



**NOTICE OF A REGULAR
CITY COUNCIL MEETING
November 12, 2025, at 6:00 PM**

PUBLIC NOTICE is hereby given that the Vineyard City Council will hold a regularly scheduled City Council meeting on Wednesday, November 12, 2025, at 6:00 PM, in the City Council Chambers at City Hall, 125 South Main Street, Vineyard, UT. This meeting can also be viewed on our [live stream page](#).

AGENDA

Presiding Mayor Julie Fullmer

1. CALL TO ORDER/INVOCATION/INSPIRATIONAL THOUGHT/PLEDGE OF ALLEGIANCE

2. PRESENTATIONS/RECOGNITIONS/AWARDS/PROCLAMATIONS

2.1. Interlocal Agreement with UDOT for the FrontRunner 2X Project

Matt Carter, FrontRunner Deputy Project Manager for UTA, will present on behalf of the FrontRunner 2X project.

3. WORK SESSION

3.1. Rental License

Neighborhood Services Coordinator Maria Arteaga will be presenting to the City Council an overview of the proposed Rental License Program. The presentation will cover the relevant code provisions, the planned rollout process, and the communication strategy developed to inform and engage the public.

3.2. Fuel Card Policy and Agreement

3.3. Transportation Utility Fee

Cody Deeter with EFG Consulting will present the findings of the Transportation Utility Fee (TUF) analysis prepared in coordination with Hales Engineering, which will outline Vineyard City's current transportation funding structure, which relies on Class B & C Road Funds and General Fund subsidies, and how implementing a TUF could provide a more stable and equitable funding source for maintaining roads and streetlights.

3.4. Vineyard Municipal Code Amendment — Title 2 Administration

The purpose of this item is to amend the Vineyard Municipal Code to reflect the City's transition from a five-member to a six-member council form of government.

3.5. First Amendment to the Holdaway Fields Development Agreement (Ordinance 2025-)

The applicants (Cadence Homes & Goodboro) will present their proposed amendments

to the Holdaway Fields development agreement.

3.6. Mountain Bike Park Location Adjustment

Staff wants to make City Council aware of the Planning Commission's unanimous support to adjust the location of the Mountain Bike Dirt Park. Instead of enhancing a Mountain Bike Dirt Park across the street from Gammon Park, staff plans to move forward with finding a contractor to design and construct a Mountain Bike Dirt Park near the Vineyard City Hall.

4. PUBLIC COMMENTS

“Public Comments” is defined as time set aside for citizens to express their views for items not on the agenda. During a period designated for public comment, the mayor or chair may allot each speaker a maximum amount of time to present their comments, subject to extension by the mayor or by a majority vote of the council. Speakers offering duplicate comments may be limited. Because of the need for proper public notice, immediate action cannot be taken in the Council Meeting. The Chair of the meeting reserves the right to organize public comments by topic and may group speakers accordingly. If action is necessary, the item will be listed on a future agenda; however, the Council may elect to discuss the item if it is an immediate matter of concern. *Public comments can be submitted ahead of time to pams@vineyardutah.org.*

5. MAYOR AND COUNCILMEMBERS' REPORTS/DISCLOSURES/RECUSALS

6. STAFF, COMMISSION, AND COMMITTEE REPORTS

City Manager Report

7. CONSENT ITEMS

7.1. Approval of the October 22, 2025, City Council Meeting Minutes

7.2. Approval of the 2026 City Council Meeting Schedule (Resolution 2025-56)

7.3. Municipal Code Amendment — Section 13.12.120 Reservations and Rental of City Parks and Facilities (Ordinance 2025-16)

7.4. Municipal Code Amendment — Section 13.12.130 Concessions (Ordinance 2025-17)

7.5. Concessions Policy Amendment (Resolution 2025-57)

7.6. Personnel Policy Amendment to Title XVI REIMBURSABLE EXPENSES (Resolution 2025-54)

City Manager Eric Ellis will present recommended amendments to the travel policy found in the Vineyard Personnel Policy Title XVI Reimbursable Expenses.

7.7. Vac Truck Purchase (Resolution 2025-58)

7.8. Street Sweeper Purchase (Resolution 2025-59)

7.9. Municipal Code Amendment — Section 2.30.040 Arts, Parks and Recreation, Culture, and Heritage (ARCH) (Ordinance 2025-18)

7.10. ARCH Grant Policy and Procedure Manual Update (Resolution 2025-60)

7.11. Municipal Code Amendment to Title 2.14 Elections (Ordinance 2025-19)

8. APPOINTMENTS/REMOVALS

8.1. The mayor, with the advice and consent of the council, will appoint members to various boards and commissions.

9. BUSINESS ITEMS

9.1. PUBLIC HEARING — Update to Vineyard City Development Standards and Design Specifications (Ordinance 2025-15)

Vineyard City updated its Development Standards and Design Specifications, last revised in 2017, to align with new Utah APWA standards and address City-specific infrastructure needs.

10. CLOSED SESSION

The Mayor and City Council pursuant to Utah Code 52-4-205 may vote to go into a closed session for the purpose of (these are just a few of the items listed, see Utah Code 52-4-205 for the entire list):

- a discussion of the character, professional competence, or physical or mental health of an individual
- b strategy sessions to discuss collective bargaining
- c strategy sessions to discuss pending or reasonably imminent litigation
- d strategy sessions to discuss the purchase, exchange, or lease of real property, including any form of a water right or water shares
- e strategy sessions to discuss the sale of real property, including any form of a water right or water shares
- f discussion regarding deployment of security personnel, devices, or systems
- g the purpose of considering information that is designated as a trade secret, as defined in Section [13-24-2](#), if the public body's consideration of the information is necessary in order to properly conduct a procurement under [Title 63G, Chapter 6a, Utah Procurement Code](#)

11. ADJOURNMENT

The next regularly scheduled meeting is on December 10, 2025.

This meeting may be held in a way that will allow a councilmember to participate electronically.

The public is invited to participate in all City Council meetings. In compliance with the Americans with Disabilities Act, individuals needing special accommodations during this meeting should notify the City Recorder at least 24 hours prior to the meeting by calling (385) 338-5183.

I, the undersigned Deputy City Recorder for Vineyard, Utah, hereby certify that the foregoing

notice and agenda was posted at Vineyard City Hall, on the Vineyard City and Utah Public Notice websites, and delivered electronically to staff and to each member of the Governing Body.

AGENDA NOTICING COMPLETED ON:

11/10/2025

CERTIFIED (NOTICED) BY:

/s/ Tony Lara

TONY LARA, DEPUTY CITY RECORDER



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Interlocal Agreement with UDOT for the FrontRunner 2X Project

Department: Public Works

Presenter: Naseem Ghandour

Background/Discussion:

To provide an overview of the FrontRunner Point Improvements (FPI) Project (FrontRunner 2X) and to present the Draft Master Agreement for review prior to consideration for formal approval during the action item portion of the same meeting.

The FPI project is a regionally significant infrastructure effort involving coordination between Vineyard City, UDOT, UTA, and HDR Engineering. It aims to enhance access, connectivity, and multimodal integration around the Vineyard FrontRunner Station.

A draft Master Agreement has been developed outlining roles, responsibilities, and funding arrangements among the participating agencies. Vineyard City's legal team has reviewed the agreement, and staff are now bringing it forward for City Council review and action.

Fiscal Impact:

None

Recommendation:

None

Sample Motion:

None

Attachments:

None



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Rental License

Department: Community Development

Presenter: Maria Arteaga

Background/Discussion:

As part of the City's ongoing efforts to ensure safe and well-maintained rental housing, staff has developed a Rental License Program designed to promote compliance with city standards and improve communication between property owners, tenants, and the City.

Fiscal Impact:

N/A

Recommendation:

Sample Motion:

No action will be take at this time.

Attachments:

None

Vineyard City Fuel Card Policy

1. Purpose

The Vineyard City Fuel Card Policy establishes procedures for the issuance and authorized use of City-issued fuel cards and fuel Personal Identification Numbers (PINs) for Vineyard City employees. This policy outlines the requirements and procedures for the application, use, safeguarding, and termination of fuel cards and associated PINs. Cardholders and their immediate supervisors are responsible for ensuring compliance with this policy and taking appropriate measures to minimize the risk of fraud, waste, or abuse.

2. Scope

This policy applies to all Vineyard City employees and departments authorized to use City-issued fuel cards and PINs for the purchase of fuel for City vehicles and equipment. All employees shall use fuel cards and PINs in accordance with this policy.

3. Issuance

Fuel cards are provided as a cost-effective method for purchasing fuel for City vehicles and equipment. Fuel cards are to be used solely for official City business and shall not be used for personal or non-City business.

Fuel cards are issued to specific vehicles.

PINs are issued to authorized individuals and City vehicles for use in conjunction with a Fuel card.

Requests for new or replacement cards must be submitted through the established application process.

4. Authorized Use

Fuel cards and PINs may be used only for purchasing fuel for City vehicles and equipment.

Purchases shall comply with any applicable limits or restrictions set to each card.

Employees shall enter accurate odometer readings and vehicle identification information when prompted at the time of purchase.

The appropriate type of fuel shall be purchased for vehicles or equipment.

5. Prohibited Use

The following actions are strictly prohibited and may result in disciplinary action:

- Purchase of fuel or items for personal vehicles or non-City purposes.
- Sharing assigned fuel cards or sharing individual PINs.
- Splitting transactions to bypass purchase limits.
- Misrepresentation of mileage, vehicle number, or other required information.

6. Cardholder Responsibilities

Cardholders and supervisors shall:

Safeguard fuel cards and individual PINs.

Report lost, stolen, or compromised cards immediately.

Review transactions for accuracy and report discrepancies promptly.

Return cards to the Finance Department upon transfer, termination, or reassignment.

7. Monitoring and Compliance

Fuel card activity shall be regularly reviewed to ensure compliance with this policy.

Noncompliance may result in suspension or revocation of car privileges, disciplinary action, and/or reimbursement for unauthorized charges.

Supervisors are responsible for monitoring card usage and ensuring that employees under their supervision comply with this policy.

8. Termination and Card Recovery

Upon an employee's separation from the City or reassignment to a role that no longer requires a fuel card, the card must be returned immediately to the Finance Department.

9. Enforcement

Any misuse, fraud, or abuse of a City-issued fuel card may result in disciplinary action up to and including termination, restitution of funds, and potential legal action.

Vineyard City Fuel Card Agreement

I, the undersigned employee, acknowledge receipt of a Vineyard City Fuel Card or PIN and agree with the following:

- A. The Vineyard Fuel Card is to be used only for the assigned City vehicle and personal use is strictly prohibited.
- B. I agree to follow all policies and procedures outlined in the Vineyard City Fuel Card Policy.
- C. I understand that I am responsible for ensuring all purchases made with the Fuel Card comply with City policies and for maintaining accurate records of all transactions.
- D. I acknowledge that failure to comply with the Fuel Card Policy or misuse of the card may result in disciplinary action, including revocation of card privileges, potential termination of employment, and/or legal action.
- E. I will immediately report any lost, stolen, or compromised Fuel Cards or PINs to the Finance Department.

By signing below, I acknowledge that I have read, understood, and agree to the terms of this agreement and the City's Fuel Card Policy.

Employee Name: _____

Employee Signature: _____

Date: _____

VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Transportation Utility Fee

Department: Public Works

Presenter: Cody Deeter with EFG Consulting

Background/Discussion:

This work session provides the City Council with an overview of the Transportation Utility Fee (TUF) analysis prepared for Vineyard City by Hales Engineering and EFG (Energy Finance Government) Consulting. The study evaluates how a TUF can provide a stable and equitable funding source for maintaining the City's growing transportation network, including roads and streetlights, while reducing reliance on the General Fund and ensuring long-term financial sustainability.

Vineyard's continued growth has increased the demand for roadway maintenance and reinvestment. Preventative maintenance, when funded consistently, costs far less than full reconstruction. Currently, the City's Transportation Fund is supported primarily by Class B & C Road Funds distributed by the State, but these revenues are supplemented annually by General Fund subsidies to meet maintenance and capital needs. A Transportation Utility Fee would allow costs to be distributed proportionally among users based on roadway impact and service demand, reducing the City's dependence on general revenues.

Under Utah Code Title 11, Chapter 26, Part 3, municipalities may impose a Transportation Utility Fee to fund the repair, replacement, and maintenance of public transportation systems. This authority confirms the legality of such fees when there is a clear link between service use and cost recovery. All collected revenues must be deposited in a dedicated Transportation Utility Fund and used solely for transportation purposes.

Vineyard last charged a Transportation Utility Fee in 2020 at a rate of \$3.50 per Equivalent Residential Unit (ERU). The proposed \$5.00 per ERU residential rate reflects inflation and current maintenance costs. The financial analysis identifies approximately \$41 million in capital needs through 2035, to include ongoing pavement preservation and streetlight maintenance programs.

The model developed by EFG and Hales Engineering establishes a 2026 revenue requirement of \$2.11 million, with commercial and industrial rates adjusted for axle weight and trip generation. For example, retail users would pay about \$70 per 1,000 square feet monthly, while industrial users would pay approximately \$91. Rates are projected to increase by 3 percent annually, while ERUs are expected to grow about 9 percent annually as development continues. Comparative analysis shows Vineyard's proposed rate aligns with other Utah cities, which range from \$3.60 to \$18.50 per ERU per month.

Fiscal Impact:

None

Recommendation:

None

Sample Motion:

None

Attachments:

None



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Vineyard Municipal Code Amendment — Title 2 Administration

Department:

Presenter:

Background/Discussion:

Vineyard City has historically operated under a five-member council form of government, consisting of the Mayor and four Councilmembers. Following Council action and voter approval in 2024, and in accordance with Utah Code Annotated §10-3b-301 and related statutory provisions, the City has approved a transition to a **six-member council form of government**.

This change increases the number of councilmembers from four (plus the Mayor) to five (plus the Mayor), thereby requiring updates to the relevant sections of the Vineyard Municipal Code that currently reference the former five-member structure.

Fiscal Impact:

Recommendation:

Sample Motion:

No motion will be made at this time.

Attachments:

1. 2025-10-30 Council-Mayor-Manager -- Title 2 Changes (draft)

I. Background & Legal Framework

Vineyard City is changing from a five- to a six-member council form of government.

Under the Six-Member Council form (Utah Code § 10-3b-303):

- The Council is the municipality’s legislative body and retains all powers not otherwise assigned.
- The Mayor exercises the powers listed in § 10-3b-104 (chief executive, budget message, appointments with consent, signing contracts, ceremonial head, etc.), unless the Council by ordinance:
 - Removes one or more powers, duties, or functions from the Mayor;
 - Delegates to the Mayor a power otherwise held by the Council; or
 - Reinstates previously removed powers.

The Council may, by ordinance, appoint a Manager and delegate to that Manager “one or more executive or administrative duties.”

That means: Vineyard’s new Title 2 must both (a) state the default statutory mayoral powers, and (b) specify which of those duties are delegated to the City Manager.

II. Policy Goals & Rationale

Vineyard is now a midsize, fast-growing city with increasing administrative complexity (infrastructure, downtown civic center, PIDs, etc.). A professional manager model provides continuity and efficiency, while keeping accountability with the elected Council and Mayor.

Therefore, the ordinance should:

- a. Retain the Mayor’s ceremonial, intergovernmental, and leadership roles;
- b. Delegate routine day-to-day administration to a City Manager appointed by and accountable to the Council; and
- c. Require the Manager to implement Council policy under the direction of the Council as a body, not individual members.

III. Proposed structure for Title 2, Chapter 4

§ 2.04.010 Mayor – Powers and Duties

(A) The Mayor is the chief executive officer of the City and shall perform the duties specified in Utah Code § 10-3b-104, except as otherwise provided in this Chapter.

(B) The Mayor:

- (1) Presides at Council meetings and acts as chair of the legislative body;
- (2) Signs ordinances, resolutions, contracts, and instruments on behalf of the City;
- (3) Represents the City in ceremonial and intergovernmental affairs;
- (4) Delivers an annual budget message to the Council;
- (5) Appoints, with advice and consent of the Council, members of boards, commissions, and officers as provided by law; and
- (6) Performs other duties assigned by statute or by ordinance not delegated to the City Manager.

§ 2.04.020 Delegation of Executive and Administrative Authority

(A) Pursuant to Utah Code § 10-3b-303(1)(b)(iii), the Council hereby delegates to the City Manager the executive and administrative duties listed in § 2.04.030 [and 2.08.010](#).

(B) The Council retains the authority to modify, add to, or withdraw any delegated duty by ordinance or resolution adopted in accordance with Utah Code § 10-3b-303(2).

(C) The delegation of duties does not diminish the Mayor's authority to represent the City publicly or to provide policy leadership as chair of the Council.

§ 2.04.030 City Manager – Powers and Duties

(A) **Appointment.** The Council shall appoint a City Manager to serve at the pleasure of the Council. The Council may remove the Manager by majority vote at any time.

(B) **General Authority.** The City Manager shall be the chief administrative officer of the City under the policy direction of the Council and shall:

- (1) Supervise and coordinate the administration of all departments, offices, and agencies of the City, except as otherwise provided by law;
- (2) Implement ordinances, resolutions, and policies adopted by the Council;
- (3) Prepare and submit to the Mayor and Council the annual budget and capital improvement plan; administer the adopted budget;

- (4) Oversee personnel administration, including appointment, discipline, and removal of subordinate employees in accordance with the City's personnel policies;
- (5) Manage procurement, contracts, and purchasing consistent with City ordinances;
- (6) Prepare administrative regulations, subject to Council approval where required;
- (7) Provide the Council and Mayor with timely reports and recommendations on City operations;
- (8) Attend all Council meetings with voice but no vote; and
- (9) Perform other duties delegated by ordinance, resolution, or Council direction.

(C) **Acting Manager.** In the Manager's temporary absence or incapacity, the Council may designate an Acting City Manager.

(D) **Additional Administrative Functions.** The City Manager shall perform all additional administrative functions and duties set forth in Section 2.08.010 of this Code, including general supervision of City departments, personnel management, fiscal administration, and enforcement of City ordinances and regulations, subject to the policy direction of the City Council.

§ 2.04.040 Administrative Relations and Non-Interference

(A) The Council shall act collectively through ordinance, resolution, or motion. No individual Councilmember or the Mayor may direct the City Manager or staff concerning the day-to-day operation of departments.

(B) Individual Councilmembers may make inquiries through the City Manager but shall not give orders to the City Manager or to subordinates of the City Manager.

(C) The City Manager shall keep the Mayor and Council fully informed of significant administrative matters and shall facilitate information flow between the administration and legislative body

* * *

2.08.010 Office Created; Administration Provisions

(A) **Office Created:** The office of the city manager, which shall be known as "city manager", is created and established pursuant to Utah code section [10-3b-303](#)~~10-3b-403~~. The city manager shall be referred to as the city manager or the chief administrative officer.

(B) **Control:** The powers, duties and functions of the office of city manager shall be subject to the control and policies of the governing body which is defined in state law as being the mayor and council as a group.

- (C) **Appointment:** The mayor, with the advice and consent of the city council, shall appoint the city manager, who shall be appointed on the basis of experience, and administrative and executive abilities and qualifications.
- (D) **Bond:** Before taking office, the city manager shall furnish a fidelity bond, at the expense of the city, in the amount of sixty thousand dollars (\$60,000.00), conditioned upon the faithful performance of his or her duties, with a corporation licensed to do business in this state as a surety. Such bond shall be filed with the city recorder after being approved by the governing body.
- (E) **Term of Office:** The city manager shall serve at the pleasure of the mayor and the city council and may be removed at any time, with or without cause, by the affirmative vote of the mayor and a majority of the city council, or all council members except the mayor.
- (F) **Discretion of Governing Body:** In removing the city manager, the governing body may use its discretion and its action shall be final and shall not depend upon any particular showing or degree of proof.
- (G) **Employment Agreement:** Nothing in this chapter shall be construed as a limitation on the power or authority of the governing body to enter into any supplemental agreement with the city manager with additional terms and conditions of employment not inconsistent with any provisions of this chapter.
- (H) **Salary:** The salary and other compensation of the city manager shall be established by the governing body in accordance with Utah law.
- (I) **Office and Time Spent:** The city manager shall maintain an office in the city hall and shall spend such time in the performance of the duties of city manager as is necessary or may be required from time to time by the governing body. The City manager shall be an exempt employee for purposes of the fair labor standards act and shall not be entitled to overtime pay unless specifically agreed to by the governing body. The city manager shall not accept any outside employment in addition to employment by the city without prior approval of the governing body.
- (J) **Residence:** The city manager need not be a resident of the city at the time of the city manager's appointment or thereafter.

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~~(J)~~(K) The powers and duties of the city manager are further described in Section 2.04.030 of this Code. In the event of conflict between this Section and Section 2.04.030, the provisions of Section 2.04.030 shall control.

VINEYARD PLANNING COMMISSION STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: First Amendment to the Holdaway Fields Development Agreement (Ordinance 2025-)

Department: Community Development

Presenter: Anthony Fletcher, Morgan Brim

Background/Discussion:

The developers of Holdaway Fields have submitted a proposed amendment to the existing Development Agreement. The intent of this amendment is to align the agreement more closely with their current build strategy and implementation schedule. The proposal introduces updates to the phasing plan, park dedication timing, and lot frontage standards.

Proposed Amendments

1. Phasing Plan Revisions - The applicant is proposing to adjust the sequence of several development phases to better reflect the construction strategy and market conditions. An updated phasing exhibit has been provided for reference. For context, the currently approved phasing plan is also included in the packet.
2. Park Completion and Dedication Timing - The applicant seeks to modify the timing of park construction and dedication to coordinate with the updated phasing plan and the issuance of Certificates of Occupancy. The intent is to ensure park improvements are delivered in a manner consistent with the revised buildout sequence.
3. Lot Frontage Adjustment (Cottage Lots) - The amendment includes a revision to the allowed lot frontage range for the Cottage Lot product type. This change does not alter the total number of lots but would introduce flexibility in lot widths to accommodate a more varied streetscape and housing mix.

Next Steps

The purpose of this work session is to introduce the proposed amendments and gather feedback from the City Council, and the public. Comments received during this discussion will help staff and the applicant refine the final Development Agreement amendment before it proceeds to formal public hearing and consideration for approval.

Fiscal Impact:

N/A

Recommendation:

No action Required

Sample Motion:

No action Required

Attachments:

1. Proposed D.A. Amendment
2. HF_PHASING_08.01.25 - _GOODBORO_UPDATE-
HF_PHASING_PROPOSAL_08.01.25
3. Updated Holdaway fields Phasing Plan 09.16.25 - Administratively Approved Final
4. DA_Amendment_Narrative

When recorded, return to:

Vineyard City
125 South Main Street
Vineyard, Utah 84059
Attention: Ezra Nair

Parcel ID: [_____]

DEVELOPMENT AGREEMENT
(Cadence / Goodboro Vineyard Project)

This Development Agreement (the “**Agreement**”) is entered into the ____ day of _____, 2022 (the “**Effective Date**”), by and between Vineyard City, a Utah municipal corporation (the “**City**”), and Cadence Vineyard 400, LLC, a Utah limited liability company (“**Cadence**”), and Goodboro Vineyard Holdaway, LLC, a Utah limited liability company (“**Goodboro**,” and together with Cadence, “**Developer**”). Each of the City and Developer are sometimes referred to in this Agreement as a “**Party**,” or collectively as the “**Parties**.”

RECITALS

A. Developer owns approximately 92 acres of land located within the boundaries of the City, as more particularly described in **Exhibit “A-1”** attached hereto (the “**Developer Property**”), and has rights to develop certain portions of real property adjacent to the Developer Property owned by The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, which real property is more particularly described in **Exhibit “A-2”** (such portions, the “**Church ROW Property**” and together with the Developer Property, the “**Properties**”).

B. Developer desires to develop the Properties in accordance with the neighborhood plan attached hereto as **Exhibit “B”** and incorporated herein by this reference, which has been approved by the City (as the same may be revised, amended or modified the “**Neighborhood Plan**”), including all future improvements to be located therein (the Properties, together with all such improvements, is referred to as the “**Project**”), which Neighborhood Plan, for purposes of clarity, does not include the church-owned properties located within or adjacent to the Project, other than the Church ROW Property.

C. The Properties are subject to the City’s Laws, including without limitation the City’s Zoning Code (section 15.02 et seq.), and specific provisions on Development Agreements (section 15.16 et seq.), pursuant to which this Agreement may control over certain provisions of the City’s Laws with respect to matters set forth herein.

D. The lots associated with the Project will be developed into (i) 295 single-family detached residences, of which approximately 127 single-family detached units will be in an age-restricted community (depicted as those lots colored orange on page 2 of the attached

Neighborhood Plan), and (ii) one or more parks, trails, alleys, local amenities, and other uses, all as more particularly described and depicted in the Neighborhood Plan and in this Agreement.

E. The City Council has reviewed this Agreement and determined that it is consistent with the Municipal Land Use, Development, and Management Act, Utah Code Section 10-9a-101, *et seq.* (the “*Act*”), the Ordinances (defined below), and the City of Vineyard General Plan, and that this Agreement provides for and promotes the health, safety, welfare, convenience, aesthetics, and general good of the community as a whole. This Agreement does not contradict, and specifically complies with, and is governed by the Act. The Parties understand and intend that this Agreement is a “development agreement” within the meaning of, and entered into pursuant to the terms of, the Act.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals, which the Parties agree are contractual in nature and are not merely recitals, and the goals of the City and Developer, which include the coordinated development of the Project to achieve a development of the highest quality, the Parties agree to be legally bound as follows:

1. Incorporation of Recitals. The above Recitals are hereby incorporated into this Agreement.

2. Purpose of Agreement. The purpose of this Agreement is to reduce to writing the respective understandings and agreements of the Parties with regard to the development of the Project and implementation of the Neighborhood Plan. To the maximum extent permissible under the laws of Utah and the United States, it is the intent of the City and Developer that this Agreement incorporates the uses and density rights granted to Developer and the Project pursuant to the Neighborhood Plan, including Developer’s “vested rights” pursuant to the Act as reflected in the Neighborhood Plan. All Plats (defined below) for the Project are subject to the ordinances, regulations and policies of the City governing the development of real property within the City as of the Effective Date, including the Zoning Ordinance (defined below) (collectively, the “*Ordinances*”), provided that any conflict between the Ordinances and the provisions of this Agreement shall be controlled by this Agreement.

3. Definitions. In addition to the other capitalized terms defined elsewhere in this Agreement, the following terms shall have the respective meanings indicated below:

(a) “City’s Laws” means, collectively, all City ordinances, rules, and regulations, including the provisions of the City’s General Plan, the City’s Zoning Code, the City’s engineering and development standards and specifications, and any permits issued by the City pursuant to the foregoing ordinances and regulations.

4. Allowed Uses and Approval.

(a) The uses allowed within the Project, as specified in the Neighborhood Plan, are incorporated into this Agreement. All Plats shall be reviewed, and approved or denied by the City, in accordance with the procedures of the Ordinances in effect when the application for the respective Plat is determined to be complete, provided that any conflict between the Ordinances

and the provisions of this Agreement shall be controlled by this Agreement. Upon the approval of the Neighborhood Plan by the City, Developer received a vested right to develop the Project as described herein and in accordance with the Neighborhood Plan, subject to Developer's compliance with the Zoning Ordinance and other Ordinances not inconsistent with this Agreement.

(b) In accordance with the Ordinances, Developer will submit preliminary and final subdivision plats (each a "**Plat**" and collectively the "**Plats**"), consistent with the Neighborhood Plan and this Agreement, whether in one submission or a series of submissions associated with phased development, and all other documentation required and deemed necessary by the City for compliance of the Project with the Ordinances. The Plats shall include all improvements required by this Agreement, in accordance with the Ordinances and construction standards of the City (to the extent not inconsistent with the Neighborhood Plan or this Agreement), including setbacks, infrastructure, utilities, landscaping, open space, easements, grading, drainage, fences, sound barriers and architectural design as necessary under the Ordinances to obtain City approval. In the event that the City rejects or requests modifications to a Plat due to inconsistency between such Plat and the Neighborhood Plan or this Agreement, Developer shall cause a new or corrected Plat to be prepared and submitted to the City. All portions of the Project must be developed in accordance with the approved Plats, the Ordinances and construction standards of the City (to the extent not inconsistent with the Neighborhood Plan or this Agreement), and those specific approvals that Developer may request and the City may hereafter approve.

(c) Developer shall provide all documents and information necessary for the issuance of building permits by the City, including specific construction plans and specifications for all required Project improvements. Developer agrees to provide appropriate and complete applications to the City for review. If Developer provides an incorrect or incomplete application, the City shall notify Developer that such application is incorrect or incomplete in accordance with the City's Zoning Code after Developer provides such application. Upon receipt of a complete application, the City agrees to process application(s) in accordance with City's Zoning Code and policy. The City has no obligation to review incomplete or non-conforming applications.

5. Description of Project; Zoning; Density.

(a) The Developer Property, is identified on **Exhibit "A-1"** attached hereto, and the Church ROW Property is identified on **Exhibit "A-2"**. Any further changes to the legal description of the Properties shall be authorized only upon written amendment to this Agreement, in accordance with the terms hereof. The Neighborhood Plan is identified on **Exhibit "B"** attached hereto, which includes the locations, uses, density, and other specifications of the Project, including approximate location of parks, trails, open space, amenities, road and street systems, alleys and other improvements and uses designated therein.

(b) Developer intends to develop the Project in accordance with the City's Holdaway Farms Special District residential zone, which zoning ordinance is set forth on the attached **Exhibit "C"** (the "**Zoning Ordinance**") and applies to the Properties. The Zoning Ordinance permits the development of the Project, in terms of allowed uses and allowed densities, consistent with this Agreement, including without limitation the Neighborhood Plan.

(c) Whenever required by this Agreement to design, construct, install, operate, or maintain any infrastructure, improvements, facilities, or services, the City and Developer agree to comply with the Ordinances or the requirements of the applicable service provider or agency, with authority, as applicable, for such design, construction, installation, operation, or maintenance, in effect at the time a Plat is determined complete.

(d) The Neighborhood Plan and the Zoning Ordinance shall provide the density basis for all Plats presented to the City. The maximum total base residential dwelling units allowed within the Project are set forth in the Zoning Ordinance and the Neighborhood Plan.

(e) To avoid confusing the Project with other neighborhoods in the City, Developer agrees the name of the Project shall not include the word "Park."

6. Phase Development. The Project will be developed in phases as set forth in Exhibit ~~F~~D, as the same may be modified by the Plats, (the "Phasing Plan") as approved by the City Staff. The Phasing Plan in Exhibit ~~F~~D has been updated from the Phasing Plan contained in the Neighborhood Plan and Exhibit D. For purposes of this Agreement, the Phasing Plan in Exhibit ~~F~~D and the contents of this Development Agreement shall control. Phasing of the Project shall take into account and be accomplished so as to ensure continuity and orderly development of the Project, coordination in connection with the installation of infrastructure improvements, future road and utility capacity needs, availability of access to all portions of the Project and related considerations. The phasing of the Project shall be constructed as presented in the approved neighborhood plan, except for those changes reflected in the Phasing Plan. Developer may adjust the Phasing Plan and/or develop Phases out of numerical order, provided however that public infrastructure, street, and park improvements must be constructed as outlined in Section 6(a), 6(b), and 6(c) of this Agreement. At a minimum, open space and park areas shall be constructed with the amenities, parking, and infrastructure that are indicated in the Neighborhood Plan. A site plan for each park space shall be approved by the Planning Commission and City Council. Within each phase of the Development, the Developer must complete the public infrastructure, street, and park improvements (excluding planter trees and vegetation) within that phase before the City shall be obligated to issue a certificate of occupancy for any lot constructed within that same phase.

(a) Park spaces shall be completed and receive final approval from the City as follows:

(i) Park labeled as ~~Holdaway-East~~ Park on the Phasing Plan shall be ~~platted with Phase 3 and completed~~ dedicated prior to issuance of ~~the 114th~~ certificate of occupancy for ~~the community any of the lots developed within the same phase~~;

(ii) Parks labeled as Bike Trail Park and ~~HoldawayEast~~ Park on the Phasing Plan shall be ~~platted with Phase 7 and completed~~ dedicated prior to the issuance of ~~the 214th~~ certificate of occupancy for ~~the community any of the lots developed within the same phase~~;

(b) The club house, pool, and associated private amenities of the age-restricted community shall be platted with Phase 4 and constructed and completed prior to the issuance of a certificate of occupancy for the 54th unit within such age restricted community.

(c) Street improvements, including sidewalks, planters (excluding planter trees and vegetation), curbs, gutters, trails, and roadways, shall be completed and receive final approval from the City as follows:

(i) Main Street Connection, and Sleepy Ridge Connection to 30 West, via Main Street, to Stillwater shall be platted with Phase 1 and completed prior to the issuance of a certificate of occupancy for any of the lots developed within the same phase; and

(ii) 400 South to the eastern terminus at Holdaway Road shall be platted with Phase 2 and completed prior to the issuance of a certificate of occupancy for any of the lots developed within the same phase, with the condition that if Developer does not submit Phase 2 for approval by the City prior to receiving a certificate of occupancy for the twenty-fourth (24th) lot in Phase 1, then, upon the City's request, the Developer and/or the Church shall dedicate to the City those portions of the full-width right-of-way for 400 South from Main Street to the eastern terminus that are owned by Developer or Church.

(iii) 400 South to the western terminus shall be platted with Phase ~~73~~ and completed prior to the issuance of a certificate of occupancy for any of the lots developed within the same phase.

If planter trees and vegetation are not installed on any street fronting a lot or lots prior to issuance of a certificate of occupancy for that lot or lots, then the Developer shall furnish to the City a bond sufficient to cover the cost of installing such trees and vegetation on that lot or lots. The City shall not apply the bond until one hundred-eighty days (180 days) have passed since the City issued the certificate of occupancy for that lot or lots and the Developer has not installed the required planter trees or vegetation.

7. Dedication and Easements. All dedications and easements required as part of Plat approval in favor of the City or other service provider or agency under the terms of this Agreement shall be provided to the City or other service provider or agency at the time of Plat recordation or at an earlier time as may be agreed to by the City and Developer and/or other service provider or agency.

8. Public Utilities. Developer shall pay for the construction and installation of utilities within the Project as may be required to service the Project under applicable law, including all municipal water and sewage services to the Project, and all electrical lines, natural gas lines, telecommunication and cable television lines, and so forth (collectively, the "**Utilities**"). With respect to those Utilities already in place and adjacent to the Properties, the Developer shall make all connections at similar or corresponding sizes; provided however, that if any connection is larger than that which would be required to service the Project under applicable law and as established by an engineering study approved by the City Engineer, which approval shall not be unreasonably withheld, conditioned or delayed, or to the extent the City otherwise requires any enlargement of the Utilities in excess of the minimum requirements to service the project under applicable law, the City shall bear the incremental cost of such upsizing. The City agrees to allow Developer to connect the Project to the City's municipal water systems, the City's off-site wastewater lines and mains, and sewer lines, lift stations, and other facilities in conformance with applicable design,

construction and engineering standards and requirements and to provide the Utilities services to the Project with sufficient capacity to service the Project. The City agrees to cooperate with Developer, and to take all reasonable actions necessary to provide the Utilities to the Project at the minimum level of service required by the City Engineer. The Parties agree to comply with all applicable local, state and federal laws, rules and regulations for culinary water facilities, services, quality standards and controls. All impact fees charged by the City in connection with the development of the Project and the approval of Plats shall be calculated based on the City's impact fee schedule as in effect on the Effective Date.

9. Storm Water Detention. Developer acknowledges and agrees that it shall be responsible for the financing and construction of storm water detention facilities of an adequate size to handle on-site storm water runoff generated by the Project. To the extent that storm water detention facilities or other storm water infrastructure improvements are required by the City to be sized to accommodate storm water runoff generated off-site from the Project, the City agrees to pay for the additional costs necessary to create sufficient excess capacity to handle storm water runoff generated off-site, the improvements for which shall be located within the areas designed by Developer and approved by the City. The final design and configuration of the detention facilities shall be subject to approval, as applicable, by the City, Utah County, the applicable flood control board, and Developer as part of the Plats. The storm water detention facilities shall be dedicated and transferred to the City upon completion, except for those storm water detention facilities that are located within that portion of the Project affected and maintained by a private homeowners' association, as reasonably determined by the City Engineer and submitted to the City Council for approval with the Plats. Storm water facilities dedicated to the City shall not be considered as open space or park space, either fully or partially; provided however, that underground storm water facilities may be located beneath open space and park space with approval by the City Engineer, which approval shall not be unreasonably withheld, conditioned or delayed, assuming such siting won't interfere with other uses of said open space or park space.

10. Roads. Except as otherwise provided below, Developer agrees to improve, dedicate and convey to the City, at no charge to the City, such land and rights-of-way (including temporary construction easements) as necessary for the roads, sidewalks, and curbs and gutters located on the Properties as set forth on the Neighborhood Plan (collectively, the "**Roads**"). Developer agrees that it shall be responsible for financing and construction of Roads within the Properties of an adequate size to handle traffic generated by the Project itself as reasonably determined by the City Engineer and in conformance with the City's Laws. The final design and configuration of the Roads shall be consistent with the Neighborhood Plan and shall be subject to approval, which approval shall not be unreasonably withheld, conditioned or delayed, by the City and Developer as part of the Plats. Upon satisfactory completion of construction, inspection, and acceptance by the City of any Roads that are constructed by Developer, such Roads situated on the Developer Property shall be transferred to the City. Notwithstanding the foregoing, (a) to the extent the City requires the Developer to "upsized" any Roads beyond the size required to provide an adequate level of service to the Project or that which is designated and described in the approved Neighborhood Plan, the City shall be responsible for all construction costs related to such upsized Roads in excess of the construction costs that would otherwise be expended if such Roads were developed to the size necessary to achieve an acceptable level of service or to be consistent with the approved Neighborhood Plan, which level of service shall be determined by a Traffic Impact Study (TIS) submitted to and approved by the City Engineer, which approval shall not be

unreasonably withheld, conditioned or delayed; and (b) in the event the City requires any of the Roads to be constructed earlier than indicated in the attached Phasing Plan, (i) the City shall fund the construction activities and all such construction costs that result directly from changing the Phasing Plan, and (ii) Developer will reimburse the City for its share of approved construction costs, excluding costs attributed to upsizing such Roads, through impact fees, assessments, or payments of money, as agreed to between the City and Developer. Prior to incurring any additional costs due to upsizing Roads, the Developer shall provide itemized costs estimate to the City Engineer for review and approval, which approval shall not be unreasonably withheld, conditioned or delayed, to enter into an agreement between the City and Developer. Such construction costs shall include, without limitation, any design, engineering, labor, materials, and other associated costs and expenses, but shall exclude internal costs of Developer and City personnel. The City shall not be obligated to pay any costs for which it did not receive and approve a cost estimate in advance.

(a) With the exception of the approximately four-hundred and forty foot (440') segment of 400 South between the Developer's property line and Holdaway Road (the "Holdaway Segment"), which Holdaway Segment shall be sixty-five feet (65') wide, Developer shall construct all roadway improvements on 400 South (from Lake View Drive west to Main Street) and on Main Street (from 400 South north to the northern border of the Project) as a seventy-seven-foot (77') Parkway Street (collectively, the "Parkway Streets") according to the specifications, cross section, and other descriptions of such roadway improvements in the Neighborhood Plan. The City recognizes that, according to the May 2, 2022 Cross Section Analysis performed by Hales Engineering, a copy of which is attached hereto as **Exhibit "E"** and incorporated herein by reference, seventy-seven feet is wider than would be necessary to provide an adequate level of service for traffic impacts resulting from the Project directly. Developer estimates the cost of upsizing the Parkway Streets to be approximately Two Hundred Twenty-Five Thousand Dollars (\$225,000). To pay for the increased cost of upsizing the Parkway Streets, the City agrees to reimburse Developer for its actual costs of constructing the roadway portion of the Parkway Streets up to a not-to-exceed cost of Two Hundred-Fifty Thousand Dollars (\$250,000). Developer shall bear any actual costs in excess of this not-to-exceed amount. For all roadways except the Holdaway Segment, the Developer shall be solely responsible for the cost of all sidewalk, planter, curb, gutter, and trail portions of the Parkway Streets. For the Holdaway Segment, the Developer shall bear any and all costs for installing curb, gutter, and ensuring there is at least thirty feet (30') of roadway width, including the existing roadway; the City shall reimburse Developer for the actual costs of upsizing the roadway width greater than thirty feet (30'), and the sidewalk, planter, and trail portions of the Holdaway Segment. The City and Developer shall coordinate with the adjacent landowner to design the Holdaway Segment at the reduced width of sixty-five feet (65') but with trail and sidewalk connections of similar width to the Parkway Street Cross-Section contained in the Neighborhood Plan.

(b) An "Alley" is defined as a paved road section that that is dedicated as a secondary means of access to an abutting property. Alleys constructed as part of the Project shall be dedicated to a private homeowners' association and maintained by the same. In the event that a private homeowners' association is unable to maintain the Alleys, then the Plats shall be recorded with each Alley dedicated to the homeowner directly abutting each Alley. The City shall not accept dedication of any Alley of the Project.

(c) The City shall approve on-street parking along the public roads of the Project if such parking does not encroach into the established travel lanes. Developer shall enter into the City's overnight street parking program and, accordingly, shall limit on-street parking to roads as defined by the terms of that program. This overnight, on-street parking shall not be considered as approved parking towards applicable City parking requirement standards.

(d) The Developer shall coordinate with the City and the developer of the property adjacent to the Project's northern border (Home Center) to stub a Road connection to East Zinfandel Lane from the Project prior to the City's issuance of the 103rd certificate of occupancy in the overall Project. This connection shall be paid for by the developers of the respective properties.

(e) The Developer shall conduct a traffic calming study and provide engineering recommendations to the City Engineer for East Zinfandel Lane, to include the street section within the City's maintained section. The Developer shall incorporate traffic impacts from and due to the Project when evaluating and providing recommendations.

11. Reimbursement. Developer agrees to construct the upsized public utilities and roadway improvements required by this Agreement according to the timeframes contained in the Phasing Plan. Developer will furnish, or cause to be furnished, all labor, equipment, materials, manpower, and supplies which are necessary to adequately and completely construct these improvements. No materials, supplies, labor, or equipment will be furnished by the City unless agreed to in writing by the City. Developer shall construct or cause the improvements to be constructed in a workmanlike manner. The Developer shall have the responsibility to pay its contractor(s). Payment will be made to the Developer from the City in a lump sum payment at the end of constructing the improvements for each phase and acceptance by the City. The Developer shall be paid within sixty (60) days following the day in which a billing statement is received by the City from the Developer. To mitigate against disputes over the cost of the public utility improvements, the Developer shall submit the contractor's estimate for the cost of the Work to the City for pre-approval, which pre-approval shall not be unreasonably withheld, conditioned or delayed. The City shall reimburse the actual cost, not to include Developer's profits, of the sidewalk and trail improvements along the Holdaway Segment of 400 South, and the roadway improvements along all of the Parkway Streets that exceed the width of the Local Street Cross-Section. Under no circumstance shall the City be responsible for any costs for roadway improvements exceeding TWO-HUNDRED-FIFTY-THOUSAND DOLLARS (\$250,000.00). The cap in the preceding sentence shall not apply to the sidewalk and trail improvements along the Holdaway Segment; the City shall reimburse Developer for the actual costs, not to include Developer's profits, of the sidewalk and trail improvements along the Holdaway Segment. For public utility work, the Developer may add five percent (5%) to the engineered estimate as a contingency. To avoid any disputes about eligible expenses, the City will review and approve—which review and approval shall not be unreasonably withheld, conditioned or delayed—an estimate provided by Developer prior to constructing the improvements for which the City is responsible for costs. Reimbursement will be for actual costs and shall not include Developer's profits. If costs remain within the pre-approved amount, including contingency, then the City shall reimburse such costs without question or delay. Payment of the costs shall be non-refundable.

12. Municipal Services. The City shall provide all City services to the Project that it provides from time to time to other residents and properties within the City including, but not limited to, development services and inspections, road and streetlight maintenance on public streets, police, and other emergency services. Such services shall be provided to the Project as required by applicable law and at the same levels of services, and on the same terms and rates as provided to other residents and properties in the City. Service levels and availability shall be determined by the City during its review and approval of the Phasing Plan. The City may choose not to provide services to any areas outside the approved Phasing Plan unless accepted and approved by the City Engineer, which approval shall not be unreasonably withheld, conditioned or delayed. The Developer shall not construct any areas in which emergency services cannot obtain reasonable access to provide services. The parties acknowledge and agree that Developer may be required to provide secondary emergency access over a temporary construction road during the first phase of the Project.

13. Parks and Open Space. Developer agrees to provide the parks, open space, trails and buffer areas generally as set forth in the Neighborhood Plan. The City agrees that the final size and location of parks, open spaces, trails and buffer areas shall be determined in the Plats, but shall be as generally identified in the Neighborhood Plan. The open space may include recreational areas, pedestrian and bicycle trails, neighborhood parks, and commonly maintained natural or landscaped areas, as approved by the City, which approval shall not be unreasonably withheld. Upon complete construction of such open space, Developer shall convey, dedicate, and/or donate to the City, at no cost to the City, and the City agrees to accept and receive such completed open space areas, in accordance with the City code, as shown on the Plats, after which the City shall be responsible for the maintenance of such dedicated open space and any improvements thereto. As part of the Plats and as applicable under the City Ordinances, Developer agrees to submit an open space plan to the City for its review and approval in connection with the Plats. The developer shall coordinate with Home Center Construction to extend the planned mid-block crossing into the Sycamores neighborhood as shown in the Neighborhood Plan. The Parties acknowledge and agree that the park depicted in the Neighborhood Plan in the northeast area of the Project shall be developed as a park or public use as determined by the city, that the names for the parks used in this agreement are temporary, and that the City shall have the right to rename the parks following its usual processes for assigning names to parks and public places.

14. City and Other Governmental Permits. The City shall (a) promptly review, consider and execute all consents, submittals or other documents as may be required in connection with the approved Plats; (b) have a representative available to attend all appropriate meetings with respect to Developer's activities under this Agreement, provided adequate notice is given to the City; and (c) promptly meet and consider such actions as required by the Act, applicable Ordinances and the Utah Open Meetings Act to provide all appropriate consents, approvals and opinions as requested by Developer from time to time. Before commencement of construction or development of any improvements on the Properties, Developer shall, at its expense secure any and all permits which may be required by any other governmental or quasi-governmental agency having jurisdiction over the work or affected by its construction or development. The City shall cooperate with Developer and contractors working on the Project in their endeavors to obtain any other permits and approvals as may be required from other governmental or quasi-governmental agencies having jurisdiction over the Properties or portions thereof (such as, by way of example, public utilities or utility districts or agencies) and, at the request of Developer, in the execution of such permit applications

and agreements as may be required to be entered into with such other agencies, which request shall not be unreasonably denied.

(a) Environmental Permits. The Developer understands there may be environmental permits required to develop the Properties and shall coordinate with the appropriate state and federal agencies regarding construction activities which may impact the adjacent protected lands (e.g., wetlands). The Developer shall be responsible for all costs associated with environmental study, permits, and additional construction costs as determined by the cognizant state and federal agencies. The Developer shall provide the City with all applicable forms, permits, documentation from those state and federal agencies establishing its work in accordance with those agencies. The Developer understands that any buffers established by those state and federal agencies along protected areas shall be at the expense of the Developer and shall not be reduced from the open space or park areas established in the Neighborhood Agreement, City Laws, or this Development Agreement.

15. Developer Easement and Restrictive Covenants. Developer covenants and agrees that, prior to the closing of Developer's construction loan for the Project, if any, Developer shall, as part of its development of the Project and/or for the benefit of the City, perform or cause to be performed the following: (a) record any restrictive covenants on the Project as provided in the Plats, in form and content consistent with the Neighborhood Plan and reasonably satisfactory to the City; and (b) record any easement on the Project as provided in the Plats, in form and content reasonably satisfactory to the City, for all other public improvements and public utility easements. Developer shall provide the City with a proposed form of each of the foregoing easements and restrictive covenants at least thirty (30) days prior to the submission of the Plats to the City. The City shall provide comments within ten (10) business days of receipt of such proposed forms. The consent of the City to the forms of easement and restrictive covenants shall not be unreasonably withheld. The City acknowledges that the form of easements and covenants described in this section will also be subject to the review and consent of the lender providing construction financing for the Project, if any, and the City agrees that the City's consent to changes requested by such lender will not be unreasonably withheld. No Accessory Dwelling Units ("ADU"), internal or external, shall be permitted in the age-restricted community on any lot smaller than six-thousand (6,000) square feet.

16. Construction and Inspection. The Project shall be developed by Developer in accordance with the City's Laws, the development standards of the City, and the Neighborhood Plan. Developer shall construct, or cause to be constructed, all improvements on the Project in conformity with all applicable federal, state and local laws, ordinances, rules and regulations. "As built" drawings of public infrastructure improvements for the Project shall be provided to the City without cost and shall include GIS information. The City shall perform periodic inspections of the public improvements to ensure conformance to the Engineer of Record's requirements and the City Engineer's drawings stamped "For Construction", which are installed and constructed by Developer. The City shall hold a preconstruction meeting with Developer, prior to Developer's construction of public infrastructure improvements, to review the requirements for construction operations. The Developer shall not proceed with public infrastructure construction activities of the Project until a Notice-To-Proceed (NTP) is issued by the City Engineer.

17. Model Homes. Notwithstanding any other provision in this Agreement to the contrary, Developer shall have the right to, pursuant to Section 4(c), apply for and obtain a building permit for and construct up to two (2) model homes (the “Model Homes”) in conjunction with and before completion of Developer’s construction the first phase of infrastructure improvements (the “Phase 1 Improvements”; provided however, that the Phase 1 Improvements must be complete before Developer may obtain certificates of occupancy for the Model Homes. The parties acknowledge and agree that Developer may be required to provide adequate emergency access over a temporary construction road during this phase of the Project.

18. Mortgagee Protections. The City recognizes Developer will be receiving construction financing from a private Lender or its successor and assigns (the “**Lender**”). The City will provide the Lender with thirty (30) days prior written notice of the City’s intent to declare a default by Developer under this Agreement. Although otherwise effective with respect to Developer, no notice delivered to Developer shall affect any rights or remedies of the Lender unless a copy of such notice has been delivered to such Lender in accordance with the immediately preceding sentence. The Lender shall have the right to cure any default of Developer under this Agreement. The City will not unreasonably withhold its consent to provide such other assurance and protections to the Lender by means of an amendment to this section or by separate agreement. In the event of a foreclosure by the Lender, this Agreement shall be binding on the Lender and its assigns, and any purchaser of the Developer Property at foreclosure. The City will agree to allow the Lender to take a collateral security interest in this Agreement and, in the event of a default by Developer to the Lender, to allow the Lender, or a purchaser in foreclosure of the Lender’s lien, to assume the obligations of this Agreement and to complete the Project pursuant hereto; provided that any such foreclosure purchaser has reasonably demonstrated that it has the development experience and financial ability to complete the Project in accordance with the terms of this Agreement. In the event of an assumption of this Agreement as permitted by this section, the City agrees to perform its obligations under this Agreement to the Lender or to such purchaser and to make necessary extensions of deadlines under this Agreement. This section shall not limit or subordinate the City’s interests, including but not limited to the rights to collect taxes or impose fines, fees, or remedies against Developer or subsequent owners of property developed pursuant to this Agreement.

19. Default. Neither Party shall be in default under this Agreement unless such Party fails to cure a breach under this Agreement within thirty (30) days after written notice is given to the defaulting Party by the other Party, which notice shall set forth the details of such breach in reasonable detail. If the nature of the defaulting Party’s obligation is such that more than thirty (30) days are reasonably required for performance or cure, the defaulting Party shall not be in default if such Party commences performance or cure within such thirty (30) day period (or, if such commencement is impossible due to a Force Majeure (defined below), commences performance or cure when such Force Majeure terminates) and after such commencement diligently prosecutes the same to completion.

20. Notices. Any consent, request, notice or other communication required or contemplated by this Agreement shall be in writing and shall be deemed properly given (a) if hand delivered, when delivered; (b) if mailed by United States Certified Mail (postage prepaid, return receipt requested), three (3) business days after mailing; (c) if by Federal Express or other nationally recognized overnight courier service, on the next business day after delivered to such

courier service for delivery on the next business day; or (d) if by e-mail transmission, on the day of transmission so long as the sender receives no evidence reasonably indicating delivery was unsuccessful, to the addresses set forth on the signature pages, or at such other address as the party to be served with notice has furnished in writing to the party seeking or desiring to serve notice as a place for the service of notice.

21. Conveyances. All dedications and conveyances of property to the City, as contemplated herein, shall be made by special warranty deed, free and clear of all financial liens and encumbrances, such as mortgages, deeds of trust, mechanic or materialmen's liens, but otherwise subject to all matters of record except as the Parties may otherwise reasonably agree.

22. Governing Law; Attorneys' Fees. This Agreement is entered into under and pursuant to and is to be construed and enforceable in accordance with the laws of the State of Utah. In the event of default by any Party, or if any action is brought because of any breach of or to enforce or interpret any of the provisions of this Agreement, the Party prevailing in such action shall be entitled to recover from any defaulting Party reasonable attorneys' fees, costs and expenses incurred in enforcing, interpreting or terminating this Agreement.

23. Time. Time is of the essence with respect to all time periods contained in this Agreement.

24. Interpretation; Incorporation. The titles and headings contained herein are for convenience only and do not define, limit or construe the contents of this Agreement. The word "include(s)" means "include(s), without limitation," and the word "including" means "including, but not limited to." All recitals and exhibits to this Agreement are incorporated herein by reference and are deemed an integral part of this Agreement.

25. Further Assurances. Each Party to this Agreement shall undertake all further acts reasonably necessary in order to carry out the intent and purposes of this Agreement and the actions contemplated herein. All provisions and requirements of this Agreement shall be carried out by each Party hereto as allowed by law.

26. Reserved Legislative Powers. Nothing in this Agreement shall limit the future exercise of the police power by the City in enacting land use ordinances or other ordinances and regulations, provided, that in no case shall the future exercise of the City in enacting said ordinances and regulations limit or change in any manner the allowed uses, densities, rights and obligations granted by the Neighborhood Plan or this Agreement. Developer understands that it is required to comply with future changes, amendments, or revisions to City ordinances and regulations that do not change the allowed uses or densities for the Project, as identified by this Agreement. If the City, in its legislative power, imposes a temporary zoning regulation for a compelling and countervailing public purpose, all obligations required by Developer, under the terms of this Agreement, shall be suspended and held in abeyance for the duration of the temporary zoning regulation, as enacted by the City.

27. State and Federal Law – Invalidity. Both the City and Developer mutually agree that the rights and obligations created by this Agreement are only such as are consistent with state and federal law. Both the City and Developer further agree that if any provision of this Agreement

becomes inconsistent with state or federal law, or is declared invalid, this Agreement shall be deemed amended to the extent necessary to make it consistent with state or federal law, as the case may be, the balance of the Agreement remaining in full force and effect. If the City's approval of the Neighborhood Plan or any Plat is determined to be invalid by a court of competent jurisdiction, then, at Developer's option, this Agreement shall also be null and void.

28. Assignment. Neither this Agreement, nor any of the provisions, terms or conditions hereof can be assigned by Developer to another party, individual or entity without assigning the rights as well as the obligations under this Agreement, and without the prior written consent of the City, which shall not be unreasonably withheld. Such assignments shall be subject to review by the City which is intended to provide assurances that the proposed assignee possesses sufficient ability to assume the provisions, terms, and conditions of this Agreement. The City shall review and approve, approve with conditions or deny all proposed assignments by Developer to a subsequent fee owner, as required by this Section, within twenty-one (21) days of notice of proposed sale, assignment, or other transfer. If the City takes no action to either approve (with or without conditions) or deny a proposed assignment, the assignment shall be deemed approved by the City. If the City in good faith determines that the proposed assignee does not have sufficient financial ability to assume and carry out the affirmative provisions, terms and conditions of this Agreement, a portion of this Agreement may still be assigned but Developer shall remain responsible for the performance of all obligations of this Agreement. Notwithstanding the foregoing, the City hereby consents to the assignment by Developer of any or all of its rights under this Agreement to its Lender, provided that notice of the assignment is given to the City of such assignment promptly after the transfer is accomplished. The rights of the City under this Agreement shall not be assigned.

29. Agreement to Run with the Land; Priority. This Agreement shall be recorded in the office of the Utah County Recorder against the Developer Property and is intended to and shall be deemed to run with the land, and shall be binding on all successors and assigns of Owner in the ownership or development of any portion of the Developer Property, senior to any debt security instruments encumbering the Developer Property except as provided in Section 18. The benefits of this Agreement shall inure to successors-in-interest and/or subsequent owners of the Developer Property only if the Agreement is transferred or assigned in accordance with the provisions of Section 28 above.

30. Relationship of Parties; No Third-Party Rights. This Agreement does not create any joint venture, partnership, undertaking, or business arrangement between the Parties hereto nor create any rights or benefits to third parties.

31. Amendments; Waivers. This Agreement may be amended, waived or enforced only by the Parties hereto. No waiver of any of the provisions of this Agreement shall operate as a waiver of any other provision regardless of any similarity that may exist between such provisions nor shall a waiver in one instance operate as a waiver in any future event. No waiver shall be binding unless executed in writing by the waiving Party. This Agreement may be amended only in a writing signed by all of the Parties hereto.

32. Force Majeure. The time within which actions must be completed under this Agreement shall be extended for a period of time equal to the period of any delay directly affecting

construction that is caused by (a) fire, flood, war, earthquake or other acts of God, (b) strikes, acts of public enemy, riot or insurrection, (c) unanticipated environmental testing or remediation, (d) governmental regulation of the sale or transportation of materials, supplies or labor, (e) disruptions in the availability of labor or materials, (f) plague, epidemic, outbreaks of infectious disease or any other public health crisis, including quarantine or other governmental restrictions in response thereto, (g) unanticipated delays in obtaining Lender approvals due to characteristics of the Project, (h) changes in applicable building codes or interpretations thereof or (i) delays caused by the City in the reviewing and approving Developer's submittals in excess of the City's normal practices (each a "***Force Majeure***").

33. Entire Agreement; Counterparts. This Agreement, together with the exhibits attached hereto, and all regulatory approvals given by the City for the Project, contain the entire Agreement of the Parties with respect to the subject matter hereof, and supersede any prior promises, representations, warranties, inducements or understandings between the Parties which are not contained in such agreements and regulatory approvals. This Agreement may be executed in multiple counterparts, which together shall constitute one and the same document.

34. Term of Agreement. This Agreement shall be for a period of fifteen (15) years following the date of recording of this Agreement; provided, however, that upon the expiration of such initial twelve (12)-year term, if this Agreement has not been previously terminated and if Developer has substantially complied with the terms of this Agreement, Developer shall have the option, exercisable by written notice to the City, to extend the term of this Agreement for an additional five (5) years.

35. Severability. If any part or provision of this Agreement is held to be unconstitutional, invalid or unenforceable by a court of competent jurisdiction, such adjudication shall not affect any other parts or provisions of this Agreement, all of which shall remain in full force and effect.

36. Approval of Agreement. The Parties hereby represent and warrant, as applicable, as follows: (a) Developer certifies that the person executing this Agreement on behalf of Developer is duly authorized and fully empowered to execute the same for and on behalf of Developer; and (b) the City certifies that the execution and delivery hereof has been approved at a duly convened meeting of the City Council and the same is binding upon the City to the extent provided herein and enforceable against it in accordance with its terms.

