



City of Tualatin

www.tualatinoregon.gov

"NECESSARY PARTIES"
MARKED BELOW

NOTICE OF APPLICATION SUBMITTAL

- ANNEXATION CONDITIONAL USE PERMIT PLAN TEXT AMENDMENT
 ARCHITECTURAL REVIEW PLAN MAP AMENDMENT OTHER:

CASE/FILE: AR17-0009 (Community Development Dept.: Planning Division)

PROPOSAL	To construct site improvements to a portion of the site and construct two bottle gas storage buildings, one service building, one refuse enclosure, and place one office trailer at 10500 SW Tualatin-Sherwood Road for Air Liquide.
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PROPERTY	Name of Application	AIR LIQUIDE GAS DEPOT				
	<input type="checkbox"/> n/a	Street Address	10500 SW Tualatin-Sherwood Road			
		Tax Map and Lot No(s).	2S1 26BO 00105			
		Planning District	General Manufacturing (MG)	Overlays <input type="checkbox"/>	NRPO <input type="checkbox"/>	Flood Plain <input type="checkbox"/>
		Previous Applications	N/A	Additional Applications: N/A	CIO COMMERCIAL	

DATES	Receipt of application	10/18/2017	Deemed Complete	03/14/2018	CONTACT	Name: Matt Straite
	Notice of application submittal			03/14/2018		Title: Contract Planner
	Project Status / Development Review meeting			03/20/2018		E-mail: MISTRAITE@tualatin.gov
	Comments due for staff report			03/30/2018		Phone: 503-691-3029
	Public meeting: <input type="checkbox"/> ARB <input type="checkbox"/> TPC <input checked="" type="checkbox"/> n/a					Notes: You may view the application materials through this City web page: www.tualatinoregon.gov/projects
	City Council (CC)		<input checked="" type="checkbox"/> n/a			

City Staff

- City Manager
- Building Official
- Chief of Police
- City Attorney
- City Engineer
- Community Development Director
- Community Services Director
- Economic Development liaison
- Engineering Associate*
- Finance Director
- GIS technician(s)
- IS Manager
- Operations Director*
- Parks and Recreation Coordinator
- Planning Manager
- Street/Sewer Supervisor
- Water Supervisor

Neighboring Cities

- Durham
- King City Planning Commission
- Lake Oswego
- Rivergrove PC
- Sherwood Planning Dept.
- Tigard Community Development Dept.
- Wilsonville Planning Division

Counties

- Clackamas County Dept. of Transportation and Development
- Washington County Dept. of Land Use and Transportation (ARs)
- Washington County Long Range Planning (LRP) (Annexations)

Regional Government

- Metro

School Districts

- Lake Oswego School Dist. 7J
- Sherwood SD 88J
- Tigard-Tualatin SD 23J (TTSD)
- West Linn-Wilsonville SD 3J

State Agencies

- Oregon Dept. of Aviation
- Oregon Dept. of Environmental Quality (DEQ)
- Oregon Dept. of Land Conservation and Development (DLCD) (via proprietary notice)
- Oregon Dept. of State Lands: Wetlands Program
- Oregon Dept. of Transportation (ODOT) Region 1
- ODOT Maintenance Dist. 2A

- ODOT Rail Division
- OR Dept. of Revenue

Utilities

- Republic Services
- Clean Water Services (CWS)
- Comcast [cable]*
- Frontier Communications [phone]
- Northwest Natural [gas]
- Portland General Electric (PGE)
- TriMet
- Tualatin Valley Fire & Rescue (TVF&R)
- United States Postal Service (USPS) (Washington; 18850 SW Teton Ave.)
- USPS (Clackamas)
- Washington County Consolidated Communications Agency (WCCCA)

Additional Parties

- Tualatin Citizen Involvement Organization (CIO)

*Paper Copies

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Air Liquide Gas Depot Architectural Review

1.05 SUMMARY

The proposed storage and office buildings meet all applicable Architectural Review standards. Where practicable, the development will be compatible with current and existing surrounding uses, and is designed to comply with the zoning requirements of the General Manufacturing District. This application complies with City requirements, will result in economic growth for the area, and merits approval as requested. The use of this site is consistent with adjacent uses. An existing gas cylinder storage facility is located on the parcel north and abutting this site. For reference, an HMIS report, Exhibit K, is herewith submitted.



City of Tualatin

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APPLICATION FOR ARCHITECTURAL REVIEW

Direct Communication to:			
Name: <u>Eric Lanciault</u>		Title: <u>Architect</u>	
Company Name: <u>EL Architects</u>			
Current address: <u>3200 SE 164th Ave Suite 302</u>			
City: <u>Vancouver</u>		State: <u>WA</u>	ZIP Code: <u>98683</u>
Phone: <u>360.798.3801</u>	Fax:	Email: <u>eric@elaaa.com</u>	
Applicant			
Name: <u>Matt Ouellette</u>		Company Name: <u>JH Kelly</u>	
Address: <u>2311 East First St.</u>			
City: <u>Vancouver</u>		State: <u>WA</u>	ZIP Code: <u>98661</u>
Phone: <u>360-431-9647</u>	Fax:	Email: <u>mouellet+@jhkelly.com</u>	
Applicant's Signature: <u>Matt Ouellette</u>		Date: <u>10.3.17</u>	
Property Owner			
Name: <u>Air Liquide Electronics Attn: Matt Layland</u>			
Address: <u>9101 LBJ Fwy Suite 800</u>			
City: <u>Dallas</u>		State: <u>TX</u>	ZIP Code: <u>97243</u>
Phone: <u>214.893.0717</u>	Fax:	Email: <u>matt.layland@airliquide.com</u>	
Property Owner's Signature: <u>Eric Lanciault</u>		Date: <u>10.04.2017</u>	
(Note: Letter of authorization is required if not signed by owner)			
Architect			
Name: <u>Eric Lanciault</u>			
Address: <u>3200 SE 164th Ave Suite 302</u>			
City: <u>Vancouver</u>		State: <u>WA</u>	ZIP Code: <u>98683</u>
Phone: <u>360.798.3801</u>	Fax:	Email: <u>eric@elaaa.com</u>	
Landscape Architect			
Name: <u>Jamie Clark</u>			
Address: <u>9901 NE 7th Ave Building A Suite 214</u>			
City: <u>Vancouver</u>		State: <u>WA</u>	ZIP Code: <u>98685</u>
Phone: <u>360.921.4445</u>	Fax:	Email: <u>jclark@clarklanddesign.com</u>	
Engineer			
Name: <u>VAA Attn: David Selinsky</u>			
Address: <u>2300 Berkshire Lane North Suite 200</u>			
City: <u>Plymouth</u>		State: <u>MN</u>	ZIP Code: <u>55441</u>
Phone: <u>763.577.9142</u>	Fax:	Email: <u>dselinsky@vaaeng.com</u>	
Project			
Project Title: <u>Air Liquide Tualatin Cylinder Storage Depot</u>			
Address: <u>10500 Psw Tualatin - Sherwood Rd</u>			
City: <u>Tualatin</u>		State: <u>OR</u>	ZIP Code: <u>97062</u>
Brief Project Description: <u>New gas bottle storage & handling facility; (5) Bldgs & associated infrastructure</u>			
Proposed Use: <u>Warehousing & office</u>			

Value of Improvements:	\$1,496,083
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AS THE PERSON RESPONSIBLE FOR THIS APPLICATION, I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION ABOVE, ON THE FACT SHEET, AND THE SURROUNDING PERTY OWNER MAILING LIST IS CORRECT. I AGREE TO COMPLY WITH ALL APPLICABLE CITY AND COUNTY ORDINANCES AND STATE LAWS REGARDING BUILDING CONSTRUCTION AND LAND USE.

Applicant's Signature: <i>Matt Ouellette</i>	Date: 10.3.17
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Office Use	
Case No:	Date Received: Received by:
Fee: Complete Review :	Receipt No:
Application Complete as of:	ARB hearing date (if applicable):
Posting Verification:	6 copies of drawings (folded)
1 reproducible 8 1/2" X 11" vicinity map	1 reproducible 8 1/2" X 11" site, grading, LS, Public Facilities plan
Neighborhood/Developer meeting materials	

Project: Air Liquide

Date: 1
0

Project No.: 673

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Re.: Developer Meeting

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Developer Meeting

Meeting Date: September 6, 2017. 10:00 am**Meeting Location:** The Grand Hotel at Bridgeport**Presenters:** Matt Layland(ML), John Hoover(JH), Don Sweetnam(DS)**Attendees:** Melinda Anderson(MA), Phil Beatty(PB), Erin Engman(EE), Luke Orem(LO), Rob Harris(PR), Scott Iburg(SI), Victoria Ailes(VI), Linnus Carleton(LC), Keven Subbent(KS), Andrew Helimich(AH), Melinda Robinfan(MR)**New Items:**

- Don presented an overview of Air Liquide's history, market focus, and distribution system.
- John presented the project plans:
 - The new facility is essentially a relocation of Air Liquide's depot directly North of the site.
 - Develop ~1.5 acre within the 5 acre Site.
 - Traffic impact is minimal. Roughly two employees.
 - This will be Air Liquide's only storage facility in the region.
 - Various detection systems will be employed.
 - Routinely monitor for oxygen depletion.
 - Specific product sensors will be in place to detect any fugitive emissions.
 - No production at this facility; only storage.
 - Not a Class I Division 1 facility- likely to be Division 2.
 - Uses natural ventilation and forced air.
 - The occupancy classification will be H.
 - Various hazard classes will be stored.
 - No plans for rail development/use.
 - No anticipation of processing gasses on-site.
 - Truck Traffic 2-4 trips per week.
 - No future construction is planned; if anything were to be developed, it would go through same process.
 - Construction will be ~3 months.
 - Small construction crew.

End of Minutes

EL,Architects

3200 se 164th avenue suite 302
vancouver, washington 98683 360.798.3801

PRELIMINARY TITLE REPORT

Date: September 28, 2017

Escrow Officer: Janice Mann
Phone: (503) 290-5561
Email: Jan.Mann@stewart.com

Title Officer: Meg Clark-Kilcoyne
Order Number: 01049-30420
Email: Meg.ClarkKilcoyne@stewart.com

Property Address: 10450 SW Tualatin Sherwood Rd., Tualatin, OR 97062

	<u>Liability</u>	<u>Premium</u>
ALTA 2006 Owner's Policy Standard	To Be Determined	
	(Underwriting fee - 11%)	
Proposed Insured:		
ALTA 2006 Loan Policy Extended	To Be Determined	
	(Underwriting fee - 11%)	
Proposed Insured: To be determined		

Stewart Title Company is prepared to issue on request and on recording of the appropriate documents, a policy or policies of Stewart Title Guaranty Company, as applied for, with coverages as indicated, based on this preliminary report. As of **September 25, 2017** at 8:00 A.M. title to the property described herein is vested in:

Air Liquide America Specialty Gasses LLC

Subject only to the exceptions shown herein and to the terms, conditions and stipulations contained in the policy form. No liability is assumed until a full premium has been paid and a policy issued.

LEGAL DESCRIPTION: SEE EXHIBIT "A" ATTACHED HERETO

EXHIBIT "A" LEGAL DESCRIPTION

A tract of land in part of Sections 23 and 26, Township 2 South, Range 1 West of the Willamette Meridian, in the City of Tualatin, County of Washington, and State of Oregon, described as follows:

Beginning at a point on the West line of said Section 26 which is South 00°00'53" West 811.25 feet from the Northwest corner of said Section 26, said point of beginning is also located on the Northwesterly right-of-way line of the Burlington Northern Railroad; thence North 00°00'53" East 811.25 feet to the Northwest corner of said Section 26; thence continuing North, along the West line of said Section 23, North 00°04'41" West 479.73 feet to a point on the Southerly right-of-way line of the Tualatin-Sherwood Road (County Road No. 492); thence North 55°25'50" East 48.55 feet; thence South 00°04'41" East 507.23 feet to a point 40.0 feet East from the intersection of Sections 23, 26, 27, and 22; thence North 89°55'19" East 333.8 feet, along this line to a point on the West line of a tract conveyed to Elwyn G. Kinney by deed recorded February 24, 1972 in Book 855, Page 523, Deed Records of Washington County; thence South 00°09'47" West 319.53 feet, along said West line; thence Southwesterly, along the arc of a 383.07 feet radius curve to the right (the long chord bears South 14°13'10" West 186.08 feet), a distance of 187.96 feet to a point on the Northerly right-of-way line of the Burlington Northern Railroad, said point being the Southwesterly corner of said Kinney tract; thence continuing Southwesterly, along the Northerly right-of-way line of the Burlington Northern Railroad, along the arc of a 2890.0 feet radius curve to the left (the long chord bears South 43°59'33" West 469.36 feet), a distance of 469.88 feet to the point of beginning.

EXCEPTING THEREFROM that portion conveyed to Washington County by Dedication Deed recorded April 24, 1992 as Fee No. [92027734](#), Washington County Records..

TOGETHER WITH a perpetual non-exclusive roadway easement for ingress and egress as conveyed from the Halton Company to LAI Holding, Inc. by the Access Easement recorded October 3, 1995 as Fee No. [95071339](#), Washington County Records.

SCHEDULE B

GENERAL EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.
6. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed.

SPECIAL EXCEPTIONS:

7. 2017-2018 taxes, a lien not yet payable.
8. City liens, if any, of the City of Tualatin.
9. The herein described premises are within the boundaries of and subject to the statutory powers, including the power of assessment of Clean Water Services.
10. Rights of the public in and to any portion of the herein described premises lying within the boundaries of streets, roads, or highways.
11. Easement, including the terms and conditions thereof,
Granted to: Oregon Electric Railway Company
Recorded: January 19, 1971
Book: [804](#)
Page: 186
Recording No.: 8358
Purpose: railroad right-of-way
Affects: a portion of the Easterly 12.5 feet
12. Easement, including the terms and conditions thereof,
Granted to: City of Tualatin
Recorded: September 17, 1982
Recording No.: [82024281](#)
Purpose: waterline
Affects: 10 feet wide area along the West line of the Northerly portion

13. Easement, including the terms and conditions thereof,
Granted to: Tri-County Metropolitan Transportation District of Oregon, a mass transit district
Recorded: March 6, 2007
Recording No.: [2007-024967](#)
Purpose: slopes
Affects: Southeasterly portion
14. Easement, including the terms and conditions thereof, as disclosed by
Instrument: Notice of Supplemental Final Order and Judgment
Granted to: AT&T Corp. and AT&T Communications - East, Inc. (formerly AT&T Communications)
Recorded: November 17, 2008
Fee No.: [2008-093292](#)
Purpose: permanent telecommunications system
Affects: 16-1/2 feet wide area, exact location not shown
15. Partial Assignment of Access Easement, including the terms and conditions thereof,
Granted to: Praxair Distribution, Inc.
Recorded: January 4, 2016
Recording No.: [2016-000183](#)
Affects: Easement recorded October 3, 1995 as Fee No. 95071339
We note that the instrument incorrectly refers to Fee No. 95071139.
16. Access Easement Agreement, including the terms and conditions thereof:
By and Between: Air Liquide America Specialty Gasses LLC
And: Praxair Distribution, Inc.
Recorded: January 4, 2016
Fee No.: [2016-000184](#)
Affects: the Northerly portion
17. Unrecorded leaseholds, rights of parties in possession, and security interests in trade fixtures, personal property, or unattached improvements, if any.
18. No search has been made for Financing Statements filed in the office of the Secretary of State. Exception may be taken to such matters as may be shown thereby.
19. Current and/or advance personal property taxes that may become due upon transfer or sale of the premises herein described. Please contact the Washington County Treasurer's office for further information.
20. The requirement that a copy of the Operating Agreement and Articles of Organization of Air Liquide America Specilty Gasses LLC, a Delaware limited liability company, be submitted to us for examination. Any conveyance or encumbrance by said Company should be executed in accordance with the Operating Agreement of said Company.
21. The requirement that a copy of the Operating Agreement and Articles of Organization of Airgas USA, LLC, a Delaware limited liability company, be submitted to us for examination. Any conveyance or encumbrance by said Company should be executed in accordance with the Operating Agreement of said Company.
22. The attached Commercial Title Affidavit must be completed in full, notarized, and submitted to the Company for review prior to closing.
23. Parties in possession, or claiming to be in possession, other than the vestees shown herein. For purpose of ALTA Extended coverage, we will require an Affidavit of Possession be completed and returned to us. Exception may be taken to such matters as may be shown thereby.
24. Statutory liens for labor or materials, including liens for contributions due to the State of Oregon for unemployment compensation and for workmen's compensation, which have now gained or hereafter may gain priority over the lien of the insured mortgage where no notice of such liens appear of record.

END OF EXCEPTIONS

NOTES:

NOTE (a): We find no judgments or Federal Tax Liens against the vestee herein.

NOTE (b): We find no judgments or Federal Tax Liens against Airgas USA, LLC.

NOTE (c): We find that Air Liquide America Specialty Gasses LLC is listed as inactive according to the Office of the Secretary of State for Oregon. Any limitation that such status may place on the rights of said party, including but not limited to those limitations as provided by statute, is hereby excepted.

NOTE (d): We find that Airgas USA, LLC is a Delaware limited liability company, is active in Oregon, according to the Office of the Secretary of State for Oregon.

NOTE (e): Taxes paid in full for 2016-2017:
Levied Amount: \$12,945.39
Account No.: [R541211](#)
Levy Code: 027.76
Map No.: 2S126B-00105

NOTE (f): Taxes paid in full for 2016-2017:
Levied Amount: \$42.83
Account No.: [R541202](#)
Levy Code: 023.76
Map No.: 2S126B-00104
Affects: other property also

NOTE (g): As disclosed by the county tax rolls, the uncertified 2017-2018 real market value for said property is:
Land: \$1,297,980.00
Improvements: \$0.00
Total: \$1,397,980.00
Affects: Account No. R541211

NOTE (h): As disclosed by the county tax rolls, the uncertified 2017-2018 real market value for said property is:
Land: \$2,860.00
Improvements: \$0.00
Total: \$2,860.00
Affects: Account No. R541202

NOTE (i): We find the following Deeds of record on the subject property recorded within the last 24 months:
Type of Document: Warranty Deed
Recorded: December 23, 2015
Fee No.: [2015-104807](#)

NOTE: Any map or sketch enclosed as an attachment herewith is furnished for information purposes only to assist in property location with reference to streets and other parcels. No representation is made as to accuracy and the company assumes no liability for any loss occurring by reliance thereon.

After the issuance of a preliminary title report, if a transaction is consummated in reliance thereon, but without requiring the issuance of the title policy applied for, the full scheduled charge applicable to the type of coverage normally issued on such transactions will apply.

Stewart Title Company



Meg Clark-Kilcoyne, Title Officer

bdm

**If you have any questions regarding this report or your escrow, please contact your Escrow Officer Janice Mann
◆ Phone: (503) 290-5561 ◆ Fax: (866) 739-5724.**

ESCROW OFFICER LOCATION:

Stewart Title Company
5005 SW Meadows Road
Suite 120
Lake Oswego, OR 97035
Jan.Mann@stewart.com

STG Privacy Notice Stewart Title Companies

WHAT DO THE STEWART TITLE COMPANIES DO WITH YOUR PERSONAL INFORMATION?

Federal and applicable state law and regulations give consumers the right to limit some but not all sharing. Federal and applicable state law regulations also require us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand how we use your personal information. This privacy notice is distributed on behalf of the Stewart Title Guaranty Company and its title affiliates (the Stewart Title Companies), pursuant to Title V of the Gramm-Leach-Bliley Act (GLBA).

The types of personal information we collect and share depend on the product or service that you have sought through us. This information can include social security numbers and driver's license number.

All financial companies, such as the Stewart Title Companies, need to share customers' personal information to run their everyday business—to process transactions and maintain customer accounts. In the section below, we list the reasons that we can share customers' personal information; the reasons that we choose to share; and whether you can limit this sharing.

Reasons we can share your personal information.	Do we share	Can you limit this sharing?
For our everyday business purposes — to process your transactions and maintain your account. This may include running the business and managing customer accounts, such as processing transactions, mailing, and auditing services, and responding to court orders and legal investigations.	Yes	No
For our marketing purposes — to offer our products and services to you.	Yes	No
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes — information about your transactions and experiences. Affiliates are companies related by common ownership or control. They can be financial and non-financial companies. <i>Our affiliates may include companies with a Stewart name; financial companies, such as Stewart Title Company</i>	Yes	No
For our affiliates' everyday business purposes — information about your creditworthiness.	No	We don't share
For our affiliates to market to you — For your convenience, Stewart has developed a means for you to opt out from its affiliates marketing even though such mechanism is not legally required.	Yes	Yes, send your first and last name, the email address used in your transaction, your Stewart file number and the Stewart office location that is handling your transaction by email to optout@stewart.com or fax to 1-800-335-9591.
For non-affiliates to market to you. Non-affiliates are companies not related by common ownership or control. They can be financial and non-financial companies.	No	We don't share

We may disclose your personal information to our affiliates or to non-affiliates as permitted by law. If you request a transaction with a non-affiliate, such as a third party insurance company, we will disclose your personal information to that non-affiliate. [We do not control their subsequent use of information, and suggest you refer to their privacy notices.]

SHARING PRACTICES

How often do the Stewart Title Companies notify me about their practices?	We must notify you about our sharing practices when you request a transaction.
How do the Stewart Title Companies protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer, file, and building safeguards.
How do the Stewart Title Companies collect my personal information?	We collect your personal information, for example, when you <ul style="list-style-type: none"> ▪ request insurance-related services ▪ provide such information to us We also collect your personal information from others, such as the real estate agent or lender involved in your transaction, credit reporting agencies, affiliates or other companies.
What sharing can I limit?	Although federal and state law give you the right to limit sharing (e.g., opt out) in certain instances, we do not share your personal information in those instances.

Contact us: *If you have any questions about this privacy notice, please contact us at: Stewart Title Guaranty Company, 1980 Post Oak Blvd., Privacy Officer, Houston, Texas 77056*



Geographic Information Systems



Base maps and air photo service are provided by [Metro](#)

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- D. Neighborhood/Developer Meeting Materials
- E. Legal Description
- F. Aerial Map
- G. Republic Services Approval Letter
- H. Property Owner Signature(s)
- I. Pre-Application Evidence
- J. Hydronic Model Worksheet
- K. HMIS
- L. Arborist Report
- M. Geotech Report
- N. Stormwater Management Plan
- O. Fire Flow
- P. Public Facilities Narrative
- Q. Transport Impact Analysis
- R. Lighting Cut Sheets and Plans
- S. Tax Map
- T. 11"x17" Plans
- U. Access Easement

ATTACHED SEPARATELY:

- (1) Architectural Review Submittal Checklist
- (1) Mailing Labels
- (3) 24"x36" Plans
- (1) Traffic Impact Analysis

**Air Liquide Gas Depot
Architectural Review**

1.01 PROJECT SUMMARY

Applicant: JH Kelly, LLC
Attention: Matt Oullette
131 Third Avenue
Longview, Washington 98632

**Applicant's Representative/
Project Contact:** EL, Architects, PS
Eric Lanciault
eric@elaooa.com
3200 SE 164th Ave, Ste, 302
Vancouver, WA 98683
(360) 798-3801

Plan District Designation: MG (General Manufacturing)

Site Address: 10500 SW Tualatin – Sherwood Road
Tualatin, Oregon

Site Size: 255,112 SF (5.8 acres)

Tax Map/Lots: 2S126B000105

Request: Architectural Review for two gas cylinder storage buildings,
One service building, one office trailer, and one refuse enclosure.

Applicable Criteria: TDC Chapter 61: General Manufacturing Planning District

61.020 Permitted Uses

61.021 Restrictions on Permitted Uses

61.030 Conditional Uses

61.035 Special Setbacks for Commercial Users from Arterial Streets and
Commercial Services Overlay

61.040 Prohibited Uses

61.050 Lot Size

61.060 Setback Requirements

61.065 Central Urban Renewal Area-Lot Sizes

61.075 Sound Barrier Construction

61.080 Structure Height

61.090 Access

TDC Chapter 73: Community Design Standards

73.010 Purpose

73.020 Findings and Objectives for the Architectural Review Process

73.030 Establishment of the Architectural Review Board

73.031 Qualification of Members

73.032 Appointment and Term

73.033 Vacancies and Removal

73.034 Chairman

73.035 Voting

73.036 Meetings and Records

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- 73.037 Rules
- 73.038 Ex Officio Member Under Eighteen (18) Years of Age
Architectural Review Approval
- 73.040 Architectural Review Plan Approval Required
- 73.050 Criteria and Standards
 - 73.055 Conditions Placed on Architectural Review Approvals
 - 73.056 Time Limit on Approval
- 73.095 Occupancy Requirements
- Landscape and Building Maintenance
- 73.100 Landscape Installation and Maintenance
- Design Standards
 - 73.110 Site Planning – Multi-family
- 73.120 Objectives
 - 73.130 Standards
- 73.140 Site Planning – Commercial, Industrial, Public and Semi-Public
Uses
- 73.150 Objectives
- 73.160 Standards
 - 73.170 Structure Design – Single-family and Multi-family Uses
 - 73.180 Objectives - Single-family and Multi-family Uses
 - 73.190 Standards – Single-family and Multi-family Uses
- 73.210 Objectives
- 73.220 Standards
 - 73.221 Purpose and Objectives
 - 73.222 Fence Standards
- 73.226 Objectives
- 73.227 Standards
- Landscaping
 - 73.230 Landscaping Standards
 - 73.231 Landscape Guide-lines for the Central Design District
 - 73.240 Landscaping General Provisions
 - 73.250 Tree Preservation
 - 73.260 Tree and Plant Specifications
 - 73.270 Grading
 - 73.280 Irrigation System Required
 - 73.290 Re-vegetation in Un-landscaped Areas
 - 73.300 Landscape Standards – Multi-family Uses
- 73.310 Landscape Standards – Commercial, Industrial,
Public and Semi-Public Uses
- Off-Street Parking Lot Landscaping
 - 73.320 Off-Street Parking Lot Landscaping Standards
 - 73.330 Parking Lot Landscaping – Multi-family Uses
 - 73.340 Off-Street Parking Lot and Loading Area Landscaping
- Commercial, Industrial, Public and Semi-Public Uses,
and Residential and Mixed Use Residential Uses within
the Central Design District
 - 73.350 Off-street Parking Lot Landscape Island Requirements – Multi-
family Uses
- 73.360 Off-Street Parking Lot Landscape Islands -
Commercial, Industrial, Public, and Semi-Public Uses
- 73.370 Off-Street Parking and Loading
- 73.380 Off-Street Parking Lots (6)

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73.390 Off-Street Loading Facilities

73.400 Access

73.410 Street Tree Plan

73.450 Wireless Communication Facility and Wire-less Communication
Facility attached Site Design

73.460 Objectives

73.470 Standards

73.480 Wireless Communication Facility and Wire-less Communication
Facility Attached Structure Design

73.490 Objectives

73.500 Standards

73.510 Setbacks

73.600 Central Design District Design Guidelines

73.610 Design Guidelines

Air Liquide Gas Depot Architectural Review

1.02 INTRODUCTION AND PROPOSAL

This application package includes narrative, plans, drawings, and additional documentation in support of an Architectural Review (AR) for two bottle gas storage buildings, one service building, one office trailer, and one refuse enclosure at 10500 SW Tualatin – Sherwood Road for Air Liquide. The applicant is JH Kelly and the project contact is EL, Architects, PS.

Site Description

The subject site is specifically described as map 2S126B, lot 105. The subject lot and surrounding properties are industrially zoned MG – General Manufacturing Planning District. Surrounding properties are predominantly developed parcels.

The site can be described as a flag lot bounded on the north by SW Tualatin – Sherwood Road and existing developed industrial property on the north and west property lines. The south and east edges of the property are bounded by WES Commuter Rail the right-of-way.

The property has no previous development and is generally thickly wooded. The north portion of the site extending from Tualatin – Sherwood Road to the “flag” portion of the site is already developed with an existing driveway with landscaping and fencing on each side.

Proposal

Only the portion of the site necessary for new structures, delivery access, and parking will be developed with the remainder of the site remaining forested. Five buildings are proposed for the site:

- Building 100 - gas cylinder storage, 4,500 square feet.
- Building 200 - gas cylinder storage, 4,580 square feet.
- Building 300 - office trailer with plumbing, 675 square feet.
- Building 400 - electrical/mechanical services and forklift storage, 687 square feet.
- Building 500- refuse enclosure, 308 square feet.

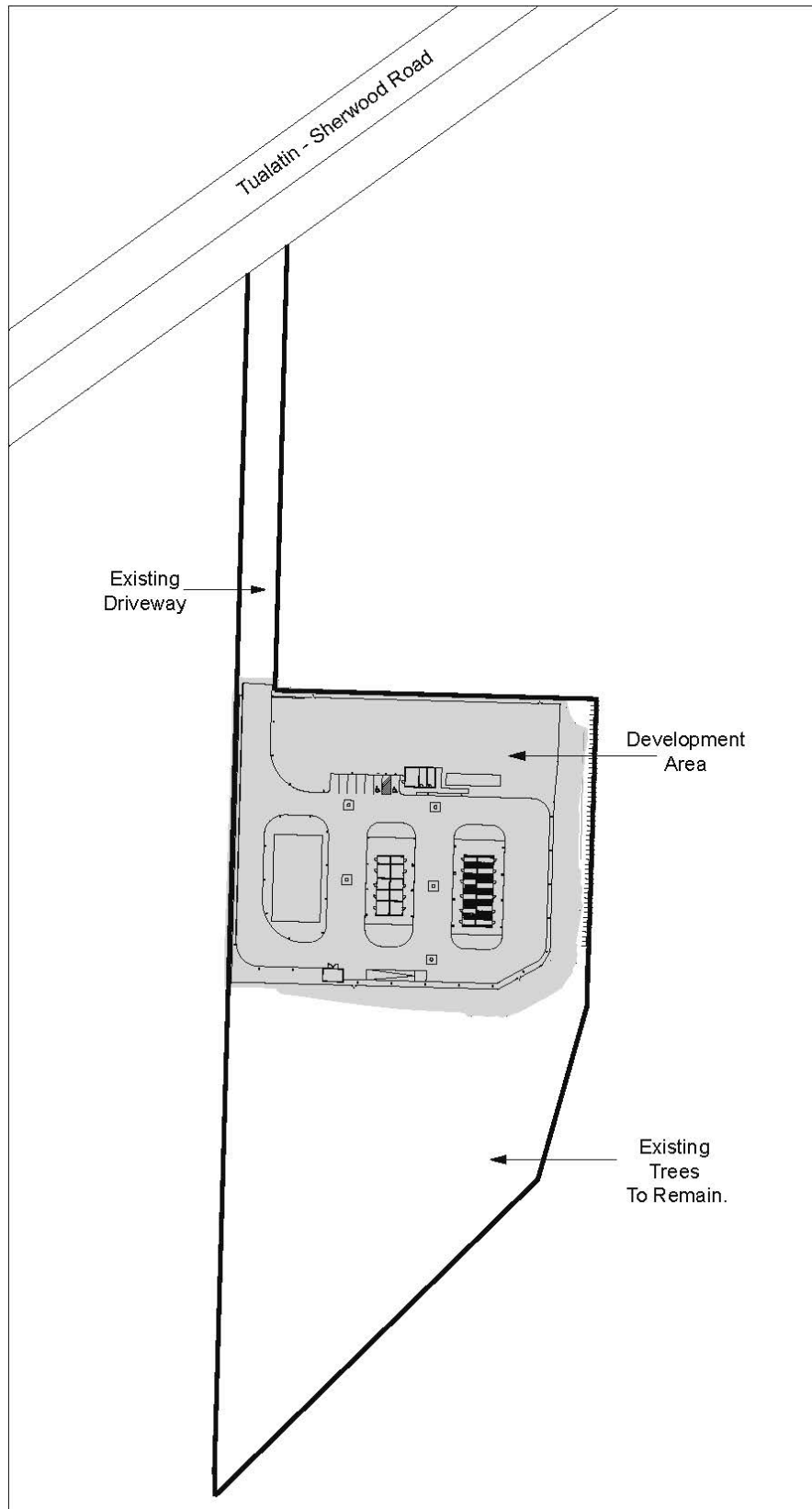
Buildings 100, 200, 400, and 500 will be low -profile steel and masonry buildings designed to blend with surrounding industrial structures. Building 300 will be a standard type site trailer. Landscaping and existing trees will generally buffer all structures from adjacent properties.

**Air Liquide Gas Depot
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Figure 1.02.1 Aerial Map of Subject Site



Figure 1.02.2 Development Area



**Air Liquide Gas Depot
Architectural Review**

1.03 Development Code Compliance Overview

The proposed development complies with City of Tualatin Development Code standards, as shown below. In accordance with City of Tualatin planning requirements, a scoping meeting was held on April 21, 2017. A neighborhood developer meeting was held on September 6, 2017. Neighborhood Developer meeting minutes, sign-in sheet, invitation letter, affidavit of mailing, certification of sign notice posting and mailing labels are herein included as Exhibit D.

This application requests AR approval for five structures and supporting infrastructure on 5.8 acres.

Table 1.03.1 Analysis						
	BLDG 100	BLDG 200	BLDG 300	BLDG 400	BLDG 500	Site Total
Lot Area (SF)						255,112
Building Area (SF)	4500	4580	675	687	308	10,750
Building Coverage Of Lot (%)	1.76%	1.79%	.26%	.27%	.12%	4.2%
Landscape Area (SF)						63119
Landscape %						54%
Total Parking						7
Accessible Parking						
Van/Carpool Parking						
Bicycle Parking						

On-Site Development

This application proposes five buildings: 4,500 SF, 4,580 SF, 675 SF, 687 SF, 308 SF. The buildings are designed for gas bottle storage, service, refuse enclosure, and office uses (see sheet C301). The site is zoned MG – General Manufacturing and the proposed uses are permitted outright.

Buildings 100, 200, 400 and 500 will be pre-engineered steel structures with CMU walls with metal roofs. Building 300 will be a metal-clad office trailer. The general color scheme will represent the Air Liquide corporate colors of blue and white. Road service around the buildings is a racetrack design with two interior connectors. The west portion of the site between the entrance drive and first interior connector will be prepared for a future building pad. The future building is not included in this AR request. Loading for buildings 100 and 200 will occur along each interior connector and the east portion of the racetrack loop. Buildings 300, 400 and 500 will be accessed from the restricted loop drive. Parking will be located adjacent to Building 400.

Buildings 100 and 200 are the tallest structure with a gable roof ridge height of 20 feet.

The location of the refuse enclosure has been reviewed and approved by Republic Services; please see Exhibit G.

Undeveloped areas of the site will remain wooded and developed portions will be landscaped in accordance with City of Tualatin standards.

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Stormwater

The Air Liquide site improvements project has been evaluated to meet or exceed the standards of the Clean Water service, Chapter 4 (Revision April 2017) guidelines, which require the peak runoff rates shall not exceed pre-development rates for the specific range of storms, 65% phosphorus removal, and water quality be treated for 0.36 inches of runoff at a minimum of 0.4 feet.

The proposed site improvements consist of 5 new buildings and bituminous driveways to access them. The improvements will increase the impervious area of the site by 1.54ac. The majority of the impervious runoff will be captured by storm water inlets and will be piped to a proposed treatment pond. A small portion of runoff will sheet flow directly to the pond, and an even smaller portion of the runoff will sheet flow to the existing driveway.

Flow from the south that typically flows through the site will be captured in a grassed swale, and will be routed to the east and then to the north until it reaches the proposed treatment pond.

Sanitary Sewer System

Building 300 will be plumbed. The sanitary sewer and domestic water systems will connect to the existing laterals extending south along the existing entry drive.

Streets

All vehicle traffic for the site will enter from SW Tualatin – Sherwood Road, utilizing the existing driveway.

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1.04 Architectural Review Approval Criteria

This application addresses the necessary approval standards of the Tualatin Development Code relevant to Architectural Review for industrial development. As described in the following narrative, the proposal meets the standards of TDC *Chapter 61: General Manufacturing Planning District (MG)* and TDC *Chapter 73: Community Design Standards*.

The following table identifies applicable development standards and how the proposed development satisfies each.

Table 104.2 Development Standards		
	City of Tualatin (MG District)	Proposed (Bldgs 100,200,300,400,500)
Setback Requirements		(from property line to building)
Front Yard	30'	81' minimum
Side Yard	0'	91' minimum
Rear Yard	0'	405' minimum
Parking and Circulation		50' minimum
Maximum Structure Height	60'	20'
Landscaping	15% of total site area	54% of total site area
Minimum Parking (per 1,000 GSF)	<u>Zone A</u>	2.7 per 1,000 Average
Warehousing (Bldgs. 100, 200, 400)*	0.3	
General Office (Bldg. 300)	2.7	
Maximum Parking (per 1,000 GSF)	<u>Zone A</u>	
Warehousing (Bldgs. 100, 200, 400)*	0.4	
General Office (Bldg. 300)	3.4	
Minimum Bicycle Parking	Warehousing: 2, or 0.1 per 1,000 GSF, whichever is greater Office: 2, or 0.5 per 1,000 GSF	4
Bicycle Parking to be Covered	First 5 spaces or 30% of parking spaces, whichever is greater	2%

*For calculation purposes, Service Building 400 is considered as Warehousing.

Chapter 61: General Manufacturing Planning District

Section 61.020 Permitted Use.

No building, structure or land shall be used, except for the following uses as restricted in TDC 61.021.

- (1) All uses permitted by TDC 60.020 and 60.037 in the Light Manufacturing Planning District.*
- (2) Assembly, packaging, processing, and other treatment of beer, coffee, and canned goods.*
- (3) Assembly of electrical appliances, such as refrigerators, freezers, washing machines, and dryers.*
- (4) Auto body and/or paint shop; auto machine shop; auto radiator repair shop; general auto and light truck repair, including but not limited to, repairing and rebuilding engines and repair of transmissions, drivelines and rearends except not allowed in the Special Commercial Setback, TDC 61.035(1-3).*
- (5) Chemical warehouse and distribution.*
- (6) Cold storage plant.*
- (7) Concrete batch plant, except not allowed in the Leveton Tax Increment District.*
- (8) Manufacture of the following types of products:*
 - (a) Batteries.*
 - (b) Boilers.*
 - (c) Bottles.*
 - (d) Brick, tiles, or terra cotta.*
 - (e) Cans.*
 - (f) Chainsaws.*
 - (g) Electric generators.*
 - (h) Electric motors.*
 - (i) Electric transformers.*
 - (j) Engines, larger gasoline or diesel.*
 - (k) Heating and cooling equipment.*
 - (l) Industrial gases, excluding chlorine.*
 - (m) Ladders.*
 - (n) Lawnmowers.*
 - (o) Manufactured Dwellings.*
 - (p) Motor vehicles.*
 - (q) Paint.*
 - (r) Pet food.*
 - (s) Prefabricated building or structural members for buildings.*
 - (t) Rototillers.*
 - (u) Signs and display structures.*
 - (v) Windows.*
- (9) Marijuana facility, subject to the provisions in TDC Chapter 80.*
- (10) Metal casting (small to large size).*
- (11) Metal fabrication (light to medium) (of unfinished or semi-finished metals). : (12) Petroleum product distribution and storage.*
- (13) Planning mill.*
- (14) Processing, assembly, packaging, and other treatment of small products manufactured from sheet metal, wire larger than 1/4 inch (0.25") in diameter, or tobacco.*
- (15) Production of agricultural crops. (16) Sale, service and rental of industrial machinery including*

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machine tools, processing, and packaging machinery, forklifts, hoists and conveyors.

(17) Sandblasting.

(18) Storage and retail sale of rock, gravel, barkdust, sawdust, coal or topsoil except not allowed in the Special Commercial Setback, TDC 60.035(1-3).

(19) Structural-mechanical testing laboratories.

(20) Welding shop.

(21) Wireless communication facility attached.

(22) Wireless communication facility. (23) Other uses of a similar character found by the Planning Director to meet the purpose of this district, as provided in TDC 31.070.

(24) Sale, service and rental of construction and industrial equipment to contractors and industrial firms only.

[Ord. 592-83, 6/13/83; Ord. 621-84, 2/13/84; Ord. 812-90, 9/24/90; Ord. 819-91, 1/14/91; Ord. 911-94, 2/14/94; Ord. 913-94, 2/28/94; Ord. 965-96, 12/9/96; and Ord. 988-97, 12/8/97;. Ord. 1003-98, 4/27/98; Ord. 1026-99, 8/9/99; Ord. 2046-00, 2/14/00; Ord. 1133-03, 03/24/03; Ord. 1122-02, 11/25/02; Ord. 1212-06, 06/26/06; Ord. 1370-14 §9, 3/24/14; Ord. 1379-15, § 4 03/23/2015]

Response: the structures are for chemical warehousing and distribution.

Section 61.021 Restrictions on Permitted Uses

The following restrictions shall apply to those uses listed as permitted uses in TDC 61.020:

(1) The use must be conducted wholly within a completely enclosed building, except off-street parking and loading, utility facilities, wireless communication facilities, outdoor storage of materials and products directly related to the permitted use and outdoor play areas of child day care centers as required by state day care certification standards.

(2) The retail sale of products manufactured, assembled, packaged or wholesaled on the site is allowed provided that the retail sale area, including the showroom area, shall be no greater than 5% of the gross floor area of the building not to exceed 1,500 square feet.

(3) For other retail uses, excluding retail sales of products manufactured, assembled, packaged or wholesaled on the site, the following restrictions shall apply:

(a) Retail uses on land designated Employment Area or Corridor on Map 9-4 shall not be greater than 60,000 square feet of gross floor area per building or business.

(b) Retail commercial, retail service and professional service uses on land designated Industrial Area on Map 9-4 shall not be greater than 5,000 square feet of sales or service area in a single outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following two exceptions, which shall not be subject to the size limitations stated in this subsection:

(i) Commercial uses within the Special Setbacks for Commercial Uses Area, shown on Map 9-5, and as specified in TDC 61.035, except 61.035(4)(b).

(ii) Development approved through the application of the Industrial Business Park Overlay District to certain properties, as specified in TDC Chapter 69.

(iii) Development approved through the application of standards for additional small-scale mixed uses in ML as specified in TDC 60.037-60.038.

(4) Marijuana facilities are subject to the provisions in TDC Chapter 80. To the extent there is a conflict between the provisions in this Chapter and the provisions in TDC Chapter 80, the provisions in TDC Chapter 80 apply.

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[Ord. 1212-06, 06/26/06; Ord. 1370-14 §10, 3/24/14; Ord. 1379-15, § 5 03/23/2015]
Response: the buildings will be enclosed.

Section 61.030 Conditional Uses

The following uses are permitted in accordance with TDC Chapter 32 and as restricted in TDC 61.031:

- (1) All conditional uses listed in TDC 60.040, which are not otherwise permitted in TDC 61.020, except schools for kindergarten through 12, which are not permitted.*
- (2) Resource recovery facility except not allowed in the Special Commercial Setback, TDC 60.035(1-3).*
- (3) Refuse transfer station except not allowed in the Special Commercial Setback, TDC 60.035(1-3).*
- (4) Bus maintenance and storage facility. [Ord. 592-83 §97, 6/13/83; Ord. 621-84 §11, 2/13/84; Ord. 913-94 §8, 2/28/94; Ord. 1003-98 §7, 4/27/98; Ord. 1026-99 §83, 8/9/99; Ord. 1046-00 §17, 2/14/00; Ord. 1050-00 §6. 3/13/00; Ord. 1133-03, 03/24/03; Ord. 1122-02, 11/25/02; Ord. 1103-02, 03/25/02; Ord. 1212-06, 06/26/06]*

Response: The proposed uses do not require Conditional Use permitting.

Restrictions on Conditional Uses Section 61.031.

- (1) The retail sale of products manufactured, assembled, packaged or wholesaled on the site is allowed provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet.*
- (2) For other retail uses, excluding retail sales of products manufactured, assembled, packaged or wholesaled on the site, the following restrictions shall apply:*
 - (a) Retail uses on land designated Employment Area or Corridor on Map 9-4 shall not be greater than 60,000 square feet of gross floor area per building or business.*
 - (b) Retail commercial, retail service and professional service uses on land designated Industrial Area on Map 9-4 shall not be greater than 5,000 square feet of sales or service area in a single outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following two exceptions, which shall not be subject to the size limitations stated in this sub-section:*

(i) Commercial uses within the Special Setbacks for Commercial Uses Area, shown on Map 9-5, and as specified in TDC 61.035, except 61.035(4)(b).

(ii) Development approved through the application of the Industrial Business Park Overlay District, as specified in TDC Chapter 69. [Ord. 1212-06, 06/26/06]

Response: No retail activities will occur on this site.

Section 61.035 Special Setbacks for Commercial Uses from Arterial Streets and Commercial Services Overlay.

- (1) Commercial uses listed in TDC 60.020 and 60.040 as subject to the Special Setback for Commercial Uses shall be set back at least 300 feet from the centerline of SW Tualatin Sherwood Road and SW 124th Avenue and 350 feet from the centerline of SW Pacific Highway 99W west of Cipole Road.*
- (2) No part of the use, including required parking and outdoor storage or display, is allowed in the Special Setback.*
- (3) The Special Setback applies in the following specific areas. The areas are generally illustrated on Map 9-5.*

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- (a) *On the east side of SW 124th Avenue from SW Tualatin Road to SW Tualatin Sherwood Road and on the west side from SW Pacific Highway to SW Tualatin Sherwood Road.*
- (b) *On the south side of SW Tualatin Sherwood Road from the east property line of Lot 8, Itel Industrial Park to SW 120th Avenue and on the north side of SW Tualatin Sherwood Road from SW 95th Avenue to SW Cipole Road.*
- (c) *On the south side of SW Pacific Highway 99W from Cipole Road west to the Urban Growth Boundary.*

(4) Additional uses listed below are permitted in the Commercial Services Overlay on properties shown in the specific areas illustrated on Map 9-5 and only when conducted within an enclosed building.

(a) Automobile glass shop; Automobile accessory sales and auto parts retailing and wholesaling; auto and light truck service shop, including but not limited to, service for air conditioners, electrical, brakes, washing, detailing, mufflers, oil, or lubrication, sound, tune-up, and upholstery; auto tire shop and ancillary truck tire sales; canopy sales and repair; automobile body and/or auto paint shop; auto radiator repair shop; general auto and light truck repair, including but not limited to, repairing and rebuilding engines and repair of transmissions, drivelines, and rearends.

(b) Truck-mounted camper sales with all sales and storage conducted entirely within an enclosed building and not to exceed 10,000 square feet of building floor area.

(c) Tool and equipment rental. [Ord. 1133-03, 3/24/03; Ord. 1191-05, 6/27/05]

Response: This project is not a commercial use and does not fall under the Commercial Services Overlay.

Section 61.040 Prohibited Uses.

The following uses are prohibited:

- (1) Residential dwellings, except as otherwise provided in TDC 61.030.*
- (2) Commercial uses defined by TDC Chapters 50, 51, 52, 53 and 54, except as otherwise provided in TDC 61.020 and 61.030.*
- (3) Others:*
 - (a) Auto wrecking.*
 - (b) Commercial radio or TV broadcasting antennas.*
 - (c) Creosote treatment of products.*
 - (d) Distillation of bones.*
 - (e) Distillation of oil, coal, wood or tar compounds.*
 - (f) Fat rendering.*
 - (g) Forge plants.*
 - (h) Junk or salvage yard.*
 - (i) Manufacture of the following products:*
 - (i) Acid.*
 - (ii) Ammonia.*
 - (iii) Bleaching powder.*
 - (iv) Celluloid pyroxylin.*
 - (v) Cement, lime, gypsum and plaster of paris.*
 - (vi) Chlorine gas.*
 - (vii) Creosote.*
 - (viii) Disinfectant.*
 - (ix) Dye stuffs.*
 - (x) Explosives.*

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- (xi) Fertilizer.
- (xii) Herbicides.
- (xiii) Insect poison.
- (xiv) Radioactive materials.
- (xv) Soap.
- (xvi) Sodium compounds.
- (xvii) Tar roofing, water-proofing and other tar products.
- (j) Rock crushing.
- (k) Rolling mills.
- (l) Saw mill.
- (m) Slaughter of livestock or poultry.

(4) Handling, storage, processing, or other activities dealing with hazardous, toxic, or radioactive waste. [Ord. 592-83 §98, 6/13/83; Ord. 621-84 §12, 2/13/84; Ord. 1026-99 §84, 8/9/99; Ord. 1046-00 §18, 2/14/00; Ord. 1050-00 §8, 3/13/00]

Response: No hazardous, toxic, or radioactive waste will be handled, stored, or processed on site. The site will only be used for storage and handling of bottled gasses. Please see chemical HMIS herewith submitted as Exhibit K.

Section 61.050 Lot Size.

Except for lots for public utility facilities, natural gas pumping stations and wireless communication facility which shall be established through the Subdivision, Partition or Lot Line Adjustment process, the following requirements shall apply:

- (1) The minimum lot area shall be 20,000 square feet.
- (2) The minimum lot width shall be 100 feet.
- (3) The minimum average lot width at the building line shall be 100 feet.
- (4) The minimum lot width at the street shall be 100 feet.
- (5) For flag lots, the minimum lot width at the street shall be sufficient to comply with at least the minimum access requirements contained in TDC 73.400(8) to (12).
- (6) The minimum lot width at the street shall be 50 feet on a cul-de-sac street. [Ord. 866-92, 4/27/92; Ord. 965-96, 12/9/96]

Response: 1. Actual lot area=255,112 SF, 5.85 acres

2. Actual lot width=373'-10"

3. Average lot width at building line= 373'-10"

4. Actual lot width at SW Tualatin – Sherwood Road is 50'-4"; no

change is

proposed and modifications are impracticable.

5. Not applicable.

Section 61.060 Setback Requirements.

(1) *Front yard. The minimum setback is 30 feet. When the front yard is across the street from a residential or Manufacturing Park (MP) district, a front yard setback of 50 feet is required. When a fish and wildlife habitat area is placed in a Tract and dedicated to the City at the City's option, dedicated in a manner approved by the City to a non-profit conservation organization or is retained in private ownership by the developer, the minimum setback is 10 – 30 feet, as determined in the Architectural Review process, with the exception of front yards across the street from a residential or MP District, provided the buildings are located farther away from fish and wildlife habitat areas.*

(2) *Side yard. The minimum setback is 0 to 50 feet, as determined through the Architectural Review process. When the side yard is adjacent to a property line or*

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across the street from a residential or Manufacturing Park (MP) District, a side yard setback of 50 feet is required.

(3) Rear yard. The minimum setback is 0 to 50 feet, as determined through the Architectural Review process. When the rear yard is adjacent to a property line or across the street from a residential or Manufacturing Park (MP) District, a rear yard setback of 50 feet is required.

(4) Corner lot yards. The minimum set-back is the maximum setback prescribed for each yard for a sufficient distance from the street intersections and driveways to provide adequate sight distance for vehicular and pedestrian traffic at intersections and driveways, as determined through the Architectural Review process.

(5) The minimum parking and circulation area setback is 5 feet, except when a yard is adjacent to public streets or Residential or Manufacturing Park District, the minimum setback is 10 feet. No setback is required from lot lines within ingress and egress areas shared by abutting properties in accordance with TDC 73.400(2).

(6) No spur rail trackage shall be permitted within 200 feet of an adjacent residential district.

(7) No setbacks are required at points where side or rear property lines abut a rail-road right-of-way or spur track.

(8) No fence shall be constructed within 10 feet of a public right-of-way.

(9) Setbacks for a wireless communication facility shall be established through the Architectural Review process, shall consider TDC 73.510, shall be a minimum of 5 feet, and shall be set back from an RL District, or an RML District with an approved small lot subdivision, no less than 175 feet for a monopole that is no more than 35 feet in height and the setback shall increase five feet for each one foot increase in height up to 80 feet in height, and the setback shall increase 10 feet for each one foot increase in height above 80 feet. [Ord. 592-83 §99, 6/13/83; Ord. 621-84 §13, 2/13/84; Ord. 862-92 §42, 3/23/92; Ord. 904-93 §42, 9/13/93; Ord. 965-96 §75, 12/9/96; Ord. 1026-99 §85, 8/9/99; Ord. 1050-00 §9, 3/13/00; Ord. 1098-02, 2/11/02; Ord. 1224-06 §19, 11/13/06]

Response: See Table 104.2 above.

Section 61.065 Central Urban Renewal Area-Lot Sizes.

The minimum lot size in the Central Urban Renewal District shall conform to the lot sizes described on Map 9-3. [Ord. 635-84 §29, 6/11/84; Ord. 694-86 §6, 5/27/86; Ord. 1026-99 §86, 8/9/99; Ord. 1046-00 §19, 2/14/00]

Response: This project is not in the Central Urban Renewal District.

Section 61.070 [Repealed by Ord. 862-92 §43, 3/23/92]

Section 61.075 Sound Barrier Construction

(1) Sound barrier construction shall be used to intercept all straight-line lateral paths of 450 feet or less between a residential property within a residential planning district and any side edge of an overhead door or other doorway larger than 64 square feet, at a minimum height of eight feet above the floor elevation of the doorway.

(2) Sound barrier construction shall be used to intercept all straight-line lateral paths of 450 feet or less between a residential property within a residential planning district and any building mechanical device at a minimum height equal to the height of the mechanical object to be screened.

(3) Sound barrier construction shall consist of masonry walls or earth berms located so as to reflect sound away from, rather than toward, noise sensitive properties. This may

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include masonry "wing walls" attached to a building, detached masonry walls (such as at the perimeter of the site), earth berms, or combinations of the three.

(4) Wing walls must be at least as tall as the tallest overhead door they are designed to screen at the point where they meet the building. The height of the wall may be reduced along a maximum incline formed by a horizontal distance twice the vertical change in height, or 26.5 degrees from horizontal.

(5) "Straight-line lateral path" shall mean a direct line between two points as measured on a site plan. "Wing wall" shall mean a wall that is attached to a building on one side and meets the screening requirements of (1) and (2) of this section. "Building mechanical device" shall include, but is not necessarily limited to, heating, cooling and ventilation equipment, compressors, waste evacuation systems, electrical transformers, and other motorized or powered machinery located on the exterior of a building.

(6) Where existing structures (on or off site) are located such that they will reflect sound away from residential areas and will function as a sound barrier, on-site sound barrier construction shall not be required, except that at the time such structures are removed, sound barrier construction shall be required.

(7) New construction, including additions or changes to existing facilities, shall comply with the provisions of this section. When additions or changes to existing facilities are proposed, existing structures on the property may be required to comply with the provisions of this section, as determined through the Architectural Review process. Where buildings or outdoor use areas located on more than one parcel are all part of a single use as determined through the Architectural Review process, all of the parcels may be required to comply with the provisions of this section. [Ord. 812-90, §7, 9/24/90]

Response: Sound emanating from the site will be restricted to truck motor noise and reversing klaxons. All sounds will be at least 450 feet from residential areas.

103.1 Section 61.080 Structure Height.

(1) Except as provided in TDC 61.080(2) - (4), no structure shall exceed a height of 60 feet and flagpoles which display the flag of the United States of America either alone or with the State of Oregon flag shall not exceed 100 feet above grade provided that the setbacks are not less than a distance equal to the flagpole height.

(2) The maximum permitted structure height in TDC 61.080(1) may be increased to no more than 100 feet, provided that all yards adjacent to the structure are not less than a distance equal to the height of the structure.

(3) Height Adjacent to a Residential District. Where a property line, street or alley separates MG land from land in a residential district, a building, flagpole or wireless communication support structure shall not be greater than 28 feet in height at the required 50 foot setback line. No building or structure, including flagpoles, shall extend above a plane beginning at 28 feet in height at the required 50 foot setback line and extending away from and above the setback line at a slope of 45 degrees, subject always to the maximum height limitation in TDC 61.080(1) and (2).

(4) Wireless Communication Support Structure. The maximum structure height for a wireless communication support structure and antennas is 100 feet unless the wireless communication support structure and antennas are located within 300 feet of the centerline of I-5, in which case the maximum structure height is 120 feet. [Ord. 792-90 §6, 1/8/90; Ord. 965-96 §76, 12/9/96; Ord. 1026-99 §87, 8/9/99; Ord. 1046-00 §20, 2/14/00; Ord. 1116-02, 8/26/02]

Response: No structure exceeds 60 feet.

103.1 Section 61.090 Access

All lots created after September 1, 1979, shall abut a public street, except secondary condominium lots, which shall conform to TDC 73.400 and TDC Chapter 75. Lots and

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tracts created to preserve wetlands, green-ways, Natural Areas and Storm Water Quality Control Facilities identified by Chapters 71, 72, Figure 3-4 of the Parks and Recreation Master Plan and the Surface Water Management Ordinance, TMC 3-5, as amended, respectively, or for the purpose of preserving park lands in accordance with the Parks and Recreation Master Plan, may not be required to abut a public street. [Ord. 872-92 §17, 6/29/92; Ord. 979-97 §26, 7/14/97; Ord. 1026-99 §88, 8/9/99; Ord. 1046-00 §21, 2/14/00]

Response: This lot abuts SW Tualatin – Sherwood Road.

*103.1 Section 61.100 Off-Street Parking and Loading.
Refer to TDC Chapter 73.*

*103.1 Section 61.110 Environmental Standards.
Refer to TDC Chapter 63.*

*Section 61.120 Floodplain District.
Refer to TDC Chapter 70.*

*Section 61.130 Wetlands Protection District.
Refer to TDC Chapter 71.*

*Section 61.140 Community Design Standards.
Refer to TDC Chapter 73.*

*Section 61.150 Landscape Standards.
Refer to TDC Chapter 73. [Ord. 725-87, 6/22/87; Ord. 862-92, 3/23/92]*

Chapter 73: Community Design Standards

Section 73.010 Purpose.

Purpose.

To provide a process and definable standards to improve the aesthetic quality of the City's physical development. [Ord. 862-92, §51, 3/23/92]

Section 73.020 Findings and Objectives for the Architectural Review Process.

(1) The City Council finds that excessive uniformity, dissimilarity, inappropriateness, or poor quality of design in the exterior appearance of structures and the lack of proper attention to site development and landscaping, in the business, commercial, industrial, and certain residential areas of the City hinders the harmonious development of the City; impairs the desirability of residence, investment or occupation in the City; limits the opportunity to attain the optimum use and value of land and improvements; adversely affects the stability and value of property; produces degeneration of property in such areas with attendant deterioration of conditions affecting the peace, health and welfare of the City; and destroys a proper relationship between the taxable value of property and the cost of municipal services therefore.

(2) The City Council declares that the purposes and objectives of community design standards are to:

(a) Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of development.

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- (b) Discourage monotonous, drab, unsightly, dreary and inharmonious development.*
- (c) Promote the City's natural beauty and visual character and charm by ensuring that structures and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain, natural environment, and landscaping. Exterior appearances of structures and other improvements should enhance these qualities.*
- (d) Encourage site planning and development to incorporate bikeways, pedestrian facilities, greenways, wetlands, and other natural features of the environment and provide incentives for dedication of access easements and property to the public through shift of residential density, system development charge credits, landscaping credits and setback allowances.*
- (e) Protect and enhance the City's appeal to tourists and visitors and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial properties.*
- (f) Stabilize and improve property values and prevent blighted areas and thus increase tax revenues.*
- (g) Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and thus decrease the cost of governmental services.*
- (h) Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvement.*
- (i) Sustain the comfort, health, safety, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and thus pro-mote and protect the peace, health and welfare of the City.*
- (j) Determine the appropriate yard setbacks, building heights, minimum lot sizes when authorized to do so by City ordinance. [Ord. 862-92, §51, 3/23/92; Ord. 864-92, §11, 4/13/92; Ord. 933-94, §45, 11/28/94]*

ARCHITECTURAL REVIEW BOARD

Section 73.030 Establishment of the Architectural Review Board.

- (1) There is hereby established an Architectural Review Board whose members, terms, officers and manner of transacting business shall be as prescribed by TDC 73.030 to 73.037.*
- (2) The Architectural Review Board shall be responsible for reviewing and commenting upon applications which may be directed to it through the development process in accordance with TDC 31.073(4) and requests for review of planning staff decisions concerning architectural features. Additionally, projects for commercial buildings 50,000 square feet and larger, industrial buildings 150,000 square feet and larger, multi-family projects of 100 units or more or for any number of multi-family units adjacent to a Low Density Residential (RL) Planning District shall be reviewed directly by the Architectural Review Board in accordance with TDC 31.077. The City Council may direct the Board to review and comment on other matters that the Council determines are or may be within the Board's areas of expertise. [Ord. 743-88, §38, 3/28/88; Ord. 862-92, §51, 3/23/92; Ord. 864-92, §12, 4/13/92; Ord. 894-93, §10, 5/24/93; Ord. 1096-02 §36, 1/28/02]*

Section 73.031 Qualification of Members.

The Board shall consist of seven regular members and three alternate members as follows: one member of the City Council; one registered professional architect and one alternate member who shall be a registered professional architect; one registered

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professional landscape architect and one alternate member who shall be a registered professional landscape architect; one registered professional engineer or registered engineer in training and one alternate member who shall be a registered professional engineer or registered engineer in training; and three lay members. Of the three lay members, at least two shall reside in the City. [Ord. 637-84, §1, 6/11/84; Ord. 1188-05, 5/23/05]

Section 73.032 Appointment and Term.

The members of the Board shall be appointed by the Mayor and approved by the City Council. Whenever possible, the Mayor shall appoint individuals who are either property owners, residents, or actively engaged in business or employment in the City. Of the members first appointed, 3 members shall be appointed for terms of 1 year, and 4 members for terms of 2 years. Subsequent appointments shall be for terms of 2 years, or until successors are appointed. Terms of office shall commence on the dates of appointment of the respective members. The term of any alternate member designated in TDC 73.031 shall be the same as the term of the professional member for whom the alternate member is designated. [Ord. 862-92, §51, 3/23/92]

Section 73.033 Vacancies and Removal.

Any vacancy shall be filled for the remainder of the unexpired term of the original appointment. The Mayor, with the approval of the City Council, may remove any regular or alternate member of the Board for misconduct or nonperformance. Unexcused absences from 3 consecutive meetings, including regular and special work sessions, or unexcused absences from more than 50 percent of such meetings held during the calendar year, shall constitute nonperformance. An excused absence may be obtained by contacting the Chairman or Secretary of the Board at least 24 hours prior to any scheduled Board meeting. No member of the Board may be excused for more than 3 Board meetings during any calendar year. Misconduct means conviction of a crime or violation of the Code of Ethics, ORS 244,040, or laws concerning conflicts of interest, ORS 244.120. [Ord. 862-92, §51, 3/23/92]

Section 73.034 Chairman.

The City Council member of the Board shall serve as Chairman. [Ord. 637-84, §2, 6/11/84]

Section 73.035 Voting.

Four members shall constitute a quorum for the transaction of business. The Chairman shall be counted to determine a quorum and shall have the same voting powers as other members of the Board. Each member shall have one vote. A majority vote of the members shall be required for all Board actions. An alternate member shall have the same voting rights as the professional member for whom the alternate member is designated. [Ord. 862-92, §51, 3/23/92]

Section 73.036 Meetings and Records.

The Board shall hold two regular meetings each month. However, the regular meetings need not be held if there are no drawings or plans submitted for review by the Board.

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The deliberations and proceedings of the Board shall be public. [Ord. 637-84, §3, 6/11/84]

Section 73.037 Rules.

The Board may adopt and amend rules to govern the conduct of its business, consistent with the provisions of this Code. [Ord. 862-92, §51, 3/23/92]

Section 73.038 Ex Officio Member Under Eighteen (18) Years of Age.

In addition to the regular members of the Board, the City Council may appoint not more than one ex officio member under the age of eighteen (18) years, who shall serve a one-year term which may be renewed for one additional year. Except as otherwise provided, such ex officio member shall be treated as a board member, i.e., by receiving a copy of the agenda and staff report, and by full participation in the Board's discussion. Such ex officio member shall not be counted for purposes of establishing a quorum for the conduct of Board business and shall not be permitted to vote on motions or other action taken by regular Board members. The qualification of members of the Board under 73.031 shall not apply to the ex officio member. In addition to other criteria deemed relevant by the Council for appointment or removal, the Council may consider the effect of participation on the Board on such person's academic performance. [Ord. 888-93, §11, 3/23/83]

ARCHITECTURAL REVIEW APPROVAL

Section 73.040 Architectural Review Plan Approval Required.

(1) Except for an addition or alteration to an existing single-family dwelling when it results in less than a 35% expansion of the structure's existing footprint or less than a 35% alteration of an existing wall plane or only affects the wall plane of the side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, as permitted by these standards, no new building, condominium, townhouse, single family dwelling, addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), manufactured dwelling park, small-lot subdivision, landscape improvement (excluding greenways, parks and other Parks and Recreation Department road side improvements), parking lot improvement or expansion, above ground public utility facility (sewer or water pump stations, pressure reading stations and water reservoir), electrical substation, above ground natural gas pumping station, installation of decorative lighting (e.g. neon), exterior painting, awnings, murals, wireless communication facility, attached wireless communication facility or exterior major remodeling shall occur until the architectural review plan required under TDC 31.071 has been reviewed and approved by the Community Development Director and City Engineer or their designees, or by the Architectural Review Board or City Council for conformity with applicable standards or criteria.

(2) No new single-family dwelling or addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side

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yard of the dwelling abuts the side yard of an adjacent dwelling), as permitted by these standards, shall occur until the architectural review application under TDC 31.071(7) has been reviewed and approved by the Community Development Director or their designee for conformity with the applicable standards or criteria.

(3) Construction, site development and landscaping shall be carried out in substantial accord with the approved architectural review plan or application. Review of the proposed architectural review plan or application and any changes thereto shall be conducted in accordance with TDC Chapter 31. [Ord. 743-88 §32, 3/28/88; Ord. 844-91 §8, 10/14/91; Ord. 862-91 §51, 3/23/92; Ord. 864-94 §13, 4/13/92; Ord. 904-93 §43, 9/13/93; Ord. 965-96 §81, 12/9/96; Ord. 988-97 §12, 12/8/97; Ord. 979-97 §49, 7/14/97; Ord. 988-97 §12, 12/8/97; Ord. 1025-99 §31, 7/26/99; Ord. 1026-99 §95, 8/9/99; Ord. 1260-08 §6, 5/12/08]

Response: No residential use is proposed on this site.

Section 73.050 Criteria and Standards.

(1) In exercising or performing his or her powers, duties, or functions, the Community Development Director shall determine whether there is compliance with the following:

(a) The proposed site development, including the site plan, architecture, landscaping, parking and graphic design, is in conformance with the standards of this and other applicable City ordinances insofar as the location, height, and appearance of the proposed development are involved;

(b) The proposed design of the development is compatible with the design of other developments in the general vicinity; and

(c) The location, design, size, color and materials of the exterior of all structures are compatible with the proposed development and appropriate to the design character of other developments in the vicinity.

(2) In making his or her determination of compliance with the above requirements, the Community Development Director shall be guided by the objectives and standards set forth in this chapter. If the architectural review plan includes utility facilities or public utility facilities, then the City Engineer shall determine whether those aspects of the proposed plan comply with applicable standards.

(3) In determining compliance with the requirements set forth, the Community Development Director shall consider the effect of his or her action on the availability and cost of needed housing. The Community Development Director shall not use the requirements of this section to exclude needed housing types. However, consideration of these factors shall not prevent the Community Development Director from imposing conditions of approval necessary to meet the requirements of this section. The costs of such conditions shall not unduly increase the cost of housing beyond the minimum necessary to achieve the purposes of this Code. As part of the Architectural Review process, the Community Development Director has no authority to reduce dwelling unit densities.

(4) As part of Architectural Review, the property owner may apply for approval to remove trees, in addition to those exemptions allowed in TDC 34.200(3), by submitting information concerning proposed tree removal, pursuant to TDC 34.210(1). The granting or denial of a tree removal permit shall be based on the criteria in TDC 34.230.

(5) *Conflicting Standards.* In addition to the MUCOD requirements, the requirements in TDC Chapter 73 (Community Design Standards) and other applicable Chapters apply. If TDC Chapters 57, 73 and other applicable Chapters, conflict or are different, they shall be resolved in accordance with TDC 57.200(2). [Ord. 637-84, §5, 6/11/84; Ord. 725-87, §2, 6/22/87; Ord. 743-88, §33, 3/28/88; Ord. 862-92, §51, 3/23/1992; Ord. 864-92, §14, 4/13/82; Ord. 963-96, §5, 6/24/96; Ord. 1025-99, §32, 7/26/99; Ord. 1062.00, §22,

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12/11/00; Ord. 1062-00, 1/3/01; Ord. 1227-07 §12, 2/12/07]

Response: A tree plan is herewith submitted. Please see drawing L2.0 herewith submitted.

Section 73.055 Conditions Placed on Architectural Review Approvals.

(1) An architectural review approval may include restrictions and conditions. These restrictions and conditions shall be reasonably conceived to:

- (a) Protect the public from the potentially deleterious effects of the proposal;*
- (b) Fulfill the need for public facilities and services created by the proposal, or increased or in part attributable to the proposal;*
- (c) Further the implementation of the requirements of the Tualatin Development Code.*

(2) The following types of conditions are specifically contemplated by subsection (1) of this section and the listing below is illustrative only and not a limitation of the authority granted by this section.

(a) Development Schedule--A reasonable time schedule may be placed on construction activities associated with the proposed development, or portion of the development.

(b) Dedications, Reservation--Dedication or reservation of land, or the granting of an easement for park, open space, rights-of-way, bicycle or pedestrian paths, Greenway, Natural Area, Other Natural Area, riverbank, the conveyance of title or easements to the City or a non-profit conservation organization, or a homeowners' association.

(c) Construction and Maintenance Guarantees--Security from the property owners in such an amount that will assure compliance with approval granted.

(d) Plan Modifications--Changes in the design or intensity of the proposed development, or in proposed construction methods or practices, necessary to assure compliance with this chapter.

(e) Off-Site Improvements--Improvements in public utility facilities not located on the project site where necessary to assure adequate capacity and where service demand will be created or increased by the proposed development if the cost of providing services to others will be increased as a result of the development. The costs of such improvements may be paid for in full while allowing for recovery of costs from users on other development sites, or they may be prorated to the proposed development in proportion to the service demand projected to be created or increased by the project. For development on land where the Industrial Business Park Overlay District is applied, conditions of approval may be included to address the impact, or the cumulative impact, of the development generated by the underlying ML or MG District uses and the Overlay District uses, including but not limited to the traffic impacts generated by non-industrial uses. For development on land where the Mixed Use Commercial Overlay District (MUCOD) is applied, conditions of approval may be included to address the impact, or the cumulative impact, of the development generated by the underlying CG District uses and the MUCOD uses, including but not limited to the traffic impacts generated by noncommercial uses.

(f) Other Approvals--Evaluation, inspections or approval by other agencies, jurisdictions, public utilities, or consultants, may be required for all or any part of the proposed development.

(g) Access Limitation--The number, location and design of street accesses to a proposed development may be limited or specified where necessary to maintain the capacity of streets to carry traffic safely, provided that sufficient access to the development is maintained.

(h) Public Utility Facilities--Must be constructed in accordance with the City's Public Works Construction Code. [Ord. 743-88 §24, 3/28/88; Ord. 862-92 §51, 3/23/92; Ord.

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933-94 §46, 11/28/94; Ord. 979-97 §50, 7/14/97; Ord. 1040-99 §10, 12/13/99; Ord. 1062.00, §21, 12/11/00; Ord. 1062-00, 1/3/01]

Section 73.056 Time Limit on Approval.

Architectural Review approvals shall expire after two years unless:

(1) A building, or grading permit submitted in conjunction with a building permit application, has been issued and substantial construction has taken place pursuant to the permit and an inspection has been performed by a member of the Building Division; or

(2) The Architectural Review (AR) applicant requests in writing an extension and the City approves it. If the Community Development Director and the City Engineer or their designees approved the AR, then the Community Development Director and City Engineer shall decide upon the extension request. If the Architectural Review Board (ARB) approved the AR, then the ARB shall decide upon the extension request. The applicant shall provide notice of extension request to past recipients of the AR notice of application and post a sign pursuant to TDC 31.064. Before approving an extension, the deciding party shall find the request meets these criteria:

(a) The applicant submitted a written extension request prior to the original date.

(b) There have been no significant changes in any conditions, ordinances, regulations or other regulations or other standards of the City or applicable agencies that affect the previously approved project so as to warrant its resubmittal for AR.

(c) If the previously approved application included a special study, the applicant provided with the extension a status report that shows no significant changes on the site or within the vicinity of the site. A letter from a recognized professional also would satisfy this criterion if it states that conditions have not changed after the original approval and that no new study is warranted.

(d) If the AR applicant neglected site maintenance and allowed the site to become blighted, the deciding party shall factor this into its decision.

(e) The deciding party shall grant no more than a single one-year extension for an AR approval.

(f) If the Community Development Director and City Engineer or their designees are the deciding party, then they shall decide within thirty (30) days of receipt of the request. If the ARB is the deciding party, then the ARB shall decide within sixty (60) days of receipt of the request. If the deciding party fails to decide within the applicable time period, the decision shall default to approval.

