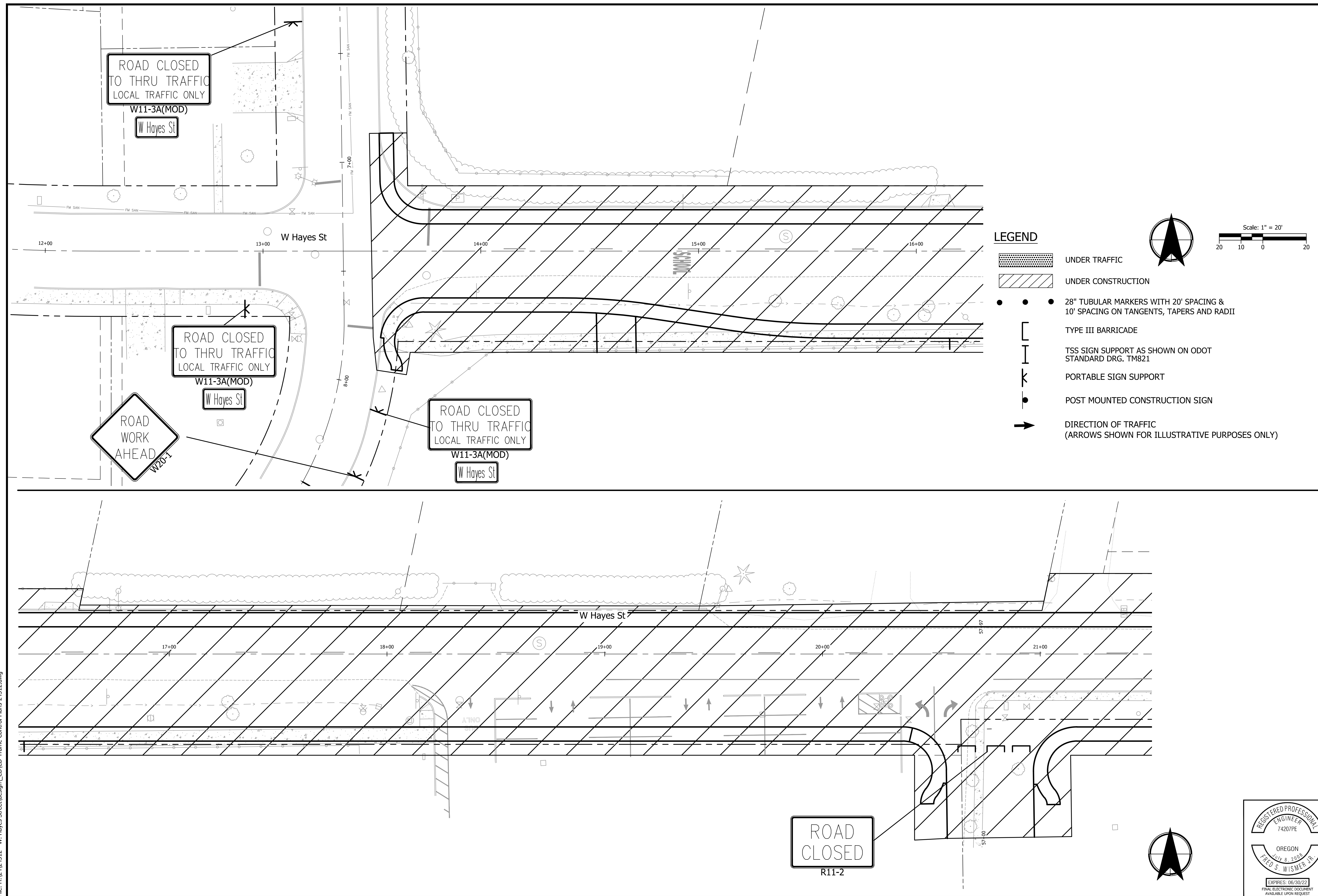
Submission Date: 03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

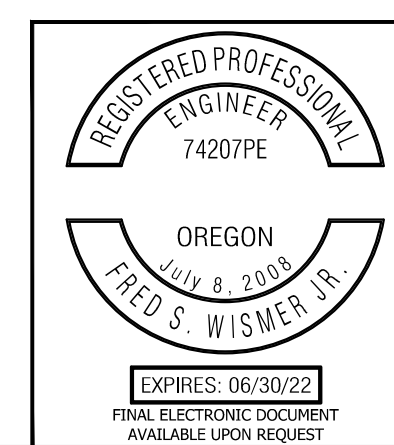
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
TRAFFIC CONTROL PLANS - STAGE 2

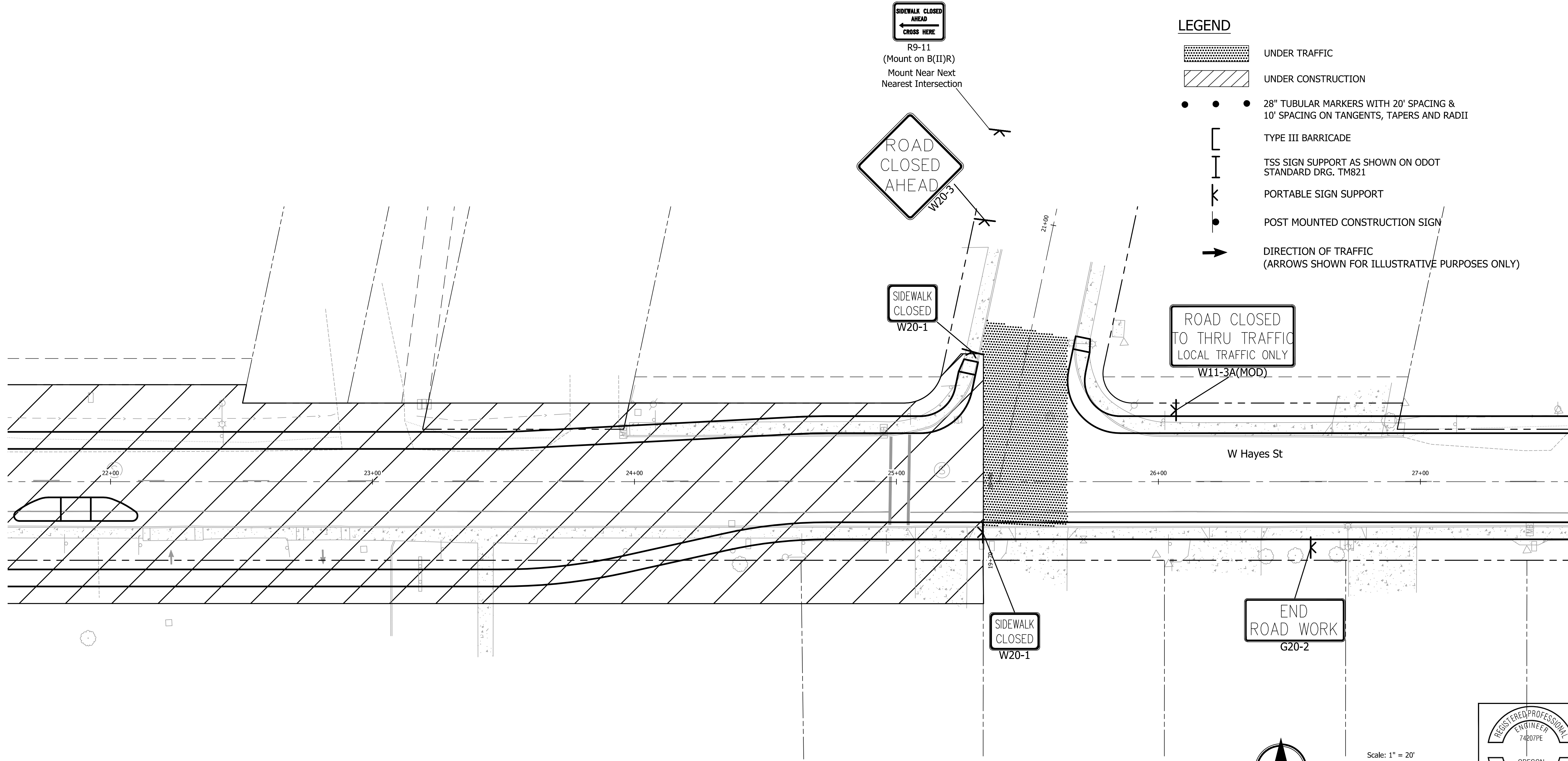
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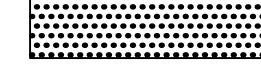
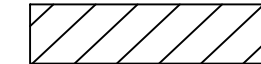




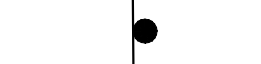

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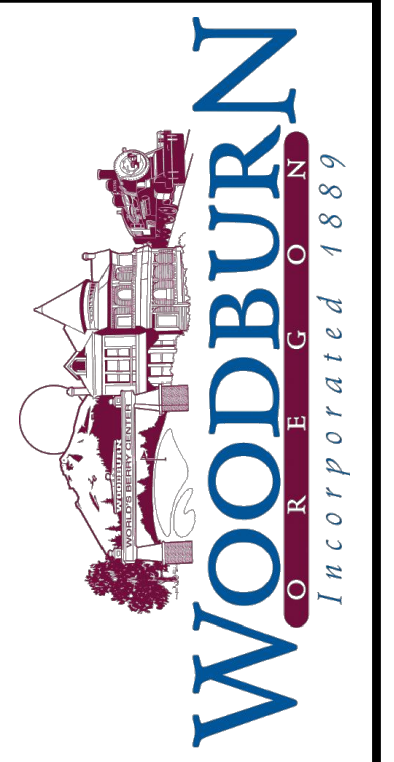


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LEGEND

-  UNDER TRAFFIC
-  UNDER CONSTRUCTION
-  28" TUBULAR MARKERS WITH 20' SPACING & 10' SPACING ON TANGENTS, TAPERS AND RADII
-  TYPE III BARRICADE
-  TSS SIGN SUPPORT AS SHOWN ON ODOT STANDARD DRG. TM821
-  PORTABLE SIGN SUPPORT
-  POST MOUNTED CONSTRUCTION SIGN
-  DIRECTION OF TRAFFIC (ARROWS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY)



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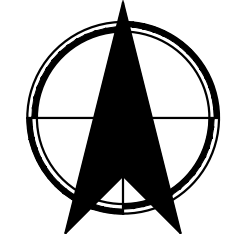
#	DATE	REVISION	APP'D

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PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 TRAFFIC CONTROL PLANS - STAGE 2

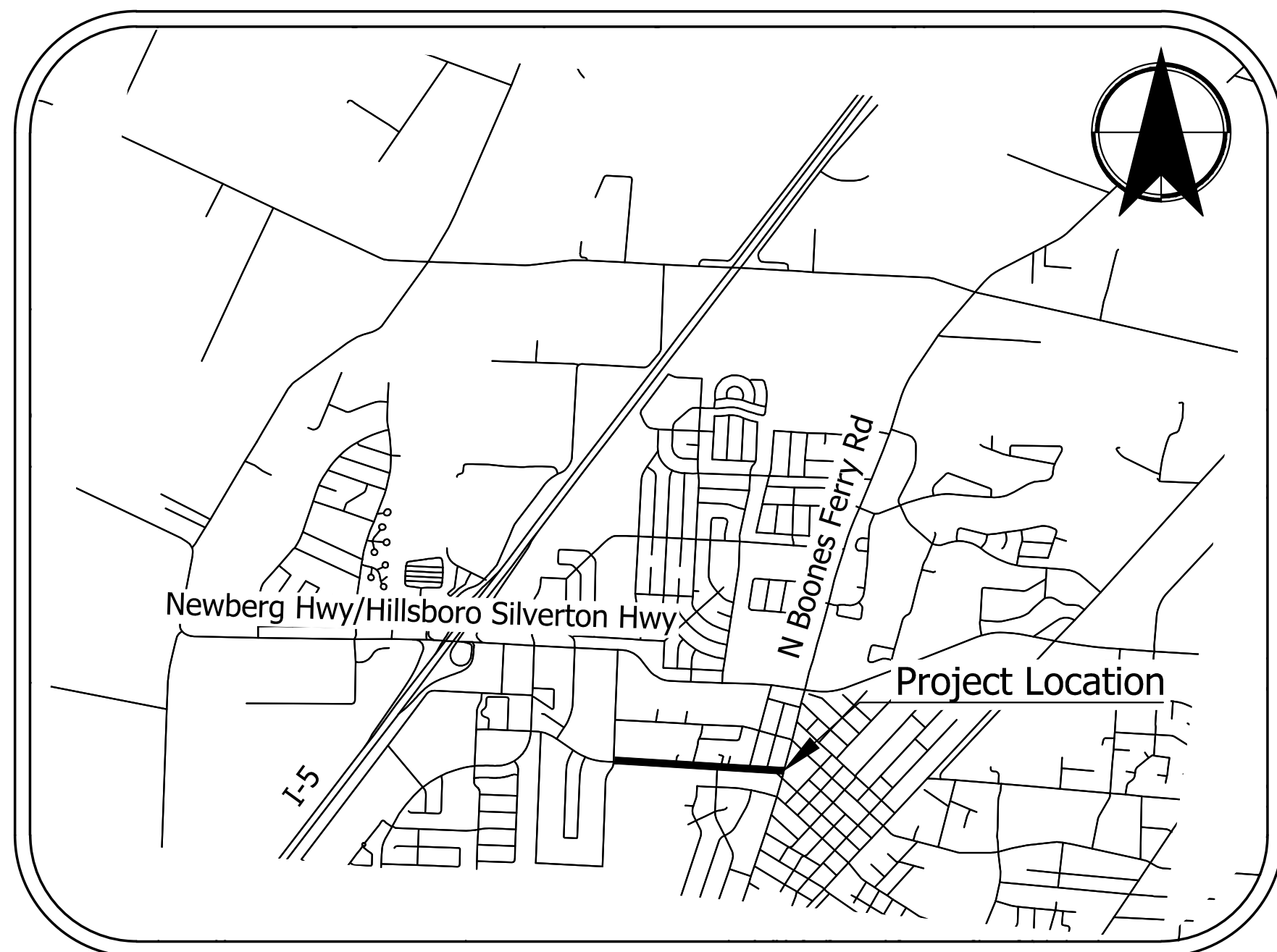
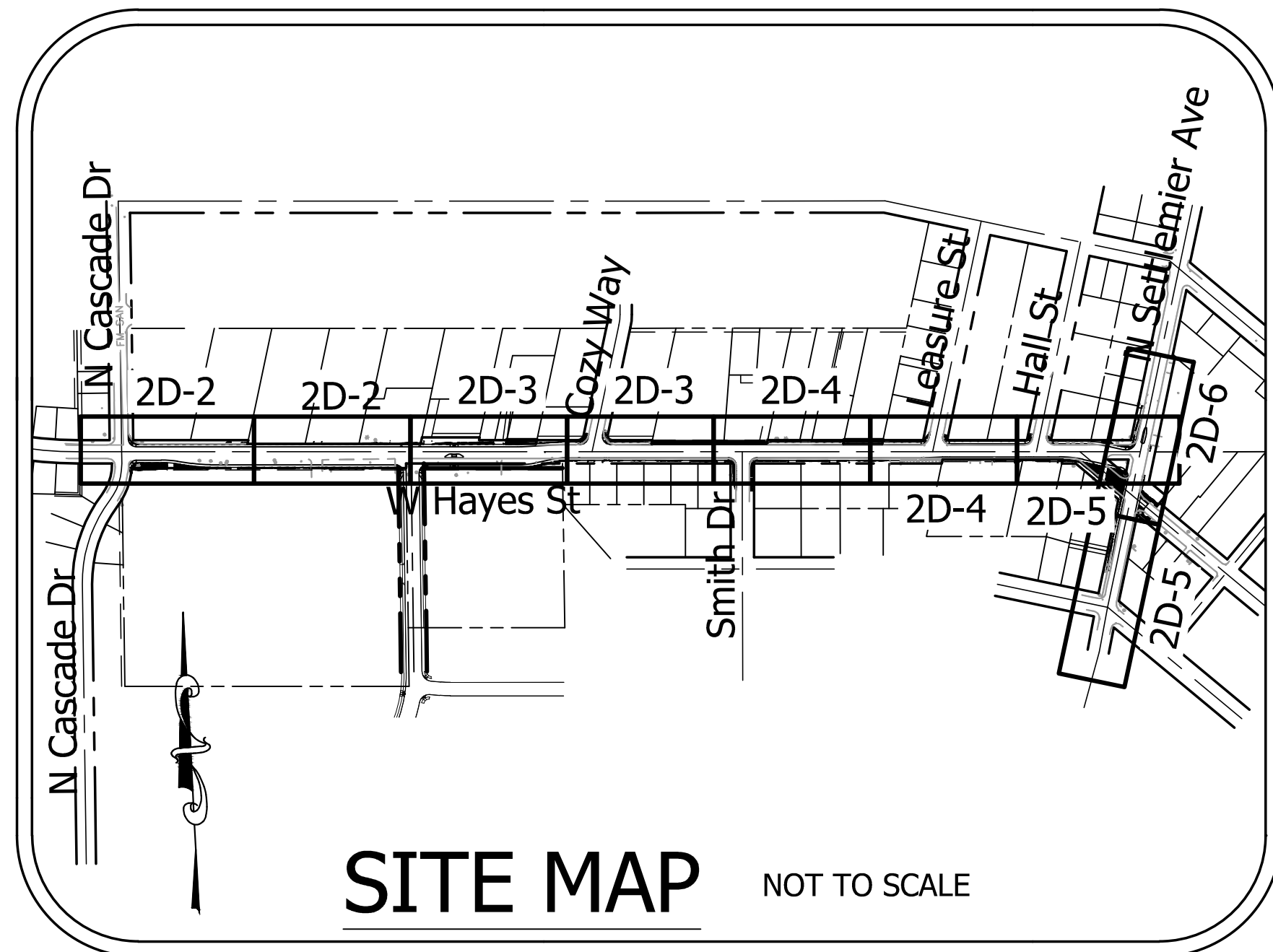
SHEET NO. 2C-7



Scale: 1" = 20'



W HAYES STREET IMPROVEMENTS GRADING & EROSION CONTROL



OWNER

OWNER: City of Woodburn
 CONTACT: Eric Liljequist, PE (PW Direction)
 ADDRESS: 190 Garfield St, Woodburn, OR 97071
 PHONE: 503-982-5240
 FAX: 503-982-5242

PLANNING / ENGINEERING /

ENGINEERING FIRM

Kittelston And Associates, Inc.
 CONTACT: Fred Wismer, PE
 ADDRESS: 851 SW 6th Ave, Suite 600
 ADDRESS: Portland, OR 97204
 PHONE: 503-535-7440

PERMITTEE'S SITE INSPECTOR:

COMPANY/AGENCY:

PHONE:

FAX:

E-MAIL:

DESCRIPTION OF EXPERIENCE:

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS

Paved Street with Roadside Ditches and Inconsistence Storm System

DEVELOPED CONDITIONS

Paved Street with Sidewalk

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200-CN PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-CN PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-CN PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

- * CLEARING (FEBRUARY - MARCH 2022)
- * MASS GRADING (FEBRUARY - JULY 2022)
- * UTILITY INSTALLATION (FEBRUARY - JULY 2022)
- * STREET CONSTRUCTION (APRIL - AUGUST 2022)
- * FINAL STABILIZATION (JUNE - OCTOBER 2022)

TOTAL SITE AREA = 182,715 SF = 4.2 ACRES

TOTAL DISTURBED AREA = 170,189 SF = 3.9 ACRES

SITE SOIL CLASSIFICATION:

ON-SITE SOILS ARE SILT LOAM AS DESCRIBED BY THE WEBSOIL ONLINE SURVEY.

RECEIVING WATER BODIES:

NEAREST WATER BODY: MILL CREEK

SHEET INDEX

2D	GRADING AND EROSION CONTROL COVER SHEET
2D-2 Thru 2D-6	GRADING AND EROSION CONTROL PLAN
2D-7	GRADING AND EROSION CONTROL DETAILS

PROJECT LOCATION:

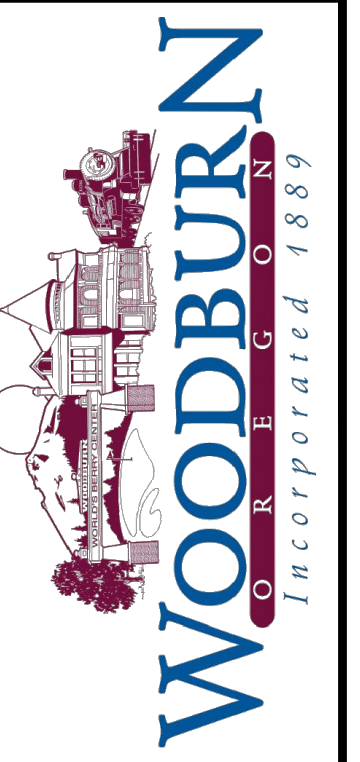
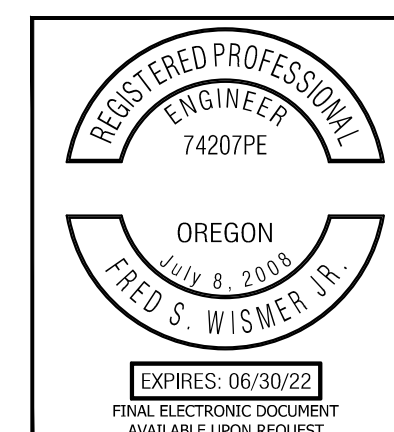
LATITUDE =45.146142 LONGITUDE = -122.866097

PROPERTY DESCRIPTION:

PUBLIC RIGHT-OF-WAY

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.



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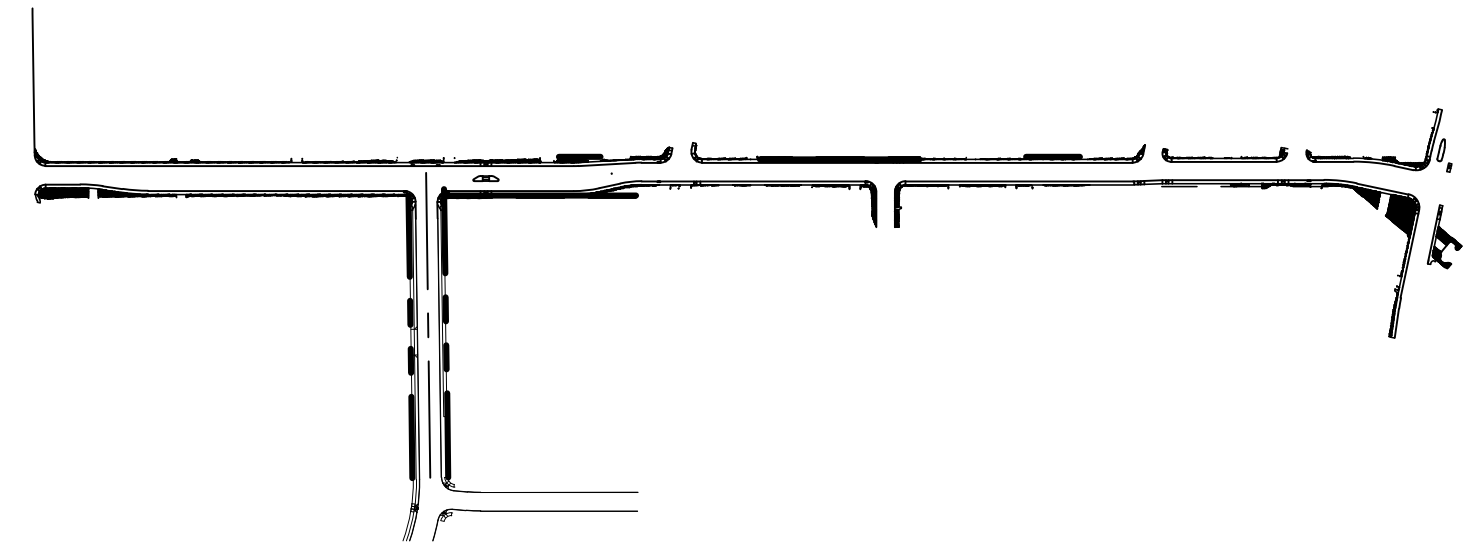
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

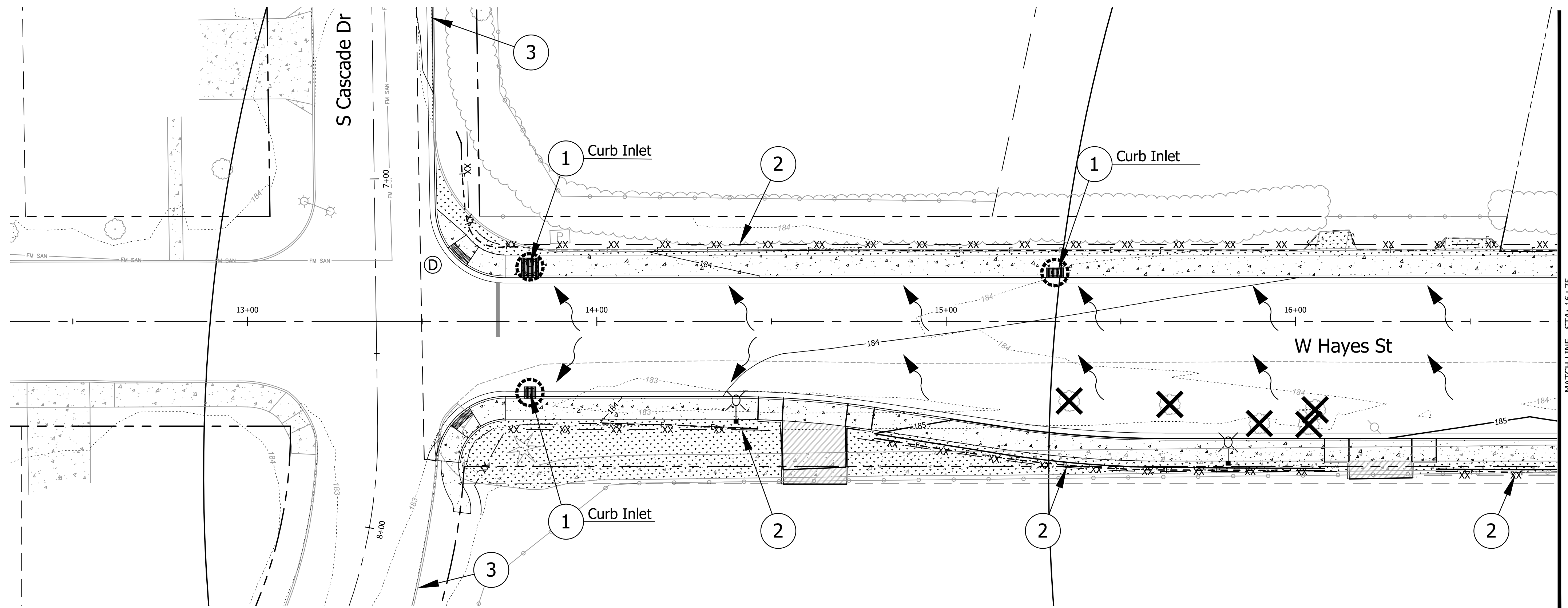
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL COVER SHEET

SHEET NO. 2D

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Plot Stamp: 3/4/2022 9:16:10 AM - Fred Wismer
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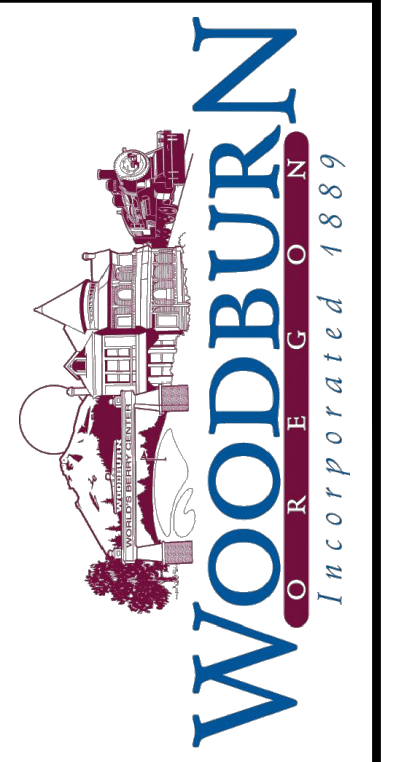
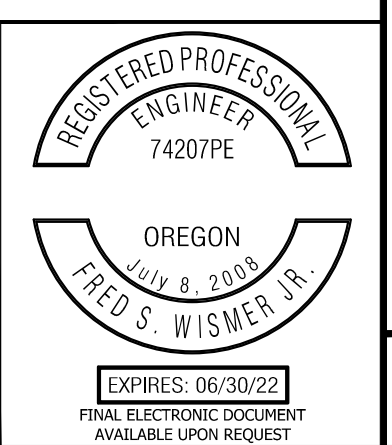
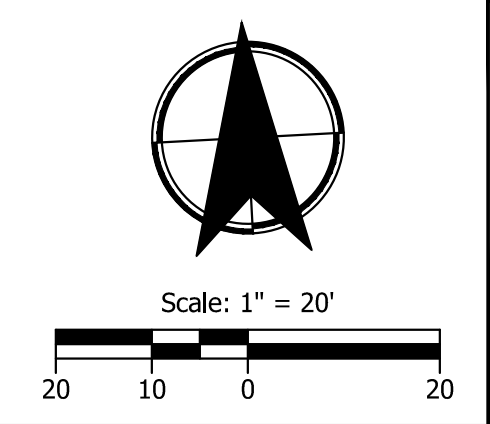
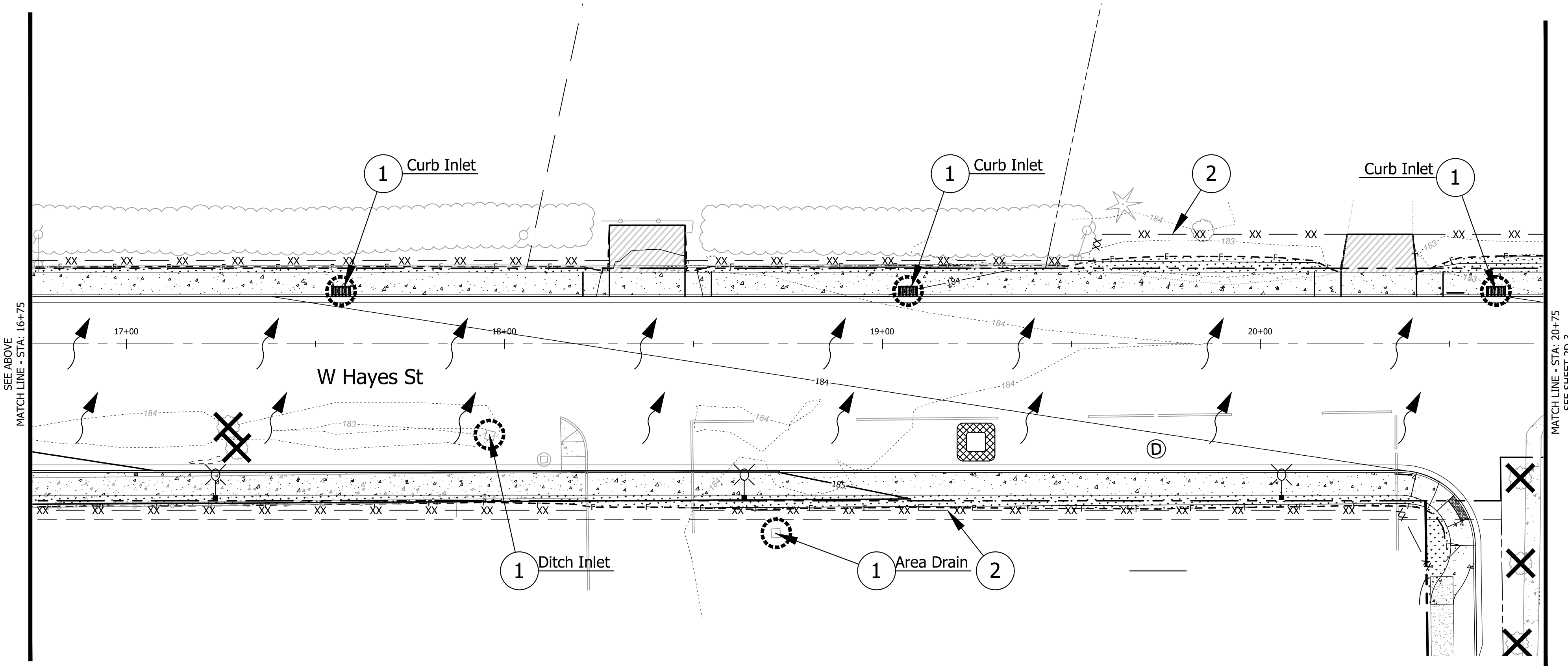


LEGEND

- XX — XX — XX — XX — Sediment Fence
- — — — Existing ROW Line
- — — — Proposed ROW Line
- - - - 250 Existing Major Contours
- - - - 249 Existing Minor Contours
- — — — 250 Proposed Major Contours
- - - - 249 Proposed Minor Contours
- Flow Arrow
- Ⓧ Ⓧ Extg./Proposed MH
- Ⓧ Ⓧ Extg./Proposed CB
- Ⓧ Ⓧ Inlet Protection
- Ⓧ Concrete Washout Facility
- ★ Trees to Remain
- ✕ ✕ Trees to Removed

CONSTRUCTION NOTES

- ① Install Inlet Protection.
(For Details, See Sht. 2D-7)
- ② Install Sediment Fence.
(For Details, See Sht. 2D-7)
- ③ Install Inlet Protection at Next Nearest Inlet
Inlet Not Shown
(For Details, See Sht. 2D-7)



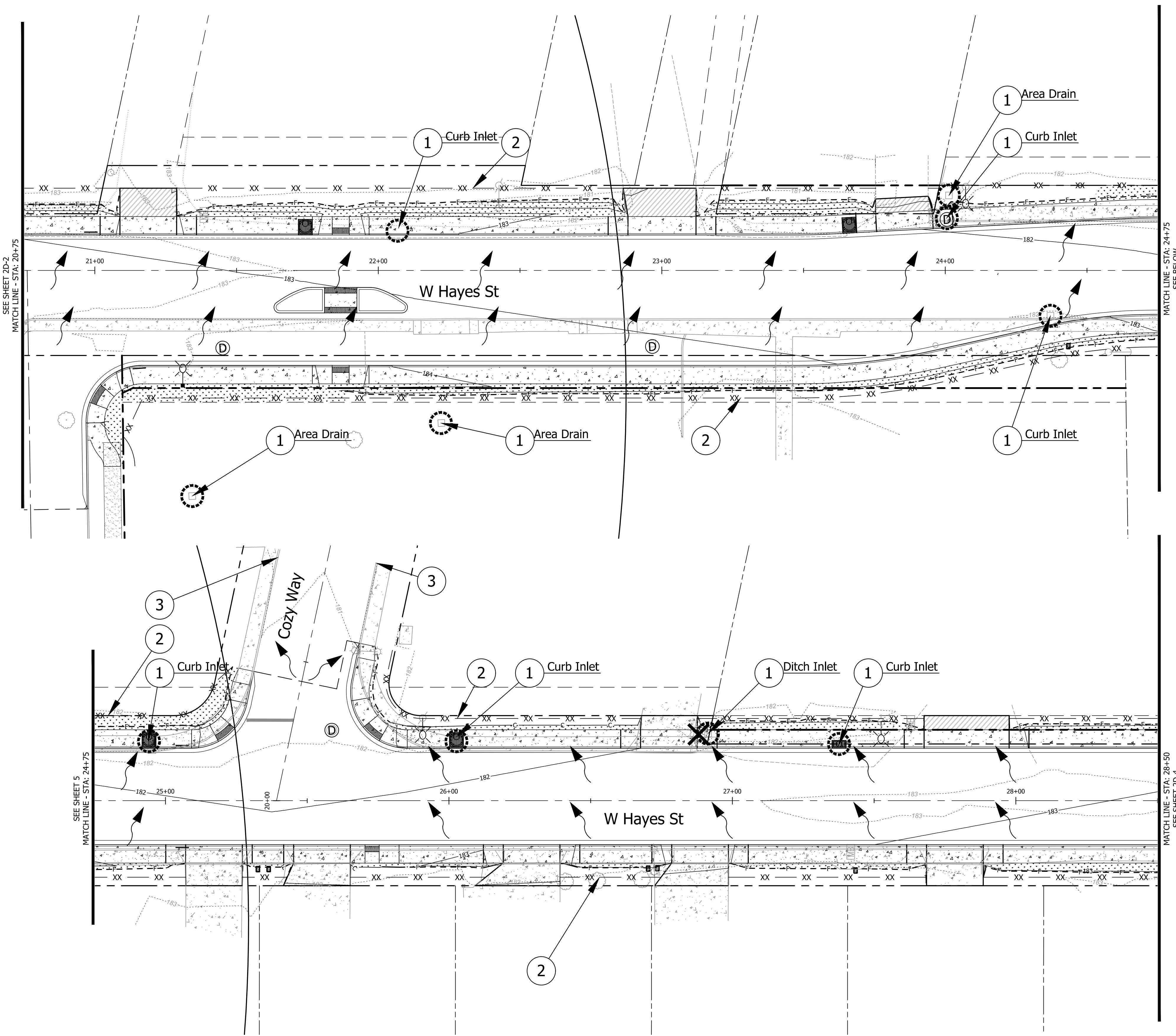
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#	DATE	REVISION	APP'D

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PROJECT NO. 2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL PLAN
 SHEET NO. 2D-2

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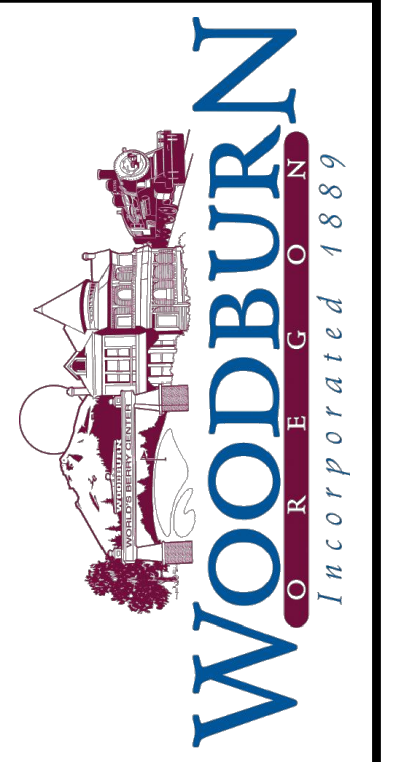
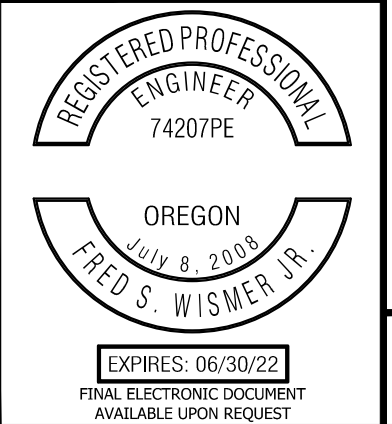
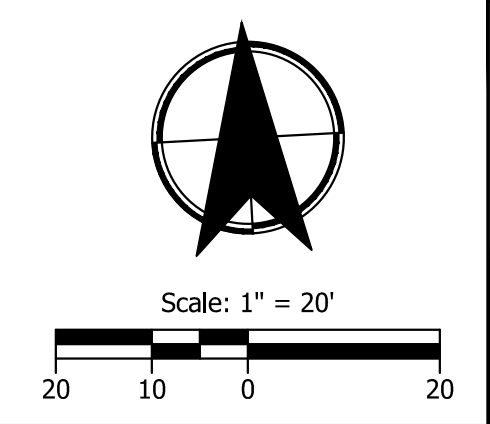


LEGEND

- XX — XX — XX — XX — Sediment Fence
- — — — Existing ROW Line
- — — — Proposed ROW Line
- - - - 250 Existing Major Contours
- - - - 249 Existing Minor Contours
- - - - 250 Proposed Major Contours
- - - - 249 Proposed Minor Contours
- Flow Arrow
- ⊕ ⊕ Extg./Proposed MH
- ⊞ ⊞ Extg./Proposed CB
- ⊞ ⊞ Inlet Protection
- ⊞ ⊞ Concrete Washout Facility
- ★ ★ Trees to Remain
- ✕ ✕ Trees to Removed

CONSTRUCTION NOTES

- ① Install Inlet Protection.
(For Details, See Sht. 2D-7)
- ② Install Sediment Fence.
(For Details, See Sht. 2D-7)
- ③ Install Inlet Protection at Next Nearest Inlet
Inlet Not Shown
(For Details, See Sht. 2D-7)



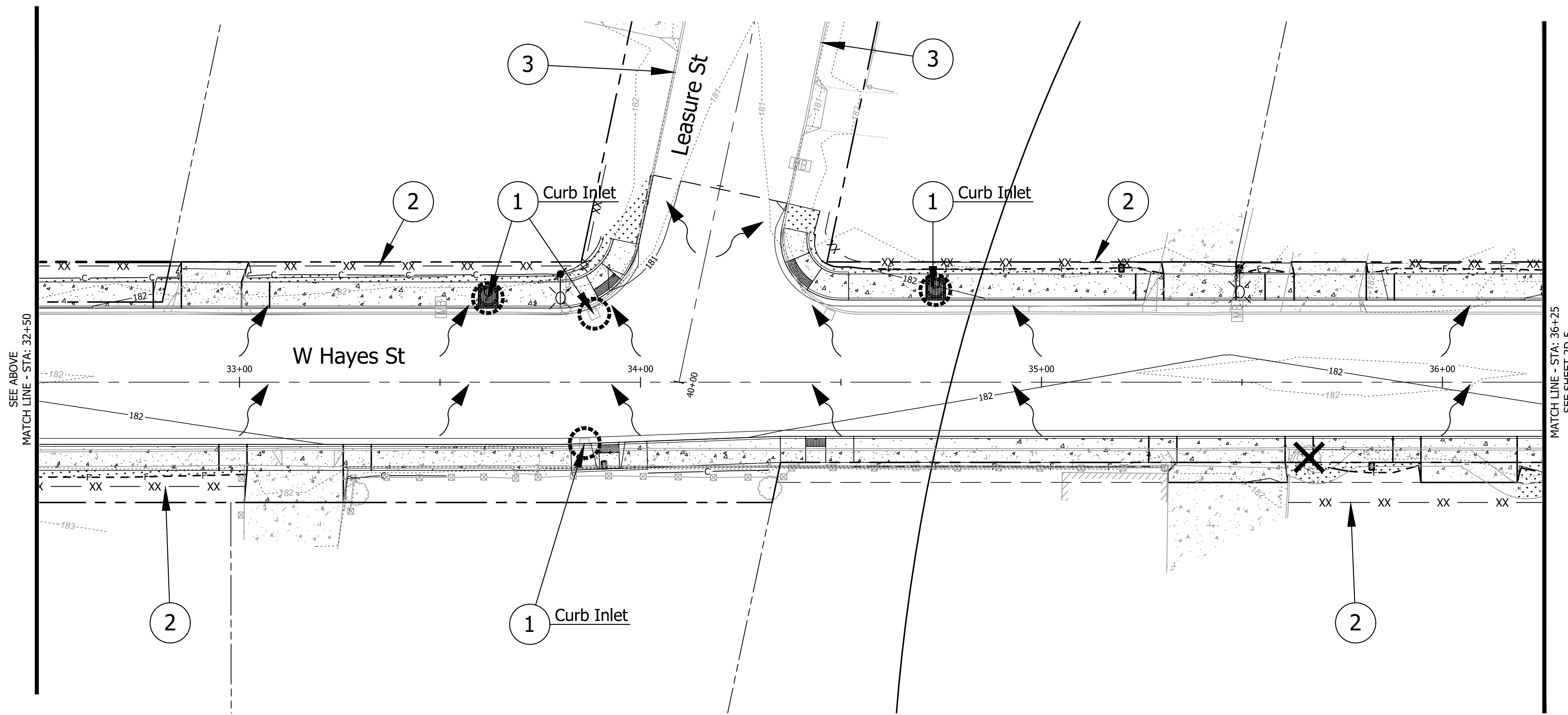
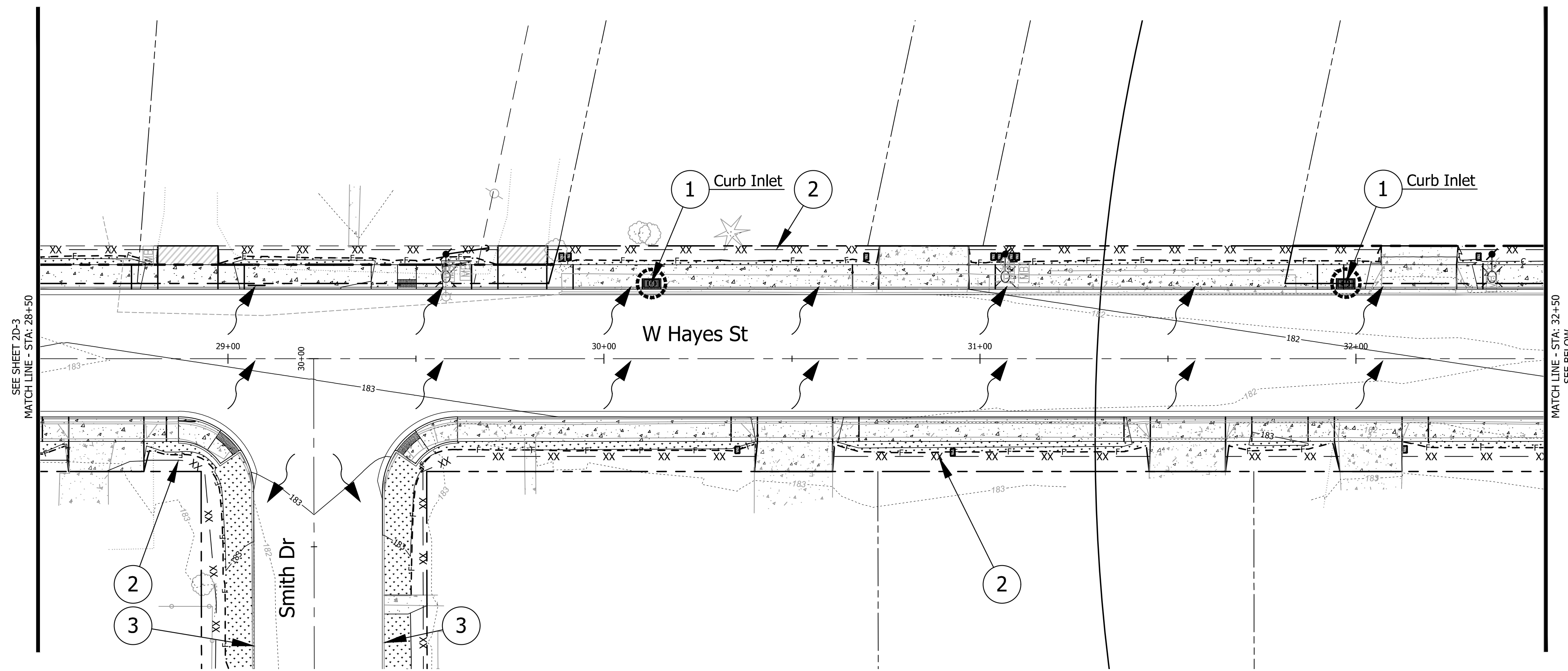
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 PORTLAND, OR 97204
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W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL PLAN
 SHEET NO. 2D-3

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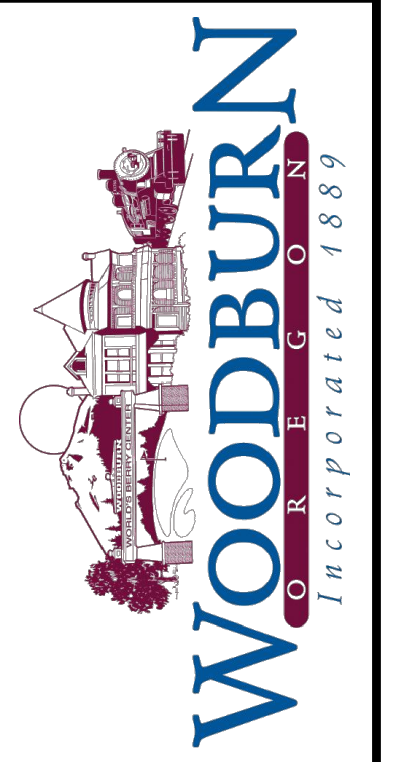
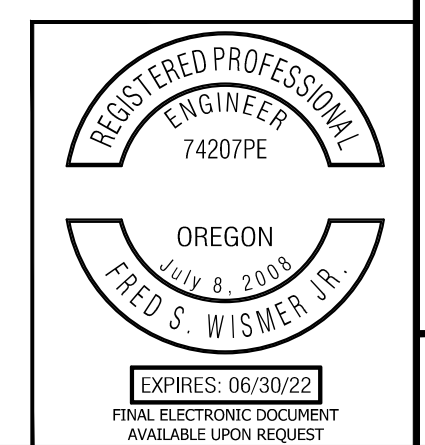
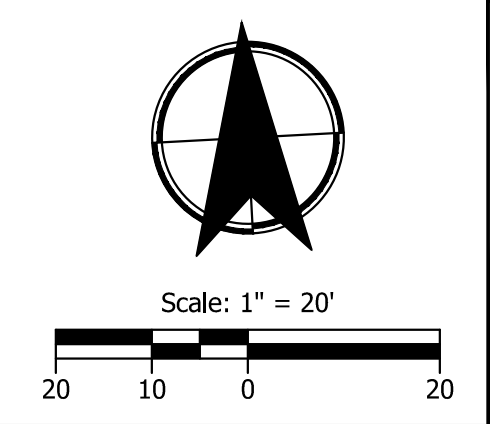


LEGEND

- XX — XX — XX — XX — Sediment Fence
- — — — Existing ROW Line
- — — — Proposed ROW Line
- - - - 250 Existing Major Contours
- - - - 249 Existing Minor Contours
- — — — 250 Proposed Major Contours
- - - - 249 Proposed Minor Contours
- Flow Arrow
- ⊕ ⊕ Extg./Proposed MH
- ⊞ ⊞ Extg./Proposed CB
- ⊘ ⊘ Inlet Protection
- ⊞ Concrete Washout Facility
- ★ ○ Trees to Remain
- ✕ ✕ Trees to Removed

CONSTRUCTION NOTES

- 1 Install Inlet Protection.
(For Details, See Sht. 2D-7)
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(For Details, See Sht. 2D-7)
- 3 Install Inlet Protection at Next Nearest Inlet
Inlet Not Shown
(For Details, See Sht. 2D-7)



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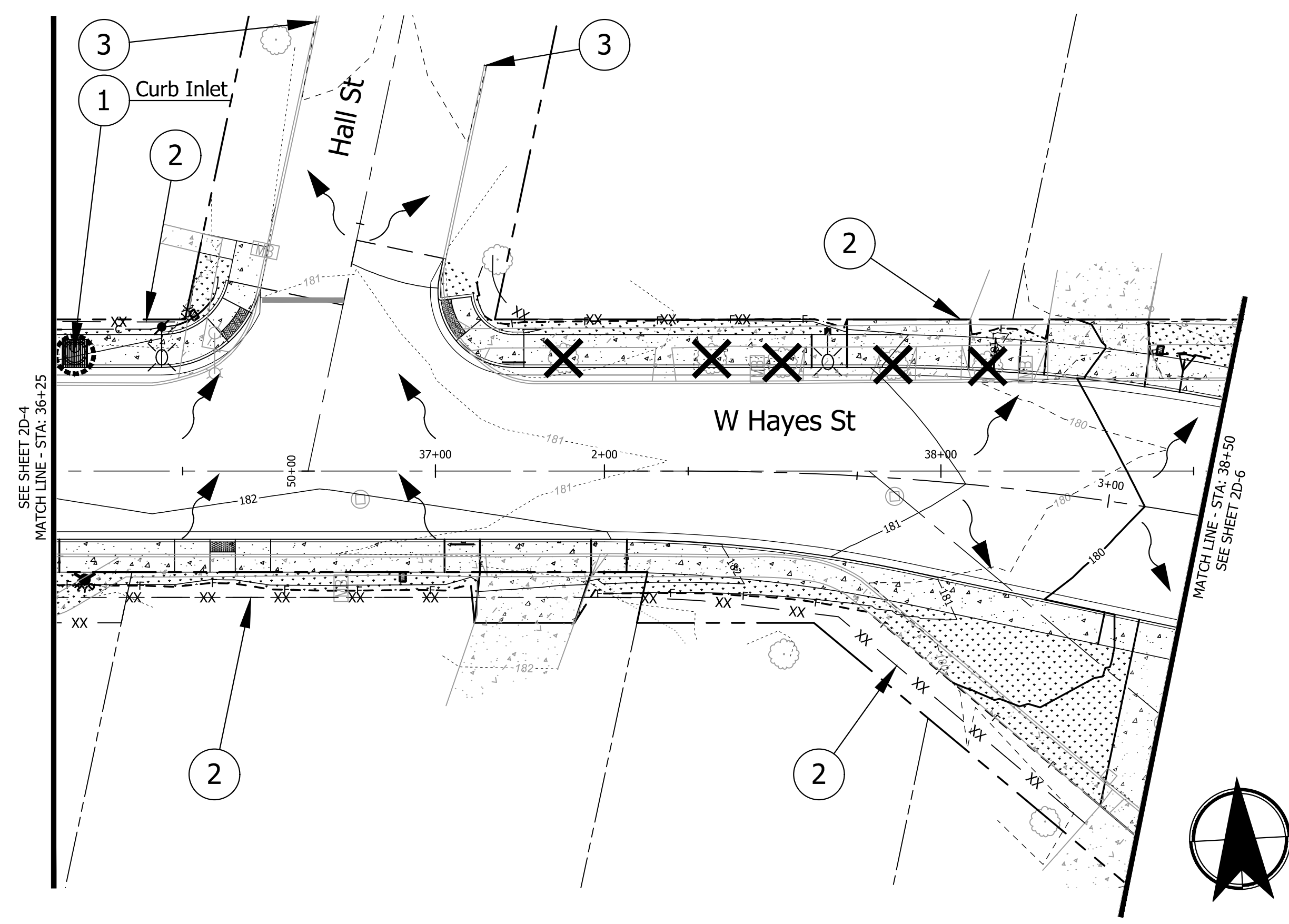
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W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL PLAN

SHEET NO. 2D-4

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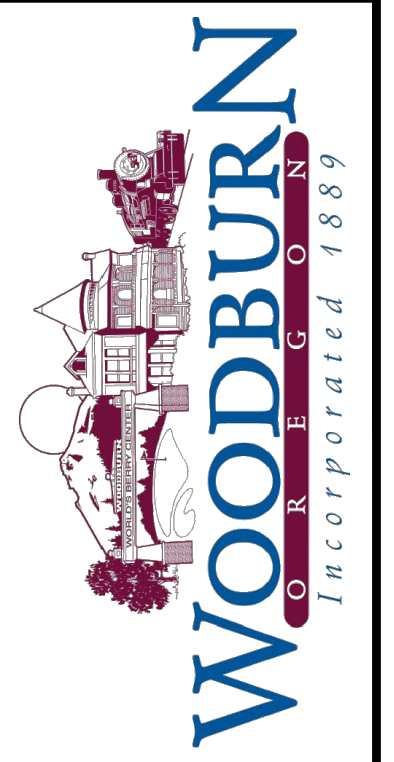
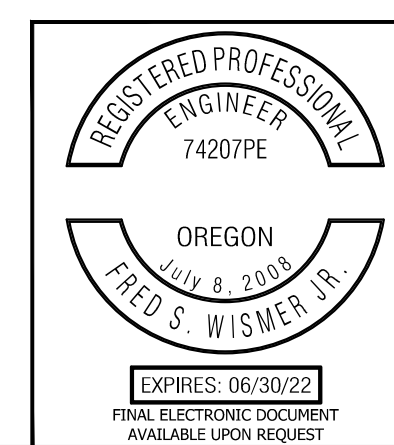
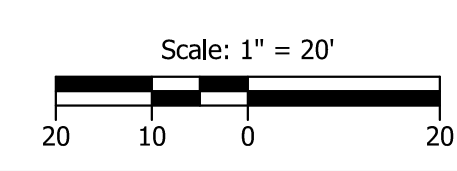


LEGEND

- XX — XX — XX — XX — Sediment Fence
- - - - - Existing ROW Line
- — — — — Proposed ROW Line
- - - - - 250 Existing Major Contours
- - - - - 249 Existing Minor Contours
- — — — — 250 Proposed Major Contours
- - - - - 249 Proposed Minor Contours
- Flow Arrow
- ⊕ ⊕ Extg./Proposed MH
- ⊞ ⊞ Extg./Proposed CB
- ⊞ ⊞ Inlet Protection
- ⊞ ⊞ Concrete Washout Facility
- ★ ★ Trees to Remain
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CONSTRUCTION NOTES

- 1 Install Inlet Protection.
(For Details, See Sht. 2D-7)
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(For Details, See Sht. 2D-7)
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Inlet Not Shown
(For Details, See Sht. 2D-7)



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REVISION	DATE	APP'D

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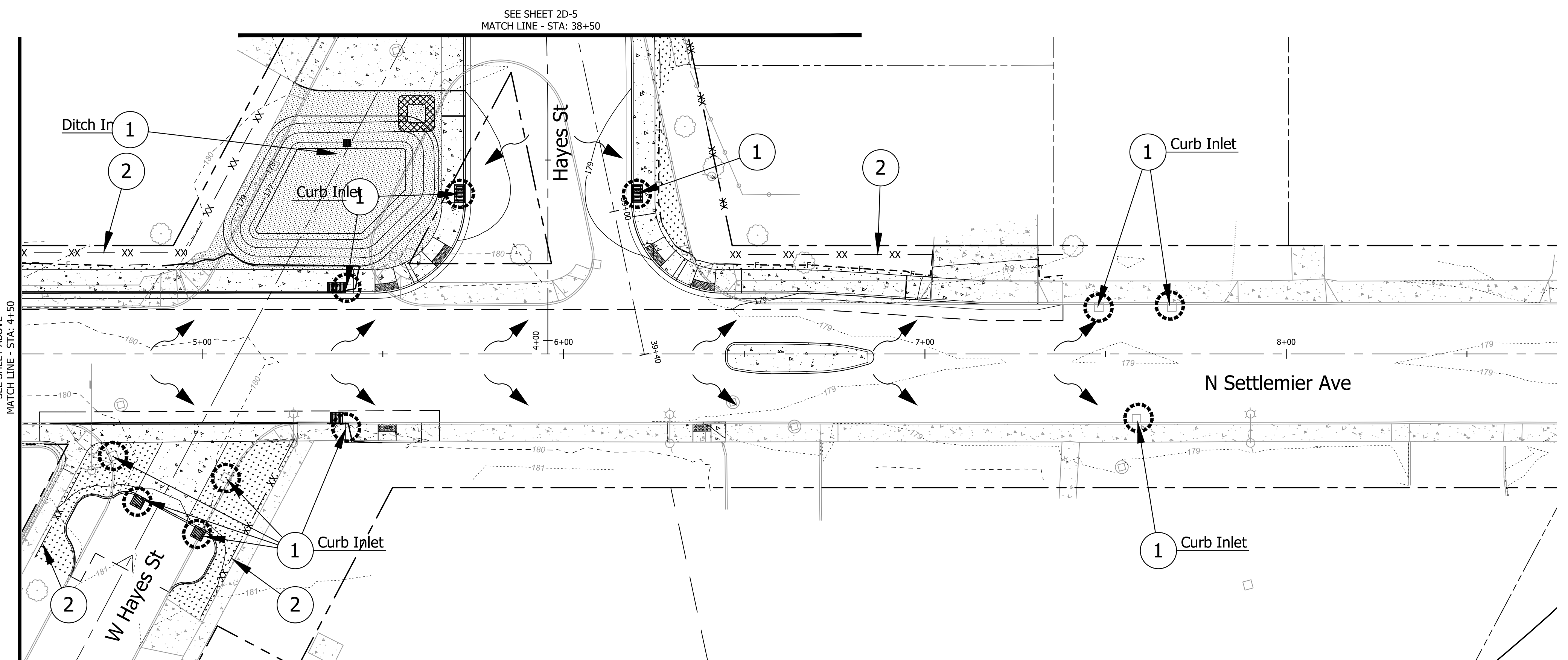
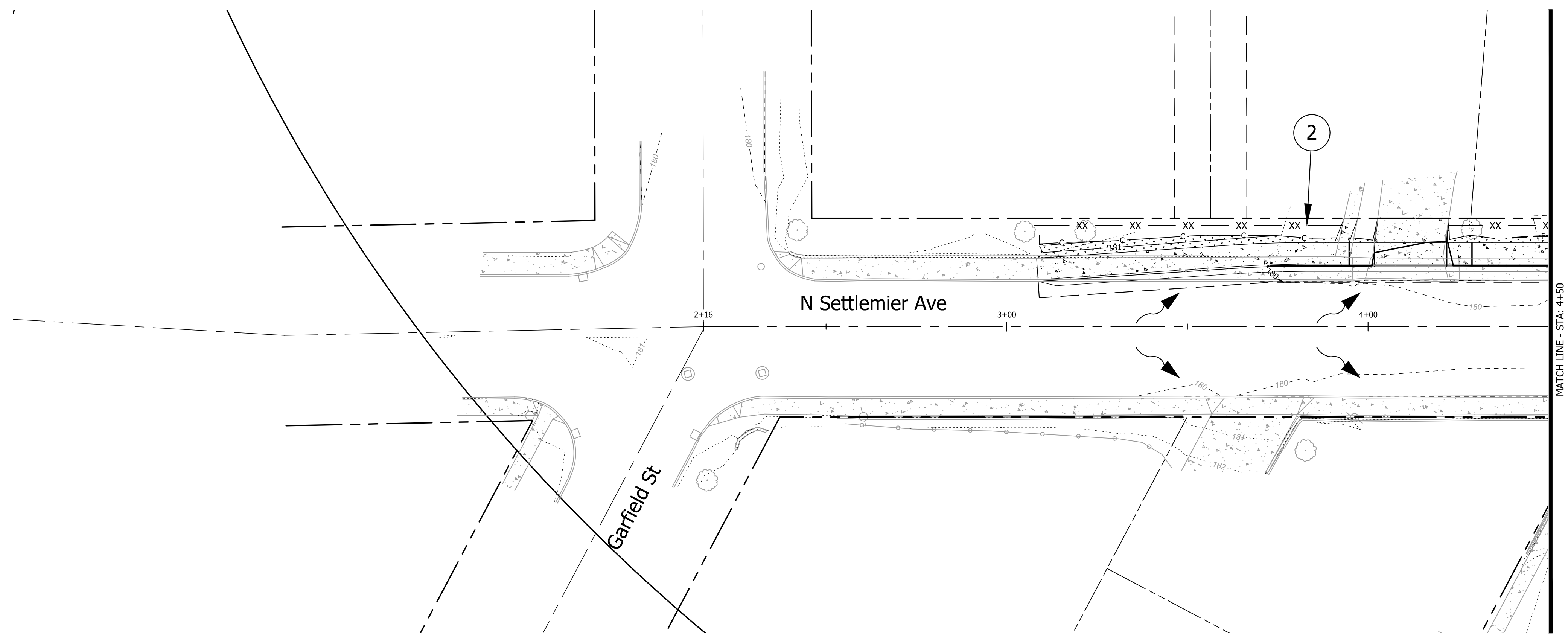
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PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL PLAN

SHEET NO.
2D-5

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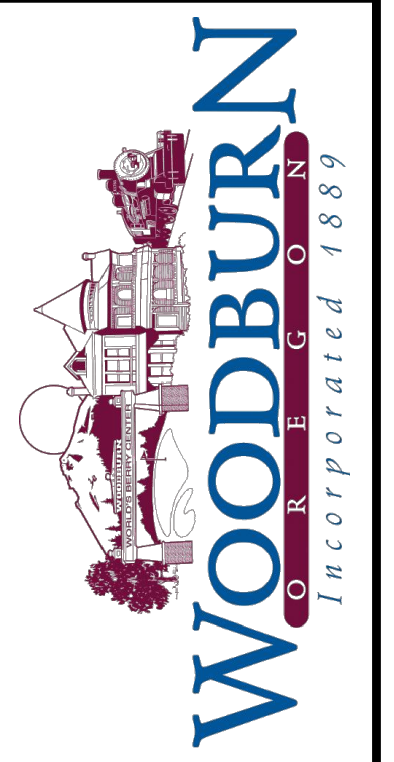
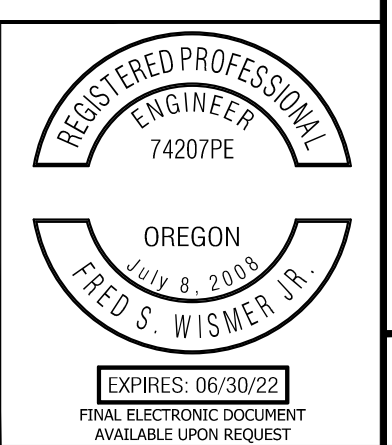
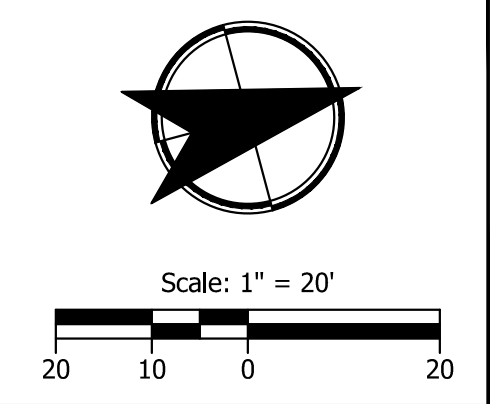


LEGEND

- XX — XX — XX — XX — Sediment Fence
- — — — Existing ROW Line
- — — — Proposed ROW Line
- - - - 250 Existing Major Contours
- · · · 249 Existing Minor Contours
- — — — 250 Proposed Major Contours
- · · · 249 Proposed Minor Contours
- Flow Arrow
- ⊕ ⊕ Extg./Proposed MH
- ⊞ ⊞ Extg./Proposed CB
- ⊞ ⊞ Inlet Protection
- ⊞ ⊞ Concrete Washout Facility
- ★ ★ Trees to Remain
- ✕ ✕ Trees to Removed

CONSTRUCTION NOTES

- 1 Install Inlet Protection.
(For Details, See Sht. 2D-7)
- 2 Install Sediment Fence.
(For Details, See Sht. 2D-7)
- 3 Install Inlet Protection at Next Nearest Inlet
Inlet Not Shown
(For Details, See Sht. 2D-7)



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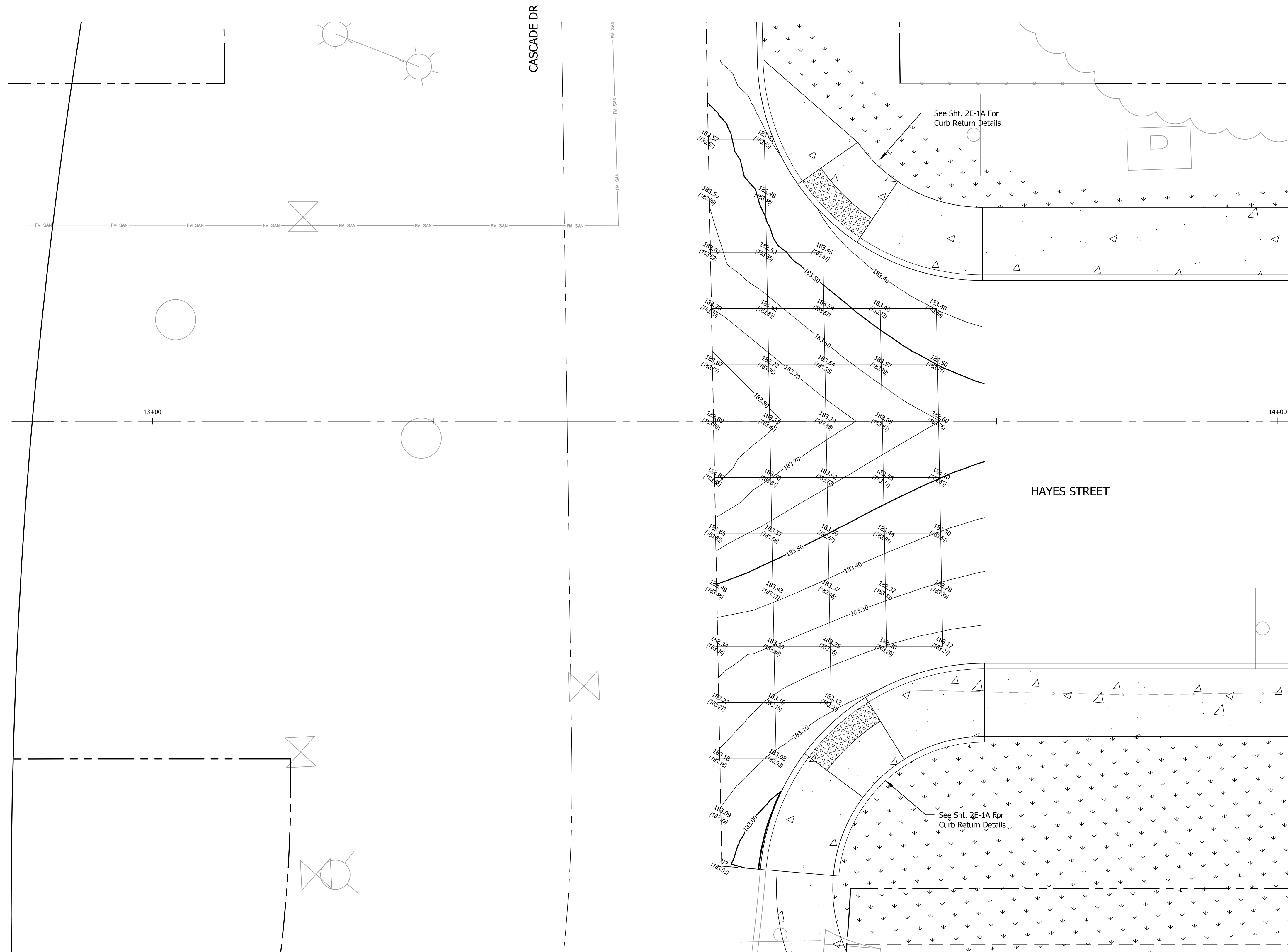
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW
 PROJECT NO. 2015-001-20

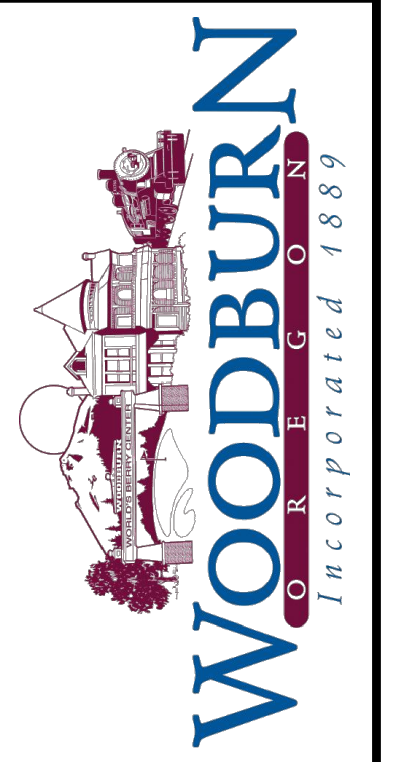
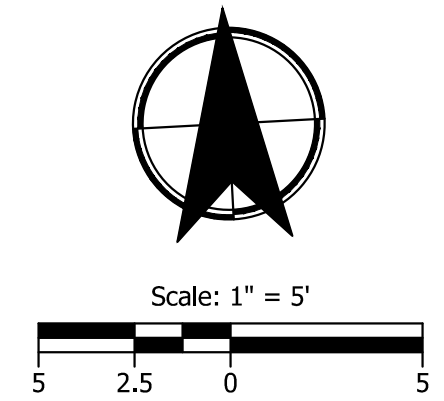
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 GRADING AND EROSION CONTROL PLAN

SHEET NO. 2D-6

Plot Stamp: 3/4/2022 9:17:31 AM - Fred Wismer
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- GENERAL NOTES**
- Elevations Are Top Of Pavement Finished Grade Unless Otherwise Noted
 - Contours Are Top Of Pavement Finished Grade
 - Grids Are 5' Spacing
 - Extg. Grade Elevations = (XXX.XX)
 Prop. Grade Elevations = XXX.XX



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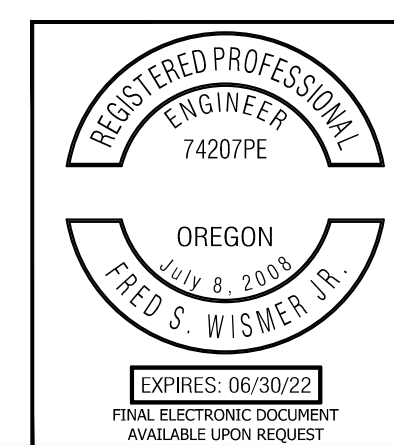
REVISION	DATE	#	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERSECTION GRADING PLAN
 CASCADE DRIVE