[Signature pages follows]

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EXHIBIT A-1

(Legal Description of Developer Property)

EXHIBIT A-2

(Legal Description of Church ROW Property)

EXHIBIT B
(Neighborhood Plan)

EXHIBIT C
(Zoning Ordinance)

EXHIBIT D

(Phasing plan of the Project)

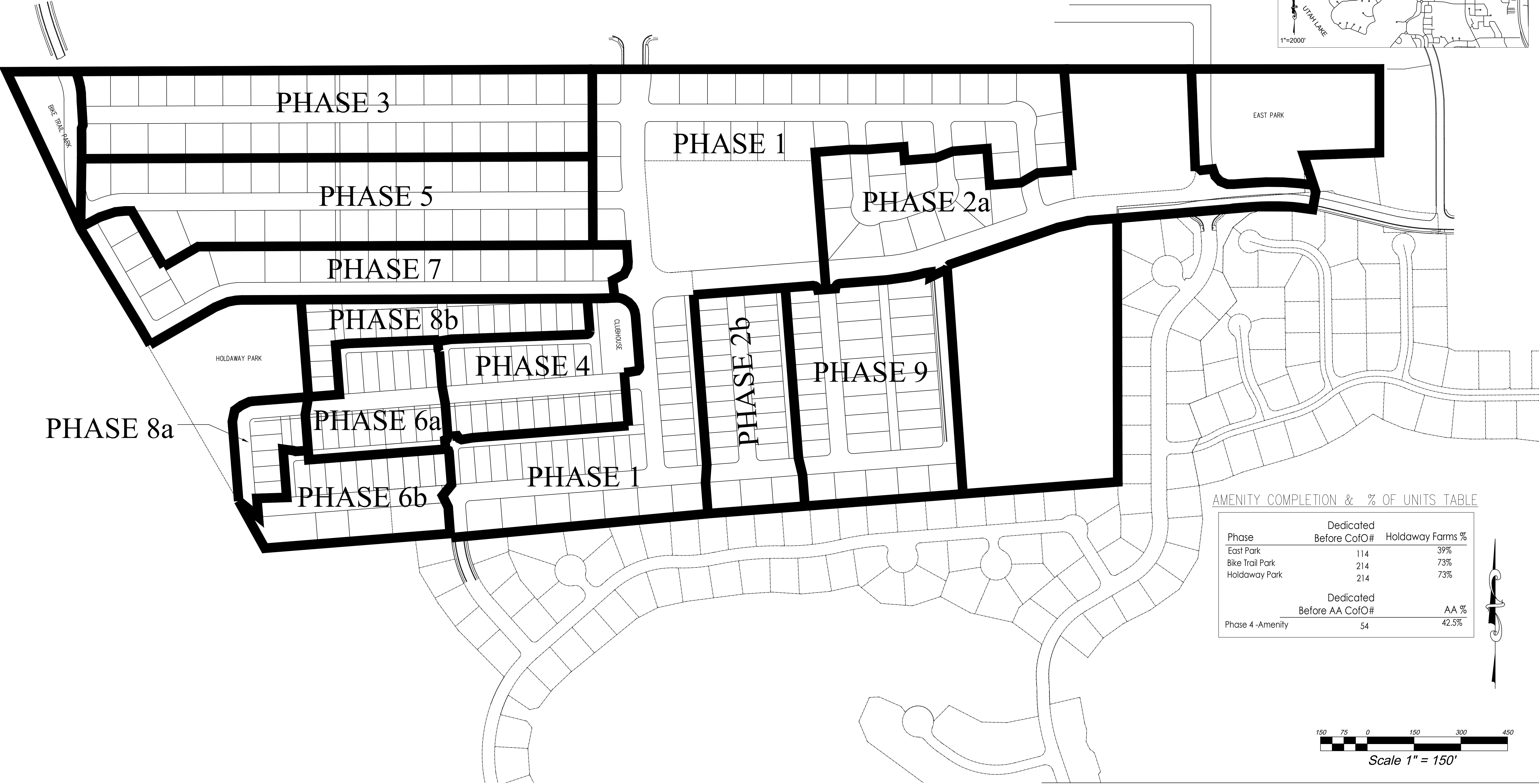
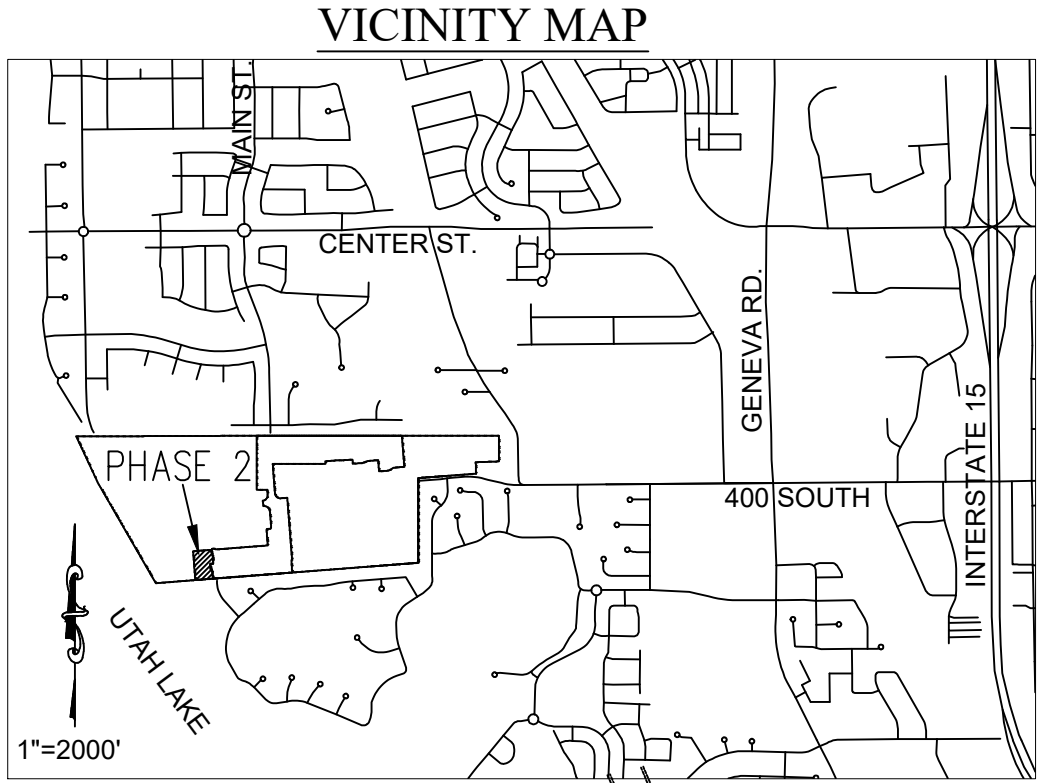
EXHIBIT E

(Cross Section Analysis)

|

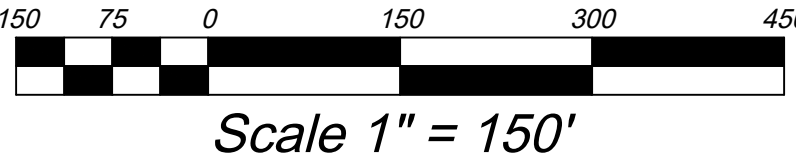
EXHIBIT F
(Updated Phasing Plan)

HOLDAWAY FIELDS



AMENITY COMPLETION & % OF UNITS TABLE

Phase	Dedicated Before CofO#	Holdaway Farms %
East Park	114	39%
Bike Trail Park	214	73%
Holdaway Park	214	73%
Dedicated Before AA CofO#		
Phase 4 -Amenity	54	42.5%

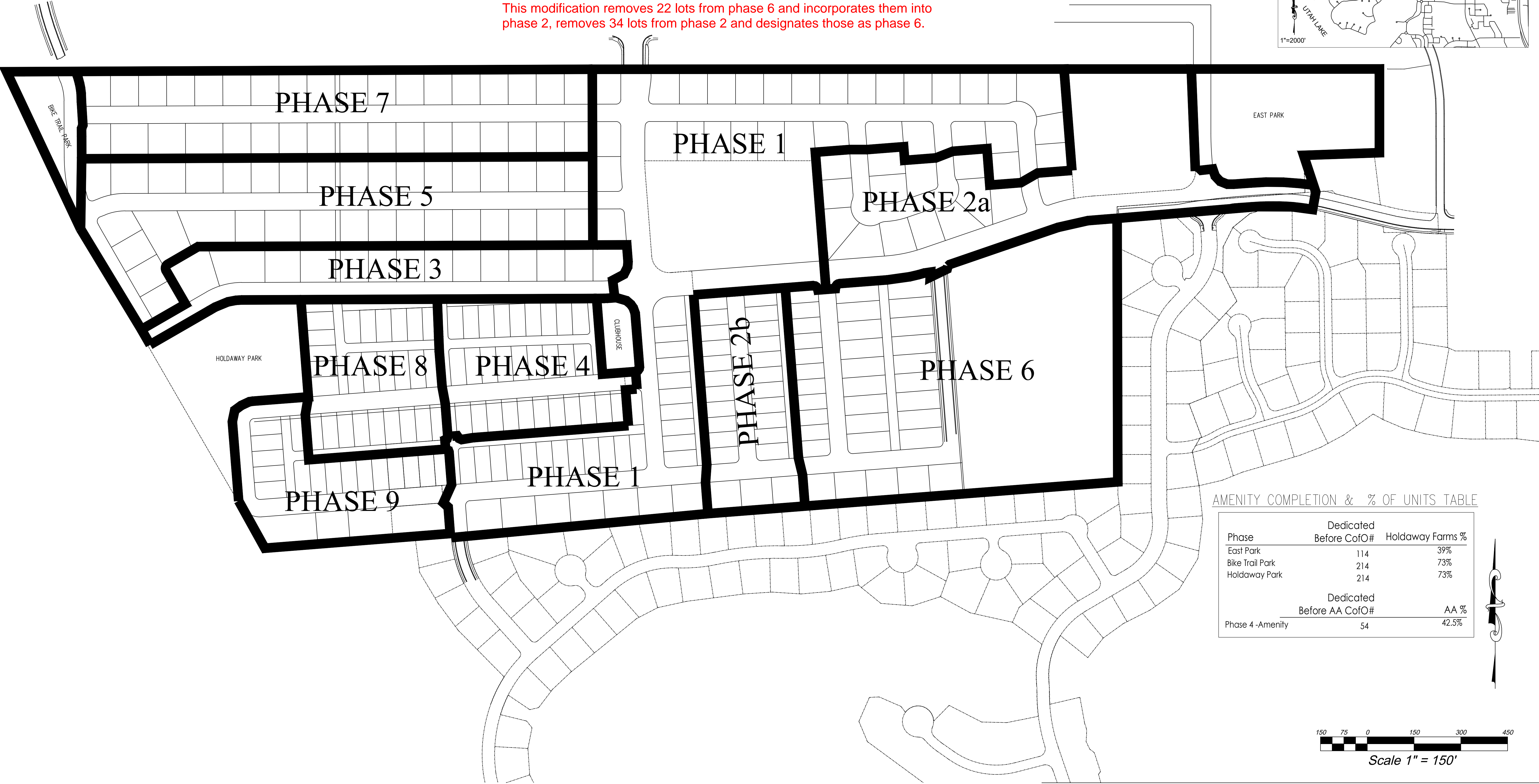
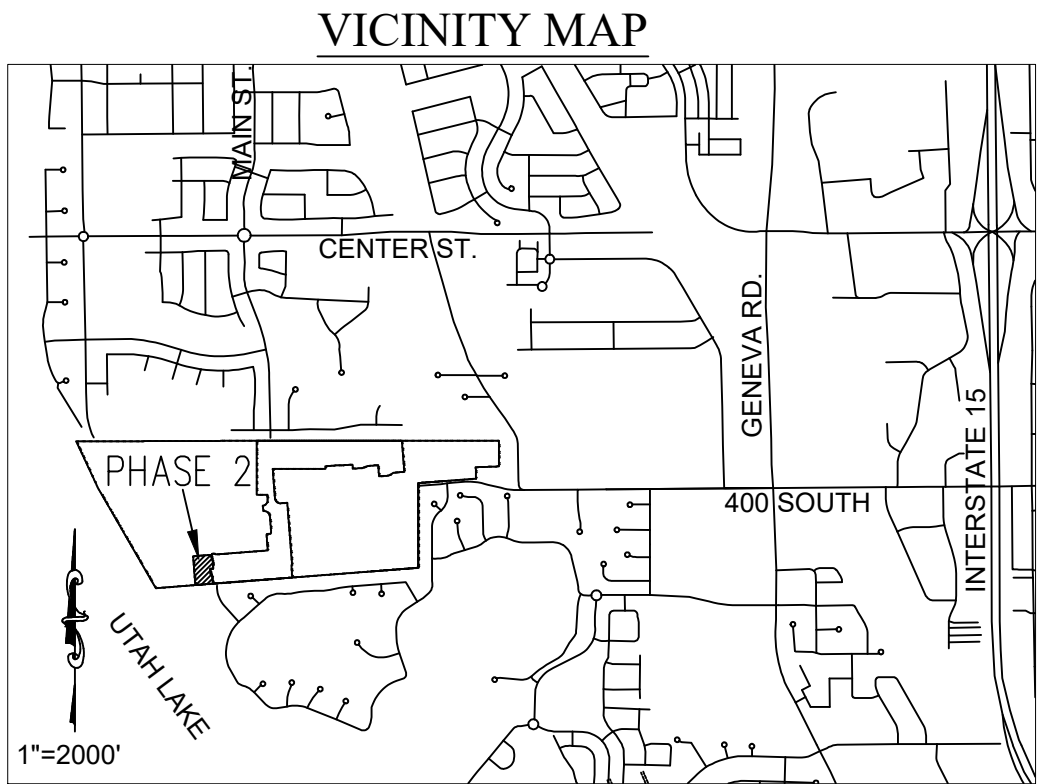


HOLDAWAY FIELDS

UPDATED PHASING PLAN

Administratively Approved 9/16/2025

This modification removes 22 lots from phase 6 and incorporates them into phase 2, removes 34 lots from phase 2 and designates those as phase 6.



AMENITY COMPLETION & % OF UNITS TABLE

Phase	Dedicated Before CofO#	Holdaway Farms %
East Park	114	39%
Bike Trail Park	214	73%
Holdaway Park	214	73%
Dedicated Before AA CofO#		
Phase 4 -Amenity	54	42.5%



We are requesting to amend the Development Agreement for the Holdaway Fields Project. This amendment is primarily to improve the flexibility of the phasing plan to allow for more efficient phasing of the community and modify the neighborhood plan to allow for narrower lots in the active adult portion of the community. The specific areas to be amended are listed below.

- Section 6 of the Development Agreement: To reference new phasing plan exhibit as Exhibit F. Also, to allow phases to be constructed out of numerical order to accommodate efficiency and the need for additional lots.
 - Section 6(a)(i): Adjust dedication of the parks to match CofO count listed on the phasing plan. Also, to change the first park being dedicated to the East Park instead of Holdaway park. This makes sense with our current development being located next to the East Park, while Holdaway park will not have housing around it until later phases.
 - Section 6(a)(ii): Adjust dedication of the parks to match CofO count listed on the phasing plan. Also, to adjust Holdaway Park to be developed when surrounding residential development occurs. This will allow more efficient development of the community.
- Include Exhibit F as the new phasing plan.
- Amend the “Lot Frontage” range reflected on the “Lotting Plan: Cottage Lots” page of the Neighborhood Plan in Exhibit B to say, “40-70 ft.” This amendment DOES NOT change the overall lot count for the Project. Rather, the amendment increases lot size, home plan and home price diversity and options for potential buyers in the age-restricted community in response to market feedback.



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Mountain Bike Park Location Adjustment

Department: Parks & Recreation

Presenter: Brian Vawdrey

Background/Discussion:

Staff proposed to Vineyard's Planning Commission that the Mountain Bike Dirt Park be constructed near the Vineyard City Hall, instead of across the street from Gammon Park. The purposes of this location adjustment include:

- City Hall location is closer to parking
- Make grant application stronger for Skate Park
- City Hall location is already Vineyard City-owned

The Planning Commission offered unanimous support towards this Mountain Bike Dirt Park location adjustment. As a result, staff plans to move forward with finding a contractor to design-build the Mountain Bike Dirt Park.

Fiscal Impact:

N/A. Vineyard City already has \$74,250 budgeted for a design-build contract of a Mountain Bike Dirt Park! (\$1500 allocated by City Council Special Project Fund, \$14,250 allocated by ARCH Grant, and \$58,500 allocated by RAP Tax Fund)

Recommendation:

N/A

Sample Motion:

N/A

Attachments:

1. Mountain Bike Park Area - Central Corridor Plan
2. All Wheels Bike Park Areas



EXISTING PARK





**NOTICE OF A REGULAR
CITY COUNCIL MEETING**

City Council Chambers
125 South Main Street, Vineyard, Utah 84059
October 22, 2025, at 6:00 PM

Present

Absent

Mayor Julie Fullmer
Councilmember Sara Cameron
Councilmember Brett Clawson
Councilmember Jacob Holdaway (6:38 PM)
Councilmember Mardi Sifuentes

Staff Present: City Manager Eric Ellis, Chief Deputy Holden Rockwell with the Utah County Sheriff's Office, Community Development Director Morgan Brim, Parks and Rec Director Brian Vawdrey, Chief Building Official Chris Johnson, Treasurer Zack Adams, Public Works Director Naseem Ghandour, Communications Director Jenna Ahern, City Recorder Pamela Spencer

Others Speaking: Residents Daria Evans, David Lauret, Clayton Prete, Chris Fox, and Nathan Steele; Craig Cannon and Bronson Tatton with Flagborough; Jeff Griffin with Corix


1. CALL TO ORDER


 Mayor Fullmer opened the meeting at 6:30 pm and then moved to public comments.

2. PRESENTATIONS/RECOGNITIONS/AWARDS/PROCLAMATIONS

2.1. Vineyard Academy

Communications Manager Jenna Ahern will present this year's Vineyard Academy Graduates.

 Mayor Fullmer turned the time over to Communications Manager Jenna Ahern.

 Ms. Ahern noted that they had just completed an eight (8) week Vineyard Academy and then presented the Vineyard Academy Graduates.

2.2. PROC 2025-10 Kindness Week Proclamation

Mayor Fullmer will present Kindness Week Proclamation 2025-10.

2.3. PROC 2025-11 First Responders' Day

Mayor Fullmer will present First Responder's Day Proclamation 2025-11.


 Mayor Fullmer noted that the Kindness proclamation would be posted for public viewing and then read the First Responder's Day proclamation. (recording stopped and was reset.)


2.4. Orem Hospital Update


Lincoln Hubbard, Community Relations Manager for Orem Hospital, will give an update on the Orem Community Hospital.

Mayor Fulmer turned the time over to Lincoln Hubbard, Community Relations Manager for Orem Hospital.

 Mr. Hubbard gave an update on the Hospital President and then gave a brief presentation on the Orem Community Hospital.


 Mayor Fullmer thanked Mr. Hubbard and called for questions from the council.

 Councilmember Sifuentes mentioned that she tried to use the Orem hospital whenever possible.


 Mayor Fullmer moved to Work Session Item 3.1.

2.5. Focus Group Update - City Hall


Senior Planner Cache Hancey will present the findings of a recent Focus Group regarding Facilities and Growth


 Mayor Fullmer turned the time over to Senior Planner Cache Hancey.


 Mr. Hancey presented the findings from the Focus Group regarding Facilities and Growth.


 Mayor Fullmer asked for clarification on the bond parameters. Mr. Hancey replied the Lewis Roberston and Burningham (LRB) had put cost together using an example. Mr. Hancey continued his presentation.


(Councilmember Holdaway entered the meeting at 6:38 PM.)


 Mayor Fullmer asked about the concern mentioned on the impact to the existing tax base. Mr. Hancey explained that the concern was a downturn in the market and how they would pay for continued operation of the city. Mayor Fullmer asked about the percentage used in the analysis. Mr. Hancey explained that using four (4) percent was conservative.

 Mr. Hancey continued his presentation. Mr. Hancey invited members of the focus group to speak.

 Ms. Evans mentioned that in July she was given the opportunity to participate in the focus group. She reviewed what the focus group's goals were. She said that she wished that there had been a more comprehensive study done and that they could have looked at each site as a group. She wanted to have more businesses opportunities in Vineyard. She mentioned the new school district needing additional funds. She said that she chose to keep City Hall on the current property. Councilmember Sifuentes asked if they could have additional meetings.

 Clayton Prete, living in the Solstice subdivision mentioned that agreed with having the new building in Utah City development and have Mountainland Association of Governments (MAG) as a partner. He mentioned that they had an accountant at the last meeting where they explained that tax revenues from Bellas would have paid for it. He felt there was an issue with communication and that more the information needed to be out there.

 Chris Fox, living in the Edgewater Townhomes, wished that they could have livestreamed the meetings to get information to the residents. He stated that his community had a lot of issues because of certain developers. He felt it made more sense to have the building in Gammon Park. He felt that there could have been better communication on how the building would have been funded and mentioned that there had been contention. He also felt that they should do something smaller than the original plans. Councilmember Holdaway asked about the contention. Mr. Fox mentioned that it was online. Councilmember Holdaway asked if there was confusion on the cost of the building.

 Nathan Steele, living in the Parkside subdivision, noted that he was able to attend every meeting. The overall response from every meeting was clarification and understanding. He explained that they had discussed in detail the different locations, the city's financial status, as well as potential alternatives. They discussed today, ten and twenty years from now. He said what opened his eye the most was the financials based on all of the options and to go with to the original plan. He felt it was everyone's responsibility to talk more and understand all of the city's needs. He also felt that the delay that has occurred has likely cost the city a couple million dollars on extra development costs. He also hoped they could save the relationship with MAG and still have the land donation from the developers. He said that he was as strong advocate for building in the Utah City development. He felt that building in the current location would attract more traffic to the area. He stated that he cared about the community and felt that the current location was ideal for the library or heritage center.


 Mayor Fullmer moved to item **2.1 Vineyard Academy.**


3. WORK SESSION


3.1. Personnel Policy Amendment to Title XVI REIMBURSABLE EXPENSES (Resolution 2025-54)


City Manager Eric Ellis will present recommended amendments to the travel policy found in the Vineyard Personnel Policy Title XVI Reimbursable Expenses.

 Mayor Fullmer turned the time over to City Manager Eric Ellis.


 Mr. Ellis reviewed the proposed changes to the travel policy located in the Vineyard Personnel Policy manual.

 Councilmember Clawson explained that Mr. Harding said that he did not come across anything that indicated malicious intent. He noted that the city was improving but could use additional controls. The city should have a dedicated form for travel, and different forms for different types of travels. Councilmember Clawson reiterated that Mr. Harding did not find anything malicious and had great recommendations for the city to improve. He felt it was important to review the draft and get feedback from the council.

 Mayor Fullmer asked about discouraging international travel. She said that the one international trip brought in institutions that would change the economic focus and development. She felt that the return in investment was extreme. The one visit brought a national medical center and other partnerships such as aerospace. Vineyard became the top location for an Innovation center. When there was an opportunity to advance why would they limit themselves and asked why they removed international travel from the policy. Mr. Ellis replied that they could remove that stipulation from the policy. Mayor Fullmer felt that they could evaluate it and make sure the dollars were spent in a fiscally conservative way.

 Councilmember Clawson noted that the items requiring approval were based on distances and felt that one of the recommendations was to have breakpoints based on cost. Councilmember Cameron asked if Councilmember Clawson had seen where if staff wanted to stay in a more expensive hotel they had to pay the difference. Councilmember Clawson felt that there should be a policy where at a certain cost it would need to go to council or require two (2) signatures.

 Councilmember Holdaway commended council and staff for working together to rework this policy. He felt that this new policy was a good step.


 Mayor Fullmer encouraged the full council if they were receiving pictures and allegations of misuse of travel to turn it into staff.


 Councilmember Sifuentes stated that she liked the draft and felt that international travel should be a council decision. She encouraged Councilmember Holdaway to share the evidence of personal trips in city vehicles.

 Mayor Fullmer suggested they send comments to Mr. Ellis.

4. PUBLIC COMMENTS

Mayor Fullmer called for public comments.

 Daria Evans, living in The Villas subdivision, thanked the Rojas Family for donating pumpkins to the residents. She also mentioned the success of the Boo-A-Palooza event.

 Mayor Fullmer closed public comments and then moved to Presentation Item **2.5 Focus Group Update - City Hall**

5. MAYOR AND COUNCILMEMBERS' REPORTS/DISCLOSURES/RECUSALS

No reports were given.

6. STAFF, COMMISSION, AND COMMITTEE REPORTS


No reports were given.

188 **7. CONSENT ITEMS**

189 **7.1. Approval of the September 24, 2025, City Council Meeting Minutes**


190 **7.2. Approval of the October 8, 2025, City Council Meeting Minutes**

191
192  Mayor Fullmer called a motion.

193
194  **Motion:** COUNCILMEMBER CLAWSON MOVED TO APPROVE THE CONSENT
195 ITEMS AS PRESENTED. COUNCILMEMBER CAMERON SECONDED THE MOTION.
196 MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND
197 SIFUENTES VOTED YES. THE MOTION CARRIED UNANIMOUSLY.

198
199
200 **8. APPOINTMENTS/REMOVALS**

201 **8.1. The mayor, with the advice and consent of the council, will appoint members**
202 **to the Library Board.**


203  Mayor Fullmer reviewed her appointments and called for a motion.

- 204
 - Valerie Nelson as a Youth Council Co-advisor.
 - Library Board code amendment requires a board timeline adjustment:

205 Mary Ann Geddes, Christine Jeffs, Julie Ann Tanner, and Diana Steele with terms expiring June
206 2027. Councilmember Cameron's term was for the duration of her council term. She then
207 appointed Jane Pearce as a member with her term expiring June of 2029.

- 208
 - ARCH Commission Daniel George from alternate to a member.


209
210
211  **Motion:** COUNCILMEMBER SIFUENTES MOVED TO ACCEPT THE MAYOR'S
212 APPOINTMENTS AS PRESENTED. COUNCILMEMBER CAMERON SECONDED THE
213 MOTION.


214
215  For the record Councilmember Holdaway stated that he did not have time to interview the
216 appointees.

217
218  MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, AND SIFUENTES
219 VOTED YES. COUNCILMEMBER HOLDAWAY VOTED NO. THE MOTION CARRIED
220 FOUR (4) TO ONE (1).


221
222
223 **9. BUSINESS ITEMS**


224 **9.1. PUBLIC HEARING — Adoption of the Fiscal Year 2025-2026 Working**
225 **Budget After Amendment #2 (Resolution 2025-47) (*This item was moved from***
226 ***the September 24, and the October 8, 2025, City Council Meetings.*)**
227 **FY26 Budget Amendment #2**


228
229  Mayor Fullmer called for a motion to open the public hearing.


 **Motion:** COUNCILMEMBER CAMERON MOVED TO OPEN THE PUBLIC HEARING AT 7:49 PM. COUNCILMEMBER SIFUENTES SECONDED THE MOTION. MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND SIFUENTES VOTED YES. THE MOTION CARRIED UNANIMOUSLY.

 Mr. Ellis presented the proposed FY26 budget amendments.


 Public Works Director Naseem Ghandour clarified the rollover for the water fund and pipeline was to keep the funds allocated to the project.


 Mayor Fullmer called for public comments. Hearing none, she called for a motion to close the public hearing.


 **Motion:** COUNCILMEMBER SIFUENTES MOVED TO CLOSE THE PUBLIC HEARING AT 7:57 PM. COUNCILMEMBER CAMERON SECONDED THE MOTION. MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND SIFUENTES VOTED YES. THE MOTION CARRIED UNANIMOUSLY.

 Mayor Fullmer called comments from the council.

 Councilmember Clawson felt that the presentation was easy to follow and asked if it could be attached to the minutes. Mr. Ellis replied yes.

 Councilmember Holdaway stated that he agreed with the adjustments but felt they were going into previous year's money. Mr. Ellis explained how carryover dollars worked. A discussion ensued. Mayor Fullmer explained how the city saved money for projects.


 Mayor Fullmer called for a motion.


 **Motion:** COUNCILMEMBER CAMERON MOVED TO ADOPT RESOLUTION 2025-47 THE VINEYARD CITY FISCAL YEAR 2025 – 2026 BUDGET AMENDMENT #2 AS PRESENTED BY STAFF. COUNCILMEMBER SIFUENTES SECONDED THE MOTION. ROLL CALL WENT AS FOLLOWS: MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND SIFUENTES VOTED YES. COUNCILMEMBER HOLDAWAY VOTED NO. THE MOTION CARRIED FOUR (4) TO ONE (1).


9.2. PUBLIC HEARING — District Energy Zoning Text Amendment (Ordinance 2025-14)


Bronson Tatton with Flagborough has requested a Zoning Text Amendment to the Downtown Vineyard (Town Center) Special Purpose Zoning District to allow for District Energy Uses. The City Council will take appropriate action.

 Mayor Fullmer turned the time over to Senior Planner Cache Hancey.


 Mr. Hancey presented the zoning text amendment request and to update the name and include a definition.


278  Mayor asked if there were design standards for other utility boxes in the city. Mr. Hancey
279 replied that he was not aware of any.


280
281  Mayor Fullmer called for a motion to open the public hearing.

282
283  **Motion:** COUNCILMEMBER CLAWSON MOVED TO OPEN THE PUBLIC HEARING
284 AT 8:06 PM. COUNCILMEMBER SIFUENTES SECONDED THE MOTION. MAYOR
285 FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND SIFUENTES
286 VOTED YES. THE MOTION CARRIED UNANIMOUSLY.


287 Mayor Fullmer called for public comments.


288
289  David Lauret, living on Holdaway Road, said that he understood the need for these types of
290 plans but wanted to know why they did not continue the design standard used in the entire
291 development. Mr. Hancey replied that the form-based code required window treatments, and this
292 was not convenient for these types of use. Mr. Brim explained that they needed to keep it specific
293 to this type of use and add other utilities as they came in.


294
295  Craig Cannon with Flagborough mentioned that this would eventually be located in structured
296 parking garages. Mr. Hancey noted that they would have to go through the site plan process.


297
298  Mr. Lauret asked if they could make the façade go with the rest of the development. Bronson
299 Tatton with Flagborough explained that there would be two layers of landscaping with the black
300 box being screened. There was a discussion about screening.

301
302  Mayor Fullmer called for additional public comments. Hearing none, she called for a motion
303 to close the public hearing.


304
305  **Motion:** COUNCILMEMBER SIFUENTES MOVED TO CLOSE THE PUBLIC HEARING
306 AT 8:15 PM. COUNCILMEMBER CAMERON SECONDED THE MOTION. MAYOR
307 FULLMER, COUNCILMEMBERS CAMERON, CLAWSON, HOLDAWAY AND SIFUENTES
308 VOTED YES. THE MOTION CARRIED UNANIMOUSLY.


309
310  Mayor Fullmer called or comments from the council.


311
312  Councilmember Clawson asked about the lifespan of the temporary units before permanent
313 ones were installed. Mr. Tatton replied that Huntsman would use it in their first phase and then as
314 they grow a permanent facility would be built. Jeff Griffin with Corix explained that this facility
315 would be used for about four (4) years and then look at designing a permanent plant in about year
316 three.


317
318  Councilmember Clawson asked about the size of the facility. Mr. Griffin replied they were 12-
319 foot-tall modules.


320
321  Mayor Fullmer called for further comments from the council.

323  Councilmember Holdaway agreed with narrowing it to the Energy District.

324
325  Councilmember Cameron felt that it would be as nice as the rest of the development.

326
327  Mayor Fullmer asked if they had a phasing plan. Mr. Tatton was not sure when it would trigger
328 building the permanent facility. Mr. Griffin replied that the plant was limited in capacity to two (2)
329 million square feet of building area. A discussion ensued. Mr. Brim said that they had their own
330 market and plan and on the city side they would anticipate they would be permanent. Mr. Cannon
331 said that they were encouraged from an aesthetics point of view to put them in a parking garage.

332
333  Mayor Fullmer reiterated the discussion and then called or a motion.

334
335  City Attorney Jayme Blakesley reminded the council that once they change the zoning it may
336 be permanent. He presented a proposed language change to the text amendment: “d. District
337 Energy Plants are exempt from the architectural building standards set forth but must be screened
338 and meet site plan, landscaping, and parking requirements.”

339
340  **Motion:** COUNCILMEMBER SIFUENTES MOVED TO APPROVE ORDINANCE 2025-14
341 AS PRESENTED BY CITY ATTORNEY JAYME BLAKESLEY:

342 “D. DISTRICT ENERGY PLANTS ARE EXEMPT FROM THE ARCHITECTURAL
343 BUILDING STANDARDS SET FORTH BUT MUST BE SCREENED AND MEET SITE
344 PLAN, LANDSCAPING, AND PARKING REQUIREMENTS.”

345 COUNCILMEMBER CLAWSON SECONDED THE MOTION. ROLL CALL WENT AS
346 FOLLOWS: MAYOR FULLMER, COUNCILMEMBERS CAMERON, CLAWSON,
347 HOLDAWAY AND SIFUENTES VOTED YES. THE MOTION CARRIED UNANIMOUSLY.

348
349
350 **10. CLOSED SESSION**

351 No closed session was held.

352
353
354 **11. ADJOURNMENT**

355
356  Mayor Fullmer adjourned the meeting at 8:25 PM.

357
358
359 **MINUTES APPROVED ON:** _____

360
361
362 **CERTIFIED CORRECT BY:** 
363 **PAMELA SPENCER, CITY RECORDER**
364





VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Approval of the 2026 City Council Meeting Schedule (Resolution 2025-56)

Department: City Recorder's Office

Presenter: Pamela Spencer

Background/Discussion:

It has been the practice of the council to discuss and approve the set dates for City Council meetings at a meeting in November or December for the next calendar year.

Utah State Code requires that public notice be given of the annual meeting schedule at least once a year. We have been publishing the yearly calendar on or near January 1 of each year.

Utah State Code 52-4-202 2(a) and (b)

2 (a) ..., a public body which holds regular meetings that are scheduled in advance over the course of a year shall give public notice at least once each year of its annual meeting schedule as provided in this section.

(b)The public notice under Subsection [\(2\)\(a\)](#) shall specify the date, time, and place of the scheduled meetings.

*****Attached are the recommended regular meeting dates.***

- **Yellow** — Regular meeting dates
- **Blue** — Possible cancellation date
- **Green** — Possible special session

Please note that the November 11, 2026, meeting falls on a holiday, and we typically only hold one meeting in November. If you choose to cancel the November 11 meeting, state law requires holding at least one meeting per month, so I have suggested November 18, 2026, as a possible special session date.**

Alternatives:

If the council wishes to change the date or time when the meetings are to be held, it must be done by Ordinance at a future meeting. The meeting schedule can then be readopted with the date changes.

Utah State Code 10-3-502. Regular and special council meetings.

(1) The council of each municipality shall:

- a. by ordinance prescribe the time and place for holding its regular meeting, subject to Subsection [\(1\)\(b\)](#); and
- b. hold a regular meeting at least once each month

Fiscal Impact:

N/A

Recommendation:

Staff recommends holding City Council meetings on the 2nd and 4th Wednesday of each month, beginning at 6:00 PM as per city code, except for November and December, to only hold one regular meeting each month due to holidays.

Sample Motion:

"I move to adopt Resolution 2025-56; the 2026 City Council Annual Regular Meeting Schedule, as presented."

Attachments:

1. RES 2025-56 City Council Meeting Schedule
2. 2026 Calendar

RESOLUTION NO. 2025-56

**A RESOLUTION OF THE CITY COUNCIL OF VINEYARD, UTAH COUNTY, UTAH,
ADOPTING THE 2026 VINEYARD CITY COUNCIL REGULAR ANNUAL PUBLIC
MEETING SCHEDULE AND PROVIDING FOR AN EFFECTIVE DATE.**

WHEREAS, Utah State Code 52-4-202 2(a) and (b) requires that public notice be given of the annual meeting schedule at least once a year; and

WHEREAS, the City Council desires to adopt the 2026 regular annual public meeting schedule.

NOW, THEREFORE, BE IT RESOLVED by the City Council of Vineyard, Utah County, State of Utah, as follows:

SECTION I. The 2026 Vineyard City Council regular annual public meeting schedule is adopted as shown in the attached 'Exhibit A'.

SECTION II. This resolution shall take effect immediately upon passage.

PASSED AND ADOPTED by the Vineyard City Council on this 12th day of November 2025.

Mayor Julie Fullmer

Attest:

Tony Lara, Deputy Recorder

2026

JANUARY

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FEBRUARY

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MARCH

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29	30	31				

APRIL

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MAY

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17	18	19	20	21	22	23
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31						

JUNE

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28	29	30				

JULY

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AUGUST

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23	24	25	26	27	28	29
30	31					

SEPTEMBER

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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER

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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER

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DECEMBER

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VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Municipal Code Amendment — Section 13.12.120 Reservations and Rental of City Parks and Facilities (Ordinance 2025-16)

Department: Parks & Recreation

Presenter: Brian Vawdrey

Background/Discussion:

The proposed Reservations and Rental of City Parks and Facilities Code amendments are to better align our code with what we can effectively manage as Staff. A summary of the amendments include:

- Reservations for the general public can be made online beginning January 1st for the time window of April 1st - October 31st
- Resident reserving facility doesn't need to assume full responsibility to clean the facilities per the cleaning form given at the time of reservation (Refundable deposit will be returned based upon compliance to the terms and conditions stated in the Pavilion Reservation Waiver).
- Regulations for large group/unique reservations
- Regulations for Commercial Use of Parks

Fiscal Impact:

0. Staff would like to increase the cancellation charge from \$5 to 50% of the registration fee for those who cancel a pavilion/field reservation within 1-6 days of the reservation, due to the pavilion/field not being available to other members of the community (pending the City Council's approval to the related Consolidated Fee Schedule update).

Recommendation:

Vineyard City Staff recommends that City Council approve the Reservations and Rental of City Parks and Facility Code Amendments as identified in the attached document.

Sample Motion:

"I move to adopt Ordinance 2025-16, as presented by staff."

Attachments:

1. ORD 2025-16

**VINEYARD
ORDINANCE 2025-16**

**AN ORDINANCE OF THE VINEYARD CITY COUNCIL AMENDING
MUNICIPAL CODE SECTION 13.12.120, RESERVATIONS AND RENTAL OF
CITY PARKS AND FACILITIES.**

WHEREAS, The Vineyard City Council under the authority of Utah Code 10-3 to amend the municipal code; and

WHEREAS, the City Council has determined that it is in the best interest of the citizens of the city to amend Chapter 13.12.120

NOW THEREFORE, be it ordained by the Council of the Vineyard, in the State of Utah, as follows:

SECTION 1: AMENDMENT “13.12.120 Reservation And Rental Of City Parks And Facilities” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

13.12.120 Reservation And Rental Of City Parks And Facilities

- A. The following regulations shall govern the reservation and rental of Vineyard City Park Pavilions, ~~facilities including City buildings, pavilions, and fields.~~
1. Acceptance of Reservations. Reservations can be made online, as early as January 1st of each year for the time window of April 1st – October 31st. ~~Individuals and businesses must make a reservation at least 7 days prior to the proposed date of use. Individuals and groups wanting to reserve a Vineyard City Park Pavilion are subject to agreeing to the terms and conditions, as specified in the Pavilion.~~ ~~from residents and businesses within the city will be accepted January 1st of each year for the entire year, prior to the proposed date of use. Reservations from non-resident users will be accepted not more than 90 days prior to the proposed date of use. Overnight camping in the Park is prohibited.~~ Official City use of City facilities shall take precedence over all other reservations.
 2. ~~Sundays and Holidays. Because the city facilities' were primarily designed for use by city residents, and to limit hours for paid employees to a normal work week, reservations for Holidays and Sundays will be accepted from residents only, as long as the facilities are scheduled at least seven (7) days in advance.~~
 3. ~~The resident reserving the facilities assumes the full responsibility to clean the facilities per the cleaning form given at the time of reservation.~~
 4. Large Group/Unique Reservations. Reservations made for a long-term basis,

for groups of 100+ people, or for a purpose outside of the facility's intended use, may require a special event permit issued by Vineyard City. ~~Groups who would like to reserve a City facility but will exceed a group size of 100 people may require a special event permit issued by the city.~~

- ~~5. Long-term Reservations. Groups desiring to use city facilities on a long-term basis, will only be allowed to reserve the facilities on a month-by-month basis, in order to allow others a fair opportunity to use the facilities; and will be subject to the same restrictions and fees as mentioned above.~~
- ~~6. Fees and Refunds. Charged for Park and City Facilities Use. Fees and refundable deposits~~ charged for use of city facilities are established by the Consolidated Fee Schedule. The refundable deposit charged will be returned based upon compliance to the terms and conditions stated in the Pavilion Reservation Waiver ~~for which the deposit is received.~~ (See Reservation Forms)
- ~~7. Renters Subject to Other terms as Specified on the Reservation Forms. Those wishing to rent or reserve City facilities are subject to agree, by their signature, to the terms and conditions as specified on the applicable Reservation Forms.~~
8. Non-Reserved Use. Organized groups found to be using City facilities without having made a reservation may be asked to refrain from use until the proper reservations are made.

B. The following regulations shall govern the reservation and rental of Vineyard City Park Open Spaces:

1. Park Open Space Reservations must be submitted online and approved by the Vineyard City Recreation Manager as early as January 1st of each year for the time window of April 1st – October 31st. Individuals and businesses must make a reservation at least 7 days prior to the proposed date of use. Individuals and groups wanting to reserve Vineyard City Park Open Space are subject to agreeing to the terms and conditions, as specified in the Field Leasing Policy. Official City use of City facilities shall take precedence over all other reservations.
2. Large Group/Unique Reservations. Reservations made for a long-term basis, for groups of 100+ people, or for a purpose outside of the facility's intended use, may require a special event permit issued by Vineyard City.
3. Fees and Refunds. Fees charged for use of city facilities are established by the Consolidated Fee Schedule. The refundable deposit charged will be returned based upon compliance to the terms and conditions stated in the Vineyard City Playing Field Leasing Policy.
4. Non-Reserved Use. Organized groups found to be using City facilities without having made a reservation may be asked to refrain from use until the proper reservations are made.
5. Overnight camping in the park is prohibited.

SECTION 2: REPEALER CLAUSE All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 3: SEVERABILITY CLAUSE Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 4: EFFECTIVE DATE This Ordinance shall be in full force and effect from _____ and after the required approval and publication according to law.

PASSED AND ADOPTED BY THE VINEYARD COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Mayor Julie Fullmer	_____	_____	_____	_____
Sara Cameron	_____	_____	_____	_____
Jacob Holdaway	_____	_____	_____	_____
Mardi Sifuentes	_____	_____	_____	_____
Brett Clawson	_____	_____	_____	_____

Presiding Officer

Attest

Julie Fullmer, Mayor, Vineyard

Pamela Spencer, City Recorder,
Vineyard



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Municipal Code Amendment — Section 13.12.130 Concessions (Ordinance 2025-17)

Department: Parks and Recreation

Presenter: Brian Vawdrey

Background/Discussion:

In evaluating the Concessionaire experience this year, there are some updates we would like to make to the existing Vineyard Concessions Ordinance. The updates should offer various benefits to the community and the Concessionaires.

A summary of proposed edits/additions include:

- Allowing for Concession sales at Gammon Park and Sunset Beach Park
- Allowing for Food Stands
- Only allow one (1) food truck to sell concessions at a time per park, on non-event days within the contract time frame
- Allow the Concessionaire to provide their own a-frame to advertise their concessionaire.
- Have Concessionaires pay fees monthly

Fiscal Impact:

It's possible there may be a slight cost to stripe a specific area at other Vineyard Parks (approximately \$200 per park) to provide a designated selling area for the Concessionaire(s) in the park parking lot (where applicable). The proposed updates can allow residents the potential to enjoy concession offerings at various Vineyard City Parks. This can also bring in additional revenue to the City.

Recommendation:

Vineyard City Staff recommends that the Vineyard City Council approve the proposed amendments to the Vineyard City Concessions Code, as identified in the attachment.

Sample Motion:

"I move to adopt Ordinance 2025-17, as presented by staff."

Attachments:

1. ORD 2025-17

**VINEYARD
ORDINANCE 2025-17**

**AN ORDINANCE OF THE VINEYARD CITY COUNCIL AMENDING TITLE 13
SECTION 13.12.130 CONCESSIONS.**

WHEREAS, The Vineyard City Council under the authority of Utah Code 10-3 to amend the municipal code; and

WHEREAS, he City Council has determined that it is in the best interest of the citizens of the city to amend Section 13.12.130 Concessions.

NOW THEREFORE, be it ordained by the Council of the Vineyard, in the State of Utah, as follows:

SECTION 1: **AMENDMENT** “13.12.130 Concessions” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

13.12.130 Concessions

- A. Concessionaire Permit Required. No person, firm, corporation, or organization shall sell or offer for sale any food, beverage, or other item in any city-owned park without first having obtained a Concessionaire Permit from the Vineyard Parks & Recreation Department, a valid signed contract agreement by the Vineyard Parks and Recreation Director, and all other required licenses pertaining to the selling of concessions.
- B. Procedure for approval. Any person, firm, corporation, or organization desiring to sell concessions at a Vineyard City-owned park shall adhere to the city’s concession policy and submit an application online through the city’s website.
- C. Background Check. As a condition of operating at City-sponsored youth activities or facilities where minors are present (including but not limited to youth programs or the splash pad), CONCESSIONAIRES are required to complete sex offender registry checks for all employees, staff, or volunteers age 18 and older who may have direct or ongoing contact with minors while selling concessions. Registry checks must include both the Utah Sex and Kidnap Offender Registry and the National Sex Offender Public Website. Any individual identified on either registry is not permitted to participate.
- D. Limitations. The Vineyard Parks & Recreation Director shall not issue more than ~~three~~ one Food Truck and one semi-permanent trailer/kiosk/food stand contract agreements to sell concessions simultaneous on non-event days per park at ~~Vineyard Grove Park~~ simultaneously any given Vineyard City Park on non-event days. Concessions shall only be sold at the designated park(s) identified on the Concessionaire's approved

Concessionaire Permit ~~not be sold at city-owned parks, with the exception of Vineyard Grove Park.~~

1. No concessionaire shall sell anything that is not approved on the menu by Vineyard's Parks & Recreation Director. No concessionaire shall sell concessions beyond normal hours of operation ~~(9am-9pm):~~ (specified in the Concessionaire's approved Concessionaire Permit).
 2. No concessionaire shall erect, install, operate, nor cause or permit to be erected, any sign, except as is professionally attached and displayed on the concessionaire's vehicle(s), and one A-Frame placed within the Concessionaire's Designated parking area, without obtaining the specific written consent of Vineyard's Parks and Recreation Director. Vineyard's Parks and Recreation Director shall have the exclusive right to determine if, what, when, and where signs will be permitted.
 3. Each concessionaire shall only sell concessions in the designated area(s).
- E. Fees. ~~All~~ Each seasonal food trucks and semi-permanent trailer/kiosk concessionaires shall pay ~~monthly~~ fees monthly as outlined in the Vineyard City Consolidated Fee Schedule to Vineyard City.
- F. Insurance. Each concessionaire shall provide a valid document of minimum insurance requirements as designated by Vineyard City.
- G. Penalty. Violation of any provision of this chapter shall be a class C misdemeanor.

SECTION 2: **REPEALER CLAUSE** All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 3: **SEVERABILITY CLAUSE** Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 4: **EFFECTIVE DATE** This Ordinance shall be in full force and effect from _____ and after the required approval and publication according to law.

PASSED AND ADOPTED BY THE VINEYARD COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Mayor Julie Fullmer	_____	_____	_____	_____
Sara Cameron	_____	_____	_____	_____
Jacob Holdaway	_____	_____	_____	_____
Mardi Sifuentes	_____	_____	_____	_____
Brett Clawson	_____	_____	_____	_____

Presiding Officer

Attest

Julie Fullmer, Mayor, Vineyard

Pamela Spencer, City Recorder,
Vineyard

VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Concessions Policy Amendment (Resolution 2025-57)

Department: Parks & Recreation

Presenter: Brian Vawdrey

Background/Discussion:

In evaluating the Concessionaire experience this year, there are some updates we would like to make to the existing Vineyard Concessions Ordinance. The updates should offer various benefits to the community and the Concessionaires.

A summary of proposed edits/additions include:

- Allowing for Concession sales at Gammon Park and Sunset Beach Park
- Allowing for Food Stands
- Only allow one (1) food truck to sell concessions at a time per park, on non-event days within the contract time frame
- Allow the Concessionaire to provide their own a-frame to advertise their concessionaire.
- Have Concessionaires pay fees monthly

Fiscal Impact:

0. It's possible there may be a slight cost to stripe a specific area at other Vineyard Parks (approximately \$200 per park) to provide a designated selling area for the Concessionaire(s) in the park parking lot (where applicable). The proposed updates can allow for revenue to come to Vineyard City from potential concessionaire(s) at additional Vineyard parks.

Recommendation:

Vineyard City Staff recommends that the Vineyard City Council approve the Concessions Policy Updates identified in the attachment.

Sample Motion:

"I move to adopt Resolution 2025-57, approving the Concessions Policy updates as presented."

Attachments:

1. RES 2025-57
2. Concessions Policy Update

**VINEYARD
RESOLUTION 2025-57**

**A RESOLUTION OF THE VINEYARD CITY COUNCIL AMENDING THE PARKS
CONCESSIONS POLICY**

WHEREAS, The Vineyard City Council under the authority of Utah Code 10-3 to amend the municipal code; and

WHEREAS, the City Council had determined that it was in the best interest of the citizens of the city to amend the Municipal Code Section 13.12.130 Concession; and

WHEREAS, the City Council has determined that it is in the best interest of the citizens of the city to amend the Parks Concessions Policy.

**NOW THEREFORE BE IT RESOLVED BY THE COUNCIL OF THE
VINEYARD, IN THE STATE OF UTAH, AS FOLLOWS:**

Section 1. Adoption. Amendments to the Parks Concessions Policy, attached hereto as Exhibit A and incorporated herein by reference, is hereby adopted by the Vineyard City Council.

Section 2. Severability. If any section, part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution, and all sections, parts and provisions of this Resolution shall be severable.

Section 3. Effective Date. This Resolution shall become effective immediately upon its approval by the City Council.

Passed and dated this 12th day of November 2025.

Julie Fullmer, Mayor

Attest:

Tony Lara, Deputy Recorder





Vineyard City Concessions Policy Document

I. Policy Statement

Vineyard City recognizes the value of providing concessional offerings at Vineyard Grove Park, which shall enhance the park experience for residents and visitors. This policy aims to establish guidelines for the permitting and operation of concessional services at Vineyard ~~Grove City Parks~~, while ensuring various food and drink offerings, safety, and alignment with City values.

II. Eligibility

a. Food Truck

- i. ~~CONCESSIONAIRE~~ ~~Concessionaire~~ must possess a valid Utah State Food Truck License, valid Food Handler's Permit for each employee staffing the food truck, and a valid Vineyard City ~~CONCESSIONAIRE~~ ~~Concessionaire~~ Permit.

OR

b. Semi-permanent Snack Shack Trailer/Kiosk/~~Food Stand~~

- i. ~~CONCESSIONAIRE~~ ~~Concessionaire~~ must be a duly registered and licensed legal entity, possess a valid Food Handler's Permit for each employee staffing the unit, and possess a valid Vineyard City ~~CONCESSIONAIRE~~ ~~Concessionaire~~ Permit.

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III. In the "Policy Standards" section below, the City of Vineyard shall be referred to as "CITY" and the individual/group interested in selling concessions shall be referred to as "CONCESSIONAIRE".

Policy Standards:

1. **APPROVALS:** The CITY shall only approve contract agreements for up to ~~three~~ one (1) food truck CONCESSIONAIREs and up to one semi-permanent trailer/kiosk/food stand CONCESSIONAIRE to sell concessions simultaneously per at Vineyard ~~City Grove~~ Park as identified in Section 5 below ~~simultaneously~~.
2. **SELLING CONCESSIONS:** CONCESSIONAIRE is only permitted to sell concessions on non-event days during the time frame specified in the contract agreement. The event days include, but are not limited to: Bunny Hop Egg Drop, Vineyard Days, and Boo-A-Palooza, and the 9/11 Event.

~~and the 9/11 Event.~~ The Vineyard City Parks and Recreation Director shall have the exclusive right to determine what constitutes the events for the purposes of this ~~paragraph~~ Section 2.

3. **CONCESSION MENU.** The CONCESSIONAIRE shall submit to the CITY a list of all items to be sold by the CONCESSIONAIRE. The Vineyard City Parks & Recreation Director shall approve or modify the list to confirm items allowed to be sold by CONCESSIONAIRE (while ensuring that there isn't any redundancy in product offerings from two or more CONCESSIONAIRES during the same contracted time frame). The approved list shall constitute the Concession Menu. The CONCESSIONAIRE may not serve any item that differs or varies from the Concession Menu, without prior written approval from the Vineyard City Parks & Recreation Director. The parties specifically agree that the concession service provided herein does not include the right of the CONCESSIONAIRE to install and/or operate vending machines at the Named Site.
4. **CONCESSION STRUCTURES.** Permanent structures shall not be allowed on City property. The designated semi-permanent concession area shall be limited to a trailer/~~kiosk/food stand or kiosk~~ unit approved by the CITY and shall only be parked overnight during the ~~months time frame~~ specified in the contract agreement, unless prior approval is given in writing by the CITY's Parks & Recreation Director. The food trucks shall only be in the designated food truck area during the time frame designated in the contract agreement and must be removed each day at the end of operating hours, unless prior approval is given in writing by the CITY's Parks & Recreation Director.
5. **DESIGNATED AREA FOR CONCESSION SERVICE.** No CONCESSIONAIRE shall park or drive any vehicle on city-owned property without the written approval of Vineyard City's Parks & Recreation Director. No CONCESSIONAIRE shall park in such a way as to block roads, present safety concerns, or park in any place other than in the assigned designated area. The Vineyard City Parks & Recreation Director shall have the exclusive right to determine the CONCESSIONAIRE'S setup location.

NAMED SITES for Allowed Concession Service:

- A. Vineyard Grove Park (350 N 100 E, Vineyard, UT, 84059)
- B. Gammon Park (230 E Center St, Vineyard, UT, 84059)
- A.C. Sunset Beach Park (385 S 300 W, Vineyard, UT, 84059).

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6. **COST OF OPERATION.** The CONCESSIONAIRE agrees that the entire cost of operation and maintenance of the concession service shall be the CONCESSIONAIRE's sole obligation.
7. **FIRE INSPECTION FEE.** All contracted CONCESSIONAIRES shall pay the required Orem Fire Department Inspection Fee and pass the Orem Fire Department fire inspection prior to selling concessions at any of the Named Sites ~~at the Named Site.~~
8. **PAYMENT TO THE CITY.** Each contracted CONCESSIONAIRE shall pay Vineyard City the Concessions fee(s) as designated in the Vineyard City Consolidated Fee Schedule. Each contracted CONCESSIONAIRE must submit full payment to Vineyard City for the first month's fees at least seven (7) days prior to the CONCESSIONAIRE's contracted start date to begin selling concessions,

and before each monthly renewal date, otherwise the Concessionaire shall be subject to a late fee. If full payment + late fee (if applicable) is not submitted before the CONCESSIONAIRE's contracted start date to sell concessions, and before each monthly renewal date, the CONCESSIONAIRE's contract agreement may be terminated. All credit card payments are subject to a 3% transaction fee.

9. **SANITATION.** Any area utilized by the CONCESSIONAIRE for its activities of supplying concession service at ~~Vineyard Grove Park~~ the Named Site(s), shall be kept clean, disinfected and deodorized, and all refuse shall be collected in trash cans lined with plastic bags. The CONCESSIONAIRE's employee(s) shall do a trash sweep prior to leaving the Named Sites ~~Vineyard Grove Park~~ each day.
10. **MUSIC.** CONCESSIONAIRE shall not portray any form of music at any time, other than within the CONCESSIONAIRE's vehicle for the benefit of the CONCESSIONAIRE staff.
11. **BACKGROUND CHECK.** As a condition of operating at City-sponsored youth activities or facilities where minors are present (including but not limited to youth programs or the splash pad), CONCESSIONAIRE ~~s~~ is are required to complete sex offender registry checks for all employees, staff, or volunteers age 18 and older who may have direct or ongoing contact with minors while selling concessions. Registry checks must include both the Utah Sex and Kidnap Offender Registry and the National Sex Offender Public Website. Any individual identified on either registry is not permitted to participate.
12. **COMPLIANCE WITH LAWS.** CONCESSIONAIRE agrees to strictly observe all laws, rules, regulations and ordinances of the State of Utah, Utah County, Utah County Health Department, and the City of Vineyard, which in any respect relates to the business conducted by CONCESSIONAIRE, as well as all rules, policies, and regulations at ~~Vineyard Grove Park~~ the Named Sites which are now in force or may hereafter be promulgated. CONCESSIONAIRE shall obtain and maintain a valid food handler's permit for each employee staffing the CONCESSIONAIRE from the Utah County Health Department. CONCESSIONAIRE shall obtain and maintain a valid Vineyard City Concessionaire Permit. CONCESSIONAIRE shall be responsible for paying all taxes and insurance, including but not limited to, federal and state income taxes, social security and Medicare taxes, liability insurance, and Worker's Compensation Insurance as may be required by the State of Utah. The CITY shall have the right to inspect the Concession structure, equipment, etc., at all reasonable times. Failure by the CONCESSIONAIRE to comply with any of said laws, rules, regulations, ordinances, or policies may be cause for termination of this Agreement by the CITY.
13. **INDEMNITY.** CONCESSIONAIRE shall indemnify and hold harmless the CITY, its officers, employees, representatives, and agents against all claims, demands, causes of action, suits or judgments, including but not limited to all claims, demands, causes of action, suits or judgments for death or injuries to persons or for loss of or damage to property, arising out of or in connection with the CONCESSIONAIRE's activities pursuant to this Agreement. In the event of any such claims made or suits filed against the CITY, the CITY shall give CONCESSIONAIRE prompt written

notice. CONCESSIONAIRE agrees to defend against any claims brought or actions filed against the CITY, whether such claims or actions are rightfully or wrongfully brought or filed. In case a claim should be brought or an action filed with respect to the subject of the indemnity herein, CONCESSIONAIRE agrees that the CITY may employ attorneys of its own selection to appear and defend the claim or action on its own behalf at the expense of the CONCESSIONAIRE, jointly or severally, and if not, CONCESSIONAIRE will employ appropriate and necessary legal services subject to the CITY's approval.

14. **GENERAL LIABILITY INSURANCE.** CONCESSIONAIRE agrees that it will provide Commercial General Liability insurance for personal injury and property damage or loss with a carrier authorized to do business in the State of Utah under a General Comprehensive Policy of no less than One Million Dollars (\$1,000,000.00) combined single limit per occurrence, personal injury and property damage, Two Million Dollars (\$2,000,000) aggregate, for the benefit of the CITY and naming the CITY as co-insured for the result of any liability arising out of CONCESSIONAIRE's activities pursuant to this Agreement. CONCESSIONAIRE agrees that the CITY shall not be responsible for loss or damage sustained by the acts of CONCESSIONAIRE or the acts of any third party, including but not limited to acts of vandalism or theft.
15. **AUTOMOBILE LIABILITY INSURANCE.** CONCESSIONAIRE agrees that it will provide automobile liability insurance with a carrier authorized to do business in the State of Utah of no less than One Million Dollars (\$1,000,000.00) per occurrence.
16. **WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY.** CONCESSIONAIRE agrees that it will provide Workers' Compensation statutory limits as required by the Workers Compensation Act of the State of Utah and Employers Liability limits at a minimum of \$100,000 per occurrence.
17. **OTHER INSURANCE PROVISIONS.** The policies are to contain, or be endorsed to contain, the following provisions:
 - a. General Liability and Automobile Liability Coverages
 - i. Vineyard City, its officers, officials, employees and volunteers are to be covered as additional insured as respects to: liability arising out of activities performed by or on behalf of CONCESSIONAIRE; products and completed operations of the CONCESSIONAIRE; premises owned, leased, hired or borrowed by CONCESSIONAIRE. The coverage shall contain no special limitations on the scope of protection afforded to Vineyard City, its officers, officials, employees or volunteers.
 - ii. CONCESSIONAIRE's insurance coverage shall be the primary insurance as respects to Vineyard City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by Vineyard City, its officers, officials, employees or volunteers, shall be in excess of CONCESSIONAIRE's insurance and shall not contribute to it.