(3) The Architectural review approval was granted on or after January 1, 2007 through September 30, 2009. In those cases approval shall be extended to December 31, 2012. Such approval shall not be eligible for extension under TDC 73.056(2). This subsection (3) shall terminate on January 2, 2013, without further action of the City Council. [Ord. 862-92, §51, 3/23/92; Ord. 904-93, §44, 9/13/93; Ord. 1291-09 §1, 10/26/09; Ord. 1324-11 §1, 06/13/11; Ord. 1333-11 §4, 9/12/11]

PROCEDURE

Section 73.060 [Repealed by Ord. 743-88, §34, passed 3/28/88]

Section 73.065 [Repealed by Ord. 743-88, §34, passed 3/28/88]

Section 73.067 [Repealed by Ord. 743-88, §34, passed 3/28/88]

Section 73.070 [Repealed by Ord. 743-88, §34, passed 3/28/88]

Section 73.075 [Repealed by Ord. 743-88, § 34, passed 3/28/88]

Section 73.080 [Repealed by Ord. 743-88, § 34, passed 3/28/88]

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Section 73.085 [Repealed by Ord. 743-88, § 34, passed 3/28/88]

Section 73.090 [Repealed by Ord. 862-92, § 51, passed 3/28/88]

OCCUPANCY

Section 73.095 Occupancy Requirements.

(1) Except as allowed by Subsection (2), all landscaping and exterior improvements required as part of the Community Development Director's, Architectural Review Board's or City Council's approval shall be completed in addition to Fire and Life Safety, and Engineering/Building Department requirements prior to the issuance of any certificate of occupancy.

(2) A temporary certificate of occupancy may be issued by the Building Official prior to the complete installation of all required on-site landscaping, landscaping in the public right-of-way and on-site exterior improvements if security equal to 110 percent of the cost of the landscaping and exterior improvements, as determined by the Community Development Director, is filed with the City, assuring such installation within a time specified by the Community Development Director, but not to exceed 6 months after granting of temporary occupancy. The applicant shall provide a list of uncompleted items along with specific cost estimates of on-site landscaping and on-site exterior improvements, including materials and installation to the satisfaction of the Community Development Director prior to approval of the security. "Security" may consist of a corporate surety bond issued by a surety company authorized to transact business in the State of Oregon, a cash deposit, an assignment of bank funds, an irrevocable letter of credit, cash in escrow or a certified check; and the form shall meet with the approval of the City Attorney. If installation of the on-site landscaping or other on-site exterior improvements is not completed within the period specified by the Community Development Director, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the party posting the security. The final landscape and exterior improvement inspection shall be made by the Planning Department prior to the return of any securities. Any portion of the plan not installed, not installed properly, or not properly maintained shall cause the inspection to be postponed until the project is completed, or shall cause the security to be used by the City. [Ord. 637-84, §14, 6/11/84; Ord. 862-92, §51, 3/23/92]

LANDSCAPE AND BUILDING MAINTENANCE

Section 73.100 Landscape Installation and Maintenance.

(1) All landscaping approved through the Architectural Review Process shall be continually maintained, including necessary watering, weeding, pruning and replacement, in a manner substantially similar to that originally approved through the Architectural Review Process, unless subsequently altered with Community Development Director approval.

(2) All building exterior improvements approved through the Architectural Review Process shall be continually maintained including necessary painting and repair so as to remain substantially similar to original approval through the Architectural Review Process, unless subsequently altered with Community Development Director approval. [Ord. 862-92, § 51, 3/23/92; Ord. 904-93, § 45, 9/13/93]

DESIGN STANDARDS

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Section 73.110 Site Planning – Multi-family Uses.

The purpose of multi-family, including townhouse, site planning design objectives and standards is to implement the purposes and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as buildings, vehicular parking and circulation areas, bikeways and bike parking areas, outdoor shared areas, private areas, walkways, accessways, buffer areas and landscaping. Except as otherwise provided in this Code, multi-family site planning objectives and standards shall apply to all residential and mixed use residential developments within the Central Design District. [Ord. 862-92, §51, 3/23/92; Ord. 882-92, §12, 12/14/92; Ord. 895-93, §3, 5/24/93; Ord. 1025-99 §33, 7/26/99]

Response: No multi-family uses are proposed for this site.

Section 73.120 Objectives.

All multi-family projects, including townhouses, should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments, such as apartments. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. Site elements shall be placed and designed, to the maximum extent practicable, to:

- (1) Retain and incorporate existing trees and other significant natural features and habitat such as drainage-ways and wetlands.*
- (2) Minimize soil removal from the site and grade changes.*
- (3) Minimize the effects of noise and dust pollution on areas surrounding and within the site.*
- (4) Create areas for recreation which are suitable for passive and active uses.*
- (5) Provide the opportunity for residents to watch over shared outdoor areas, entry areas and vehicular parking areas through placement and orientation of kitchen or living room windows, or both.*
- (6) Provide protection from adverse climate conditions such as summer overheating and winter storms. Architectural and landscape elements such as porches, trellises, awnings, trees and shrubs including native species, are examples of items which may mitigate these impacts.*
- (7) Parking lot location and design should minimize distances between resident vehicular parking and entry areas while providing a suitable transition in materials and scale between vehicular areas and living areas.*
- (8) Protect parked vehicles from moving vehicles.*
- (9) Select and locate plant materials to appropriately articulate space, frame views and vistas, provide seasonal variety, create usable ground surfaces, discourage intrusion into private outdoor areas, and curtail erosion.*
- (10) Provide shade and break up the appearance of large expanses of paved areas.*
- (11) Screen vehicular headlights from shining into residential units.*
- (12) Screen elements such as mechanical and electrical facilities from view.*
- (13) Avoid barriers to disabled individuals.*
- (14) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site.*
- (15) Provide, protect and maintain visual and physical corridors to adjacent wetlands, waterways, Natural Areas and Greenways.*
- (16) Provide safe and convenient walk-ways for pedestrians to move from parking areas to building entrances.*

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(17) Provide and maintain a circulation system of safe and convenient walkways and bikeways that link buildings on the site with adjacent public streets and accessways.

(18) Provide direct and convenient accessways between the development and publicly-owned land intended for general public use; arterial and collector streets where a transit stop and a bike lane is provided or designated; and abutting residential, commercial and semi-public property.

Accessways should be designed and located in a manner which does not restrict or inhibit opportunities for developers of adjacent properties to connect with an accessway and which provides continuity from property to property for pedestrians and bicyclists to use the accessway. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §4, 5/24/93; Ord. 898-93, § 3, 6/4/93; Ord. 979-97, §51, 7/14/97; Ord. 1025-99, §34, 7/26/99; Ord. 1097-02, 2/11/02; Ord. 1224-06 §20, 11/13/06]

Response: No multi-family uses are proposed for this site.

Section 73.130 Standards.

The following standards are minimum requirements for multi-family and townhouse development:

(1) Private Outdoor Areas.

(a) Except within the Central Design District, or within the Mixed Use Commercial Overlay District in which case the Architectural Review process shall determine the appropriate outdoor area, a separate outdoor area of not less than 80 square feet shall be attached to each ground level dwelling unit. These areas shall be separated from common outdoor areas in a manner which enables the resident to control access from separate to common areas with elements, such as walls, fences or shrubs.

(b) Except for townhouses, a separate outdoor area of not less than 48 square feet in the form of balconies, terraces, or loggias shall be provided for each unit located above the ground level, except that within the Central Design District or the Mixed Use Commercial Overlay District such outdoor areas may be less than 48 square feet.

(2) Entry Areas.

(a) Except as provided in TDC 73.130(2)(b), a private main entry area shall be provided in addition to required private outdoor areas and designed so that they are considered a private extension of each dwelling unit. Except for townhouses, each entrance area shall be a minimum of 24 square feet in area for each dwelling unit and may be combined to serve more than a single unit, subject to the following mini-mum area requirements:

(i) Two dwelling units for one-story buildings or two-story townhouses (48 square feet).

(ii) Four dwelling units for two-story buildings (96 square feet).

(iii) Six dwelling units for three-story buildings (144 square feet).

(iv) Unlimited for four-story and greater and for buildings with dwelling unit entries from interior corridors.

(b) Within the Central Design District, or within the Mixed Use Commercial Overlay District as determined in the Architectural Review process, a private main entry area need not meet the minimum square footage requirements in TDC 73.130(2)(a).

(c) Entry areas shall be separated from on-site parking areas and public streets with landscaping, change of grade, low fences, walls or other means that enable the resident to supervise and control access and to retain privacy.

(3) Shared Outdoor Areas and Children's Play Areas.

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(a) Except for townhouses, projects with 12 or more dwelling units shall provide year-round shared outdoor areas for both active and passive recreation (gazebos and other covered spaces are encouraged to satisfy part of this requirement) totaling not less than 450 square feet per dwelling unit. Except adult only projects, a minimum of 150 square feet of the 450 square feet shall be provided as a children's play area.

(b) The shared outdoor and children's play areas shall be located and designed in a manner which:

(i) Provides approximately the same accessibility to the maximum number of dwelling units possible;

(ii) Allows residents to watch over these areas from windows in at least two adjacent dwelling units. These windows must provide viewing from the kitchen, living room, dining room or other activity room (bedrooms or bathrooms are not included);

(iii) Provides a separation from all entryway and parking areas with a landscaped transition area measuring a minimum of 10 feet wide;

(iv) Controls access to shared outdoor areas from off-site as well as from on-site parking and entrance areas with features such as fencing, walls and landscaping;

(v) Provides both sunny and shady spots; and

(vi) Provides a usable floor surface (material such as lawn, decks, wood chips, sand and hard surface materials qualify).

(c) These standards shall not apply to townhouses or within the Central Design District or within the Mixed Use Commercial Overlay District. Within the Mixed Use Commercial Overlay District, the amount of shared outdoor areas and children's play areas shall be consistent with the intent of the Mixed Use Commercial Overlay District and shall be appropriate for the design and scale of residential use proposed as determined through the Architectural Review process.

(4) Safety and Security.

(a) Except for townhouses, private outdoor areas shall be separated from shared outdoor areas and children's play areas with elements such as walls, buildings, landscaping, and changes in grade in a manner which enables residents to utilize these areas as an extension of their units.

(b) Windows shall be located to encourage watching over entry areas, shared outdoor areas, walkways and parking areas.

(c) An outdoor lighting system shall be provided which facilitates police observation and resident observation through strategic location, orientation and brightness without shining into residential units, public rights-of-way, or fish and wildlife habitat areas.

(d) An identification system shall be established which clearly orients visitors and emergency services as to the location of residential units. Where possible, this system should be evident from the primary vehicle entryway.

(5) Service, Delivery and Screening.

(a) Provisions for postal delivery shall be conveniently located and efficiently designed for residents and mail delivery personnel.

(b) Safe pedestrian access from unit entries to postal delivery areas, shared activity areas, and parking areas shall be provided. Elements such as, but not limited to, concrete paths, raised walkways through vehicular areas or bark chip trails will meet this requirement.

(c) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.

(6) Accessways.

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(a) Accessways shall be constructed, owned and maintained by the property owner.
(b) Accessways shall be provided between the development's walkway and bikeway circulation system and all of the following locations that apply:

(i) adjoining publicly-owned land intended for public use, including schools, parks, or bike lanes. Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland;

(ii) adjoining arterial or collector streets upon which transit stops or bike lanes are provided or designated;

(iii) adjoining undeveloped residential or commercial property; and

(iv) adjoining developed sites where an accessway is planned or provided.

(c) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to a vacant parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel is developed. The agreement shall be subject to the City's review and approval.

(d) Accessways for multi-family development shall:

(i) be a minimum of 8 feet in width;

(ii) be constructed in accordance with the Public Works Construction Code if they are public accessways, and if they are private accessways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;

(iii) not have fences or gates which prevent pedestrian and bike access at the entrance to or exit from any accessway; and

(iv) have curb ramps wherever the accessway crosses a curb.

(e) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

(7) Walkways.

(a) Except for townhouses, walkways for multi-family development shall be a minimum of 6 feet in width and be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.

(b) Curb ramps shall be provided wherever a walkway crosses a curb.

(8) The Federal Americans With Disabilities Act (ADA) applies to development in the City of Tualatin. Although TDC Chapter 73, does not include the Oregon Structural Specialty Code's (OSSC) accessibility standards as requirements to be reviewed during the Architectural Review process, compliance with the OSSC is a requirement at the Building Permit step. It is strongly recommended all materials submitted for Architectural Review show compliance with the OSSC. [Ord. 725-87, §4, 6/22/87; Ord. 862-92, §51, 3/23/92; Ord. 882-92, §13, 12/14/92; Ord. 895-93, §6, 5/24/93; Ord. 898-93, §4, 6/14/93; Ord. 904-93, §46, 9/13/93; Ord. 947-95, §6, 7/24/95; Ord. 1008-98, §1-5, 7/13/98; Ord. 1025-99, §35, 7/26/99; Ord. 1224-06 §21, 11/13/06; Ord. 1252-08 §1, 2/11/08]

Response: No multi-family uses are proposed for this site.

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Section 73.140 Site Planning – Commercial, Industrial, Public and Semi-Public Uses.

The purpose of commercial, industrial, public and semi-public site planning design objectives is to implement the purposes and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as buildings, vehicular parking and circulation areas, bikeways and bike parking, accessways, walkways, buffer areas and landscaping. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §7, 5/24/93]

Section 73.150 Objectives.

All commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Site elements shall be placed and designed, to the maximum extent practicable, to:

- (1) Provide convenient walkways and crosswalks which separate pedestrians from vehicles and link primary building entries to parking areas, other on-site buildings and the public right-of-way.*
- (2) Avoid barriers to disabled individuals.*
- (3) Locate and design drive-through facilities in a manner which does not conflict with pedestrian routes or other vehicular circulation and minimizes adverse impacts on adjacent properties.*
- (4) Break up parking areas with landscaping (trees, shrubs and walkways) and buildings to lessen the overall impact of large paved areas.*
- (5) Utilize landscaping in parking areas to direct and control vehicular movement patterns, screen headlights from adjacent properties and streets, and lessen the visual dominance of pavement coverage.*
- (6) Provide vehicular connections to adjoining sites.*
- (7) Emphasize entry drives into commercial complexes and industrial park developments with special design features, such as landscaped medians, water features and sculptures.*
- (8) Locate, within parking lots, pedestrian amenities and/or landscaping in areas which are not used for vehicle maneuvering and parking.*
- (9) Encourage outdoor seating areas which provide shade during summer and sun during winter, trash receptacles and other features for pedestrian use. Plantings with a variety of textures and color are encouraged.*
- (10) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site.*
- (11) Conserve, protect and restore fish and wildlife habitat areas, and maintain or create visual and physical corridors to adjacent fish and wildlife habitat areas.*
- (12) Provide safe pathways for pedestrians to move from parking areas to building entrances.*
- (13) Design the location of buildings and the orientation of building entrances for commercial, public and semi-public uses such as churches, schools and hospitals to provide adequate pedestrian circulation between buildings and to provide preferential access for pedestrians to existing or planned transit stops and transit stations.*
- (14) Provide accessways between commercial, public and semi-public development and publicly-owned land intended for general public use; arterial and collector streets where a transit stop and/or a bike lane is provided or designated; and abutting residential, commercial and semi-public property.*
- (15) Provide accessways between industrial development and abutting greenways where a bikeway or pedestrian path is provided or designated.*

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- (16) *Accessways should be designed and located in a manner which does not restrict or inhibit opportunities for developers of adjacent properties to connect with an accessway, and provide continuity from property to property for pedestrians and bicyclists to use the accessway.*
- (17) *Provide preferential parking for carpool and vanpools to encourage employees to participate in carpools and vanpools.*
- (18) *Screen elements such as mechanical and electrical equipment, above ground sewer or water pump stations, pressure reading stations and water reservoirs from view.*
- (19) *Parking structure exteriors and underground parking should be designed to be harmonious with surrounding buildings and architecturally compatible with the treatment of buildings they serve.*
- (20) *When a fish and wildlife habitat area abuts or is on the subject property the applicant and decision authority for a development application should consider locating buildings farther away from the fish and wildlife habitat area. [Ord. 635-84, § 36, 6/11/84; Ord. 649-84, §7, 11/26/84; Ord. 661-85, §10, 3/25/85; Ord. 827-91, §6 and 7, 3/25/91; Ord. 849-91, §38 and 39, 11/25/91; Ord. 862-92, §51, 3/23/92; Ord. 895-93, §8, 5/24/93; Ord. 904-93, §47, 9/13/93; Ord. 920-94, §17, 4/11/94; Ord. 965-96, §82, 12/9/96; Ord. 979-97, §52, 7/14/97; Ord. 1097-02, 2/11/02; Ord. 1224-06 §22, 11/13/06]*

Response:

- 1) Due to the existing construction of the site's access driveway to Tualatin – Sherwood Road, a painted pedestrian walkway along one side of the access driveway is proposed for pedestrian access to SW Tualatin – Sherwood Road from the proposed area of development.**
- 2) To the greatest extent practicable, the site will be free of barriers to disabled individuals.**
- 3) No drive-through facility is proposed.**
- 4) To the greatest extent possible while still retaining the site's functionality for the proposed uses, all buildings and parking areas are accessed from the paved circulation areas and as much existing forest is preserved as practicable.**
- 5) As much of the existing forested has been maintained to buffer vehicles from adjacent properties.**
- 6) No vehicular connections to adjoining sites are proposed.**
- 7) The site is neither a commercial complex nor an industrial park development.**
- 8) Due to necessary vehicular circulation, no pedestrian amenities or landscaping areas are proposed.**
- 9) No outdoor seating areas are proposed.**
- 10) No visual or aesthetic interest features are proposed.**
- 11) As much as practicable, the site's forested area is protected for the wildlife habitat.**
- 12) A separate pedestrian sidewalk connects all parking with building 300 (office trailer).**
- 13) The proposed site use is industrial.**
- 14) The proposed site use is industrial.**
- 15) No abutting greenway or pedestrian path is present.**
- 16) No accessway is proposed.**
- 17) One vanpool parking space is proposed,**
- 18) All mechanical and electrical equipment is located within proposed structures and screened from public view.**
- 19) No parking structure is proposed.**
- 20) The proposed buildings are located as far to the north property line to maximize the amount of wildlife habitat remaining on site.**

Section 73.160 Standards.

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The following standards are minimum requirements for commercial, industrial, public and semi-public development, and it is expected that development proposals shall meet or exceed these minimum requirements.

(1) Pedestrian and Bicycle Circulation.

(a) For commercial, public and semi-public uses:

(i) a walkway shall be provided between the main entrance to the building and any abutting public right-of-way of an arterial or collector street where a transit stop is designated or provided. The walkway shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;

(ii) walkways shall be provided between the main building entrances and other on-site buildings and accessways. The walkways shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;

(iii) walkways through parking areas, drive aisles, and loading areas shall be visibly raised and of a different appearance than the adjacent paved vehicular areas;

(iv) accessways shall be provided as a connection from the development's internal bikeways and walkways to all of the following locations that apply: abutting arterial or collector streets upon which transit stops or bike lanes are provided or designated; abutting undeveloped residential or commercial areas; adjacent undeveloped sites where an agreement to provide an accessway connection exists; and to abutting publicly-owned land intended for general public use, including schools;

(v) fences or gates which prevent pedestrian and bike access shall not be allowed at the entrance to or exit from any accessway.

(vi) bikeways shall be provided which link building entrances and bike facilities on the site with the adjoining public right-of-way and accessways.

(vii) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

(b) For Industrial Uses:

(i) a walkway shall be provided from the main building entrance to sidewalks in the public right-of-way and other on-site buildings and accessways. The walkway shall be a minimum of 5 feet wide and constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.

(ii) Walkways through parking areas, drive aisles and loading areas shall have a different appearance than the adjacent paved vehicular areas.

(iii) Accessways shall be provided as a connection between the development's walkway and bikeway circulation system and an adjacent bike lane;

(iv) Accessways may be gated for security purposes;

(v) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

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- (c) Curb ramps shall be provided wherever a walkway or accessway crosses a curb.*
- (d) Accessways shall be a minimum of 8 feet wide and constructed in accordance with the Public Works Construction Code if they are public accessways, and if they are private access-ways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.*
- (e) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to an undeveloped parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel is developed. The agreement shall be subject to the City's re-view and approval.*
- (f) Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection to a bike or pedestrian path, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland.*
- (g) Accessways shall be constructed, owned and maintained by the property owner.*

(2) Drive-up Uses.

- (a) Drive-up uses shall provide a minimum stacking area clear of the public right-of-way and parking lot aisles from the window serving the vehicles as follows:*
 - (i) Banks--each lane shall provide a minimum capacity for five automobiles.*
 - (ii) Restaurants--each lane shall provide a minimum capacity for eight automobiles.*
 - (iii) Other Drive-Up Uses--each lane shall provide a minimum capacity for two to eight automobiles, as determined through the architectural review process.*
 - (iv) For purposes of this Section, an automobile shall be considered no less than twenty feet in length. The width and turning radius of drive-up aisles shall be approved through the architectural review process.*
- (b) Parking maneuvers shall not occur in the stacking area. The stacking area shall not interfere with safe and efficient access to other parking areas on the property.*
- (c) Locate drive-up aisles and windows a minimum of 50 feet from residential planning districts to avoid adverse impacts. A wall or other visual or acoustic may be required through the architectural review process.*

(3) Safety and Security.

- (a) Locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.*
- (b) In commercial, public and semi-public development and where possible in industrial development, locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way.*
- (c) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas.*
- (d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services.*
- (e) Shrubs in parking areas must not exceed 30 inches in height. Tree canopies must not extend below 8 feet measured from grade.*
- (f) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs,*

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electrical substations, and above ground natural gas pumping stations shall provide a minimum 6' tall security fence or wall.

(4) Service, Delivery and Screening.

- (a) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.*
- (b) Outdoor storage, excluding mixed solid waste and source separated recyclables storage areas listed under TDC 73.227, shall be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping.*
- (c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations shall be screened with sight-obscuring fences or walls and landscaping.*

(5) The Federal Americans with Disabilities Act (ADA) applies to development in the City of Tualatin. Although TDC, Chapter 73 does not include the Oregon Structural Specialty Code's (OSSC) accessibility standards as requirements to be reviewed during the Architectural Review process, compliance with the OSSC is a requirement at the Building Permit step. It is strongly recommended all materials submitted for Architectural Review show compliance with the OSSC.

(6) (a) All industrial, institutional, retail and office development on a transit street designated in TDC Chapter 11 (Figure 11-5) shall provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street.

(b) In addition to (a) above, new retail, office and institutional uses abutting major transit stops as designated in TDC Chapter 11 (Figure 11-5) shall:

- (i) locate any portion of a building within 20 feet of the major transit stop or provide a pedestrian plaza at the transit stop;*
- (ii) provide a reasonably direct pedestrian connection between the major transit stop and a building entrance on the site;*
- (iii) provide a transit passenger landing pad accessible to disabled persons;*
- (iv) provide an easement or dedication for a passenger shelter as determined by the City; and*
- (v) provide lighting at the major transit stop. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §9, 5/24/93; Ord. 898-93, §5, 6/14/93; Ord. 904-93, §48, 49 and 50, 9/13/93; Ord. 947-95, §8, 9, 10 and 11, 7/24/95; Ord. 965-96, §83 and 84, 12/9/96; Ord. 1008-98, §6, 7/13/98; Ord. 1046-00 §35, 2/14/00; Ord. 1103-02, , 3/25/02; Ord. 1224-06 §23, 11/13/06: Ord. 1354-13 §11, 02/25/13]*

Response:

(1) (a) The proposed use is industrial.

(b) (i) A 5'-0" wide asphalt walkway is proposed along the existing access driveway.

(ii) The proposed walkway is separated from the vehicular traffic along the access driveway by painted striping. The walkway asphalt is conterminous with the vehicle asphalt.

(iii) No adjacent bike lane exists.

(iv) No accessway is proposed.

(V) No outdoor recreation access route is proposed.

(c) No walkway crosses a curb.

(d) No accessway is proposed.

(2) No drive-up use is proposed.

(3) (a) The site will have pole-mounted lighting adequate for safety and security.

(b) No surveillance of interior activity from the public right-of-way is proposed for department of Homeland Security compliance purposes. Air Liquide has decades of experience with secure and safe handling of gases. The company has developed key safety and security protocols for cylinder depot design including:

- **Separation/Segregation:** Incompatible materials are separated by safe distances or by durable walls to prevent unintended mixing. All separation and segregation design elements meet or exceed applicable building codes. Several concentric layers of fence and gates delay access to materials by intruders.
- **Rated Construction Materials:** Durable materials such as steel, concrete masonry and synthetic insulators are used to ensure control of heat and the effect it has on stored materials.
- **Fire Suppression:** Automatic fire suppression systems will trigger and extinguish flames.
- **Ventilation:** Natural and forced ventilation are employed to dilute fugitive emissions. Ventilation rates are calculated to dilute flammables to less than LFL.
- **Ambient Air Monitoring:** Electronic sensors are installed to alert operators of low levels of fugitive emissions. Early detection helps address small issues before they grow.
- **Facility Monitoring:** All safety systems are remotely monitored by operations personnel for off-hours responses if needed. Automated alerts trigger investigations. Back-up power is applied when utility power fails.
- **Security:** State of the art security measures employed to Delay, Deter and Detect.

(c) No surveillance of interior activity from the public right-of-way is proposed.

(d) Each building will be individually identified and entries marked.

(e) Landscape requirements are met and identified. Please refer to Sheet L1.0 herewith submitted.

(f) No above-ground structures of these types are proposed.

(4) (a) All equipment is screened by a site-obscuring fencing or building walls.

(b) No storage is proposed.

(5) Please see site plan herewith submitted for ADA compliance.

(6) Per TDC Chapter 11 figure 11-5 Tualatin – Sherwood Road is scheduled for expansion of fixed route bus transit service. Sidewalk is being provided along access driveway, however access driveway is served by common vehicle apron serving several properties and does not extend directly to public right-of-way. Therefore, sidewalk cannot attach to pedestrian walk along SW Tualatin – Sherwood Road.

Section 73.170 Structure Design – Single-family and Multi-family Uses.

(1) Purpose – Single-family Uses.

The purpose of single-family building design objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are intended to promote functional, safe, innovative and attractive buildings that are compatible with the surrounding environment. This concerns the building form including the articulation of walls, roof design, materials, and placement of elements such as windows, doors, and identification features.

(2) Purpose – Multi-family Uses.

The purpose of multi-family, including townhouse, building design objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are

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intended to promote functional, safe, innovative and attractive buildings which are compatible with the surrounding environment. This concerns the building form including the articulation of walls, roof design, materials, colors, placement of elements such as windows, doors, mechanical equipment and identification features. [Ord. 862-92, §51, 3/23/92. Ord. 1025-99, §36, 7/26/99; Ord. 1260-08 §7, 5/12/08]

Response: No residential uses are proposed.

Section 73.180 Objectives – Single-family and Multi-family Uses.

(1) Objectives – Single-family Uses.

All new single-family dwellings, including an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. Development subject to Level I (Clear and Objective) Single-family Architectural Re-view approval may be permitted to vary from one or more of the clear and objective standards set forth in TDC 73.190(1)(a), provided that the Level II (Discretionary) approval criteria set forth in TDC 73.190(1)(b) are considered. New single-family dwellings, including an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), shall be designed, to the maximum extent practicable, to:

- (a) Enhance Tualatin through the creation of attractively designed housing and streetscapes.*
- (b) Encourage originality, flexibility and innovation in structure design.*
- (c) Avoid stark unarticulated building façades (elevations) and encourage sufficient relief in façades of dwellings to avoid a single block or box appearance by mixing contrasting vertical and horizontal elements in the roof and walls of structures.*
- (d) Provide continuity in design by utilizing architectural materials and style employed on the front façade (elevation) on the remaining sides of the structure.*
- (e) Discourage monotonous, drab, unsightly, dreary and inharmonious development.*
- (f) Provide guidelines for good design at reasonable costs and with multiple options to achieve the purposes of TDC 73.170(1).*

(2) Objectives – Multi-family Uses.

All multi-family projects, including town-houses, should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments, such as apartments. Buildings shall be designed, to the maximum extent practicable, to:

- (a) Provide a composition of building elements which responds to function, land form, identity and image, accessibility, orientation and climatic factors.*
- (b) Enhance energy efficiency through the use of landscape and architectural elements, such as arcades, sun-screens, lattice, trellises, roof overhangs and window orientation.*

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- (c) Create subclusters and stagger unit alignments.
- (d) Utilize functional building elements such as carports and garages, balconies, entry areas and sun screens where possible to accomplish unit identity, pride of place and visual diversity.
- (e) Give consideration to organization, design and placement of windows as viewed on each elevation. The system may be a variation on a theme or consistent symmetry and must operate in concert with the provision of adequate interior privacy, safety, daylight and ventilation.
- (f) Select building materials which contribute to the project's identity, form and function, as well as to the existing site and surrounding natural landscape and development.
- (g) Select colors in consideration of lighting conditions under which the structure is viewed, the ability of the material to absorb, reflect or transmit light, and the color's functional role (whether to blend into the environment, express a particular character, discriminate materials, define form and volume or simply as an identification feature such as with color coding).
- (h) Minimize disruption of natural site features such as topography, trees and water features. [Ord. 727-87, §7, 7/13/87; Ord. 862-92, §51, 3/23/92; Ord. 1025-99, §37, 7/26/99; Ord. 1097-02, 02/11/02; Ord. 1260-08 §8, 5/12/08]

Response: No residential uses are proposed.

Section 73.190 Standards – Single-family and Multi-family Uses.

(1) Standards - Single-family Uses.

Except for the side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, the standards in this section shall apply to all sides of a new single-family dwelling or to an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane. The wall plane shall be defined as all vertical surfaces on one side of a dwelling from the base of the main floor level up including walls, garage doors, entries, gable ends, dormers, etc., and excluding any roof areas. Garage door windows may be counted toward the required window coverage percentage in TDC 73.190(1)(a). Cornices, eaves, canopies, decks, sunshades, gutters, chimneys, flues, belt courses, leaders, sills, pilasters, lintels, ornamental features, and other similar architectural features may extend or project into a required front or rear yard set-back area not more than three feet (3') and into a required side yard not more than two feet (2'), or into the required open space as established by coverage standards in TDC Chapter 40 Low Density Residential Planning District (RL) or Chapter 41 Medium Low Density Residential Planning District (RML).

(a) Level I (Clear and Objective) Single-family Architectural Review. Dwellings shall:

- (i) On the front façade (elevation), provide windows that occupy at least twelve percent (12%) of the wall plane, provide at least three (3) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least five (5) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on the front façade (elevation) may be reduced in two percent (2%) increments to not less than eight percent (8%) of the wall plane for each additional Residential Wall Design Element provided.
- (ii) On each side elevation, except for a side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, provide windows that occupy at least eight percent (8%) of the wall plane, provide at least two (2) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least four (4) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on each side elevation may be reduced by two percent (2%) to not less than six percent (6%) of the wall plane if one (1) additional Residential Wall Design Element is provided on the same side elevation as that

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on which the reduction is made.

(iii) On the rear elevation, provide windows that occupy at least twelve percent (12%) of the wall plane, provide at least two (2) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least four (4) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on the rear elevation may be reduced by two percent (2%) to not less than ten percent (10%) of the wall plane if one (1) additional Residential Wall Design Element is provided.

(iv) Residential Roof Design Elements.

(A) Dormer, such as hipped, gabled, shed, or eyebrow dormer design, which is a projecting structure built out from a sloping roof and housing a window, vent, or decorative element.

(B) Pitched or sloping roof, such as a gable roof, which slopes down-ward in two parts from a central ridge forming a gable at each end, or hip roof, which has sloping ends and sides that meet at an inclined projecting angle.

(C) Roof eave of at least twelve inches (12").

(D) Roof overhang (barge-board or verge board) of at least six inches (6") measured outward from the face of the dwelling wall or wall plane.

(E) Window, decorative vent, door, decorated verge boards, trusses, false beams, corbels, brackets, or other decorative element(s) in gable ends.

(F) Variation in roof pitch, height of roof planes, or roof orientation, such as in a roof with multi-level eaves.

(v) Residential Wall Design Elements.

(A) Recessed entry – front façade only.

(B) Portico – front façade only. A roofed porch-like space, open along at least one side, connected to the main dwelling entrance, supported by columns or pillars, and either protruding from or recessed within the main dwelling structure.

(C) Covered porch at least thirty-six square feet (36 sq. ft.) in area and at least four feet (4') deep.

(D) Balcony, which projects from the wall plane and is enclosed by a railing or parapet (low protective wall).

(E) Vertical offsets, at least two (2), either projecting or recessed, and at least six inches (6") deep and a minimum of four feet (4') long.

(F) Horizontal offset, either projecting or recessed, at least five inches (5") deep.

(G) Bay window, box window, or box bay, which projects at least six inches (6") outward from the wall plane and forms a bay, alcove, or window seat.

(H) Column or pilaster, either complete or engaged (where one part of its surface is in contact with a wall plane), and in the wall plane, at a change in wall plane, or at a corner of the dwelling.

(I) Exterior chimney of brick, stone, composite masonry or similar materials.

(J) Engaged tower, either square, rectangular, circular or polygonal in form.

(K) Window trim or surround (casing) at least three and one-half inches (3.5") wide that completely surrounds the window, either with or without a sill beneath the window.

(L) Window grids, windows with multi-paned sashes, or elliptical, palladian, segmental arch, semicircular, or similarly shaped windows.

(M) Lintel, arch, or similar decorative header casing on windows, the main entry door, portico, garage door(s), or other opening in the wall plane.

(N) Shutters, as a matched pair for or on a window, either movable or fixed, designed to cover a window and filter light, and usually of wood or similar construction and paneled or fitted with louvers.

(O) Variation in wall cladding, wall-surface pattern, or decorative materials such as shakes, shingles, brick, stone or other similar.

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(P) Decorative or “architectural” garage door(s), with or without windows, and including patterning relief at least five-eighths inch (5/8”) deep over the door(s) surface, excepting the window area if windows are present.

(Q) Decorative trellis or trellis-work, consisting of open rafter ends or beams and cross pieces to create the appearance of a structure over which climbing plants might be trained to grow.

(R) Band, band course, band molding, belly band, belt course, or similar horizontal element of relatively slight projection marking a division in the wall plane and adding architectural interest to a façade or elevation.

(b) Level II (Discretionary) Single-family Architectural Review. Dwellings shall demonstrate consistency with the objectives of the specific standard from which relief is sought as outlined in TDC 73.180(1), in light of the following discretionary guidelines:

(i) All roofs should be pitched or sloping and articulated by use of such elements as dormers, gables, overhangs or eaves, and should have variations in roof pitch, height of roof planes, or roof orientation to create visual interest and avoid monotony in appearance.

(ii) Architectural articulation and other design elements, such as balconies, porches, dormers, bay windows, vertical or horizontal offsets, variations in cladding, or moldings should be used on all sides of the dwelling (except for a side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling) to avoid stark unarticulated building façades (elevations), to minimize the scale and visual impact of a continuous flat wall surface, and to create a sense of visual interest for passersby and neighboring property owners.

(iii) The architectural character (i.e., exterior materials, architectural articulation, design elements, etc.) of the front façade (elevation) of the dwelling should be utilized on all sides of the structure to create a unified appearance and to avoid a single block or box appearance.

(iv) New dwellings should be de-signed and situated on a property in order to create and maintain a visual sense of harmony with surrounding development and should not overwhelm the scale of surrounding development.

(v) The overall architectural de-sign of the dwelling should foster a compatible, positive relationship with the scale and character of the street, and the scale and character of surrounding existing development.

(2) Standards - Multi-family Uses.

The following standards are minimum requirements for multi-family and townhouse development.

(a) Storage.

(i) Except as provided in Subsection (a)(ii), enclosed storage areas are required and shall be attached to the exterior of each dwelling unit to accommodate garden equipment, patio furniture, barbecues, bicycles, etc. Garages are not intended to satisfy storage requirements. Each storage area shall be a minimum of 6 feet in height and have a minimum floor area of:

(A) 24 square feet for studio and one-bedroom units;

(B) 36 square feet for two bed-room units; and

(C) 48 square feet for greater than two-bedroom units.

(ii) For townhouses and residential and mixed use residential developments in the Central Design District, or within the Mixed Use Commercial Overlay District as determined in the Architectural Review process, some provision shall be made for outdoor storage adjacent to private outdoor

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areas. Such provisions shall be reviewed for adequacy through Architectural Review and shall be designed to accommodate barbecues or other small deck equipment.

(b) Carports and Garages.

(i) If carports and garages are provided for multi-family development, except townhouses, the form, materials, color and construction shall be compatible with the complex they serve.

(ii) At least one garage space shall be provided for townhouses. [Ord. 705-86, § 6, 9/8/86; Ord. 862-92, § 51, 3/23/92; Ord. 882-92, § 14, 12/14/92; Ord. 1025-99, §38, 7/26/99; Ord. 1252-08 §2, 2/11/08; Ord. 1260-08 §9, 5/12/08]

Response: No residential uses are proposed.

Section 73.200 Structure Design – Commercial, Industrial, Public and Semi-Public Uses.

The purpose of commercial, industrial, public and semi-public building design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) and are intended to promote functional, safe, innovative and attractive buildings which are compatible with the surrounding environment. This concerns the building form including the articulation of walls and roof design, materials, colors, placement of elements such as windows, doors, mechanical equipment and identification features. [Ord. 705-86, §6, 9/8/86]

Section 73.210 Objectives.

All commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Buildings shall be designed, to the maximum extent practicable, to:

- (1) Minimize disruption of natural site features such as topography, trees and water features.*
- (2) Provide a composition of building elements which is cohesive and responds to use needs, site context, land form, a sense of place and identity, safety, accessibility and climatic factors. Utilize functional building elements such as arcades, awnings, entries, windows, doors, lighting, reveals, accent features and roof forms, whenever possible, to accomplish these objectives.*
- (3) Where possible, locate loading and service areas so that impacts upon surrounding areas are minimized. In industrial development loading docks should be oriented inward to face other buildings or other loading docks. In commercial areas loading docks should face outward towards the public right-of-way or perimeter of the site or both.*
- (4) Enhance energy efficiency in commercial and industrial development through the use of landscape and architectural elements such as arcades, sunscreens, lattice, trellises, roof overhangs and window orientation.*
- (5) Locate and design entries and loading/service areas in consideration of climatic conditions such as prevailing winds, sun and driving rains.*
- (6) Give consideration to organization, design and placement of windows as viewed on each elevation having windows. Surveillance over parking areas from the inside, as well as visual surveillance from the outside in, should be considered in window placement.*
- (7) Select building materials which contribute to the project's identity, form and function, as well as to the surrounding environment.*
- (8) Select colors in consideration of lighting conditions and the context under which the structure is*

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viewed, the ability of the material to absorb, reflect or transmit light and the color's functional role (e.g., to identify and attract business, aesthetic reasons, image-building).

(9) Where possible, locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.

(10) Where practicable locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way or other public areas. [Ord. 904-93, §51, 9/13/93; Ord. 1097-02, 2/11/02]

Response:

(1) to the greatest extent practicable, the existing forested area is maintained.

(2) All storage buildings have a cohesive appearance, including materials and rooflines in common.

(3) To the greatest extent practicable, loading areas are oriented inward to face other buildings.

(4) The proposed buildings will consume minimal amounts of energy. No unique features are

proposed to enhance energy efficiency.

(5) All structures are oriented on site to minimize site disturbance; no climatic conditions are considered for their orientation.

(6) Building 300's windows surveil site operations.

(7) The building forms are a direct response to their function. Building colors reflect Air Liquide's

identity by using their corporate colors.

(8) The building colors are selected for corporate identity only.

(9) Building 300's windows surveil on-site functions.

(10) No interior activity surveillance from the public's right of way is proposed for compliance with

Homeland Security requirements.

Section 73.220 Standards.

The following standards are minimum requirements for commercial, industrial, public and semi-public development and it is expected that development proposals shall meet or exceed these minimum requirements.

(1) Safety and Security.

(a) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way or other public areas without shining into public rights-of-way or fish and wildlife habitat areas.

(b) Provide an identification system which clearly identifies and locates buildings and their entries.

(c) Shrubs in parking areas shall not exceed 30 inches in height, and tree canopies must not extend below 8 feet measured from grade, except for parking structures and underground parking where this provision shall not apply. [Ord. 904-93, §52, 9/13/93; Ord. 20-94, §18, 4/11/94; Ord. 1224-06 §24, 11/13/06]

Response:

(1) (a) No interior activity surveillance from the public's right-of-way is proposed. Site lighting

fixtures are shielded as much as practicable to minimize shining into public right-of-way

and wildlife habitats while providing necessary on-site safety and security.

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- 500** (b) Each building is clearly labeled with unique numbering, 100, 200, 300, 400, and 500 and entries are clearly designated. Please see sheets 101 and 102.
(c) Proposed landscaping meets requirements.

Section 73.221 Purpose and Objectives.

(1) *Purpose.* The purpose of fence design standards in the RL and RML Planning Districts for access-restricted lot lines and property lines abutting major and minor collector and arterial and expressway streets and interstate highways (I-5 or I-205) is to implement the community design objectives of TDC 10.020.

(2) *Objectives.* Fences shall be designed to the maximum extent practicable, to achieve the following:

(a) *Rear yards and side yards adjacent collector, arterial and expressway streets and interstate highways shall be screened from public view.*

(b) *Fences shall be constructed of highly durable materials that are low-maintenance and weather-resistant.*

(c) *Fence materials and design shall be compatible and harmonious with the required fence design type detailed in TDC 34.330 and 34.340. The design shall incorporate stone-look or brick-look elements. Colors shall be subdued and natural earth-tones, brown-tones, or grey-tones. [Ord. 1244-07 §5, 7/23/07, Ord. 1285-09 §4, 7/13/09]*

Response: The site is not included in the RL or RML Planning Districts.

Section 73.222 Fence Standards.

Minimum requirements for construction of fences in a RL or a RML Planning District, where an access-restricted lot line or property line abuts a public street right-of-way classified as a major or minor collector or arterial or expressway street, or a property line of a state-owned interstate highway are set forth in TDC 34.330 and 34.340.

[Ord. 1244-07 §6, 7/23/07, Ord. 1285-09 §5, 7/13/09]

Response: The site is not located in a RL or a RML Planning District.

Section 73.225 Mixed Solid Waste and Source Separated Recyclables Storage Areas for New or Expanded Multi-Unit Residential, Including Townhouses, Commercial, Industrial, Public and Semi-Public Development.

The purpose of mixed solid waste and source separated recyclables storage areas objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are intended to be flexible, easy and efficient to administer, and allow creativity. [Ord. 898-93, §6, 6/14/93. Ord. 1025-99, §39, 7/26/99; Ord. 1097-02, 2/11/02]

Section 73.226 Objectives.

All new or expanded multi-family, including townhouses, commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments

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such as apartments. Mixed solid waste and source separated recyclable storage areas shall be designed to the maximum extent practicable, to:

- (1) Screen elements such as garbage and recycling containers from view.*
 - (2) Ensure storage areas are centrally located and easy to use.*
 - (3) Meet dimensional and access requirements for haulers.*
 - (4) Designed to mitigate the visual impacts of storage areas.*
 - (5) Provide adequate storage for mixed solid waste and source separated recyclables.*
 - (6) Improve the efficiency of collection of mixed solid waste and source separated recyclables.*
- [Ord. 898-93, §7, 6/14/93. Ord. 1025-99, §40, 7/26/99; Ord. 1097-02, 2/11/02]*

Response:

- (1) Building 500, refuse enclosure, screens containers from view.**
- (2) Building 500 is located as equidistant among buildings as practicable.**
- (3) Building 500 meets Republic Services' criteria. Please see Exhibit G herewith submitted.**
- (4) Building 500 is located at the edge of the proposed development area.**
- (5) Building 500 provides adequate refuse storage area. Please see Exhibit G herewith submitted.**
- (6) Building 500 is located for Republic Services' efficient access. Please see Exhibit G herewith submitted.**

Section 73.227 Standards.

The following standards are minimum requirements for mixed solid waste and source separated recyclables storage areas. To provide for flexibility in designing functional storage areas, this section provides four different methods to meet the objectives of providing adequate storage for mixed solid waste and source separated recyclables and improving the efficiency of collection. An applicant shall choose and implement one of the following four methods to demonstrate compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; or 4) franchised hauler review, as more fully described in subsections (2), (3), (4) and (5) of this section.

(1) The mixed solid waste and source separated recyclables storage standards shall apply to all new or expanded multi-family residential developments containing five or more units and to new or expanded commercial, industrial, public and semi-public development.

(2) Minimum Standards Method. This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.

(a) The size and location of the storage area(s) shall be indicated on the site plan. Compliance with the requirements set forth below are reviewed through the Architectural Review process.

(i) The storage area requirement is based on the area encompassed by predominant use(s) of the building (e.g., residential, office, retail, wholesale/warehouse/manufacturing, educational/institutional or other) as well as the area encompassed by other distinct uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building shall be the sum of the area of each use.

(ii) Storage areas for multiple uses on a single site may be combined and shared.

(iii) The specific requirements are based on an assumed storage area height of 4 feet for mixed

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solid waste and source separated recyclables. Vertical storage higher than 4 feet, but no higher than 7 feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans shall include drawings to illustrate the layout of the storage area and dimensions for containers.

(iv) Multi-family residential developments containing 5-10 units shall provide a minimum storage area of 50 square feet. Multi-family residential developments containing more than 10 units shall provide 50 square feet plus an additional 5 square feet per unit for each unit above 10.

(v) Commercial, industrial, public and semi-public developments shall provide a minimum storage area of 10 square feet plus: Office - 4 square feet/1000 square feet gross leasable area (GLA); Retail - 10 square feet/1000 square feet GLA; Wholesale/ Warehouse/ Manufacturing - 6 square feet/1000 square feet GLA; Educational and institutional - 4 square feet/1000 square feet GLA; and other - 4 square feet/1000 square feet GLA.

(3) Waste Assessment Method. This method tailors the storage area size to a waste assessment and management program for the specific user of a new or expanded building. It is most appropriate when the specific use of a building is known and the type and volume of mixed solid waste to be generated can be estimated. A pre-application conference is required if the waste assessment method is proposed. The applicant shall obtain a waste assessment form from the Planning Department. The form shall be used to estimate the volumes of both mixed solid waste and source separated recyclables generated. From this information, the applicant can design a specific management, storage and collection system.

Techniques such as a compactor or cardboard baler may be implemented to minimize the square footage of the storage area. If this method of compliance is selected the waste assessment form shall be completed and submitted as part of the Architectural Review application. The plans must identify the size and location of interior, or exterior storage area(s) or both, specialized equipment to be used, and collection schedule required to accommodate the volumes of waste projected in the waste assessment. The application shall demonstrate that the mixed solid waste and source separated recyclable volumes expected to be generated can be stored in less space than required by the Minimum Standards Method. If the application does not demonstrate that the waste assessment method requires less space, through the Architectural Review process the minimum standards method may be required. The waste assessment method shall be reviewed and approved as part of the Architectural Review process.

(4) Comprehensive Recycling Plan Method. The comprehensive recycling plan method is most appropriate when an applicant has independently developed a comprehensive recycling plan which addresses mixed solid waste and source separated recyclable collection and storage for the proposed use. This method can be used when a comprehensive recycling plan has been developed for a specific development. It is most suited to uses such as hospitals, schools and industrial developments. The comprehensive recycling plan shall be submitted at the time plans are submitted for Architectural Review. The applicant shall submit plans and text that show how mixed solid waste and source separated recyclables generated by the proposed development will be served under a comprehensive recycling plan.

The application shall also demonstrate that the mixed solid waste and source separated recyclables volumes expected to be generated can be stored in less space than is required by the Minimum Standards Method. If the application does not demonstrate that the comprehensive recycling plan method requires less space, through the Architectural Review process the minimum standards method may be required. The comprehensive recycling plan method shall be reviewed and approved as part of the Architectural Review process.

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(5) Franchised Hauler Review Method. The franchised hauler review method provides for a coordinated review of the pro-posed site plan by the franchised hauler serving the subject property. This method can be used when there are unique conditions associated with the site, use, or waste stream that make compliance with any of the three other methods impracticable. The objective of this method is to match a specific hauler program (types of equipment, frequency of collection, etc.) to the unique characteristic(s) of the site or development. The applicant shall coordinate with the franchised hauler to develop a plan for storage and collection of mixed solid waste and source separated recyclables to be generated. A narrative describing how the proposed site meets one or more unique conditions, plus site plan and architectural drawings showing the size and location of storage area(s) required to accommodate anticipated volumes shall be submitted for Architectural Review. Additionally, a letter from the franchised hauler shall be submitted with the application that de-scribes the level of service to be provided by the hauler, including any special equipment and collection frequency, which will keep the storage area from exceeding its capacity. For purposes of this subsection the following constitute unique conditions:

- (a) Use of either of the three other methods of compliance would interfere with the use of the proposed development by reducing the productive space of the proposed development, or make it impossible to comply with the minimum off-street parking requirements of the underlying planning district, or*
 - (b) The site is of an irregular shape or possesses steep slopes that do not allow for access by collection vehicles typically used by the franchised hauler to serve uses similar in size and scope to the proposed use, or*
 - (c) The proposed use will generate unique wastes that can be stacked, folded, or easily consolidated without the need for specialized equipment, such as a compactor, and can therefore be stored in less space than is required by the Minimum Standards Method.*
- If the application does not demonstrate that the franchised hauler method requires less space, through the Architectural Review process the minimum standards method may be required. The franchised hauler method shall be reviewed and approved as part of the Architectural Review process.*

(6) Location, Design and Access Standards for Storage Areas. The following location, design and access standards are applicable for storage areas:

(a) Location Standards

- (i) To encourage its use, the storage area for source separated recyclables may be co-located with the storage area for mixed solid waste.*
- (ii) Indoor and outdoor storage areas shall comply with Building and Fire Code requirements.*
- (iii) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.*
- (iv) Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public or private street.*
- (v) Exterior storage areas shall be located in central and visible locations on the site to enhance security for users.*
- (vi) Exterior storage areas can be located in a parking area, if the proposed use provides parking spaces required through the Architectural Review process. Storage areas shall be appropriately screened according to TDC 73.227(6)(b)(iii).*
- (vii) Storage areas shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on site or on public streets adjacent to the site.*

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(b) Design Standards

- (i) The dimensions of the storage area shall accommodate containers consistent with current methods of local collection at the time of Architectural Review approval.*
- (ii) Storage containers shall meet Fire Code standards and be made and covered with water proof materials or situated in a covered area.*
- (iii) Exterior storage areas shall be enclosed by a sight obscuring fence or wall at least 6 feet in height. In multi-family, commercial, public and semi-public developments evergreen plants shall be placed around the enclosure walls, excluding the gate or entrance openings. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position. A separate pedestrian access shall also be provided in multi-family, commercial, public and semi-public developments.*
- (iv) Exterior storage areas shall have either a concrete or asphalt floor surface.*
- (v) Storage areas and containers shall be clearly labeled to indicate the type of material accepted.*

(c) Access Standards

- (i) Access to storage areas can be limited for security reasons. However, the storage areas shall be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.*
- (ii) Storage areas shall be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access. A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is required if the storage area is covered.*
- (iii) Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow vehicles to safely exit the site in a forward motion. [Ord. 898-93, §8, 6/4/93]*

Response:

(2) (a) Minimum Standards, sub-section (1) is proposed for designing the functional storage area, Building 500

Table 73.227.1 Trash Enclosure Requirements			
Building	Use	Required(SF)	Provided(SF)
100	Warehouse	6/1000= 27	
200	Warehouse	6/100= 27.5	
300	Office	4/1000=2.7	
400	Warehouse	6/1000= 4.1	
Additional 10 SF		10	
Total		71.3	308

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- (6) (a) (i) All waste is collocated.
- (ii) Refuse enclosure is all non-combustible construction.
- (iii) A single refuse enclosure is provided.
- (iv) The refuse enclosure is not located within any setbacks.
- (v) The refuse enclosure is highly visible from within the development area.
- (vi) The refuse enclosure is located adjacent to the site vehicular circulation and is composed of perimeter walls at least 6'-0" high.
- (vii) The refuse enclosure location will not obstruct vehicle or pedestrian traffic because a separate on-site vehicular drive area is provided.
- (b) (i) The refuse enclosure meets Republic Services' methods for collection.
- (ii) The refuse enclosure is constructed of non-combustible materials including steel roof.
- (iii) The refuse enclosure includes a perimeter wall at least 6'-0" high. Gate openings exceed 10'-0" and can be secured in both open and closed positions.
- (iv) The refuse enclosure has a concrete floor surface.
- (v) Storage areas and containers will be clearly labeled to indicate the type of material accepted prior to occupancy.
- (c) (i) Due to security requirements, access to the refuse enclosure will be restricted. Air Liquide will schedule access times with Republic Services.
- (ii) A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is provided.
- (iii) Access to the refuse enclosure by collection vehicles does not require these vehicles to be in the public right-of-way.

LANDSCAPING

Section 73.230 Landscaping Standards.

The purpose of this section is to establish standards for landscaping within Tualatin in order to enhance the environmental and aesthetic quality of the City:

- (1) *By encouraging the retention and protection of existing trees and requiring the planting of trees in new developments;*
- (2) *By using trees and other landscaping materials to temper the effects of the sun, wind, noise, and air pollution.*
- (3) *By using trees and other landscaping materials to define spaces and the uses of specific areas; and*
- (4) *Through the use of trees and other landscaping materials as a unifying element within the urban environment. [Ord. 705-86, §6, Sept. 8, 1986]*

Section 73.231 Landscape Guide-lines for the Central Design District.

- (1) *Purpose. The purpose of the landscaping guidelines section is to enhance the environmental and aesthetic quality of the Central Design District.*
- (2) *All multi-family residential, commercial, industrial, public and semi-public projects in the Central Design District should strive to meet the Design Guidelines of TDC 73.610 for landscaping to the maximum extent practicable. Landscape Architects and developers shall consider the landscaping elements of TDC 73.610 in designing new projects. In case of conflicts between guidelines and or between guidelines and objectives in TDC Chapter 73, the proposal shall provide a balance. [Ord. 1097-02, 02/11/02]*

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Section 73.240 Landscaping General Provisions.

- (1) The following standards are minimum requirements.*
- (2) The minimum area requirement for landscaping for conditional uses for RL, RML, RMH, RH and RH/HR Planning Districts, listed in TDC 40.030, 41.030, 42.030, 43.030 and 44.030, excluding 40.030(3), 40.030 (4)(j), 40.030 (4)(m), 40.030 (4)(n) and 41.030(2) shall be twenty-five (25) percent of the total area to be developed. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping shall be twenty (20) percent of the total area to be developed as determined through the AR process.*
- (3) The minimum area requirement for landscaping for uses in CO, CR, CC, CG, ML and MG Planning Districts shall be fifteen (15) percent of the total land area to be developed, except within the Core Area Parking District, where the minimum area requirement for landscaping shall be 10 percent. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.*
- (4) The minimum area requirement for landscaping for uses in IN, CN, CO/MR, MC and MP Planning Districts shall be twenty-five (25) percent of the total land area to be developed. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.*
- (5) The minimum area requirement for landscaping for uses in the Industrial Business Park Overlay Planning District and the Manufacturing Business Park Planning District shall be twenty (20) percent of the total land area to be developed.*
- (6) The minimum area requirement for landscaping for approved Industrial Master Plans shall be 20% of the total land area to be developed.*
- (7) For properties within the Hedges Creek Wetland Protection District which have signed the "Wetlands Mitigation Agreement", the improved or unimproved wetland buffer area may reduce the required landscaping to 12.5 percent as long as all other landscape requirements are met.*
- (8) Developments not in a Low Density Residential (RL) or Manufacturing Park (MP) Planning District, but which abut an RL or MP Planning District shall provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses in the district and the adjacent Low Density Residential (RL) or Manufacturing Park (MP) Planning District as approved through the Architectural Review process.*
- (9) Yards adjacent to public streets, except as described in the Hedges Creek Wetlands Mitigation Agreement, TDC 73.240(7), shall be planted to lawn or live groundcover and trees and shrubs and be perpetually maintained in a manner providing a park-like character to the property as approved through the Architectural Review process.*
- (10) Yards not adjacent to public streets or Low Density Residential (RL) or Manufacturing Park (MP) Planning Districts shall be planted with trees, shrubs, grass or other live groundcover, and maintained consistent with a landscape plan indicating areas of future expansion, as approved through the Architectural Review process.*
- (11) Any required landscaped area shall be designed, constructed, installed, and maintained so that within three years the ground shall be covered by living grass or other plant materials. (The foliage crown of trees shall not be used to meet this requirement.) A maximum of 10% of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone. Disturbed soils are encouraged to be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.*

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(12) *In the MP District, wetland buffer areas up to 50 feet in width may be counted toward the required percentage of site landscaping, subject to the following:*

(a) *The amount of wetland buffer area which may be counted as landscaping is limited to a maximum of two and one-half percent (2.5 percent) of the total land area to be developed.*

(b) *All portions of the required buffer area to be counted as landscape shall be within the boundaries of the subject property. No credit may be claimed for wetland buffer areas lying outside the lot lines of the subject parcel.*

(c) *Where wetlands mitigation in the buffer has not yet occurred at the time of development, the developer shall perform, or bear the cost of, all necessary mitigation work in the course of site development, in accordance with a Removal/Fill Permit or permits issued by the Oregon Division of State Lands and the US Army Corps of Engineers and the Unified Sewerage Agency.*

(d) *Where wetlands mitigation in the buffer has already been performed in accordance with a Removal/Fill Permit or permits issued by the Oregon Division of State Lands and the US Army Corps of Engineers, the developer shall include an enhanced mitigation plan approved by the Oregon Division of State Lands and the Unified Sewerage Agency as part of the Architectural Review submittal. The developer shall complete all work required by the enhanced wetland mitigation plan in conjunction with development of the site.*

(13) *Landscape plans for required landscaped areas that include fences should carefully integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors. [Ord. 882-92 §15, 12/14/92; Ord. 890-93 §9, 4/12/93; Ord. 904-93 §53 and 54, 9/13/93; Ord. 993-94 §48, 11/28/94; Ord. 1025-99 §41, 7/26/99; Ord. 1035-99 §16, 11/8/99; Ord. 1070-01 §11, 4/9/01; Ord. 1070-01, 4/9/01; Ord. 1216-06, 7/24/06; Ord. 1224-06 §25, 11/13/06; Ord. 1321-11 §49, 4/25/11]*

Response: Response: As shown in the table below and in the attached plans (see sheet L2.0), 54% of the proposed development will be landscaped.

Table 73.240.1 Landscape Coverage	
Use	Area
Development (SF)	116,464
Landscape Area (SF)	63,119
Landscape %	54.0%

Section 73.250 Tree Preservation.

(1) *Trees and other plant materials to be retained shall be identified on the landscape plan and grading plan.*

(2) *During the construction process:*

(a) *The owner or the owner's agents shall provide above and below ground protection for existing trees and plant materials identified to remain.*

(b) *Trees and plant materials identified for preservation shall be protected by chain link or other*

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sturdy fencing placed around the tree at the drip line.

(c) If it is necessary to fence within the drip line, such fencing shall be specified by a qualified arborist as defined in TDC 31.060.

(d) Neither top soil storage nor construction material storage shall be located within the drip line of trees designated to be preserved.

(e) Where site conditions make necessary a grading, building, paving, trenching, boring, digging, or other similar encroachment upon a preserved tree's drip-line area, such grading, paving, trenching, boring, digging, or similar encroachment shall only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met.

(f) Tree root ends shall not remain exposed.

(3) Landscaping under preserved trees shall be compatible with the retention and health of said tree.

(4) When it is necessary for a preserved tree to be removed in accordance with TDC 34.210 the landscaped area surrounding the tree or trees shall be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees that are complementary with existing, nearby landscape materials. Native trees are encouraged

(5) Pruning for retained deciduous shade trees shall be in accordance with National Arborist Association "Pruning Standards For Shade Trees," revised 1979.

(6) Except for impervious surface areas, one hundred percent (100%) of the area preserved under any tree or group of trees retained in the landscape plan (as approved through the Architectural Review process) shall apply directly to the percentage of landscaping required for a development. [Ord. 904-93, §55, 9/13/93; Ord. 1224-06, §26, 11/13/06]

Response:

All existing vegetation within the site development area is proposed to be removed.

However, existing vegetation will be preserved in all areas of the site that lie outside the site development area. The proposed fence surrounding the development area will function as tree protection fencing for trees in undeveloped areas of the site. Existing trees have been inventoried in a report by the project arborist. Existing tree canopy has been shown on a tree plan by the project landscape architect. Please refer to the Arborist Report, see Exhibit L and Tree Plan for further information.

Section 73.260 Tree and Plant Specifications.

(1) The following specifications are minimum standards for trees and plants:

(a) Deciduous Trees:

Deciduous shade and ornamental trees shall be a minimum one and one-half inch (1 1/2") caliper measured six inches (6") above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be characteristically shaped specimens.

(b) Coniferous Trees.

Coniferous trees shall be a minimum five feet (5') in height above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be well branched and characteristically shaped specimens.

(c) Evergreen and Deciduous Shrubs.

Evergreen and deciduous shrubs shall be at least one (1) to five (5) gallon size. Shrubs shall be characteristically branched. Side of shrub with best foliage shall be oriented to public view.

(d) Groundcovers.

Groundcovers shall be fully rooted and shall be well branched or leafed. English ivy (Hedera helix)

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is considered a high maintenance material which is detrimental to other landscape materials and buildings and is therefore prohibited.

(e) Lawns.

Lawns shall consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry. Lawns shall be 100 percent coverage and weed free.

(2) Landscaping shall be installed in accordance with the provisions of Sunset New Western Garden Book (latest edition), Lane Publishing Company, Menlo Park, California or the American Nurserymen Association Standards (latest edition).

(3) The following guidelines are suggested to ensure the longevity and continued vigor of plant materials:

(a) Select and site permanent landscape materials in such a manner as to produce a hardy and drought-resistant landscaped area.

(b) Consider soil type and depth, spacing, exposure to sun and wind, slope and contours of the site, building walls and overhangs, and compatibility with existing native vegetation preserved on the site or in the vicinity.

(4) All trees and plant materials shall be healthy, disease-free, damage-free, well-branched stock, characteristic of the species.

(5) All plant growth in landscaped areas of developments shall be controlled by pruning, trimming or otherwise so that:

(a) It will not interfere with designated pedestrian or vehicular access; and

(b) It will not constitute a traffic hazard because of reduced visibility. [Ord. 904-93, §57, 9/13/93]

Response:

Plants that have a track record for being tough and durable have been selected for this industrial site. The proposed shrubs and grasses have the ability to be cut to the ground and regenerate from the ground. This is a useful in the event that they are accidentally run over by a truck or cut down by an overzealous maintenance person. Trees have been located away from stormwater lines to prevent damage from roots.

Section 73.270 Grading.

(1) After completion of site grading, top-soil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting.

(2) All planting areas shall be graded to provide positive drainage.

(3) Neither soil, water, plant materials nor mulching materials shall be allowed to wash across roadways or walkways.

(4) Impervious surface drainage shall be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.

Response:

The landscape contractor and general contractor will grade the site in accordance with this section.

Section 73.280 Irrigation System Required.

Except for townhouse lots, landscaped areas shall be irrigated with an automatic underground or drip irrigation system. [Ord. 1025-99, §42, 7/26/99]

Response:

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Irrigation will be provided (design/build) by the owner or contractor. The irrigation system will be a fully automatic underground or drip system capable of adequately watering plants all year.

Section 73.290 Re-vegetation in Un-landscaped Areas.

The purpose of this section is to ensure erosion protection, and in appropriate areas to encourage soil amendment, for those areas not included within the landscape percentage requirements so native plants will be established, and trees will not be lost.

(1) Where vegetation has been removed or damaged in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements, vegetation shall be replanted.

(2) Plant materials shall be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons.

(3) The use of native plant materials is encouraged to reduce irrigation and maintenance demands.

(4) Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and storm water storage capacity. [Ord. 1224-06 §27, 11/13/06]

Response:

Plant materials will be watered by an irrigation system. The landscape architect has used several native species in the landscape design. The owner or contractor shall provide an amended topsoil for all planting beds.

Section 73.300 Landscape Standards – Multi-family Uses.

All areas within a development, including townhouses, not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas shall be landscaped. Townhouse developments may include hard surfaces in outdoor areas such as patios and storage areas as determined in the Architectural Review process. [Ord. 1025-99, §43, 7/2/99]

Response: No multi-family uses are proposed.

Section 73.310 Landscape Standards- Commercial, Industrial, Public and Semi-Public Uses.

(1) A minimum 5-foot-wide landscaped area must be located along all building perimeters which are viewable by the general public from parking lots or the public right-of-way, excluding loading areas, bicycle parking areas and pedestrian egress/ingress locations. Pedestrian amenities such as landscaped plazas and arcades may be substituted for this requirement. This requirement shall not apply where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than 8 feet.

(2) Areas exclusively for pedestrian use that are developed with pavers, bricks, etc., and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies, etc., may be included as part of the site landscape area requirement.

(3) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas shall be landscaped. [Ord. 882-92, §16, 12/14/92; Ord. 904-93, §58, 9/13/93]

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Response:

The project proposes a secure, fenced and gated gas bottle storage facility off-limits to the general public. The site is also accessed by a flag stem and is not visible to the general public from the nearest right-of-way. As such, the requirement for 5-foot landscaped area along all building perimeters (Section 73.310(1)) does not apply. However, perimeter landscaping in accordance with this requirement has been provided around buildings wherever it does not interfere with pedestrian access or loading areas. All areas within the site development not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas will be landscaped.

OFF-STREET PARKING LOT LANDSCAPING

Section 73.320 Off-Street Parking Landscaping Standards.

(1) General Provisions. In addition to the goals stated in TDC 73.110 and 73.140, the goals of the off-street parking lot standards are to create shaded areas in parking lots, to reduce glare and heat buildup, provide visual relief within paved parking areas, emphasize circulation patterns, reduce the total number of spaces, reduce the impervious surface area and stormwater runoff and enhance the visual environment. The design of the off-street parking area shall be the responsibility of the developer and should consider visibility of signage, traffic circulation, comfortable pedestrian access, and aesthetics. Trees shall not be cited as a reason for applying for or granting a variance on placement of signs.

(2) Application. Off-street parking lot landscaping standards shall apply to any surface vehicle parking or circulation area.

[Ord. 904-93, §59, 9/13/93; Ord. 1224-06 §28, 11/13/06]

Section 73.330 Parking Lot Landscaping – Multi-family Uses.

(1) Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.

(2) A clear zone shall be provided for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of 8 feet as measured from the ground level.

(3) Except for townhouse lots, a minimum 10-foot landscape setback shall be provided between the property lines and parking areas. This area shall be planted with deciduous trees an average of not more than 30 feet on center and shrubs at least 30 inches in height which provide screening of vehicular headlights. Trees shall meet the requirements of TDC 73.360(7). Native trees and shrubs are encouraged.

(4) Except for townhouse lots, provide a landscaped transition area of at least 10 feet in width between parking and vehicle circulation areas and buildings and shared outdoor areas. Deciduous shade trees located at not less than 30 feet on center shall be located in this transition area. The trees shall meet the requirements of TDC 73.360(7). Groundcover plants mixed with low shrubs must completely cover the remainder of this area within three years. Native trees and shrubs are encouraged. [Ord. 882-92, §17, 12/14/92. Ord. 1025-99, §44, 7/26/99; Ord. 1224-06 §29, 11/13/06]

Response: No multi-family uses are proposed.

Section 73.340 Off-Street Parking Lot and Loading Area Landscaping – Commercial, Industrial, Public and Semi-Public Uses, and Residential and Mixed Use Residential Uses within the Central Design District.

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(1) A clear zone shall be provided for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of 8 feet as measured from the ground level, except for parking structures and underground parking where this provision shall not apply.

(2) Perimeter site landscaping of at least 5 feet in width shall be provided in all off-street parking and vehicular circulation areas (including loading areas). For conditional uses in multifamily residential planning districts the landscape width shall be at least 10 feet except for uses allowed by TDC 40.030(3), 40.030(5)(j), 40.030(5)(m), 40.030(5)(n) and 41.030(2).

(a) The landscape area shall contain:

(i) Deciduous trees an average of not more than 30 feet on center. The trees shall meet the requirements of TDC 73.360(7).

(ii) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year-round.

(iii) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years.

(iv) Native trees and shrubs are encouraged.

(b) Where off-street parking areas on separate lots are adjacent to one another and are connected by vehicular access, the landscaped strips required in subsection (2) of this section are not required. [Ord. 882-92, §18, 12/14/92; Ord. 904-93, § 61, 9/13/93; Ord. 920-94, §19, 4/11/94; Ord. 1224-06 §30, 11/13/06]

Response: Perimeter landscape beds, a minimum of 5-feet wide, have been provided around the site perimeter and parking areas. This includes trees 30-feet apart, shrubs, and groundcover in accordance with Section 73.340. All parking lot landscaping proposed for the project has been designed to comply with this section of the design guidelines.

Section 73.350 Off-Street Parking Lot Landscape Island Requirements – Multi-family Uses.

(1) Except for townhouse lots that are not required to have landscape island areas, a minimum of 25 square feet per parking stall shall be improved with landscape island areas. They may be lower than the surrounding parking surface to allow them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping. They shall be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands. They shall be dispersed throughout the parking area (see TDC 73.380(3)). They shall be planted with groundcover or shrubs. They shall be planted with deciduous shade trees when needed to meet the parking lot shade tree requirements. Native plant materials are encouraged. Landscape square footage requirements shall not apply to parking structures and underground parking.

(2) Landscape island areas with trees shall be a minimum of 5 feet in width (from inside of curb to curb).

(3) A minimum of one deciduous shade tree shall be provided for every four parking spaces to lessen the adverse impacts of glare, reduce heat from paved surfaces, and to emphasize circulation patterns. Required shade trees shall be within 5 feet of the face of a perimeter parking lot curb and shall be uniformly distributed throughout the parking lot (see TDC 73.380(3)), except that within the Central Design District landscape islands and shade trees may be placed to frame views of the Tualatin Commons water feature or identified architectural focal elements. The trees shall meet the requirements of TDC 73.360(7).

(4) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged. [Ord. 882-92, §19, 12/14/92; Ord. 904-93, §62, 9/13/93; Ord. 1025-99, §45, 7/26/99; Ord. 1224-06 §31, 11/13/06]

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Response: No multi-family uses are proposed.

Section 73.360 Off-Street Parking Lot Landscape Islands – Commercial, Industrial, Public and Semi-Public Uses.

- (1) A minimum of 25 square feet per parking stall shall be improved with landscape island areas. They may be lower than the surrounding parking surface to allow them to receive stormwater runoff and function as water quality facilities as well as parking lot landscaping. They shall be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands. They shall be dispersed throughout the parking area [see TDC 73.380(3)]. They shall be planted with groundcover or shrubs that will completely cover the island area within 3 years. They shall be planted with deciduous shade trees when needed to meet the parking lot shade tree requirements. Native plant materials are encouraged. Landscape square footage requirements shall not apply to parking structures and underground parking.
- (2) Landscaped island areas with deciduous parking lot shade trees shall be a minimum of 5 feet in width (from inside of curb to curb).
- (3) A minimum of one deciduous shade tree shall be provided for every four (4) parking spaces to lessen the adverse impacts of glare, reduce heat from paved surfaces, and to emphasize circulation patterns. Required shade trees shall be uniformly distributed throughout the parking lot (see TDC 73.380(3)), except that within the Central Design District landscape islands and shade trees may be placed to frame views of the Tualatin Commons water feature or identified architectural focal elements. The trees shall meet the requirements of TDC 73.360(7). Parking lot shade tree requirements shall not apply to parking structures and underground parking.
- (4) Landscape islands shall be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns. Landscape island location requirements shall not apply to parking structures and underground parking.
- (5) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged.
- (6) (a) Except as in (b) below, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 25 feet back from the property line for commercial, public, and semi-public development with 12 or more parking spaces and extend 30 feet back from the property line for industrial development, except for parking structures and underground parking which shall be determined through the Architectural Review process.

(b) In the Central Design District where driveway access is on local streets, not collectors or arterials, and the building(s) on the property is(are) less than 5,000 square feet in gross floor area, or parking is the only use on the property, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 5 feet back from the property line, except for parking structures and underground parking which shall be determined through the Architectural Review process.
- (7) Deciduous shade trees shall meet the following criteria:
 - (a) Reach a mature height of 30 feet or more;
 - (b) Cast moderate to dense shade in summer;
 - (c) Long lived, i.e., over 60 years;
 - (d) Do well in an urban environment:
 - (i) Pollution tolerant.
 - (ii) Tolerant of direct and reflected heat.