SHEET NO. 2E



#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

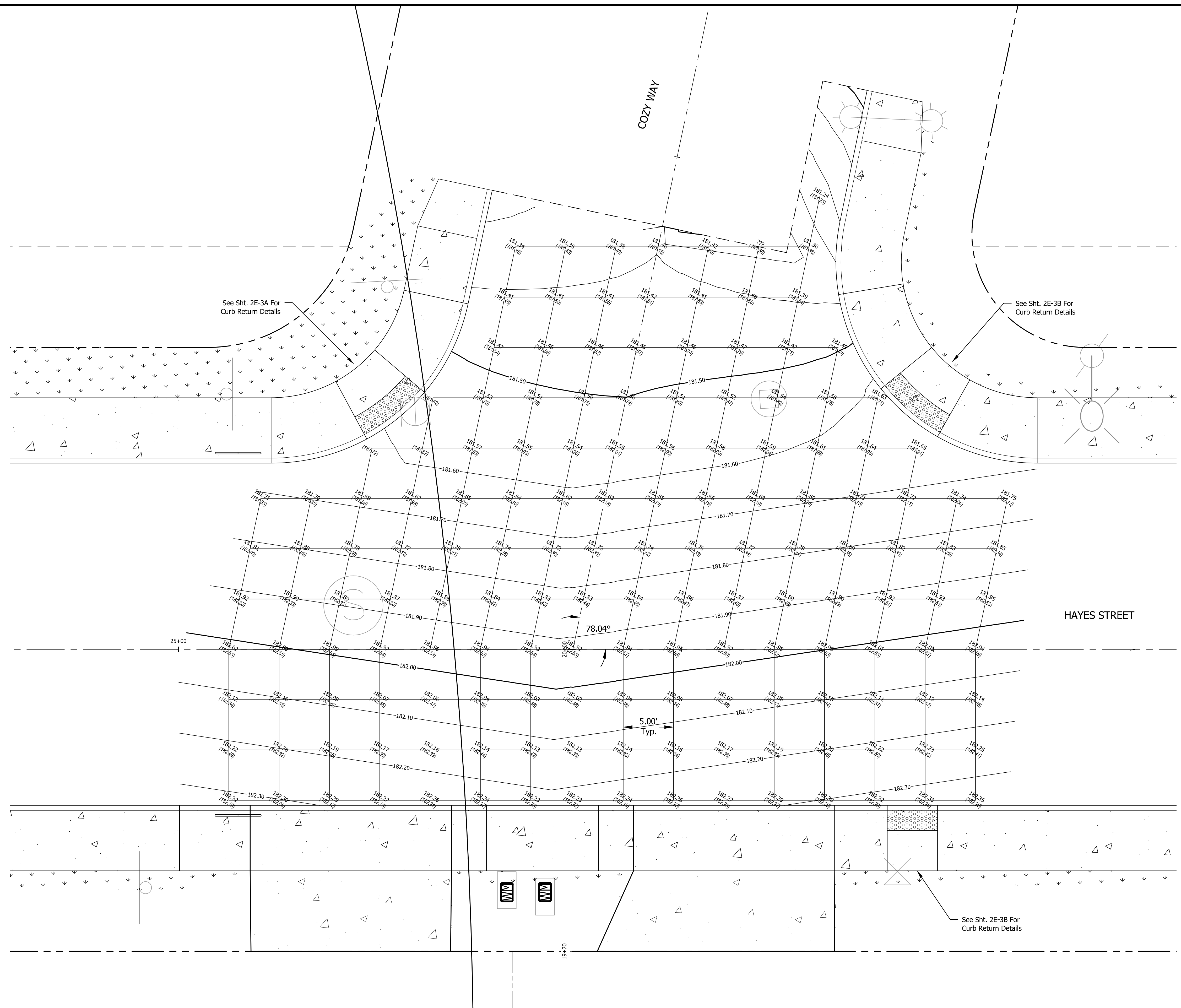
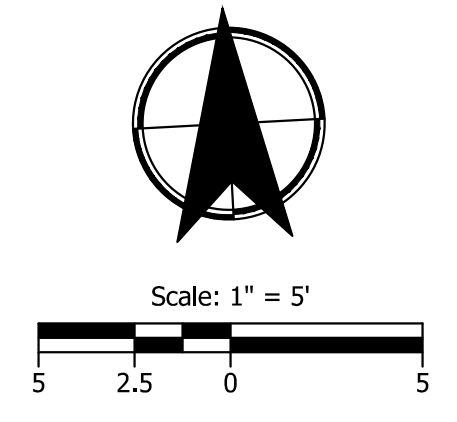
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERSECTION GRADING PLAN
 COZY WAY

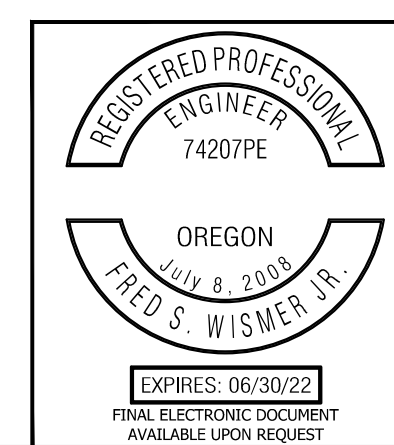
SHEET NO. 2E-3

GENERAL NOTES

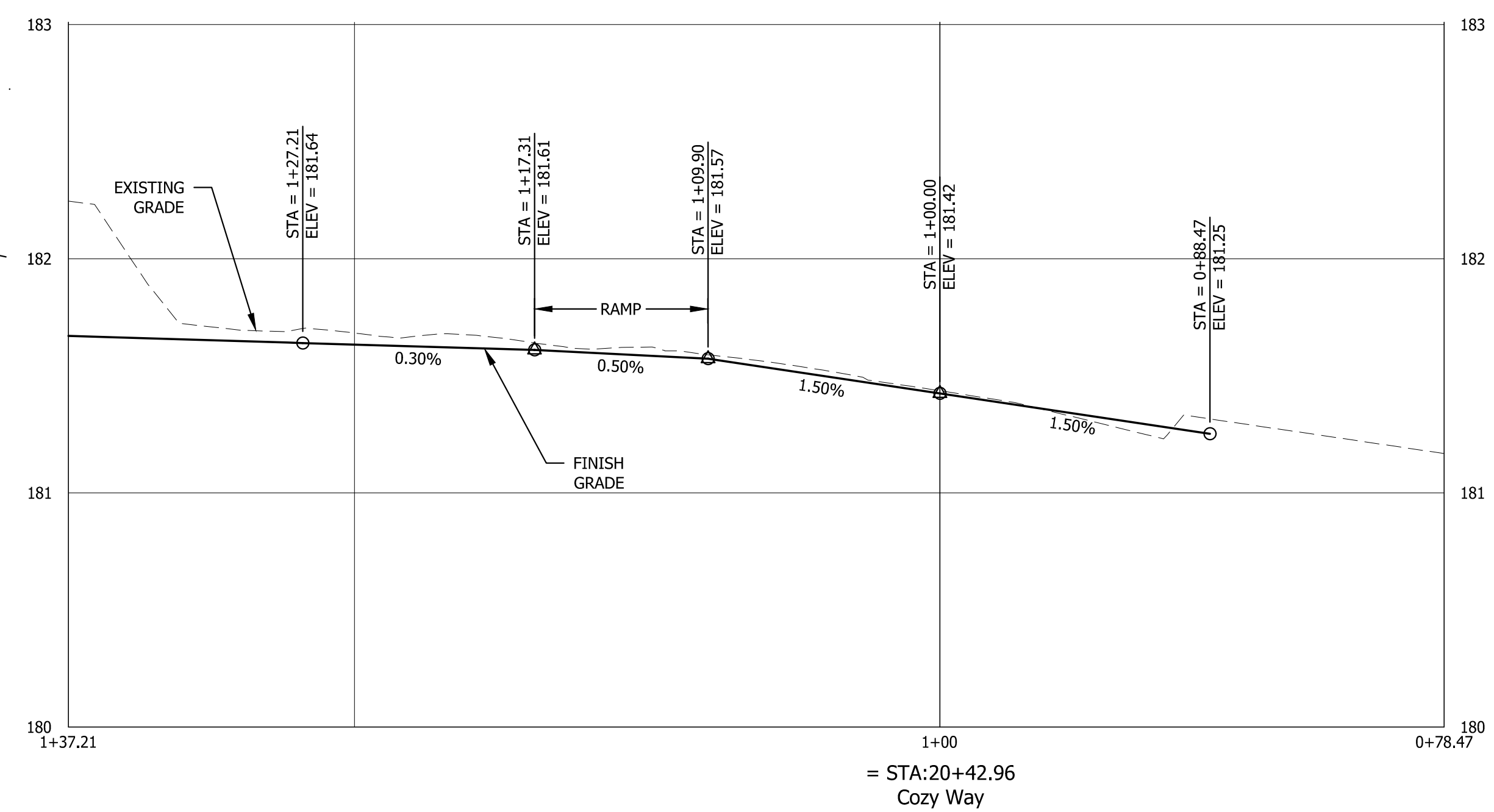
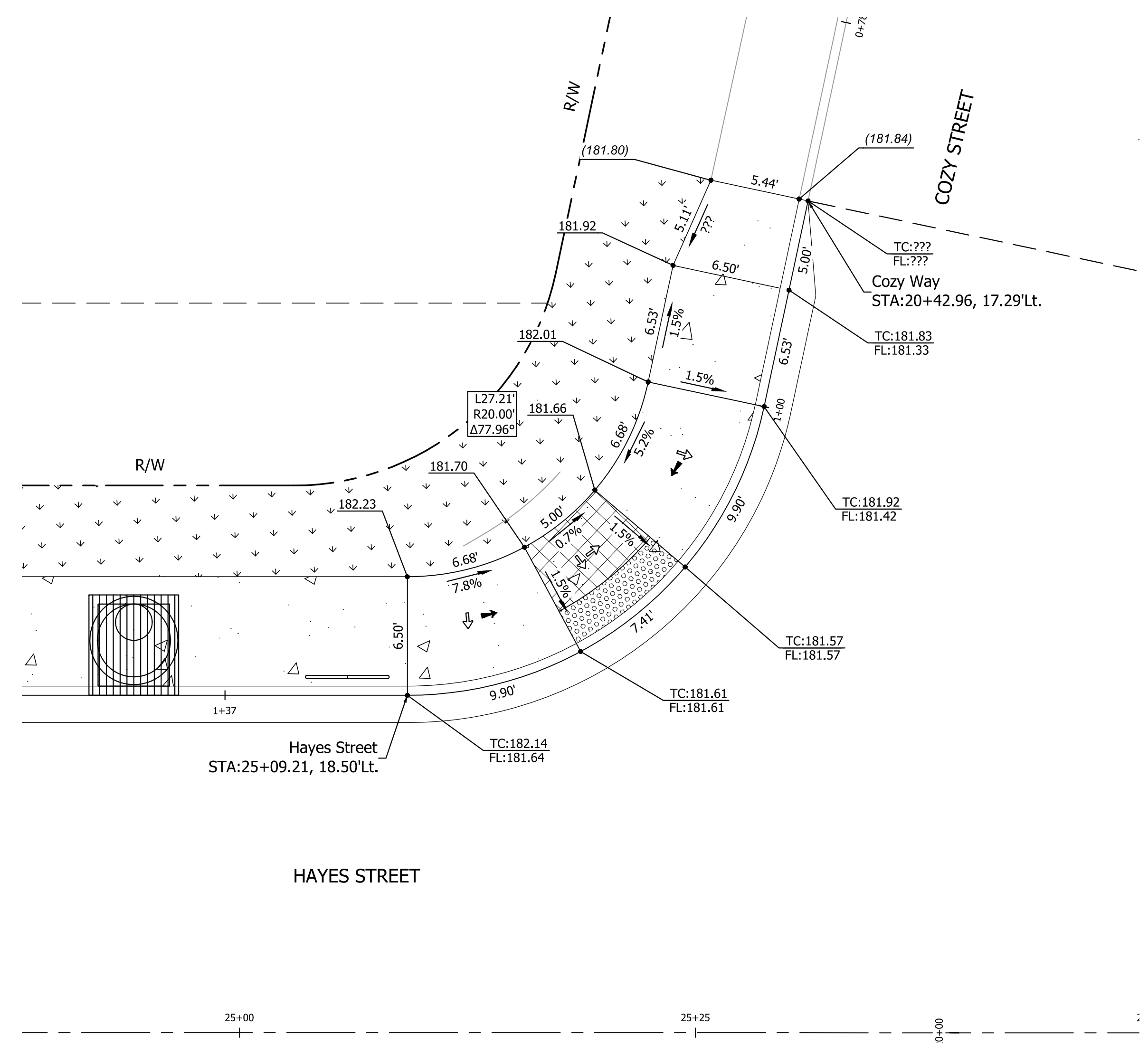
- Elevations Are Top Of Pavement Finished Grade Unless Otherwise Noted
- Contours Are Top Of Pavement Finished Grade
- Grids Are 5' Spacing
- Extg. Grade Elevations = (XXX.XX)
 Prop. Grade Elevations = XXX.XX



Plot Stamp: 3/4/2022 9:20:09 AM - Fred Wismer
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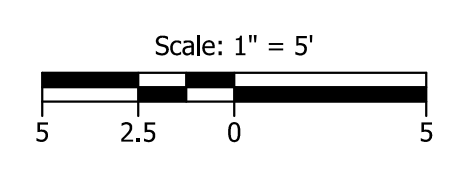
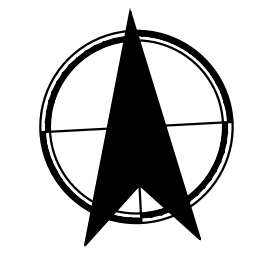
NW Curb Return

SIDEWALK RAMP GENERAL NOTES

- Contractor shall be responsible for meeting all Americans with Disabilities (ADA) requirements as defined by the public rights-of-way accessibility guidelines (PROWAG). Details and dimensions shown are approximate only and intended as a guide for initial layout purposes only and are not complete. Contractor shall take all necessary field measurements and otherwise verify all dimensions to meet ADA requirements. Should any error or inconsistency exist the contractor shall not proceed with the work affected until reported to the engineer for clarification or correction.
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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

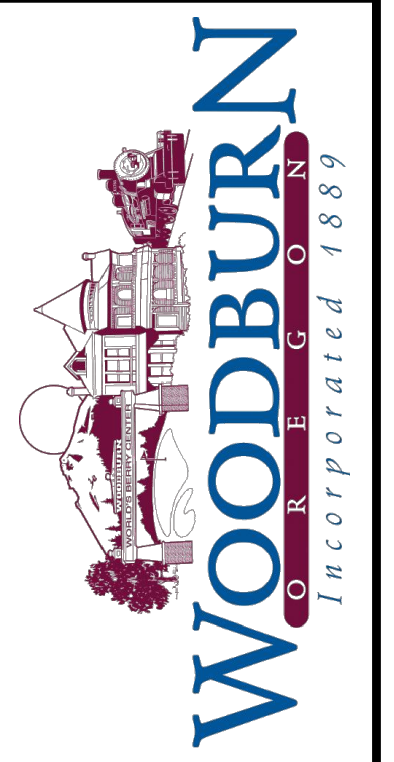
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5%. (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5%. (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



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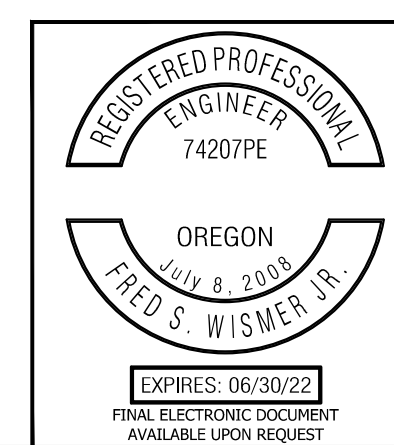
REVISION	DATE	APP'D

Submission Date: 03/07/2022

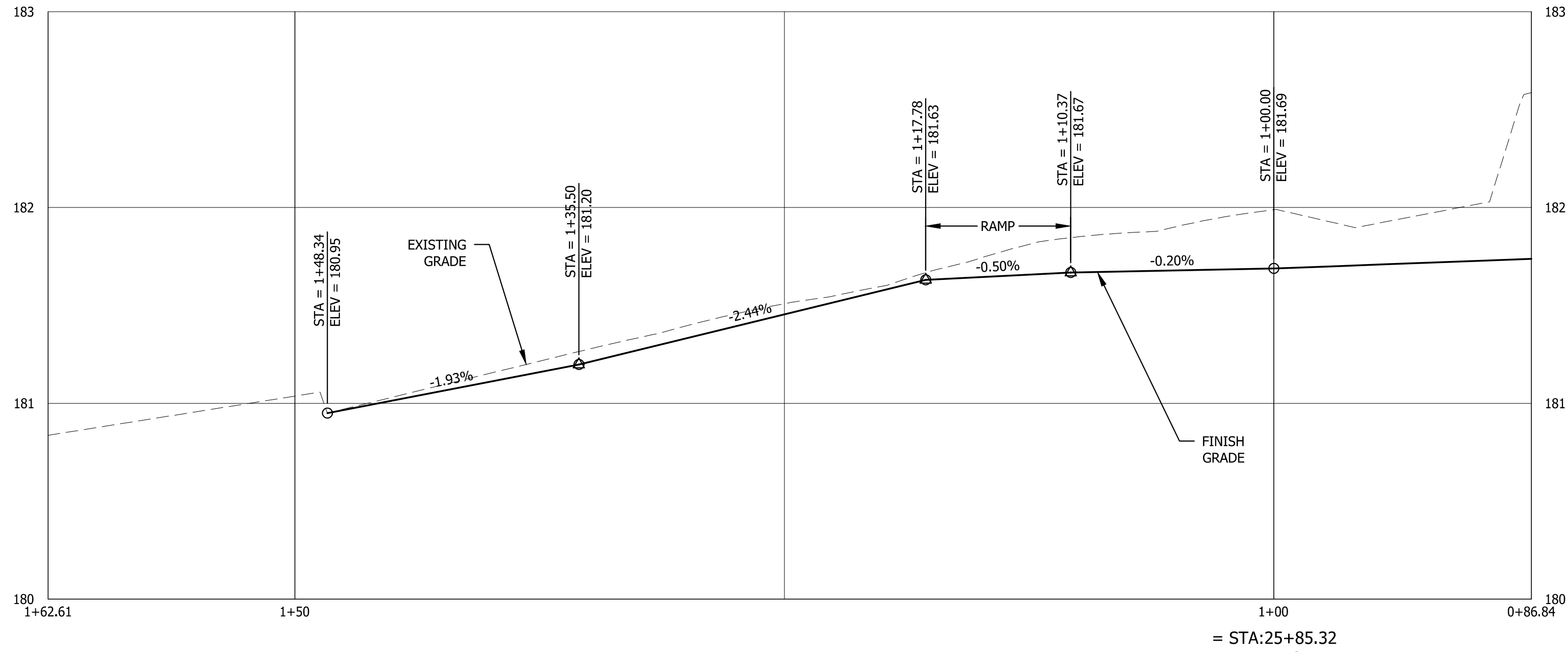
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

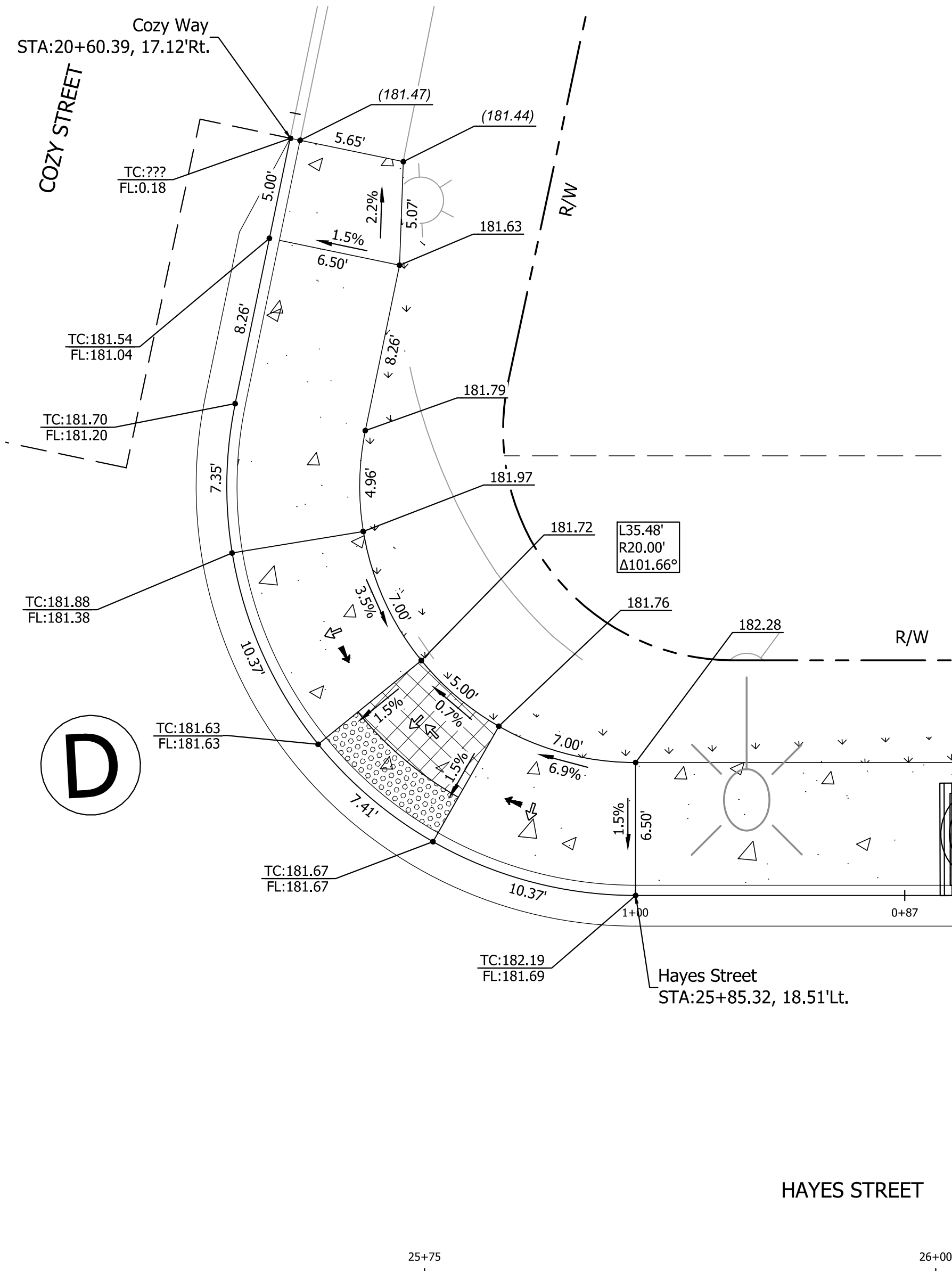
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 COZY WAY CURB RAMPS



SHEET NO. 2E-3A



NE Curb Return

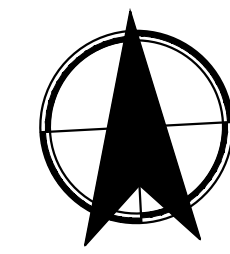


SIDEWALK RAMP GENERAL NOTES

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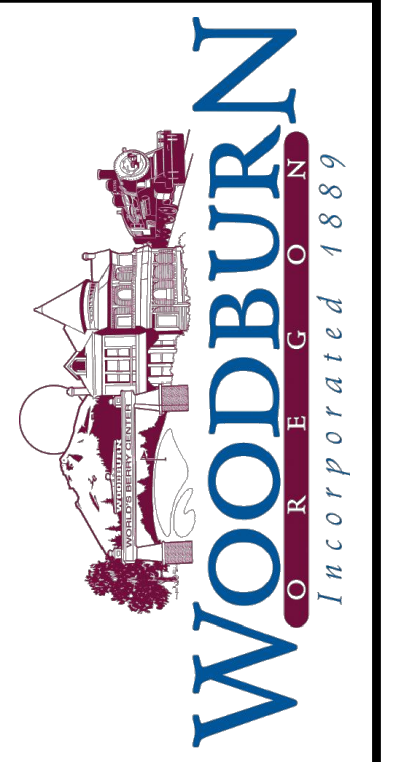
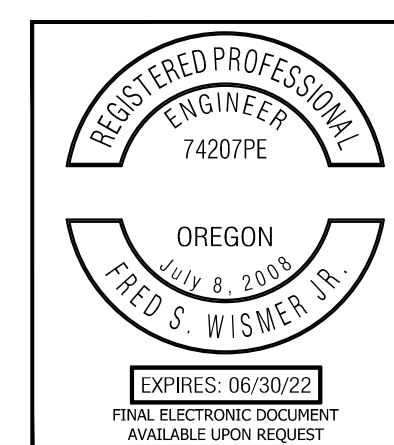
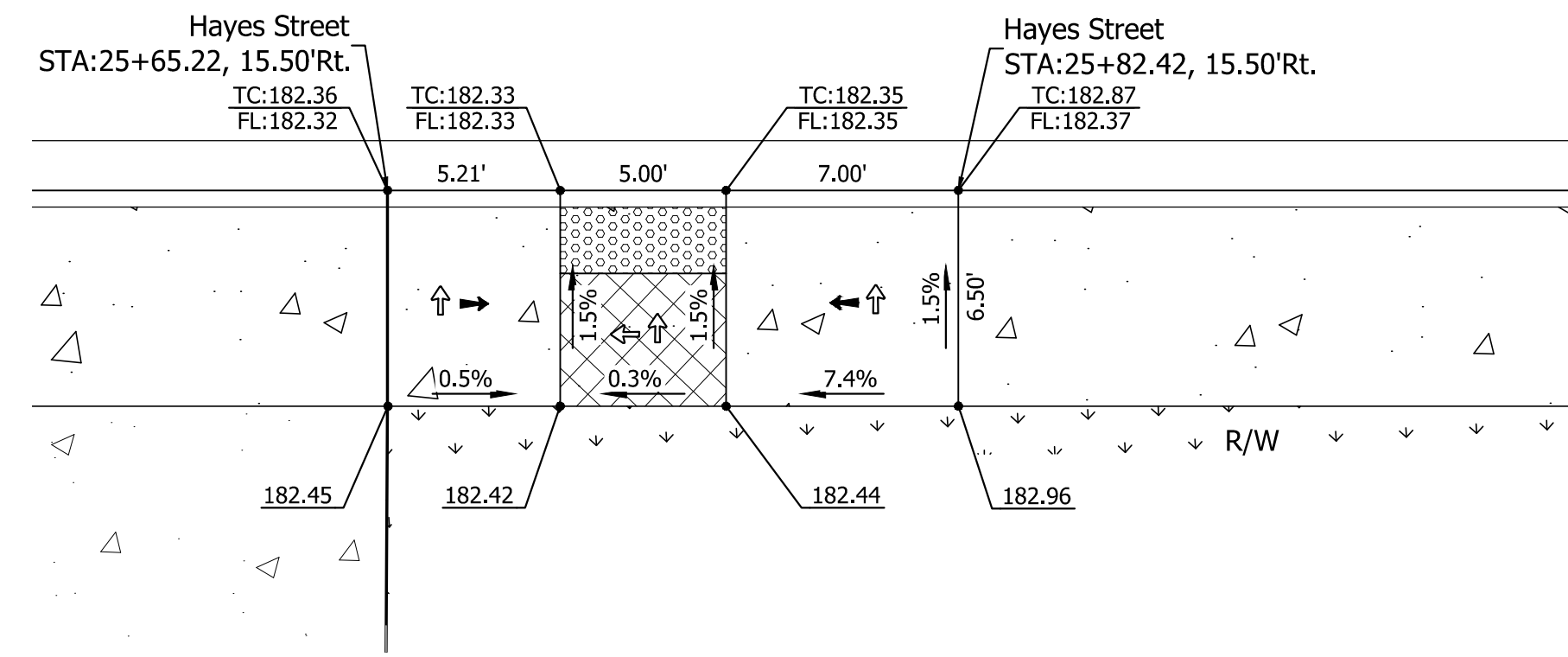
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



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REVISION	DATE	#	APP'D

Submission Date:
03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

DETAILED GRADING PLAN
 COZY WAY CURB RAMPS

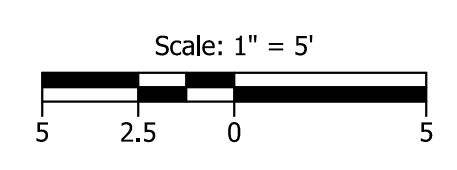
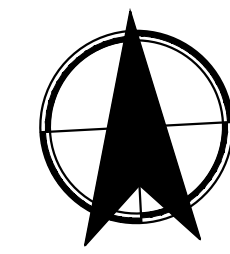
SHEET NO.
2E-3B

SIDEWALK RAMP GENERAL NOTES

- Contractor shall be responsible for meeting all Americans with disabilities (ADA) requirements as defined by the public rights-of-way accessibility guidelines (PROWAG). Details and dimensions shown are approximate only and intended as a guide for initial layout purposes only and are not complete. Contractor shall take all necessary field measurements and otherwise verify all dimensions to meet ada requirements. Should any error or inconsistency exist the contractor shall not proceed with the work affected until reported to the engineer for clarification or correction.
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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5%, (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5%, (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
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#	DATE	REVISION	APP'D

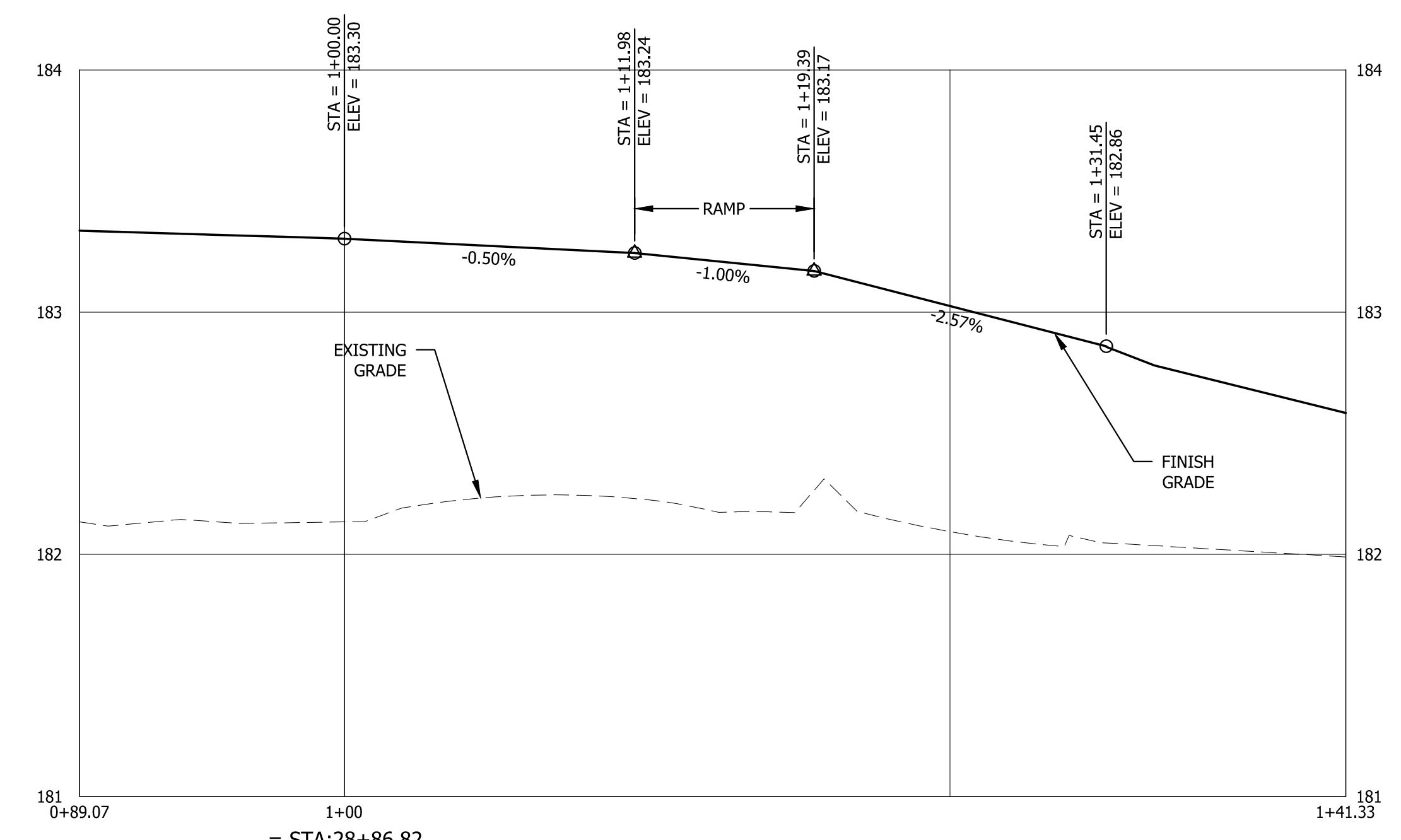
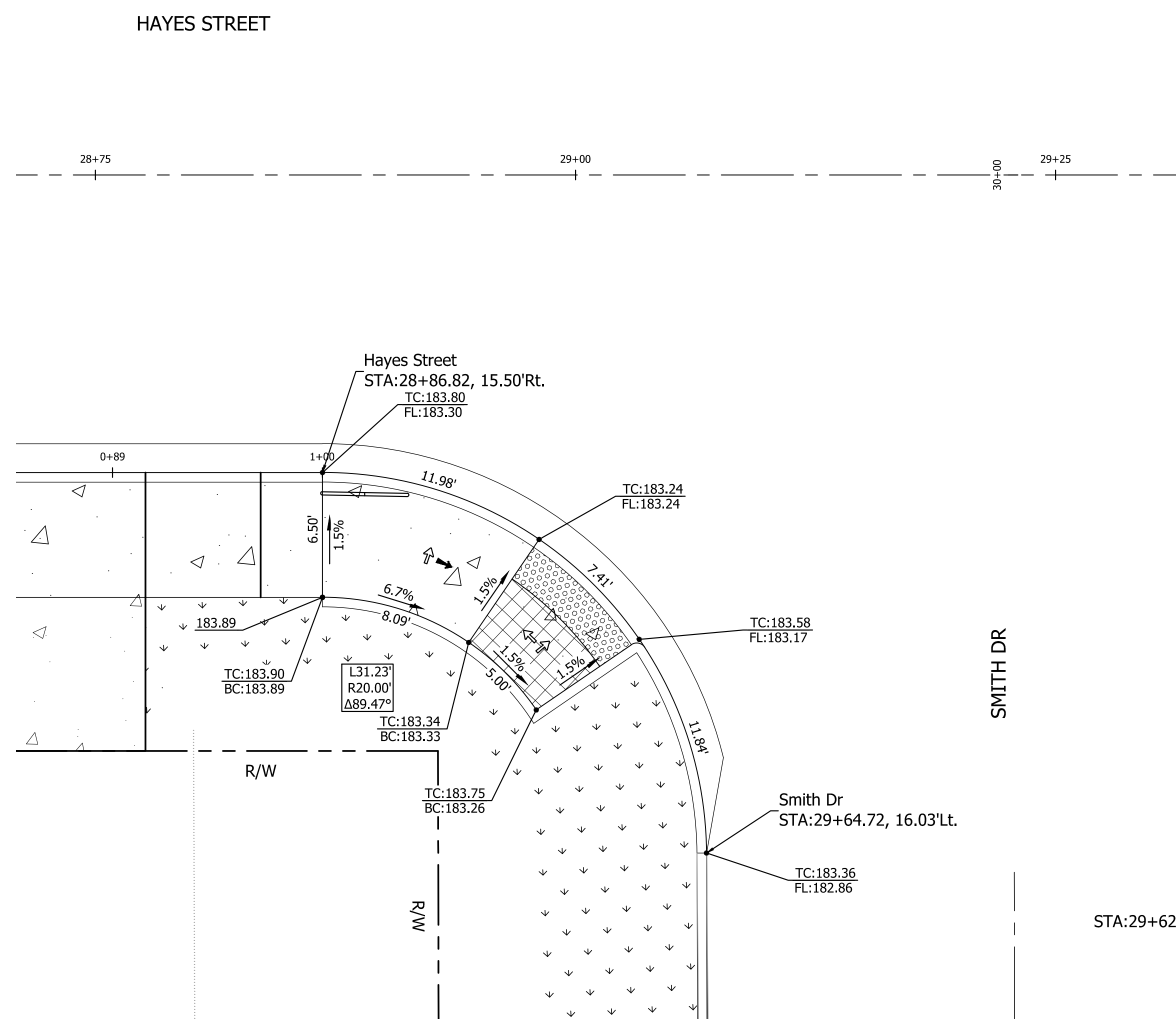
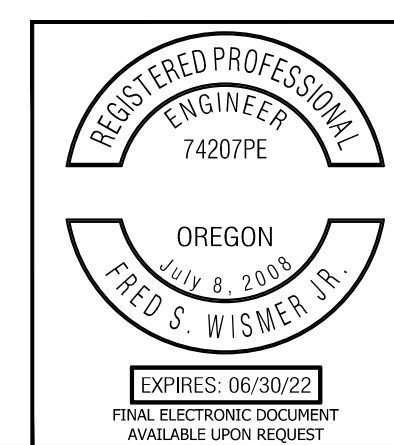
Submission Date:	03/07/2022
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Designed:	NRS/JBK
Checked:	FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

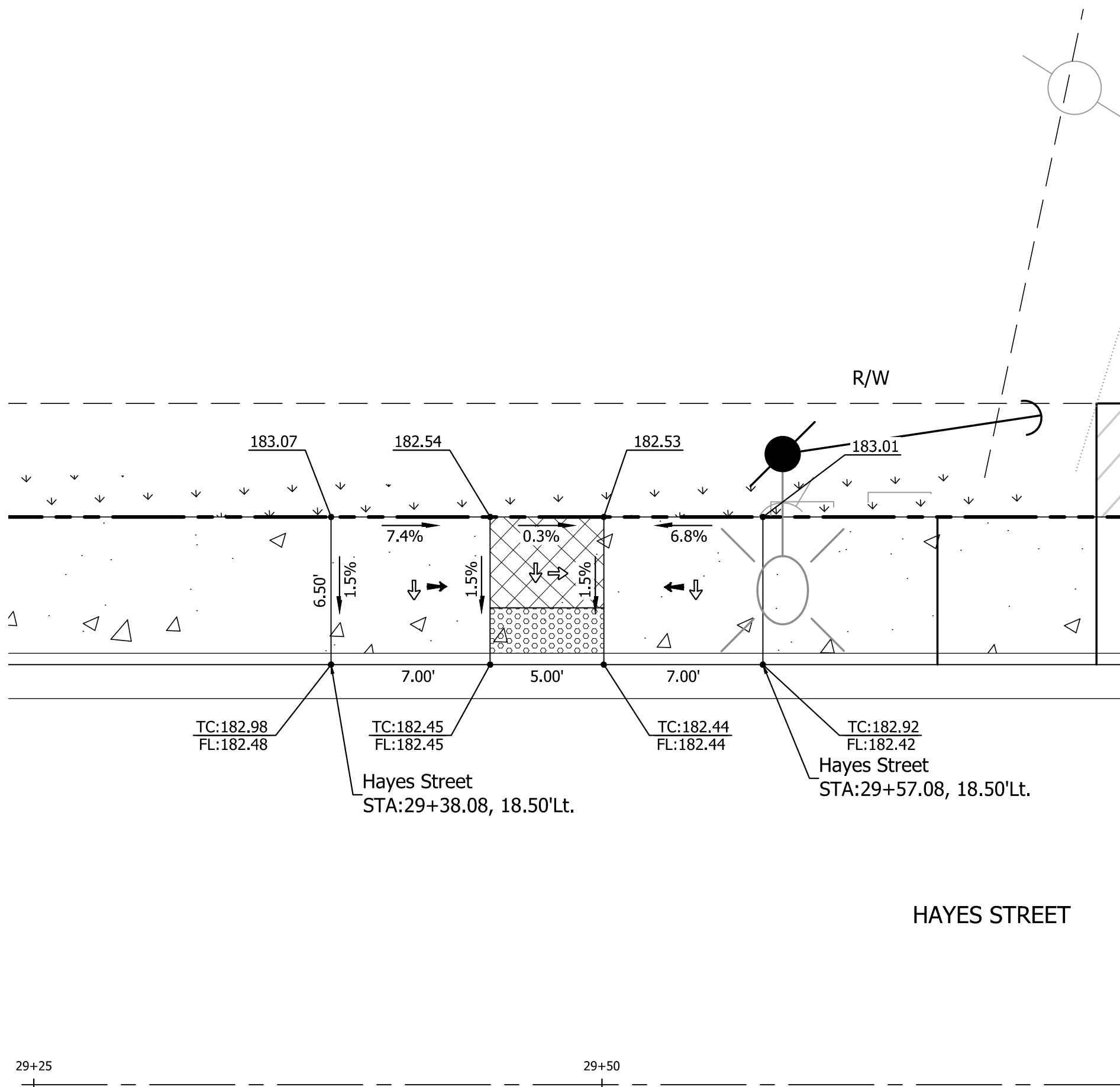
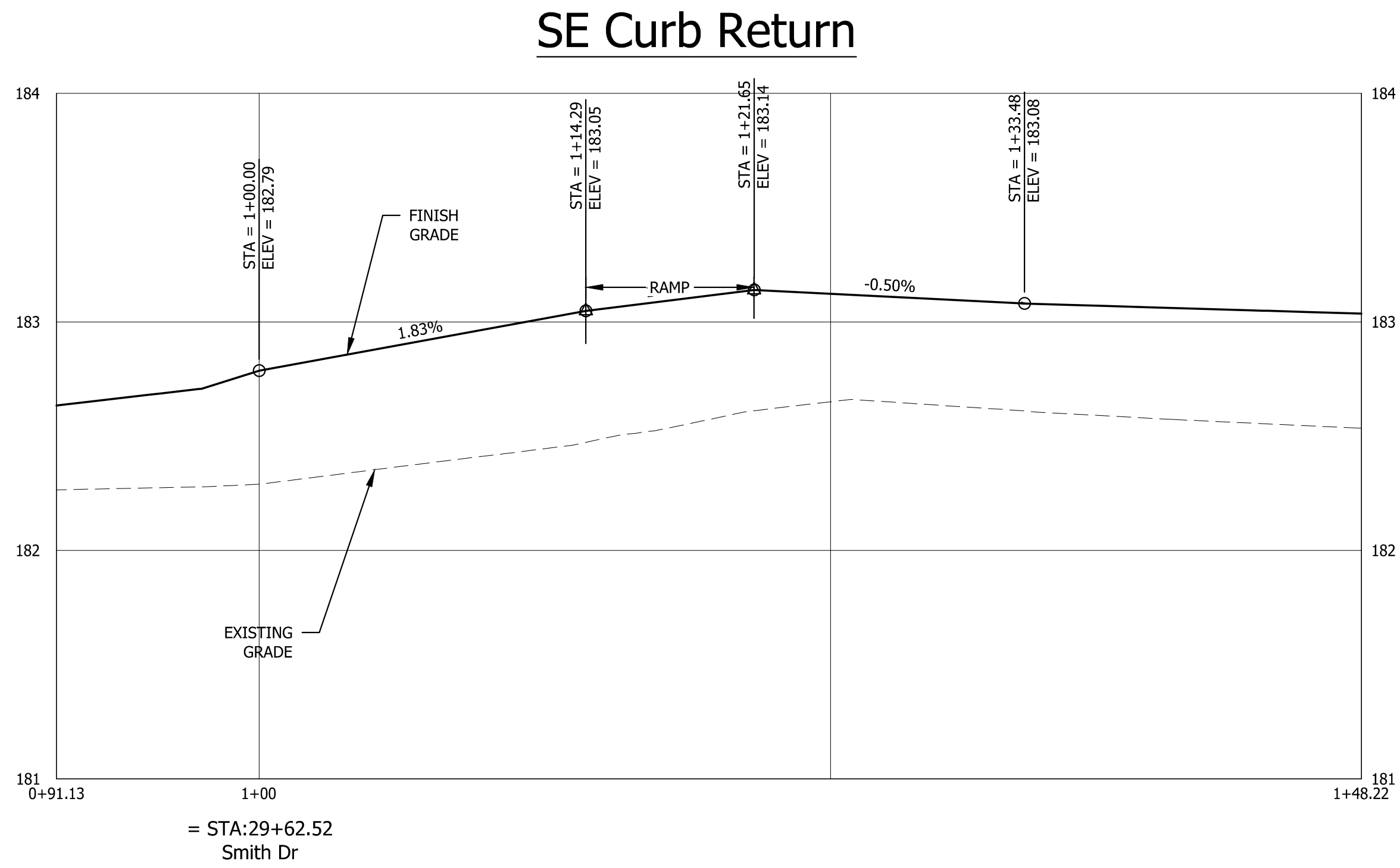
DETAILED GRADING PLAN
 SMITH DRIVE CURB RAMPS

SHEET NO.
2E-4A



SW Curb Return

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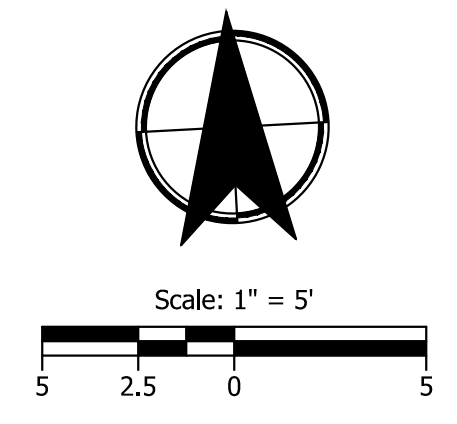


SIDEWALK RAMP GENERAL NOTES

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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

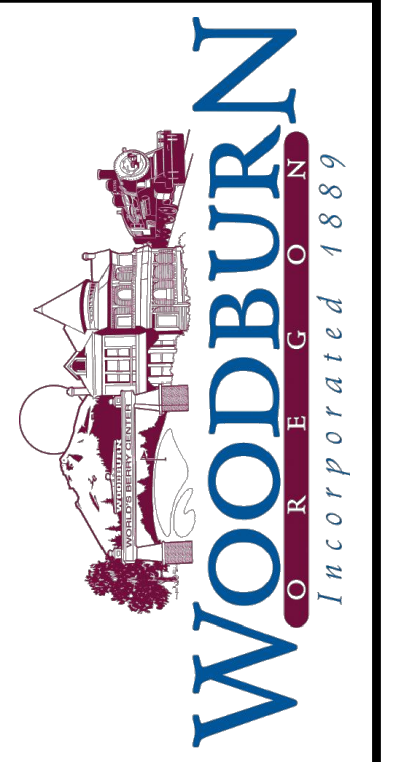
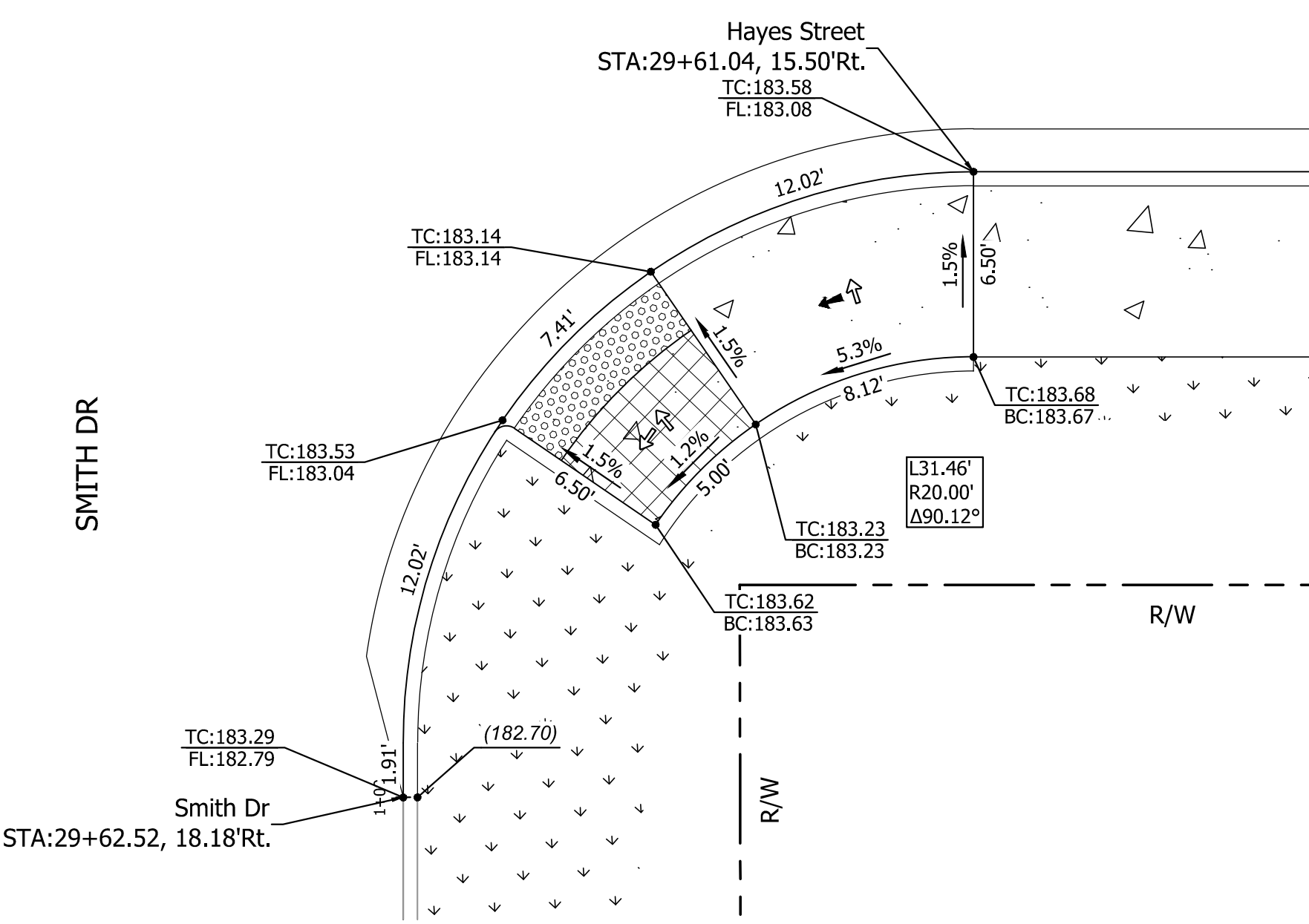
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5%. (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5%. (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



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#	DATE	REVISION	APP'D

Submission Date:
03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 SMITH DRIVE CURB RAMPS



SHEET NO.
2E-4B

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022

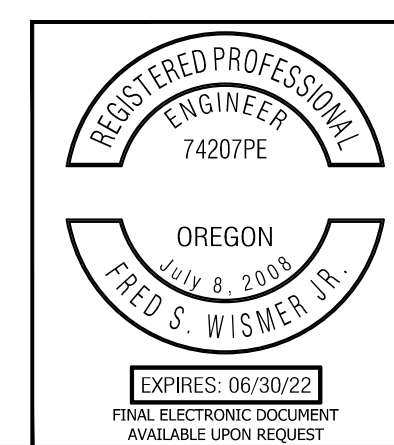
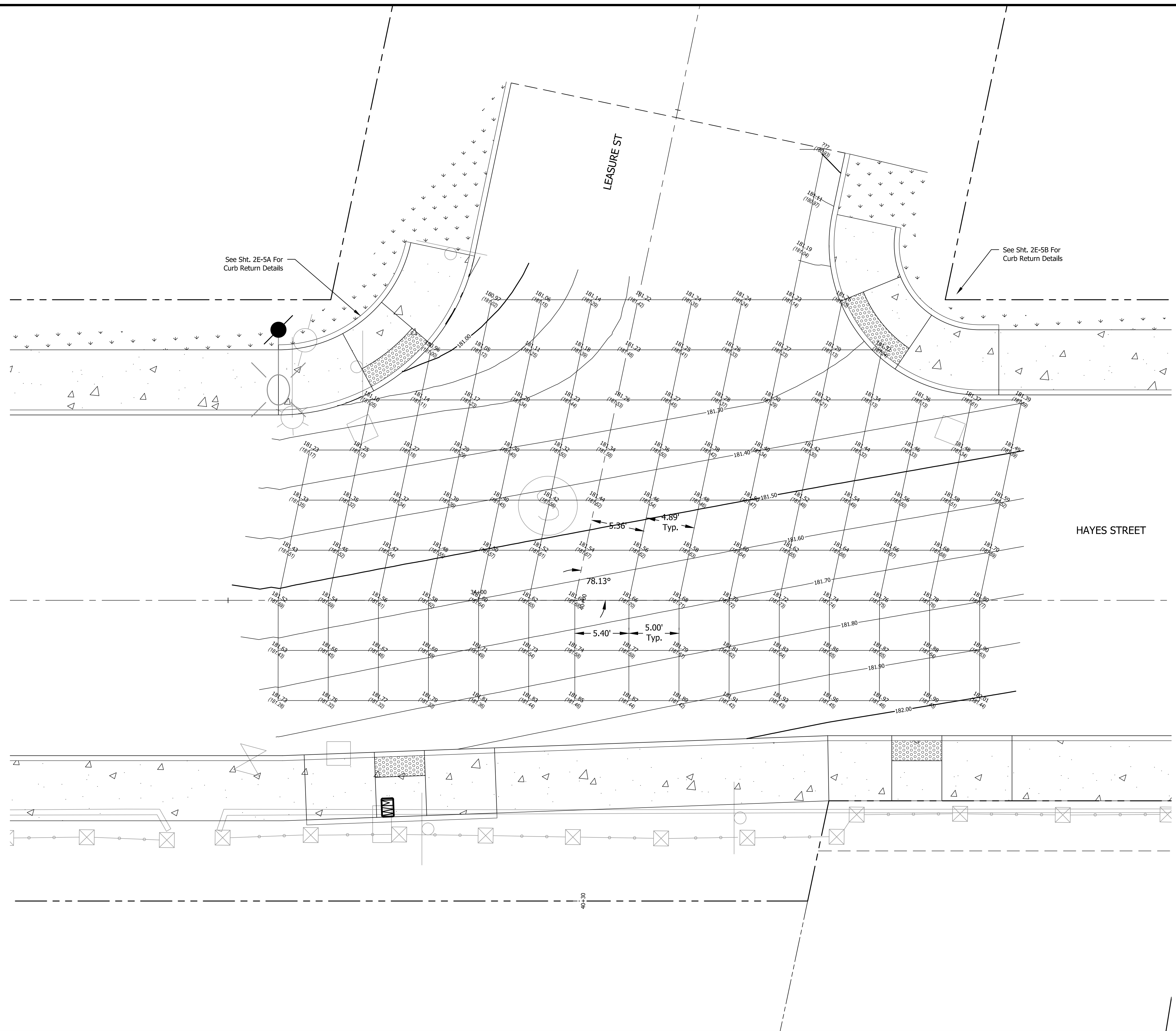
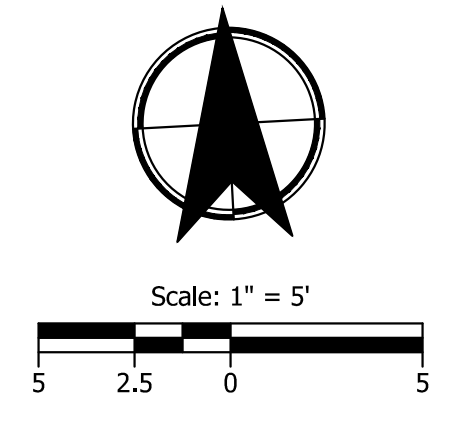
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PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERSECTION GRADING PLAN
 LEASURE STREET

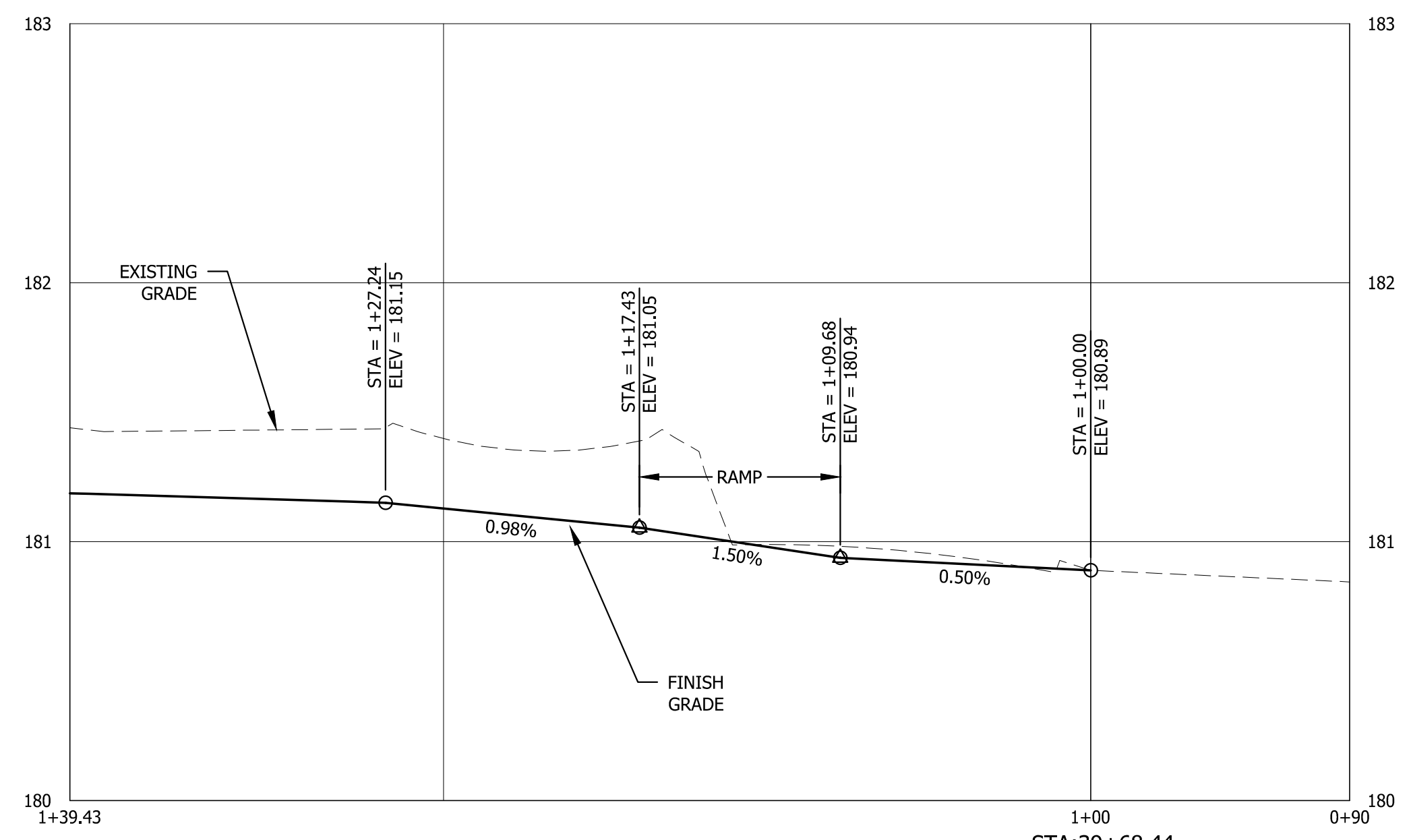
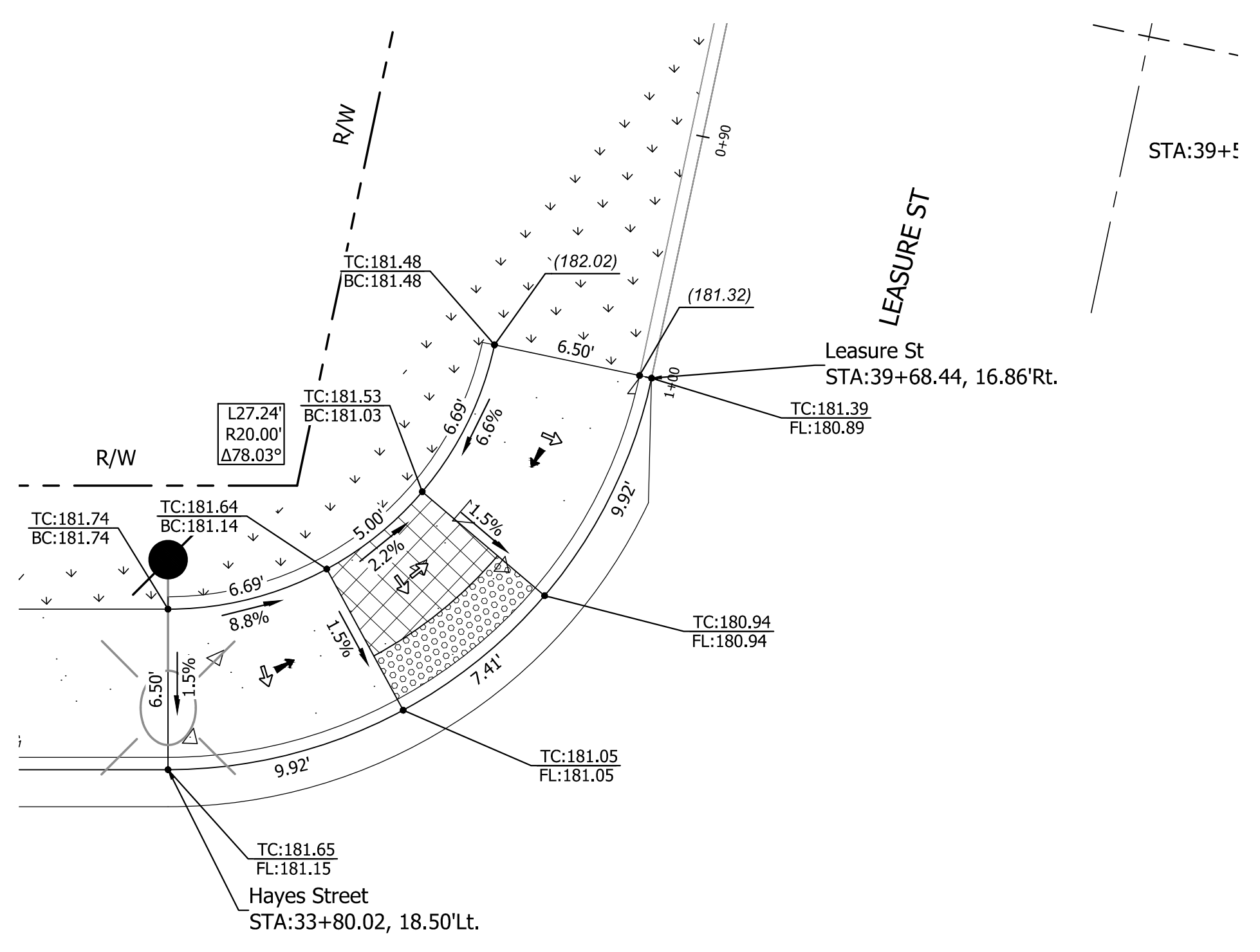
SHEET NO. 2E-5

- GENERAL NOTES**
- Elevations Are Top Of Pavement Finished Grade Unless Otherwise Noted
 - Contours Are Top Of Pavement Finished Grade
 - Grids Are 5' Spacing
 - Extg. Grade Elevations = (XXX.XX)
Prop. Grade Elevations = XXX.XX



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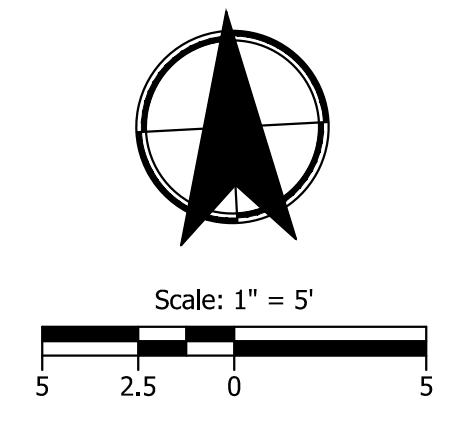
NW Curb Return

SIDEWALK RAMP GENERAL NOTES

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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

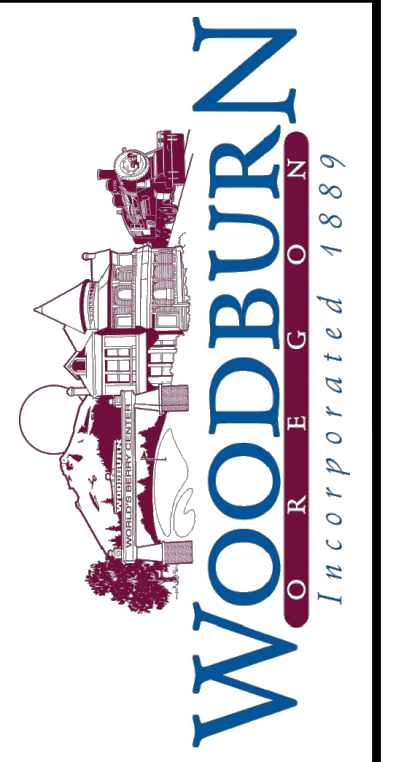
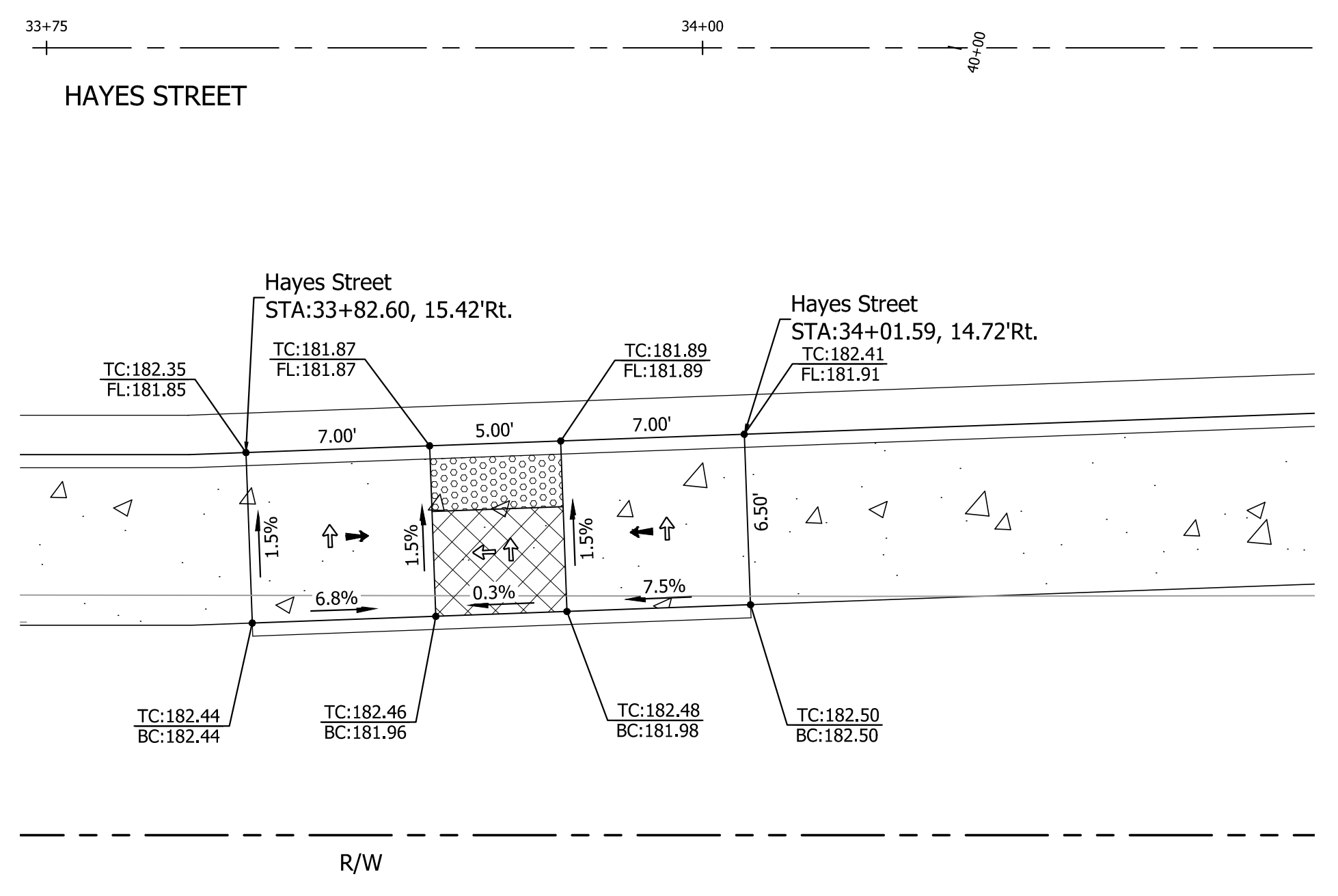
LEGEND

- ◻ Detectable Warning Surface
- ◻ Turning Space
- ↔ Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- ↔ Slope 7.5% (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
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- FL = Flow Line
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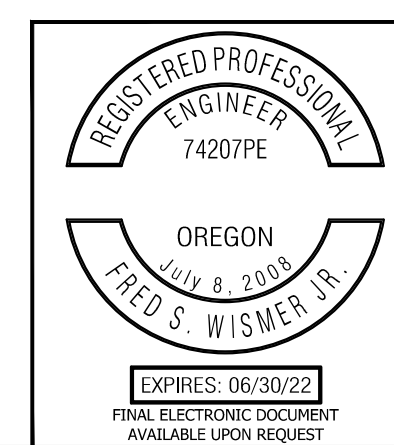
APP'D	REVISION	DATE	#

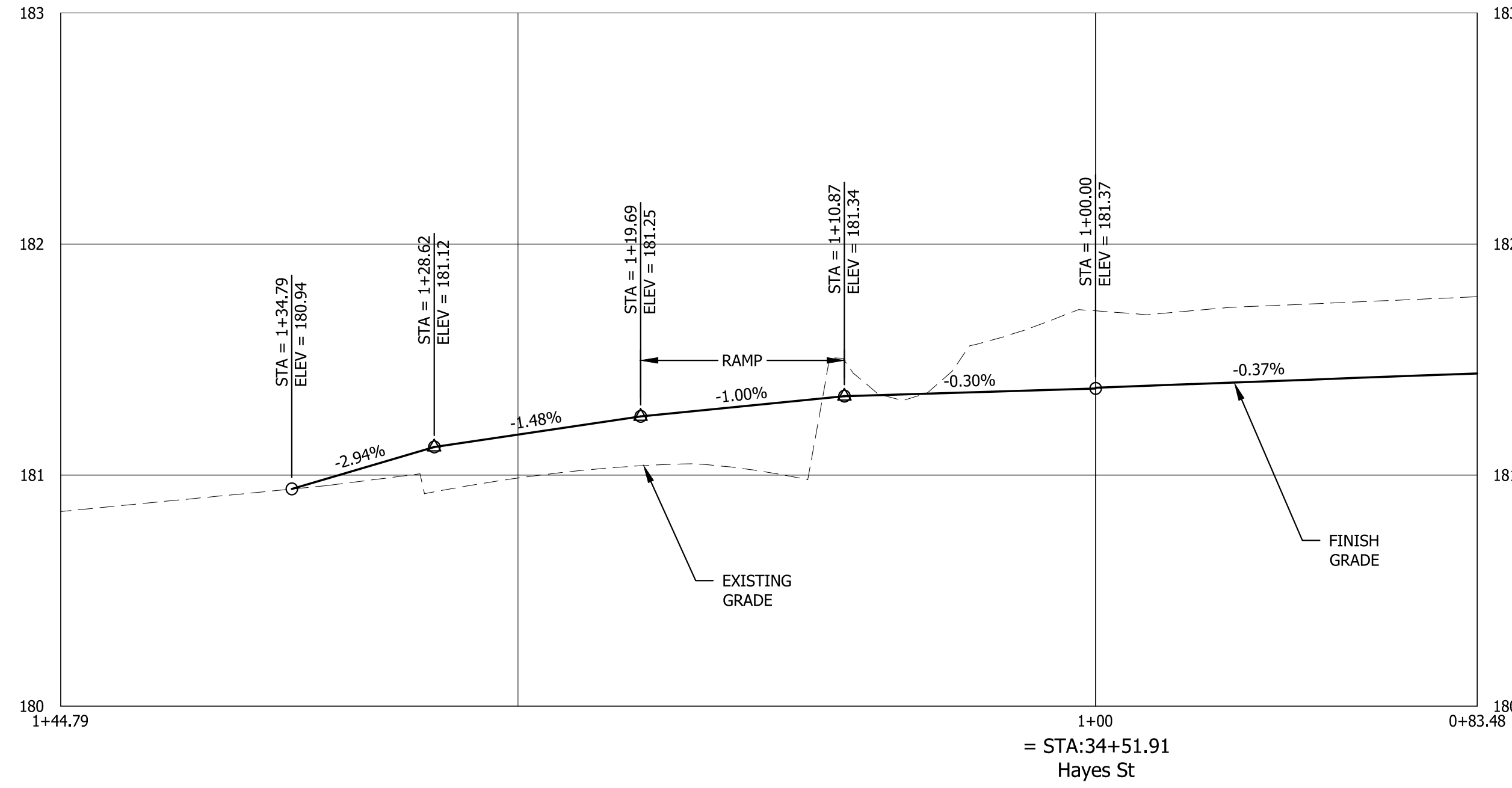
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PROJECT NO. 2015-001-20

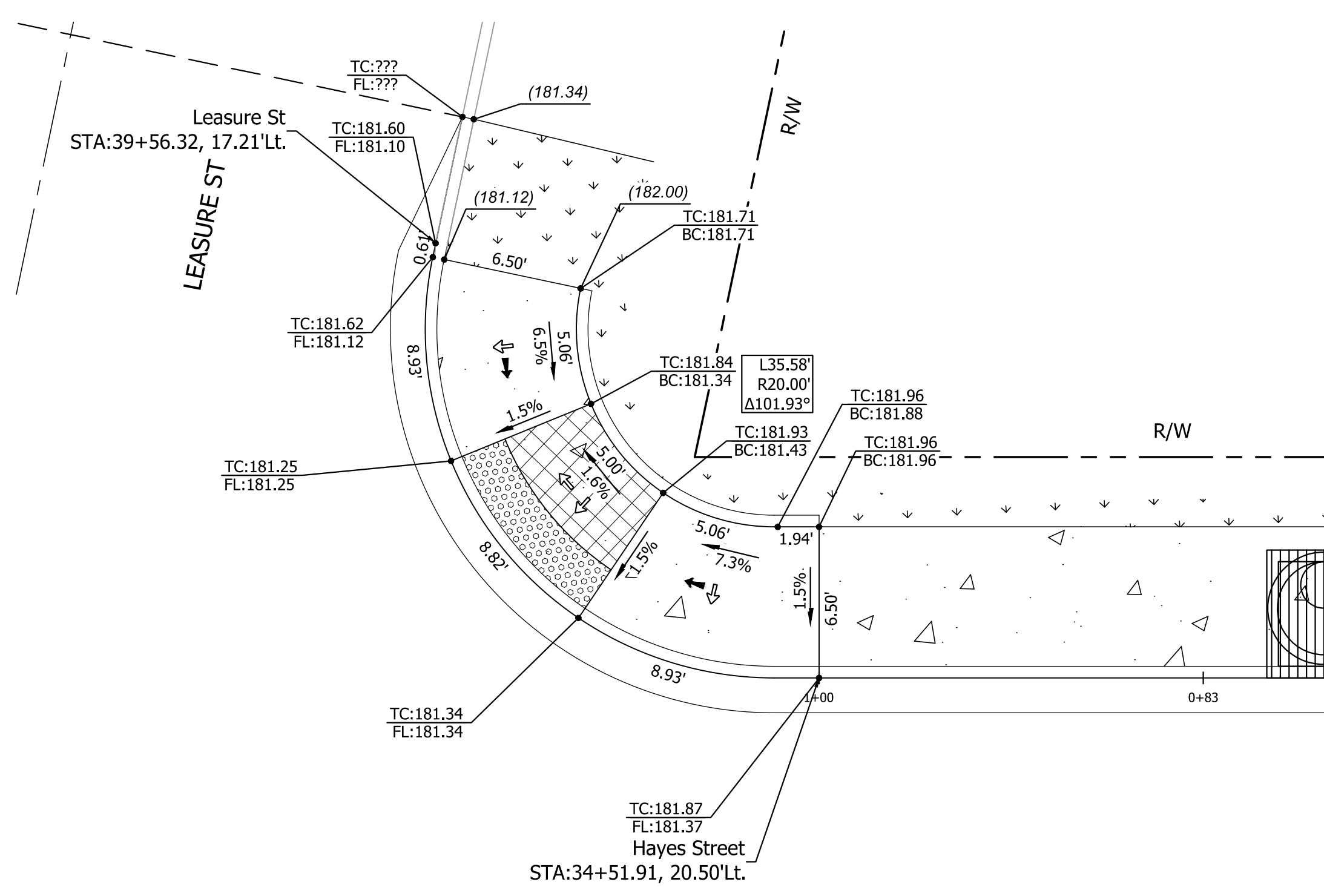
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 LEASURE STREET CURB RAMPS