- iii. Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to Vineyard City, its officers, officials, employees or volunteers.
 - iv. CONCESSIONAIRE's insurance shall apply separately to each insured against whom claim is made or a suit is brought, except with respect to the limits of the insurer's liability.
18. **ACCEPTANCE OF INSURERS.** Insurance and bonds are to be placed with insurers admitted in the State of Utah with an A.M. Best rating of not less than A-: IX, and in the limits as listed in this document, unless approved by the CITY's attorney.
19. **VERIFICATION OF COVERAGE.** CONCESSIONAIRE shall furnish the CITY with certificates of insurance and with original endorsements affecting coverage required by this clause. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms acceptable to the CITY before the concession service begins. The CITY reserves the right to require complete, certified copies of all required insurance policies, with all endorsements, at any time.
20. **NOTICE OF INCIDENT OR ACCIDENT.** CONCESSIONAIRE agrees that it will promptly disclose to the CITY all incidents or occurrences of accident, injury, and/or property damage covered by the insurance policy or policies.
21. **INDEPENDENT CONTRACTOR.** CONCESSIONAIRE is an independent contractor and not an employee or agent of the CITY. CONCESSIONAIRE and its employees are not entitled to any benefits from the CITY. The CITY shall not in any way for any purpose become an agent, partner or joint user of CONCESSIONAIRE in its business or otherwise. Except as herein provided, operation of the concession service shall be within the exclusive control and possession of the CONCESSIONAIRE.
22. **DISCRIMINATION.** CONCESSIONAIRE agrees that he/she, and his/her employees, will not discriminate against any member of the public because of race, creed, color, religion, age, sex or national origin, either in employment or service.
23. **TERM OF AGREEMENT.** The contract agreement shall commence on the date of signing and continue through the end of the time frame specified on the contract agreement.
24. **TERMINATION.** Either party shall have the right to terminate the contract agreement for any reason upon giving fourteen (14) days advanced notice in writing to the other party of such termination. In addition, the CITY may terminate the contract agreement at any time there is a default by CONCESSIONAIRE of any covenant or condition contained herein by giving the CONCESSIONAIRE written notice that specifies the area of default, and said default is not cured or remedied within a period of five (5) days from the date the notice is delivered.
25. **CANCELLATION.** If any activity or event is canceled due to weather, natural disaster, or other conditions beyond the control of the parties, no reimbursement of concession service fees or licensing fees will be returned to the CONCESSIONAIRE.

26. **LIMIT ON ACTIVITIES.** CONCESSIONAIRE shall not by reason of any of the privileges granted to it under the terms of this policy have any right whatsoever to direct or interfere with any of the activities conducted at ~~Vineyard Grove Park~~ the Named Sites, other than to conduct the concession services which are specifically reserved to the CONCESSIONAIRE by the contract agreement. No CONCESSIONAIRE shall solicit concession offerings to park attendees.
27. **SIGNS.** CONCESSIONAIRE shall not erect, install, operate, nor cause or permit to be erected, any sign, except as is professionally attached and displayed on the CONCESSIONAIRE'S food truck/trailer/kiosk/food stand and one (1) CONCESSIONAIRE-provided A-frame within the CONCESSIONAIRE'S designated parking area ~~vehicle(s)~~, without obtaining the specific written consent of the CITY's Parks and Recreation Director. The CITY's Parks and Recreation Director shall have the exclusive right to determine if, what, when, and where signs will be permitted. ~~The CITY will allow each contracted CONCESSIONAIRE to submit a flyer with its approved concession menu. The CITY will then place the approved flyer on two A-frames within the boundaries of Vineyard Grove Park to help advertise each CONCESSIONAIRE's approved menu. The CITY is not liable for any damage occurred to the flyers on the provided A-frames. The CONCESSIONAIRES are not permitted to move the A-frame sign(s) or adjust any of the flyers on the A-frame sign(s) in any way.~~
28. **LICENSE POSTING.** ~~The~~ All contracted CONCESSIONAIRES shall post their CITY Concessionaire Permit to their CONCESSIONAIRE food truck/trailer/kiosk/food stand ~~vehicle~~ in a location that is easily visible.
29. **NO ASSIGNMENT.** This contract agreement is personal to the CONCESSIONAIRE and shall not be assigned to any other person and/or entity. CONCESSIONAIRE shall not permit the use of any portion of the contract agreement by a third party.
30. **ENTIRE AGREEMENT.** This policy document contains standards for the contract agreement of the parties with respect to the subject matter hereof and any negotiation between both parties.
31. **SEVERABILITY.** Any provision of this contract, which is determined to be invalid, void, or illegal, shall in no way affect, impair, or invalidate any other provision hereof, and remaining provisions shall remain in full force and effect.
32. **MISCELLANEOUS.** The parties agree that this policy shall be interpreted in accordance with the laws of the State of Utah and Vineyard City Municipal Code. The parties executing the contract agreement hereby warrant and represent that they are duly authorized to do so in the capacity stated.



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Personnel Policy Amendment to Title XVI REIMBURSABLE EXPENSES
(Resolution 2025-54)

City Manager Eric Ellis will present recommended amendments to the travel policy found in the Vineyard Personnel Policy Title XVI Reimbursable Expenses.

Department: Administration

Presenter: Eric Ellis

Background/Discussion:

This item was discussed during the October 22nd City Council meeting. Minor edits requested have been incorporated into the document.

Fiscal Impact:

Recommendation:

Staff recommends approval of the travel policy as amended

Sample Motion:

"I move to adopt Resolution 2025-54, as presented."

Attachments:

1. (Draft) RES 2025-54; Personnel Manual Amendments - Reimbursable Expenses
2. Travel Policy

RESOLUTION NO. 2025-54

**A RESOLUTION AMENDING THE PREVIOUSLY ADOPTED PERSONNEL
POLICIES AND PROCEDURES MANUAL FOR VINEYARD, UTAH**

WHEREAS, the Vineyard City Council desires to have consistent policies for its employees and to promote a workplace that is safe and professional; and

WHEREAS, the Vineyard City Council desires to amend the Reimbursable Expenses policy in the Personnel Policies and Procedures Manual;

**NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF
VINEYARD AS FOLLOWS:**

1. The Vineyard Policies and Procedure Manual will be amended as shown in Exhibit A.
2. This Resolution shall take effect upon passing.

Passed and dated this 12th day of November 2025.

Julie Fullmer, Mayor

Attest:

Tony Lara, Deputy Recorder

XVI. REIMBURSABLE EXPENSES

3. Travel Policy

A. Purpose

The purpose of the travel policy is to establish procedures for the authorization and reimbursement of travel expenses for Vineyard City employees while conducting official City business, and to ensure such travel is necessary, cost effective, and compliant with applicable laws and regulations.

B. Authorized Travel with City Vehicles

City vehicles shall be used for official municipal travel, unless prior approval is granted for personal vehicle use.

Priority usage of City vehicles shall be given to employees traveling outside of Utah County.

Employees who receive a monthly vehicle stipend shall not receive additional mileage reimbursement for trips under 100 miles round trip.

Use the City-issued fuel card to fuel city vehicles, whenever possible.

1. Travel within the Workday (No Overnight Stay)

- Workday travel includes trips for meetings, inspections, training, or similar activities that begin and end within the same calendar day.
- Department Head approval is required for all workday travel over 100 miles round trip. The City Manager and Department Heads are excepted from this requirement and do not require prior approval for travel within the same workday.
- Fuel reimbursements for same-day travel shall follow the provisions of Section D, and employees should make reasonable efforts to minimize costs and time away from normal duties.

2. Overnight Travel

- Overnight travel includes any travel requiring lodging away from the employee's residence.
- Overnight travel must be authorized in advance by the Department Head (or the City Manager for Department Heads).
- When feasible, travel arrangements should be made using City-issued cards, and all receipts must be submitted per Section E.

3. Travel within Utah County

- When a Vineyard City vehicle or personal vehicle is used, the Vehicle Mileage Tracking Log is not required to be filled out, and fuel expenses will not be reimbursed.

4. Travel outside Utah County

- When a Vineyard City vehicle is used, the Vehicle Mileage Tracking Log shall be completed in full. A Vehicle Mileage Tracking Log shall be maintained in each City vehicle for this purpose.
- When a personal vehicle is used and no fuel, meal, or incidental reimbursement is requested, no travel documentation is required.
- Fuel, meal, and incidental reimbursements are to follow the procedures outlined in Section D.

5. Travel Approvals

To ensure appropriate oversight and cost control, all travel shall receive advance authorization according to the following schedule:

Type of Travel	Approval Required
Within Utah County (same day)	No prior approval required
Outside Utah County (same day)	Superior or Department Head (no prior approval required for City Manager or Department Head)
Outside Utah County (overnight)	Department Head (City Manager or Department Heads)
Outside Utah County (overnight) costing more than \$4000	Department Head (City Manager or Department Director)
Interstate Travel	City Manager (Mayor or City Manager)
International Travel (scrutinized)	City Council

No travel expenditure shall be incurred or reimbursed without the required authorization. Travel authorizations should include the purpose, destination, dates, estimated costs, and funding source.

6. Incidental Use of City Vehicles

To support efficient operations while maintaining accountability, Vineyard City authorizes limited incidental personal use of City vehicles under the following conditions:

a. Permitted Uses

- Travel between an employee's home and their assigned duty station when the employee is required to begin or end the day at a remote worksite, attend an early or late meeting, or remain on call.
- Brief incidental stops during official travel that do not materially deviate from the official route.
- Travel to and from conferences, training, or associated activities, or other official City business locations.

b. Prohibited Uses

- Personal errands such as: transporting family members or non-employees.
- Use for commuting unrelated to a specific work assignment or duty requirement.
- Any use inconsistent with Utah Code § 76-8-402 (incidental use of public property) or City ethics policy.

c. Documentation

- The Vehicle Mileage Tracking Log shall note the purpose and destination for all travel beyond Utah County.

C. Travel Arrangements Other than a City or Personal Vehicle

When travel for official City business requires transportation or lodging arrangements beyond the use of a City or personal vehicle, employees shall exercise sound judgement to ensure that all travel arrangements are necessary, economical, and efficient. All such arrangements shall be made in advance whenever possible, and in accordance with the authorization levels set forth in Section B. Employees are expected to select cost-effective, reasonable, and practical options for transportation, lodging, and registration, consistent with safety and the effective performance of City business.

1. Transportation

- Employees shall use the most cost-effective means of transportation.
- For air travel, economy class shall be booked unless otherwise justified and approved by the Department Head.
- Rideshare services (e.g., Uber or Lyft) are reimbursable only when used for official City business. Trips must be clearly documented with the date, time, location, and purpose of travel.
- Rental vehicles may be used only for official City business when authorized in advance. Traveling employees must select the most economical rental option to accommodate their needs and ensure appropriate insurance coverage is in place.

2. Lodging

- Overnight accommodation for official City travel shall be booked in advance using a City-issued credit card. Reimbursement for lodging costs charged to a personal card is discouraged and shall require prior approval.
- Accommodations shall be cost-effective and conveniently located. If an employee selects a higher-cost option, Department Head approval is required, the booking shall be made with a City-issued credit card, and the employee shall reimburse the City for the difference.
- A final itemized receipt shall be submitted to the Finance Department.

3. Registration and Other Fees

- Registration fees for conferences, training, or similar events shall be paid in advance using a City-issued credit card.
- Employees shall coordinate with their supervisor to ensure timely payment and avoid using personal funds.
- If a City-issued credit card is not available and employee personal funds are used, itemized receipts shall be submitted for reimbursement using the Post Travel Reimbursement Form.

D. Reimbursement

Fuel and meals are not to be charged to a City-issued credit card. Fuel charges for a city vehicle are to be charged to a City-issued fuel card. Fuel card PINs are not to be shared. Milage is not a reimbursable expense.

1. Fuel

- A personal vehicle may be used for convenience, or when a City vehicle is unavailable. Department Heads shall approve the use of a personal vehicle prior to traveling.
- Fuel expenses for official City business travel shall be reimbursed when personal funds are used in accordance with section B and when the Post Travel Reimbursement Form and supporting receipts are submitted to Human Resources in accordance with section E.
- Personal vehicles shall begin and end official City business travel with a full fuel tank to ensure accurate reimbursement.

2. Meals and Incidental Expenses

- The City shall follow the U.S. General Services Administration (GSA) per diem rates for Meals and Incidental Expenses (M&IE) for approved travel lasting more than one day. These rates are based on the travel destination and are updated annually by the GSA. Please visit www.gsa.gov to enter the travel destination.

- No reimbursement shall be authorized for meals that are included as part of a conference, training, or similar event. An itinerary from the training, conference, or event should be submitted with the Post Travel Reimbursement Form.
- For City business travel exceeding 75 miles one way that does not require overnight lodging and does not include meals as part of the conference, training, or similar event, a lunch per diem is available. The Post Travel Reimbursement Form shall be submitted with all applicable receipts.

E. Documentation

1. The Post Travel Reimbursement Form shall be completed, signed, and submitted with the appropriate documentation and receipts, physically or electronically, to Human Resources. Forms shall be submitted within 30 calendar days following the employee's return. Forms submitted outside of this timeframe may result in reimbursement being delayed or denied.
2. Expenses submitted without appropriate documentation may be denied for reimbursement. Appropriate documentation includes original receipts, itemized invoices, et cetera. Credit card statements, bank statements, charge receipts, and payment confirmations are not appropriate documentation and will not be accepted.

F. Additional Guidelines

1. Employees may elect to change travel plans to meet their personal needs; this should not incur additional costs to the City.
2. Personal use of City vehicles shall be limited to incidental or de minimis use as defined in Utah Code § 76-8-402 and this policy, and shall be consistent with the authorization set forth in Section B.
3. Employees attending conferences, training, et cetera are encouraged to share relevant information and best practices with their department upon return.
4. Personal expenses, such as alcoholic beverages, entertainment not included with the event, personal grooming, and costs for traveling companions not on city business, shall not be reimbursed.
5. Optional events in conjunction with conferences, training, or similar activities that require additional fees shall require department head approval prior to attendance. Employees who attend without prior approval may participate at their own expense and will not be eligible for reimbursement.
6. Travel shall be conducted during normal business hours whenever possible to minimize costs and ensure efficiency.

7. Travel involving spouses or other companions shall only be considered for reimbursement if they are participating in the official City business and with prior approval from the Department Head.

VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Vac Truck Purchase (Resolution 2025-58)

Department: Public Works

Presenter: Naseem Ghandour

Background/Discussion:

The City's current 2018 Van-Con Vac Truck has provided seven years of service but has reached the end of its effective operational life. The dual-engine ("pony motor") configuration has been a persistent source of mechanical problems, leading to increased repair costs, fuel inefficiency, and reduced reliability.

Currently, Timpanogos Special Service District (TSSD) provides 21 days per year of Vac Truck service under contract; however, this service is limited to portions of the City's sewer system that discharge directly to TSSD. Vineyard's system is partially connected to Orem City's collection network, which is not covered under the TSSD service agreement. As the City continues to grow, the limited contract hours are insufficient to maintain both systems or respond quickly to sewer emergencies.

In addition, contracting Vac Truck services outside of TSSD costs approximately \$400 per hour for non-emergency work, with higher rates for emergency calls. These contracted services often result in scheduling delays during critical response events.

Owning a Vac Truck will allow City crews to maintain the entire sewer and storm drain network proactively, respond immediately to blockages or backups, and perform hydro-excavation for utility exposure and infrastructure work. Having in-house capability will also reduce the City's liability exposure and lower the cost of claims related to sewer backup events by enabling faster response and prevention.

This equipment replacement has been identified in prior-year budgets and is funded in the FY 2025 approved budget Sewer Capital Equipment Fund. The FY 2025 budget allocates \$680,000 for the purchase and assumes a \$150,000 trade-in value for the existing unit.

This equipment will serve as a critical tool for maintaining the City's sanitary sewer and storm drain systems, performing hydro-excavation, and providing emergency response capabilities during sewer backups and blockages. The purchase supports the City Council's priorities of Sustainable Infrastructure and Public Safety by improving system reliability, reducing operational costs, and minimizing potential property damage claims.

After obtaining three competitive quotes, the CATE Equipment proposal for the Vac-Con Single Engine PD3612N/1500 was selected as the best combination of performance, reliability, and long-term value.

Key advantages include:

- Single-engine configuration: Eliminates the secondary pony motor, improving fuel efficiency, reliability, and reducing maintenance.
- Enhanced sewer and storm drain cleaning capability: 80 GPM at 3,000 PSI jetting system and

8” vacuum hose for efficient debris removal and hydro-excavation.

- Comprehensive service plan: The City intends to purchase a two-year prepaid service plan, with unused funds credited back to the City at the end of the term.
- Warranty coverage: Includes 12-month standard warranty, 5-year debris tank warranty, and 10-year water tank warranty.
- Operational flexibility: Supports storm drain cleaning, sanitary system maintenance, hydro-excavation, and emergency response operations.

The Vac-Con single-engine design is now an industry standard for efficiency and reliability. It significantly reduces mechanical complexity and the maintenance challenges associated with dual-engine units, such as the City’s 2018 Van-Con.

Fiscal Impact:

The total cost of the Vac-Con Single Engine PD3612N/1500 from CATE Equipment is \$643,514.72.

CATE has offered a \$170,000 trade-in for the City’s existing 2018 Van-Con Vac Truck, resulting in a net cost of approximately \$473,514.72.

The FY 2025 approved budget includes \$680,000 for this equipment purchase and anticipates a \$150,000 trade-in value, placing the total purchase well within the approved budget.

Recommendation:

Staff recommends that the City Council authorize the following actions:

1. Approve the purchase of one (1) Vac-Con Single Engine PD3612N/1500 Vacuum Truck from CATE Equipment of \$643,514.72 under Utah State Contract #MA4814.
2. Authorize the trade-in of the City’s existing 2018 Van-Con Vac Truck to CATE Equipment for \$170,000, resulting in a net purchase cost of approximately \$473,514.72.
3. Authorize the purchase of a two-year prepaid service plan, with any unused funds credited back to the City.

Sample Motion:

"I move to adopt Resolution 2025-58, to approve the purchase of a Vac-Con Single Engine PD3612N/1500 Vacuum Truck from Cate Equipment in the amount of \$643,514.72 under Utah State Contract #MA4814, authorize the trade-in of the City’s existing 2018 Van-Con unit for \$170,000, and approve the purchase of a two-year pre-paid service plan."

Attachments:

1. (Draft) RES 2025-58 Vac Truck Purchase
2. CATE Quote - Vineyard City Single Engine PD Pro Reel
3. Vac-Con Brochure 2025 - Combo

RESOLUTION 2025-58

A RESOLUTION OF THE VINEYARD CITY COUNCIL AUTHORIZING THE CITY MANAGER TO ENTER INTO A PURCHASE AGREEMENT WITH CATE EQUIPMENT FOR THE PURCHASE OF VAC TRUCK

WHEREAS, the City Council finds that the City of Vineyard ("City") is a municipal corporation duly organized and existing under the laws of Utah; and

WHEREAS, the City Council finds that in conformance with Utah Code ("UC") § 10- 3- 717 the governing body of the city may exercise all administrative powers by resolution including, but not limited to regulating the use and operation of municipal property and programs; and,

WHEREAS, the City Council finds it necessary to address certain Vehicle needs within the city; and,

WHEREAS, the City Council of Vineyard has determined that the purchase of a Vac Truck, utilizing State Contract Pricing, as attached in Exhibit A and entering into a purchase agreement with CATE Equipment is for a valid public purpose and is essential to the operations of the City;

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF VINEYARD AS FOLLOWS:

Section 1. That the City Manager is hereby authorized and directed to enter into a purchase agreement with CATE Equipment, utilizing State Contract Pricing as attached in Exhibit A

Section 3. This resolution shall take effect upon passing.

Passed and dated this 12th day of November 2025.

Julie Fullmer, Mayor

Attest:

Tony Lara, Deputy Recorder





Cate Equipment

2055 South Pioneer Road

Salt Lake City, Ut 84104

Date 7/18/2025
Number 112705
Type of SingleEngineCombination
Quote
PO

Quote

Retail
Purchaser
Retail ID #23661
Comments

Vinyard City State
Contract # MA4814

Ship To Cate Equipment 2055 S Pioneer Rd SLC, UT
84104

Price excludes any applicable sales taxes, tag, title or registration fees.
Price excludes any applicable F.E.T., tag, title or registration fees.
Price excludes any applicable tag, title or registration fees.

Price excludes any applicable F.E.T., sales taxes, tag, title or registration fees.
Option content is subject to engineering approval.

This quotation is valid for 30 days from the quotation date

Vac-Con module pricing on customer supplied chassis is valid for 120 days from date of purchase order.

Please consult factory if chassis ETA will surpass 120 days for pricing confirmation.

Model Number - V PD3612N/1500 (824 at 18" or Equivalent) L H P

Standard Equipment Includes:

Vacuum System (as specified by Model Number)

Cyclone Separator - Fan and PD Systems

Transfer Case with Hydrostatic Blower Drive - 98% Operating Efficiency

1/4" Corten Steel Debris Tank - (size as specified by model number)

Flat Style Rear Door with hydraulic door locks - Including open/close

5" Butterfly valve and 10' of lay-flat hose

Debris tank Dumping: minimum 50 deg., hydraulic telescopic lift Cylinder - power up/power down

60" Dump Height - Not Available with 15 cubic yard debris tank

Rear Bumper - Does Not Include Tow Hooks

Front Tow Hooks

Hinge type / Body Prop Permanently mount debris body prop

Debris Body Flushout - 8 Jet

Automatic Vacuum Breaker with Float Arm Assembly/Level Indicator and overfill protection

Behind Cab Boom Support and Bumper Mounted Docking Station

8" vacuum intake hose

4 Way Hydraulic Boom with 270 Degree Rotation with Joystick Controls

Front mounted 600' capacity (1" hose) - Hydraulic Fixed Hose Reel

400' high pressure jet rodder hose

Two (2) Emergency Stop Button Locations: Operator Station and Mid-Body

Water pump drive: Hydrstatic via FEPTO
 80 gpm/3000 psi water pump system
 Water Pump Remote Oil Drain - Quick disconnects
 Cross-Linked Polyethylene Water Tanks
 Full Length Steps on Lower Water Tanks for Maintenance Access
 Water Tank Drain - 1/4 Turn Ball Valve
 Heavy Duty Manual Hose Rewind Guide with Dual Aluminum Rollers
 Hose guide (Tiger Tail)
 10' Leader Hose
 20 gpm at 750 psi wash down hand gun with 25' of hose and nozzle - 50' Capacity Hand Gun Hose will replace this standard options if selected.
 Storage Box Behind Cab 16" x 42" x 96" - Standard on all models except 3yd
 1) each Sanitary and Penetrator Nozzles
 Cooling Package - Air to Oil Heat Exchanger for Hydraulics and Transfer Case, if applicable
 Remote Lube Bank for Boom Rotator and Boom Lift Cylinders - Ground Level
 20.5' aluminum intake pipe(1-3', 1-5', 1-6', and 1-6.5' nozzle)
 LED/ICC lighting
 Sherwin Williams Fast Clad High Solids Zinc Rich Primed, Sealed with Sherwin Williams Duraspar Epoxy Primer.
 Sherwin Williams Duraspar Polyurethane Single Stage Gloss and Textured Paint
 5# Fire Extinguisher - In Cab
 Set of Triangles
 12 month standard warranty - see certificate for details
 5 year debris tank warranty - see certificate for details
 10 year water tank warranty - see certificate for details
 Note: PD Blower will include a Final Filter - Steel Mesh

Main Information

Model	PD3612N/1500 (824 at 18" or Equivalent)	\$401,821.00
Blower	Hydrostatic Drive	\$0.00
Boom	10' Aluminum Telescoping Boom with Pendant Control Station	\$21,434.00
Hose Reel	PRO Reel (Precision Reel Operation) Articulating to driver's and curb side (800 x 1" Capacity) Includes 12VDC Auxiliary hydraulic pump. Transfer case selection required for Dual Engine builds. Single Eng units with PRO Reel select Winter Recirc.	\$43,835.00
Jet Rodder Hose	600' x 1" Jet Rodder Hose	\$1,395.00
Water System	80gpm/3000psi , FMC STANDARD OFFERING	\$0.00
Water Pump	0	
Auxiliary Engine	0	
Hose Brand	Cobra Hose Brand	\$0.00

Debris Body Options

Qty	Description	Cost	Total
1	6" Knife Valve with Center Post and Handle, in Lieu of the 5" Butterfly Valve (662-0125)	\$1,151.00	\$1,151.00
1	Rear splash guard (2 - 10 O'clock) - tank mounted	\$4,137.00	\$4,137.00
1	Rear, Hydraulic Pump Off System, 200 GPM w/20' lay flat Hose	\$12,391.00	\$12,391.00

Water System Options

Qty	Description	Cost	Total
1	Air Purge System	\$1,309.00	\$1,309.00
1	Artic Winter Recirculating System Rodder Hose (No Insulation), includes plumbing to upper water tanks.	\$2,934.00	\$2,934.00
1	Hydroexcavation Package Includes: 50 foot handgun hose reel with 1/2" hose, 711-53686 72" 1/2" schedule 80 lance with single forward spray nozzle, Storage tubes for lances, Heavy duty unloader valve, Main control ball valve, Variable flow valve	\$10,068.00	\$10,068.00
1	Winter Recirculating connection for low pressure hand-gun	\$408.00	\$408.00

Misc Machine Options

Qty	Description	Cost	Total
1	Cone Rack, Between Bogies, Tandem	\$868.00	\$868.00
1	Cone Storage Rack (Choose position below)	\$653.00	\$653.00

Misc Accessories

Qty	Description	Cost	Total
4	Vac-con Module Extended Warranty per year (5 year totals)	\$5,615.64	\$22,462.56

Lighting Options

Qty	Description	Cost	Total
1	LED 4 Strobes - (2) front bumper / (2) rear bumper - Whelen 500 Series TIR6 01-0663507129E - Amber	\$2,994.00	\$2,994.00
1	LED Arrow Board, Rear Debris Tank Door Mounted - Whelen TA1251NF1 Traffic Arrow	\$5,836.00	\$5,836.00
1	LED Boom Mounted Flood Lights with Limb Guard - Whelen NP6BB Worklight	\$1,152.00	\$1,152.00
1	LED Lighting for Tool Box	\$1,397.00	\$1,397.00
1	LED strobe with Limb Guard, Rear Debris Tank Mounted - Whelen L31HAF LED Beacon with Whelen BGH Branch Guard	\$1,452.00	\$1,452.00
1	Mirror Mounted LED Beacon/Strobe Light with Limb Guard - Whelen L31HAF LED Beacon with Whelen BGH Branch Guard	\$1,452.00	\$1,452.00

Pipe Storage Racks

Qty	Description	Cost	Total
1	Lazy Susan Pipe Rack (Holds 5 Pipes)	\$4,020.00	\$4,020.00

Paint

Qty	Description	Cost	Total
1	Paint: To be advised	\$0.00	\$0.00

Truck Chassis Information

Pool Truck Chassis Model **Select a Model** *Pool Trucks are subject to availability.* \$0.00

Qty	Description	Cost	Total
		\$0.00	
	Customer Supplied Chassis	0.00	

Make
Model
Engine Make and Model
Engine HP and RPM

Transmission Make and Model
CA/CT Measurement
Est Date of Arrival at Vac-Con
Dealership Providing Chassis/Phone/Contact

1/1/1900

Mounting	\$8,500.00
Subtotal	<u>\$551,669.56</u>
Less Discount	- <u>\$62,484.84</u>
Unit Total	<u>\$489,184.72</u>
Chassis Total	<u>\$145,230.00</u>
Machine Total	\$466,722.16
Delivery Cost	\$9,100.00
Total	<u>\$643,514.72</u>
Trade-in Credit	-
Total with Credit	<u>\$170,000.00</u>
	<u>\$473,514.72</u>
Year 1 Service & Parts Credit (Optional)	<u>\$8,000.00</u>
Year 2 Service & Parts Credit (Optional)	<u>\$10,000.00</u>
Year 3 Service & Parts Credit (Optional)	<u>\$12,000.00</u>
Year 4 Service & Parts Credit (Optional)	<u>\$12,000.00</u>
Year 5 Service & Parts Credit (Optional)	<u>\$12,000.00</u>

Service and parts Credit to be applied to Vineyard City's account and will rollover to the following year if the entire credit is not used in the calendar year.

. Effective **November 30, 2025**, we will implement a **3.5% price increase** on all **truck- and trailer-mounted units**, as well as **manufactured and purchased parts**. **Purchase orders received prior to November 30, 2025**, will be honored at current pricing. **Orders received after this date**, must reflect the updated pricing

Offered by: Jeff Johnson

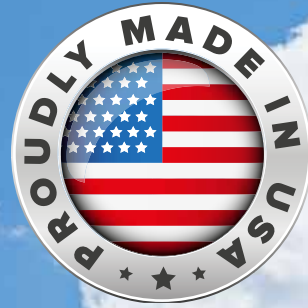
Accepted by: _____



www.vac-con.com



COMBINATION SEWER PRODUCT GUIDE



**At Vac•Con we develop
products that clean and
dig smarter through
innovative design
and manufacturing**

WELCOME

At Vac•Con, we care deeply about the protection of the environment and our communities. That's one reason we build the equipment that we do.

Our machines assist public and private entities in maintaining collection systems and treatments facilities, flood remediation and prevention, and non-destructive excavation. With proper maintenance and training, Vac•Con machines help protect the world's potable water supply and other important resources for future generations.

At Vac•Con, we aim to increase our customers' efficiencies and cost-savings by providing machine solutions that bring value to the job site... and the bottom line.

A close-up of a metal grate, likely a storm drain, with a bright light reflecting off it. The background is dark and out of focus.

Vac•Con has been making a positive impact on communities and environments around the world for over four decades.

Vac•Con rises above the competition for the following reasons:

Tailored Innovation – Vac•Con has a reputation of innovation that is cultivated by a mission to exceed customer expectations. We’ve developed many firsts in the industry such as the dual engine machine, 3-stage fan, hydrostatic drive systems, hi-dump, Omnibus Precision Power, the articulating hose reel, plastic water tanks, the Aeroboost Fan, and the Precision Reel Operation (PRO) hose reel. We are committed to introducing new and improved products each year to better improve operator ergonomics, machine performance, and overall aesthetics.

Delivery – Vac•Con is known for the ability to build and turn a machine around faster than any other competitor. When a customer has a rush order or needs a unit by a certain date, Vac•Con will have ‘wheels on the ground’ before or by that date. We can meet these deadlines due to exceptional relationships with vendors and suppliers as well as a plentiful stock of pool chassis available on-site at the manufacturing facility.

Support – From engineering, sales, parts, and technical service, once a Vac•Con customer, always a Vac•Con customer. Our teams provide personal, unparalleled product and sales support with expert knowledge from the field and the manufacturing facility. In addition, Vac•Con is supported by a worldwide network of dealers that provide front line parts, service, and sales support daily.

Product Offering – Vac•Con offers a complete portfolio of combination, hydro-excavation, and jetter equipment in truck, trailer, and skid-mounted configurations. We boast one of the most comprehensive offerings on the market and continue to evolve and add products each year to meet customer needs and fill product gaps.

Experienced – Vac•Con started in 1986 with 12 employees and a network of representatives in the sewer and wastewater industry. We’re proud of our roots and the people that have grown us to where we are today.

From engineering, sales, parts, and technical service, once a Vac•Con customer, always a Vac•Con customer.

100% Employee-Owned – Vac•Con employees have ownership in the operation, ensuring a culture of accountability and quality that can be seen in every unit. Our jobs are more than just a paycheck – they are an investment in our future, and we strive to be the best in the industry.



THE DNA OF VAC•CON COMBO MACHINES

Vacuum – At the heart of our combination machines, Vac•Con has perfected the vacuum system. We offer positive displacement blowers and fan configurations to meet any requirement or application.

Water – Capacity and power are the most important factors regarding water for combination machines. We offer a range of water tank capacities and jetting settings specifically tailored for the applications of every unit. We also understand the importance of reusing water and offer the most reliable, highest performing water recycling system on the market.

Payload – Bringing value and efficiency to our customers' operations is the mission of our equipment. For that reason, we offer a range of debris tank sizes and will work with you to custom configure a machine that legally meets your payload expectations.

Filtration – If the heart of our machines is the vacuum, then the circulatory system is filtration. To offer the most reliable, highest performing machines on the market, we have engineered filtration systems that effectively collect and separate particles before they can reach the vacuum system. In addition, we promote wet/vac operations to reduce dust production, extending the life of the vacuum system.

Operation – We know a machine is idle without an operator. For this reason, we prioritize improving operator efficiencies and ease-of-use across all our product lines. We're proud to be the innovators of some of the most user-friendly components on the market.

Bringing value and efficiency to our customers' operations is the mission of our equipment.

THE INNOVATIONS BEHIND OPERATOR SATISFACTION

PRO Reel – This revolutionary, patent-pending hose reel is like nothing ever before seen in the market. With 16-feet of side-to-side traversing motion across the front of the cab, PRO increases work area by approximately 270% as compared to traditional articulating hose reels. That's almost 70 square feet of flexible work area. An in-cab camera manhole placement systems and monitor reduce setup time by 50%. Operators will find the controls to be easy and conveniently adjustable to various heights and angles. There are no other products that compete against the PRO Reel on the market!

Articulating Hose Reel – Vac•Con was the first to develop the standard articulating hose reel, which articulates 180 degrees towards the driver's side of the cab. A hydraulically operated outrigger leg provides additional stability and support to the system. A standard configuration that's proven and trusted by operators in the field!

Wireless Operation – All Vac•Con machines are available with wireless remote-control operations, increasing operator efficiency and unit ease-of-use. Our wireless remotes offer operation at an extreme range and are designed to withstand the harshest conditions, water, dirt, and debris. An integrated battery ensures that your power source is protected from the elements and recharges by magnetics on your machine.

Remote Transfer Case Engagement – This feature is located on the front of the hose reel and allows operators to start and stop the engine as well as engage and disengage the transfer case in one convenient location. Operators no longer need to return to the cab and add extra steps to the process to get their work started.



DUAL ENGINE COMBO

The combination sewer cleaner that has been setting industry standards since 1986.

The Vac•Con line of combination machines were designed, tested, and built by the sewer cleaning experts at Vac•Con with feedback from our operators in the field. Our latest models offers a wider range of size configurations.

Vac•Con combines the flexibility of a two-engine design to get the toughest jobs done right. Our efficient design, allowing the chassis engine to drive either the 3-stage fan or positive displacement blower vacuum system, actually saves you fuel and general wear and tear in the long run. Using a standard hydrostatic drive, this design can engage the industry's most powerful vacuum. Offering a wide array of options, this is truly a “go anywhere, do anything” machine.

- Gas or diesel auxiliary engines available
- Single axle or tandem axle
- PD blower or Aeroboost fan
- Variety of debris tank and fresh water capacity options
- Hydro excavation package available



SINGLE ENGINE COMBO

Our single engine combination machines stand out amongst a crowded field of “me too” offerings.

The Vac•Con line of combination machines were designed, tested, and built by the sewer cleaning experts at Vac•Con with feedback from our operators in the field. Our latest models offers a wider range of size configurations.

Vac•Con uses the simplicity of a hydrostatic drive to power both the vacuum and water systems with a single engine. Both systems can be independently operated for multiple applications, while allowing for maximum flexibility. Looking for your single-engine machine in a sea of single-engine machines? Vac•Con's unique design offers the best value without sacrificing performance, power or ease of operation.

- Single axle or tandem axle
- PD blower or Aeroboost fan
- Variety of debris tank and fresh water capacity options
- Hydro excavation package available

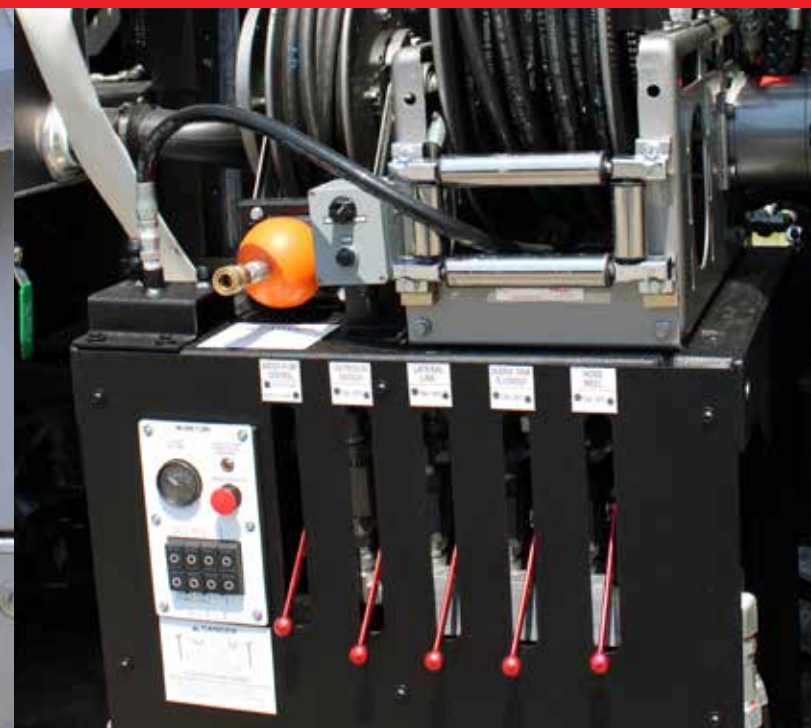


NON-CDL COMBO

A Truly non-CDL truck designed for optimal performance and minimal footprint.

This Non-CDL version of our combination machine provides the performance you'd expect from a Vac-Con with minimal footprint. This is an ideal option for smaller organizations and those who need to have anyone on the team jump in the truck and go, no CDL required.

- No CDL license required to operate
- 3 yard weighs under 26,000 GVWR with full freshwater capacity
- 3.5-yards of capacity in the debris tank
- Simple operating system designed for all skill levels
- Hydro excavation package available
- 5 yard debris tank also available
- Flat-style rear door is available (will affect overall weight)



TOUGH, INNOVATIVE, AND EFFECTIVE COMBINATION MACHINES BUILT TO MEET YOUR NEEDS.

* ITEM ON DRIVER'S SIDE OF VEHICLE

AS SHOWN:

- 1. 180-degrees Articulating Hose Reel
- 2. PRO Reel Contols
- 3. Winter Recirculation
- 4. Cross-Linked Polyethylene Water Tanks
- 5. Gas Auxiliary Engine *
- 6. Aeroboost Fan with Centrifugal Separator *
- 7. Hydraulic Reservoir
- 8. Aluminum Tool Boxes
- 9. Positive Seal Vacuum Breaker
- 10. 10-ft. Telescopic Boom with 270-degree rotation
- 11. Hinged Boom Tie Down

- 12. Debris Body Dump Controls
- 13. Corten Steel Debris Tank
- 14. External Load Level Indicator
- 15. Lateral Line Cleaning Kit
- 16. Water Pump with Suction Strainer

REAR DOOR:

- 17. 5-in. Butterfly Decant Valve
- 18. Full-opening Rear Door with Hydraulic Locks
- 19. Splash Shield
- 20. Arrow Stick Lighting
- 21. Strobe Light

OPTIONS:

- A. PRO Reel, Advanced Controls, or Hardwired
- B. PD Blower
- C. Centrifugal Compressor Quiet "Q" Drive (With Aeroboost Fan Only)
- D. Wireless Remote
- E. Hydro Excavation Package
- F. Saftey Light Packages
- G. 3-yd to 15-yd Debris Tank
- H. 500 to 1,500-gal. Water Capacity



REAR DOOR

Operator friendly rear door features 5-in. butterfly decant valve, hydraulic locks, and splash shield.



PRO Reel

The Precision Reel Operation (PRO) hose reel controls provide complete control of machine functions from one centralized location, all with real-time diagnostics.



PD BLOWER

PD blower with multiple ratings up to 27" Hg and 6,000 CFM.



AEROBOOST FAN

Vac-Con's scientifically redesigned intake and fan housing results in a balanced airflow, decreasing turbulence and noise while increasing power, and reliability.



WIRELESS REMOTE

An integrated, enhanced control system that vastly improves usability and efficiency.

SOME COMPONENTS SHOWN ARE NON-STANDARD



RECYCLER

Bringing you the industry's best, most productive work day your water and sewer operations have ever experienced.

The combination machine you trust is available with the recycling system you need for endurance and performance. Designed from proven European technology and the durability to keep you on the job working longer, the Vac•Con Recycler has made its mark on the industry. The Vac•Con Recycler boasts features providing operators with functional flexibility saving you time and increasing your efficiency.

- 73% (or higher) reduction in freshwater usage
- Increased production and better line cleaning without stopping to refill water
- Hydro excavation package available



NEPTUNE

A powerful and simple to operate combination water and vacuum system on a trailer-mounted steel frame.

The Neptune was purpose built for the trailer market with the power of portability of a Vac•Con combination machine. These machines combine a high-pressure water jet system with a high-performance industrial vacuum and provide the same rugged construction, quality and field-tested durability that Vac•Con owners have relied upon for decades.

- Simple design and operation
- Strongest trailer frame on the market, with structural steel tubing
- Standard, tandem axle dually wheels
- Tier 4 diesel auxiliary engine
- Hydro excavation package available



PRODUCT OVERVIEW

COMBINATION SPECIFICATIONS

At Vac•Con we pride ourselves on building machines that are custom built to fit the needs of our customers. As a result, Vac•Con wins out on value, performance, and reliability every single time.



Dual Engine <i>Combination Sewer Cleaning Truck</i>						
Axle Setup	Auxiliary Engine	Hose Reel Type	Vacuum Type / Drive	Filtration Type	Water Capacity / Pump	Debris Capacity
Single or Tandem	Gas or Diesel	Standard, Advanced, or PRO Reel	Aeroboost Fan or PD Blower — Hydrostatic	Cyclonic Separator — PD Blowers Include Final Filter	800–1,500 Gallons — 30–100 GPM Up to 1,000 PSI	5, 10, 12, and 15 (Cubic Yards)



Single Engine <i>Combination Sewer Cleaning Truck</i>						
Axle Setup	Auxiliary Engine	Hose Reel Type	Vacuum Type / Drive	Filtration Type	Water Capacity / Pump	Debris Capacity
Single or Tandem	N / A	Standard, Advanced, or PRO Reel	Aeroboost Fan or PD Blower — Hydrostatic	Cyclonic Separator — PD Blowers Include Final Filter	800–1,500 Gallons — 30–100 GPM Up to 1,000 PSI	5, 10, 12, and 15 (Cubic Yards)



Non-CDL <i>Combination Sewer Cleaning Truck</i>						
Axle Setup	Auxiliary Engine	Hose Reel Type	Vacuum Type / Drive	Filtration Type	Water Capacity / Pump	Debris Capacity
Single	N / A	Rotating	PD Blower — Transfer Case	Cyclonic Separator — PD Blowers Include Final Filter	500 Gallons — 30–40 GPM Up to 3,000 PSI	3 or 5 * (Cubic Yards)



Recycler <i>Combination Sewer Cleaning Truck</i>						
Axle Setup	Auxiliary Engine	Hose Reel Type	Vacuum Type / Drive	Filtration Type	Water Capacity / Pump	Debris Capacity
Tandem	N / A	Standard or Advanced	3-Stage Fan — Hydrostatic	Cyclonic Separator — 2-Stage Water Recycling System	1,000 Gallons — 50–80 GPM 2,000–3,000 PSI	10, 12, and 15 (Cubic Yards)



Neptune <i>Combination Sewer Cleaning Trailer</i>						
Axle Setup	Auxiliary Engine	Hose Reel Type / Spec	Vacuum Type / Drive	Filtration Type	Water Capacity / Pump	Debris Capacity
Tandem	Diesel	Retractable — 50' Capacity 3/8" High-Pressue	PD Blower — Auxiliary Engine	Cyclonic Separator — PD Blowers Include Final Filter	225 or 325 Gallons — 15–20 GPM Up to 3,000 PSI	535 or 845 (Gallons)

Rear Door Type / Locks	Dump Angle / Height	Boom Type / Rotation	Excavation Package	Wireless Remote	Dimensions Height / Length	Additional Options
Flat Industrial — Hydraulic Wedge Locks	50° Angle — 60" Height *	6' or 10' Telescopic — 270° Rotation	Available	Available	Max Height: 12' * — Max Length: 40'	Safety lighting package, Safety camera package, Anti-freeze water pump system, Winter recirculation, On-board storage, Mainframe deck coating, Lateral line kit, Pump-off system, Nozzle storage box, Diamond plate package, Additional high-pressure hand gun hose reel, Cone rack storage, Additional pipe storage, Air excavation

* 60" dump height not available on 15-yard models / 15-yard model exceeds 12-ft max height.

Rear Door Type / Locks	Dump Angle / Height	Boom Type / Rotation	Excavation Package	Wireless Remote	Dimensions Height / Length	Additional Options
Flat Industrial — Hydraulic Wedge Locks	50° Angle — 60" Height *	6' or 10' Telescopic — 270° Rotation	Available	Available	Max Height: 12' * — Max Length: 40'	Safety lighting package, Safety camera package, Anti-freeze water pump system, Winter recirculation, On-board storage, Mainframe deck coating, Lateral line kit, Pump-off system, Nozzle storage box, Diamond plate package, Additional high-pressure hand gun hose reel, Cone rack storage, Additional pipe storage, Air excavation

* 60" dump height not available on 15-yard models / 15-yard model exceeds 12-ft max height.

Rear Door Type / Locks	Dump Angle / Height	Boom Type / Rotation	Excavation Package	Wireless Remote	Dimensions Height / Length	Additional Options
Round — Hydraulic Cam Locks	50° Angle — 60" Height *	5' Extendable — 200° Rotation	Available	Available	Max Height: 11' 5" — Max Length: 28'	Flat rear door*, Safety lighting package, Safety camera package, Anti-freeze water pump system, Winter recirculation, Mainframe deck coating, Lateral line kit, Pump-off system, Cone rack storage, Additional pipe storage

* 5-yard debris tank / flat rear door may affect CDL weight requirements.

Rear Door Type / Locks	Dump Angle / Height	Boom Type / Rotation	Excavation Package	Wireless Remote	Dimensions Height / Length	Additional Options
Flat Industrial — Hydraulic Wedge Locks	50° Angle — 48" Height	6' or 10' Telescopic — 270° Rotation	Available	Available	Max Height: 12' 5" — Max Length: 40'	Safety lighting package, Safety camera package, Anti-freeze water pump system, Winter recirculation, On-board storage, Mainframe deck coating, Lateral line kit, Pump-off system, Nozzle storage box, Diamond plate package, Additional high-pressure hand gun hose reel, Cone rack storage, Additional pipe storage, Air excavation

* All models exceed 12-ft max height.

Rear Door Type	Dump Angle	Boom Type / Rotation	Excavation Package	Wireless Remote	Dimensions Height / Length	Additional Options
Round — Hydraulic Cam Locks	55° Angle	9' Telescopic with 2' Extension — 270° Rotation	Available	Available	Max Height: 9' 5" — Max Length: 22' 5"	Safety lighting package, Anti-freeze water pump system, Winter recirculation, On-board storage, Lateral line kit, Pump-off system, Diamond plate package

ADDITIONAL INFORMATION

Vacuum Options

PD Blowers are best used in applications dealing with liquids, sludge, or thick materials – vacuuming over a long distance horizontally. A PD has a finite lifting capability. Once a PD reaches its lift capacity, an operator must fluidize (add air) to continue conveying material to the machine.

Centrifugal Fans are capable of vacuuming material under water either with or without air induction. Fans work well moving liquids and solids at more than 100-ft. vertically or horizontally.

Capacity Options

Various Debris Tank Sizes – It doesn’t matter what the job is, Vac•Con has a machine for you. With a full line of skid, trailer, and truck-mounted configurations, we can meet your debris tank requirements. Choose your debris tank size based on your application and environment, time needed out in the field, and payload requirements.

Water Options

Water Capacities – Vac•Con offers users a range of water tank capacities to best fit their applications and job requirements. Water capacity may change the overall configuration of a unit, including going from a single to tandem axle chassis.

Recycler – Vac•Con boasts the best performing Recycler Combination Machine on the market. This component allows for 73% or higher reduction in freshwater usage depending on conditions. All components of our system are designed for recycled water use – no fast-moving water pumps or components re-purposed from freshwater systems. Coarser filtration allows for a greater range of operating conditions such as heavily sedimented and small or large diameter lines. The Vac•Con Recycler can use water from ANY source, including lift stations.

Hose Reel Options

PRO Reel – A traversing motion across the front of the cab allows for almost 70 square feet of coverage within operator reach. This reel is designed for those that need to get on the job quickly with an in-cab manhole placement camera system that allows the driver to pull up to the manhole and park it, reducing setup time by 50%.

Advanced Controls – Using an industry standard CAN bus electronic controller system this setup includes a 4” color monitor at operator’s station with integrated footage counter, 7” in-cab mounted color monitor for lighting controls, and systems monitoring and one-button transfer engagement (if equipped). Also included are pressure compensated hydraulics with dual proportional joysticks for independent control of hydraulic boom and hose reel functions.

Hardwired Controls as simple as it gets in a 12v classic operating system that is easy to setup, easy to use, and easy to maintain.

Additional Options

Noise Reduction – The Vac•Con combination machine boasts a noise reduction of 8% compared to traditional combination machines. The Aeroboost 3-stage fan with Quiet Drive are revolutionary components that bring a multitude of benefits to operators, fleets, and communities alike.

Temperature Controlled – Vac•Con understands that operators are working in some of the harshest conditions imaginable. That’s why we offer various options for temperature-controlled enclosures for both operators and important machine operations. Many of our units have the option for climate-controlled cabinets for water and electrical systems.

Boilers can be added to many units, ideal for work in cold conditions and winterization kits are available on all products.

Carbon Infused Tungsten Elbow – Working in some of the harshest conditions imaginable, this elbow provides the extra strength and durability to get the job done.

Efficiency

Fuel Savings and Operational Efficiency – If fuel-savings and operational efficiency are your priorities, then the Vac•Con was designed for you. The Vac•Con combination machine boasts premium innovations in vacuum and filtration systems that have been proven to result in the following:

- 44% Fuel savings with Quiet Drive
- 43% Decrease in operating RPM with Quiet Drive
- 25% Increase in airflow with Aeroboost Fan
- 20% More horsepower with Dual Engine machines
- 8% Decrease in noise pollution with Quiet Drive
- 5% Increase in overall vacuum pressure (lift) with Aeroboost Fan

Built to Your Needs

Custom Comes Standard – At Vac•Con we have over 40 years of experience in designing, manufacturing, and supporting combination, hydro-excavation, and jetter machinery. We work with our customers as consultants, helping you determine what machine will best suite your needs. With Vac•Con you will not be picking your next truck off the lot or compromising by picking from a few existing models... Your Vac•Con will be custom built just for you.

Plus, we are continuously innovating new solutions for our customers in an effort to provide them with a complete offering of reliable, high-performing products.





PRO REEL

The PRO Reel is the most versatile, operator conscious hose reel on the market.

Vac•Con is proud to introduce the first of it's kind, PRO Reel. Featuring a bolt-on all-aluminum design resulting in a 500-lbs. weight reduction, new ergonomic operator controls, and almost unlimited adjustability.

- Most hose reel work area coverage in the market
- 7" digital display at the operator station
- One button jet hose on / off
- In-cab camera manhole placement system reduces setup time by 50%
- Front and rear camera
- All digital hose footage counter, water level gauge, and debris tank level gauge
- Planetary gear for hose reel pay out / retrieve
- Rotary actuator for hose reel articulation
- Emergency back-up auxiliary hydraulic pump





When it comes to the best environmental machinery solutions for any application, there is no comparison to Vac•Con.

As the proven experts in the industry since 1986, our product offering has been carefully designed, engineered, built, and tested to exceed expectations and bring value to our customers.

Not only do we build the best machines in the market, we provide unparalleled customer support for our equipment leading to lifelong relationships.

**Once a Vac•Con customer,
always a Vac•Con customer.**

A WORLDWIDE NETWORK OF DEALERS

While we build the best machines in the industry, our dealers build the best support network in the field. Our global, full-product-line network of dealerships has the expertise to guide you through any buying or servicing scenario... Wherever your work leads you, you are never far from a Vac•Con expert.



To find a dealer near you, please
visit our online dealer locator

www.vac-con.com



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Street Sweeper Purchase (Resolution 2025-59)

Department: Public Works

Presenter: Naseem Ghandour

Background/Discussion:

The City's current Ravo i5 street sweeper, purchased in 2018 for \$236,877, has served Vineyard City effectively for seven years but has begun to show increased maintenance frequency and reduced operational reliability. Compact street sweepers like the Ravo i5 are typically scheduled for replacement every 7 to 8 years, which aligns with industry standards for municipal fleets. Beyond this period, operating costs, parts availability, and downtime begin to increase significantly.

Replacing this unit is consistent with Vineyard's equipment replacement plan and ensures continued compliance with stormwater pollution prevention and roadway maintenance standards. Clean and well-maintained streets also contribute to roadway safety by reducing loose debris, improving drainage, and enhancing visibility for drivers and cyclists.

Bucher CityCat VR50 was selected through the Utah State Cooperative Contract #MA4814, which has been competitively bid at the state level to ensure fair pricing, vendor accountability, and compliance with public procurement requirements. The proposed sweeper includes a five-year service plan that provides scheduled maintenance at critical intervals, reducing long-term repair costs and downtime.

A summary of the current and new Street Sweeper is provided below.

Feature	Ravo i5 (Current, 2018)	Bucher CityCat VR50 (Proposed)	Improvement
Engine	4-cylinder diesel (~130 HP)	Iveco Turbo 4-cylinder, 138 HP, Tier 4 Final	Improved power, lower emissions
Hopper Capacity	5.0 cubic yards	7.3 cubic yards (stainless steel)	+45% more capacity, fewer dump cycles
Dump Height	43 inches	61 inches (high dump)	Greater versatility for dumping into larger containers/trucks
Turning Radius	~12 feet	9.5 feet (4-wheel steering)	Increased maneuverability in tight areas
Water System	200-gallon tank	235-gallon tank with high-pressure wash system	Better dust suppression and cleaning coverage
Noise Level	~70–72 dB	63 dB in-cab	Quieter operation

Diagnostics	Basic dash indicators	7" CANview diagnostics and data capture	Enhanced performance monitoring and maintenance tracking
Maintenance Coverage	Standard warranty only	5-year service plan (scheduled 500/1000-hour services)	Predictable maintenance costs and minimized downtime

The proposed unit will enhance operational efficiency, extend the life of roadway surfaces, and improve community aesthetics. Its high-efficiency filtration and water system reduce dust and particulates, directly supporting the City's environmental sustainability goals.

This purchase directly supports the City Council's strategic priorities of Sustainable Infrastructure and Public Safety by maintaining clean streets, extending the life of pavement assets, and reducing pollutants entering the stormwater system.

Fiscal Impact:

Purchase: \$279,325 for Proposed 2025 Bucher CityCat VR50.

Trade-In: \$40,000 for the City's existing 2018 Ravo i5 sweeper

Net purchase cost of approximately \$239,325.

The approved FY 2025 Transportation Fund includes \$300,000 for the replacement of the street sweeper, to include approximately \$50,000 trade-in.

Recommendation:

Staff recommends that the City Council authorize the following actions:

1. Approve the purchase of one (1) Bucher CityCat VR50 Street Sweeper from Cate Equipment in the amount of \$279,325 under Utah State Contract #MA4814, a competitively bid state contract.
2. Authorize the trade-in of the City's existing 2018 Ravo i5 Street Sweeper to Cate Equipment for \$40,000, resulting in a net purchase cost of approximately \$239,325.

Sample Motion:

"I move to adopt resolution Resolution 2025-59, to approve the purchase of a Bucher CityCat VR50 Street Sweeper from Cate Equipment in the amount of \$279,325 under Utah State Contract and authorize the trade-in of the City's existing 2018 Ravo i5 sweeper."

Attachments:

1. (Draft) RES 2025-59 Street Sweeper Purchase
2. Sweeper Price Quote
3. CityCat5006 product brochure May 2024

RESOLUTION 2025-59

A RESOLUTION OF THE VINEYARD CITY COUNCIL AUTHORIZING THE CITY MANAGER TO ENTER INTO A PURCHASE AGREEMENT WITH CATE EQUIPMENT FOR THE PURCHASE OF A STREET SWEEPER TRUCK

WHEREAS, the City Council finds that the City of Vineyard ("City") is a municipal corporation duly organized and existing under the laws of Utah; and

WHEREAS, the City Council finds that in conformance with Utah Code ("UC") § 10-3-717 the governing body of the city may exercise all administrative powers by resolution including, but not limited to regulating the use and operation of municipal property and programs; and,

WHEREAS, the City Council finds it necessary to address certain Vehicle needs within the city; and,

WHEREAS, the City Council of Vineyard has determined that the purchase of a Street Sweeper Truck, utilizing State Contract Pricing, as attached in Exhibit A and entering into a purchase agreement with CATE Equipment is for a valid public purpose and is essential to the operations of the City;

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF VINEYARD AS FOLLOWS:

Section 1. That the City Manager is hereby authorized and directed to enter into a purchase agreement with CATE Equipment, utilizing State Contract Pricing as attached in Exhibit A

Section 3. This resolution shall take effect upon passing.

Passed and dated this 12th day of November 2025.

Julie Fullmer, Mayor

Attest:

Tony Lara, Deputy Recorder



**BMNA Standard Build**

Dealer

Date

Cate Equipment

9/2/2025

End User

PO#

Vinyard City

State Contract # MA4814

5006

Standard Sweeper Equipment

Prices Effective - January 1, 2025

Standard Factory Warranty: 2 years or 2,000 Hours

7.3 Cubic Yard 4003 Stainless Steel Hopper & Fan Case	In Cab Noise Level - 63 dB(A)
Iveco Turbo 4 cylinder in-line Diesel; Tier 4 Final; 138 HP @ 2200 rpm; Intergrated Engine Diagnostic System	Electrical System - 24 volt
Full Hydrostatic Transmission with 25 mph Transit Speed	Gradeability - up to 30%
GVM 23,150 lbs; Payload 11,025 lbs with a turning radius of 9.5 ft curb to curb	Sweep Path: (2) Gutter Brooms and Suction Nozzle = 8 feet
31" Stainless Steel Vacuum Nozzle with 10" suction hose and Leaf flap.	Steering Column - Tilt and Height Adjustment
Hydrostatic Controlled 4-Wheel Steering; turning radius 9' 5" curb to curb.	Heated Windshield
Two (2) 35" Poly/Steel Gutter Brooms; variable speed adjustment 0-150 rpm; impact proof suspension.	Heater with Two (2) Speed Fan
37" Standard Dump Height; Optional High Dump 61"; tipping angle 50 degrees.	Body Painted In Standard Factory White
Spacious High Visibility Custom Cab,with window in cabin floor to always view working suction nozzle.	Bucher Data Capture USB Flash Drive
Ergonomically positioned 7" CANview Display System and data capture	1 Sweeper Parts/Service CD In English
235 gallon water tank; In-Cab Nozzle volume adjustment.	1 Sweeper Operator's Manual In English
Engine Fuel Tank - 30 gallons with 8 gallon Ad Blue tank	Tires - 4 Wheels 265/70 R 19.5

QTY	ID Number	DESCRIPTION	2025 List Price	2025 Extended
1	KF517	VR50 City Cat Purpose Built Street Sweeper	\$215,000	\$215,000
1	KCC01	Air Conditioning - Fully Integrated	\$4,900	\$4,900
0	KCC32	Camera Single Rear Displaying on JVM	\$1,600	\$0
1	KCC33	Cameras - Rear and Nozzle Displaying on JVM	\$3,100	\$3,100
1	KCC12	Radio / CD Player	\$1,100	\$1,100
0	KE025	Overload Indicator	\$2,700	\$0

QTY	ID Number	DESCRIPTION	2025 List Price	2025 Extended
0	KCC36	Deluxe Driver Seat - Isri. Weight, height and Lumbar adjustments.	\$4,500	\$0
1	KE006	Electronic Battery Isolator	\$2,400	\$2,400
0	KZ005	Fire Extinguisher (5lbs. dry powder)	\$625	\$0
0	KAC39	Wanderhose - 360 degree Top turn-table mounted, spring balanced with 6" diameter & 16 feet long hose.	\$8,500	\$0
0	KAC79	Wanderhose w/ Hydraulic Supported; 360 degree Top turn-table mounted; 8" diameter & 21 feet long	\$23,700	\$0
1	KAC40	Hopper Easy Clean - Flushes hopper, fan & mesh.	\$3,000	\$3,000
1	KAC38	Hopper Mesh Lift Kit - hand pump	\$1,800	\$1,800
1	KGC52	High Dump Hopper - 4003 Stainless Steel; Dump Height - 61"	\$6,500	\$6,500
0	KGC59	Additional Water Tank Standard Dump - 296 gallons; total water capacity - 530 gallons	\$12,000	\$0
0	KGC60	Additional Water Tank High Dump - 296 gallons; total water capacity - 530 gallons	\$18,000	\$0
1	KAC28	Front Mounted 3rd Brush, Dual Rotation.	\$12,500	\$12,500
1	KAC25	In-Cab Dual Gutter Broom Tilt - Hydraulic Controlled	\$3,000	\$3,000
1	KAC53	In-Cab Independent Gutter Broom Down Pressure Control w/ Independent lift - Hydraulic Controlled	\$4,400	\$4,400
0	KAC48	Rubber Lined Nozzle, Intake Seat & Inlet Duct. Lined with 5mm thick increase wear rubber.	\$3,000	\$0
1	KW027	HD High Pressure Water System - Includes hand lance & reel. 2900 PSI / 8 GPM to 1500 PSI / 5 GPM	\$6,800	\$6,800
1	KW014	High Pressure Spray Bar Behind Suction Nozzle	\$2,500	\$2,500

0	KX065	Centralized & Auto Grease System - all grease points; Standard Dump	\$5,350	\$0
1	KX067	Centralized & Auto Grease System - all grease points; High Dump	\$5,800	\$5,800
1	KCC35	Cruise Control (Sweep Speed Control)	\$1,500	\$1,500
1	KCC11	Sweeping Mirror Right Hand Side	\$460	\$460
0	KX071	1 Extra Set of Keys - Ignition, Fuel and Cab Door	\$400	\$0

QTY	ID Number	DESCRIPTION	2025 List Price	2025 Extended
0	BMNA 105	Rotating LED Beacon - Cab or Rear Mounted. Each Pricing. Advise Location Upon Ordering	\$750	\$0
0	KX070	Data Capture via USB Memory Stick	\$900	\$0
3	KE041	Working LED Lights - RH or LH Gutter Broom or Suction Nozzle. Each Pricing. Advise Location Upon on ordering.	\$550	\$1,650
0	KDC50/51	Additional Operating or Spare Parts Manuals - English only ... Each Pricing	\$400	\$0
0	BMNA 300	Custom Paint Color: Dealer must provide a 3x5 paint sample and the RAL or PPG paint code.	\$7,000	\$0
Sweeper options total w/ UT state contracted price #MA4814				\$259,825

QTY	SPECIAL OPTIONS AND MODIFICATIONS	Price
1	CBC050 - Connect Go - NC	\$0
2	5 year service plan for standard services (2 x 500 and 2 x 1000 hour service)	\$12,000
1		
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0		\$0
0	FREIGHT - FOB Origin - Mooresville, NC	\$7,500
State Contract Price #MA4814		\$279,325

Purchase Order # _____

Print Name

Signature

Date

- Dealer shall bear responsibility for the accuracy of the order. BMNA will build and invoice to match this signed confirmation. Please reconcile ALL pricing and build specifications.
- Any request to add options or modify after signing this order confirmation will result in a 10% surcharge of the dealer net price option.
- Add-on "in field" options are an additional 10% of dealer net price.