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(e) Require little maintenance:

- (i) Mechanically strong.
- (ii) Insect- and disease-resistant.
- (iii) Require little pruning.

(f) Be resistant to drought conditions;

(g) Be barren of fruit production. [Ord. 882-92, §20, 12/14/92; Ord. 904-93, §64, 9/13/93; Ord. 920-94, §20, 4/11/94; Ord. 945-95, §1, 5/8/95; Ord. 1224-06 §32, 11/13/06]

Response:

The project is proposing 7 parking stalls. 175 square feet of parking lot island space is required and 2 shade trees are required. The project is proposing in excess of 175 square feet of island space at the ends of the parking stall row and 3 shade trees adjacent to the parking stalls. All other applicable requirements in this section have been met or exceeded by the landscape plan.

Section 73.370 Off-Street Parking and Loading

(1) General Provisions.

(a) At the time of establishment of a new structure or use, or change in use, or change in use of an existing structure, within any planning district of the City, off-street parking spaces, off-street vanpool and carpool parking spaces for commercial, institutional and industrial uses, off-street bicycle parking, and off-street loading berths shall be as provided in this and following sections, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process, based upon clear findings that a greater number of spaces are necessary at that location for protection of public health, safety and welfare or that a lesser number of vehicle parking spaces will be sufficient to carry out the objectives of this section. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In case of conflicts between guidelines or objectives in TDC Chapter 73, the proposal shall provide a balance.

(b) At the time of enlargement of an existing multi-family residential, commercial, institutional or industrial structure or use, TDC 73.370 shall apply to the existing and enlarged structure or use.

(c) Except where otherwise specified, the floor area measured shall be the gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading.

(d) Where employees are specified, the term shall apply to all persons, including proprietors, working on the premises during the peak shift.

(e) Calculations to determine the number of required parking spaces and loading berths shall be rounded to the nearest whole number.

(f) If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area shall be provided prior to commencement of the new use.

(g) Parking and loading requirements for structures not specifically listed herein shall be determined by the Community Development Director, based upon requirements of comparable uses listed.

(h) When several uses occupy a single structure, the total requirements for off-street parking may be the sum of the requirements of the several uses computed separately or be computed in accordance with TDC 73.370(1)(m), Joint Use Parking.

(i) Off-street parking spaces for dwellings shall be located on the same lot with the dwelling. Other required parking spaces may be located on a separate parcel, provided the parcel is not greater than five hundred (500) feet from the entrance to the building to be served, measured along the shortest pedestrian route to the building. The applicant must prove that the parking located on

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another parcel is functionally located and that there is safe vehicular and pedestrian access to and from the site. The parcel upon which parking facilities are located shall be in the same ownership as the structure.

(j) Required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business.

(k) Institution of on-street parking, where none is previously provided, shall not be done solely for the purpose of relieving crowded parking lots in commercial or industrial planning districts.

(l) Parking facilities may be shared by users on adjacent parcels if the following standards are met:

(i) One of the parcels has excess parking spaces, considering the present use of the property; the other parcel lacks sufficient area for required parking spaces.

(ii) The total number of parking spaces meets the standards for the sum of the number of spaces which would be separately required for each use.

(iii) Legal documentation, to the satisfaction of the City Attorney, shall be submitted verifying permanent use of the excess parking area on one lot by patrons of the uses deficient in required parking area.

(iv) Physical access between adjoining lots shall be such that functional and reasonable access is actually provided to uses on the parcel deficient in parking spaces.

(v) Adequate directional signs shall be installed specifying the joint parking arrangement.

(vi) Areas in the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor would be better protected.

(m) Joint Use Parking. Joint use of parking spaces may occur where two or more separate developments or multiple uses in a development are able to jointly use some or all of the same required parking spaces because their parking demands occur at different times. Joint use of parking spaces may be allowed if the following standards are met:

(i) There shall be no substantial conflict in the principal operating hours of the buildings or uses for which the joint use parking is proposed. Future change of use, such as expansion of a building or establishment of hours of operation which conflict with or affect a joint use parking agreement are prohibited, unless approval is obtained through the Architectural Review process;

(ii) The joint use parking spaces shall be located no more than 500 feet from a building or use to be served by the joint use parking;

(iii) The number and location of parking spaces, hours of use and changes in operating hours of uses subject to joint use shall be approved through the Architectural Review process;

(iv) Legal documentation, to the satisfaction of the City Attorney, shall be submitted verifying the joint use parking between the separate developments. Joint use parking agreements may include provisions covering maintenance, liability, hours of use and cross easements; and

(v) The City Attorney approved legal documentation shall be recorded by the applicant at the Washington or Clackamas County Recorder's Office and a copy of the recorded document submitted to the Planning Department prior to issuance of a building permit.

(vi) Areas in the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor would be better protected.

(n) Bicycle parking facilities shall include long-term parking that consists of covered, secure stationary racks, lockable enclosures, or rooms (indoor or outdoor) in which the bicycle is stored and short-term parking provided by secure stationary racks (covered or not covered), which accommodate a bicyclist's lock securing the frame and both wheels. The Community Development

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Director, their designee, or the Architectural Review Board may approve a form of bicycle parking not specified in these provisions but that meets the needs of long-term and/or short-term parking pursuant to Section 73.370.

(o) Each bicycle parking space shall be at least 6 feet long and 2 feet wide, and overhead clearance in covered areas shall be at least 7 feet, unless a lower height is approved through the Architectural Review process.

(p) A 5-foot-wide bicycle maneuvering area shall be provided beside or between each row of bicycle parking. It shall be constructed of concrete, asphalt or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be maintained.

(q) Access to bicycle parking shall be provided by an area at least 3 feet in width. It shall be constructed of concrete, asphalt or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be maintained.

(r) Required bicycle parking shall be located in convenient, secure, and well-lighted locations approved through the Architectural Review process. Lighting, which may be provided, shall be deflected to not shine or create glare into street rights-of-way or fish and wildlife habitat areas.

(s) Long-term bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.

(t) Bicycle parking may be provided within the public right-of-way in the Core Area Parking District subject to approval of the City Engineer and provided it meets the other requirements for bicycle parking.

(u) Bicycle parking areas and facilities shall be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs shall be located at the main entrance and at the location of the bicycle parking facilities.

(v) Required bicycle parking spaces shall be provided at no cost to the bicyclist, or with only a nominal charge for key deposits, etc. This shall not preclude the operation of private for-profit bicycle parking businesses.

(w) Parking on existing residential, commercial and industrial development may be redeveloped as a transit facility as a way to encourage the development of transit supportive facilities such as bus stops and pullouts, bus shelters and park and ride stations. Parking spaces converted to such uses in conjunction with the transit agency and approved through the Architectural Review process will not be required to be replaced.

(x) Required vanpool and carpool parking shall meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

(2) Off-Street Parking Provisions.

(a) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except for minimum parking requirements for the uses in TDC 73.370(2)(a) (Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv) within the Core Area Parking District (CAPD). Minimum standards for off-street motor vehicle parking for the uses in 73.370(2) (a) Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv in the CAPD are in TDC 73.370(2)(b). The maximum requirements are divided into Zone A and Zone B, as shown on the Tualatin Parking Zone Map, Figure 73-3. The following are exempt from calculation of maximum parking requirements: parking structures; fleet parking; parking for vehicles for sale, lease or rent; car/vanpool parking; dedicated valet parking; and user-paid parking.

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USE	MINIMUM MOTOR VEHICLE PARKING REQUIREMENT	MAXIMUM MOTOR VEHICLE PARKING REQUIREMENT	BICYCLE PARKING REQUIREMENT	PERCENTAGE OF BICYCLE PARKING TO BE COVERED
<u>Residential Uses:</u>				
(i) Detached single-family dwelling, residential home, residential facilities (located in low density (RL) planning districts) Townhouse	2.00 vehicle parking spaces per dwelling unit, residential home or residential facility (stalls or spaces within a residential garage not included, except as approved in Architectural Review).	None	None Required	N/A
(ii) Multi-family dwellings in subdivisions	1.50 spaces per unit, in addition to garage	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100
(iii) Multi-family dwellings in complexes with private internal driveways	1.0 space/studio, 1.25 space/1 bedr., 1.50 space/2 bedr., 1.75 space/3= bedr. in addition to	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100

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	garage			
(iv) Retirement housing facility	1.00 space per dwelling unit	None	0.50 space per unit	50
(v) Boarding house, lodging	1.00 space per guest house accommodation	None	0.25 space per guest house accommodation	50
(vi) Congregate care, assisted living and residential care facilities	0.50 space per dwelling unit	None	2, or 0.20 spaces per dwelling unit, whichever is greater	50
(vii) Residential facilities (located in other than low density residential planning districts)	1.00 space per 3 beds, plus 1.00 space per employee	None	2, or 1.00 space for every 6 beds, whichever is greater	50
(viii) Dwelling units within the Central Design District except as specified in (d), (e), and (f) above	1.50 space per dwelling unit, including garage	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100
<u>Institutions:</u>				
(i) Convalescent home, nursing home or sanitarium	1.00 space per 2 beds for patients or residents	None	2, or 1.00 space for every 6 beds, whichever is greater	50
<u>Places of Public Assembly:</u>				

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(i) Library, reading room	1.00 space per 400 sq. ft. of public area	None	2, or 1.5 spaces per 1,000 gross sq. ft., whichever is greater	10
(ii) Nursery, primary, elementary or middle school, child day care center	2.00 spaces per employee	None	4, or 1.00 space per 5 students based on the design capacity of the facility, whichever is greater	75
(iii) Senior high school	0.2 spaces per student and staff	Zone A and Zone B: 0.3 spaces per student plus 1.00 space per staff	4, or 1.00 space per 5 students based on the design capacity of the facility, whichever is greater	25
(iv) Other places of public assembly, including churches	1.00 space per 4 seats or 8 feet of bench length	Zone A: 0.6 spaces per seat Zone B: 0.5 spaces per seat	1.0 space per 40 seats or 80 feet of bench length	35
<u>Commercial Amusements:</u>				
(i) Theater	1.00 space per 4 seats	Zone A: 0.4 spaces per seat Zone B: 0.5 spaces per seat	1.0 space per 30 seats	10
(ii) Bowling alley	5.00 spaces per lane	None	4, or 0.50 spaces per lane, whichever is greater	40
(iii) Dance hall, skating rink	4.3 spaces per 1,000 sq. ft. gross floor area	Zone A: 5.4 spaces per 1,000 sq. ft. gross floor area Zone B: 6.5	2.0 spaces per 1,000 sq. ft. of floor area	50

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		spaces per 1,000 sq. ft. gross floor area		
(iv) Racquet court, health club	1.00 space per 1,000 sq. ft. gross floor area	Zone A: 1.3 spaces per 1,000 sq. ft. gross floor area Zone B: 1.5 spaces per 1,000 sq. ft. gross floor area	2.0 spaces per 1,000 sq. ft. of exercise area	50
<u>Commercial</u>				
(i) Retail shops (under 100,000 sq. ft. gross floor area)	4.00 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	0.50 space per 1,000 sq. ft. of gross floor area	50
(ii) Retail store handling exclusively bulky merchandise such as furniture or automobiles and service or repair shops	1.00 space per 400 sq. ft. of sales floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	2, or 0.20 space per 1,000 sq. ft. of sales floor area, whichever is greater	50
(iii) Shopping center (over 100,000 sq. ft. of gross floor area)	4.1 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	0.50 space per 1,000 sq. ft. of gross floor area	50

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(iv) Banks/Savings and loans	4.30 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.4 spaces per 1,000 sq. ft. gross floor area Zone B: 6.5 spaces per 1,000 sq. ft. gross floor area	2, or 0.33 spaces per 1,000 sq. ft. whichever is greater	10
(v) Medical & dental offices	3.90 spaces per 1,000 sq. ft. of gross floor area	Zone A: 4.9 spaces per 1,000 sq. ft. gross floor area Zone B: 5.9 spaces per 1,000 sq. ft. gross floor area	2, or 0.33 spaces per 1,000 gross sq. ft. ;whichever is greater	First 10 spaces or 40%, whichever is greater
(vi) General office	2.70 spaces per 1,000 sq. ft. of gross floor area	Zone A: 3.4 spaces per 1,000 sq. ft. gross floor area Zone B: 4.1 spaces per 1,000 sq. ft. gross floor area	2, or 0.50 spaces per 1,000 gross sq. ft. whichever is greater	First 10 spaces or 40%, whichever is greater
(viii) Restaurant	10.00 spaces per 1,000 sq. ft. of gross floor area	Zone A: 19.1 spaces per 1,000 sq. ft. gross floor area Zone B: 23.0 spaces pe 1,000 sq. ft. gross floor area	2.00 spaces per 1,000 gross sq. ft.	25
(ix) Drive-up restaurant	9.90 spaces per 1,000 sq. ft. of gross floor area	Zone A: 12.4 spaces per 1,000 sq. ft. gross floor area Zone B: 14.9 spaces per	2.00 spaces per 1,000 gross sq. ft	25

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		1,000 sq. ft. gross floor area		
(x) Motel	1.00 space per room	None	0.20 space per room	10
(xi) Mortuary	1.00 space per 4 seats or an 8 feet of bench length in chapels	None	1.0 space per 40 seats or 80 feet of bench length	10
(xii) Office furniture and office furniture sales	1.00 space per 550 gross sq. ft.	None	2, or 0.20 space per 1,000 sq. ft. of sales floor area, whichever is greater	10
(xiii) Park and ride lots	None	None	5% of auto spaces	100
(xiv) Major transit stops (not Park and Ride lots)	None	None	4	100
(xv) Wireless communication facility	1.0 space	None	N/A	N/A
<u>Industrial</u>				
(i) Manufacturing	1.60 spaces per 1,000 sq. ft. of gross floor area	None	2, or 0.10 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater
(ii) Warehousing	0.30 spaces per 1,000 sq. ft. of gross floor area	Zone A: 0.4 spaces per 1,000 sq. ft. gross floor area Zone B: 0.5 spaces per 1,000 sq. ft. gross floor area	2, or 0.10 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater

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(iii) Wholesale establishment	3.00 spaces per 1,000 sq. ft. of gross floor area	None	2, or 0.50 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater
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(b) The following are the minimum requirements for off-street motor vehicle parking in the Core Area Parking District (CAPD) for the uses in TDC 73.370(2)(a)(Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: i, ii, iv; Commercial Amusements: i, ii; and Commercial: i, ii, xi, xii, xiv).

(i) Core Area Parking District (CAPD) off-street motor vehicle parking standards are required at 75% of the applicable off-street motor vehicle parking requirements identified in TDC 73.370(1)(h), 73.370(1)(m) and 73.370(2)(a).

(ii) Off-street motor vehicle parking requirements: (Refer to Core Area Parking District Ordinance TMC Chapter 11-3 for fee schedules and regulations regarding the Core Area Parking District.)

(A) Commercial, semi-public, and public uses except as outlined under TDC 73.370(2)(b)(ii)(B). A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of gross leasable area for commercial, semi-public, and public uses above grade, except as outlined under TDC 73.370(2)(b)(ii)(B).

(B) Development of a publicly-owned community center on Tract 8 of the Tualatin Commons shall be exempt from providing off-street motor vehicle parking and the impact fee within the CAPD.

(C) Residential Uses:

(1) Common-wall Dwellings including townhouses and condominiums. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided.

(2) Multi-Family Dwellings. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of living units, above grade.

(3) Retirement Housing, Residential Homes and Residential Facilities. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of dwelling units, above grade.

(iii) CAPD off-street motor vehicle parking required under TDC 73.370(2)(b)(i) shall be provided for residential uses and gross leasable area of commercial, semi-public, and public uses below grade and above the second floor, except as outlined under TDC 73.370(2)(b)(ii)(B).

(iv) At the time of enlargement of an existing structure or use there shall be no net loss of existing off-street motor vehicle parking in addition to providing new off-street motor vehicle parking required under TDC 73.370(2)(b).

(v) Outdoor dining facilities are exempt from providing off-street motor vehicle parking within the CAPD

(3) Off-Street Vanpool and Carpool Parking Provisions.

The minimum number of off-street Vanpool and Carpool parking for commercial, institutional and industrial uses is as follows:

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Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces
0 to 10	1
10 to 25	2
26 and greater	1 for each 25 spaces

[Ord. 882-92 §1, 12/14/92; Ord. 895-93 §10, 11 and 12, 5/24/93; Ord. 904-93 §66 and 67, 9/13/93; Ord. 920-94 §21, 4/11/94; Ord. 930-94 §2, 8/8/94; Ord. 956-96 §37, 1/8/96; Ord. 965-96 §85, 12/9/96; Ord. 1025-99 §96, 7/26/99; Ord. 1026-99, 8/9/99; Ord. 1046-00 §36, 2/14/00; Ord. 1097-02, 2/11/02; Ord. 1224-06 §33, 11/13/06, Ord. 1277-09 §3, 3/9/09; Ord. 1345-12 §1, 5/14/12; Ord. 1354-13 §12 & 13, 02/25/13]

Response:

Table 73.370.1 Required				
Use	Minimum Motor Vehicle	Maximum Motor Vehicle	Bicycle	Percentage Covered Bicycle
Warehousing (9,769sf)	0.30 spaces per 1,000sf (3) Required	0.40 spaces per 1,000sf (4) Required	2 or 0.10 spaces per 1000sf, whichever is greater (2) Required	First 5 spaces or 30%, whichever is greater (1) Required
General Office (757sf)	2.70 spaces per 1,000sf (2) Required	3.4 spaces per 1000sf (3) Required	2 or 0.50 spaces per 1000sf, whichever is greater (2) Required	First 10 spaces or 40%, whichever is greater (1) Required
Total	5	7	4	2%

Table 73.370.3 Provided

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Use	Minimum Motor Vehicle	Maximum Motor Vehicle	Bicycle	Percentage Covered Bicycle
Warehousing* (9,769sf)	3	4	2	1%
General Office (757sf)	2	3	2	1%
Total	5	7	4	2%

***For calculation purposes, Service Building 400 is considered as Warehousing.**

Section 73.380 Off-Street Parking Lots.

A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:

(1) Off-street parking lot design shall comply with the dimensional standards set forth in Figure 73-1 of this section, except for parking structures and underground parking where stall length and width requirements for a standard size stall shall be reduced by .5 feet and vehicular access at the entrance if gated shall be a minimum of 18 feet in width.

(2) Parking stalls for sub-compact vehicles shall not exceed 35 percent of the total parking stalls required by TDC 73.370(2). Stalls in excess of the number required by TDC 73.370(2) can be sub-compact stalls.

(3) Off-street parking stalls shall not exceed eight continuous spaces in a row without a landscape separation, except for parking structures and underground parking. For parking lots within the Central Design District that are designed to frame views of the central water feature or identified architectural focal elements as provided in TDC 73.350(3), this requirement shall not apply and the location of parking lot landscape islands shall be determined through the Architectural Review process.

(4) Parking lot drive aisles shall be constructed of asphalt or concrete, including pervious concrete. Parking stalls shall be constructed of asphalt or concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Drive aisles and parking stalls shall be maintained adequately for all-weather use and drained to avoid water flow across sidewalks. Pervious surfaces such as pervious concrete, pavers and grasscrete, but not gravel or woody material, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or in a Clean Water Services Vegetated Corridor. Parking lot landscaping shall be provided pursuant to the requirements of TDC 73.350 and TDC 73.360. Walkways in parking lots shall be provided pursuant to TDC 73.160.

(5) Except for parking to serve residential uses, parking areas adjacent to or within residential planning districts or adjacent to residential uses shall be designed to minimize disturbance of

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residents.

(6) Artificial lighting, which may be provided, shall be deflected to not shine or create glare in a residential planning district, an adjacent dwelling, street right-of-way in such a manner as to impair the use of such way or a Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor.

(7) Groups of more than 4 parking spaces shall be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.

(8) Service drives to off-street parking areas shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

(9) Parking bumpers or wheel stops or curbing shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.

(10) Disability parking spaces and accessibility shall be provided in accordance with applicable federal and state requirements.

(11) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, shall have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, shall have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic. [Ord. 882-92, §22, 12/14/92; Ord. 904-93, §68, 69 and 70, 9/13/93; Ord. 920-94, §22, 4/11/94; Ord. 956-96, §38, 1/8/96; Ord. 1224-06 §34, 11/13/06; Ord. 1354-13 §14, 02/25/13]

Response:

(1) Please see site plan for parking space layout.

(2) No sub-compact parking spaces are proposed.

(3) Parking spaces are less than (8) contiguous.

(4) Parking spaces and drive aisle are constructed of asphalt.

(5) No residential use is proposed.

(6) No lighting will shine or create glare in a residential planning district, and adjacent dwelling or

street right-of-way.

Section 73.390 Off-Street Loading Facilities.

(1) The minimum number of off-street loading berths for commercial, industrial, public and semi-public uses is as follows:

Square Feet of Floor Area	Number of Berths
Less than 5,000	0
5,000 - 25,000	1
25,000 - 60,000	2
60,000 and over	3

(2) Loading berths shall conform to the following minimum size specifications.

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- (a) Commercial, public and semi-public uses of 5,000 to 25,000 square feet shall be 12' x 25' and uses greater than 25,000 shall be 12' x 35'
- (b) Industrial uses - 12' x 60'
- (c) Berths shall have an unobstructed height of 14'
- (d) Loading berths shall not use the public right-of-way as part of the required off-street loading area.

(3) Required loading areas shall be screened from public view from public streets and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

(4) Required loading facilities shall be installed prior to final building inspection and shall be permanently maintained as a condition of use.

(5) A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading children shall be located on the site of a school or child day care center having a capacity greater than 25 students.

(6) The off-street loading facilities shall in all cases be on the same lot or parcel as the structure they are intended to serve. In no case shall the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

(7) Subject to Architectural Review approval, the Community Development Director may allow the standards in this Section to be relaxed within the Central Design District, where a dense mix of uses is desirable in close proximity, pedestrian circulation is strongly emphasized, and the orientation of structures around a central water feature virtually eliminates the possibility of reserving any side of a building solely for truck access. Adjustments may include, but are not limited to, reduction in the number of loading berths required, adjustment of loading berth size specifications and right-of-way restrictions, shared loading berths and maneuvering areas for use by more than one building, alteration or elimination of screening requirements, and requirements for maintenance of berths in a clean and visually appealing condition. The Community Development Director, their designee, or the Architectural Review Board may allow a loading area adjacent to or within a street right-of-way in the Central Design District where the loading and unloading operations meet all of the following criteria:

- (a) short in duration (i.e., less than one hour);
- (b) infrequent (fewer than three operations daily);
- (c) does not obstruct traffic during peak traffic hours;
- (d) does not interfere with emergency response services;
- (e) is acceptable to the applicable roadway authority; and
- (f) the design standards for the abutting road allow on-street parking. [Ord. 882-92, §23, 12/14/92; Ord. 956-96, §39, 1/8/96; Ord. 1354-13 §15, 02/25/13]

Response: The project's main function is loading and unloading gas cylinders; no truck berths

are proposed.

Section 73.400 Access.

(1) The provision and maintenance of vehicular and pedestrian ingress and egress from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. Access management and spacing standards are provided in this section of the TDC and TDC Chapter 75. No building or other permit shall be issued until scale plans are presented that show how the ingress and egress requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing ingress and egress requirements, it shall be unlawful and a

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violation of this code to begin or maintain such altered use until the required increase in ingress and egress is provided.

(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts shall be placed on permanent file with the City Recorder.

(3) Joint and Cross Access.

(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.

(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:

(i) a continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards.

(ii) a design speed of 10 mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;

(iii) stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive;

(iv) a unified access and circulation system plan for coordinated or shared parking areas.

(c) Pursuant to this section, property owners may be required to:

(i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;

(ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;

(iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners;

(iv) If (i-iii) above involve access to the state highway system or county road system, ODOT or the county shall be contacted and shall approve changes to (i-iii) above prior to any changes.

(4) Requirements for Development on Less than the Entire Site.

(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall be reviewed as one unit in relation to the access standards. The number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall also apply to phased development plans. The owner and all lessees within the affected area shall comply with the access requirements.

(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

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(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Engineer.

(6) Except as provided in TDC 53.100, all ingress and egress shall connect directly with public streets. [Ord. 882-92, § 24,12/14/92]

(7) Vehicular access for residential uses shall be brought to within 50 feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.

(8) To afford safe pedestrian access and egress for properties within the City, a sidewalk shall be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks shall be constructed to a design and in a manner approved by the City Engineer. Sidewalks approved by the City Engineer may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks shall provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction shall include construction of the curb and gutter section to grades and alignment established by the City Engineer.

(9) The standards set forth in this Code are minimum standards for access and egress, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.

(10) Minimum access requirements for residential uses:

(a) Ingress and egress for single-family residential uses, including townhouses, shall be paved to a minimum width of 10 feet. Maximum driveway widths shall not exceed 26 feet for one and two car garages, and 37 feet for three or more car garages. For the purposes of this section, driveway widths shall be measured at the property line.

(b) Ingress and egress for multi-family residential uses shall not be less than the following:

Dwelling Units	Minimum Number Required	Minimum Width	Walkways, Etc.
2	1	16 feet	No walkways or curbs required
3-19	1	24 feet	No walkways or curbs required
20-49	1 or 2	24 feet 16 feet (one way)	6-foot walkway, 1 side only; curbs required

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50-499	1	32 feet	6-foot walkway, 1 side only; curbs required
	or 2	24 feet	
Over 500	As required by City Engineer	As required by City Engineer	As required by City Engineer

(11) Minimum Access Requirements for Commercial, Public and Semi-Public Uses. In the Central Design District, when driveway access is on local streets, not collectors or arterials and the building(s) on the property is(are) less than 5,000 square feet in gross floor area, or parking is the only use on the property, ingress and egress shall not be less than 24 feet. In all other cases, ingress and egress for commercial uses shall not be less than the following:

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-99	1	32 feet for first 50 feet from ROW, 24' thereafter	Curbs required; walkway 1 side only
100-249	2	32 feet for first 50 feet from ROW, 24' thereafter	Curbs required; walkway 1 side only
Over 250	As required by City Engineer	As required by City Engineer	As required by City Engineer

(12) Minimum Access Requirements for Industrial Uses. Ingress and egress for industrial uses shall not be less than the following:

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-250	1	36 feet for first 50' from ROW, 24' thereafter	No curbs or walkway required
Over 250	As required by City Engineer	As required by City Engineer	As required by City Engineer

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(13) One-way Ingress or Egress.

When approved through the Architectural Review process, one-way ingress or egress may be used to satisfy the requirements of Subsections (7), (8), and (9). However, the hard-surfaced pavement of one-way drives shall not be less than 16 feet for multi-family residential, commercial, or industrial uses.

(14) Maximum Driveway Widths and Other Requirements.

(a) Unless otherwise provided in this chapter, maximum driveway widths shall not exceed 40 feet.

(b) Except for townhouse lots, no driveways shall be constructed within 5 feet of an adjacent property line, except when two adjacent property owners elect to provide joint access to their respective properties, as provided by Subsection (2).

(c) There shall be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Engineer.

(15) Distance between Driveways and Intersections.

Except for single-family dwellings, the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.

(b) At the intersection of two local streets, driveways shall be located a minimum of 30 feet from the intersection.

(c) If the subject property is not of sufficient width to allow for the separation between driveway and intersection as provided, the driveway shall be constructed as far from the intersection as possible, while still maintaining the 5-foot setback between the driveway and property line as required by TDC 73.400(14)(b).

(d) When considering a public facilities plan that has been submitted as part of an Architectural Review plan in accordance with TDC 31.071(6), the City Engineer may approve the location of a driveway closer than 150 feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision. The written approval shall be incorporated into the decision of the City Engineer for the utility facilities portion of the Architectural Review plan under the process set forth in TDC 31.071 through 31.077.

(16) Vision Clearance Area.

(a) Local Streets - A vision clearance area for all local street intersections, local street and driveway intersections, and local street or driveway and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 10 feet from the intersection point of the right-of-way lines, as measured along such lines (see Figure 73-2 for illustration).

(b) Collector Streets - A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area shall be 10 feet (see Figure 73-2 for illustration).

(c) Vertical Height Restriction - Except for items associated with utilities or publicly owned

**Air Liquide Gas Depot
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structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction shall be permitted between 30 inches and 8 feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

(17) Major driveways, as defined in 31.060, in new residential and mixed-use areas are required to connect with existing or planned streets except where prevented by topography, rail lines, freeways, pre-existing development or leases, easements or covenants, or other barriers. [Ord. 895-93 §3, 5/24/93; Ord. 945-95, 5/8/95; Ord. 1025-99, §7, 7/26/99; Ord. 1026-99 §97, 8/9/99; Ord. 1103-02, 3/25/02; Ord. 1096-02, 1/28/02; Ord. 1354-13 §16, 02/25/13]

General Response: The site has an existing driveway accessed from a joint-use road apron contiguous with SW Tualatin – Sherwood Road. The joint-use was established by an access easement dated September 26, 1995 recorded in Washington County as document 95071339. The easement is a perpetual nonexclusive roadway easement for the sole purpose of ingress and egress to the property. The easement specifically allows for “road construction, reconstruction, maintenance and repair”, therefore, the work proposed for this project is allowed under this easement’s constraints.

The access easement document is herewith attached as Exhibit U.

Response:

- (1) No increase ingress or egress is required, therefore, no modifications to the joint-use road apron necessary. Work in the apron area will be limited to installation of underground utilities and construction of new sidewalk access to SW Tualatin-Sherwood Road.**
- (2) Joint access easement attached as Exhibit U.**
- (3) (a) A cross access drive exists in the existing joint use apron. No marked pedestrian access exists, however, sidewalk pedestrian access is proposed through the joint use apron from SW Tualatin-Sherwood Road to the flagpole portion of the site.
(b)(i) The existing service drive is not clearly defined and does not provide driveway separation for attached parcels. Due to SW Tualatin-Sherwood Road’s skewed relationship to the site parcels and the close proximity of these parcels to one another as well as SW Tualatin-Sherwood Road, no remedy for the poorly defined access apron is proposed.
(ii) The existing access apron exceeds 24 feet in width due to the geometric relationship among the parcels abutting it.
(iii) The existing access apron is too short to allow for stub outs or other physical indicators to make visually obvious the abutting properties are tied in via a service drive.
(iv) No parking areas are included in the existing joint access apron; none are proposed.**
- (c)(i) A joint use easement has been recorded in Washington County.
(ii) No evidence of a recorded agreement with the deed stating remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway has been found.
(iii) No joint maintenance agreement with the deed has been recorded.
(iv) No changes to the joint access apron are proposed with exception of required pedestrian access, therefore, this requirement not applicable.**
- (4) (a) The pertinent lot is owned by a sole entity. Therefore, this does not apply.**

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- (b) Due to the small size of the existing site access apron, this does not apply.
- (5) Lot fronts only SW Tualatin-Sherwood Road.
- (6) Ingress to and egress from the existing shared apron is across the existing shared access driveway fronting SW Tualatin-Sherwood Road.
- (7) Not a residential use, therefore not applicable.
- (8) An existing sidewalk abuts SW Tualatin-Sherwood Road.
- (9) Acknowledged.
- (10) Not a residential use, therefore not applicable.
- (11) Project is industrial use, therefore not applicable.
- (12) Existing apron along SW Tualatin-Sherwood Road meets 36' feet width requirement and subsequent 50 feet meets minimum 24 feet wide requirement. A new sidewalk is proposed on one side of the access route.
- (13) Access is not one-way, therefore not applicable.
- (14) (a) Existing driveway width on this parcel does not exceed 40 feet.
(b) Existing driveways constructed under joint use easement terms.
(c) Not applicable.
- (15)(a) through (d), not applicable.
- (16)(a) through (c), not applicable. Subject property does not have direct access frontage to SW Tualatin-Sherwood Road. Rather, it has access to SW Tualatin-Sherwood Road through an adjacent property's frontage.
- (17) Not applicable.

Section 73.410 Street Tree Plan.

A person who desires to plant a street tree shall comply with TDC 74.765, which comprises the street tree plan. [Ord. 1279-09, §2, 3/23/09]

Response: No street trees are proposed.

Section 73.450 Wireless Communication Facility and Wire-less Communication Facility attached Site Design.

The purpose of wireless communication facility and attached facility design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as support structure location, lighting, screening, fencing and landscaping. [Ord. 965-96, §86, 12/9/96]

Response: No wireless communication facility is proposed.

Section 73.460 Objectives.

All wireless communication facilities and attached facilities should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Site elements shall be placed and designed, to the maximum extent practicable, to:

- (1) Be aesthetically located to be compatible with the surrounding environment and analyze co-location before seeking new sites.*
- (2) Minimize disruption of natural site features such as topography, trees, and water features.*
- (3) Take into consideration the existing topography of the site and surrounding vicinity.*

Air Liquide Gas Depot Architectural Review

- (4) *Locate a wireless communications facility within stands of existing vegetation and trees to reduce the visual impact of the support structure.*
- (5) *Screen elements such as mechanical and electrical equipment from view.*
- (6) *Locate a wireless communication facility attached to existing rooftop mechanical equipment before placement on the exterior wall of a building.*
- (7) *Co-locate wireless communication facility or attached facility.*
- (8) *Construct wireless communication support structures at the minimum height necessary to serve the operational requirements of the system.*
- (9) *Separate wireless communication support structures from each other. [Ord. 965-96, §87, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1116-02, 8/26/02]*

Response: No wireless communication facility is proposed.

Section 73.470 Standards.

The following standards are minimum requirements for a wireless communication facility or wireless communication facility attached development. Development proposals shall meet or exceed these minimum requirements.

- (1) A wireless communication facility attached shall not be attached to buildings which are designed solely for single family residential use.
- (2) Attempt to locate wireless communication facility attached antennas to existing rooftop mechanical equipment before placement on the exterior wall of a building.
- (3) A wireless communication facility shall be located to take full advantage of existing site conditions such as surrounding vegetation and trees.
- (4) Mechanical and electrical equipment and the bottom 6' of the support structure for a wireless communication facility shall be screened from the public right-of-way and abutting property by the use of a minimum 6' tall security fence or wall consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick.
- (5) A wireless communication facility support structure shall be constructed to the minimum height necessary to serve the operational requirements of the facility.
- (6) Obsolete or unused wireless communication support structures and associated equipment and antennas shall be removed within 12 months of cessation of operations at a site.
- (7) No new wireless communication support structure shall be permitted unless the applicant submits a co-location report showing whether or not any existing tower or support structure within one-half mile of the proposed site can accommodate the applicant's proposed antennae. The report shall address the following:
 - (a) Do existing towers or support structures, or approved but not yet constructed towers or support structures located within the geographic area meet the applicant engineering requirements;
 - (b) Are existing towers or support structures of sufficient height to meet the applicant's engineering requirements;
 - (c) Do existing towers or support structures have sufficient structural strength to support the applicants proposed antennae and related equipment;
 - (d) Would the applicant's proposed antennae cause electromagnetic interference with the antennae on the existing tower or support structure, or would existing antennae cause interference with the applicant's proposed antennae; and
 - (e) Are there other limiting factors that render existing towers and support structures unsuitable or unavailable.
- (8) No new wireless communication support structure shall be permitted unless the applicant submits a coverage report inclusive of an overall system plan for the City, showing facilities

Air Liquide Gas Depot Architectural Review

presently constructed or approved and future expansion plans.

(9) The minimum distance between WCF monopoles shall be 1500 feet. Separation shall be measured by following a straight line from one monopole to the next. For purposes of this section, a wireless communication facility monopole shall include wireless communication facility monopole for which the City has issued a development permit, or for which an application has been filed and not denied. [Ord. 965-96, §88, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1116-02, 8/26/02]

Response: No wireless communication facility is proposed.

Section 73.480 Wireless Communication Facility and Wire-less Communication Facility Attached Structure Design.

The purpose of wireless communication facility design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) and are intended to promote functional, safe, innovative and attractive designs which are compatible with the surrounding environment. This concerns the support structure form, materials, colors, antenna design and screening. [Ord. 965-96, §89, 12/9/96]

Response: No wireless communication facility is proposed.

Section 73.490 Objectives.

All wireless communication facilities should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. To the maximum extent practicable, support structures and antennas shall be designed to:

- (1) Be aesthetically and architecturally designed to be compatible with the surrounding environment while recognizing that wireless communication facilities are unique designs due to their function.*
- (2) Select colors in consideration of lighting conditions and the context under which the structure is viewed, the ability of the material to absorb, reflect or transmit light and the color's functional role, e.g., aesthetic reasons.*
- (3) Select platform and antenna designs which minimize their size and visual appearance to surrounding development.*
- (4) Provide a composition of structural material elements which is cohesive and responds to use needs, site context, land form, a sense of place and identity, safety, and climatic factors.*
- (5) Select materials which contribute to the project's form and function, as well as to the surrounding environment. [Ord. 965-96, §90, 12/9/96; Ord. 1098-02, 2/11/02]*

Response: No wireless communication facility is proposed.

Section 73.500 Standards.

The following standards are minimum requirements for a wireless communication facility or wireless communication facility attached development. Development proposals shall meet or exceed these minimum requirements.

- (1) Monopoles shall be used in all residential, institutional, and commercial planning districts.*
- (2) Monopoles shall be used in all industrial planning districts.*
- (3) Equipment shelters, buildings or cabinets to house radio electronics equipment shall be concealed, camouflaged, vegetatively screened, or placed underground.*
- (4) A wireless communication facility shall be designed to allow co-location of facilities.*

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(5) Wireless communication facility attached antennas shall be painted to match the color of the mechanical screen wall or building to which it is attached.

(6) Antennas and platforms shall be de-signed to minimize their size and appearance to surrounding development. [Ord. 965-96, §91, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1216-06, 7/24/06]

Response: No wireless communication facility is proposed.

Section 73.510 Setbacks.

The Community Development Director shall, in making the determination of compliance for setbacks for Wireless Communication Facilities and Wireless Communication Support Structures, consider the following factors:

(1) If the abutting property is in the Low Density Residential (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and if natural vegetation, such as evergreen trees, does not exist to act as a screen, then a greater setback than the minimum required may be appropriate. If such natural vegetation exists, then the minimum required setback may be appropriate.

(2) If the abutting property is in the Low Density Residential (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and it is vacant or its use is a single-family dwelling, then a greater setback than the minimum required may be appropriate. If the use is not a single-family dwelling, then the minimum required setback may be appropriate.

(3) If the abutting property is in the Low Residential Density (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and it is vacant or its use is a single family dwelling and it is at a lower elevation than the subject property, then a greater setback than the minimum required may be appropriate. [Ord. 965-96, §92, 12/9/96]

Response: No wireless communication facility is proposed.

Section 73.600 Central District Design Guidelines.

Purpose and Applicability.

(1) The "Central Tualatin Concept Plan and Design Guidelines, October 2001" were developed for the Tualatin Commons Enhancement Strategy Work Plan and are intended to enhance the identity of the Tualatin Commons area. The purpose of the Guidelines is to: Provide prospective developers and designers with a checklist of issues that must be addressed in Central Design District proposals; Provide the City of Tualatin with an overall conceptual approach that will enable determinations on proposals that are in concert with and add to the Central Tualatin Concept Plan; Provide the City of Tualatin with a method of evaluating public and private development or redevelopment on a consistent basis.

(2) The Design Guidelines apply to the Central Design District as shown on TDC Figure 73-4. The Design Guidelines are structured into four topic areas: Central Tualatin Concept; City Connections; Spaces and Landscapes; and Buildings. [Ord. 1097-02, 2/11/02]

Section 73.610 Design Guidelines.

All development in the Central Design District should strive to meet the following guidelines to the maximum extent practicable. Architects and developers shall consider these guidelines and the provisions of TDC 73.050(1) in designing new projects in Central Design District and shall include

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in the Architectural Review application a narrative explaining how the development considered each of the Design Guidelines and how the guidelines are balanced. Consideration of the guidelines includes an evaluation of how the proposal is or is not consistent with each guideline. In case of conflicts between guidelines or between guidelines and other objectives in TDC Chapter 73, the proposal should provide a balance. To the maximum extent practicable, development in the Central Design District should be designed to:

CENTRAL TUALATIN CONCEPT

(1) Draw People and Activity into Central Tualatin.

Central Tualatin is strategically situated to be both a local and regional focal point. Developments should lend themselves to attracting a variety of pedestrian activities at the core of Central Tualatin. Entry points into Central Tualatin should establish a sense of arrival.

02+(2) Encourage Further Development.

Buildings and spaces should reflect an analysis of historic and existing design principles, as well as create design opportunities for new adjunct development.

(3) All Seasons City.

Building uses and exterior spaces should lend themselves to use throughout all four seasons. Designs should include protected spaces and pathways to enable year-round use by visitors and inhabitants.

(4) 24 Hour / 7 Day City.

Developments should foster the idea of extended hours of use throughout the week. Where uses are subject to “business hour” operation, the development should include amenities that provide for external enjoyment of buildings at all times of day.

(5) Heart of a Great City.

Buildings and spaces between them should be carefully designed and crafted to reinforce each other. This reinforcing design should be of high importance for buildings which front public improvements and major circulation systems.

(6) Sustainable Design.

New development should embody current “green” building techniques wherever possible. Energy efficient design options should be explored as well as alternative building products which have less impact on the local as well as world environment.

(7) Buildings as Good Neighbors.

Each building should be designed to fit into the evolving context of Central Tualatin and should contribute and enhance the public experience, not only of itself, but of the buildings that provide its context. Undesirable elements of buildings should either be screened or hidden from view.

(8) A Place of Multiple Activities.

When practicable, include multiple uses in building structures, as well as flexibility in the use of exterior spaces.

(9) Scale of the Street.

Building heights adjacent to a street edge should be at least as tall as half the width of the right-of-way. Street trees can also be used in meeting the height goal. A combination of buildings and trees are generally the best solution to create the framework of the street.

(10) Pedestrian Interaction.

Buildings and exterior space should foster activity and interaction of citizens at a pedestrian scale. Encourage a variety of uses within walking distance for residents, employees, and visitors.

(11) Building Setbacks.

Buildings within Central Tualatin must meet zoning regulations but should be encouraged to front the street edge. In addition, buildings placed close to side and rear property lines should be designed with sensitivity to future development on adjacent properties.

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CITY CONNECTIONS

(12) Visual Linkages.

Design interior and exterior spaces that recognize and promote visual linkages to other defining elements, such as monuments, civic spaces, and other natural and urban landmarks that orient the user.

(13) Clustering of Attractors.

Connections between major downtown attractors should be strengthened in order to create an easily walkable and friendly atmosphere. Reinforcement of connections could include new signage, landscaping and visual cues.

(14) Axial Relationships and Monuments.

Recognize existing and potential axial relationships of places and buildings and incorporate, in building form or in monuments, extensions or terminations of these relationships.

(15) Places and Connections.

Provide a safe, inviting series of interconnected “places,” both interior and exterior to the building structures. Provide linkages to adjacent neighborhoods for pedestrians, bicycles, and automobiles.

(16) Transit Dynamics.

Public transit is fundamental to the future of Central Tualatin and its connection to the region. Both existing and future public transit expansion should be considered in any new development plans.

(17) Driving and Parking.

In the design of streets and parking areas, functional requirements of vehicular activity should not compromise, but should enhance, the pedestrian environment.

(18) Pedestrian Opportunities.

Integrate pedestrian circulation systems with existing and planned systems, both indoor and outdoor, that connect public rights-of-way and spaces, activities and uses, utilizing furniture and landscaping that are convenient to use and in character with the public improvements.

(19) Connection to the River.

The Tualatin River and Hedges Creek are valuable and unique community resources.

Development should be sensitive to the natural character of the river and creekfront. Provide linkages from Central Tualatin to these resources for pedestrian and bicycle access.

(20) Green Streets.

Promote creation of “green” streets and surface parking areas utilizing features like permeable paving, solar powered lighting, and native landscaping. City design standards should be flexible to allow designs that have a minimal impact on non-renewable natural resources.

(21) Connections through Buildings.

Promote design that allows for public interaction with buildings. Encourage pedestrian walkways through, and elevated connections between, sections of the building.

SPACES AND LANDSCAPES

(22) Civic Rooms.

Development of public spaces within and around Central Tualatin should contribute to the formation of “civic rooms.” Within these rooms, specific commercial and public uses, circulation patterns, public art, and architectural character will be encouraged to reinforce the “room” and its linkage to the overall Central Tualatin area.

(23) Areas of Many Functions.

Create pathways, open spaces and enclosed or sheltered public spaces to be flexible and to accommodate a number of functions, whether organized or casual.

(24) The Street.

Define the street through delineation of right-of-way with the building edge, landscaping, lighting and signing appropriate to the function of the street and the area of Central Tualatin it serves.

Air Liquide Gas Depot Architectural Review

Street trees spaced at no more than 30' on center is critical to establishing the character of a street.

(25) The Intersections.

Consider intersections as a "room" within the City. Maintain vehicular flow requirements while providing safe and convenient pedestrian access. When possible, focus the location of building entries, building details, street lighting, and signage at intersections.

(26) Courtyards and Plazas.

In private development, design court-yards and plazas that provide a continuity of experience between the inside and outside of the building and between the public and private realm.

(27) Open Space Defined By Buildings.

The spaces between buildings should enhance the public experience through building design, form and organization.

(28) Inside and Outside.

Ground floor activities in buildings within Central Tualatin should present an interesting and enticing addition to the pedestrian experience. Exterior walls abutting public rights-of-way shall have more than 50% of the surface in windows, showcases, displays, art or pedestrian access elements.

(29) Roofscaping.

The rooftops of buildings within Central Tualatin present an opportunity for "green" design and upper level activities. New development should be encouraged to create eco-roofs and/or opportunities for places where activity could enhance the street.

(30) Street Trees.

Selection of trees along street edges should create a unifying canopy for the street. Trees with strong vertical shapes should be used sparingly to avoid a discontinuous or "lollipop" appearance.

(31) Signage.

Business identity signs, while conforming to other requirements of the sign ordinance, should add to the quality and character of the street. Signs should also relate to the building's character and provide identity and focus for the use.

BUILDINGS

(32) Building Form.

Single-purpose buildings should be treated as "stand-alone" structures with style and size appropriate to use. Mixed-use buildings should be designed to relate contextually to the surrounding buildings. In general, all new development should compliment adjacent buildings.

(33) Adaptable Design.

As Central Tualatin evolves over time, the market will dictate changes in uses and densities. Design of buildings should consider flexibility in use and density over the life of the building.

(34) Active Buildings along Linkage Streets.

Where linkage streets are identified within Central Tualatin, active uses should be developed to support them. A retail corridor along the major street edges would help to reinforce the pedestrian link between focal points or attractors.

(35) Solar Access.

New development in Central Tualatin should be designed to provide solar access and to minimize the impact of shadows on neighboring buildings and spaces. The use of upper floor setbacks and sloping roofs is encouraged.

(36) The Outside Wall.

The "outside wall," the building's presentation both to passers-by and to users, should invite participation. Upper levels of buildings facing the street should incorporate decks, balconies or other devices that activate the wall enclosing the street.

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(37) Craft of Building.

In designing buildings, recognize the “craft of building” as fundamental in creating appropriate building detail. Lasting materials are strongly encouraged and the way buildings are assembled is important to the final product and its relationship to Central Tualatin.

(38) Building Entrances.

Building entrances should support and enhance the pedestrian oriented quality of Central Tualatin. Design entrances to give identity to buildings and uses therein.

(39) Parking Relationship to Building.

Parking areas are to be integrated into the building design. Surface parking should be limited to one-half block areas. Delineate surface parking from pedestrian ways by low vertical elements, such as masonry walls, fences or landscaping.

(40) Service Areas.

Since service access and trash holding areas are expected to be adjacent to road-ways and open spaces, care must be taken to avoid a back-door appearance to the building faces adjacent to pedestrian areas and other buildings. Employ screening and landscaping to reduce the visual impact of service areas.

(41) Interior Working Environment.

Interior design of buildings in Central Tualatin should recognize the need for quality work environments for all its users. Natural lighting and ventilation should be utilized to the maximum extent possible. [Ord. 1097-02, 2/11/02].

Response: The site is not located within the Central Design District.

Air Liquide Gas Depot Architectural Review

1.05 SUMMARY

The proposed storage and office buildings meet all applicable Architectural Review standards. Where practicable, the development will be compatible with current and existing surrounding uses, and is designed to comply with the zoning requirements of the General Manufacturing District. This application complies with City requirements, will result in economic growth for the area, and merits approval as requested. The use of this site is consistent with adjacent uses. An existing gas cylinder storage facility is located on the parcel north and abutting this site. For reference, an HMIS report, Exhibit K, is herewith submitted.

	3
City of Tualatin	.
<i>Attention: Engineering Department</i>	1
18880 SW Martinazzi Avenue	6
Tualatin, OR 97062-7092	.
	2
	0
	1
Re: Air Liquide Gas Depot	8
Public Facilities Narrative - REVISED	

Dear Tualatin Engineering:

An application for Architectural Review (AR) was filed by EL, Architects, PS to build an approximately 116,464 square foot gas cylinder storage facility composed of five structures. The development area consists of approximately 2.8 acres.

Air Liquide, represented by Eric Lanciault, proposes to develop the site with five buildings. The property is currently undeveloped, but public improvements have been constructed with previous development of a site access driveway.

The site is bounded by industrial developments to the north and west and the WES Commuter Rail right-of-way along the south and east.

The applicant had a scoping meeting on April 21, 2017. The neighborhood/developer meeting was held on September 6, 2017.

The following are the Public Facilities findings related to the site. All references to sections in the Tualatin Development Code (TDC) or Tualatin Municipal Code (TMC) unless otherwise noted.

TDC 74.120 ...No work shall be undertaken on any public improvement until after the construction plans have been approved by the City Engineer and a Public Works Permit issued and the required fees paid.

TDC 74.04 (1) All the Public improvements required under this chapter shall be completed and accepted by the City prior to issuance of a Certificate of Occupancy.

TDC 74.330 Utility Easements

(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television, television cable, gas, electric lines and other public utilities shall be granted to the City

Eric Lanciault, Architect

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360.798.3801

- (4) ...For both on-site and off-site easement areas, a utility easement shall be granted to the City; Building Permits shall not be issued for the development prior to acceptance of the easement by the City.
- (5) The width of the public utility easement shall meet the requirements of the Public Works Construction Code.

TMC 4-1.010 This development is subject to all applicable building code requirements and all applicable building and development fees.

1. *Fire and Life Safety:*

TMC 4-2.010 (1) Every application for a building permit and accompanying plans shall be submitted to the Building Division for review of water used for fire protection, the approximate location and size of hydrants to be connected, and the provisions for access and egress for firefighting equipment. If upon such review it is determined that the fire protection facilities are not required or that they are adequately provided for in the plans, the Fire and Life Safety Reviewer shall recommend approval to the City Building Official.

Response: There is one existing fire hydrant located at the north end of the existing driveway. Please see site plan following this letter. One new fire hydrant will be located north of Building 100. Buildings 100 and 200 will be fully sprinklered. Buildings 300, 400 and 500 will not be sprinklered.

The existing fire water service to the site is adequate for this project and will not require any public improvements. Please see Walter L. Cook, PE report, Exhibit O.

2. *Transportation:*

TDC 11.610 Transportation Goals and Objectives (2) (e) For development applications, including, but not limited to subdivisions and architectural reviews, a LOS of at least D and E are encouraged for signalized and unsignalized intersections, respectively.

Response: A Trip Generation Assessment prepared for this project indicates minimal impact to SW Tualatin – Sherwood Road near Teton Avenue and recommends the City support the development without requiring a detailed traffic impact study.

TDC 73.400 (5)... a sidewalk shall be constructed along all street frontage, prior To use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to City standards,...

Response: An existing sidewalk along SW Tualatin – Sherwood Road serves the site.

TDC 74.420 (6) All required street improvements shall include curbs, sidewalks, storm drainage, streetlights, street signs, and, where designated, bikeways and transit facilities.

TDC74.425 Street Design Standards

Response: No changes or improvements are proposed along SW Tualatin – Sherwood Road.

TDC 74.430 Streets, Modifications of Requirements in Cases of Unusual Conditions.

Response: No modifications to standards in cases of unusual conditions are proposed as part of this development.

TDC 74.440 Streets, Traffic Study Required

Response: A traffic assessment memo has been prepared by a professional engineer and is included with this Architectural Review application.

TDC 74.450 Bikeways and Pedestrian Paths

Response: No bikeways or pedestrian paths are proposed as part of this development.

TDC 74.470 Street Lights

- (1) *Street light poles and luminaries shall be installed in accordance with the Public Works Construction Code.*
- (2) *The applicant shall submit a street lighting plan for all interior streets on the proposed development prior to issuance of a Public Works Permit.*

Response: No street lighting improvements are proposed as part of this development.

TDC 74.485 Street Trees

- (1) *Prior to approval of a residential subdivision or partition final plat, the applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees. The location, placement, and cost of the trees shall be determined by the City. This sum shall be calculated on the interior and exterior streets as indicated on the final subdivision or partition plat.*
- (2) *In nonresidential subdivisions and partitions street trees shall be planted by the owners of the individual lots as development occurs.*
- (3) *The Street Tree Ordinance specifies the species of tree which is to be planted and the spacing between trees. [Ord. 119-05, 7/25/05]*

Response: No street trees are proposed as a part of this development.

TDC 74.660 Underground

- (1) *All utility lines including, but not limited to, those required for gas, electric, communication, lighting and cable television services and related facilities shall be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets may be placed above ground. Temporary utility service facilities, high capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant shall make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve of the location of all surface-mounted transformers.*

Response: All proposed utilities will be placed underground in accordance with this requirement. Surface-mounted transformers will be placed internal to the development, screened from adjacent right-of-way.

TDC 75.060 Existing Driveways and Street Intersections (2) The city engineer may restrict existing driveways and street intersections to right-in and right-out by construction of raised median barriers or other means.

Response: No restriction of existing driveway is anticipated as a part of this application.

3) Access:

TDC 73.400 Access

- (2) Owners of two or more uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use.*
- (10) Minimum access requirements for residential uses: Ingress and egress for multi-family residential uses shall not be less than the following:...for 50-499 parking spaces a minimum of one 32-foot wide access or two 24-foot wide accesses are required.*
- (11) Minimum Access Requirements for Commercial, Public and Semi-Public Uses. If 1-99 parking spaces are required, only one access is required. If 100-249 parking spaces are required, two accesses are required. Ingress and egress shall not be less than 32 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.*
- (12) Minimum Access Requirements for Industrial Uses. If 1-250 parking spaces are required, only one access is required. Ingress and egress shall not be less than 36 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.*
- (14) (a) Unless otherwise herein provided, maximum driveway widths shall not exceed 40 feet.*
- (15) Distance between Driveways and Intersections. Distances listed shall be measured from the stop bar at the intersection. (a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.*

Response: the site is served by an existing driveway accessed from SW Tualatin – Sherwood Road through an existing asphalt entrance apron serving multiple parcels. An access easement is granted to the existing site's driveway as a perpetual non-exclusive roadway easement for ingress and egress as conveyed from the Halton Company to LAI Holding, Inc. by the Access Easement recorded October 3, 1995 as indicated in Exhibit E of the Stewart Title preliminary title report dated September 28, 2017 submitted with the Architectural Review submittal.

TDC 75.120 Existing Streets

(4) Tualatin – Sherwood Road

Response: No new access from SW Tualatin – Sherwood Road is Proposed.

4. Water:

TDC 74.610 (1) Water lines shall be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans shall be submitted to the City Engineer for review and approval prior to construction.

TMC 3-3.040 (2) for nonresidential uses, separate meters shall be provided for each structure.

TMC 3-3.120 (2) The owner of property to which City water is furnished for human consumption shall install in accordance with City standards an appropriate backflow prevention device on the premises where any of the following circumstances exist: (b) Where there is a fire protection service, and irrigation service or a nonresidential service connection which is two inches or larger in size;

TMC 3-3.120 (4) requires all irrigation systems to be installed with a double check valve assembly.

TDC 74. 74.610 (3) As set forth in TDC Chapter 12, Water Service, the City has three water service levels. All development applicants shall be required to connect the proposed development site to the service level in which the development site is located.

Response TDC 74.610 (1): An existing 8" water line extends approximately 320 lineal feet onto the property. The line runs north-south along the west property line, paralleling the existing flagpole drive. A new 8" water line will connect to this existing stub and continue south to serve the site. No building is served by domestic water; a stub for a future building is provided. External showers located north of Buildings 100 and 200 are connected to domestic water.

5. *Sanitary Sewer:*

TDC 74.330 (1) Sanitary sewer lines shall be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.

Response: An existing 6" sanitary line extends approximately 340 lineal feet onto the property. The line runs north-south down the centerline of the existing flagpole drive. A new sanitary manhole will be installed within the drive and a 6" line will continue south to serve the site. Building 400 will connect to this waste line; Buildings 100, 200, 300 and 500 do not require sanitary connections. A manhole is provided for connection to a future building. The system will be gravity type.

TDC 74.330 Utility Easements (1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electric lines and other public utilities shall be granted to the City.

Response: Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electrical lines and other public utilities will be granted to the City as needed. An existing easement is in place for the existing waterline serving the development area.

6. *Storm Drainage & Water Quality:*

TDC 74. 74.630 Storm Drainage System

(1) *Storm drainage lines shall be installed to serve each property in accordance with City standards. Storm drainage construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.*

(2) *The storm drainage calculations shall confirm that adequate capacity exists to serve the site. The discharge from the*

development shall be analyzed in accordance with the City's Storm and Surface Water Regulations.

Response: Stormwater and water quality for each building and associated impervious surface will be accommodated on site; no connection to City storm system is proposed.

TDC 74.650 Water Quality, Stormwater Detention and Erosion Control

- (2) On all other development applications, prior to issuance of any building permit, the applicant shall arrange to construct a permanent on-site water quality facility and storm water detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit from Clean Water Services.*
- (3) For on-site private and regional non-residential public facilities, the applicant shall submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.*

TMC 3-50220 Criteria for Requiring On-Site Detention to be constructed.

- (1) There is an identified downstream deficiency, as defined in TMC 3-5.210, and a detention rather than conveyance system enlargement is determined to be the more effective solution.*
- (2) There is an identified regional detention site within the boundary of the development.*

TMC 3-5-330 Permit Required. Except as provided in TMC 3-5.310, no person shall cause any change to improved or unimproved property that will, or is likely to, increase the rate or quantity of run-off or pollution from the site without first obtaining a permit from the City and following the conditions of the permit.

TMC 3-5-380 Criteria for Granting Exemptions to Construction of On-Site Water Quality Facilities. A regional public facility may be constructed to serve private non-residential development provided:

- (1) The facility serves more than one lot; and*
- (2) All owners sign a stormwater facility agreement; and*
- (3) Treatment accommodates reasonable worst case impervious area for full build-out, stormwater equivalent to existing or proposed roof area is privately treated in LIDA facilities, and any detention occurs on each lot.*

Response: Stormwater and water quality for each building and associated impervious surface will be accommodated on-site.

7. *Grading*

TDC 74.640 (1) Development sites shall be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development. (2) A development applicant shall submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this

development will not affect the drainage on adjacent properties. The City Engineer may require the applicant to remove all excess material from the development site.

Response: The proposed grading plan minimizes the impact of stormwater runoff to adjacent properties and allows adjacent properties to drain as they did before the development.

8. *Erosion Control:*

TDC 74.650 (3) For on-site private and regional non-residential public facilities, the applicant shall submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

Response: An erosion control plan will be submitted prior to approval of a Public Works Permit.

9. *Stormwater Connection Permit:*

TDC 74.650 Water Quality, Stormwater Detention and Erosion Control (2) On all other development applications, prior to issuance of any building permit, the applicant shall arrange to construct a permanent on-site water quality facility and stormwater detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit form the Unified Sewerage Agency.

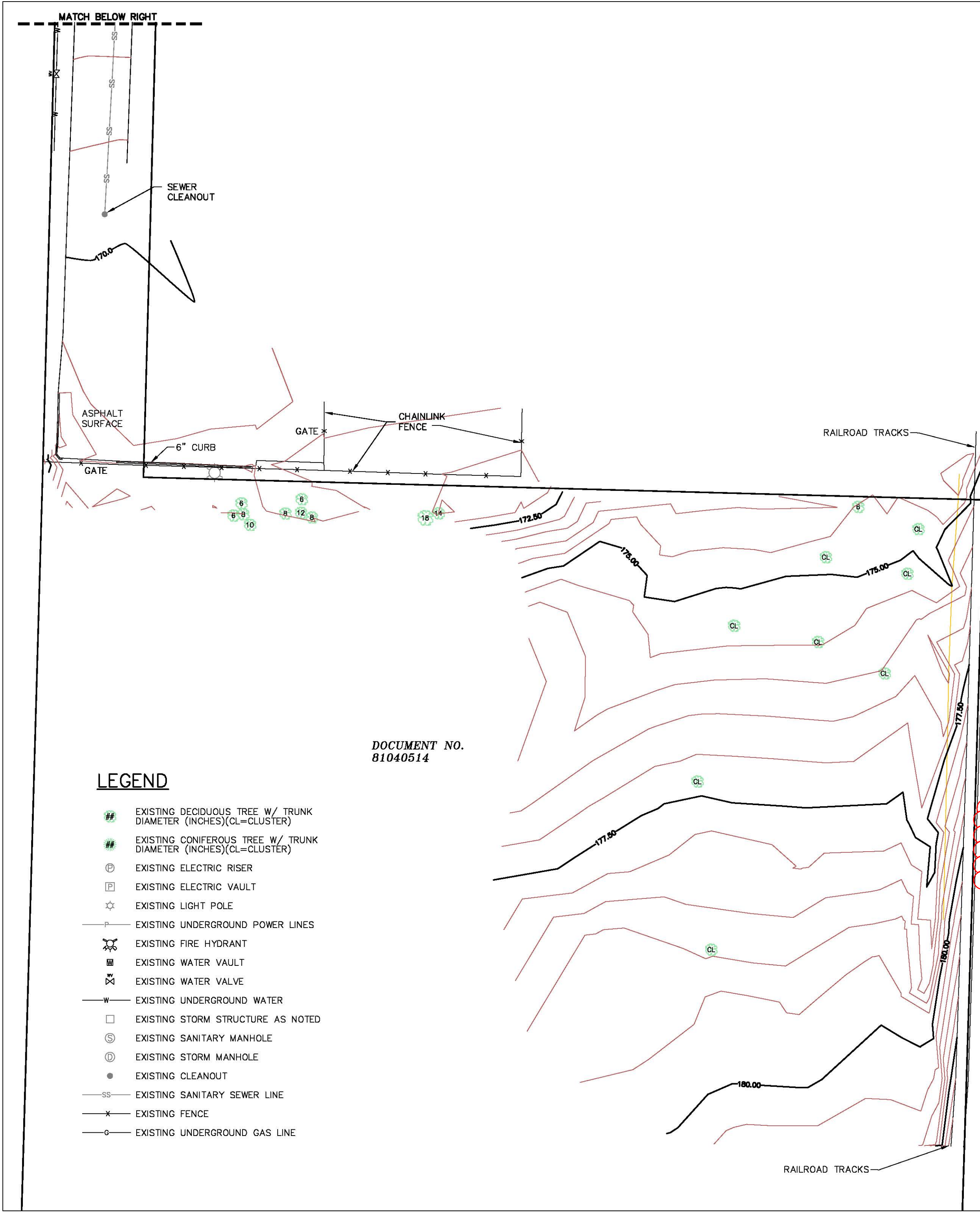
Response: A CWS Service Provider Letter (SPL) is included with the Architectural Review Application.

If you have any questions regarding this application, please feel free to contact me at 360-798-3801.

Sincerely,



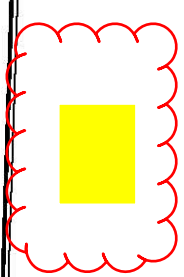
Eric Lanciault
Principal, Eric Lanciault, Architect



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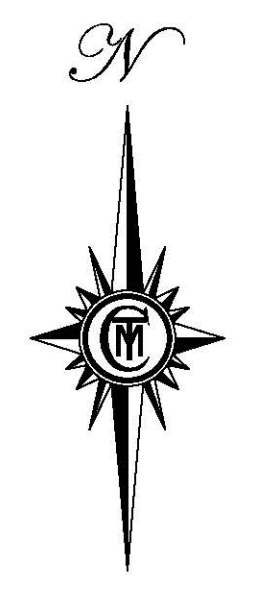
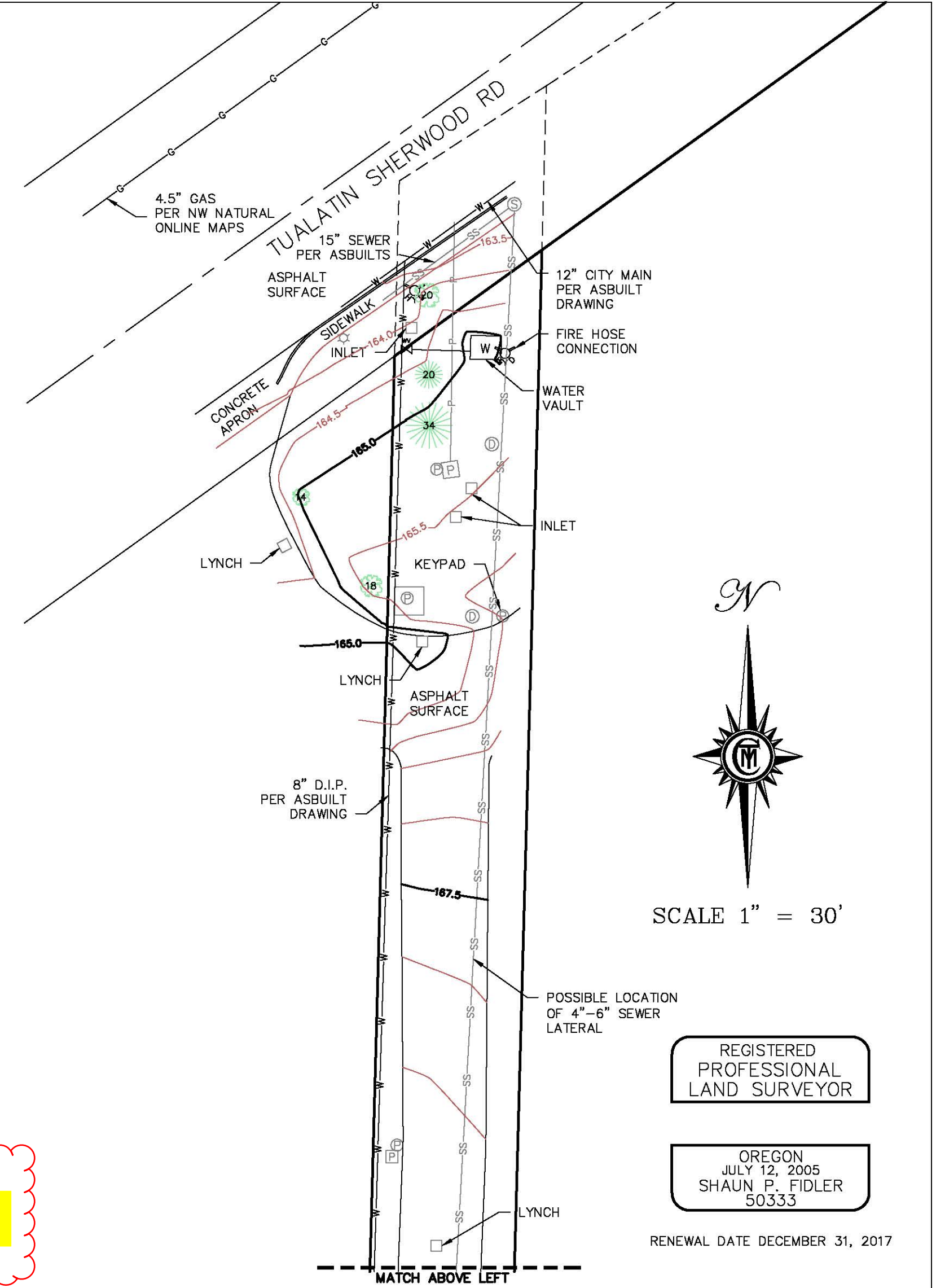
LEGEND

- ## EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- ## EXISTING CONIFEROUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- ⊕ EXISTING ELECTRIC RISER
- ⊠ EXISTING ELECTRIC VAULT
- ☆ EXISTING LIGHT POLE
- P — EXISTING UNDERGROUND POWER LINES
- ⊗ EXISTING FIRE HYDRANT
- ⊠ EXISTING WATER VAULT
- ⊠ EXISTING WATER VALVE
- W — EXISTING UNDERGROUND WATER
- EXISTING STORM STRUCTURE AS NOTED
- ⊙ EXISTING SANITARY MANHOLE
- ⊙ EXISTING STORM MANHOLE
- EXISTING CLEANOUT
- SS — EXISTING SANITARY SEWER LINE
- X — EXISTING FENCE
- G — EXISTING UNDERGROUND GAS LINE



NOTES

1. THE PURPOSE OF THIS MAP WAS TO SHOW THE EXISTING CONDITIONS FOR 10450 SW TUALATIN-SHERWOOD ROAD.
2. THE BASIS OF BEARINGS WAS PER SN 28,357 WASHINGTON COUNTY SURVEY RECORDS.
3. LOCAL DATUM WAS ESTABLISHED BY GPS STATIC OBSERVATION, ELEVATION = 170.39' (NAVD88)
4. THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF JH KELLY. FOR CIVIL ENGINEER DESIGN.
5. THIS MAP WAS PREPARED BY PLAT RECORDS, CALCULATED DATA, AND FIELD MEASUREMENTS, A RECORDED BOUNDARY SURVEY WILL NOT BE FILED.
6. ALL UTILITY LOCATIONS ARE SHOWN BY ABOVE GROUND FEATURES AND LOCATION OF PAINT MARKS SUPPLIED BY THE LOCAL UTILITY COMPANIES. CMT TAKES NO RESPONSIBILITY OF UNDERGROUND LOCATION. PLEASE NOTIFY THE UTILITY NOTIFICATION CENTER BEFORE ANY DIGGING 1-800-332-2344.



SCALE 1" = 30'

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 12, 2005
SHAUN P. FIDLER
50333

RENEWAL DATE DECEMBER 31, 2017

TOPOGRAPHIC SURVEY

10450 SW TUALATIN SHERWOOD RD
SW 1/4 SEC. 23
T 2 S., R 1 W., W.M.
CITY OF TUALATIN
WASHINGTON COUNTY, OREGON
AUGUST 17, 2017
DRAWN: DMR CHECKED: SPF
SCALE 1"=30' ACCOUNT # 209
Z:\209-008\DWG\209-008BASE



CMT SURVEYING AND CONSULTING
9136 SE ST HELENS ST, SUITE J
PO BOX 3251
CLACKAMAS, OR 97015
PHONE (503) 850-4672 FAX (503) 850-4590



REPUBLIC
SERVICES

10295 SW Ritter Road, Wilsonville, OR 97070
O: 503.404.2135 F: 503.682.9004 republicservices.com

February 2, 2018

Matt Ouellette
Project Manager
JH Kelly, LLC

Re: Air Liquide project Tualatin Oregon

Dear Matt;

Thank you, for sending me the site plans and enclosure designs for Air Liquide Project being built in Tualatin.

My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Tualatin. We provide complete Commercial waste removal services and recycling services as needed on a weekly basis for this location.

I do not see any interference of where the enclosure is being planned that will affect your garbage & recycling services, or my ability to safely enter and exit the property. I will be able to drive between Building 100 and the site called Future Building to directly approach the enclosure. The size of the enclosure as stated in your notes of being 22' X 14' is fine for both trash and recycling containers. As noted please make sure the gates can open at least 120 degrees and be able to lock in the open position. Thank you for making the adjustment for the gates to be full width of the front.

Thanks Matt, for your help and concerns for our services prior to this project being developed.

Sincerely,

Frank J. Lonergan
Operations Manager
Republic Services Inc.

STORM WATER MANAGEMENT PLAN

CALCULATIONS AND SUMMARIES

Air Liquide

Tualatin, OR

VAA Comm. No. 170359

~~October 6, 2017~~

Revised January 26, 2018

Engineer:

VAA
2300 Berkshire Ln
Plymouth, MN 55441
Ph. (763) 587-7323

Owner:

Air Liquide

Calculation and Analysis completed by or completed under the direction of:

Jeffery Schrock, PE
Oregon # 81970PE

Table of Contents

Summary	Storm Water Summary and Summary Tables
Appendix A	HydroCAD Report
Appendix B	Water Quality Calculations

I HEREBY CERTIFY THAT THIS REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM DULY LICENSED AS AN ENGINEER, IN THE STATE OF OREGON.

Jeffrey Schrock, PE, 81970PE

Storm Water Summary

Design Standards –

The Air Liquide site improvements project has been evaluated to meet or exceed the standards of the Clean Water Service, Chapter 4 (*Revision April 2017*) guidelines, which require the peak runoff rates shall not exceed pre-development rates for the specific range of storms, 65% phosphorus removal, and water quality be treated for 0.36 inches of runoff at a minimum of 0.4 feet.