SHEET NO. 2E-5A





NE Curb Return

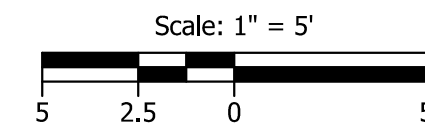
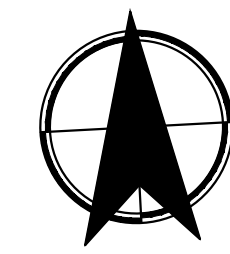


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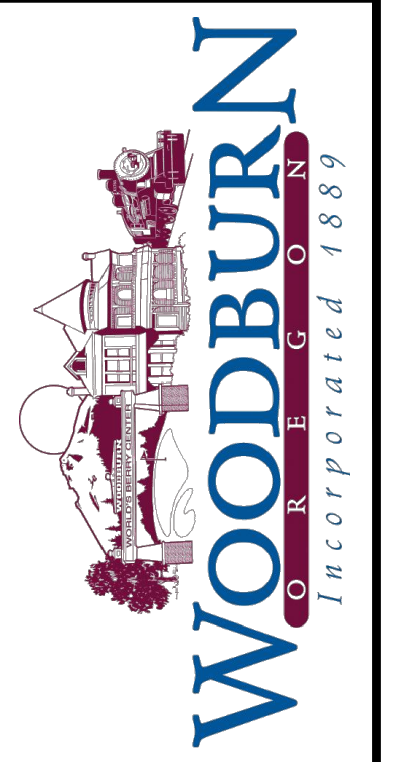
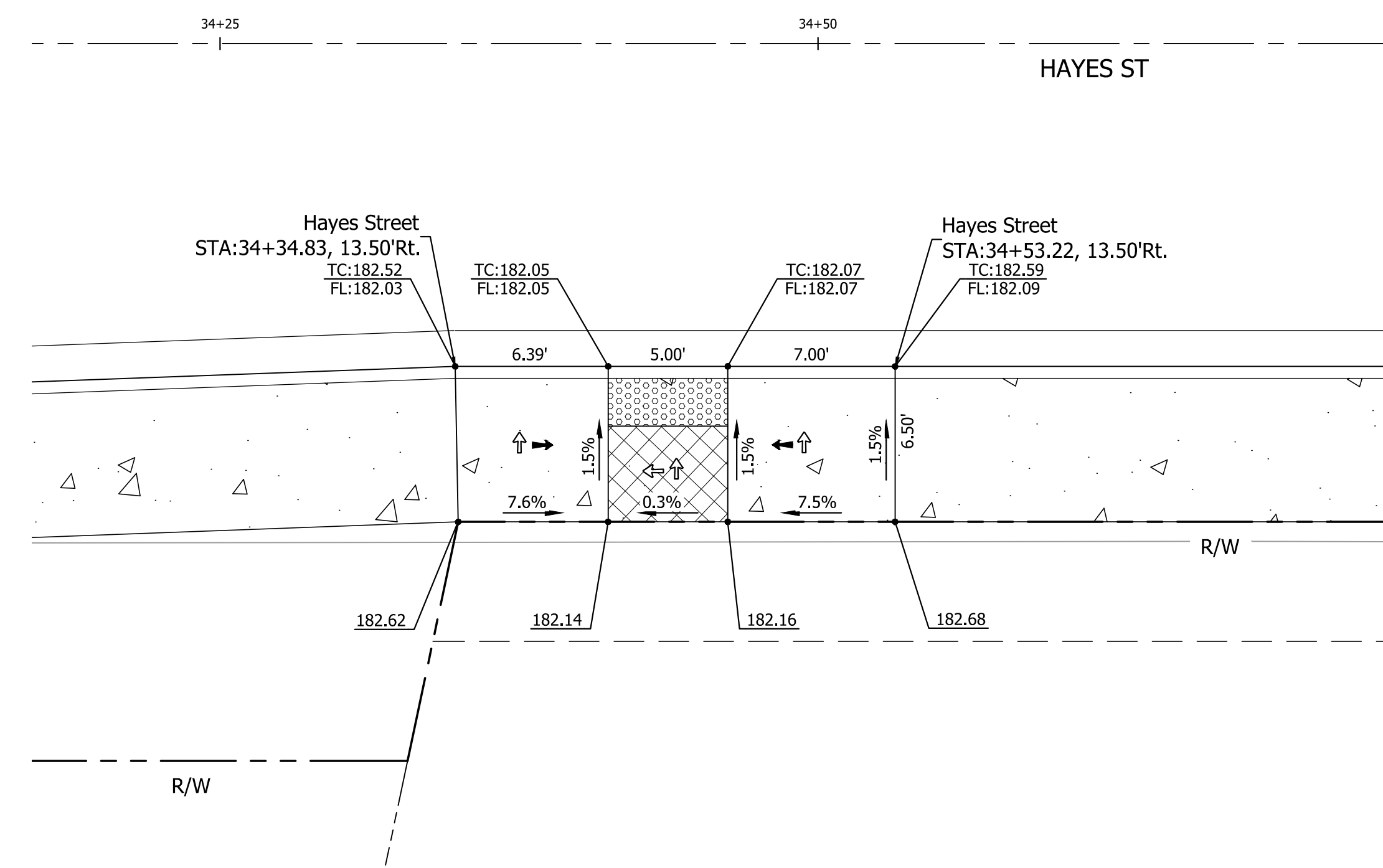
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)



ABBREVIATION

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- FL = Flow Line
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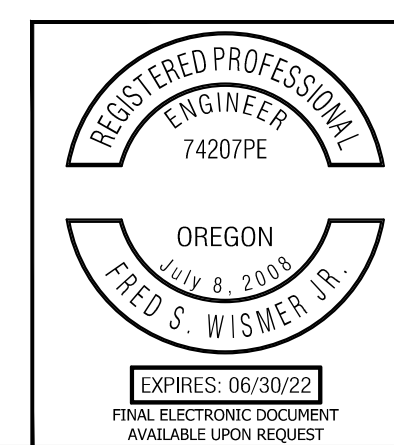
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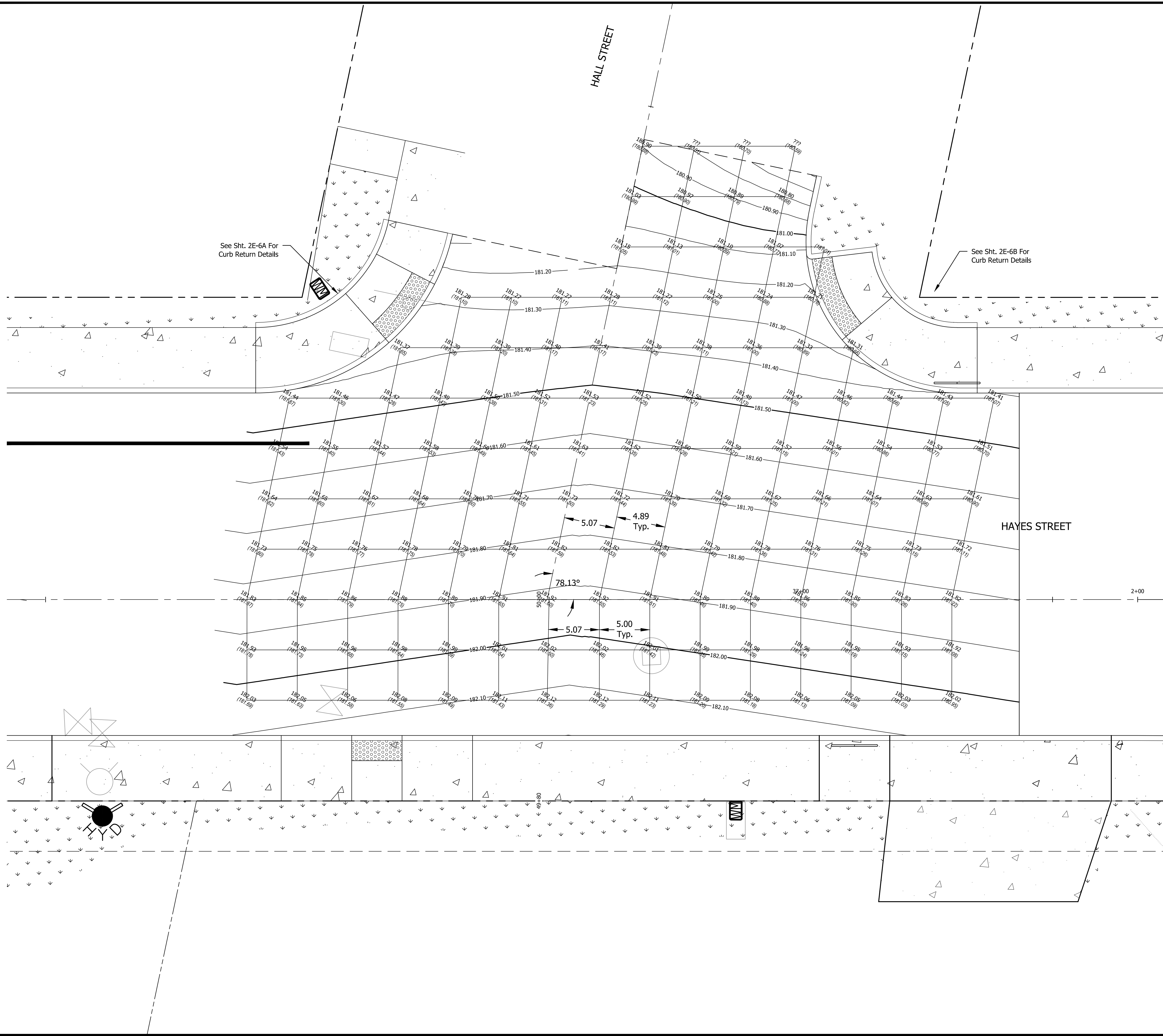
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 LEASURE STREET CURB RAMPS

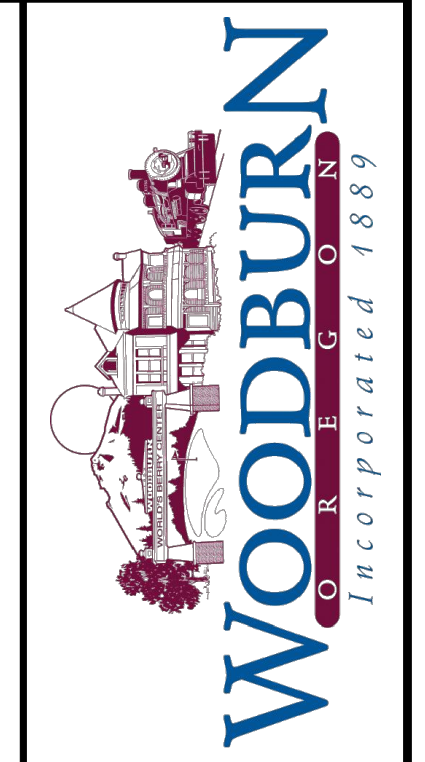
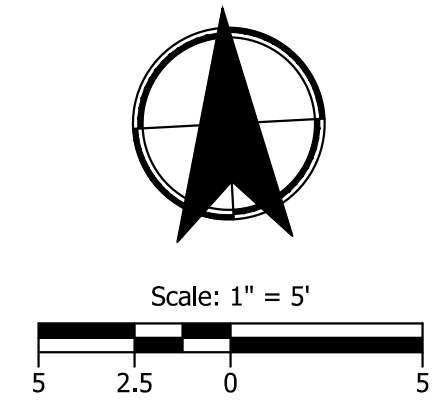


SHEET NO. 2E-5B

Plot Stamp: 3/4/2022 9:24:01 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Intersection-Grading-Plans-24512.dwg



- GENERAL NOTES**
- Elevations Are Top Of Pavement Finished Grade Unless Otherwise Noted
 - Contours Are Top Of Pavement Finished Grade
 - Grids Are 5' Spacing
 - Extg. Grade Elevations = (XXX.XX)
 Prop. Grade Elevations = XXX.XX



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

NO.	DATE	REVISION	APP'D.

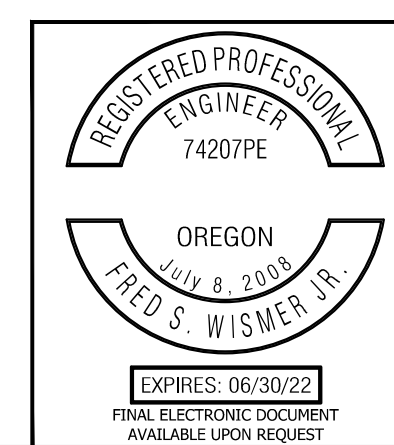
Submission Date: 03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

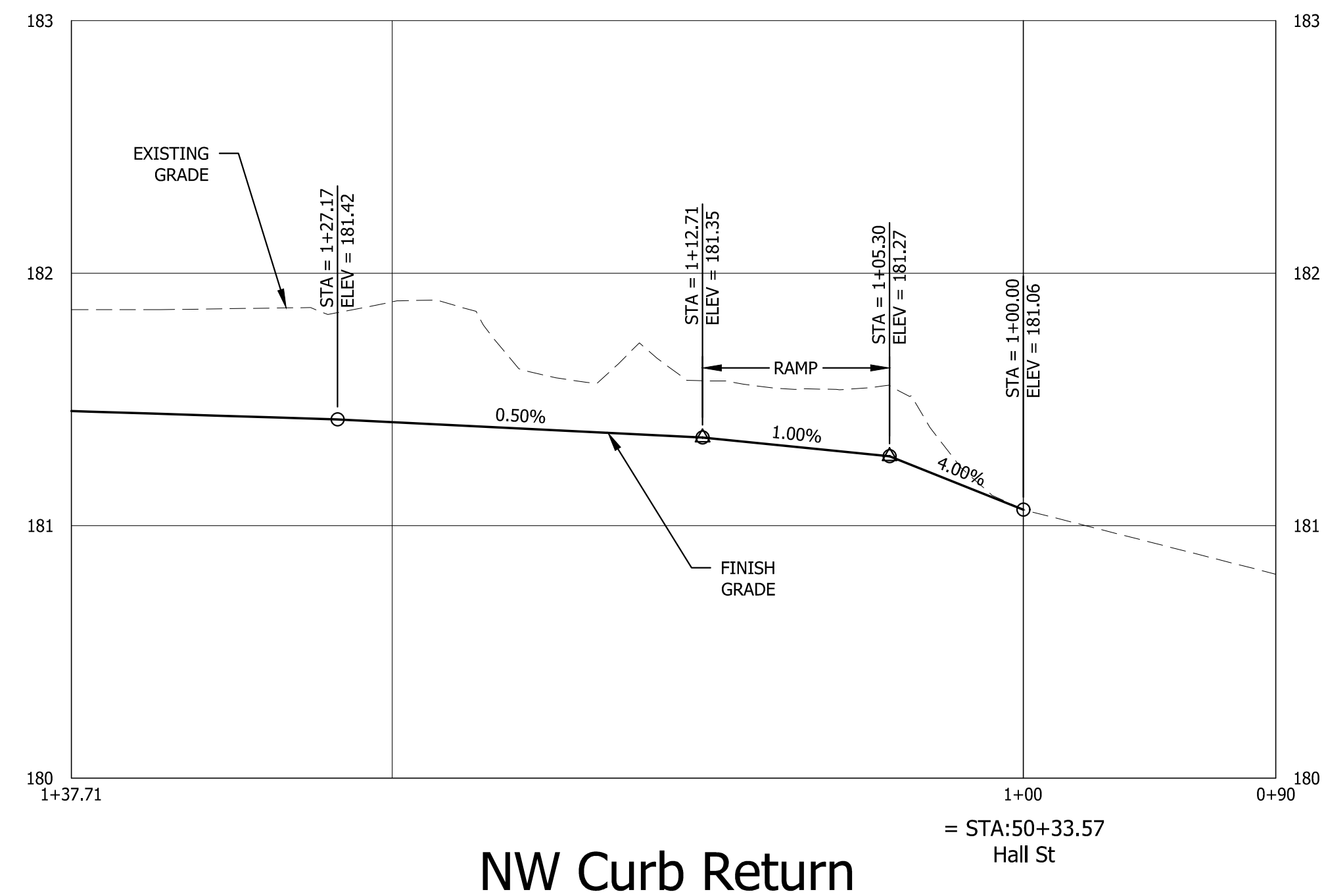
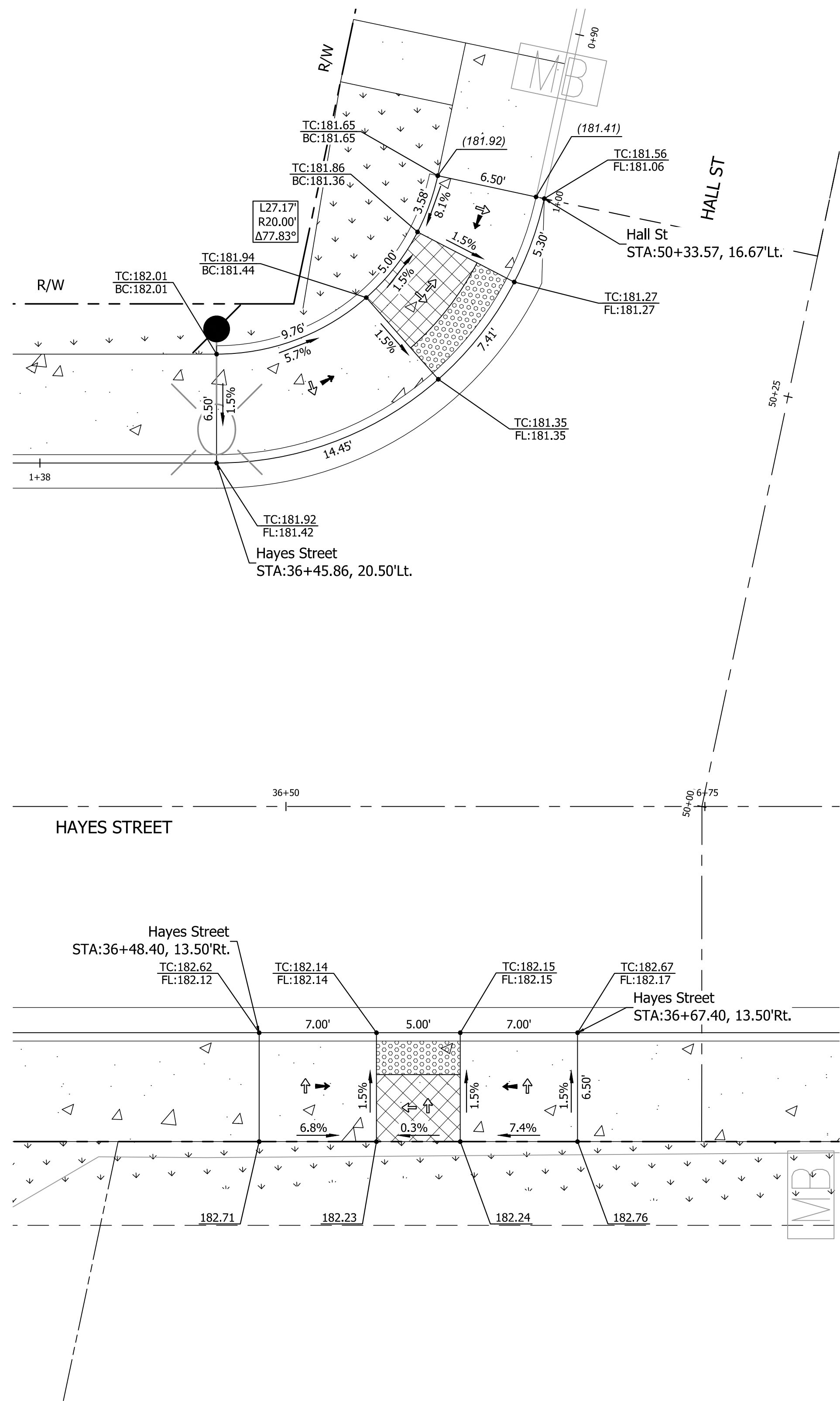
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERSECTION GRADING PLAN
 HALL STREET

SHEET NO. 2E-6



Plot Stamp: 3/4/2022 9:24:33 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Detailed-Grading-Plans-24512.dwg



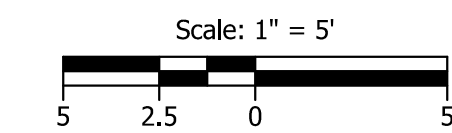
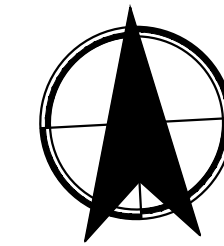
NW Curb Return

SIDEWALK RAMP GENERAL NOTES

- Contractor shall be responsible for meeting all Americans with disabilities (ADA) requirements as defined by the public rights-of-way accessibility guidelines (PROWAG). Details and dimensions shown are approximate only and intended as a guide for initial layout purposes only and are not complete. Contractor shall take all necessary field measurements and otherwise verify all dimensions to meet ADA requirements. Should any error or inconsistency exist the contractor shall not proceed with the work affected until reported to the engineer for clarification or correction.
- Protect freshly poured concrete from vandalism or other damage for a minimum of twenty-four (24) hours or until cured enough to support typical use, whichever is longer. Any concrete damaged by vandalism or other causes shall be replaced at no cost to the city.
- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

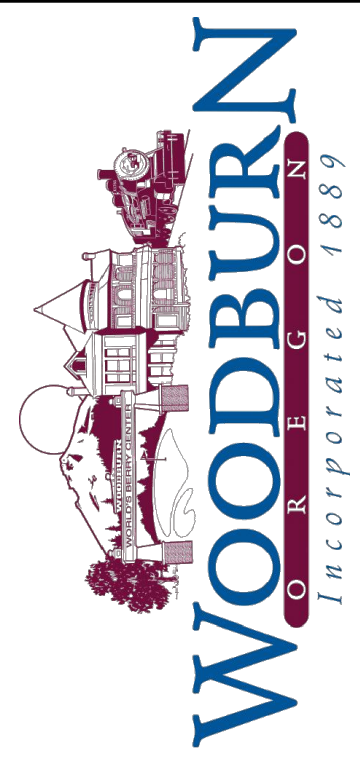
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



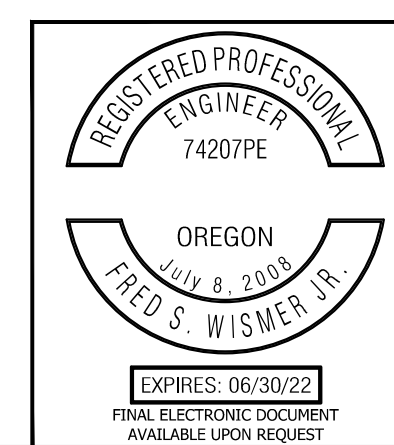
KITTELSON & ASSOCIATES
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#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

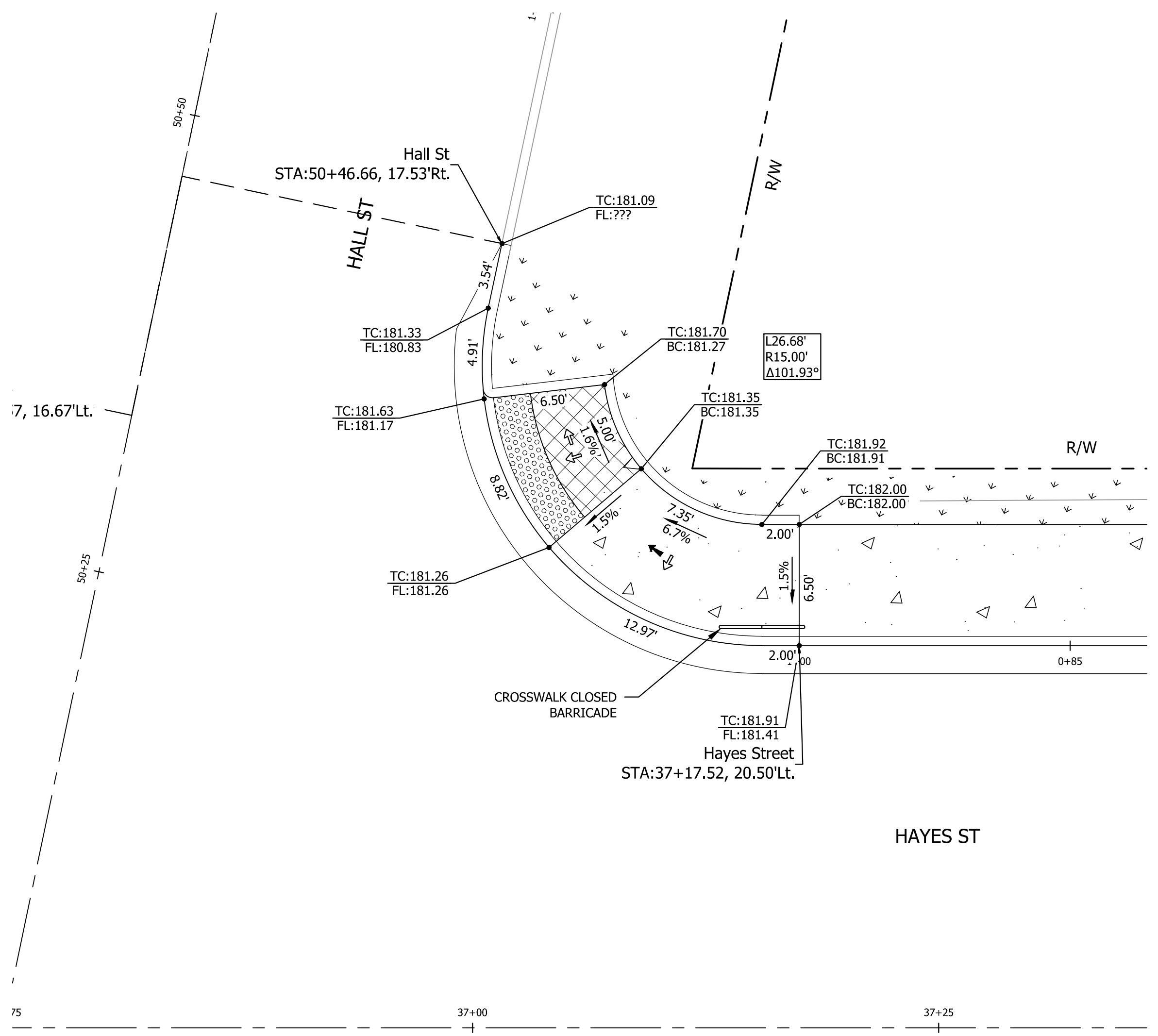
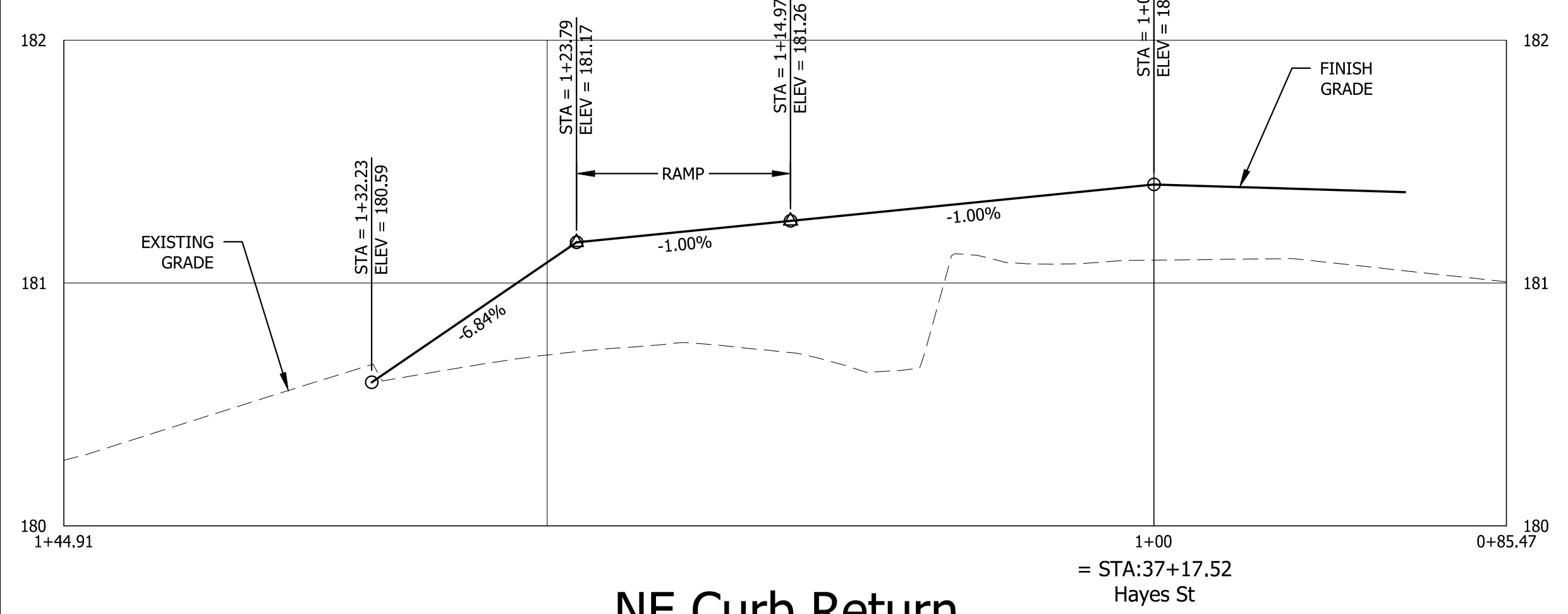
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 HALL STREET CURB RAMPS



SHEET NO. 2E-6A

Plot Stamp: 3/4/2022 9:24:47 AM - Fred Wismer
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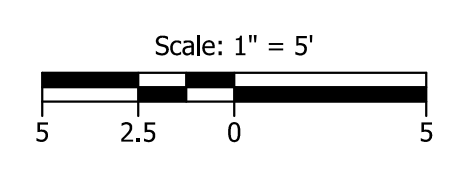
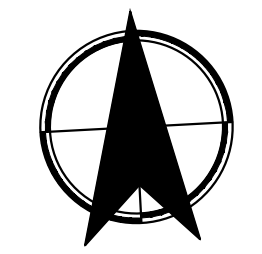


SIDEWALK RAMP GENERAL NOTES

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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

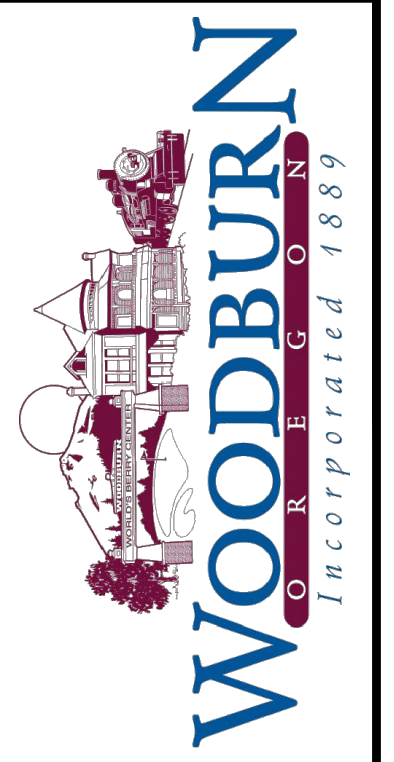
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)



ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



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 851 SW 6TH AVENUE, SUITE 600
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REVISION	DATE	#	APP'D

Submission Date: 03/07/2022

Drawn: JCB/RMM, Designed: NRS/JBK, Checked: FSW

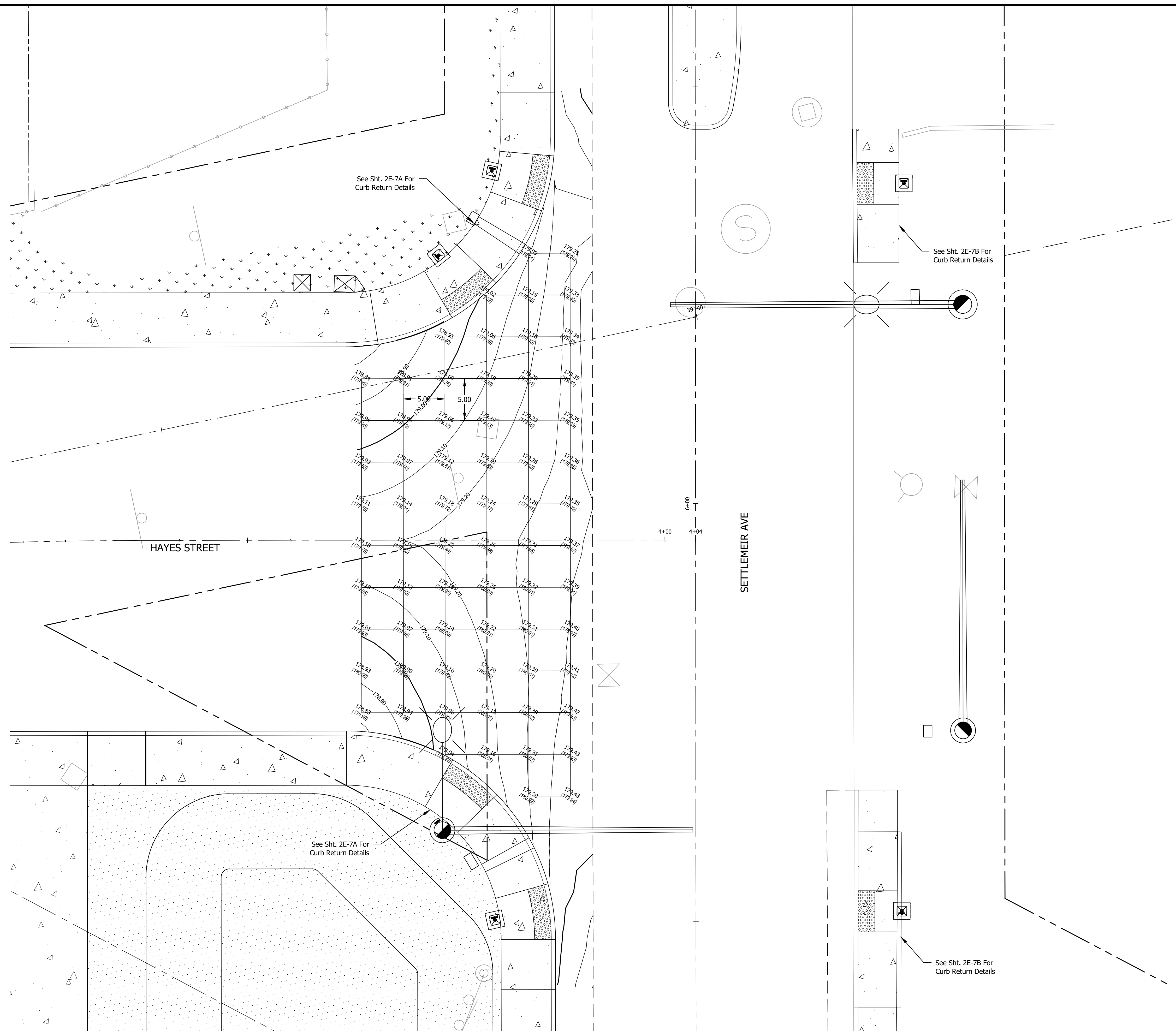
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 HALL STREET CURB RAMPS

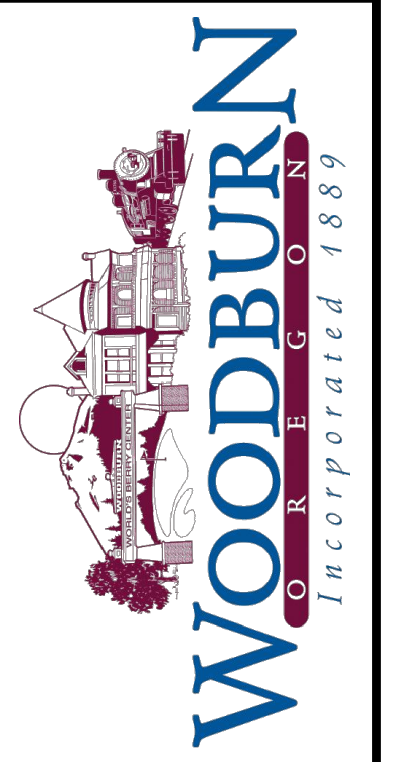
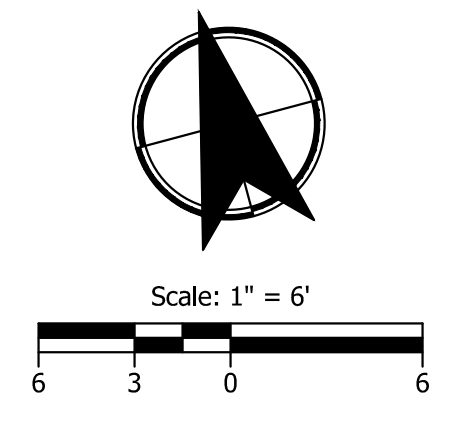


SHEET NO. 2E-6B

Plot Stamp: 3/4/2022 9:25:16 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Intersection-Grading-Plans-24512.dwg



- GENERAL NOTES**
- Elevations Are Top Of Pavement Finished Grade Unless Otherwise Noted
 - Contours Are Top Of Pavement Finished Grade
 - Grids Are 5' Spacing
 - Extg. Grade Elevations = (XXX.XX)
Prop. Grade Elevations = XXX.XX



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#	DATE	REVISION	APP'D

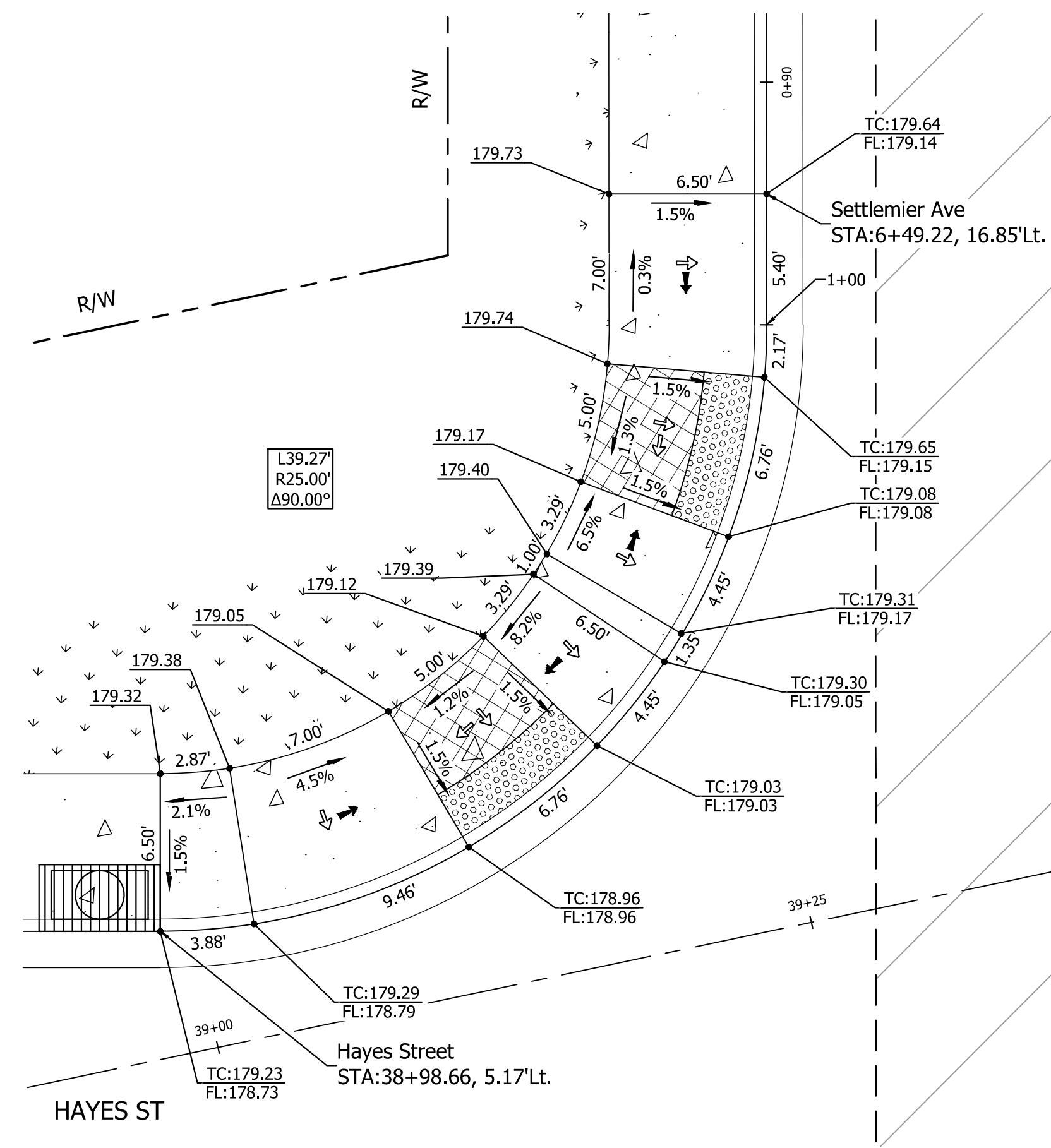
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

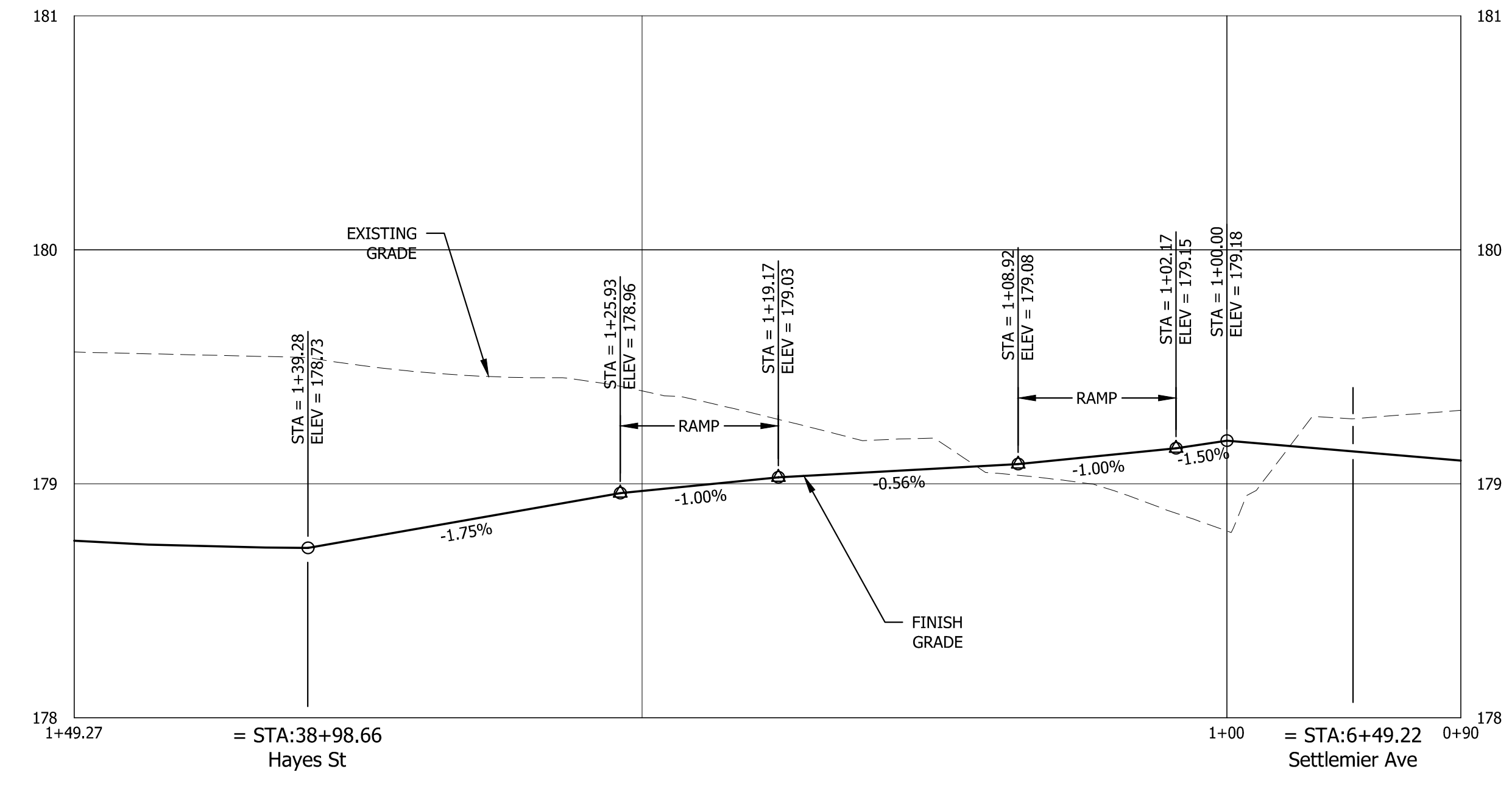
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERSECTION GRADING PLAN
 SETTLEMEIR AVE

SHEET NO. 2E-7





NW Curb Return

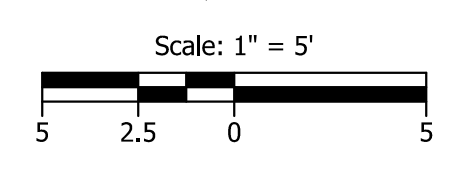
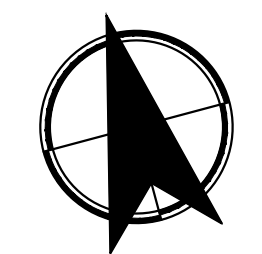


SIDEWALK RAMP GENERAL NOTES

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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

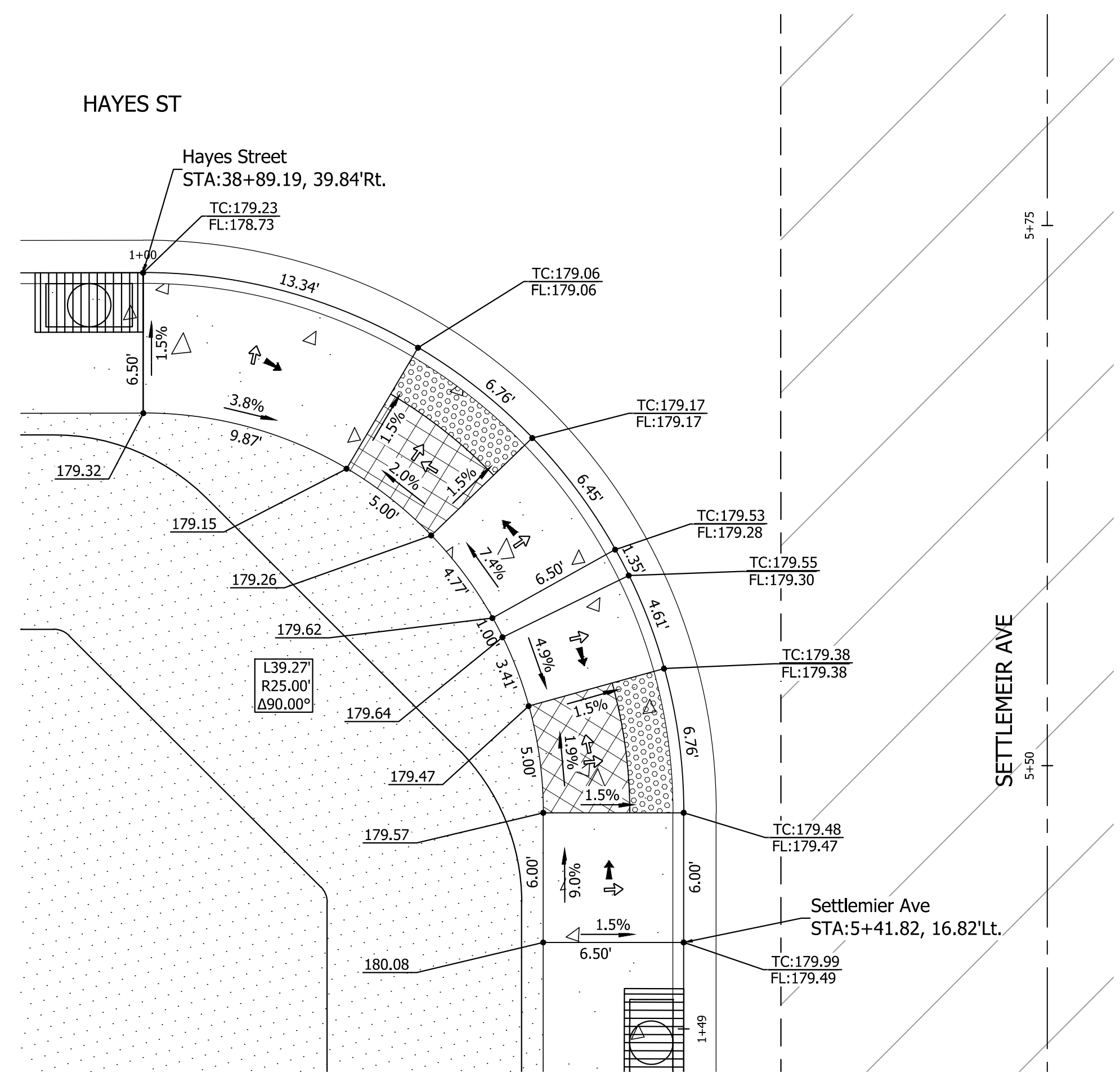
LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)

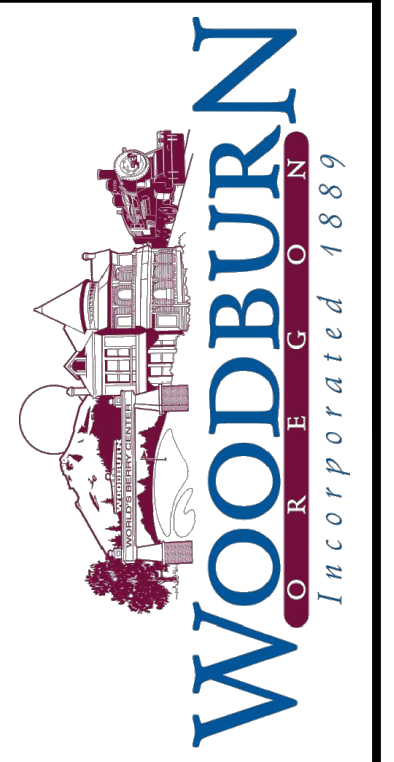
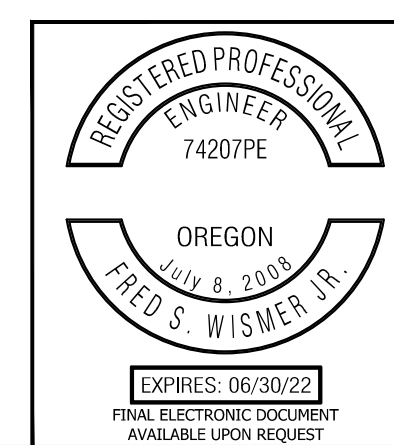
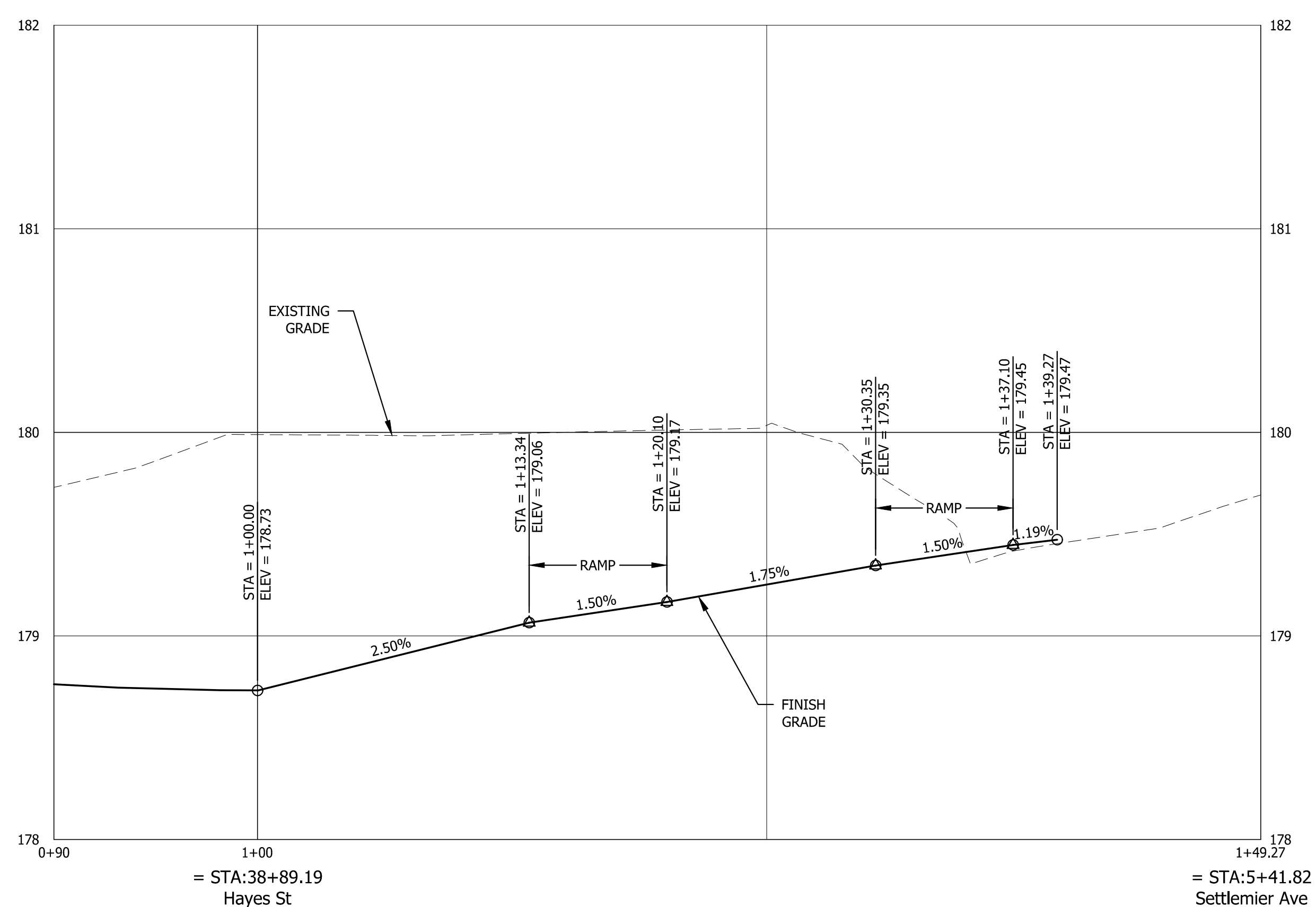


ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade



SW Curb Return



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NO.	DATE	REVISION	APP'D.

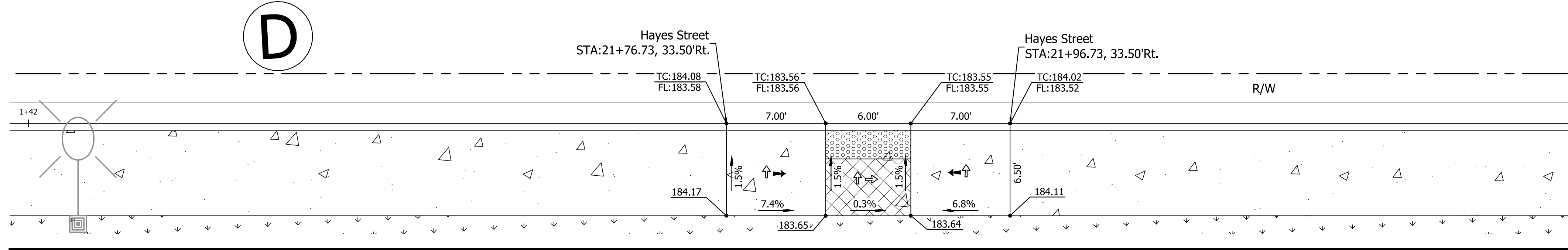
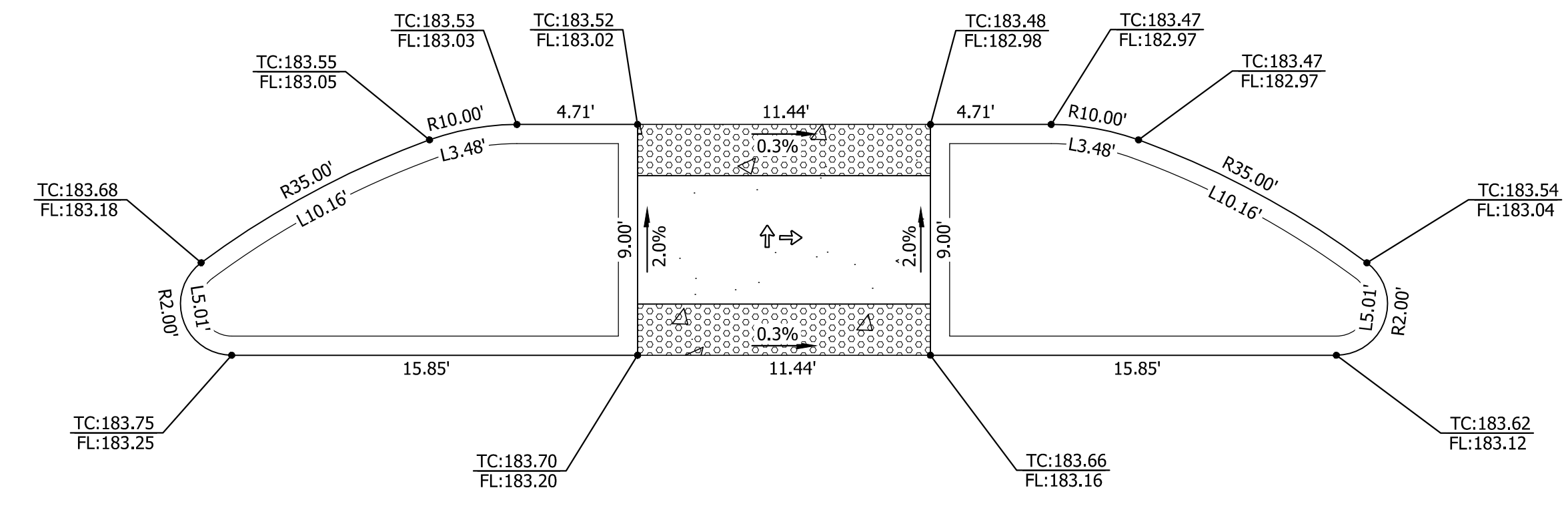
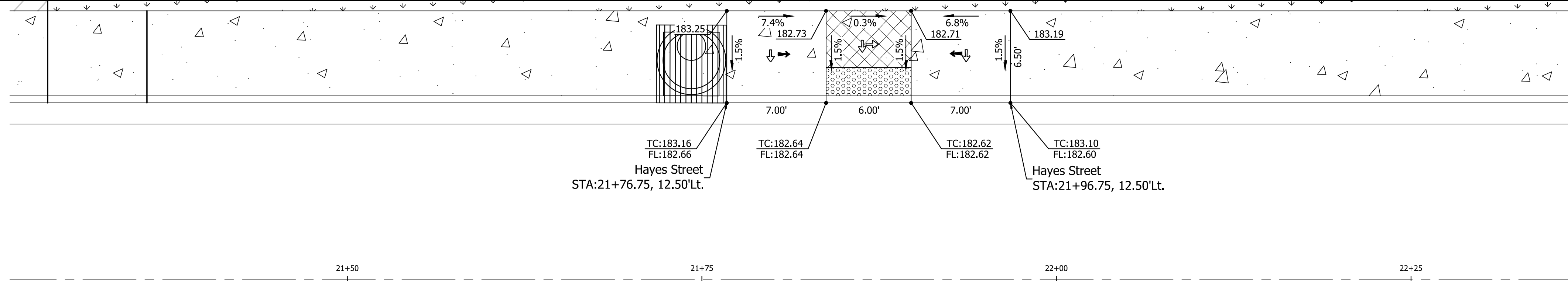
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 SETTLEMEIR AVE
 SHEET NO. 2E-7A

Plot Stamp: 3/4/2022 9:25:53 AM - Fred Wismer
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Plot Stamp: 3/4/2022 9:26:12 AM - Fred Wismer
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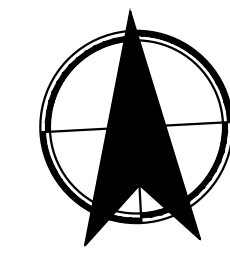


SIDEWALK RAMP GENERAL NOTES

- Contractor shall be responsible for meeting all Americans with disabilities (ADA) requirements as defined by the public rights-of-way accessibility guidelines (PROWAG). Details and dimensions shown are approximate only and intended as a guide for initial layout purposes only and are not complete. Contractor shall take all necessary field measurements and otherwise verify all dimensions to meet ada requirements. Should any error or inconsistency exist the contractor shall not proceed with the work affected until reported to the engineer for clarification or correction.
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- See Standard ODOT Details RD902, RD904, RD906, and RD920 for Curb Ramp Construction on Sheet 2B-6

LEGEND

- Detectable Warning Surface
- Turning Space
- Slope 1.5% (max. 2.0% Finished Surface Slope) (normal Sidewalk Cross Slope)
- Slope 7.5% (max. 8.3% Finished Surface Slope)

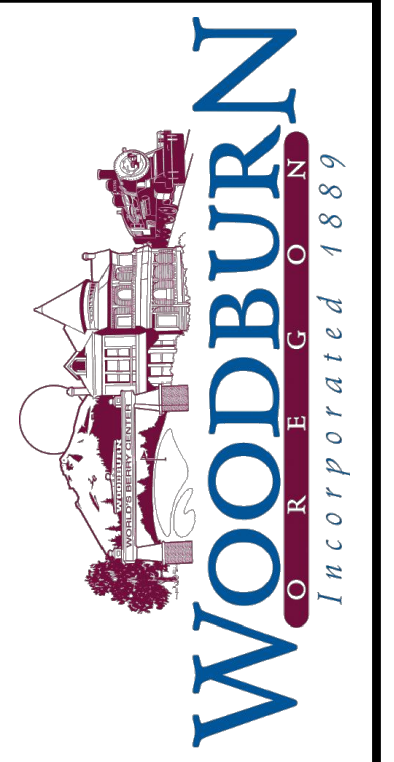
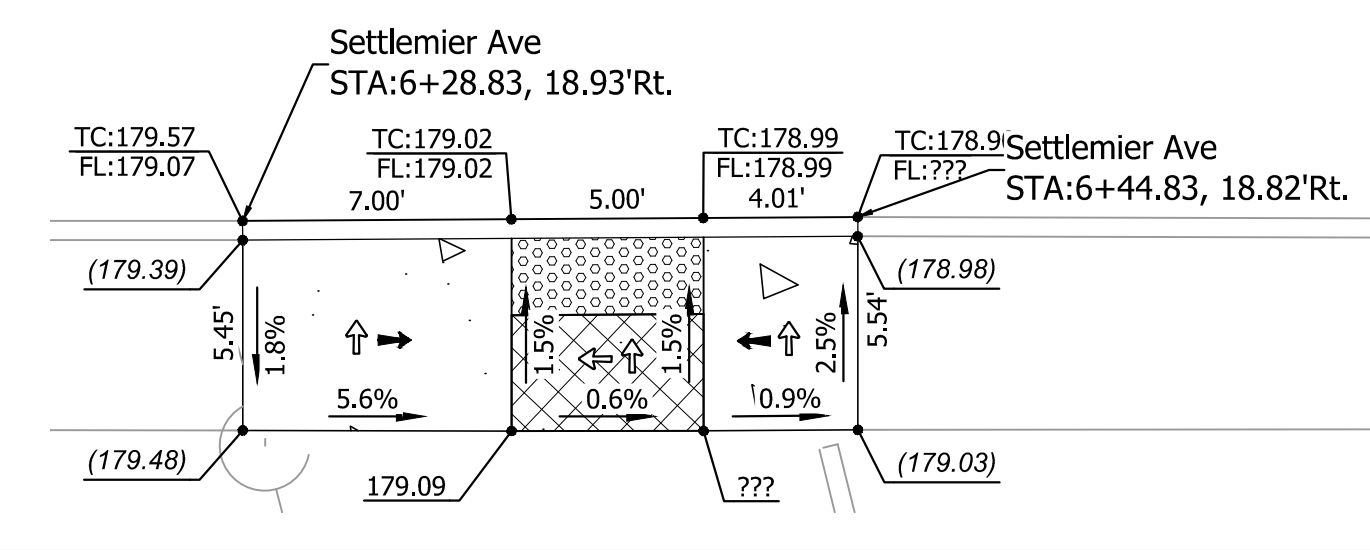
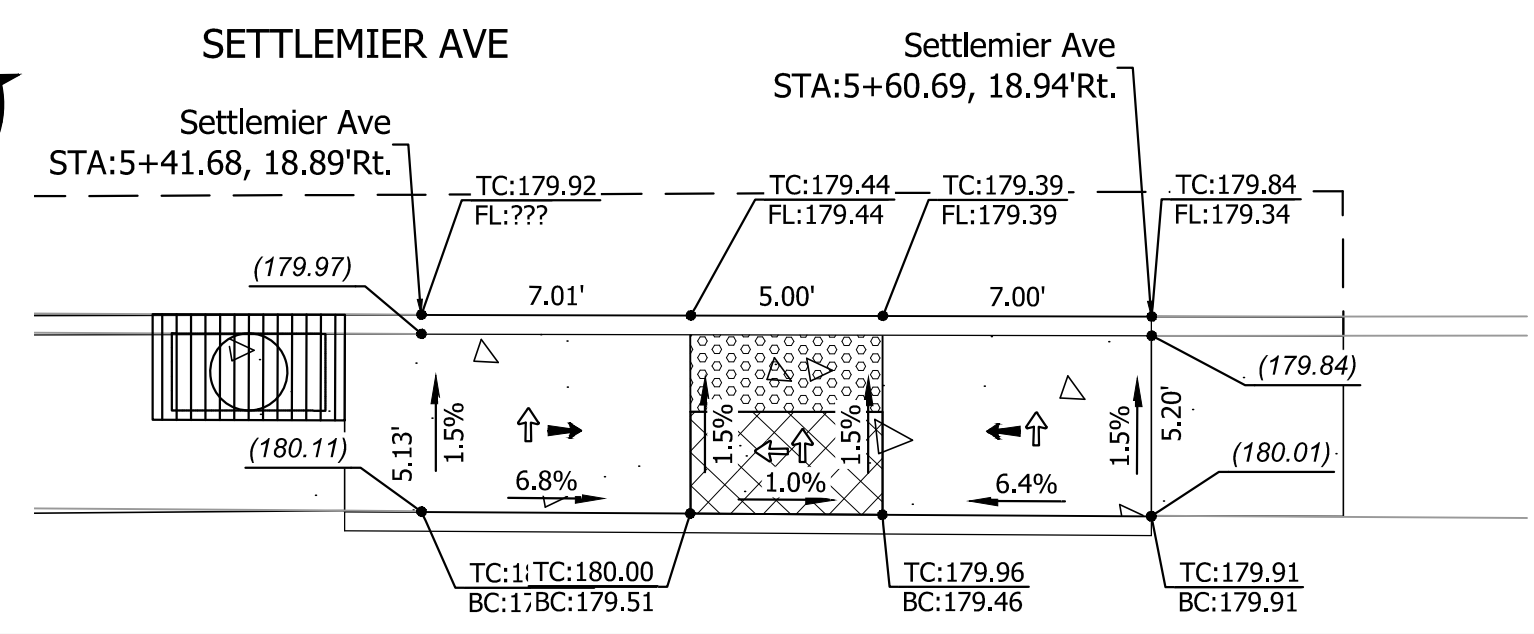
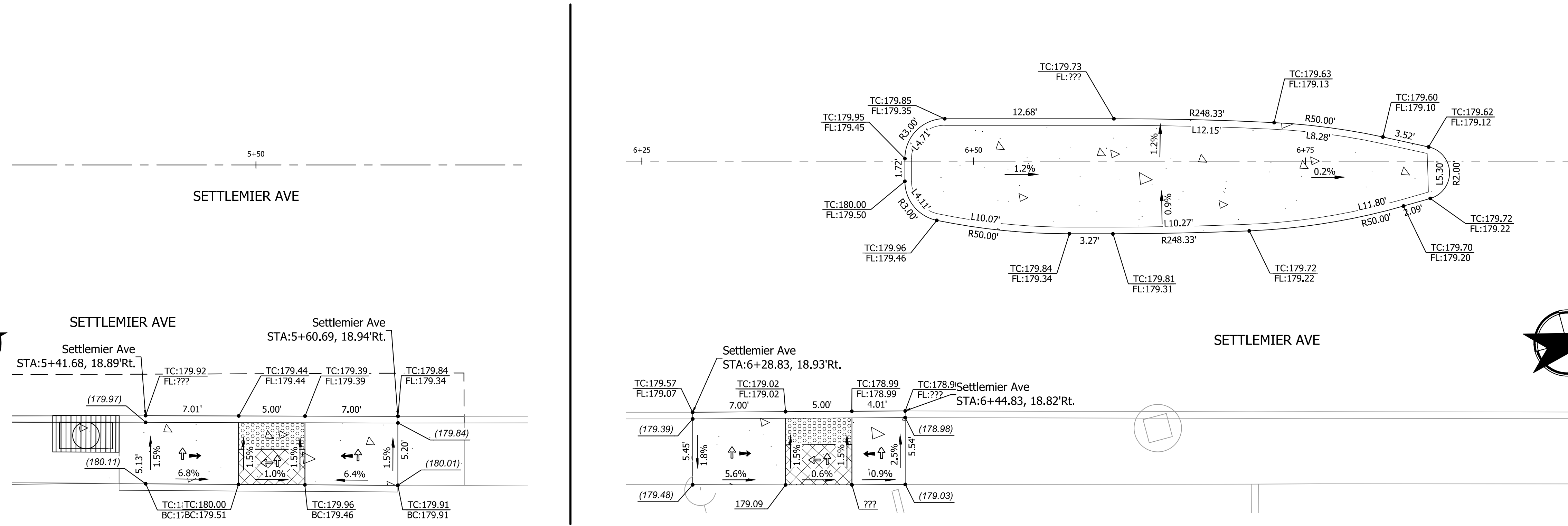


Scale: 1" = 5'
 5 2.5 0 5

ABBREVIATION

- TC = Top of Curb Elevation
- BC = Bottom of Curb Elevation
- FL = Flow Line
- () = Match Extg. Grade

D



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

REVISION	DATE	#	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 DETAILED GRADING PLAN
 SETTLEMIER AVE



SHEET NO. 2E-7B

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

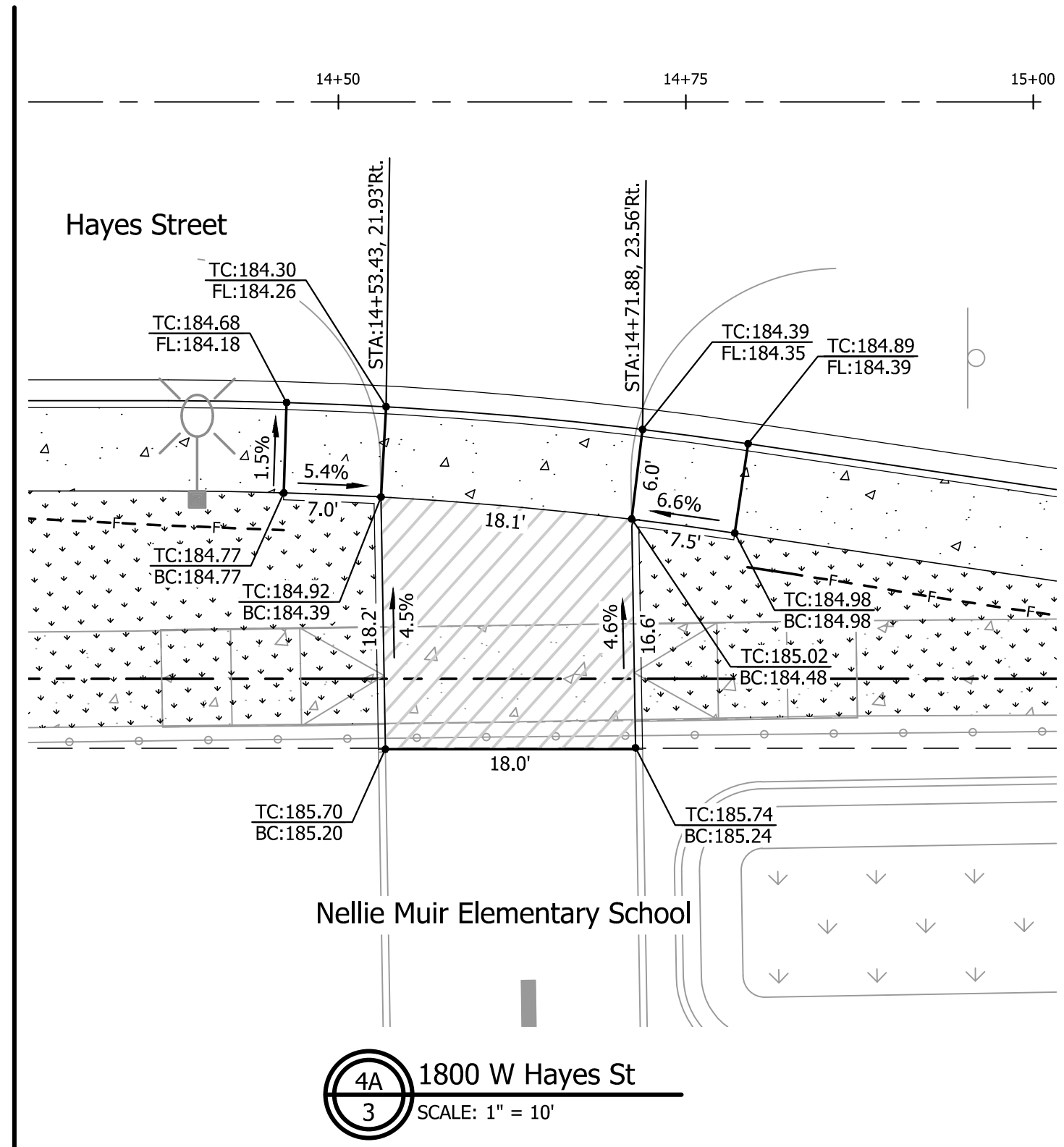
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

REGISTERED PROFESSIONAL ENGINEER
 7420/PE
 OREGON
 JULY 8, 2008
 FRED S. WISMER JR.
 EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST

DETAILED DRIVEWAY GRADING PLANS

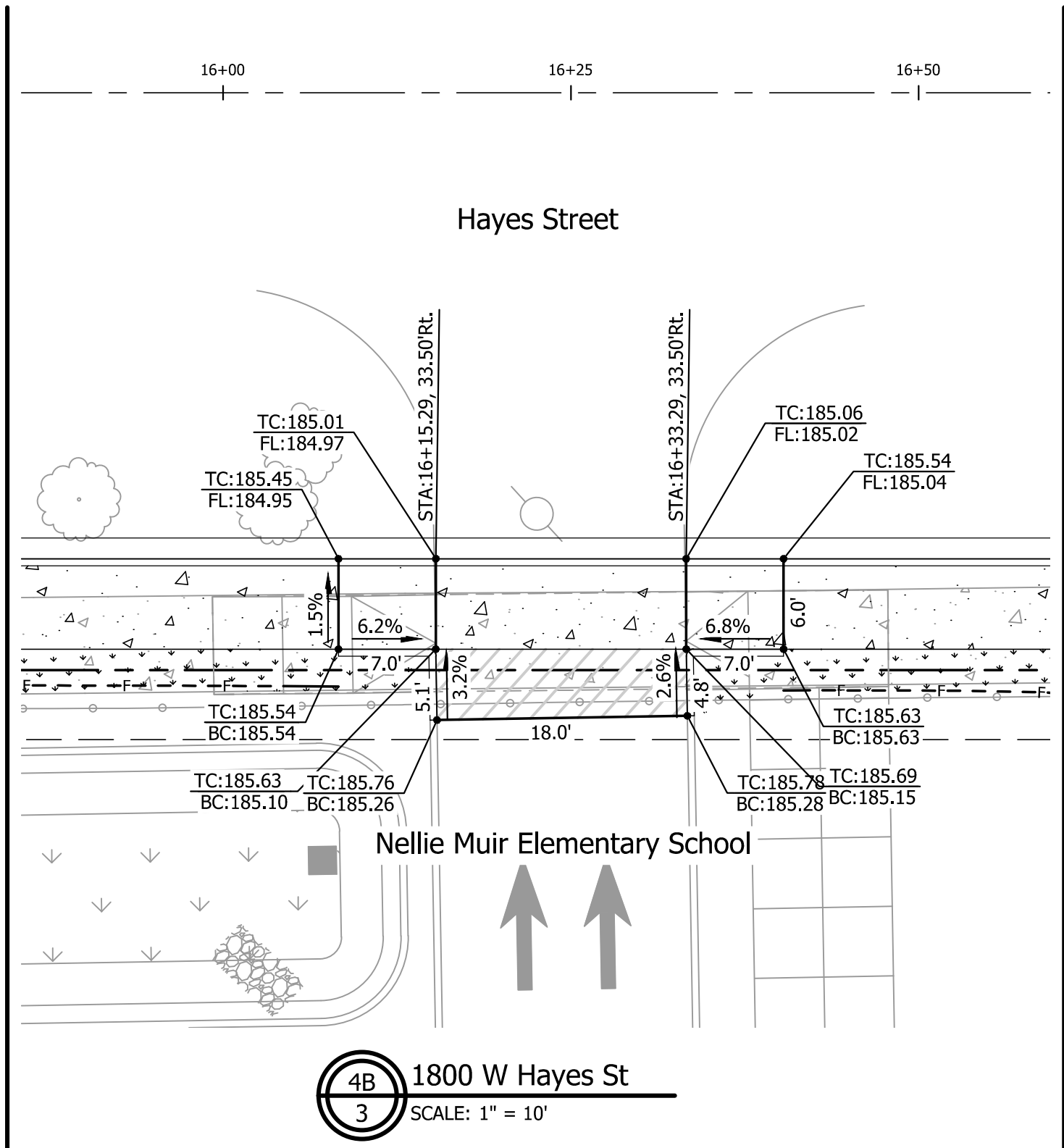
SHEET NO. 2E-10



4A 1800 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

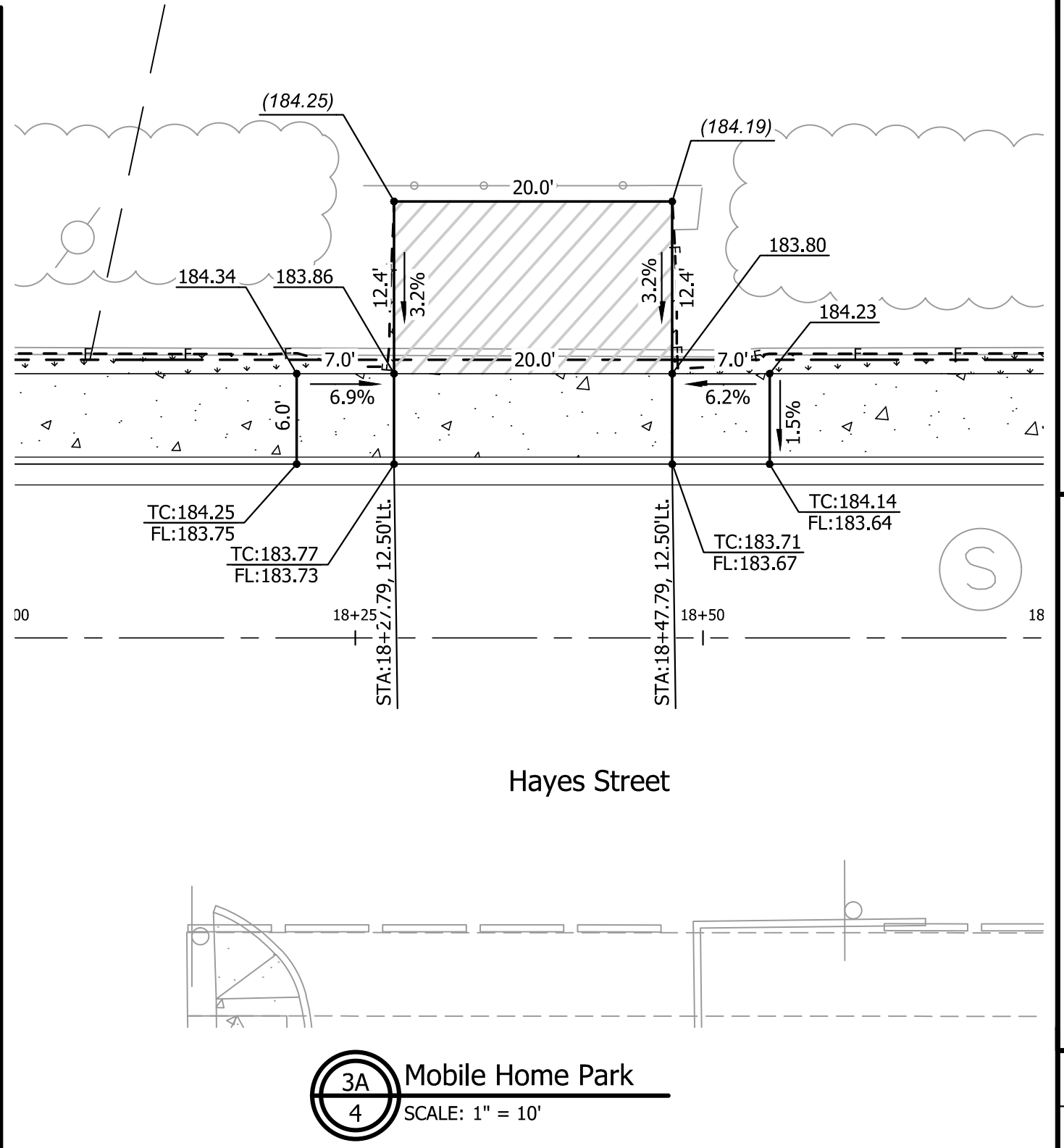
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
18.1	32.6	Concrete	197.6	Asphalt	314.4



4B 1800 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

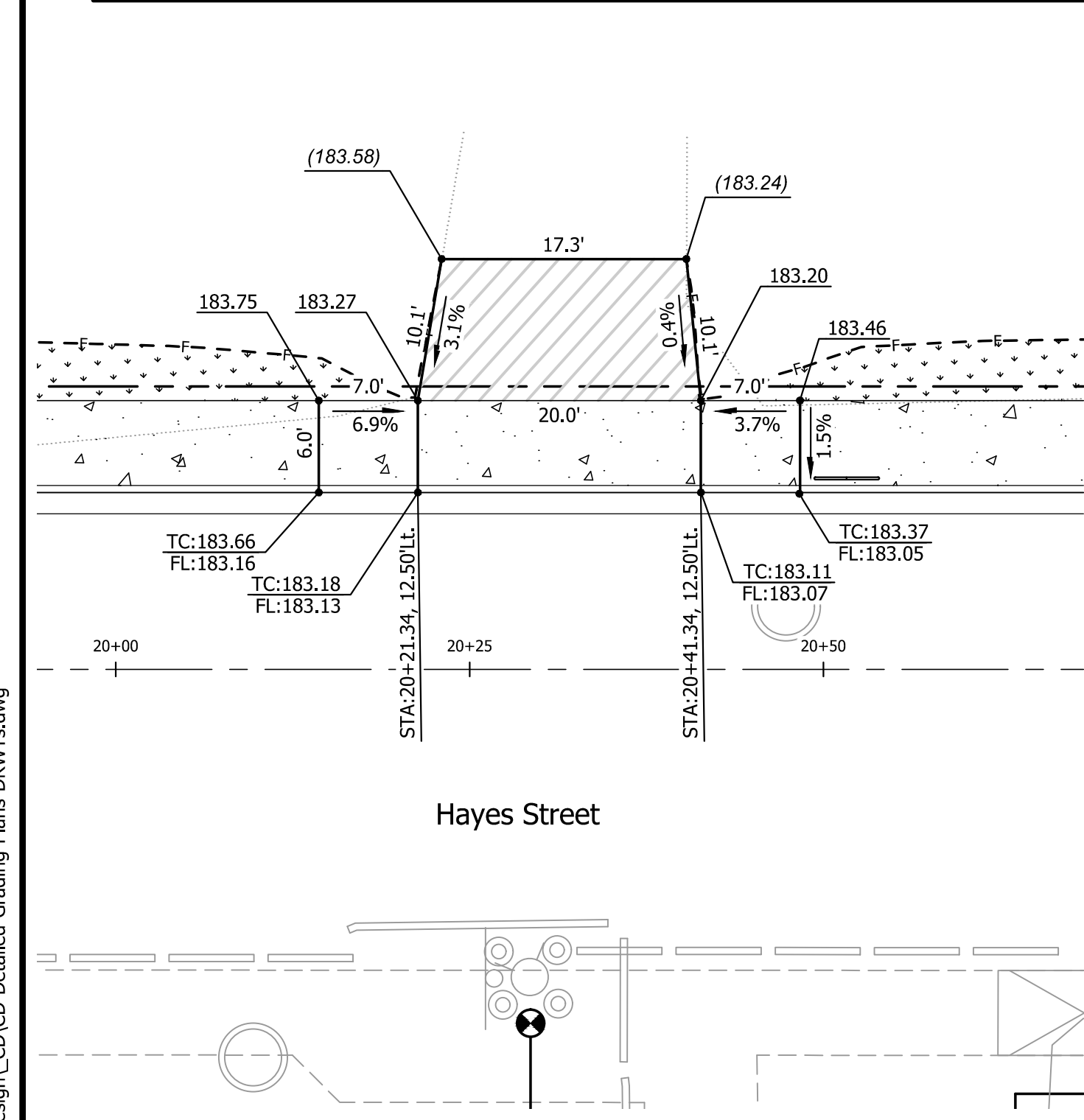
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
18.0	32.0	Concrete	192.0	Asphalt	89.1



3A Mobile Home Park
 SCALE: 1" = 10'

Driveway Construction Table

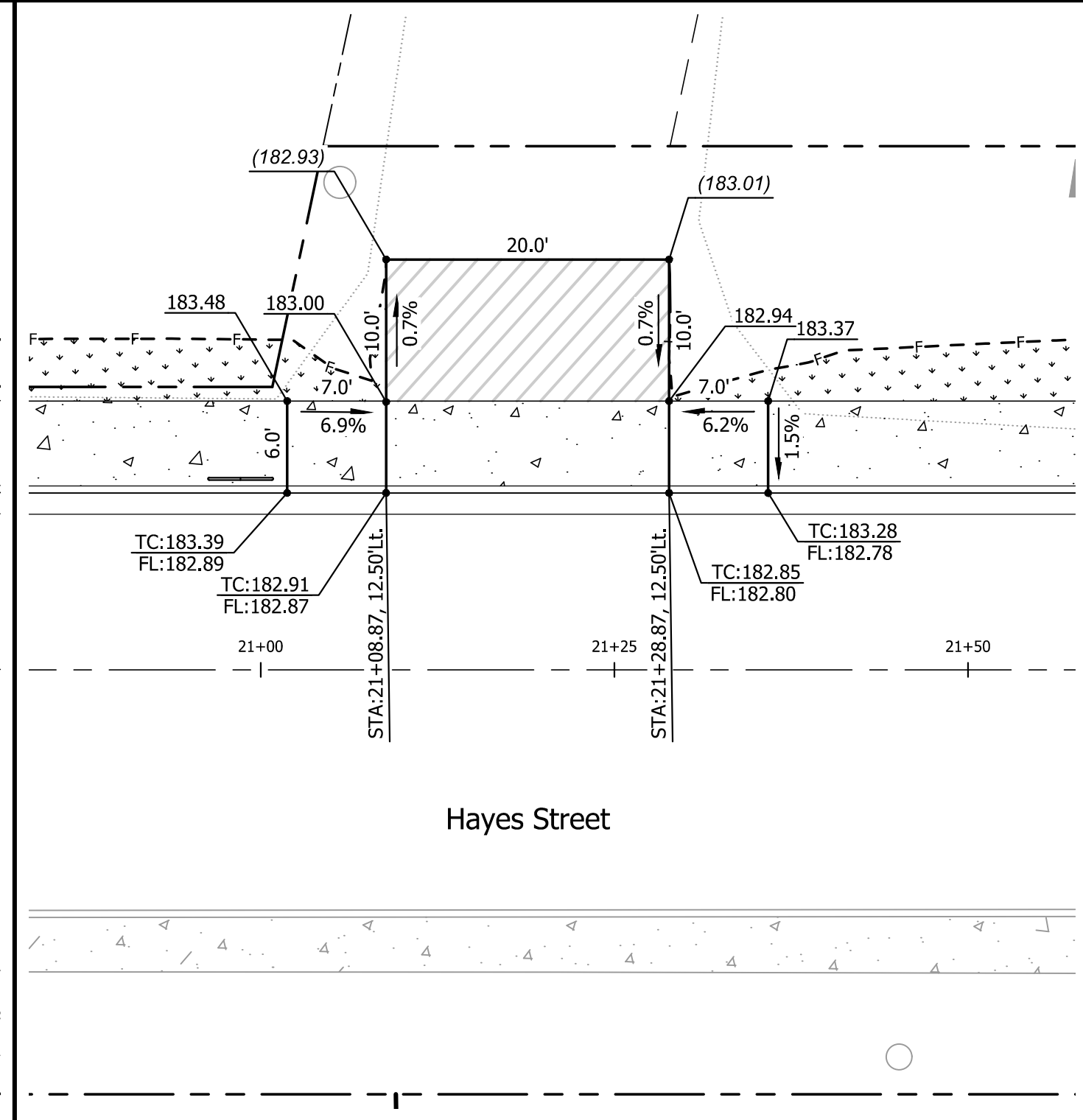
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Asphalt	248.0



1A 1767 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

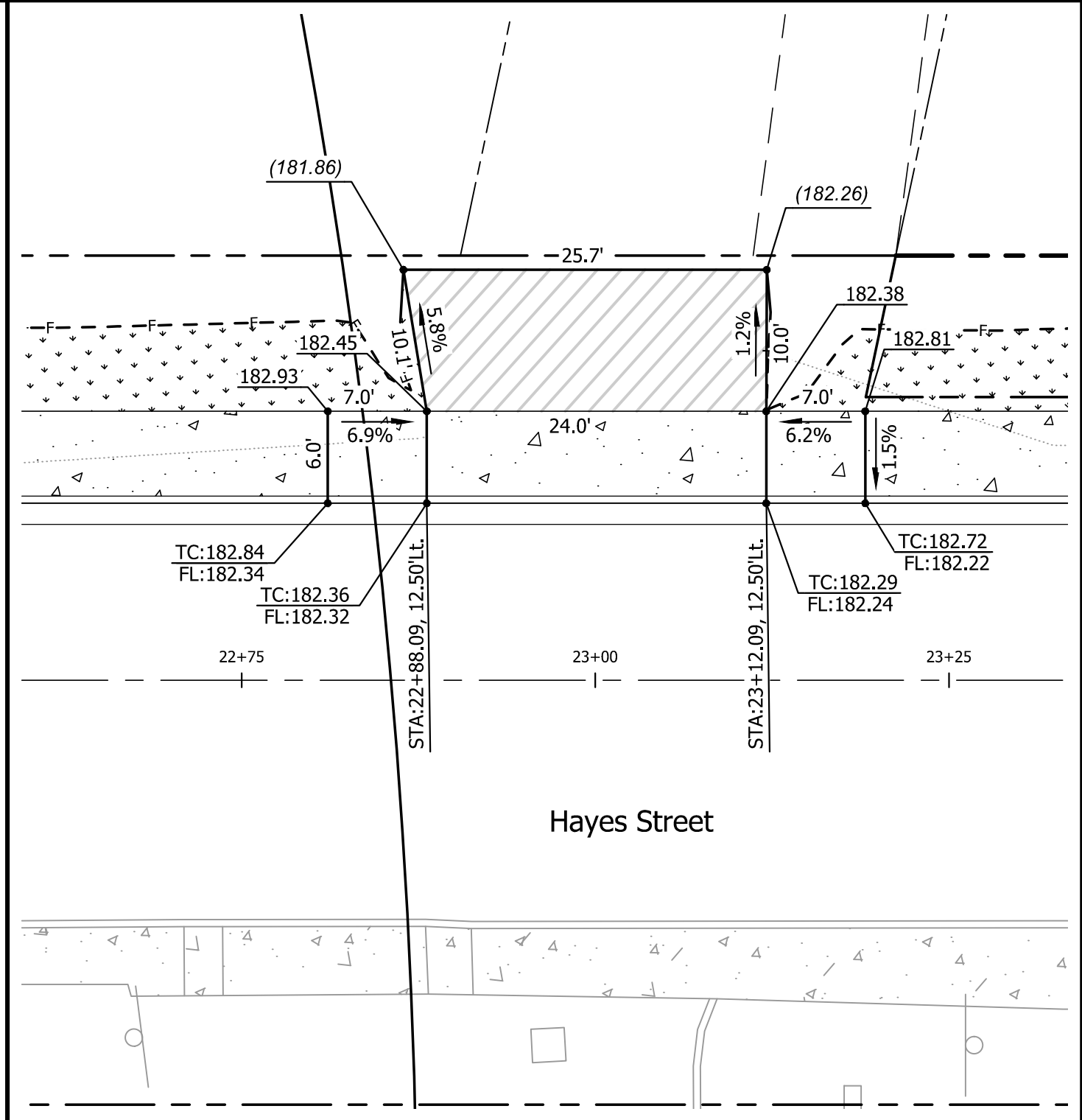
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	27.0	Concrete	162.0	Asphalt	186.5



1B 1645-1655 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

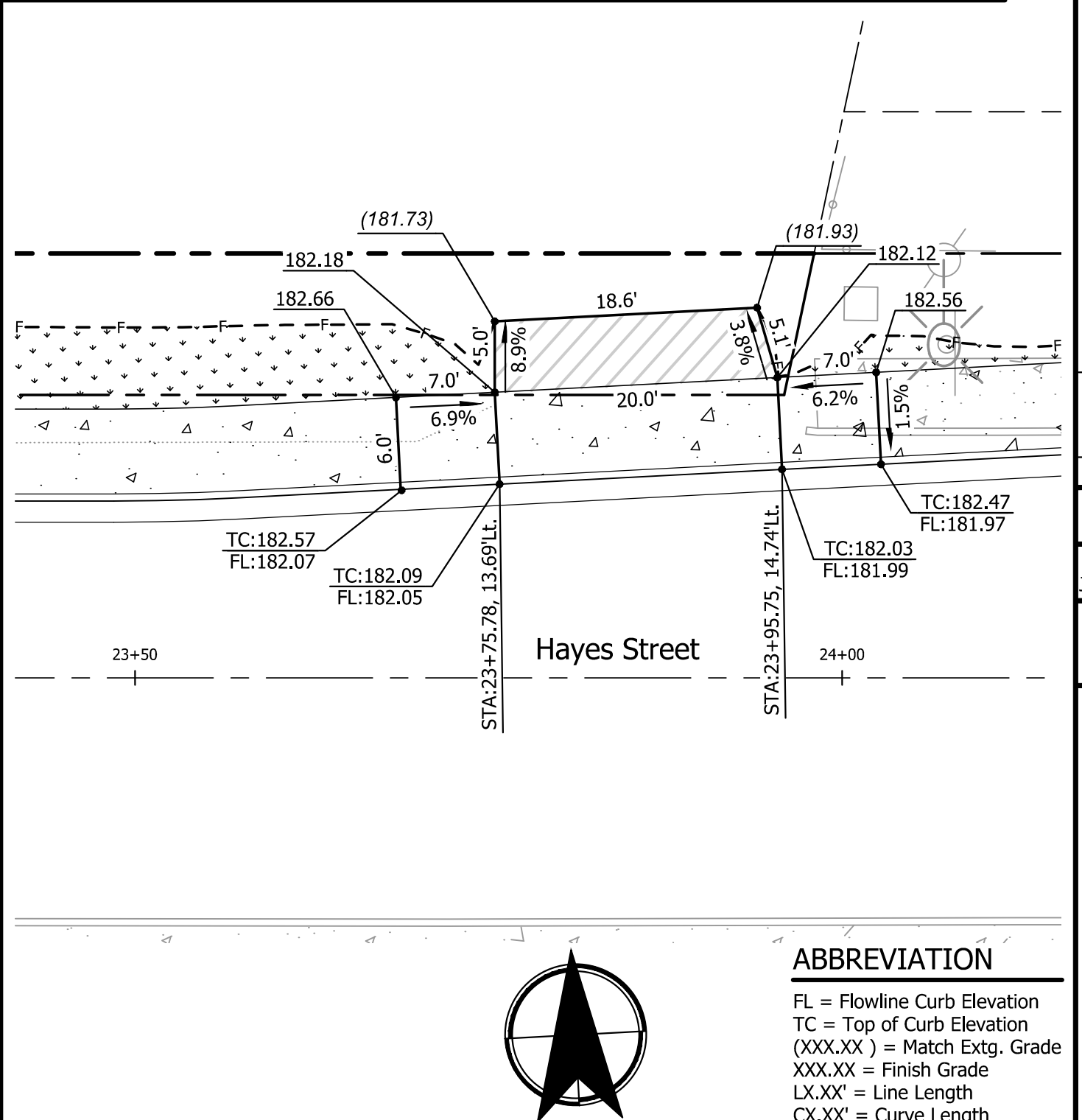
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Asphalt	200.0



1C 1637 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

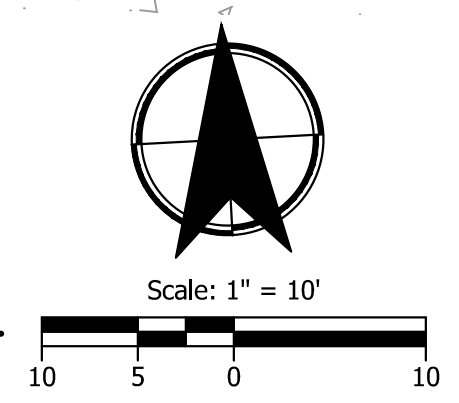
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
24.0	38.0	Concrete	228.0	Asphalt	248.5



1D 1621 W Hayes St
 SCALE: 1" = 10'

Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Asphalt	96.5



ABBREVIATION
 FL = Flowline Curb Elevation
 TC = Top of Curb Elevation
 (XXX.XX) = Match Extg. Grade
 XXX.XX = Finish Grade
 LX.XX' = Line Length
 CX.XX' = Curve Length

Plot Stamp: 3/4/2022 9:27:05 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Detailed-Grading-Plans-DRWYS.dwg

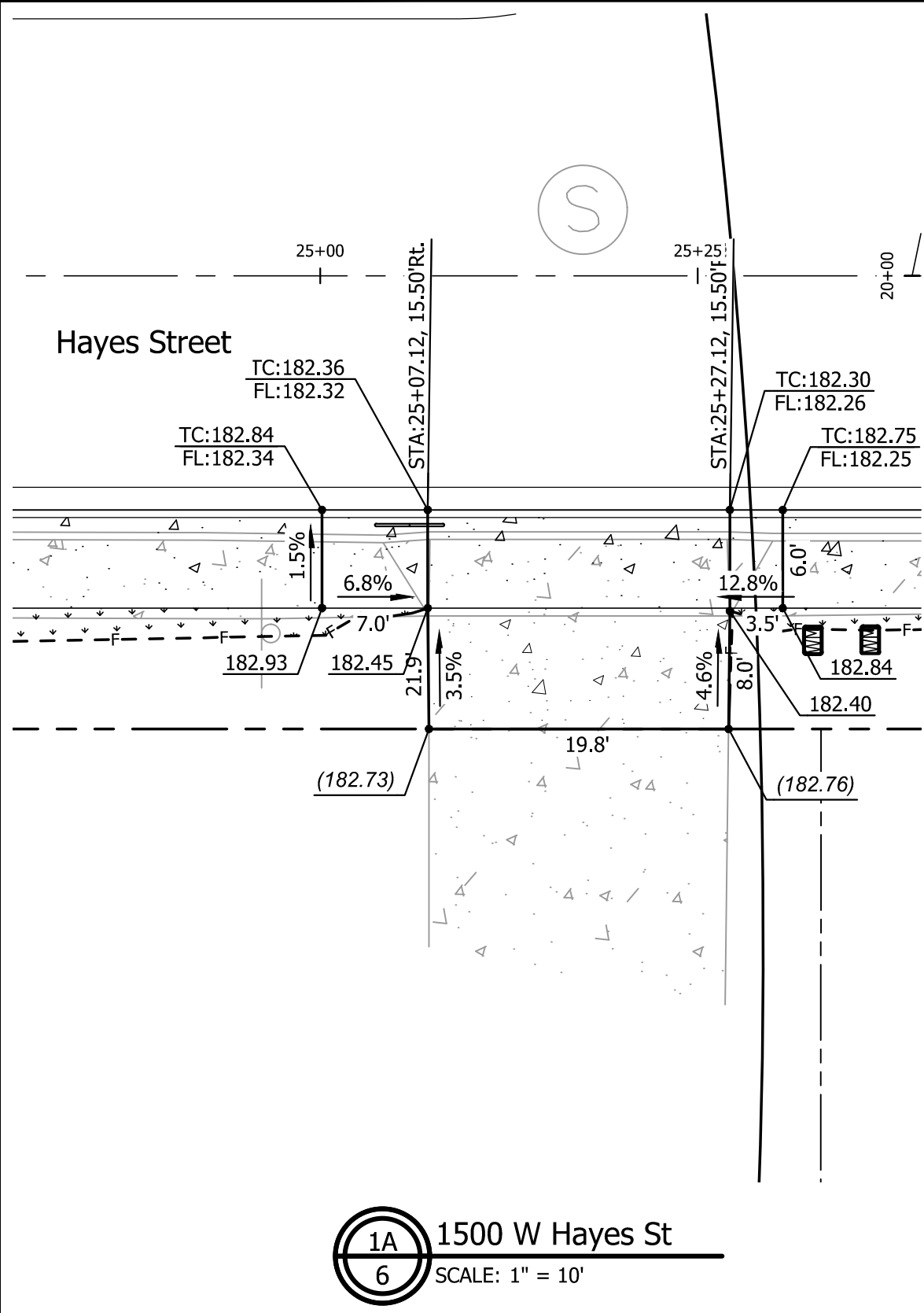
NO.	REVISION	DATE	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW
 PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

DETAILED DRIVEWAY GRADING PLANS

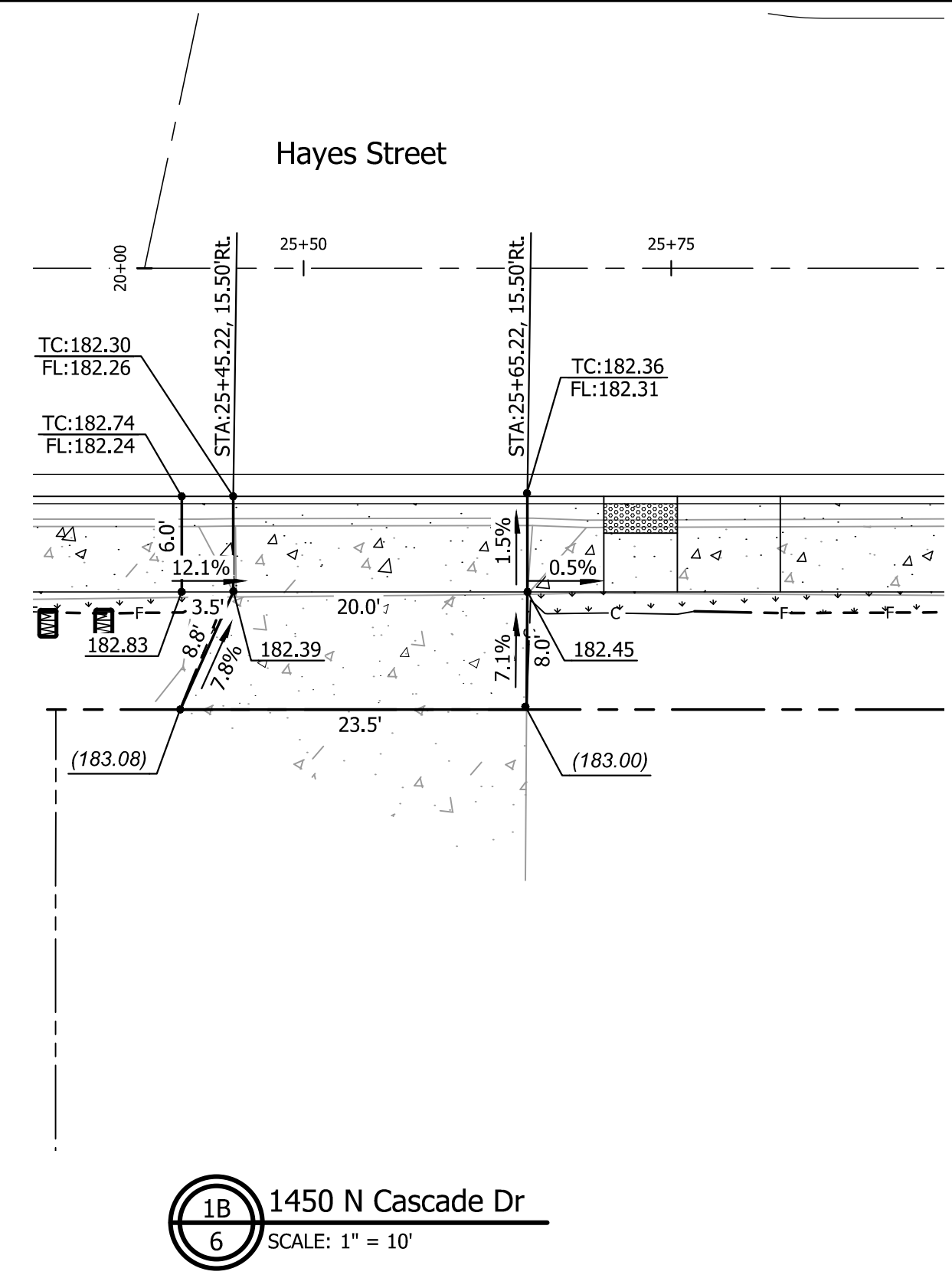
SHEET NO. 2E-11



1A 1500 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

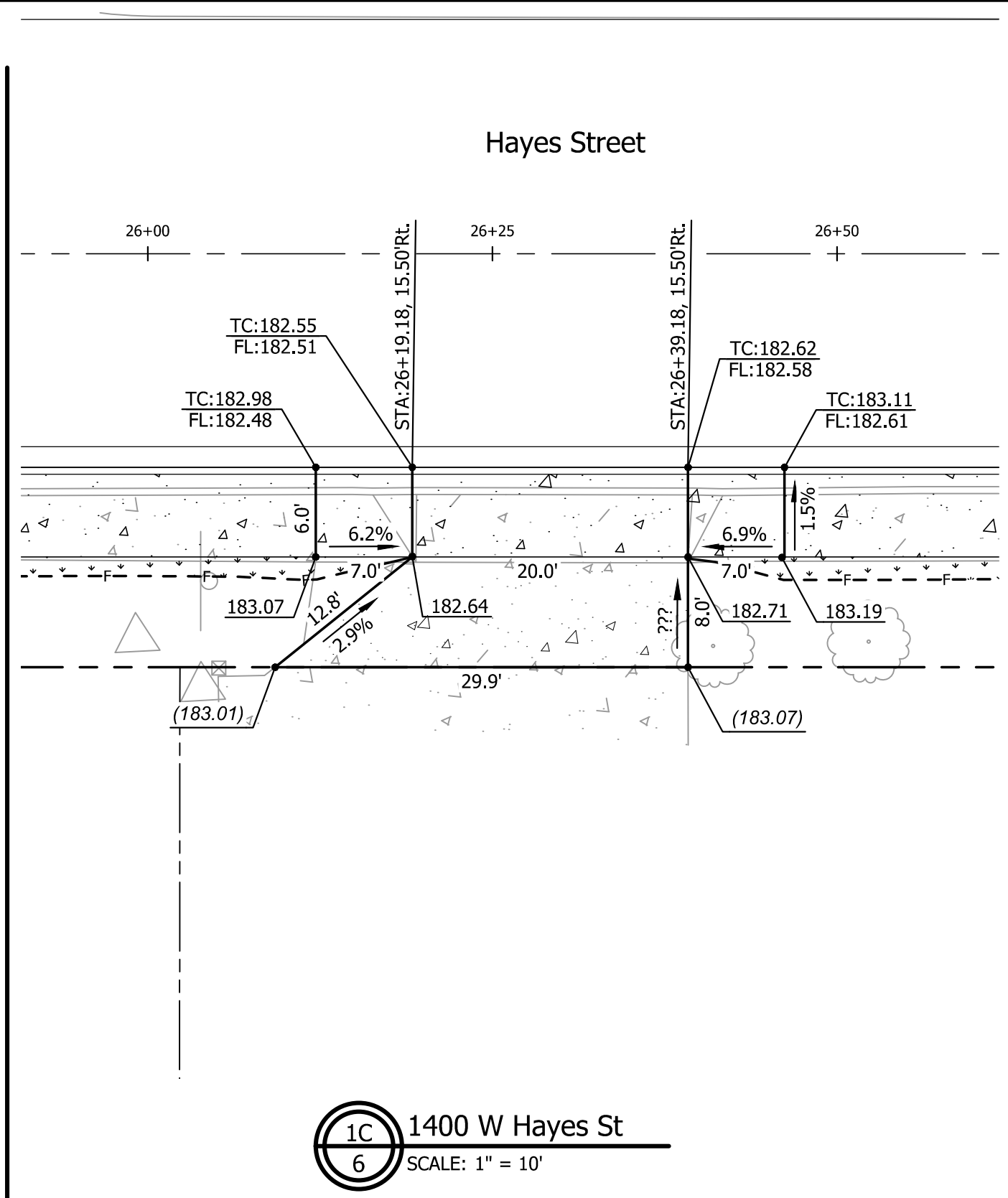
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
19.8	30.3	Concrete	183.0	Concrete	159.4



1B 1450 N Cascade Dr
SCALE: 1" = 10'

Driveway Construction Table

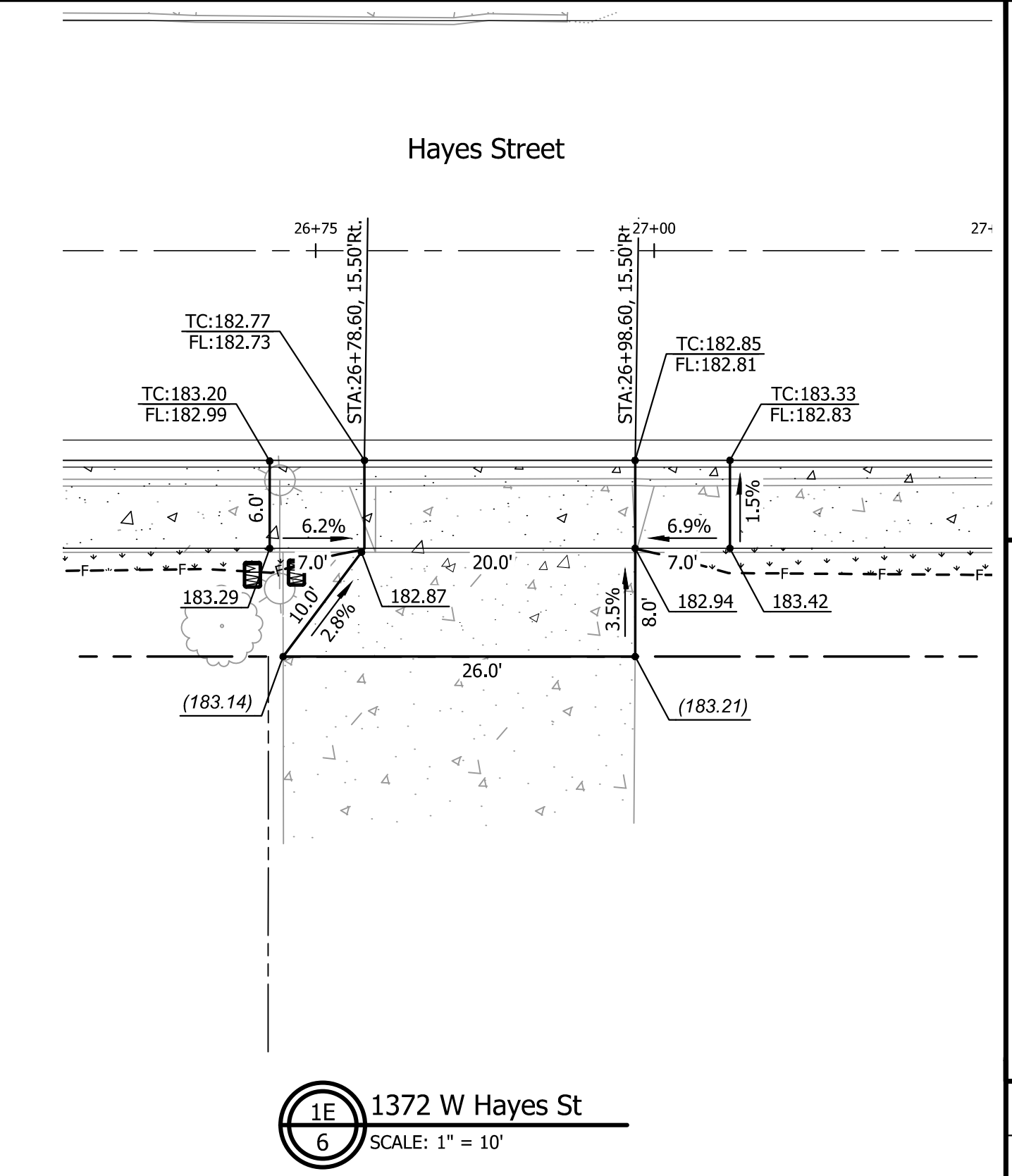
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
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1C 1400 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

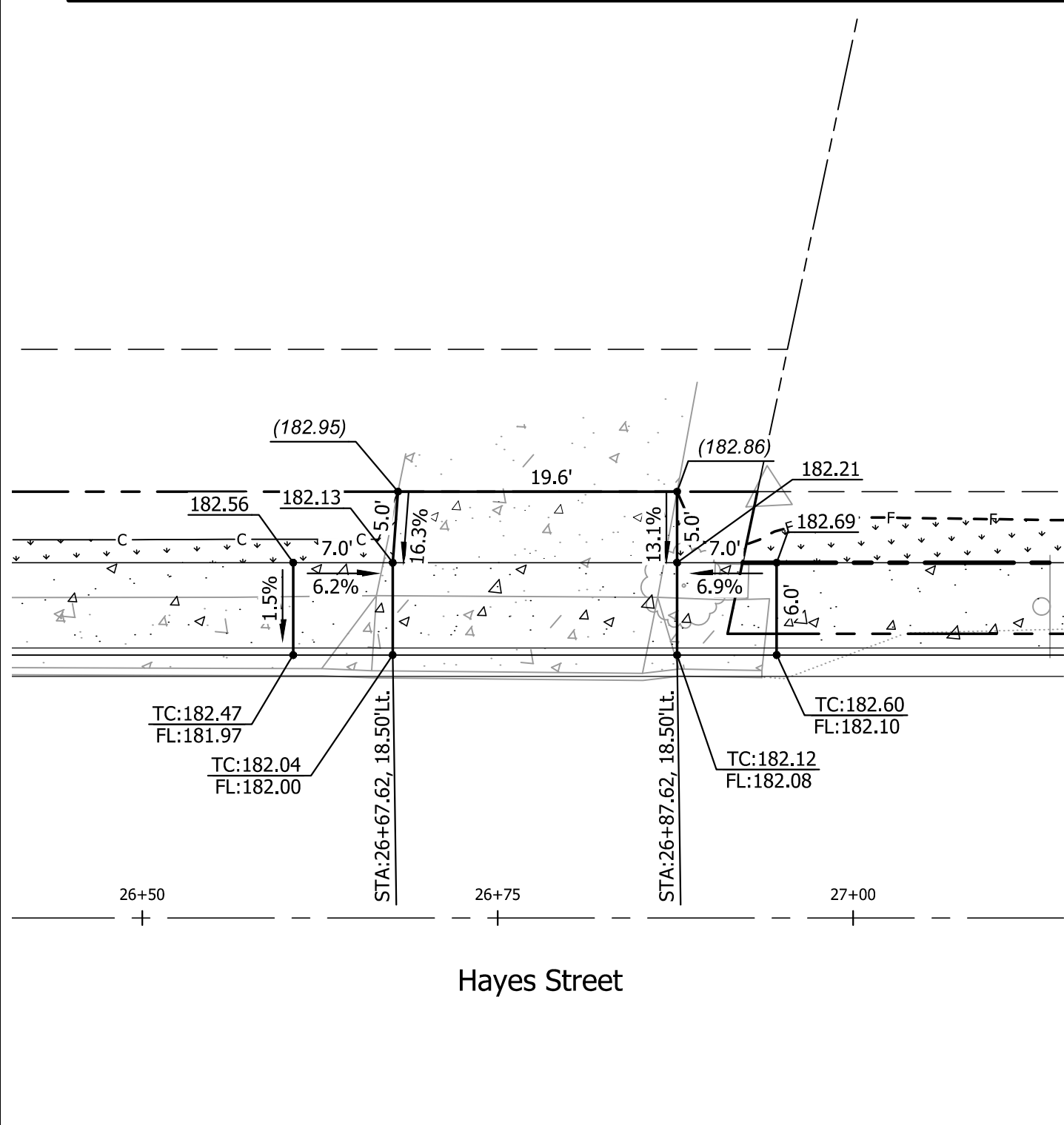
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	199.8



1E 1372 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

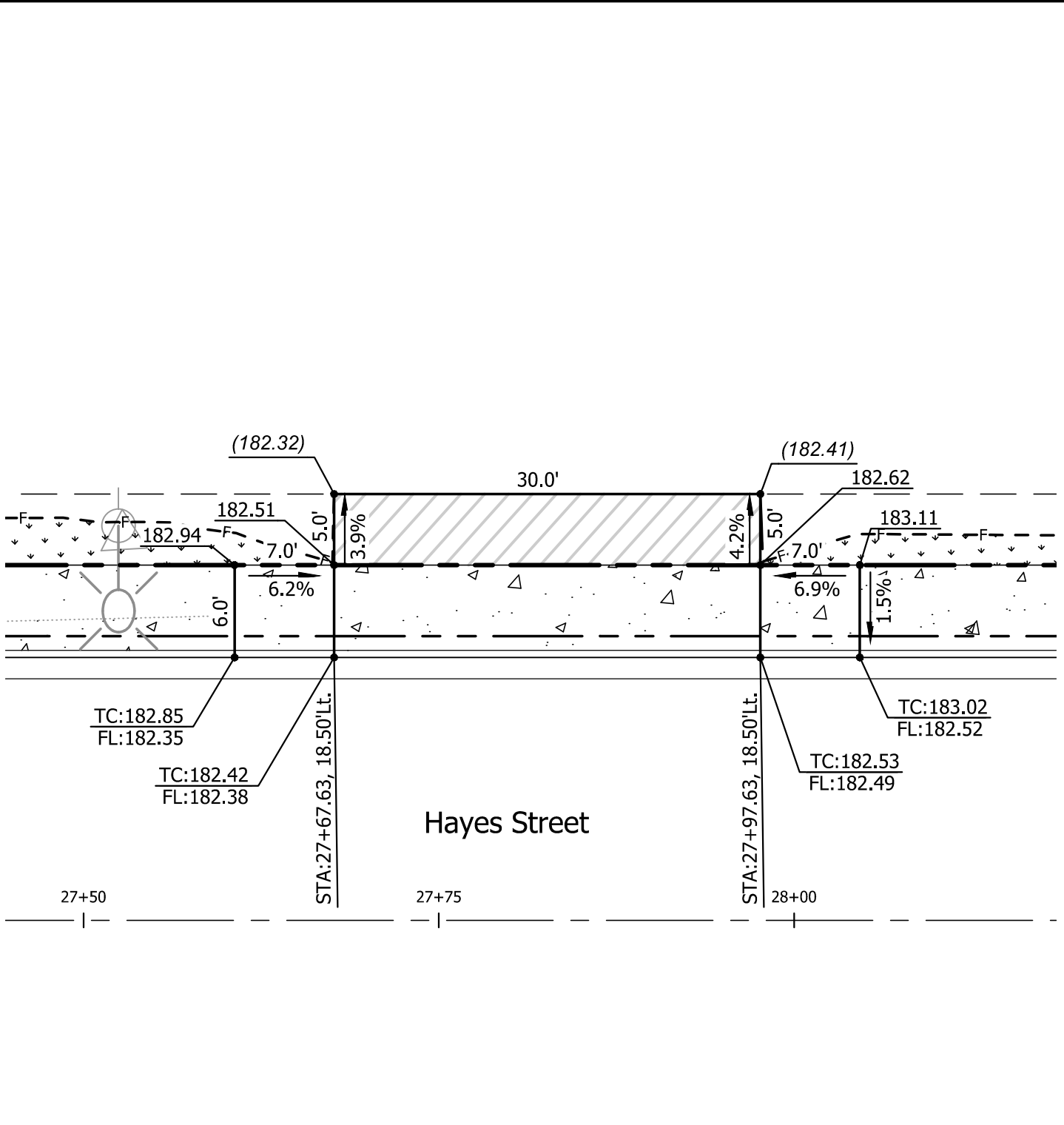
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	184.1



1D 1453 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

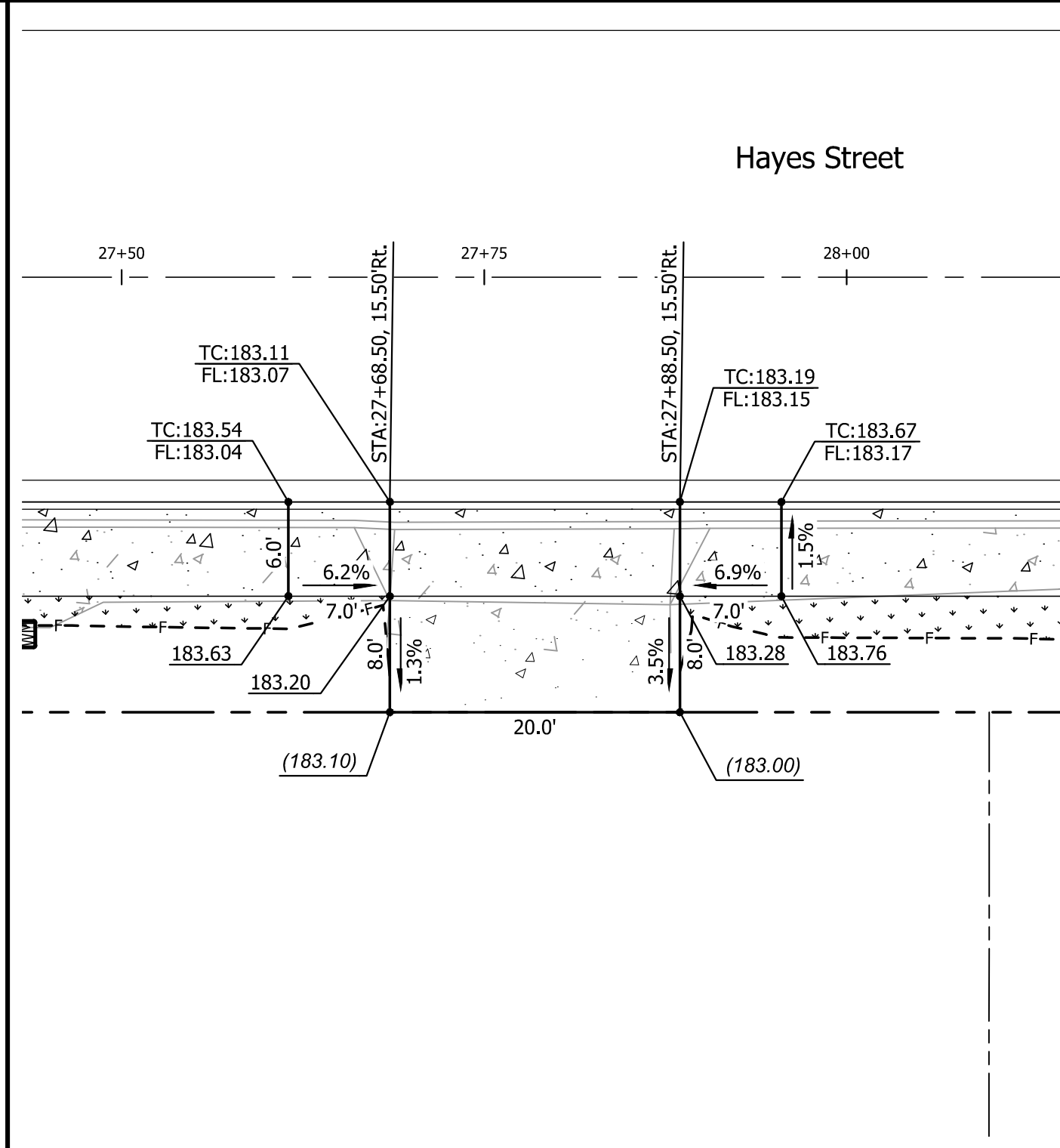
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
19.6	33.6	Concrete	201.6	Concrete	99.1



1G Hayesvilla Apartments
SCALE: 1" = 10'

Driveway Construction Table

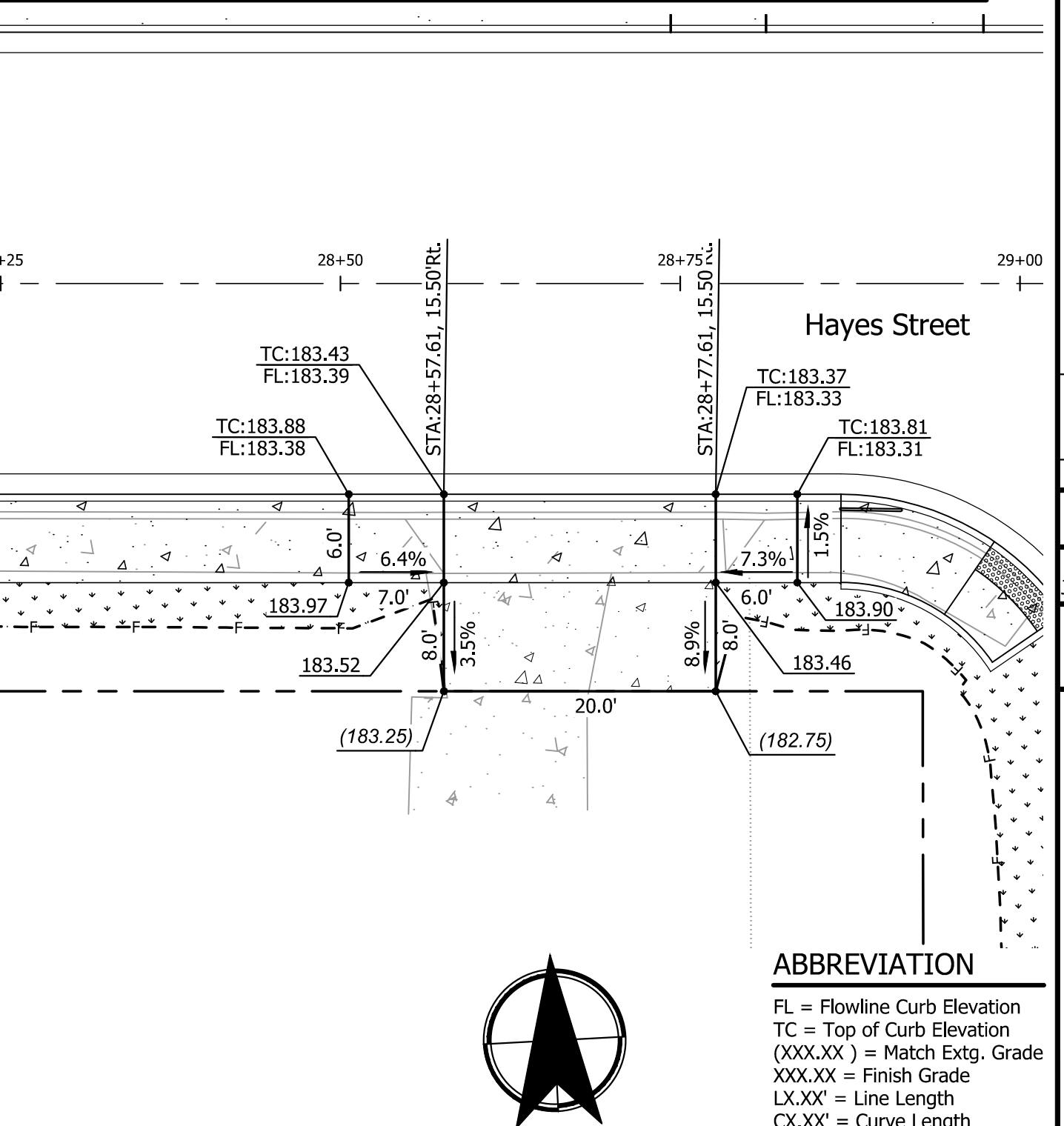
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
30.0	44.0	Concrete	264.0	Asphalt	150.0



1F 1356 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

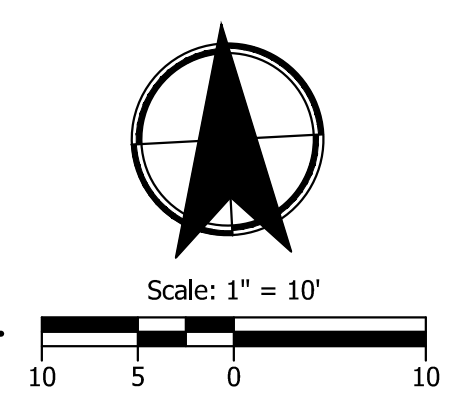
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	160.0



1A 1340 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	160.0



ABBREVIATION

FL = Flowline Curb Elevation
 TC = Top of Curb Elevation
 (XXX.XX) = Match Extg. Grade
 XXX.XX = Finish Grade
 LX.XX' = Line Length
 CX.XX' = Curve Length

REGISTERED PROFESSIONAL ENGINEER
 74207PE
 OREGON
 JULY 8, 2008
 FRED S. WISMER JR.
 EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST

Plot Stamp: 3/4/2022 9:27:30 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Detailed-Grading-Plans-DRWYS.dwg

NO.	DATE	REVISION	APP'D

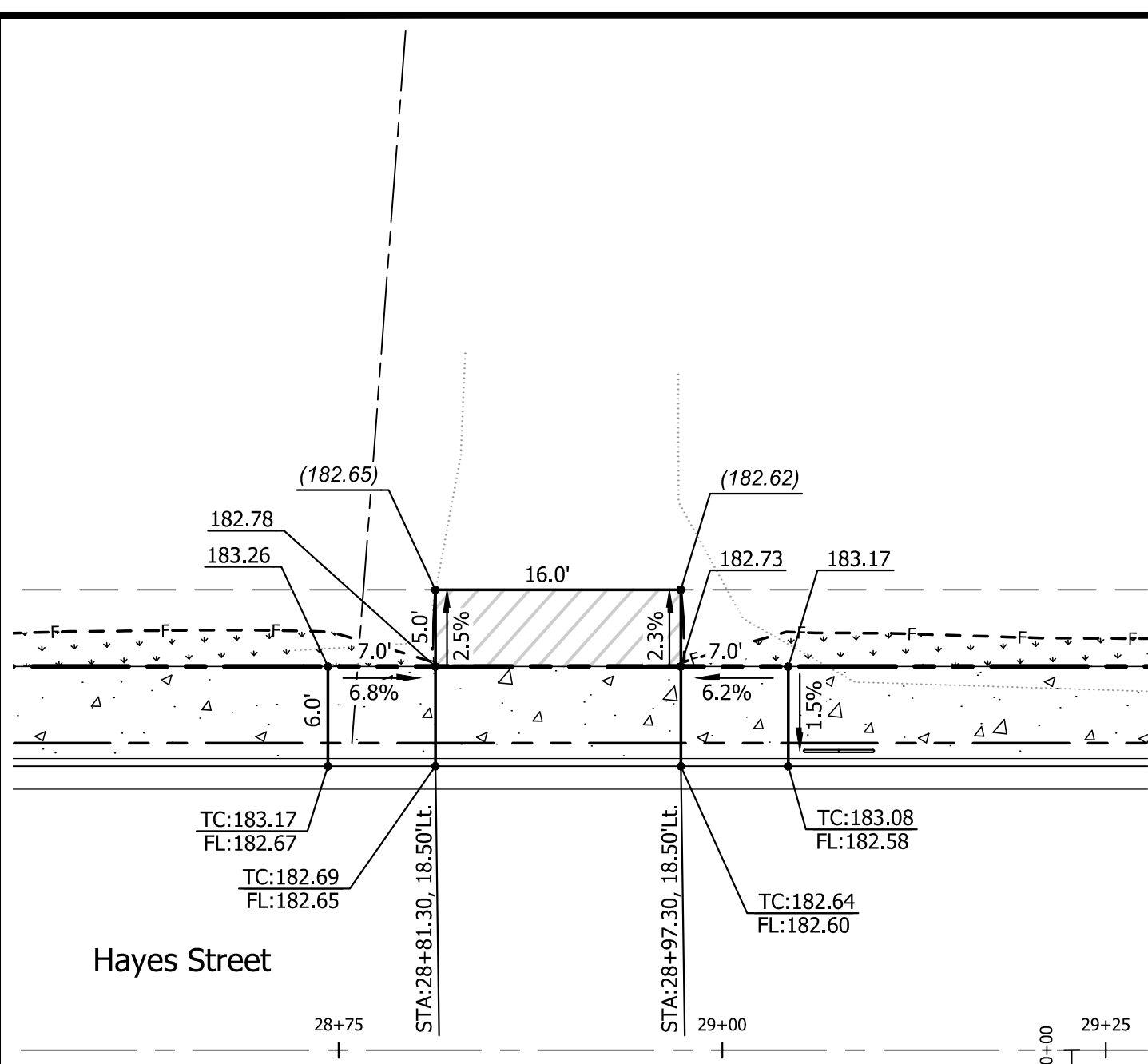
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

DETAILED DRIVEWAY GRADING PLANS

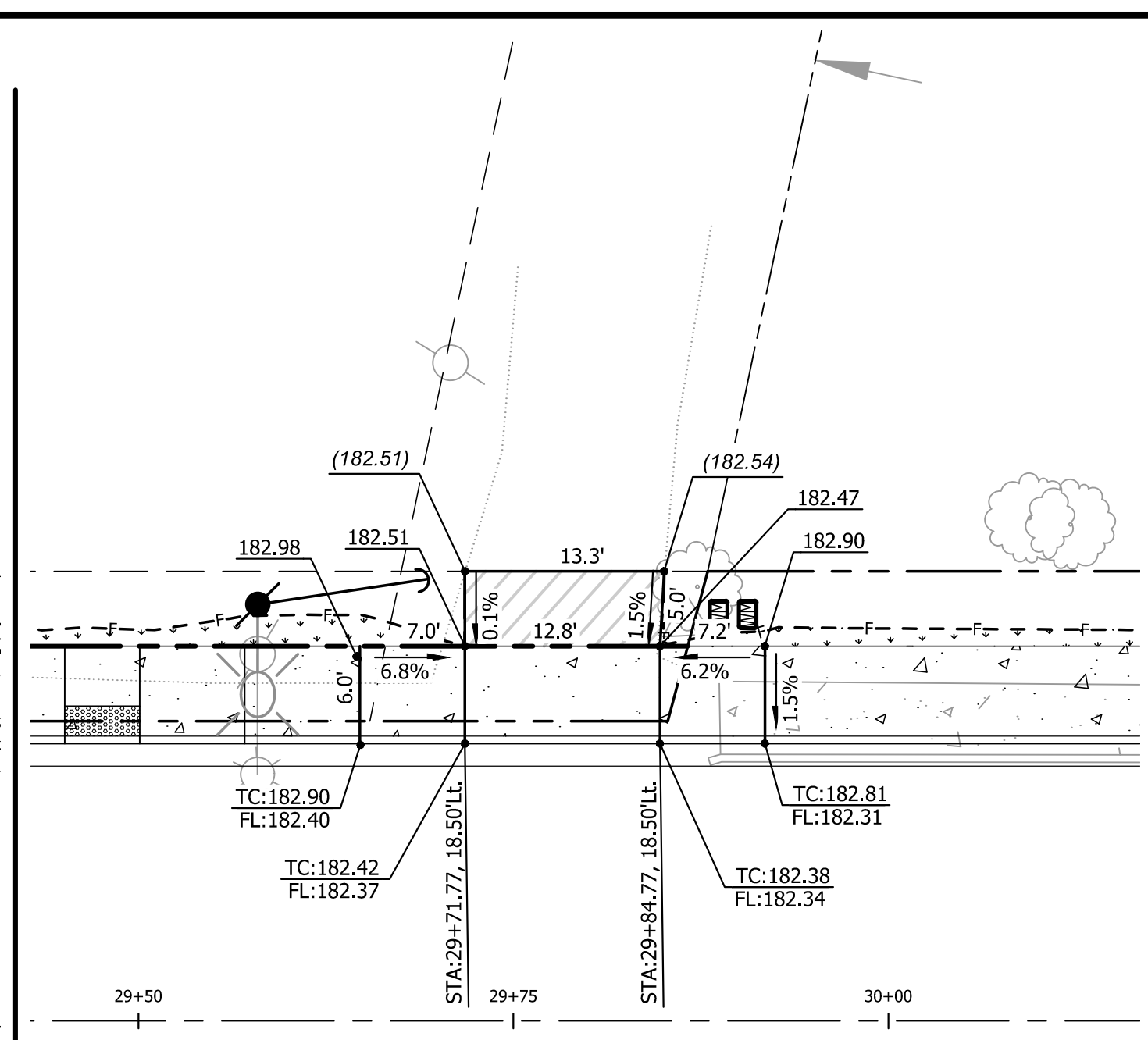
SHEET NO.
2E-12



1B
7
1315-1311 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

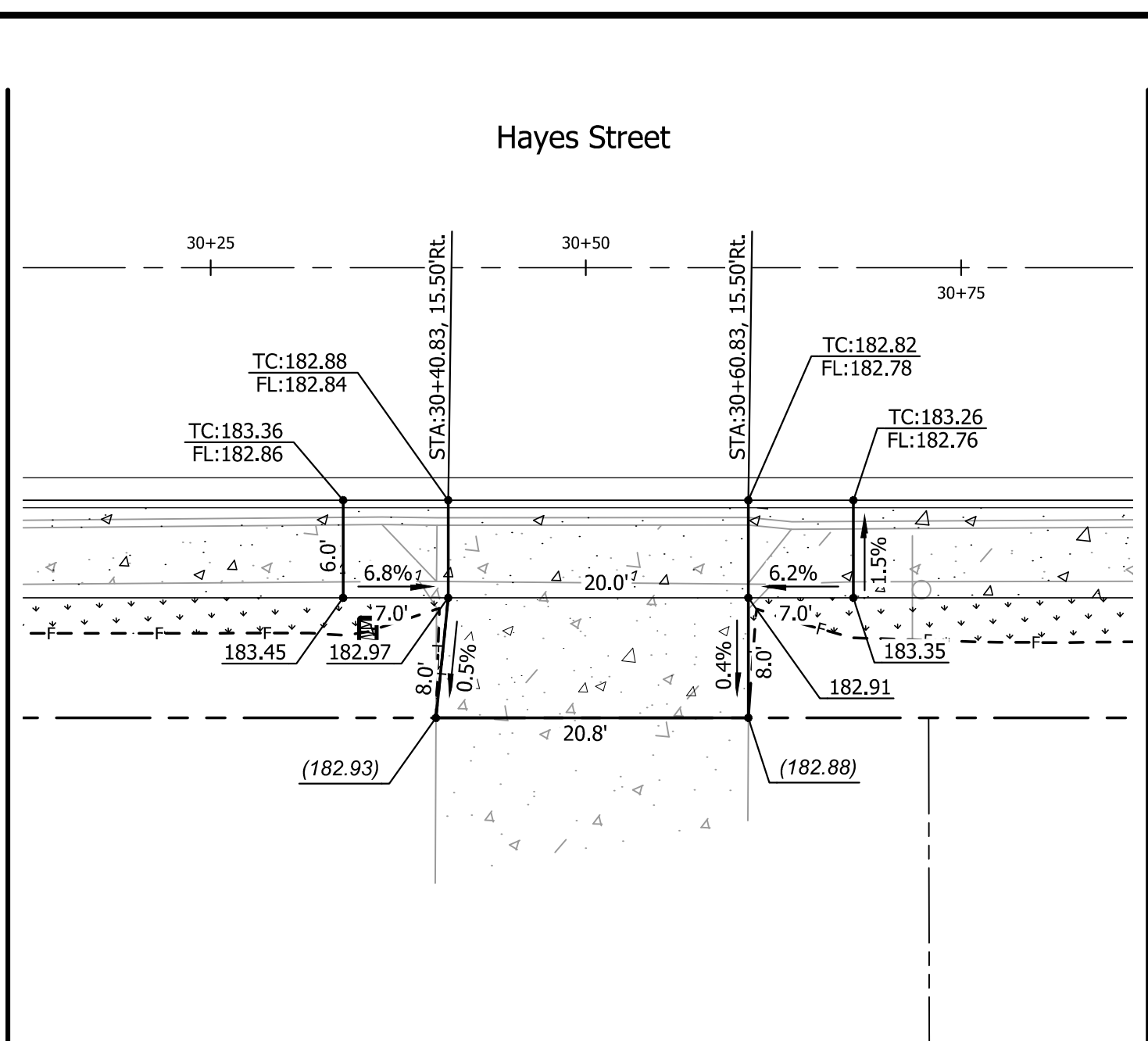
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
26.0	32.0	Concrete	354.00	Asphalt	354.00



1C
7
1309 N Cascade Dr
SCALE: 1" = 10'

Driveway Construction Table

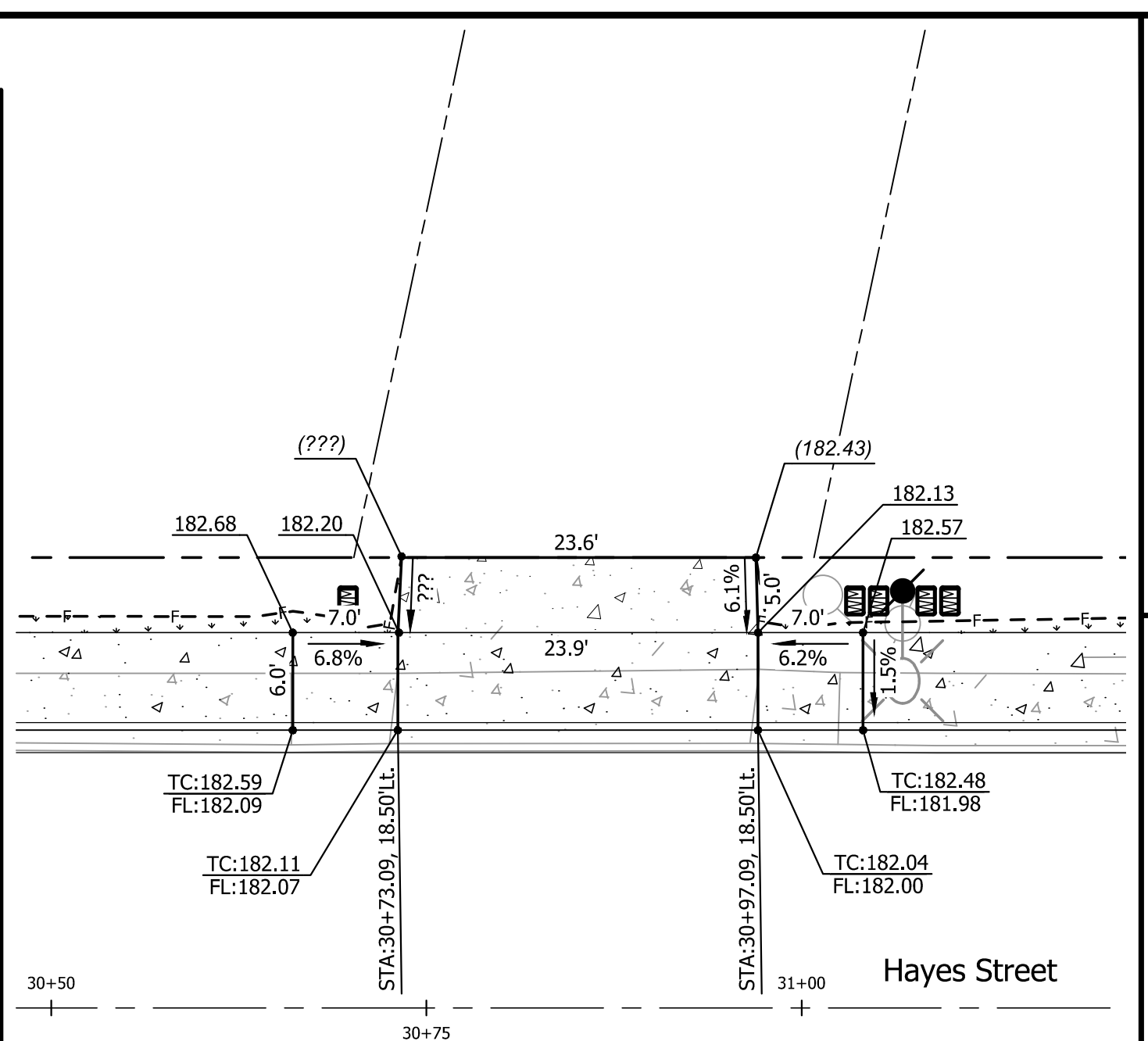
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
12.8	27.0	Concrete	162.0	Asphalt	65.7



1D
7
1290 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

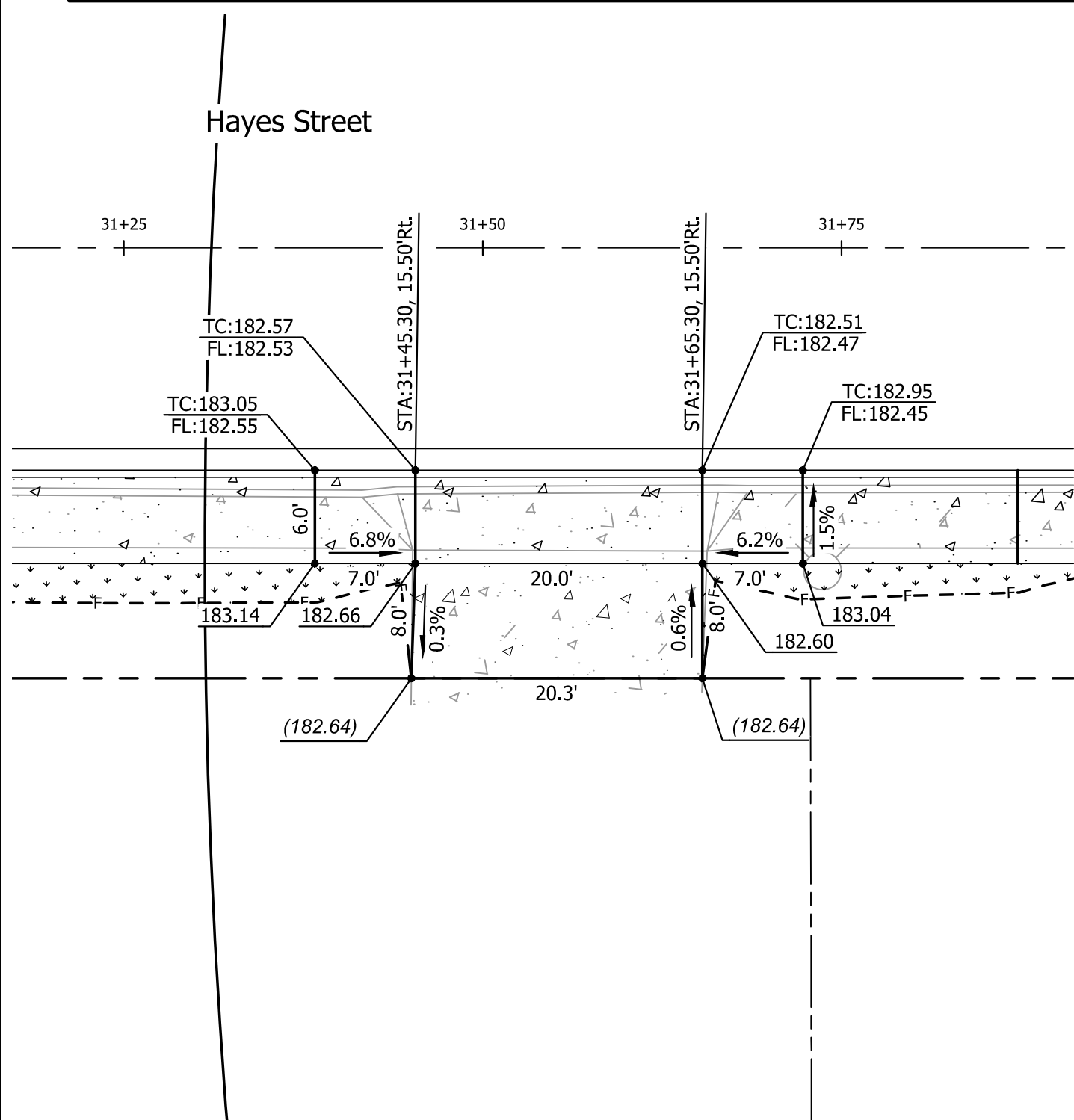
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	163.3