CityCat 5006

Performance package in the compact class





CityCat 5006

The CityCat 5006 compact street sweeper sets a new standard for compact sweepers with its unique design and pioneering technology. A CityCat 5006 mid-sized road sweeper provides the best of both worlds; maneuverable dimensions combined with heavy-duty suction performance – an ideal combination for sweeping urban areas where large hopper capacity and compact agility are equally important.

High performance **and productivity**

The CityCat 5006 delivers on performance. It has the appetite of a large truck mounted sweeper, the functionality of a multi-purpose vehicle and the maneuverability of a compact sweeper; all delivered in a single package, designed and built to the exacting standards required by demanding municipal environments.

The smooth-running, high-torque Iveco engine with extremely low fuel consumption and emission levels allows exceptionally reliable and economical operation. Heavy-duty suction power and a high payload are combined with a four-wheel steering system as standard, to provide capacity and agility without

compromise. Comfortable in heavy-duty cleansing environments and crowded streets, the CityCat 5006 easily cleans urban areas.

With the 7.3 YD³ stainless steel hopper, and an optional water recirculation feature, the CityCat 5006 achieves increased on-station working and reduces 'tip runs', enhancing productivity and reducing running costs.

The two side brushes in combination with a 3rd brush have a maximum sweeping width of 148" (3768 mm). The sweeping system can be hydraulically moved 15" (400 mm) laterally to the left or right-hand side of the sweeper.

EcoELS

Engine & hydraulic management system

Low fuel consumption

According to EN 15429-2 standard

Class leading turning circle

232" curb to curb

High payload

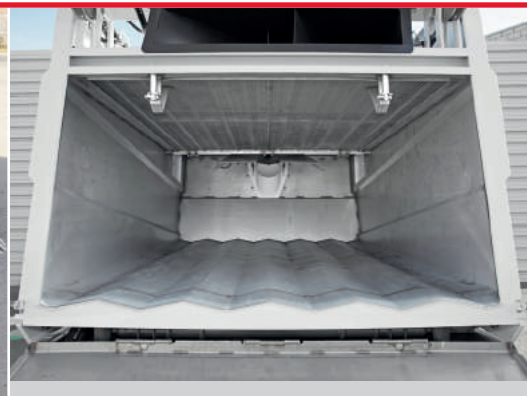
Up to 11,023 lbs at 23,150 lbs GVM



4 wheel steering

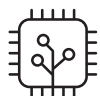


3rd brush



7.3 YD³ stainless steel hopper

The CityCat 5006 delivers



Working speed

0-12 mph

Steering

Hydrostatic controlled four-wheel steering

Hydrostatic drive

Can switch seamlessly from forward to reverse and work mode/transit

Easy clean option

Available for easier cleaning of the hopper, reducing daily cleaning effort



Water tanks

Optimized moulded design with easy removal for maintenance

Pick up system

Pulled brush system with suction intake in front of axle, hydraulically and laterally movable

Steel hydraulic pipes

Up to 60% less hydraulic hoses than other sweepers in this class



Hopper

7.3 YD³ stainless steel hopper volume with high dump option

Water volume

232 gallon water capacity



Disc brakes

Front axle with dual calipers, rear axle with single calipers

Water recirculation

Service water is filtered and fed to the suction intake

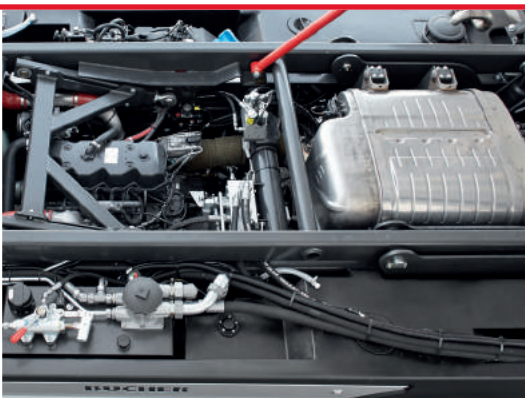
EcoELS

Unique engine and hydraulic Eco Extended Load Sensing management system, which allows a reduction of noise and fuel consumption with no loss of performance



Battery isolator switch

Allows safe working and prevents an accidental discharge



FPT, Iveco NEF Tier 4 Final Engine



Suction intake



Floor glass panel

Low environmental **impact**

Low water usage

The CityCat 5006 uses a recirculation system to reuse the water inside the hopper. This reduces refilling costs and extends on-station time.

Low fuel consumption with EcoELS

Through the intelligent EcoELS engine and hydraulic management system, the CityCat 5006 can provide a high energy efficiency, high performance and low noise, resulting in optimum fuel consumption. The concept considers the performance requirements of the operator and external influences such as sweeping mode or driving uphill, automatically delivering the amount of power needed for the task, without derating the optimal operating point. Comparison tests have shown a reduction of diesel consumption between 25-30% and a noise level of 20%.

Less CO₂ emissions

With its low fuel consumption in work mode, the CityCat 5006 produces only half as much CO₂ emissions per year as other sweepers in its class (per year = 2,000 operating hours).

Dust emissions

EUnited 4 star certified for PM10 and PM2.5.

HVO / Bio diesel B7 compatible

HVO (Hydrotreated Vegetable Oil) has the equivalent productive output as diesel but with none of the harmful properties. It burns cleaner and produces significantly lower damaging emissions, with up to 90% less Carbon Dioxide (CO₂) and 30-70% less NOX (nitrogen oxides). A non-fossil fuel, HVO can be used 100 % or with any EN590 diesel mix without modification or change in servicing requirements.

High dust suppression

Water jets on each brush provide a fine clean water spray to trap dust particles lifted by the two (optional three) brushes. In addition, recycled water from the hopper is filtered and fed into the suction intake.

**Iveco NEF
Tier 4 Final
Engine**

Standard engine

**PM10 and
PM2.5**

EUnited 4 star
certified



Safety and comfort

Bucher Municipal is dedicated to achieving the highest productivity from its sweepers. We believe enhanced operator comfort and safety directly relate to productivity and equipment performance. That is why our sweepers are designed to give the best driver comfort and ease of operation, as well as providing a safe work environment for the driver and for third parties.

The compact outer dimensions, as well as the four-wheel steering system that can be turned on and off, give the CityCat 5006 maximum maneuverability, ensuring perfect directional stability and safety for everyday work.

Safe handling

- Cruise control option in work mode reduces operator effort
- Hydrostatic drive system auto brakes when the driver disengages drive
- All-round disc braking system (front and rear) and hydraulic operated disc handbrake system

All-round control

- An audible signal for safe reversing
- Rear view camera auto engages when reverse is selected

Operators comfort

- Low in-cab noise
- Comfortable, hydro bearing cab suspension
- Steering column with angle and height adjustment
- Full automotive suspension

The cab design

The cab design of the CityCat 5006 achieves space, wide screen visibility, ease of use and comfort, from a range of standard and optional benefits:

- 3 person cab
- Air-suspension adjustable seat with lumbar support and optional heating
- Soft-feel steering wheel with angle adjustment
- Power-assisted steering
- Heated, curved and low-reflection windscreen
- Integrated air conditioning option
- In-cab heating
- In-cab radio and MP3 player



Visual module

The display gives information on sweeper functions and has also a diagnostic fault finding capability. Fault diagnosis is also accessible from the visual module.



Multi-functional armrest

The multi-function and adjustable armrest enable operators to control the sweeping functions of the machine from a single large buttoned keypad.



Cabin

Walk through cab with clear side vision and big wind-screen. Easy reach/use control panels positioned to the front and side of the operator.



Central console

Easy to reach with water tabs, hand brake, power plug and air-conditioning controls.



Operator safety

Automatically engaged mechanical high visibility body prop.



3 person cab

Optional third passenger seat allowing transportation of additional crew members.



Low cost of ownership

The CityCat 5006 offers lower maintenance costs when compared to a chassis mounted vehicle. With 500-hour service intervals on the whole vehicle, service costs and downtime are kept to a minimum.

Designed to cope with tough environments, the CityCat 5006 hopper is manufactured from 1.4003 stainless steel for protection against corrosion and wear.

The CityCat 5006 is designed and built for urban and city sweeping. The engine and drive train are also matched to this purpose, resulting in greater fuel efficiency.

Bucher Connect offers digital alerts or recommendations whenever you experience a fault or error. Our service also includes access to technical assistance for real-time solutions and remote diagnostics, which drastically reduces maintenance costs and increases operating time.

Water volume

Water recirculation option and 232 gal clean water volume - allowing prolonged productive work time

Fan

Heavy-duty fan with wear resistant blades

Multi-season

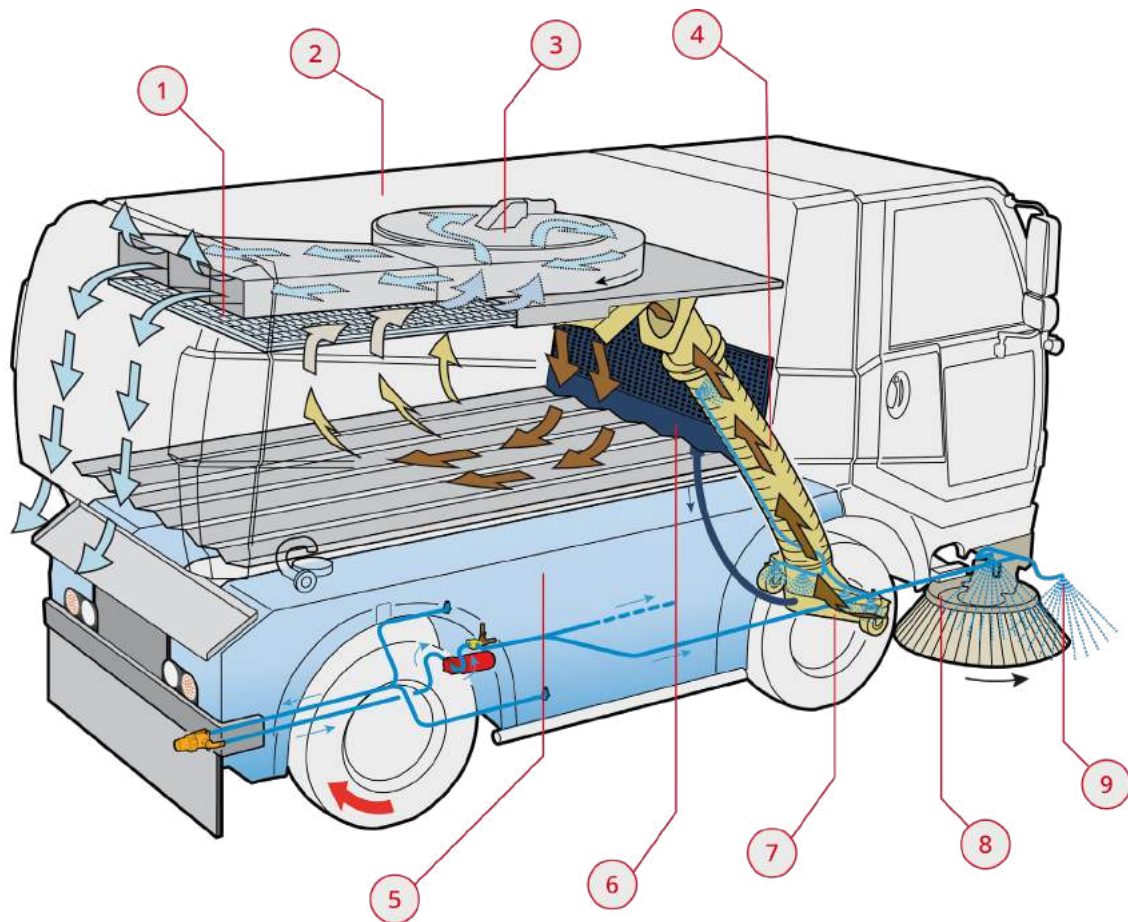
Year-round multi-tasking machine

Bucher Connect



Sweep and suction system

High productivity starts with the interaction of driver and equipment. The sweeping system combined with a large water and hopper volume are the basis for achieving this goal. The pulled brush system with 15.75" lateral adjustment is easy to maneuver so the driver can focus on the road and the optional 3rd brush.



1 Large, easy to clean mesh inside the hopper to prevent clogging by leaves

2 Large 7.3YD³ stainless steel hopper with water recirculation system

3 Fan arrangement on top of the hopper for optimal air flow

4 Bucher DNA straight suction hose with water nozzles for dust suppression

5 Big 232 gallon fresh water volume with tank placement for a low point of gravity

6 Recirculation system which feeds the used water directly to the suction intake

7 Wide 31" (800 mm) suction intake, laterally adjustable

8 Pulled brush system, whole system laterally adjustable

9 Water nozzles for maximum dust suppression, adjustable from cab

Significant options



Road construction brush

The road construction front brush is suitable for particularly tough applications, including road construction and weed removal. Furthermore, it has a floor support pressure regulation and a tilt.



Traveling Speed

Traveling speed is local country/market/regulation dependent with a mechanical steering system replacing the hydraulic steering system.



Boom reel & hand lance

Two booms are mounted on the hopper with a reel and a hand lance that are connected to the highpressure water system, useful for flushing rubbish from the sides of the street directly in front of the sweeper.



Street wash system

Ample pressure allows market squares, building sites and pedestrian zones to be washed down and left spotlessly clean.



Wanderhose

The wanderhose with hydraulic support enables cleaning of underfloor containers up to 6.5 feet deep. The abrasion resistant, 360° rotatable suction hose has a diameter of 8" with a length of 21 feet.

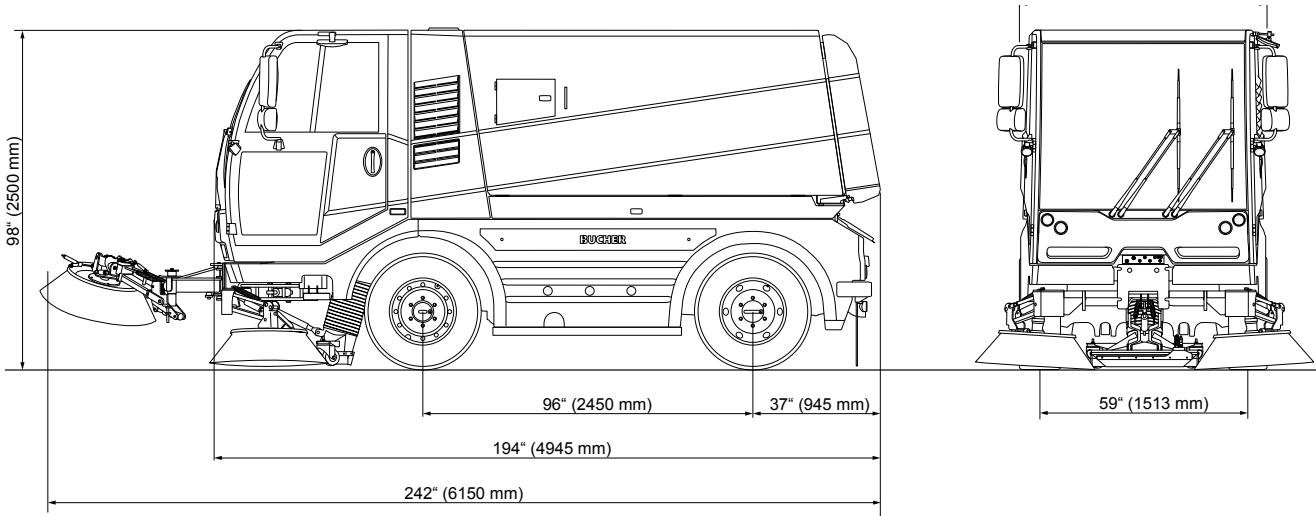


High dump

Allows the sweeping material to be dumped into dumpsters or dump trucks by having an extended discharge height of 61".



Sweeper configuration



Dimensions

Length	194" (4945 mm)
Width	70" (1798 mm)
Height	98" (2500 mm)
Wheelbase	96" (2450 mm)
Track	59" (1513 mm)
Max. cleaning width 2 brushes	99" (2533 mm)
Max. cleaning width 3 brushes	138" (3520 mm)
Max. cleaning width 3 brushes (RCB)	148" (3768 mm)
Turning radius	116" (2950 mm)

Tires

265 / 70 R 19.5 140 / 138M

Noise level cab

63 dB(A)

Driving Performance

Working speed	0-12 mph
Climbing ability	30%

Chassis

Bucher fabricated ladder frame chassis with "C" rail construction.

GVW	23,148 / 22,928 lbs (49 mph)
Empty weight	12,125 / 12,345 lbs (49 mph)
Payload	11,023 / 10,802 lbs (49 mph)

Engine

Engine	FPT, Iveco NEF Tier 4 Final 141 HP
Engine displacement	4485 cm ³
Output	141 HP @ 2,200 RPM
Torque	427 ft lbs (608 Nm)
Fuel tank	29 gal
Electrical system	24 V

* According to national legislation



Bucher Connect

The digitalization of fleets of any size using Bucher Connect makes the daily workload of fleet owners and managers much easier. Designed as an all-inclusive service, it offers targeted support and services for minimizing downtime and operating costs. Its aim is the optimal operation of sweepers – and street cleaning at a lower cost.

Bucher Municipal North America Inc.

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 Fax +1 704 658 1377
 info.us@buchermunicipal.com

www.buchermunicipal.com

At Bucher Municipal, we innovate and engineer better cleaning and clearing solutions, helping our customers grow and maintain efficient and profitable businesses. Leveraging the over 200-year-old heritage of Bucher, we are committed to helping you achieve more using less. Taking pride in being seen as a reliable partner, we work locally with you in realizing the possibilities for a smarter, cleaner and more efficient tomorrow. Today.



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The 5 Things
You Must Know
Before Buying a
Street Sweeper

Driven by better



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Municipal Code Amendment — Section 2.30.040 Arts, Parks and Recreation, Culture, and Heritage (ARCH) (Ordinance 2025-18)

Department: Parks & Recreation

Presenter: Brian Vawdrey

Background/Discussion:

Staff is proposing an amendment to MC Section 2.30.040 to ensure greater efficiency of the ARCH Commission. A summary of the amendment is as follows:

-One Commissioner may be at-large, instead of One Member shall be at-large. This change can allow for more Vineyard resident representation.

Fiscal Impact:

N/A

Recommendation:

Vineyard City Staff recommends that the Vineyard City Council approve the proposed amendment to MC Section 2.30.040 Arts, Parks and Recreation, Culture, and Heritage (ARCH), as identified in the attachment.

Sample Motion:

"I move to adopt Ordinance 2025-18, as presented by staff."

Attachments:

1. Ord_2025-18

**VINEYARD
ORDINANCE 2025-18**

**AN ORDINANCE OF THE VINEYARD CITY COUNCIL, VINEYARD, UTAH
AMENDING THE CITY'S MUNICIPAL CODE SECTION 2.30.010 COMMITTEES
AND COMMISSIONS; AND AMENDING SECTION 2.30.040 ARTS,
RECREATION AND PARKS, CULTURAL, AND HERITAGE (ARCH) ADVISORY
COMMISSION.**

WHEREAS, the Vineyard City Council desires to amend Section 2.30.010 and Section 2.30.040 of the Municipal Code of the City relating to Committees and Commissions; and

WHEREAS, the City Council has determined that the proposed section will promote the public interest and welfare of its residents; and

NOW THEREFORE, be it ordained by the Council of the Vineyard, in the State of Utah, as follows:

SECTION 1: **AMENDMENT** “2.30.010 General Provisions” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.30.010 General Provisions

A. INTENT AND PURPOSE.

1. It is the intent and purpose of this chapter to encourage citizen involvement and obtain citizen advice and input by creating certain committees and commissions of the city as hereinafter discussed. Any and all committees and commissions established pursuant to this chapter shall be advisory bodies: they shall have no authority to bind the city or impose any conditions on the city or its citizens.
2. Nothing in this chapter shall prevent or preclude the City Manager from establishing or creating executive committees, task forces, etc., to give advice and recommendations to the office of the City Manager.

B. DEFINITIONS. For purposes of this Chapter,

1. Committee shall mean a body of people drawn from among members of the City Council or a commission, City employees, or members of the public, that is created by the City Council or commission and is entrusted with a specific job or task related to the work of the City Council or commission.
2. Commission shall mean a body of people established by the City Council to perform certain advisory functions.

- C. COMMITTEES. Committees shall be established by motion or resolution of the organizing council or commission. The size, scope, and duration of a committee shall be determined in the organizing motion or resolution. No committee shall include more than two members of any single council or commission such that the committee would include a quorum of that body.
- D. COMMISSIONS. Commissions shall be established by ordinance. Unless otherwise specifically stated in a commission enabling ordinance, all commissions established pursuant to the provisions of this chapter shall be composed of five (5) members, two (2) alternate members, and one (1) ex-officio member, all of whom shall be appointed by the Mayor with the advice and consent of the City Council. Commission members and alternate members shall be residents of the City. Ex officio members may be employees of the City. The appointed members shall serve as the decision-making body for the commission. Each commission may seek nonvoting members/volunteers who desire to participate consistent with the purpose or mission of the respective commission.
1. TERM, REMOVAL, AND VACANCIES. Unless otherwise specifically stated in a commission enabling ordinance, the following provisions shall govern the membership on any commission established pursuant to this chapter. The members shall serve for a term of four (4) years and shall not serve more than two (2) consecutive terms. Each term shall begin on January 1 of the year of appointment and shall end on December 31 of the year when the appointment expires or until a successor is appointed. The terms of commission and committee members shall be staggered. A commission or committee member may be appointed for a term of less than ~~three (3)~~ four (4) years to provide for staggered terms or to complete a vacated, unexpired term. The mayor may remove any member of a commission without cause as determined solely by the discretion of the mayor and as approved by a majority of the city council. Any member of a commission so removed shall be entitled to a hearing before the city council if a hearing is requested in writing within seven (7) calendar days after the city council votes to remove the member. The purpose of the hearing is to allow the member being removed to be heard on the issue of removal.
 2. The mayor may remove any Commission member if three (3) consecutive commission meetings in a calendar year are missed. If the absence of a Commission member is due to an extended illness or vacation, the Commission member is responsible to provide written notice to the Mayor prior to the time the absence will occur. If such notice is given, these removal requirements do not apply.
 3. RULES AND PROCEDURES. Unless otherwise specifically stated in a commission enabling ordinance, each commission established pursuant to the provisions of this chapter shall formulate its own rules for the selection of a chairperson, time, place and manner of calling of meetings and other procedural matters; provided, that there shall be at least one (1) meeting of the

commission each quarter. Each commission shall prepare written minutes of all meetings which shall be approved by each commission at subsequent meetings. The original approved minutes shall be maintained in the Office of the City Recorder. Commission meetings shall be held as open meetings in accordance with the requirements of the Utah Open and Public Meetings Act, U.C.A. § 52-4-101 et seq.

SECTION 2: **AMENDMENT** “2.30.040 Arts, Recreation And Parks, Cultural, And Heritage (ARCH) Advisory Commission” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.30.040 Arts, Recreation And Parks, Cultural, And Heritage (ARCH) Advisory Commission

A. GENERAL: The Vineyard Arts, Recreation and Parks, Culture, and Heritage (ARCH) Advisory Commission is hereby created.

B. PURPOSES:

1. To connect with staff and partners to address community needs in order create a more healthy, vibrant, safe, and inclusive city.
2. To support recreational facilities and cultural organizations that enrich the overall quality of life throughout Vineyard.
3. To advise the City Council and staff on Arts, Recreation and Parks, Culture, and Heritage; facilitate public education and awareness; and help ensure Vineyard retains, protects, promotes, and enhances these aspects within the city.
4. To make fiscally responsible recommendations to the City Council for distribution of the Recreation, Arts, and Park (RAP) Tax Funds that are allocated to them.
5. To gather additional funding to support Arts, Recreation and Parks, Culture, and Heritage.
6. To leverage broader networks to create and obtain resources and grants to drive public goodwill and communicate the importance of Arts, Recreation and Parks, Culture, and Heritage.
7. To disperse any funds allocated by the City Council for Arts, Recreation and Parks, Culture, and Heritage.

C. DUTIES: The Commission shall have the responsibilities provided in this section:

1. Culture and Arts:
 - a. To enhance life through celebration, innovation, music, art, literature, and traditions.

- b. To provide social and economic value to Vineyard through promotion of events held in Vineyard.
- c. To provide recommendations to the Special Events Coordinator.
- d. To understand the demography of Vineyard and to work with staff to advise, promote, participate and support community programs, projects, and events designed to provide economic development and engage the wide-ranging culture of Vineyard.
- e. To work with staff and organizations to make recommendations to City Council regarding art throughout the city. Examples of organizations are: Universities, Public and Private Schools, Historic Organizations, Cultural Organizations, Chambers of Commerce, Tourist Bureaus, governmental agencies, etc.
- f. To provide a portfolio of service to support the creative economy, arts, and cultural ecosystem.

2. Heritage:

- a. To advise on referred policy from the City Council or staff, related to heritage.
- b. To work with a wide range of entities, 501(C)(3)s, and nonprofits to solicit, collect, obtain, protect, archive, and display historical artifacts, properties, stories, histories, etc., relating to Vineyard's heritage upon City Council approval.
- c. Work with staff and outside entities to promote, conduct, and participate in community programs, projects, and events designed to provide information and education to the community on Vineyard's heritage.
- d. To create a master plan for monuments and heritage throughout the city.
- e. Keep and update the city's historical documents and add additional volumes to Our Vineyard Heritage book.

3. Recreation, Arts, and Park (RAP) Tax:

- a. At least annually, review all applications, and provide the mayor and City Council with recommendations on grants for cultural arts facilities and organizations, and recreational facilities. The City Council will consider the recommendations and make a final determination in distributing the RAP Tax funds .
- b. RAP Tax funds are collected in accordance with Chapter 4.14 of the Vineyard Municipal Code.

4. Reports:

- a. The commission shall render a quarterly report of their activities to the City Council.

D. MEMBERS OF THE COMMISSION:

- 1. Members of the commission are appointed as per Section 2.30.010 of this Chapter;
- 2. With the exception that one member ~~or alternate~~ ~~shall~~ may be at-large and have demonstrated knowledge and experience in Arts, Recreation and Parks,

Culture, and Heritage and may reside anywhere in the state of Utah.

SECTION 3: REPEALER CLAUSE All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 4: SEVERABILITY CLAUSE Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 5: EFFECTIVE DATE This Ordinance shall be in full force and effect from November 12, 2025, and after the required approval and publication according to law.

PASSED AND ADOPTED BY THE VINEYARD COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Mayor Julie Fullmer	_____	_____	_____	_____
Sara Cameron	_____	_____	_____	_____
Jacob Holdaway	_____	_____	_____	_____
Mardi Sifuentes	_____	_____	_____	_____
Brett Clawson	_____	_____	_____	_____

Presiding Officer

Attest

Julie Fullmer, Mayor, Vineyard

Pamela Spencer, City Recorder,
Vineyard



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: ARCH Grant Policy and Procedure Manual Update (Resolution 2025-60)

Department: Parks & Recreation

Presenter: Brian Vawdrey

Background/Discussion:

Staff is proposing amendments to the ARCH Grant Policy and Procedure Manual to ensure alignment with RAP Tax Code and accountability measures for ARCH Grant applicants. A summary of the proposed amendments include:

- Allowing each Vineyard City division to apply for ARCH Grant funding, instead of just one application per organization
- One ARCH Commissioner may be at-large, instead of one ARCH member shall be at-large
- Grant Timeline amendments for enhanced clarity of ARCH Grant applicants
- Added eligibility for ARCH grant applicants, such as the applicant must include all necessary land use approvals/permits prior to submitting an ARCH Grant application. This helps ensure awarded grant funds can be utilized.
- Different deadline reporting dates for awarded ARCH Grant applicants to ensure greater efficiency for financial tracking

Fiscal Impact:

N/A

Recommendation:

Vineyard City Staff recommends that the Vineyard City Council approve the proposed amendments to the Vineyard City ARCH Grant Policy and Procedure Manual, as identified in the attachment.

Sample Motion:

"I move to adopt Resolution 2025-60, as presented by Staff."

Attachments:

1. RES 2025-60 ARCH Grant Policy Manual Amendments
2. ARCH Grant Policy and Procedure Document Updates 10-30-25

RESOLUTION 2025-60

A RESOLUTION OF THE VINEYARD CITY COUNCIL AMENDING THE VINEYARD CITY ARCH COMMISSION GRANT POLICY MANUAL

WHEREAS, in November 2019 a majority of Vineyard City voters approved the RAP Tax. The RAP tax went into effect on April 1, 2020, and will last for 10 years, and

WHEREAS, the RAP tax provides additional funding to fund community improvements such as, but not limited to City owned cultural or recreational facilities, private nonprofit cultural organizations, a qualifying facility within the geographic area of an entity that is a party to interlocal agreement with the City, and ongoing operating expenses of a city owned recreational facility, and

WHEREAS, in February of 2023, The ARCH Commission was created by the City Council and one of the commission's duties is to review grant applications for a portion of RAP tax funding

WHEREAS, on April 24, 2024, the City Council adopted a Policy and Procedure Manual for this grant application process. The Manual aims to establish clear guidelines and processes to ensure consistency and efficiency in the grant process of applying, reviewing, and approving, and

WHEREAS, the Vineyard City Council now desires to amend the grant policy manual; and

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BODY OF VINEYARD, UTAH AS FOLLOWS:

Section 1. Approval. That certain amendments to the Grant Policy Manual, attached hereto and incorporated herein by reference, are hereby approved and adopted by the City Council of Vineyard City.

Section 2. Severability. If any section, part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution, and all sections, parts and provisions of this Resolution shall be severable.

Section 3. Effective Date. This Resolution shall become effective immediately upon its approval by the City Council.

Passed and dated this 12th day of November 2025.

Mayor Julie Fullmer

Attest:

Deputy Recorder Tony Lara





VINEYARD

STAY CONNECTED

Vineyard City ARCH Grant ~~Program~~ Policy & Procedure DocumentManual

ARCH Background ~~Grant Program Overview~~

Background

In February of 2023, the Vineyard ARCH Commission was created by the Vineyard City Council to help promote Arts, Recreation & Parks, Culture, and Heritage within the community. The ARCH Commission shall consist of five (5) members and two (2) alternates. All Commissioners shall be Vineyard City residents, except for one Commissioner may be at-large and may be a non-resident of Vineyard. All Commissioners shall be volunteers. A key purpose of the ARCH Commission is to annually recommend to City Council which ARCH Grant applicants shall receive funding.

In November of 2019, a majority of Vineyard City voters approved ~~approved~~ the RAP Tax. As a result, one-tenth of one percent of the City's sales tax is designated for supporting a wide range of Parks & Recreation projects, such as: capital development, ongoing operations of parks, recreational facilities, and cultural arts programs. The Vineyard City RAP tax went into effect on April 1, 2020 and ~~shall~~will last for 10 years. The November 2029 General Election ~~shall~~will include a ballot proposition to continue the Vineyard RAP Tax for an additional ~~the next 10~~ ten years.

~~The RAP tax provides additional funding for the community. One tenth of one percent of the City's sales tax goes to fund community improvements such as, but not limited to City owned cultural or recreational facilities, private nonprofit cultural organizations, a qualifying facility within the geographic area of an entity that is a party to interlocal agreement with the City, and ongoing operating expenses of a City owned recreational facility.~~

~~In February of 2023, The ARCH Commission was created by the City Council The board consists of 4 volunteer citizens of Vineyard~~



VINEYARD

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~~City and one at-large representative who gives their recommendation to the City Council on funding requests, and one of the commission's duties is to review grant applications for a portion of RAP tax funding. The board consists of 4 volunteer citizens of Vineyard City and one at-large representative who gives their recommendation to the City Council on funding requests.~~

ARCH Grant Annual Timeline

The ARCH Grant Annual Timeline shall be as follows:

- September 1st - November 15th: Online ARCH Grant application open
- November ARCH Commission Meeting: Grant applicants, or designee(s), shall present to the ARCH Commission
- January - February: ARCH Commission reviews overall scores for each grant applicant and determines a recommendation for City Council regarding any grant award allocation(s)
- February - March: ARCH Grant funding awarded and all ARCH Grant applicants notified of award status
- March: Distribution of ARCH Grant funding allocation(s)

General Guidelines

1. The Vineyard City Council shall determine how much funding to allocate from the RAP Tax fund to the ARCH Grant, prior to each fiscal year.
2. The ARCH Commission may revise the ARCH Grant application prior to making it available each year.
3. All ARCH Grant applications shall be submitted via an application provided by Vineyard City.
4. Only one (1) application submission shall be permitted per fiscal year per 501(c)(3) organization/Vineyard City division.



VINEYARD

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5. All ARCH Grant applications shall be submitted prior to the application deadline. Late applications shall not be considered.
6. All ARCH Grant Applicants, or designee(s), shall be required to present and discuss their application project/program in front of the ARCH Commission.
7. The ARCH Commission shall review and score each Grant applicant and recommend which applicant(s), if any, and amount(s) the City Council should approve via majority vote.
8. Vineyard City Staff shall provide notice to all ARCH Grant applicants regarding the ARCH Commission's recommendations to the City Council and the City Council's final decision on distribution of funds.
9. The ARCH Grant fund is not an entitlement. Submitting a Grant application does not guarantee that any funds shall be awarded.
10. Organizations shall not be awarded multi-year ARCH Grant funding for the same project without Vineyard City Council approval.
11. ARCH Grant(s) may be provided to publicly-owned and operated facilities, as long as the facilities are located in Vineyard OR are within the geographical area of entities that are parties to an interlocal agreement, to which Vineyard City is a party.

Eligible Applicants

~~In order to~~ To qualify for ARCH grant fundings, applicants
~~an organization must~~ shall:

- a) Be a valid 501(c)(3) non-profit organization OR a Vineyard City-funded division.



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1. Qualifying 501(c)(3) non-profit organization(s) must have, or commit to have, a significant presence in Vineyard City AND have a purpose of advancing/preserving Vineyard City arts, music, special events, parks and recreation, theater, dance, heritage, natural history, or cultural arts.
- b) Possess and submit, with the ARCH grant application, all necessary land-use permit approvals that pertain to the project/program, prior to the ARCH grant application deadline.

Eligible vs Ineligible ARCH Grant Projects/Programs

RAP Tax funds can be used for a variety of projects and programs, in accordance with Utah State Code 59-12-1402 and Vineyard City Code 4.14.

- Eligible ARCH Grant Projects/Programs include, but are not limited to:
 - o Art Festivals
 - o Music or Dance Performances
 - o Heritage/Culture Programs/Projects
 - o Theater Groups
 - o Special Events
 - o Parks Facilities
 - o Recreational Facilities
 - o Library Enhancements
 - o Trail/Bike Path Improvements

All ARCH Grant projects/programs must directly benefit the Vineyard community, aligning with the specific needs and interests of local residents.

- Ineligible ARCH Grant Projects/Programs pertain to, but are not limited to:
 - o Road enhancements
 - o Public safety
 - o Schools
 - o Political lobbying
 - o Fundraising
 - o Paying down accumulated deficits or existing debt



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- o Activities not available to the general public or activities held at privately-owned facilities
- o Activities that take place outside of Vineyard City
- o Activities that are primarily religious in purpose
- o Scholarships
- o Purchasing awards or cash prizes
- o Rodeos
- o Fireworks
- o Services unrelated to Arts, Recreation & Parks, etc

Funding cannot be used for improvements to a 501(c)(3) organization itself, but must be dedicated to programming or initiatives that serve the Vineyard community.

÷

~~a) Be a 501(c)(3) nonprofit organization, or a city funded recreation, arts, event or cultural program or facility.~~

- ~~b) Qualifying 501(c)(3) nonprofit organization must:~~
- ~~1. Have, or commit to have, a significant presence in Vineyard City; and~~
 - ~~2. Have as a primary purpose the advancement and/or preservation of natural history, art, music, theater, dance, heritage or cultural arts.~~

~~RAP Tax funds can be used for a variety of projects and programs, in accordance with Utah State Code 59-12-1402 and Vineyard City Code 4.14.~~

~~Funding may be used to support municipal or nonprofit 501(c)(3) organizations providing programs such as, but not limited to:~~

~~Arts Festivals
Heritage and Culture Programs or Projects~~



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~~Theater Groups~~

~~Bands~~

~~Museums~~

~~Certain Capital Improvements Projects~~

~~Events~~

~~Recreation Facilities~~

~~Library~~

~~Trails/Bike Paths~~

~~Playing Fields/Courts~~

~~Only one application will be accepted per organization in each application window.~~

~~Funding Limitations:~~

~~RAP funds are governed by state code and have limitations on their use. RAP funds granted to organizations may not be used for capital construction expenses, payments into an endowment fund, expenditures for programs outside of Vineyard, activities not available to the general public, political lobbying, fundraising expenses related to capital or endowment campaigns, or for other expenses not related to the organization's primary cultural purpose or directly related to or for the direct benefit to the residents of Vineyard City.~~

~~RAP grant funding for organizations may not be used for the following expenditures:~~

- ~~• Accumulated deficits or debt retirement;~~



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- ~~Public Schools and/or school programs or hiring of temporary or permanent staff in any school or school system;~~
- ~~Lobbying Expenses;~~
- ~~Scholarships, purchase awards or cash prizes;~~
- ~~Non-arts related magazines or newspapers;~~
- ~~Broadcasting network or cable communications systems;~~
- ~~Performances, events or activities that take place outside of Vineyard City;~~
- ~~Activities intended primarily for fundraising;~~
- ~~Social service programs;~~
- ~~Fireworks;~~
- ~~Rodeos;~~
- ~~Activities that are primarily religious in purpose;~~
- ~~Start-up organizations;~~
- ~~Private Foundations.~~

~~Projects or programs must directly benefit the Vineyard community, aligning with the specific needs and interests of local residents. Funding cannot be used for improvements to the 501(c)(3) organization itself, but must be dedicated to programming or initiatives that serve the Vineyard community.~~

~~ARCH Grant Application Process~~

~~ARCH Grant Program Annual Timeline~~



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~~September 1 – November 15th: Application opened for grant funding~~

~~November ARCH Commission Meeting: Presentation by Applicant to ARCH Commission~~

~~January – February: Reviewed by the ARCH Commission and recommended to City Council~~

~~• February – March: Project Funding Awarded~~

~~March: RAP Tax Funds Distributed~~

~~General Guidelines~~

- ~~1. All requests for Vineyard City RAP Tax funds must be submitted via an application provided by the ARCH Grant Program. Applications are available each year starting September 1. The ARCH Grant Program may revise the attached application prior to making it available each year.~~
- ~~2. All applications must be submitted prior to the application deadline. Late applications will not be considered.~~
- ~~3. The ARCH Commission will review every application, and accompanying material, and shall identify and recommend which grants the City Council should approve via majority vote. Applicants may be required to make a presentation and discuss the merits of their proposals in front of the ARCH Commission and/or City Council.~~
- ~~4. The ARCH Commission will provide notice to applicants regarding their recommendations to the City Council and the City Council's final decisions on distribution of funds to be received. Those applicants who were disqualified or denied funding will also be notified.~~
- ~~5. The ARCH Program Grant funds are not an entitlement. Filling out an application does not guarantee that any funds will be awarded~~



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- ~~6. The Vineyard City Council shall make all final determinations as to the amount of RAP tax funds to be distributed to each entity or organization~~
- ~~7. The fact that a particular project, facility, or organization has previously received RAP tax funds does not guarantee that it will receive subsequent funding unless so authorized in the original grant~~
- ~~8. Grant funds may be provided to publicly owned and operated facilities, all facilities must be located in Vineyard or within the boundaries of an inter-local agreement with Vineyard City.~~

ARCH Grant Award Recipient Requirements

After the City Council approves the ~~final~~ annual ~~RAP tax~~ARCH Grant funding recipient award(s), ~~distribution list through the budget process~~, each grant recipient ~~receiving a grant~~ shall:

1. Enter into an contract agreement with ~~the Vineyard City~~. The agreement shall be signed by both parties, prior to the exchange of receiving-awarded funds. The~~Said~~ contract shall include:
 - A detailed ~~planned use schedule list~~ of planned expenditures.
 - A beginning and end date for the project/program, if applicable.
 - Accountability measures for Vineyard City to ensure proper use of ARCH Grant expenditures and project completion. A provision allowing for Vineyard City to verify all application information and use of funds information
2. Sign and return the ~~The~~ required contract agreement ~~must be executed~~ within 30 days of the City Council approving the ARCH Grant recipient award(s). ~~RAP Tax funds. RAP Tax funds will be disbursed in accordance with the City's fiscal year (July 1- June 30). Distribution of funds will be at the discretion of the City.~~ ARCH Grant Organizations



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Awardees who do not expend all their grant funds properly and complete the project/programs by June 1st of the following fiscal year shall return all any-unused and any misused portion of the grant amounts -to Vineyardthe City by June 30thwithin two (2) weeks time, unless otherwise determined by Vineyardthe City.

3. Ensure that~~all~~ all promotional items, programs, publications, performances, and all other printed materials include the ARCH logo (supplied by Vineyard City) or other language required by ~~the ARCH Grant Program supplied by the City~~.
4. Provide itemized expenses in a year-end report (compliance report). The report must be received by ~~the 2nd Tuesday in~~ June 1st of each year, as applicable. If the report is not received by this date or is an inadequate report, grant funds shall will be required to be returned to Vineyard City and the grant awardee applicant willshall no longer be eligible for future Vineyard City ARCH grant fundings.
5. ~~Future grant funding may be withheld due to inadequate and incomplete reports.~~



VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: Municipal Code Amendment to Title 2.14 Elections (Ordinance 2025-19)

Department: Recorder

Presenter: Pamela Spencer

Background/Discussion:

With changes made to the Utah State Elections Code and the ending of the Municipal Alternate Voting Methods Pilot Project, the recorder's office has determined that it was appropriate to make changes to the Municipal Elections Code.

Fiscal Impact:

N/A

Recommendation:

Staff recommends adoption of the MC Code amendments to Chapter 2.14 Elections.

Sample Motion:

"I move to adopt Ordinance 2025-19, as presented."

Attachments:

1. Ord_2025-19 (4)

**VINEYARD
ORDINANCE 2025-19**

**AN ORDINANCE OF THE VINEYARD CITY COUNCIL AMENDING THE
VINEYARD MUNICIPAL CODE CHAPTER 2.14. ELECTIONS**

WHEREAS, the Vineyard City Council has the authority under Utah Code 10-3 to amend the municipal code; and

WHEREAS, with changes to the Utah Elections Code and the ending of the Municipal Alternate Voting Methods Pilot Project, the City Council has determined that it is in the best interest of the citizens of the city to amend Chapter 2.14. Elections

NOW THEREFORE, be it ordained by the Council of the Vineyard, in the State of Utah, as follows:

SECTION 1: **AMENDMENT** “2.14.010 Definitions” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.010 Definitions

For the purpose of this chapter, the terms identified below shall have the following meanings:

"Agent of a candidate" means:

- A. Any individual acting on behalf of a candidate at the direction of the reporting entity;
- B. Any individual employed by a candidate in the candidate's capacity as a candidate;
- C. The personal campaign committee of a candidate
- D. Any member of the personal campaign committee of a candidate in the member's capacity as a member of the personal campaign committee of the candidate; or
- E. A political consultant of a candidate.

"Anonymous contribution limit" means for each calendar year: a total amount of fifty dollars (\$50.00) and is from unknow sources.

"Candidate" means an individual who files a declaration of candidacy for municipal office or who receives contributions, makes expenditures, or gives consent for any other individual to receive contributions or to make expenditures to bring about the individual's election to a municipal office.

“Candidate” does not include an individual who filed for the office of judge.

“Contribution” means:

- A. A monetary contribution;
- B. A gift, subscription, donation, loan, advance, or anything of value given to a candidate;
- C. A contract, promise or agreement to make a gift, subscription, donation, loan, advance, or deposit of money or anything of value to the candidate;
- D. Any transfer of funds from another reporting entity to the candidate;
- E. Compensation paid by any individual or reporting entity, other than the candidate, for personal services provided without charge to the candidate;
- F. A loan made by a candidate deposited to the candidate's own campaign; or
- G. Any in-kind contribution (Goods and Services).

A "contribution" does not include:

- A. Services provided by an individual volunteering the individual's time on behalf of the candidate if the services are provided without compensation by the candidate, an agent of the candidate, or any other person;
- B. Money lent to the candidate by a financial institution in the ordinary course of business; or
- C. Goods or services provided for the benefit of a candidate at less than fair market value that were not authorized by or coordinated with the candidate or an agent of the candidate.

"Coordinating with the candidate" means providing services or goods for the benefit of a candidate or using official logos, slogans, or elements belonging to or owned by the candidate, with the prior knowledge or agreement of the candidate or an agent of the candidate.

"Expenditure" means:

- A. Any disbursement from a campaign account in a financial institution of contributions or receipts;
- B. A purchase, payment, donation, distribution, loan, advance, deposit, gift of money, or anything of value made for political purposes;
- C. An express, legally enforceable contract, promise, or agreement to make any purchase, payment, donation, distribution, loan, advance, deposit, gift of money, or anything of value for a political purpose;
- D. Compensation paid by a candidate or an agent of the candidate for personal services rendered by an individual without charge to a reporting entity;
- E. Transfer of funds between the candidate and a candidate's personal campaign committee as defined in Section 20A-11-101 or
- F. Goods or services provided by a reporting entity for the benefit of the candidate for political purposes at less than fair market value.

"Expenditure" does not include

- A. services provided without compensation by an individual volunteering the individual's

- time on behalf of the candidate; or
- B. money lent to a candidate by a financial institution in the ordinary course of business.

“In-kind contribution” means anything of value other than money that is accepted by the candidate, an agent of the candidate, or through coordinating with the candidate. “Monetary contribution” means a contribution given to a candidate or an agent of the candidate of any money or credit made in cash, check, or any electronic transfer.

“Political consultant” means an individual who is paid by a candidate, or paid by another person on behalf of and with the knowledge of the candidate, to provide political advice to the candidate and includes individuals who:

- A. Have already been paid with money or other consideration;
- B. Expects to be paid in the future with money or other consideration; or
- C. Understands that they may be paid in the future, with money or other consideration, at the discretion of the candidate, or another person on behalf of and with the knowledge of the candidate.

“Political purposes” means an act done with the intent or in a way to influence or tend to influence, directly or indirectly, any individual to refrain from voting or to vote for or against any candidate or an individual seeking a municipal office at any caucus, political convention, or election. "Reporting date" means ~~ten days before a municipal primary or general election;~~ ~~for~~ a campaign finance statement required to be filed no later than seven days before a municipal primary and twenty eight days and again seven days before a general election; ~~and the day of filing, for a campaign finance statement required to be filed~~ no later than 30 days after a municipal primary or general election.

“Reporting entity” means:

- A. A candidate;
- B. A committee appointed by a candidate to act for the candidate.

~~"Reporting limit" means \$50.00.~~

"Write-in candidate" means a candidate who has qualified as a write-in candidate by following the procedures and requirements of this chapter.

SECTION 2: **AMENDMENT** “2.14.030 Election Of Officers” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.030 Election Of Officers

The election and terms of office shall be as follows:

- A. In the year following a year in which a presidential election is held, the offices of mayor and two (2) councilmembers shall be filled by a municipal general election. Their terms shall be for four (4) years.
- B. In the year preceding a year in which a presidential election is held, the offices of the other ~~two (2)~~ three (3) councilmembers shall be filled in a municipal general election. Their terms shall be for four (4) years.
- C. The officers shall be elected in at-large elections which are held at the time and in the manner provided for electing municipal officers.
- D. On or before May 1st in a year in which there is a municipal general election, the city recorder shall publish a notice identifying the municipal offices to be voted upon in the general municipal election which satisfies the requirements of § 10-3-301, Utah Code (1953, as amended).

SECTION 3: **AMENDMENT** “2.14.040 Primary Elections” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.040 Primary Elections

~~Except for elections conducted while Vineyard participates in the State’s Municipal Alternate Voting Methods Pilot Project,~~ Vineyard shall utilize the primary election procedure established by §20A-9-404 and §20A-1-201.5 Utah Code (1953, as amended), as the procedure to establish candidates for municipal offices if the number of candidates for any particular city office exceeds twice the number of individuals needed to fill that office. ~~Vineyard City shall not conduct a primary election for elections conducted while the City participates in the State’s Municipal Alternate Voting Methods Pilot Project.~~

SECTION 4: **AMENDMENT** “2.14.050 Declaration Of Candidacy Requirements” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.050 Declaration Of Candidacy Requirements

- A. Each individual seeking to become a candidate for municipal office shall file a declaration of candidacy, which complies with the requirements described in § 20A-9-203 of the Utah Code (1953, as amended), with the city recorder during office hours and not later than 5:00 p.m. between June 1st and June 7th (Monday through Friday)

of any odd-numbered year. ~~When June 7th is a Saturday, Sunday, or holiday, the filing time shall be extended until 5:00 p.m. on the following business day.~~ The declaration of candidacy shall be filed in person by the individual seeking to be a candidate, or by the individual's agent, provided the requirements of § 20A-9-203(5), Utah Code (1953, as amended), are properly satisfied.

- B. Before filing a declaration of candidacy for election to any city office, an individual shall:
1. Be a registered voter;
 2. Have resided within the boundaries of Vineyard City for at least twelve (12) consecutive months immediately preceding the date of the election. In the case of annexation by Vineyard City, any individual who has resided in the territory annexed for the prescribed twelve (12) month period is deemed to meet the residence requirements for candidacy in Vineyard City;
 3. Not have had their right to hold public office restricted pursuant to Article IV, Section 6 of the Utah Constitution or they shall have had their right to hold elective office restored pursuant to §20A-2-101.3 and §20A-2-101.5, Utah Code (1953, as amended).
- C. An individual seeking to file a declaration of candidacy may not:
1. Be a candidate for more than one (1) office in the state of Utah during any election year; or
 2. Be a current employee of Vineyard City.
- D. Before accepting any declaration of candidacy, the filing officer shall:
1. Read to the prospective candidate the constitutional and statutory qualification requirements for the office that the candidate is seeking; and
 2. Require the candidate to state whether or not the candidate meets those requirements.
- E. If the prospective candidate states that they do not meet the qualification requirements for the office, the filing officer may not accept the prospective candidate's declaration of candidacy.
- F. If the candidate states that they meet the requirements of candidacy, the filing officer shall:
1. **Accept the candidate's declaration of candidacy;**
 2. Inform the candidate that their name will appear on the ballot as the their name is written on the declaration of candidacy.
 3. **Provide a certified copy of the declaration of candidacy to the Lieutenant Governor's Office;**
 4. Provide the candidate with a copy of the pledge of fair campaign practices described under § 20A-9-206, Utah Code (1953, as amended), and inform the candidate that signing the pledge is voluntary and that signed pledges shall be filed with the city for public inspection; and
 5. If the candidate elects to sign the pledge of fair campaign practices, the filing officer shall accept the candidate's pledge.
- G. The form of the declaration of candidacy shall be as established by § 20A-9-203, Utah Code (1953, as amended).
- H. The candidate shall pay the filing fee listed in the Vineyard Consolidated Fee Schedule

(as amended).

- I. Any resident of Vineyard may nominate a candidate for a city office by filing a nomination petition with the city recorder during office hours but not later than 5:00 p.m. between June 1st and June 7th of any odd-numbered year and ends at 5:00 PM on the fourth business day after the day on which the filing period begins. ~~When June 7th is a Saturday, Sunday, or holiday, the filing time shall be extended until 5:00 p.m. on the following business day.~~
 1. The nomination petition must be signed by twenty-five (25) registered voters who reside in Vineyard City.
 2. The form of the nomination petition shall be as established by § 20A-9-203, Utah Code (1953, as amended).

SECTION 5: **AMENDMENT** “2.14.060 Write-In Candidates” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.060 Write-In Candidates

- A. Each individual wishing to become a valid write-in candidate shall file a declaration of candidacy with the city recorder on the last business day that is at least not later than sixty-five (65) calendar days before the date of the regular municipal general election. ~~If the filing deadline falls on a weekend or holiday, it shall be extended to the next regular business day.~~
- B. The city recorder shall:
 1. Read to the candidate the constitutional and statutory requirements for the office as required in Section 2.14.050 of this chapter; and
 2. Ask the candidate whether or not the candidate meets the requirements. If the candidate cannot meet the requirements of office, the filing officer may not accept the write-in candidate’s declaration of candidacy.
- C. A voter may cast a write-in vote by entering the name of a valid write-in candidate on a paper ballot or ballot sheet or in the areas designated on any other form of ballot provided.

SECTION 6: **AMENDMENT** “2.14.070 Certification Of Candidates - Objection To Candidates” of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.070 Certification Of Candidates - Objection To Candidates

- A. The city recorder shall verify with the county clerk that all candidates are registered voters. Any candidate who is not registered to vote is disqualified and the recorder may not include the candidate's name on the ballot.
- B. Immediately after expiration of the period for filing a declaration of candidacy, the city recorder shall:
1. publicize a list of the names of the candidates as they will appear on the ballot:
 - a. (1) as a class A notice under UCA Section 63G-30-102, for seven calendar days; ~~by publishing the list in at least two successive publications of a newspaper of general circulation in the municipality;~~
 - (2) ~~by posting one copy of the list, and at least one additional copy of the list per 2,000 population of the municipality, in places within the municipality that are most likely to give notice to the voters in the municipality, subject to a maximum of 10 lists; or by mailing the list to each registered voter in the municipality;~~
 - b. ~~by posting the list on the Utah Public Notice Website, created in Section 63A-16-601, for seven days; and if the municipality has a website, by posting the list on the municipality's website for seven days; and~~
 2. notify the lieutenant governor of the names of the candidates as they will appear on the ballot.
- C. A declaration of candidacy or nomination petition is valid unless a written objection is filed with the city recorder within ten (10) days after the last day for filing. If an objection is made, the city recorder shall:
1. Mail or personally deliver notice of the objection to the affected candidate immediately; and
 2. Decide any objection within forty-eight (48) hours after it is filed.
- D. If the city recorder sustains the objection, the candidate may correct the problem by amending the declaration or petition within three (3) days after the objection is sustained or by filing a new declaration within three (3) days after the objection is sustained.
- E. The city recorder's decision on an objection to form is final. Challenges to the city recorder's decision on substantive matters shall be made pursuant to § 20-9-203, Utah Code (1953, as amended).

SECTION 7: AMENDMENT "2.14.110 Campaign Finance Disclosure" of the Vineyard Municipal Code is hereby *amended* as follows:

AMENDMENT

2.14.110 Campaign Finance Disclosure

- A. Deposit of Monetary Contributions. Each Candidate:
 1. Shall deposit a monetary contribution in a separate campaign account in a financial institution; and
 2. May not deposit or mingle any monetary contributions received into a personal or business account.
- B. Anonymous Contributions. Within thirty (30) days of receiving a contribution that exceeds the anonymous contributions limit, a candidate shall disburse the amount of the anonymous contribution to either:
 1. The Utah State Treasurer for deposit into the state's general fund;
 2. The Vineyard City Recorder for deposit into the city's general fund; or
 3. An organization that is exempt from federal income taxation under Section 501(c)(3), Internal Revenue Code
- C.
 1. In a year in which a municipal primary is held, each candidate who will participate in the municipal primary shall file a campaign finance statement with the city recorder no later than seven (7) days before the primary election.
 2. Each candidate for Vineyard City municipal office who is not eliminated at a municipal primary election shall file with the city recorder a campaign finance statement as described in this chapter:
 - a. no later than 28 days before the municipal general election is held;
 - b. no later than seven (7) days before the municipal general election is held; and
 - c. 30 days after the day on which the municipal general election is held.
 3. Each candidate for municipal office, who is eliminated at a municipal primary election shall file with the city recorder a campaign finance statement no later than thirty (30) days after the municipal primary election is held.
 4. If no primary election is held for a race, each candidate who will participate in that race shall file a campaign finance statement with the city recorder no later than:
 - a. 28 days before the day on which the municipal general election is held;
 - b. seven days before the day on which the general election is held; and
 - c. 30 days after the day on which the municipal general election is held.
- D. Each campaign finance statement under Part C shall~~;~~:
 1. Except as provided in Subsection D(2),
 - a. report all of the candidate's itemized and total:
 - (1) campaign contributions, including in-kind and other nonmonetary contributions, five days before the campaign finance statement is due, excluding an expenditure previously reported; a contribution previously reported ; and
 - (2) campaign expenditures made up to and including five days before the campaign finance statement is due, excluding the expenditure previously reported and
 - b. identify:
 - (1) for each contribution, the amount of the contribution and the

- name of the donor, if known; and
 - (2) the aggregate total of all contributions that individually do not exceed the reporting limit; and
 - (3) for each campaign expenditure, the amount of the expenditure and the name of the recipient of the expenditure; or
 - c. report the total amount of all campaign contributions and expenditures if the candidate receives \$500 or less in campaign contributions and spends \$500 or less on the candidate's campaign.
- E. The city recorder shall, at the time the candidate for municipal office files a declaration of candidacy and again 35 days before each municipal general election, notify the candidate in writing of:
- 1. the provisions of this Section governing the disclosure of campaign contributions and expenditures;
 - 2. the dates when the candidate's campaign finance statement is required to be filed; and
 - 3. the penalties that apply for failure to file a timely campaign finance statement, including the statutory provision that requires removal of the candidate's name from the ballot for failure to file the required campaign finance statement when required.
- F. Notwithstanding any provision of Title 63G, Chapter 2, Government Records Access and Management Act, the city recorder shall:
- 1. make each campaign finance statement filed by a candidate available for public inspection and copying no later than one business day after the statement is filed; and
 - 2. make the campaign finance statement available for public inspection by:
 - a. posting an electronic copy on the city's website no later than seven business days after the statement is file; and
 - b. verifying that the address of the municipality's website has been provided to the lieutenant governor in order to meet the requirements of Utah Code Subsection 20A-11-103(5); or
 - c. submitting a copy of the statement to the lieutenant governor for posting on the website established by the lieutenant governor under Utah Code Subsection 20A-11-103 no later that two business days after the statement is filed.
- G.
- 1. If a candidate fails to timely file a campaign finance statement required under Sections (C) or (D) the city recorder:
 - a. may send an electronic notice to the candidate that states:
 - (1) that the candidate failed to timely file the campaign finance statement; and
 - (2) that, if the candidate fails to file the report within 24 hours after the deadline for filing the report, the candidate will be disqualified; and

- b. may impose a fine of \$50 on the candidate.
 - 2. The city recorder shall disqualify a candidate and inform the appropriate election official that the candidate is disqualified if the candidate fails to file a campaign finance statement described in Section C within 24 hours after the deadline for filing the report.
 - 3. If a candidate is disqualified under Subsection I(2), the election official:
 - a. Shall:
 - (1) notify the opposing candidate(s) for the municipal office that the candidate is disqualified;
 - (2) send an email notification to each voter who is eligible to vote in the municipal election office race for whom the election official has an email address informing the voter that the candidate is disqualified and that votes cast for the candidate will not be counted;
 - (3) post notice of the disqualification on the city's website; and
 - (4) if practicable, remove the candidate's name from the ballot by blacking out the candidate's name before the ballots are delivered to voters;
 - b. may not count any votes for that candidate.
 - 4. An election official may fulfill the requirements described in Subsection I(3)(c) in relation to a mailed ballot, including a military overseas ballot, by including with the ballot a written notice"
 - a. informing the voter that the candidate is disqualified; or
 - b. directing the voter to the city's website to inform the voter whether a candidate on the ballot is disqualified.
- H. Notwithstanding Part H.1, a candidate who timely files each campaign finance statement required under Section C is not disqualified if:
 - 1. the statement details accurately and completely the information required under Section D, except for inadvertent omissions or insignificant errors or inaccuracies; and

2. the omissions, errors, or inaccuracies are corrected in an amended report or in the next scheduled report.
- I. A campaign finance statement required under this section is considered filed if it is received in the city recorder's office by 5 p.m. on the date that is it due.
- J. In addition to the other penalties established herein, any candidate who fails to comply with the requirements of this section is guilty of an infraction.
- K.
 1. A private party in interest may bring a civil action in district court to enforce the provisions of this section.
 2. In a civil action under Part J.1, the court may award costs and attorney's fees to the prevailing party.