Existing Site Description-

This 5.73-acre subject site is situated in a heavy industrial district of the City of Tualatin. The site surrounded on all sides by industrial sites. A rail line passes across the southern and eastern edges of the subject site. The surrounding properties include Matheson (Welding Gas Supplier), Lakeside Limber (Hardware Store), EleMar Oregon (Granite Supplier), Air Products & Chemical Inc (Professional Services) and Airgas Operations (Manufacturer). The surrounding parcels range in size from 2.02 acres to 7.81 acres.

There are currently no stormwater controls on site or adjacent to the site to connect to.

Existing Geology Description-

A soil exploration and geotechnical report was completed Rapid Soil Solutions on July 18, 2017. A total of three (3) hand augur were excavated in the area of the new building and one test pit in the parking area to develop a pavement design. The locations of the borings are shown on figure 3 in the appendix. An EIT, engineer in training observed the drilled and logged the subsurface materials. The soil logs were compiled by a geotechnical engineer. The logs were created using the Unified Soil Classification and Visual Manual Procedure (ASTM-D 2488). The soil conditions were stiff CLAY (CL), to a depth of 12 feet. Groundwater was not encountered. Moisture contents varied from 27 to 32.1%.

Existing Terrain Description-

The site is high along the east and southern borders of the site. Drainage from the east and south west and north is pitched to the, which conveys runoff to the existing driveway. Storm sewer is located in Tualatin-Sherwood Road.

Proposed Runoff Description-

The proposed site improvements consist of 4 new buildings and bituminous driveways to access them. The improvements will increase the impervious area of the site by 1.54ac. The majority of the impervious runoff will be captured by storm water inlets and will be piped to a proposed treatment pond. A small portion of runoff will sheet flow directly to the pond, and an even smaller portion of the runoff will sheet flow to the existing driveway.

Flow from the south that typically flows through the site will be captured in a grassed swale, and will be routed to the east and then to the north until in reaches the proposed treatment pond.

Proposed Runoff Treatment-

Water Quality Volume (WQV) was calculated for the site. The WQV is the volume of water that is produced by the water quality storm. The WQV equals 0.36 inches over the impervious area that is required to be treated as shown in the formula below:

$$\text{Water Quality Volume (CF)} = \frac{0.36 \text{ (in.)} \times \text{Area (sq.ft.)}}{12 \text{ (in./ft.)}} = \frac{0.36 \text{ (in.)} \times 62,050 \text{ (sq.ft.)}}{12 \text{ (in./ft.)}} = 1,862 \text{ CF}$$

The WQV is the volume of water from the bottom of the pond to the discharge point of the outlet control structure (5 inches above the bottom). See Table 1 below.

Table 1

WATER QUALITY VOLUME				
		VOLUME		
CONTOUR	AREA	STAGE		CUM'TIVE
	SF	CF		CF
171.40	4,002			
171.80	5,582	1,917	100%	1,917

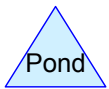
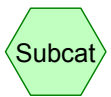
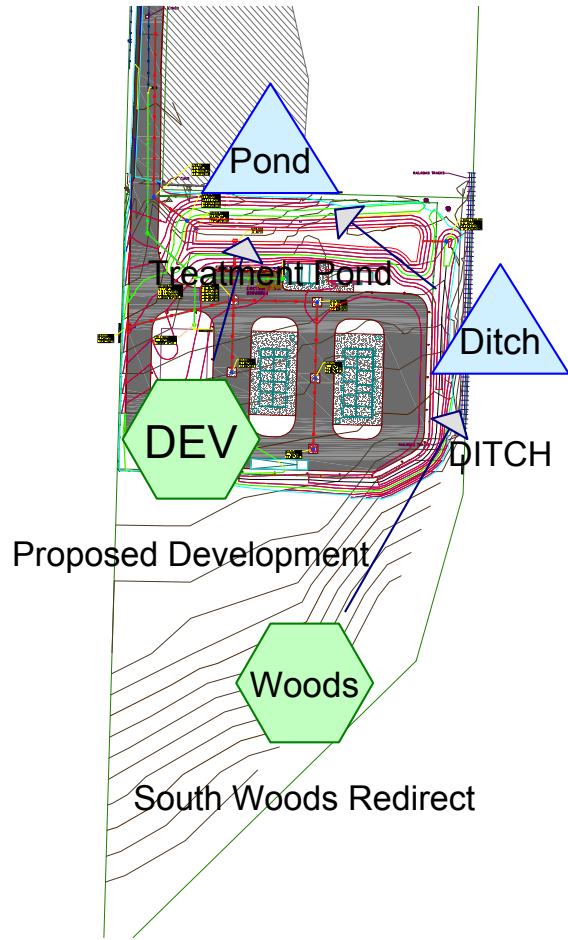
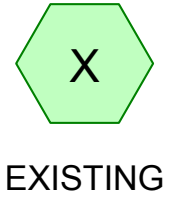
The system was also designed for rate control. The stormwater quantity on-site detention facilities have been designed to capture runoff so the post-development runoff rates from the site, and do not exceed the pre-development runoff rates from the site, based on 24-hour storm events ranging from the 2-year return storm to the 25-year return storm. Specifically, the 2, 10, and 25-year post-development runoff rates will not exceed their respective 2, 10, and 25-year pre-development runoff rates. Runoff rates were determined using the NOAA ATLAS 2 Isopleth maps for 24-HR precipitation maps, and calculation flow rates using HydroCAD software. See Table 2 below.

Rate is substantially decreased in the proposed condition. Excess runoff that enters the pond will flow through a double manhole - outlet control structure. The first manhole's only outlet is a 4" PVC pipe. This outlet will limit the flow out of the pond. The second manhole is for overflow or clogging of the first manhole.

Table 2

RUNOFF RATES			
STORM	EXISTING	PROPOSED	REDUCTION
EVENT	RATE	OCS RATE	
	(CFS)	(CFS)	
2-YR	1.44	0.74	50%
10-YR	3.01	0.83	72%
25-YR	3.88	0.87	78%

Appendix A



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>1.78"
Tc=10.0 min CN=93 Runoff=5.11 cfs 0.290 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>0.76"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=0.97 cfs 0.219 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>0.72"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=1.44 cfs 0.322 af

Pond Ditch: DITCH Peak Elev=174.31' Storage=159 cf Inflow=0.97 cfs 0.219 af
Outflow=0.97 cfs 0.217 af

Pond Pond: Treatment Pond Peak Elev=172.81' Storage=8,573 cf Inflow=5.11 cfs 0.507 af
Outflow=0.72 cfs 0.457 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 5.11 cfs @ 12.01 hrs, Volume= 0.290 af, Depth> 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
* 1.452	98	Pavement
0.505	80	>75% Grass cover, Good, HSG D
1.957	93	Weighted Average
0.505		25.80% Pervious Area
1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 0.97 cfs @ 13.08 hrs, Volume= 0.219 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	Channel Flow, Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 1.44 cfs @ 13.02 hrs, Volume= 0.322 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 0.76" for 2-YR event
 Inflow = 0.97 cfs @ 13.08 hrs, Volume= 0.219 af
 Outflow = 0.97 cfs @ 13.10 hrs, Volume= 0.217 af, Atten= 0%, Lag= 1.1 min
 Primary = 0.97 cfs @ 13.10 hrs, Volume= 0.217 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 174.31' @ 13.10 hrs Surf.Area= 426 sf Storage= 159 cf

Plug-Flow detention time= 5.9 min calculated for 0.217 af (99% of inflow)
 Center-of-Mass det. time= 2.8 min (922.4 - 919.6)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	10.0" Round Culvert L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 ' S Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	2.0' long x 0.5' breadth INLET GRATE Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.97 cfs @ 13.10 hrs HW=174.31' (Free Discharge)

- 1=Culvert (Passes 0.97 cfs of 2.18 cfs potential flow)
- 3=INLET GRATE (Weir Controls 0.97 cfs @ 1.58 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 1.13" for 2-YR event
 Inflow = 5.11 cfs @ 12.01 hrs, Volume= 0.507 af
 Outflow = 0.72 cfs @ 13.98 hrs, Volume= 0.457 af, Atten= 86%, Lag= 118.1 min
 Primary = 0.72 cfs @ 13.98 hrs, Volume= 0.457 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 172.81' @ 13.98 hrs Surf.Area= 7,644 sf Storage= 8,573 cf

Plug-Flow detention time= 157.9 min calculated for 0.457 af (90% of inflow)
 Center-of-Mass det. time= 109.6 min (962.6 - 852.9)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	8.0" Round Outlet Pipe L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 1/ Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	27.0" x 24.0" Horiz. Structure #2 Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	4.0" Round Connection Pipe L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 1/ Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	24.0" x 27.0" Horiz. Structure #1 Grate X 0.80 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.72 cfs @ 13.98 hrs HW=172.81' (Free Discharge)

- 1=Outlet Pipe (Passes 0.72 cfs of 2.75 cfs potential flow)
- 2=Structure #2 Grate (Controls 0.00 cfs)
- 3=Connection Pipe (Barrel Controls 0.72 cfs @ 8.29 fps)
- 4=Structure #1 Grate (Passes 0.72 cfs of 17.39 cfs potential flow)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>2.73"
Tc=10.0 min CN=93 Runoff=7.68 cfs 0.445 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>1.46"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=1.97 cfs 0.417 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>1.39"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=3.01 cfs 0.626 af

Pond Ditch: DITCH Peak Elev=174.48' Storage=236 cf Inflow=1.97 cfs 0.417 af
Outflow=1.97 cfs 0.416 af

Pond Pond: Treatment Pond Peak Elev=173.85' Storage=17,845 cf Inflow=7.83 cfs 0.861 af
Outflow=0.83 cfs 0.790 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 7.68 cfs @ 12.01 hrs, Volume= 0.445 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YR Rainfall=3.50"

Area (ac)	CN	Description
* 1.452	98	Pavement
0.505	80	>75% Grass cover, Good, HSG D
1.957	93	Weighted Average
0.505		25.80% Pervious Area
1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 1.97 cfs @ 13.02 hrs, Volume= 0.417 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YR Rainfall=3.50"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	Channel Flow, Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 3.01 cfs @ 13.00 hrs, Volume= 0.626 af, Depth> 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YR Rainfall=3.50"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 1.46" for 10-YR event
 Inflow = 1.97 cfs @ 13.02 hrs, Volume= 0.417 af
 Outflow = 1.97 cfs @ 13.05 hrs, Volume= 0.416 af, Atten= 0%, Lag= 1.9 min
 Primary = 1.97 cfs @ 13.05 hrs, Volume= 0.416 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 174.48' @ 13.05 hrs Surf.Area= 469 sf Storage= 236 cf

Plug-Flow detention time= 4.1 min calculated for 0.415 af (99% of inflow)
 Center-of-Mass det. time= 2.2 min (904.3 - 902.1)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	10.0" Round Culvert L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 ' S Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	2.0' long x 0.5' breadth INLET GRATE Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.97 cfs @ 13.05 hrs HW=174.48' (Free Discharge)

- 1=Culvert (Passes 1.97 cfs of 2.39 cfs potential flow)
- 3=INLET GRATE (Weir Controls 1.97 cfs @ 2.06 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 1.92" for 10-YR event
 Inflow = 7.83 cfs @ 12.01 hrs, Volume= 0.861 af
 Outflow = 0.83 cfs @ 14.62 hrs, Volume= 0.790 af, Atten= 89%, Lag= 156.8 min
 Primary = 0.83 cfs @ 14.62 hrs, Volume= 0.790 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 173.85' @ 14.62 hrs Surf.Area= 10,197 sf Storage= 17,845 cf

Plug-Flow detention time= 247.9 min calculated for 0.789 af (92% of inflow)
 Center-of-Mass det. time= 206.7 min (1,051.4 - 844.6)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	8.0" Round Outlet Pipe L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 '/ Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	27.0" x 24.0" Horiz. Structure #2 Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	4.0" Round Connection Pipe L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 '/ Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	24.0" x 27.0" Horiz. Structure #1 Grate X 0.80 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.83 cfs @ 14.62 hrs HW=173.85' (Free Discharge)

- 1=Outlet Pipe (Passes 0.83 cfs of 3.08 cfs potential flow)
- 2=Structure #2 Grate (Controls 0.00 cfs)
- 3=Connection Pipe (Barrel Controls 0.83 cfs @ 9.54 fps)
- 4=Structure #1 Grate (Passes 0.83 cfs of 24.80 cfs potential flow)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>3.21"
Tc=10.0 min CN=93 Runoff=8.95 cfs 0.524 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>1.84"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=2.52 cfs 0.527 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>1.77"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=3.88 cfs 0.794 af

Pond Ditch: DITCH Peak Elev=174.58' Storage=285 cf Inflow=2.52 cfs 0.527 af
Outflow=2.50 cfs 0.525 af

Pond Pond: Treatment Pond Peak Elev=174.32' Storage=22,943 cf Inflow=9.19 cfs 1.049 af
Outflow=0.88 cfs 0.866 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 8.95 cfs @ 12.01 hrs, Volume= 0.524 af, Depth> 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YR Rainfall=4.00"

Area (ac)	CN	Description
* 1.452	98	Pavement
0.505	80	>75% Grass cover, Good, HSG D
1.957	93	Weighted Average
0.505		25.80% Pervious Area
1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 2.52 cfs @ 13.01 hrs, Volume= 0.527 af, Depth> 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YR Rainfall=4.00"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	Channel Flow, Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 3.88 cfs @ 12.99 hrs, Volume= 0.794 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YR Rainfall=4.00"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 1.84" for 25-YR event
 Inflow = 2.52 cfs @ 13.01 hrs, Volume= 0.527 af
 Outflow = 2.50 cfs @ 13.09 hrs, Volume= 0.525 af, Atten= 1%, Lag= 4.7 min
 Primary = 2.50 cfs @ 13.09 hrs, Volume= 0.525 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 174.58' @ 13.09 hrs Surf.Area= 495 sf Storage= 285 cf

Plug-Flow detention time= 3.6 min calculated for 0.525 af (100% of inflow)
 Center-of-Mass det. time= 2.0 min (898.1 - 896.1)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	10.0" Round Culvert L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 ' S= 0.0350 ' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	2.0' long x 0.5' breadth INLET GRATE Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.50 cfs @ 13.09 hrs HW=174.58' (Free Discharge)

- 1=Culvert (Inlet Controls 2.50 cfs @ 4.58 fps)
- 3=INLET GRATE (Passes 2.50 cfs of 2.70 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 2.33" for 25-YR event
 Inflow = 9.19 cfs @ 12.01 hrs, Volume= 1.049 af
 Outflow = 0.88 cfs @ 14.87 hrs, Volume= 0.866 af, Atten= 90%, Lag= 171.9 min
 Primary = 0.88 cfs @ 14.87 hrs, Volume= 0.866 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 174.32' @ 14.87 hrs Surf.Area= 11,416 sf Storage= 22,943 cf

Plug-Flow detention time= 280.3 min calculated for 0.866 af (83% of inflow)
 Center-of-Mass det. time= 207.8 min (1,049.1 - 841.3)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	8.0" Round Outlet Pipe L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 1/ Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	27.0" x 24.0" Horiz. Structure #2 Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	4.0" Round Connection Pipe L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 1/ Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	24.0" x 27.0" Horiz. Structure #1 Grate X 0.80 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.88 cfs @ 14.87 hrs HW=174.32' (Free Discharge)

- 1=Outlet Pipe (Passes 0.88 cfs of 3.22 cfs potential flow)
- 2=Structure #2 Grate (Controls 0.00 cfs)
- 3=Connection Pipe (Barrel Controls 0.88 cfs @ 10.06 fps)
- 4=Structure #1 Grate (Passes 0.88 cfs of 27.51 cfs potential flow)

Appendix B



Air Liquide
#170359

REVISED:
1/26/2018

Site Total

Hard Surface **62,050** SF or 1.42 AC

1) WATER QUALITY, PROVIDE 0.36" TREATMENT VOLUME

62,050 SF X 0.36 IN / (12 IN / FT) = **1,862** CF

2) CALCULATE WATER QUALITY FLOW

1,862 CF / 14,400 SEC = **0.13** CFS

3) POND BOTTOM = 171.4
 5.0 IN + 171.4 = 171.82

WATER QUALITY VOLUME				
		VOLUME		
CONTOUR	AREA	STAGE		CUM'TIVE
	SF	CF		CF
171.40	4,002			
171.80	5,582	1,917	100%	1,917

RUNOFF RATES			
STORM	EXISTING	PROPOSED	REDUCTION
EVENT	RATE	OCS RATE	
	(CFS)	(CFS)	
2-YR	1.44	0.72	50%
10-YR	3.01	0.83	72%
25-YR	3.88	0.87	78%





Planners and Engineers 763.559.9100
 2300 Berkshire Lane N, Suite 200 www.vaaeng.com
 Plymouth, MN 55441 info@vaaeng.com



CLIENT:

PROJECT:
 AIR LIQUIDE
 GAS DEPOT
 TUALATIN, OR

NO.	DATE	ISSUE/REVISION	BY

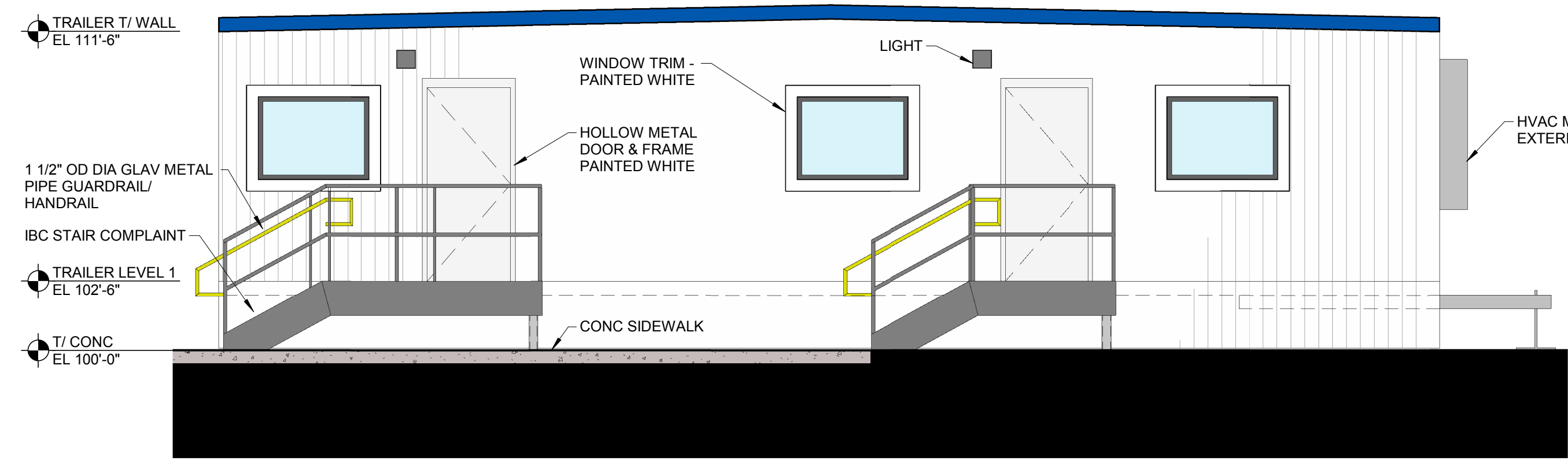
PRELIMINARY
NOT FOR CONSTRUCTION

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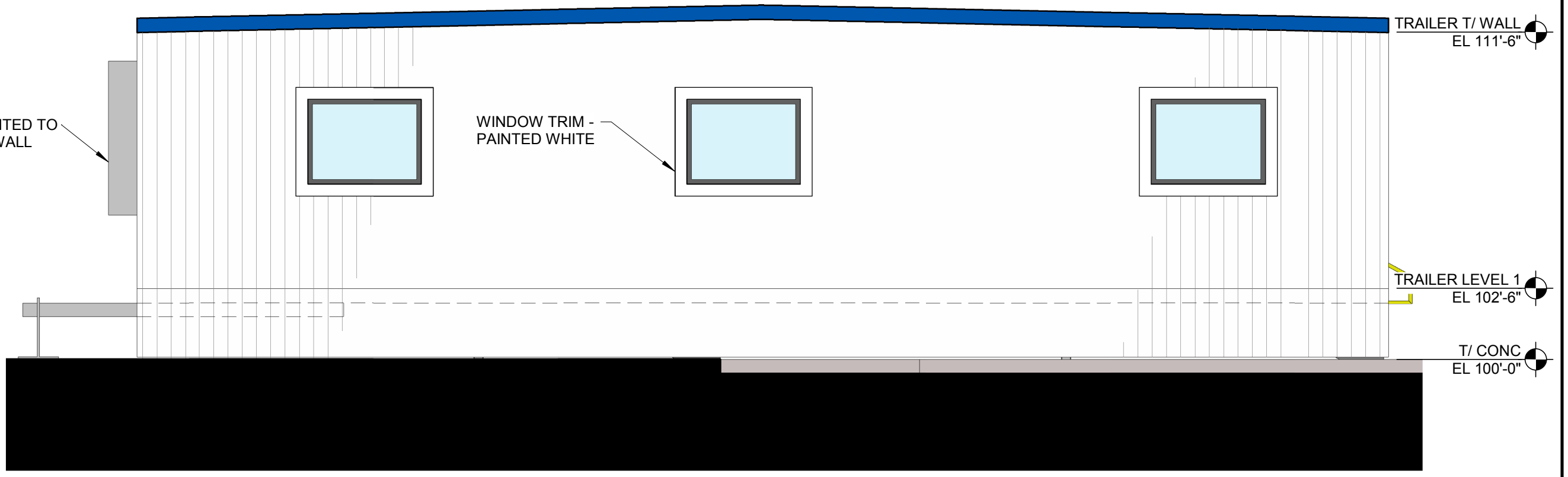
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DRAWN: KYV	CHECKED: DFS
APPROVED: DFS	

DRAWING TITLE:
 OFFICE TRAILER BLDG #300
 PLAN & EXTERIOR
 ELEVATIONS

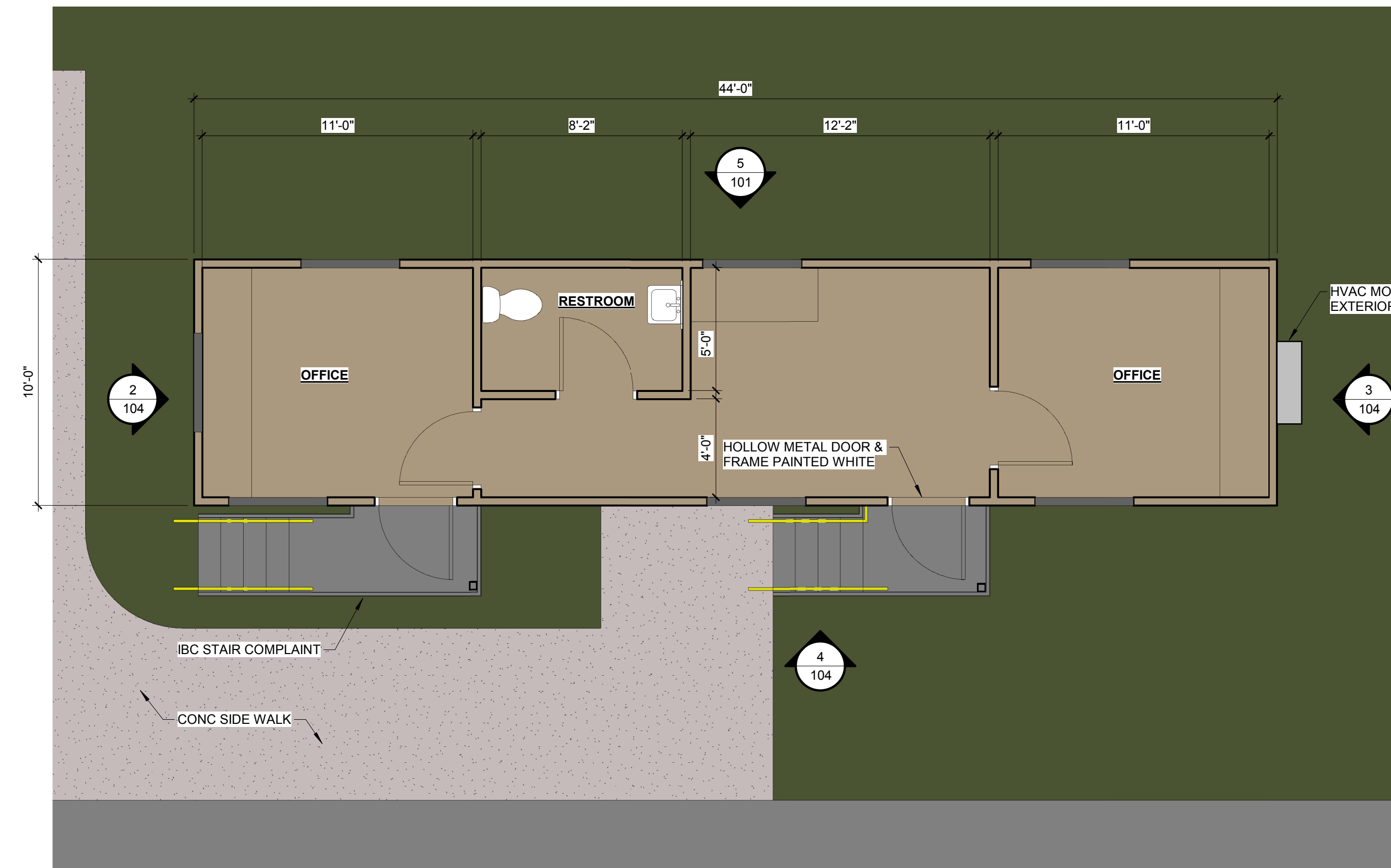
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SCALE: AS NOTED	



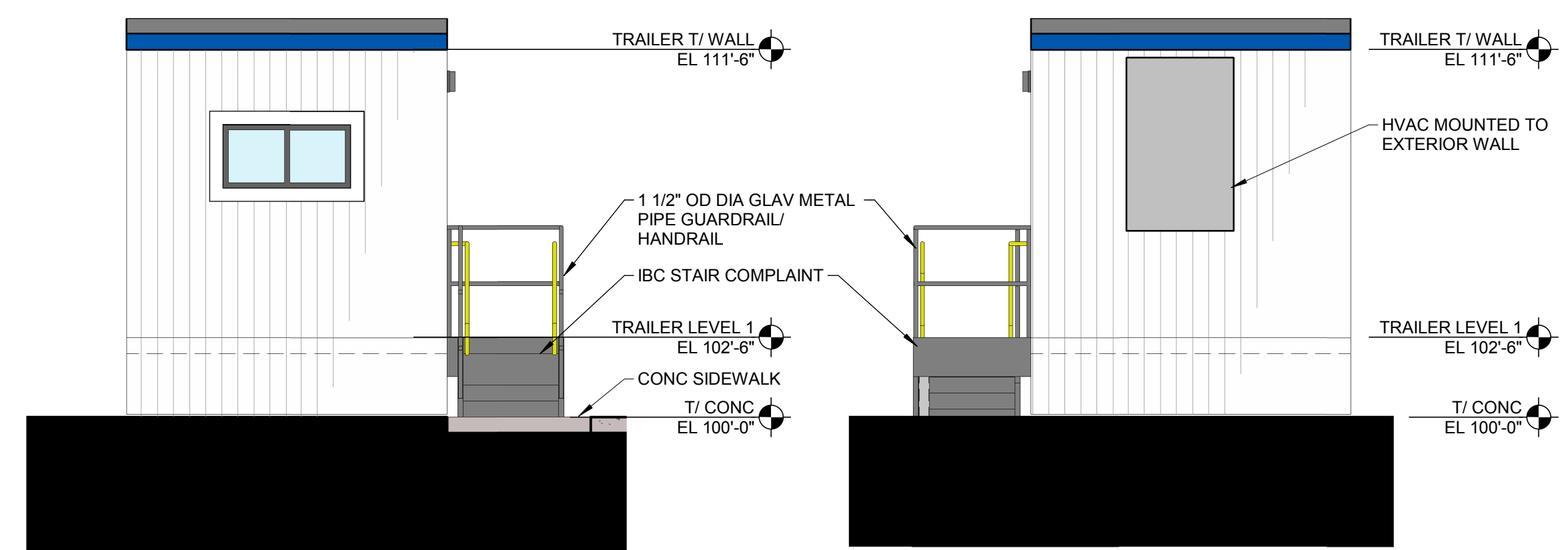
4 SOUTH EXTERIOR ELEVATION @ OFFICE BLDG #300
 1/4" = 1'-0"



5 NORTH EXTERIOR ELEVATION @ OFFICE BLDG #300
 1/4" = 1'-0"



1 PLAN @ OFFICE BLDG #300
 1/4" = 1'-0"



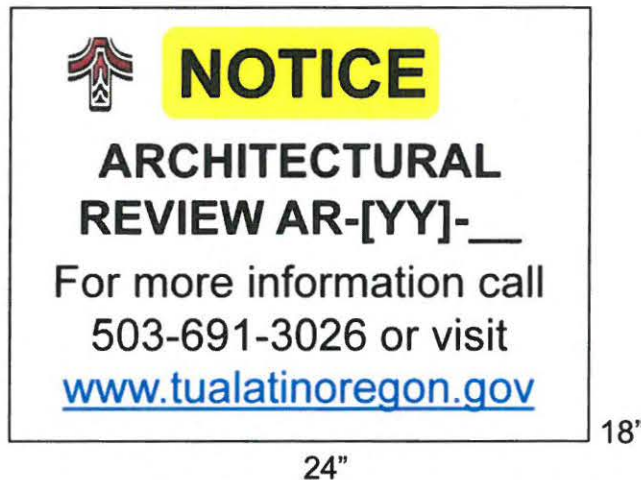
2 WEST EXTERIOR ELEVATION @ OFFICE BLDG #300
 1/4" = 1'-0"

3 EAST EXTERIOR ELEVATION @ OFFICE BLDG #300
 1/4" = 1'-0"



Date Plotted: 12/04/17 2:35:52 PM

ARCHITECTURAL REVIEW CERTIFICATION OF SIGN POSTING



The applicant shall provide and post a sign pursuant to Tualatin Development Code (TDC) 31.064(2). Additionally, the 18" x 24" sign must contain the application number, and the block around the word "NOTICE" must remain **primary yellow** composed of the **RGB color values Red 255, Green 255, and Blue 0**. Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates>.

NOTE: For larger projects, the Community Development Department may require the posting of additional signs in conspicuous locations.

As the applicant for the Air Liquide Depot
project, I hereby certify that on this day, 1 sign(s) was/were posted on the
subject property in accordance with the requirements of the Tualatin Development Code and the
Community Development Department - Planning Division.

Applicant's Name: Luke Orem
(PLEASE PRINT)

Applicant's Signature: [Handwritten Signature]

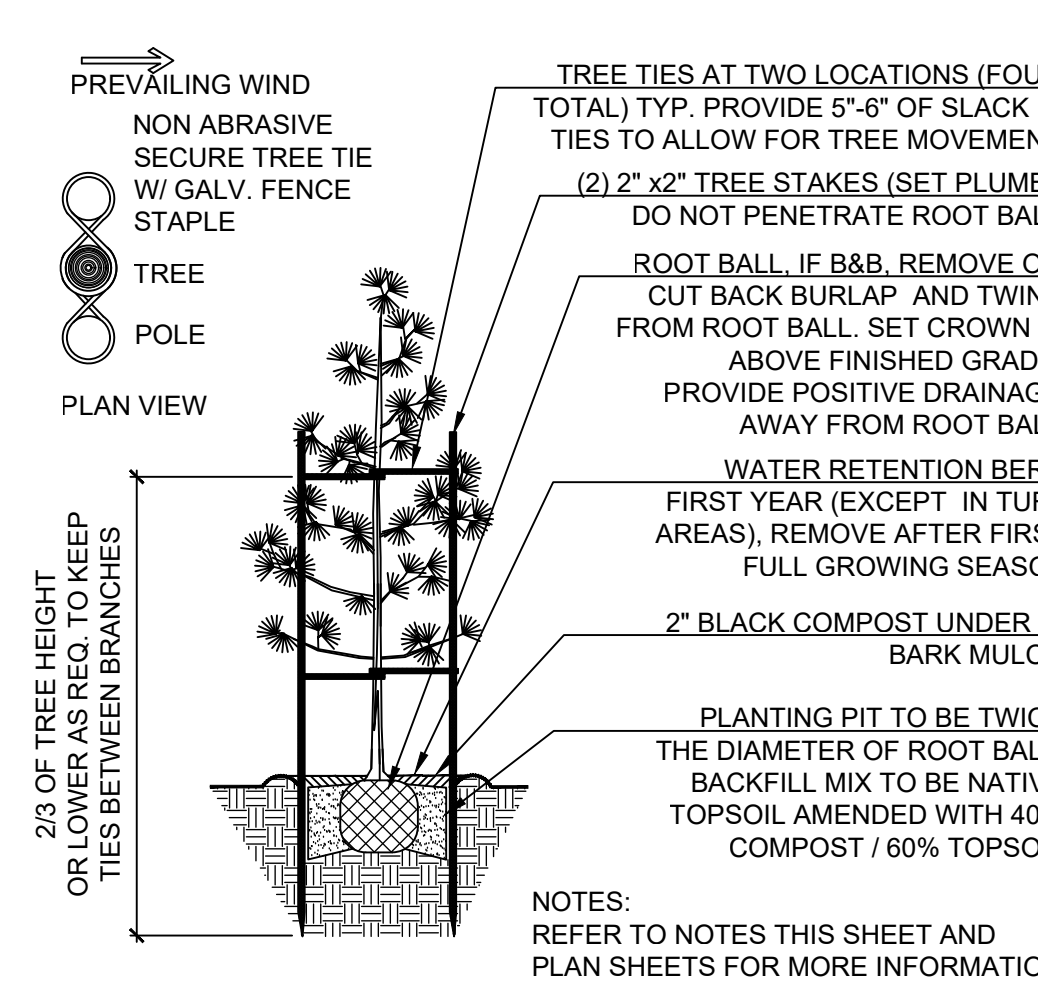
Date: 10/5/2017

GENERAL LANDSCAPE NOTES

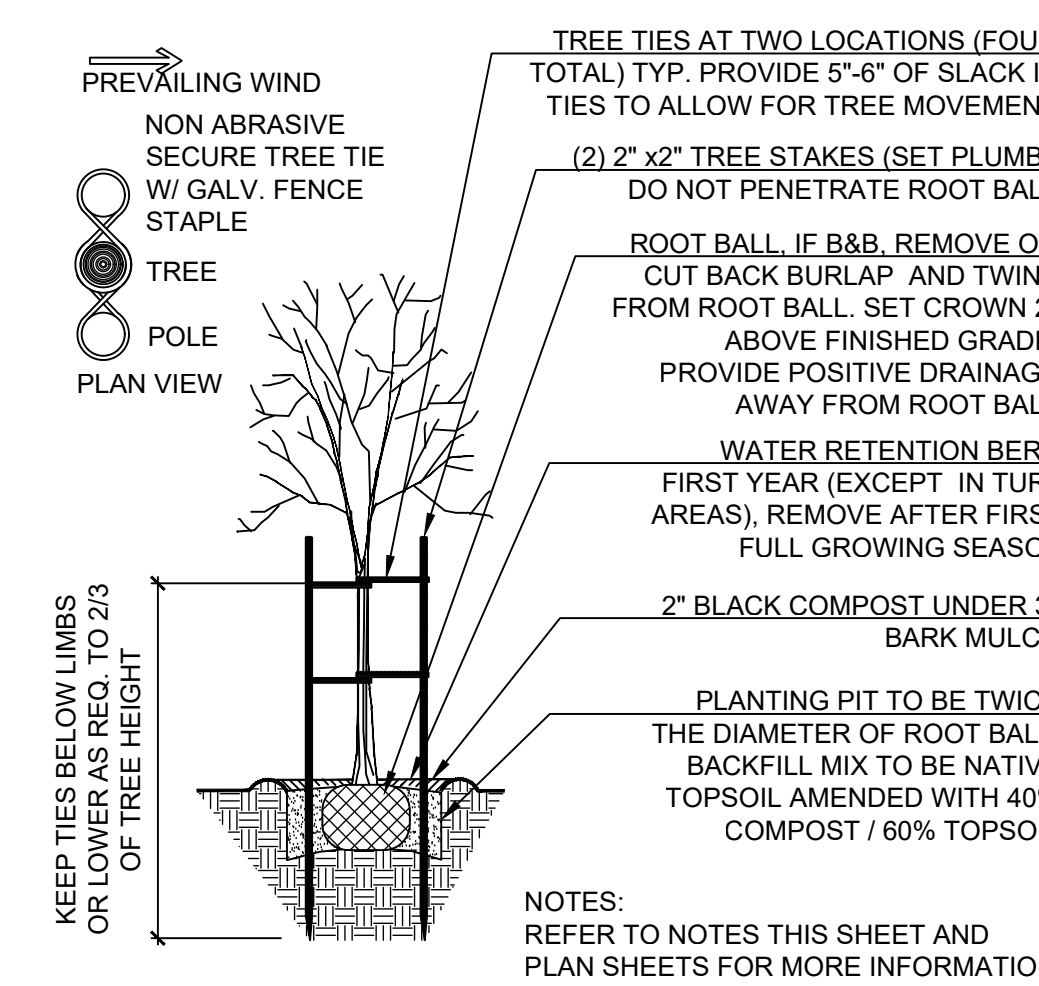
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES. IF THERE IS A DISCREPANCY BETWEEN THE QUANTITIES LISTED IN THE PLANT LEGEND AND THE QUANTITIES SHOWN ON THE PLAN, THE PLAN SHALL PREVAIL.
- STAKE ALL PROPOSED TREE LOCATIONS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING TREE PITS. THE OWNER RESERVES THE RIGHT TO ADJUST LOCATION AND SPACING OF PLANTS.
- PLANT SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SIMILAR IN SIZE, SHAPE, AND FOLIAGE TYPE TO THE PLANT BEING REPLACED AND MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. STREET TREE SUBSTITUTIONS SHALL BE FROM CITY APPROVED LISTS OR SHALL BE APPROVED BY THE LOCAL JURISDICTION.
- ALL PLANTS SHALL MEET OR EXCEED INDUSTRY STANDARDS FOR SIZE AND QUALITY. SUBSTANDARD PLANT MATERIAL WILL BE REJECTED BY THE OWNER'S REPRESENTATIVE.
- THE LOWER BRANCHES OF TREES ADJACENT TO ROADS, PARKING AREAS, AND WALKWAYS SHALL BE PRUNED UP TO AVOID INTERFERENCE WITH PEDESTRIANS AND VEHICLES.
- PLANTINGS WITHIN SIGHT DISTANCE AND VISION CLEARANCE TRIANGLES SHALL CONFORM TO LOCAL CODE STANDARDS.

- REPLACE AND RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION OR TO THE OWNER'S SATISFACTION.
- VERIFY BELOW GRADE CONDITIONS AND UTILITY LOCATIONS (EXISTING AND PROPOSED) PRIOR TO DIGGING.
- COORDINATE ALL PLANTINGS WITH LOCATIONS OF UTILITY POLES, STORM WATER STRUCTURES, CLEANOUTS, ELECTRICAL TRANSFORMERS, WATER METERS, FIRE HYDRANTS, AND ANY OTHER ABOVE OR BELOW GROUND UTILITIES AND STRUCTURES. CONTRACTOR MAY FIELD ADJUST OR ELIMINATE PLANTS THAT CONFLICT WITH UTILITIES WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE. LOCAL CODE REQUIREMENTS AND BEST INDUSTRY PRACTICES SHALL GOVERN THE DISTANCE BETWEEN PLANTINGS AND VARIOUS UTILITIES.
- THE CIVIL ENGINEER AND GENERAL CONTRACTOR SHALL COORDINATE WITH THE IRRIGATION DESIGNER/ CONTRACTOR TO PROVIDE 4" SCH. 40 PVC SLEEVES AS NECESSARY UNDER DRIVEWAYS, SIDEWALKS, AND PARKING LOTS TO SUPPLY IRRIGATION TO ISOLATED PLANTING BEDS. SLEEVES SHALL HAVE A MINIMUM 24" OF COVER.
- REMOVE ALL CONSTRUCTION DEBRIS FROM THE SITE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING ANY LANDSCAPE WORK. CONSTRUCTION DEBRIS DISCOVERED BURIED IN PLANTING BEDS SHALL BE

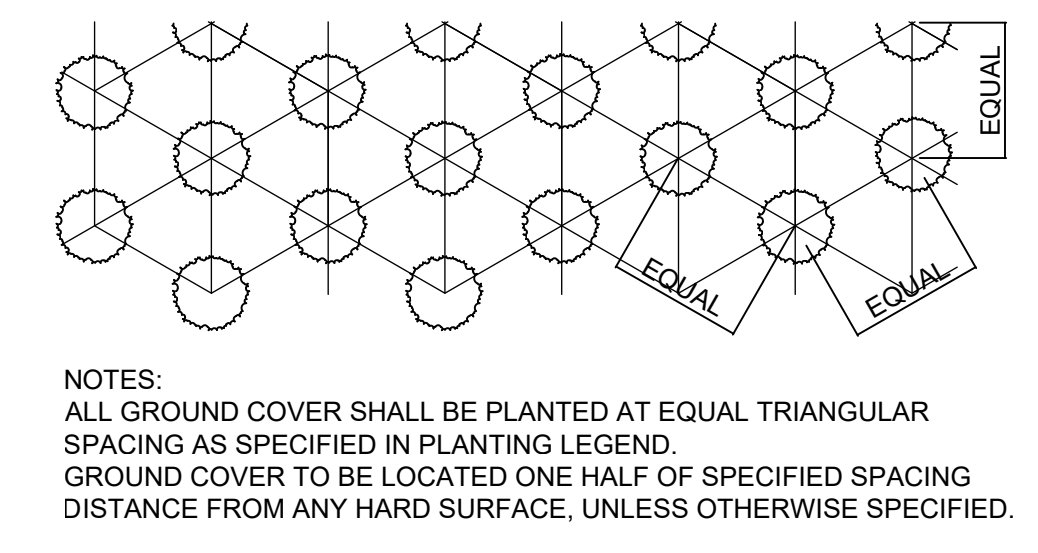
- REMOVED PRIOR TO COMPLETING LANDSCAPE WORK.
- ALL PLANTING AREAS SHALL BE PROVIDED WITH AT LEAST 8 INCHES OF NON-COMPACTED TOPSOIL OR COMPOST AMENDED AND TILLED NATIVE SOIL.
- TWO INCHES OF BLACK COMPOST MATERIAL SHALL BE INCORPORATED INTO THE TOP LAYER OF SOIL IN SEEDING AREAS. ADD ONE SHOVEL FULL OF COMPOST PER GALLON POT SIZE TO THE PLANTING PIT FOR EACH TREE, SHRUB OR GROUND COVER PLANT.
- IDENTIFY ALL PLANTING BEDS AND LAWN EDGES IN THE FIELD FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO PLANTING AND SEEDING OPERATIONS.
- TREES PLANTED CLOSER THAN 5 FEET FROM CURBS AND SIDEWALKS SHALL BE INSTALLED WITH 18" DEEPROOF® ROOT BARRIERS OR AN APPROVED EQUAL, ACCORDING TO MANUFACTURERS SPECIFICATIONS.
- THE LANDSCAPE PLANTING PLANS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OUTLINED BY LOCAL CODES. IF A CODE OR STANDARD WAS OVERLOOKED, OMITTED OR VIOLATED ON THE PLAN, THE CODE SHALL PREVAIL OVER THE PLAN. IF THE CONTRACTOR PROPOSES ANY DEVIATIONS FROM THE PLANTING PLANS, THOSE DEVIATIONS SHALL NOT CAUSE THE PLAN TO FALL BELOW MINIMUM CODE REQUIREMENTS.



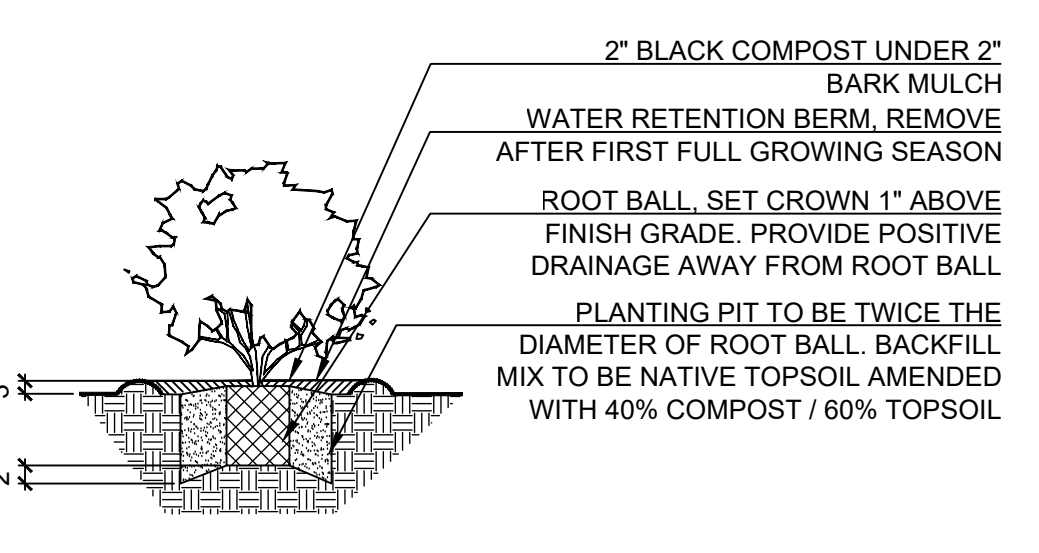
1 Evergreen Planting Detail
NO SCALE



2 Deciduous Tree Planting Details
NO SCALE



3 Groundcover Planting Details
NO SCALE



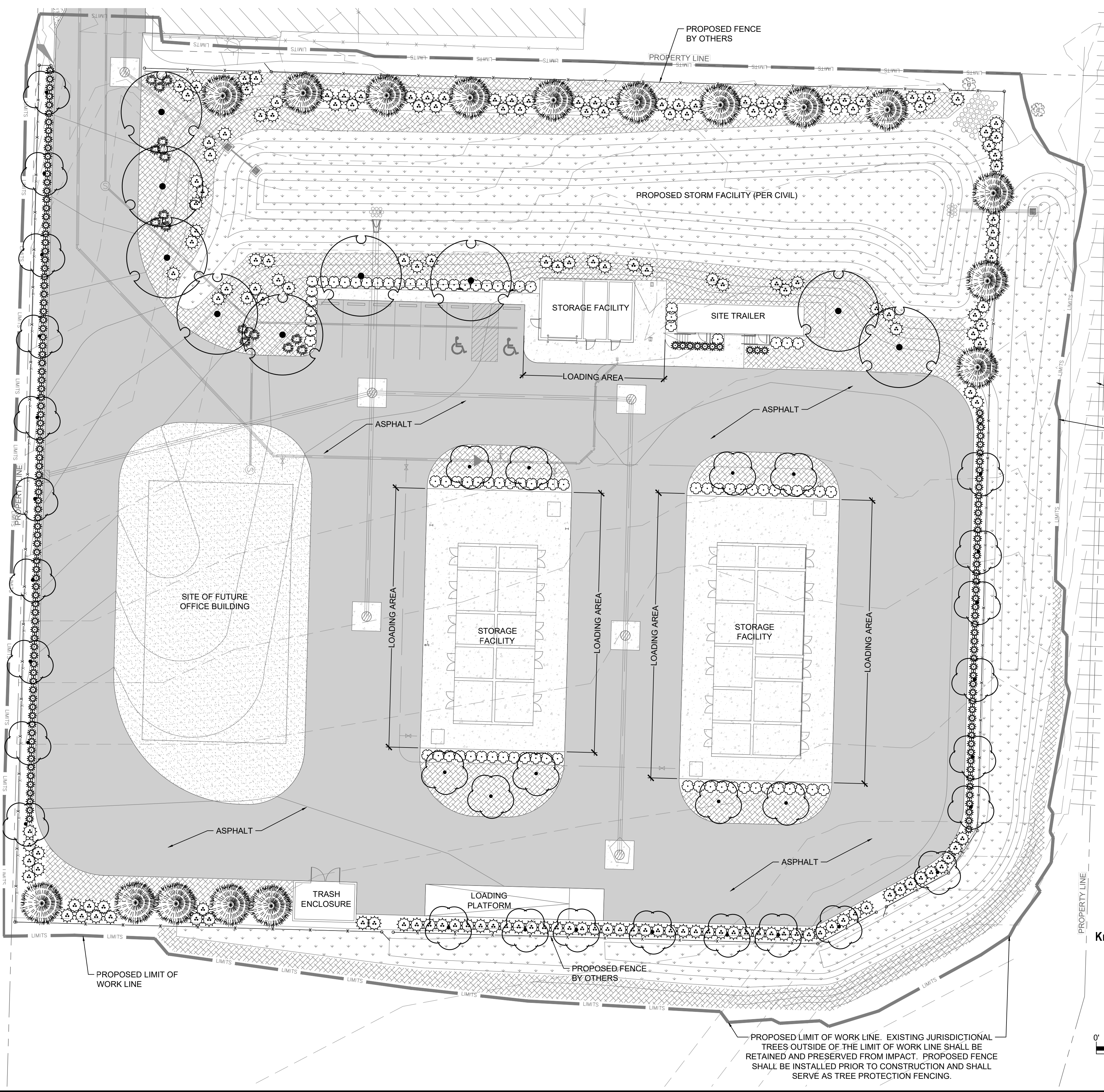
4 Shrub Planting Details
NO SCALE

PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONTAINER	SIZE	SPACING	QTY
	Calocedrus decurrens / Incense Cedar	B & B	5' height	30' o.c.	17
	Carpinus betulus 'Emerald Avenue' TM / European Hornbeam	B & B	1.5" cal	30' o.c.	9
	Carpinus betulus 'Fastigiata' / Pyramidal European Hornbeam	B & B	1.5" cal	as shown	33
SHRUBS	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Cornus sericea 'Artic Fire' / Artic Fire Dogwood	1 gal	12"-15"	5' o.c.	166
	Spiraea x bumalda 'Goldflame' / Goldflame Spirea	1 gal	12"-15"	4' o.c.	86
GRASSES	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Calamagrostis x acutiflora 'Avalanche' / Feather Reed Grass	1 gal	15"-18"	3' o.c.	148
	Pennisetum alopecuroides 'Red Head' / Red Head Fountain Grass	1 gal	12"-15"	3.5' o.c.	15
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Fragaria chilensis / Beach Strawberry	1 gal	10"-12"	6' o.c.	383
SOD/SEED	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Turf Hydroseed / Drought Tolerant Fescue Blend	hydroseed			8,158 sf
STORM FACILITY	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Plant Mix (by others) / Storm Facility Plant Mix	seed			21,659 sf

PROJECT SPECIFIC LANDSCAPE NOTES

- THE STORM FACILITY SIZE, SHAPE, AND OTHER DETAILS WILL BE WORKED OUT IN FINAL DESIGN. THE FACILITY SHOWN ON THIS PLAN IS APPROXIMATE. IF STORM FACILITY SHRINKS, THEN BEACH STRAWBERRY OR LAWN SHALL BE PLANTED IN THE VACATED SPACE.
- STORM FACILITY PLANTINGS WILL BE SPECIFIED BY THE CIVIL ENGINEER. IF THE CIVIL ENGINEER DOES NOT SPECIFY STORM FACILITY PLANTINGS, THE LANDSCAPE ARCHITECT RECOMMENDS THE WETLAND PRAIRIE / BIOSWALE 1 NATIVE SEED MIX BY HERITAGE SEEDLINGS, INC. SHALL BE HYDROSEEDED IN THE STORM FACILITY. THE SEED MIX IS AVAILABLE AT WWW.HERITAGESEEDLINGS.COM OR 503-585-9835.
- IRRIGATION SHALL BE PROVIDED (DESIGN/BUILD) BY THE OWNER OR CONTRACTOR. IRRIGATION SHALL BE PROVIDED BY FULLY AUTOMATIC UNDERGROUND OR DRIP SYSTEM CAPABLE OF KEEPING ALL PLANT MATERIAL ADEQUATELY WATERED THROUGHOUT THE YEAR.



811
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SCALE: 1" = 20'

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2718 REGISTERED
653
James R. Clark
OREGON
03/31/08
LANDSCAPE ARCHITECT

Clark Land Design, PLLC
Land Use Planning
Landscape Architecture
Development Consulting

1001 NE Avenue, Suite A-214 | Vancouver, WA 98661 | 509.621.4441 | jclark@clarkdesign.com

Air Liquide Gas Bottle Storage

10780 TUALAIN - SHERWOOD ROAD
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SHEET TITLE
PRELIMINARY
LANDSCAPE PLAN

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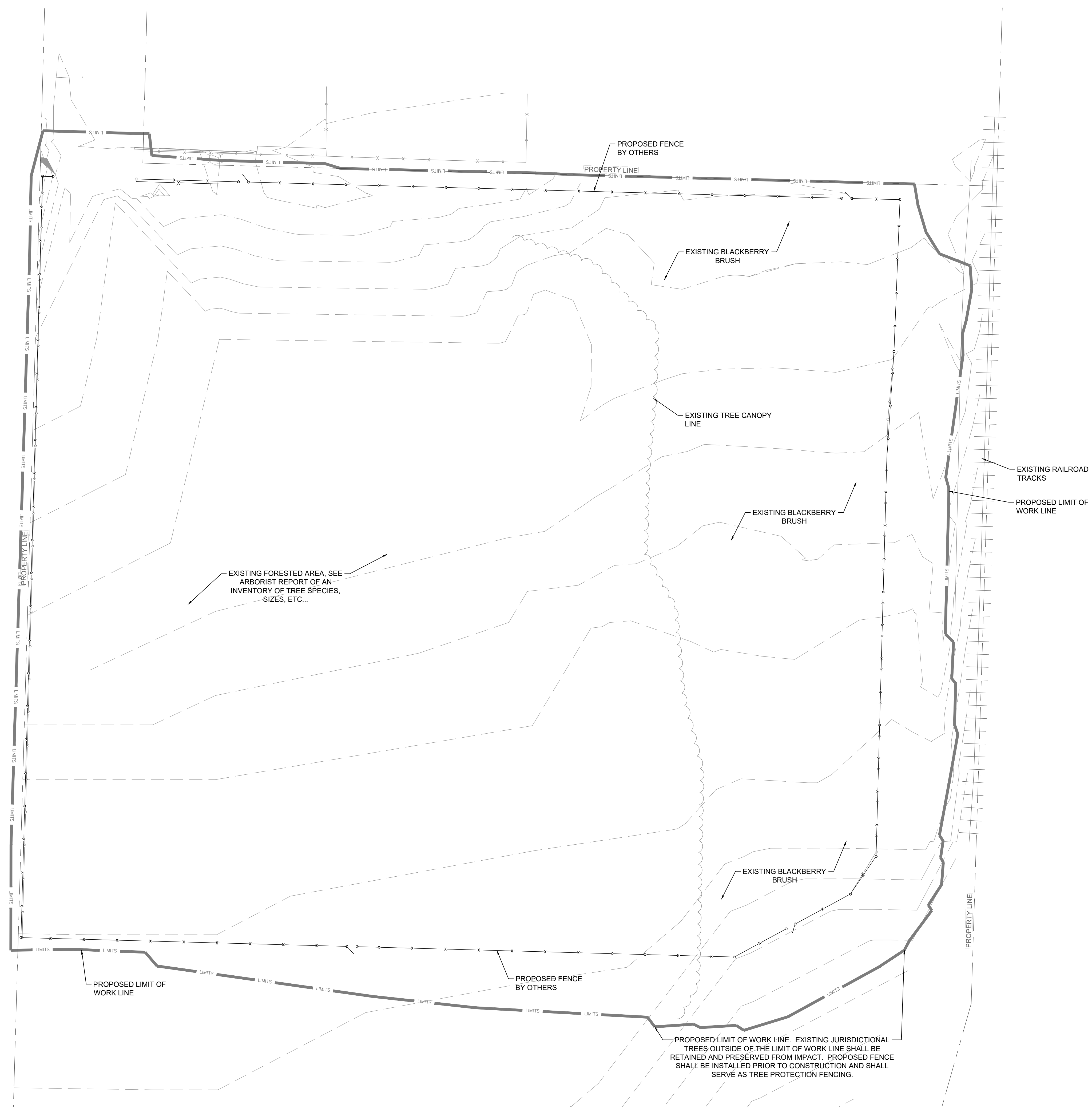
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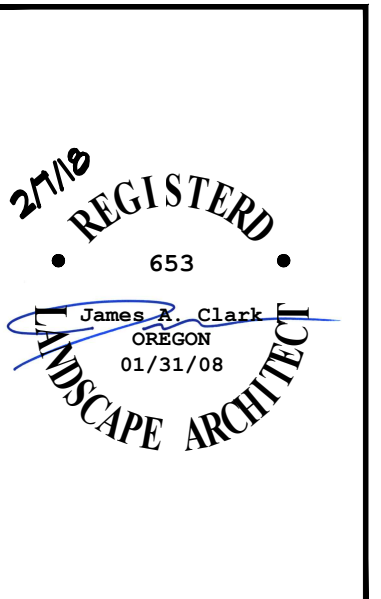
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NOTES
 1. TREES WITHIN THE AREA OF DEVELOPMENT ARE INVENTORIED IN AN ARBORIST REPORT BY TERAGAN & ASSOCIATES, INC., DATED OCTOBER 5, 2017. THIS REPORT IS INCLUDED IN THE PRELIMINARY LAND USE APPLICATION. PLEASE REFER TO THIS REPORT FOR ADDITIONAL INFORMATION AND RECOMMENDATIONS.



Clark Land Design, pllc
 Land Use Planning
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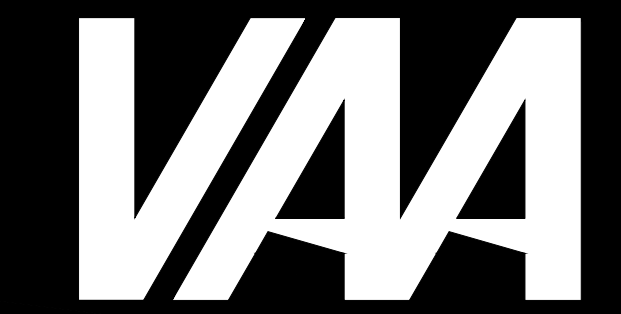
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SITEWORK FOR THE PROPOSED AIR LIQUIDE GAS DEPOT TO SERVE AIR LIQUIDE CREATIVE OXYGEN TUALATIN, OR



Planners and Engineers 763.559.9100
2300 Berkshire Lane N, Suite 200 www.vaaeng.com
Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
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B	01/26/18	CITY REVIEW SUBMITTAL	CMB

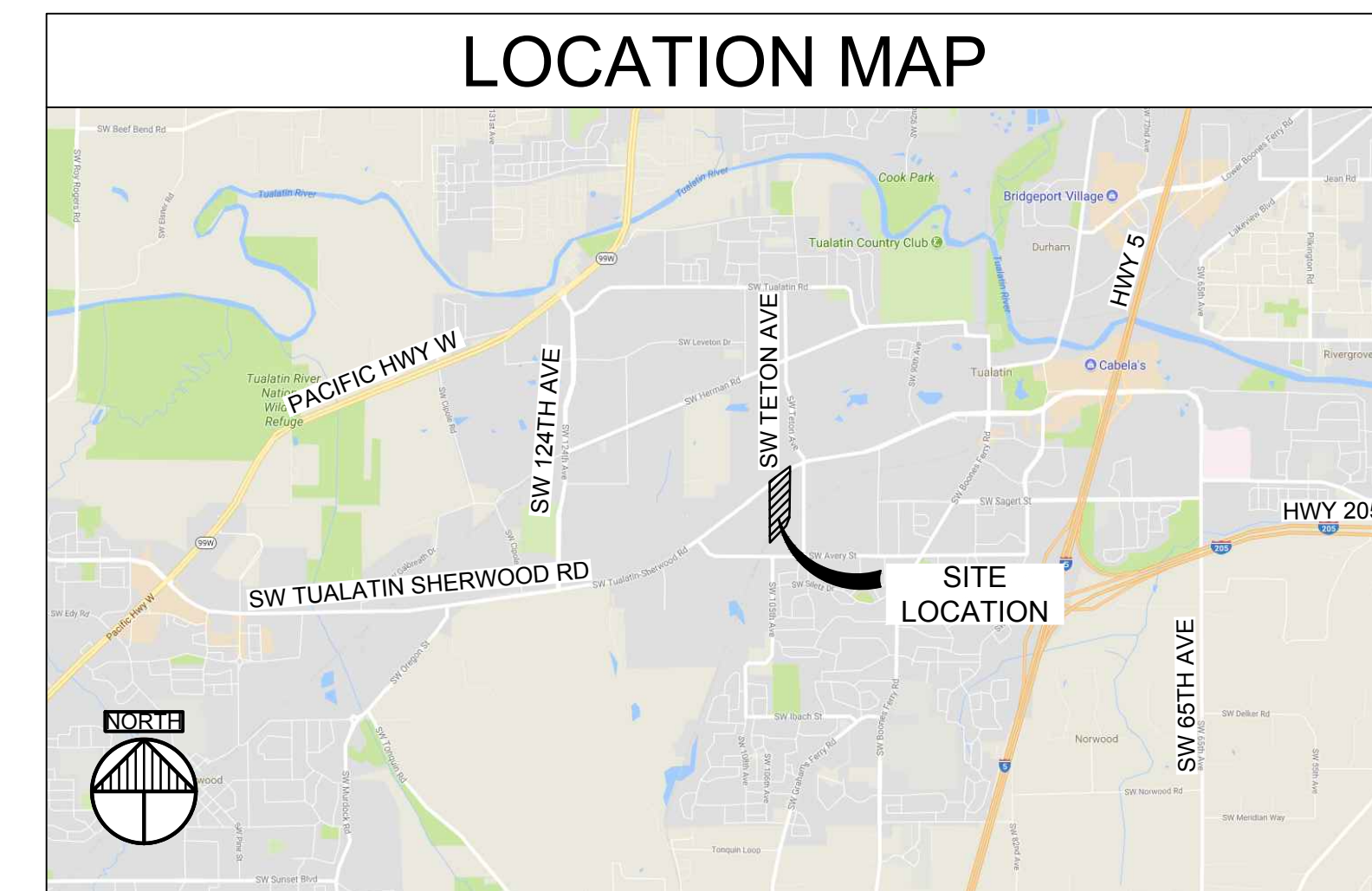
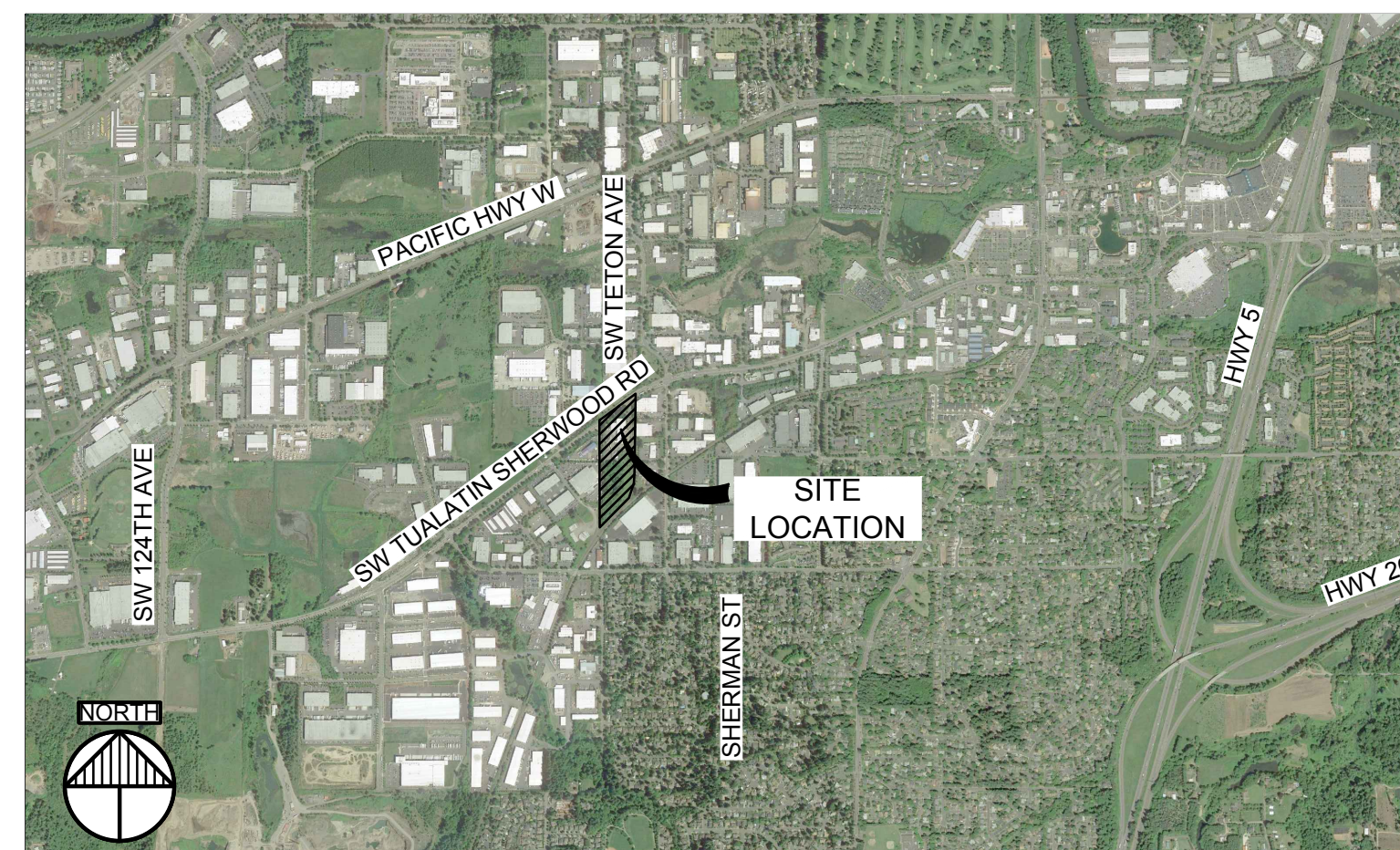
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**TITLE SHEET AND
DRAWING INDEX**

PROJECT NO: 170359	DRAWING NO: C000
SCALE: AS NOTED	



DRAWING INDEX	
SHEET NO.	
C000	TITLE SHEET AND DRAWING INDEX SURVEY BY CMT SURVEYING AND CONSULTING
C100	ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN
C101	ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN
C200	OVERALL GRADING AND DRAINAGE PLAN
C201	ENLARGED GRADING AND DRAINAGE PLAN
C300	OVERALL EROSION AND SEDIMENT CONTROL PLAN
C301	ENLARGED EROSION AND SEDIMENT CONTROL PLAN
C400	OVERALL UTILITY PLAN
C401	ENLARGED UTILITY PLAN
C450	OVERALL SITE PAVING PLAN
C451	ENLARGED SITE PAVING PLAN
C500	CIVIL DETAILS
C501	CIVIL DETAILS
C502	CIVIL DETAILS
C503	CIVIL DETAILS
C504	CIVIL DETAILS
C600	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

**ISSUED FOR
REVIEW
NOT FOR CONSTRUCTION**

GENERAL NOTES

1. ALL EXISTING INFORMATION TAKEN FROM SURVEY BY CMT SURVEYING AND CONSULTING PROJECT NUMBER 81040514, DATED JULY 7, 2017. BACKGROUND SURVEY ON THESE DRAWINGS IS FOR REFERENCE ONLY. NOT ALL TOPOGRAPHIC INFORMATION SHOWN HEREIN HAS BEEN SURVEYED. REFER TO SHEET C100 FOR DETAILED DESCRIPTION OF SPECIFIC AREAS THAT HAVE NOT BEEN SURVEYED. ADDITIONAL SURVEY SHALL BE COMPLETED AND DESIGNS VERIFIED PRIOR TO SUBMISSION OF CONSTRUCTION LEVEL DOCUMENTS.
2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
4. ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE.
5. CONTRACTOR TO KEEP FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO REPAIR ANY DAMAGE AT OWN EXPENSE.
6. ALL WORK TO CONFORM WITH CITY OF TUALATIN AND STATE OF OREGON STANDARDS AND REGULATIONS.
7. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CATCHBASINS AND MANHOLES ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. COORDINATE LOCATION OF MANHOLE COVER AND CASTING SO THAT IT IS PROPERLY LOCATED AT THE BACK OF CURBLINE FOR THE CURB INLETS OR CENTERED IN THE AREA AS SHOWN ON THE PLAN FOR THE AREA DRAINS AND MANHOLE COVERS.
9. FLARED END SECTIONS (FES) ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. ALL PIPE LENGTHS INCLUDE FES. CONTRACTOR/SURVEYOR TO STAKE THE END OF FES FOR LOCATION.
10. PROVIDE TRAFFIC CONTROL AT STREETS AND SIDEWALKS PER CITY OF TUALATIN AND MUTCD REQUIREMENTS.
11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

REMOVAL NOTES

1. ALL UTILITY DEMOLITION AND/OR ABANDONMENT TO BE PERFORMED IN ACCORDANCE WITH CITY OF TUALATIN AND STATE OF OREGON REGULATIONS AND STANDARDS.
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3. ALL ELECTRICAL POLE AND LIGHT REMOVAL SHALL BE COORDINATED WITH THE OWNER AND AUTHORITY HAVING JURISDICTION PRIOR TO DEMOLITION.
4. EXISTING TREES TO BE RETAINED SHALL BE FENCED AROUND THE DRIP LINE WITH CHAIN LINK OR OTHER STURDY FENCING DURING CONSTRUCTION.