1E
7
1281-1277 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

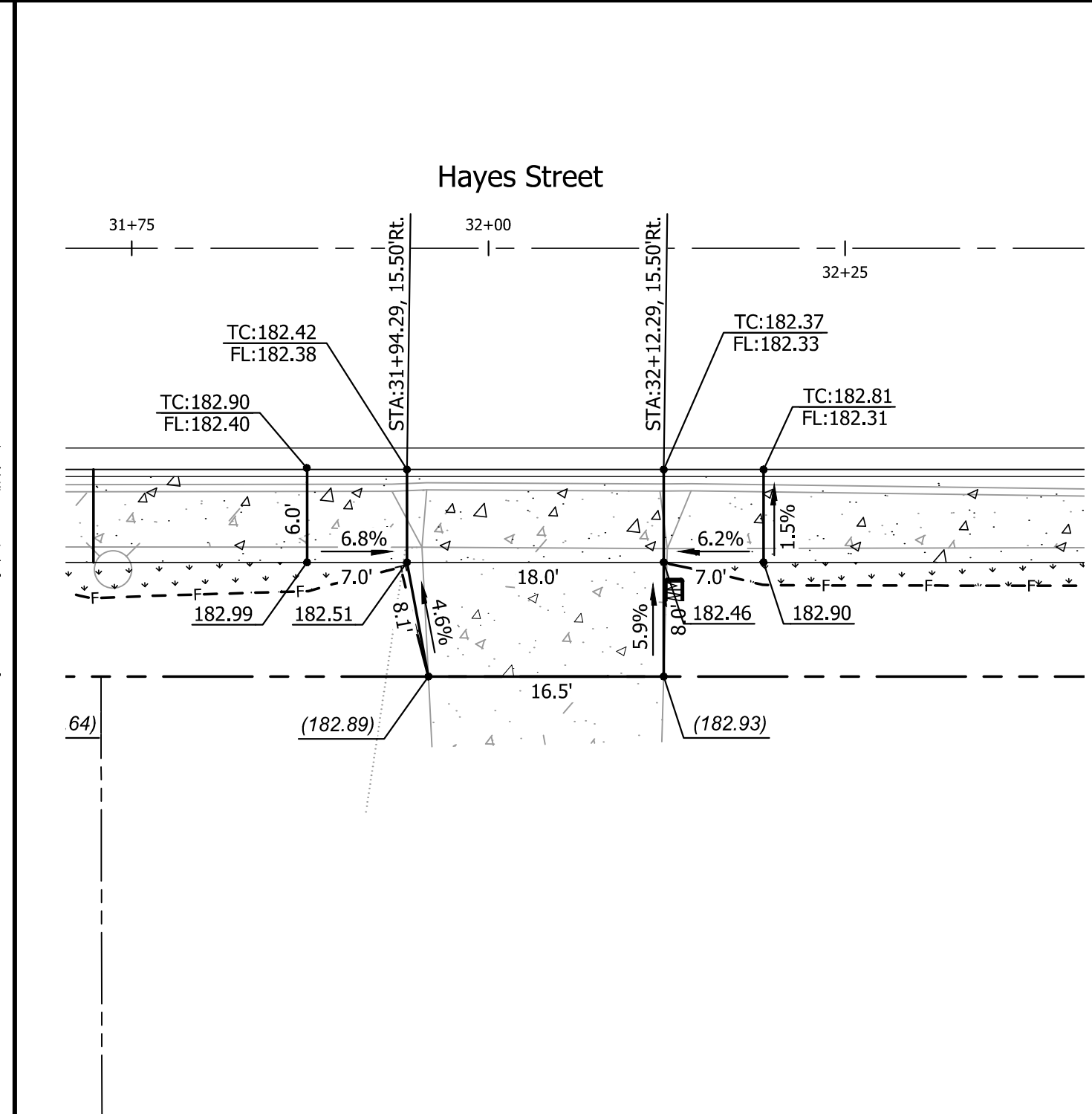
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
23.9	37.9	Concrete	227.4	Concrete	119.1



1F
7
1250 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

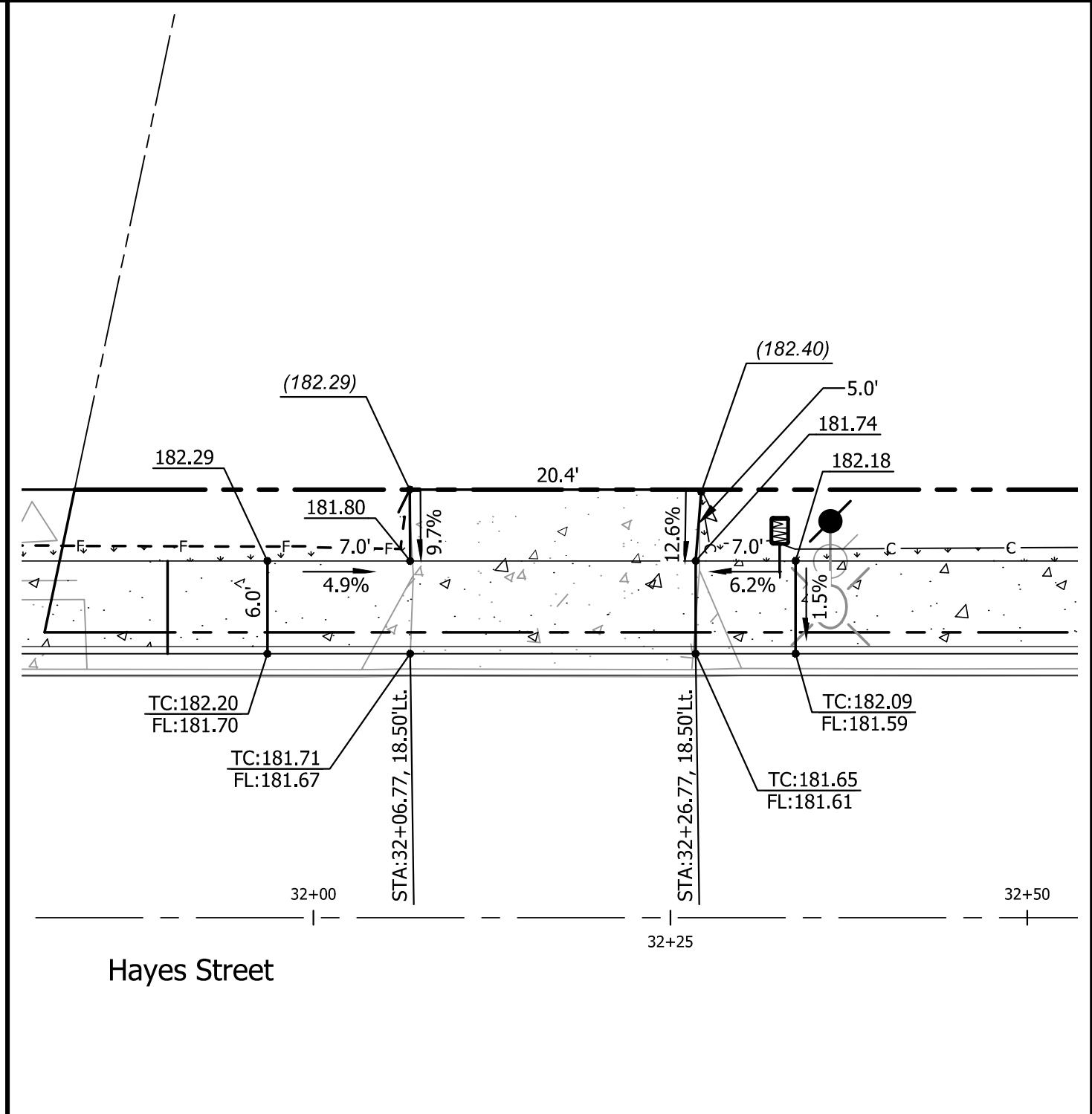
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	161.1



1G
7
1150 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

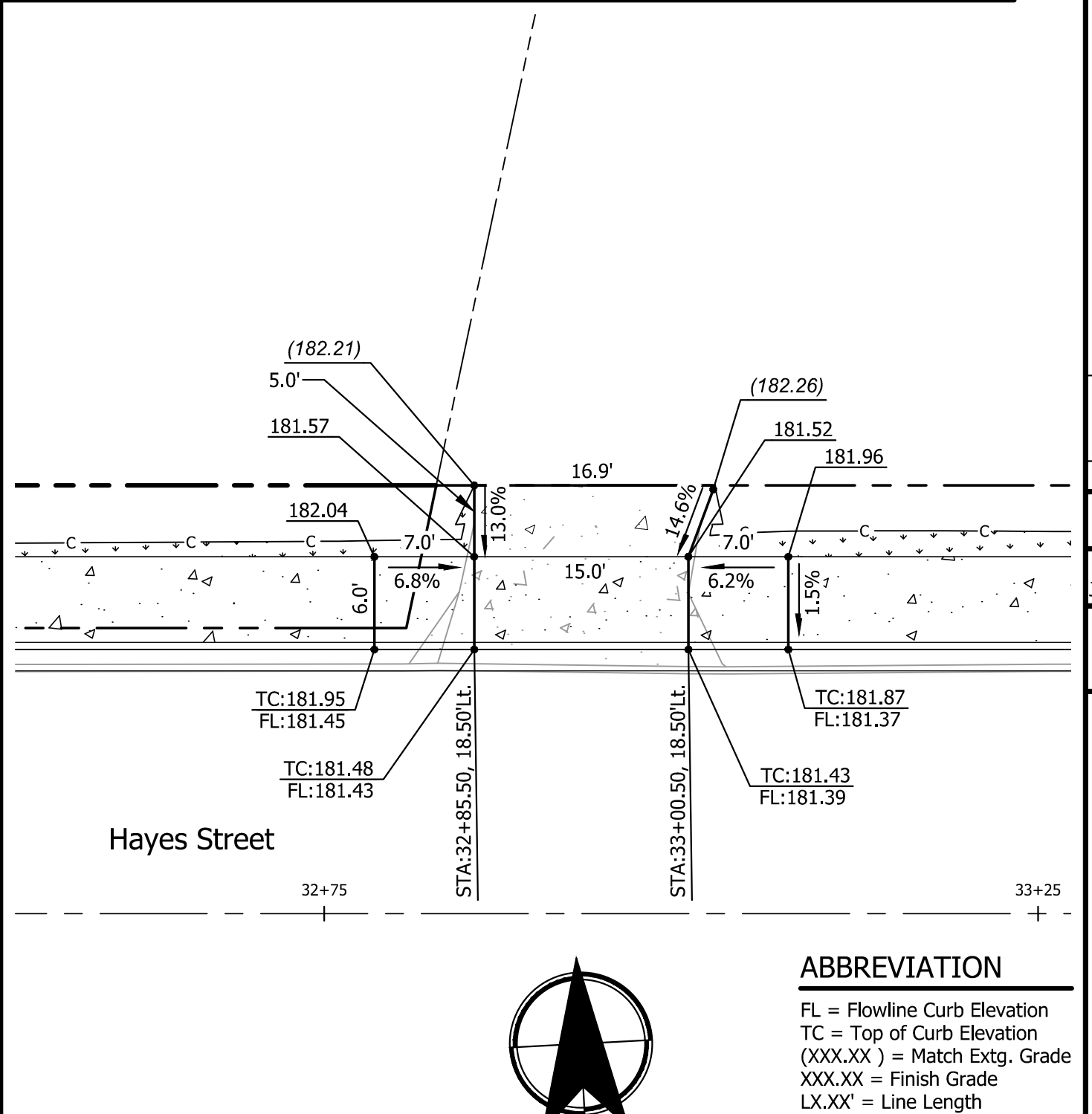
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
18.0	32.0	Concrete	192.0	Concrete	138.0



1H
7
1251 W Hayes St
SCALE: 1" = 10'

Driveway Construction Table

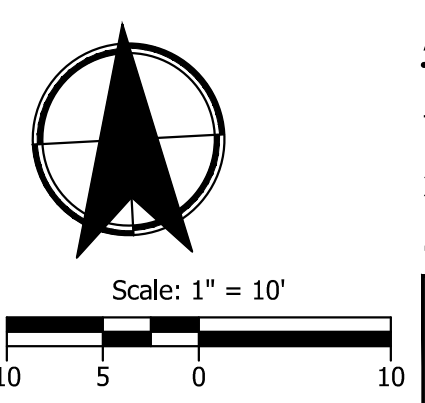
Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.3	34.3	Concrete	204.0	Concrete	100.7



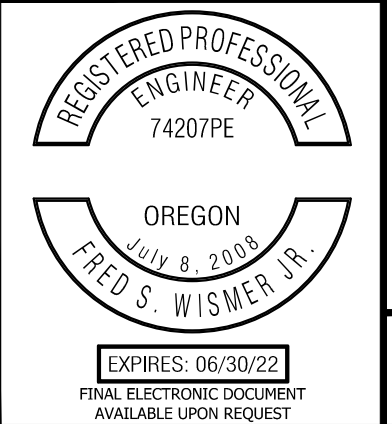
1A
8
507 Leasure St Garage
SCALE: 1" = 10'

Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
15.0	29.0	Concrete	174.0	Concrete	80.1



ABBREVIATION
 FL = Flowline Curb Elevation
 TC = Top of Curb Elevation
 (XXX.XX) = Match Extg. Grade
 XXX.XX = Finish Grade
 LX.XX' = Line Length
 CX.XX' = Curve Length



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NO.	REVISION	DATE	APP'D.

Submission Date:
03/07/2022

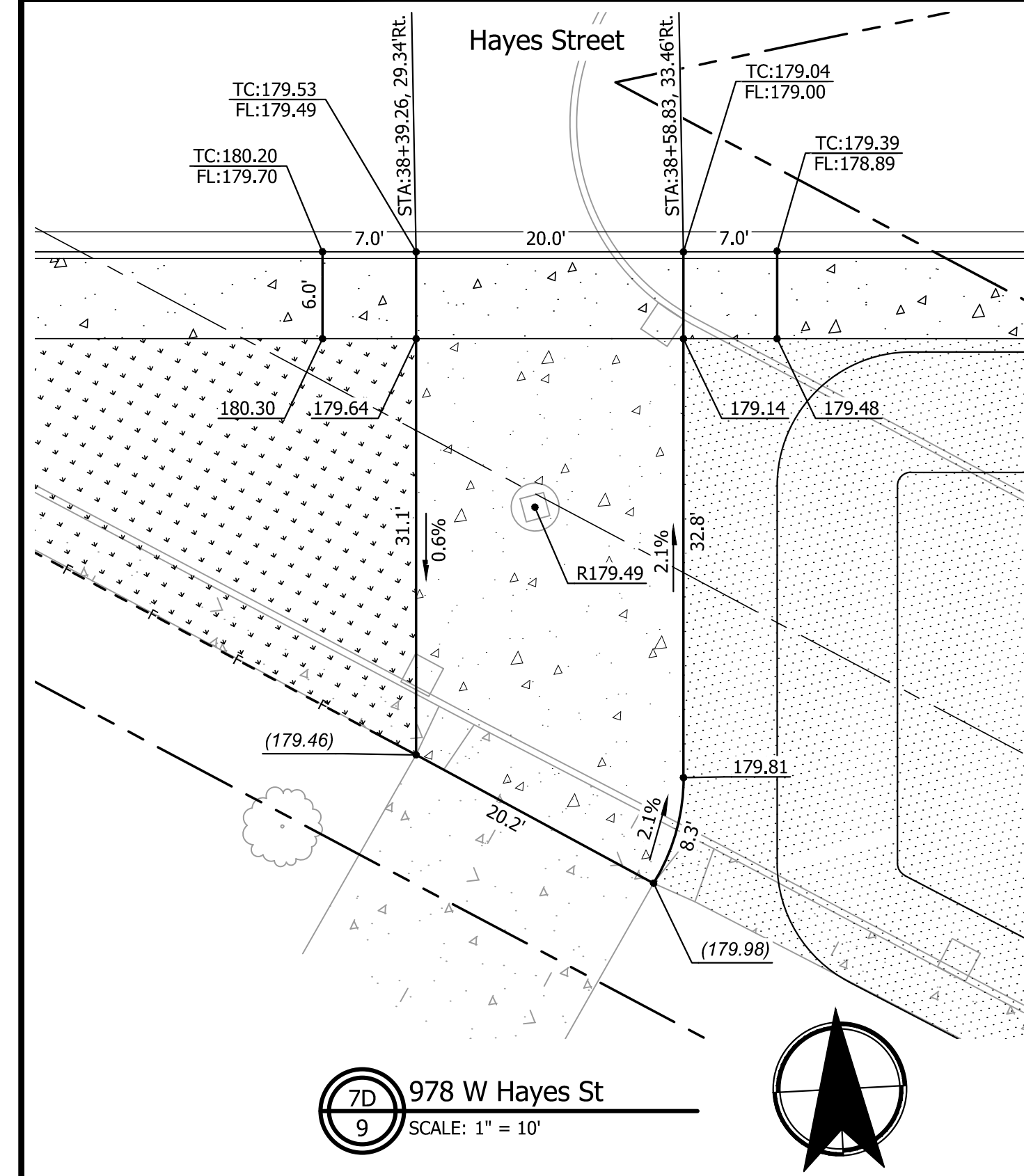
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemeir Avenue

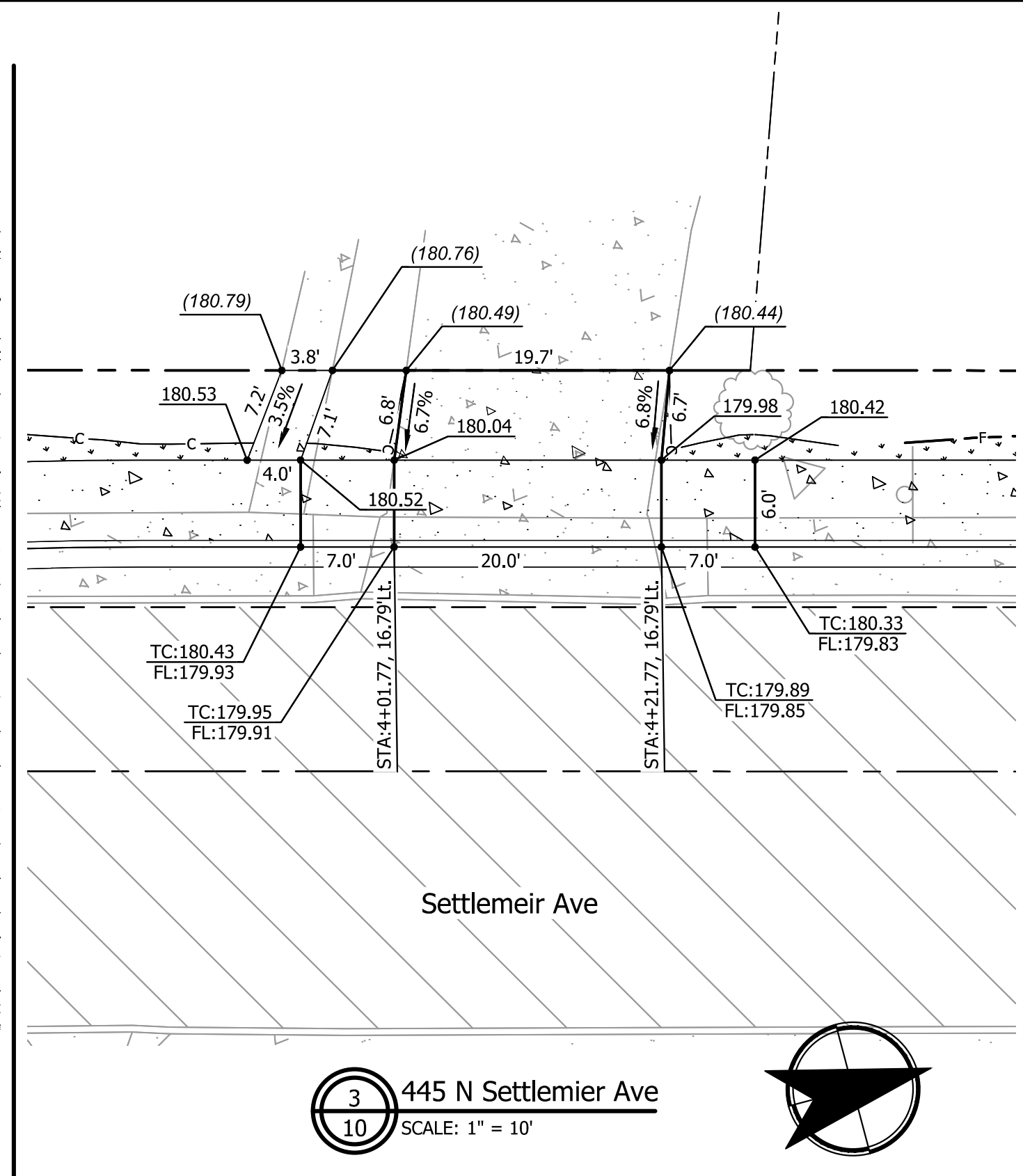
DETAILED DRIVEWAY GRADING PLANS

SHEET NO.
2E-14



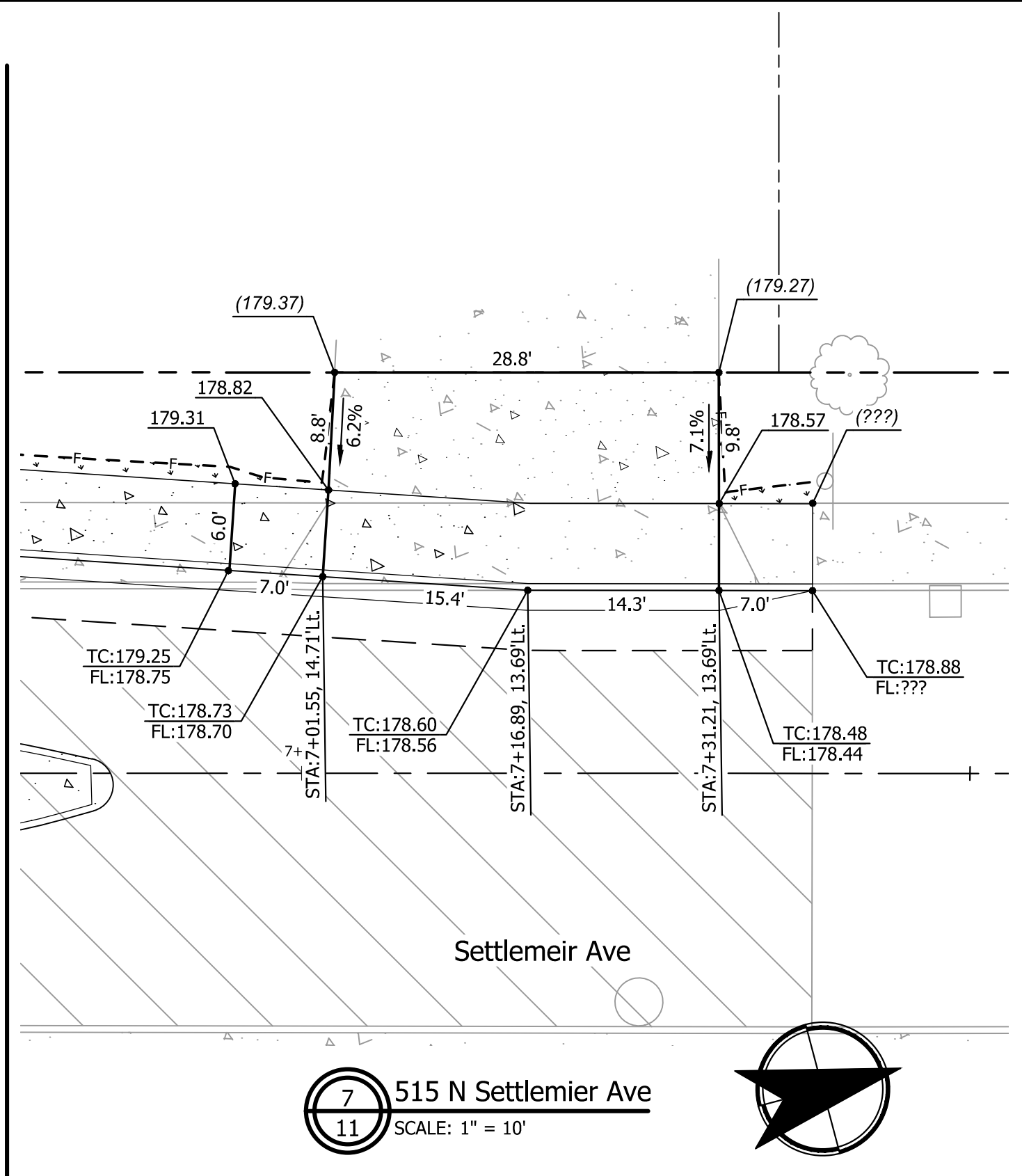
Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	723.8



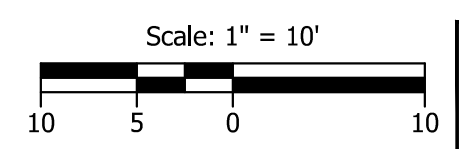
Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
20.0	34.0	Concrete	204.0	Concrete	134.0

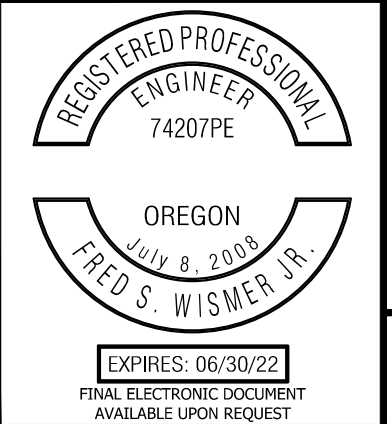


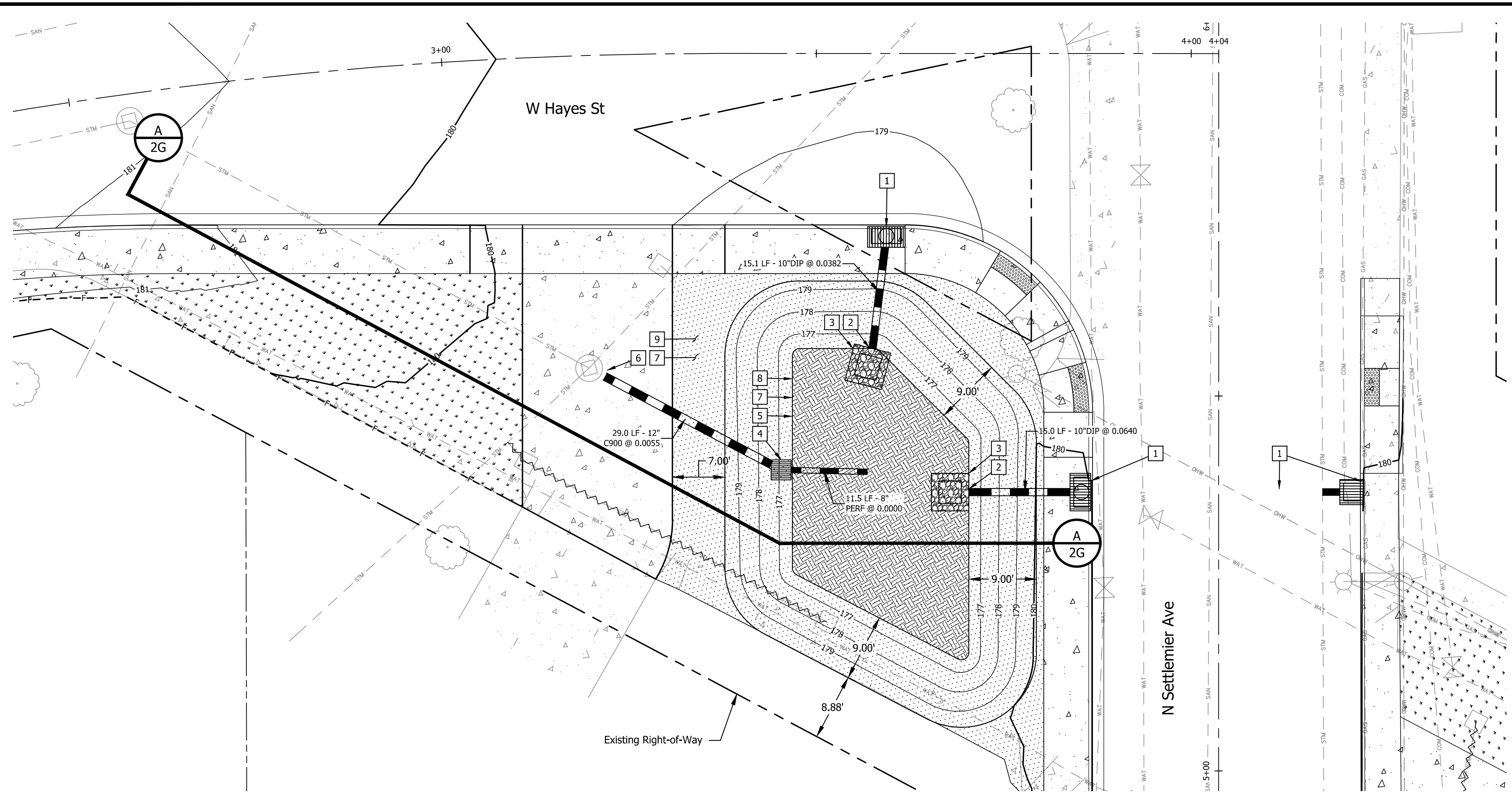
Driveway Construction Table

Throat Width (ft)	Width w/Wings (ft)	Driveway Area Material	Driveway Area (Sq. Ft) (D/W)	Approach Area Material	Approach Area (Sq. Ft) (D/W)
29.7	43.7	Concrete	262.2	Concrete	282.3

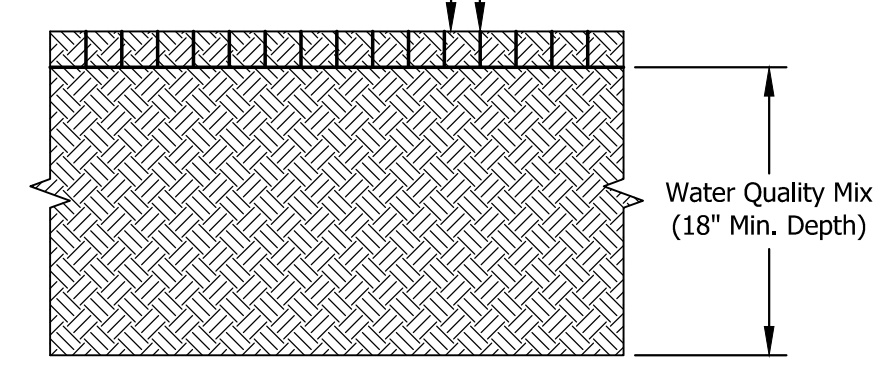


ABBREVIATION
FL = Flowline Curb Elevation
TC = Top of Curb Elevation
(XXX.XX) = Match Extg. Grade
XXX.XX = Finish Grade
LX.XX' = Line Length
CX.XX' = Curve Length





Access Grid filled with Water Quality Mix.
Access Grid to be NDS EZ Roll Grass Pavers
or Approved Equal from ODOT QPL.
Permanent Water Quality Seeding



Water Quality Soil Media Properties	
Sieve Size	Percent Passing (By Weight)
No. 4	100
No. 10	95 - 100
No. 40	40 - 60
No. 100	10 - 25
No. 200	5 - 10

General Notes

- Water Quality Mix shall be 20% - 25% medium type compost with 75% - 80% water quality soil media.
- Soil sampling must meet the requirements of AASHTO T2.
- Sieve analysis must meet the requirements of AASHTO T27 and AASHTO T11.
- Soil pH range should be between 5.5 to 8.0.
- Medium type compost shall meet the requirements of Section 03020 of the 2021 Oregon Standard Specifications for Construction.
- Contractor shall use a manually operated landscape water filled roller to compact the water quality mix.
- Contractor shall rake level and remove surface rocks larger than 1-inch diameter.

Biofiltration Media Detail

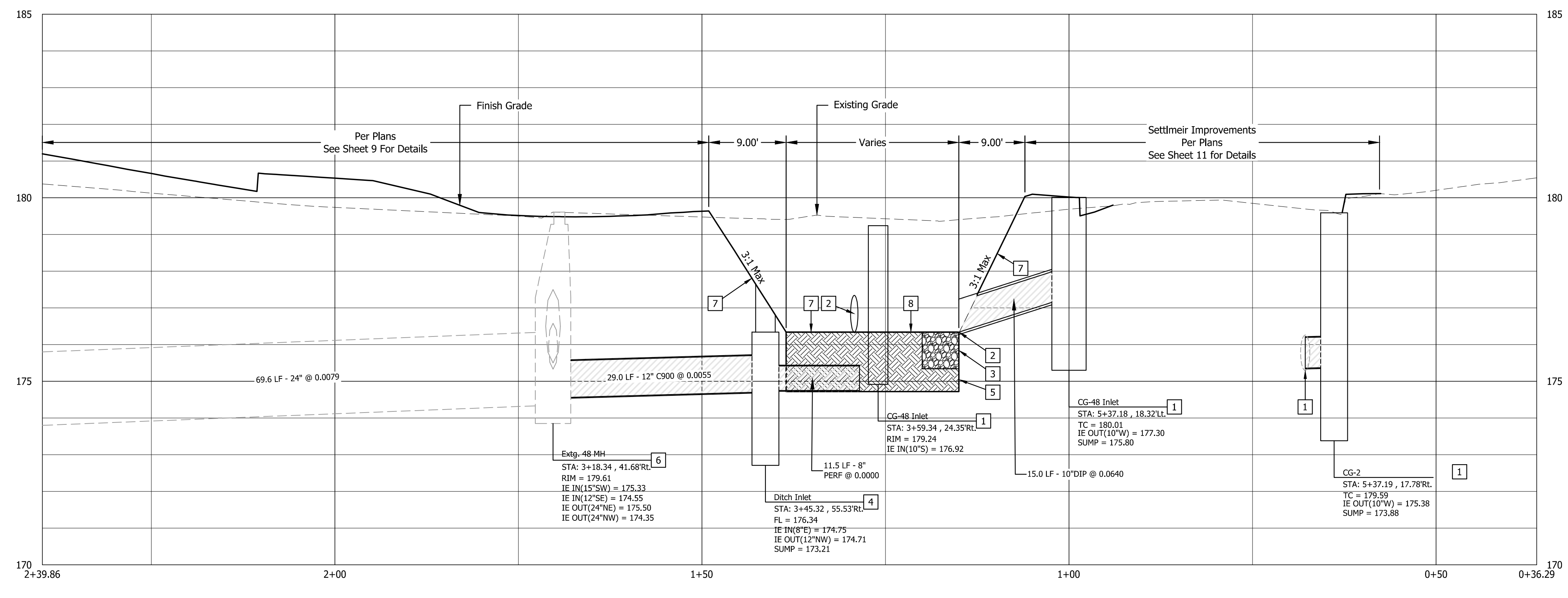
SCALE: NTS

STORM CONSTRUCTION NOTES

- Proposed Storm System
See Sheets 3 thru 11 for Details and Elevation Information
- Proposed Storm Outfall with Sloped Pipe End (2 Ea.)
W. Hayes Street STA 38+81.55, 55.10' Rt. IE = 176.34
N Settlemier STA 5+37.17, 33.32' Lt. IE = 176.34
- Construct Class 50 Riprap Energy Dissipater (5' W x 5' L x 12" D) (2 Ea.)
- Construct Ditch Inlet per CWS Standard Drawing No. 390
See Sheet 2B-5 for details
- Install Access Grid and 18" of Bio-filtration Media Along Pond Bottom
(±725 SF). See Detail This Sheet
- Connect to Existing Manhole (1 Ea.)
- Install Permanent Water Quality Seeding (±2,655 SF)
For Seeding Information, See Below.
- Pond Bottom Elevation = 176.34'
- Install 4" of Topsoil

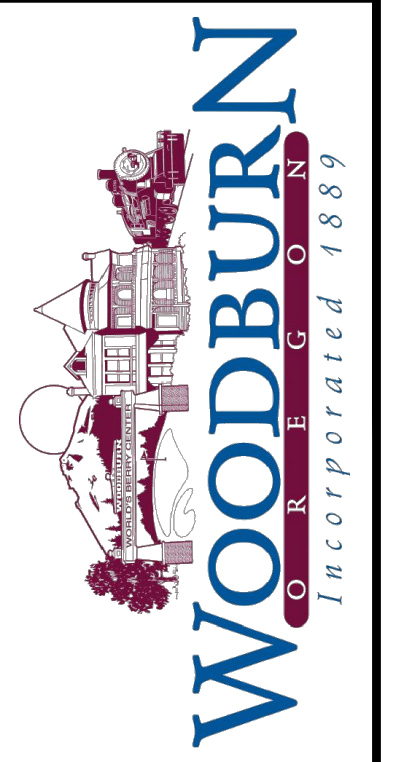
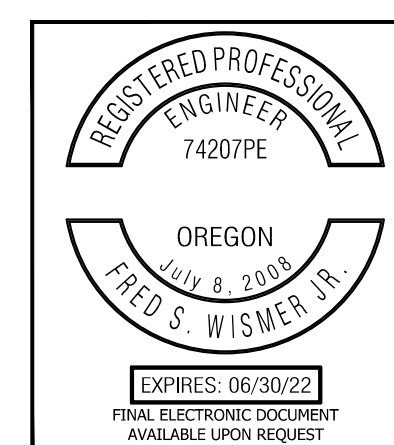
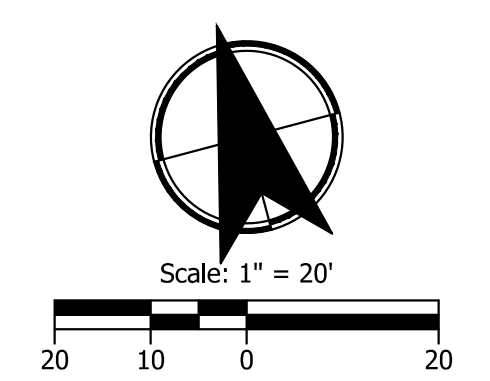
LEGEND

- Permanent Lawn Seeding Area
See Sheets 3 Thru 12 for More Information
- Bio-filtration Media Area Per Detail This Sheet (±725 SF)
- Permanent Water Quality Seeding Area (±2,655 SF)
- Proposed Riprap Area per Construction Notes This Sheet



Pond Section (A-A)

SCALE: NTS



KITTELSON & ASSOCIATES
851 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022

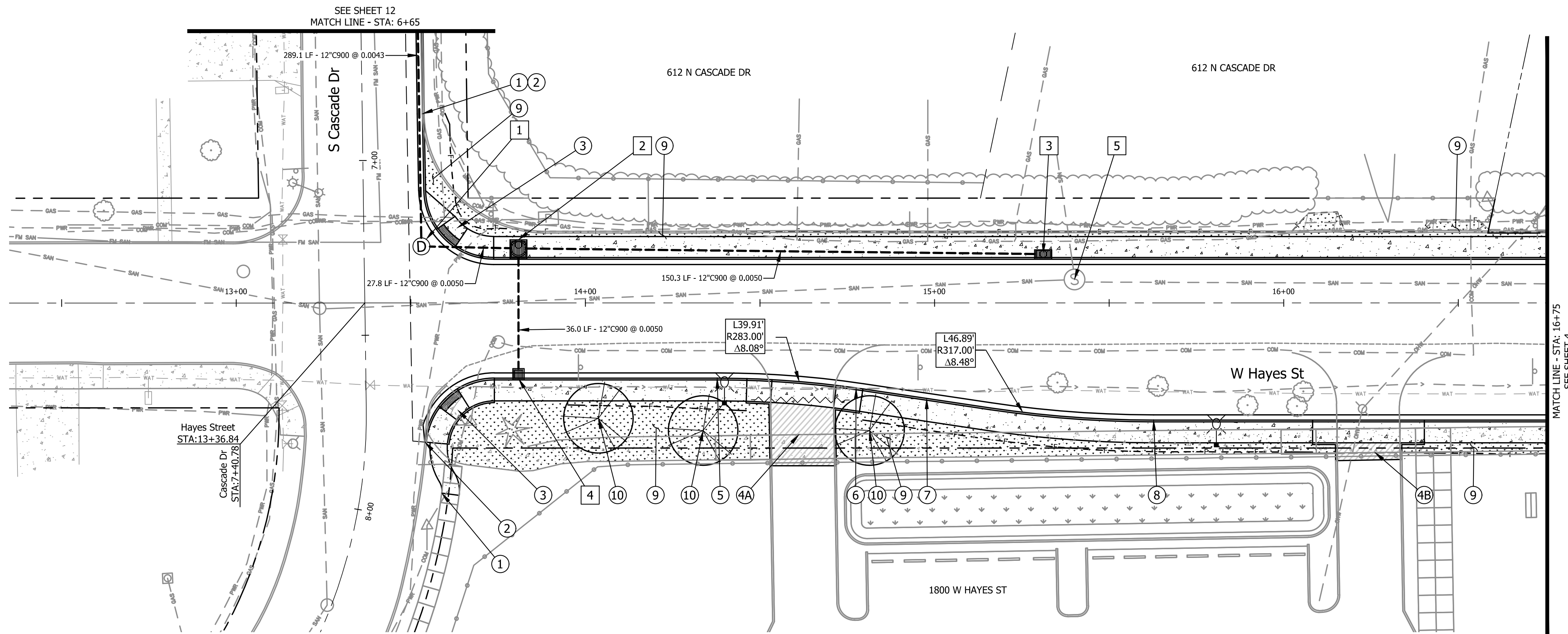
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
WATER QUALITY PLAN - BIORETENTION POND

SHEET NO. 2G

Plot Stamp: 3/4/2022 9:29:03 AM - Fred Wismer
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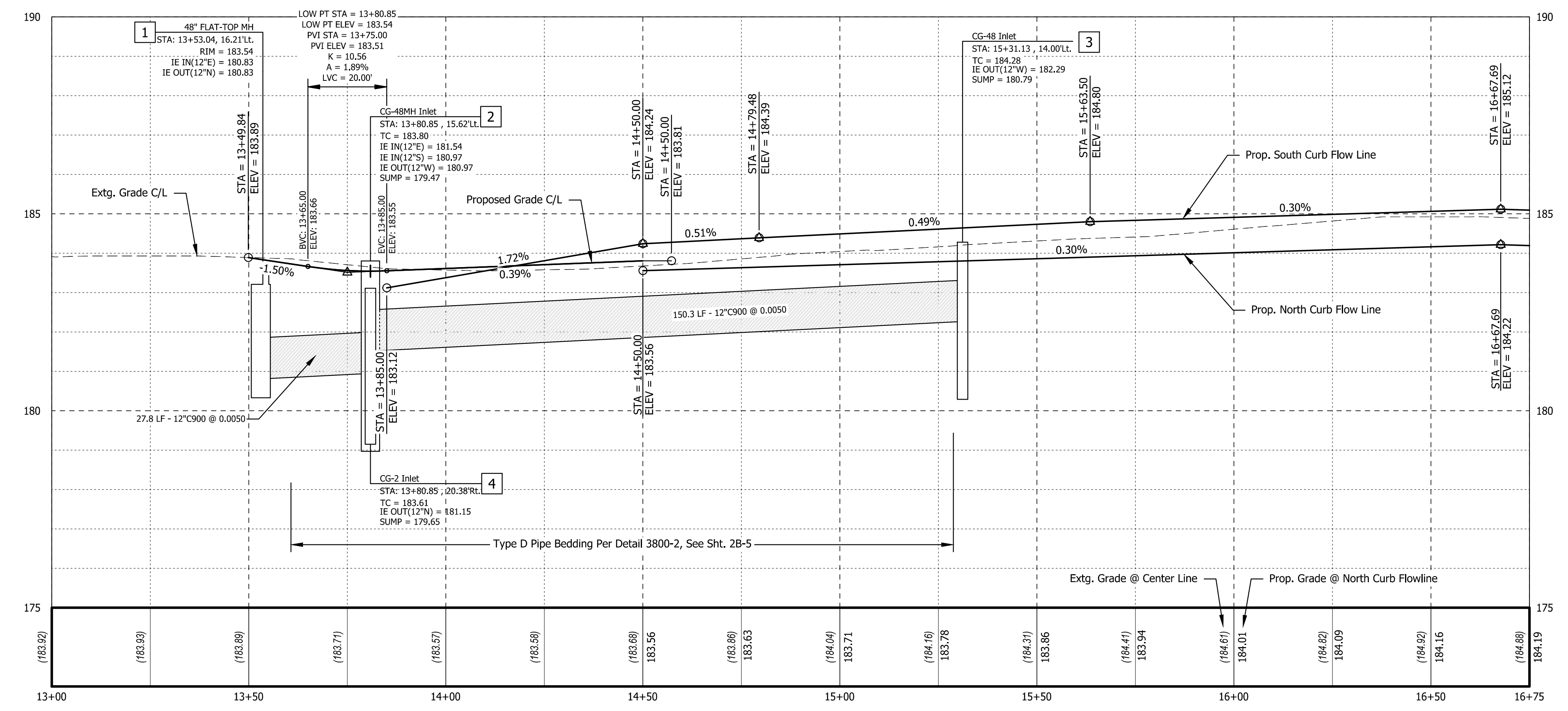


STREET CONSTRUCTION NOTES

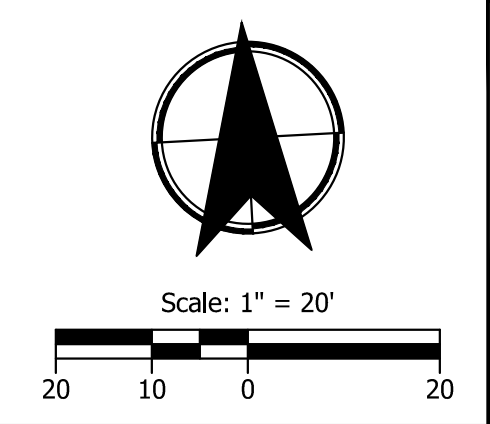
- ① Construct Std. Curb & Gutter, & Sidewalk
Match Existing
(For Details, See Sht. 2B)
- ② Sawcut & Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ③ Construct Parallel Sidewalk Ramp (2 Ea.)
(For Standard Details, See Sht. 2B-6)
- ④ Construct Driveway
A - Sta. 14+46.27, 21.63'Rt - Sta. 14+79.48, 24.59'Rt
B - Sta. 16+08.29, 33.50'Rt - Sta. 16+40.29, 33.50'Rt
(For Details, See Sht. 2B)
- ⑤ Curb Point of Curvature
STA: 14+37.76, 21.50'Rt.
- ⑥ Curb Point of Tangency
STA: 14+77.54, 24.31'Rt.
- ⑦ Curb Point of Curvature
STA: 15+16.04, 30.04'Rt.
- ⑧ Curb Point of Tangency
STA: 15+60.57, 33.50'Rt.
- ⑨ Install Permanent Lawn Seeding (±3,210 SF)
- ⑩ Install Permanent Street Tree 'Kwanzan Cherry Plum' [Prunus 'Kwanza'] (3 Ea.)
(For Details, See Sht. 2B)
STA: 14+03.73, 33.00'Rt.
STA: 14+33.72, 36.50'Rt.
STA: 14+81.38, 36.50'Rt.

STORM CONSTRUCTION NOTES

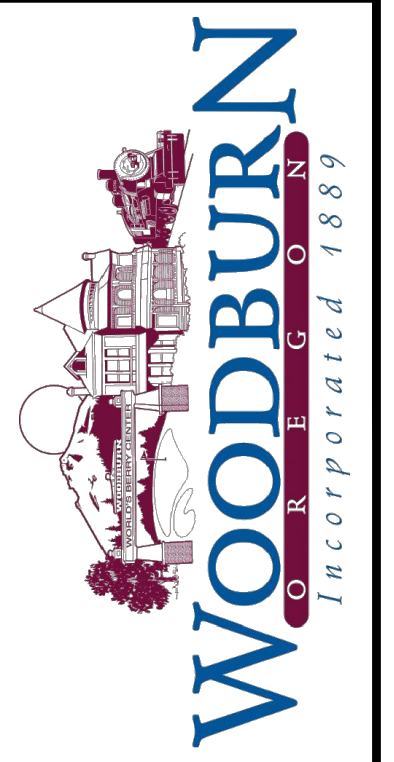
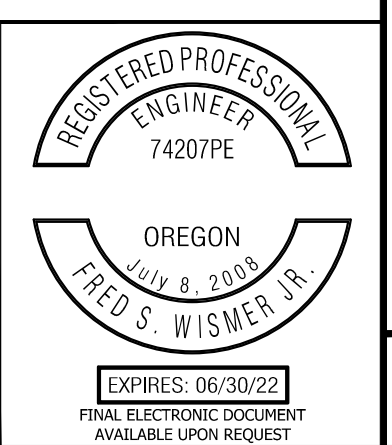
- 1 Install 48" Flat-Top Manhole (1 Ea.),
Rotate Cone so Manhole entrance is within Roadway
(For Details, See Sht. 2B-3)
- 2 Install CG-48 Manhole Inlet (1 Ea.)
(For Details, See Sht. 2B-4)
- 3 Install CG-48 Inlet (1 Ea.)
(For Details, See Sht. 2B-4)
- 4 Install CG-2 Inlet (1 Ea.)
(For Details, See Sht. 2B-3)
- 5 Adjust to Grade (Major) (1 Ea.)
(For Details, See Sht. 2B-3)



Hayes Street Profile
Horz: 1"=20', Vert: 1"=2'



Earthworks
Excavation
617.4 CY
Embankment
27.5 CY



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851 SW 6TH AVENUE, SUITE 600
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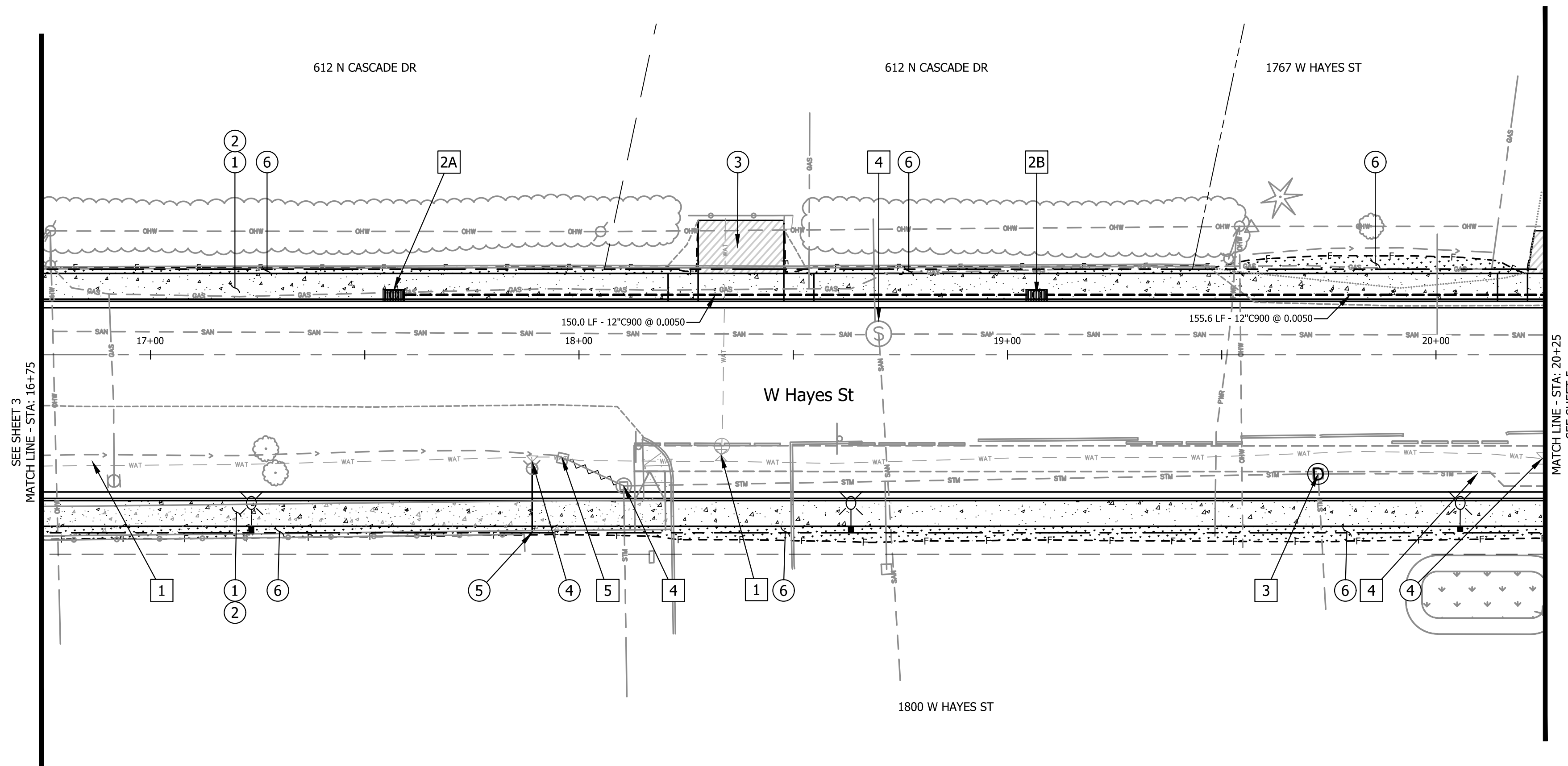
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
Drawn: JCB/RMM, Designed: NRS/JBK, Checked: FSW
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
HAYES PLAN AND PROFILE

SHEET NO. 3

Plot Stamp: 3/4/2022 9:29:32 AM - Fred Wismer
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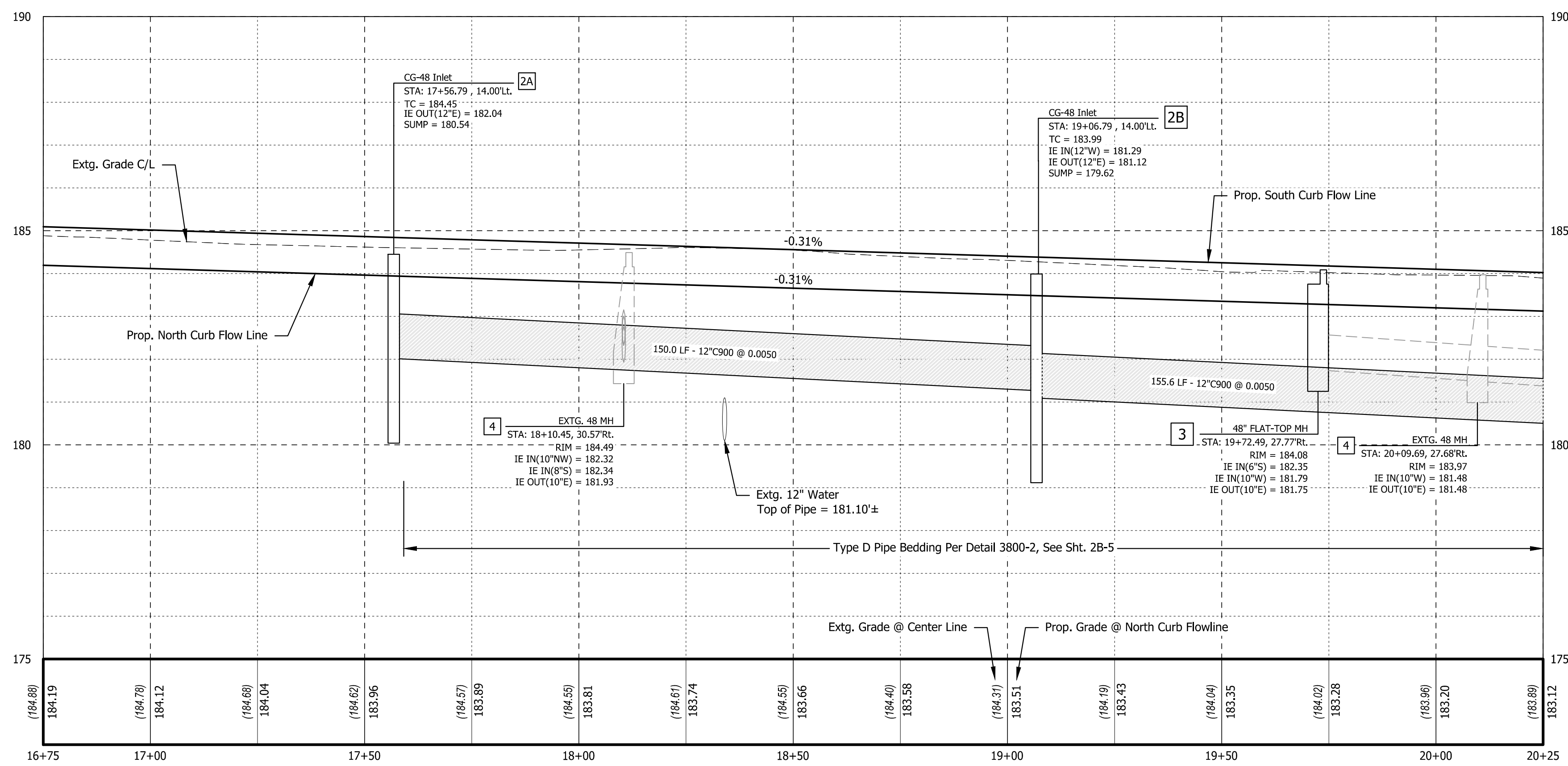


STREET CONSTRUCTION NOTES

- ① Construct Std. Curb & Gutter, & Sidewalk (For Details, See Sht. 2B)
- ② Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ③ Construct Driveway Sta. 18+20.79, 12.50'Lt - Sta. 18+54.79, 12.50'Lt (For Details, See Sht. 2B)
- ④ Adjust Water Valve to Grade (Minor) (2 Ea.)
- ⑤ Construct Fire Hydrant (For Details, See Sht. 2B-5)
- ⑥ Install Permanent Lawn Seeding (±1,880 SF)

STORM CONSTRUCTION NOTES

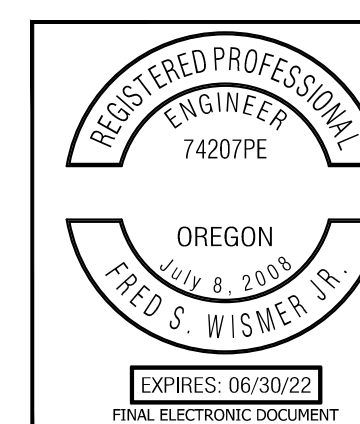
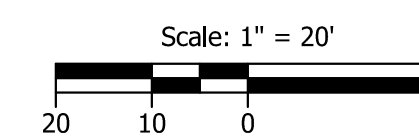
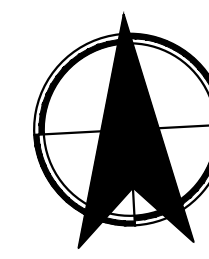
- 1 Adjust Water Valve to Grade (Minor)(1 Ea.)
- 2 Install CG-48 Inlet (2 Ea.) (For Details, See Sht. 2B-4)
- 3 Remove Extg. Inlet and Install 48" Flat Top Manhole (1 Ea.) (For Details, See Sht. 2B-3)
- 4 Adjust Manhole Rim to Grade (Major)(2 Ea.)
- 5 Remove Catch Basin (1 Ea.)



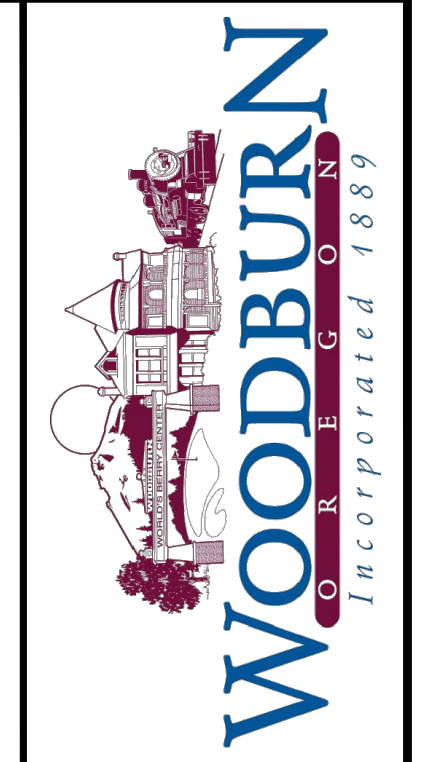
Hayes Street Profile

Horz: 1"=20', Vert: 1"=2'

Earthworks
 Excavation
 862.3 CY
 Embankment
 37.4 CY



EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

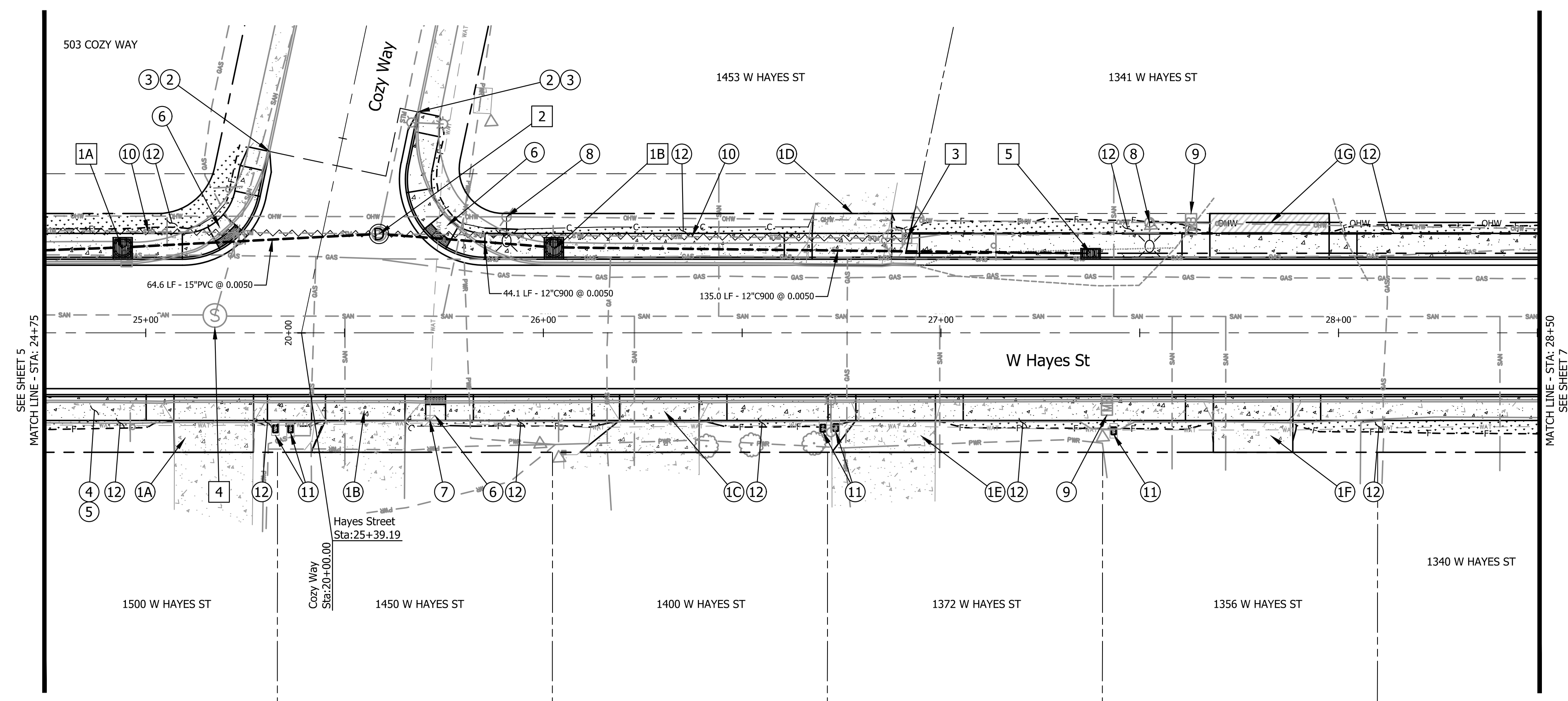
#	DATE	REVISION	APP'D

Submission Date:
 03/07/2022
 Drawn: JCB/RMM
 Designed: NRS/JBK
 Checked: FSW

PROJECT NO.
2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 HAYES PLAN AND PROFILE
 SHEET NO.
4

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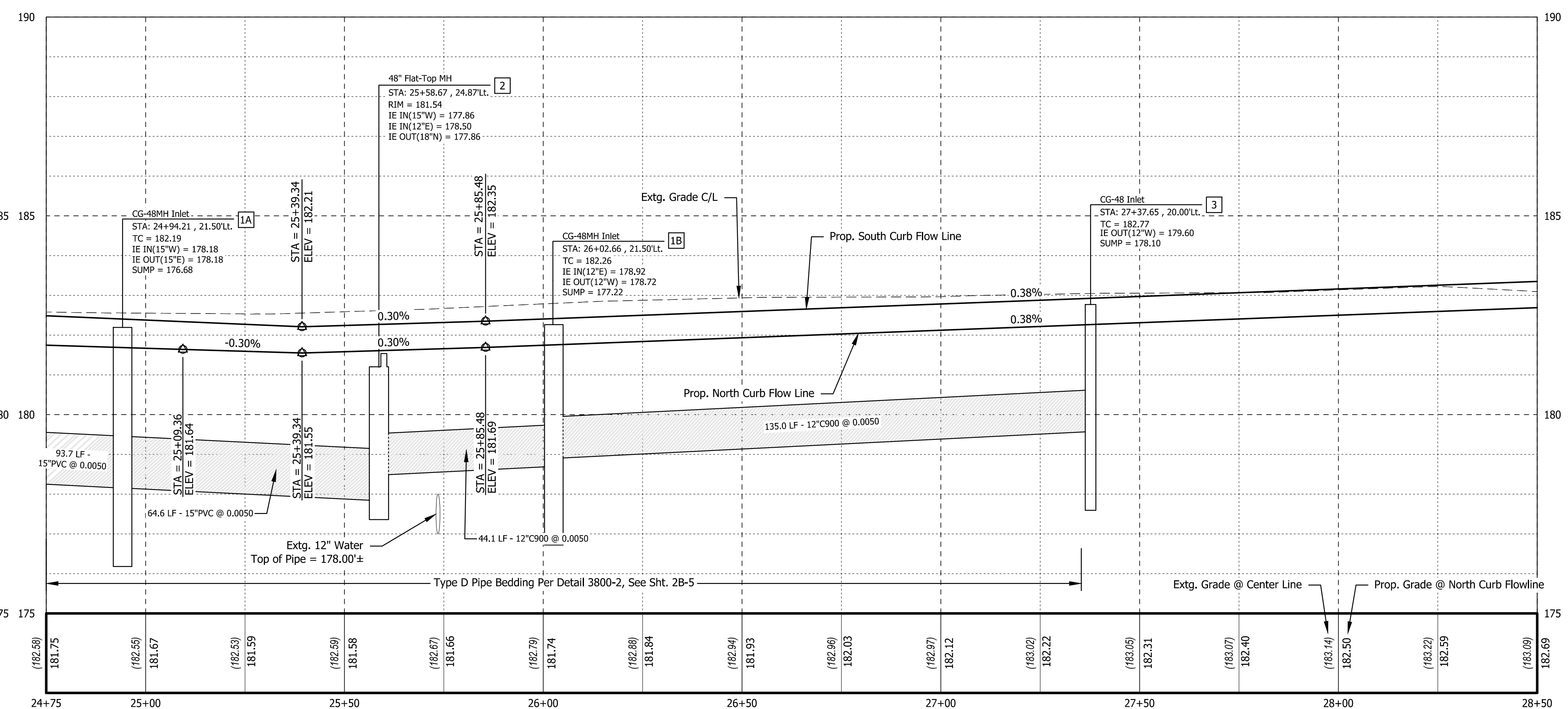
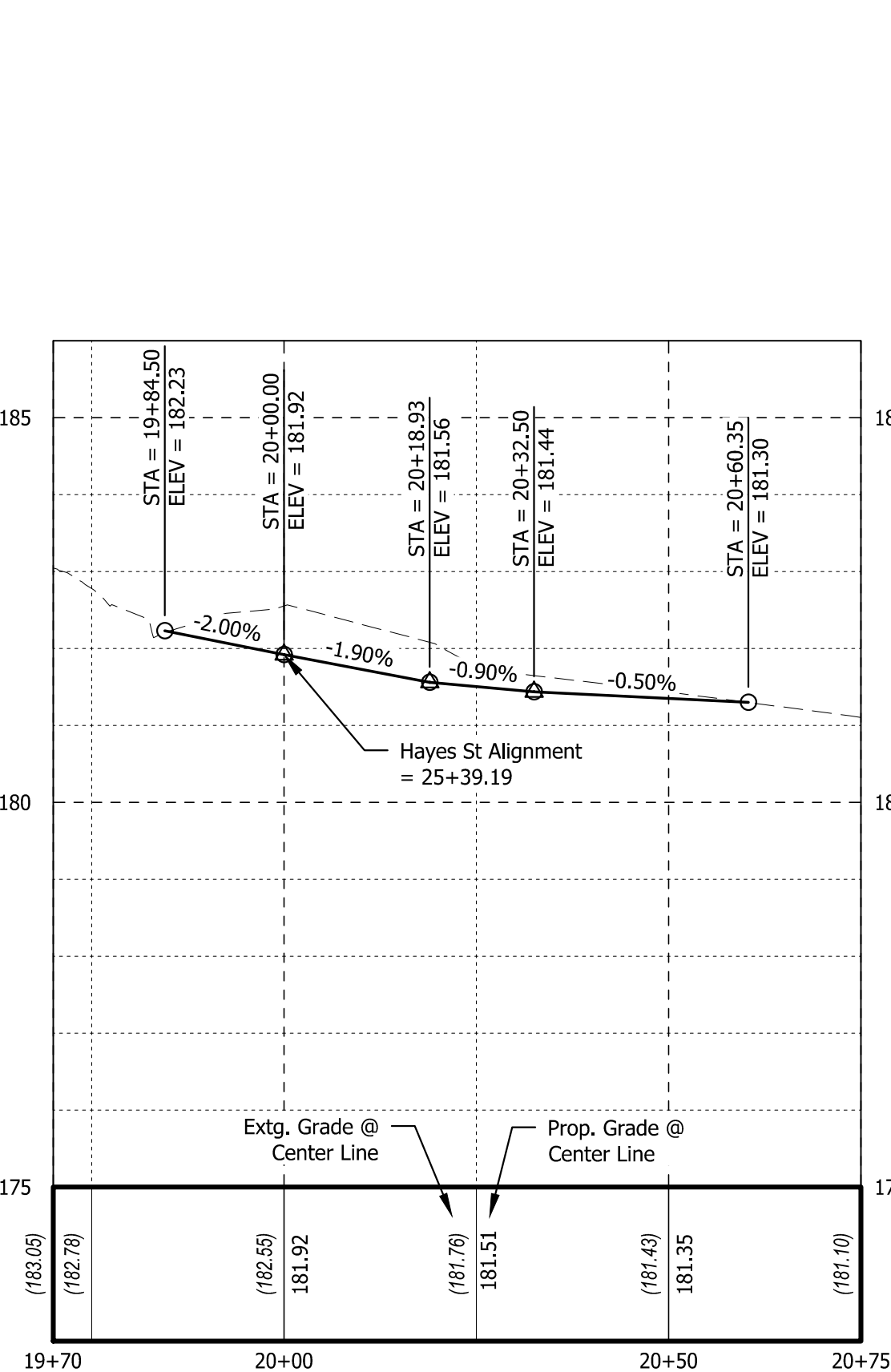


STREET CONSTRUCTION NOTES

- ① Construct Driveway
 A - Sta. 25+00.12, 15.50 'Rt. - Sta. 26+12.18, 15.50 'Rt.
 B - Sta. 25+41.72, 15.53 'Rt. - Sta. 25+65.22, 15.50 'Rt.
 C - Sta. 26+12.18, 15.50 'Rt. - Sta. 26+46.18, 15.50 'Rt.
 D - Sta. 26+60.62, 18.50 'Lt. - Sta. 26+94.62, 18.50 'Lt.
 E - Sta. 26+71.60, 15.50 'Rt. - Sta. 27+05.60, 15.50 'Rt.
 F - Sta. 27+61.50, 15.50 'Rt. - Sta. 27+95.50, 15.50 'Rt.
 G - Sta. 27+60.63, 18.50 'Lt. - Sta. 28+04.63, 18.50 'Lt.
 (For Details, See Sht. 2B)
- ② Construct Std. Curb & Gutter, & Sidewalk
 Match Existing
 (For Details, See Sht. 2B)
- ③ Sawcut and Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ④ Construct Std. Curb & Gutter, & Sidewalk
 (For Details, See Sht. 2B)
- ⑤ Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ⑥ Construct Parallel Sidewalk Ramp (3 Ea.)
 (For Detailed Grading, See Sht. 2B-6)
- ⑦ Adjust Water Valve to Grade (Minor) (2 Ea.)
- ⑧ Prop. Light Fixture
 (Refer to Sheets IL-2 Thru IL-6)
- ⑨ Remove Extg. Mailbox Upon Installation of the Proposed Mailbox Cluster
- ⑩ Abandon Extg. Sewer Line
- ⑪ Water Meter Relocation, By City Forces (Ea. 5)
- ⑫ Install Permanent Lawn Seeding (±1,350 SF)

STORM CONSTRUCTION NOTES

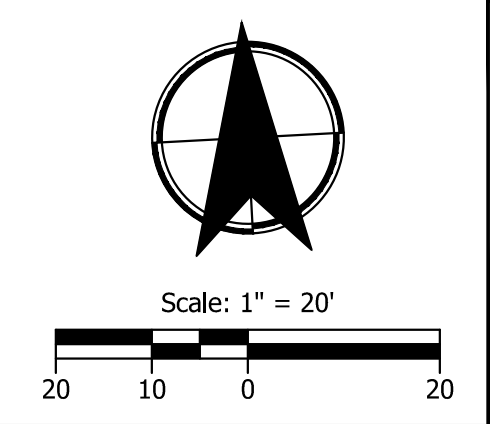
- ① Install CG-48 Manhole Inlet (2 Ea.)
 (For Details, See Sht. 2B-4)
- ② Install 48 In. Flat Top Manhole (1 Ea.)
 Install over Extg. Sewer (1 Ea.)
 (For Details, See Sht. 2B-3)
- ③ Remove Extg. Inlet
- ④ Adjust Manhole Rim to Grade (Major) (1 Ea.)
- ⑤ Install CG-48 Inlet
 (For Details, See Sht. 2B-4)



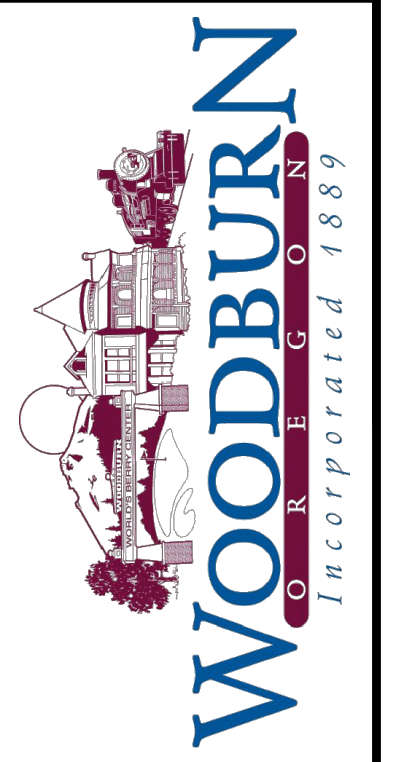
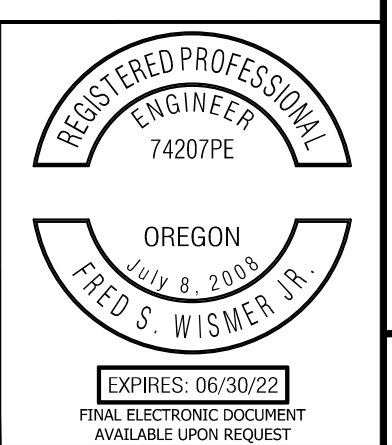
Cozy Way Connection Profile