SECTION 8: REPEALER CLAUSE All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 9: SEVERABILITY CLAUSE Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 10: EFFECTIVE DATE This Ordinance shall be in full force and effect from November 12, 2025, and after the required approval and publication according to law.

PASSED AND ADOPTED BY THE VINEYARD COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Mayor Julie Fullmer	_____	_____	_____	_____
Sara Cameron	_____	_____	_____	_____
Jacob Holdaway	_____	_____	_____	_____
Mardi Sifuentes	_____	_____	_____	_____
Brett Clawson	_____	_____	_____	_____

Presiding Officer

Attest

Julie Fullmer, Mayor, Vineyard

Pamela Spencer, City Recorder,
Vineyard

VINEYARD CITY COUNCIL STAFF REPORT

Meeting Date: November 12, 2025

Agenda Item: PUBLIC HEARING — Update to Vineyard City Development Standards and Design Specifications (Ordinance 2025-15)

Department: Public works

Presenter: Patrick James

Background/Discussion:

Vineyard City adopted its current Development Standards and Design Specifications in 2017. These standards serve as the technical foundation for public infrastructure construction, subdivision improvements, and private development projects. They ensure consistency, durability, and compliance with federal, state, and local regulations while protecting the City's long-term investment in infrastructure.

Since 2017, there have been significant changes in industry practices, federal and state requirements, and agency coordination standards. In particular, the Utah Chapter of the American Public Works Association (APWA) recently completed a comprehensive update of its standards and specifications, providing a modernized framework for local governments to adopt.

Vineyard City has undertaken a review and update of its Development Standards and Design Specifications with the following objectives:

- **Alignment with Utah APWA Standards:** The updated document incorporates the Utah APWA's revamped standards, ensuring regional consistency and compatibility with contractors and engineers across Utah.
- **Integration of New Regulations:** Federal and state requirements related to stormwater management, ADA accessibility, utility construction, and roadway design have been incorporated.
- **City-Specific Needs:** Vineyard has incorporated modifications that reflect the unique conditions within the City, including soils, groundwater, traffic growth, and design expectations for multimodal transportation and sustainability.
- **Clarity for Contractors and Developers:** The updated standards provide clear guidance for contractors, developers, and design professionals, ensuring uniformity and reducing ambiguity during design and construction.

The attached document provides the updated Vineyard City Development Standards and Design Specifications for use by contractors and developers. Adoption of these standards will support consistent infrastructure development, improve construction quality, and streamline the review and approval process.

Future changes to the City Development Standards and Design Specifications will be reviewed and approved by the Development Review Committee (DRC) to allow for changes that are to align with Federal, State, and other statutory requirements, and additionally to update the documents for errors and omissions. The DRC Chair will determine when a proposed change is

substantial and requires review and approval by the City Council.

Fiscal Impact:

None, Implementation will improve efficiency in project design and inspection, resulting in long-term cost savings to the City.

Recommendation:

Staff recommends that the City Council adopt the updated Vineyard City Development Standards and Design Specifications by ordinance.

Sample Motion:

"I move to adopt by ordinance 2025-14, the updated Vineyard City Development Standards and Design Specifications as presented."

Attachments:

1. Ordinance - Construction & Design Standards Update - Vineyard - 2025
2. Final Specifications - Construction and Design Standard Update - Vineyard 2025
3. Final - Construction Standard Drawings - Vineyard 2025

VINEYARD

ORDINANCE 2025-15

**AN ORDINANCE OF THE VINEYARD CITY COUNCIL AMENDING THE
CONSTRUCTION AND DESIGN STANDARDS**

WHEREAS, the Vineyard City Council last adopted the Vineyard City Design Standards and Specifications in February 2007; and

WHEREAS, the Standards have and will continue to be updated periodically as new technology, policy changes, procedure changes, updated methods of design and construction are implemented, or infrastructure materials change; and

WHEREAS, the Development Review Committee (DRC) shall review such periodical updates to determine if such updates are considered minor modifications, in which those updates are to align with federal, state, and other statutory standards, or to make corrections for errors or omissions. The DRC shall approve those modifications and corrections, or determine if the proposed updates should be submitted to City Council for approval; and

WHEREAS, in coordination with the City Public Works Director, Engineer, Staff, and Hansen, Allen, and Luce Engineering prepared and recommends revisions to the Construction and Design Standards; and

WHEREAS, the City Council held a public hearing on November 12, 2025, regarding updates to the Standards; and

WHEREAS, the City Council finds good cause for adopting the Standards as revised;

NOW THEREFORE, be it ordained by the Council of the Vineyard, in the State of Utah, as attached.

PASSED AND ADOPTED BY THE VINEYARD COUNCIL NOVEMBER 12, 2025.

	AYE	NAY	ABSENT	ABSTAIN
Mayor Julie Fullmer	_____	_____	_____	_____
Sara Cameron	_____	_____	_____	_____
Jacob Holdaway	_____	_____	_____	_____
Mardi Sifuentes	_____	_____	_____	_____
Brett Clawson	_____	_____	_____	_____

Presiding Officer

Attest

Julie Fullmer, Mayor, Vineyard

Pamela Spencer, City Recorder, Vineyard



Vineyard

Construction and Design Standards

1.04 General Provisions

1.04.010 Definitions

- A. AASHTO. The American Association of State Highway and Transportation Officials.
- B. APWA. The Utah Chapter, [American Public Works Association Manual of Standard Specifications and Plans](#), latest edition.
- C. AWWA. The American Water Works Association Standards, latest edition.
- D. City. The City of Vineyard, Utah.
- E. City Engineer. The City Engineer or delegated representative. This person shall be the ENGINEER and OWNER as defined by APWA.
- F. County. Utah County, Utah.
- G. Contractor. A person or company constructing Improvements having required state licenses to perform said work.
- H. City Council. The governing body of the City.
- I. DRC. The Vineyard City Development Review Committee.
- J. Developer. Person, persons, partnership, or corporation developing or making Improvements to a property.
- K. Development. A land Improvement that requires a Site Plan or Subdivision.
- L. Final Plat. An original recordable plat drawn in a form approved by the City and County, showing all lots, rights-of-way, utility easements, and other items required for recordation.
- M. Floodplain. That area designated on the most recent Flood Insurance Rate Map for the City of City, prepared by the Federal Emergency Management Agency, as a flood plain as amended.
- N. General Plan. The general plan document as approved by the City Council.

- O. Improved Lot. A lot which has all the improvements required in the Subdivision ordinance.
- P. Improvements. Improvements include all City infrastructure including but not limited to streets, curb, gutters, sidewalks, grading, landscaping, water, sanitary sewer, irrigation, drainage, power, communication, fencing, and public facilities.
- Q. Landowner. An owner of property.
- R. Lot. A parcel or tract of land within a subdivision which is or may be occupied by a building or structure and the accessory buildings, structures or uses customarily incident thereto, including such open spaces as are arranged and designed to be used in connection with a building according to the zone within which the lot is located.
- S. Minor Land Disturbance Permit. A permit required for construction work under 1 acre in size that does not require a SWPPP permit and is completed in less than 12 months.
- T. MUTCD. The Manual on Uniform Traffic Control Devices.
- U. Offsite Facilities. Facilities outside of the boundaries of the Subdivision or Development site which are designated and located to serve the needs of the subdivision or development or adjacent property, usually lying between a development and existing facilities.
- V. Onsite Facilities. Facilities installed within or on the perimeter of a Subdivision or Development site.
- W. OSHA. The Occupational Safety and Health Administration is the main federal agency charged with the enforcement of safety and health legislation.
- X. Parcel of Land. A contiguous area of land in the possession or ownership of one entity with one tax identification number.
- Y. Planning Commission. The City Planning Commission.
- Z. Preliminary Plat. A map or plat of a proposed subdivision or development approved by the City with accompanying supplementary documents.
- AA. Prime Subcontractor. Sub-contractor doing the majority of a specific work within the engineering permit.
- BB. Public Works Director. The City Public Works Director or delegated representative.
- CC. Public Utility Easements (PUE). A Public Utility Easement acquired by the city for city utilities. Easement shall read, "All Public Utility

Easements platted hereon are in perpetuity for installation, maintenance, repair, and replacement of municipal utilities, public walls, fences, sidewalks, trails, and appurtenant parts thereof, and the right to reasonable access. Easement shall run with the real property and shall be binding upon the grantor and the grantor's successors, heirs, and assigns."

- DD. Right-of-Way. A public strip of land that is granted, through an easement, deed, plat, or other mechanism, for transportation purposes, including but not limited to street, walkway, trail, or railway.
- EE. Site Plan. A plan for a commercial, industrial, institutional, governmental, or planned residential development in the City.
- FF. Storm Water Discharge. A Utah Pollutant Discharge Elimination System (UPDES) Storm Water permit may be required before any ground disturbance or construction activities. The purpose of the permit is to prevent storm water runoff from washing pollutants into local surface waters such as streams, rivers, or lakes.
- GG. Streets. A thoroughfare which has been dedicated and accepted by the City Council, which the City has acquired by prescriptive right or which the City owns, or is offered for dedication on an approved recorded final plat. For further explanation see the streets section.
- HH. Subdivision. Any parcel of land that is divided, re-subdivided or proposed to be divided into two or more lots, parcels, sites, units, plots, or other division of land for the purpose, whether immediate or future, for offer, sale, lease, or development either on the installment plan or upon any and all other plans, terms, and conditions. A subdivision includes (1) the division or development of land whether by deed, metes and bounds description, devise and testacia, lease, map, plat, or other recorded instrument; and (2) divisions of land for all land for all residential and nonresidential uses, including land used or to be used for commercial, agricultural, and industrial purposes.
- II. Utilities. Includes drinking water lines; irrigation lines; sanitary sewer; storm, land and groundwater drains; gas lines; electric power lines; cable television and telephone lines; underground conduits; and junction boxes and all appurtenances to the above.

1.04.020 Standards and Codes

- A. GENERAL. The purpose of the Construction and Design Standards and Standard Drawings is to govern Development and any public infrastructure or utility work done or Improvements installed within current or proposed public right-of-way, public easement, or that will be under the responsibility of a homeowner's association.

Owners, Contractors, Developers, and Civil Engineers should thoroughly read and understand these specifications and standards before designing or

constructing public improvements. They shall contact the City Engineering Staff for all matters dealing with construction work within a City right-of-way or with any work connecting onto a City utility. SPECIAL PERMITS AND BONDING ARE REQUIRED FOR ALL SUCH WORK.

- B. CITY CODE. Improvements shall comply with the [City Title 15 Zoning Code](#) and all other City ordinances and codes.
- C. APWA. [APWA standards shall apply to any standard not included in the City's Construction and Design Standards](#).
- D. CODES AND STANDARDS. Where codes and standards are referred to, they refer to the most current version of the code or standard. It shall be the duty of a supplier of any material to submit evidence, if requested, that its material is in compliance with the applicable codes and standards.

The City Construction and Design Standard Specifications and Standard Drawings are the minimum requirements of the City. If any provisions herein conflict with general industrial standards, or with other requirements specified by the City, the more stringent of the standards [as determined by the City Engineer](#) will apply.

- E. STATE AND LOCAL LAWS. The Contractor shall conform to all applicable state and local laws in carrying out its obligations under the Contract [or Land Disturbance Permit](#). This shall include, but is not limited to, compliance by the Contractor with the requirements of Chapter 30, of Title 34, of the Utah Code Annotated, 1953 as Amended. If the provisions of Section 34-30-1, of the Utah Code Annotated, 1953 as amended, are not complied with, this Contract shall be void.
- F. COMPLIANCE WITH GOVERNMENTAL REGULATIONS. The Contractor's personnel, equipment, and operations shall comply fully with all applicable standards, regulations, and requirements of existing Federal, Utah State, and Local governmental agencies. This shall include, but not necessarily be limited to, the following:
 - 1. United States Occupational Safety and Health Administration (OSHA). Title 29 of the Code of Federal Regulations, Part 1926 (29 CFR Part 1926), Safety and Health Regulations for Construction.
 - 2. Utah State Industrial Commission. The Utah Occupational Safety and Health Act (1973) and Employer-Employee Safe Practices for Excavations and Trenching Operations (Jan. 1, 1974), as published by the Utah State Industrial Commission, including any and all amendments or revisions effective prior to performance of the work.
 - 3. Utah Department of Transportation (UDOT). When crossing or working within UDOT rights-of-way the Contractor shall be responsible to obtain all necessary permits and comply with all appropriate UDOT

regulations including applicable sections in "State of Utah Standard Specifications for Road and Bridge Construction," latest edition.

4. Permits. The Contractor is responsible to obtain all required permits and licenses to complete the work, including land disturbance permits, contractor licenses, business licenses, engineering permits and building permits all other applicable permits to this project. Contractor shall be subject to the conditions of all permits and agreements between the Owner and the permitting agencies. See Division 14, Rights-of-Way.

1.04.030 Pre-Construction

- A. GENERAL. It shall be unlawful to commence any Improvement or Development in the City without completing the following:

1. Application. Submit complete development application.
2. Application Fee. Pay application fees.
3. Construction Plans Approval. Receive City approval of plans according to Article 1.08.010 A (Plan approval).
4. Contractor Approval. Receive City approval of Contractor according to Section 1.12.010 (Contractor Approval).
5. Land Disturbance Permit. Obtain Land Disturbance Permit as required in Section 1.16.040 (Land Disturbance Permits). If a contract with the City to do such work for the City has been finalized, the contract fulfills the permit requirement.
6. Inspection Fee. Pay inspection fee according to Article 1.16.010 C (Inspection Fee).
7. Special Engineering Review Fee. If applicable, pay specialized engineering review fees according to Section 1.08.040 (Specialized Engineering).
8. Federal, State, and Local Permits. Obtain necessary Federal, State, and Local permits required for Improvements.
9. Bonds. Receive City approval of required bonds.

- B. EASEMENTS. Developer shall provide Municipal Utility Easements (MUEs) and/or Public Utility Easements (PUEs) for all utility extensions through private property or property owned by public agencies other than the City and for 10 feet along public rights-of-way. Developments other than single family home developments shall provide 10-foot MUEs along all property lines. If setbacks are less than 10 feet, then MUEs shall be the extent of the setback. Single family lots shall have ~~10-foot~~ 10-foot public utility easements along

public rights-of-way or streets and not ~~necessarily~~ along the other property lines unless a utility is planned there.

- C. BONDS. All Development shall obtain payment and performance bonds for the total cost plus 10% of the Improvements in public Right-of-Way or Easements. Development bonds shall be in the form of an irrevocable letter of credit from a bank, a bond from a surety company, escrow, or a cash other bond approved by the City~~bond paid directly to the City~~. Bonds must be approved by the City before construction begins.

At minimum, ~~E~~each contractor doing work in the City is required to maintain a \$2,000.00 contractor bond deposit with the City for public improvements. Improvements that do not require a Site Plan or Subdivision but do require a Minor Land Disturbance Permit shall only require a contractor bond deposit.

Payment and of performance and contractor bonds deposits are to guarantee the following:

1. Construction is completed and meets City Construction and Design Standards.
2. Final inspection is conducted.
3. Final inspection punch list items are completed.

No bond deposit shall be released until all improvements are completed and accepted by the City. See Article 1.16.010 (Acceptance of Improvements) and Section 1.04.070 (Post Construction).

- D. PRE-CONSTRUCTION CONFERENCE. A Pre-Construction Conference according to APWA 01 31 19 (Pre-Construction Conference) shall be held before any work on Improvements or a Development may commence. The following shall attend the conference:

1. City Engineer
2. Landowner, Landowner Representative, or Developer
3. Contractor
4. Major Prime Subcontractors.

Prime Major Subcontractors not attending the pre-construction meeting must schedule an additional Pre-Construction Conference with the City Engineer before beginning work. The location of the meeting shall be at the City Public Works Office, 240 East Gammon Rd, Vineyard, Utah 84058.

The following items shall be furnished at the meeting:

1. Construction Sequence Outline. A detailed outline showing the sequences of construction of principle items of work. The outline shall

show the beginning and ending dates of the major items of work on the Project.

2. Contact List. A list of names, titles, addresses, and mobile telephone numbers of the Developer and Contractor responsible personnel, indicating those who may be reached outside normal working hours.
3. Subcontractor and Material Supplier's List. A list of subcontractors and material suppliers.
4. Other Items and Minutes. Other items may be discussed at this Pre-Construction Conference as determined by the City Engineer. Official minutes of this meeting as prepared by the City ~~Engineer~~ shall become part of the project file for the project.
5. Pre-Construction Inspection Video. The Contractor shall be responsible to take time-dated footage of surrounding property before construction and submit to the City Engineer's office. Any disputes on damage will be resolved with the video. If the Contractor fails to turn in this video, it will be subject to the City Engineer's judgement on the resolution of damage disputes. The City may retain the documentation up until the end of warranty period.

1.04.040 Land Disturbance Permits

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to land disturbance permits:
 1. Section 1.04.030 (Pre-Construction)
 2. Article 1.04.040 C (Land Disturbance Permit Fee)
 3. Section 1.04.060 (Traffic Control)
 4. Article 1.08.010 B (Construction Plans Approval)
 5. Section 1.12.010 (Contractor Approval)
 6. Article 1.12.010 A (Contractor's License)
 7. Section 1.12.020 (Insurance)
 8. Article 1.16.010 C (Inspection Fee)
- B. GENERAL. No person, firm, partnership, corporation, or entity of any kind shall open up, break, dig, excavate, construct, reconstruct, repair, alter a grade in or upon any public street, sidewalk, curb, curb cut, driveway, or gutter for any purpose or in any manner commence any construction in or upon any public

rights of way, street, or sidewalk without first procuring from the city engineer a Land Disturbance Permit for the specific construction or other work to be undertaken.

Any emergency activity that is immediately necessary for the protection of life, property, or natural resources including activities required to promote public safety, repairs to water lines, and/or other City infrastructure repairs is exempt from a Land Disturbance Permit with the approval of the City Engineer.

Use the [Online Land Disturbance Permit Application](#) to apply. Small Improvements may be constructed with a Minor Land Disturbance Permit as determined by the City Engineer.

- C. LAND DISTURBANCE PERMIT FEE. Land Disturbance Permit fees must be paid before a Land Disturbance Permit is issued. Fee shall be established by the City Council by resolution. ~~Fees shall be assessed on the following items:~~
1. ~~Sewer and water lateral installation inspection.~~
 2. ~~Re-inspection (When an inspection has been requested, the inspection is performed and the work is not complete, a re-inspection fee shall be assessed.)~~
 3. ~~Barricades (provided by, or called out by the City)~~
- D. TIME LIMITATIONS. Permits must be approved 48 hours prior to construction. The City may stipulate time limits for completion of work and suspend permits for non-compliance.

Minor Land Disturbance Permits shall expire and become null and void if substantial work authorized by such permit has not commenced within thirty (30) calendar days of issuance or is not complete within ninety (90) days from the date of issuance or the Pre-Construction Conference. Extensions may be given upon approval by the City Engineer.

Other land disturbance permits shall expire and become null and void if substantial work authorized by such permit has not commenced within six (6) months of issuance or is not complete within two (182) ~~years~~ [months](#) from the date of issuance or the Pre-Construction Conference. Extensions may be given upon approval by the City Engineer. [Two one-year extensions may be given prior to a new full permit, review is required.](#)

- E. LAND DISTURBANCE PERMIT REQUIREMENTS. Contractors are required to submit the following to obtain a Land Disturbance Permit:
1. License. Copy of contractor's license as required by Article 1.12.010 A (Contractor's License)
 2. Certificate of Insurance (COI). COI approved by City. COI shall meet the requirements of Section 1.12.020 (Insurance).

3. Land Disturbance Permit Fee. Pay the Land Disturbance Permit Fee according to Article 1.04.040 C (Land Disturbance Permit Fee).
4. Inspection Fee. Pay inspection fee according to Article 1.16.010 C (Inspection Fee).
5. Bond. Bond approved by the City. Bond shall meet the requirements of Article 1.04.030 (Bonds).
6. Approved Construction Plans. Receive City approval of plans according to Article 1.08.010 B (Construction Plans Approval).
7. Traffic Control Plan. If applicable, a copy of the approved Traffic Control Plan according to Section 1.04.060 (Traffic Control).
8. Contractor Approval. Receive City approval of Contractor according to Section 1.12.010 (Contractor Approval).
9. Local/State/Federal Permits. An approved copy of any Federal, State, and Local permits required for the Improvements. The applicant shall obtain from any state or federal agency including any ~~other~~ appropriate environmental permits that pertain to the property. Copies of these approved permits shall be included with the Land Disturbance Permit. However, the inclusion of those permits in the application shall not preclude the City Engineer from imposing additional development requirements and conditions, commensurate with this Chapter, on the development of property covered by those permits. Failure of the applicant to obtain the necessary permits may be a basis for denial of issuance of a Land Disturbance Permit among other required permits. Such other required permits will be to obtain and maintain coverage during the duration of the project under the UPDES with a Notice of Intent (NOI) permit. Developers are also required to maintain a SWPPP during the duration of the project. A completed SWPPP is required to obtain an NOI permit from the State.

Drainage Channels, Waterways, and Sensitive Areas. Property owners shall not fill, alter, or restrict natural channels, wetlands, waterways or any other Sensitive Lands without proper permits from all responsible governing agencies, including a Land Disturbance Permit from the City. Property owners proposing to redirect runoff, surface, and/or pipe flow to properties or facilities outside City boundaries must provide written approval from the applicable governing agency. Discharges or modifications to irrigation ditches or canals require written approval from the canal owners and applicable governing agencies. Property owners are responsible for the protection of channels located within their property in compliance with this ordinance.

1.04.050 Construction

A. APWA. Unless otherwise specified in the City Construction and Design Standards, construction work shall meet the requirements and specifications of the following APWA sections and related sections:

1. APWA 00 72 00 4.4 (Reference Points and Monuments)
2. APWA 01 25 00 (Product Options and Substitutions)
3. APWA 01 26 00 (Contractor Modification Procedure)
4. APWA 01 57 00 (Temporary Controls)
5. APWA 01 64 00 (Owner-furnished Products)
6. APWA 01 65 00 (Product Delivery and Handling)
7. APWA 01 66 00 (Product Storage and Protection)
8. APWA 31 05 10 (Boundary Markers and Survey Monuments)
9. APWA 31 25 00 (Erosion and Sedimentation Control)

B. CITY CONSTRUCTION AND DESIGN STANDARDS. All construction work shall conform to the related City Construction and Design Standards. More specifically, See the following City Construction and Design Standards for additional specifications related to this section:

1. Chapter 1.16 (Inspection and Testing)
2. Section 1.12.030 (Submittals)
3. Section 1.20.020 (Excavation)

C. SURVEY. The alignment of the side property lines for each lot in a subdivision shall be marked in the top back of curb with a lot line witness marker that meets the requirements and specifications of APWA 31 05 10 (Boundary Markers and Survey Monuments). Developer shall provide survey benchmarks and monuments as required by the City Engineer.

All property corners shall be marked with a rebar corner marker that meets the requirements and specifications of APWA 31 05 10 (Boundary Markers and Survey Monuments). Corners must be marked before acceptance of a subdivision's improvements by the City. The rebar must be offset 2 to 4 inches by a steel tee post four feet out of the ground on the property line alignment.

D. INSPECTION AND TESTING. All work shall be inspected and tested by the City according to Chapter 1.16 (Inspection and Testing).

E. VARIATIONS, SUBSTITUTIONS, EXCEPTIONS AND CHANGES. Any variation, substitution or exception from the standards in this policy must be authorized in writing by the City Engineer. Product options and substitutions must meet

the requirements of APWA 01 25 00 (Product Options and Substitutions) and APWA 01 26 00 (Contractor Modification Procedure). Any item of construction not covered in these standards must have plans and specifications approved by the City Engineer. Requests for changes to the Construction Standards shall be made in writing to the City Engineer. These requests will be reviewed during revision process conducted in conjunction with the APWA revisions.

F. TEMPORARY CONTROLS. Temporary controls such as noise, dust, mud, surface water, ground water, pollution and erosion controls shall meet the requirements and specifications of APWA 01 57 00 (Temporary Controls).

1. Dust and Debris. The Contractor shall control dust and debris originating with the construction. Dust and other debris shall be controlled on a daily basis by methods that shall include, but not be limited to, the use of a dust setting spray, a "pick-up broom or street sweeper and trash disposal. The Contractor shall maintain on the project site a water truck with a minimum two thousand (2,000) gallon capacity.

The Contractor shall be responsible to secure a source of water and shall obtain the necessary permission or permit for its use. Failure by the Contractor to adequately control dust and debris may result in the City initiating dust and debris control measures and deducting the cost from Bond.

2. Groundwater. Pumping groundwater into the sanitary sewer system is prohibited.
3. Erosion and Sedimentation Control. Erosion and sedimentation shall be controlled according to APWA 31 25 00 (Erosion and Sedimentation Control).
4. Storm Water. Ground water and surface water must be kept on the construction site. If either ~~leave~~leaves the site by any manner, additional temporary controls must be implemented to protect the storm water drain system.

A Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) may also be required. See [Vineyard Municipal Code: 7.08 Stormwater Management Requirements](#) and specifically [Section 7.08.060 Stormwater Design and BMP Manuals](#). SWPPP shall include a plan to control erosion and sedimentation according to APWA 31 25 00 (Erosion and Sedimentation Control).

G. PUBLIC SAFETY AND CONVENIENCE. The convenience of the general public and the protection of persons and property is of prime importance and shall be provided for by the Contractor during this project. The Contractor shall use every reasonable precaution to safeguard persons and property. Failure of a Landowner or City to notify the Contractor of any deficiencies in providing for

public safety and convenience shall not relieve the Contractor from this responsibility.

No person shall be cut off from access to their residences or places of business without a permit from the City with specific time and duration of closure. Notice shall be provided to the residence or business 48 hours before the closure. In no case shall a closure for a period exceeding exceed eight (8) hours, unless the Contractor has made special arrangements in writing with the affected persons prior to commencing work in the area.

- H. NOTIFICATION OF RESIDENTS. All property owners and residents adjacent to the streets or easements affected by the construction shall be notified by the Contractor at least forty-eight (48) hours in advance of time construction begins. The Contractor can satisfy this requirement by placing a written notice on the door of each residence or business reading "Notice of Construction Operation". [Contractor] will be working on ~~the construction of street improvements on~~ your street starting ~~about on~~ [start day and time]." The Contractor shall provide their contact information on the notice and shall provide a copy of the notification form at the pre-construction meeting and the method to be used (hang on door, etc.) See Article 1.04.060 C (Traffic Control Plan) and Article 1.04.060 E (Road Closure Communication Plan) for additional notice requirements for road closures.
- I. WORK ZONE. The Contractor will be required to confine construction operations within the dedicated right-of-way for public thoroughfares or within areas for which construction easements have been obtained unless it has made special arrangements in writing with the affected property owners in advance. The Contractor will be required to protect stored materials, lawn, trees, and other features located adjacent to the proposed construction site. During construction operations, the Contractor shall construct and maintain such facilities as may be required to provide access by all property owners to their property.
- J. REFERENCE POINTS AND MONUMENTS. See APWA 00 72 00 4.4 (Reference Points and Monuments) for work affecting or related to reference points and monuments.
- K. ABANDONED UTILITY SERVICE. Abandoned water services shall first be permitted through the engineering office. Abandoned water services shall be disconnected at the main. Saddle and corporation stop shall be removed, and a Romac Industries stainless steel repair clamp (Style SS1) shall be installed. Unneeded sewer services shall have a cleanout at property line with a watertight plug on the private property side of the cleanout wye.
- L. INTERFERING STRUCTURES, UTILITIES AND FACILITIES. The Contractor shall exercise all possible caution to prevent damage to existing structures and utilities, whether above ground or underground. While these structures and utilities may be shown on the improvement plans, the information has been

compiled from the best available sources, its completeness and accuracy cannot be guaranteed, and it is presented simply as a guide to possible difficulties. See Section 1.20.020 (Excavation) In Areas with Concrete for repair of damaged concrete.

The Contractor shall notify all utility offices concerned at least forty-eight (48) hours in advance of construction operations in which a utility agency's facility may be involved. Notification to blue stakes does not necessarily cover all buried lines. This shall include, but not be limited to, irrigation, water, telephone, electric, sewer, storm drain, gas, and cable television. The Contractor shall be responsible for any and all changes to, relocation of, or re-connection to public utility facilities encountered or interrupted during the prosecution of the work, and all costs relating thereto shall be at the Contractor's expense.

The Contractor shall contract with and pay Public Utility Agencies for work required in connection with all utility interferences and handle all necessary notifications, scheduling, coordination and details. It shall be the responsibility of the Contractor to relocate and expose all existing underground structures and utilities in such a manner as to prevent damage to the same. Any structure or utilities damaged by the Work shall be repaired or replaced at the Contractor's expense.

If the Contractor encounters existing structures that will prevent construction, it shall notify the City Engineer before continuing with the construction in order that the he or she may make such field revisions as necessary to avoid conflict with the existing structures.

- M. MATERIALS. Acquire, provide, and safeguard materials and turn in submittals according to Section 1.12.030 (Submittals).

1.04.060 Traffic Control

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, traffic control work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA 01 55 26 (Traffic Control)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to traffic control:
1. Article 1.04.060 D (Road Closures)
 2. Article [1.04.060 E \(Road Closure Communication Plan\)](#)

- C. TRAFFIC CONTROL PLAN. Construction Work that will impact vehicle or pedestrian traffic will require a City approved traffic control plan that meets the requirements of APWA 01 55 26 (Traffic Control) and the following:
1. Traffic Obstructions. The Contractor shall, at all times, conduct its work so as to ensure the least possible obstruction to traffic and normal commercial pursuits.
 2. UDOT and County Roads or Right-of-Ways. If vehicle or pedestrian traffic along a County or UDOT road is impacted, the traffic control plan must also be approved by the agency whose road is impacted.
 3. Road Closures. Traffic control plans must include any road closures with estimated dates for closing and opening the road. See Article 1.04.060 D (Road Closures). Traffic Control Plans shall also include Road Closure Communication Plans if required. See Article 1.04.060 E (Road Closure Communication Plan).
 4. Road Surfaces. The Contractor shall be responsible for maintaining existing road surfaces suitable safe for travel by the public.
- D. ROAD CLOSURES. If conditions are justified, the City Engineer may authorize the Contractor to close general traffic to not more than one (1) City block at any given time. No such closure shall be made without the authorization of the City Engineer. Closure of streets or highways shall be in conformance with APWA 01 55 26 (Traffic Control) and the following:
1. Garbage Pickup Day. Road closures are not permitted on garbage pick-up day. This requirement can be waived by the City Engineer.
 2. Overnight Road Closures. If a road is closed overnight, all open trenches shall be covered with a steel plate with appropriate warning sign.
 3. Forecasted Snow. If snow is forecasted and the road is to remain open, no steel plates are allowed. Instead, local road trenches shall be backfilled and compacted with road base. Other roads shall be backfilled with cold mix.
- E. ROAD CLOSURE COMMUNICATION PLAN. City Engineer may require a Road Closure Communication Plan for significant road closures. Road closure communication plans shall include the following:
1. Using a Public Involvement Firm. The contractor shall be required to hire a reputable public involvement firm to oversee public communication. This requirement can be waived by the City Engineer if the project would not measurably benefit from a public involvement firm. The public involvement firm shall ensure, as reasonably possible, the public that are affected by the project are well informed of project details, including schedule.

2. Map of Affected Entities. Public involvement firm shall provide the City with a map of properties affected by the closure. property owners.
3. Critical Notifications. The public involvement firm shall notify the following offices of all closures with the start and end date of closure:
 - a. PUBLIC WORKS
 - b. CITY ENGINEERING
 - c. POLICE
 - d. FIRE
 - e. AMBULANCE
 - f. SCHOOL DISTRICT
 - g. GARBAGE AND RECYCLING COLLECTION SERVICE
 - h. CITY PUBLIC INFORMATION OFFICER
 - i. COUNTY DISPATCH
 - j. UTA DISPATCH
4. Notice. Public involvement consultant shall send notice of closure with the approved traffic control plan to affected property owners within 500 feet of the closure or as defined in the traffic control plan. Notices shall be sent 5 days and again at 48 hours before closure unless otherwise approved in the traffic control plan. The traffic control plan shall include begin and end dates of closure. Notices may be in the form of a door hanger, phone call and/or email.

1.04.070 Post-Construction

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, post-construction work shall meet the requirements and specifications of the following APWA sections and related sections:
 1. APWA 01 78 23 (Operation and Maintenance Data)
- B. BOND RELEASE. The Public Works Director will release bonds when the following is completed:
 1. Operation and Maintenance Manuals. Contractor must submit and make requested revisions to operation and maintenance manuals according to Article 1.04.070 C (Operation and Maintenance Manuals).
 2. Record Drawings. Record drawings must be submitted and revised according to Article 1.04.070 D (Record Drawings).

3. Final Inspection. The final inspection must be completed according to Article 1.16.020 Q (Acceptance of Improvements).
 4. Final Inspection Punch List. Contractor must complete the final inspection punch list according to Article 1.16.020 Q (Acceptance of Improvements).
 5. Payment and Performance Bond. A payment and performance bond will only be released once a warranty bond is received and approved according to Article 1.04.070 E (Warranty Bond).
 6. Warranty Bond. A warranty bond will only be released once the warranty inspection and warranty inspection punch list are completed according to Article 1.16.020 Q (Acceptance of Improvements).
- C. OPERATION AND MAINTENANCE MANUALS. Operation and maintenance manuals shall meet the requirements of APWA 01 78 23 (Operation and Maintenance Data). The Contractor shall furnish the City Engineer with two (2) paper sets, a pdf, and a Word version of all operation and maintenance manuals, drawings, diagrams, etc., for all pumps, motors, control panels, valves, meters, etc. The Contractor shall be responsible for all costs associated with the preparation of operation and maintenance manuals.
- Final inspection shall not be scheduled until the operation and maintenance manuals are received, reviewed by the City Engineer, and corrections made for use in the Operation and Maintenance Manual. The Contractor shall be responsible for all costs associated with the preparation of operation and maintenance manuals.
- D. ELECTRONICS AND RECORD DRAWINGS. When the Owner's Engineer has the capability, pRecord Drawings including the plat, site plan, and as-built improvement drawings shall be furnished electronically in a color PDF and MicroStation Format (.dgn), AutoCAD format (.dwg) or Data Exchange Format (.dxf).

Field record drawings shall be kept on site throughout the project duration. They will be used to create the electronic record drawings. The field Record Drawings should be updated whenever a change from the design is made to assure accuracy. The drawings must show a record of all departures from the contract drawings that occur during construction. These shall be kept on a clean set of prints of the contract drawings. The Project Manager will review the field Record Drawings to verify that changes are being recorded as construction occurs.

Record drawings and the required electronic files may be required to be received, reviewed by the City Engineer, and corrections made prior to Final i~~nspection being schedule~~shall not be scheduled until the records drawings and the required electronic files are received, reviewed by the City Engineer,

~~and corrections made.~~ The Contractor shall be responsible for all costs associated with the preparation of record drawings.

~~In addition to the electronic files, after completion of all public works improvements the Owner shall provide the City with two sets of veldum or sepia (reproducible) "Record Drawings" which have been corrected to show the constructed improvements. Final payment from the bond shall not be made until these records are received.~~

1. PDF File Submittal. PDF submittals shall consist of the Approved Final Construction Set with all construction updates and changes clouded. Dimensions shall be provided for all services and laterals from the nearest lot line to their constructed locations. All sewer, land drain, and storm drain pipes shall have sizes, slopes, and measurements between structures labeled. Actual constructed rim and flow line elevations for each manhole and or box shall be shown.
2. AutoCAD DWG File Submittal. All CAD files shall be registered to the North American Datum 83 (NAD83), U.S. Survey Feet, Utah State Plane Central Zone Coordinate system (grid) with ties to monument information available through the Utah County Surveyor.

Record drawings shall reflect all changes and show all constructed public improvements and utility line work with labeled survey points and elevations on all features (i.e. service laterals, valves, fittings, manholes, etc.). All feature types shall be given unique layer names and color coded by utility type as follows:

• Culinary	-	Blue
• Storm Drain/Gravity Irrigation	-	Purple
• Sanitary Sewer	-	Green
• Land Drain	-	Brown
• Pressure Irrigation	-	Orange
• Electrical and Dry Conduits	-	Red
• Road Features	-	White

All files shall be constructed in a format that is geometrically correct; meaning that all lines that intersect are snapped together at a common point (no overlapping lines or short shots vertically or horizontally).

Storm, land drain, and sewer pipes shall be drawn in the direction of flow and shall be a continuous polyline between structures and snapped together at the centerline of the structure. Water lines shall be continuous polylines

between pipe intersections or changes in pipe size. Street centerlines shall be continuous polylines between intersections. The edge of pavement or curb and gutter, sidewalks, and street centerlines shall be as shown on the design drawing unless field adjustments are made, which will require resurveying for the record drawings. Culinary waterline, storm drain lines, and power conduit lines shall be polylines representing their actual horizontal location. Where text is being placed for a polygon feature, the text justification point shall be placed within the boundary of the polygon. It is acceptable to have the text overlap one another. FREE HAND DRAWINGS WILL NOT BE ACCEPTED!

E. WARRANTY BOND. All Development shall submit a ~~cash~~[letter of credit](#) warranty bond after final inspection and before final acceptance. Bond shall be in the amount of 10% of the payment and performance bond. For Minor Land Disturbance Permits, [a minimum](#) \$500 of the contractor bond will be held for warranty.

1.08 Design Requirements

1.08.010 General Requirements

- A. GENERAL. The purpose of the Design Criteria is to govern any design and engineering performed regarding public improvements. Engineers and designers working on projects within the City should thoroughly read and understand these requirements before designing and creating construction plan sets for public improvements.

This division contains design criteria that are in addition to normal and acceptable engineering practices and are to be used on designs in the City. The City Engineer shall have authority to modify the criteria as needed to meet changing or unusual needs or conditions.

The design engineer shall contact the City for all matters dealing with engineering within the City's existing or proposed right-of-way or with any work connecting onto a City utility.

- B. ENGINEERING. The criteria contained in this document are organized into divisions and sections covering specific areas of design. It will often be necessary to use a number of sections for the design of a single project. For instance, the design of a street may require the use of standards regarding streets, sidewalks, pressure pipe, sewer, and storm drain.

These standards are a guide for design, but not a substitute for quality engineering. It is the obligation of the designer to use these standards responsibly and professionally to produce designs conforming with commonly accepted engineering practices and the Code of Professional Conduct. It will at times be desirable and/or necessary to vary from the standards in this document to produce a quality product. When the need arises, please refer to the following section on variances.

- C. VARIANCES. When it becomes necessary or desirable to vary from the standards presented in this document, a variance may be requested from the City Engineer. Such a request shall be made in writing and will include:

1. The standard to be varied.
2. The proposed variation.
3. Justification for the variance.

A written response will be given within a reasonable time period. A variance determination may be appealed to the Development Review Committee; then the Planning Commission; and then the City Council.

- D. AMENDMENTS. Amendments to these standards may be requested by writing the City Engineer with details and justification for an amendment. The

City Engineer along with ~~the City~~[the City](#) Staff will meet periodically to discuss proposed amendments and make recommendations to ~~the City~~[the City](#) Council. ~~The City~~[The City](#) Council will entertain changes to the standards once a year at their discretion.

1.08.020 Construction Plans

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to construction plans:
1. Chapter 1.44 (Landscaping)
 2. Chapter 1.48 (Irrigation Sprinkler Systems).
 3. Section 1.04.060 (Traffic Control)
- B. CONSTRUCTION PLANS APPROVAL. The City Engineer shall approve construction plans ~~in accordance with this Chapter and cut sheets~~ before any work begins. Contractors proceeding with work without such approvals shall have the project shut down until such approvals are obtained. Repeated offenses may result in the Contractor losing its pre-qualification to perform work in ~~the City~~[the City](#).
- C. Traffic Control Plan. If applicable, a copy of the approved Traffic Control Plan according to Section 1.04.060 (Traffic Control) shall be ~~included in the construction plans~~[submitted 7 working days prior to start of construction operations](#).
- D. CONNECTION. ~~Developers shall extend street and utility improvements to the boundaries of the development and to a connection with existing improvements of the same kind according to master plans and as directed by the City Engineer. Developers are required to upsize utilities based on latest master plans. Development layout must provide for future street and utility extension to adjacent development and be compatible with the contour of the ground.~~
- E. PLAN SETS. The following instructions are for the purpose of standardizing the preparation of construction plans to obtain uniformity in appearance, clarity, size, and style. Plans and designs shall meet the standards defined in the specifications and drawings hereinafter outlined. All drawings and/or prints shall be clear and legible and conform to good engineering and drafting room practice.

Include the following in construction plans for all Developments:

1. Final Plat or Site Plan. A copy of the final plat or site plan if applicable.

2. Comprehensive Plan View. A comprehensive plan view of the entire project showing all utilities, roads, and appurtenances.
 3. Plan and Profiles. Plan and profiles of all storm, land and groundwater drains, sanitary sewer, curb, gutter, and irrigation.
 4. Detail Drawings. Detail drawings of street cross sections according to the City Construction and Design Standard Drawings and other detail drawings only for items not found in the City standard drawings. Detail drawings shall be to scale and completely dimensioned and described. All items shall be designed in accordance with minimum requirements established by the City Construction and Design Standards.
 5. Off-Site Work Plans. Complete plans for all off-site work to be done in conjunction with the Development.
 6. Professional Civil Engineer Stamp and Signature. A stamp and signature of a Professional Civil Engineer licensed in the state of Utah on each plan sheet, detail drawing, and design sheet.
 7. Detailed Engineer's Estimate. Detailed engineer's take off quantities and cost estimate for all construction work related to the project.
 8. Existing and Proposed Conditions and Improvements. All plan and profile sheets shall show all existing and proposed improvements including but not limited to concrete, structures, pavement, landscaping, boxes, pipe, valves, manholes, poles, power and communications boxes, conduit, water ways, water bodies, and wetlands.
- F. PLAN AND PROFILE SHEETS. Include the following on each plan sheet:
1. North Arrow. Generally, north should be up or to the right if up is not feasible.
 2. Scale. Only use standard engineering scales between 1 inch equals 10 feet and 60 feet. A scale of 1 inch equals 100 feet may be used on the plan view of the entire project if necessary to fit project on one sheet.
 3. Title Block. Title block along right side of sheet with title of drawing in lower right corner. Include in title block:
 - a. Name of subdivision and plat or site plan.
 - b. Name of City.
 - c. Specific type of drawing (construction drawings, plan view, plan and profiles, off-site construction, detail drawings).
 - d. Name of engineer, surveyor, or firm preparing drawings.

- e. Drawing number of total number of drawings.
4. Profile Sheets. Also include the following with profile drawings:
- a. Vertical scale of 1 inch equals 1, 2, 3, 4, 5, or 6 feet.
 - b. Reference to the vertical datum. The 1929 or 1988 North American Vertical Datum (NAVD29 or NAVD88) shall be used for all elevation data. NAVD29 may only be used when approved by the City Engineer.
 - c. Benchmark location and elevation for checking construction.
 - d. Stationing aligned from plan view.
 - e. Existing ground, ditch, and utility lines.
 - f. A sheet index on each sheet showing profiled area in relation to the overall project.
- G. ELECTRIC AND COMMUNICATION PLANS. Construction plans must include the location of all existing and proposed poles, transformers, secondary junction boxes, sectionalizers, switchgears, overhead or underground electrical wire and communication cable and any other significant electric or communication infrastructure.
- H. STREET, PARKING LOT, AND DRIVEWAY PLANS. Include the following for curb, gutter, sidewalks, and street surfacing plans:
- 1. Plan and Profile. Plan and profile for top back of curb for each side of the street. Label profile line as top back of curb for both sides of street if it is the same.
 - 2. Elevations and Flow Direction Arrows. Flow line elevations and flow direction arrows for gutters.
 - 3. Curb and Gutter Type. Type of all standalone curbs and curb and gutter if other than the standard APWA Plan 205.1 Type A 30 inch Curb and Gutter. City Engineer may approve twenty four inch curb and gutter to match existing.
 - 4. Accesses. Location and width of all accesses.
 - 5. Street Cross Sections. Street cross sections with all proposed and existing utilities and base sections as per pavement design and soils report and Construction and Development Standards.
- I. SANITARY SEWER, STORM, LAND AND GROUNDWATER DRAIN PLANS. Include the following for sanitary sewer, storm, land and groundwater drain plans:

1. Plan and Profile. Plan and profile of all new and existing mains and manholes.
 2. Boxes and Manholes. Box and manhole size, location, and elevations of flow lines and rim.
 3. Pipe. Location, size, grade, and type of pipe of new and existing mains.
 4. Service Laterals. Location of each service lateral with distance stubbed back into property clearly drawn and dimensioned. For abandoned sanitary sewer services see Article 1.04.050 K (Abandoned Utility Service). Service lateral connections to the main shall be spaced a minimum of 4 feet apart.
 5. Storm Calculations. Storm water calculations required by Section 1.08.070.
 6. Storm Inlet Boxes. Storm inlet boxes shall be located on street corners and or property lines according to the Standard Drawings.
- J. DRINKING WATER PLANS. Include the following for drinking water and plans:
1. Pipe. Location, size, and type of pipe of new and existing water mains.
 2. Fittings. Location of valves, fittings, hydrants, boxes, meters, and appurtenances.
 3. Minimum Cover. Minimum cover of four (4) feet.
 4. Service Laterals. Location of each service lateral with distance stubbed back into property clearly drawn and dimensioned. For abandoned water services see Article 1.04.050 K (Abandoned Utility Service). Service lateral connections to the main shall be spaced a minimum of 4 feet apart.
 5. Redundant Water Loops. Looping of the drinking water lines will be required at the discretion of the City Engineer to provide adequate fire flows, pressures, water quality, and redundancy. Below are guidelines as to when redundant connections may be required:
 - a. **PRESSURE SWINGS:** Looping is required if modeled or existing pressure swings exceed 20 psi during a peak day.
 - b. **FIRE FLOW AND MINIMUM PRESSURE:** Looping is required if modeled or existing pressures and fire flow do not meet State or City minimum standards.
 - c. **NUMBER OF UNITS ON A DEAD-END LINE:** If a development's plans will create an additional drinking water line connection in future phases, 50 homes, or equivalent residential units, may be

installed onto the dead-end drinking water main line.
Permanent dead-end lines may only have 35.

- d. **SUPPLY TO CRITICAL FACILITIES:** If the waterline will or does supply water to a critical facility (as determined by the City Engineer), looping is required.
 - e. **WATER QUALITY:** Looping is required if there is reasonable risk of the design causing degradation of water quality.
- K. **LANDSCAPING PLANS.** For landscaping that will be maintained by the City or a homeowner's association submit one copy of the landscaping plans including all irrigation system layouts, details, legends, and drawings. These project plans shall meet the requirements of the Chapter 1.44 (Landscaping) and Chapter 1.48 (Irrigation Sprinkler Systems).
- L. **IRRIGATION CANAL AND PIPE PLANS.** Plans that affect canals or irrigation pipes must be stamped approved by those responsible for their maintenance before they are approved by the City unless otherwise required by law.

1.08.030 Land Development

- B. **GENERAL.** The following land development criteria shall apply to all designs for land development in the City. It will be necessary to refer to the current general plan and zoning plan for correct land use designations. Design shall comply with the current City Zoning Ordinance and Subdivision Ordinance. Additional design criteria are specified in the Standard Drawings.
- C. **PROJECT IMPACT ON ADJACENT PROPERTIES.** The design of public improvement and utility projects shall evaluate the project impact to adjacent private and public property. The evaluation shall include mitigation measures for right-of-way acquisition, public utility easements, and construction easements. The design engineer shall give consideration to traffic and pedestrian safety, accessibility and storm water surface flows that may have an impact on all adjacent properties.

The design of the new development must not create a non-conforming use out of a neighboring parcel. For example, if a pre-existing lot designed to function as an interior lot will change to a corner lot because of the design of the new development, additional property may need to be deeded to that lot to insure it is in conformance to the current zoning ordinance for a corner lot.

- D. **DESIGN CONSIDERATIONS TO PRESERVE NATURAL FEATURES AND MITIGATE HAZARDOUS CONDITIONS.**
- 1. **Natural Features.** The design of public improvements shall preserve the natural features such as natural drainage, wetlands, existing native vegetation and wild life habitat where applicable. The Applicant(s) or his/her representative shall delineate the location of such natural

feature when submitting concept plans or preliminary design drawings for all public improvement projects. The design engineer shall be responsible to incorporate all natural features identified by City Staff reviews and shall be required to notify and get approval from all state and federal agencies that control the natural features.

2. Hazardous Conditions. Land subject to hazardous conditions such as wetlands, soil liquefaction, shallow water table, floods, landfill, and polluted or non-potable water supply shall be identified and shall not be developed until the hazards have been preserved or will be mitigated during development process and will appear on construction design plans. The approval of a subdivision plat or construction drawings do not terminate the responsibility of the design engineer in using standard duty of care in the investigation and design for the hazardous conditions associated with the project. The design engineer shall be required to notify and get approval from all state and federal agencies that control the preservation or mitigation processes.
- E. IDENTIFICATION OF EXISTING EASEMENTS AND RIGHTS OF WAY. The design engineer shall identify all easements and rights of way that exist on the subject property that is to be developed. Sufficient investigation and agreements must take place to illustrate to the City the status of all easements and rights of way on the property. These easements and rights of way must be illustrated on the appropriate drawings and in a clear manner.
- F. RECORDS DRAWING SUBMITTAL REQUIREMENTS. See Article 1.04.070 (Record Drawings). Record drawings shall may be required to be submitted before warranty requests scheduling final inspection.

1.08.040 Streets

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, street work shall meet the requirements and specifications of the following APWA sections and related Divisions:
 1. APWA DIVISION 34 (Transportation)
 2. APWA DIVISION 03 (Concrete)
 3. APWA 03 30 04 (Concrete)
 4. APWA 32 16 13 (Driveway, Sidewalk, Curb, Gutter APWA 31 05 19 (Geotextiles)
 5. APWA 31 05 21 (Geogrids/Geocomposites)
 6. APWA 32 12 16 (Plant-Mix Asphalt Paving)
 7. APWA 32 12 16.13 (Plant-Mix Bituminous Paving)

8. APWA 32 14 13 (Precast Concrete Unit Paving)
 9. APWA 32 14 16 (Brick Unit Paving)
 10. APWA 32 17 23 (Pavement Markings)
 11. APWA 34 71 13 (Vehicle Barriers)
 12. APWA 34 71 19 (Vehicle Delineators)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to Storm, Land, and Groundwater Drain design standards:
1. Chapter 1.36 (Streets and Pavements)
 2. Chapter 1.40 (Portland Cement Concrete and Masonry Work)
 3. Drawing 1 (Standard Street Intersection and Utility Locations)
 4. Drawing 2 (Standard Utility Locations in Knuckle)
 5. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 6. Drawing 4 (Standard Street Cross Sections and Utility Locations)
 7. Drawing 5 (Curb, Gutter, and Sidewalk)
 8. Drawing 6 (Typical Curb Approach)
 9. Drawing 7 (Standard Curb Return at Intersection)
 10. Drawing 8 (Pedestrian Access)
 11. Drawing 9 (Pedestrian Access Mid Block)
 12. Drawing 15 (Standard Cul-De-Sac)
 13. Drawing 16 (Standard Knuckle)
 14. Drawing 31 (110-Foot Roundabout for Local Street Intersection)
 15. Drawing 32 (Typical Street/Stop Sign Installation Detail)
 16. Drawing 33 (Typical Street Light 1)
 17. Drawing 34 (Typical Street Light 2)
 18. Drawing 35 (Typical Street Light 3)
 19. Drawing 36 (Concrete Pole Base (Street Light))

- C. GENERAL. The following street design criteria shall apply to all street designs in the City. It will be necessary to refer to the current master transportation plan for correct street designation. Design shall comply with the current AASHTO guidelines on geometric design. Additional design criteria are specified in the Standard Drawings
- D. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to street improvements:
1. Article 1.44.010 H (Fences and Walls)
- E. DRIVEWAY AND INTERSECTION LOCATION. Driveways and street intersection locations shall be designed according to the [City Transportation Master Plan](#). No driveways shall be constructed within the following distances from an adjoining street. These distances are from top back of curb (TBC) to the edge of driveway for accesses along local streets:
- a. [34' from an adjoining local street](#).
 - b. [100' from adjoining collector/arterial \(approach\)](#).
 - c. [120' from adjoining collector/arterial \(departure\)](#).

Curb cuts shall only be allowed for driveways. Driveways shall be a minimum of 3 feet from any above grade utility box. All accesses and streets onto collectors and arterials must be approved by the City Engineer.

[No at grade street intersection shall be allowed along the crossing road within 250 feet from the railroad right-of-way. No access shall be allowed along the crossing road within 250 feet unless authorized and approved by the Development Review Committee. Any access approved within 250 feet of the railroad right-of-way shall require a railroad crossing diagnostic be completed and approved by both Union Pacific Railroad and UDOT.](#)

- F. PARKING. Parking shall meet the requirements of the [City Title 15 Zoning Code](#) and City Construction and Design Standard Drawings.
- G. REVERSE FRONTAGE LOTS. New residential developments shall only be designed to allow direct access from individual lots or dwelling units to local streets unless otherwise authorized by the City Engineer.
- H. ALLOWABLE GRADES. The maximum grade allowed for any City street or private driveway is 8.0% unless otherwise approved by the City Engineer. In no case shall grades greater than 12.0% be allowed. The minimum grade allowed for any City street is [0.50%](#).
- I. STAMPED CONCRETE. The color and pattern of stamped concrete shall be approved by the [Development Review Committee](#).

- J. PRECAST CONCRETE OR BLOCK WALLS. Masonry walls, six feet tall, shall be provided along the sides of residential developments which have reverse or side frontage to arterial streets, collector streets, interstates or railroads. If a lot has frontage on a Residential collector street, a 6' masonry wall is required.
- K. PEDESTRIAN RAMPS. Pedestrian ramps shall be placed at all corners of intersections and at all other locations of regular pedestrian traffic across roads as determined by the City Engineer or his/her designee. All ramps shall conform to the requirements of the Americans with Disabilities Act and City standards. Utility access fixtures shall not be located within 2 feet of the closest edge of a pedestrian ramp. Concrete aprons for fire hydrants, electrical boxes & etc. shall extend to ramps or driveways to eliminate landscape strips between utility aprons and ramps/driveways. Storm inlet boxes are not allowed within the pedestrian ramp.
- L. HORIZONTAL AND VERTICAL CURVE. Horizontal and vertical curve alignments shall be determined by AASHTO Geometric Design of Highways and Streets (Greenbook) and additional ASSHTO design standards.
- M. MAILBOXES. Proposed neighborhood mailbox locations shall be required with the development plans.
- N. INTERSECTIONS. Full intersections that are encompassed in one subdivision need to be built in the same phase of the subdivision. Up to the curb returns on all 4 corners. Section of an intersection cannot wait for future phases.
- O. TRAFFIC IMPACT STUDIES. A traffic impact study may be necessary to identify, review and make recommendations for mitigation of the potential impacts a development may have on the roadway system. Physical and operational characteristics of the roadway are typically identified. The development design engineer is expected to follow the Utah Department of Transportation document entitled "Traffic Impact Study Requirements" (current edition). Generally, a traffic study may be required for all developments expected to produce over 100 average daily trips (ADT). The City engineer will have the authority to dismiss this requirement if it can be illustrated that the traffic impact will be negligible on the roadway system. All developments expected to produce over 100 ADT must be discussed with the City Engineer to determine the necessity of this requirement.
- P. STREET CLASSIFICATION. Streets will be classified according to their functional use as described below. Existing facilities may not fully comply.
 - 1. Boulevard Streets Arterials. The Boulevard Arterial Streets provide continuous routes for the movement of large volumes of all types of through traffic across the City and between the City and outlying areas. Geometric design and traffic control should emphasize the safe movement of through traffic and minimize property access. Access to arterials shall be limited from local streets or individual driveways.

Arterials will typically be multi-lane streets and shall have separate turning lanes at intersections. Arterials will connect to the Expressway system.

2. Parkway Streets Collectors. The Parkway Collector Streets provide continuous routes for the movement of large volumes of all types of through traffic across the City and may also connect to outlying areas. Geometric design and traffic control should emphasize the safe movement of through traffic and minimize property access. Access to collectors shall be limited from local streets or individual driveways. Collectors will typically be two-lane streets with separate turning lanes at intersections and may be multi-lane streets if warranted by traffic volumes.
 3. Local Streets. The Local Streets serve as a means of access to abutting property. They are intended to serve low speeds and short trip routes, with usually less than 500 vehicles per day.
 4. Design Vehicle for Classification Type. All street classifications are designated to carry passenger vehicles and up to the following Design Vehicle Types:
 - a. Boulevard-Arterial Streets up to WB50.
 - b. Parkway-Collector Streets up to WB40.
 - c. Local Streets up to SU30.
- Q. MINIMUM AND MAXIMUM GRADES. The minimum acceptable grade slope measured at the centerline of the street is one-half percent (0.5%). The flow line of curb returns, knuckles and cul-de-sacs' shall also be no less than one-half percent (0.5%). The maximum slope varies depending on road classification. The sub-sections below shall be used to determine maximum slope.
1. ~~Boulevards and Parkways~~Arterial and Collector Streets. ~~Boulevard and Parkway-s~~Arterial and Collector Streets shall be limited to a maximum grade of eight percent (8%). Sustained grades (600 feet or more) shall be limited to seven percent (7%).
 2. Local Streets. Local streets shall be limited to maximum grade of ten percent (10%). Sustained grades (600 feet or more) shall be limited to nine percent (9%).
 3. Cul-de-sacs. Cul-de sacs with shall be limited to a maximum grade of six percent (6%). The cul-de-sac shall terminate at the bulb with a grade not to exceed three percent (3%) for the last one hundred feet (100') of traveled surface.