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PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

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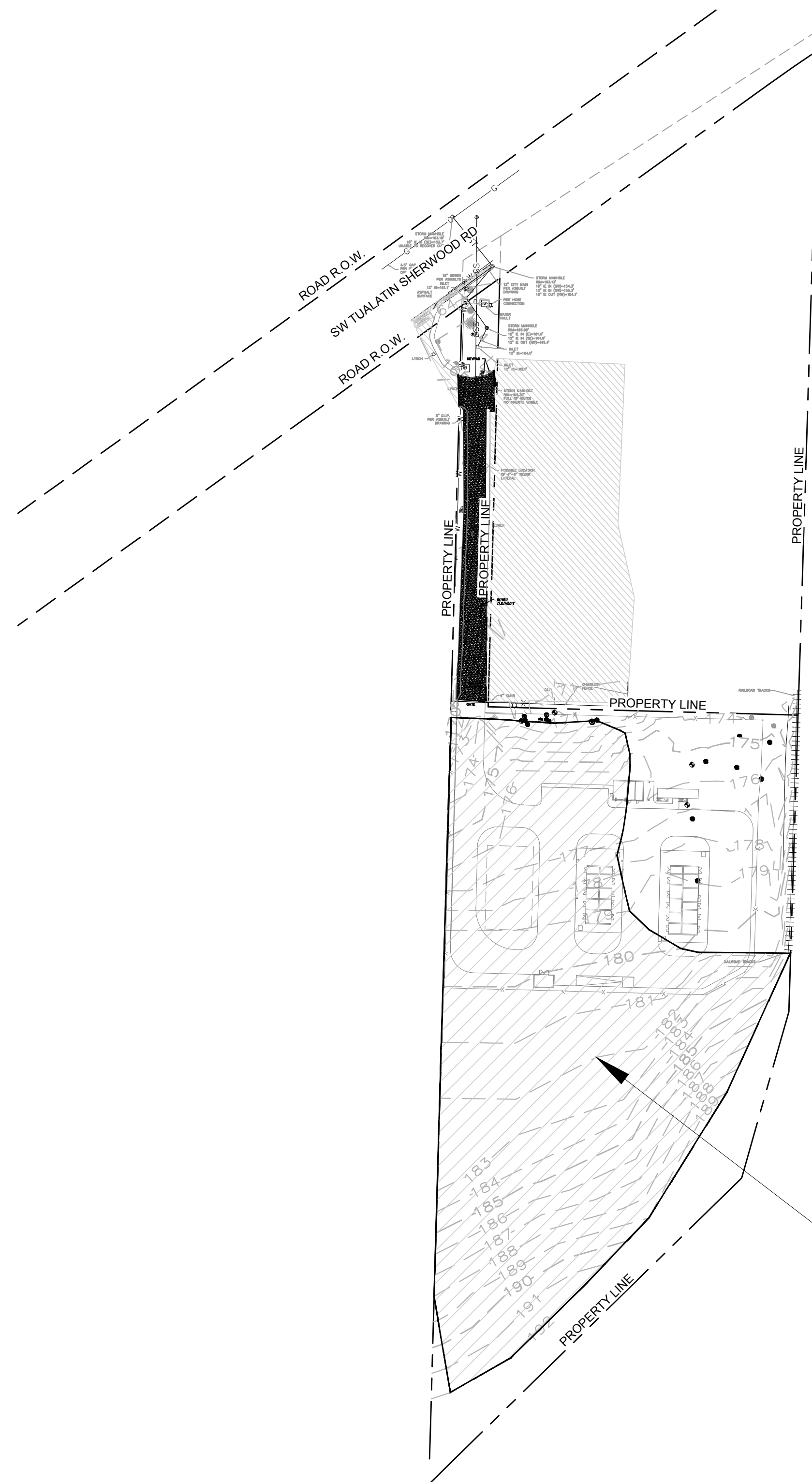
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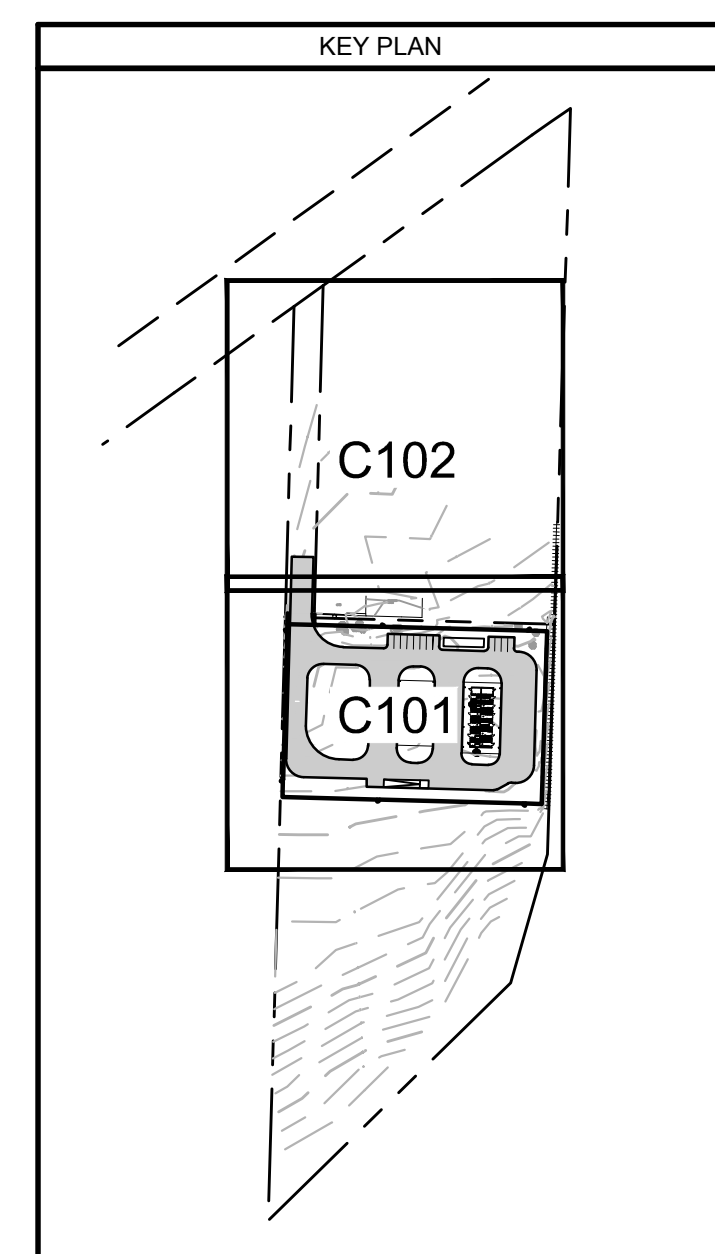
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OVERALL EXISTING
CONDITIONS AND
REMOVALS PLAN

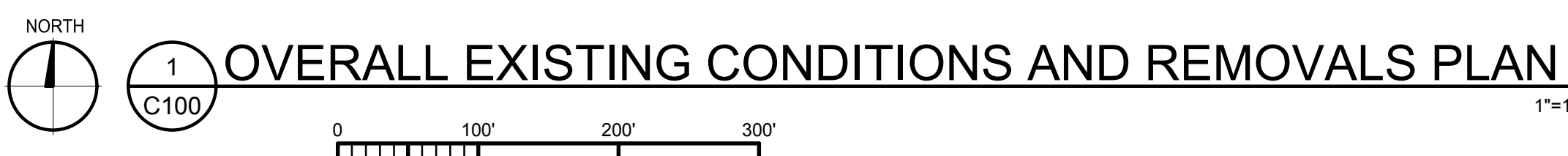
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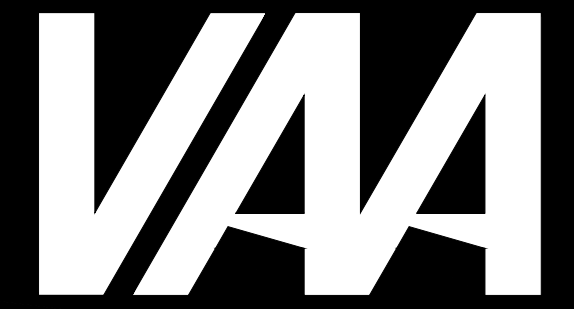


1 OVERALL EXISTING CONDITIONS AND REMOVALS PLAN

MATCHLINE - SEE SHEET C102

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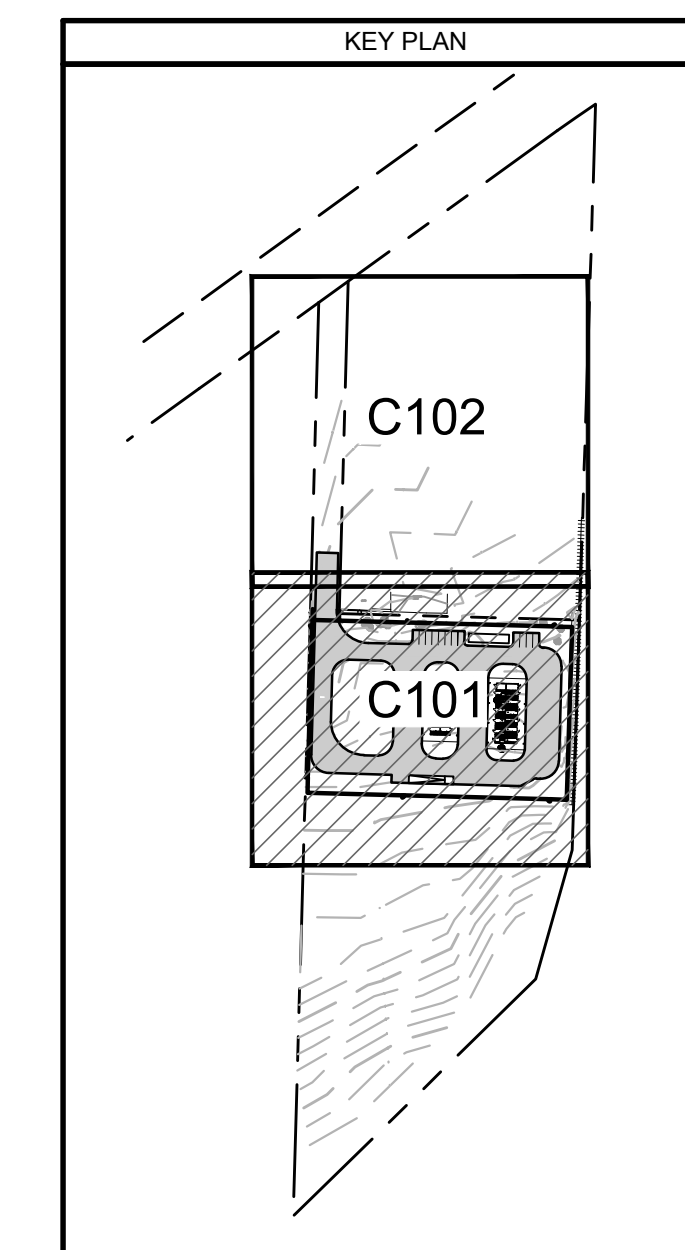
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LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- ← DENOTES EXISTING SURFACE DRAINAGE
- 170- EXISTING MAJOR CONTOUR
- 171- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- ☀ EXISTING TREE
- ☀ EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED SAWCUT LINE
- HA#2 SOIL BORING LOCATION
- SURVEYED AREA BOUNDARY

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LIMITS OF DISTURBANCE
(SHOWN OUTSIDE OF PROPERTY
LIMITS FOR CLARITY. NO WORK
SHALL BE PERFORMED OUTSIDE
OF PROPERTY LINES.)

EXISTING BITUMINOUS
PAVEMENT TO BE
REMOVED

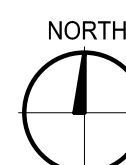
APPROXIMATELY 320' OF
EXISTING CURB AND
GUTTER TO BE REMOVED

EXISTING FENCE AND
GATE TO BE REMOVED
REMOVE FENCE TO
NEAREST POST

APPROXIMATELY 8' OF
EXISTING CURB AND
GUTTER TO BE REMOVED

ALL TREES IN THIS AREA
TO BE REMOVED
REFER TO TREE
PRESERVATION PLAN
(PREPARED BY OTHERS)

APPROXIMATE LOCATION OF EXISTING
BITUMINOUS PAVEMENT. LOCATIONS SHOWN
HAVE NOT BEEN SURVEYED AND WERE
OBTAINED FROM AERIAL PHOTOGRAPHY

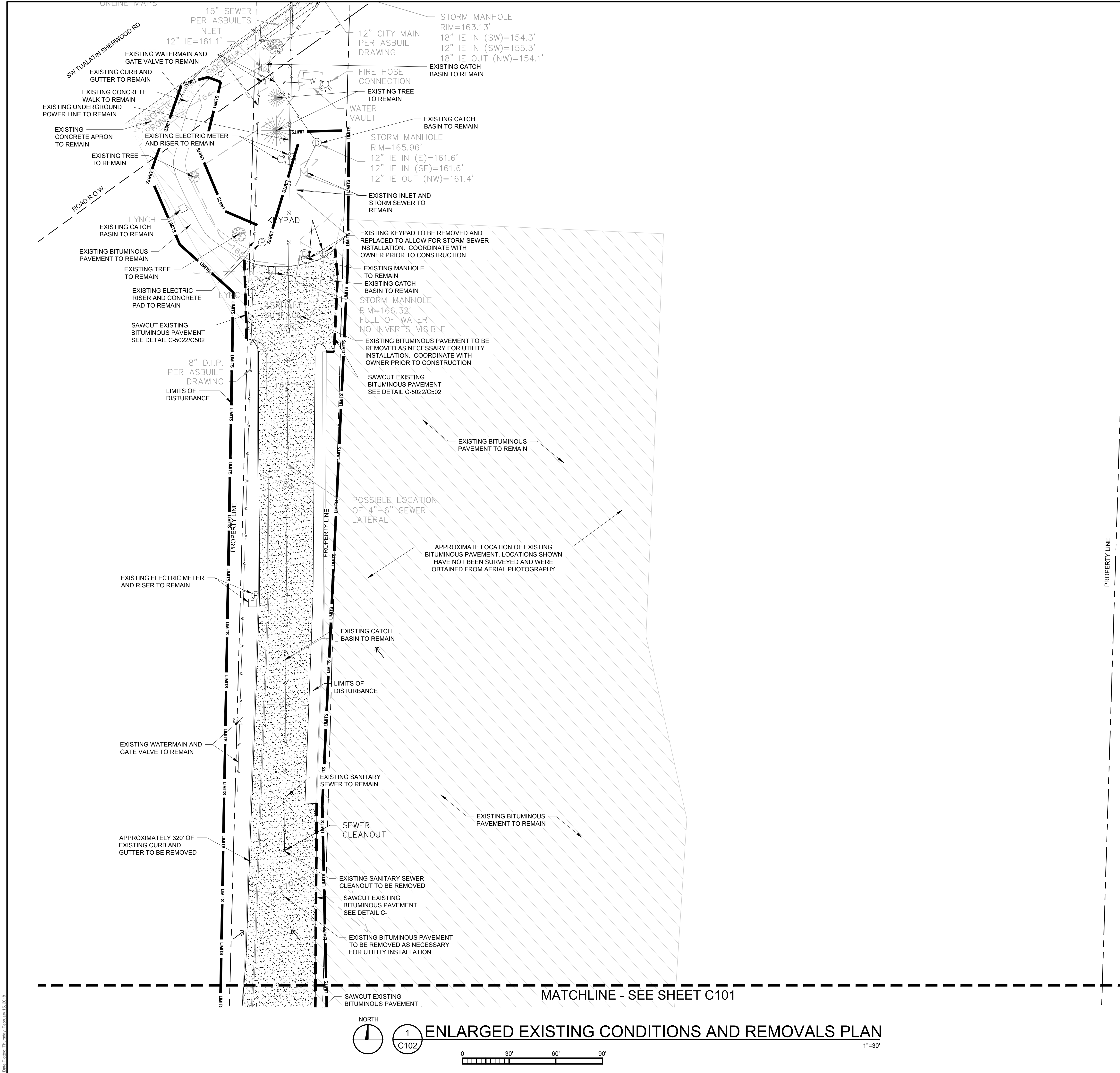


1
C101

ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN

1"=20'





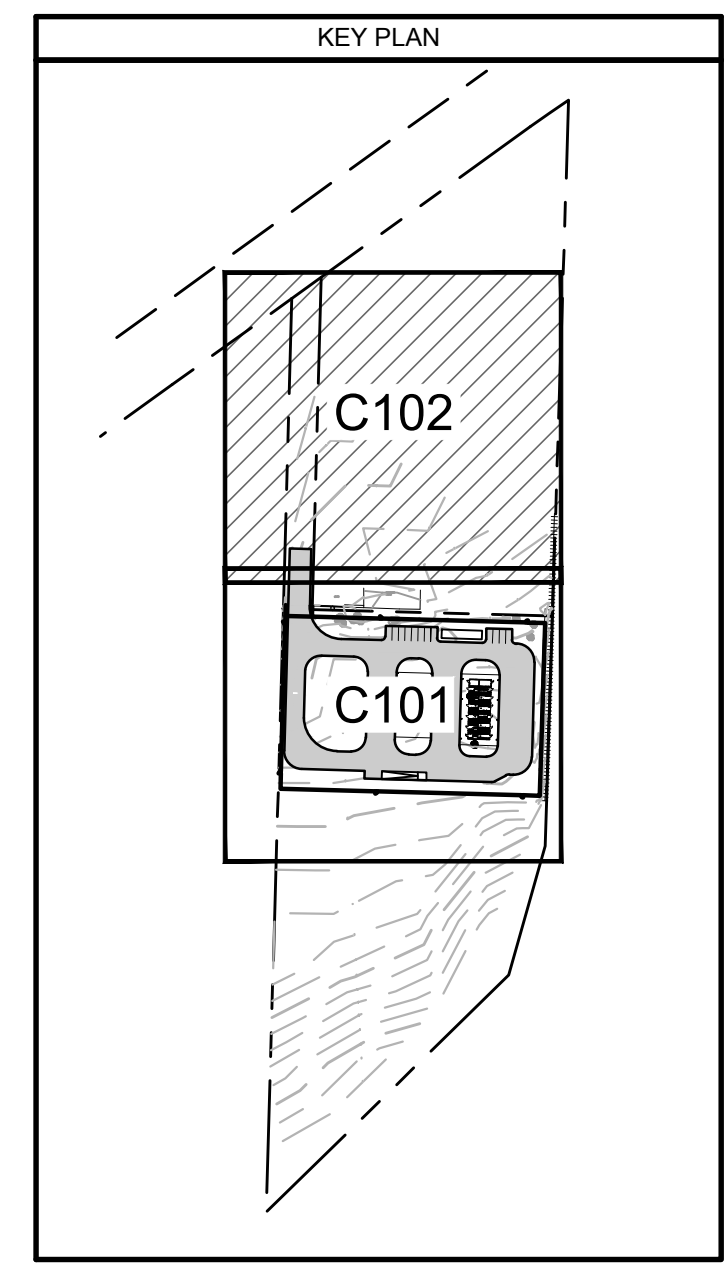
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LEGEND

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- DENOTES EXISTING SURFACE DRAINAGE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED SAWCUT LINE
- SOIL BORING LOCATION
- SURVEYED AREA BOUNDARY

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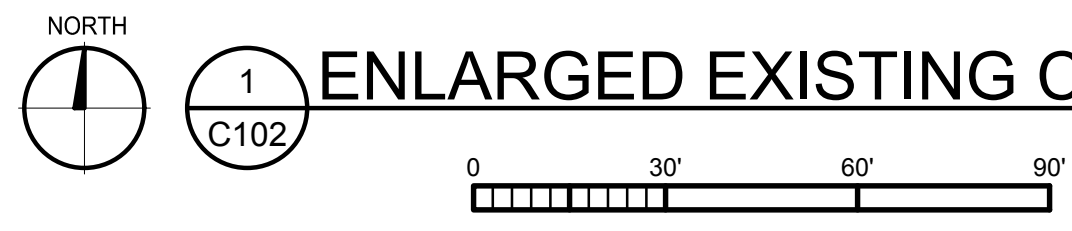
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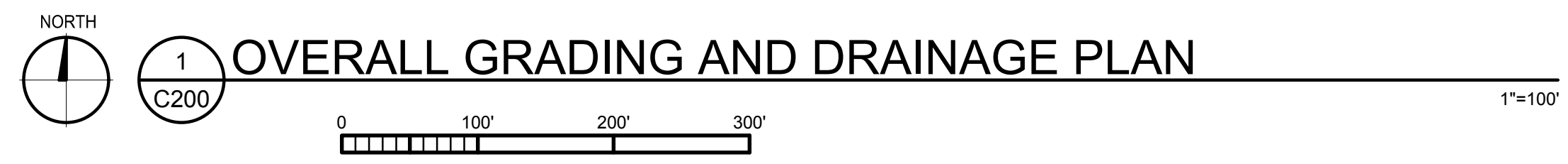
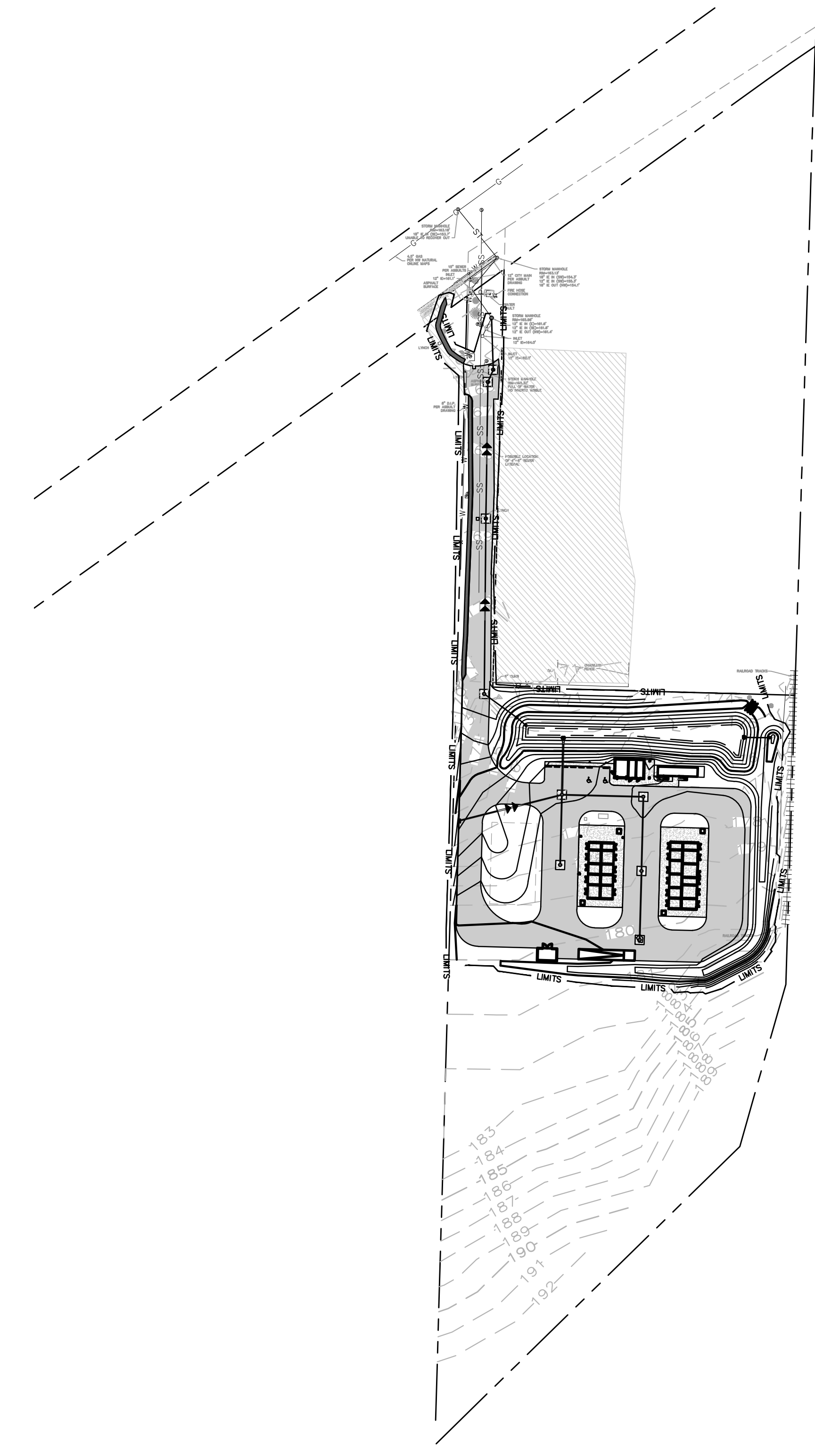
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SCALE: AS NOTED	

ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN



MATCHLINE - SEE SHEET C101



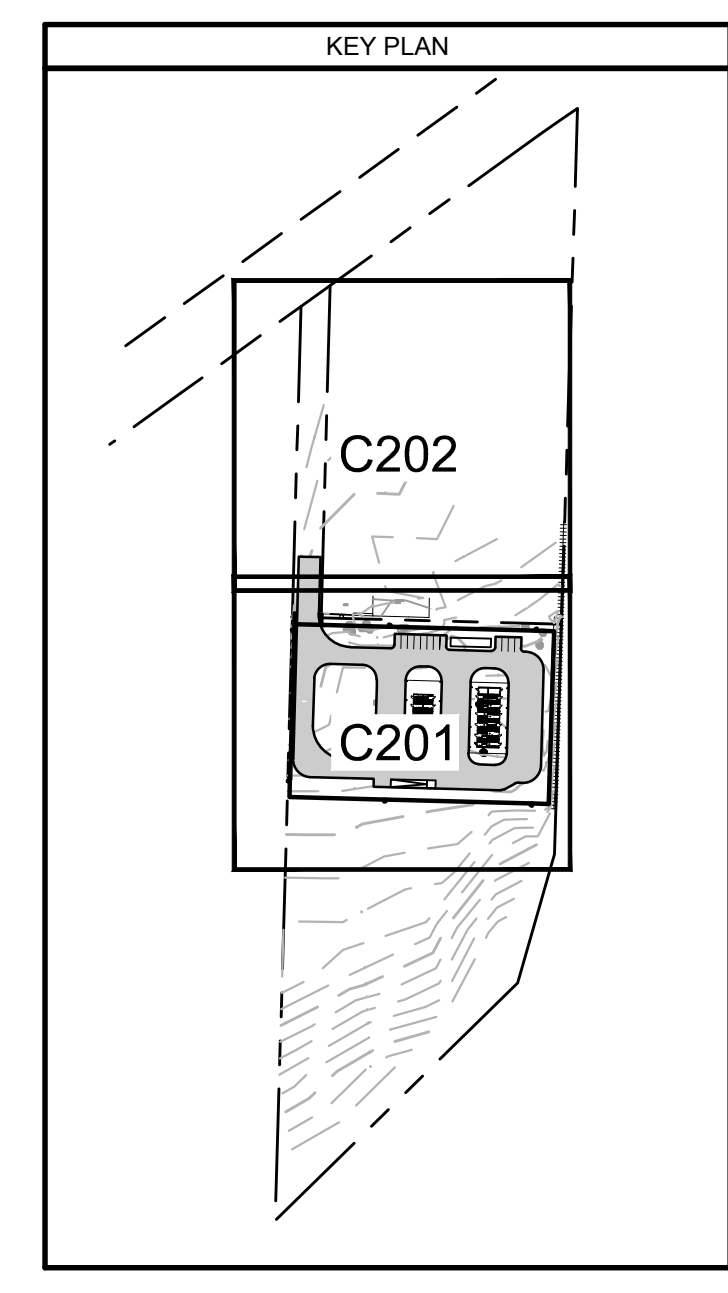
GENERAL NOTES

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2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
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5. CONTRACTOR TO KEEP FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO REPAIR ANY DAMAGE AT OWN EXPENSE.
6. ALL WORK TO CONFORM WITH CITY OF TUALATIN AND STATE OF OREGON STANDARDS AND REGULATIONS.
7. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
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9. FLARED END SECTIONS (FES) ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. ALL PIPE LENGTHS INCLUDE FES. CONTRACTOR/SURVEYOR TO STAKE THE END OF FES FOR LOCATION.
10. PROVIDE TRAFFIC CONTROL AT STREETS AND SIDEWALKS PER CITY OF TUALATIN AND MUTCD REQUIREMENTS.
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GRADING NOTES

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2. SEE SHEET C300 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. SEE SWPPP C600 FOR ADDITIONAL DETAILED EROSION PREVENTION AND SEDIMENT CONTROL NOTES.
4. SEE SHEETS C301 & C302 FOR ADDITIONAL LOCATIONS OF EROSION AND SEDIMENT CONTROL ITEMS. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

CIVIL EL. 179.86 = STRUCTURAL EL. 100'-0"




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REVIEW
NOT FOR CONSTRUCTION**



Planners and Engineers 763.559.9100
2300 Berkshire Lane N, Suite 200 www.vaaeng.com
Plymouth, MN 55441 info@vaaeng.com

CLIENT:



Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

**AIR LIQUIDE GAS DEPOT
TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/28/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

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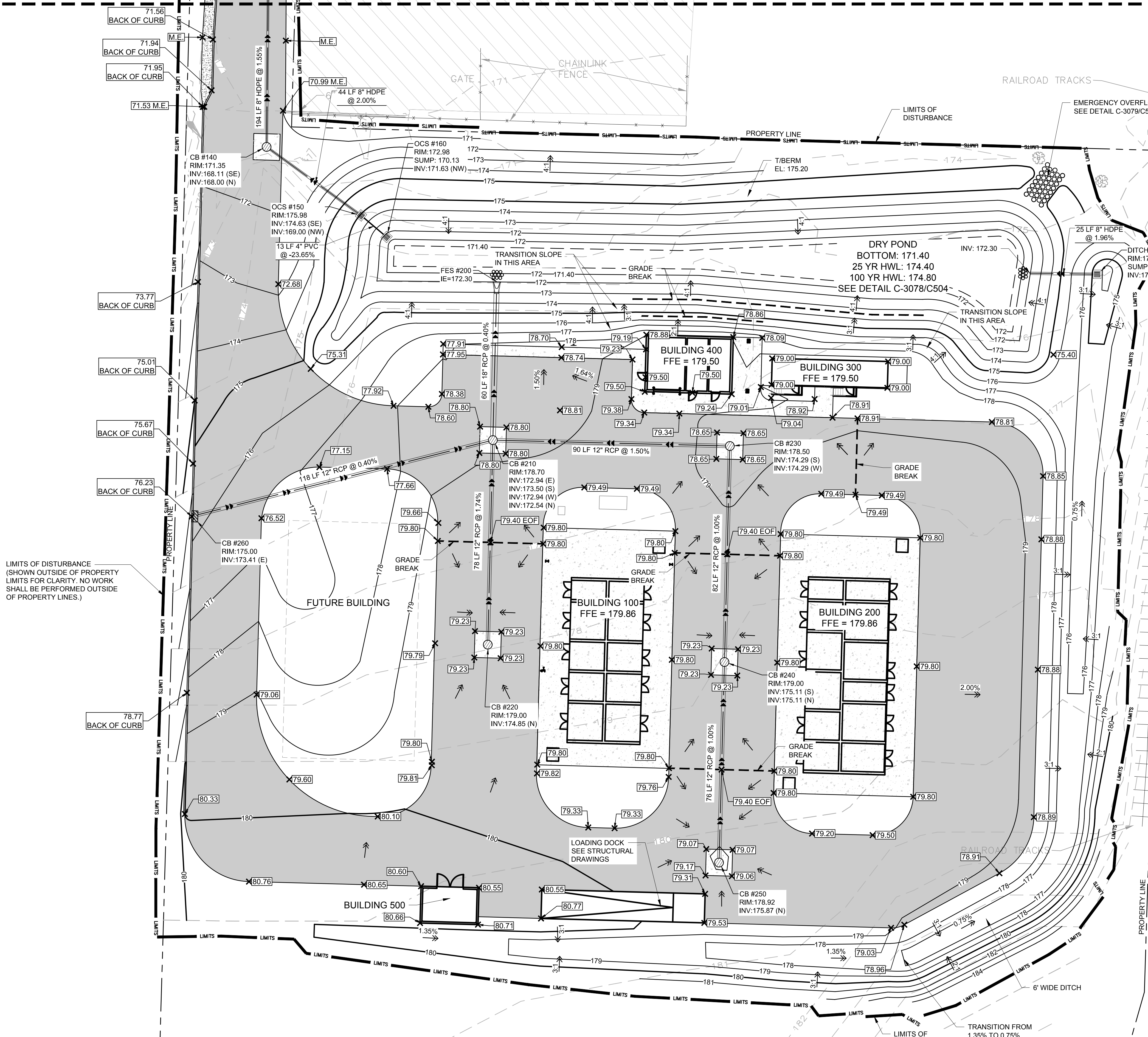
DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
	APPROVED:

DRAWING TITLE:

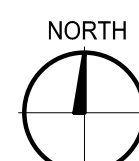
**OVERALL GRADING
AND DRAINAGE PLAN**

PROJECT NO: 170359	DRAWING NO: C200
SCALE: AS NOTED	

MATCHLINE - SEE SHEET C202



LIMITS OF DISTURBANCE (SHOWN OUTSIDE OF PROPERTY LIMITS FOR CLARITY. NO WORK SHALL BE PERFORMED OUTSIDE OF PROPERTY LINES.)



ENLARGED GRADING AND DRAINAGE PLAN



GRADING NOTES

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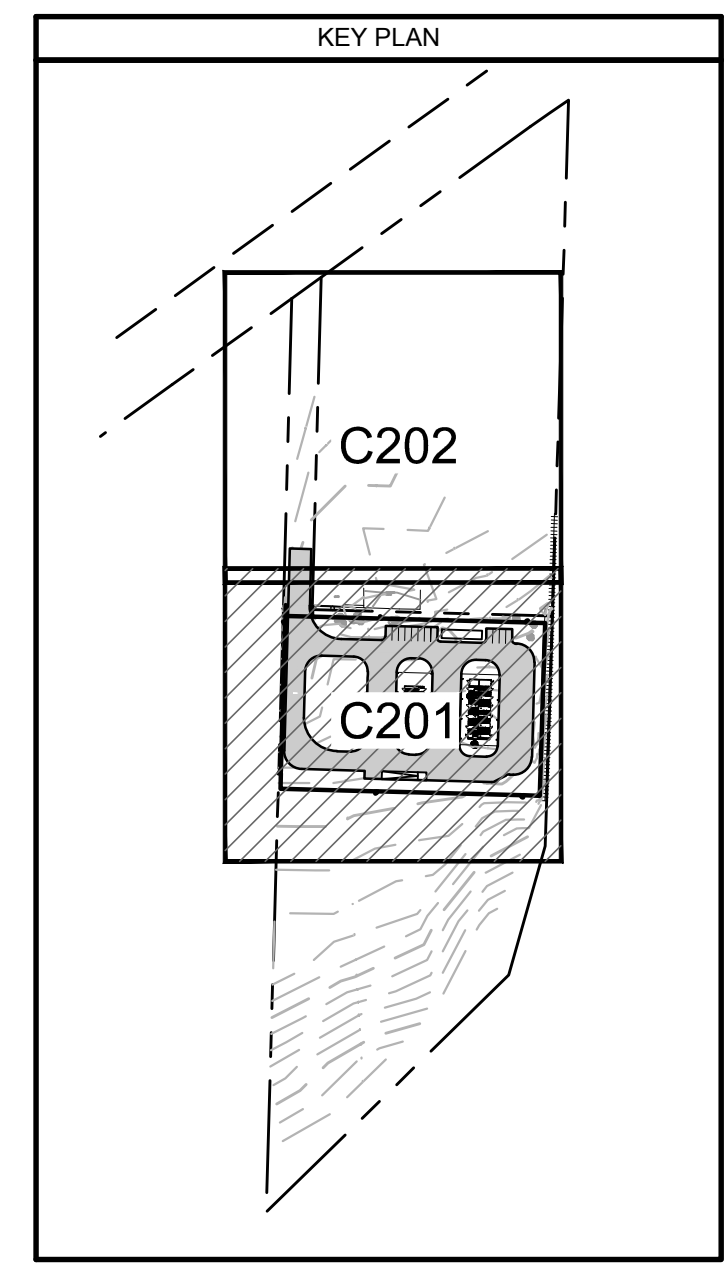
LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING R.O.W.
- 180- PROPOSED CONTOUR
- X79.80 PROPOSED SPOT ELEVATION
- ←2.00% →3:1 DENOTES PROPOSED SURFACE DRAINAGE
- 170- EXISTING MAJOR CONTOUR
- 171- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINILE
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRADE BREAK

CASTING SCHEDULE

STRUCTURE	CASTING TYPE	DETAIL NUMBER	STRUCTURE I.D.
EXCB #100	N/A	N/A	N/A
STMH #110	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
STMH #120	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
STMH #130	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
CB #140	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
OCS #140	DRAWING NO. 400 / C504	DRAWING NO. 720 / C503	48"
OCS #160	DRAWING NO. 400 / C504	DRAWING NO. 720 / C503	48"
FES #200	N/A	N/A	N/A
CB #210	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #220	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #230	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #240	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #250	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #260	NEENAH R-3067	DRAWING NO. 330 / C503	2'x3'
DITCH INLET #300	DRAWING NO. 400 / C504	DRAWING NO. 390 / C504	24"

CIVIL EL. 179.86 = STRUCTURAL EL. 100'-0"



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Plymouth, MN 55441
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info@vaaeng.com

CLIENT:
 Air Liquide
creative oxygen
CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT TUALATIN, OR

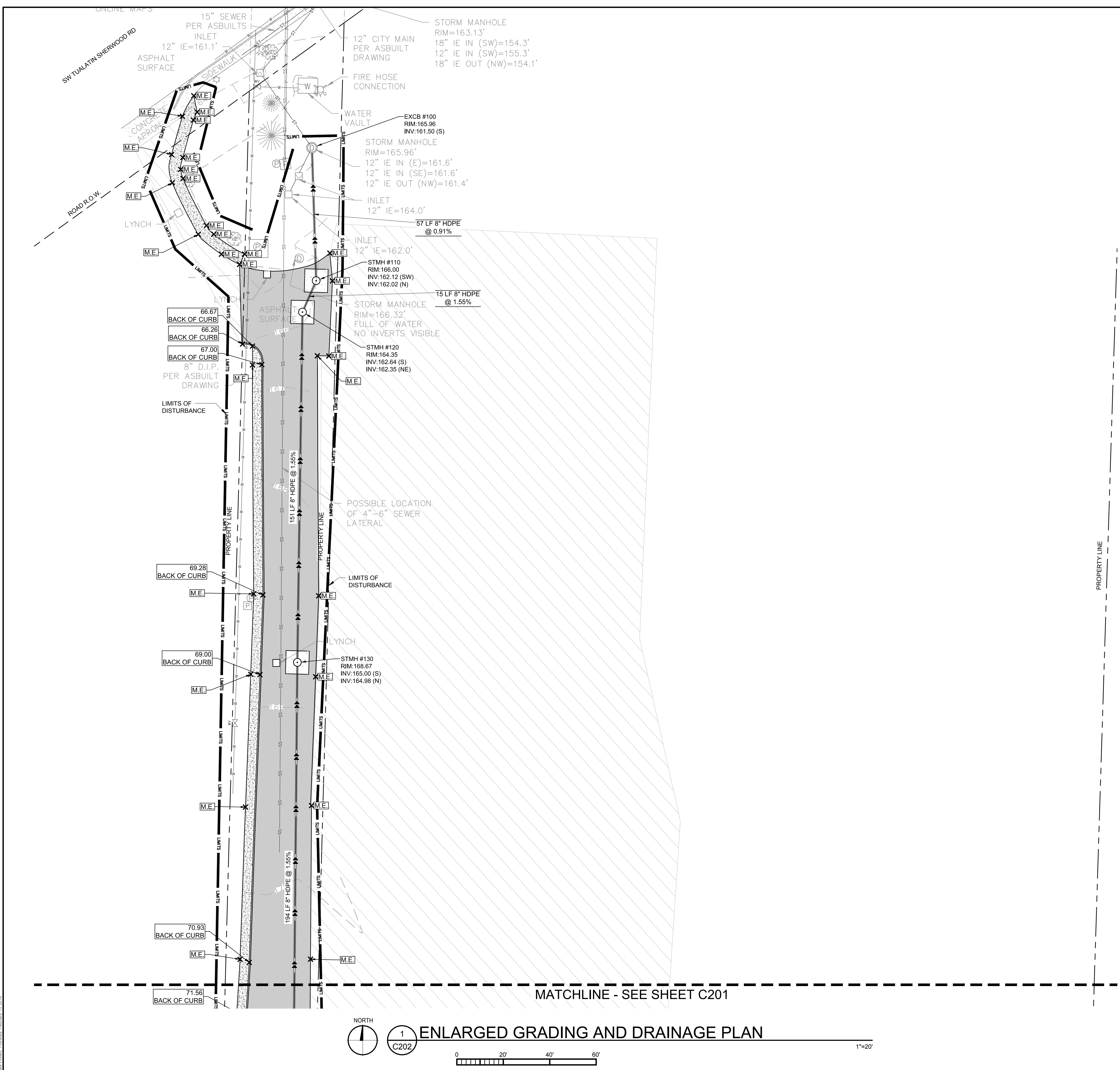
NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:
ENLARGED GRADING AND DRAINAGE PLAN

PROJECT NO: 170359
DRAWING NO: C201
SCALE: AS NOTED



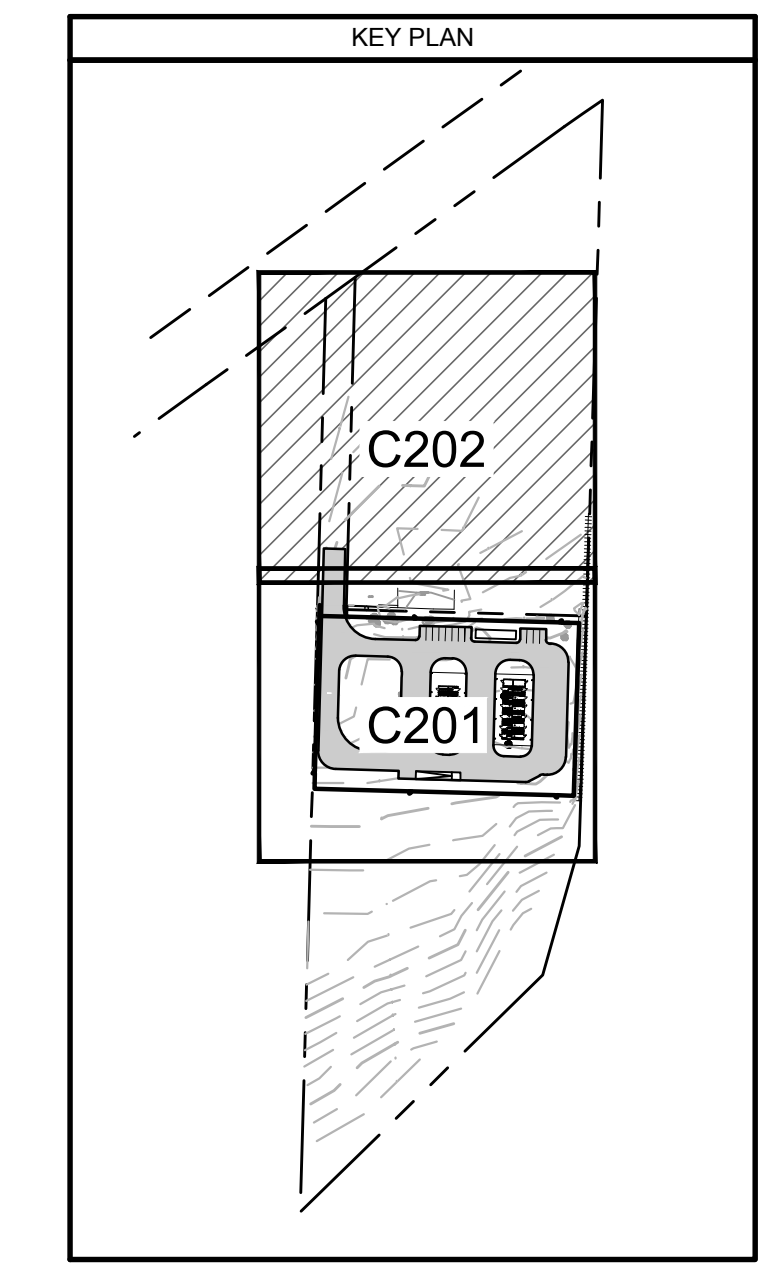
LEGEND

	EXISTING PROPERTY LINE
	EXISTING R.O.W.
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	DENOTES PROPOSED SURFACE DRAINAGE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	LIMITS OF DISTURBANCE
	EXISTING TRACK
	EXISTING CHAIN LINK FENCE
	EXISTING TREE
	EXISTING LIGHT POLE
	EXISTING BITUMINOUS PAVEMENT
	PROPOSED STORM SEWER
	PROPOSED FES WITH RIPRAP
	PROPOSED CATCH-BASIN
	PROPOSED MANHOLE
	PROPOSED CLEANOUT
	PROPOSED OCS / DITCH INLET
	PROPOSED DRAINTILE
	PROPOSED SANITARY SEWER
	PROPOSED WATERMAIN
	PROPOSED BITUMINOUS PAVEMENT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRADE BREAK

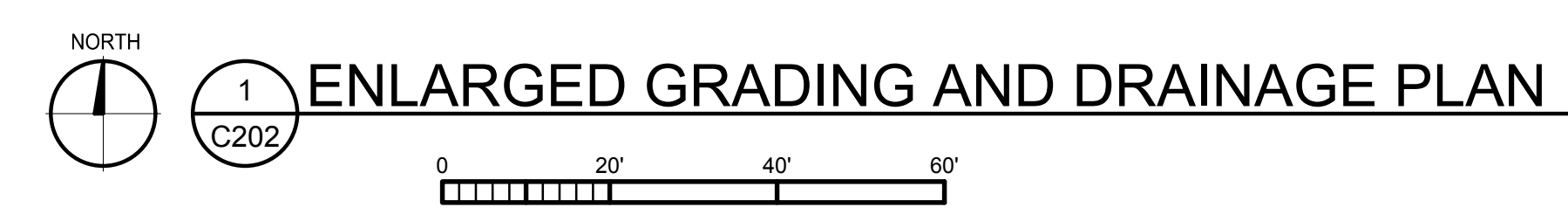
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CLIENT:

Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
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CERTIFICATION:

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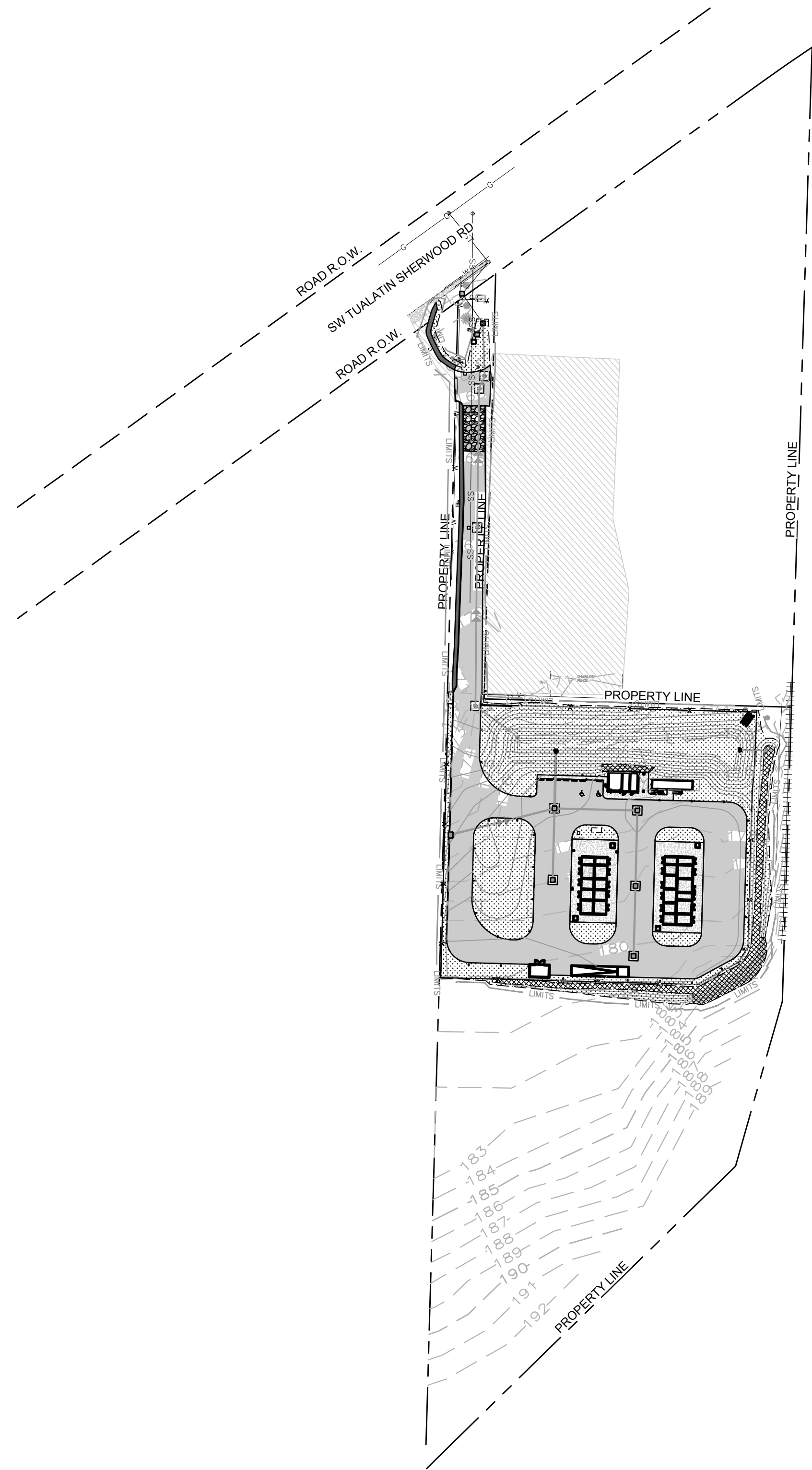
DESIGNED: NHM
CHECKED: AMB
APPROVED:

DRAWING TITLE:

ENLARGED GRADING AND DRAINAGE PLAN

PROJECT NO: 170359
SCALE: AS NOTED

DRAWING NO: C202



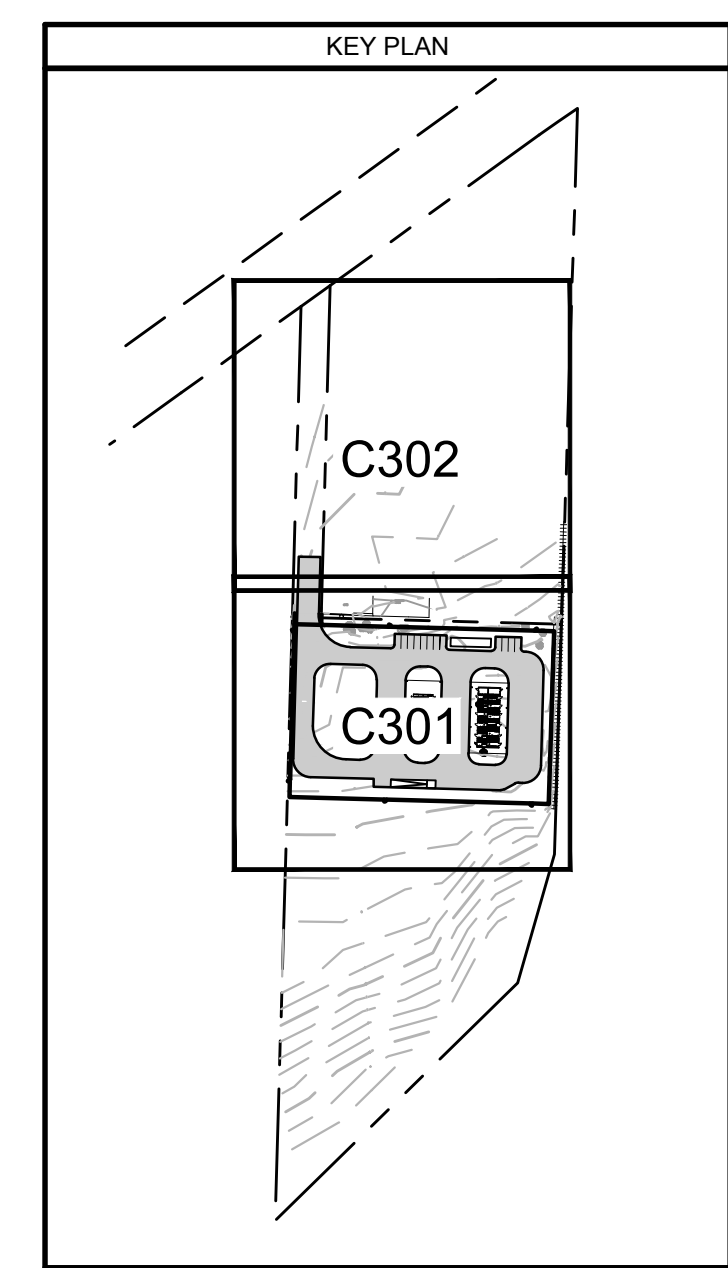
NORTH
 1 OVERALL EROSION AND SEDIMENT CONTROL PLAN
 C300
 0 100' 200' 300'
 1"=100'

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EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR TO RESTORE ALL AREAS OUTSIDE THE LIMITS OF PAVING. PROVIDE PERMANENT SEEDING, FERTILIZER, MULCH AND EROSION CONTROL BLANKET OF ALL DISTURBED AREAS PER ODOT EROSION CONTROL MANUAL CHAPTER 3. SEED MIX SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.3. FERTILIZER SHALL BE PHOSPHORUS FREE, MULCH SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.4. EROSION CONTROL BLANKET SHALL BE ODOT TYPE A.
2. SEE SWPPP C600 FOR ADDITIONAL DETAILED EROSION PREVENTION AND SEDIMENT CONTROL NOTES.
3. INSTALL PERIMETER AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.



ISSUED FOR REVIEW
NOT FOR CONSTRUCTION



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 2300 Berkshire Lane N, Suite 200 www.vaaeng.com
 Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
 TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

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DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:

OVERALL EROSION
 AND SEDIMENT
 CONTROL PLAN

PROJECT NO: 170359	DRAWING NO: C300
SCALE: AS NOTED	

MATCHLINE - SEE SHEET C302

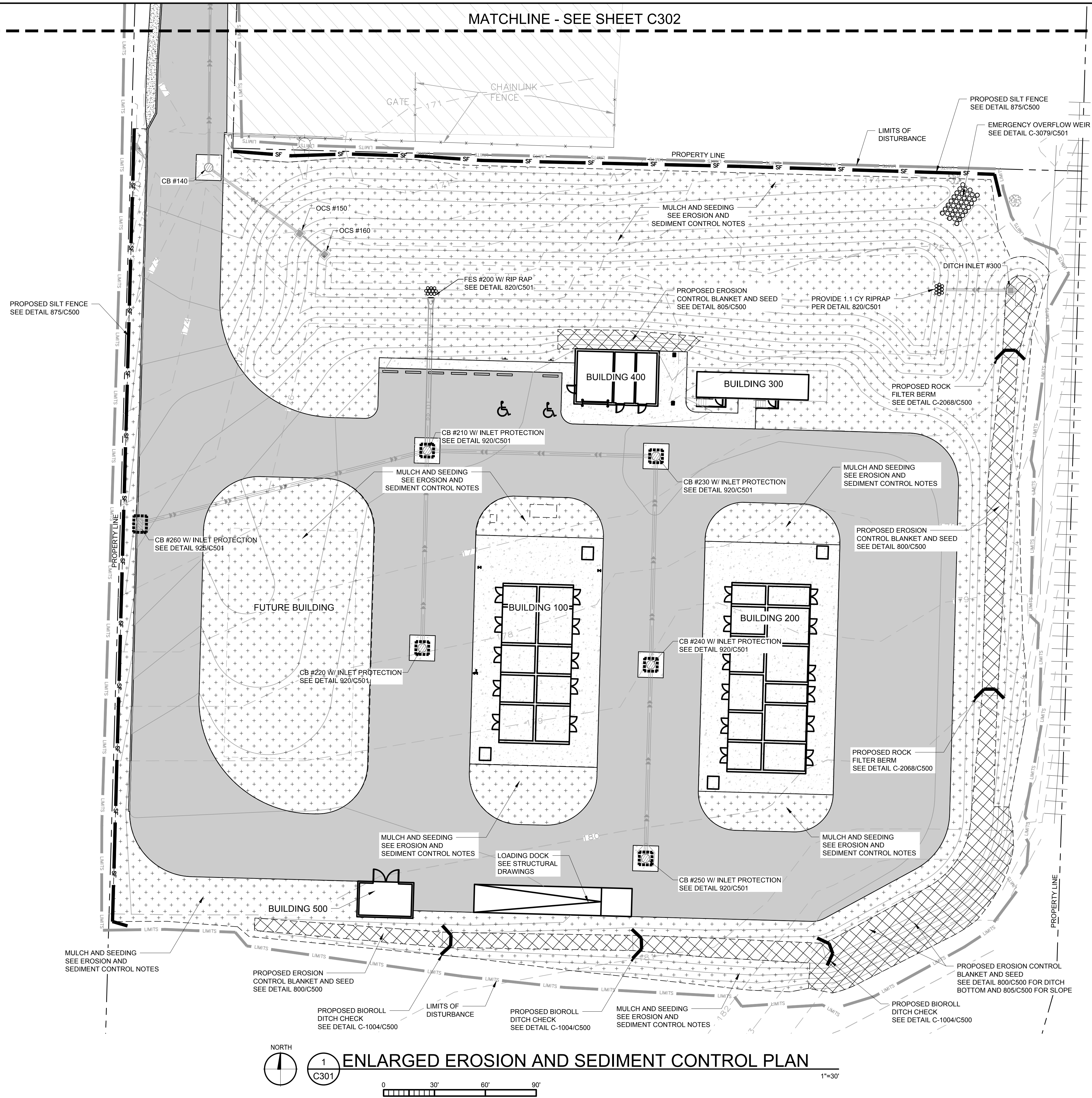
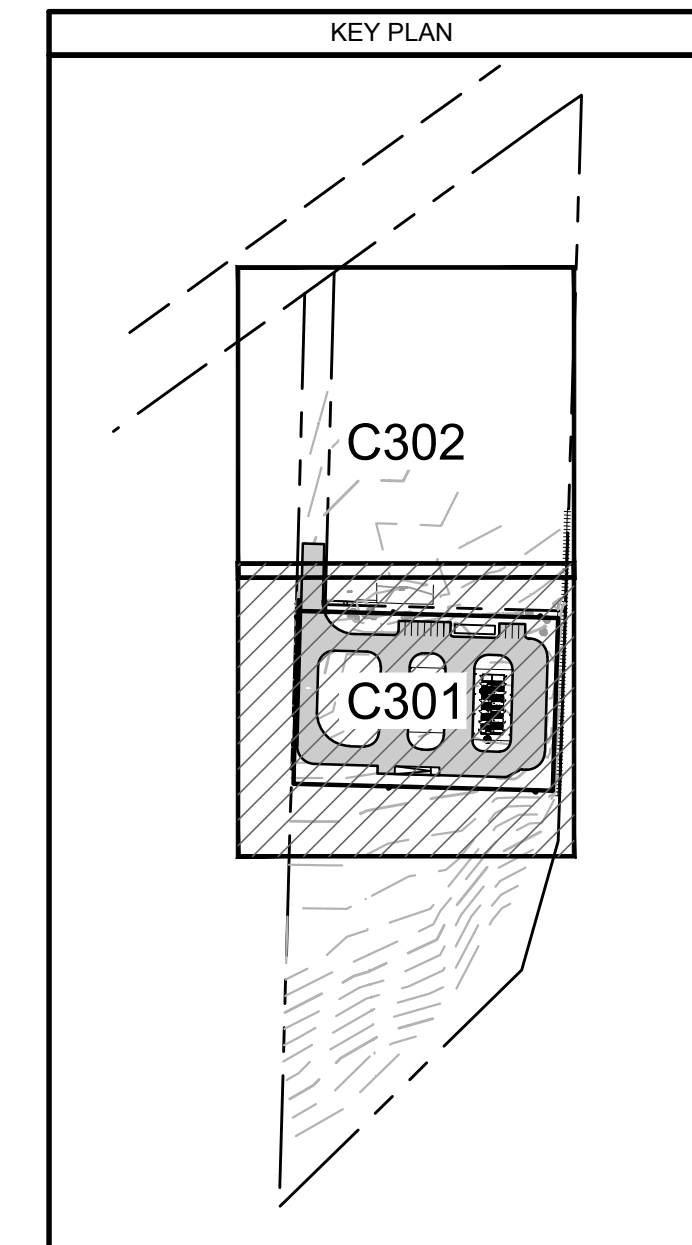
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- INSTALL PERIMETER AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES WITH INLET PROTECTION
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN WITH INLET PROTECTION
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAIN TILE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SILT FENCE
- PROPOSED BIOROLL DITCH CHECK
- PROPOSED EROSION CONTROL BLANKET / SEED
- PROPOSED SEED AND MULCH
- PROPOSED ROCK CONSTRUCTION ENTRANCE

TOPSOIL SHALL BE REPLACED IN ALL LANDSCAPE AREAS



ENLARGED EROSION AND SEDIMENT CONTROL PLAN
 NORTH
 1
 C301
 0 30' 60' 90'
 1"=30'



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DATE: 10/06/17
 DRAWN: CMB
 DESIGNED: NHM
 CHECKED: AMB
 APPROVED:

DRAWING TITLE:
**ENLARGED EROSION
 AND SEDIMENT
 CONTROL PLAN**

PROJECT NO:
 170359
 SCALE:
 AS NOTED
 DRAWING NO:
C301

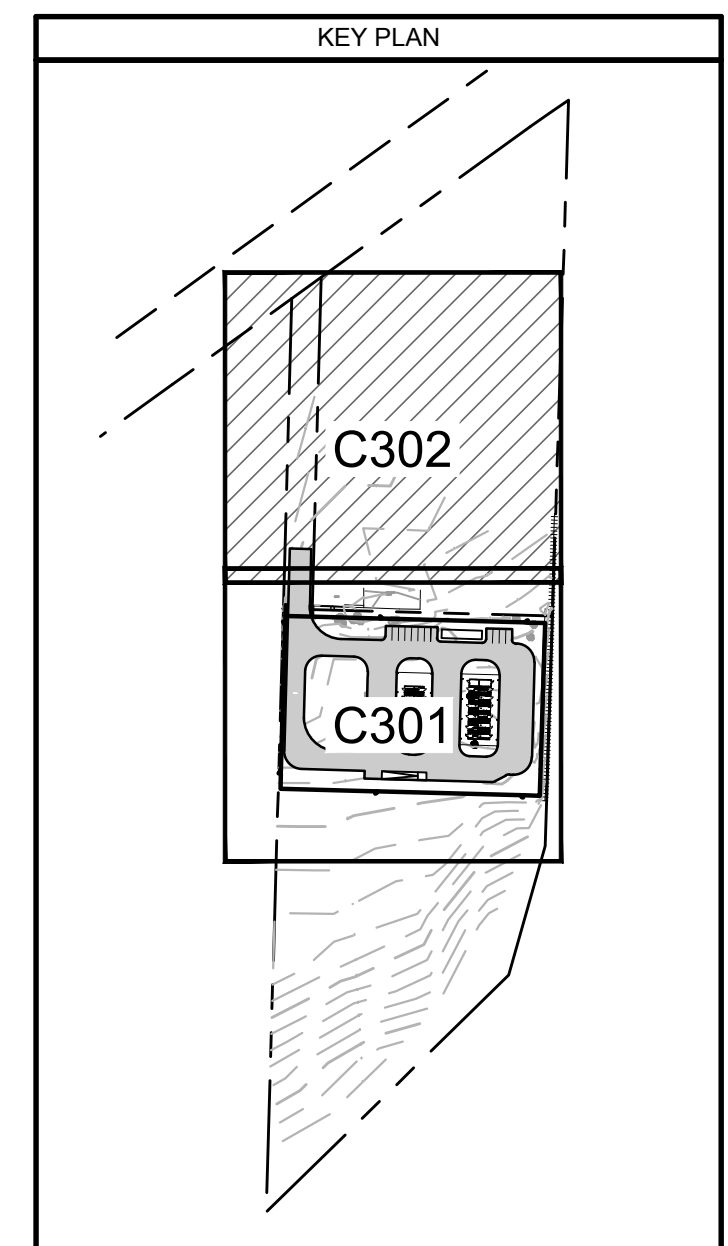
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LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
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- PROPOSED FES WITH INLET PROTECTION
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN WITH INLET PROTECTION
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SILT FENCE
- PROPOSED BIOROLL DITCH CHECK
- PROPOSED EROSION CONTROL BLANKET / SEED
- PROPOSED SEED AND MULCH
- PROPOSED ROCK CONSTRUCTION ENTRANCE



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CLIENT PROJECT NO:

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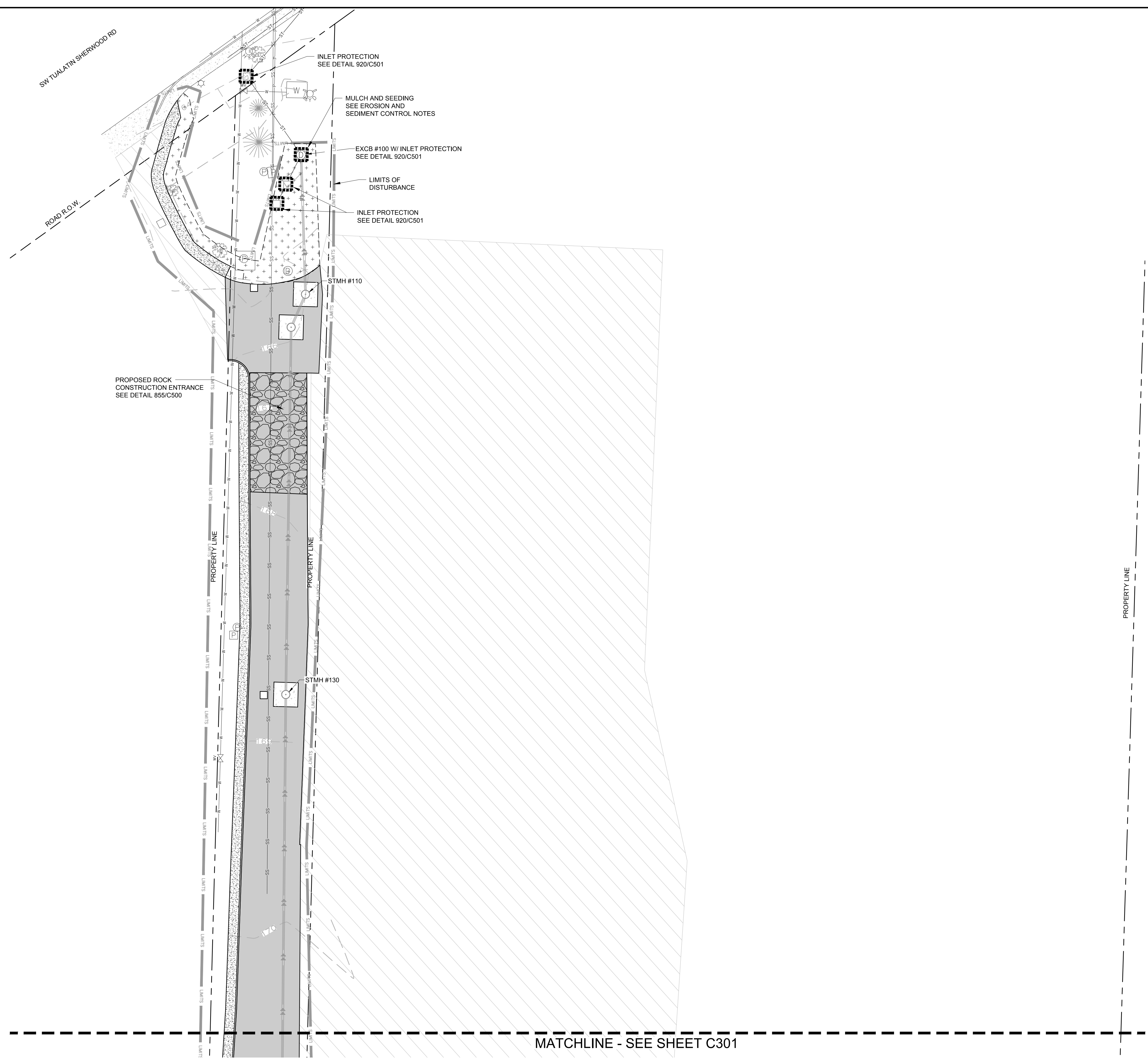
NO	DATE	ISSUE/REVISION	BY
A	10/06/17	ISSUED FOR PERMIT	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE: 10/06/17
DESIGNED: NHM
DRAWN: CMB
CHECKED: AMB
APPROVED: [Signature]

DRAWING TITLE:
ENLARGED EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO: 170359	DRAWING NO: C302
SCALE: AS NOTED	



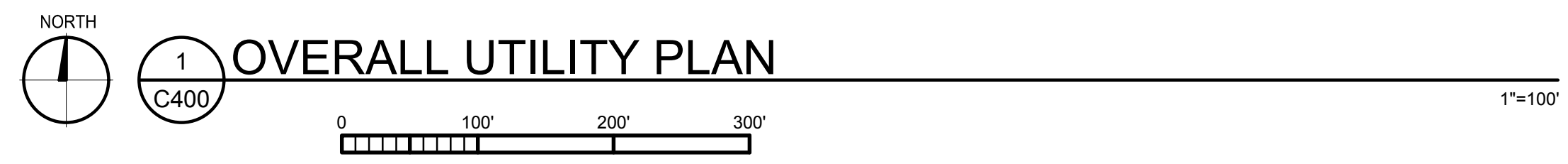
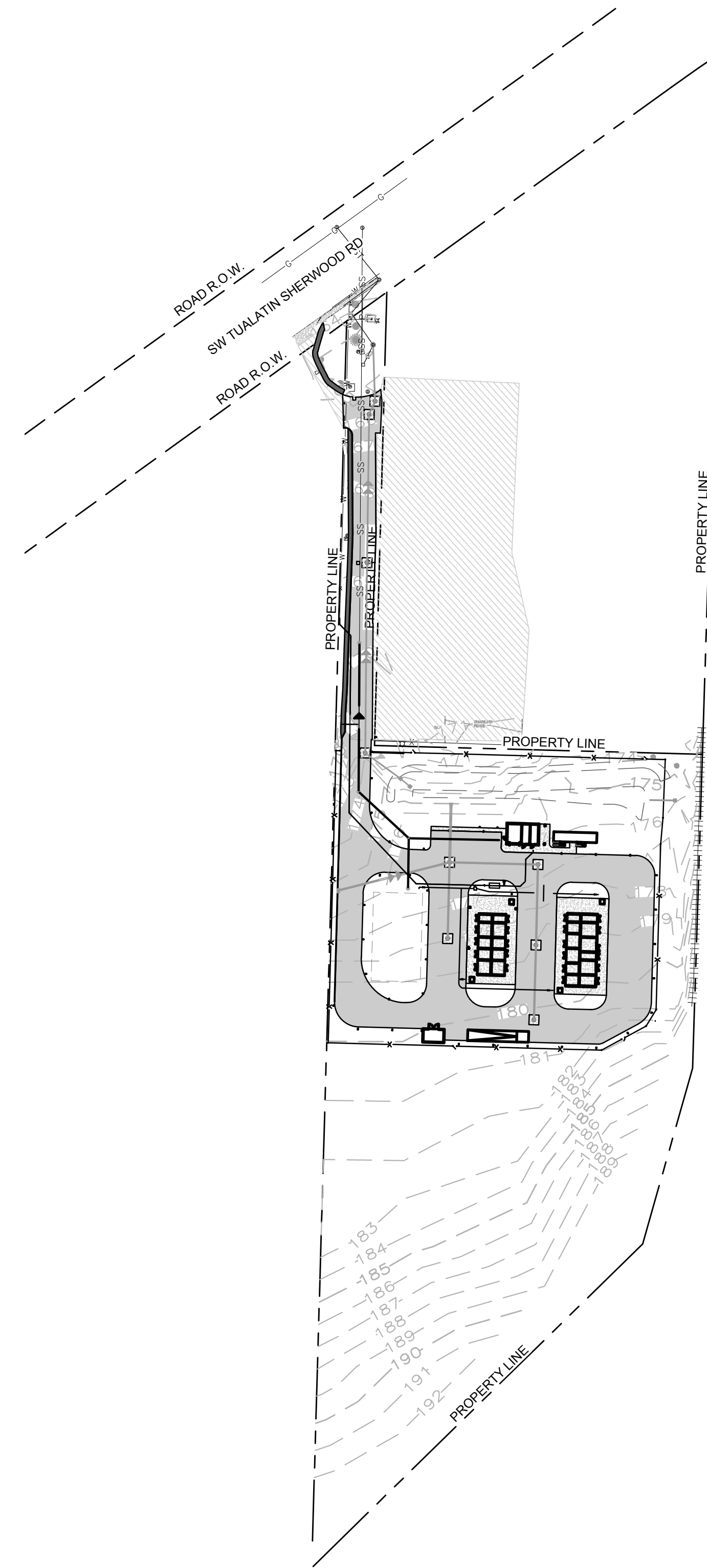
NORTH

1
C301

ENLARGED EROSION AND SEDIMENT CONTROL PLAN

1"=20'

Date Plotted: Thursday, February 18, 2018

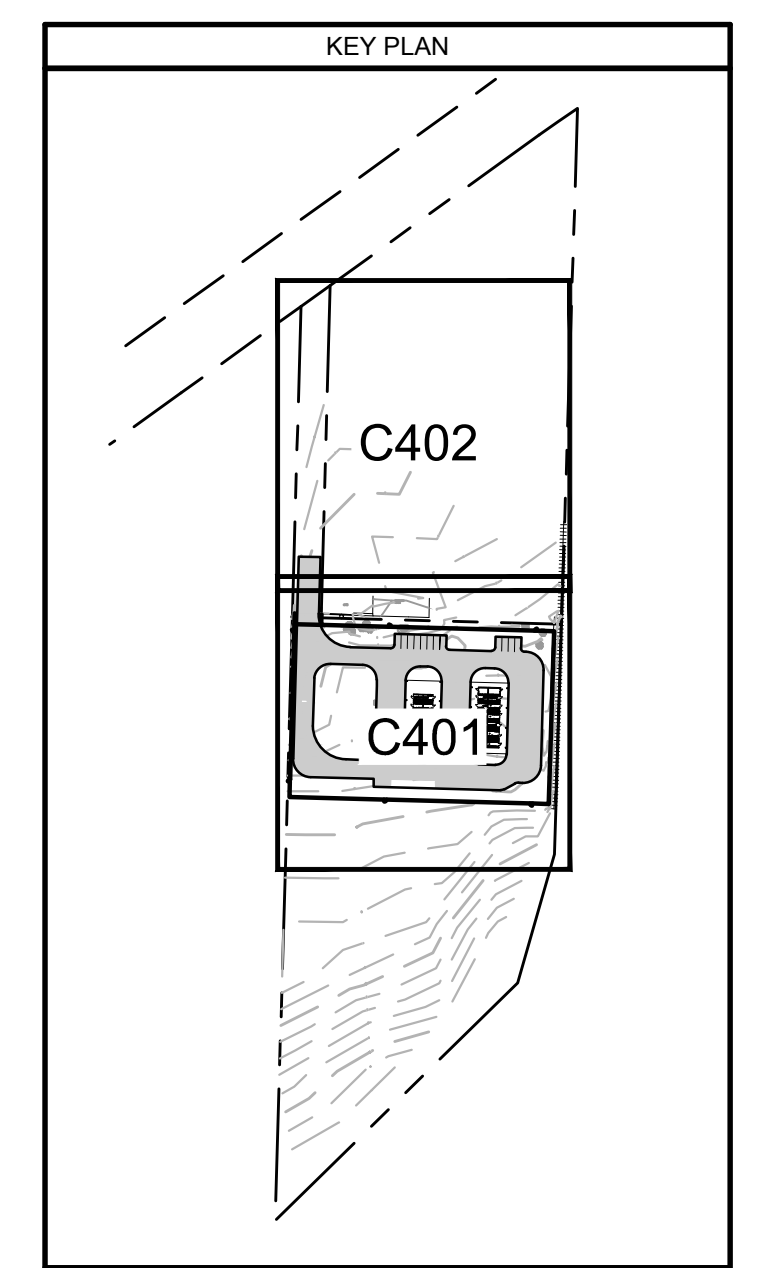


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8. CATCHBASINS AND MANHOLES ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. COORDINATE LOCATION OF MANHOLE COVER AND CASTING SO THAT IT IS PROPERLY LOCATED AT THE BACK OF CURBLINE FOR THE CURB INLETS OR CENTERED IN THE AREA AS SHOWN ON THE PLAN FOR THE AREA DRAINS AND MANHOLE COVERS.
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3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS THROUGHOUT THE DURATION OF THE CONSTRUCTION. CLEAN PAVED ROADWAYS BY SHOVELING OR SWEEPING. STREET WASHING IS ALLOWED ONLY AFTER SHOVELING OR SWEEPING HAS REMOVED SEDIMENT. SEE CITY OF TUALATIN STANDARDS AND REGULATIONS.
4. PROVIDE THE FOLLOWING MINIMUM COVER OVER THE TOP OF PIPE AS FOLLOWS:
 - A. 3' OVER WATERMAIN
 - B. 3' OVER SANITARY SEWER
 - C. 1.5' OVER STORM SEWER