Hayes Street Profile

Horz: 1"=20', Vert: 1"=2'



Earthworks
 Excavation 954.8 CY
 Embankment 18.3 CY



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

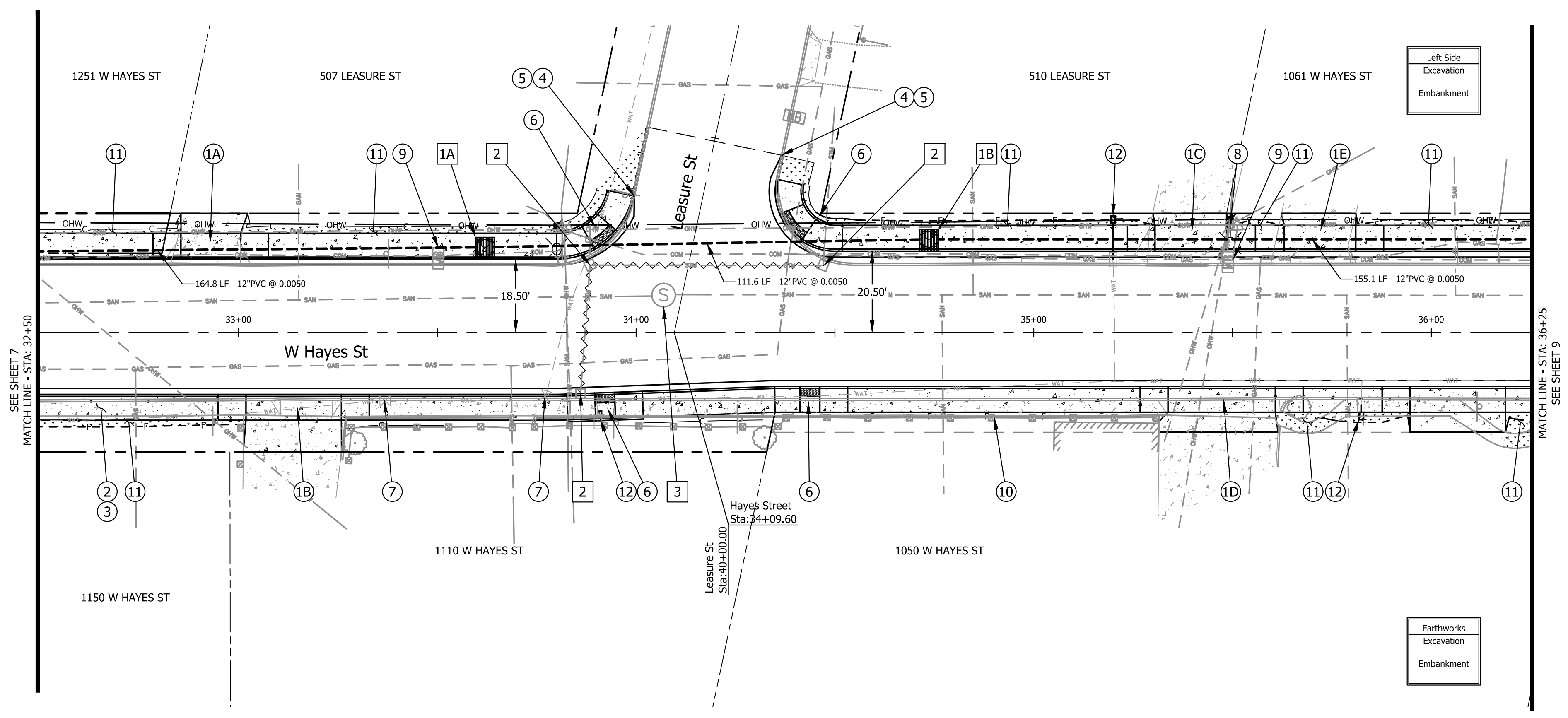
Submission Date: 03/07/2022
 Drawn: JCB/RMM, Designed: NRS/JBK, Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 HAYES PLAN AND PROFILE

SHEET NO. 6

Plot Stamp: 3/4/2022 9:30:33 AM - Fred Wismer
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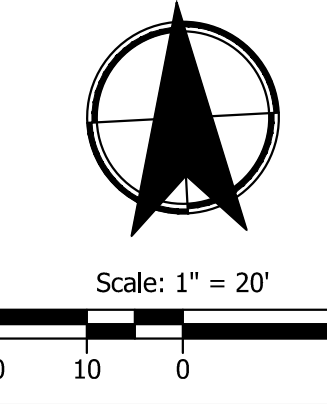
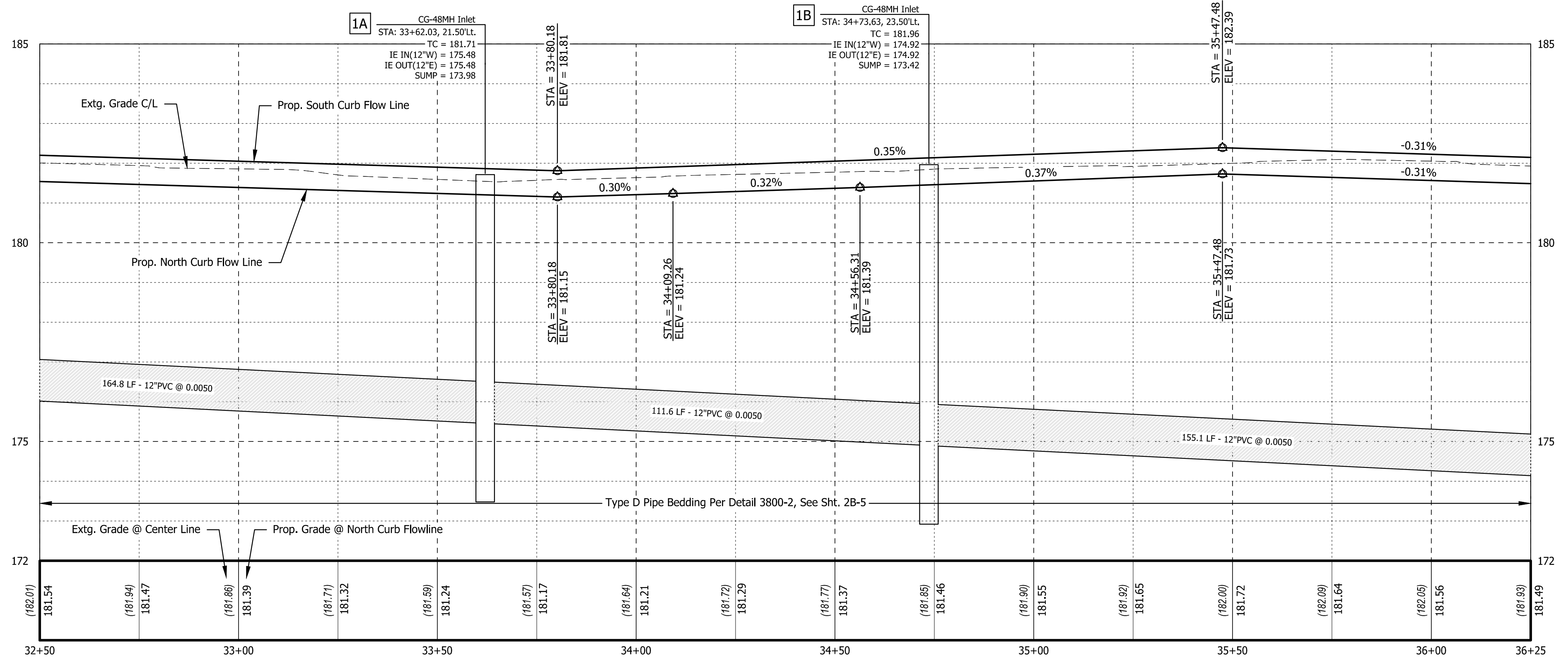
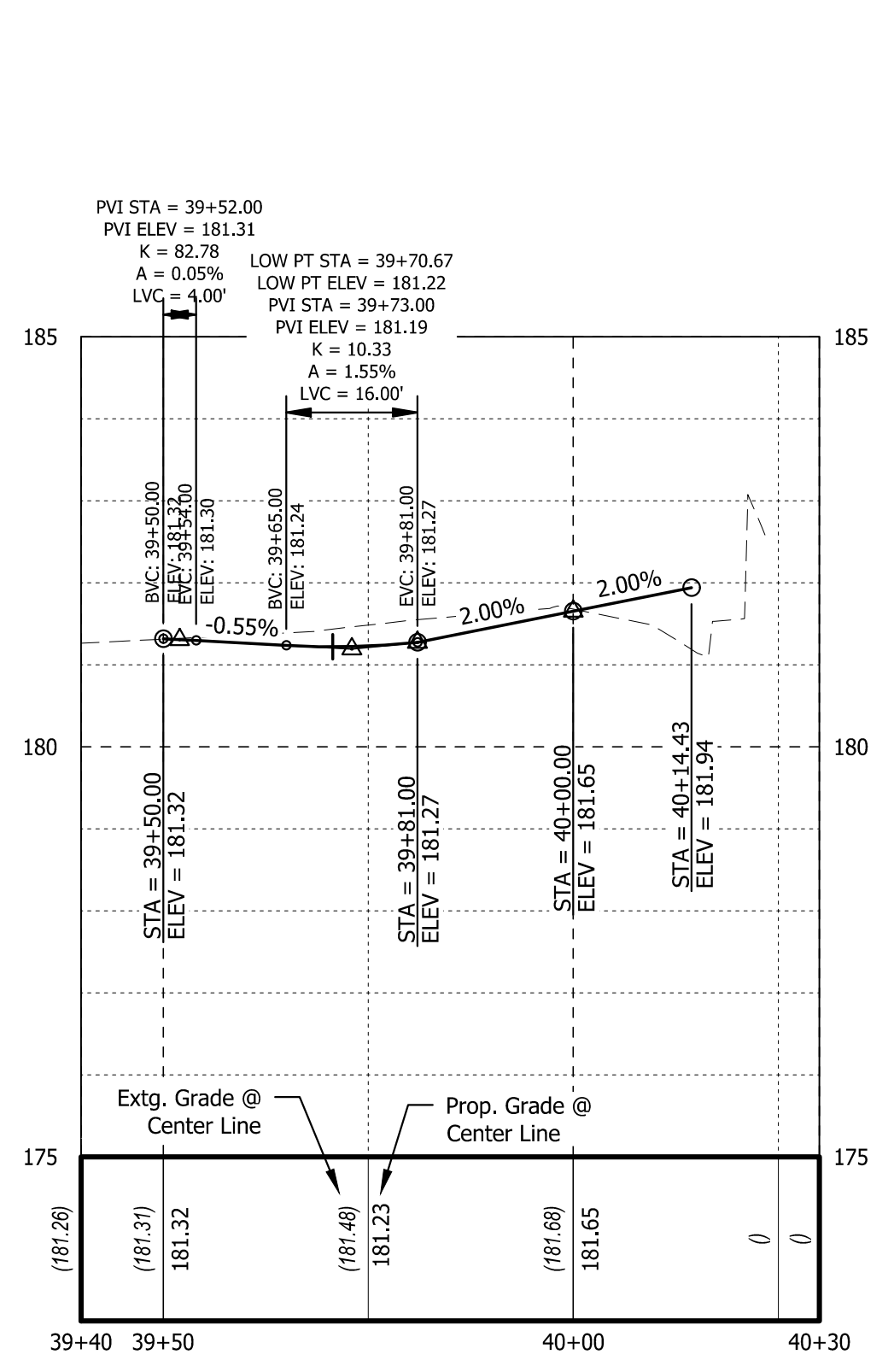


STREET CONSTRUCTION NOTES

- ① Construct Driveway
 A - Sta. 32+78.50, 18.50'Lt. - Sta. 33+07.50, 18.50'Lt
 B - Sta. 32+98.87, 15.50'Rt. - Sta. 33+32.87, 15.50'Rt.
 C - Sta. 35+23.52, 20.50'Lt. - Sta. 35+55.77, 20.50'Lt.
 D - Sta. 35+26.79, 13.50'Rt. - Sta. 35+67.79, 13.50'Rt.
 E - Sta. 35+55.77, 20.50'Lt. - Sta. 35+88.02, 20.50' Lt.
 (For Details, See Sht. 2B)
- ② Construct Std. Curb & Gutter, & Sidewalk
 Match Existing
 (For Details, See Sht. 2B)
- ③ Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ④ Construct Std. Curb & Gutter, & Sidewalk
 Match Existing
 (For Details, See Sht. 2B)
- ⑤ Sawcut and Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ⑥ Construct Parallel Sidewalk Ramp (4 Ea.)
 (For Detailed Grading, See Sht. 2B)
- ⑦ Adjust Water Valve to Grade (Minor) (2 Ea.)
- ⑧ Prop. Light Fixture
 (Refer to Sheets IL-2 Thru IL-6)
- ⑨ Remove Extg. Mailbox Upon Installation of the Proposed Mailbox Cluster
- ⑩ Retain and Protect Existing Fence
- ⑪ Install Permanent Lawn Seeding (±770 SF)
- ⑫ Water Meter Relocation, By City Forces (3 Ea.)

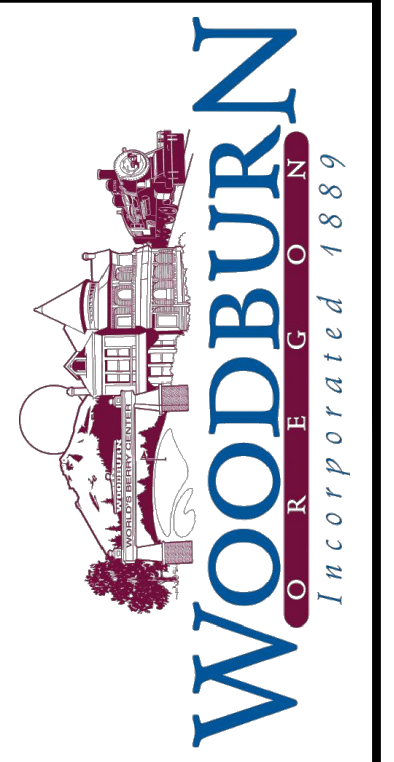
STORM CONSTRUCTION NOTES

- 1 Install CG-48 Manhole Inlet (2 Ea.)
 (For Details, See Sht. 2B-3)
- 2 Remove Extg. Storm Structure (2 Ea.)
- 3 Adjust Manhole Rim to Grade (Major) (1 Ea.)



Earthworks
 Excavation 711.6 CY
 Embankment 17.6 CY

REGISTERED PROFESSIONAL ENGINEER
 74207PE
 OREGON
 JULY 8, 2008
 FRED S. WISMER JR.
 EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM, Designed: NRS/JBK, Checked: FSW

PROJECT NO. 2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 HAYES PLAN AND PROFILE
 SHEET NO. 8

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

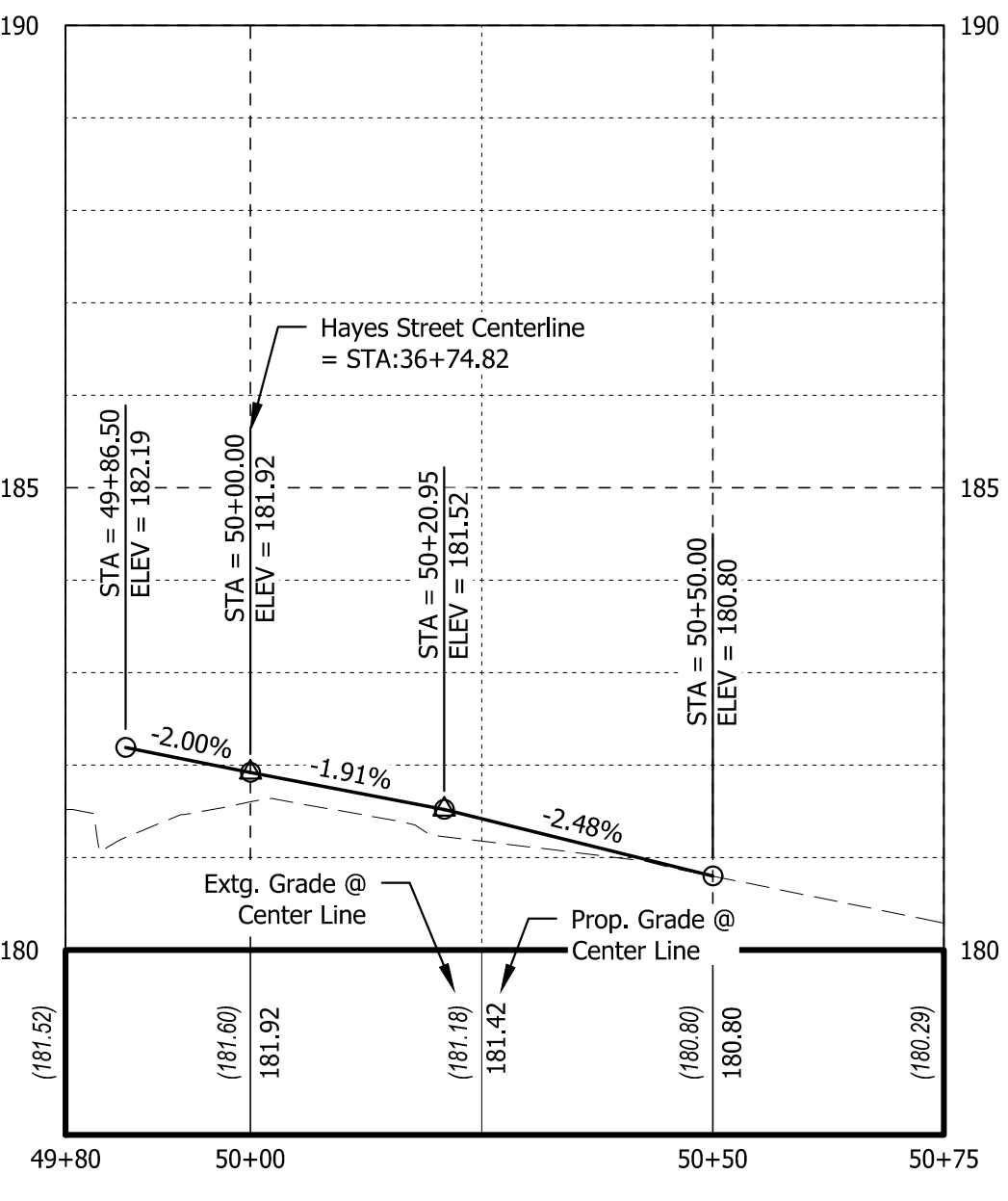
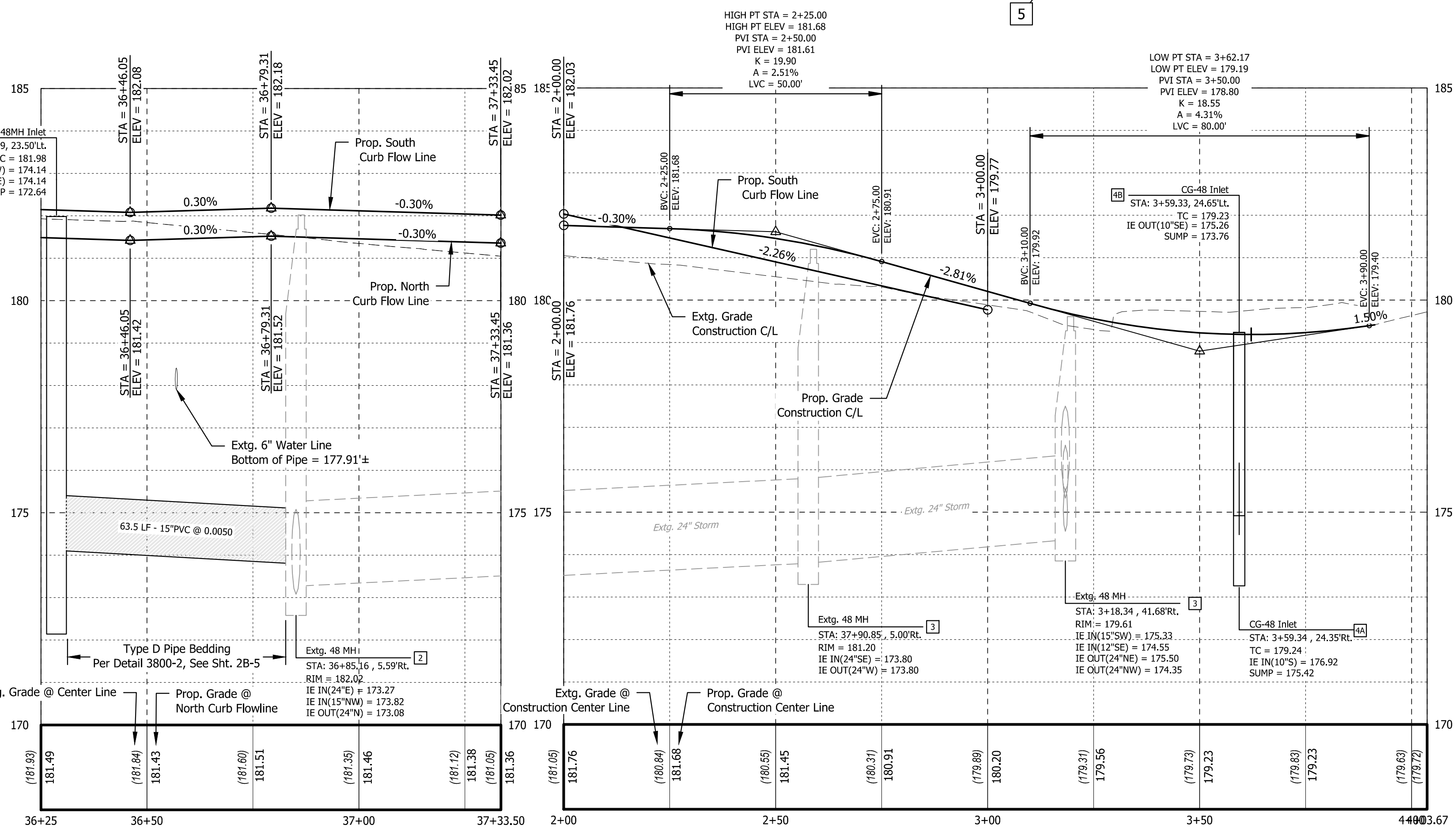
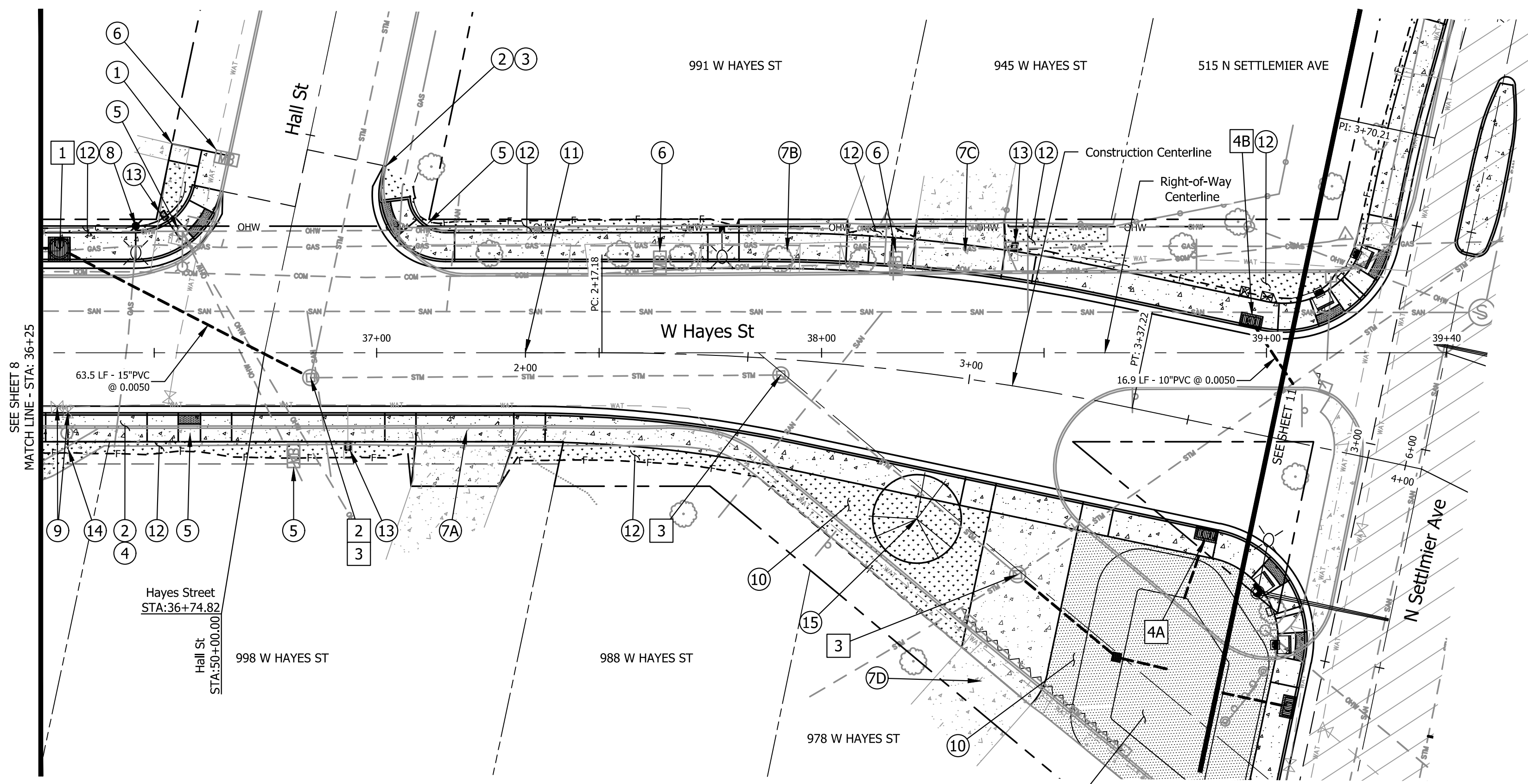
HAYES PLAN AND PROFILE

STREET CONSTRUCTION NOTES

- ① Construct Std. Sidewalk
Match Existing
(For Details, See Sht. 2B)
- ② Construct Std. Curb & Gutter, & Sidewalk
Match Existing
(For Details, See Sht. 2B)
- ③ Sawcut and Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ④ Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ⑤ Construct Parallel Sidewalk Ramp (3 Ea.)
(For Detailed Grading, See Sht. 2B-6)
- ⑥ Remove Extg. Mailbox Upon Installation of the Proposed Mailbox Cluster
- ⑦ Construct Driveway
A - Sta. 37+01.83, 13.50'Rt. - Sta. 37+37.83, 13.50'Rt.
B - Sta. 37+74.45, 20.50'Lt. - Sta. 38+14.00, 20.50'Lt.
C - Sta. 38+14.00, 20.50'Lt. - Sta. 38+48.00, 20.50'Lt.
D - Sta. 38+14.00, 20.50'Lt. - Sta. 38+48.00, 20.50'Lt.
(For Details, See Sht. 2B)
- ⑧ Prop. Light Fixture
(Refer to Sheets IL-2 Thru IL-6)
- ⑨ Adjust Water Valve to Grade (Minor) (2 Ea.)
- ⑩ Remove Extg. Pavement, Curb, and Sidewalk
- ⑪ STA: 33+33.45
Begin Construction Centerline at STA 2+00.00
- ⑫ Install Permanent Lawn Seeding (±2,265 SF)
- ⑬ Water Meter Relocation, By City Forces
- ⑭ Install Fire Hydrant
STA: 36+30.63, 21.50' Rt.
Back of Walk Elevation = 182.73
(For Details, See Sht. 2B-5)
- ⑮ STA: 38+21.42, 37.34'Rt.
Install Permanent Street Tree 'Kwanzan Cherry Plum' [Prunus 'Kwanza'] (3 Ea.)
(For Details, See Sht. 2B)

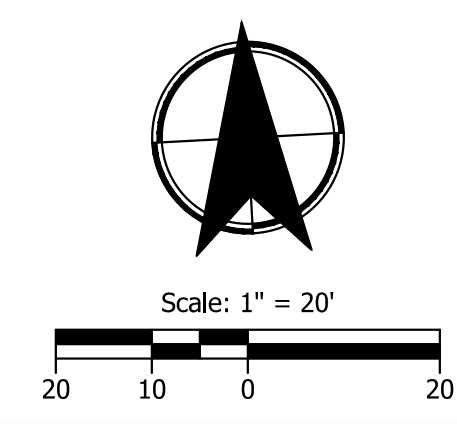
STORM CONSTRUCTION NOTES

- ① Install CG-48 Manhole Inlet (1 Ea.)
(For Details, See Sht. 2B-4)
- ② Connect to Extg. Structure (1 Ea.)
(For Details, See Sht. 2B-4)
- ③ Adjust Manhole Rim to Grade (Major) (3 Ea.)
- ④ Install CG-48 Inlet (2 Ea.)
(For Details, See Sht. 2B-4)
- ⑤ Construct Water Quality Facility
See Sheet 2G for Details



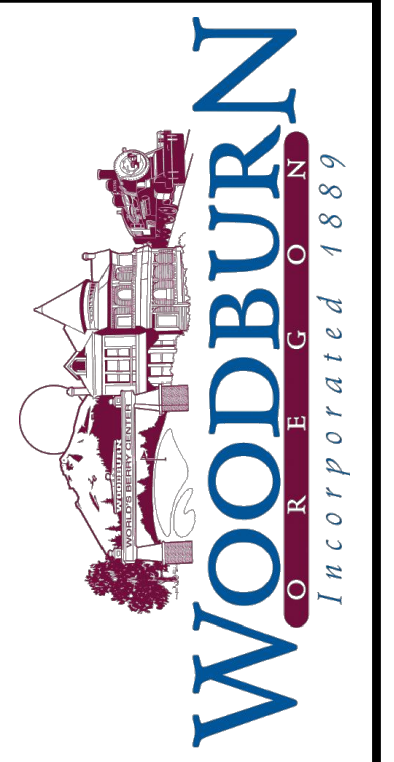
Hayes Street Profile
 Horz: 1"=20', Vert: 1"=2'

Hayes Street Construction Profile
 Horz: 1"=20', Vert: 1"=2'



Earthworks
Excavation
651.9 CY
Embankment
35.8 CY

REGISTERED PROFESSIONAL
ENGINEER
74207PE
OREGON
JULY 8, 2008
FRED S. WISMER JR.
EXPIRES: 06/30/22
FINAL ELECTRONIC DOCUMENT
AVAILABLE UPON REQUEST



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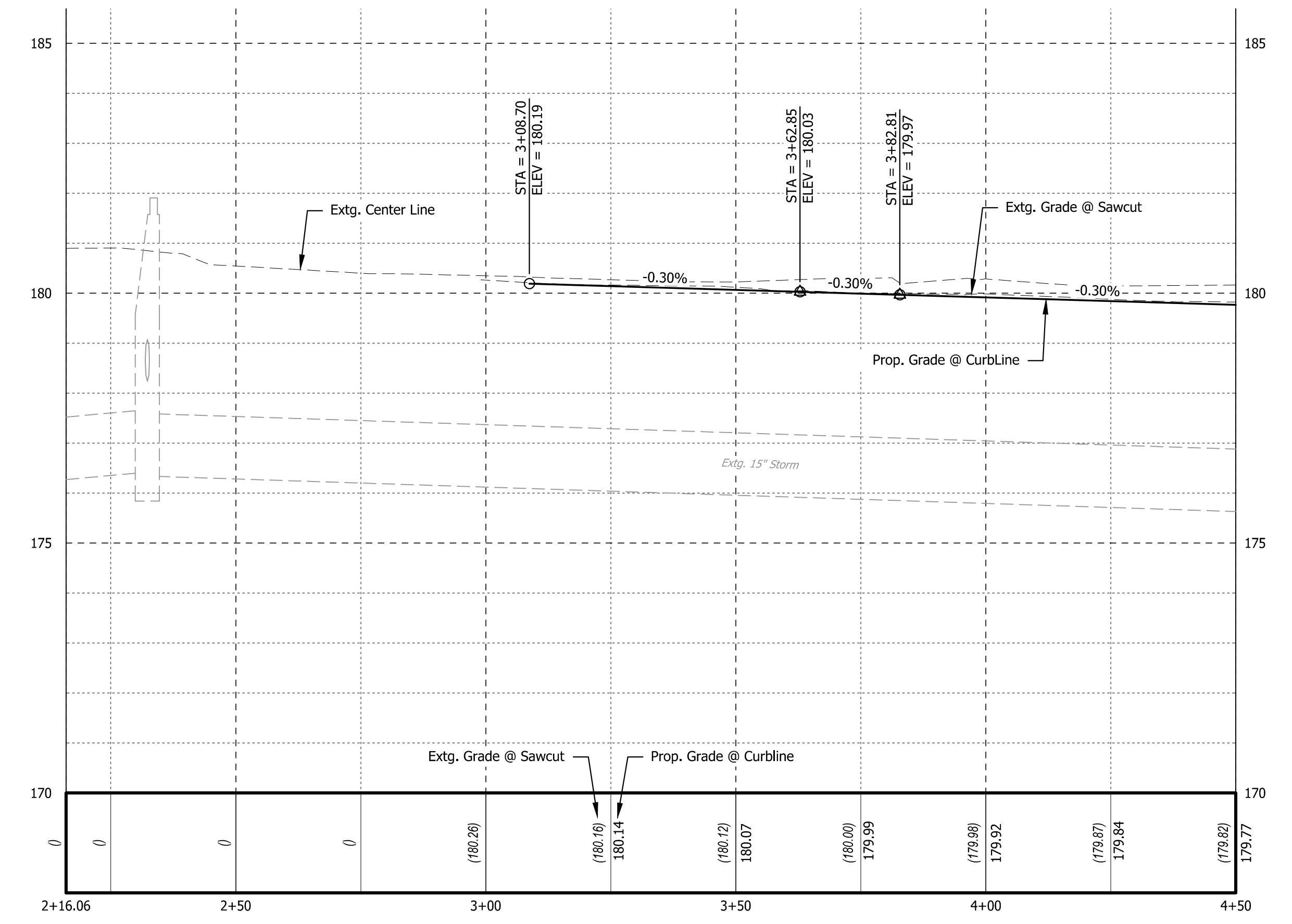
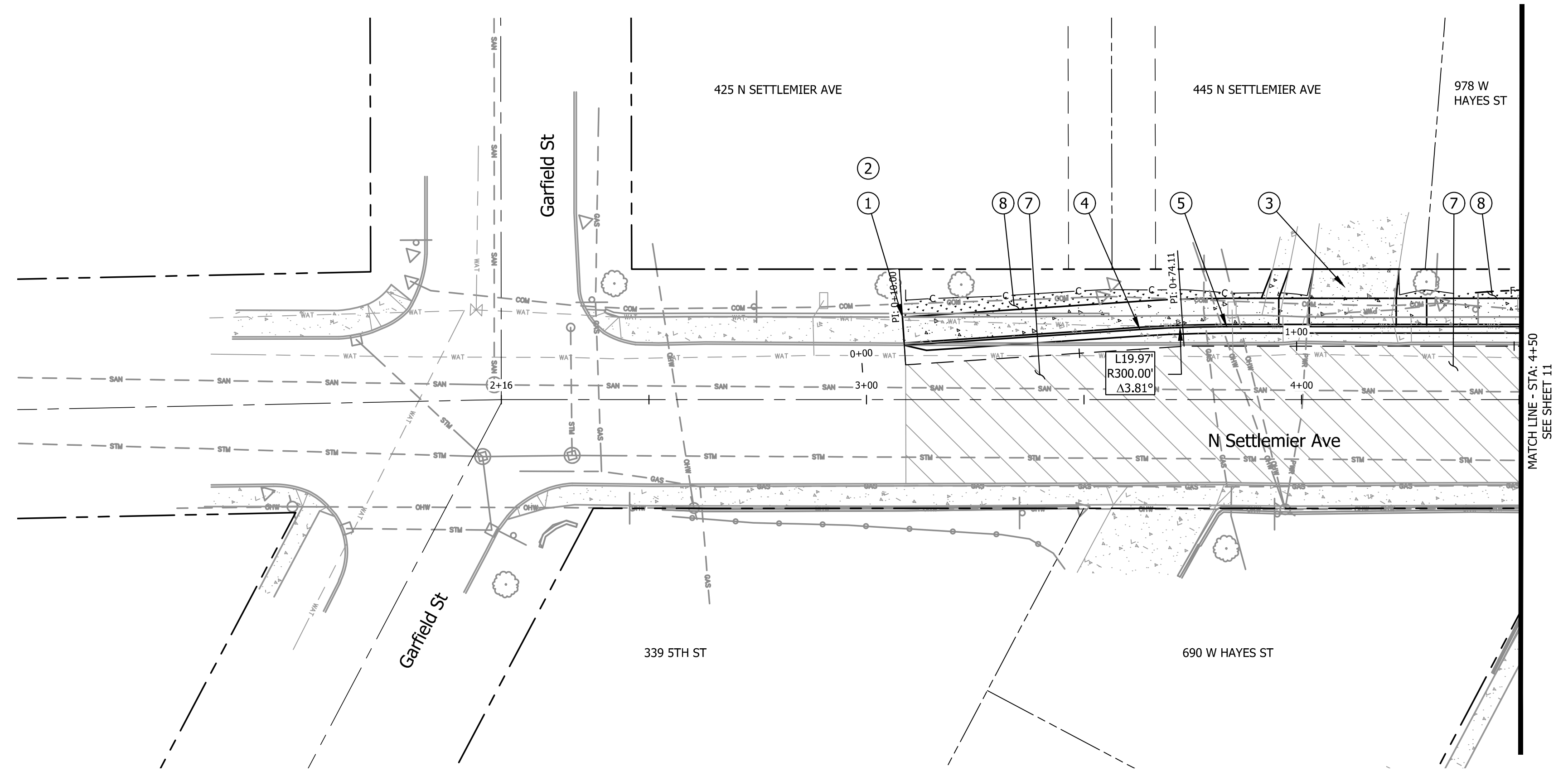
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 SETTLEMIER PLAN AND PROFILE

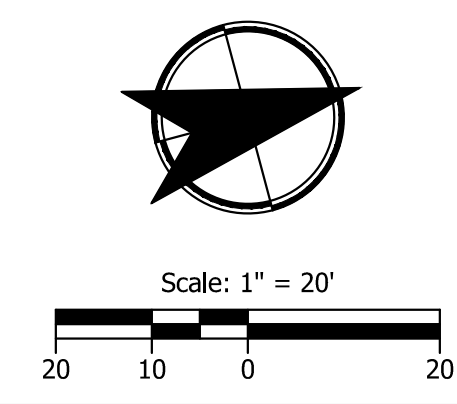
SHEET NO. 10

CONSTRUCTION NOTES

- ① Construct Std. Curb & Gutter, & Sidewalk Match Existing (For Details, See Sht. 2B)
- ② Sawcut & Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ③ Construct Driveway Sta. 3+94.77, 16.78'Lt - Sta. 3+28.77, 16.79'Lt (For Details, See Sht. 2B)
- ④ Curb Point of Curvature STA: 3+62.85, 16.11'Lt.
- ⑤ Curb Point of Tangency STA: 3+82.81, 16.78'Lt.
- ⑥ Curb Point of Tangency STA: 3+82.81, 16.78'Lt.
- ⑦ 2" Grind and Inlay Per Typical Sections, See Sheet 2A
- ⑧ Install Permanent Lawn Seeding (±285 SF)



Settlemier Ave Profile
 Horz: 1"=20', Vert: 1"=2'

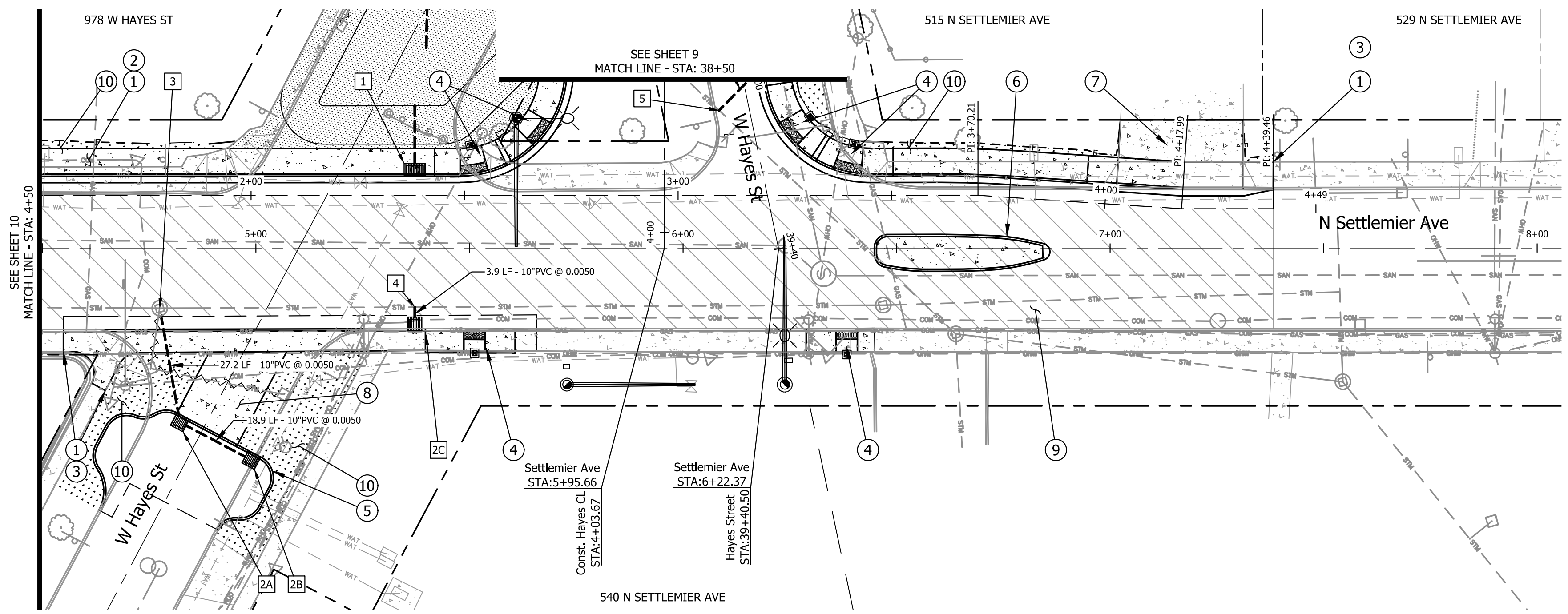


Earthworks
 Excavation 91.1 CY
 Embankment 0.0 CY



EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST

Plot Stamp: 3/4/2022 9:30:56 AM - Fred Wismer
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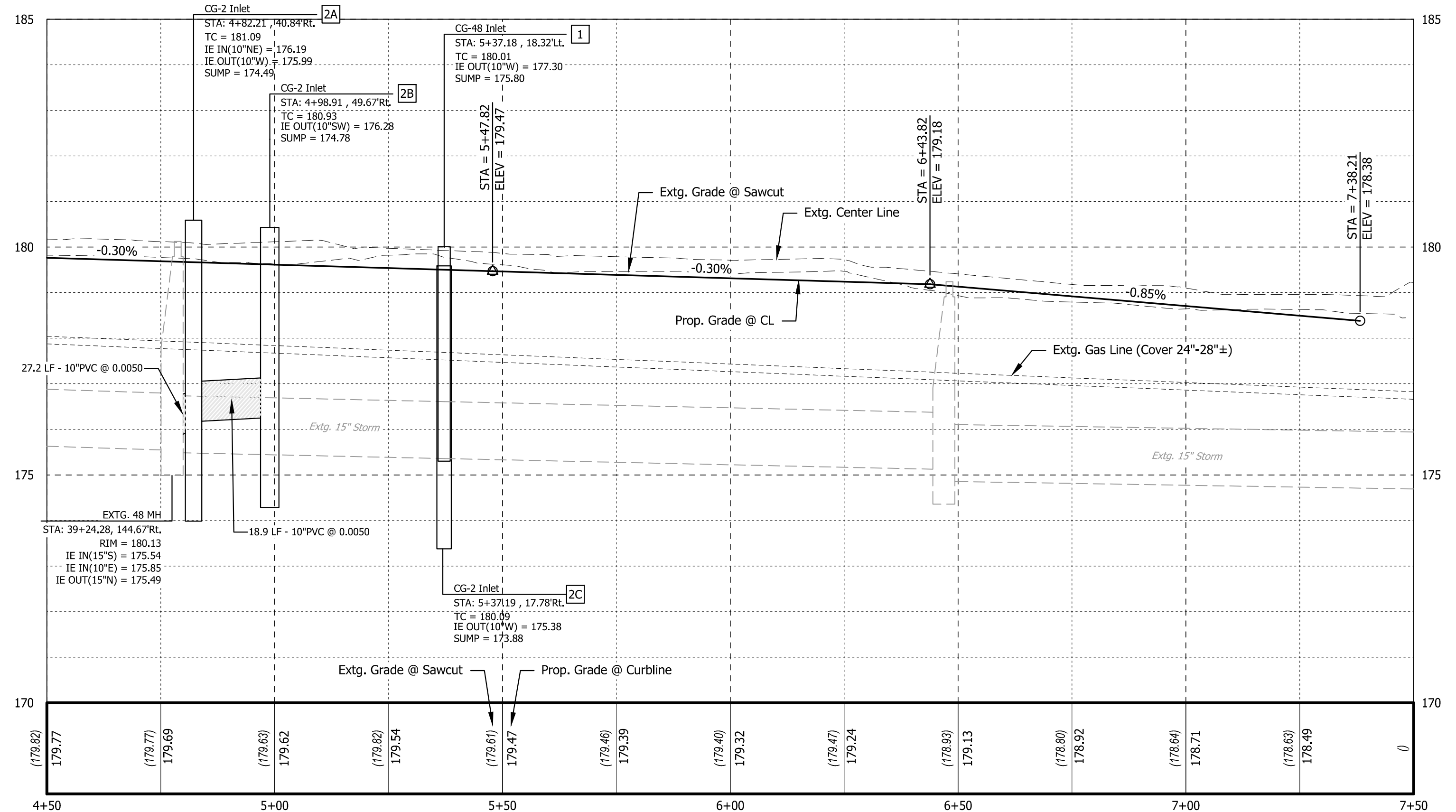


CONSTRUCTION NOTES

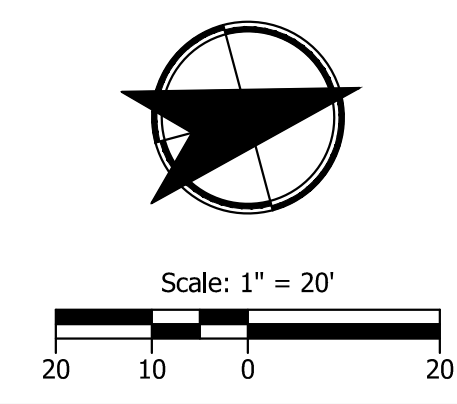
- ① Construct Std. Curb & Gutter, & Sidewalk (For Details, See Sht. 2B)
- ② Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ③ Sawcut & Remove Extg. Pavement, Curb & Gutter, & Sidewalk
- ④ Construct Parallel Sidewalk Ramp (6 Ea.) (For Detailed Grading, See Sht. 2B)
- ⑤ Construct Standard Curb (For Detailed Grading, See Sht. 2B)
- ⑥ Construct Doweled Median Island (For Details, See Sht. 2B-2)
- ⑦ Construct Driveway Sta. 6+94.56, 15.18'Lt - Sta. 7+38.21, 14.18'Lt (For Details, See Sht. 2B)
- ⑧ Install 6" Reinforced Concrete Section Over 4" of 1"-0 Minus Aggregate
- ⑨ 2" Grind and Inlay Per Typical Sections, See Sheet 2A
- ⑩ Install Permanent Lawn Seeding (±1,140 SF)

STORM CONSTRUCTION NOTES

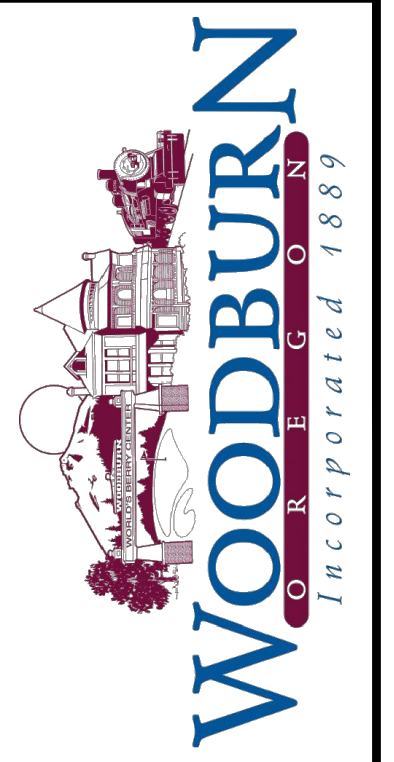
- ① Install CG-48 Inlet (Ea. 1) (For Details, See Sht. 2B-4)
- ② Install CG-2 Inlet (Ea. 3) (For Details, See Sht. 2B-3)
- ③ Connect to Extg. Structure (Ea. 1) (For Details, See Sht. 2B-4)
- ④ N Settlemier Ave Sta. 5+37.12, 13.85' Rt. Tee into Extg. 15" Stormwater Pipe (Ea. 1) (For Details, See Sht. 2B-4)
- ⑤ W Hayes St. Sta. 39+05.92, 6.95' Rt. Tee into Extg. 24" Stormwater Pipe (Ea. 1) (For Details, See Sht. 2B-4)



Settlemier Ave Profile
Horz: 1"=20', Vert: 1"=2'



Earthworks
Excavation
329.7 CY
Embankment
6.6 CY



KITTELSON & ASSOCIATES
851 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
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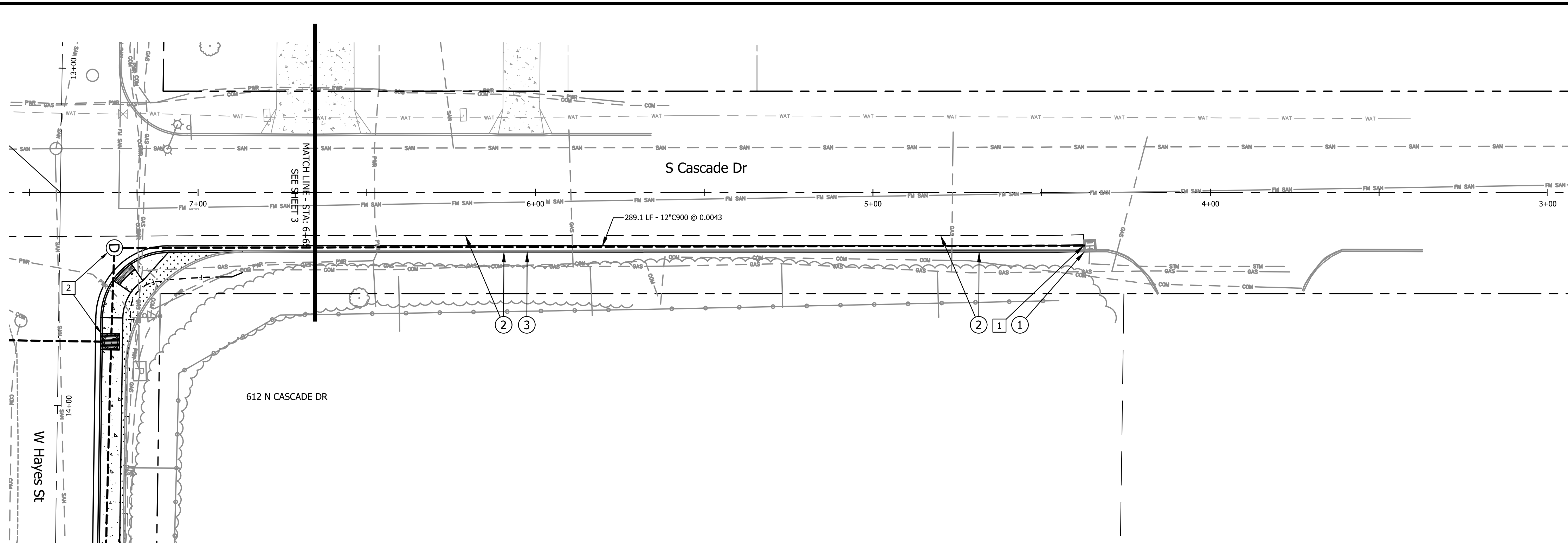
Submission Date:
03/07/2022
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
SETTLEMIER PLAN AND PROFILE

SHEET NO.
11

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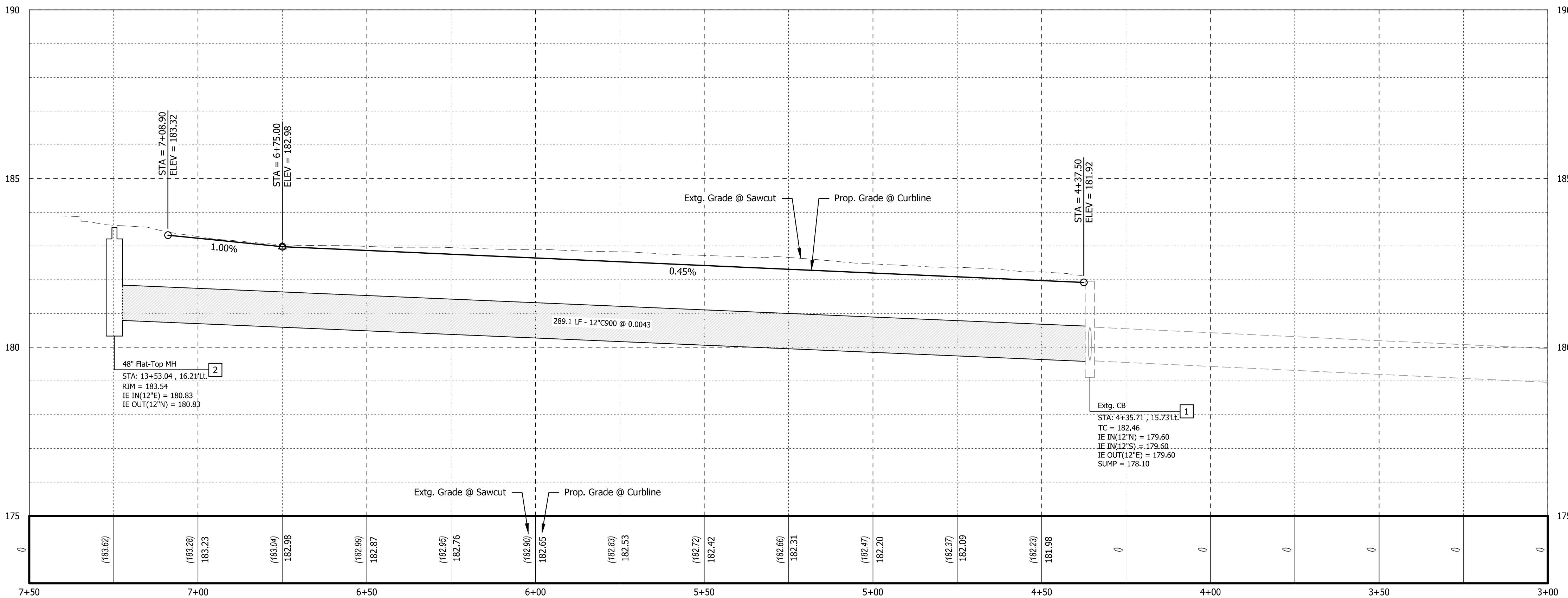


CONSTRUCTION NOTES

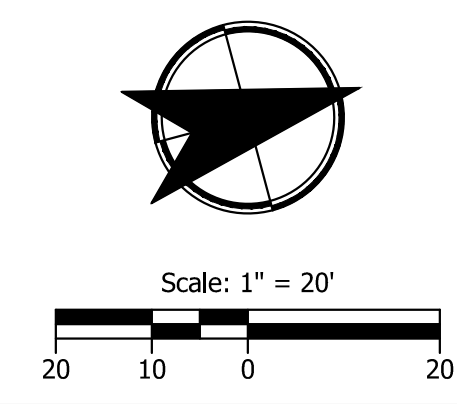
- ① Cascade Dr Sta: 4+37.47, 17.00' Lt. End Construct Std. Curb & Gutter, Match Extg. For Details, See Sht. 2B)
- ② Sawcut & Remove Extg. Pavement, Curb & Gutter
- ③ Construct Std. Curb & Gutter, & Sidewalk (For Details, See Sht. 2B)

STORM CONSTRUCTION NOTES

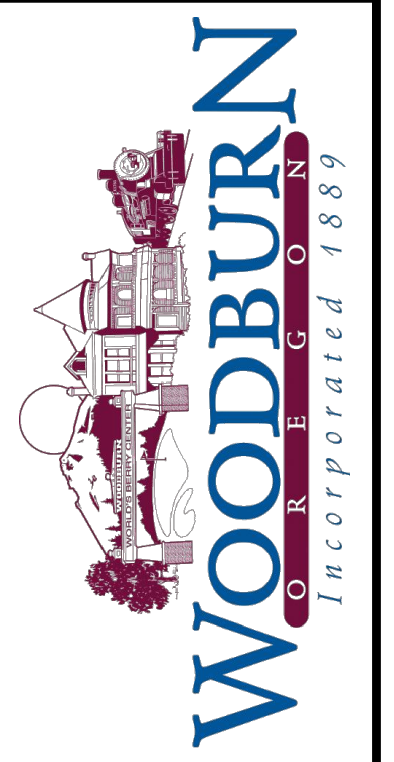
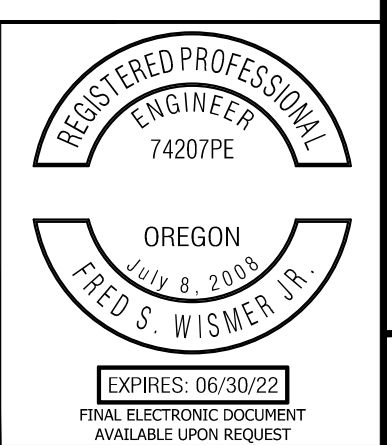
- ① Connect to Extg. Structure (Ea. 1) (For Details, See Sht. 2B-4)
- ② Proposed Storm Structure See Sheet 3 for Details



S Cascade Profile
Horz: 1"=20', Vert: 1"=2'



Earthworks	Excavation	86 CY
	Embankment	0



KITTELSON & ASSOCIATES
851 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D







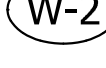





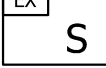
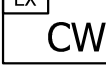
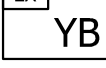
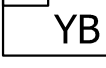

Submission Date: 03/07/2022
Drawn: JCB/RMM, Designed: NRS/JBK, Checked: FSW
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
CASCADE PLAN AND PROFILE
SHEET NO. 12

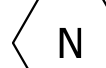
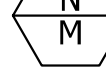
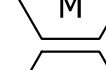
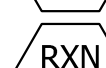


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Plot Stamp: 3/4/2022 9:31:50 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Signing and Striping-24512.dwg

STRIPING LEGEND

-  INSTALL STOP BAR
-  INSTALL STANDARD CROSSWALK
-  INSTALL STAGGERED CONTINENTAL CROSSWALK
-  INSTALL BIKE LANE STANDARD STENCIL
-  INSTALL NARROW DOUBLE NO-PASS
-  INSTALL TRANSVERSE MEDIAN BARS
-  INSTALL 8" WHITE LINE
-  INSTALL TWO-WAY LEFT TURN
-  INSTALL LEFT TURN ARROW
-  INSTALL RIGHT TURN ARROW
-  INSTALL SCHOOL
-  PAINT CURB YELLOW
-  MAINTAIN AND PROTECT EXISTING STOP BAR
-  MAINTAIN AND PROTECT EXISTING STANDARD CROSSWALK
-  MAINTAIN AND PROTECT EXISTING 4" YELLOW BROKEN LINE
-  REMOVE EXISTING 4" YELLOW BROKEN LINE
-  REMOVE EXISTING RIGHT TURN ARROW

SIGNING LEGEND

-  INSTALL NEW SIGN (N).
-  INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT.
-  INSTALL EXISTING SIGN (N) ON NEW (M) SIGN SUPPORT.
-  RETAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT.
-  REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT
-  RECTANGULAR RAPID FLASHING BEACONS (SEE SIGNAL PLANS)

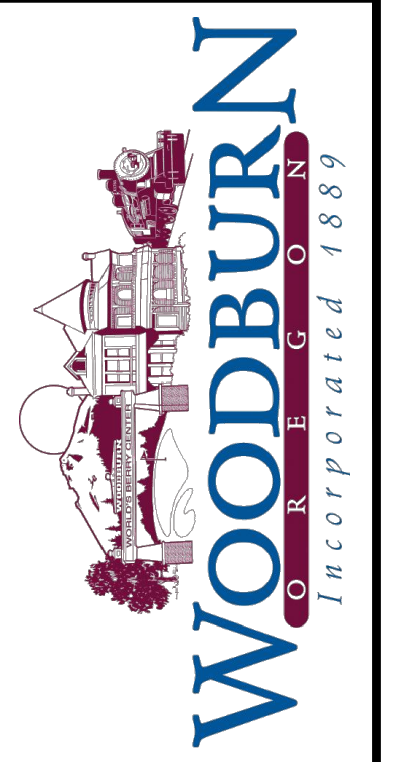
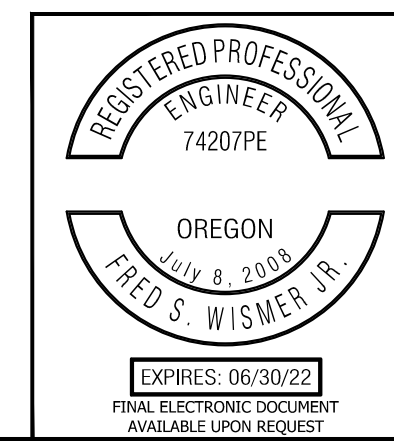
N = SIGN NUMBER
 M = MATERIAL OPTIONS ARE:
 S = PERFORATED STEEL SQUARE TUBE SIGN SUPPORT
 CCS = CROSSWALK CLOSURE SUPPORT

STRIPING GENERAL NOTES

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) 2009 EDITION, AND THE OREGON SUPPLEMENT TO THE M.U.T.C.D. 2009 EDITION, AND THE 2018 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. ALL PRE-MARKERS FOR PAVEMENT MARKINGS AND STRIPING LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
3. PERMANENT STRIPING SHALL BE THERMOPLASTIC MATERIAL UNLESS OTHERWISE NOTED. LONGITUDINAL LINES SHALL BE METHOD "A" THERMOPLASTIC, EXTRUDED, SURFACE, NON-PROFILED.
4. EXISTING MARKINGS NOT SHOWN ARE TO REMAIN IN PLACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. EXISTING STRIPING REMOVED DURING SCORING AND REPAVING TO BE INSTALLED AS SHOWN.
6. REFER TO ODOT STANDARD DRAWINGS TM500, TM501, AND TM503 FOR ALL PAVEMENT MARKING DETAILS ON SHEET SS-9.

SIGNING GENERAL NOTES

1. ALL SIGNING SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) 2009 EDITION, AND THE OREGON SUPPLEMENT TO THE M.U.T.C.D.
2. THE LOCATIONS OF SIGN INSTALLATIONS SHOWN ARE APPROXIMATE WITH THE EXACT LOCATIONS TO BE DETERMINED IN THE FIELD.
3. EXISTING SIGNS NOT SHOWN ARE TO REMAIN IN PLACE UNLESS OTHERWISE DIRECTED.
4. REFER TO ODOT DETAIL TM 223 FOR LETTER HEIGHT ON STREET NAME SIGNS.
5. SIGNS LOCATED ON TRAFFIC SIGNAL POLES REFERENCE THE SIGNAL DESIGN PLANS.
6. TRAFFIC SIGN LEGEND AND MOUNTING DETAILS ARE SHOWN ON SHEETS SS-6 THRU SS-8, SS-11 AND SS-12.
7. CROSSWALK CLOSED SIGNS MOUNTED ON BOTH SIDES OF BARRICADE. SEE DETAILS ON SHEET SS-9 .