4. Vertical Alignment. All changes in vertical alignment shall be made by vertical curves with minimum length of one hundred feet (100') for local streets and three hundred feet (300') for boulevard and parkway streets. Actual vertical curve length shall be a function of design speed.
- R. STREET DESIGN. The following street design criteria shall apply to all street designs in the City. Additional design criteria are specified in the Standard Drawings.
1. Design Speeds. The design speed will be used to design and establish geometric features including sight distance, intersections, etc. to current AASHTO standards. The following minimum design criteria shall be met.
 - a. Local street shall be designed to at least 30 mph.
 - b. ~~Parkway-Collector~~ Streets shall be designed to at least 40 mph.
 - c. ~~Boulevard-Arterial~~ Streets shall be designed to at least 50 mph.
 1. Posted speed limits shall be 5 mph less than the listed design speeds.
 2. Horizontal Curves. Changes in horizontal alignment of over one degree shall be made using horizontal curves. In some cases, horizontal alignment changes on local streets may be allowed without a horizontal curve if the resulting alignment functions as a two-legged intersection.
 - a. Local Streets shall have a centerline radius of at least 150 feet.
 - b. Collector Streets shall have a centerline radius of at least 370 feet.
 3. Vertical Curves. Streets shall be designed with vertical curves where grade changes greater than 1% occur. Vertical curves shall be designed using the appropriate design speed according to the latest AASHTO design guidelines. It is encouraged to include the "K" value in the profile illustrating the vertical curve.
 4. Cul-de-sacs. The cul-de-sac shall be limited to a maximum length of six hundred fifty feet (650') as measured from the intersection centerline to the center of the cul-de-sac. Downhill cul-de-sacs are strongly discouraged and may only be allowed if it can be demonstrated that surface drainage will be controlled in a manner acceptable by the City Engineer and approved by City Council.
 5. Widening Asphalt along an Existing Road. When a development project requires asphalt widening due to the placing of new curb and gutter along an existing road, the cross slope of the new asphalt must

be between one percent (1%) and four percent (4%). The construction drawings must adequately show the cross slope and the asphalt “saw cut line” required to create the slope. The new asphalt shall match the existing cross slope or shall be replaced from the crown of the roadway to the gutter.

6. Finished Width of Exterior Roads. When ~~authorized by the City Engineer, roads with development on one side may construct a minimum of half the road plus ten (10) feet of pavement and three (3) feet of shoulder. roads are designed along the exterior of developed property, a minimum of ten (10) feet of unobstructed asphalt on the opposite side of the designed centerline must be constructed.~~ Depending on the classification of the road, additional width may be requested by the City.

7. Lane Widths, Turning Lanes and Clear Zones.
 - a. The minimum traffic lane width will be 11 feet. Pavement widths are as defined in the City Standard Drawings.

 - b. Turning lanes shall be incorporated on ~~Boulevard~~ Arterial and ~~Parkway-Collector~~ Street designs. Length of separate turning lanes shall be designed using the current addition of AASHTO and based on a capacity analysis. Width of separate turning lanes shall be 12-foot in width for ~~Boulevard~~ Arterial streets and 11-foot width for ~~Parkway-Collector~~ streets.

 - c. A three (3) foot clear zone shall be required on all streets built with a curb and having a speed limit of 25 mph or less. Streets with speed limits greater than 25 mph will use the AASHTO Standard to determine clear zone limits. Variances to clear zone requirements will be considered for overhead electrical facilities where compliance will significantly impact existing trees. In no case will a clear zone of less than eighteen (18) inches be allowed. A clear zone variance must be approved by the City Engineer.

8. Pavement Loading and Design. The following charts shall be used in the determination of pavement loading and design.

TRAFFIC CLASSIFICATIONS			
Traffic Class	Maximum EAL(a)	Type of Street	Total Heavy Trucks During

			Design Period
I	5000	Light Traffic Cul-de-sac	7,000
II	10,000	Local Streets	7,000 - 15,000
III	100,000	Collector Streets	70,000 – 150,000
IV	1,000,000	Arterial Streets	700,000 – 1,500,000
(a) Equivalent axle load for 20 year design period			
(b) Roadway serving as access for construction vehicles may require additional structure design prior approval			

- a. The table below illustrates the traffic classifications to be used for determination of the minimum roadway structural sections.
- b. The table below illustrates the California Bearing Ratio (CBR) values as they relate to the subgrade soil classifications.

SUBGRADE SOIL CLASSIFICATION			
Subgrade Class	Resilient Modulus (Mpa)	Characteristics of Soil	CBR Value
Very Poor Soil	<30	Clay and fine silt - Extremely soft and plastic when wet	3
Poor Soil	30-80	Clay, fine silt and sandy soils - soft and plastic when wet	3-8
Medium Soil	80-170	Loans, silty sands and some clayey sand gravel, retains moderate degree of firmness with moisture	8-17
Good to Excellent Soil	170	Clean sands, sand gravel and free of plastic materials- retains load support when wet	17

- c. The table below illustrates the minimum required structural section based on the specific CBR value.

ASPHALTIC CONCRETE PAVEMENT STRUCTURAL SECTION					
Subgrade Class	Pavement Section	Traffic Classification			
		I	II	III	IV
Very poor CBR <3	Asphalt Concrete Surface	3"	3"	4"	6"
	Untreated Aggregate Roadbase	10"(b)	12"(b)	8"(b)	12"(b)

	Aggregate Subbase	-	-	12"(b)	16"(b)
Poor CBR 3-8	Asphalt Concrete Surface	3"	3"	4"	6"
	Untreated Aggregate Roadbase	8"	8"	8"	8"
	Aggregate Subbase	-	-	6"	12"
Medium CBR 9-17	Asphalt Concrete Surface	3"	3"	4"	6"
	Untreated Aggregate Roadbase	8"	8"	8"	8"
	Aggregate Subbase	-	-	4"	6"
Good to Excellent CBR >17	Asphalt Concrete Surface	3"	3"	4"	6"
	Untreated Aggregate Roadbase	8"	8"	8"	8"
	Aggregate Subbase	-	-	-	-
(a) Subbase soil must be of sufficient depth for the stabilization of the road structural section. (b) Road structural design must be submitted by a licensed and qualified engineer for review and approval. (c) Traffic Classification III & IV requires the addition of an appropriate geotextile fabric conforming to AASHTO M288-96 to separate the roadbase course from the subbase. (d) Traffic Classification III & IV requires a 3/4" mix design. (e) Traffic Classification I & II requires a 1/2" mix design.					

S. INTERSECTION DESIGN. The following intersection design criteria shall apply to all intersection designs in the City. Additional design criteria are specified in the Standard Drawings.

1. Street Alignment and Offsets. Angular street alignment at an intersection shall be as close to perpendicular as possible. In no case shall an intersecting street be more than 10° from perpendicular. Centerlines of opposing streets should match at the intersection whenever possible. Offsets of up to ten (10) feet may be allowed in a single intersection but separate intersections must have at least one-hundred fifty (150) feet of separation.
2. Curb Returns. Curb returns shall be designed such that there is a smooth transition from one leg of the intersection to another, using vertical curves where grade changes greater than 2% occur. The designer shall include enough information on the plans to demonstrate compliance. In some cases, this requires profiling the top back of curb through the curb returns. Elevations at the PC, PT, and appropriate subdivided delta (central angle) locations will be required.

3. ADA Curb Ramp Design. Curb ramps shall be designed in accordance with current ADA standards and guidelines, and shall meet the Accessibility Standards found in the City Standard Specifications (see Division 12, Concrete Curb and Gutter and Sidewalk). The standard drawings also include specific dimensional information.
 4. Stop Controlled Grades at Intersections. Streets that will have stop control at an intersection shall not have a grade slope of greater than three percent (3%) for a distance of fifty (50) feet from the intersecting streets right-of-way.
 5. Roundabout Design. Roundabouts shall be designed in accordance with the U.S. Department of Transportation publication FHWA-RD-00-067 (Roundabouts: An Informational Guide). Roundabouts in local streets shall also follow the criteria shown in the standard drawings. The engineer shall submit the circulatory design speeds with the design drawings.
 6. Sight Distance Triangle. A clear line of sight must be provided at all intersections, ~~see Vineyard City Access Management Manual. The "Sight Distance Triangle" must be calculated using the stopping "Sight Distance" of the road being intersected. The stopping "Sight Distance" is 200 feet for a Local street, 300 feet for a Parkway Collector and 425 feet for a Boulevard Arterial. The figure below illustrates the required "Sight Distance Triangle" based on the "Sight Distance".~~
- T. PARKING. ~~See Standard Drawing 30. The dimensions of each off-street parking space shall be at least nine feet (9') by eighteen feet (18'). Diagonal parking spaces shall be nine feet (9') by eighteen feet (18') measured from the nearest curb face. Ninety (90) degree parking spaces shall be nine feet (9') by eighteen feet (18') measured from the curb face. Parallel parking spaces shall be nine feet (9') by twenty four feet (24') measured from the curb face.~~
- U. STREET LIGHTING. All streets shall have street lights spaced 250 feet on center on alternating sides of the street. Street lights shall be located at or on property lines or corners.
1. Residential Streets. Street lights along residential streets shall be placed on 12-foot (12') poles. At a 4-way intersection a street light shall be placed at a minimum of 2 adjacent corners. At a 3-way or a tee intersection a street light shall be placed on the property line along the through street across from the odd street leg. At knuckles or 2-way intersections a street light shall be placed on the inside corner. A street light shall be placed at the end of cul-de-sacs.
 2. Arterial and Collector Streets. Street lights along arterial and collector streets shall be placed on 20-foot (20') poles. At all intersections a street light shall be placed at each corner of the intersection.

1.08.050 Drinking Water

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water work shall meet the requirements and specifications of the following APWA sections and related Divisions:
 - 1. APWA DIVISION 33 (UTILITIES)
 - 2. APWA 33 11 00 (Water Distribution and Transmission)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to Storm, Land, and Groundwater Drain design standards:
 - 1. Chapter 1.24 (Drinking Water)
 - 2. Drawing 1 (Standard Street Intersection and Utility Locations)
 - 3. Drawing 2 (Standard Utility Locations in Knuckle)
 - 4. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 - 5. Drawing 22 (Fire Hydrant and Water Valve Detail)
 - 6. Drawing 23 (Thrust Block Details)
 - 7. Drawing 24 (Typical Culinary Water Connection)
 - 8. Drawing 25 (Large Meter Assembly)
 - 9. Drawing 26 (Backflow Prevention Assembly)
- C. GENERAL. See Chapter 1.24 (Drinking Water). The Developer shall connect the development with the city drinking water system with all appurtenances and shall make such drinking water available to each lot or unit within the development. Adequacy of supply and sizes of drinking water mains shall be established by the City Engineer. Looped connection of the drinking waterlines will be required at the discretion of the City Engineer to provide adequate fire flows and redundancy.
- D. GENERAL. The following pressure pipe design criteria shall apply to all pressure pipe designs in the City. Design shall comply with the current applicable AWWA standards. Additional design criteria are specified in the Standard Drawings.
- E. CULINARY WATER PIPE DESIGN.
 - 1. Pipe Material. Polyvinyl Chloride (PVC) pipe for the transmission and distribution of water shall be manufactured in accordance with the most current AWWA C900 standards, "AWWA Standard for Polyvinyl Chloride Pressure Pipe, 4-inch through 12-inch, for Water". The PVC

pipe shall have a cast-iron-pipe-equivalent outside diameter. PVC pipe 14 inches and larger shall be manufactured in accordance with the most current AWWA C905 standards, "AWWA Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14-inch through 36-inch". All PVC pipe 4-inch and larger shall be DR. 18 with a working pressure of 150 PSI. Pipe smaller than 4-inch shall be schedule 40 PVC.

2. Fire Hydrant Spacing. Fire Hydrants shall be placed in locations that allow for accessibility by the lay of a fire hose of no more than two hundred fifty (250) feet from the hydrant to the most remote point of any structure intended for occupancy. Buildings that are to be equipped with sprinkled fire suppression are to have a hydrant within one hundred (100) feet of the "Fire Department Connection" (FDC). Other requirements shall be based on the "International Fire Code" or designated Fire Marshall. A fire hydrant shall be located at the end of a cul-de-sac or temporary dead-end street.
- F. PIPE LOOPING. Culinary pipe shall not be looped under a sanitary sewer pipe.
- G. AIR VAVLES. Water system designs shall be designed without the requirement of air valves.

1.08.060 Sanitary Sewer

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, sanitary sewer work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 33 31 00 (Sanitary Sewerage System)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to Storm, Land, and Groundwater Drain design standards:
1. Chapter 1.28 (Sanitary Sewer)
 2. Drawing 1 (Standard Street Intersection and Utility Locations)
 3. Drawing 2 (Standard Utility Locations in Knuckle)
 4. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 5. Drawing 18 (Typical Sewer Manhole Detail)
 6. Drawing 19 (Typical Manhole on Existing Pipe)
 7. Drawing 20 (Typical Sampling Manhole)

8. Drawing 21 (Typical Sewer Drop Manhole)
 9. Drawing 27 (Typical Sewer Lateral)
 10. Drawing 28 (Typical Grease Trap)
 11. Drawing 14 (Typical Land Drain Manhole Detail)
- C. GENERAL. The Developer shall provide each lot with a sanitary sewer system in accordance with the ordinances of the City. All said work shall be done as directed and under the supervision of the City Engineer. Note that abandoned sewer services shall have a cleanout at property line with a watertight plug on the private property side of the cleanout wye.

The following sewer design criteria shall apply to all gravity sewer system designs in the City. Additional design criteria are specified in the Standard Drawings.

- D. PIPE SLOPES. Slopes shall be designed to have a 2 foot per second velocity unless otherwise approved by the City Engineer. Sewers shall be laid with uniform slope between manholes. Whenever possible the slope should exceed 0.006 ft/ft. The pipe should be sized to meet anticipated hydraulic loads, increasing the pipe size to reduce the minimum slope requirements shall not be allowed. Sewer slopes shall not exceed 0.12 ft/ft, drop manholes shall be used when steeper slopes are needed, drop manholes shall be used to keep line grade below maximum grade allowed.

The minimum sewer pipe-main shall be eight-inch (8") diameter and shall not be designed at a grade no flatter than that, which is specified in the table below. If the State guidelines require steeper grades than indicated below, the State guidelines shall apply. The engineer shall coordinate the pipe size with the City Engineer for future design capacities.

Minimum Sanitary Sewer Slopes	
Pipe Diameter (inches)	Minimum Slope (%)
4	2.000
6	1.000
8	0.400
10	0.280
12	0.220
14	0.158
15	0.150
16	0.132
18	0.120
21	0.100
24	0.080
27	0.066

30	0.057
36	0.045
48	0.031
54	0.027
60	0.023

Unless otherwise approved and/or required by the City Engineer, sewer lines eight (8) through fifteen (15) inches in diameter shall be designed to flow no more than half-full during peak flow. Sewer lines larger than fifteen (15) inches in diameter shall be designed to flow three-fourths full.

- E. MANHOLE DESIGN. ~~See Section 1.28.020 (Manholes). Minimum interior diameter for manholes with one or two connections is four foot (4'). Minimum interior diameter for manholes with three or more connections is five-foot (5'). The diameter of the manhole shall be determined by the intersection pipe sizes and the clearances required between the pipes for proper construction. Generally, there should be a minimum of twelve inches (12") clear distance between any two connecting pipes. See Article 1.28.020 (Manholes Size) for sizing manholes.~~ Spacing between manholes shall be no more than four hundred (400) feet.

All manholes and combination boxes shall feature steps made of copolymer polypropylene conforming to ASTM D4101.

Pipe inverts through a manhole shall have a minimum two-tenths (0.20) fall from the inlet to the outlet when the pipes are greater than 100° apart in alignment. When the pipes are 90° to 100° apart in alignment, three-tenths (0.30) fall will be required. Pipe alignments under 90° will not be allowed and will require the construction of additional manholes.

A manhole must be provided at the end of all piping sections in a development. The manhole must be located as close to the edge of the project as reasonably allowable when future adjacent land development is possible. The manhole base shall be constructed for the future connections with a plug installed.

Separation between sewer and or land drain manholes shall be a minimum of three foot (3') measured from the outside of the structures. Where design requirements cannot accommodate the minimum separation, flowable fill will be required between the structures and a combined elongated concrete.

- F. SERVICES. See Section 1.28.040 (Sanitary Sewer Services). Service connections directly into a manhole will not be allowed. No service laterals will be allowed in stubs. Wherever possible, buildings shall be discharged to the Sewer Main Line with a gravity flow Sewer Lateral. Sewer Laterals shall conform to the requirements of the Adopted Plumbing Code.

~~New sewer laterals installed to lots shall be located ten feet (10') uphill of the lowest front property corner.~~ The minimum cover of sewer laterals is 3 feet, and 3 foot 6 inches at the property line. One sewer service lateral per unit unless otherwise authorized by the City Engineer. ~~Each unit of separate ownership shall be required to have a separate sanitary Sewer Lateral, unless otherwise approved by the City Council.~~

~~Sewer Laterals shall have at least four (4) feet of cover unless otherwise authorized by the City Engineer.~~

Gravity Sewer Laterals.

The size of Sewer Laterals shall be determined on the basis of the total fixture units drained by such sewer, in accordance with the Adopted Plumbing Code. See Article 1.28.040 D (Clean-Outs) for clean-out requirements.

The minimum size for gravity Sewer Laterals shall be four (4) inches in diameter. Sewer Laterals shall be run at a uniform slope of not less than 2% grade. Where it is impractical to run the sewer at a 2% grade due to the depth of the Sewer Main Line, the design engineer will provide a solution to the City Engineer for approval.

Pressure Sewer Laterals

Professional advice should be obtained prior to installing pumping equipment or pressure Sewer Laterals.

In locations where buildings cannot be discharged to the Sewer Main by a gravity flow Sewer Lateral, flows shall be discharged into a tightly covered and vented sump from which the flows shall be pumped, by automatic pumping equipment and discharged into a gravity flow Sewer Lateral, connecting at a cleanout, or the Sewer Main, connecting in a manhole, with an approved restrained coupling(s).

Pumping equipment and pressure Sewer Laterals shall be designed to meet or exceed the anticipated use requirements. The total maximum system head shall not exceed the pump manufacturer's recommended allowable head for the pump system being proposed.

Pressure Sewer Laterals shall be constructed of HDPE. Pressure Sewer Laterals shall be sized to provide a minimum velocity of 2.0 feet per second at the design pumping rate. Pressure Sewer Laterals shall be designed and constructed on a constant reverse grade.

- G. SEWER LIFT STATIONS. Sewer lift stations will only be allowed upon written approval by the City Engineer.

1.08.070 Storm, Land, and Groundwater Drains

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, storm, land, and groundwater drain work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 33 08 00 (Commissioning of Water Utilities)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to Storm, Land, and Groundwater Drain design standards:
1. Chapter 1.32 (Storm, Land, and Groundwater Drains)
 2. Drawing 1 (Standard Street Intersection and Utility Locations)
 3. Drawing 2 (Standard Utility Locations in Knuckle)
 4. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 5. Drawing 10 (Standard Curb Face Inlet Detail)
 6. Drawing 11 (Mountable Curb Inlet Detail)
 7. Drawing 12 (Manhole Access Curb Inlet Box (Combo Box) Detail)
 8. Drawing 13 (Storm Drain Junction Box Detail)
 9. Drawing 14 (Typical Land Drain Manhole Detail)
- C. GENERAL. The Developer shall provide on-site storm drainage facilities ~~according to the Storm Water Drainage Design Manual and~~ in accordance with the ordinances of the City and the City Construction and Design Standards.

Calculations will need to be completed and submitted to the City documenting the following design parameters:

1. Detention. All detention shall detain a 25 year 24 hour storm with a maximum 0.15 cfs per acre release rate. Release rates shall be determined by the City Engineer.
2. Retention. All retention shall retain and infiltrate a 100 year 24 hour storm event. Retention shall drain out after 48 hours.

The following storm drainage design criteria shall apply to all storm drainage designs in the City that will be maintained by the City. Additional design criteria are specified in the Standard Drawings. The minimum allowed pipe size for all storm drain pipe is fifteen-inch (15") diameter.

D. INLET BOXES AND MANHOLES.

1. Storm Water Inlets. Curb face inlets must be constructed at all low lying areas. Curb face inlet boxes will serve tributary piping and shall not be used as junction boxes or manholes. If multiple piping is required in a structure using a curb face inlet, a combination box shall be constructed which must include a manhole for access. No inlets shall be allowed at the bottom of an ADA ramp structure or in a designated pedestrian path. Refer to standard details for more information.

As a general rule, inlets shall be installed at intervals not to exceed 500 feet. Inlet spacing shall be addressed during the design phase. Storm drain catch basins or inlets shall generally be located on both sides of the street to avoid cross gutters. Inlet spacing and configuration shall be designed to collect runoff from a 10-year design storm.

2. Storm Drain Boxes. No storm drain manholes allowed. Minimum junction box interior width is four-foot (4'). A minimum of six inches (6") clear distance between the pipe and a side wall is required. Refer to the Storm Drain Junction Box Standard Detail for additional details.

Spacing between storm drain boxes shall be no more than four hundred (400).

3. Pipe Material. Pipe material shall be reinforced concrete or solid wall HDPE pipe dual wall polypropylene pipe as approved by City Engineer's office.

HDPE pipe for storm drain shall be manufactured in accordance with most current ASTM D 3350, "Standard Specification for Polyethylene Plastics Pipe and Fitting Materials" and most current AWWA C906, "AWWA Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4 inch through 63 inch, for Water Distribution." Pipe and fittings shall be High Density Polyethylene made of PE 4710 material, and shall have a minimum cell classification of PE 445474C or higher.

Polyethylene pipe shall be joined by thermal butt-fusion, electrofusion, or other methods as recommended for use by the pipe manufacturer. Fusion shall be conducted only by persons who have received training in the use of fusion equipment according to the recommendations of the pipe supplier or equipment supplier. In situations where different polyethylene piping materials must be joined, the fusion procedure shall be approved by the Engineer. Polyethylene piping shall not be joined by solvent cements, adhesives (such as epoxies), or threaded type connections.

4. Storm Water Treatment. All new land development will require provisions for storm water treatment before the water is allowed to discharge into the existing City system. A design that will separate oils

and particulates from the discharged water will have to be approved by the City Engineer. The treatment facility must be easily accessible and maintainable without unreasonable effort.

E. MULTIPLE-LOT STORM DRAINAGE CALCULATIONS. The following information shall be included in the storm drainage calculations for multiple-lot development.

1. Hydrologic (Flow) Calculations.

- a. A map showing drainage sub-basins and the piping system.
- b. Cumulative peak flow calculations for each sub-basin (submit all input data, calculations and results).

2. Hydraulic (Inlet and Pipe) Calculations.

- a. Capacity calculations for each segment of the pipe system.
- b. Calculations demonstrating that flow rates in streets do not exceed maximums before being caught in storm drain inlets. "Section 5.07, Sub-Section C: Inlet Spacing" dictates the criteria required for allowable water spread.
- c. Calculations demonstrating that inlets are sufficiently long to capture peak design flows.
- d. Calculations demonstrating that all pipes have a 2 fps minimum velocity for the design storm.
- e. Detention Calculations.

1. Detention volume requirement which includes an analysis that identifies the storm whose duration creates the greatest detention volume requirement, given storm duration and stage storage curve and outlet discharge curve.
2. Orifice calculations illustrating that the maximum release rate is not exceeded.
3. Engineer to provide certification with stamp that constructed detention meets design volumes and capacities

F. COMMERCIAL SITE STORM DRAINAGE CALCULATIONS. The following information shall be included in the storm drainage calculations for commercial site property development.

1. Hydrologic (Flow) Calculations.

- a. Peak flow calculations for the site (submit all input data, calculations and results).
 - 2. Hydraulic (Inlet and Pipe) Calculations.
 - a. Capacity calculations for each segment of the pipe system.
 - 3. Detention Calculations.
 - a. Detention volume requirement-an analysis that identifies the storm whose duration creates the greatest detention volume requirement, given storm duration and stage storage curve and outlet discharge curve.
 - b. Stage storage curve - generally required only on large detention basins.
 - c. Outlet discharge curve - generally required only on large detention basins.
 - d. Orifice calculations illustrating that the maximum release rate is not exceeded.
 - e. Detention Basins Acceptance. Prior to acceptance of detention basin construction, a Registered Professional Engineer shall provide a stamped letter and exhibit verifying that the constructed volume, side slopes, high water/spillway elevations, box/orifice plate elevations, pipe sizes and slopes, etc. have met the requirements set forth within the storm drainage report and the construction plans
- G. LANDSCAPED STORM DETENTION BASIN REQUIREMENTS. Storm water must be detained such that the peak flow rate released from the site does not exceed 0.15 cubic feet per second per acre of development (cfs/acre). Detention basins must have vehicular access for maintenance and will not be allowed in the backyards of single family residences. The following limitations apply to detention basins.
- 1. The side slopes of the basin may not be steeper than 3:1 unless special circumstances warrant a change. The bottom of the detention basin must slope toward the drain.
 - 2. Within 10 feet of the outlet, the slope of the basin bottom must not be flatter than 5% unless a concrete apron is constructed around the outlet.
 - 3. Excluding areas within 10 feet of the outlet, the maximum allowable depth of water in the basin is 3 feet. An additional one (1) foot of freeboard must be constructed on all basins.

4. Storm drain pipes are to be continuous through detention areas to allow low flows to proceed through the storm drainage system without having to come to the surface. These flows must still pass through the outlet restriction that limits runoff rates.
 5. Basins are to be designed such that water does not run into them after storm water reaches a maximum depth (unless a free flowing overflow is provided)—this can usually be controlled by the elevation of an inlet box in the street adjacent to the basin.
 6. Basins are to be designed such that when runoff exceeds design values or when restrictions plug, excess storm water will be directed to the street system or bypass the restriction by entering the piped system via a free flowing overflow.
 7. A basin may be designed for dual use, but uses other than the detention of storm water must be approved by the City Engineer.
 8. In cases where the basin detains water from and is part of a project controlled by a “Home Owners Association” (HOA), the HOA will be responsible to maintain the operation, landscaping and irrigation sprinkling of the basin.
- H. HARD SURFACE STORM DETENTION STORAGE REQUIREMENTS. If property is not available for a landscaped detention basin or cannot meet the one-foot depth criteria, storm water shall be detained underground in an approved underground system. Storm water must be detained such that the peak flow rate released from the site does not exceed 0.15 cubic feet per second per acre of development (cfs/acre). Underground storage designs should be discussed with the City Engineer before submittal. The following limitations apply to underground detention storage.
1. Basins are to be designed such that when runoff exceeds design values or when restrictions plug, excess storm water will be directed to the street system or bypass the restriction by entering the piped system via a free flowing overflow.
 2. The private property owner benefiting from the hard surface or underground detention storage will be responsible to maintain the operation of the system.
- I. UNDERGROUND STORM DRAIN DETENTION. Standards coming soon.
- J. STORM WATER QUANTITY CRITERIA AND DESIGN GUIDELINES. The following storm drainage criteria and design guidelines apply to all storm drainage plans in the City and shall be used in storm drainage calculations. The City Engineer has authority to modify the criteria and guidelines as needed to meet changing or unusual needs or conditions.
1. Design Storm.

- a. Frequency.
 1. Design storm drain piping system for a 10-year storm.
 2. Design detention for the 25-year storm.
 3. Design for the flooding hazard and overflow point of any storm greater than the 25-year storm.
- b. Intensity—per the following table.

Rainfall Intensities (inches/hour)

Duration	10 Year	25 Year	100 Year
5 min	3.18	4.19	6.16
10 min	2.42	3.18	4.69
15 min	2.00	2.63	3.87
30 min	1.34	1.77	2.60
60 min	0.83	1.09	1.61
2 hours	0.47	0.61	0.87
3 hours	0.34	0.43	0.59
6 hours	0.20	0.24	0.31
12 hours	0.12	0.14	0.18
24 hours	0.07	0.08	0.10

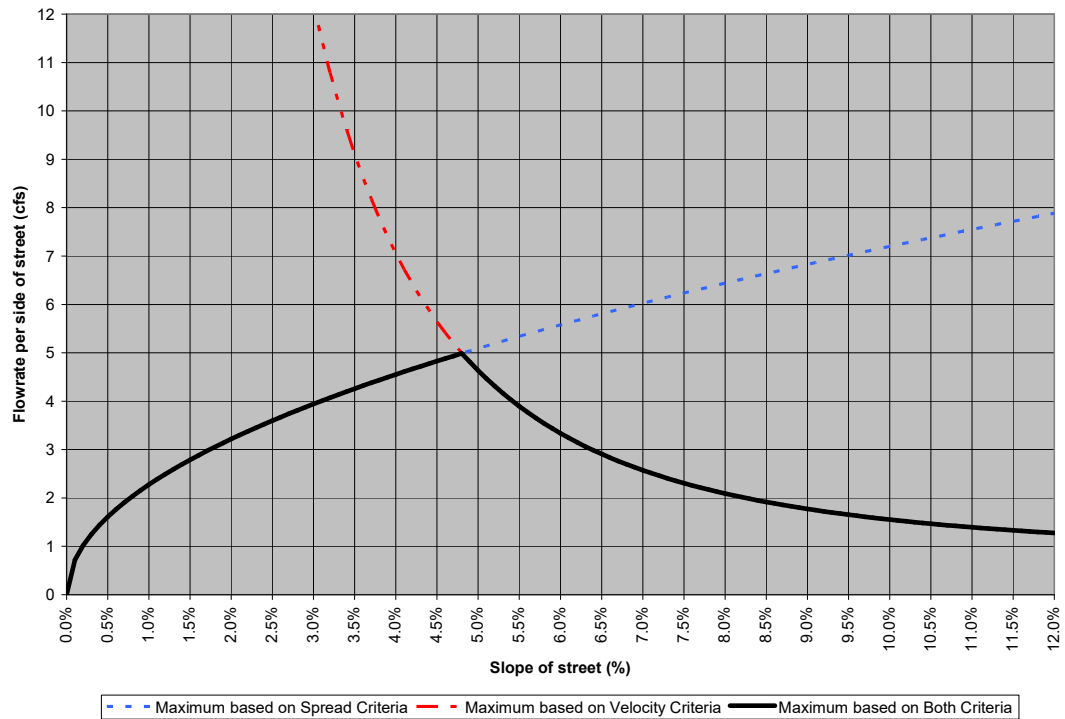
2. Runoff Coefficients. The City requires the design engineer to calculate a composite runoff coefficient based on surface type and associated runoff coefficient, weighted by the area of each surface type.
3. Inlet Spacing. Two criteria must be met.
 - a. Spread of water in the street:
 1. Storm water must be delivered from the street into an underground piped system when the spread of water in the street covers the outside 7 feet of asphalt on a local street, the outside 2 feet on a Parkway street and the outside 2 feet on a Boulevard street. This will leave 12-feet of unsubmerged asphalt for local streets (that have 26 feet of asphalt), 10-feet in each direction of unsubmerged asphalt for Parkway streets (that have 24 feet of asphalt) and 22-feet in each direction of unsubmerged asphalt for Boulevard streets (that have 48 feet of asphalt).

b. Gutter velocity:

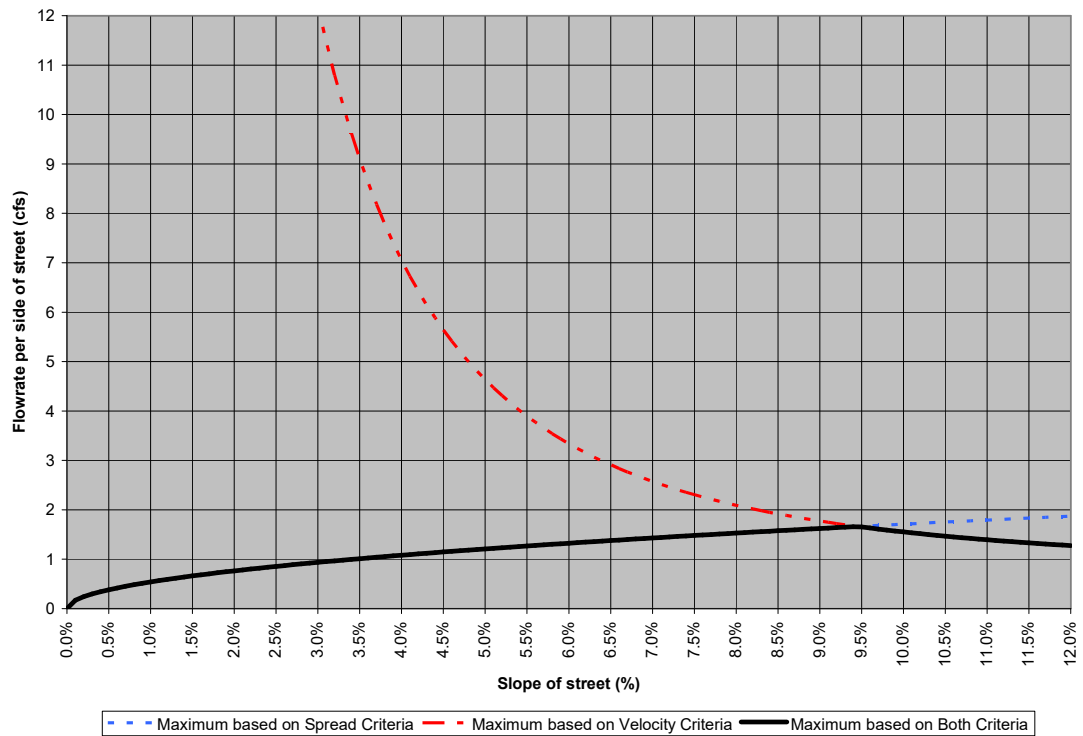
1. Water must be delivered from the street into an underground piped system when the velocity of water in the deepest part of the gutter reaches 10 feet per second (as a safety consideration).

Both of these requirements are a function of street slope and storm water flow rate. Storm water must be delivered from the street to storm drains when flows reach amounts shown in the following graphs. This means that for a given longitudinal street slope, flows on the street surface must be delivered into the underground piped system when they reach the amount indicated on the graph by the solid line.

GRAPH FOR LOCAL STREETS



GRAPH FOR PARKWAY AND BOULEVARD STREETS



Note: The spread of water in the street is calculated using the Manning equation in the form developed by Izzard, with a roughness coefficient of 0.013 and the standard street cross section. The velocity criteria is based on the velocity at the deepest part of the gutter with the Manning Equation, with a roughness coefficient of 0.013, and using a depth at a point six inches from the face of the curb as the hydraulic radius

4. Inlet Capacity. The designer is to assume 50% blockage of inlets when considering storm drain inlet capacity.
5. UPDES and Storm Water Pollution Prevention Plan. All construction sites, which disturb an area of 1 acre or more, or disturb less than one acre and are part of a common plan of development, need to obtain a UPDES permit from the State of Utah. As a condition of the permit, a Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented as outlined by the Department of Environmental Quality website (<http://www.deq.utah.gov/Permits/water/updes/stormwater.htm>).

1.08.080 Power and Communication

- A. POWER. Electrical lines shall be underground except when the City Engineer feels that such underground lines are not in the best interest of the City. Lines shall be located opposite water and pressurized irrigation lines if possible
- B. COMMUNICATION. Communication lines shall be underground except when the City Engineer feels that such underground lines are not in the best interest of the City.

1.08.090 Specialized Engineering

- A. GENERAL. Any specialized engineering beyond the expertise of city staff such as, but not limited to, geotechnical, traffic, environmental, hillside, floodplain, bank stabilization and erosion control will require the review of qualified consultants. All review costs shall be paid by the Developer.
- B. LANDFILL, CONSTRUCTION DEBRIS, OR GARBAGE. Any work around and related to landfills or areas with buried debris, waste, or garbage will require a Phase I environmental report with recommendations for additional study. No buildings, paved parking lots, paved roads, curb, gutter, sidewalks are allowed to be located over landfills, construction debris, or garbage unless otherwise approved by the appropriate federal, state and/or city agency having jurisdiction.
- C. HILLSIDE GEOTECHNICAL ENGINEERING. Any development or land disturbance of any kind shall be required to submit a site specific geotechnical report including a slope stability analysis. Close proximity to a

steep slope shall be defined as the horizontal distance from the slope which is less than or equal to the vertical distance from the crest of the slope to the toe of the slope. The geotechnical report shall include sufficient subsurface exploration, laboratory testing and geotechnical engineering analysis to render design level geotechnical recommendations and opinions regarding slope stability and required mitigation to protect planned or future development above and below the slope(s) from earth deformations and other adverse soil or geological conditions.

All work completed in connection with the site specific geotechnical report shall be performed by an experienced geotechnical engineering firm and under the direct supervision and direction of a professional geotechnical engineer properly licensed in the state of Utah. The scope of work described below is considered the minimum requirement for the geotechnical investigation. The geotechnical firm shall use their experience and engineering judgment in conjunction with the minimum requirements outlined below to develop an appropriate site-specific geotechnical scope of work and report.

1. Field Explorations. Prior to commencing field explorations, the geotechnical engineer shall review available geologic maps, aerial photographs and other pertinent literature to develop an understanding of the site and its geologic setting.
2. Utilities. Locate utilities within areas of explorations by notifying the appropriate local one-call state utility locate service. Independent private utility locates may be required for utilities not identified by the local one-call service.
3. Soil Borings. Complete at least one (1) soil boring for every residential lot. The number of borings for other types of development shall be determined by standard geotechnical practice. Boring(s) shall be located within close proximity to slope crests so as to render a representative soil profile of the slope for analysis. The boring(s) shall extend to a minimum depth of 15 feet below the tow of the slope. For example, if a 30-foot tall slope is being evaluated the boring shall extend at least 45 feet below the top of the slope. Borings shall extend through existing fill materials so that at least one sample is collected in native soil. Adjust boring depths for anticipated site development cuts and fills and for known soil conditions.

The geotechnical engineer shall consider past property use and location. Additional soil borings shall be planned for sites located in areas that are known or suspected to have had previous slope deformations or seeps, springs or other adverse features. Special attentions shall be given to identifying, to the extent practical, the presence and extent of existing fill.

4. Soil Samples. Collect a minimum of four (4) soil samples in the upper ten (10) feet of the profile and at intervals of five (5) feet thereafter. Adjust sampling intervals to include major changes in soil layering. Collect a sufficient number of undisturbed samples in fine-grained soils to properly assess strength and consolidation properties. Perform split barrel sampling in granular soils. Field blow counts should be corrected for energy and depth and presented as Standard Penetration Test (SPT) blow counts on the soil boring logs.

Field classify encountered soil in accordance with the American Standard for Testing and Materials (ASTM) and Unified Classification System (USCS).

5. Bedrock. Borings encountering bedrock shall be extended a minimum of 5 feet into the bedrock. Rock coring equipment shall be used where practical to aid in assessing rock properties. Where cores are collected, Rock Quality Designator (RQD) values should be presented on the boring logs.
6. Laboratory Testing. Samples collected in the field shall be properly packaged to avoid disturbance or freezing and transported to an accredited geotechnical and materials testing laboratory for further observation and testing. Laboratory testing shall be performed under the direction of a Utah licensed professional geotechnical engineer and in accordance with appropriate ASTM standards. At a minimum laboratory testing shall include the following:
 - a. SIEVE ANALYSIS: Determine grain size distribution and percent fines (minus 200 sieve).
 - b. ATTERBERG TESTS: Classification, indexing, shrinkage and expansiveness.
 - c. DENSITY: In-place density.
 - d. MOISTURE CONTENT: Natural moisture content.
 - e. SHEAR STRENGTH: Direct shear and/or triaxial shear.

Additional laboratory testing may be required to address site conditions and provide necessary engineering properties for analysis. The geotechnical engineer shall use his professional judgment and local experience to determine an appropriate scope for laboratory testing. Laboratory test results shall be presented in the Geotechnical Report, on individual summary sheets in the report appendix or on the boring logs.

7. Geotechnical Report Requirements. The results of the field and laboratory programs shall be evaluated by a Utah registered

professional geotechnical engineer. Based on the results of their evaluation, an engineering report shall be prepared that details the results of the testing performed, provides logs of the borings and a diagram of the site/boring layout and provides geotechnical recommendations and information regarding the following:

- a. SUITABILITY: General suitability of the site for the planned development.
 - b. PRECAUTIONS AND LIMITATIONS: Recommended precautions and limitations.
 - c. PROCEDURES: Subsurface exploration procedures.
 - d. EXISTING CONDITIONS: Soil and rock conditions encountered.
 - e. GROUNDWATER: Groundwater depth during and after drilling.
 - f. SETTING: Geologic setting.
 - g. HAZARDS: Geologic hazards.
 - h. SLOPE STABILITY EVALUATION: Slope stability evaluation including provisions, recommendations and designs to mitigate the effects of unstable slopes and other geologic hazards that may adversely impact planned developments above and below the slope(s).
 - i. SPECIAL DESIGN AND CONSTRUCTION PROVISIONS: Special design and construction provisions for footings or foundations near steep slopes, including type and depth of foundation system and set back distance from slopes.
 - j. RUNOFF AND DRAINAGE: Surface water runoff control and drainage.
 - k. SUBSURFACE DRAINAGE: Existing subsurface drainage conditions.
 - l. SITE GRADING AND EARTHWORK REQUIREMENTS: Recommended site grading and earthwork requirements, as appropriate.
8. BORING LOGS. Detailed individual boring logs and graphical cross sections summarizing soil / rock profiles and slope stability analysis and results shall be included in the geotechnical report. The logs shall contain sufficient detail to render a clear description of the soil stratigraphy, soil descriptions and classifications, SPT blow counts, sample locations and depths, groundwater depths and appropriate laboratory test results. Individual boring logs shall include a description

of the boring location, exploration equipment used, relative or actual elevation, date of exploration and other pertinent information relative to the field exploration. The cross sections shall contain sufficient detail to render a clear description of the slope stability analysis results, and any mitigation measures required. The cross sections shall contain soil profile data, and a summary of engineering properties and parameters used in the analysis for each significant soil / rock layer.

9. SURFACE WATER BANK STABILIZATION. In order to protect future development adjacent to surface water and natural erosion hazards, all future development that borders surface water within the boundaries of the City shall complete a natural hazards analysis for flooding, erosion, and groundwater hazards. A technical report must be prepared by a professional engineer, registered in the State of Utah, to document that analysis. The analysis and report shall, at a minimum, include the following items:
10. WATER HAZARD MAPS. A figure with a recent aerial photograph for a base map showing the study area and the FEMA Special Flood Hazard Areas. The study area shall include the proposed lot(s) or parcel(s) that are to be developed 1,000 feet either side of Development along flood hazard (measured along the water bank) of the proposed development. Map shall show the location of proposed structures, or building envelopes, adjacent to the flood hazard.

A review of historic surface water in the area. Use the following items, if available:

- a. HISTORICAL AERIALS: Historical aerial photographs of the area.
 - b. ORIGINAL CADASTRAL SURVEY: Original government cadastral survey of the area.
 - c. HISTORICAL QUADANGLE MAPS: Historic quadrangle maps of the area.
 - d. RECENT AERIALS: Recent aerial photographs and maps of the area.
11. OTHER WATER HAZARD ANALYSIS. Include a figure in the report that documents the results of the following analysis:
 - a. CHANNEL MIGRATION AND EROSION TRENDS: An assessment of channel migration and erosion trends in the area.
 - b. TYPICAL FIELD CHANNEL: Provide a figure that shows one or more typical field surveyed channel cross sections of the river channel adjacent to the proposed development. Comment on banks slopes, material on channel bottom, and vegetation.

- c. AVERAGE VELOCITY: Average anticipated flow velocities in the channel adjacent to the development associated with flood events that have a 10-, 2- and 1-percent chance of occurring in any given year.

A field assessment of the condition and stability of the existing channel in the study area, on both sides of the river. This field assessment shall primarily be a visual assessment completed by a professional with a member of the City Engineering staff in attendance. It shall include, but not be limited to:

- a. SOILS: Soil types.
- b. ERODIBILITY: Erodibility of the channel bed and banks.
- c. CHANNEL AND BANKS: General condition of the channel and banks.
- d. VEGETATION: An assessment of the condition and percent cover of existing vegetation on the channel banks and in the floodplain.
- e. EXISTING EROSION CONTROL MEASURES: An assessment of any existing erosion control measures that exist in the area.
- f. EROSION HAZARDS: Identification of any erosion hazards that need to be mitigated.
- g. MAINTENANCE EASEMENTS: Identify maintenance easements needed to access the channel. surface water.
- h. EROSION AND FLOOD HAZARD: Provide an overall “professional opinion” based on previous experience, professional judgment, and technical analyses of any existing erosion and flood hazards that could potentially endanger proposed structures, utilities or infrastructure and recommend means to mitigate those hazards.

12. GROUNDWATER. In addition to the erosion hazard assessment, the following issues shall also be addressed in this report:

- a. RUNOFF: Generally identify how storm water runoff from the proposed development will be managed. If storm water will be discharged into the surface waters confirm that backwater will not back up into the pipe and cause flooding in the newly developed area during a 1-percent annual chance flood.
- b. BASEMENTS: Assess whether the area is suitable for basements based on anticipated groundwater levels during the 1-percent annual chance flood.

- c. GROUNDWATER LEVELS: Historic groundwater levels in the area (if any).
- d. 1-PERCENT FLOOD GROUNDWATER LEVELS: If a ground water drain is proposed as part of the development, assess how it will function during the 1-percent annual chance flood.
- e. CERTIFIED BASEMENT STATEMENT: Provide a certified statement from a professional geotechnical engineer regarding whether the proposed area is suitable for the construction of basements based on the assumption that the river will be conveying the 1-percent annual chance flood.

13. PROFESSIONAL GEOTECHNICAL ENGINEER STAMP AND SIGNATURE.

The final geotechnical report shall bear the geotechnical engineer's stamp and signature.

14. REPORT. One (1) electronically submitted PDF copy of the report shall be delivered to the City within sufficient time for review and comment. The City will have the report reviewed by its own geotechnical engineer. The cost of that review will be borne by the applicant.

1.12 Contractor Requirements

1.12.010 Contractor Approval

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to contractor approval:
1. Article 1.04.030 C (Bonds)
 2. Article 1.08.010 B (Construction Plans Approval)
 3. Section 1.12.020 (Insurance)
- B. GENERAL. Before a Contractor performs any Improvement within the City, the City shall approve the Contractor. Approval is granted for a period of one (1) year upon submission of the following:
1. Contractor's License. An active Utah State Division of Occupational and Professional Licensing contractor's license. License must be an E100, S410, or S390. Work will be restricted to that authorized by the license.
 2. Certificate of Insurance (COI). COI approved by City. COI shall meet the requirements of Section 1.12.020 (Insurance).
 3. Status Verification. Contractor agrees that it, and its subcontractors, will register with and use a Status Verification System to verify the federal employment authorization status of all employees hired after July 1, 2009. Contractor, and its subcontractors, will comply, in all respects, with Utah Code Annotated §63-99a-103, as it may be amended from time to time.
- C. APPROVED PLANS. Contractor shall not begin construction without approved plans according to Article 1.08.010 B (Construction Plans Approval). Contractors proceeding with work without such approved plans shall have the project shut down until plans are approved. Repeated offenses may result in the Contractor losing its Contractor Approval to perform work in the City.

1.12.020 Insurance

- A. GENERAL. A Contractor must acquire the insurance stipulated in this section to prequalify to do construction work. The city must receive and accept proof of the insurance before any work may begin. The submittal of said evidence to the City shall not relieve or decrease the liability of the Contractor hereunder.
- B. WORKERS' COMPENSATION. Contractor shall obtain worker's compensation insurance as required by State law.

C. Proof of comprehensive general liability insurance. Bodily injury insurance will be in an amount of not less than three hundred thousand dollars (\$300,000.00) for any one occurrence. Property damage insurance will be in an amount of not less than two hundred thousand dollars (\$200,000.00) for any one occurrence and shall include underground exposure. Combined liability insurance will be in an amount of not less than five hundred thousand dollars (\$500,000.00) for any one occurrence.

D. COMMERCIAL GENERAL LIABILITY INSURANCE. A 30-day written notice shall be provided to the City in the event of cancellation and a 10-day written notice for non-payment of premium. Also, the following statement is required on the COI: "Vineyard City, its elected and appointed officials, employees, agents, volunteers and the Utah Department of Transportation are listed on the referenced policy as additional insureds." The ~~following~~ commercial general liability insurance must be obtained and submitted on ISO Form CG 00 01 (11/85) or equivalent, occurrence policy. Refer to state requirements for limits, with limits not less than:

General Aggregate	\$1,000,000
Products Comp/OPS Aggregate	\$1,000,000
Personal and Advertising Injury	\$ 500,000
Each Occurrence	\$500,000
Fire Damage (any one fire)	\$50,000
Medical Expense (any one person)	\$5,000

Also include the following endorsements or their equivalents attached thereto:

1. ISO Form CG 25 03 (11/85), Amendment of Limits of Insurance (Designated Project or Premises), describing the subject contract and specifying limits ~~as shown above~~.
 2. ISO Form CG 20 10 (11/85), Additional Insured — Vineyard City, Lessees, or Contractors (Form B), naming the City as additional insured and containing the following statement, "This Endorsement Also Constitutes Primary Coverage in the Event of any Occurrence, Claim, or Suit".
- E. AUTOMOBILE LIABILITY INSURANCE. Contractor shall obtain automobile liability insurance with limits of not less than \$500,000 Combined Single Limit per accident. Coverage shall apply to any auto.

1.12.030 Submittals

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, material submittals work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA 01 33 00 (Submittal Procedure)
 2. APWA 01 64 00 (Owner-Furnished Products)
 3. APWA 01 65 00 (Product Delivery and Handling)
 4. APWA 01 66 00 (Product Storage and Protection)
- B. GENERAL. Contractors are required to provide to the City submittals according to APWA 01 33 00 (Submittal Procedure) for all materials to be used in the City for review and approval.
1. For pre-manufactured items, documentation must be submitted a minimum of 2 weeks before installation and must include sufficient information, including shop drawings, if applicable, to establish models, colors, sizes, installation requirements, etc. that will be used.
 2. For on-site manufactured items, such as asphalt, concrete or base courses, submit mix designs, hot/cold weather installation plans, and materials certifications a minimum of 5 working days prior to planned installation.
 3. Submittals for the following, at a minimum, should be submitted:
 - a. All pre-manufactured items meeting city standards such as light fixtures, electrical components, utility fixtures and piping, landscaping, etc.
 - b. Hot Mix Asphalt Mix Designs
 - c. Portland Cement Concrete Mix Designs
 - d. Treated Base Course Mix Designs
 - e. Untreated Base Course Job Mix Formulas
 - f. Tack and Prime Coats
 - g. Concrete Curing Compounds
 4. Submit copies of all Quality Control testing and inspection reports within 48 hours of placement of materials.
- C. NEW MATERIALS. Only new materials may be used during construction unless otherwise authorized by the City Engineer.

- D. CITY FURNISHED PRODUCTS. If the City furnishes any products the Contractor shall conform to requirements and specifications of APWA 01 64 00 (Owner-Furnished Products).
- E. PRODUCT DELIVERY AND HANDLING. The Contractor shall conform to requirements and specifications of APWA 01 65 00 (Product Delivery and Handling).
- F. PRODUCT STORAGE AND PROTECTION. The Contractor shall conform to requirements and specifications of APWA 01 66 00 (Product Storage and Protection).

1.12.040 Quality Assurance and Quality Control

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, quality assurance and quality control work shall meet the requirements and specifications of the following APWA sections and related Divisions:
 - 1. APWA 01 43 00 (Quality Assurance)
 - 2. APWA 01 45 00 (Quality Control)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to quality assurance and quality control:
 - 1. Chapter 1.16 (Inspection and Testing)
- C. QUALITY ASSURANCE. Perform Quality Assurance work in accordance with APWA 01 43 00 (Quality Assurance). Quality assurance work shall be conducted at the Contractor's expense. The City will verify quality assurance at their discretion and inform the contractor of acceptance or rejection.
- D. QUALITY CONTROL. Perform Quality Control work in accordance with APWA 01 45 00 (Quality Control). Quality Control work shall be conducted at the Contractor's expense. The City will verify quality Control at their discretion and inform the contractor of acceptance or rejection.
- E. MATERIALS PRODUCTION. Use UDOT certified facilities for asphalt and portland cement concrete. Submit verification of Plant Certifications with mix designs.
- F. TESTING. Perform testing in accordance with APWA 01 43 00 (Quality Control). Use UDOT certified laboratories and personnel. Submit verification of lab and personnel with mix designs.

1.16 Inspection and Testing

1.16.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, inspections and testing work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 1 (GENERAL REQUIREMENTS)
 2. APWA 00 72 00 Part 13 (Tests and Inspections; Correction, Removal or Acceptance of Defective Work)
 3. APWA 00 72 00 14.7 (Final Inspection)
 4. APWA 01 43 00 (Quality Assurance)
 5. APWA 01 45 00 (Quality Control)
 6. APWA 01 66 00 (Product Storage and Protection).
 7. APWA 03 20 00 (Concrete Testing)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to inspection and testing:
1. Chapter 1.16 (Inspection and Testing)
 2. Article 1.04.030 D (Pre-Construction Conference)
- C. INSPECTION FEE. Inspection fees established by the City Council in the annual budget or by resolution shall be charged for Improvements and Development. Inspection fees shall include a charge for inspection callbacks.
- D. INSPECTIONS. All inspections will be done by appointment only with a minimum 24-hour notice. If no inspection for a Minor Land Disturbance Permit is called for and performed 60 days after permit issuance, Contractor's Deposit will be forfeited. Items buried without City approval will be re-excavated by the permittee at no additional cost to the City.

Inspections and testing shall be conducted according to APWA 00 72 00 Part 13 (Tests and Inspections; Correction, Removal or Acceptance of Defective Work) and in accordance with City standards.

1. Notification of Needed Inspections:
 - a. Inspection performed during regular working hours requires at least twenty-four (24) hours' notification.

- b. Inspections needed after 4:00 p.m., require notification be given ~~by 1:00 p.m. on~~ the day ~~of before~~ the inspection and will be accommodated if personnel are available.
 - c. Inspections needed on the weekend require that notification be given by 1:00 p.m. on the preceding ~~Friday~~ Thursday and will be accommodated if personnel are available.
- E. PRE-CONSTRUCTION CONFERENCE. The Contractor must schedule a Pre-Construction Conference according to Article 1.04.030 D (Pre-Construction Conference) before any inspection work.
- F. FEDERAL, STATE, AND LOCAL INSPECTING AGENCIES. The site of construction is to be open at all reasonable times and places for periodic observation by accredited representatives of the Federal, State, and local agencies who have regulatory or supervisory authority over any part of the work proposed or regulated thereto.
- G. DEFECTIVE WORK AND PROTECTION OF WORK AND MATERIALS. Contractor shall protect any construction work against damage from weather vandalism or any other hazard. See APWA 00 72 00 Part 13 (Tests and Inspections; Correction, Removal or Acceptance of Defective Work). See APWA 01 66 00 (Product Storage and Protection).
- H. TESTING AND SAMPLING. The City Engineer or City Inspector may require that testing or sampling be performed in his or her presence, ~~in which case the Developer or Contractor shall be notified of this requirement in writing at the time the building permit is issued, or at the Pre-Construction Conference, or when construction drawings are released by the City for construction, as applicable.~~

~~The Contractor will perform quality control inspection, sampling and testing in accordance with the APWA Manual of Standard Specifications and City standards. Quality control testing will consist of all testing identified for acceptance within the individual specifications. At minimum, this will include the following:~~

~~Material quantity, by weight or volume.~~

~~Aggregate gradations for all fill, asphalt or concrete materials.~~

~~Thickness testing for all materials with a specified thickness.~~

~~Density testing for all materials with a specified density.~~

~~Mix properties for asphalt, including binder content, air voids at design compaction, voids in the mineral aggregate (VMA) at design compaction.~~

~~Mix properties for asphalt, including air content, slump, and 28 day compressive strengths.~~

~~Each sample or test shall be accompanied by the following written data, which shall be reported to the City with test results:~~

~~Name of Project~~

~~Name of Developer/Contractor~~

~~Project Street Address~~

~~Appropriate Test Name~~

~~Date of Sampling~~

~~Sample Number (if more than one sample per day)~~

~~Name of Technician~~

~~Location~~

- I. TESTING AGENCY. All materials testing, whether in a laboratory or in the field, shall be conducted by a testing agency approved by the City Engineer.
- J. WORK WITHOUT REQUIRED INSPECTION AND TESTING. Failure to provide proper notification or to perform work without inspection or testing will result in rejected material. Rejected material will be subject to additional verification requirements including, but not limited to, post-placement sampling and laboratory testing for material conformance, in-place testing for asphalt and base thickness and density, in-place testing for concrete strength and air content. All post-placement testing for uninspected work will be at no additional cost to the City.

Additionally, any work performed without required inspection or testing will give the City the option to hold the bond covering that portion of the improvements in violation, or, require the removal and replacement of the uninspected work. ~~The City shall have the option of retaining part or all of the bond for up to 10 years after installation of improvements constructed without required inspection or testing~~The City Engineer may require specialized testing to verify acceptance. The City Engineer may also accept the work at a reduced price.

- K. SUB-STANDARD WORK AND PAY FACTORS. If any inspection or test indicates that work does not meet City standards the City Engineer may require that the work be redone. If the work has a pay factor option in the APWA or City standards, the City Engineer may accept the work at a reduced price upon condition that the pay factors outlined in the City standards apply. Payment reduction amounts shall either be assessed to the developer as a fee based upon bond estimates for the work or be applied against payments to Contractors for City contracts. When any work is done to a lower standard than allowed for in the pay factor tables the work shall be redone until it meets City standards.

- L. WEEKLY PROGRESS MEETINGS. All active construction projects in the City will have a weekly progress meeting at the City inspector. Progress meetings may be held on site.
- M. ROAD CONSTRUCTION. Road construction may not commence until all underground utilities are installed and pass all the inspections and tests required by these standards.
- N. ASPHALT PAVING ACCEPTANCE DETAILS. Unless otherwise stated, the City will determine acceptance of asphalt paving, including underlying base layers, based on a combination of contractor quality control testing, City quality assurance testing, and asphalt plant production records.
- O. ACCEPTANCE OF IMPROVEMENTS. Inspections made by the City or a company hired by the City to determine compliance with the specifications do not imply final acceptance of the work. The City requires the completion of all facilities before any are accepted for maintenance. The following inspections must be scheduled and passed before final acceptance of any improvements:
 - 1. Final Inspection. The Contractor must schedule with the City Final Inspection according to APWA 00 72 00 14.7 (Final Inspection).
 - 2. One Year Warranty Inspection. One year after the Contractor or Developer passes the end of construction inspection, he or she must schedule a one year warranty inspection. This inspection must be conducted after the one year asphalt preservation coat is applied when applicable.

If the Contractor or Developer does not pass one of these inspections a punch list of work items necessary to pass the inspection will be given to the Contractor or Developer. The Contractor or Developer must reschedule inspections with the City until the project or development passes the inspection.

All improvements shall be free from defects, damage, or debris at the time of these inspections. The Contractor or Developer shall not be responsible for debris or damage not caused as a result of his or her work or quality of work.

Any faulty or defective work shall be corrected by the Contractor within 30 days of the failed inspection or according to the contract the City has with the Contractor.

If the Contractor or Developer fails to do so, the City Engineer may have such repairs made, and the cost of such repairs shall be paid by the Developer before bond release.

1.16.020 Drinking Water

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 01 45 00 (Quality Control)
 3. APWA 33 08 00 (Commissioning of Water Utilities)
 4. APWA 33 08 00 3.9 (Tracer Wire Continuity Test)
 5. APWA 33 11 00 (Water Distribution and Transmission)
 6. APWA 33 13 00 (Disinfection)
- B. GENERAL. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure drinking water installations meet the requirements of APWA DIVISION 33 (UTILITIES) and related APWA sections.
- C. MAIN LINE INSPECTION. The City must inspect all drinking water main line installations on an ongoing basis. Inspection notification must be given before any construction of main line may begin. All fittings, crosses, tees, bends, valves, bell insertions, and hydrants must be inspected by the City before they are backfilled.
- D. TRACER WIRE CONTINUITY TEST. Entire length of tracer wire shall be tested and approved prior to paving as required by APWA 33 08 00 3.9 (Tracer Wire Continuity Test).
- E. DRINKING WATER SERVICE INSPECTION. The City must inspect all drinking water services before service trenches are backfilled. The City must be able to survey services at the main during the inspection. Use stainless steel stiffeners installed to manufacturer's specifications in all small diameter polyethylene pipe, City must be able to verify that stainless steel stiffeners were installed.
- F. HIGH CHLORINE TEST. High chlorine tests shall meet the requirements and specifications of APWA 33 13 00 (Disinfection). The City must conduct a high chlorine test at every hydrant on a new drinking water main installation. If a hydrant does not exist on the test section, tests must be taken at the end of each line. The chlorine residual shall be at least 25 mg/L.
- G. PRESSURE TEST. Pressure test must be conducted after the successful completion of the bacteria test. The Contractor must pressure/leakage test all drinking water systems, system extensions and service laterals to the setter in the presence of the City Engineer or have tests documented and submitted by a certified testing company approved by the City. Test shall be performed in accordance with APWA 33 11 00 (Water Distribution and Transmission) requirements for leakage and exfiltration.

- H. LEAKAGE TEST. Leakage tests shall be conducted concurrently with the pressure tests and according to APWA 33 08 00 (Commissioning of Water Utilities). Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$Q \equiv \frac{LD * \sqrt{P}}{133,200}$$

In which Q is the allowable leakage, in gallons per hour; L is the length of pipeline tested in feet; P is the average test pressure, in pounds per square inch (gage) and D is the nominal diameter of the pipe in inches.