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NOT FOR CONSTRUCTION



Planners and Engineers 763.559.9100
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Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

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DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:

OVERALL UTILITY PLAN

PROJECT NO: 170359	DRAWING NO: C400
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018

MATCHLINE - SEE SHEET C402

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED SANITARY MANHOLE
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT

GENERAL NOTES

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 Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

PROJECT:
**AIR LIQUIDE GAS DEPOT
 TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
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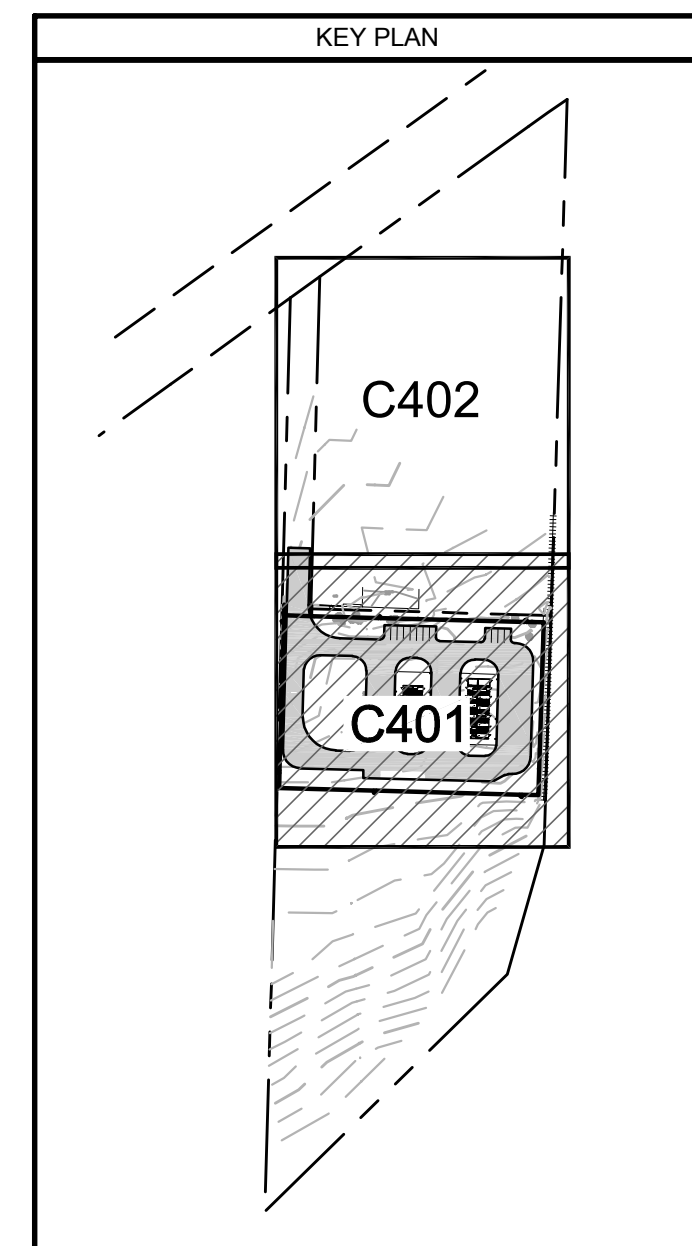
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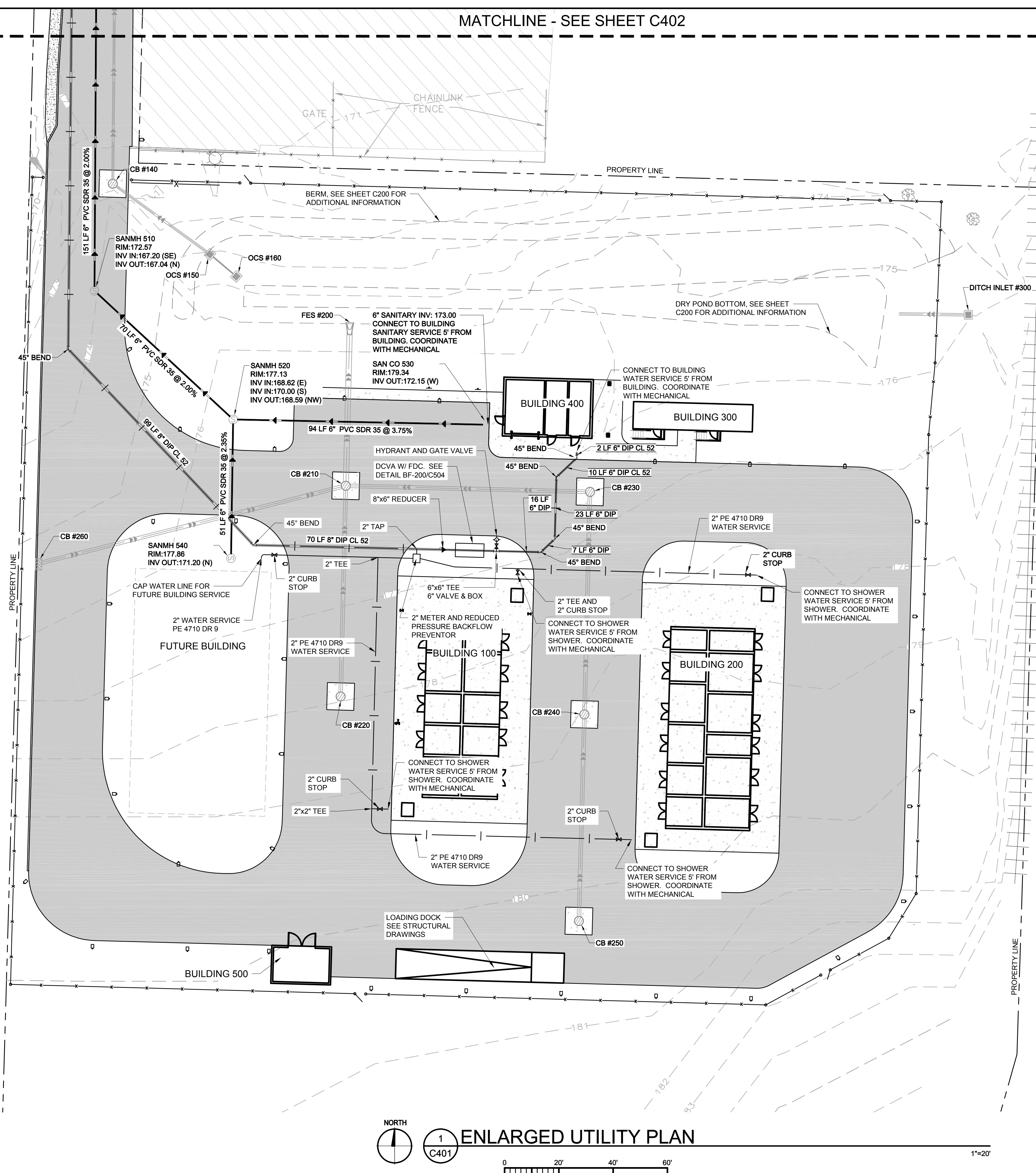
DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:
ENLARGED UTILITY PLAN

PROJECT NO: 170359	DRAWING NO: C401
SCALE: AS NOTED	



**ISSUED FOR
 REVIEW
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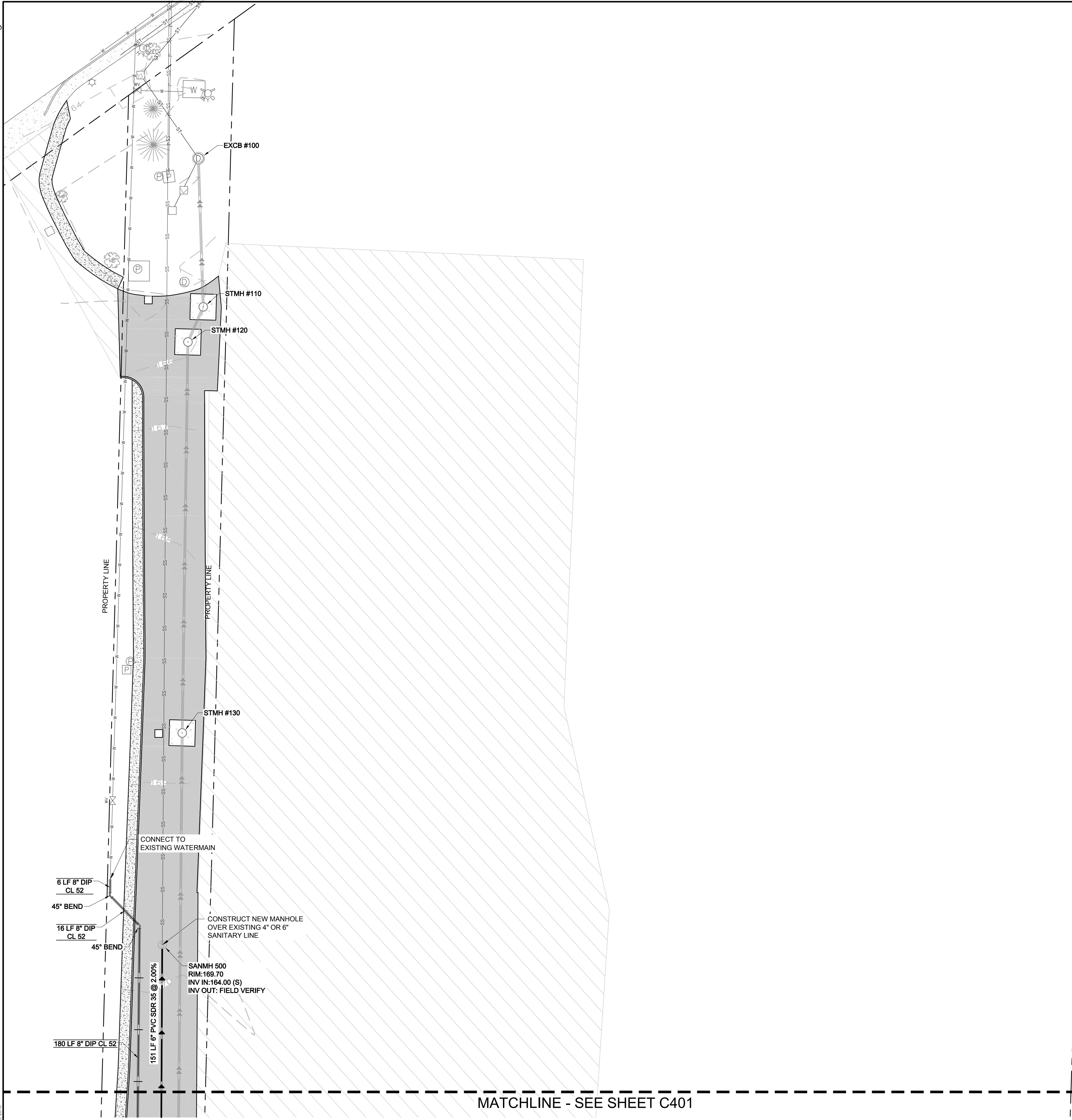


ENLARGED UTILITY PLAN
 1
 C401



1"=20'

Date Plotted: Thursday, February 15, 2018



LEGEND

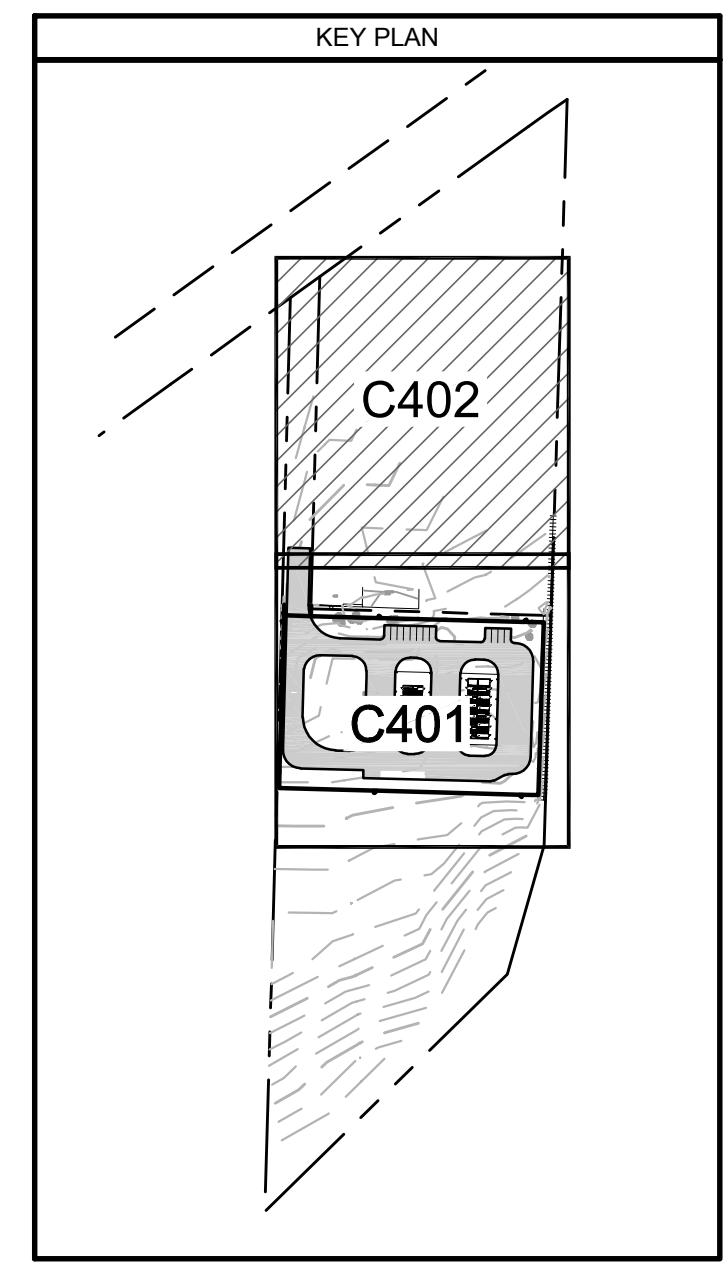
- EXISTING PROPERTY LINE
- - - - - EXISTING R.O.W.
- ===== EXISTING TRACK
- - - - - EXISTING CHAIN LINK FENCE
- (tree symbol) EXISTING TREE
- (sun symbol) EXISTING LIGHT POLE
- ===== EXISTING BITUMINOUS PAVEMENT
- =====> PROPOSED STORM SEWER
- =====> PROPOSED FES
- (circle with dots) PROPOSED CATCHBASIN
- (circle with 'M') PROPOSED MANHOLE
- (circle with 'C') PROPOSED CLEANOUT
- (circle with 'S') PROPOSED SANITARY MANHOLE
- =====> PROPOSED OCS / DITCH INLET
- =====> DT PROPOSED DRAINTILE
- =====> PROPOSED SANITARY SEWER
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- ===== PROPOSED BITUMINOUS PAVEMENT
- ===== PROPOSED CONCRETE PAVEMENT
- (square) PROPOSED LIGHT

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Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	01/26/18	CITY REVIEW SUBMITTAL	CMB

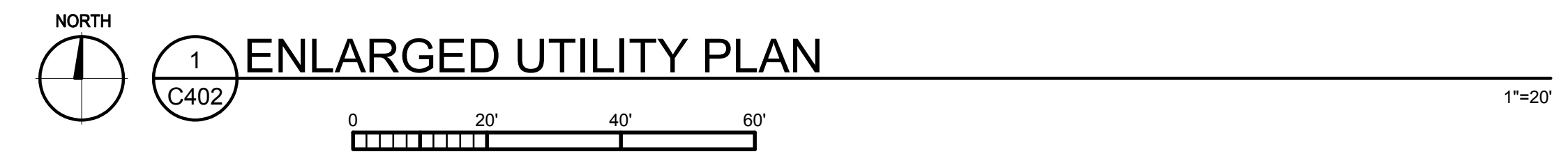
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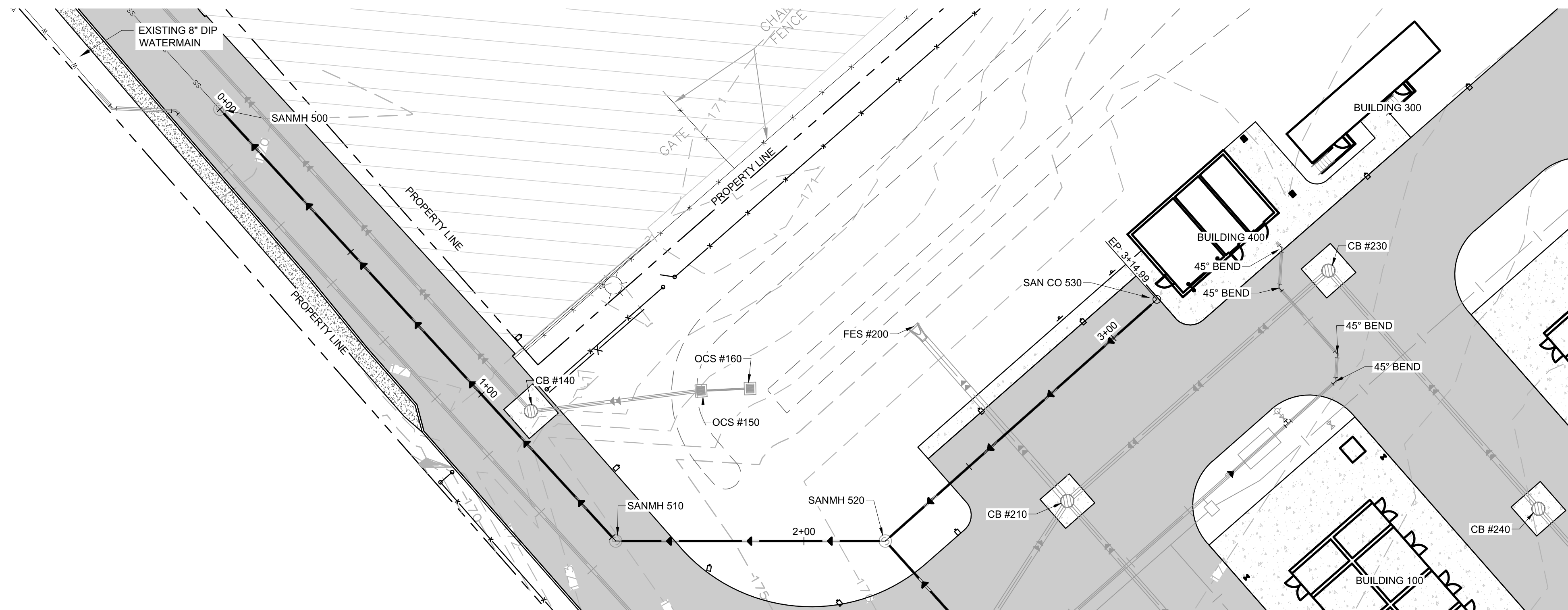
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DESIGNED: NHM	CHECKED: AMB
APPROVED:	

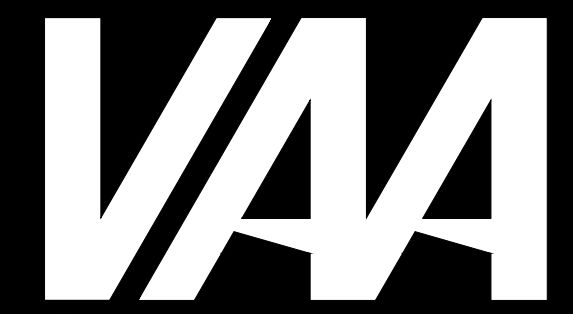
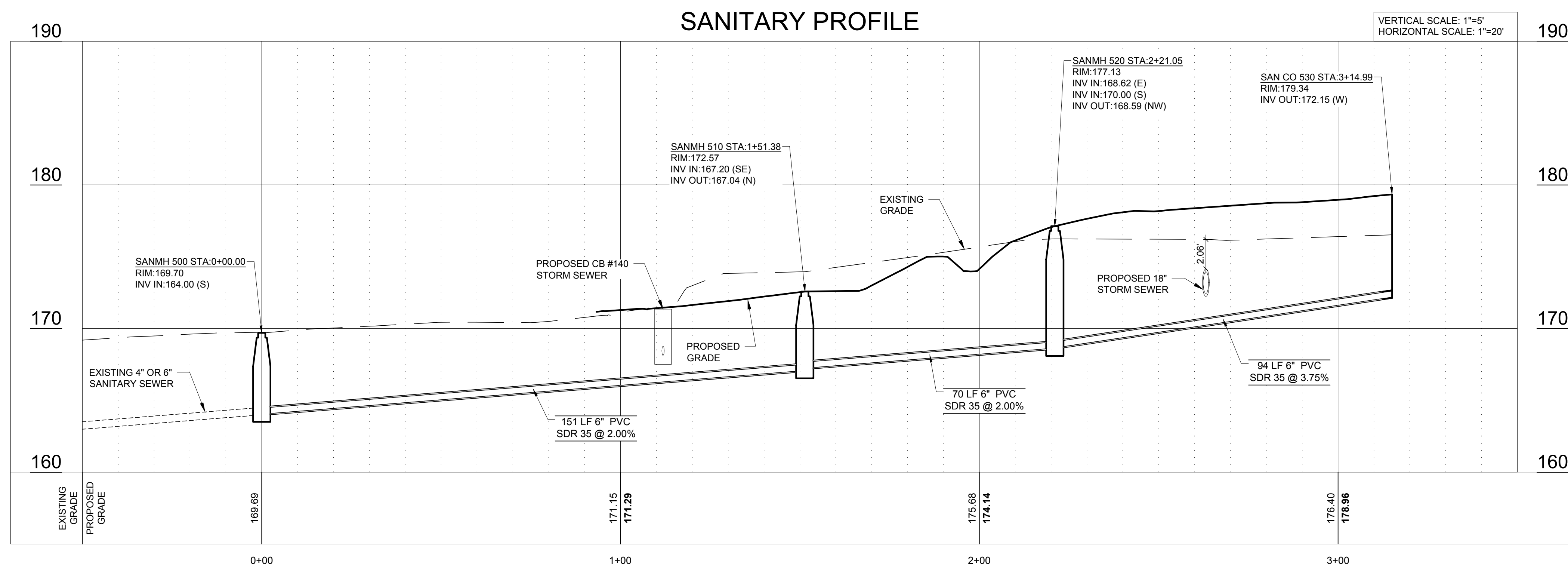
DRAWING TITLE:
ENLARGED UTILITY PLAN

PROJECT NO: 170359	DRAWING NO: C402
SCALE: AS NOTED	





NORTH
 1 C403
SANITARY PLAN AND PROFILE
 0 20' 40' 60' 1"=20'



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 2300 Berkshire Lane N, Suite 200 www.vaaeng.com
 Plymouth, MN 55441 info@vaaeng.com

CLIENT:



CLIENT PROJECT NO:

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**AIR LIQUIDE GAS DEPOT
 TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
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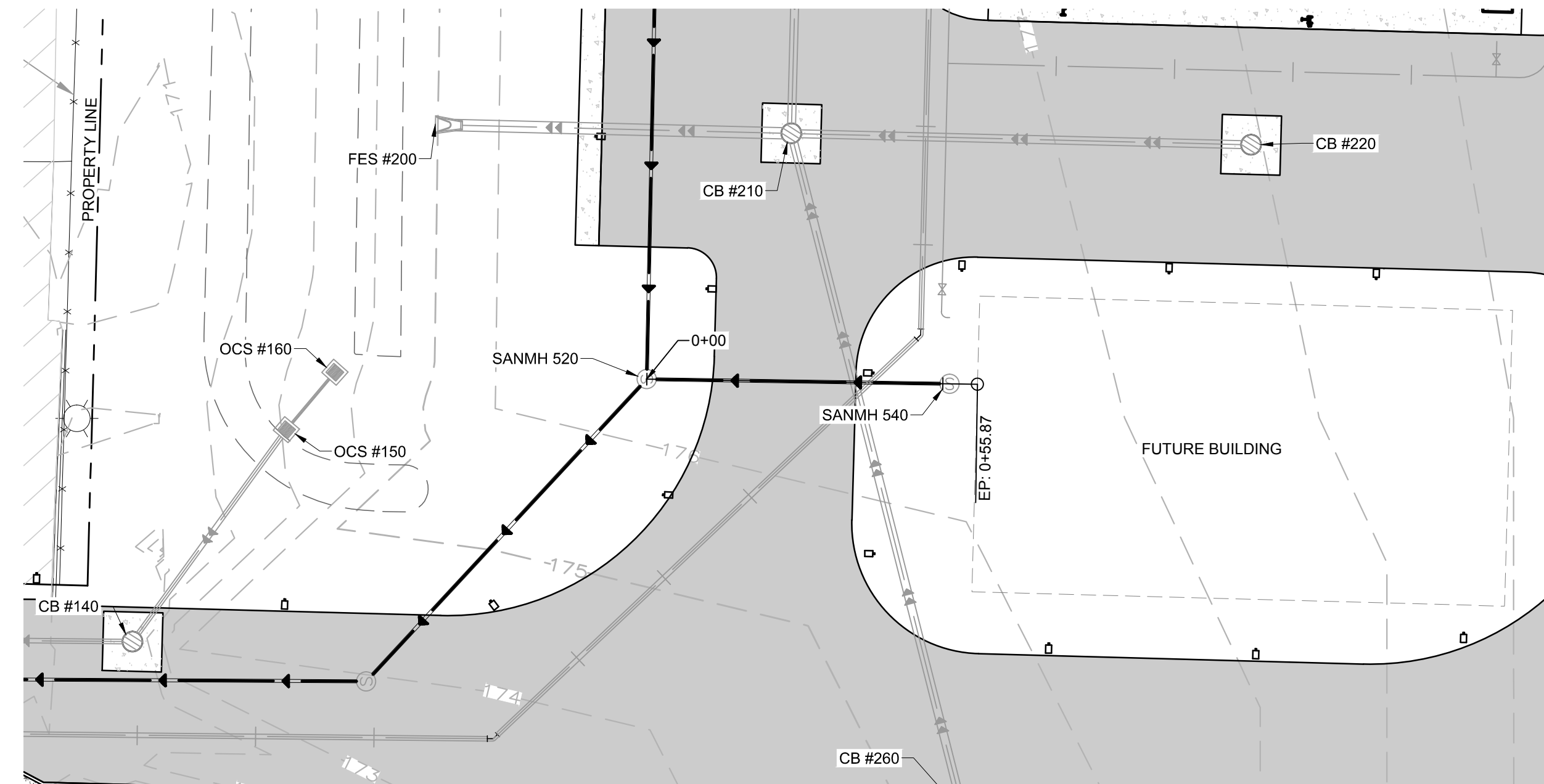
DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:
**SANITARY
 PLAN AND PROFILE**

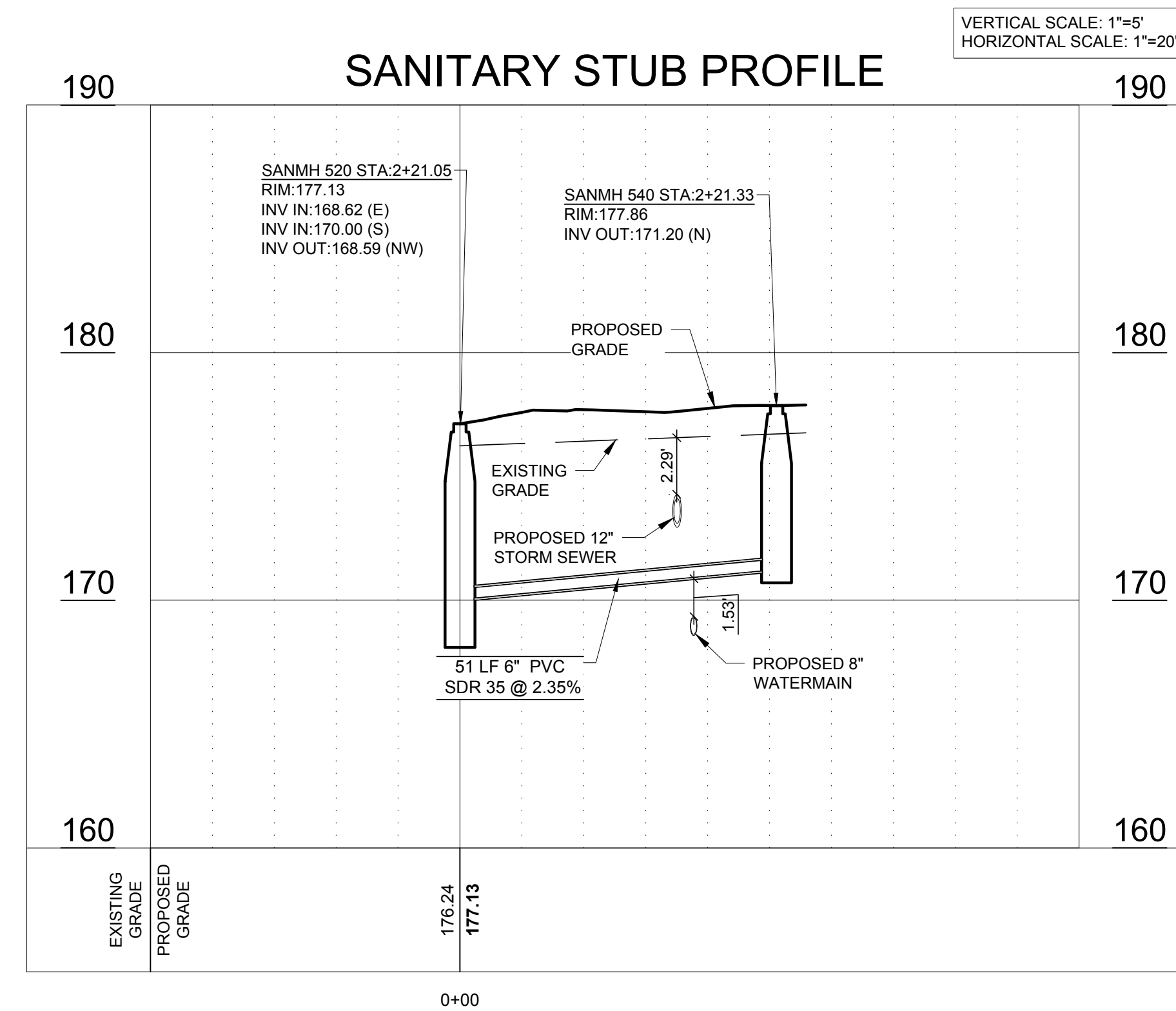
PROJECT NO: 170359	DRAWING NO: C403
SCALE: AS NOTED	

**ISSUED FOR
 REVIEW
 NOT FOR CONSTRUCTION**

Date Plotted: Thursday, February 15, 2018



NORTH
 1
 C404
SANITARY PLAN AND PROFILE
 0 20' 40' 60' 1"=20'



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 Plymouth, MN 55441 info@vaaeng.com

CLIENT:



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**AIR LIQUIDE GAS DEPOT
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DRAWING TITLE:

**SANITARY
 PLAN AND PROFILE**

PROJECT NO: 170359	DRAWING NO: C404
SCALE: AS NOTED	

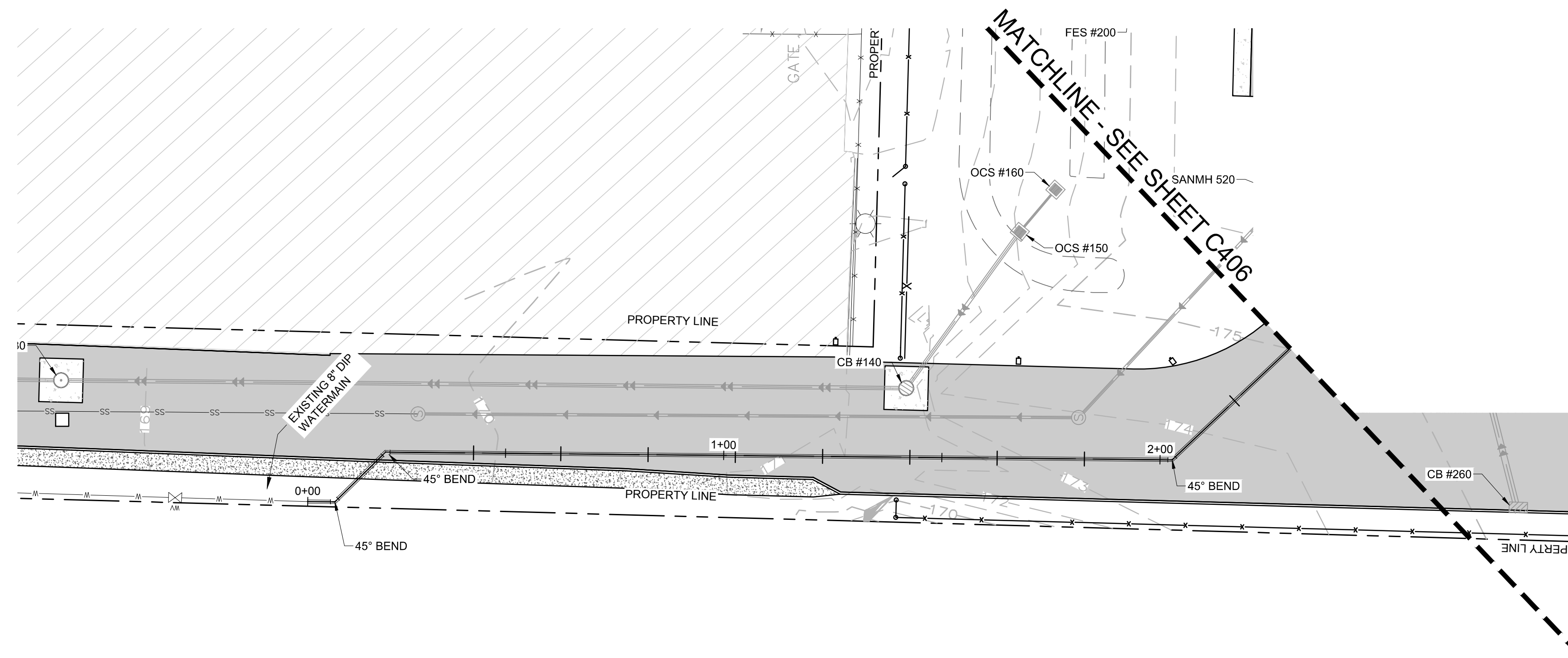
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CLIENT PROJECT NO:

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 AIR LIQUIDE GAS DEPOT
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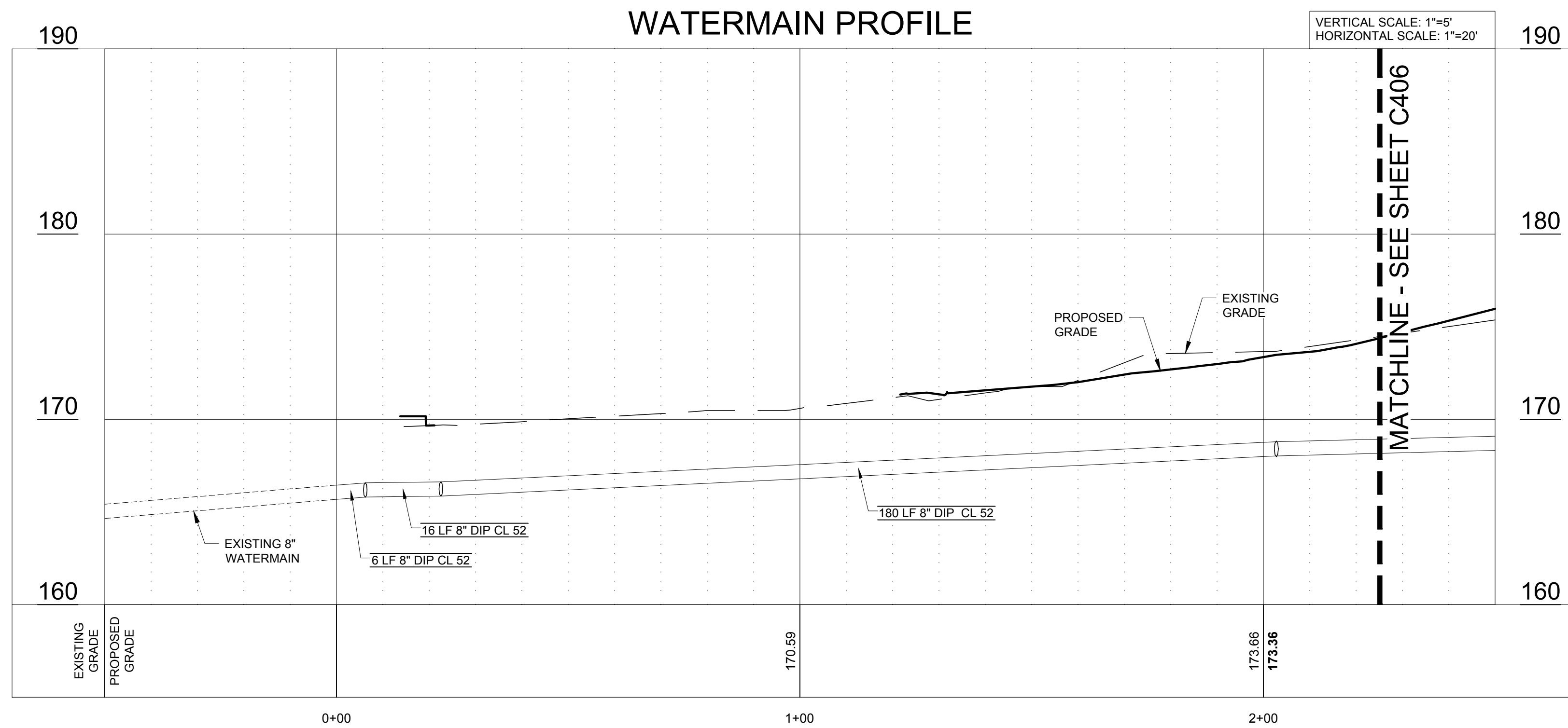


NORTH

1 WATERMAIN PLAN AND PROFILE 0+00.00 - 2+40.00

0 20' 40' 60'

1"=20'



NO	DATE	ISSUE/REVISION	BY
A	01/26/18	CITY REVIEW SUBMITTAL	CMB

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DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:
 WATERMAIN PLAN
 AND PROFILE
 STA: 0+00.00 - 2+40.00

PROJECT NO: 170359	DRAWING NO: C405
SCALE: AS NOTED	

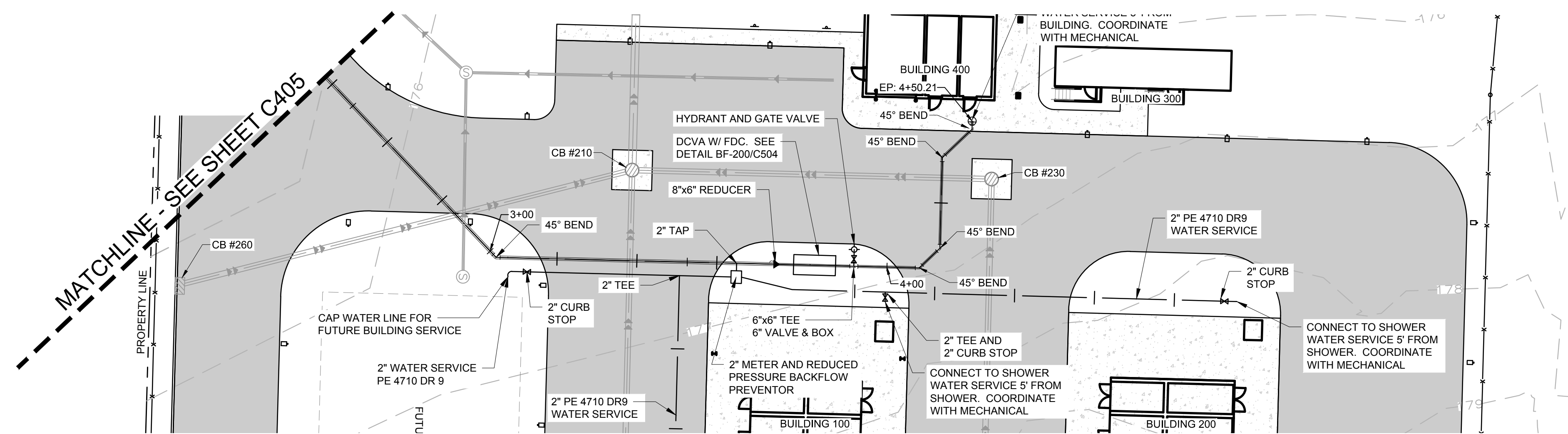
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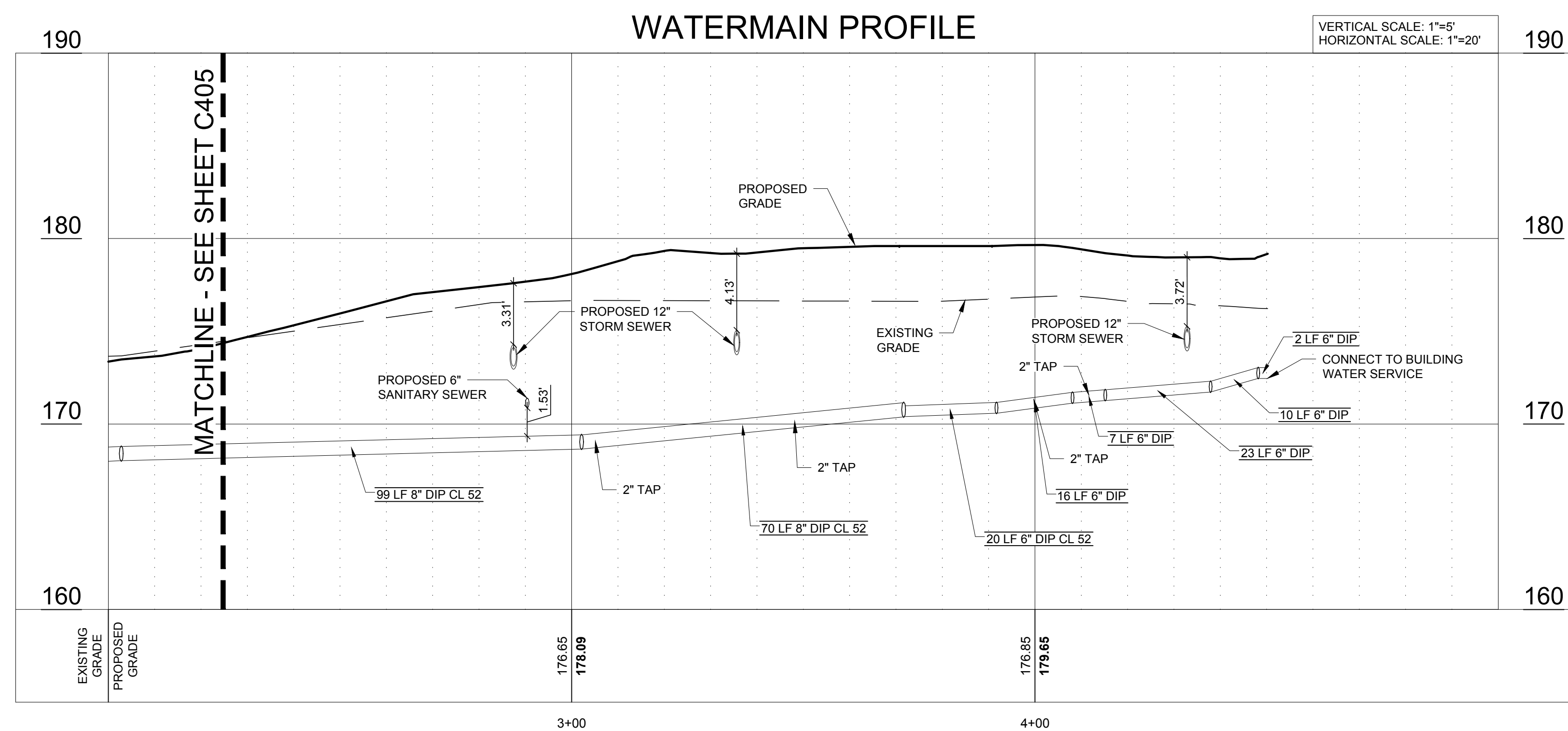


CLIENT PROJECT NO:

PROJECT:
**AIR LIQUIDE GAS DEPOT
TUALATIN, OR**



NORTH
1 WATERMAIN PLAN AND PROFILE 2+40.00 - END
C403
0 20' 40' 60'
1"=20'



NO	DATE	ISSUE/REVISION	BY
A	01/26/18	CITY REVIEW SUBMITTAL	CMB

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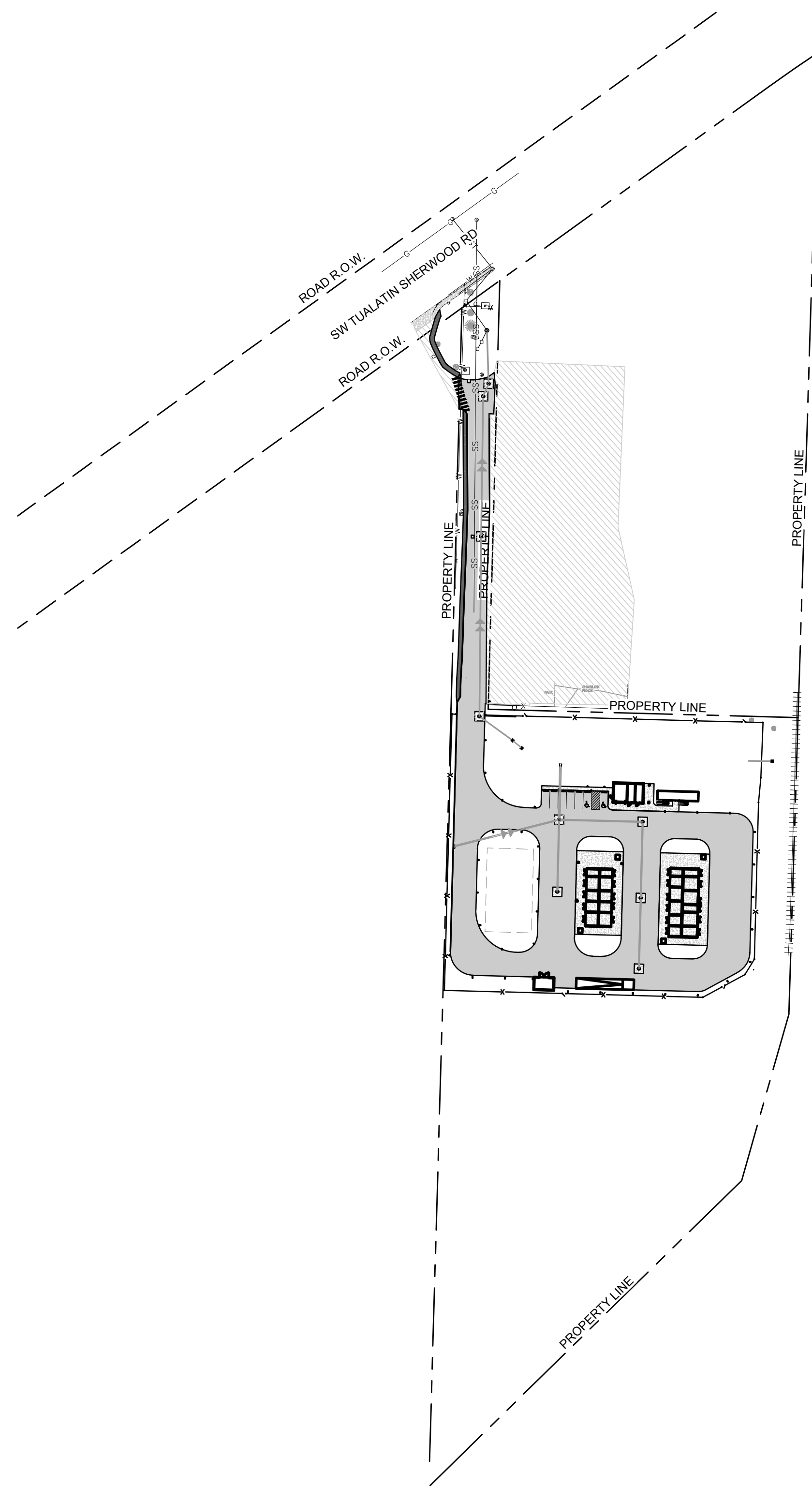
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DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:
**WATERMAIN PLAN
AND PROFILE
STA: 2+40.00 - END**

**ISSUED FOR
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NOT FOR CONSTRUCTION**

PROJECT NO: 170359	DRAWING NO: C406
SCALE: AS NOTED	

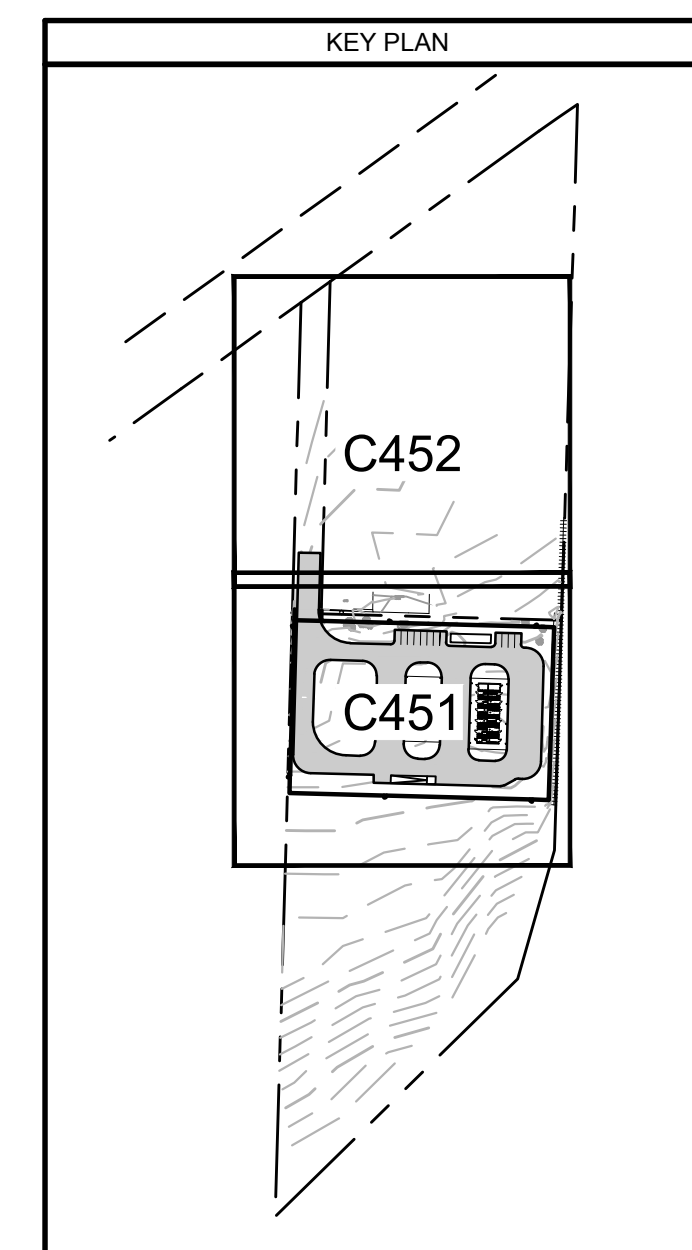


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11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

PAVING NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE



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VAA

Planners and Engineers 763.559.9100
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Plymouth, MN 55441 info@vaaeng.com

CLIENT:

Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

**AIR LIQUIDE GAS DEPOT
TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

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DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:

**OVERALL SITE
PAVING PLAN**

PROJECT NO: 170359	DRAWING NO: C450
SCALE: AS NOTED	

MATCHLINE - SEE SHEET C452

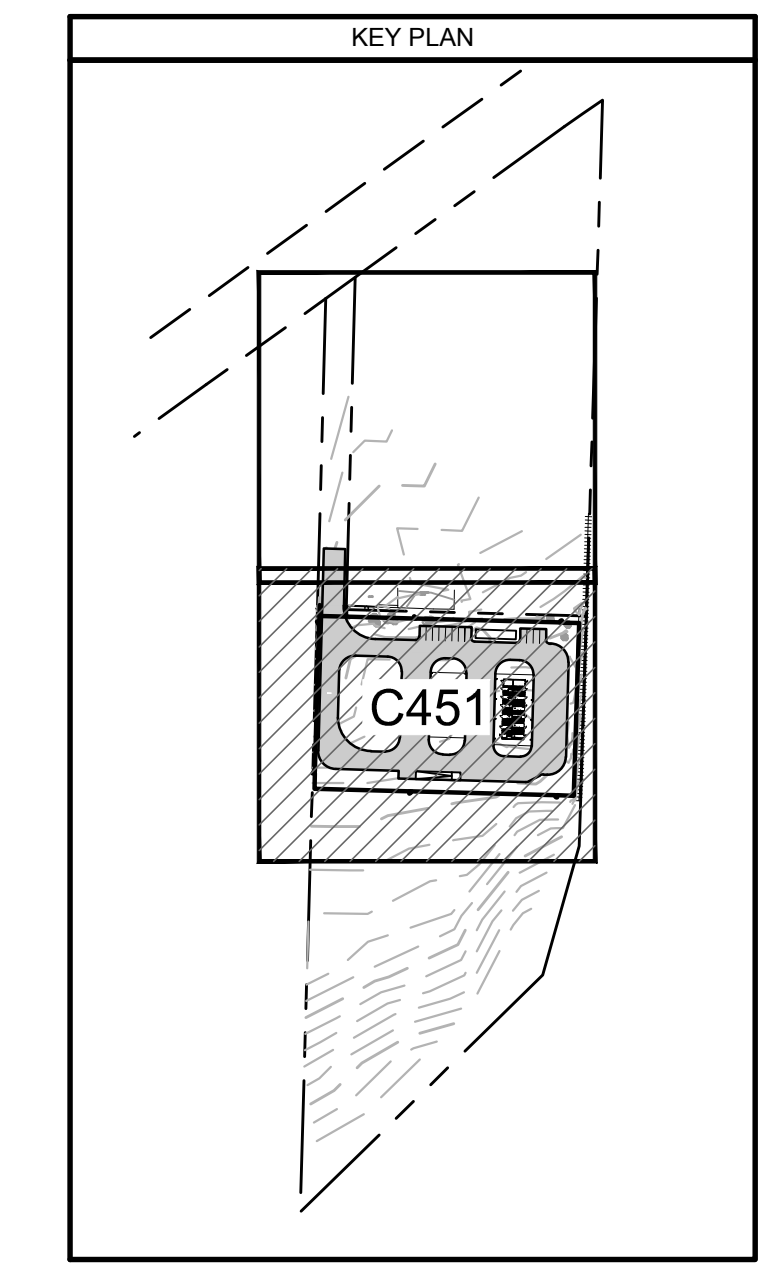
PAVING NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- PROPOSED FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED FES
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT

PROPOSED BUILDINGS	
BUILDING 100 GAS STORAGE BUILDING	4,500 SF (1,734 SF CMU UNDER METAL ROOF)
BUILDING 200 GAS STORAGE BUILDING	4,580 SF (2,304 SF CMU UNDER METAL ROOF)
BUILDING 300 OFFICE	675 SF
BUILDING 400 FORKLIFT / ELEC / SPRINK	687 SF
BUILDING 500 TRASH ENCLOSURE	308 SF
TOTAL BUILDING AREA:	10,750 SF



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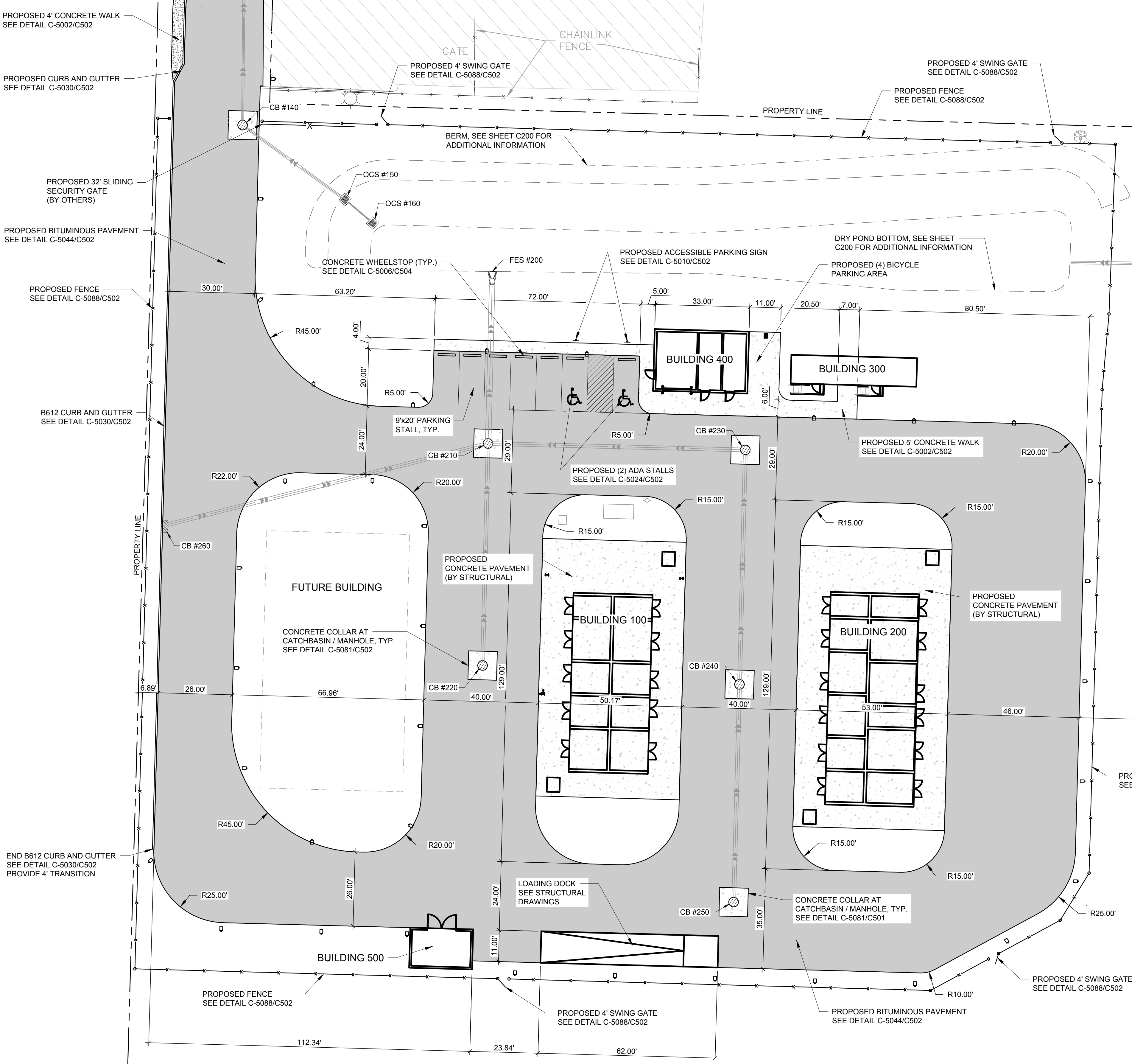
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DRAWING TITLE:
**ENLARGED SITE
PAVING PLAN**

PROJECT NO: 170359	DRAWING NO: C451
SCALE: AS NOTED	



PAVING NOTES

- 1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE

LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING R.O.W.
- ==== EXISTING TRACK
- - - - EXISTING CHAIN LINK FENCE
- PROPOSED FENCE
- PROPOSED FENCE
- ☼ EXISTING TREE
- ☼ EXISTING LIGHT POLE
- [Pattern] EXISTING BITUMINOUS PAVEMENT
- [Pattern] PROPOSED FES
- [Pattern] PROPOSED CATCHBASIN
- [Pattern] PROPOSED MANHOLE
- [Pattern] PROPOSED CLEANOUT
- [Pattern] PROPOSED OCS / DITCH INLET
- [Pattern] PROPOSED BITUMINOUS PAVEMENT
- [Pattern] PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT



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PROJECT:
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 TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
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B	01/26/18	CITY REVIEW SUBMITTAL	CMB

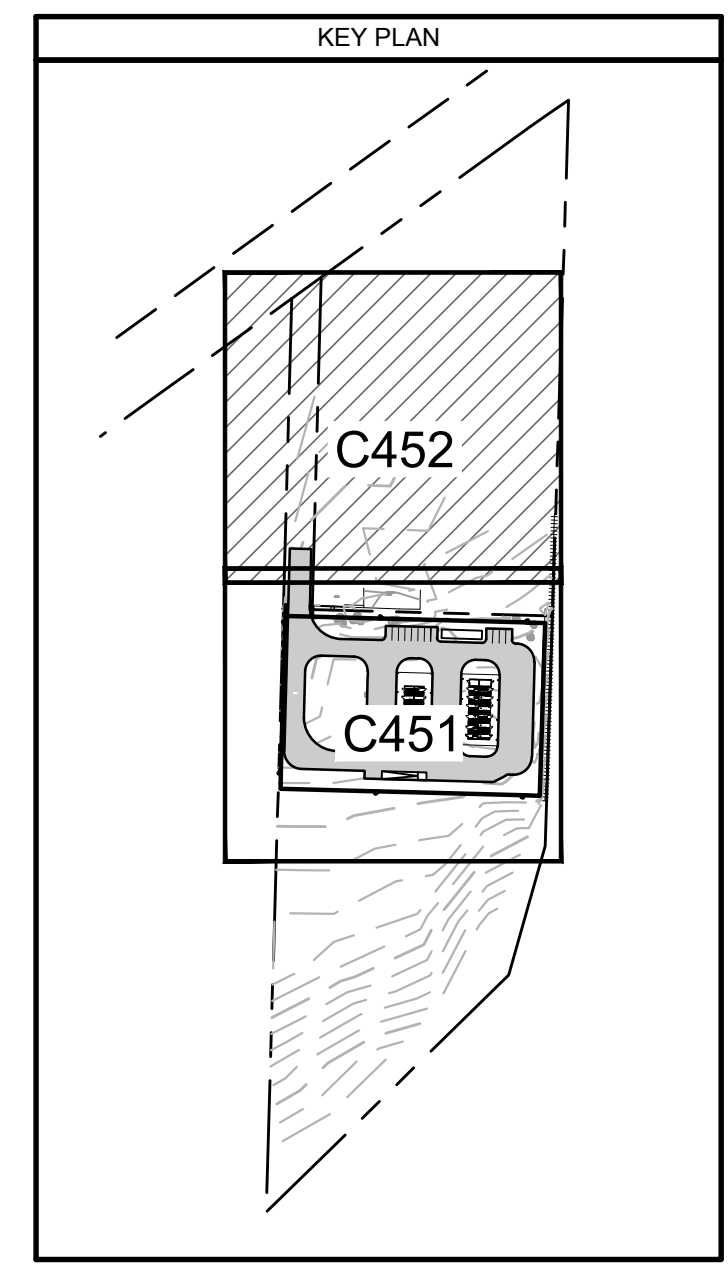
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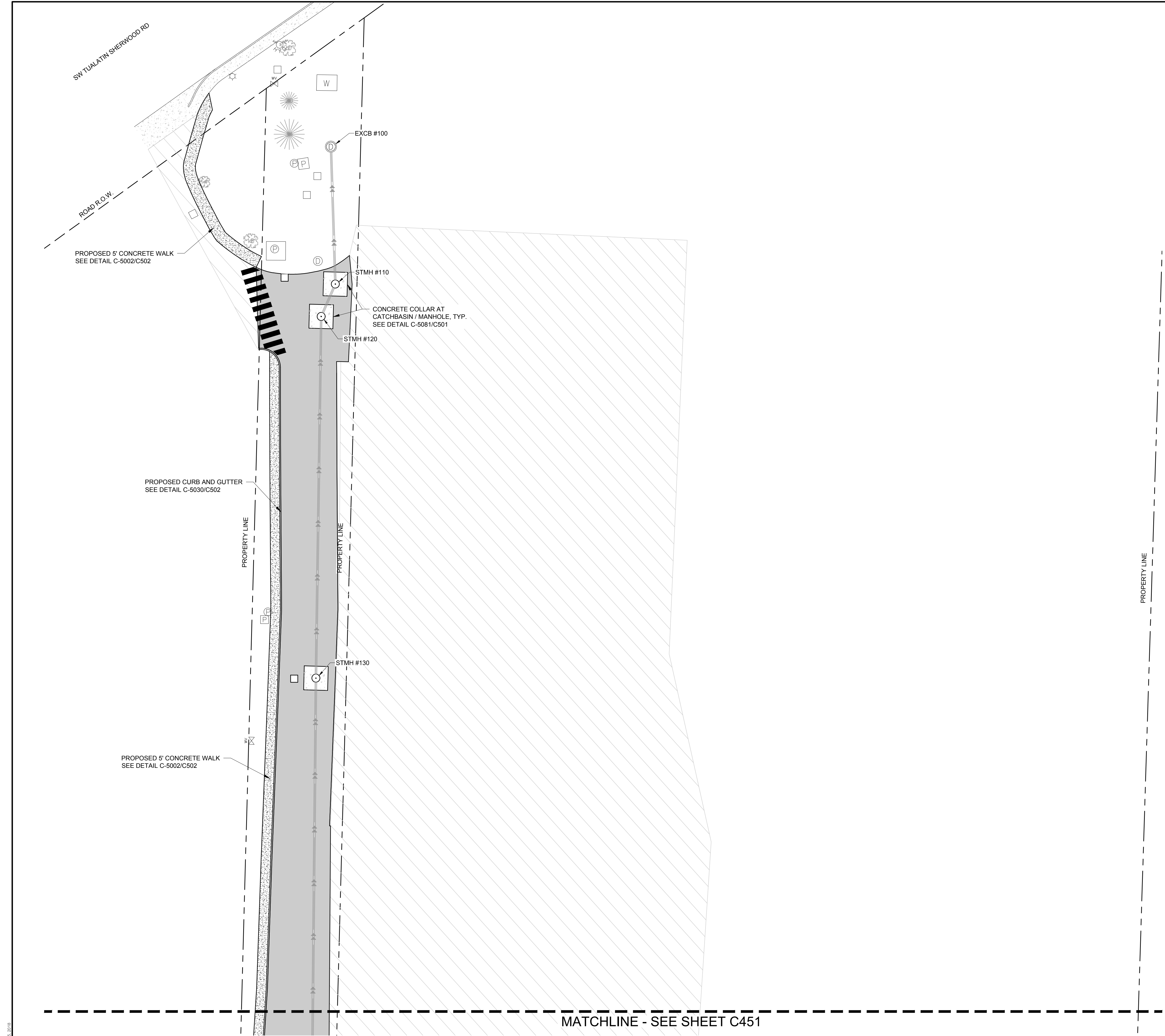
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APPROVED:	

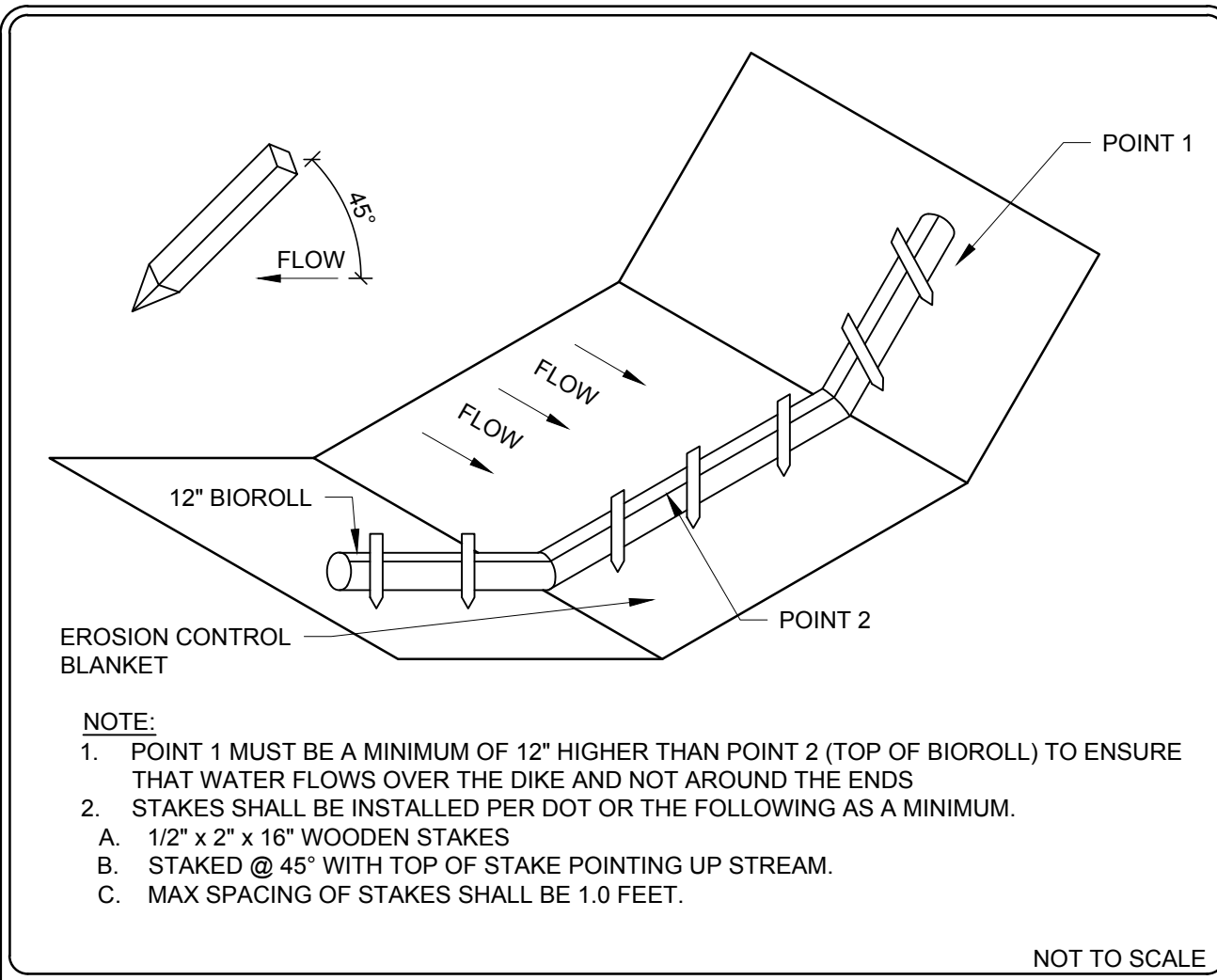
DRAWING TITLE:
**ENLARGED SITE
 PAVING PLAN**