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
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Submission Date:
03/07/2022

Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

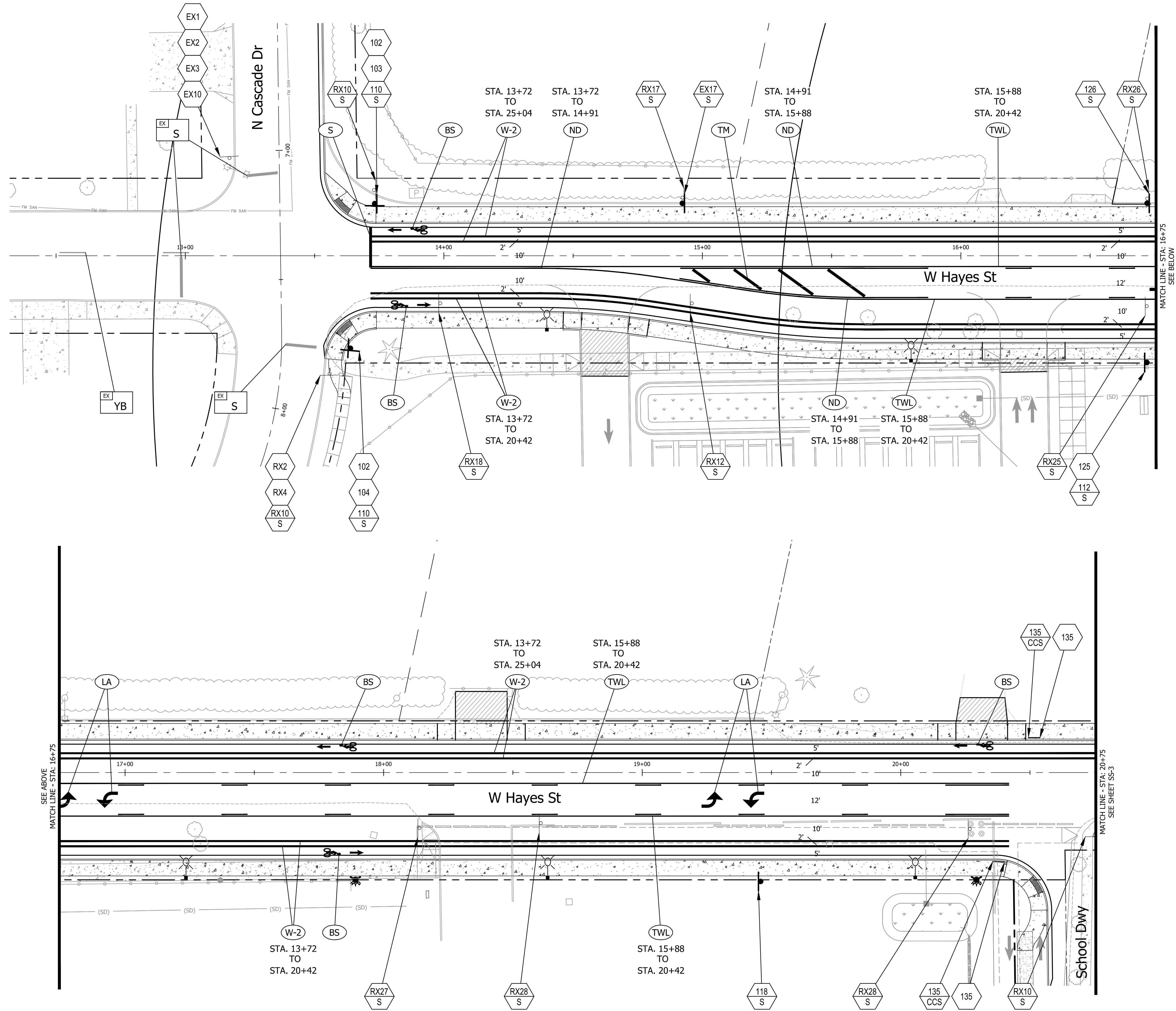
PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

SIGNING AND STRIPING LEGEND & NOTES

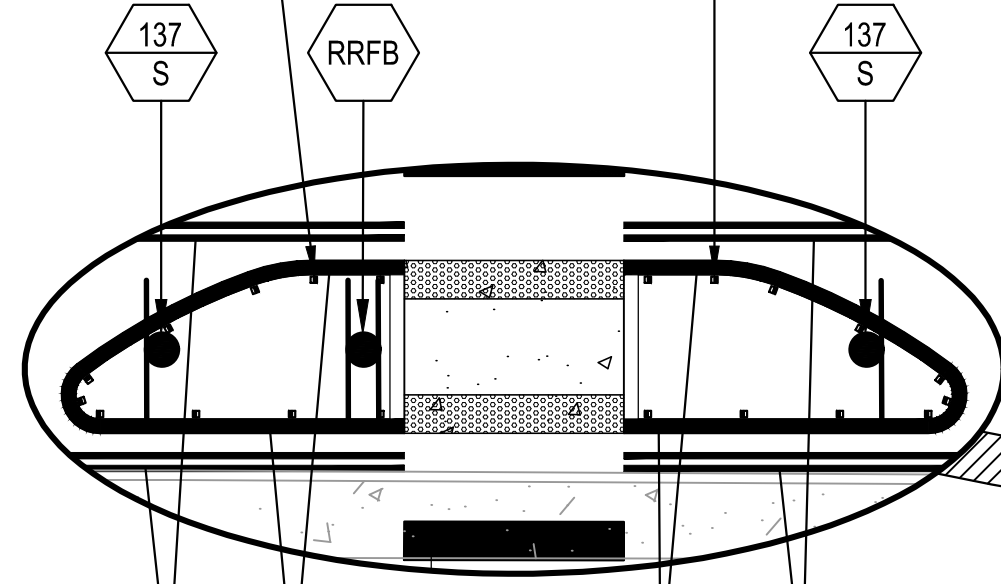
SHEET NO.
SS-1

Plot Stamp: 3/4/2022 9:32:00 AM - Fred Wismer
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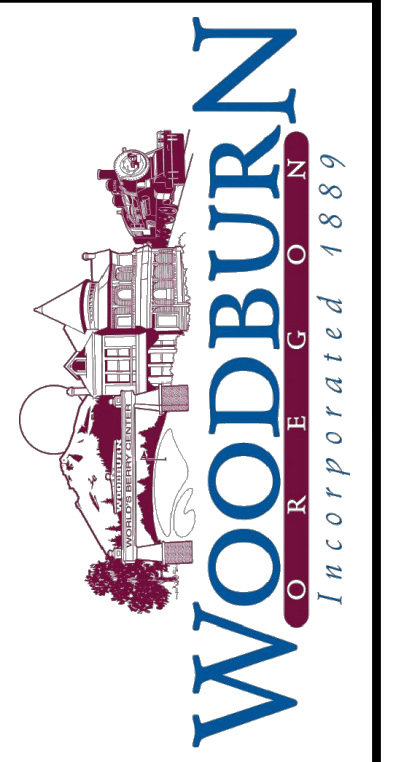
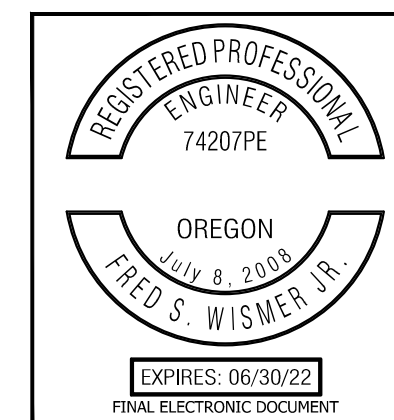
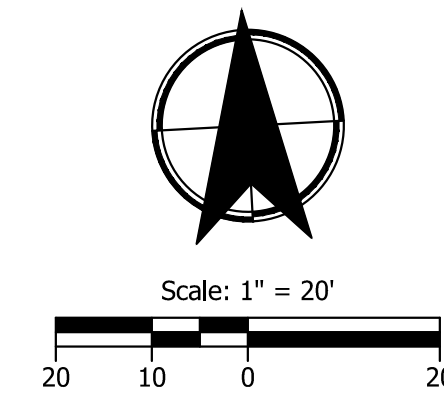
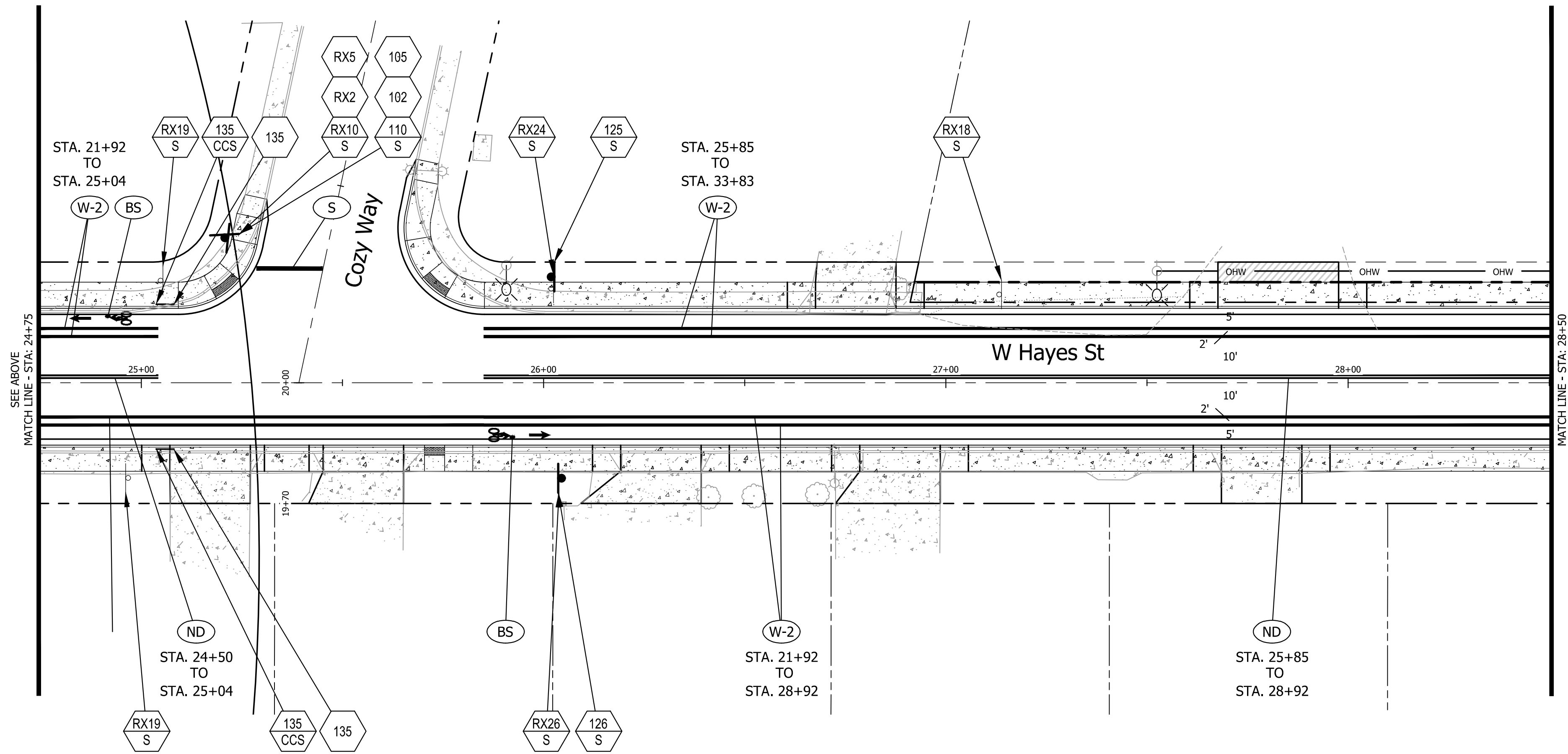
Install ten (10) yellow bi-directional raised pavement markers on top of the curb as shown



ND YC
 STA. 21+52 TO STA. 21+81

YC ND
 STA. 21+92 TO STA. 22+15

Median Detail
 SCALE: 1" = 10'



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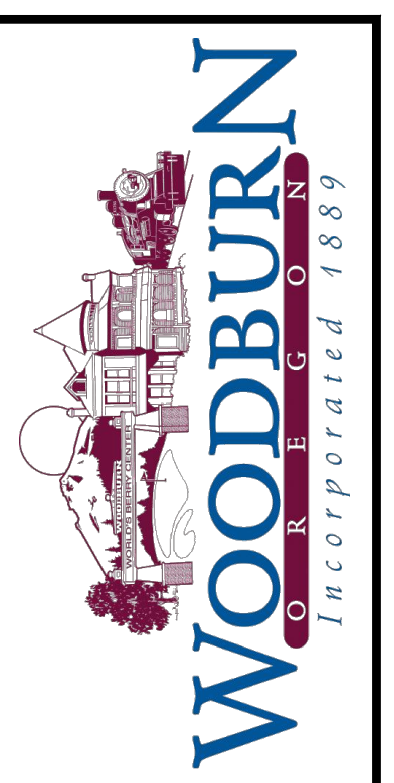
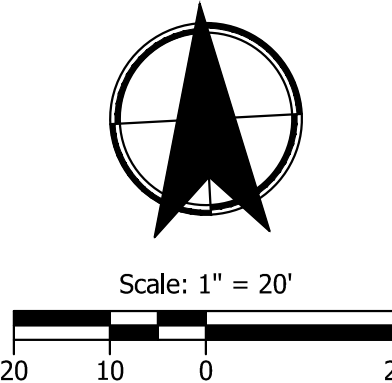
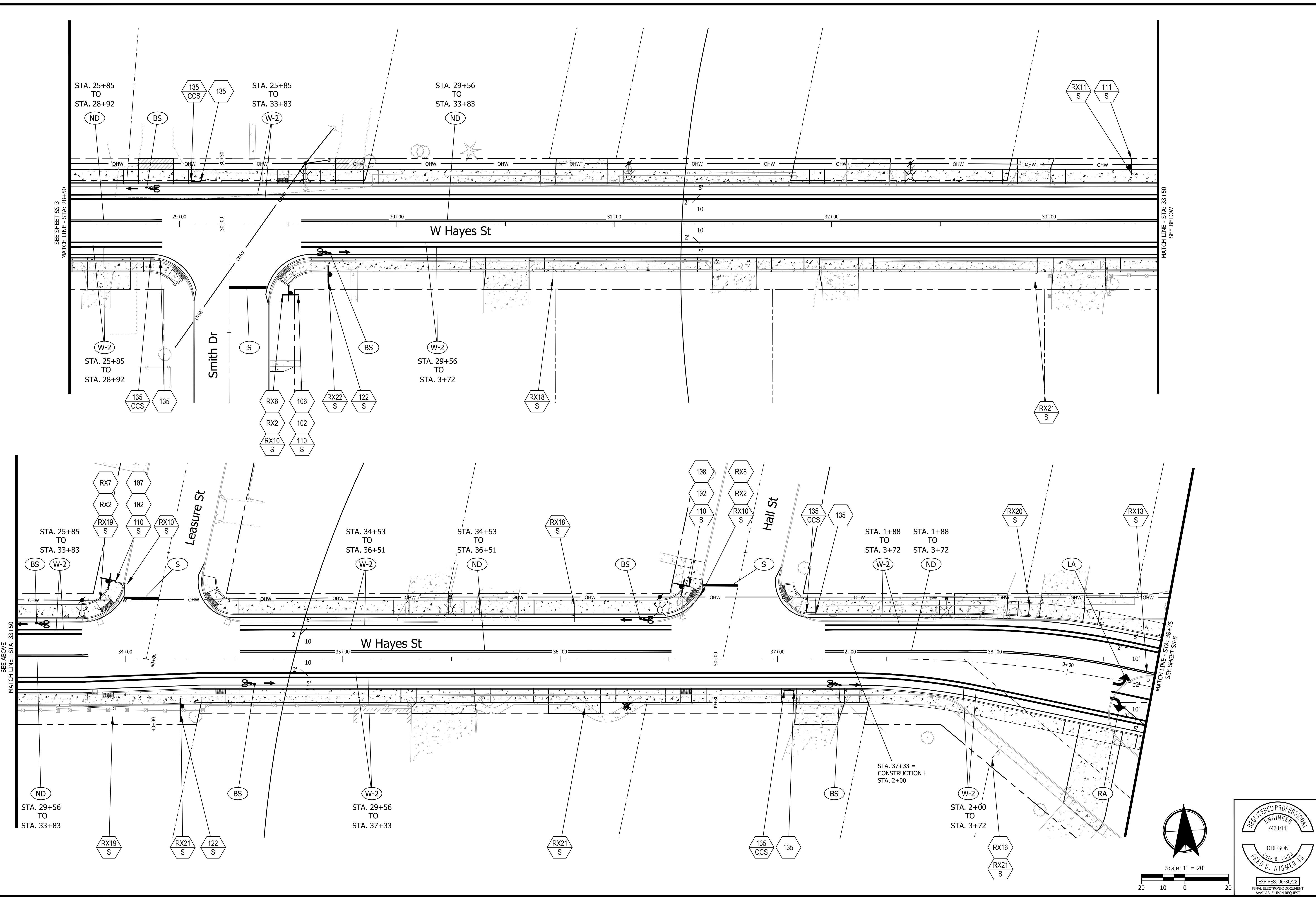
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW
 PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 SIGNING AND STRIPING PLAN

SHEET NO. SS-3

Plot Stamp: 3/4/2022 9:32:18 AM - Fred Wismer
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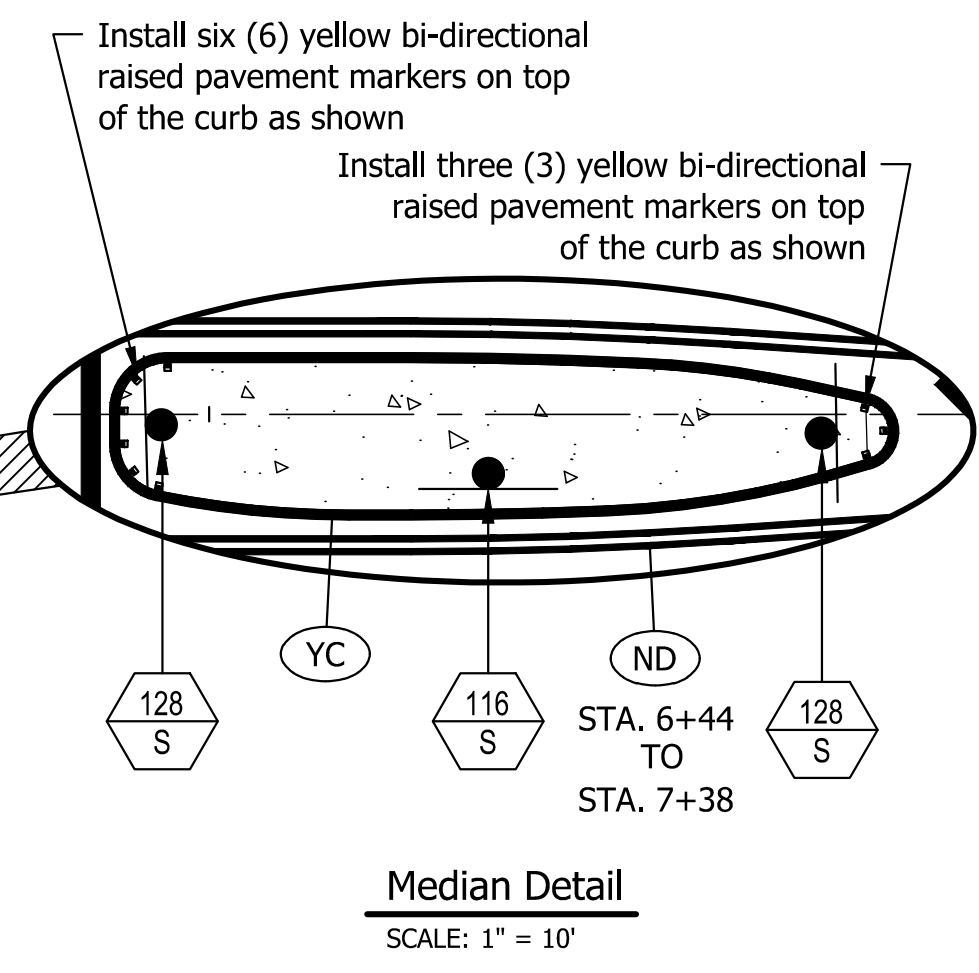
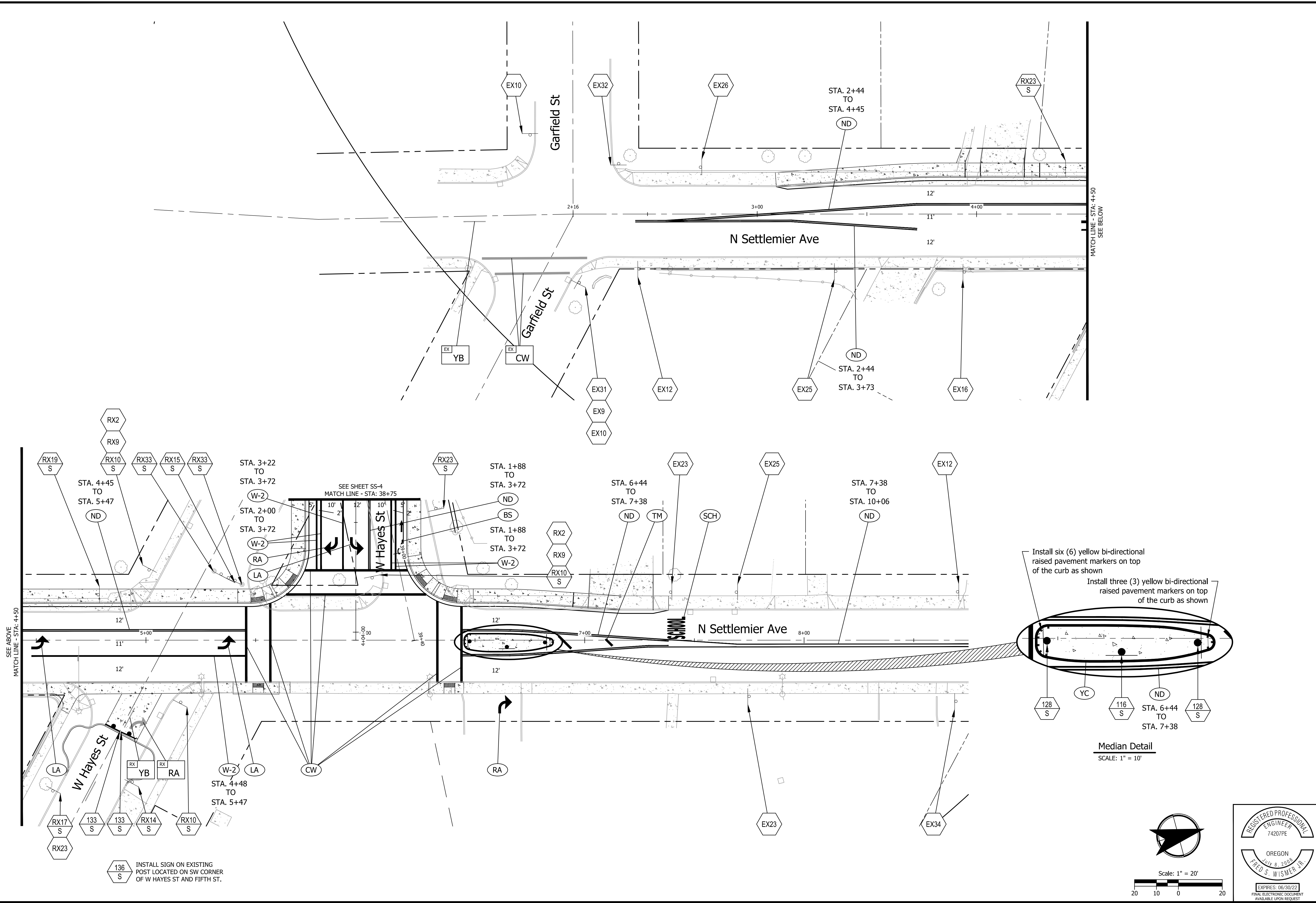
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW
 PROJECT NO. 2015-001-20

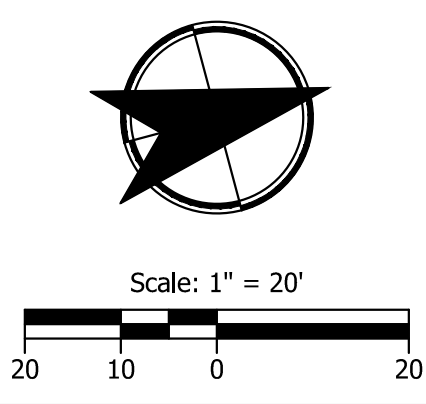
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 SIGNING AND STRIPING PLAN

SHEET NO. SS-4

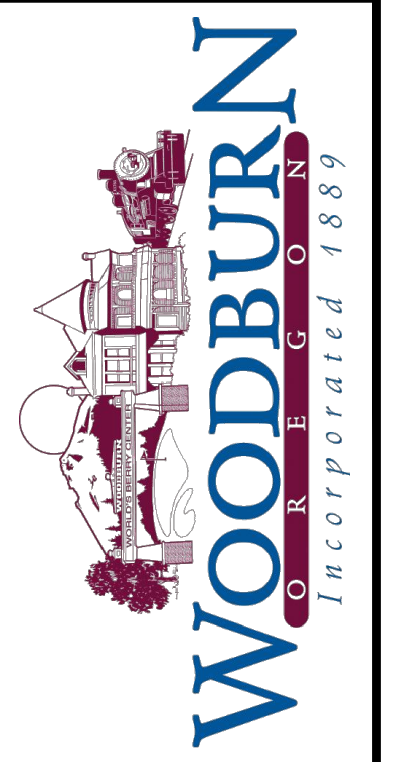
Plot Stamp: 3/4/2022 9:32:27 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\CD-Signing and Striping-24512.dwg



Median Detail
 SCALE: 1" = 10'



136 S INSTALL SIGN ON EXISTING POST LOCATED ON SW CORNER OF W HAYES ST AND FIFTH ST.



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#	DATE	REVISION	APP'D

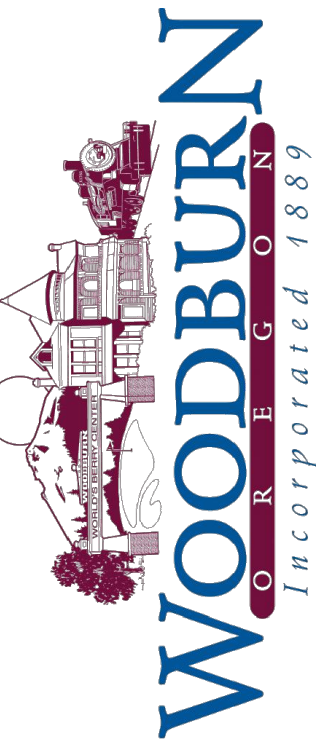
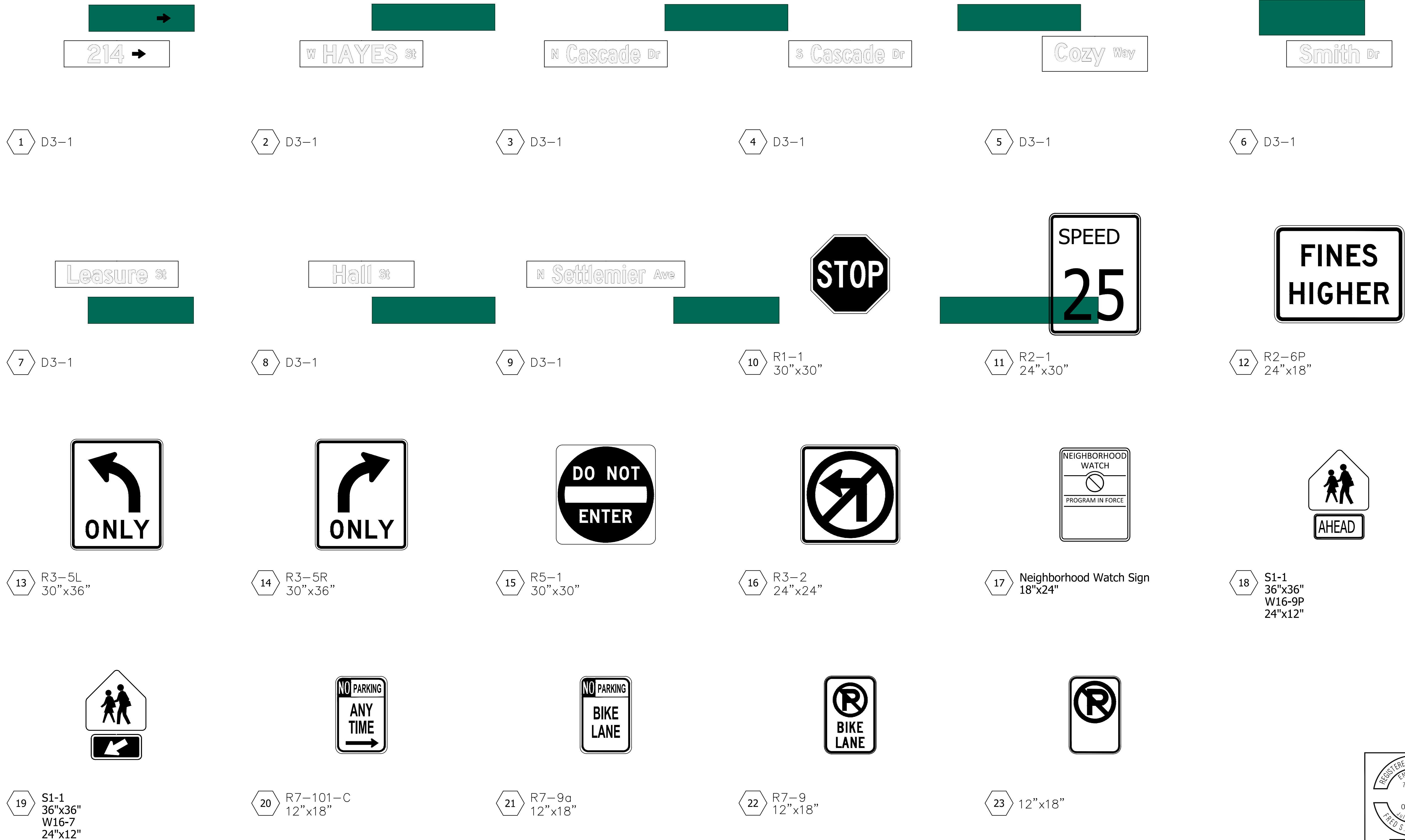
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 SIGNING AND STRIPING PLAN

SHEET NO. SS-5

EXISTING SIGNS



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#	DATE	REVISION	APP'D

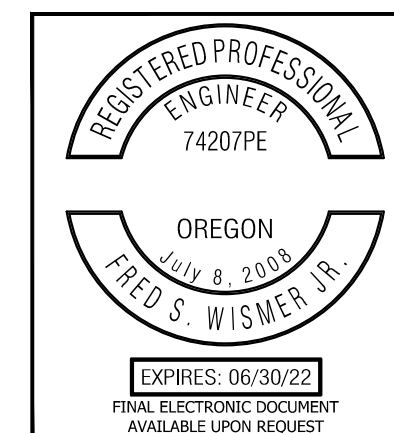
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
 2015-001-20

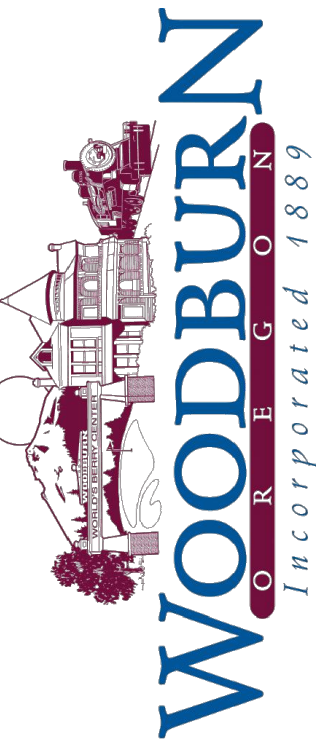
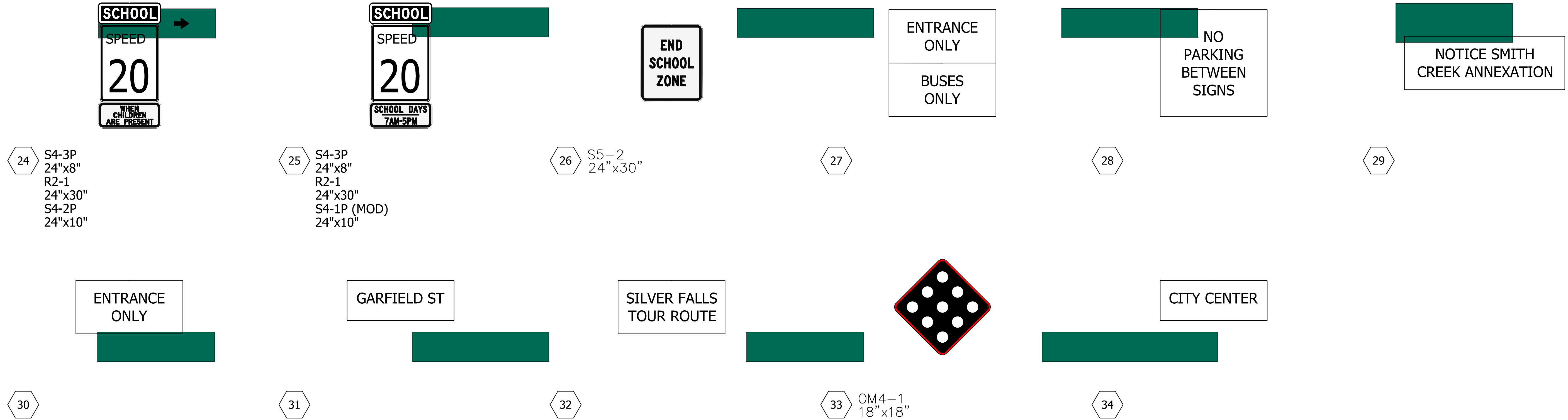
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

SIGNING LEGEND

SHEET NO.
 SS-6



EXISTING SIGNS



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#	DATE	REVISION	APP'D

Submission Date:
03/07/2022

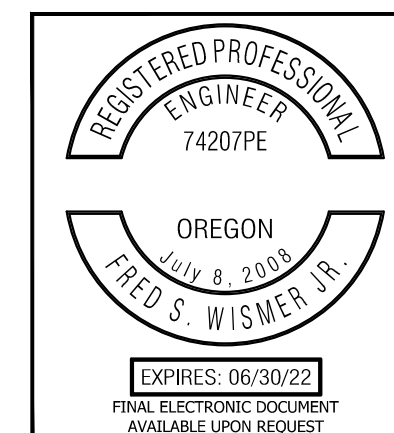
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

STIGNING LEGEND

SHEET NO.
SS-7



PROPOSED SIGNS

W Hayes St

N Cascade Dr

S Cascade Dr

Cozy Way

Smith Dr

Leasure St

102 D3-1
42"x12"
6 Required
2-Sided

103 D3-1
42"x12"
1 Required
2-Sided

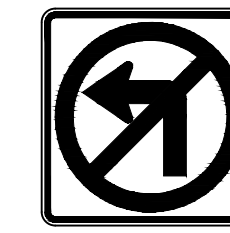
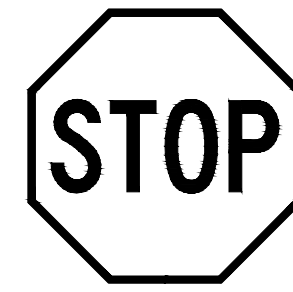
104 D3-1
42"x12"
1 Required
2-Sided

105 D3-1
36"x12"
1 Required
2-Sided

106 D3-1
36"x12"
1 Required
2-Sided

107 D3-1
42"x12"
1 Required
2-Sided

Hall St



108 D3-1
36"x12"
1 Required
2-Sided

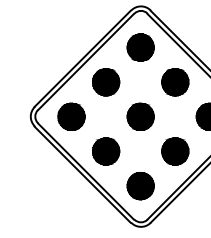
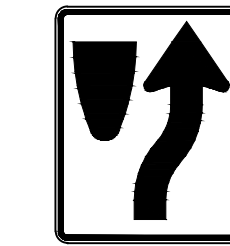
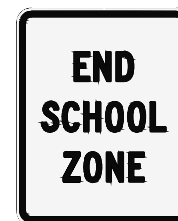
110 R1-1
30"x30"
7 Required

111 R2-1
24"x30"
1 Required

112 R2-6P
24"x18"
2 Required

116 R3-2
24"x24"
1 Required

118 S1-1
36"x36"
W16-9P
24"x12"
2 Required



122 R7-9
12"x18"
2 Required

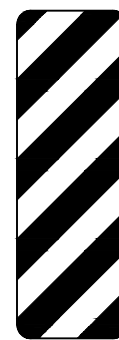
125 OS5-5
24"x36"
OS4-8
24"x10"
4 Required

126 S5-2
24"x30"
2 Required

127 R1-5b
36"x36"
2 Required

128 R4-7
24"x30"
2 Required

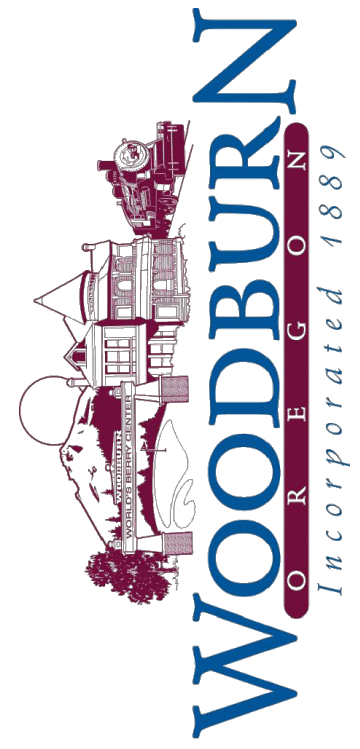
133 OM4-1
18"x18"
2 Required



135 OR22-7
24"x18"
20 Required

136 W14-1
24"x24"
1 Required

137 OM3-L
12"x36"
2 Required



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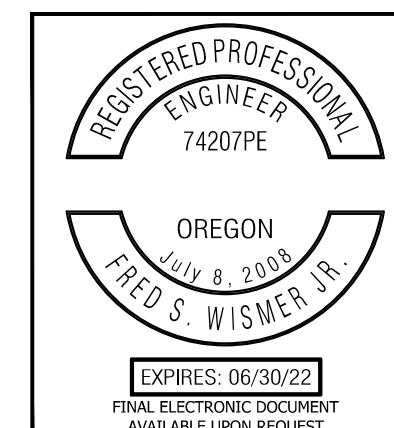
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

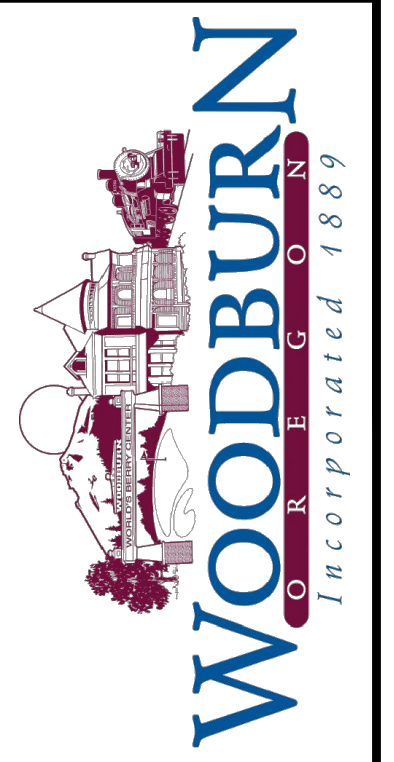
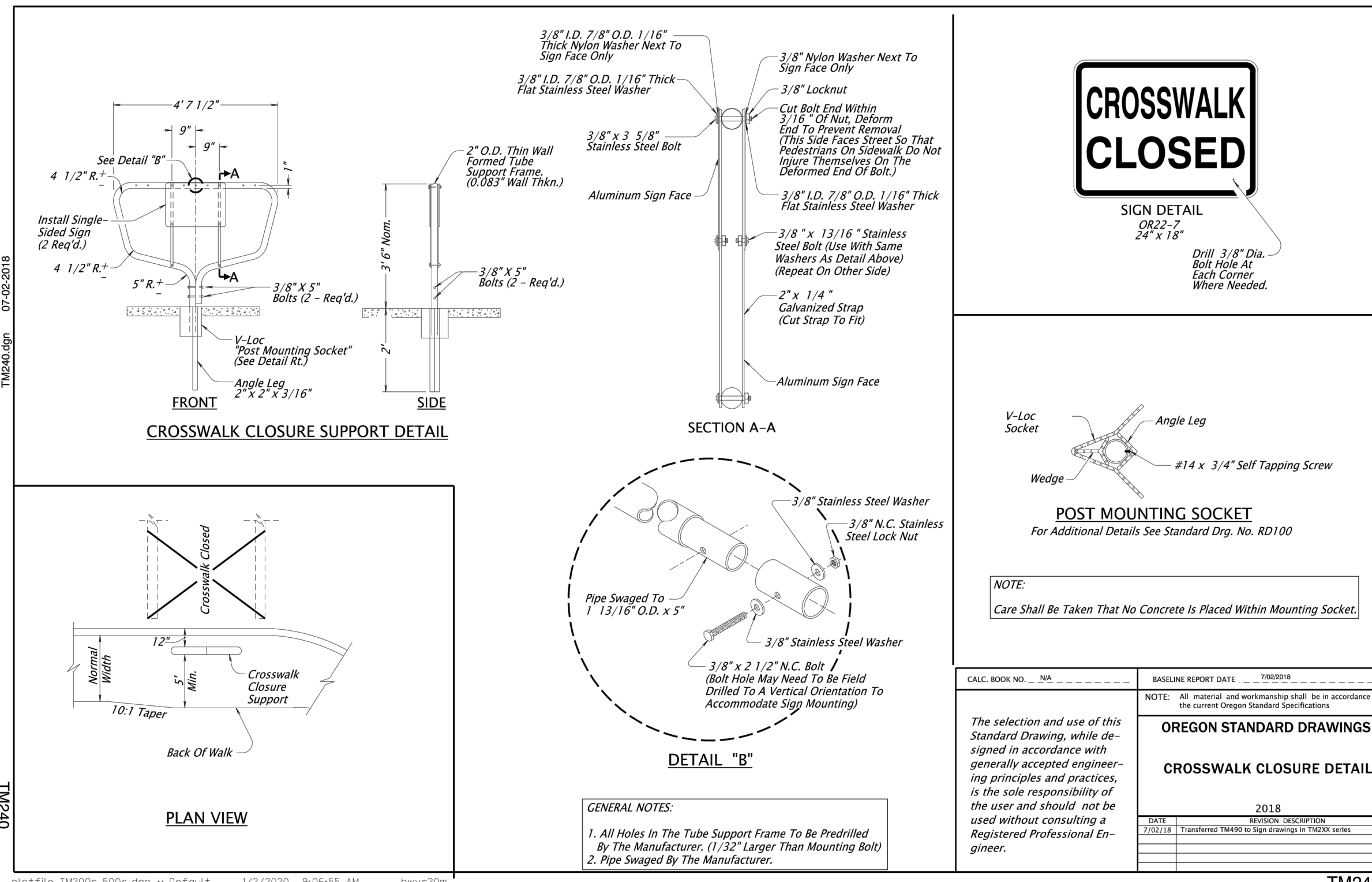
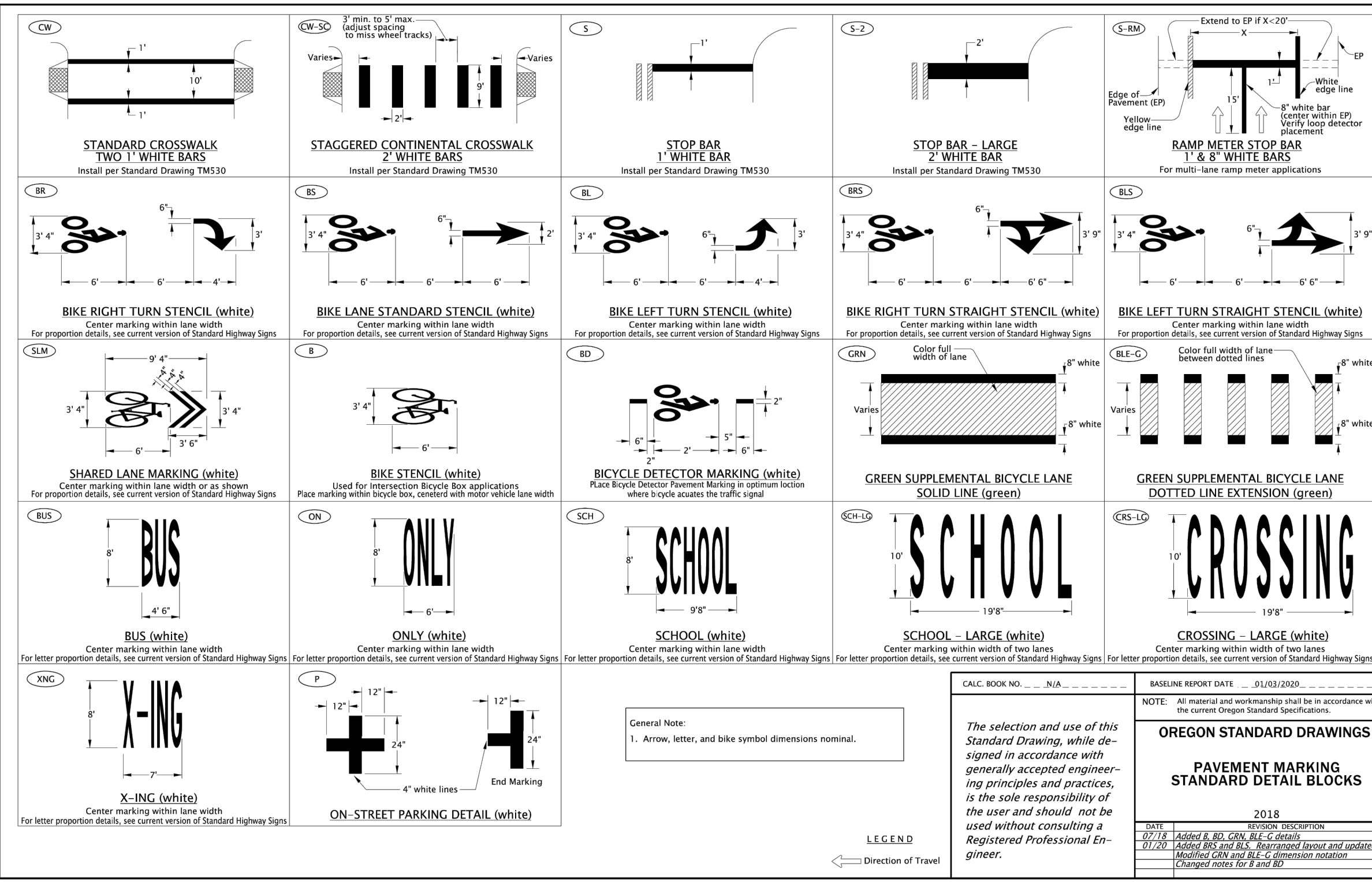
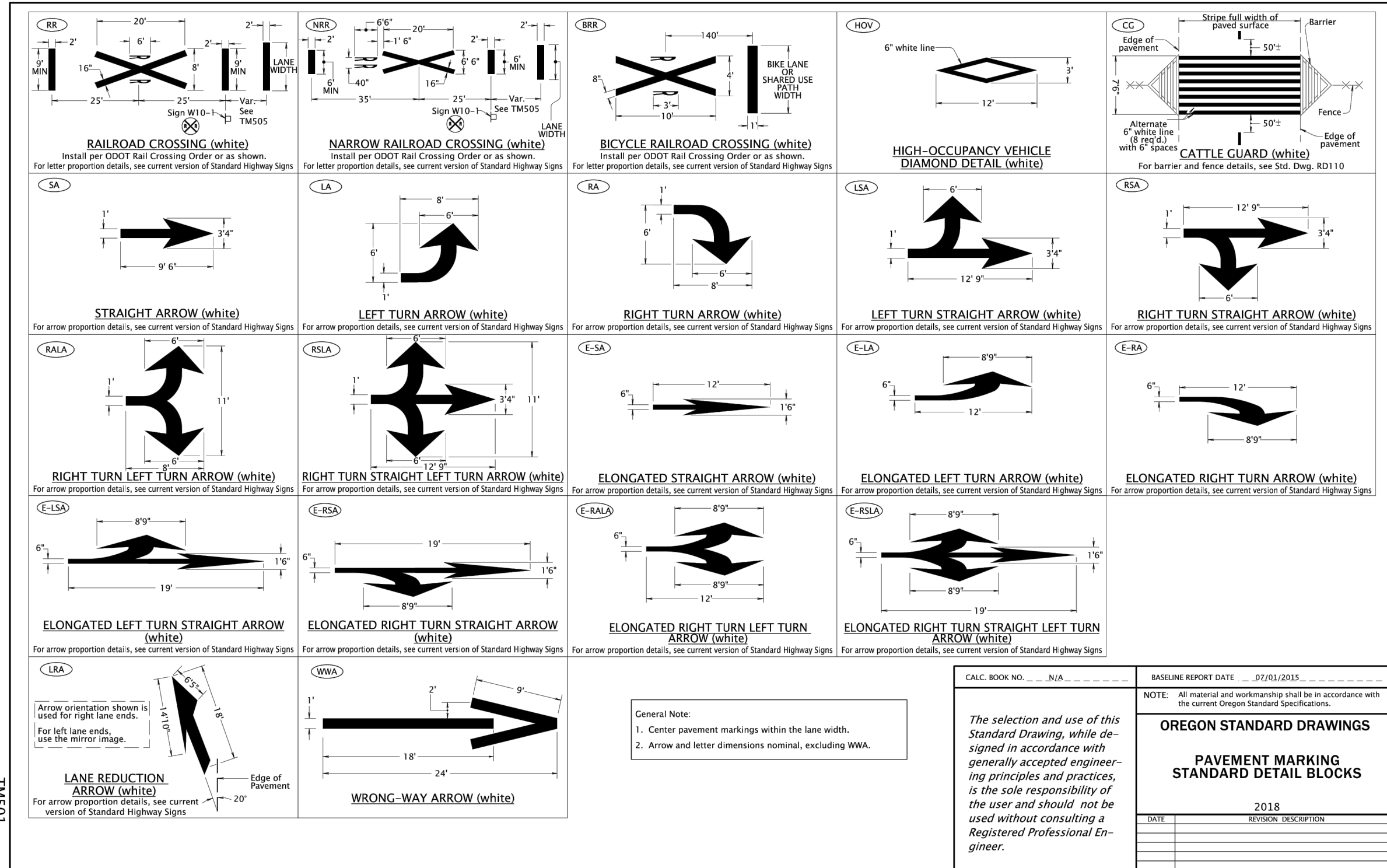
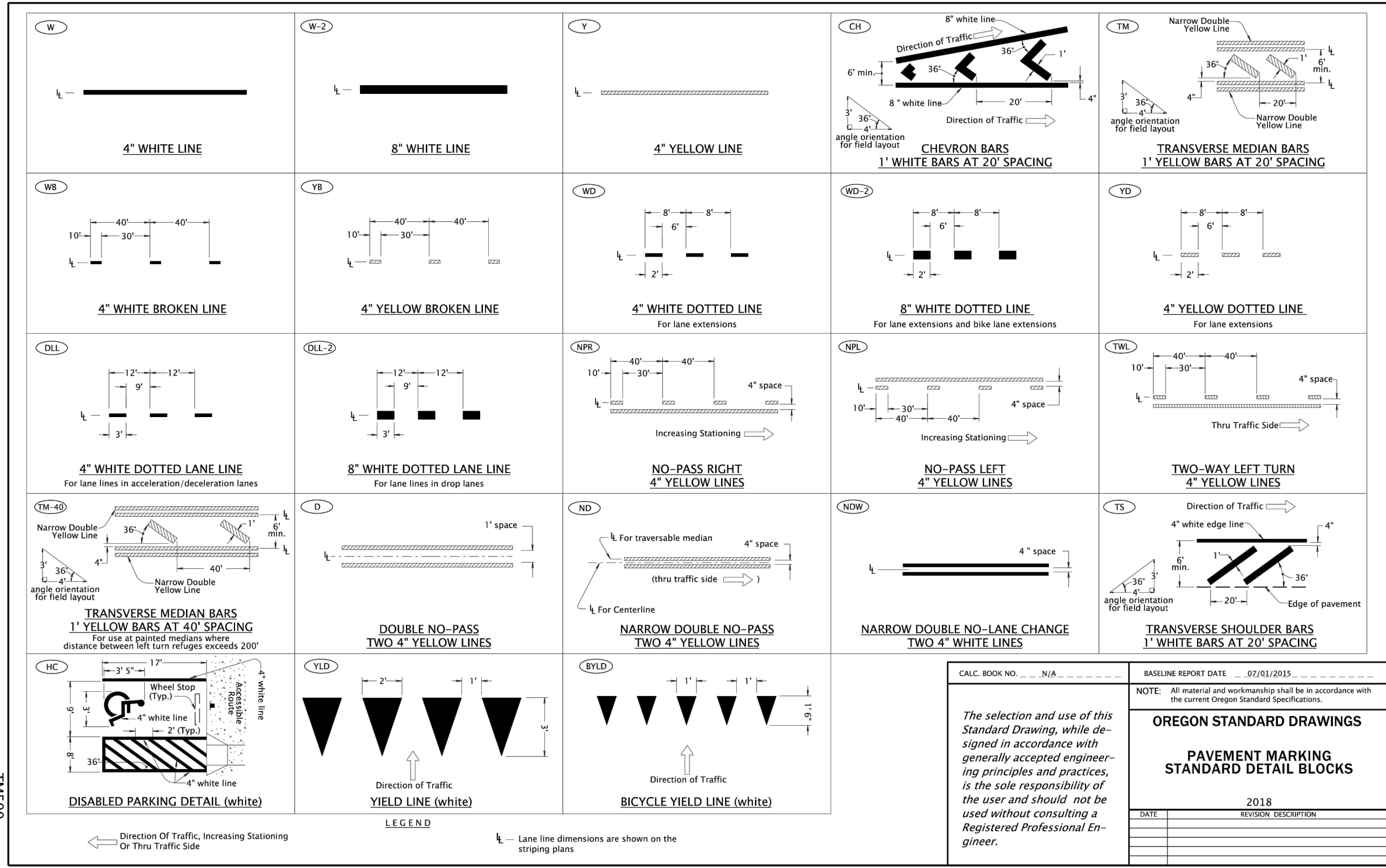
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

SIGNING LEGEND



SHEET NO. SS-8

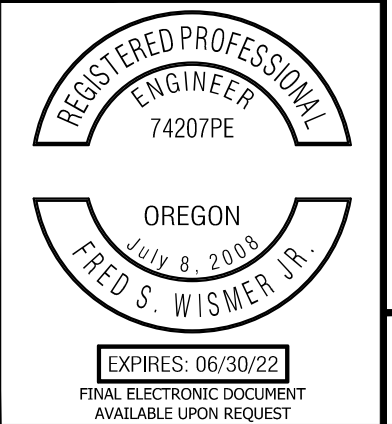


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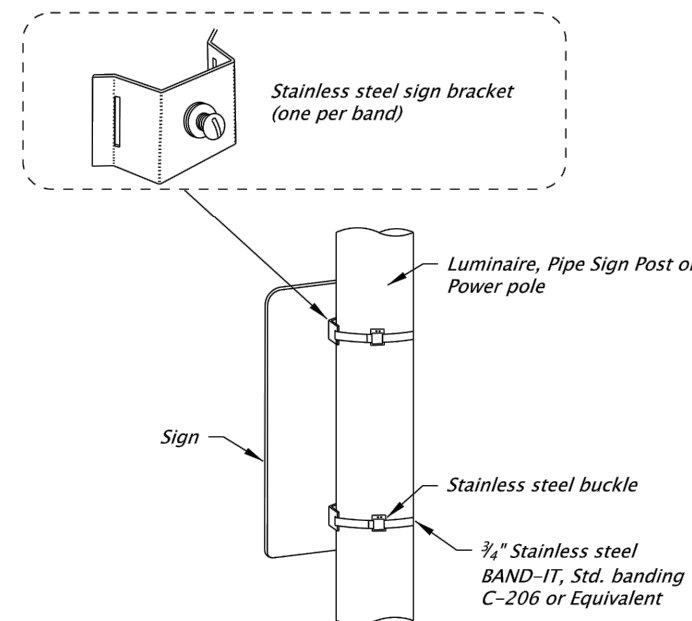
NO.	REVISION	DATE	BY	APP'D

Submission Date: 03/07/2022
Drawn: JCB/RMM
Designed: NRS/JBK
Checked: FSW

PROJECT NO. 2015-001-20
W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue
SIGNING AND STRIPING DETAILS
SHEET NO. SS-9



Plot Stamp: 3/4/2022 9:32:46 AM - Fred Wismer
File: H:\24\24512 - W. Hayes Street\design_CD\CD-Signing and Striping-24512.dwg

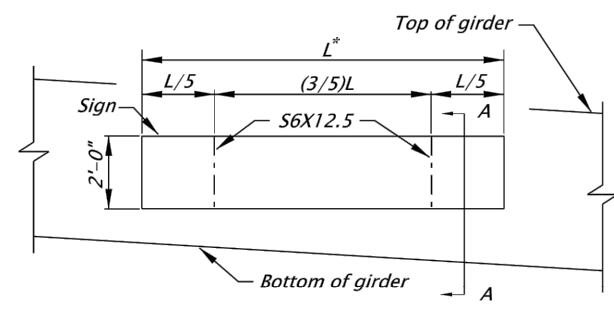


Signs mounted to vertical posts that use stainless steel clamps shall not be wider than 36". Use 2 clamps for all signs less than 48" in height and 3 clamps for signs 48" to 60" in height.

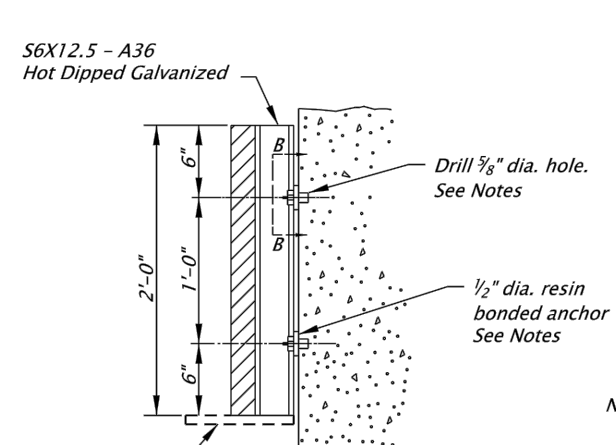
STAINLESS STEEL CLAMP (SSC) DETAIL
No Scale

GENERAL NOTES

- For Secondary Sign Mounts See TM678.

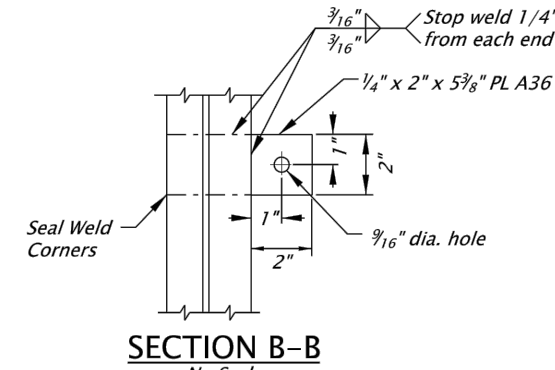


SIGN ELEVATION
No Scale



SECTION A-A
No Scale

ROAD NAME SIGN STRUCTURE MOUNT DETAIL



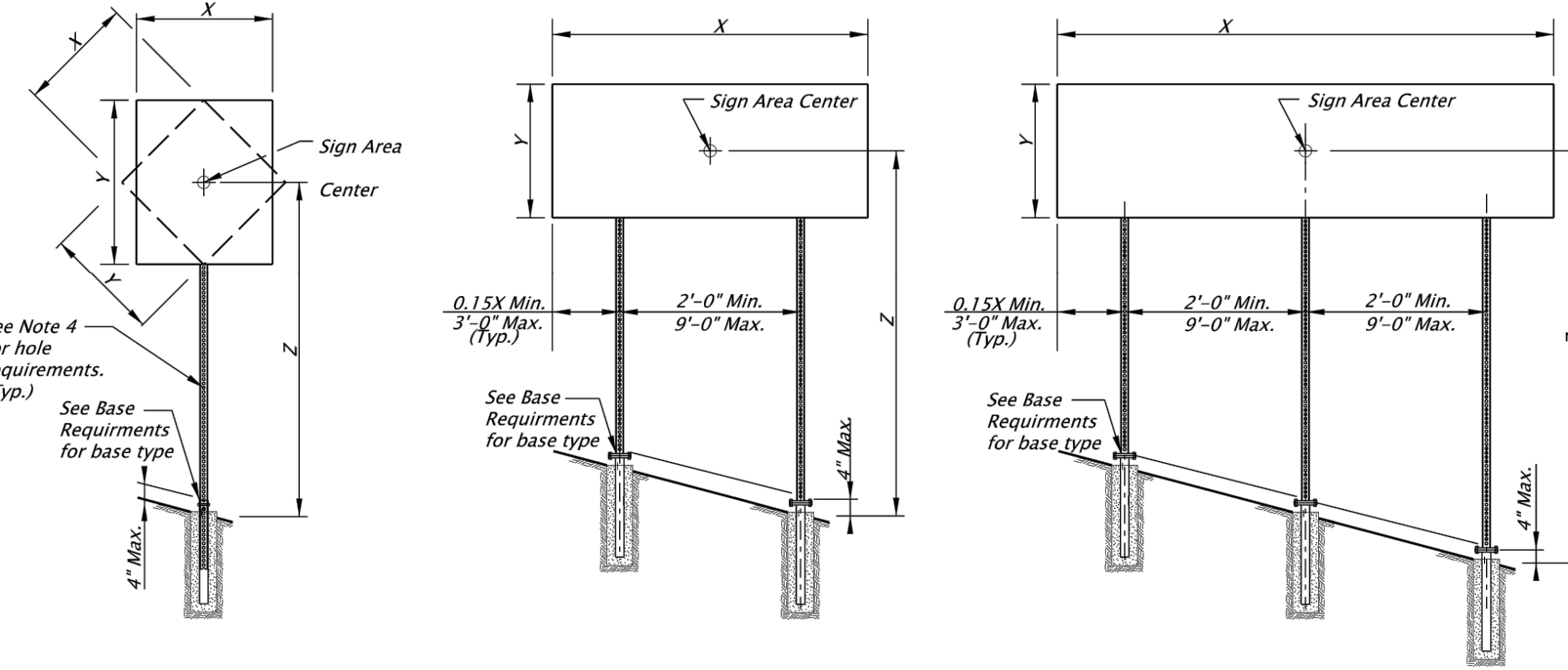
SECTION B-B
No Scale

- Notes:
- Install resin bonded anchors according to Section 00535.
 - Resin bonded anchors shall conform to ASTM A307.
 - The hole depths shall develop the pullout strength specified in Table 00535-1.
 - Tighten 1/2" dia. anchors using 16 ft.-lb. of torque for waxed galvanized and 40 ft.-lb. of torque for galvanized only connections.

CALC. BOOK NO. _____	BASISLINE REPORT DATE 06-JUL-2015
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SIGN MOUNTS	
DATE 2018	
REVISION DESCRIPTION	

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Effective Date: June 1, 2020 - November 30, 2020 **TM677**



SINGLE POST ELEVATION
No scale

TWO POST ELEVATION
No scale

THREE POST ELEVATION
No scale

(X * Y * Z) in Ft. - Maximum
3 Second Gust Wind Speed (TM671)

Square Tube Size	85 MPH			95 MPH			105 or 110 MPH		
	1	2	3	1	2	3	1	2	3
2"-12 ga.	79	158	237	63	126	189	57	114	171
2 1/2"-12 ga.	136	272	408	109	218	327	98	196	294
2 1/2"-10 ga.	165	330	495	132	264	396	119	238	357
2 1/2" & 2 1/2"-12 ga.	231	462	693	185	370	555	167	334	501

PERMANENT PERFORATED STEEL SQUARE TUBE TABLE

(X * Y * Z) in Ft. - Maximum
3 Second Gust Wind Speed (TM671)

Square Tube Size	85 MPH			95 MPH			105 or 110 MPH		
	1	2	3	1	2	3	1	2	3
2"-12 ga.	125	250	375	100	200	300	90	180	270
2 1/2"-12 ga.	215	430	645	172	344	516	155	310	465
2 1/2"-10 ga.	261	522	783	209	418	627	189	378	567
2 1/2" & 2 1/2"-12 ga.	364	728	1092	292	584	876	263	526	789

TEMPORARY PERFORATED STEEL SQUARE TUBE TABLE

Number of Posts

Square Tube Size	1	2	3
2"-12 ga.	Anchor	Anchor	N/A
2 1/2"-12 ga.	Anchor	Slip	Slip
2 1/2"-10 ga.	Slip	Slip	Slip
2 1/2" & 2 1/2"-12 ga.	Slip	Slip	Slip

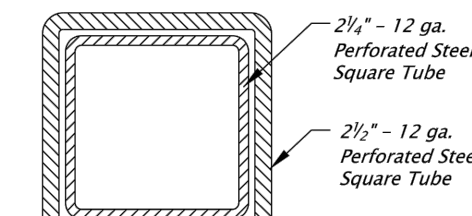
BASE REQUIREMENTS

- Anchor - See Drawing TM687 for PSST anchor foundation details.
- Slip - See Drawing TM688 for PSST slip base foundation details.
- N/A - Do not use this option.

* - See 2 1/2" & 2 1/2"-12 ga. detail.

GENERAL NOTES:

- Perforated Steel Square Supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 4th Edition, 2001, 2002, 2003, and 2006 interim revisions.
- The design basic wind speed (3 second gust) shall be according to the wind map shown on TM671.
- Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
- Use 1/2" diameter holes at 1" spacing on each of the 4 sides.
- Steel post shall have a minimum yield stress of 50 ksi.
- Steel shall be galvanized according to ASTM A653 with coating designation G90.
- General design parameters are Kz = 0.87, Cd (sign) = 1.20, and G = 1.14.
- Permanent signing uses an Ir = 0.71 for a recurrence interval of 10 years.
- Temporary signing uses an Ir = 0.45 for a recurrence interval of 1.5 years.
- The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
- For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM622.
- Posts protected by barrier or guardrail do not require slip bases.



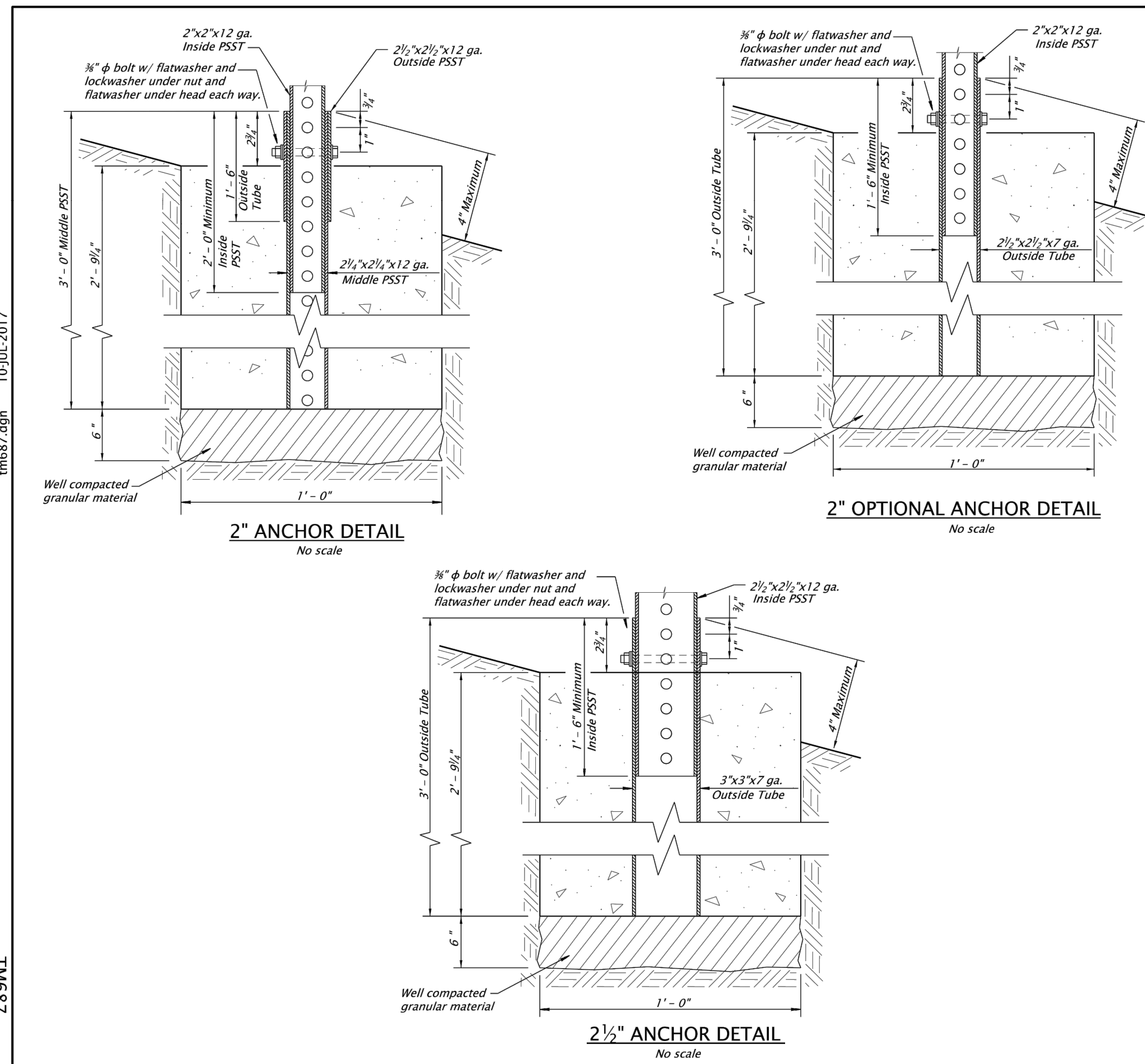
2 1/2" & 2 1/2" - 12 GA. DETAIL
No scale

Accompanied by dwgs. TM200, TM671, TM687, TM688, TM689, TM822

CALC. BOOK NO. 5752	BASISLINE REPORT DATE 10-JUL-2017
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION	
DATE 2018	
REVISION DESCRIPTION	

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Effective Date: June 1, 2020 - November 30, 2020 **TM681**



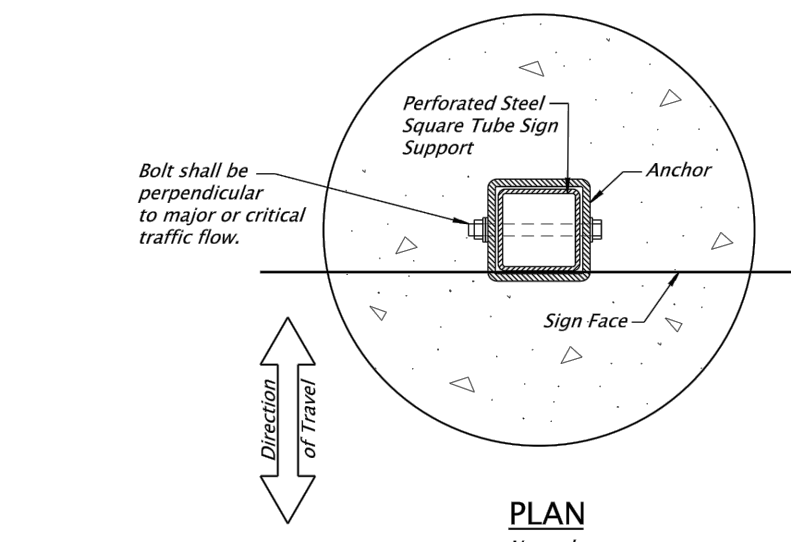
2" ANCHOR DETAIL
No scale

2" OPTIONAL ANCHOR DETAIL
No scale

2 1/2" ANCHOR DETAIL
No scale

General Notes:

- Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
- Anchor steel shall be hot dipped galvanized or approved equal.
- Footing concrete shall be Commercial Grade Concrete (fc = 3000 psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
- The estimated concrete volume is .09 cubic yards.



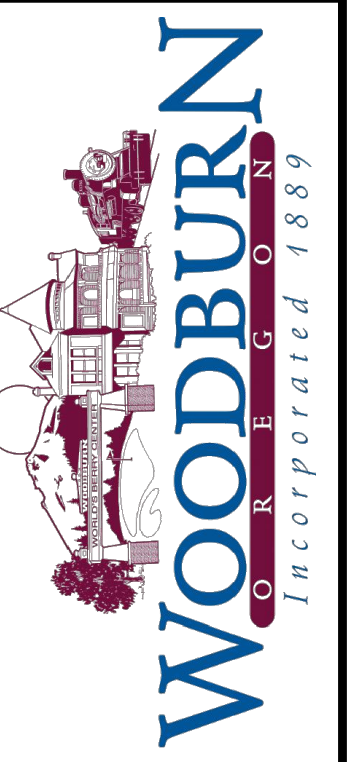
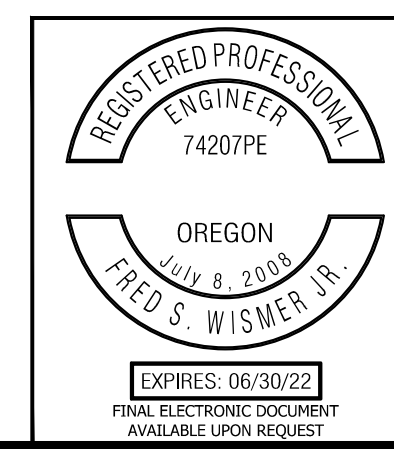
PLAN
No scale

Accompanied by dwgs. TM681, TM688

CALC. BOOK NO. 5752	BASISLINE REPORT DATE 06-JAN-2012
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
PERFORATED STEEL SQUARE TUBE (PSST) ANCHOR FOUNDATION	
DATE 2018	
REVISION DESCRIPTION	

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Effective Date: June 1, 2020 - November 30, 2020 **TM687**



KITTELSON & ASSOCIATES
 851 SW 6TH AVENUE, SUITE 600
 PORTLAND, OR 97204
 P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. **2015-001-20**

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue

SHEET NO. **SS-10**

LEGEND

CONTROLLERS & CABINETS

- Install a model 332S cabinet & control equipment with riser frame. Orient louvered door as shown.
- Install ATC controller
- Install base Mounted Service cabinet, 120/240 volt metered for signal system
- Remove existing service cabinet

POLES

- Install (T=type) standard traffic signal mast arm pole. See Pole Entrance Chart Sht. TS-4
- Install (L=Length) foot traffic signal mast arm
- Install pedestrian signal pedestal with frangible base
- Retain and protect existing power pole
- Install (L=Length) foot luminaire arm
- Remove existing traffic signal mast arm pole
- Remove existing mast arm

SIGNALS

- Install phase (Ph=phase) vehicle signal with retro-reflective strips on back-plates, see detail on Std. Dwg. No. TM460.
- Install phase (Ph=phase) countdown pedestrian signal with clamshell mount and pushbutton mount. Include phase (Ph=phase) audible pedestrian signal.
- Remove existing vehicle signal

SIGNS

- Install Aluminum Street Name Sign "W Hayes St" on Mast Arm
- Install Aluminum Street Name Sign "W Settlemier Ave" on Mast Arm
- Install Aluminum (30"x36") LEFT TURN ONLY sign (R3-5L)
- Install Aluminum (30"x36") RIGHT TURN ONLY sign (R3-5R)
- Install Aluminum (30"x36") TURNING VEHICLES YIELD TO PEDS sign (R10-15L)
- Remove existing interior illuminated sign

LUMINAIRES

- Install Leotek, 88 Watt, 700mA, 40 LED GCM2-40H-MV-WW-2R-GY-700-PCR7-RWG-WL-FDC Bond luminaire to pole grounding terminal
- Install Photocontrol Electronic Relay on Fixture (See Project Specifications)

JUNCTION BOXES

- Install 17"x10"x12" (min. dimension) precast concrete junction box
- Install 17"x10"x12" (min. dimension) precast concrete junction box with concrete apron
- Install 30"x17"x12" (min. dimension) precast concrete junction box with concrete apron
- Install 30"x17"x18" (min. dimension) precast concrete junction box with concrete apron (See Oregon Standard Dwg. TM472 for Details)

CONDUITS

- Install (S=size) inch conduit
- Install Conduit and Wire as Required by Power Company
- Install conduit by horizontal directional drilling, open trench not allowed

MISCELLANEOUS

- Power Source Location. To be coordinated by other
- Install Single Sided Rapid Rectangular Flashing Beacon. See details on sheet TS-5
- Install Double Sided Rapid Rectangular Flashing Beacon. See details on sheet TS-5

FIRE PREEMPTION

- Install channel (Ch=channel), fire preemption detector feeder cable
- Install channel (Ch=channel), (N=number) barrel fire preemption detector unit

DETECTION

- Install near-range radar detector unit (T=Radar)
- Install far-range radar detector unit (T=Radar)
- Install Wavetronix Click 656 SDLC radar interface unit, SDLC cable, and shelf rack

WIRES & CABLES

- Install (X=number of cables) control cable(s) with (N=number) (G=AWG wire size) AWG conductors.
- Install poly pull line (500 FT/LB minimum strength)
- Install radar control cables (T=Radar)
- Retain and protect existing wiring.
- Remove existing wiring.
- Install (N=number) No. G (G=AWG Wire Size) THWN Wires
- Install (N=number) No. G (G=AWG Wire Size) XHHW Wires

GENERAL NOTES:

1. All materials and workmanship shall conform to Special Provisions and the 2021 Oregon Standard Specifications for Construction, and the Oregon Standard Drawings listed below.
2. The contractor shall supply all equipment, materials, and labor required for the signal operations shown on this plan.
3. The contractor shall verify the locations of existing utilities and coordinate this work with the utility companies/agencies to eliminate any conflicts.
4. The contractor shall field verify the location of all signal equipment before installation.
5. Signal timing will be provided by ODOT.
6. Retain and protect existing signal and detection during construction until new signal installation is complete and ready for turn-on. Maintain minimum signal operation down time.
7. All junction boxes shall be placed in sidewalk or concrete apron.
8. Install #12 stranded copper (orange) tracer wire in all conduits. Ground all tracer wires.
9. Conduit shall be placed in the same trench with other conduits when possible.
10. Top of signal and pedestrian foundations shall match top of finished grade of sidewalk.
11. All conduit runs shall be within right-of-way.
12. Install poly pull tape (1,200 LBF min. strength, non conductive) in all conduits.
13. All underground conduits and fittings shall be Schedule 80 PVC.

SIGNAL MOUNTING OPTIONS

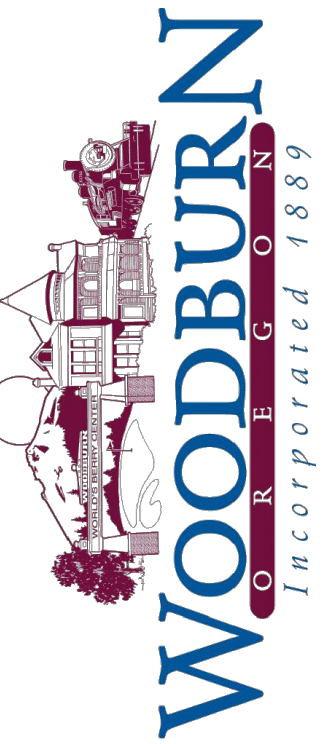
B = Adjustable skybracket (No Tenon)

SIGNAL HEAD OPTIONS

2 = 12" R, 12" Y, 12" G
6L = 12" RLTA, 12" YLTA, 12" FYLTA, 12" GLTA

SIGN MOUNTING OPTIONS

AB = Adjustable skybracket (No Tenon)



851 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
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#	DATE	REVISION	APP'D

Submission Date: 03/07/2022

Drawn: JBK Designed: JBK Checked: WES

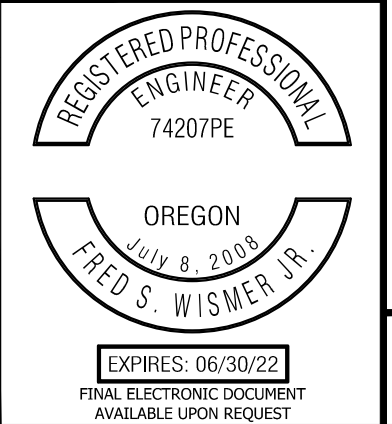
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

SIGNAL LEGEND AND NOTES

SHEET NO. TS-1

ACCOMPANIED BY DWGS.
TM223, TM450, TM457, TM460, TM462
TM466, TM465, TM467, TM470, TM471,
TM472, TM482, TM485, TM488, TM650,
TM651, TM652, TM653, TM654
DET4437, DET4681



#	DATE	REVISION	APP'D

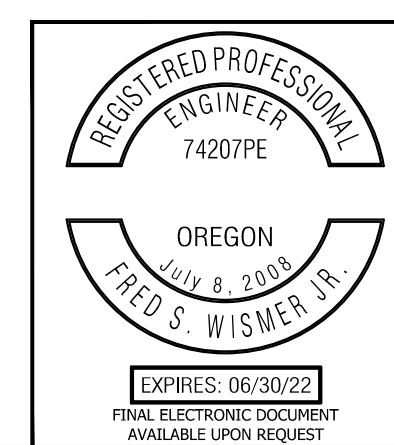
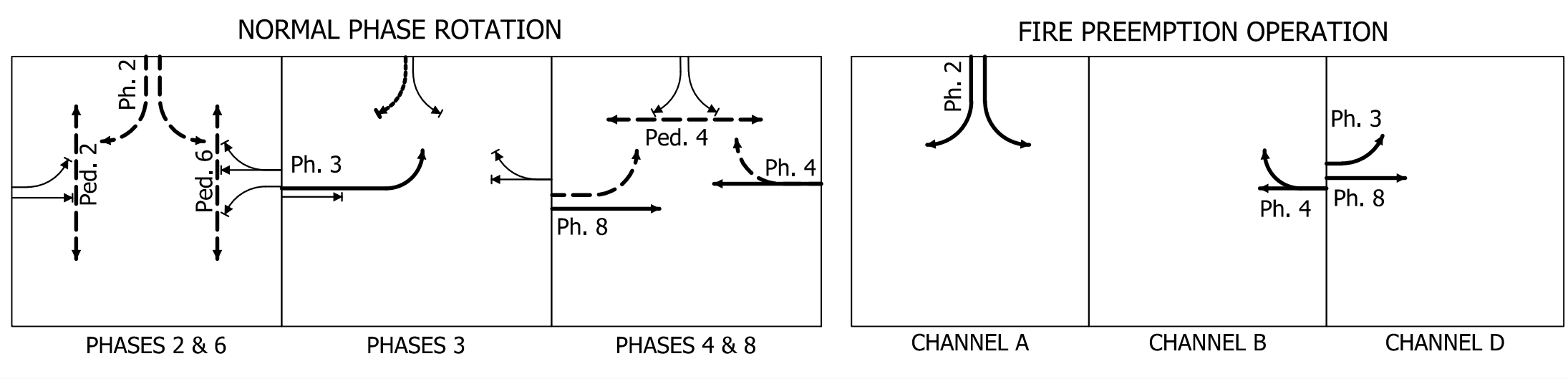
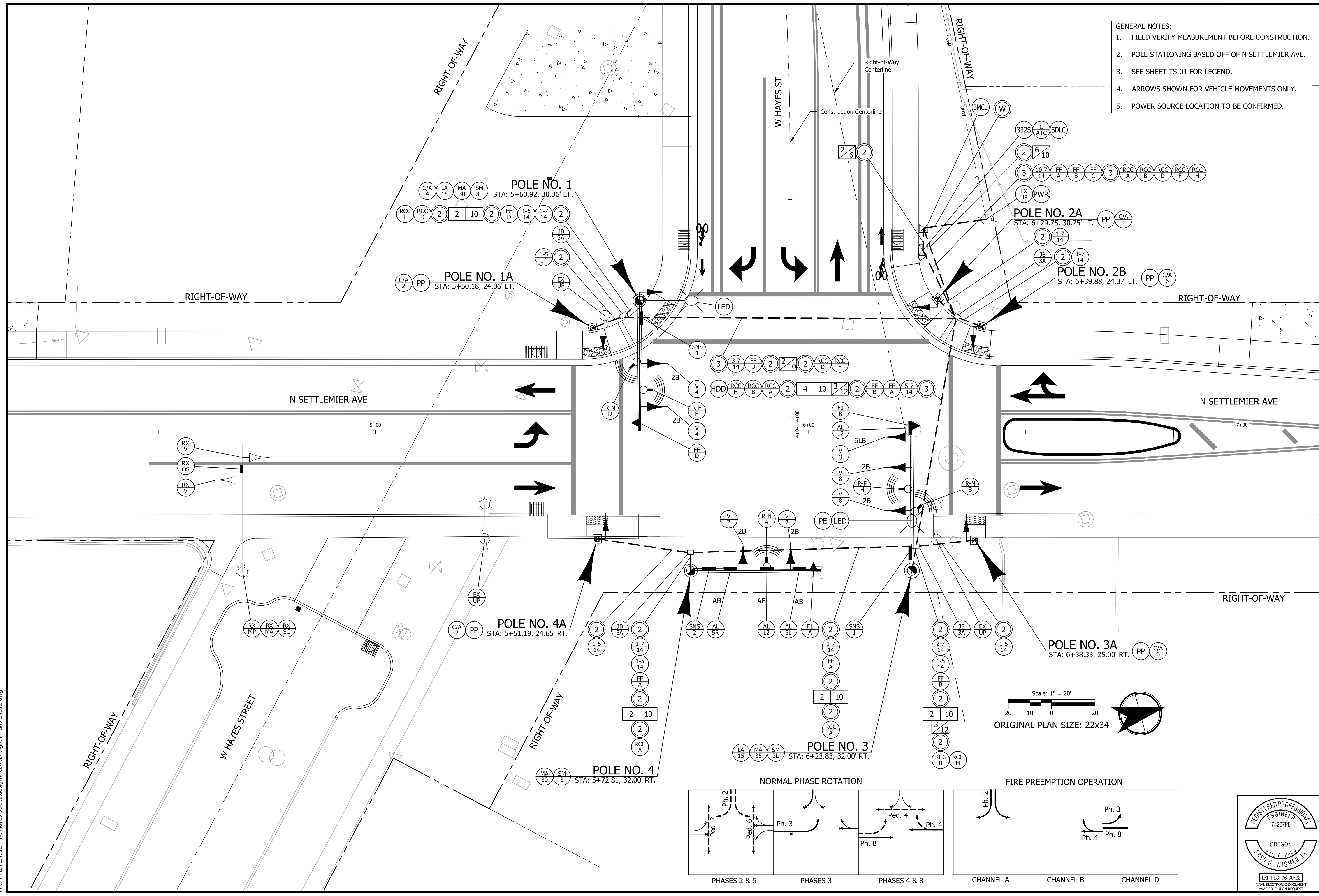
Submission Date: 03/07/2022
Drawn: JBK Designed: JBK Checked: WES

PROJECT NO. 2015-001-20

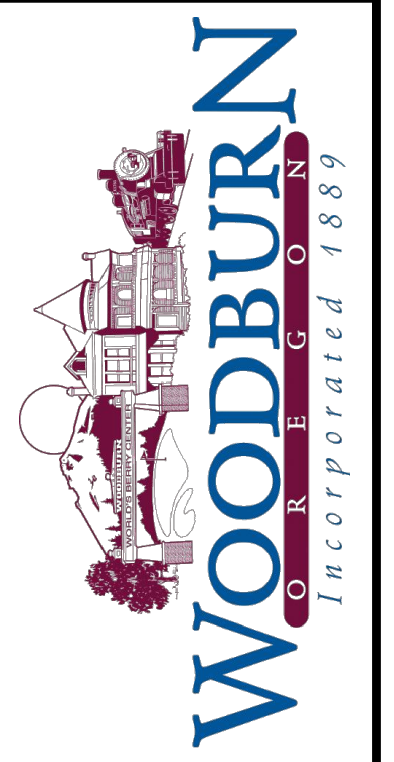
W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

SHEET NO. TS-2

- GENERAL NOTES:**
1. FIELD VERIFY MEASUREMENT BEFORE CONSTRUCTION.
 2. POLE STATIONING BASED OFF OF N SETTLEMIER AVE.
 3. SEE SHEET TS-01 FOR LEGEND.
 4. ARROWS SHOWN FOR VEHICLE MOVEMENTS ONLY.
 5. POWER SOURCE LOCATION TO BE CONFIRMED.