Provide 20025 psi test pressure for 2 hours unless specified otherwise. If any test of pipe laid discloses leakage greater than specified, the Contractor shall, at their own expense, locate and repair the defective material until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

- I. BACTERIA TEST. Pipes shall be cleaned thoroughly before disinfection. If flushing alone is insufficient to remove debris or contamination (as determined by the City Engineer), mechanical cleaning will be required, followed by swabbing with a 1% hypochlorite disinfection solution. Only after proper cleaning should disinfection commence.

Bacteria tests shall meet the requirements and specifications of APWA 33 13 00 (Disinfection). Tests may only be scheduled at certain regular times set by the City. Only City staff may open and close valves and fire hydrants. The Contractor shall be present and when City opens all hydrants or other locations to be tested from. The City shall submit samples to a certified lab to be tested according to state drinking water regulations.

If any sample point fails on the first test, the line will be flushed and re-tested at all sample points. If any sample point fails a second time, the complete line will be re-disinfected and re-tested at all sample points. If any samples come back marked "presence", which means coli form bacteria is present, the line will be re-disinfected and re-tested at all sample sites. Contractor is responsible to pay for all bacteria tests and retests.

Drinking water services on main replacements will not be installed until bacteria sample results have been approved by the City Engineer. All testing lab fees shall be paid by the Contractor. Services on new subdivisions will be tested at the same time as the main line.

1.16.030 Earthwork

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, earthwork shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 31 (EARTH WORK)
 2. APWA DIVISION 32 (EXTERIOR IMPROVEMENTS)
 3. APWA DIVISION 33 (UTILITIES)
 4. APWA 01 45 00 (Quality Control)
 5. APWA 32 05 10 (Backfilling Roadways) Section 3.9
- B. GENERAL. The inspections and tests in this section are required for all sanitary sewerutility construction in the City boundaries and on all construction relating to the City sanitary sewerutility systems outside the city boundaries. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure earthwork meets the requirements of APWA DIVISION 31 (EARTH WORK), DIVISION 32 (EXTERIOR IMPROVEMENTS) and related APWA sections.
- C. COMPACTION AND MOISTURE CONTENT TESTS. The City will require testing on all sub-grade and fill material for compaction and moisture content by an appropriately licensed and certified testing agency. Test locations shall be determined by the City.
1. Trenches. Tests will generally be taken 1 per 200 lineal feet of trench per 8-inch lift.
 2. Streets. Tests will generally be taken 3 per 200 lineal feet of street per 8-inch lift.
 3. Other Cuts and Fills. Tests will generally be taken 1 per 2,000 square feet of compacted area.
- D. REDHEAD INSPECTION. The project engineer must provide redheads for all grade work when brought to within 3 inches of finish grade. The City must inspect and accept finished grading to the engineered redheads.
- E. PROOF ROLL INSPECTION. Proof roll inspections shall be conducted according to APWA 32 05 10 (Backfilling Roadways) Section 3.9.
- F. THICKNESS TEST. Material thickness tests will be conducted by the City when the City Engineer considers it necessary. The total depth shall be reasonably close to that shown in the typical section. Depth analysis shall be made on at least four holes for each section. Base thickness shall be accepted if 75% of the

test holes are less than 1/4" below the specified thickness and no individual hole shall be more than 3/4" below the specified thickness.

1.16.040 Landscaping and Irrigation Sprinkler Systems

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, landscaping and irrigation sprinkler systems work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA 01 45 00 (Quality Control)
- B. GENERAL. The inspections and tests in this section are required for all landscaping and irrigation sprinkler work that will be owned or maintained by the City or a Home Owners Association unless otherwise specified by the Construction and Design Standards or otherwise required by the City Engineer. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure work meets requirements of plans and City standards.
- All work shall be inspected by the City Assistant Director Parks and Open Spaces or designee. All inspections shall be done by appointment only with a minimum 24-hour notice. Items buried without City approval shall be re-excavated by the permittee at no additional cost to the City.
- C. PLANT MATERIAL INSPECTION. All plant materials are to be inspected and approved by the City at the time of delivery on site. This approval does not constitute final acceptance of any plant material by the City Parks Department Representative. All plant materials will be inspected again at time of final inspection and once again at the end of the warranty period. See Article 1.16.020 Q (Acceptance of Improvements). Any plant found to be unacceptable at any of these inspections shall be immediately removed and replaced.
- D. FLUSHING INSPECTION. When the pipelines are connected and the sprinkler risers in place but before any heads are installed, the control valves shall be opened and flushed with a full head of water to clean out the system. This shall be done in the presence of the City.
- E. SPRINKLER SYSTEM ASSEMBLY INSPECTION. An on-site inspection shall be conducted by the City after the entire sprinkler system is assembled and prior to backfilling the trenches. During this inspection all fittings, bends, sweeps, valves, sprinkler heads and any other appurtenance on the system may be surveyed by the City. This inspection will not be conducted for landscaping that is not planned to be owned by the City.
- F. FALL SPRINKLER WINTERIZING TEST. In the fall of the year during the installation and guarantee period, the Contractor shall meet with the City on the project site. The Contractor shall winterize the system by draining all the

water and doing everything necessary to insure the protection of the system until spring. Blowing out the lines by compression shall be permitted during the 1 year guarantee. The individuals involved from both parties shall exchange all information necessary for the eventual takeover of the system by the City Maintenance Personnel. This inspection will not be conducted for landscaping that is not planned to be owned by the City.

- G. SPRING SPRINKLER ENERGIZING TEST. The Contractor with the City Maintenance Personnel in attendance shall energize the sprinkler irrigation system the spring following the fall winterizing test. Contractor shall repair all defects found as a result of winter damage, improper installation, improper maintenance, defective materials or inadequate sprinkler drainage. This inspection will not be conducted for landscaping that is not planned to be owned by the City.
- H. FINAL INSPECTION. Landscaping shall be completed prior to the final inspection and acceptance of warranty with the appropriate phase of the development. The Contractor shall operate, maintain, and guarantee the irrigation sprinkler system until all landscaping on the project is approved by the City Parks Department at a final inspection. Contractor shall submit record drawings, manufacturer's technical product maintenance data, and installation instructions for irrigation sprinkler system materials and products to the City before final inspection.
- I. ONE YEAR WARRANTY INSPECTION. At the end of the one (1) year warranty period, all landscaping and irrigation sprinkler systems must then be inspected and tested by the Contractor with the City present. This inspection will not be conducted for landscaping that is not planned to be owned by the City.
 - 1. Irrigation sprinkler systems must operate in a satisfactory manner, with a full uniform coverage of the areas that are indicated to be sprinkled. Sprinkler heads shall be adjusted to proper level.
 - 2. Landscape and irrigation sprinkler systems will not be inspected for acceptance in parts. Where inspected work does not comply with requirements, Contractor shall replace rejected work and continue specified maintenance until reinspected by the City and found to be acceptable. Remove rejected plants and materials promptly from the project site and replace with approved plants and materials.

1.16.050 Portland Cement Concrete Work

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, Portland cement concrete work shall meet the requirements and specifications of the following APWA sections and related Divisions:
 - 1. APWA DIVISION 3 (CONCRETE)

2. APWA 01 45 00 (Quality Control)
 3. APWA 03 30 05 (Concrete Testing)
 4. APWA 03 39 00 (Concrete Curing)
- B. GENERAL. The inspections and tests in this section are required for all concrete work that will be owned or maintained by the City or a Home Owners Association unless otherwise specified by the Construction and Design Standards or otherwise required by the City Engineer. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure Portland cement concrete work meets the requirements of APWA DIVISION 3 (CONCRETE), and related APWA and City standards.
- C. COMPRESSION, SLUMP, TEMPERATURE AND AIR ENTRAINMENT TEST. Test concrete work according to APWA 03 30 05 (Concrete Testing). The City Engineer may allow the following pay factors for sub-standard Portland cement concrete strength:

Pay Factor	Tolerance (psi below 28-day specified strength)
0.98	1 to 100
0.94	101 to 200
0.88	201 to 300
0.80	301 to 400
0.50	401 to 500
Replace	More than 500

These pay factors may not be applied toward concrete in structures.

- D. FORMS AND STRING LINE INSPECTION. The City shall inspect all forms and string lines before concrete may be placed.
- E. GUTTER DRAINAGE INSPECTION. The City shall inspect all gutters for drainage prior to paving. Water shall be let into all gutters and any gutters with standing water in excess of 1/4 inch after runoff shall be replaced. Contractor must supply water truck for gutter drainage inspection.
- F. THICKNESS TEST. The City shall determine the number, if any, and location of core tests necessary to ensure the proper thickness of Portland cement concrete. Tests shall be taken at equal intervals in a test area. A test area shall be defined as a total area placed at the same time and by the same process. The average thickness shall then be determined from all the cores taken. Tests shall be taken and verified by a certified testing lab contracting to the City.

When the average thickness is more than 0.25 inches below the specified thickness, a minimum of 1 core per 1,500 square feet of pavement shall be taken. Work with sub-standard thickness may be accepted at reduced price if the appropriate pay factor for the lowest tested thickness is applied to all of the substandard work. The City Engineer may allow the following pay factors for substandard Portland cement concrete thickness:

Portland Cement Concrete
Thickness Pay Factors

Pay Factor	Tolerance (inches below specified thickness)
1.00	0.00 to 0.25
0.90	0.26 to 0.50
0.70	0.51 to 0.75
0.50	0.76 to 1.00
Replace	More than 1.00

- G. CURING INSPECTION. The City shall inspect the curing of all Portland cement concrete work within 24 hours of pouring the concrete. Curing shall be completed according to APWA 03 39 00 (Concrete Curing).

1.16.060 Sanitary Sewer

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, sanitary sewer work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 01 45 00 (Quality Control)
 3. APWA 33 08 00 (Commissioning of Water Utilities)
 4. APWA 33 08 00 3.6 (Exfiltration Test)
 5. APWA 33 08 00 3.7 (Distortion Test)
- B. GENERAL. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control), and APWA 33 08 00 (Commissioning of Water Utilities) and shall ensure sanitary sewer installations meet the requirements of APWA DIVISION 33 (UTILITIES) and related APWA sections.
- C. MAIN LINE INSPECTION. The City must inspect all sanitary sewer main line installation on an ongoing basis. Inspection notification must be given before any construction of the main may begin.

- D. SERVICE INSPECTION. The City must inspect all sanitary sewer services before service trenches are backfilled. The City must be able to survey services at each end during the inspection.
- E. AIR PRESSURE TEST. Contractor shall conduct a low pressure air test according to APWA 33 08 00 3.6 (Exfiltration Test) by the following method under the direction of the City Engineer with equipment equal to Cherne Industrial, Inc., or provide proof that test was conducted by a certified testing company. Sanitary sewer pipes with inside diameters of 30 inches or larger shall be leak tested according to manufacturer's specifications.
1. All wyes, tees, or ends of lateral stubs shall be suitably capped and braced to withstand the internal test pressures. Caps shall be easily removable for future lateral connections or extensions. After a manhole to manhole section of line has been backfilled and cleaned, it shall be plugged at each manhole with pneumatic plugs.
 2. Low pressure air shall be introduced into the sealed line until the internal air pressure reaches 4 psi-G greater than the average back pressure of any ground water that may be over the pipe. At least 2 minutes shall be allowed for the air pressure to stabilize.
 3. The portion of line being tested shall be accepted if the portion under test does not lose air at a rate greater than 0.003 cubic feet per minute per square foot of internal pipe surface or 2.0 cubic feet per minute minimum when tested at an average 3.0 psi-G greater than any back pressure exerted by ground water that may be over the pipe at the time of the test.
 4. The pipe and joints shall also be considered acceptable when the time required in minutes for pressure to decrease from 3.5 To 2.5 psi-G (greater than the average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

Pressure Reduction Time Limits

Pipe Diameter (inches)	Time (minutes)
4	2.0
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	8.5
21	10.0
24	11.5

If the installation fails to meet this requirement, the Contractor shall determine at his/her own expense the source of leakage. He shall repair or replace all defective materials and/or workmanship. All sanitary sewer mains shall be tested, cleaned and accepted by the City before laying the street surface.

- F. VIDEO INSPECTION. Contractor shall clean all sanitary sewer lines prior to video inspection. The ~~City-Contractor~~ shall video inspect all sanitary sewer main lines prior to paving with a NASSCO certified company.

Cleaning shall be done using a high pressure jet cleaning machine, producing a minimum of 800 psi. Debris shall not be permitted to enter the City storm drain system. Wastewater and debris shall not be permitted to enter the City sanitary sewer system but shall be removed at the lowest manhole of the extension.

Main line determined to be defective by the City Engineer shall be remedied by the Contractor. Contractor shall then clean and video inspect the main lines again.

- G. DISTORTION TEST (MANDREL TEST). Contractor shall perform a distortion test according to APWA 33 08 00 3.7 (Distortion Test) on all sewer lines after video inspection. Distortion tests must be conducted in the presence of the City Engineer or be documented and submitted by a certified testing company approved by the City. The Mandrel must be pulled by hand or air. A pipe distortion test shall be required of the Developer/Contractor after backfilling and compaction of the trench.

1.16.070 Storm, Land, and Groundwater Drains

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, storm, land, and groundwater drains work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 01 45 00 (Quality Control)
- B. GENERAL. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure storm water installations meet the requirements of APWA DIVISION 33 (UTILITIES) and related APWA sections.
- C. MAIN LINE INSPECTION. The City must inspect all storm, land, and groundwater drain main lines during installation on an ongoing basis. Inspection notification must be given before any construction of the pipe may begin. All groundwater drain designs shall be pre-approved by the City Engineer.

- H. VIDEO INSPECTION. Contractor shall clean all sanitary sewer lines prior to video inspection. The ~~City-Contractor~~ shall video inspect all sanitary sewer main lines prior to paving with a NASSCO certified company.

Cleaning shall be done using a high pressure jet cleaning machine, producing a minimum of 800 psi. Debris shall not be permitted to enter the City storm drain system but shall be removed at the lowest manhole or box of the extension.

Main line determined to be defective by the City Engineer shall be remedied by the Contractor. Contractor shall then clean and video inspect the main lines again.

1.16.080 Streets

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, streets work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 31 (EARTH WORK)
 2. APWA DIVISION 32 (EXTERIOR IMPROVEMENTS)
 3. APWA 01 45 00 (Quality Control)
 4. APWA 32 12 16 (Plant-Mix Asphalt Paving)
- B. GENERAL. Inspections and tests shall be conducted according to APWA 01 45 00 (Quality Control) and shall ensure street installations meet the requirements of APWA DIVISIONS 31 (EARTH WORK) and 32 (EXTERIOR IMPROVEMENTS) and related APWA sections.
- C. PRE-PAVING MEETING. The paving contractor must schedule a pre-paving meeting with the City's engineering secretary at least 7 days before any asphalt paving on a new development or city project may begin. Paving may not begin until after the pre-paving meeting and/or written notice-to-proceed is given by the City.

The paving contractor, developer, project engineer, supplier and testing firm must be present at the Pre-Paving Meeting. Topics for the meeting will include:

1. Contact Information and Project Responsibility
2. Submittal Review
3. Placement Schedule
4. Placement Tonnages

5. Density testing and inspection details, including field targets, roller pattern and whether cores will be used for thickness and density acceptance.
6. Mix sampling and testing details, including sampling locations, procedures, testing facility and result turnaround time.
7. Inclement weather plans.

Workmanship issues, including tack coverage, limitations on raking and smoothness requirements.

- D. ASPHALT PAVEMENT MATERIAL TESTS. Material tests will be conducted by the Contractor when the City Engineer considers it necessary.
- E. COMPACTION TESTS. The Contractor shall have a certified testing company test all bituminous pavement for compaction and moisture content. Test locations may be determined by the City but will generally be taken 3 per 200 lineal foot of street or 1 per 2,000 square foot of paved area. Pay factors as per APWA 32 12 16 (Plant-Mix Asphalt Paving) shall apply. Test results shall be sent to the City by the testing company within 3 business days of the tests.
- F. GRADING INSPECTION. The subgrade, sub-base, and road base shall all be graded to an engineered red-head and accepted by the City. Red-heads shall be placed every 50 feet at the crown of the road. If the distance between redheads and edge of pavement exceeds 25 feet additional redheads shall be installed halfway between the crown and edge of pavement. Red-heads shall also be placed every 50 feet at the edge of pavement where there is no curb and gutter.
- G. THICKNESS TEST. Material depth tests will be conducted by the Contractor with the City present. City Engineer may waive this requirement if he or she considers it unnecessary. The total depth shall be reasonably close to that shown on the typical section. Depth analysis shall be made on at least four holes for each section. Base thickness shall be accepted if 75% of the test holes are less than 1/4" below the specified thickness and no individual hole shall be more than 3/4" below the specified thickness. Work with sub-standard thickness may be accepted at reduced price if the appropriate pay factor for the lowest tested thickness is applied to all of the substandard work. The following table outlines the pay factors for sub-standard asphalt pavement thickness:

Pavement Depth Pay Factors	
Pay Factor	Tolerance (inches below specified thickness)
0.95	0.00 to 0.25
0.90	0.26 to 0.50

Replace	More than 0.5
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H. PROFILE TOLERANCE INSPECTION. Profile tolerance inspections may be required by the City any time within a year of paving. Collector and arterial streets shall meet the requirements of APWA 32 12 16 (Plant-Mix Asphalt Paving). For local streets profiling, the maximum vertical distance from the pavement surface to a straight edge is:

1. 1/4-inch in 10-feet parallel to centerline.
2. 3/8-inch in 10 feet perpendicular to centerline except at cross section grade breaks.

I. ASPHALT CONCRETE TEMPERATURE TEST. This test shall be conducted on the first three loads of asphalt concrete installed, and on one in four of all future loads as required by the City. Testing shall be conducted according to the requirements and specifications of APWA 32 12 16 (Plant-Mix Asphalt Concrete Paving). Temperature gauge shall be allowed to stabilize for 1 minute before taking reading if using probe type. If using infrared "gun" type, reading shall consist of an average of a minimum of 3 readings, where reading is taken immediately after displacing a minimum of 2 inches of material from the surface being tested and the "gun" is within 18" of the surface being tested.

J. ASPHALT PAVING LIMITATIONS. Pave according to Section 02741 Part 3.8 of the 2012 Standard Specifications for Road and Bridge Construction published by the Utah Department of Transportation (UDOT) unless otherwise approved by the City Engineer. Place HMA between April 15 and October 15, and when the air temperature in the shade and the roadway surface temperature are above 50 degrees Fahrenheit. In the event the City Engineer approves paving between October 15th and April 15th, an overlay in the spring will be required as outlined in the table below. Do not place HMA on frozen base or during adverse climatic conditions such as precipitation or when roadway surface is icy or wet. Use a release agent that does not dissolve asphalt and is acceptable to the City Engineer for all equipment and hand tools used to mix, haul, and place the HMA.

Pavement Depth After October 15TH / Before April 15TH

Street	Typical	Base Asphalt	Spring Overlay	Total Asphalt
Local	3"	2.5"	2"	4.5"
Collector	4"	3"	2"	5"
Arterial	5"	4"	2"	6"
Parking lot & Driveway	3"	2.5"	2"	4.5"
Commercial Local	4"	3"	2"	5"

The City Engineer may, at his/her discretion, waive this date restriction requirement if outside temperatures are at least 60°F and the base material condition is approved.

1.20 Earthwork and Trenches

1.20.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, earthwork and trenches work shall meet the requirements and specifications of the following APWA sections and related Divisions:
 - 1. APWA DIVISION 31 (EARTH WORK)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to earthwork and trenches:
 - 1. Chapter 1.08 (Improvement and Design Requirements)
 - 2. Chapter 1.12 (Inspection and Testing)
 - 3. Chapter 1.16 (Contractor Requirements)

1.20.020 Excavation

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, excavation work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 31 11 00 (Site Clearing)
 - 2. APWA 31 23 16 (Excavation)
 - 3. APWA 31 23 17 (Rock Removal)
 - 4. APWA 31 25 00 (Erosion and Sedimentation Control)
 - 5. APWA 31 41 00 (Shoring)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to excavation.
 - 1. Article 1.20.030 E (Cement Treated Fill)
 - 2. Drawing 1 (Standard Street Intersection and Utility Locations)
 - 3. Drawing 2 (Standard Utility Locations in Knuckle)
 - 4. Drawing 3 (Standard Street Cross Section and Utility Locations)
 - 5. Drawing 17 (Typical Trench Section)
 - 6. Drawing 22 (Fire Hydrant and Water Valve Detail)

7. Drawing 23 (Thrust Block Details)
 8. Drawing 25 (Large Meter Assembly)
 9. Drawing 26 (Backflow Prevention Assembly)
- C. SAFETY. All construction shall be done in accordance with the provisions of the Utah State Industrial Commission, OSHA regulations and APWA 31 23 16 (Excavation). No trenches deeper than 4 feet shall be left open at any time unless construction is in process. When construction is in process only 200 feet of trench may be open at one time and must be completely backfilled before proceeding. No trenches shall be left open at any time unless guarded with adequate barricades, warning lamps and signs.

Any injury or damage resulting from lack of adequate bracing and shoring shall be the responsibility of the Contractor and the Contractor shall, at his/her own expense, affect all necessary repairs or reconstruction resulting from such damage. No inspections will be done in unsafe trenches and will be the cause for immediate shutdown at the project until the trench is deemed to be safe by the City Engineer.

- D. IN GRAVEL AND PAVED SURFACE AREAS. Where any excavation occurs in a gravel or paved surface area such as a road, driveway or parking area, the surface shall be restored according to the requirements and specifications of APWA 33 05 25 (Pavement Restoration) and the following conditions.
1. Base. Only engineered fill as outlined in this chapter may be used as backfill or sub-base material under gravel and paved surfaces. A minimum of 8 inches of untreated base course shall be placed over backfill or sub-base. All fill material shall be placed and compacted to City standards. Flowable fill shall not be allowed for backfill unless authorized by the City Engineer, see Article 1.20.030 E (Cement Treated Fill).
 2. Surface Maintenance. The surface shall be maintained by blading, sprinkling, rolling, adding gravel, etc., to maintain a safe uniform surface satisfactory to the City.
 3. Cutting of Pavement. Before any excavation in a paved area, the surface along the entire excavation shall be cut to provide a vertical joint in the surface. Cut shall be made 6 inches from the edge of excavation in straight lines parallel or perpendicular to the trench or edge of pavement. A pavement saw shall be used for all pavement cutting. If excavation damages the cut pavement, pavement shall be cut again before patching. A roto-milled edge shall be acceptable as a cut.
 4. Time Limitation. All road cuts shall be repaired within 2 working days of excavation unless otherwise authorized by the City Engineer.

5. Cold Weather Patching. Trenches cut during winter months or when asphalt plants are not operating, shall be patched the same day of the cut with a good quality cold mix according to the requirements and specifications of APWA 32 12 16.19 (Cold-Mix Asphalt Paving). These trenches shall be maintained until asphalt plants open. When asphalt plants open, the temporary cold patch shall be removed and a new patch of hot mix asphalt shall be placed. All cold mix patches shall be replaced with hot mix patches within 20 days of the opening of the hot mix plant.
 6. Adjust Incidental Structures to Grade. Adjust incidental structures to grade according to APWA 33 05 14 (Utility Grade Adjustment).
- E. IN AREAS WITH CONCRETE. When damaged, existing concrete improvements shall be removed and replaced to the next joint or scoring line beyond the damaged or broken sections. If joints or scoring lines do not exist or are three or more feet from the removed or damaged section, the damaged portions shall be removed and reconstructed to neat, plane faces. All concrete work shall meet the requirements and specifications of Chapter 39.65. (Portland Cement Concrete Work) and APWA 33 05 25 (Pavement Restoration).
- F. ROCK EXCAVATIONS AND BLASTING. Rock excavations shall meet the requirements and specifications of APWA 31 23 17 (Rock Removal). Blasting will not be allowed except by permission from the City Engineer and shall meet the requirements and specifications of APWA 02 41 13 (Selective Site Demolition). The Contractor shall comply with all laws, regulations, ordinances, and safety codes relative to the handling, storage, and use of explosives. The Contractor shall be fully responsible for all damage to life and property attributable to its blasting operations. Excessive blasting or overshooting will not be permitted. The Contractor shall remove any material outside the authorized cross section, which may be shattered or loosened by blasting.
- G. SITE CLEARING AND THE DISPOSAL OF EXCESS MATERIALS. Site clearing shall be conducted according to APWA 31 11 00 (Site Clearing). All excavation material, which is not required for construction or is unsuitable for fill material, shall be immediately disposed of by the Contractor. All roads, sidewalks, curbs, gutters and ditches shall be kept clean of excavated material except as outlined in Title 10.06.040 of the City Municipal Code.

All demolition work shall meet the requirements and specifications of APWA 02 41 13 (Selective Site Demolition), APWA 02 41 14 (Pavement Removal) and APWA 02 41 15 (Pavement Pulverizing).

Removal and disposal of Asbestos Cement Pipe shall be per the Utah Department of Environmental Quality (DEQ) Division of Air Quality (DAQ) guidance document, How to Handle Non-friable Asbestos Cement Pipe, A

- H. BARRICADES. Barriers shall be placed at each end of all excavations, and at such places as may be necessary along excavations, to warn all pedestrians and vehicular traffic of such excavations. Lights shall also be placed along excavations from one hour before sunset each day to one hour after sunrise of the next day, until such excavations are entirely refilled, compacted, and surfaced or final graded. All excavations shall be barricaded in such a manner as to prevent persons from walking into, falling into, or otherwise entering those excavations.
- I. CONTROL OF GROUNDWATER. All trenches shall be kept free from water during excavation, fine grading, pipe laying and jointing, and pipe embedment operations. Where the trench bottom is mucky or otherwise unstable because of the presence of groundwater, and in all cases where the static groundwater is above the bottom of any trench or bell hole excavation, such groundwater shall be lowered to the extent necessary to keep the trench free from water and the trench bottom stable when the work within the trench is in progress. The discharge from excavation dewatering shall be conducted to natural drainage channels, gutters, drains, or storm sewers. No sanitary sewer shall be used for disposal of trench water. Surface water shall be prevented from entering trenches. [A state dewatering permit is required if the groundwater is pumped into the storm drain or leaves the site.](#)
- J. TRENCH CROSSINGS AND EASEMENTS. At road crossings or where existing driveways occur on a road, the Contractor shall make provisions for trench crossings either by means of backfill, tunnels, or temporary bridges.

Any disturbance to property caused by the Contractor's activity within easements shall be restored to the satisfaction of the owner of the property. If necessary, shrubs, fences, or other objects shall be removed carefully. If work must occur on a lawn, the lawn shall be cut to a width of two feet (2') wider than the intended work area (one foot (1') on each side). The lawn sod shall be stacked separately from and shall not be mixed with other excavated material.

After the sod is removed, if excavation is necessary, the topsoil shall be removed to a depth of twelve inches (12"), or the actual depth of the topsoil, whichever is less. The topsoil shall be stored separately from and shall not be mixed with other excavated material.

Following completion of the backfilling and the compaction of the trench, the Contractor shall replace topsoil, lawn sod, shrubs, fences, and other items that may have been removed from within the easement area and shall clean up and remove any rocks, dirt or any other debris that remain from the construction work. The Contractor shall obtain a release from the property owner stating that the repairs have been made to the satisfaction of the Owner. A copy of said release shall be delivered to the City Engineer.

K. RESTORATION OF CONSTRUCTION SITE. During the progress of the Work, the Contractor shall clean up all construction debris, excess excavation, and excess materials, and shall restore all fences, irrigation structures, ditches, culverts, and similar items. The Contractor shall stockpile the excavated trench material so as to do the least damage to adjacent grassed areas, or fences, regardless of whether these are on private property or public rights-of-way. All excavated materials shall be removed from grassed and planted areas and these surfaces shall be left in a conditions equivalent to their original surface and free from all rocks, gravel, boulders, or other foreign materials.

1.20.030 Subgrade

A. APWA. Unless otherwise specified in the City Construction and Design Standards, subgrade work shall meet the requirements and specifications of the following APWA sections and related sections:

1. APWA 31 23 16 (Excavation)
2. APWA 31 23 17 (Rock Removal)
3. APWA 31 23 26 (Compaction)
4. APWA 31 25 00 (Erosion and Sedimentation Control)

B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to subgrade:

1. Drawing 17 (Typical Trench Section)

C. PREPARATION. All subgrade shall be shaped and compacted in reasonably close conformity with lines, grades and typical cross section as established by the City Engineer. All grading shall be based on an engineered survey, accepted by the City.

In trenches and cut or fill areas the subgrade shall be scarified to a depth of 8 inches and compacted according to the compaction standards of this chapter. No rocks larger than 4 inches in diameter, organic material, soft clay, spongy material, or other deleterious material will be permitted in this scarified subgrade layer.

D. SOFT AND YIELDING AREAS. Soft and yielding areas which do not compact to City standards shall be removed and replaced with enough compacted engineered fill to bridge the area. Trenches excavated within 10 feet of the lip of gutter shall remove the pavement to the gutter and replace it as part of the trench asphalt pavement repair unless otherwise approved by the City Engineer.

- E. TRENCHES. When the sub-grade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, the trench shall be over-excavated to a sufficient depth and backfilled with enough compacted fill as approved by the City to bridge the area.
- F. ROADS. Road sub-grades shall be shaped and graded to within a tolerance of 0.15 feet of design grade. Drainage shall be maintained at all times.
- G. STRUCTURES. Sub-grade material for all concrete structures, regardless of type or location, shall be firm, dense, thoroughly compacted and consolidated; shall be free from mud and muck; and shall be sufficiently stable to remain firm and intact under the feet of the workmen engaged in sub-grade surfacing, laying reinforcing steel, and depositing concrete.

Coarse gravel or crushed stone may be used for subsoil reinforcement if results are satisfactory to the City Engineer. Such material shall be applied in layers, not exceeding 6 inches in thickness, each layer being embedded in the sub-soil by thorough tamping. All excess soil shall be removed to compensate for the displacement of the gravel or crushed stone and the finished elevation of any subsoil reinforced in this manner and shall not be above the specified sub-grade.
- H. SOILS ANALYSIS. The City Engineer may require a soil analysis and design for projects in any area.

1.20.040 Fill Material

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, fill material work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 31 05 13 (Common Fill)
 - 2. APWA 31 05 13 2.3 (Granular Backfill Borrow)
 - 3. APWA 31 05 13 2.7 (Sand)APWA 31 05 13 2.8 (Gravel)
 - 4. APWA 31 05 15 (Cement Treated Fill)
 - 5. APWA 31 05 15 2.1 (Cement Treated Flowable Fill)
 - 6. APWA 31 05 15 2.3 (Lime Treated Fill)
 - 7. APWA 31 05 15 2.4 (Asphalt Treated Fill)
 - 8. APWA 31 23 26 (Compaction)
 - 9. APWA 31 25 00 (Erosion and Sedimentation Control)
 - 10. APWA 32 11 23 (Aggregate Base Courses)

11. APWA 32 11 23 2.1 (Untreated Base Courses)
 12. [APWA 32 11 24 \(Pulverized Pavement Base Course\)](#)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to fill material:
1. Section 1.24.060 (Installation and Compaction of Earth Materials)
 2. Drawing 1 (Standard Street Intersection and Utility Locations)
 3. Drawing 2 (Standard Utility Locations in Knuckle)
 4. Drawing 3 (Standard Street Intersection and Utility Locations)
 5. Drawing 17 (Typical Trench Section)
 6. Chapter 1.20 (Earthwork and Trenches)
- C. GENERAL. Only bedding material, engineered fill, untreated base course, or cement treated fill as specified in this section may be used as fill material under and within a foot of streets, future street areas, driveways, and concrete unless otherwise specified.
- In other areas native excavated material may normally be used unless such material cannot be properly compacted according to specifications in this chapter, 1.20 (Earthwork and Trenches). All fill material, including native fill material, must be free from debris, organic material, and rocks larger than 6 inches in diameter and have a liquid limit not to exceed 35 and plastic limit not to exceed 15.
- D. CONTRACTOR RESPONSIBILITY. The Contractor will be responsible for ensuring backfill and compaction are properly and adequately done according to APWA 31 23 26 (Compaction). Settlement of trenches within a period of two- (2) years after final acceptance of the project shall be considered incontrovertible evidence of inadequate compaction, and the Contractor shall be responsible for correcting the condition in accordance with the provisions of these Specifications. This includes the replacement of sidewalk, curb and gutter, and other surface improvements.
- E. BEDDING MATERIAL. Use APWA 31 05 13 2.8 (Gravel) No. ~~54~~ Sewer Rock for gravity pipe bedding material. Use APWA 31 05 13 2.7 (Sand) sand as a bedding material for pressure pipe and conduit. Bedding sand must compact sufficiently to support the pipe.
- F. ENGINEERED FILL. Use APWA 31 05 13 2.3 (Granular Backfill Borrow) granular backfill borrow for Engineered Fill.

- G. UNTREATED BASE COURSE. Use APWA 32 11 23 2.1 (Untreated Base Courses) Aggregate Class A for untreated base course. The use of slag as an untreated base course shall not be permitted.
- H. CEMENT TREATED FILL. Cement treated fill may only be used when approved by the City Engineer and shall meet the requirements and specifications of APWA 31 05 15 (Cement Treated Fill). Cement treated fill does not include treated/stabilized base materials that are part of the pavement design. Cement treated fill includes following fill materials:
 - 1. Controlled Low-Strength Material (CLSM) (Flowable Fill) APWA 31 05 15 2.1 (Cement Treated Flowable Fill)
 - 2. Lime Treated Fill, APWA 31 05 15 2.3 (Lime Treated Fill)
 - 3. Asphalt Treated Fill, APWA 31 05 15 2.4 (Asphalt Treated Fill)
- I. DEFECTIVE FILL. Fill not conforming to the requirements of this specification shall be reworked to the requirements or removed and replaced with acceptable fill.

1.20.050 Slopes, Embankments, Fills, and Open Channels

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, slopes, embankments, fills, and open channels work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 31 25 00 (Erosion and Sedimentation Control)
 - 2. APWA 31 36 00 (Gabions)
 - 3. APWA 31 37 00 (Riprap or Rock Lining)
 - 4. APWA 31 41 00 (Shoring)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to slopes, embankments, fills, and open channels:
 - 1. Section 1.04.050 (Erosion and Sedimentation Control)
- C. PREPARATION. Unsuitable materials that occur in the foundation for slopes, embankments, and fills shall be removed by clearing, stripping, and/or grubbing. Where suitable materials occur, after stripping, the foundation shall be scarified to a depth of not less than 8 inches. All materials in slopes, embankments, and fills, including the scarified foundation layer, shall be placed, moistened, and compacted according to the compaction standards in this chapter.

- D. MATERIAL. When the slope, embankment, or fill exceeds the amount of excavation, sufficient additional material shall be obtained from borrow pits provided by the Contractor. All material proposed to be imported shall be subject to the review and approval of the City Engineer prior any hauling operations.

The materials used for slope, embankment and fill construction shall be free from sod, grass, trash, rocks larger than 6 inches in diameter and all other material unsuitable for construction of compacted fills.

- E. GRADING. Grading of completed slope, embankment, or fill shall bring the surfaces to a smooth, uniform condition with final grades being within 0.1 foot of the design grade. All grading shall be done to an engineered red-head.
- F. SLOPE SAFETY. All slope construction shall be in accordance with all City, State and Federal regulations. Plans and Specifications for structures must be approved by the City if the excavation is greater than five (5) feet. No permanent slopes steeper than 3:1 shall be allowed without a retaining structure unless otherwise approved in writing by the City Engineer. The width of the excavation shall be increased if necessary to provide space for sheeting, bracing, shoring and/or other supporting installations. Unsafe slopes will be the cause for immediate shutdown of the project.
- G. SHORING. Conduct work according to APWA 31 41 00 (Shoring). Excavations shall be shored as required to support the walls of the excavations. These measures shall be taken to protect the workers, the work in progress, existing utilities, structures, and improvements, from damage due to sliding and settling of trench walls.

The Contractor shall be fully responsible for the adequacy of methods and materials used in trench sheeting, bracing, shoring, and other systems provided to protect workers. Injury to or death of workers resulting from inadequate trench safety measures shall be the full and complete responsibility of the Contractor. All damages resulting from lack shoring shall be the responsibility of the Contractor, and the Contractor shall affect all necessary repairs or reconstruction at its own expense resulting from such damage.

Shoring that does not extend below the centerline of the pipe may be removed at the discretion and responsibility of the Contractor after the pipe embedment has been placed and compacted to a level twelve (12) inches above the top of the pipe. Following removal of the sheeting or bracing, the trench shall be immediately backfilled and compacted or consolidated.

- H. SEDIMENT AND EROSION CONTROL. See Section 1.04.050 (Erosion and Sedimentation Control).
- I. GABIONS. Gabions shall meet the requirements and specifications of APWA 31 36 00 (Gabions)

- J. RIP RAP AND ROCK LINING. Rip rap and rock lining work shall meet the requirements and specifications of APWA 31 37 00 (Riprap or Rock Lining).

1.20.060 Installation and Compaction of Earth Materials

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, installation and compaction of earth materials work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA 33 05 20 (Backfilling Trenches)
 2. APWA 31 23 23 (Backfilling Structures)
 3. APWA 32 05 10 (Backfilling Roadways)
 4. APWA 31 23 26 (Compaction)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to installation and compaction of earth materials:
1. Article 1.20.030 D (Fill Material)
 2. Section 1.20.040 (Fill Material)
 3. Drawing 17 (Typical Trench Section)
- C. GENERAL. Fill material outside of pavement areas, as defined by APWA 32 05 10 (Backfilling Roadways), and more than 24 inches from any utility box shall be compacted to not less than 90% of the maximum dry density.
- D. STREETS. Sub-base and road-base shall be graded to an engineered red head. Loose rock, roots, brush, and other materials that may be encountered in shaping the sub-base must be removed. Any soft and yielding area in the fill which do not compact to the specified density shall be removed and replaced with engineered fill installed and compacted to City standards or as directed by a Geotechnical Engineer.
- E. BACKFILL IN TRENCHES. Backfill shall be carefully placed around and over pipes and shall not be permitted to fall directly on a pipe from such a height or in such a manner as to cause damage according to APWA 32 05 20 (Backfilling Trenches) and City Standard Drawing 17 (Typical Trench Section)
- F. PIPE ZONE. The pipe zone includes the full width of trench from 3 inches below the pipe to 12 inches above the pipe for all pipes except for large reinforced concrete pipe (RCP). Large RCP includes RCP with internal diameters larger than 24 inches. The pipe zone for large RCP shall include the full width of trench from 6 inches below the pipe to 12 inches above the pipe.

The pipe zone for all pipes shall be filled with compacted bedding material as specified in Article 1.20.030 D (Fill Material). Pipe zone materials shall be placed and compacted under and around the pipe in horizontal layers not to exceed 8 inches and tamped by hand or pneumatic tampers.

1.20.070 Geotextiles, Geogrids, and Geocomposites

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, geotextiles, geogrids, and geocomposites work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 31 05 19 (Geotextiles)
 - 2. APWA 31 05 21 (Geogrids and Geocomposites)
- B. GENERAL. All geotextile work shall meet the requirements and specifications of APWA 31 05 19 (Geotextiles). Geogrid and geocomposite work shall meet the requirements and specifications of APWA 31 05 21 (Geogrids/Geocomposites). Geotextile, geogrid and geocomposite work includes but is not limited to the following geotextile applications:
 - 1. Stabilization-Separation
 - 2. Silt Fence
 - 3. Erosion Control
 - 4. Roadway Pavements
 - 5. Drainage
 - 6. Weed Barrier
 - 7. Granular Base Reinforcement
 - 8. Asphalt Concrete Reinforcement
 - 9. Soil Reinforcement

1.20.080 Subsurface Pipe Installation

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, subsurface pipe installation work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 33 05 23.35 (Trenchless Utility Installation)
 - 2. APWA 33 05 23.40 (Cured-in-Place Pipe)

- B. GENERAL. Pipes, conduits, or casings, six (6) inches in diameter or less, may be bored, jacked, augured or jetted under sidewalk, curb, gutter if authorized by the City Engineer. The resulting hole diameter shall not exceed 1 inch plus the outside diameter of the pipe or sleeve installed.
- C. BORING OR JACKING. Boring or jacking work shall meet the requirements and specifications of APWA 33 05 23.35 (Trenchless Utility Installation).
- D. TUNNELING. Where sidewalk, curb, and gutter exists, excavation may be made by tunneling provided the following requirements are met:
1. Excavation. Excavation shall be vertical and as near to the curb or sidewalk as possible;
 2. Tunnel Length. The length of the tunnel shall not exceed the width of the sidewalk, curb, and gutter;
 3. Separate Sidewalk and Curb. Where a separate sidewalk and curb exist, an excavation shall be made between the sidewalk and the curb;
 4. Undisturbed Earth. At least three feet of undisturbed earth shall be left under the sidewalk or curb; and
 5. Tunnel Backfill. Where the sidewalk has been tunneled, the hole shall be filled from each end with flowable fill. Where the excavation cannot meet these requirements, a section of sidewalk, curb, or gutter, from joint to joint shall be removed and replaced.

1.24 Drinking Water

1.24.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 33 08 00 (Commissioning of Water Utilities)
 3. APWA 33 11 00 (Water Distribution and Transmission)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to drinking water:
1. Chapter 1.08 (Improvement and Design Requirements)
 2. Chapter 1.12 (Inspection and Testing)
 3. Chapter 1.16 (Contractor Requirements)
 4. Chapter 1.20 (Earthwork and Trenches)
 5. Drawing 1 (Standard Street Intersection and Utility Locations)
 6. Drawing 2 (Standard Utility Locations in Knuckle)
 7. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 8. Drawing 22 (Fire Hydrant and Water Valve Detail)
 9. Drawing 23 (Thrust Block Details)
 10. Drawing 24 (Typical Culinary Water Connection)
 11. Drawing 25 (Large Meter Assembly)
 12. Drawing 26 (Backflow Prevention Assembly)
- C. LOCATION. Drinking water mains shall be located on either the north or east sides of a street according to the following Standard Drawings unless otherwise authorized by the City Engineer. Drinking water distribution and transmission lines shall not be installed within 10' of any footing, foundation or pad of a structure.
- D. CROSS CONNECTION. There shall be no physical cross connections between the drinking water system and pipe, pumps, hydrants, or tanks that may be contaminated from any source, including pressurized irrigation. See Article

1.24.030 I (Backflow Devices) for service connections to sprinkler systems or other hazardous connection points.

Valve boxes, meter boxes, and other vaults or manholes containing valves, blow-offs, meters, or other such appurtenances to a distribution system, shall not be connected directly to a storm drain or sanitary sewer, and shall be provided with a drain to daylight if possible. Where this is not possible gravel sumps may be used if the site is not subject to flooding and conditions will ensure adequate drainage. Sump pumps may also be considered if a drain to daylight or sump is not feasible.

- E. IDENTIFICATION TAPE. ~~All drinking water mains shall be installed with identification tape that meets the requirements and specifications of APWA 33 05 20 (Backfilling Trenches).~~ Tape shall be buried 12 inches below grade.
- F. TRACER WIRE. ~~All pipe shall include a 12-gauge solid THHN tracer wire installed according to NESC standards. The tracer wire shall be installed in the pipeline trench approximately 6 inches above the top of pipe. The tracer wire shall be brought up in the valve boxes to permit connecting to when doing line location.~~ All water line pipes shall include a 14 AWG solid direct bury red or blue wire. Tracer wire shall be installed and secured to the top of all main line pipe and service laterals. Use poly tape to secure wire at all joints and 5-foot intervals.

Tracer wire is to extend 24 inches above the finished grade at the base of fire hydrants. It shall be housed in a 1-1/2" x 24" PVC pipe located 6 inches in front of the fire hydrant. The 1-1/2" PVC will extend 2 inches above grade (concrete apron) and shall have a slip cap according to Drawing 22 (Fire Hydrant and Water Valve Detail). DO NOT GLUE THE CAP ON.

Tape service lateral tracer wire to corporation stop. If mainline has tracer wire, splice and connect service wire with 3M Direct Bury Splice Kit to main line tracer wire. Wires are to be run into each meter box with enough wire to extend 24" above grade.

DO NOT run tracer wire up inside valve boxes. Install along outside of valve boxes until near the top as required by Drawing 22 (Fire Hydrant and Water Valve Detail). Any splicing of tracer wire shall use a 3M Direct Bury Splice Kit and be tested for continuity. Tie tracer wire in a knot before splices.

- G. CONNECTIONS TO EXISTING DRINKING WATER LINES. Information in the plans may be based on inaccurate record drawings. The Contractor is responsible for verifying the actual size, material type, and location of existing water lines in the field before starting any connection work. ~~All connections shall comply with AWWA C600 (for ductile iron), AWWA C605 (for PVC), and AWWA C651 (for disinfection).~~ Not all required installation materials needed for installation are depicted in the plans. Contractor shall be responsible for acquiring and installing these materials.

Tapping tees may only be installed with City Engineer approval and when the existing main is at least one size larger than the new intersecting line. All tapping operations must follow AWWA C600/C605 standards, and disinfection must meet AWWA C651 requirements, including swabbing, flushing, and bacteriological testing.

All connections must be properly restrained, pressure tested and disinfected before being placed into service.

~~H. SURFACE WATER CROSSINGS. When a surface water crossing is proposed, the design and installation shall comply with the following:~~

- ~~1.—Utah Administrative Code R309-550-8~~
- ~~2.—APWA 33-08-00 (Commissioning of Water Utilities)~~
- ~~3.—APWA 33-11-00 (Water Distribution and Transmission)~~

~~The water main must be adequately supported and anchored to prevent movement, protected from damage and freezing, and made accessible for future repair or replacement. For underwater crossings, the pipe shall have a minimum of 2 feet of cover, or more if local conditions require, to provide adequate protection against erosion and external forces.~~

~~For watercourse crossings that span greater than 15 feet in width, the pipeline shall utilize the following special construction methods:~~

- ~~1.—Restrained Joints. The pipe must have restrained joints throughout the section within the watercourse to prevent joint separation and flexible restrained joints at both edges of the crossing to accommodate potential ground movement.~~
- ~~2.—Isolating Valves. Isolating valves shall be provided on both sides of the water crossing at locations not subject to high ground water or flooding, so that the section can be isolated for testing or repair.~~
- ~~3.—Sampling Tap. A sampling tap must be installed between the isolating valves for representative water quality testing. These taps shall be located in areas not subject to flooding.~~
- ~~4.—Pressure Test. A means shall be provided to pressure test the underground water crossing pipe in between the isolating valves.~~

~~I.H. UNUSUAL PIPING AND PLUMBING. Special and unusual piping and plumbing for equipment or structures are treated as separate items and are not included in these standards. Their design shall be approved by the City Engineer.~~

1.24.020 Pipe and Fittings

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water pipe and fitting work shall meet the requirements and specifications of the following APWA sections and related sections:

1. APWA 33 05 05 (Ductile Iron Pipe)
2. APWA 33 05 07 (Polyvinyl Chloride Pipe)
3. APWA 33 05 09 (Steel Pipe - Lined and Coated)

- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to drinking water pipe and fittings:

1. Drawing 1 (Standard Street Intersection and Utility Locations)

2. Drawing 2 (Standard Utility Locations in Knuckle)

2-3. Drawing 23 (Thrust Block Details)

3-4. Section 1.24.050 (Meters and Services)

- C. PIPE. Polyvinyl chloride (PVC) pipe shall be used for all drinking water mains 24 inches in diameter and smaller unless otherwise authorized by the City Engineer. Pipe type for main lines larger than 24 inches in diameter and pipe material shall be designed. No used materials may be reused. The minimum main line pipe size for new installations is 8 inches in diameter.

Under no circumstances shall the pipe or accessories be dropped into the trench. All foreign matter or dirt shall be removed from the inside of the pipe before it is placed, and it shall be kept clean during and after laying. No debris, tools, or other materials shall be placed in the pipe during laying operations. When laying of pipe is not in progress, the pipe shall be closed by a water-tight plug.

- D. TRANSMISSION LINES. Transmission lines shall be designed to minimize unpressurized flows. Unpressurized transmission lines shall not be installed less than 20 feet from a concentrated source of pollution such as septic tanks, drain fields, garbage dumps, pit privies, sewer lines, and feed lots. They shall also not be placed in boggy areas or areas subject to the ponding of water.

- E. POLYVINYL CHLORIDE PIPE (PVC). PVC pipe shall meet the standards and specifications of APWA 33 05 07 (Polyvinyl Chloride Pipe). Only blue or white, DR-18 pressure class 235 psi PVC pipe may be used for drinking water main lines.

PVC Pipe shall conform to AWWA C900 for 4-inch through 24-inch pipes. PVC pipes smaller than 4 inches shall be DR-21 ASTM D2241 pipe. Pipe materials for sizes larger than 24 inches in diameter shall be individually designed.

- F. DUCTILE IRON PIPE. Ductile iron pipe shall meet the standards and specifications of APWA 33 05 05 (Ductile Iron Pipe). Only a pressure class of 150 psi or larger may be used. A tubular black polyethylene encasement must be installed according to AWWA C105 over all ductile iron pipe and fittings. Flanges, when required, shall meet the requirements and specifications of AWWA C115. Ductile iron pipe shall be wrapped with V-Bio Polyethylene Encasement or approved equivalent.
- G. POLYETHYLENE PIPE. Polyethylene pipe shall meet the standards and specifications of AWWA C906 DR-11 pressure class 200 psi with NSF-61 certification for drinking water main lines 4 inches in diameter and greater. See Section 1.24.050 (Meters and Services) for polyethylene pipe specifications for sizes smaller than 4 inches in diameter.
- H. STEEL PIPE - LINED AND COATED. Steel pipe shall meet the standards and specifications of APWA 33 05 09 (Steel Pipe - Lined and Coated).
- I. FITTINGS. Use Ductile Iron fittings that conform to the provisions of ANSI/AWWA C110/A21.10 or C153/A21.53 unless otherwise recommended by the manufacturer and authorized by the City Engineer. All PVC pipe being inserted into fittings shall have the bevel end removed.

All fitting bolts and nuts shall be greased. Only NSF-certified, food-grade, non-aerosol lubricants compliant with ANSI/NSF Standard 61 shall be used. All fittings shall have an 8 mil vinyl wrap plastic cover. Minimum pressure Class will be 250 for pipes larger than 12-inch diameter. Pipes of 12-inch diameter and smaller shall be pressure Class 350. Pipe cutting for closure pieces or other purposes shall be cut cleanly and in a workmanlike manner, following manufacturer recommendations. All cut pipe ends must be beveled and filed to prevent damage to gaskets during joint assembly.

Couplings shall be equal to the product of Smith-Blair or Dresser with cast iron couplings being used on all cast iron and PVC pipe. All steel fittings and bolts shall be coated with a non-oxide coating and wrapped with polyethylene.

- J. RESTRAINING. Thrust blocks shall be installed according to Standard Drawing 23. Mechanical restraint shall also be installed at each fitting requiring a thrust block. ~~Either thrust blocks or mechanical restraining devices shall be used for all tees, valves, plugs, caps and bends. Restraining shall be accomplished according to the standard drawings.~~ Thrust Blocks: Concrete thrust blocks shall be installed at all fittings subject to unbalanced thrust forces, including tees, valves, plugs, caps, and at bends deflecting 11 1/4 degrees or more. Thrust blocking shall be designed and installed as per AWWA C600/C605, taking into account pipe size, system operating pressure, and the soil's bearing capacity. Thrust blocks shall be poured against undisturbed soil. The concrete used for thrust blocks shall have a minimum compressive strength of 3000 psi at 28 days. All fittings shall be encased in a 12 mil protective plastic wrap (as per

~~AWWA C105) before the thrust block is poured. The area of bearing on both the pipe and the surrounding soil shall be as shown in the standard draw.~~
~~Mechanical Restraints: In areas where thrust blocks are impractical (e.g., limited space or unsuitable soils), approved mechanical restraining devices, such as mechanical joint restraining glands or restrained joint systems, shall be installed following AWWA C600/C605 standards. These devices must be capable of withstanding the anticipated thrust forces based on system pressures and soil conditions.~~
~~Design Considerations: The selection between thrust blocks and mechanical restraints shall be based on site-specific conditions, including available space, soil stability, and system pressures. All restraint systems must be designed to ensure that pipe and fittings remain securely in place under maximum operating pressures and transient surges.~~

- K. MAIN LINE DEAD ENDS. Dead-end mains must be equipped with a fire hydrant if flow and pressure are sufficient. If not, an approved flushing hydrant or blow-off valve shall be installed. All flushing devices shall be sized to provide a minimum velocity of 2.5 feet per second (fps) within the main being flushed. Under no circumstances shall a flushing device be directly connected to a sanitary sewer.

1.24.030 Valves and Couplings

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water valves and couplings work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA 33 12 16 (Water Valves)
 2. APWA 33 12 16 2.2 (Gate Valves)
 3. APWA 33 12 16 2.3 (Butterfly Valves)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to drinking water valves and couplings:
1. Drawing 2 (Standard Utility Locations in Knuckle)
 2. Drawing 22 (Fire Hydrant and Water Valve Detail)
 3. Drawing 23 (Thrust Block Detail)
 4. Drawing 26 (Backflow Prevention Assembly)
- C. GENERAL. Only the City may open or close drinking water valves. A sufficient number of valves shall be provided on water mains so that inconvenience and sanitary hazards will be minimized during repairs. Valves shall be located at not more than 500-foot intervals in commercial districts and at not more than

one block or 800-foot intervals in other districts. Valves shall be bolted to all extensions of tee and cross fittings.

- D. RESILIENT SEATED GATE VALVE. All valves on 4-inch to 10-inch drinking water mains shall be resilient seated gate valves that meet the standards and specifications of APWA 33 12 16 2.2 (Gate Valves).
- D. BUTTERFLY VALVE. All valves 12-inch and larger valves shall be butterfly valves that meet the standards and specifications of APWA 33 12 16 2.3 (Butterfly Valves).
- F. VALVE BOXES. All top of valve boxes located in streets shall be installed 1/4 inch below grade centered in a 30 inch fiber reinforced concrete collar. Valve boxes in off-road areas shall extend 6 inches above grade. Lid detail shall be similar to Comco C-6517.
- G. RESSURE REGULATION VALVES (PRVs). PRVs which are required in a development shall be designed by the Developer's engineer and the design shall be submitted to the City Engineer for review and approval prior to starting construction. All PRV's shall be Cla-Val with a 4" bypass or unless otherwise required by the City Engineer. PRVs shall be placed in a concrete vault and have telemetry included.
- H. TAPPING VALVES. Tapping valves may only be used when approved by the City Engineer. Tapping saddles with an "O" ring may be used if the drinking water main line to be tapped is larger than the new drinking water main line. Where the tap is the same size as the existing main, cast iron or stainless-steel tapping sleeves shall be used, which encase the full perimeter of the pipe. The valve shall be a tapping valve with a guide lip on the flanged side. The opposite side of the valve shall have a mechanical joint connection.
- I. AIR, VACUUM AND RELEASE VALVES. Combination air, vacuum and release valves shall be installed according to the standard drawings at high points in the system as required by the City Engineer.
- J. BACKFLOW DEVICES. Installation of backflow devices shall conform to the state-adopted plumbing code and City Standard Drawing

1.24.040 Fire Hydrants

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, fire hydrants work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 33 11 11 (Relocate Water Meters and Fire Hydrants)
 - 2. APWA 33 12 19 (Hydrants)
 - 3. AWWA C651 (Disinfecting Water Mains)

- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to fire hydrants:

1. Drawing 22 (Fire Hydrant and Water Valve Detail)

- C. GENERAL. Only the City may open or close fire hydrants. Fire hydrants shall meet the requirements and specifications of APWA 33 12 19 (Hydrants) and the City standard drawing for fire hydrants. ~~Only Red~~ Mueller Super Centurion 250 fire hydrants or approved equivalent ~~may shall~~ be installed. A red Waterous WB-67 may be used when the Mueller hydrant is unavailable or if approved by the City Engineer. They shall have a 5 ¼ inch barrel diameter and 6-inch mechanical joint connection. The 6-inch gate valve will be mechanical joint by flange connected to the main line tee. The valve box lid shall read "FIRE".

Hydrants shall have one 4 ½ inch streamer nozzle and two 2 ½ inch hose nozzles. Hydrants shall be frost proof. The threads shall be National Standard Fire Hose Thread. Hydrants shall be set at a height that will allow approximately 2 inches exposed between the finished ground and the sidewalk flange. Fire hydrants shall be set vertically and held in place by adequate concrete blocking which shall be left in the trench. A gravel filled drip area shall be provided. See standard drawing for fire hydrants.

- D. PLACEMENT AND LOCATION. Spacing of fire hydrants shall be according to the International Fire Code and the local fire code official. Fire hydrants shall be capable of providing fire flow amount determined by the local fire code official. An adequate number of hydrants or blow-offs shall be provided to allow periodic flushing and cleaning of water lines in compliance with AWWA C651 (Disinfecting Water Mains).

The relocation of fire hydrants shall meet the requirements and specifications of APWA 33 11 11 (Relocate Water Meters and Fire Hydrants) and related sections.

1.24.050 Meters and Services

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, drinking water meters and services work shall meet the requirements and specifications of the following APWA sections and related sections:

1. APWA 33 05 06 (Polyethylene Pipe)
2. APWA 33 11 11 (Relocate Water Meters and Fire Hydrants)
3. APWA 33 12 33 (Water Meters)
4. AWWA C901 (Polyethylene Pressure Pipe and Tubing)

B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to drinking water meters and services:

1. Drawing 24 (Typical Culinary Water Connection)
2. Drawing 25 (Large Meter Assembly)
3. Drawing 26 (Backflow Prevention Assembly)

C. GENERAL. Pipe damaged by scratches, cuts, kinks, or buckled areas shall not be installed. No used materials may be reused. Deflection in joints shall meet manufacturer's specifications and shall be approved by the City Engineer or shall be replaced with the proper fitting.

All drinking water services shall have dual check valves. The minimum size for new drinking water service lines is 1 inch. Acceptable diameters for services lines are 1", 1.5", 2", 4", 6", and 8". Services shall conforming to ASTM B88 standards. Services 1 inch or larger may be polyethylene pipe conforming to the requirements and specifications of APWA 33 05 06 (Polyethylene Pipe) and AWWA C901 (Polyethylene Pressure Pipe and Tubing) and be NSF-61 Certified. Only CTS SDR9 200 psi blue polyethylene pipe shall be used for service lines. All connections shall have stainless steel stiffeners.

D. METERS. Install meters according to City Standard Drawing 24 (Typical Culinary Water Connection) and Drawing 25 (Large Meter Assembly). All meters shall be paid for by the Contractor and supplied by the City. Meter boxes shall be in good repair. They shall not be set at an angle, crushed, or dented. The inside of boxes must be free from obstructions such as dirt, rocks or debris.

E. PLACEMENT AND LOCATION. All meter boxes shall have their location and grade staked prior to installation. Service taps shall be a minimum of 24 inches apart along main line and extend perpendicular from the main to meter. No taps will be allowed within 24 inches of the end of pipe. Drinking water service lines shall meet the separation from sanitary sewer requirements in this chapter.

F. METER RELOCATION. Relocate meters according to APWA 33 11 11 (Relocate Water Meters and Fire Hydrants). If a meter must be moved it may only be displaced a maximum of 24 inches to either side. If it must be moved more than 24 inches, a new service line must be installed. When ever a new service line is installed the old corporation stop shall be shut off at the main and the old service line cut two feet from the main. City must verify disconnection before buried.

1.28 Sanitary Sewer

1.28.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, sanitary sewer work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (UTILITIES)
 2. APWA 33 31 00 (Sanitary Sewerage System)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to sanitary sewer:
1. Chapter 1.08 (Design Requirements)
 2. Chapter 1.12 (Contractor Requirements)
 3. Chapter 1.16 (Inspection and Testing)
 4. Chapter 1.20 (Earthwork and Trench Requirements)
 5. Drawing 1 (Standard Street Intersection and Utility Locations)
 6. Drawing 2 (Standard Utility Locations in Knuckle)
 7. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 8. Drawing 18 (Typical Sewer Manhole Detail)
 9. Drawing 19 (Typical Manhole on Existing Pipe)
 10. Drawing 20 (Typical Sampling Manhole)
 11. Drawing 21 (Typical Sewer Drop Manhole)
 12. Drawing 27 (Typical Sewer Lateral)
 13. Drawing 28 (Typical Grease Trap)
- C. LOCATION. Sanitary Sewer main lines shall be located on either the south or west sides of a street according to the following Standard Drawings unless otherwise authorized by the City Engineer:
1. Drawing 1 (Standard Street Intersection and Utility Locations)
 2. Drawing 2 (Standard Utility Locations in Knuckle)
 3. Drawing 3 (Standard Street Cross Sections and Utility Locations)

Sanitary Sewer mains shall not be installed within 10' of any footing, foundation or pad of any structure. A maximum of 500 feet of pipe shall be allowed between manholes.