PROJECT NO: 170359	DRAWING NO: C452
SCALE: AS NOTED	

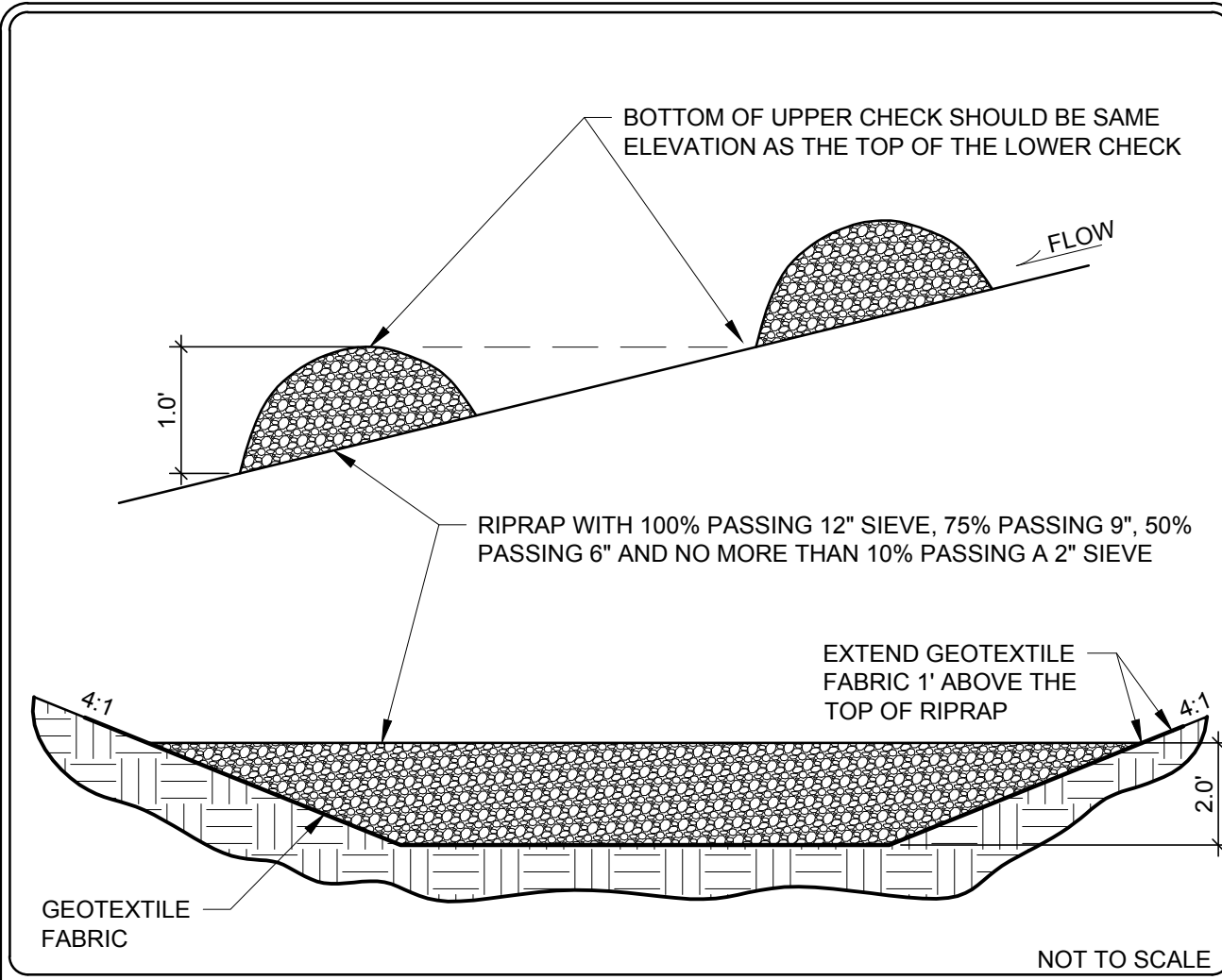


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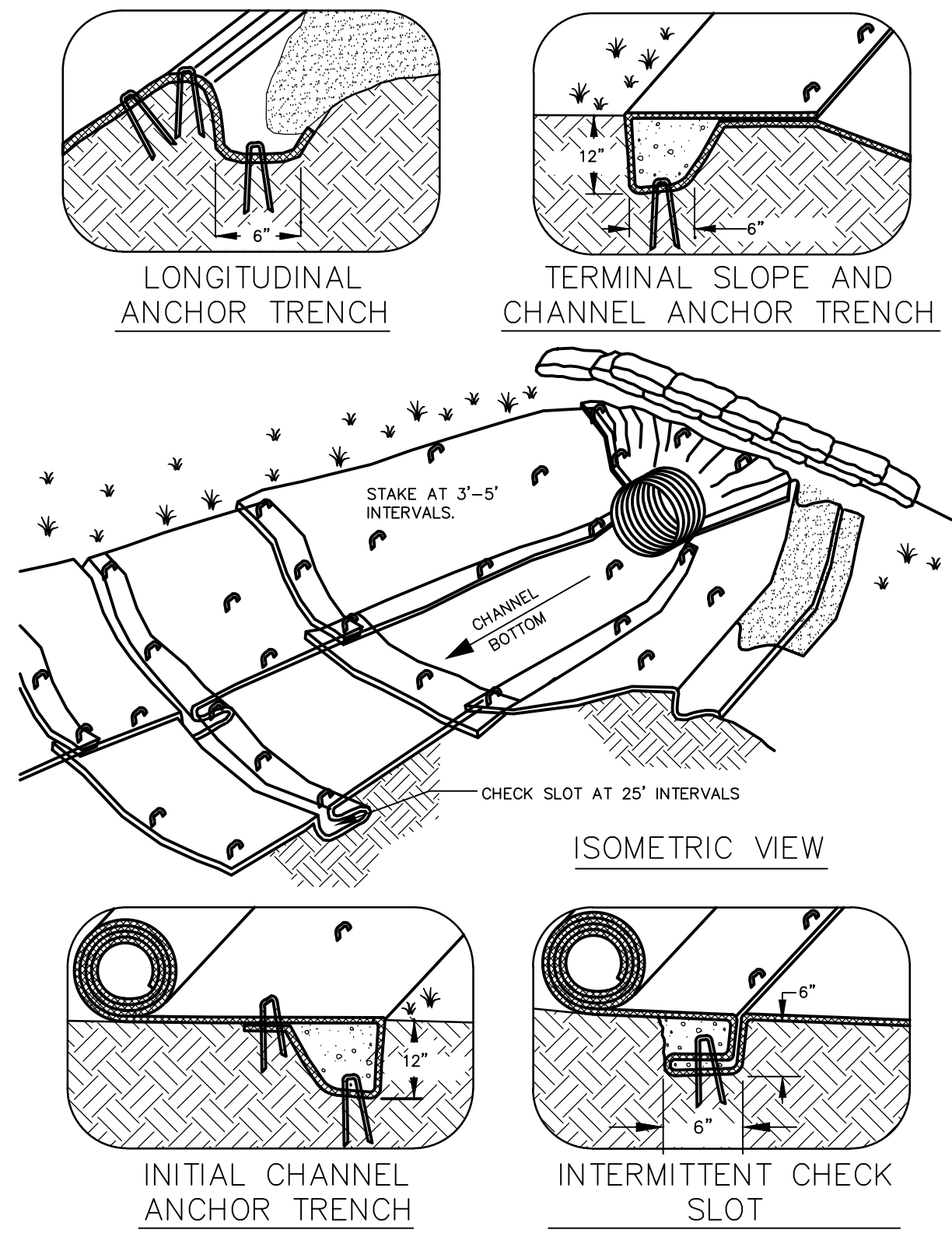




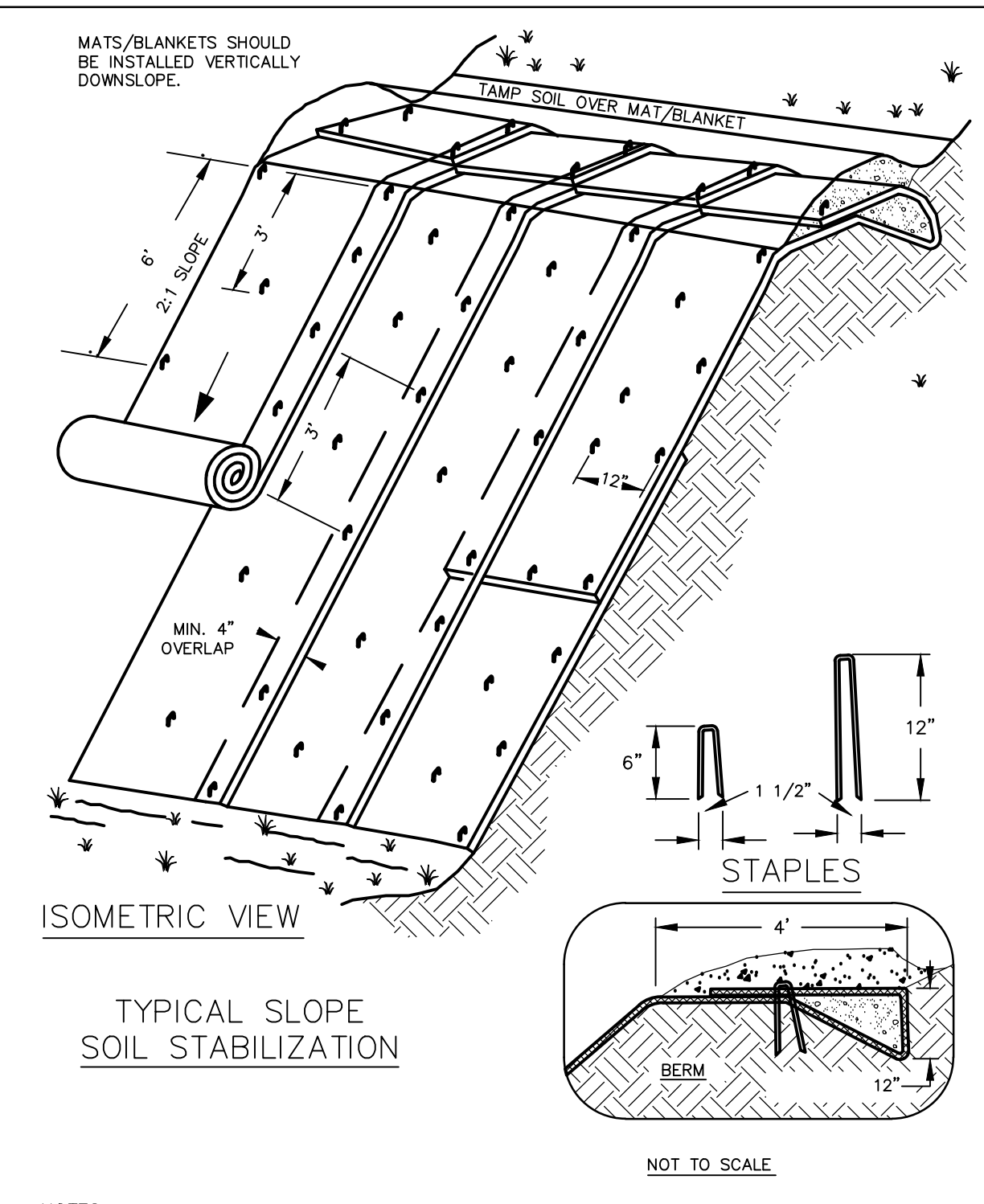
VAA BIOROLL DITCH CHECK DETAIL
 PLATE NO. C-1004



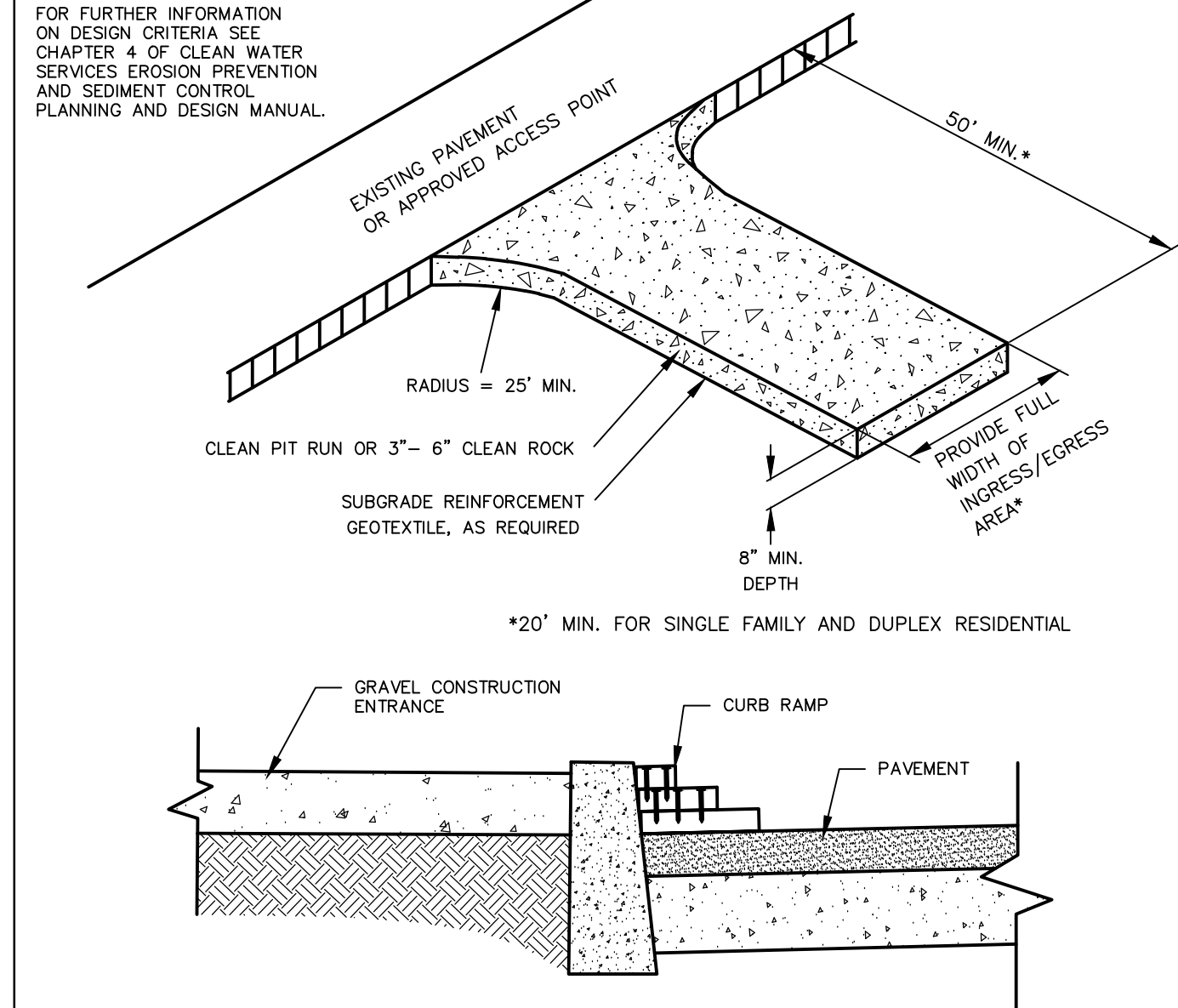
VAA ROCK FILTER BERM
 PLATE NO. C-2068



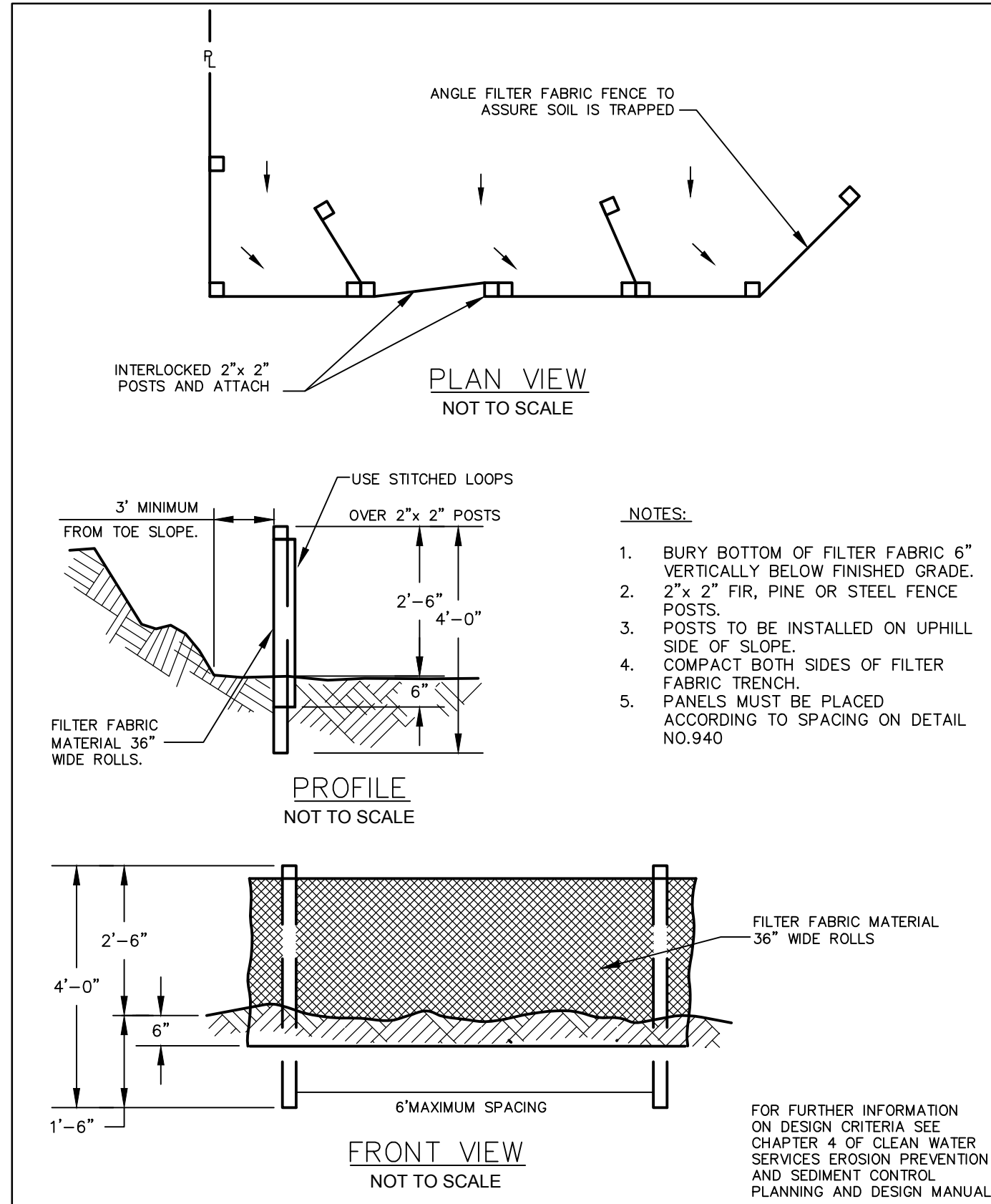
CleanWater Services
 MATTING CHANNEL INSTALLATION
 DRAWING NO. 800 REVISED 12-16



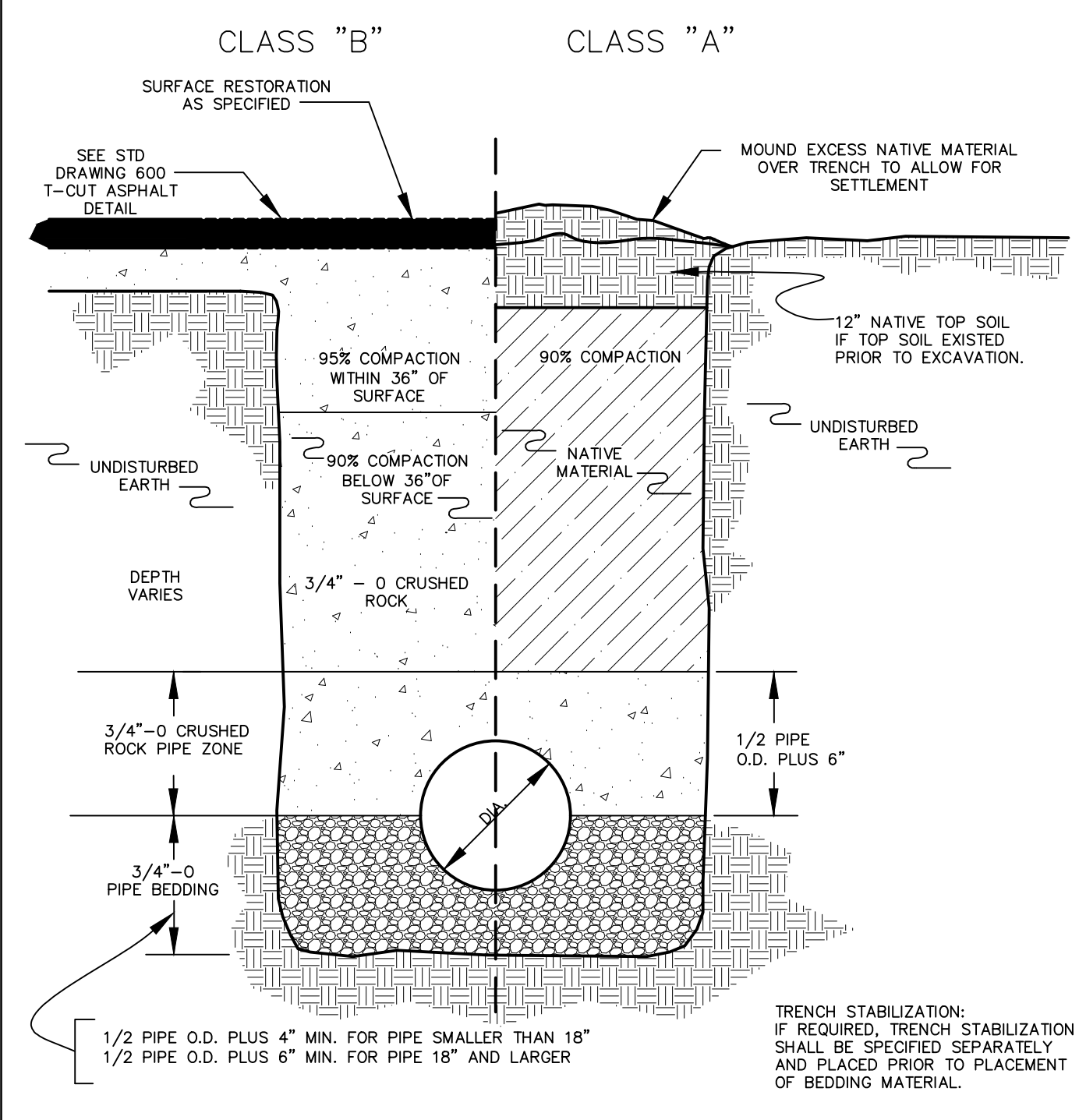
CleanWater Services
 MATTING SLOPE INSTALLATION
 DRAWING NO. 805 REVISED 12-16



CleanWater Services
 CONSTRUCTION ENTRANCE
 DRAWING NO. 855 REVISED 12-16



CleanWater Services
 SEDIMENT FENCE
 DRAWING NO. 875 REVISED 12-16



CleanWater Services
 TRENCH BACKFILL DETAILS
 DRAWING NO. 590 REVISED 12-16



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CLIENT:
AirLiquide
 creative oxygen

CLIENT PROJECT NO:

PROJECT:
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 TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
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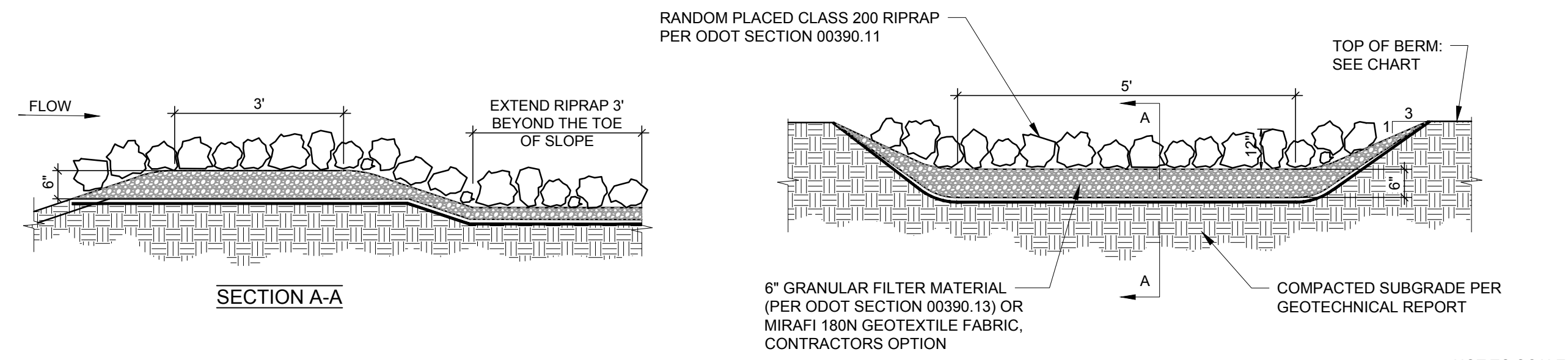
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DATE: 10/06/17 DRAWN: CMB
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 DRAWING TITLE:
 CIVIL DETAILS

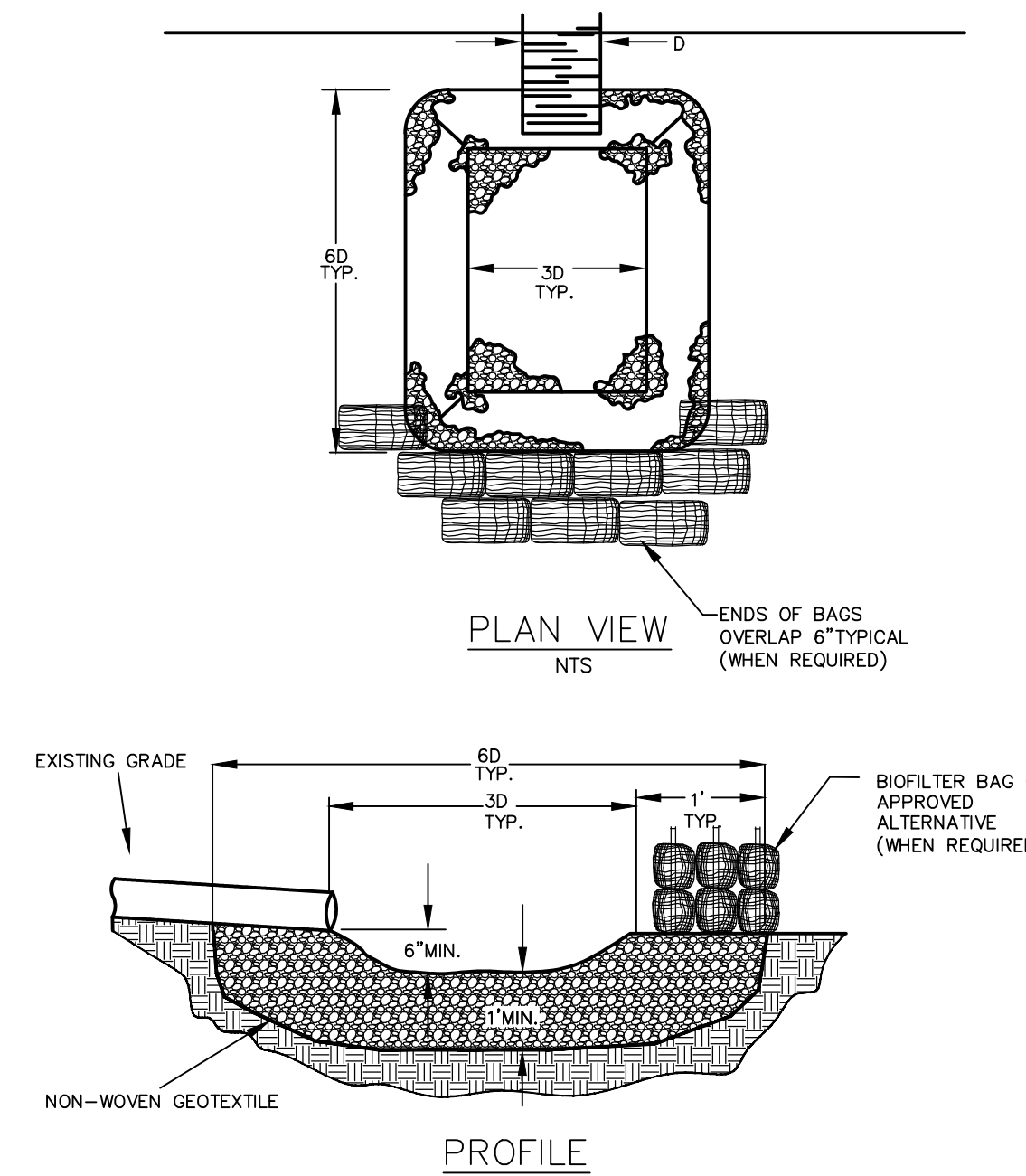
PROJECT NO: 170359 DRAWING NO: C500
 SCALE: AS NOTED

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RIP-RAP OVERFLOW REFERENCE CHART				
WEIR	BOTTOM RIP-RAP ELEV.	TOP RIP-RAP ELEV.	TOP BERM ELEV.	DEPTH RIP-RAP
1	174.00	175.00	175.20	12"



FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



- NOTES:
- BIO BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
 - STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1" x 2" WOOD STAKES OR APPROVED EQUAL PER BAG.

OUTLET PROTECTION RIP RAP
DRAWING NO. 820 REVISED 12-16

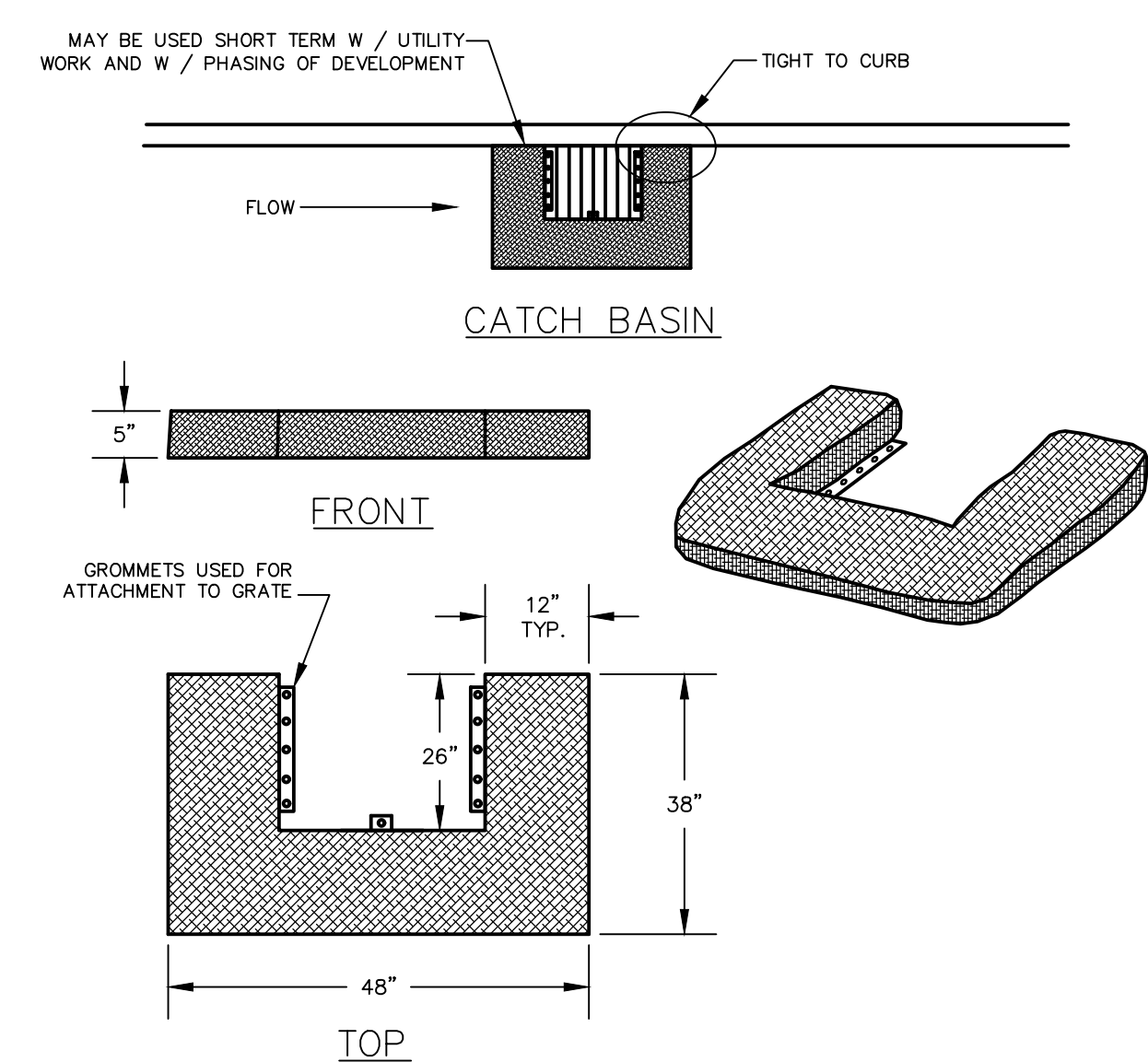
- RIPRAP:**
- ROCK FOR RIPRAP SHALL BE ANGULAR IN SHAPE.
 - THICKNESS OF A SINGLE ROCK SHALL NOT BE LESS THAN ONE-THIRD ITS LENGTH.
 - ROUNDED ROCK WILL NOT BE ACCEPTED UNLESS APPROVED BY THE DISTRICT.
- RIPRAP INSTALLATION:**
- EXCAVATE BELOW FINISH GRADE TO DEPTH & DIMENSIONS SHOWN ON APPROVED PLANS.
 - INSTALL WOVEN GEOTEXTILE FABRIC.
 - PLACE RIP RAP TO FINISH GRADE.

GRADE RIPRAP SHALL BE THE CLASS AND SIZE OF ROCK ACCORDING TO THE FOLLOWING:

CLASS	CLASS	CLASS	CLASS	CLASS	PERCENT (BY WEIGHT)
50	100	200	700	2000	
WEIGHT OF ROCK (LBS)					
50-30	100-60	200-140	700-500	2000-1400	20
30-15	60-25	140-80	500-200	1400-700	30
15-2	25-2	80-8	200-20	700-40	40
2-0	2-0	8-0	20-0	40-0	10

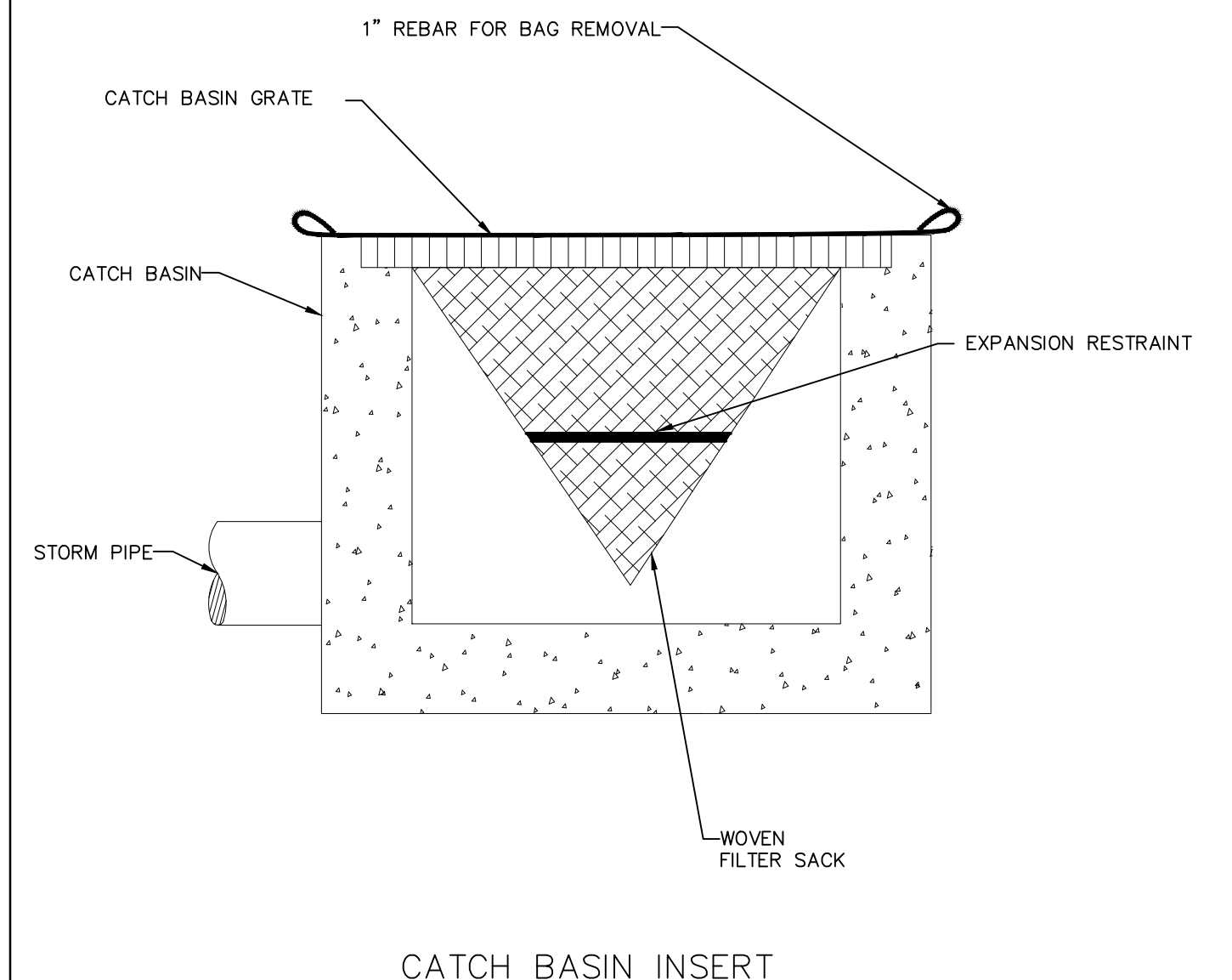
RIP RAP DETAILS
DRAWING NO. 770 REVISED 3-07

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



- INSTALLATION NOTES:
- INSTALL SOLID FABRIC SIDE DOWN MESH SIDE UP.
 - ATTACH TO CATCH BASIN GRATE AT A MINIMUM OF 3 LOCATIONS TIGHT TO CURB WITH 1/4" ZIP TIES.
- MAINTENANCE NOTES:
- ANY VISIBLE SIGN OF SEDIMENT ACCUMULATION TO BE CLEANED UP AT THE END OF EACH WORKDAY.
 - REPLACE U - SHAPED FILTER BAG AS NECESSARY TO PREVENT WOOD CHIPS FROM ENTERING THE STORM SYSTEM.

INLET PROTECTION TYPE 6
DRAWING NO. 925 REVISED 12-16



- NOTE:
- RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

INLET PROTECTION TYPE 5
DRAWING NO. 920 REVISED 12-16



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CLIENT:
 Air Liquide creative oxygen
CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
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B	01/28/18	CITY REVIEW SUBMITTAL	CMB

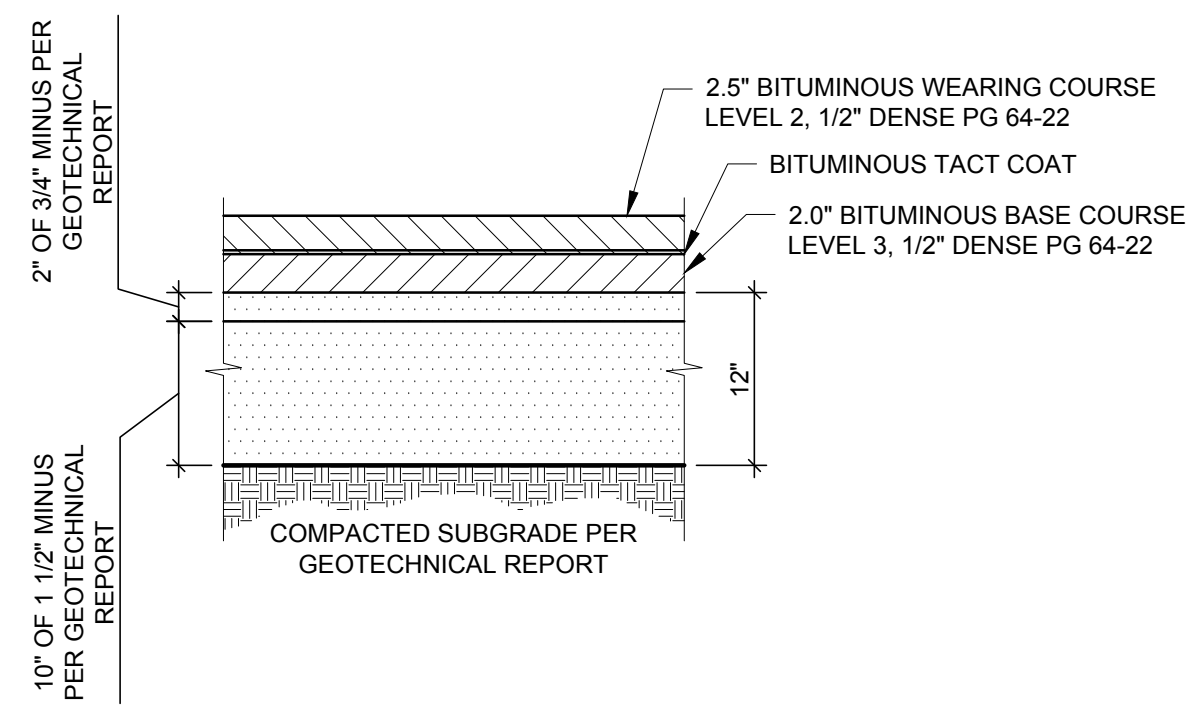
CERTIFICATION:

DATE: 10/06/17 DRAWN: CMB
DESIGNED: NHM CHECKED: AMB APPROVED:

DRAWING TITLE:
CIVIL DETAILS

PROJECT NO: 170359 DRAWING NO: C501
SCALE: AS NOTED

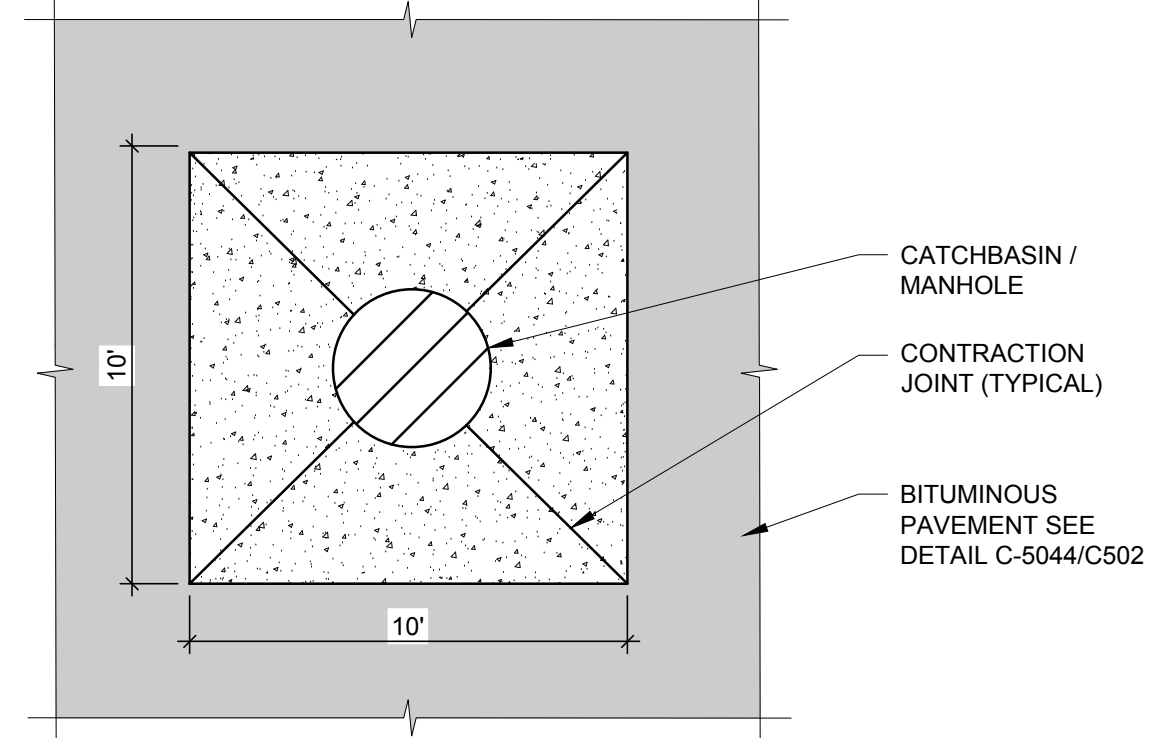
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NOTE: IF PAVEMENT IS CONSTRUCTED DURING THE WET SEASON (OCTOBER - APRIL), PROVIDE GEOTEXTILE FABRIC (MIRIFI 570 OR APPROVED EQUAL)

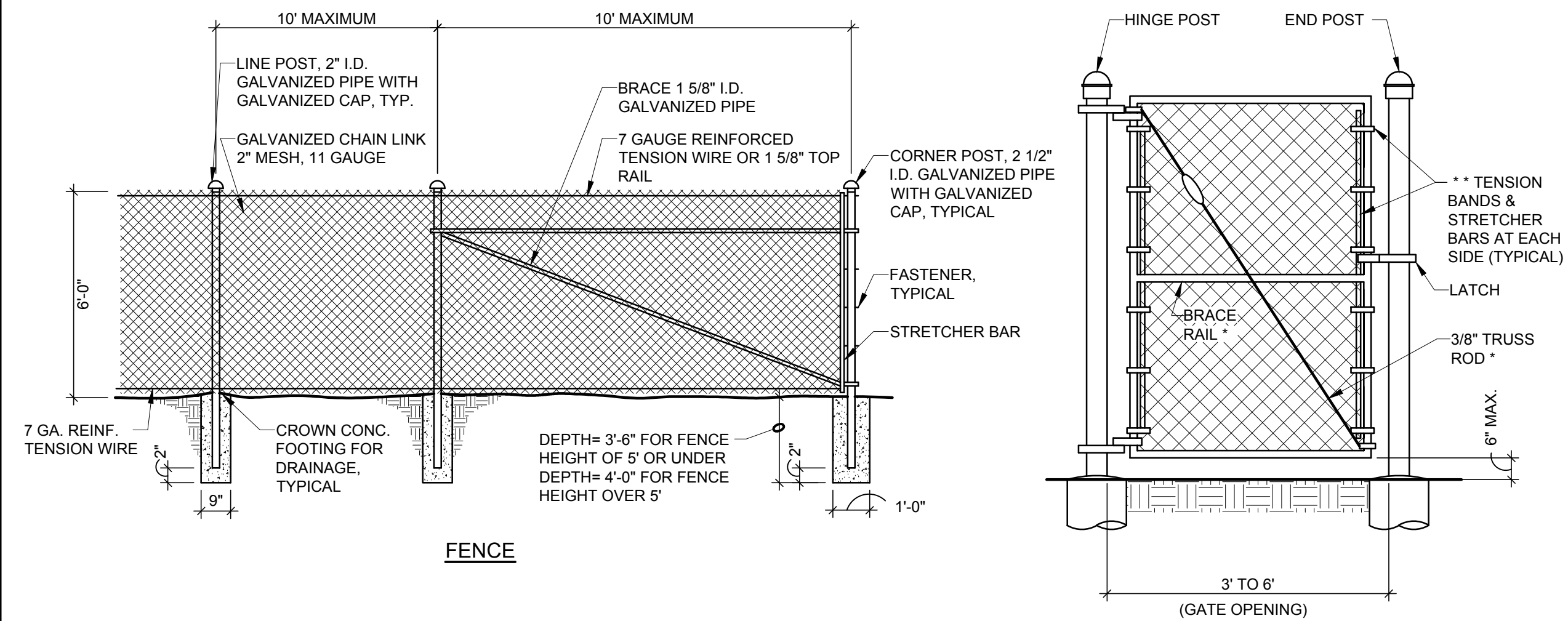
NOT TO SCALE

VAA BITUMINOUS PAVEMENT DETAIL
PLATE NO. C-5044



NOT TO SCALE

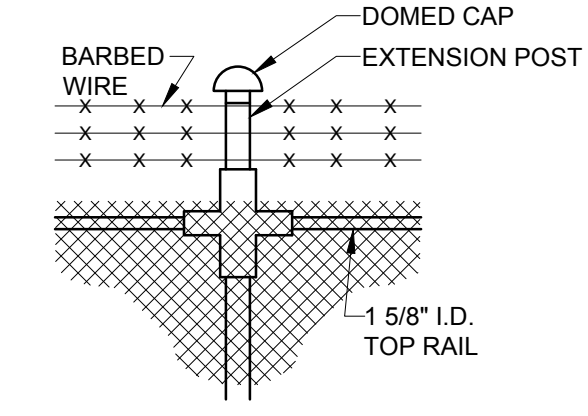
VAA CONCRETE COLLAR AT CATCHBASIN DETAIL
PLATE NO. C-5081



FENCE

SWING GATE

- NOTES:**
- DEPTH OF FOOTINGS ARE INTO NATURAL UNDISTURBED SOIL OR TESTED & APPROVED COMPACTED FILL.
 - CONCRETE FOOTINGS SHALL BE A MINIMUM 5 SACK MIX & TEST TO A MINIMUM OF 2000 P.S.I. IN 28 DAYS.
 - THE FOLLOWING ITEMS SHALL BE FURNISHED AND INSTALLED -
 - A. BARBED WIRE
 - B. EXTENSION ARM
 - C. TOP RAIL
 - 12GA. WIRE FASTENERS SHALL BE USED.
 - DETAIL-A REFERS TO ALL ENCLOSURES TYP. U.N.O.
 - ADDITIONAL BRACING MAY BE REQUIRED. WITH RUNS OVER 200'.



DETAIL-A

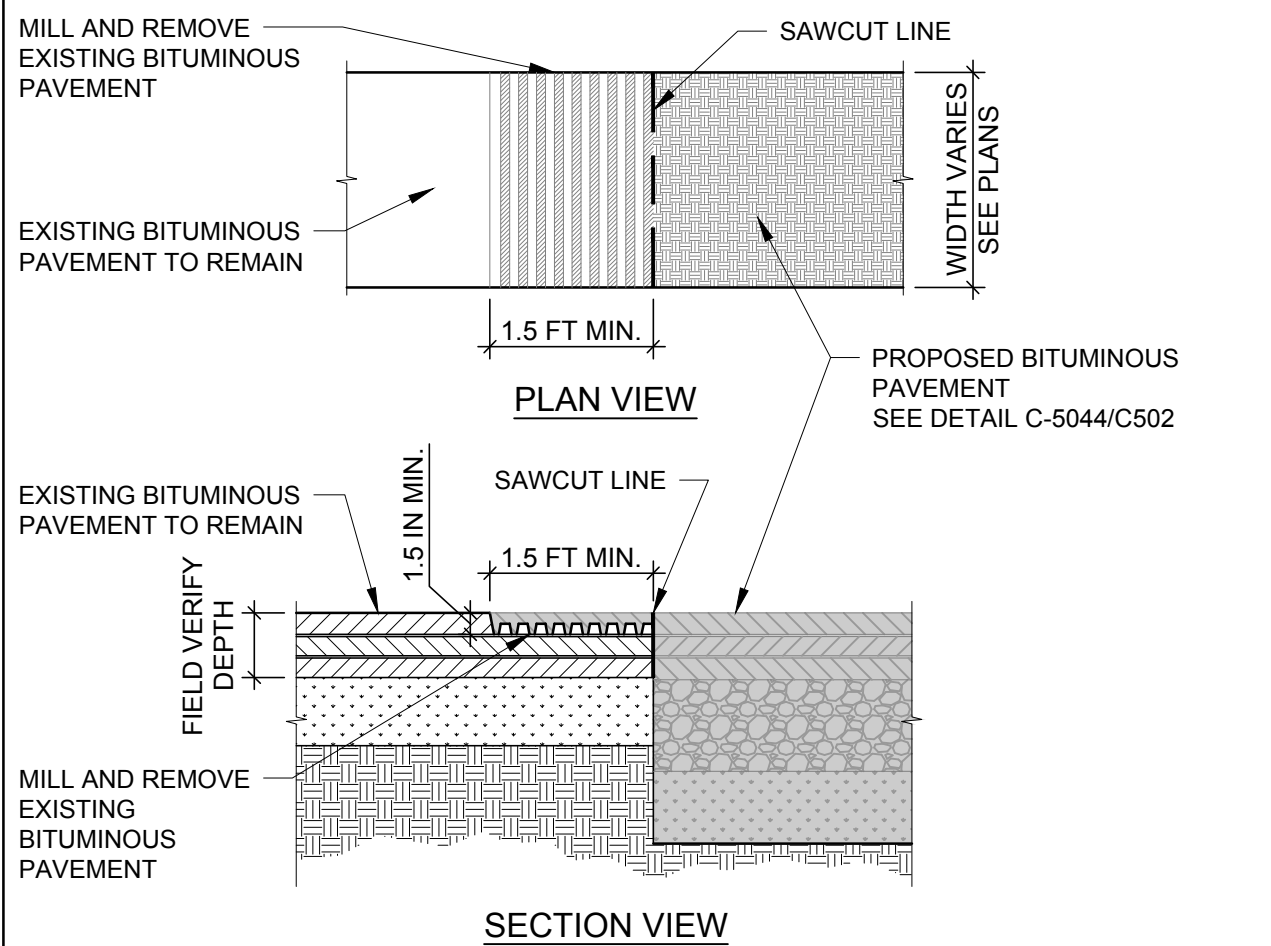
GATE OPENING		FRAME PIPE NOMINAL	BRACE RAIL-PIPE NOMINAL
WIDTH ¹	HEIGHT ²		
3' TO 6'	3' TO 6'	1.50"	1.50"

GATE OPENING WIDTH ¹	HINGE POST		CONCRETE FOOTING	
	ROUND PIPE NOMINAL	ROLL FORMED STEEL	DEPTH	DIAMETER
3' TO 6'	3.00"	3.50"x3.50"	36"	12"

- NOTES:**
- * ARE NOT REQUIRED FOR GATES 3' TO 5' HEIGHT OR 5' OR LESS IN WIDTH.
 - ** TENSION BANDS SHALL BE SPACED 12" C. TO C.
 - 1 LEAF WIDTH FOR DOUBLE VEHICULAR GATE
 - 2 SHALL COINCIDE WITH FENCE HEIGHT

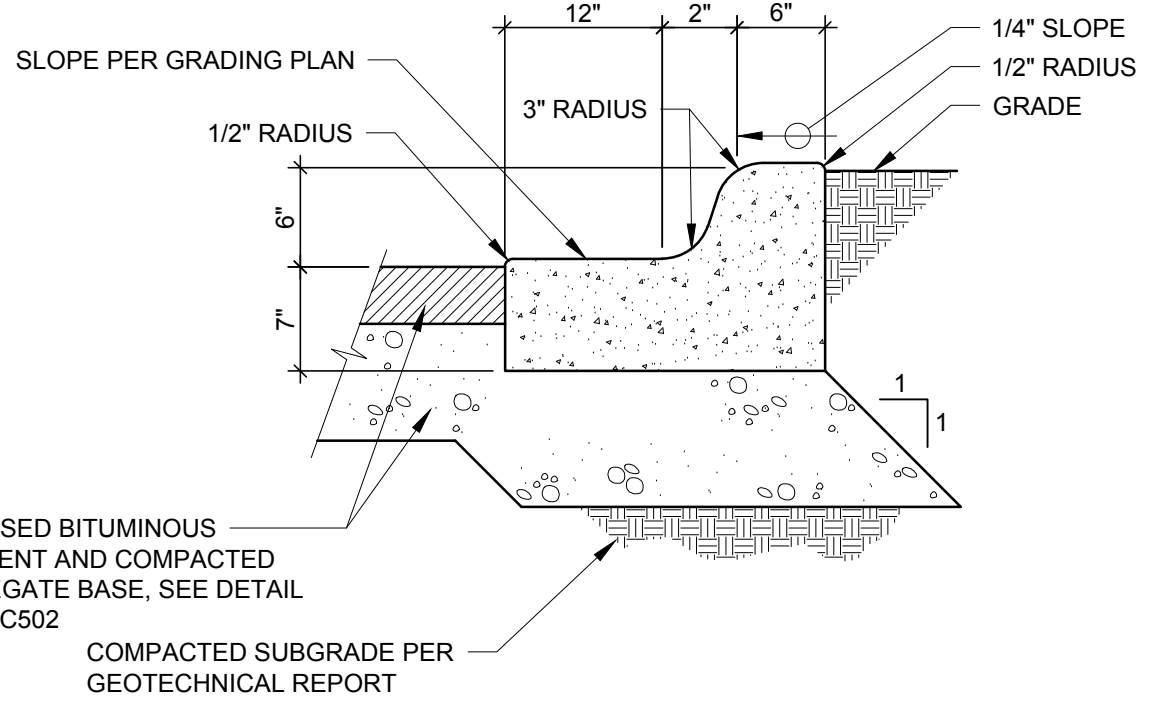
NOT TO SCALE

VAA FENCE AND GATE
PLATE NO. C-5088



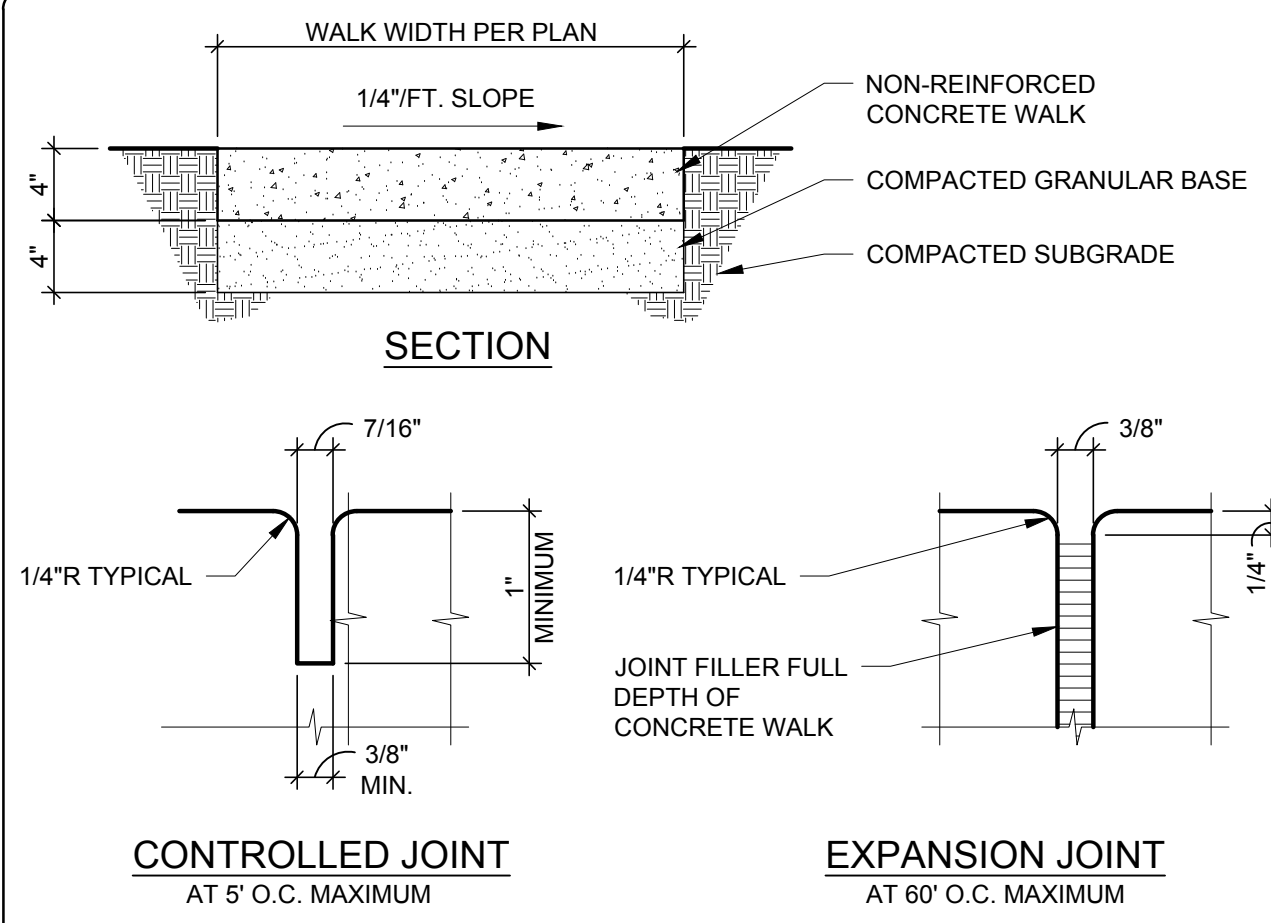
NOT TO SCALE

VAA MILLED BITUMINOUS EDGE DETAIL
PLATE NO. C-5022



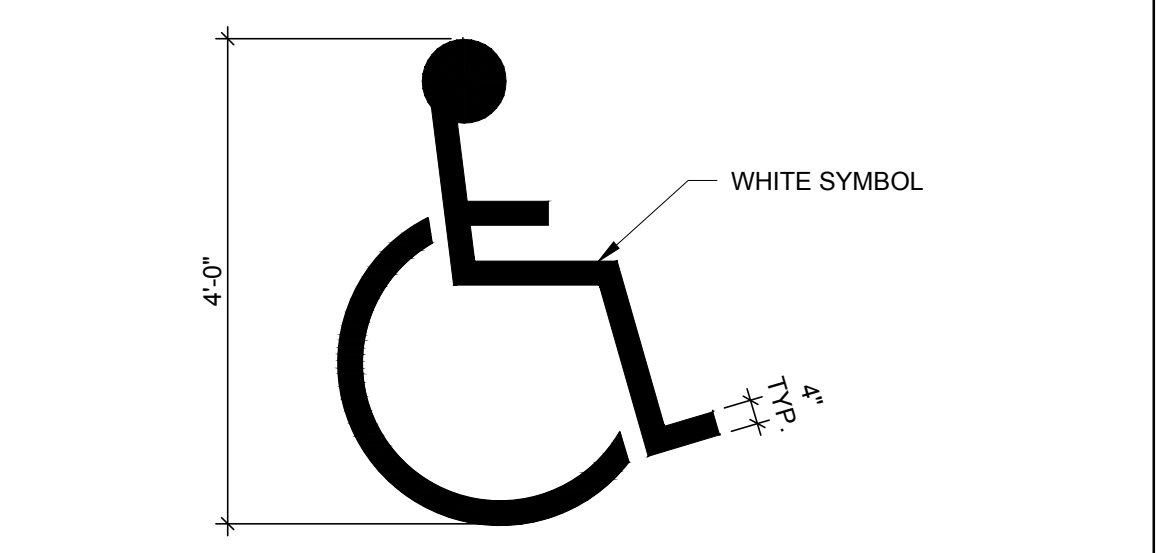
NOT TO SCALE

VAA CONCRETE CURB AND GUTTER (B612) DETAIL
PLATE NO. C-5030



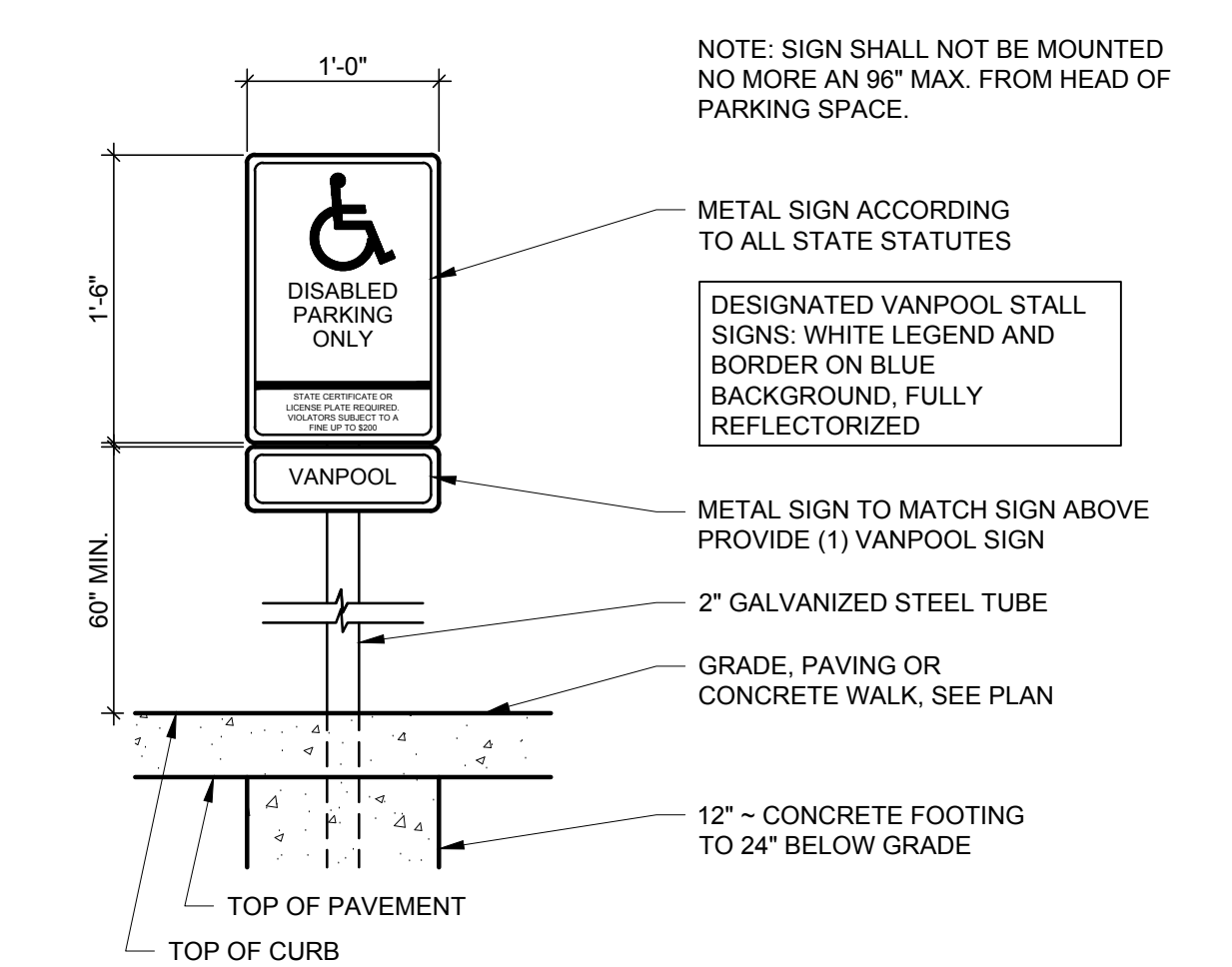
NOT TO SCALE

VAA CONCRETE WALK AND JOINT DETAIL
PLATE NO. C-5002



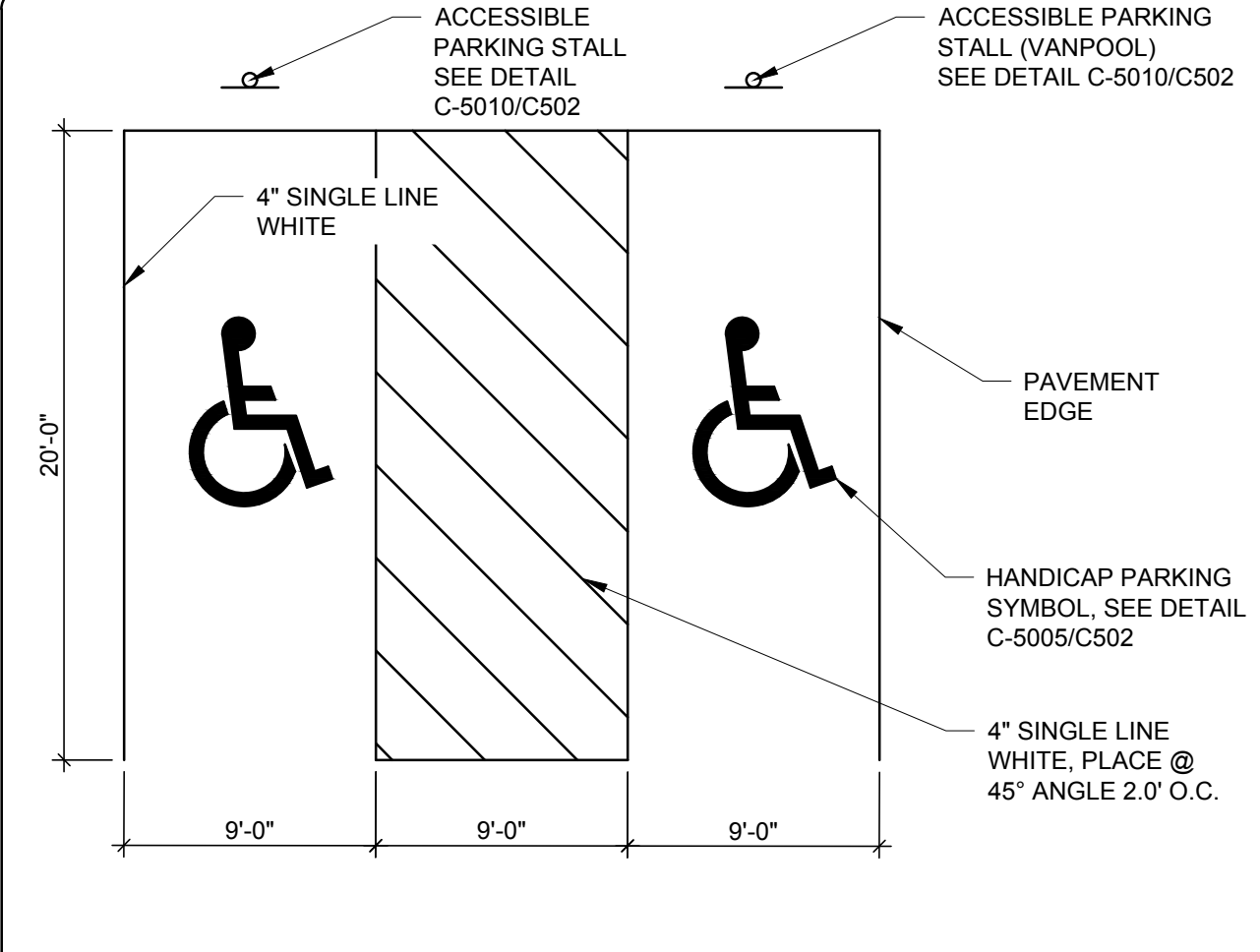
NOT TO SCALE

VAA HANDICAP PARKING SYMBOL DETAIL
PLATE NO. C-5005



NOT TO SCALE

VAA ACCESSIBLE PARKING SIGN DETAIL
PLATE NO. C-5010



NOT TO SCALE

VAA HANDICAP PARKING STALL(S) DETAIL
PLATE NO. C-5024



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www.vaaeng.com
info@vaaeng.com

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PROJECT:
AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
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B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

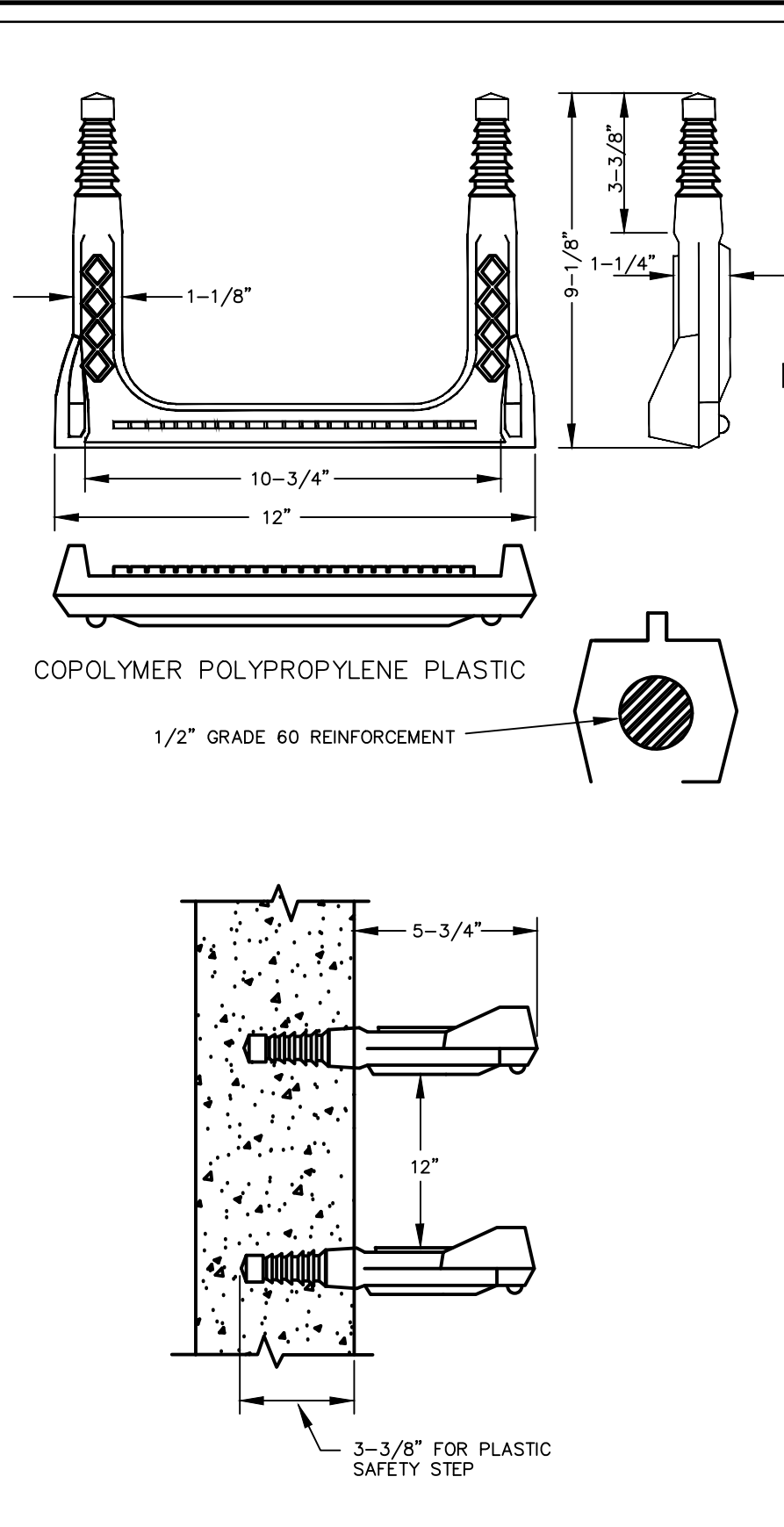
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DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:
CIVIL DETAILS

PROJECT NO: 170359	DRAWING NO: C502
SCALE: AS NOTED	

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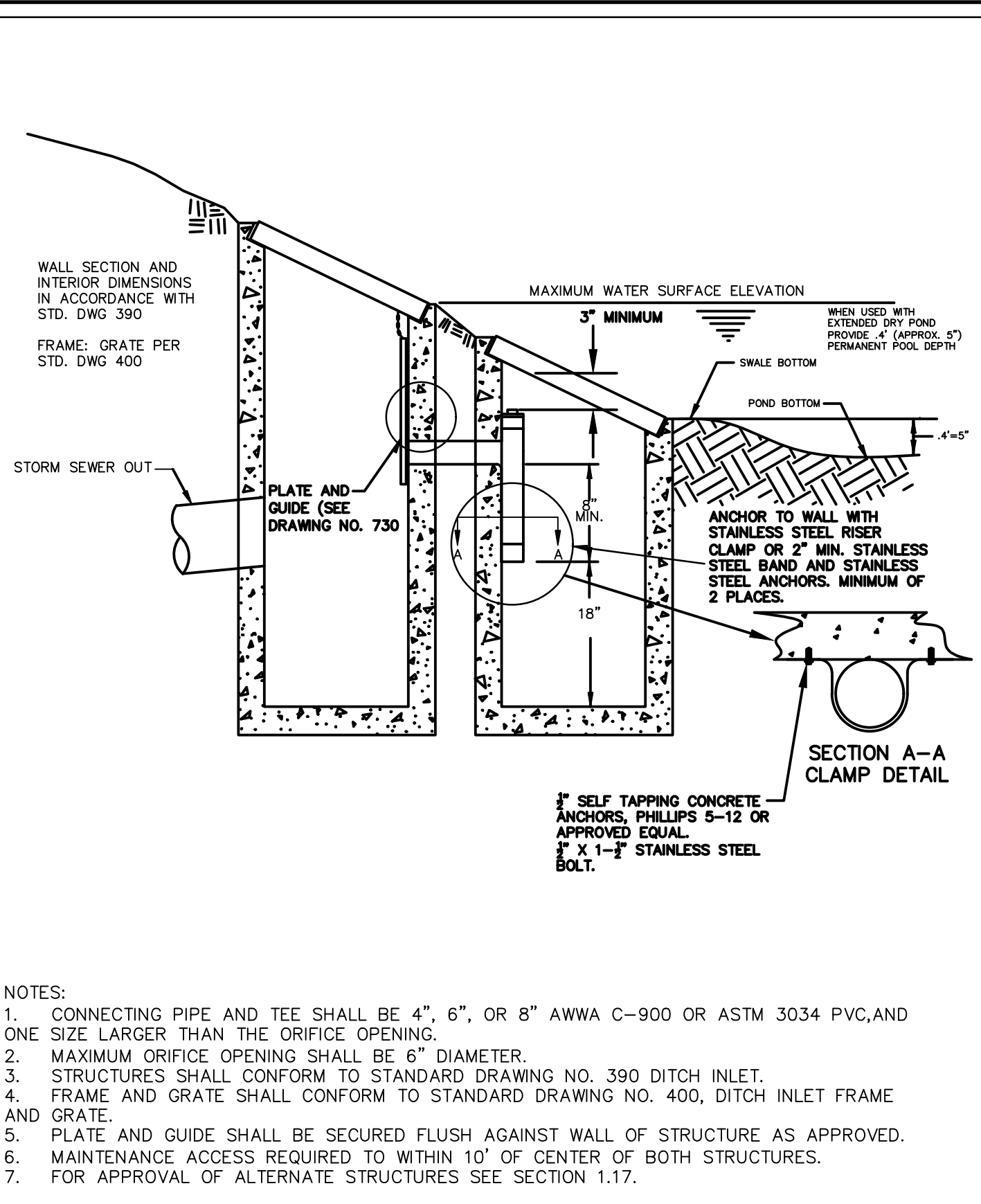
MATERIALS:

PLASTIC:
MUST CONFORM WITH ASTM C-478. STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60. MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

NOTES:

1. ALL STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED.
3. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND SIZE. (MIXING OF UNMATCHED STEPS IS NOT PERMITTED).
4. STEPS ADJUSTED OR ADDED SHALL BE EPOXIED IN HOLES THAT ARE FREE OF MOISTURE AND DEBRIS. (EPOXY TO MEET ASTM C881).