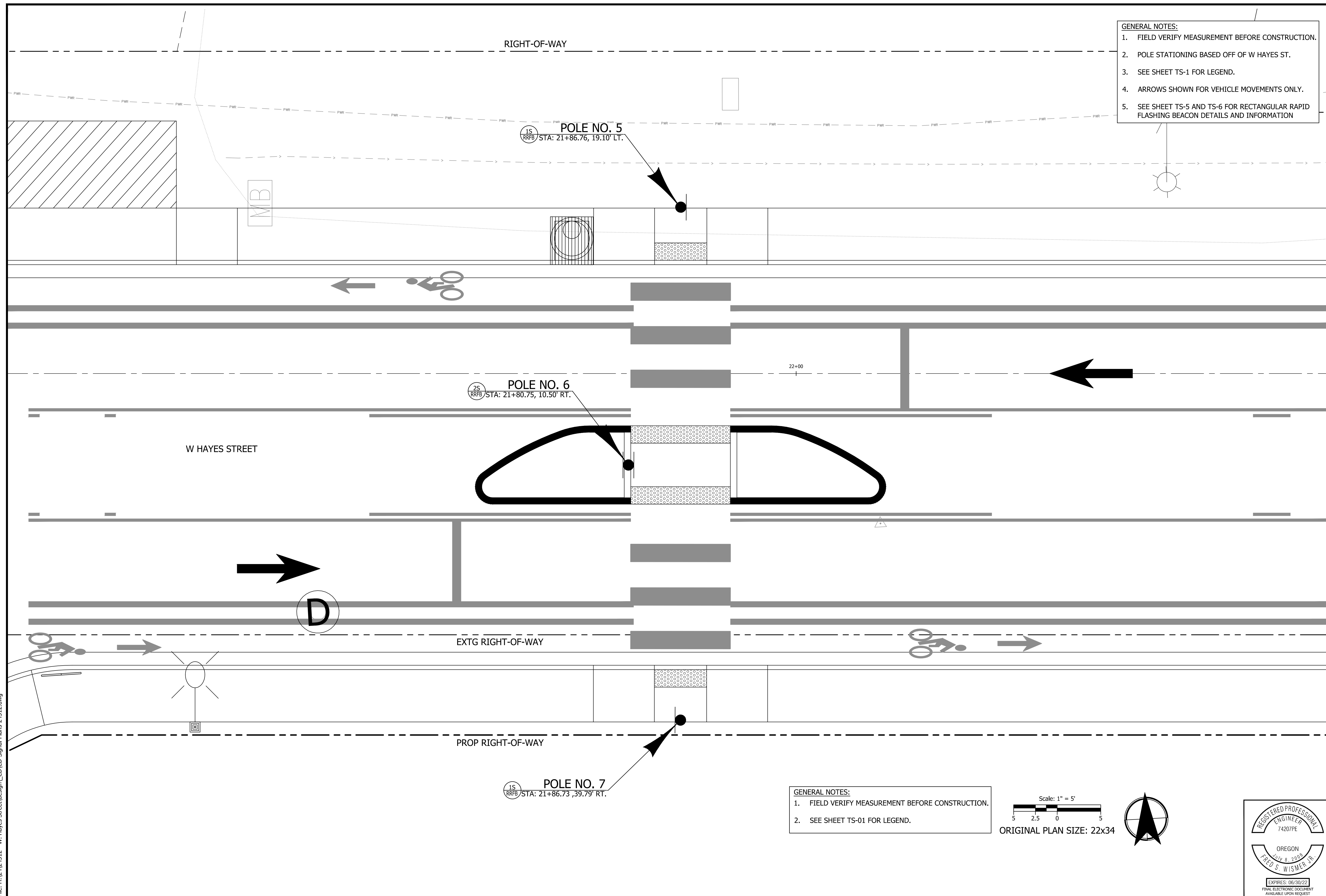


Plot Stamp: 3/4/2022 9:33:38 AM - Fred Wismer
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- GENERAL NOTES:**
1. FIELD VERIFY MEASUREMENT BEFORE CONSTRUCTION.
 2. POLE STATIONING BASED OFF OF W HAYES ST.
 3. SEE SHEET TS-1 FOR LEGEND.
 4. ARROWS SHOWN FOR VEHICLE MOVEMENTS ONLY.
 5. SEE SHEET TS-5 AND TS-6 FOR RECTANGULAR RAPID FLASHING BEACON DETAILS AND INFORMATION



#	DATE	REVISION	APP'D.

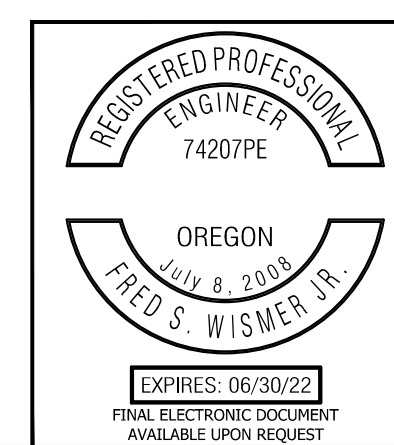
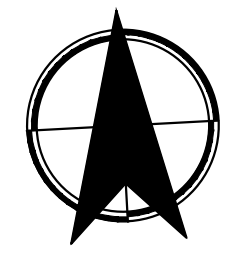
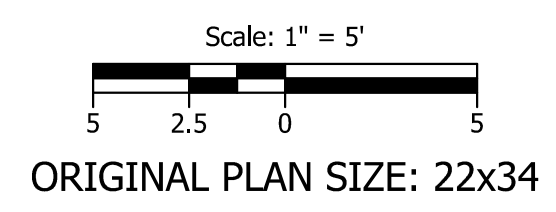
Submission Date: 03/07/2022
 Drawn: JBK, Designed: JBK, Checked: WES

PROJECT NO.
2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 RECTANGULAR RAPID FLASHING BEACON PLAN

SHEET NO.
TS-3

- GENERAL NOTES:**
1. FIELD VERIFY MEASUREMENT BEFORE CONSTRUCTION.
 2. SEE SHEET TS-01 FOR LEGEND.



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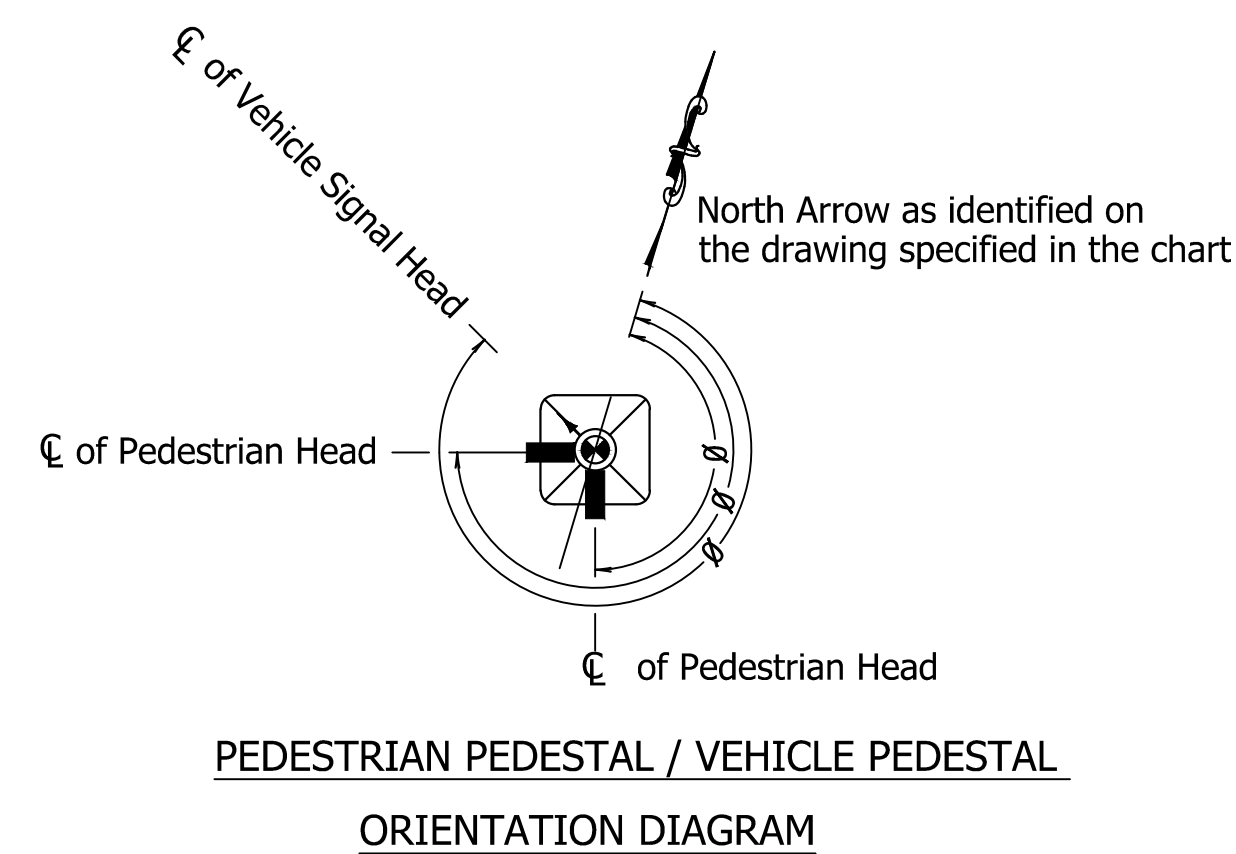
POLE ENTRANCE CHART

POLE #			EQUIPMENT ON POLE								EQUIPMENT ON MAST ARM OR SPAN WIRE (LENGTH IN FEET AND EQUIPEMTN TYPE)								LUMINAIRE				FIXTURES		FOUNDATION INFORMATION			
POLE #	DWG NO	TYPE	PED SIGNAL DEG	PUSH BUTTO N DEG	TERM CABINET DEG	SIGN DEG	VEHICLE SIGNAL DEG	RADAR DEG	SERVICE DEG	SOLAR MOUNT	ARM LENGTH	D1	D2	D3	D4	D5	D6	D7	D8	ARM LENGTH	ARM DEGREE	MOUNTING HEIGHT	TYPE	DISTRU BUTION	INITIAL LUMENS	REQUIRED FOUNDATIION DEPTH	FOUDATION CONTO L POINT ELEVATION	TOP OF ANCHOR ROD ELEVATION
1	TS-2	SML	180	340	180	-	-	-	-	-	30'	2.0' FF	5.5' V2	9.5' RAD	15.5' V2	16.5' RAD	26.0' SNS	-	-	15'	270	35	LED	2R	10,230	12.0'	-	-
1A	TS-2	PP	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0'	-	-	
2A	TS-2	PP	90	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0'	-	-	
2B	TS-2	PP	180	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0'	-	-	
3	TS-2	SML	-	-	180	-	-	-	-	-	35'	1.5' FF	2.0' AL	4.0' V6L	12.0' V2	16.0' RAD	21.0' V2	22.0' RAD	31.0' SNS	15'	0	35	LED	2R	10,230	12.0'	-	-
3A	TS-2	PP	0	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0'	-	-	
4	TS-2	SM	-	-	180	-	-	-	-	-	30'	1.5' FF	5.0' AL	7.0' V2	12.5' AL	12.5' RAD	18.0' V2	21.0' AL	26.0' SNS	-	-	-	-	-	-	12.0'	-	-
4A	TS-2	PP	0	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0'	-	-	
5	TS-4	RRFB	90	180	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0'	-	-	
6	TS-4	RRFB	90 / 270	90	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0'	-	-	
7	TS-4	RRFB	270	0	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0'	-	-	

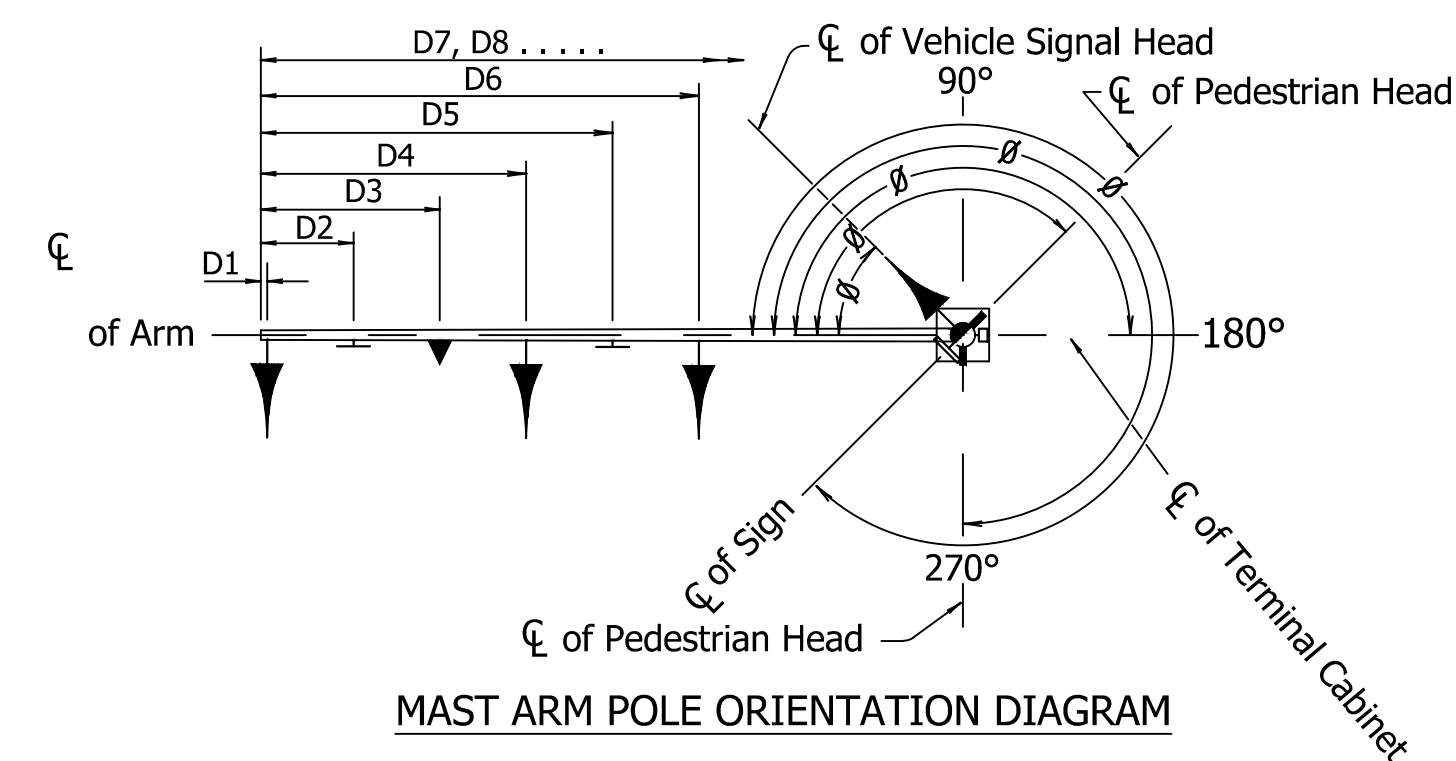
*POLE FURNISHED BY CITY
 **SIGN REPLACES EXISTING ILLUMINATED SIGN AT SAME LOCATION

LEGEND

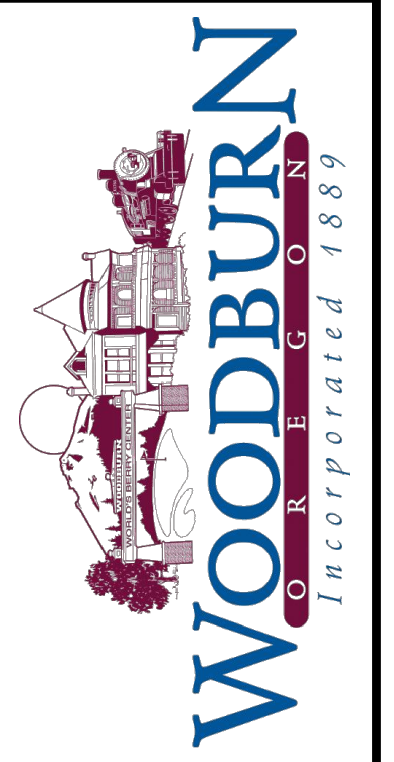
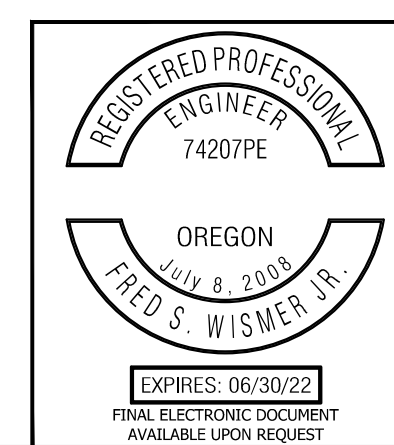
- SM = ODOT SIGNAL MAST ARM POLE.
- SML = ODOT SIGNAL MAST ARM POLE WITH LUMINAIRE
- PP = PEDESTRIAN PEDESTAL WITH FRANGIBLE BASE
- RRFB = RECTANGULAR RAPID FLASHING BEACON
- EX = EXISTING TRAFFIC SIGNAL MAST ARM POLE
- RX = TO BE REMOVED
- V2 = TRAFFIC SIGNAL TYPE 2, ADJUSTABLE BRACKET MOUNT TENON NOT REQUIRED (SEE STD. DWG. TM462)
- V6L = TRAFFIC SIGNAL TYPE 6L, ADJUSTABLE BRACKET MOUNT TENON NOT REQUIRED (SEE STD. DWG. TM462)
- SNS = STREET NAME SIGN ON MAST ARM MOUNT (SEE STD DWG. TM679)
- F = FIRE PREEMPTION (SEE STD. DWG. TM465)
- RAD = WAVETRONIX RADAR
- VP = VEHICLE SIGNAL PEDESTAL WITH TRANSFORMER BASE (SEE SHEET TS-13)



NOTE:
 Equipment shown on the orientation diagram is a clarification of angles of equipment that may be located on a Pedestrian Pedestal or Vehicle Pedestal.



NOTE:
 Equipment shown on orientation diagram is clarification of distance and angles of equipment that may be located on a Mast Arm or Signal Pole.

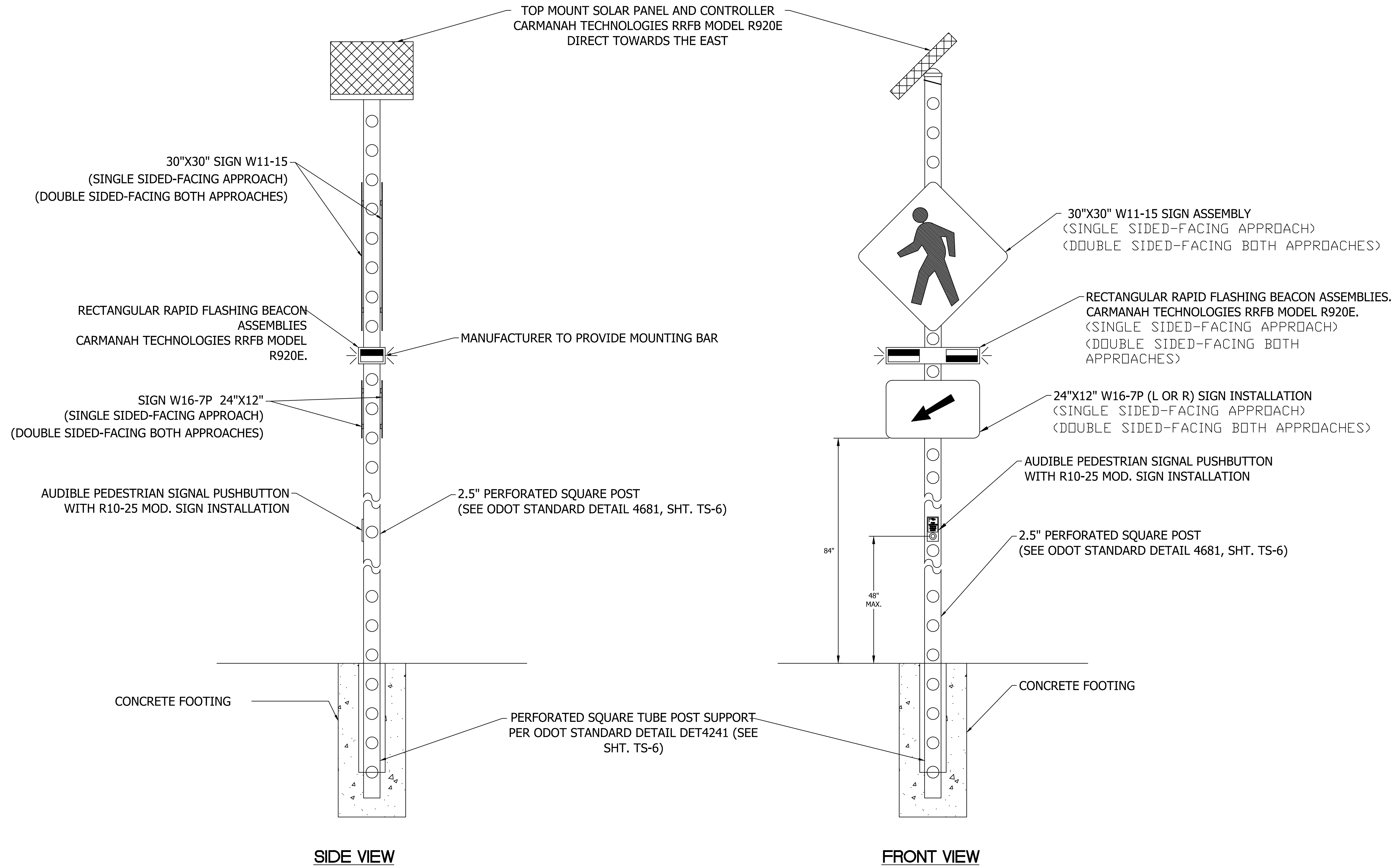


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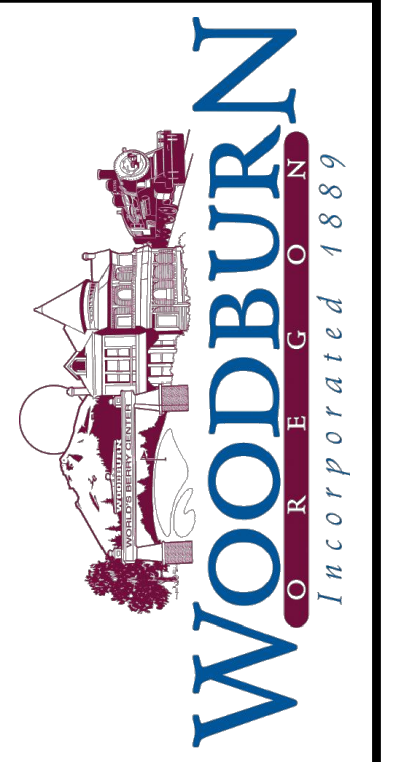
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JBK, Designed: JBK, Checked: WES
 PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 POLE ENTRANCE CHART
 SHEET NO. TS-4



RECTANGULAR RAPID FLASHING DETAIL



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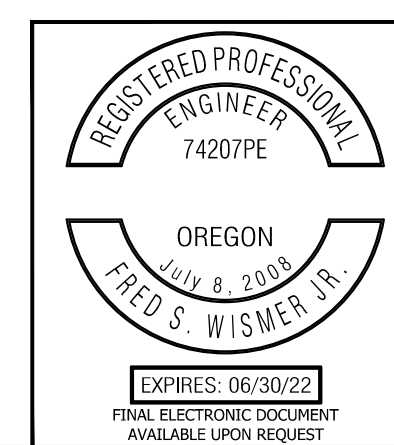
Submission Date: 03/07/2022
Drawn: JBK Designed: JBK Checked: WES

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
Cascade Avenue to Settlemier Avenue

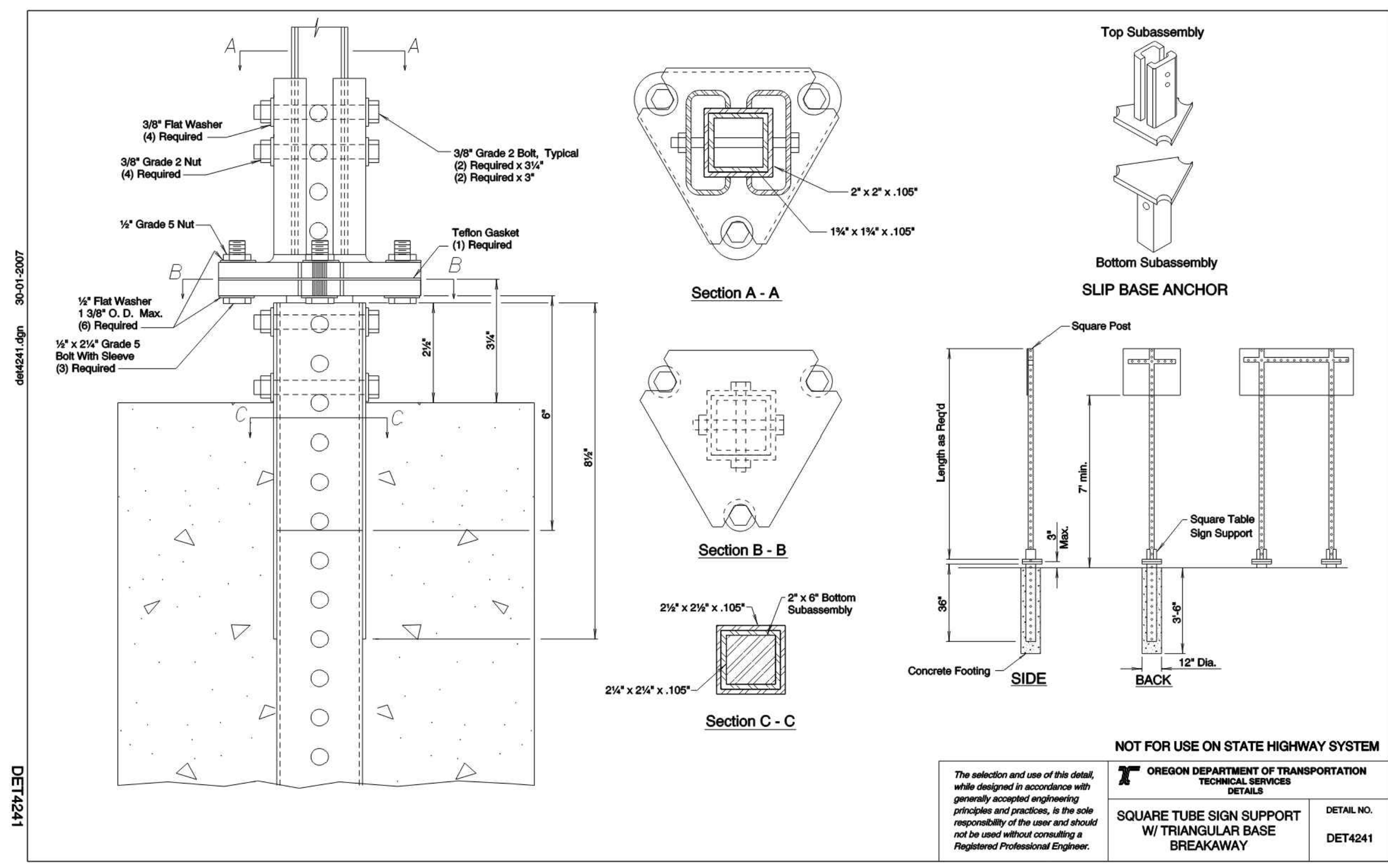
SIGNAL DETAILS

SHEET NO. TS-5



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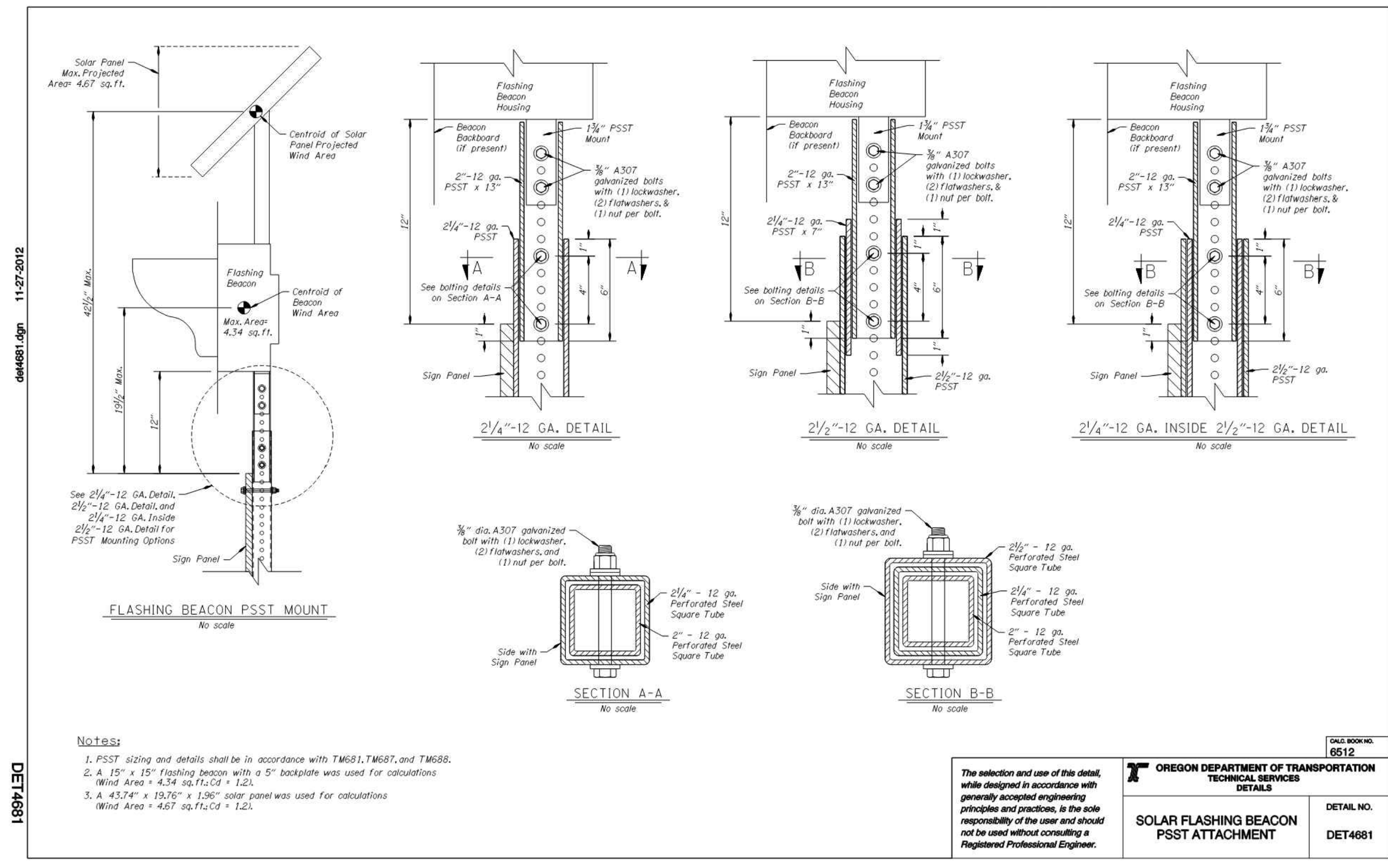
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DET14241

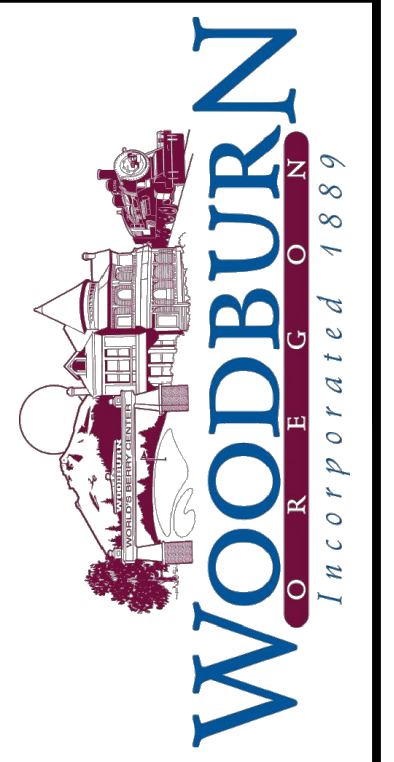
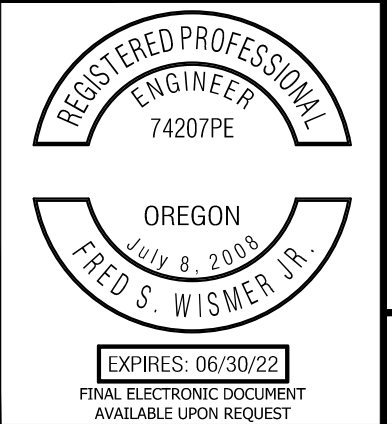
OREGON DEPARTMENT OF TRANSPORTATION
 TECHNICAL SERVICES
 DETAILS
 SQUARE TUBE SIGN SUPPORT
 W/ TRIANGULAR BASE
 BREAKAWAY
 DETAIL NO.
 DET4241



11-27-2012 dgp18889dp

DET14691

OREGON DEPARTMENT OF TRANSPORTATION
 TECHNICAL SERVICES
 DETAILS
 SOLAR FLASHING BEACON
 PSST ATTACHMENT
 DETAIL NO.
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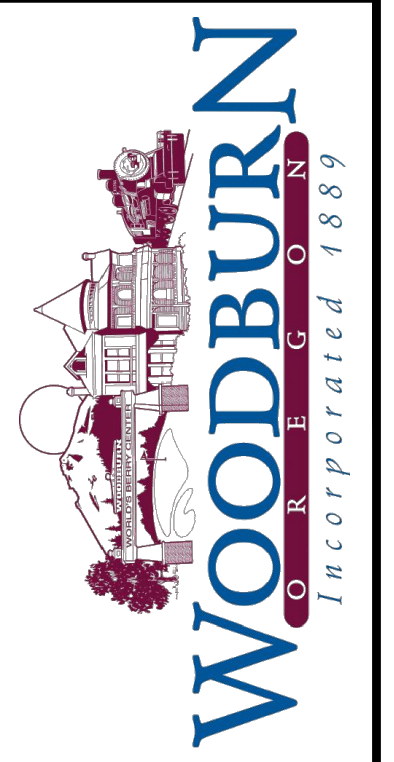
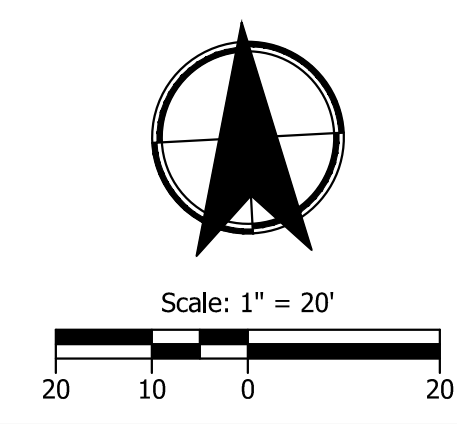
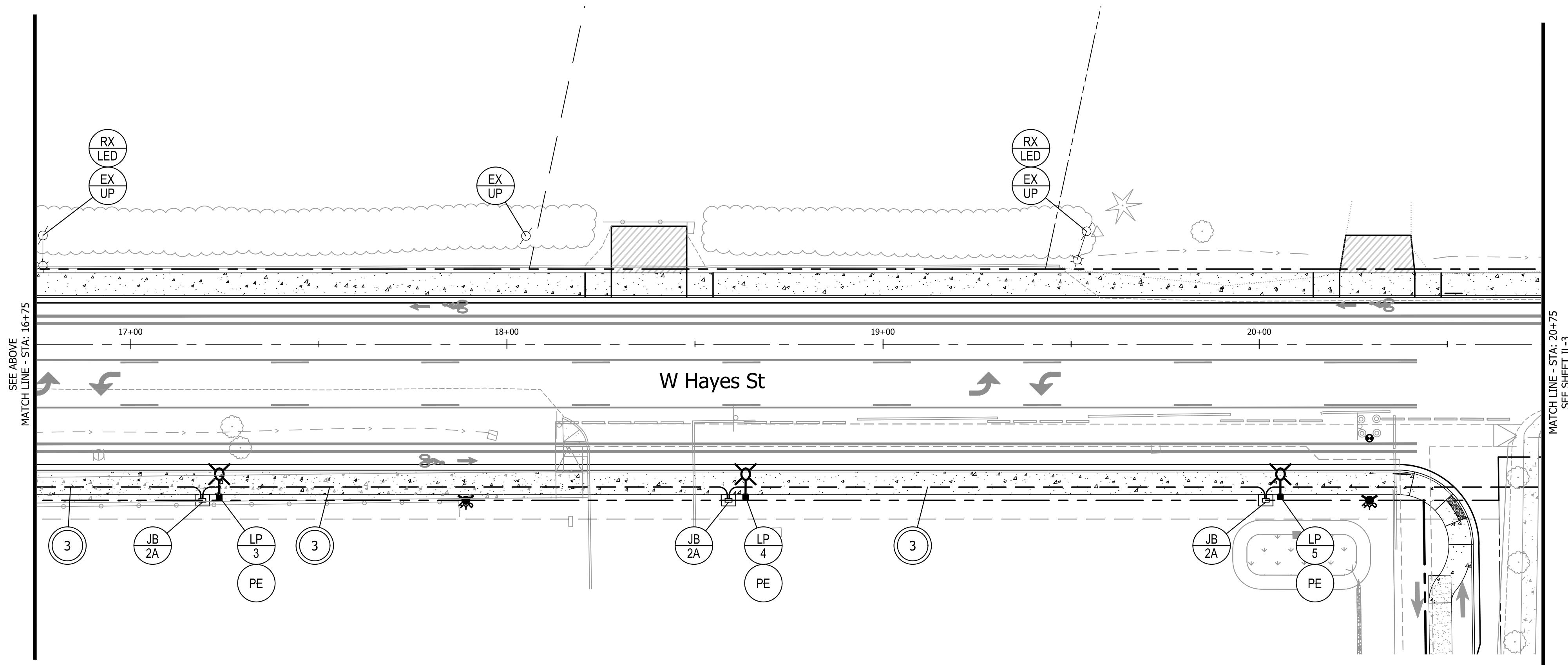
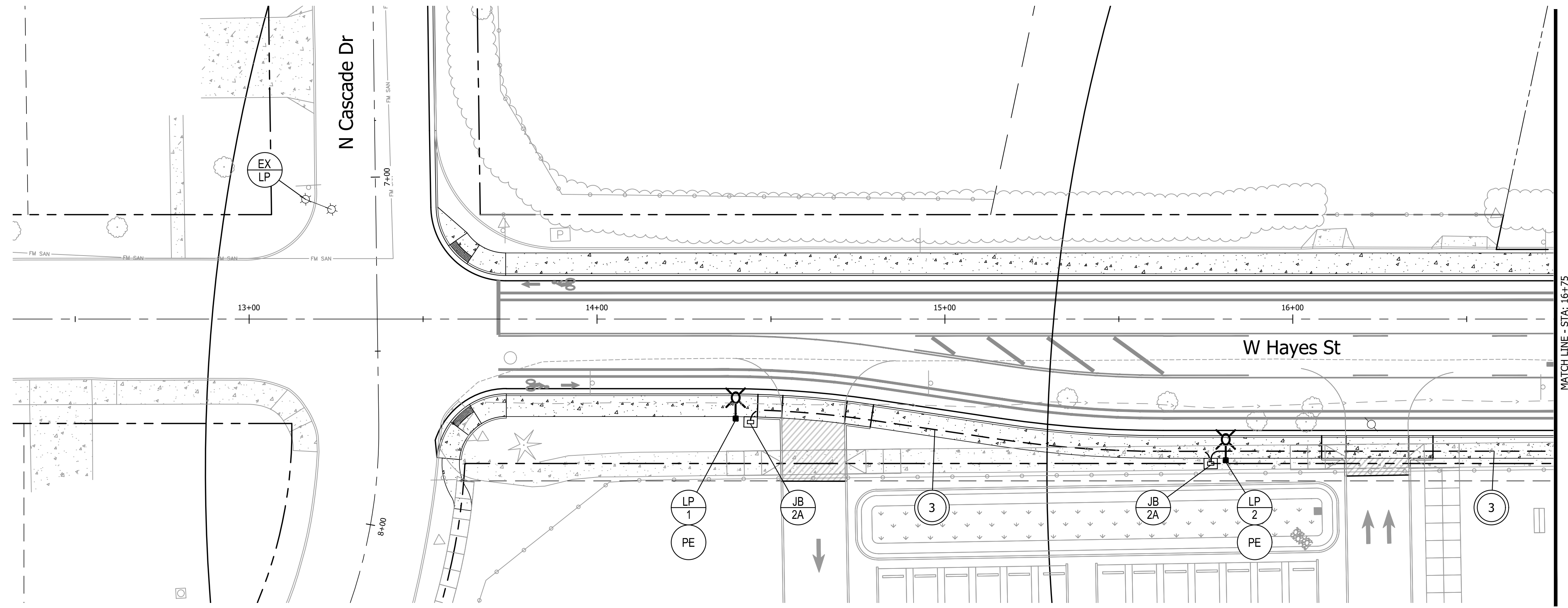
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REVISION	DATE	#	APP'D

Submission Date:
 03/07/2022
 Drawn: JBK
 Designed: JBK
 Checked: WES

PROJECT NO.
 2015-001-20
W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 SIGNAL DETAILS
 SHEET NO.
 TS-6

Plot Stamp: 3/4/2022 9:34:33 AM - Fred Wismer
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#	DATE	REVISION	APP'D

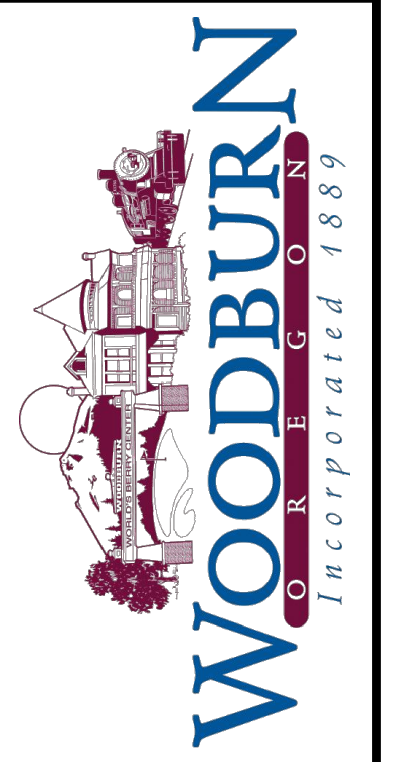
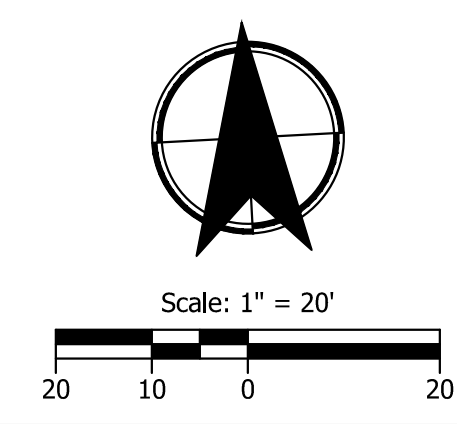
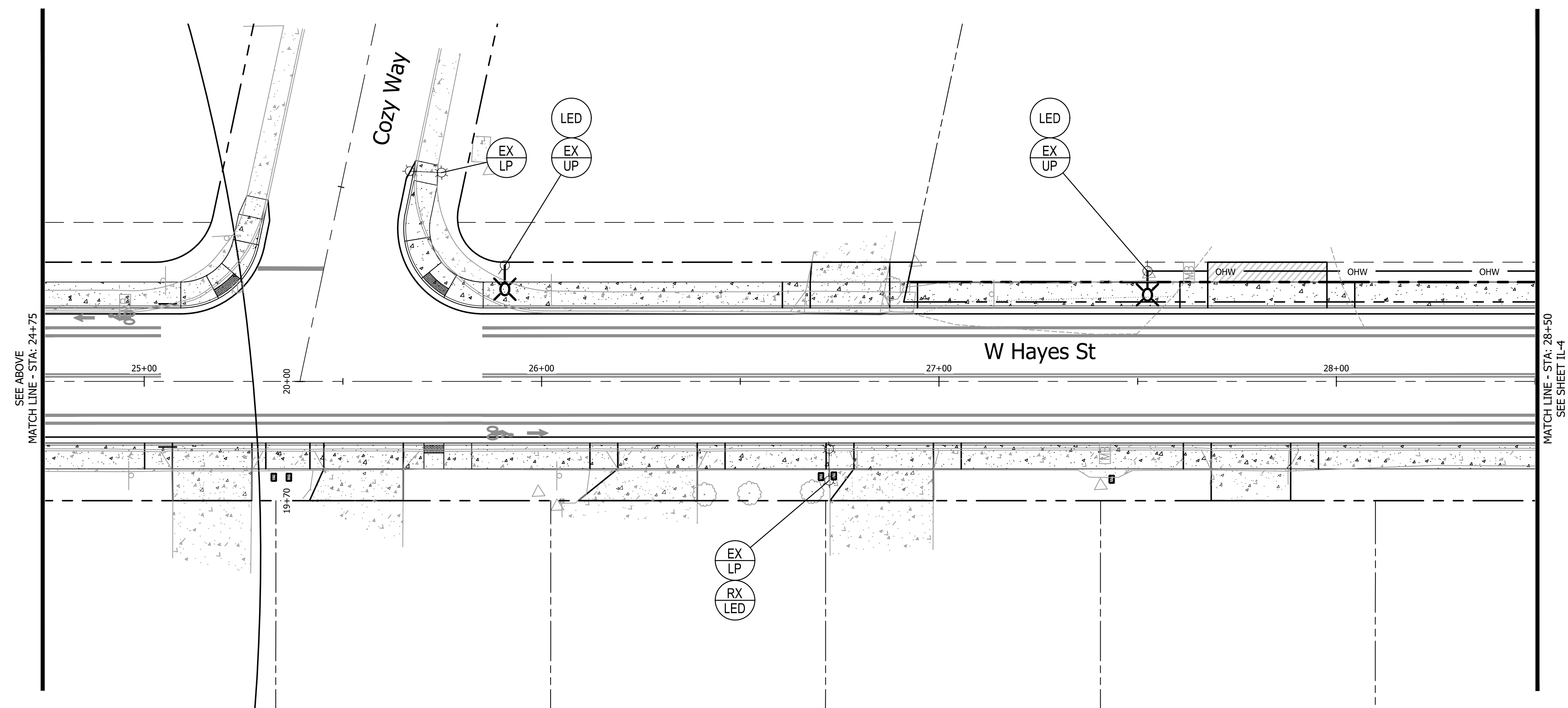
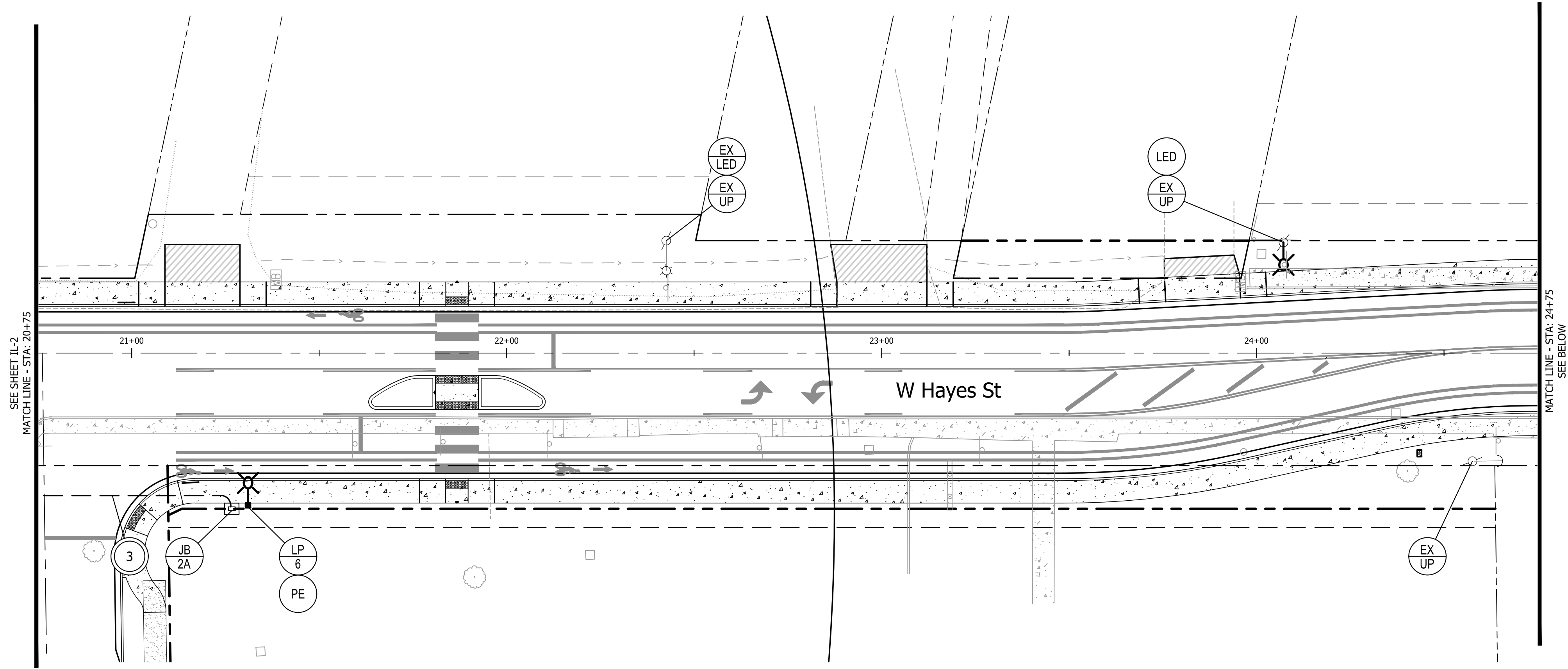
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 ILLUMINATION PLAN

SHEET NO. IL-2

Plot Stamp: 3/4/2022 9:34:40 AM - Fred Wismer
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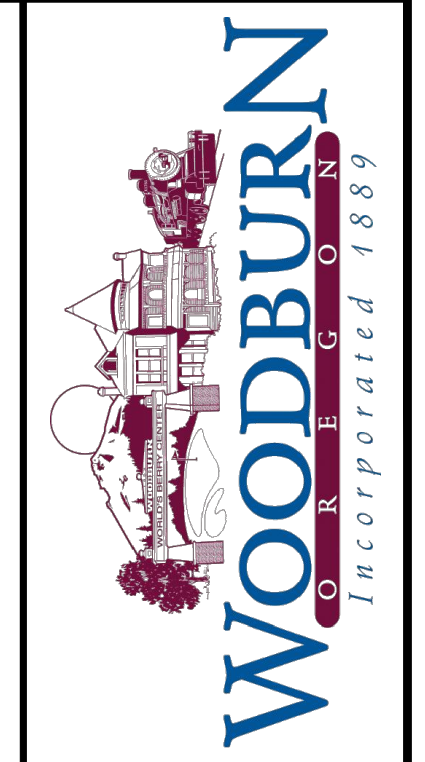
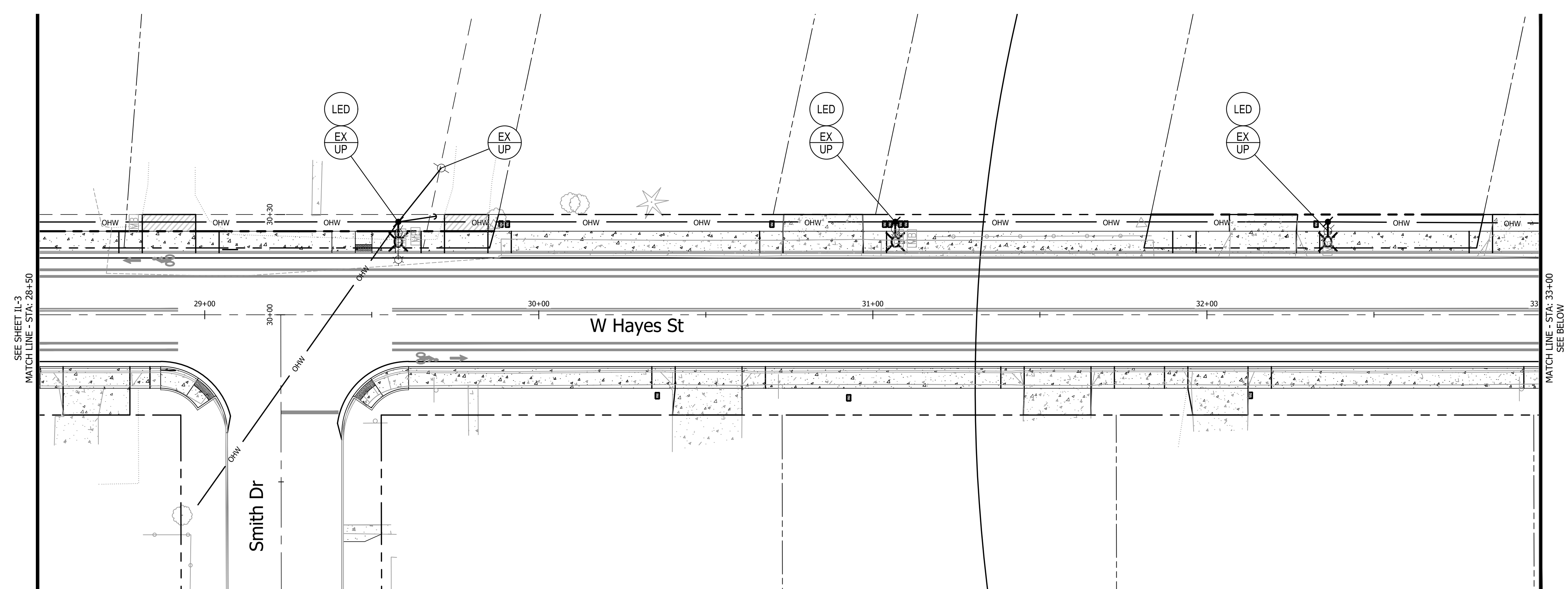
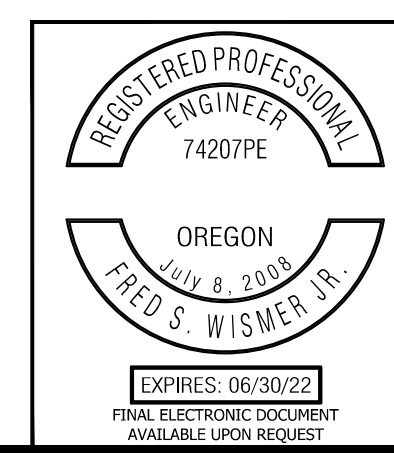
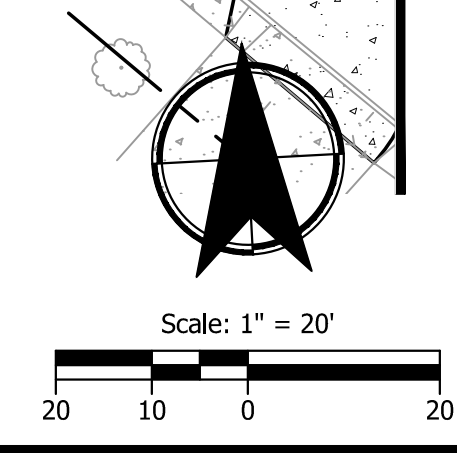
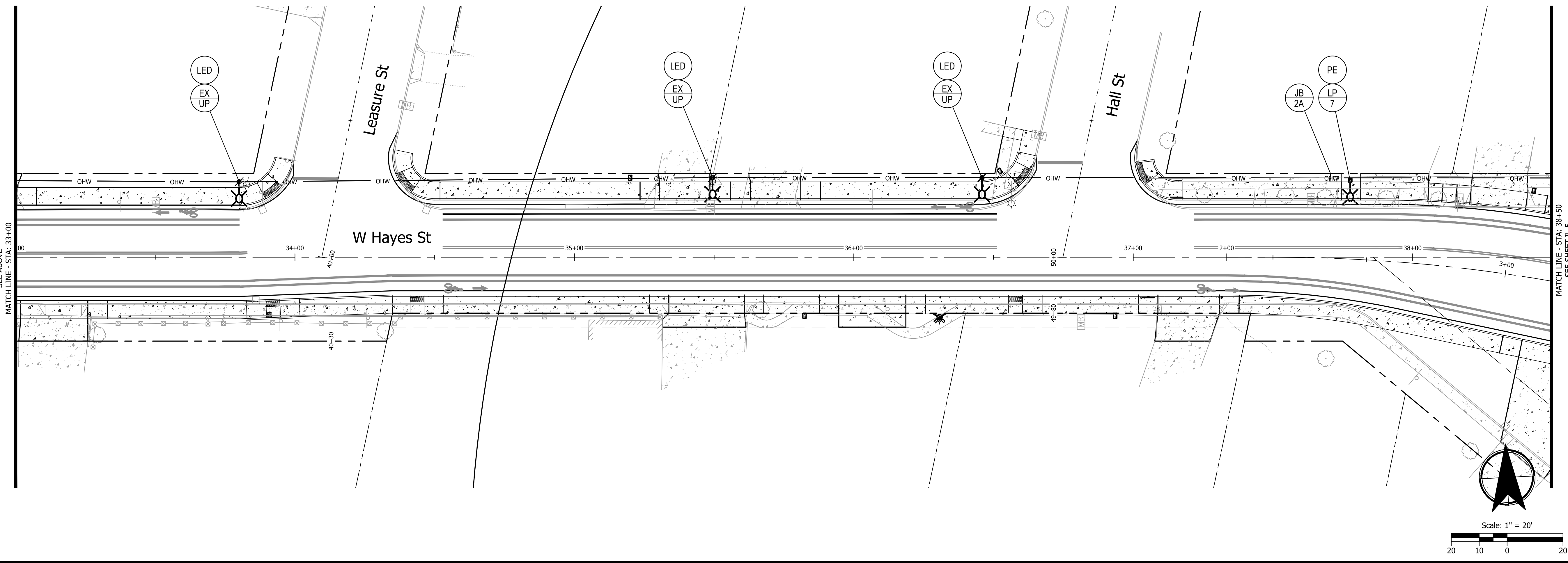
Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO.
 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 ILLUMINATION PLAN

SHEET NO.
 IL-3

Plot Stamp: 3/4/2022 9:34:48 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\illumination-24512.dwg



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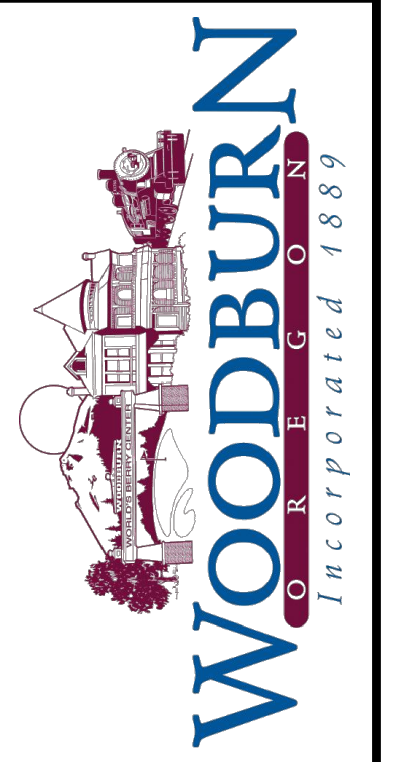
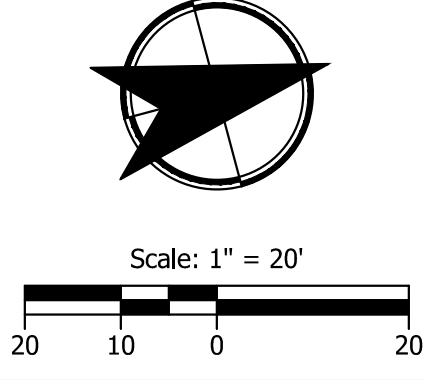
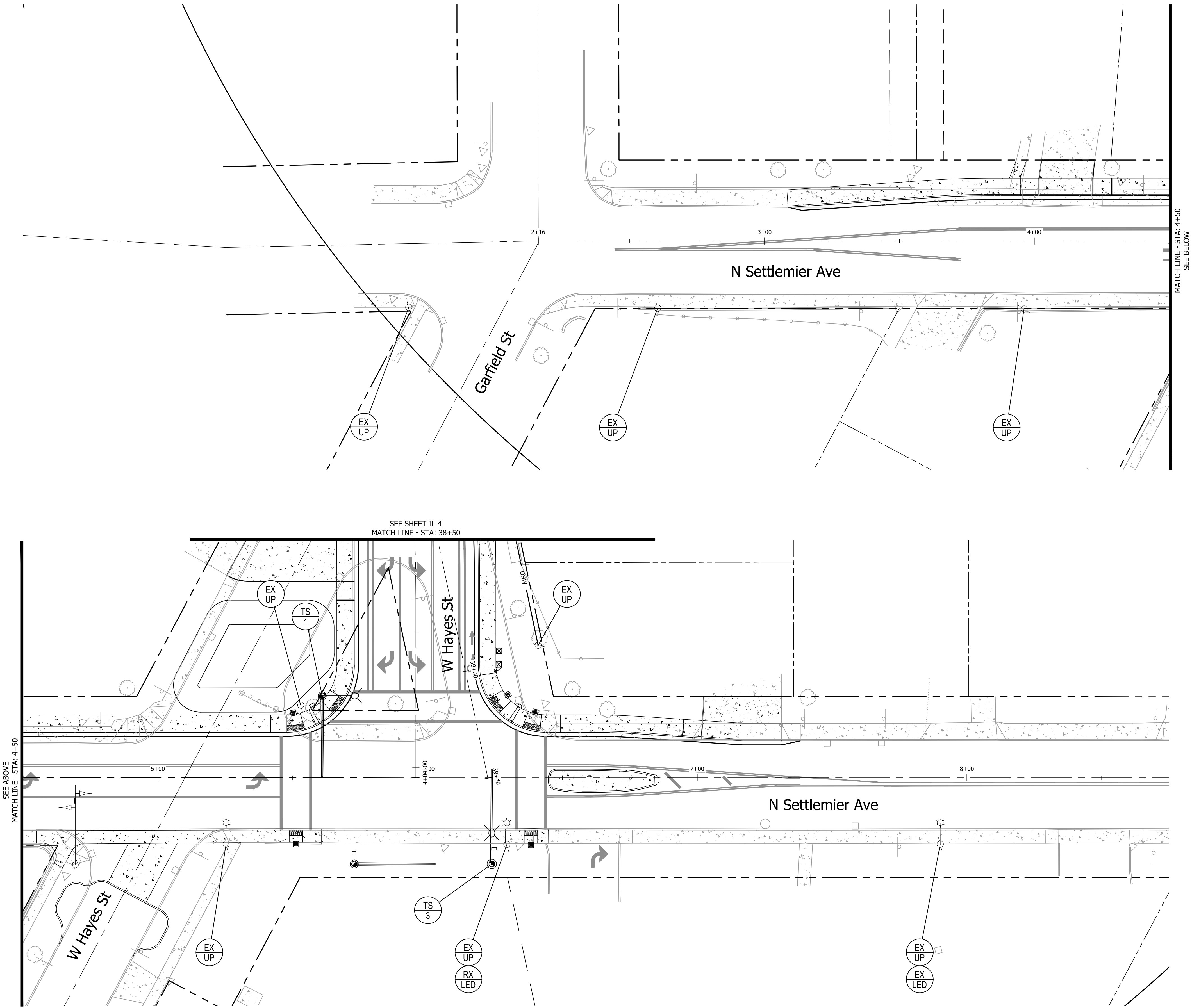
#	DATE	REVISION	APP'D

Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW
 PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 ILLUMINATION PLAN

SHEET NO. IL-4

Plot Stamp: 3/4/2022 9:34:54 AM - Fred Wismer
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 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

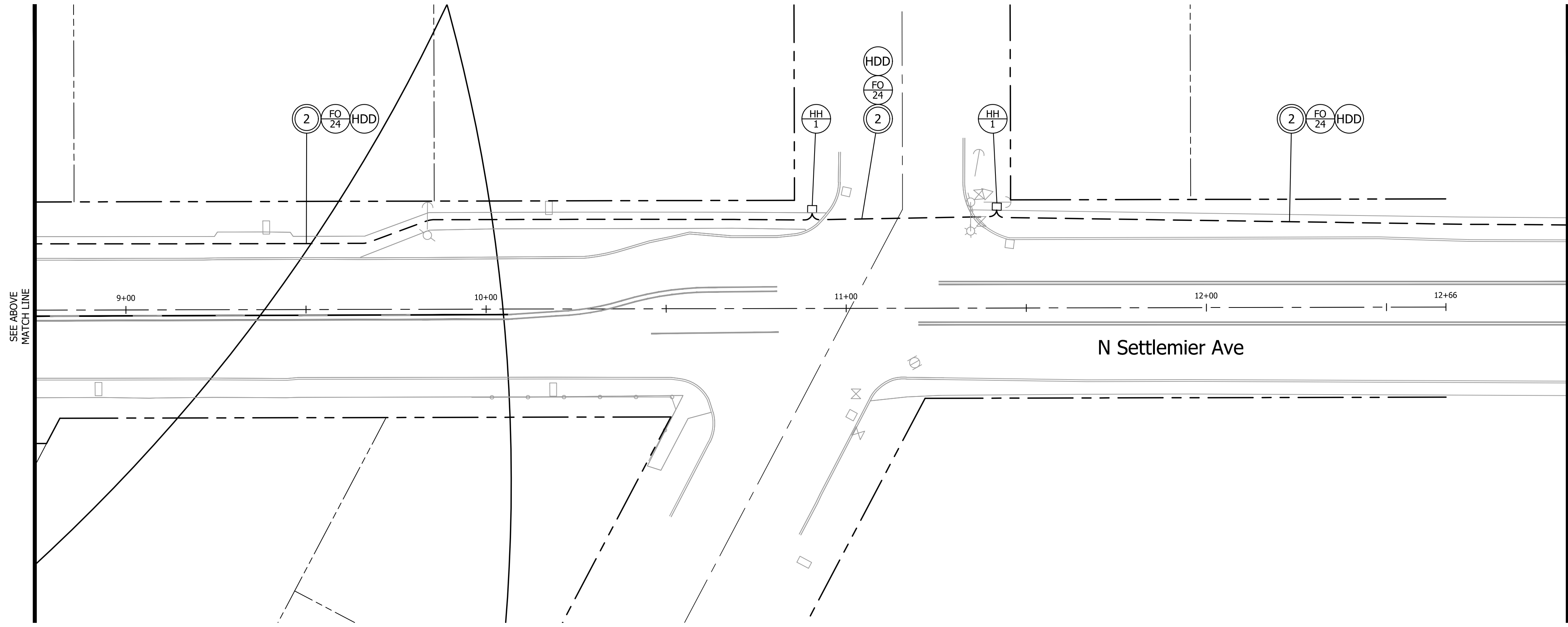
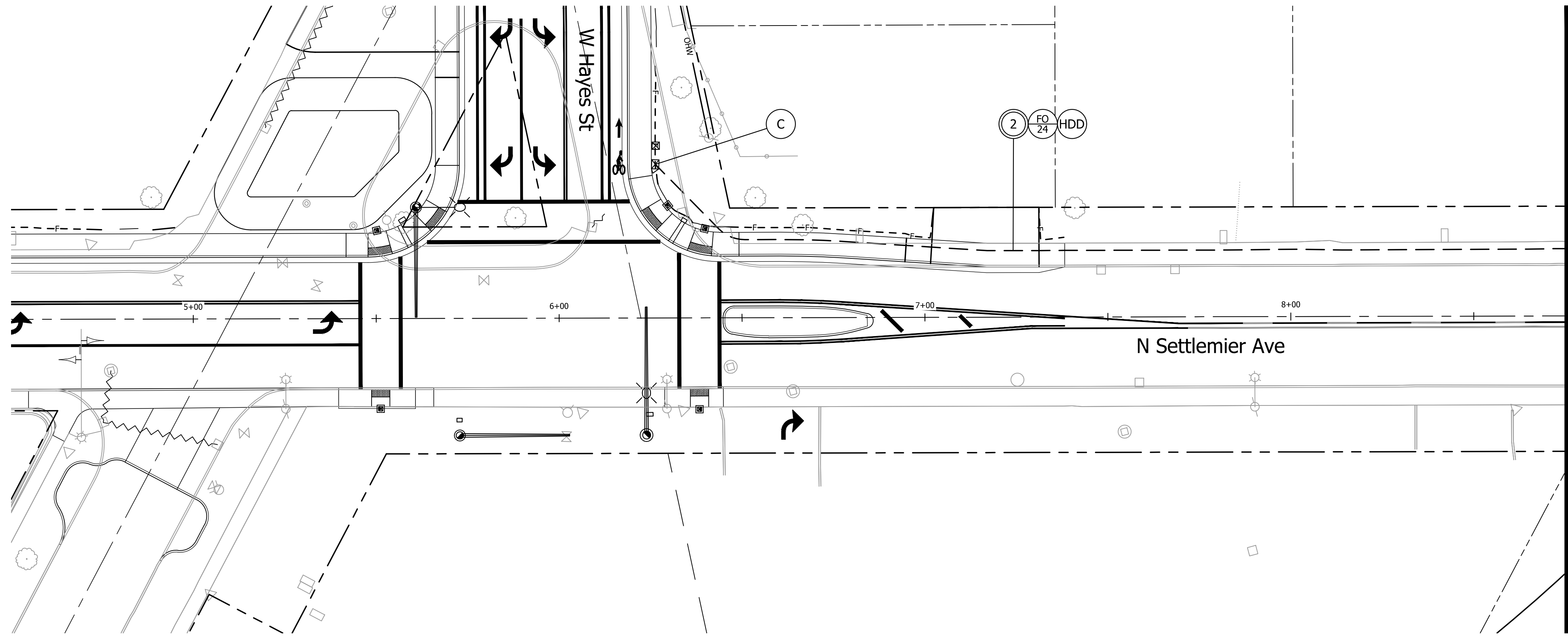
PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 ILLUMINATION PLAN

SHEET NO. IL-5

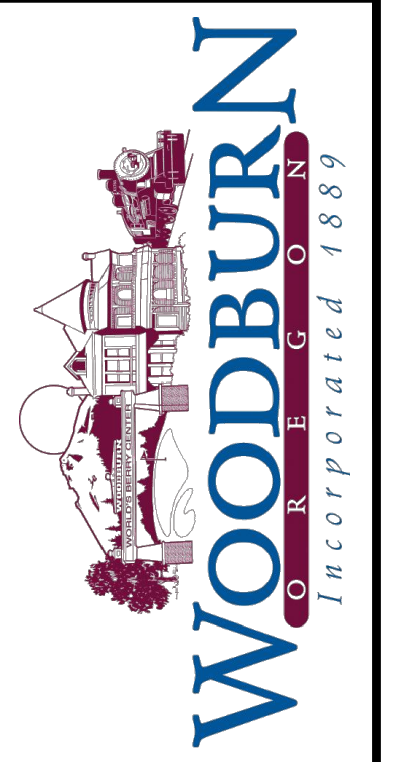
EXPIRES: 06/30/22
 FINAL ELECTRONIC DOCUMENT
 AVAILABLE UPON REQUEST

Plot Stamp: 3/4/2022 9:35:12 AM - Fred Wismer
 File: H:\24\24512 - W. Hayes Street\design\CD\interconnect-24512.dwg



CONSTRUCTION NOTES

- (C) Controller cabinet (See Signal Plan)
- FO N Install (N=number) strand single mode fiber optic cable. See Special Provisions.
- (HDD) Install conduit by horizontal direction drilling, open trench not allowed
- (HH 1) Install 24"x30"x24" Fiber Optic Hand Hole (See TM472 for details)
- (2) Install (S=size) inch conduit



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Submission Date: 03/07/2022
 Drawn: JCB/RMM Designed: NRS/JBK Checked: FSW

PROJECT NO. 2015-001-20

W. Hayes Street Improvements
 Cascade Avenue to Settlemier Avenue
 INTERCONNECT PLAN

SHEET NO. IC-1