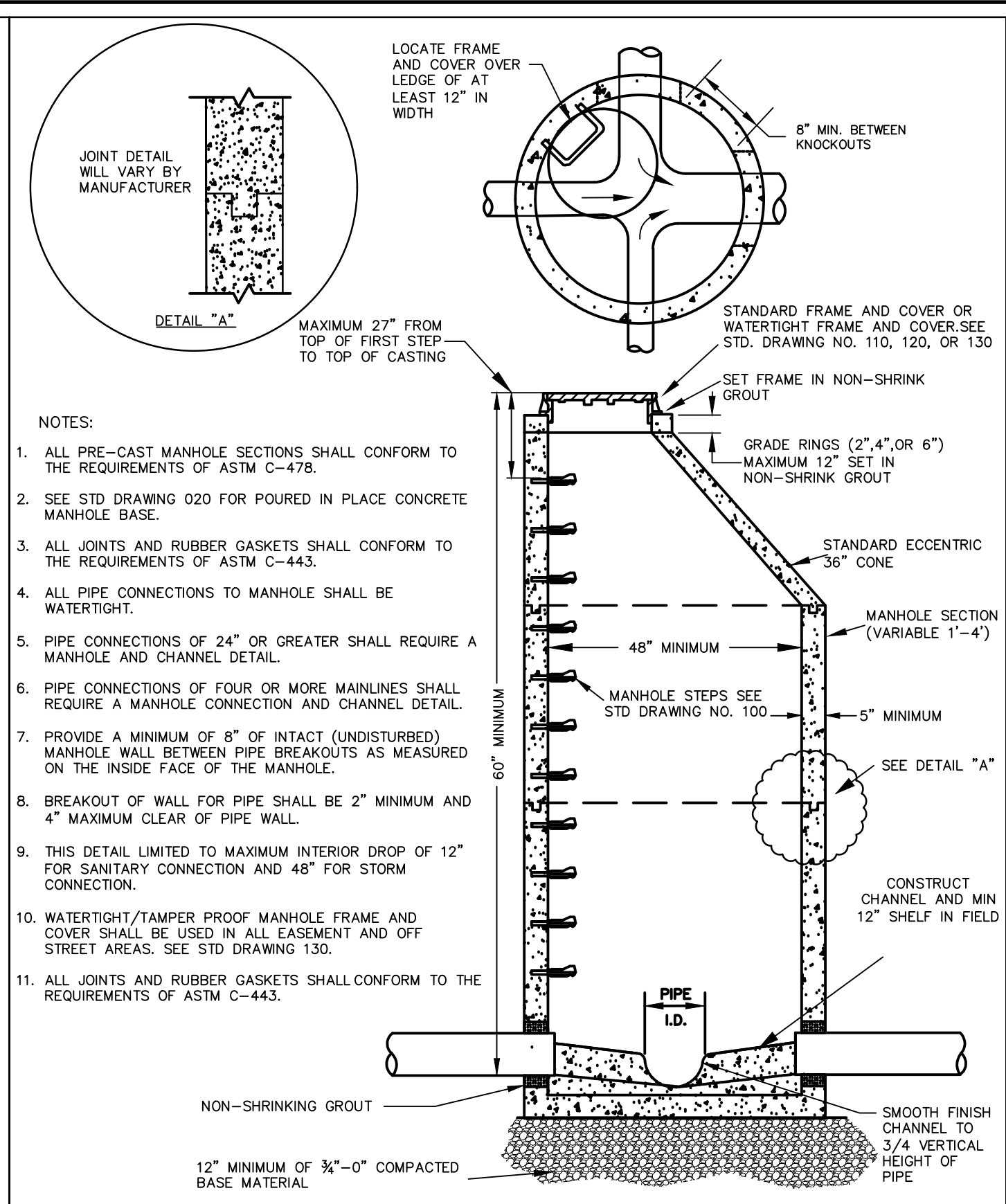
MANHOLE STEP
DRAWING NO. 100 REVISED 12-16



NOTES:

1. CONNECTING PIPE AND TEE SHALL BE 4", 6", OR 8" AWWA C-900 OR ASTM 3034 PVC, AND ONE SIZE LARGER THAN THE ORIFICE OPENING.
2. MAXIMUM ORIFICE OPENING SHALL BE 6" DIAMETER.
3. STRUCTURES SHALL CONFORM TO STANDARD DRAWING NO. 390 DITCH INLET.
4. FRAME AND GRATE SHALL CONFORM TO STANDARD DRAWING NO. 400, DITCH INLET FRAME AND GRATE.
5. PLATE AND GUIDE SHALL BE SECURED FLUSH AGAINST WALL OF STRUCTURE AS APPROVED.
6. MAINTENANCE ACCESS REQUIRED TO WITHIN 10" OF CENTER OF BOTH STRUCTURES.
7. FOR APPROVAL OF ALTERNATE STRUCTURES SEE SECTION 1.17.

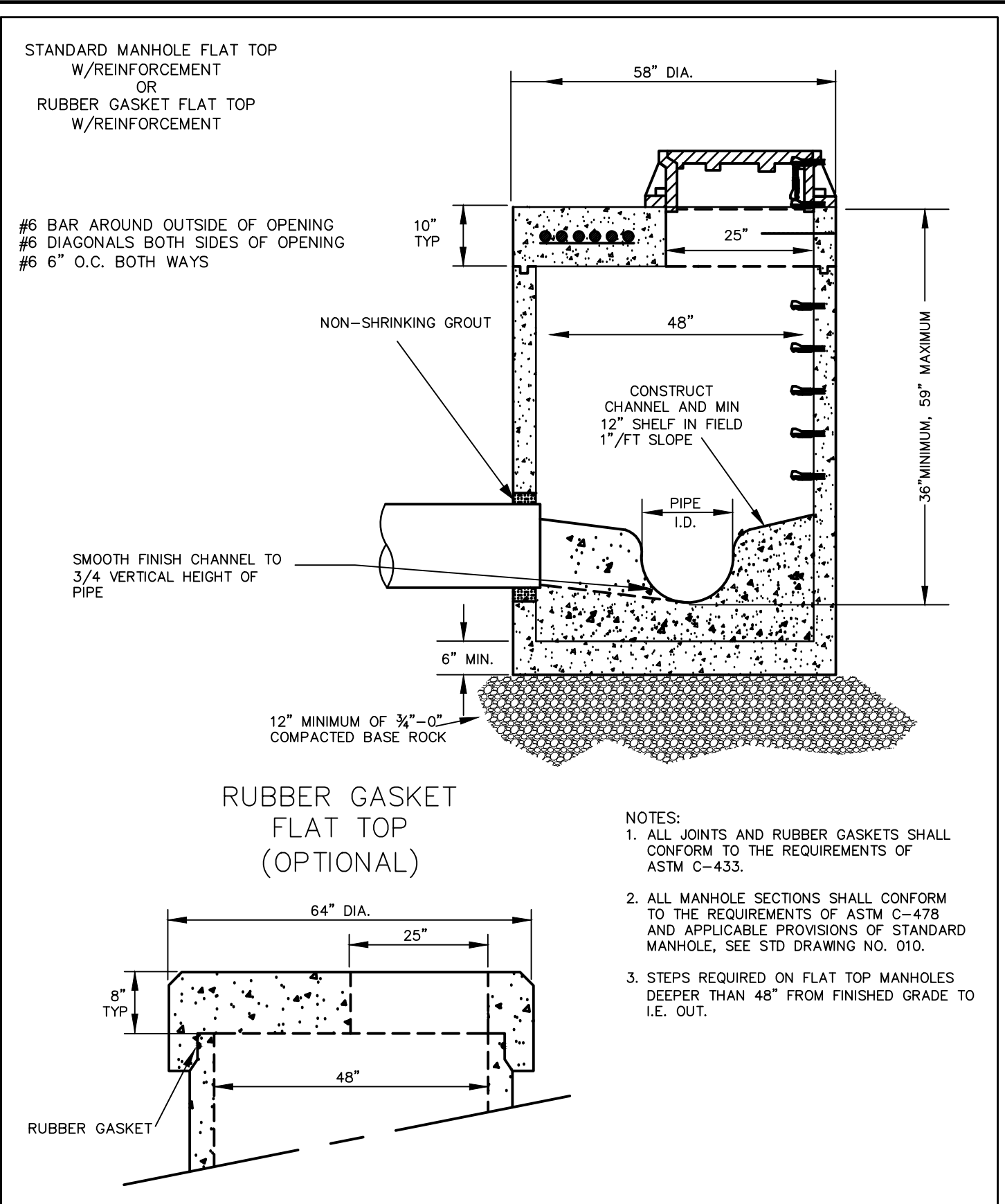
OUTFLOW CONTROL STRUCTURE
DRAWING NO. 720 REVISED 11-06



NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. SEE STD DRAWING 020 FOR POURED IN PLACE CONCRETE MANHOLE BASE.
3. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
4. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
5. PIPE CONNECTIONS OF 24" OR GREATER SHALL REQUIRE A MANHOLE CONNECTION AND CHANNEL DETAIL.
6. PIPE CONNECTIONS OF FOUR OR MORE MAINLINES SHALL REQUIRE A MANHOLE CONNECTION AND CHANNEL DETAIL.
7. PROVIDE A MINIMUM OF 8" OF INTACT (UNDISTURBED) MANHOLE WALL BETWEEN PIPE BREAKOUTS AS MEASURED ON THE INSIDE FACE OF THE MANHOLE.
8. BREAKOUT OF WALL FOR PIPE SHALL BE 2" MINIMUM AND 4" MAXIMUM CLEAR OF PIPE WALL.
9. THIS DETAIL LIMITED TO MAXIMUM INTERIOR DROP OF 12" FOR SANITARY CONNECTION AND 48" FOR STORM CONNECTION.
10. WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS. SEE STD DRAWING 130.
11. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.

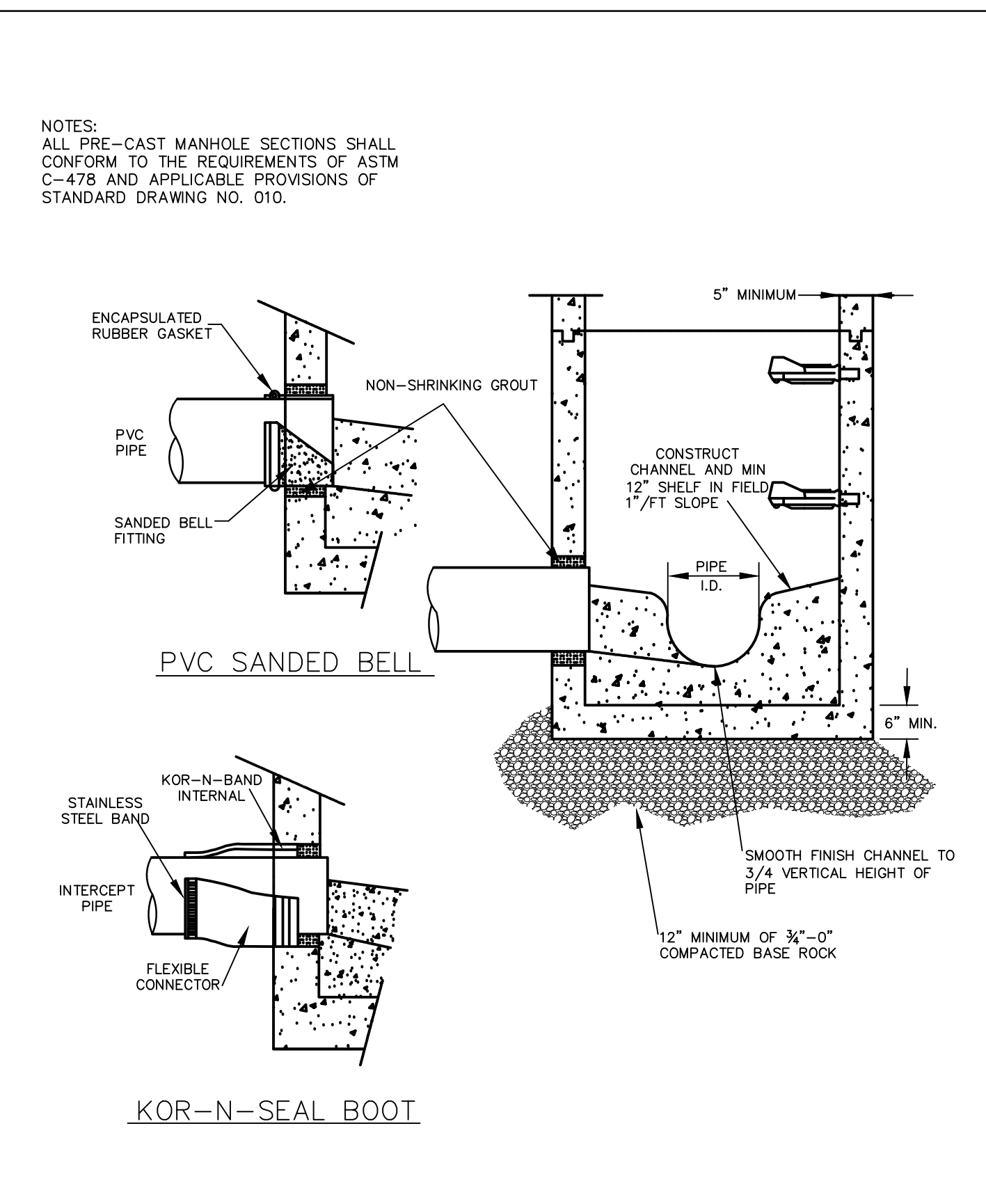
STANDARD MANHOLE
DRAWING NO. 010 REVISED 12-16



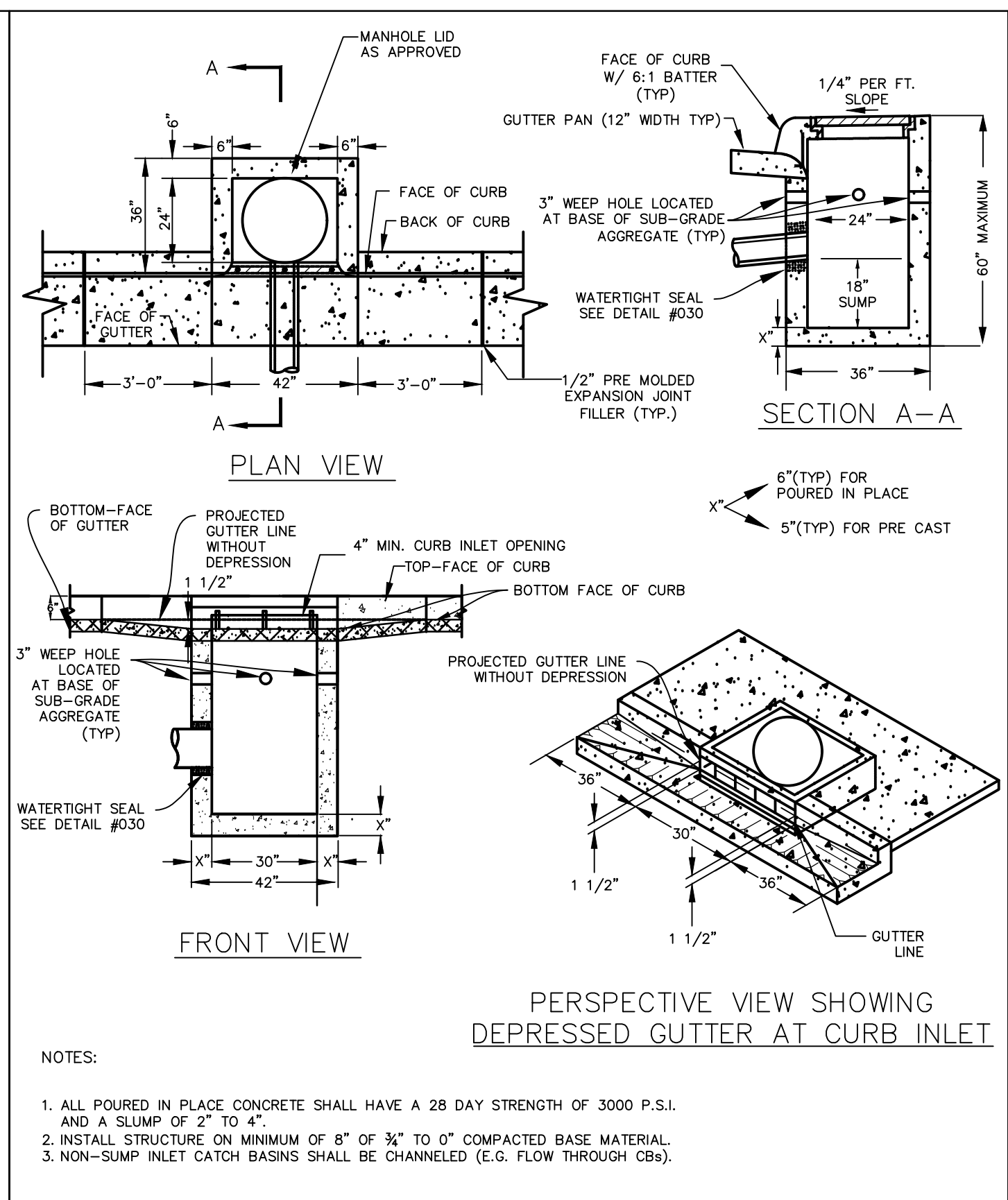
NOTES:

1. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-433.
2. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, SEE STD DRAWING NO. 010.
3. STEPS REQUIRED ON FLAT TOP MANHOLES DEEPER THAN 48" FROM FINISHED GRADE TO I.E. OUT.

FLAT TOP MANHOLE
DRAWING NO. 050 REVISED 12-16



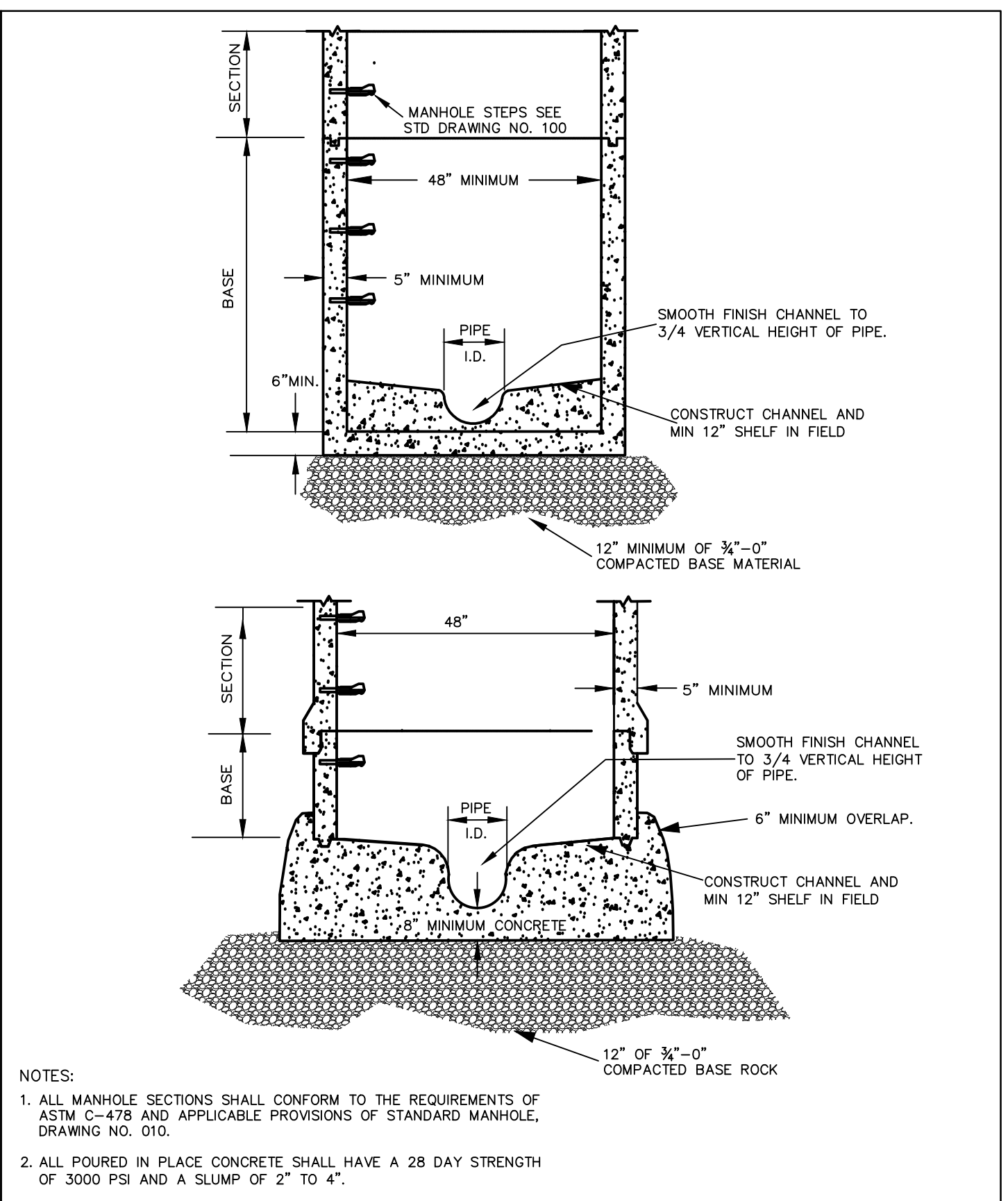
MANHOLE CONNECTIONS
DRAWING NO. 030 REVISED 12-16



NOTES:

1. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND A SLUMP OF 2" TO 4".
2. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4" TO 0" COMPACTED BASE MATERIAL.
3. NON-SLUMP INLET CATCH BASINS SHALL BE CHANNLED (E.G. FLOW THROUGH CBS).

INLET CATCH BASIN (CG-30)
DRAWING NO. 330 REVISED 12-16



NOTES:

1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING NO. 010.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".

MANHOLE BASE
DRAWING NO. 020 REVISED 11-16



Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441

763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

CLIENT PROJECT NO:

PROJECT:

**AIR LIQUIDE GAS DEPOT
TUALATIN, OR**

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

NOTICE: THE DESIGNS SHOWN AND DESCRIBED HEREIN INCLUDING ALL TECHNICAL DRAWINGS, DETAILS, DEVELOPMENTS, GRAPHS AND NOTES IS HEREBY AND THE EXCLUSIVE PROPERTY OF VAA, LLC AND CANNOT BE COPIED, DUPLICATED, REPRODUCED OR COMMERCIALY EXPLOITED, IN WHOLE OR IN PART, NOR CAN ANY DERIVATIVE WORK BE MADE, UNLESS EXPRESSLY AUTHORIZED IN WRITING BY VAA, LLC. COPYRIGHT VAA, LLC 2017. ALL RIGHTS RESERVED.

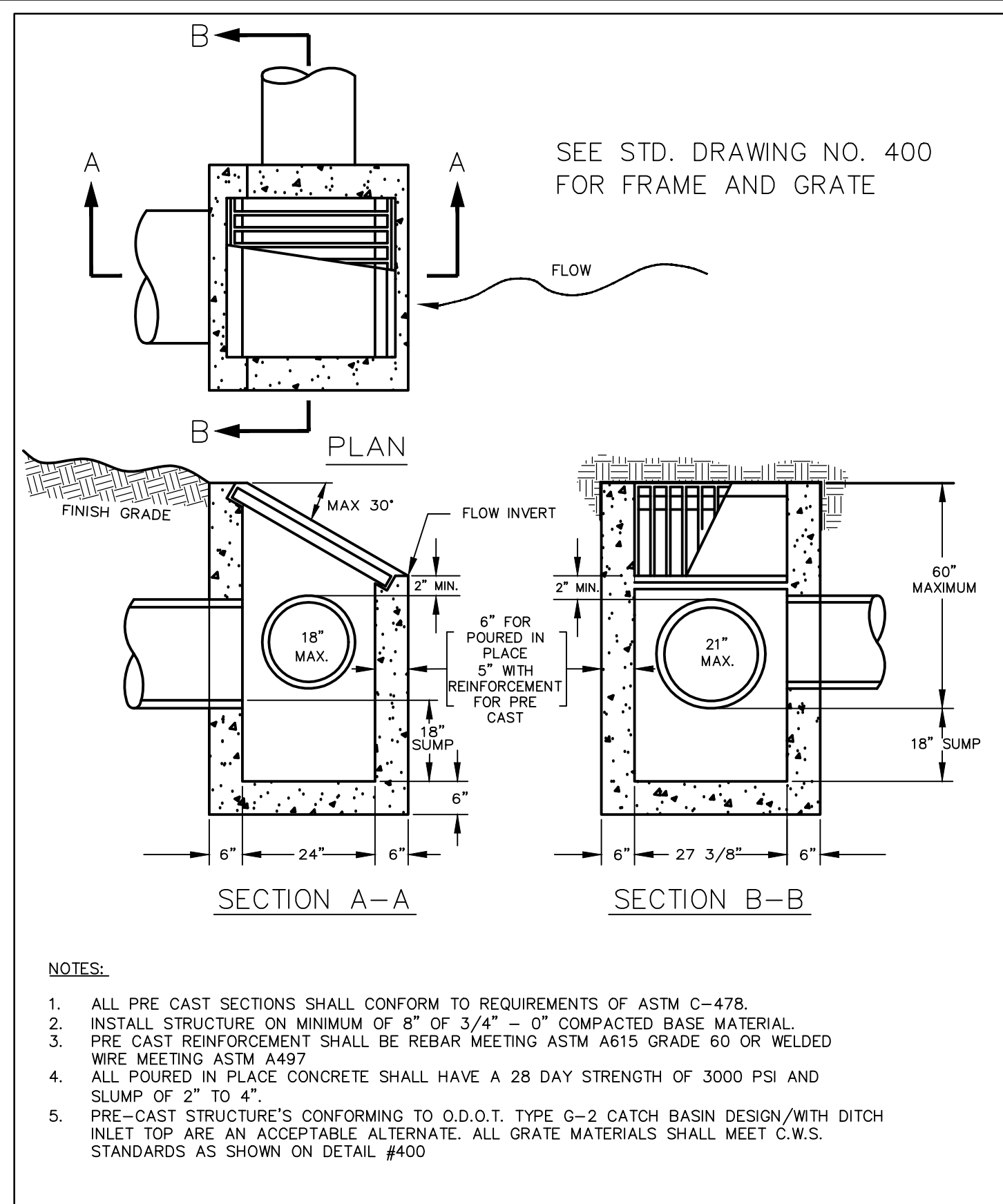
DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
	APPROVED:

DRAWING TITLE:

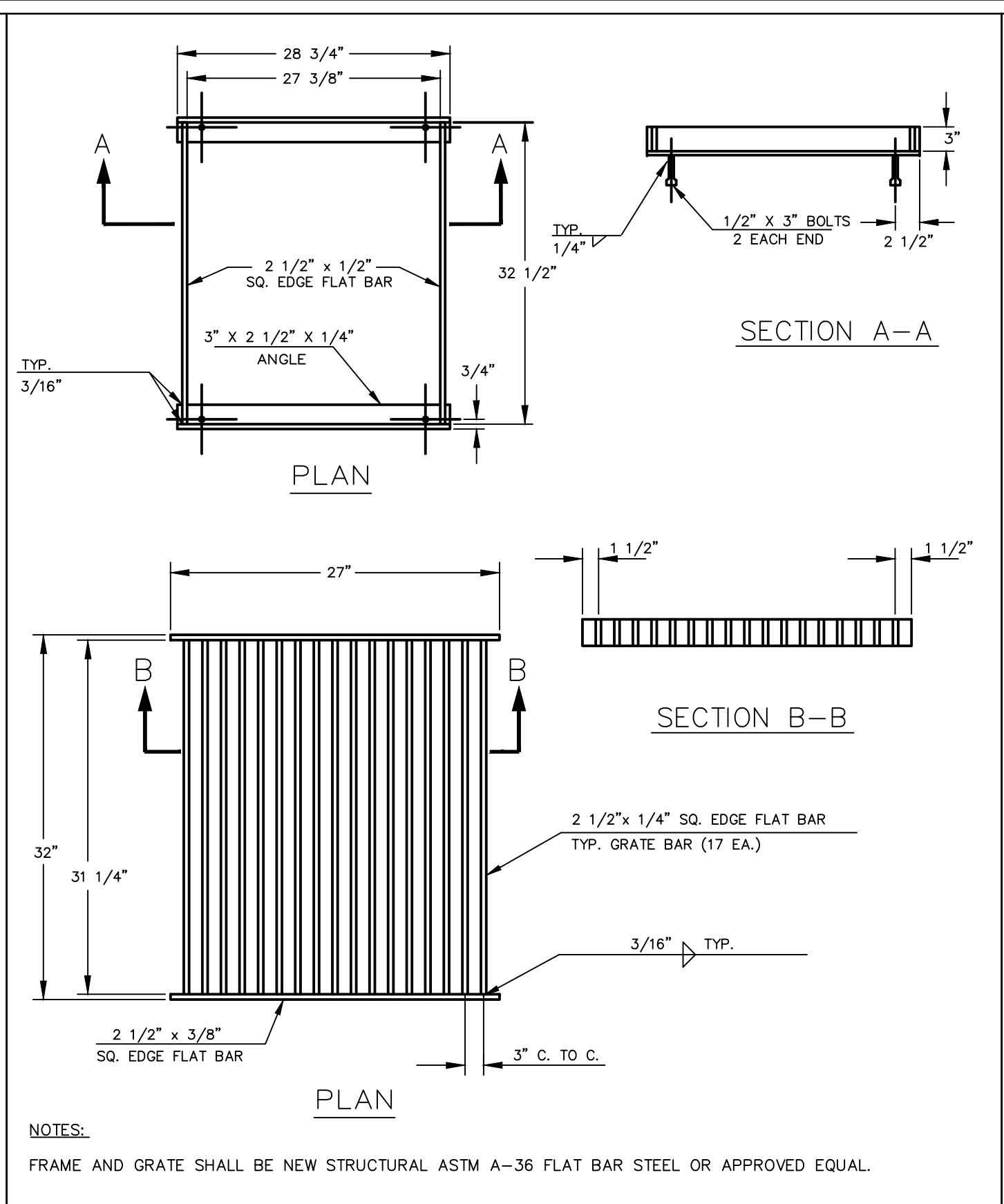
CIVIL DETAILS

PROJECT NO: 170359	DRAWING NO: C503
SCALE: AS NOTED	

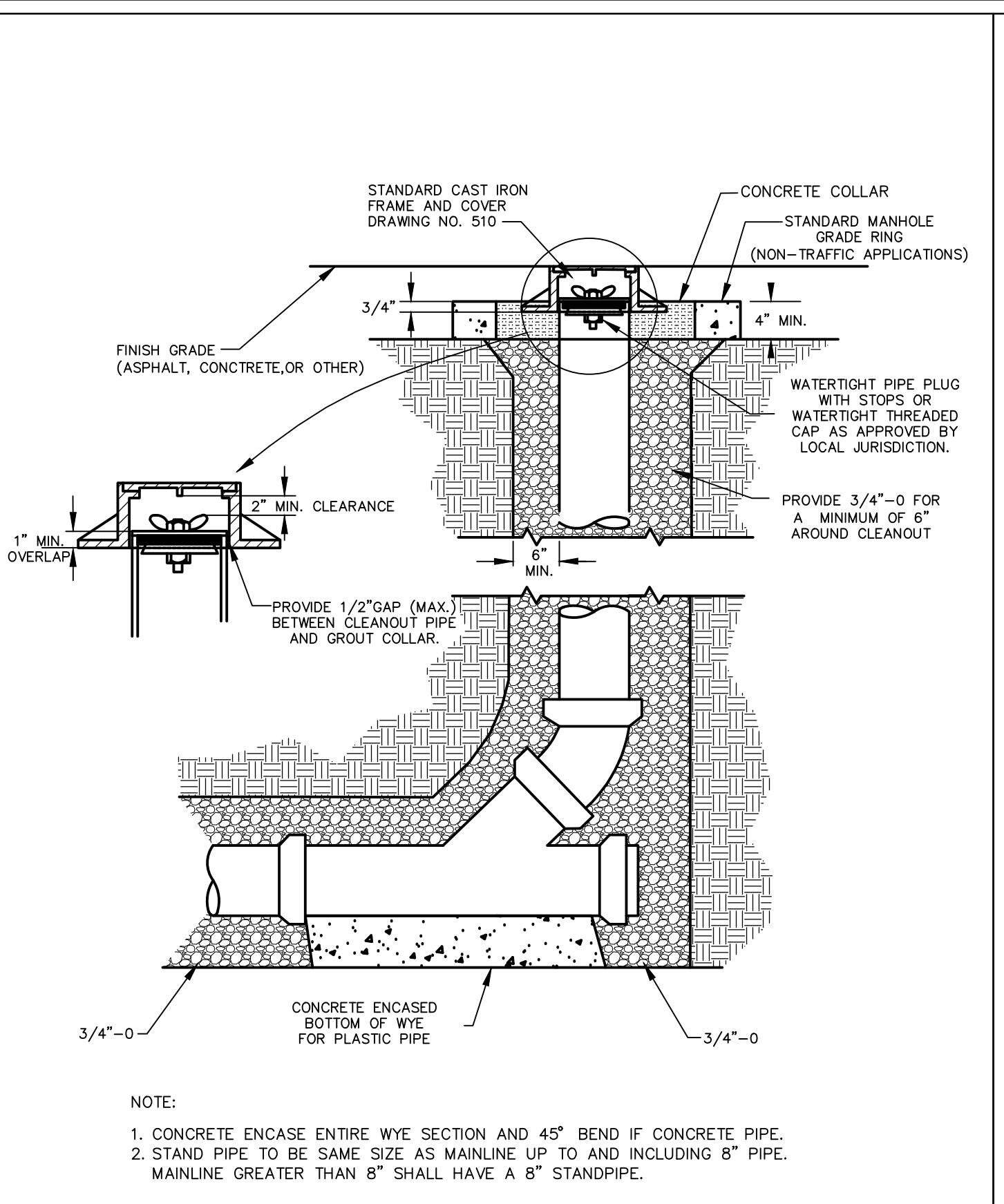
**ISSUED FOR
REVIEW
NOT FOR CONSTRUCTION**



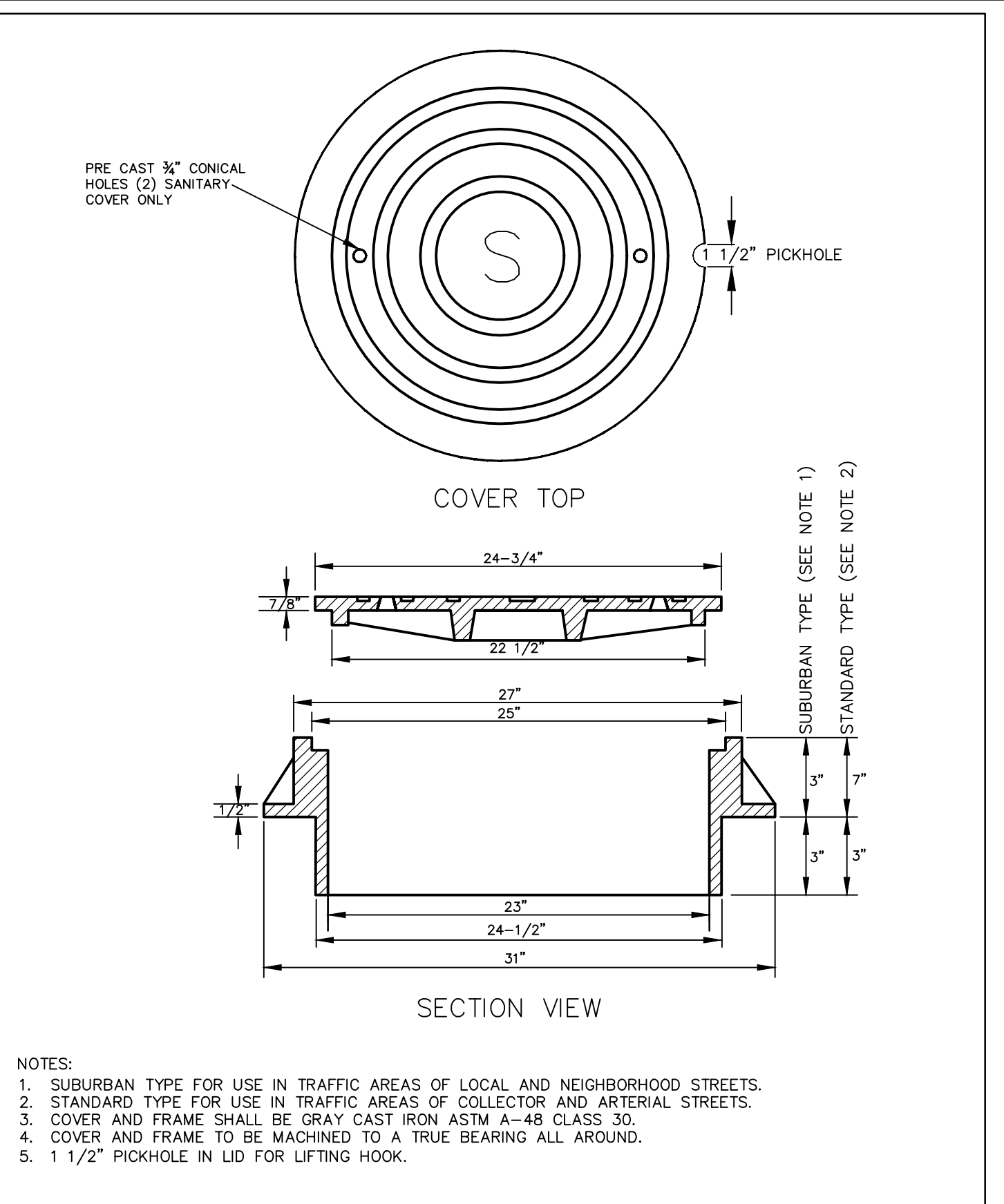
DITCH INLET
DRAWING NO. 390
REVISED 05-07
CleanWater Services



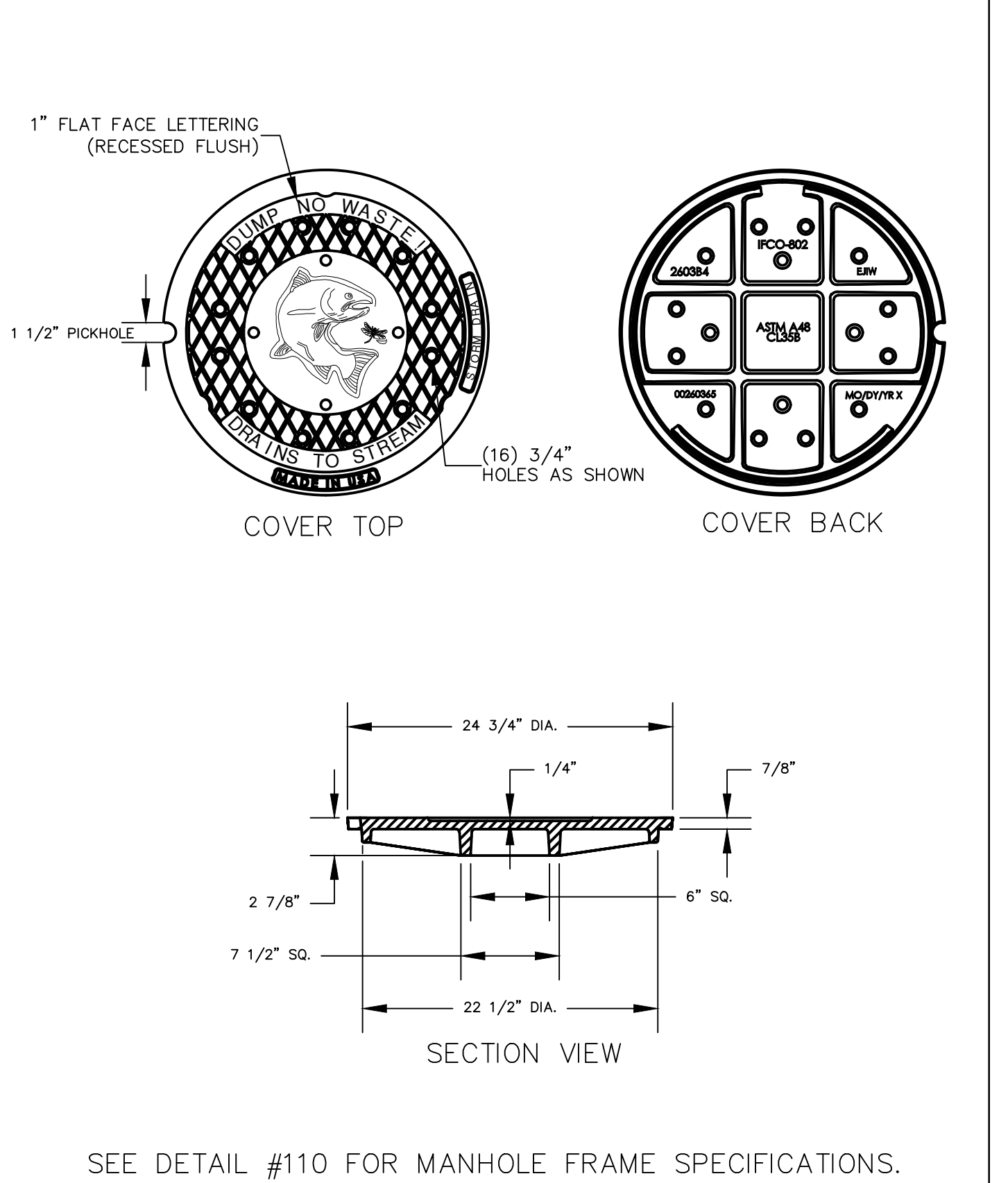
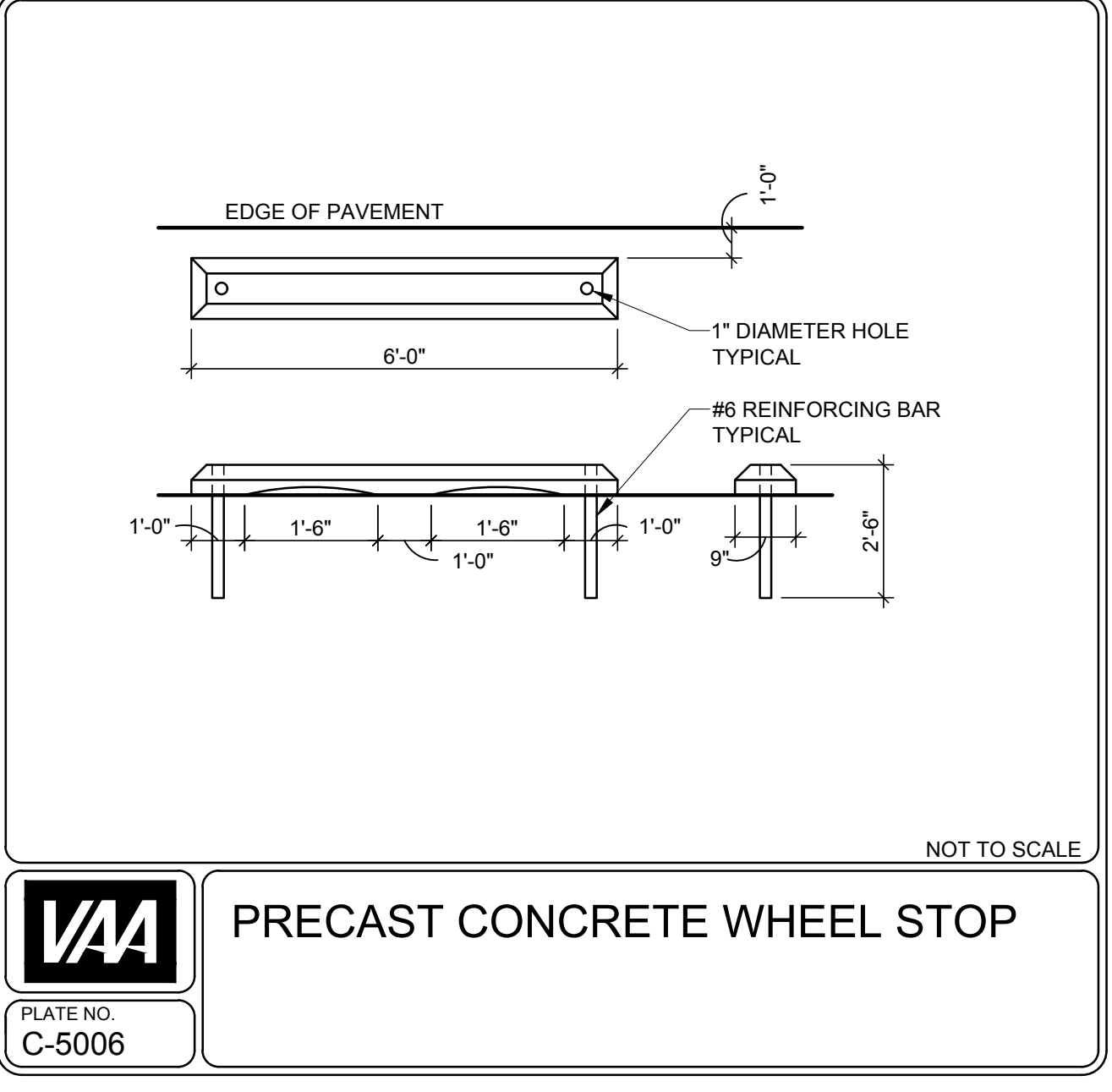
DITCH INLET FRAME AND GRATE
DRAWING NO. 400
REVISED 12-06
CleanWater Services



STANDARD CLEANOUT
DRAWING NO. 500
REVISED 01-13
CleanWater Services



SUBURBAN AND STANDARD MANHOLE FRAME AND COVER SANITARY
DRAWING NO. 110
REVISED 02-17
CleanWater Services



STORM WATER MANHOLE LID
DRAWING NO. 120
REVISED 12-06
CleanWater Services

VAA

Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441

763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

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DATE: 10/06/17	DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB
APPROVED:	

DRAWING TITLE:

CIVIL DETAILS

PROJECT NO: 170359	DRAWING NO: C504
SCALE: AS NOTED	

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION



JH Kelly, LLC
 www.jhkelly.com
 WA CRL #JHKELL044KF
 OR CCB #0117544

Hydrant Flow Test Report

LOCATION: NE WAGNER CT, SCAPPOOSE DATE: 1/22/2018

TEST MADE BY: _____ TIME: 10:00 am

REPRESENTATIVE OF: _____

WITNESS: J.H. KELLY / SCAPPOOSE FIRE MARSHAL

STATE PURPOSE OF TEST: HYDRANT FLOW TEST FOR SPRINKLER CALCULATIONS

IF PUMPS AFFECT TEST, INDICATE PUMPS OPERATING: N/A

FLOW HYDRANTS: A1 A2 A3 A4

Size Nozzle: 2 1/2" 2 1/2"

Pilot Reading: 65

TEST 1: GPM: 1500 GPM

STATICP 65 psi RESIDUAL B 38 psi

PROJECTED RESULTS: At 20 psi Residual 1976 GPM

TEST 2: GPM: 1160 GPM

STATICP 65 psi RESIDUAL B 53 psi

PROJECTED RESULTS: At 20 psi Residual 2368 GPM

REMARKS: TEST 1 FLOWED 2 DIFFUSERS SIMULTANEOUSLY AT 750gpm EACH

LOCATION MAP: Show line sizes and distance to next cross connected line. Show valves and Hydrant branch size. Indicate North. Show flowing hydrants – Label A1, A2, A3, A4. Show location of Static and Residual – Label B.

Indicate B. Hydrant: YES Sprinkler: N/A Other (Identify): N/A

NFPA 55
Standard for the
Storage, Use, and Handling of Compressed Gases and
Cryogenic Fluids in Portable and Stationary Containers,
Cylinders, and Tanks
2005 Edition

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This edition of NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*, was prepared by the Technical Committee on Industrial and Medical Gases and acted on by NFPA at its November Association Technical Meeting held November 13–17, 2004, in Miami Beach, FL. It was issued by the Standards Council on January 14, 2005, with an effective date of February 7, 2005, and supersedes all previous editions.

This edition of NFPA 55 was approved as an American National Standard on February 7, 2005.

Origin and Development of NFPA 55

NFPA 55 was developed by the Industrial and Medical Gases Committee in recognition of the need to provide information on the use of cylinder gases in one standard. The Compressed Gas Association assisted the project by submitting a draft that was used as the framework for the standard.

NFPA 55 supersedes NFPA 43C, *Code for the Storage of Gaseous Oxidizing Materials*, which was developed by the Committee on Hazardous Chemicals and transferred to the Industrial and Medical Gases Committee. The committee believed that one standard covering storage of all gas cylinders was needed and, with the new NFPA 55, the need for NFPA 43C no longer existed.

Since this standard was introduced in 1993, it has been widely used and accepted by users of different types of gases as a single source covering requirements for installation and usage of gases in portable cylinders. The 1998 edition clarified many requirements and provided additional advisory information to assist the users of the standard. Editorial changes were also incorporated for clarity.

Copyright NFPA

NO SMOKING signs promoting smoking shall be provided for an entire site or building, or in the following locations:

- (1) In rooms or areas where hazardous materials are stored or dispensed or used in open systems in amounts requiring a permit in accordance with Section 4.1
- (2) Within 25 ft (7.6 m) of outdoor storage, dispensing, or open-use areas
- (3) In areas containing flammable gases

Chapter 5 Classification of Hazards

5.1 Hazardous Materials Classification.

5.1.1 Pure Gases. Hazardous materials shall be classified according to hazard categories as follows:

- (1) Physical hazards, which shall include the following:
 - (a) Flammable gas
 - (b) Nonflammable gas
 - (c) Oxidizing gas
 - (d) Pyrophoric gas
 - (e) Unstable reactive (detonable) gas, Class 3 or Class 4
 - (f) Unstable reactive (nondetonable) gas, Class 2 or Class 3
- (2) Health hazards, which shall include the following:
 - (a) Corrosive gas
 - (b) Cryogenic fluids
 - (c) Highly toxic gas
 - (d) Toxic gas
 - (e) Irritant gas

3.3.28 Gallon. A standard U.S. gallon.

3.3.29 Gas.

3.3.29.1* Compressed Gas. A material, or mixture of materials, that (1) is a gas at 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.696 psia) and (2) that has a boiling point of 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.7 psia) and that is liquefied, nonliquefied, or in solution, except those gases that have no other health or physical hazard properties are not considered to be compressed gases until the pressure in the packaging exceeds an absolute pressure of 280 kPa (40.6 psia) at 20°C (68°F).

3.3.29.2 Corrosive Gas. A gas that causes visible destruction of or irreversible alterations in living tissue by chemical action at the site of contact.

3.3.29.3 Flammable Gas. A material that is a gas at 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.7 psia), that is ignitable at an absolute pressure of 101.325 kPa (14.7 psia) when in a mixture of 13 percent or less by volume with air, or that has a flammable range at an absolute pressure of 101.325 kPa (14.7 psia) with air of at least 12 percent, regardless of the lower limit.

3.3.29.4 Flammable Liquefied Gas. A liquefied compressed gas that, when under a charged pressure, is partially liquid at a temperature of 20°C (68°F) and is flammable.

3.3.29.5 Highly Toxic Gas. A chemical that has a median lethal concentration (LC₅₀) in air of 200 ppm by volume or less of gas or vapor, or 2 mg/L or less of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 g and 300 g (0.44 lb and 0.66 lb) each.

3.3.29.6 Inert Gas. A nonreactive, nonflammable, noncorrosive gas such as argon, helium, krypton, neon, nitrogen, and xenon.

3.3.29.7 Irritant Gas. A chemical that is not corrosive, but that causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41, for an exposure of 4 or more hours or by other appropriate techniques, it results in an empirical score of 5 or more. A chemical is classified as an eye irritant if so determined under the procedure listed in 16 CFR 1500.42, or other appropriate techniques.

3.3.29.8 Nonflammable Gas. A gas that does not meet the definition of a flammable gas.

3.3.29.9* Other Gas. A gas that is not a corrosive gas, flammable gas, highly toxic gas, oxidizing gas, pyrophoric gas, toxic gas, or unstable reactive gas with a hazard rating of Class 2, Class 3, or Class 4 gas.

3.3.29.10 Oxidizing Gas. A gas that can support and accelerate combustion of other materials.

3.3.29.11 Pyrophoric Gas. A gas with an autoignition temperature in air at or below 54.4°C (130°F).

3.3.29.12 Toxic Gas. A gas with a median lethal concentration (LC₅₀) in air of more than

200 ppm, but not more than 2000 ppm by volume of gas or vapor, or more than 2 mg/L, but not more than 20 mg/L of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 g and 300 g (0.44 lb and 0.66 lb) each.

3.3.29.13* Unstable Reactive Gas. A gas that, in the pure state or as commercially produced, will vigorously polymerize, decompose, or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature.

3.3.29.13.1 Class 2 Unstable Reactive Gas. Materials that readily undergo violent chemical change at elevated temperatures and pressures.

3.3.29.13.2 Class 3 Unstable Reactive Gas. Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation.

3.3.29.13.3 Class 4 Unstable Reactive Gas. Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures.

3.3.30* Gas Cabinet. A fully enclosed, noncombustible enclosure used to provide an isolated environment for compressed gas cylinders in storage and use. [5000, 2003]

3.3.31 Gas Manufacturer/Producer. A business that produces compressed gases or cryogenic fluids, or both, or fills portable or stationary gas containers, cylinders, or tanks.

3.3.32* Gas Room. A separately ventilated, fully enclosed room in which only compressed gases, cryogenic fluids, associated equipment and supplies are stored or used.

3.3.33* Gaseous Hydrogen System. A system in which the hydrogen is delivered, stored, and discharged in the gaseous form to a piping system. The gaseous hydrogen system terminates at the point where hydrogen at service pressure first enters the distribution piping.

3.3.34 Handling. The deliberate movement of material in containers by any means to a point of storage or use.

3.3.35* Hazard Rating. The numerical rating of the health, flammability, and self-reactivity, and other hazards of the material, including its reaction with water, specified in NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*.

3.3.36* Immediately Dangerous to Life and Health (IDLH). A concentration of airborne contaminants, normally expressed in parts per million (ppm) or milligrams per cubic meter, that represents the maximum level from which one could escape within 30 minutes without any escape-impairing symptoms or irreversible health effects.

3.3.37* ISO Module. An assembly of tanks or tubular cylinders permanently mounted in a frame conforming to International Organization for Standardization (ISO) requirements.

3.3.38 Limit.

Table 6.9 Explosion Control Requirements

Material	Class	Explosion Control Methods	
		Barricade Construction	Explosion Venting or Prevention Systems
Unstable reactive gas	4	Required	Not required
	3 (detonable)	Required	Not required
	3 (nondetonable)	Not required	Required

6.10* Fire Protection Systems.

Except as provided in 6.10.1, buildings or portions thereof required to comply with Protection Levels 1 through 5 shall be protected by an approved automatic fire sprinkler system complying with NFPA 13, *Standard for the Installation of Sprinkler Systems*.

6.10.1 Rooms or areas that are of noncombustible construction with wholly noncombustible contents shall not be required to be protected by an automatic fire sprinkler system.

6.10.2 Sprinkler System Design.

6.10.2.1 When sprinkler protection is provided, the area in which compressed gases or cryogenic fluids are stored or used shall be protected with a sprinkler system designed to be not less than that required by NFPA 13 for Ordinary Hazard Group 2 with a minimum design area of 278.7 m² (3000 ft²).

6.10.2.2 When sprinkler protection is provided, the area in which the flammable or pyrophoric compressed gases or cryogenic fluids are stored or used shall be protected with a sprinkler system designed to be not less than that required by NFPA 13 for Extra Hazard Group 1 with a minimum design area of 232.25 m² (2500 ft²).

6.11 Lighting.

Approved lighting by natural or artificial means shall be provided.

6.12 Hazard Identification Signs.

6.12.1 Location. Hazard identification signs shall be placed at all entrances to locations where compressed gases are produced, stored, used, or handled in accordance with NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*.

6.12.1.1 Ratings shall be assigned in accordance with NFPA 704.

6.12.1.2 The authority having jurisdiction shall be permitted to waive this requirement where consistent with safety.

6.12.2 Application. Signage shall be provided as specified in 6.12.2.1 and 6.12.2.2.

Walter L. Cook PE
Fire Protection Engineering Since 1991

February 15, 2018

Matt Layland,
Air Liquide – Electronics
Project Engineering Manager
c/o Airgas
4344 Main St.
Pearland TX 77581

**RE: Fire Protection Sprinkler Hydraulic Requirements
Storage of Gas Cylinders Only**

Dear Matt,

Based on my current understandings from Appendix K, Materials Matrix and verbal reports, the required sprinkler demand and hose allowance is as follows;

1. Attachment 1 - NFPA 55 is the primary standard for gasses stored in cylinders, in addition the OFC and NFPA 13 apply. Other NFPA standards may also influence the determination,
2. Attachment 2 – NFPA 55, definition of hazards for gasses stored in cylinders,
3. Attachment 3 – NFPA 55 definition of gasses proposed for storage in cylinders,
4. Attachment 4 – NFPA 55 6.10.2 – Sprinkler density from NFPA 13,

- In accordance with NFPA 55 6.10.2.12 sprinkler density is to be Extra Hazard Group 1 over 2,500 sf minimum,

- From NFPA 13 Exhibit 5.5 EH G1 is 0.3 GPM 2,500 SF or 750 GPM

- Hose Allowance 250 GPM (or as required by Fire Marshal)

- Total Hydraulic Demand (at most remote building) = 1,000 GPM @ 20 PSI minimum

Comparing the demand to the fire flow test indicates adequate city supply assuming all hydraulic losses to sprinklers are factored in. This determination is based on limited project information and representation by the project architect and engineer of record.

The hydraulic requirements presented above are for protection of gas cylinders only as presented in the VAA Material Matrix.

Sincerely

Walter L. Cook PE
OR License 10001 Expires 12/31/2019

13467 SW Summerwood Dr
Tigard, OR 97223

WER-I

PHONE (503) 333-3470

E-MAIL WALT.L.COOK@GMAIL.COM

000423

OCT - 3 1995

63229

Recorded By Titor Title
Courtesy Only. Not Examined

STATE OF OREGON }
County of Washington } SS

I, Jerry R. Hanson, Director of Assessment and Taxation and Ex-Officio County Clerk for said county, do hereby certify that the within instrument of writing was received and recorded in book of records of said county.

Jerry R. Hanson

Jerry R. Hanson, Director of Assessment and Taxation, Ex-Officio County Clerk

After Recording Return to:

Anthony J. Motschenbacher, Esq.
Preston Gates & Ellis
3200 U.S. Bancorp Tower
111 SW Fifth Avenue
Portland, Oregon 97204

ACCESS EASEMENT

DATE: September 26, 1995

Doc : 95071339
Rect: 151900 53.00
10/03/1995 04:21:23PM

PARTIES: The Halton Company, an Oregon corporation ("Grantor")
LAI Holdings, Inc. ("Grantee")

RECITALS

Grantor conveys to Grantee a perpetual nonexclusive roadway easement according to the terms described herein. The description of the easement is attached hereto as Attachment A. The easement is appurtenant to Grantee's property described on Attachment B ("Appurtenant Property").

The sole purpose of the easement shall be for ingress and egress to the Appurtenant Property. In conjunction with such use, Grantee may construct, reconstruct, maintain, and repair a road thereon, at the sole expense of Grantee. Such road construction, reconstruction, maintenance and repair shall not interfere with Grantor's use of or improvements upon Grantor's property.

Grantor reserves the right, but shall not be obligated, to use, construct, reconstruct, and maintain a road located upon the easement for all purposes including access to Grantor's property. Except as to the rights herein granted, Grantor shall have the full use and control of the property described on Attachment A, and may grant any rights to the property to third parties as it deems desirable.

Grantor reserves the right to relocate the road or easement at any time but shall not interfere with Grantee's ingress or egress during such relocation. Such relocation shall be without reimbursement of any type to Grantee. If the road or easement is relocated, Grantor may record an instrument indicating the relocated easement which shall serve to amend this easement and eliminate any rights of Grantee in the original easement strip.

Grantee assumes all risk arising out of the use of the easement strip and Grantor shall have no liability to Grantee or any third party for any condition existing thereon. Grantee shall indemnify and defend Grantor from any loss, claim, or liability to Grantor, arising in any manner out of this grant of roadway easement or the use thereof.

1-5

000424

OCT - 3 1995

The easement shall run with the Appurtenant Property.

This easement is granted subject to all prior easements or encumbrances of record.

IN WITNESS WHEREOF, The Halton Company has executed this instrument the date first written above.

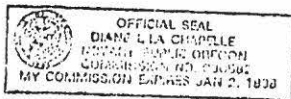
THE HALTON COMPANY

By Mark J. Fahey
Mark J. Fahey
Treasurer

STATE OF OREGON)
County of Multnomah) ss.

On this 27th day of September, 1995, before me, a notary public in and for the state of Oregon, personally appeared Mark J. Fahey, Treasurer of The Halton Company, known to me to be the person who executed the foregoing instrument on behalf of The Halton Company and acknowledged to me that he executed the same for the purposes therein stated.

Diane L. La Chapelle
Notary Public for Oregon
My commission expires 1-2-98



OCT - 3 1995

ATTACHMENT A

A tract of land for ingress and egress purposes, located in the Northeast portion of that certain tract of land conveyed to Thomas M. Taylor, Trustee of the Thomas M. Taylor Trust, by Recorder's Document No. 94107778, Washington County Deed Records, situated in the Southeast one-quarter of Section 22, Township 2 South, Range 1 West of the Willamette Meridian, City of Tualatin, County of Washington and State of Oregon, more particularly described as follows:

Beginning at a point on the East line of said Thomas M. Taylor tract, said point bears North $00^{\circ}14'51''$ West, 323.09 feet from a 3" aluminum disk marking the Southeast corner of said Section 22; thence South $89^{\circ}45'09''$ West, 44.81 feet to a point on the arc of a 45 foot non-tangent radius curve to the left, a radial line bears North $88^{\circ}36'00''$ East to said point; thence northerly and westerly along the arc of said curve 63.90 feet through a central angle of $81^{\circ}21'33''$ (the long chord bears North $42^{\circ}04'47''$ West, 58.66 feet) to a point on the Southeasterly right of way line of Tualatin-Sherwood Road, County Road No. 2737, 49 feet from the centerline thereof as set forth in Dedication Deed to Washington County in Recorder's Document No. 90-26764, said Deed Records; thence along said Southeasterly right of way line North $52^{\circ}33'58''$ East, 65.68 feet to a point on the arc of a 45 foot non-tangent radius curve to the left, a radial line bears North $82^{\circ}11'20''$ West to said point; thence southerly and easterly along the arc of said curve 63.89 feet through a central angle of $81^{\circ}20'45''$ (the long chord bears South $32^{\circ}51'43''$ East, 58.66 feet) to a point on the east line of said Thomas M. Taylor tract; thence along the east line thereof, South $00^{\circ}14'51''$ East, 34.00 feet to the Point of Beginning.

Containing therein 3,453 square feet.

3

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OCT - 3 1995

ATTACHMENT B

Part of Sections 23 and 26, Township 2 South, Range 1 West, of the Willamette Meridian, in Washington County, Oregon, described as follows:

Beginning at a point on the west line of said Section 26, which is South 0°00'53" West, 811.25 feet from the northwest corner of said Section 26, said point of beginning is also located on the northwesterly right of way line of the Oregon Electric Railway Company; thence North 0°00'53" East, 811.25 feet to the northwest corner of said Section 26; thence continuing North along the west line of said Section 23, North 0°04'41" West, 304.0 feet to a point on the center line of County Road No. 492; thence North 55°25'50" East, along the center of said Road, 455.66 feet to a point on the northerly extension of the westerly line of that tract of land conveyed to Elwyn C. Kinney, by deed recorded October 22, 1970, in Book 798, page 208, Deed Records of Washington County; thence South 0°09'47" West, along said west line and its northerly and southerly extension, 1055.75 feet to a point on the west line of that tract of land conveyed to Elwyn C. Kinney, by deed recorded February 24, 1972, in Book 855, page 523, Deed Records of Washington County; thence Southwesterly along the arc of a 383.07 foot radius curve to the right (Long Chord bears South 14°13'10" West and is 186.08 feet in length) a distance of 187.96 feet to a point on the northerly right of way line of the Oregon Electric Railway Company, said point also being the southwest corner of said Kinney tract; thence continuing Southwesterly along the northerly right of way line of said Oregon Electric Railway Company, along the arc of a 2890.0 foot radius curve to the left (Long Chord South 43°59'33" West, 469.36 feet) a distance of 469.88 feet to the point of beginning.

EXCEPTING THEREFROM a tract of land in the Southwest quarter of Section 23, Township 2 South, Range 1 West, of the Willamette Meridian, in Washington County, Oregon, described as follows:

Beginning at a point on the southerly right of way line of the Tualatin-Sherwood Road (County Road No. 492), which point is located North 0°04'41" West, 479.73 feet and North 55°25'50" East, 72.80 feet from the southwest corner of said Section 23; thence continuing North 55°25'50" East, 382.73 feet, to the northwest corner of that tract of land conveyed to Elwyn C. Kinney, by deed recorded October 22, 1970, in Book 798, page 208, Deed Records of Washington County; thence South 0°09'47" West, 385.82 feet, along the westerly line of said Kinney tract to a

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OCT - 3 1995

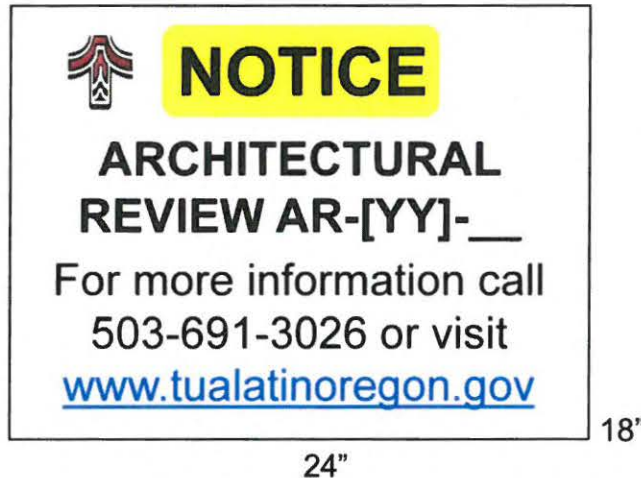
0000428

point; thence South $89^{\circ}55'19''$ West, 313.80 feet to a point 60.0 feet East of the west line of said Section 23; thence North $0^{\circ}04'41''$ West, parallel to and 60.0 feet East of said west line of Section 23, a distance of 169.08 feet to the point of beginning.

FURTHER EXCEPTING THEREFROM that portion lying within the bounds of County Road No. 492 (Southwest Tualatin-Sherwood Road).

5

ARCHITECTURAL REVIEW CERTIFICATION OF SIGN POSTING



The applicant shall provide and post a sign pursuant to Tualatin Development Code (TDC) 31.064(2). Additionally, the 18" x 24" sign must contain the application number, and the block around the word "NOTICE" must remain **primary yellow** composed of the **RGB color values Red 255, Green 255, and Blue 0**. Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates>.

NOTE: For larger projects, the Community Development Department may require the posting of additional signs in conspicuous locations.

As the applicant for the Air Liquide Depot
project, I hereby certify that on this day, 1 sign(s) was/were posted on the
subject property in accordance with the requirements of the Tualatin Development Code and the
Community Development Department - Planning Division.

Applicant's Name: Luke Orem
(PLEASE PRINT)

Applicant's Signature: [Handwritten Signature]

Date: 10/5/2017