- D. PIPE SLOPES. See Article 1.08.060 (Pipe Slopes).
- E. SANITARY SEWER LIFT STATIONS. Sanitary sewer lift stations which are required in a development shall be designed by the Developer's engineer and the design shall be submitted to the City Engineer and wastewater division for review and approval prior to starting construction. City owned lift stations will be the wet well/dry well type, will have standby power, proper ventilation, telemetry, a flow meter, and will be designed for large areas, not individual subdivisions unless approved otherwise by the City Engineer. Building permit and inspections shall be required.
- F. UNUSUAL PIPING AND PLUMBING. Special and unusual piping and plumbing for equipment or structures are treated as separate items and are not included in these standards.

1.28.020 Manholes

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, sanitary sewer manhole work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 33 31 00 2.3 (Manholes)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to sanitary sewer manholes:
 - 1. Drawing 18 (Typical Sewer Manhole Detail)
 - 2. Drawing 19 (Typical Manhole on Existing Pipe)
 - 3. Drawing 20 (Typical Sampling Manhole)
 - 4. Drawing 21 (Typical Sewer Drop Manhole)
- C. GENERAL. Manholes shall be furnished complete with cast-iron rings and covers.
- D. SIZE. Generally use ~~45~~-foot inside diameter (ID) manholes for main lines ~~less than 15-30~~ inches in diameter ~~and smaller, 5-foot ID manholes for main lines 15 to 30 inches in diameter~~, and 6-foot ID manholes for main lines greater than 30 inches in diameter. ~~5-foot ID manholes are required in the following situations: At all intersections of 3 or more 8-inch or larger pipelines. All change-in-direction manholes. In manholes deeper than 15 feet. In manholes with a grades greater than 20% through the manhole.~~

- E. LARGE DIAMETER PIPE MANHOLES. Manholes on sanitary sewer trunk lines 152 inch in diameter or greater shall be monolithic, precast "Perfect Lined Manhole System, as manufactured by NWPX, HDPE/FRP Lined Precast Concrete Manholes for Sewers" or an approved equivalent installed to manufacturer's specifications.~~be HDPE-lined manholes, precast polymer manholes, epoxy coated, or polyurea coated.~~

1.28.030 Pipe and Fittings

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, all sanitary sewer pipe and fittings work shall meet the requirements and specifications of the following APWA sections and related sections:
1. Division 33 (UTILITIES)
 2. APWA 33 05 07 (Polyvinyl Chloride Pipe)
 3. APWA 33 05 11 (Polypropylene Pipe)
- B. GENERAL. All sanitary sewer lines 8 inches to 18 inches in diameter shall be constructed with polyvinyl chloride (PVC) pipe. All sanitary sewer lines larger than 18 inches in diameter shall be constructed with the following:
1. Polyvinyl chloride (PVC) pipe
 2. Corrugated Polypropylene Pipe
 3. HDPE-Lined Reinforced Concrete Pipe
 4. Or approved equivalent.

The minimum main line pipe size for new installations is 8 inches in diameter. Pipe material for main lines larger than 24 inches or buried more than 12 feet deep shall be designed and require manufacturing and engineering specifications to be submitted to the City Engineer for written approval. No used materials may be reused.

- C. POLYVINYL CHLORIDE PIPE (PVC). PVC pipe shall meet the requirements and specifications of APWA 33 05 07 (Polyvinyl Chloride Pipe) and shall have a minimum rating of SDR-35.
- D. CORRUGATED POLYPROPYLENE. Triple Wall Corrugated Polypropylene per APWA 33 05 11 (Polypropylene Pipe). Diameters up to 30 inches shall meet the requirements and specifications of ASTM F2736. Diameters over 30 inches shall meet the requirements and specifications of ASTM F2764.
- E. HDPE-LINED REINFORCED CONCRETE PIPE. Reinforced concrete pipe (RCP) lined with High-Density Polyethylene, which shall meet the minimum design requirements of Class III RCP as defined in ASTM C76. Pipe joints shall be

weldless for diameters up to 60 inches. For diameters greater than 60 inches, field welding is permitted.

- F. CURED-IN-PLACE PIPE. Cured-in-Place pipe shall meet the requirements and specifications of APWA 33 05 23.40 (Cured-in-Place Pipe).
- G. FITTINGS. Fittings shall meet the requirements and specifications of APWA Division 33 (UTILITIES), manufacturer, and City standard drawings.

1.28.040 Services

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, sanitary sewer services work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 33 31 00 (Sanitary Sewerage Systems)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to sanitary sewer services:
 - 1. Section 1.08.060 (Sanitary Sewer Design Requirements)
 - 2. Section 1.16.060 (Sanitary Sewer Inspection and Testing)
 - 3. Drawing 27 (Typical Sewer Lateral)
 - 4. Drawing 28 (Typical Grease Trap)
- C. PIPE. Pipe used for new service laterals shall be PVC Plastic Pipe conforming to ASTM D3034 SDR 35. The minimum sewer service pipe size is 4 inches in diameter. ~~New sewer laterals installed to lots shall be located ten feet (10') uphill of the lowest front property corner.~~

Deflection in joints shall meet manufacturer's specifications and shall be approved by the City Engineer or shall be replaced with the proper fitting. New service laterals shall be constructed with materials and procedures as specified herein and in the standard drawings. Existing service laterals shall be constructed with materials compatible with the existing laterals with appropriate connections for joining the ends of existing laterals.

Pipe damaged by scratches, cuts, kinks, or buckled areas shall not be installed. No used materials may be reused.

- D. CLEAN-OUTS. There shall be no ~~combination of bends of combined angle greater 90 degrees or greater~~ in a service line between the main line and the ~~building property line~~ without a clean-out. A clean-out shall be installed ~~2 feet behind at the~~ property line, ~~at every bend~~ and within 5 feet of the foundation ~~wall on all service lines~~. The maximum distance between clean-outs on a

service line is one hundred (100) feet for 6 inch service lines and fifty (50) feet for 4 inch lines.

- E. CONNECTIONS TO MAIN LINE. All sewer lateral connections onto new sewer mains shall be made through preformed inline Y or approved equivalent ~~Insert a Tee type connection installed in the main line at the time of main line installation.~~

Connections onto existing sewer mains shall be made with field installed service saddles (gasketed and clamped). All connections by field installed service saddles on existing sewer mains shall be done with a sewer tapping machine and all required fittings and materials. Connections shall be made as shown in the standard drawing for sewer laterals.

When an existing sewer lateral is encountered along the line and grade of a new main line it shall be relocated using appropriate pipe and fittings and graded to insure adequate slope to drain properly. Minimum slope shall be one-quarter inch (1/4") per foot.

1.32 Storm, Land, and Groundwater Drains

1.32.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, storm, land, and groundwater drain work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 33 (Utilities)
 2. APWA 33 41 00 (Drainage Systems)
 3. APWA 33 47 00 (Ponds)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to storm, land, and groundwater drains:
1. Chapter 1.08 (Design Requirements)
 2. Chapter 1.12 (Contractor Requirements)
 3. Chapter 1.16 (Inspection and Testing)
 4. Chapter 1.20 (Earthwork and Trenches)
 5. Drawing 1 (Standard Street Intersection and Utility Locations)
 6. Drawing 2 (Standard Utility Locations in Knuckle)

7. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 8. Drawing 10 (Standard Curb Face Inlet Detail)
 9. Drawing 11 (Mountable Curb Face Inlet Detail)
 10. Drawing 12 (Manhole Access Curb Inlet Box (Combo Box) Detail)
 11. Drawing 13 (Storm Drain Junction Box Detail)
 12. Drawing 14 (Typical Land Drain Manhole Detail)
- C. SIZE. The City Engineer must approve the sizes of all proposed drain lines. The minimum size of pipe is 15 inches in diameter for main lines and 12 inches in diameter for laterals.
- D. LOCATION. Drain lines shall be located on either the north and east sides of the street 4 feet from the lip of gutter centerline according to the following Standard Drawings unless otherwise authorized by the City Engineer:
1. Drawing 1 (Standard Street Intersection and Utility Locations)
 2. Drawing 2 (Standard Utility Locations in Knuckle)
 3. Drawing 3 (Standard Street Cross Sections and Utility Locations)
- E. MINIMUM SLOPES. Slopes shall be designed to have a 2 foot per second velocity unless otherwise approved by the City Engineer. The following table lists minimum slopes for drain lines for each size of pipe:

Minimum Drain Line Slopes	
Pipe Diameter (inches)	Minimum Slope (%)
12	0.194
14	0.158
15	0.144
16	0.132
18	0.113
21	0.092
24	0.077
27	0.066
30	0.057
36	0.045
48	0.031
54	0.027
60	0.023

- F. UNUSUAL PIPING AND PLUMBING. Special and unusual piping and plumbing for equipment or structures are treated as separate items and are not included in these standards.
- G. LAND AND GROUNDWATER DRAINS. All plans for groundwater drains must be designed and stamped by a licensed professional civil engineer in the State of Utah. Only rigid pipe may be used.
- G. MANHOLES AND CLEANOUT STRUCTURES. A manhole or cleanout structure shall be located at the upstream end of the storm drain pipe and at all changes in pipe size, horizontal alignment, slope and material of the storm sewer. Maximum horizontal distance between manholes is 500 feet.
- H. ROADWAY DRAINAGE. Roads must provide for routing of the 100-year flood discharge to adequate downstream conveyance facilities. The 100-year flood flows in streets should be contained within street right-of-way. Provision shall be made to allow runoff within the street to enter any downstream detention basins or other such facilities.

Downhill cul-de-sacs will not be allowed unless specifically approved by the City Engineer. Special consideration shall be given to downhill "T" intersections to ensure that flooding will not occur outside of the right-of-way.

- I. INLETS AND OUTLETS. Outlets for storm drain pipe that discharge to an earth-lined channel or basin shall be stabilized to mitigate erosion potential. A concrete apron shall be constructed around curb inlets to allow sediment to be easily cleaned up.
- J. STORM WATER TREATMENT. Storm water treatment for oil, grease and other pollutants shall be provided at all sites with more than 6 parking spaces. Engineer design and calculations shall be submitted showing the effectiveness of the treatment. Provide a maintenance plan for the storm water treatment facility.
- K. CULVERTS. The minimum culvert size is 24 inches. Culverts shall be designed to convey the 100-year flood event without overtopping the road. A culvert blockage factor of 50 percent shall be used for culverts placed in drainages with upstream debris producing potential as determined by the City. Backwater surface computations shall be completed upstream of culverts and shall be shown to be non-damaging to upstream properties. Improvements must be installed at entrance and exit structures to minimize erosion and accommodate maintenance.
- L. BRIDGES. Bridges must pass the 100-year flood event with a minimum of 2 feet of freeboard.

Local and regional scour analyses shall be performed on the structure, upstream and downstream. All potential scour shall be properly mitigated.

M. OPEN CHANNELS. Open channels shall be designed to meet the following criteria:

1. Convey the 100-year flood event with a minimum freeboard of 1 foot.
2. Have low maintenance requirements.
3. Provide maintenance access through easements the entire channel length
4. Side slope of 2H:1V or flatter.
5. Bank stabilization shall be designed to minimize erosion and maintenance.
6. Irrigation ditches located in areas of new development shall be enclosed (pipe or culvert).

N. FLOODPLAINS. Development near water bodies shall be in accordance with the National Flood Insurance Program and the City's Flood Damage Prevention ordinance (See Chapter 20 of Municipal Code Title 15).

The Flood Damage Ordinance requires, among other things:

1. Bank Stabilization/Erosion Hazard Analysis. A bank stability/erosion hazard analysis shall be performed by a licensed professional engineer (15.4.20.030 C.5).
2. Geotechnical Report. A geotechnical report shall be prepared that includes (15.4.20.040 A.2.b):

a. AMBIENT GROUNDWATER SURFACE ELEVATION: At least one measurement of the ambient groundwater surface elevation on the site of proposed development collected between May 1 and May 31.

b. ESTIMATED MAXIMUM ANTICIPATED GROUNDWATER: An engineer's estimate of the maximum anticipated groundwater elevation anticipated on the site during periods of flooding, referencing nearby base flood elevations on the current FIRM and all other available sources.

c. RECOMMENDED LOWEST FLOOR ELEVATION: An engineer's recommendations with regard to the lowest elevation(s) that the lowest floor(s) (including basements) of all new and substantially improved structures should be constructed to be protected from flooding from groundwater and groundwater that could be influenced by surface water during periods of flooding.

3. Lowest Floor Elevation. The lowest floor (including basement), shall be elevated a minimum of two feet above the base flood elevation (15.4.20.040 B.1)
 4. Bank Setbacks. All permanent structures shall be set back a minimum of 60 feet from the top of bank of the nearest water body or open channel that conveys runoff water.
- O. CONNECTING TO EXISTING DRAIN LINES. Manholes and sumps used to connect proposed storm drain to existing storm drain shall be plumb and centered on the existing storm drain. The new pipe shall be placed against the existing pipe at the elevation designated by the project engineer and the base poured as specified above. Care shall be taken not to disturb the alignment of the existing storm drain during the excavation procedure. Any damage to the existing storm drain shall be repaired.
- P. SUMPS. Sumps may only be constructed of reinforced concrete, precast sections and shall meet the requirements of ASTM C478-73. Sumps shall have eccentric lids to ensure adjustments in alignment.
- Q. INLET AND CLEAN OUT STRUCTURES. Surface water must enter the City storm drain system through standard City inlet boxes. In no case may water inlet directly into storm manholes, clean-outs, or sumps. Inlets and clean out structures shall not exceed 500 ft spacing.
- R. HEADWALLS. A headwall shall be installed at all ditch to pipe transitions. Headwall designs must be stamped by a licensed professional civil engineer in the State of Utah and approved by the City Engineer.

1.32.020 Drainage Plan and Report

- A. GENERAL. A final Drainage Plan and Report is required for all proposed developments and shall be prepared by a professional civil engineer registered in the State of Utah.
- B. REPORT. The report portion of the Drainage Plan and Report shall contain the following:
1. Title Page. Title page showing project name, date, preparer's name, seal and signature.
 2. Development Description. Description of the development, including location (township, range, section, subdivision and lot).
 3. Property Description. Description of property, area, existing site conditions including all existing drainage facilities such as ditches, canals, washes, swales structures, storm drains, springs, detention and retention basins.

4. Off-Site Drainage. Description of off-site drainage features and characteristics upstream and downstream of the site and any known drainage problems.
5. Proposed Facilities. A description of proposed facilities that will be used to manage on-site and off-site storm water runoff associated with the development, including calculations used to estimate runoff and size storm water facilities. See Section 4.78.12 for design criteria and Section 4.78.16 for approved rainfall-runoff computation methods.
6. On-Site Drainage. Description of existing and proposed on-site drainage features, characteristics, and facilities.
7. Master Planned Drainage Facilities. Description of master planned drainage facilities and how the development and proposed drainage facilities conform to the storm drain master plan.
8. Downstream Receiving Facilities. Description of downstream receiving facilities for storm water discharges and the capacities of those facilities. Include calculations.
9. FEMA Floodplain. Description of existing FEMA floodplain, if applicable.
10. Other Drainage Studies. Description of other drainage studies that affect the site.
11. Preliminary Drawings. Preliminary drawings of proposed drainage facilities that also show existing storm drain facilities on or adjacent to the site.
12. Flood Control Requirements. Description of compliance with applicable flood control requirements and FEMA requirements, if applicable.
13. Runoff Computations. Description of design runoff computations.
14. Design Calculations. Design calculations to support inlet spacing and sizing of facilities. Include a description of drainage facility design computations.
15. Easements. Description of any needed drainage easements or rights-of-way.
16. FEMA Calculations. Description of FEMA floodway and floodplain calculations, if applicable.
17. Groundwater Depth Estimate. Description of field work performed to estimate minimum depth to groundwater at the site.
18. Geotechnical Report. Commentary on geotechnical engineer's findings of percolation rates, soil structure, groundwater depth, and

recommendation on low impact development (LID) infrastructure implementation effectiveness. If not recommended, submit a proposal for alternative controls to meet the City's LID requirement. If recommended, provide details of how the LID infrastructure will meet our requirements.

19. Conclusion. Conclusions stating compliance with drainage requirements and opinion of effectiveness of proposed drainage facilities and accuracy of calculations.
 20. Appendices. Appendices showing all applicable reference information.
- C. DRAWINGS. Drawings shall be submitted with the Drainage Plan and Report and shall include the following information, if applicable.
1. Property Lines. Existing and proposed property lines.
 2. Topography. Existing and proposed topography (2-foot maximum contour interval) extending at least 100 feet beyond the site.
 3. Streets, Easements, and Rights-of-Way. Existing and proposed streets, easements, and rights-of-way.
 4. Drainage and Irrigation Facilities. Existing drainage and irrigation facilities.
 5. FEMA Floodplain. FEMA floodplain and floodway.
 6. Water Body and River Setbacks. Required setbacks for structures from the nearest top bank of the City if applicable.
 7. Basin Boundaries. Drainage basin boundaries and subbasin boundaries on a topographical map.
 8. Existing Flow Patterns. Existing flow patterns and paths.
 9. Proposed Flow Patterns. Proposed flow patterns and paths.
 10. Proposed Drainage Facilities. Location and size of proposed drainage facilities including: storm drain pipes, inlets, manholes, cleanouts, swales, channels, and retention and detention basins. Include spot elevations of proposed grade, flowline and top, back curb.
 11. Proposed Drainage Facility Details. Details of proposed storm drain facilities, including storm drain inlets. Include maintenance and monitoring plan for storage facilities.
 12. Proposed Irrigation Facility Details. Details of proposed improvements to existing irrigation facilities and any facilities to be used to manage high groundwater conditions on the site.

13. Drainage Easements. Location of drainage easements required.
14. Other Drainage Features. Other relevant drainage features.
15. Drawing Sheet Elements. Scale, north arrow, legend, title block showing project name, date, preparers name, seal and signature.

1.32.030 Pipe and Fittings

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, all storm drain pipe and fittings shall meet the requirements and specifications of the following APWA sections and related sections:
 1. APWA 33 05 02 (Concrete Pipe and Culvert)
 2. APWA 33 05 04 (Corrugated Metal Pipe)
 3. APWA 33 05 06 (Polyethylene Pipe)
 4. APWA 33 05 11 (Polypropylene Pipe)
- B. GENERAL. Reinforced concrete or polypropylene pipe shall be used for all main drain lines 15" or larger in diameter and for all drain lines of smaller size with less than 2 feet of cover or more than 8 feet of cover. Corrugated metal pipe (CMP) may only be used when authorized by the City Engineer.
- C. CONCRETE PIPE. Concrete pipe shall meet the requirements and specifications of APWA 33 05 02 (Concrete Pipe and Culvert). Reinforced concrete pipe (RCP) shall be Class III. Only new pipe may be used unless otherwise authorized by the City Engineer.
- D. CORRUGATED METAL PIPE (CMP). CMP shall meet the requirements and specifications of APWA 33 05 04 (Corrugated Metal Pipe).
- E. POLYPROPYLENE PIPE. Polypropylene pipe shall meet the requirements and specifications of APWA 33 05 11 (Polypropylene Pipe). Use HP Storm, SaniTite, or equivalent depending on bury depth, groundwater, and other factors. Diameters up to 30 inches shall meet the requirements and specifications of ASTM F2736. Diameters over 30 inches shall meet the requirements and specifications of ASTM F2764.
- F. HIGH DENSITY POLYETHYLENE PIPE (HDPE). HDPE pipe shall meet the requirements and specifications of APWA 33 05 06 (Polyethylene Pipe). Three (3) feet or less bury depths require triple wall HDPE pipe approved by the City Engineer.

1.32.040 Retention/Detention Basins

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to retention/detention basins:

1. Article 1.08.030 F (Storm, Land, and Groundwater Drains)
- H. GENERAL. Basins shall be designed to meet the requirements of Article 1.08.030 F (Storm, Land, and Groundwater Drains) and the following criteria:
1. Freeboard. A minimum of 1 foot of freeboard shall be provided.
 2. Side Slope. (See table below)

Depth	Slope
18"	2:1
3'	3:1
Above 3'	4:1

3. Maintenance and Monitoring Plan. Provide a plan to maintain and monitor the facility.
 4. Vehicular Access. Provide vehicular access to the facility.
 5. Landscaping. All facilities shall be landscaped in accordance with City Standards.
 6. Emergency Overflow Spillway. Design an emergency overflow spillway to safely discharge runoff from the facility assuming the outlet is inoperable, or the inflow exceeds the outlet capacity.
 7. Maximum Depth. Maximum depth shall be [3 feet of detained water or as](#) approved by the City Engineer.
- B. RETENTION BASINS. Design of retention basins shall be according to the Storm Water Drainage Design Manual. All retention basins shall have a series of interconnected sumps connected to curb inlet boxes or storm drain main lines. All retention basins shall be landscaped in accordance with City Standards.

All retention basins shall be constructed for drainage areas designated in the Storm Drain Master Plan. Basins for smaller areas may be allowed only with prior written approval of the City Engineer.

- C. DETENTION BASINS. Design of detention basins shall be according to the Storm Water Drainage Design Manual. Detention basins may be constructed in landscape or parking areas. Each detention basin shall incorporate LID storm drain principles and have an overflow to the City storm drain system. Pipes shall not be used as storage in storm water calculations.

Each detention basin shall have an outlet to the City storm drain system. A trash rack shall be installed at the outlet(s) to prevent debris from entering the storm drain system.

1.36 Streets and Pavements

1.36.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, streets and pavement work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 34 (TRANSPORTATION)
 2. APWA 31 05 19 (Geotextiles)
 3. APWA 31 05 21 (Geogrids/Geocomposites)
 4. APWA 32 12 16 (Plant-Mix Asphalt Paving)
 5. APWA 32 12 16.13 (Plant-Mix Bituminous Paving)
 6. APWA 32 14 13 (Precast Concrete Unit Paving)
 7. APWA 32 14 16 (Brick Unit Paving)
 8. APWA 32 17 23 (Pavement Markings)
 9. APWA 34 71 13 (Vehicle Barriers)
 10. APWA 34 71 19 (Vehicle Delineators)
 11. APWA Plan 205.1 (Type A Curb and Gutter)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to streets and pavements.
1. Chapter 1.08 (Improvement and Design Requirements)
 2. Chapter 1.12 (Inspection and Testing)
 3. Chapter 1.16 (Contractor Requirements)
 4. Drawing 1 (Standard Street Intersection and Utility Locations)
 5. Drawing 2 (Standard Utility Locations in Knuckle)
 6. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 7. Drawing 4 (Standard Street Cross Sections and Utility Locations)
 8. Drawing 5 (Curb, Gutter, and Sidewalk)
 9. Drawing 6 (Typical Curb Approach)

10. Drawing 7 (Standard Curb Return at Intersection)
 11. Drawing 8 (Pedestrian Access)
 12. Drawing 9 (Pedestrian Access Mid Block)
 13. Drawing 15 (Standard Cul-De-Sac)
 14. Drawing 16 (Standard Knuckle)
 15. Drawing 31 (110-Foot Roundabout for Local Street Intersection)
 16. Drawing 32 (Typical Street/Stop Sign Installation Detail)
 17. Drawing 33 (Typical Street Light 1)
 18. Drawing 34 (Typical Street Light 2)
 19. Drawing 35 (Typical Street Light 3)
 20. Drawing 36 (Concrete Pole Base (Street Light))
- C. TIME LIMITATION AFTER CURB AND GUTTER IS PLACED. Pavement shall be placed at least 7 days after and before 45 days after the placement of curb and gutter unless ~~an extension is granted by~~ otherwise authorized by the City Engineer.
- D. GEOTEXTILES, GEOGRIDS AND GEOCOMPOSITES. All geotextile work shall meet the requirements and specifications of APWA 31 05 19 (Geotextiles) and APWA 32 12 16 (Plant-Mix Asphalt Paving). Geogrid and geocomposite work shall meet the requirements and specifications of APWA 31 05 21 (Geogrids/Geocomposites) and APWA 32 12 16.13 (Plant-Mix Bituminous Paving).
- E. PAVERS. Pavers and installation shall meet the requirements and specifications of APWA 32 14 13 (Precast Concrete Unit Paving) and APWA 32 14 16 (Brick Unit Paving).
- F. PAINTED TRAFFIC LINES AND MARKINGS. Painted traffic lines and markings shall meet the requirements and specifications of APWA 32 17 23 (Pavement Markings) and the MUTCD. If striping is to be removed it shall be removed by water blasting. ~~B~~ Temporary black paint over existing paint ~~and grinding will not be allowed~~ unless otherwise authorized by the City Engineer.
- G. TRAFFIC BARRIERS. Vehicle barriers shall meet the requirements and specifications of APWA 34 71 13 (Vehicle Barriers) and the MUTCD.
- H. VEHICLE DELINEATORS. Vehicle delineators shall meet the requirements and specifications of APWA 34 71 19 (Vehicle Delineators) and the MUTCD.

1.36.020 Street Section

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to street sections.
1. See Section 1.08.040 (Street Design Requirements)
 2. See Section 1.016.080 (Street Inspection and Testing)
 3. See Section 1.20.030 (Subgrade)
 4. See Section 1.20.040 (Fill Material)
 5. Article 1.20.040 F (Engineered Fill)
 6. Article 1.20.040 G (Untreated Base Course)
 7. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 8. Drawing 4 (Standard Street Cross Sections and Utility Locations)
- B. CURBS AND GUTTERS. Use APWA Plan 205.1 (Type A Curb and Gutter) 30 inch Curb and Gutter unless otherwise authorized by the City Engineer to match existing curb and gutter.
- C. GRADING. The sub-grade, sub-base, and road base shall all be graded to an engineered red head and accepted by the City. Red heads shall be placed every 50 feet at the crown of the road. If the distance between red-heads and edge of pavement exceeds 25 feet additional redheads shall be installed halfway between the crown and edge of pavement. See Section 1.20.030 (Subgrade).

1.36.030 Trail Section

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, trail section work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA 31 05 19 (Geotextiles)
 2. APWA 32 12 05 (Bituminous Concrete)
 3. APWA 32 17 23 (Pavement Markings)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to trail sections.
1. Section 1.20.030 (Subgrade)
 2. Article 1.20.040 F (Engineered Fill)

3. Article 1.20.040 G (Untreated Base Course)

- C. GENERAL. A pavement and soils investigation shall be performed for all new trails. The results of this investigation and a design of the trail section shall be submitted to and accepted by the City Engineer.

The following guidelines shall be used as a minimum requirement for trail cross sections. They should be used unless the soils investigation indicates they are not adequate. Any variations from these standards must be approved by the City Engineer. All trail materials shall be placed according to City standards.

1. Engineered Fill. Compacted engineered fill shall be placed in all areas where fills are required to meet grade or the requirements of the soils investigation. See Article 1.20.040 F (Engineered Fill).
2. Untreated Base Course. 6 inches of compacted untreated base course shall be placed under the surface course of all trails. See Article 1.20.040 G (Untreated Base Course).
3. Bituminous Surface Course. A minimum of 3 inches of asphalt pavement (bituminous concrete) shall be installed according to Section 1.36.040 (Bituminous Surface Course) and more specifically Article 1.36.040 C1 (Trails and Parking Lots).
4. Limestone Crusher Fines. When required, 2 1/2 inches of limestone crusher fines shall be placed along the edges of the trails to the top of the bituminous surface course. The compacted limestone crusher fines shall meet the following gradation:

Limestone Crusher Fines Gradation

Sieve	Passing
3/8 inch	100%
No. 4	70 to 90%
No. 10	30 to 70%
No. 40	5 to 30%
No. 200	5 to 15%

- D. SURVEY. Both sides of a trail shall be laid out by a survey and approved by the City before construction. Lath shall be placed at 100 foot intervals and at bends and obstacles the trail comes near.
- E. WEED ABATEMENT. All weeds shall be sprayed and killed with Roundup or an approved equivalent one week before any work may be performed, and within 3 weeks of the placement of untreated base course.
- F. GEOTEXTILE FENCE. An APWA 31 05 19 (Geotextiles) silt fence shall be installed along the limits of the trail construction at hillsides and river embankments.

- G. SUB-GRADE. The sub-grade shall be grubbed of all trees, bushes and other organic matter. See Section 1.20.030 (Subgrade). Sub-grade shall be graded to meet the following ADA requirements for walkways:
1. Maximum Slope. Sub-grade shall not have a slope greater than 8.33%.
 2. Maximum Run for Steep Slopes. For slopes between 5.00% and 6.25% the maximum run shall be 40 feet. For slopes between 6.25% and 8.33% the maximum run shall be 30 feet.
- F. WEED BARRIER. Weed barrier geotextile shall meet the requirements and specifications of APWA 31 05 19 (Geotextiles).
- G. TRAIL MARKINGS. If required by the City Engineer, trail lanes shall be delineated by a center single dashed yellow line. Painted traffic lines and markings shall meet the requirements and specifications of APWA 32 17 23 (Pavement Markings) and the MUTCD.
- H. CLEAN-UP. Upon completion of the trail section all windrows, survey and construction debris and geotextile fence shall be removed from along the edges of the trail.

1.36.040 Bituminous Surface Course

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, bituminous surface course work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA 32 12 05 (Bituminous Concrete)
 2. APWA 32 12 13.19 (Prime Coat)
 3. APWA 32 12 16.13 (Plant-Mix Asphalt Paving)
 4. APWA 32 12 16.19 (Cold-Mix Asphalt Paving)
 5. APWA 32 12 16.19 (Cold-Mix Bituminous Paving)
 6. APWA 32 12 13.13 (Tack Coat)
 7. APWA 32 01 13 (Slurry Seal)
 8. APWA 32 01 14 (Chip Seal)
 9. APWA 32 01 15 (Micro-Surface Seal)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to bituminous surface course.
1. Drawing 3 (Standard Street Cross Sections and Utility Locations)

2. Drawing 4 (Standard Street Cross Section and Utility Locations)

- C. ASPHALT PAVEMENT (ALSO REFERENCED AS BITUMINOUS CONCRETE). Asphalt concrete shall meet the specifications and requirements of APWA 32 12 05 (Bituminous Concrete), APWA 32 12 16.13 (Plant-Mix Asphalt Paving) and APWA 32 12 16.19 (Cold-Mix Bituminous Paving). Asphalt Binder (RAB) content may not exceed 15% in any mix design.
1. Trails and Parking Lots. Use an APWA 32 12 05 (Bituminous Concrete) Class I asphalt pavement (bituminous concrete).
 2. Local Residential Streets. Use an APWA 32 12 05 (Bituminous Concrete) Class II asphalt pavement (bituminous concrete).
 3. Local Non-Residential Streets, Parkways, and Boulevards. Use an APWA 32 12 05 (Bituminous Concrete) Class III asphalt pavement (bituminous concrete).
- D. Cold-Mix Pavement (Bituminous Concrete). Cold-mix pavement (bituminous concrete) shall only be installed when allowed by the City Engineer. All cold-mix asphalt concrete shall be replaced with hot-mix within 30 days of when it becomes available. Cold mix concrete shall meet the requirements of APWA 32 12 16.19 (Cold-Mix Bituminous Paving).
- E. PRIME COAT. Prime coat only as required by the plans or the City. Prime coat shall meet the requirements and specifications of APWA 32 12 13.19 (Prime Coat).
- F. TACK COAT. Install tack coat as required and according to APWA 32 12 13.13 (Tack Coat). Use CSS-1 or CSS-1h tack emulsion diluted 2:1 (concentrate to water) at the following application rates. Apply tack coat to all horizontal and vertical surfaces sufficient to achieve minimum 95% coverage prior to placement of overlay or patch.

<i>Application</i>	<i>Rate (Gal/SY - Diluted)</i>
<i>New Pavement (<1 year Old)</i>	<i>0.06</i>
<i>Existing Pavement</i>	<i>0.08</i>
<i>Rotomilled Surface</i>	<i>0.12</i>

- G. THIN OVERLAYS AND PATCHES. Use binder and asphalt concrete as defined in Article A and Article B based on paver or hand applications.
- H. CRACK SEAL. Crack Seal material shall be ~~Deery 103 Sealant~~ Utah spec and or an approved equivalent. New roads should receive crack seal around all

[manhole collars, water valve collars, repair patches, cold joints, and along the edge of the road at the lip of gutter.](#)

- I. SLURRY SEAL. Slurry seals shall meet the requirements and specifications of APWA 32 01 13 (Slurry Seal). The type of slurry seal applied to a City street shall be approved and specified by the City Engineer. Use a Type II slurry seal with a CQS-1H emulsion, unless otherwise defined.
- J. CHIP SEAL. Chip seals shall meet the requirements and specifications of APWA 32 01 14 (Chip Seal). Use a Type A or C ceramic chip seal with an LMCRS-2 or CRS-2P chip emulsion.
- K. MICRO-SURFACING. Micro-surfacing shall meet the requirements and specifications of APWA 32 01 15 (Micro-Surface Seal). Use a Type II or type III microsurfacing with a CQS-1H emulsion, unless otherwise defined.

1.40 Portland Cement Concrete and Masonry Work

1.40.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, Portland cement concrete and masonry work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA DIVISION 03 (Concrete)
 2. APWA 03 30 04 (Concrete)
 3. APWA 32 16 13 (Driveway, Sidewalk, Curb, Gutter)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to Portland cement concrete and masonry work.
1. Chapter 1.08 (Improvement and Design Requirements)
 2. Chapter 1.12 (Inspection and Testing)
 3. Chapter 1.20 (Earthwork and Trenches)
 4. Drawing 5 (Curb, Gutter, and Sidewalk)
 5. Drawing 6 (Typical Curb Approach)
 6. Drawing 8 (Pedestrian Access)
 7. Drawing 9 (Pedestrian Access Mid Block)
- C. SPECIFICATIONS. These specifications cover the installation of concrete work including but not limited to curbs, gutters, sidewalks, boxes, and thrust blocks. All concrete work shall meet the requirements and specifications of APWA Division 03 (Concrete) and related sections. Concrete driveway, sidewalk, curb and gutter work shall meet the requirements and specifications of APWA 32 16 13 (Driveway, Sidewalk, Curb, Gutter). See Chapter 1.08 (Improvement and Design Requirements) for improvement and design requirements, Chapter 1.12 (Inspection and Testing) for inspection and testing requirements, and Chapter 1.20 (Earthwork and Trenches) for earthwork and trench requirements. Also, see standard drawings related to concrete work.
- D. GENERAL. Supply and Install concrete according to APWA 03 30 04 (Concrete). All concrete work shall be constructed where indicated on the plans or as directed by the project engineer and shall conform in all respects to the specified lines, grades, and dimensions and City standards.

- E. AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS. All pedestrian facilities will conform to the current federal ADA standards.
- F. ~~SLIP FORMING. In each known drive approach and at each pedestrian ramp, 12 inch #4 rebar shall be place at 24 inches on center with 4 inches extending into the curb, 2 ½ inches below the top back of curb.~~
- G. COMBINATION CURB, GUTTER, AND SIDEWALK. ~~Combination curb, gutter, and sidewalk will not be allowed unless authorized by the City Engineer.~~
- H. COLD WEATHER. shall not be placed when a descending air temperature in the shade and away from artificial heat falls below 35°F. Concrete shall not be poured on frozen ground. Where temperatures are projected to descend below 32°F within 72 hours after placement, concrete shall be covered or otherwise protected against freezing. Calcium chloride may be used only upon City Engineer approval. No more than 1.5% (by weight) of calcium chloride can be used. No calcium chloride shall be used when metal is to be embedded into or in constant contact with the concrete, including but not limited to the following situations:
1. cross gutters
 2. sidewalks reinforced with rebar
 3. light post footings with embedded anchor bolts
 4. slabs with mesh
 5. openings in walls with angle iron headers
 6. steel base plates mounted or embedded in the concrete surface
 7. or any other concrete improvement with non-coated reinforcing steel

Any other admixtures must be approved by the City Engineer.

If concrete is not protected by insulation blankets for 72 hours following installation and the temperature drops below 45 degrees a pay factor of 0.50 shall apply.

- I. DEBRIS IN GUTTERS. Once curb and gutter and surface course is in place they shall be kept as clean as possible. Dirt and gravel shall not be placed in gutter or on street. Gutter shall flow freely at all times.
- J. SIDEWALK. When equipment is required to cross over sidewalk, bridging will be provided to protect concrete.
- K. DRIVE APPROACHES. All concrete for a drive approach shall be 65 inches thick in the public right-of-way for residential and 8 inches for non-residential and multi-family driveways. —

- L. PROTECTION OF WET CONCRETE. The Contractor shall be responsible to protect wet concrete. Any concrete that is vandalized before setting up shall be replaced at the contractor's expense.
- M. REPAIR. When authorized by the City Engineer, Contractor may repair concrete damage with Concrete Solution's Ultra Surface Concrete Polymer installed to manufacturer's specifications or an equivalent that is approved by the City Engineer.

1.40.020 Installation

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, installation work shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 03 39 00 (Concrete Curing)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to installation.
 - 1. Chapter 1.24 (Earthwork and Trenches)
- C. CUTTING PAVEMENT FOR CURB AND GUTTER INSTALLATION. When replacing gutter, the pavement shall be cut along the entire excavation to provide a vertical joint in the surface. Cut shall be a minimum of 12 inches from lip of gutter. A pavement saw shall be used for all pavement cutting. If excavation damages the cut pavement, pavement shall be cut again before patching. All road cuts shall be repaired within 2 working days.
- D. FORMS AND JOINTS. When pouring concrete along a curve, flexible forms with enough stakes to hold the forms at an even curve shall be used. Straight forms shall not be used on curved sidewalk or curb or gutters.

Curb and gutter contraction joints shall be constructed every 10 feet by using steel templates 1/8 inch in thickness. Sidewalk contraction joints shall meet APWA requirements with the minimum distance between joints being 5 feet.
- E. BASE MATERIAL. A minimum of 4 inches of untreated base course shall be installed under all concrete and shall extend out 1 foot in all directions from concrete unless otherwise specified. Untreated base course shall be compacted and installed according to City standards. See Chapter 1.24 (Earthwork and Trenches).
- F. MIXING AND CONVEYING. Concrete transported in a truck mixer, agitator, or other transportation device shall be discharged at the job and placed in its final position in the forms within 1 hour after the introduction of the mixing water to the cement and the aggregate, or the cement to the aggregate, except that in hot weather or under other conditions contributing to quick

stiffening of the concrete, the maximum allowable time may be reduced by the City Engineer. The maximum volume of mixed concrete transported in an agitator shall be in accordance with the specified rating. During adverse weather conditions the City Engineer may deem it necessary for the use of a concrete pump truck.

- G. FINISHING. As soon as the concrete has set sufficiently to retain its shape without support of the face form, the clamps, spreaders and face forms shall be removed. While the concrete is still green, the surface shall be thoroughly floated with a magnesium or moist wooden float to provide an even smooth surface, then broomed lightly.
- H. CURING. As soon as possible after final finishing, the finished surface shall be coated with a curing compound. The compound shall be an ASTM C-1315 Type 2 curing compound that meets the APWA 03 39 00 (Concrete Curing) specifications. The compound shall be applied in accordance with the manufacturer's recommendations.

During the months of October through February exposed concrete shall be covered with an insulated curing blanket that meets the ACI 306 specification for 3 days when temperatures remain at 15 degrees Fahrenheit or higher and for 7 days for temperatures below 15 degrees Fahrenheit. Insulated curing blankets shall only be removed during the warmest parts of the day. The curing compound shall then be applied within 24 hours of the blankets being removed.

1.40.030 Materials and Mixes

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, all materials and mixes work shall meet the requirements and specifications of APWA DIVISION 03 (Concrete).

~~PROPORTIONING. The supplier shall determine proportions by weight of aggregates, cement, additives, and water required to comply with strength, workability, and other requirements detailed herein. Such proportions shall be submitted to the City Engineer in three copies annually along with the following tests on materials and shall be subject to his/her approval:~~

~~Coarse aggregate~~

~~Source~~

~~Deleterious substances~~

~~Los Angeles Abrasion Test~~

~~Sodium Sulfate Soundness Test~~

~~Sieve~~

Fine aggregate

Source

Deleterious substances

Calorimetric Test for Organics

Sodium Sulfate Soundness Test

Sieve and fineness modulus

Cement

Type

Supplier

Analysis

Upon approval, all concrete shall be prepared in terms of the proportions so approved unless variation becomes necessary by reason of materials or conditions to achieve the requirements of these specifications, in which case such variation shall be approved in writing by the City Engineer. Approval by the engineer of mix proportions shall not relieve the supplier from the responsibility for obtaining the concrete strengths specified or complying with all other provisions of this specification.

CONTROL. Measurements of materials except water shall be by weight. Equipment used shall be capable of controlling weight within 1% of each ingredient. Water may be measured either by volume or weight provided that an accuracy of 1% is maintained. Cement may be assumed to weigh 94 pounds per sack but proportioning aggregates for fractional sacks of cement will not be permitted unless the fractional amount is weighed for each batch. WATER ADJUSTMENTS. Compensation for the water contained in the aggregates shall be made at least once daily or as often as inspection of the concrete may indicate that variation from this cause has occurred. The Pycnometer Method of assessing water in aggregate may be used for its determination for the purposes of this paragraph.

1.40.040 Masonry

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, masonry work shall meet the requirements and specifications of the following APWA sections and related sections:
1. APWA Division 04 (Masonry)

- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to masonry.
 - 1. Drawing 3 (Standard Street Cross Sections and Utility Locations)
 - 2. Drawing 4 (Standard Street Cross Section and Utility Locations)
- C. GENERAL. All masonry work shall meet the requirements and specifications of APWA Division 04 (Masonry) and related sections.
- D. GRAFFITI PROTECTION. Apply Prosoco Sure Klean Weather Seal Blok-Guard & Graffiti Control WB 6 Weather Seal or approved equivalent to unpainted masonry surfaces at risk to graffiti with installation.

1.44 Landscaping

1.44.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, landscaping work shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA 31 05 19 2.7 (Weed Barrier Geotextile)
 2. APWA 31 31 19 (Vegetation Control)
 3. APWA 32 01 10 (Relocate Fences and Gates)
 4. APWA 32 31 13 (Chain Link Fences and Gates)
 5. APWA 32 31 16 (Welded Wire Fences and Gates)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to landscaping.
1. Article 1.04.070 C (Record Drawings)
- C. GENERAL. These specifications are for landscape work completed on public property or private property that will become public property or be owned by an HOA.
- D. APPURTENANCES. Any minor items of labor or materials not specifically noted on the drawings or specifications, but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the given contract payment schedule items.
- E. AS-BUILT OR RECORD DRAWINGS. The contractor must furnish as-built or Record Drawings according to Article 1.04.070 C (Record Drawings). drawings to the City.
- F. GOVERNMENT REGULATIONS. Ship landscape materials with certificates of inspection as required by governmental authorities. Comply with governing regulations applicable to landscape materials.
- G. SOURCE. Provide trees and shrubs, and other plants grown in a recognized nursery in accordance with good horticultural practice. Provide healthy, vigorous stock grown under climatic conditions similar to the locality of the project and free of disease, insects, eggs, larvae, and defects such as knots, sun-scale, injuries, abrasions, or disagreement.

Plant Materials and other landscape items will be evaluated according to compliance with drawings, schedules, and specifications; as well as overall aesthetic quality, grower or supplier reputation, physical inspection, and

American Association of Nurseryman Standards (AANS). Select plants that will not be adversely affected by the existing soil chemistry at the planting location.

The source or supplier for all plant materials shall be furnished to the City prior to the delivery of any plant materials on site or stored elsewhere.

- H. FENCES AND WALLS. All fences and walls except those for individual single family lots must be approved by the City. Chain link and field wire fencing shall meet the requirements and specifications of APWA 32 31 13 (Chain Link Fences and Gates) and APWA 32 31 16 (Welded Wire Fences and Gates) respectively. The relocation of fences and gates shall meet the requirements and specifications of APWA 32 01 10 (Relocate Fences and Gates) and related sections.
- I. VEGETATION CONTROL. Vegetation control shall meet the requirements and specifications of APWA 31 31 19 (Vegetation Control). APWA 31 05 19 2.7 (Weed Barrier Geotextile) fabric shall be installed in all planter beds under rock mulch. Cover fabric with 3" minimum ~~of bark mulch or~~ rock mulch.

1.44.020 Lawns and Grasses

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, lawns and grasses shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 32 01 90 (Plant Maintenance)
 - 2. APWA 32 92 00 (Turf and Grasses)
 - 3. APWA 32 93 13 (Ground Cover)
- B. GENERAL. Lawns and grasses shall meet the requirements and specifications of APWA 32 92 00 (Turf and Grasses) and APWA 32 93 13 (Ground Cover).
- C. GRADING. Till soil to a depth of 4 inches and remove rocks and debris over 1 inch in diameter. The elevation of topsoil relative to walks, hard surfaces or edges shall be:
 - 1. Seeded Areas. 1/2 inches below.
 - 2. Sodded Areas. 1 1/2 inches below.

1.44.030 Trees

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, trees shall meet the requirements and specifications of the following APWA sections and related sections:
 - 1. APWA 32 93 43 (Tree)

2. APWA 32 01 91 (Tree Root Cutting)
 3. APWA 32 01 93 (Pruning Trees)
 4. APWA 32 01 90 (Plant Maintenance)
 5. APWA 31 05 13 (Common Fill)
- B. GENERAL. Tree and work relating to trees shall meet the requirements and specifications of the [City Tree and Landscape Manual](#), APWA 32 93 43 (Tree), APWA 32 01 91 (Tree Root Cutting), APWA 32 01 93 (Pruning Trees) and 32 01 90 (Plant Maintenance). Install per standard G-112. Trees may be planted without a certified arborist when authorized by the City Engineer.
- C. TREE SIZES. City ordinance specifies deciduous trees to be at least 2 inch caliper and evergreen trees to be at least 8 to 10 feet in height. Plants of a larger size may be used pending approval by the City Engineer. Sizes of root balls or containers shall be increased proportionately.
- D. IRRIGATION. All trees shall have an independent isolated irrigation zone with in-line drip (3 rings of drip).
- E. LABELS. Label at least one plant of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.
- F. TOPSOIL. Topsoil shall meet APWA 31 05 13 (Common Fill). A minimum of 4" of topsoil shall be placed in grass areas and 12" in planters. Native soil shall be scarified 6" deep and graded before topsoil is placed.
- G. CITY ARBORIST. City Arborist must be onsite at the beginning of the planting of any trees.
- H. TREE GRATES. Only 4 foot square D&L O-8644 or approved equivalent grates shall be used. Grates shall be set to grade with the top back of curb and sidewalk. Grates shall be set in metal frame manufactured specifically for grate. Frame shall be set in concrete extending a minimum of 6 inches from sides of frame. Concrete shall be installed to City standards for Portland Cement Concrete.

1.48 Irrigation Sprinkler Systems

1.48.010 General

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, irrigation sprinkler systems shall meet the requirements and specifications of the following APWA sections and related Divisions:
1. APWA 32 84 23 (Underground Irrigation Systems)

- B. GENERAL. These specifications are for landscape work completed on private property that will become public property. All underground irrigation systems shall meet the requirements and specifications of APWA 32 84 23 (Underground Irrigation Systems).
- C. APPURTENANCES. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- D. PRESSURE VERIFICATION. The Contractor, prior to installing the system, must verify existing water pressure. If there is a failure to obtain the needed pressure or if an excess of pressure exists for normal operation, the Contractor shall contact the City for any adjustments to the system. Failure to report any discrepancies in pressure due to whatever reason, and installation done prior to notification of City Parks Department shall be done at the expense of the Contractor.
- E. PLAN MODIFICATIONS. The plans show the general arrangement of all piping. Should local conditions necessitate the rearrangement of some, or if piping can be run to better advantage, the contractor, before proceeding with the work, shall prepare and submit drawings of such to the office of the City Parks Department Representative and obtain written approval before commencing work shown by these drawings.
- F. ~~AS-BUILT SURVEY. The Contractor shall notify the City to survey all underground utilities such as sprinkler pipes, wires and valves either installed or uncovered in the course of construction. Contractor shall give the City 24-hour notice to survey utilities.~~

1.48.020 Pipe and Fittings

- A. PIPE. Use solvent weld schedule 40 PVC for main line pipe 3 inches in diameter and smaller. Use Class 200 PVC for main line pipe larger than 3 inches in diameter.
- B. MAIN LINE FITTINGS. Use solvent weld schedule 40 PVC fittings for pipe smaller than 3 inches in diameter. All fittings for pipe 3 inch and larger pipe shall be ductile iron, grade 65-45-12 in accordance with ASTM A-536.

Fittings shall have deep bell push on joints with gaskets meeting ASTM F977. Fittings shall be Harco Deep Bell as manufactured by the Hanington Corporation of Lynchburg, VA or approved equivalent. Transition gaskets are not allowed.
- C. CIRCUIT PIPE FITTINGS. Use solvent weld schedule 40 PVC fittings.
- D. SLEEVES. Pipe and control wire ~~e conduiting and tubing~~ under walks, roads and other hard surfaces shall be installed in solvent weld Class 40 PVC sleeves of

adequate size. Sleeves shall be a minimum of 3 inches in diameter or one and a half times the size of the pipes or conduit whichever is greater. Sleeves shall be straight and level or less than 2% grade.

All wiring shall be placed in its own conduit according to Article 1.48.040 M (Control Wire). There shall be one sleeve for each sprinkler pipe or control wire conduit pipe. A spare sleeve capped on both ends shall be installed at each crossing unless waived by the City Engineer. Sleeves shall extend 18 inches beyond the edge of walks, road, and other hard surfaces. Wire conduit may be ran inside of sprinkler pipe sleeves. Conduit for control wires shall have minimum inside diameters according to the following chart:

1.48.030 Sprinkler Heads

- A. GENERAL. Install according to APWA plan number 621 and 622, but do not install PVC elbow and riser.
- B. SPRAY HEADS. All spray type sprinkler heads shall be Rainbird "1800" series PRS 30 or approved equivalent. Minimum height of a sprinkler head in the lawn shall be 4" and 12" in shrub and flower beds. All ~~lawn~~ spray heads shall be installed on swing pipe with two spiral barbed ells and one street ell between the sprinkler head and the spiral barb. Hunter MP 1000 rotators, MPLCS 515, MPSC515, MPSS530, MP Corner or equivalents are not allowed. MP rotators or equivalents (that are allowed MP 2000, MP300) must be installed in a Hunter Pro-spray PRS 40 sprinkler body or equivalent.
- C. ROTARY HEADS. All rotary type sprinkler heads shall be Rainbird 5000 or 6504 series or approved equivalent. All stream rotary and impact heads capable of distributing more than 6 gallons per minute or more shall be installed on a pre-assembled swing joint by Spears or an approved equivalent.
- D. FILTER. Amiad T Filter with a Brushaway assembly or approved equivalent. The filter should be the same size as the mainline pipe. The Filter shall be enclosed with a lockable wire mesh enclosure. Filters 3" and larger should be the Amiad Mini Sigma automatic filter or approved equivalent. Automatic filters shall be enclosed in a stainless steel enclosure.

1.48.040 Controllers, Valves, and Flow Meters

- A. APWA. Unless otherwise specified in the City Construction and Design Standards, controller valves and flow meters shall meet the requirements and specifications of the following APWA sections, plans, and related sections:
 - 1. APWA Plan 631.1 (Backflow Preventer – Less than 3-Inch Diameter)
 - 2. APWA Plan 631.2 (Backflow Preventer – 3-Inch and Larger)
 - 3. APWA Plan 632 (Drain Valve)

4. APWA Plan 633 (Control Valve)
 5. APWA Plan 651 (Isolation Valve)
- B. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to controller valves and flow meters.
1. Drawing 24 (Typical Culinary Water Connection)
 2. Drawing 25 (Large Meter Assembly)
 3. Drawing 26 (Backflow Prevention Assembly)
- C. CONTROLLER. Controller and pedestal shall be ~~the same type as those used in the City central control system~~ Rainbird ?? or approved equivalent. The controller shall be as described in the irrigation legend on the drawings.
- D. MANUAL MAIN LINE ISOLATION VALVE. See APWA Standard Plan 635 (Isolation Valve). Install a Nibco gate valve or approved equivalent.
- E. MANUAL CIRCUIT ISOLATION VALVE. Brass ball valve with handle.
- F. AUTOMATIC VALVES. Automatic valves shall be Rainbird PEB electric remote control valves or an approved equivalent. A manual circuit isolation valve shall be installed on the supply side of each automatic valve. Install according to APWA Plan 633 (Control Valve), but do not install schedule 80 PVC union. For valves 1.5" and larger allow only one valve per box. 1" valves; 2 valves per standard box or 3 valves per jumbo box.
- G. MASTER VALVES AND FLOW METERS. Master valves and flow meters must be installed on main supply line and/or according to design and must be compatible with the ~~approved Calsense central~~ control system or be compatible with other approved controllers.
- H. AUTOMATIC DRAIN VALVES. Install according to APWA Plan 632 (Drain Valve).
- I. BACK FLOW PREVENTER. Shall be required on connections to the drinking water system. Install according to APWA Plans 631.1 (Backflow Preventer – Less than 3-Inch Diameter) and 631.2 (Backflow Preventer – 3-Inch and Larger).
- J. STOP AND WASTE VALVES. Stop and waste valves shall be Mueller H - 10288N Oraseal or an approved equivalent. Stop and Waste valve shall be of manual type for operation by handle key.
- K. QUICK COUPLER VALVES. Quick coupler valves shall be installed with brass riser and pre-manufactured swing joint. At least 2 quick coupler valves shall be installed, one at each end of main line. Valves shall be 1 inch standard. Rain Bird model 44LRC or approved equivalent. Must provide one quick coupler key that fits the specified model.

- L. VALVE BOXES. Must be Oldcastle plastic valve boxes, model numbers VB 910, VB 1419, and/or VB 1220 or approved equivalents. Valves shall be located in lawn or planted areas. Avoid locating valves in areas of high pedestrian and vehicular circulation. Valve boxes shall be at finished grade with valve stems 4 inches minimum and 12 inches maximum below top of box and with 3 inches of pea gravel or 3/4 inch minus crushed gravel under the valve. Valve boxes shall be rectangular, heavy duty and green in color. Valve boxes for automatic valves shall be large enough to enclose manual circuit isolation valve and automatic valve.
- M. CONTROL WIRE. Install control wire according to APWA Plan 651 (Isolation Valve). Add two extra blue control wires per controller to the longest run for emergency use and mark it in the control box as an extra wire. Only 2 wire control systems may be installed. All splices must be in a valve box according to Article 1.48.040 L (Valve Boxes). Control wiring shall only be placed in solvent weld Class 40 PVC conduit with sweeps and sized according to the following table:

Minimum Wire Sleeve Conduit Sizes	
Number of Wires	Conduit I.D.
1 to 7	1 inch
8 to 11	1 ½ inch
12 to 22	2 inch
23 to 31	2 ½ inch
32 to 36	3 inch

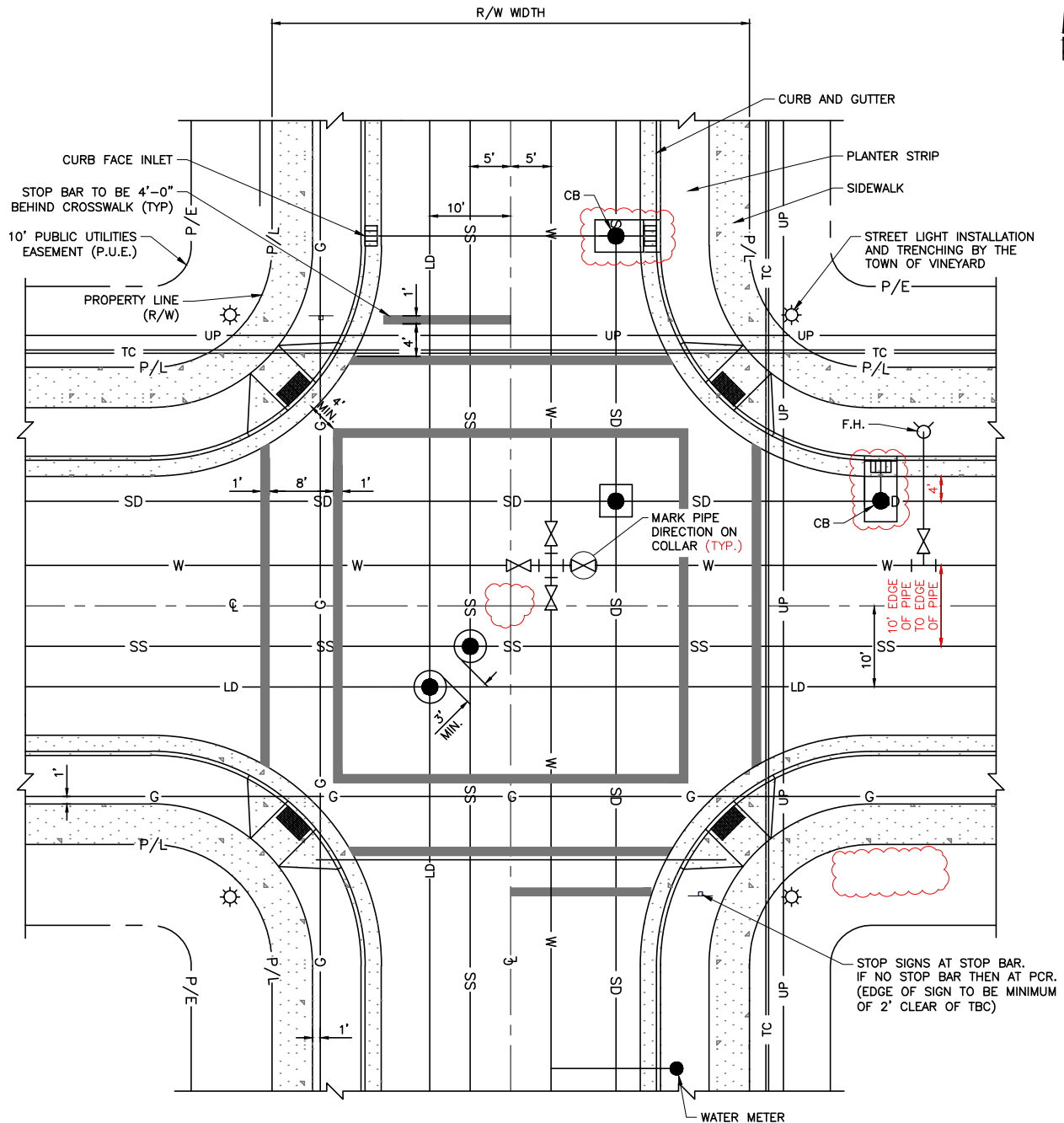
All control wire conduit under walks, roads, and other hard surfaces must be installed in sleeves according to Article 1.48.020 D (Sleeves).

1.48.050 Installation

- A. CITY CONSTRUCTION AND DESIGN STANDARDS. See the following City Construction and Design Standards for additional specifications related to installation.
1. Article 1.16.040 D (Flushing Inspection)
- B. SCHEDULE. Contractor shall submit a construction schedule of anticipated work time to facilitate timely visits for review of work. Schedule must be submitted to the City before any landscaping may beginbegin.
- C. DEPTH AND LOCATION. Lines bordering curbs or sidewalks shall be 6 inches away to allow for maintenance and access to the lines. Control wires must be buried at least 12 inches below finished grade in conduit according to Article 1.48.020 D (Sleeves)and bundled with a plastic tape every 10 feet.
- D. TRENCH BACKFILL MATERIAL. All trenches shall be backfilled in 12-inch12-inch lifts and tamped sufficiently to insureensure no settling of the surface. No

rocks larger than 1 inch shall be allowed within 3 inches of the pipe. The Contractor, in placing the irrigation lines, and appurtenances, may uncover material not suitable for finished grading. This material shall be removed from the site. After the installation of the lines, the finished grading shall be smoothed over and restored to its original condition, using additional topsoil where necessary.

- E. THRUST BLOCKS. All mainlines greater than 2 inches in size shall be installed with thrust blocks wherever a change of direction occurs. Thrust blocks shall be installed per city standards. Mechanical joint restraint systems installed to manufacturer's specifications may be installed instead of thrust clocks if approved by city.
- F. FLUSHING. See Article 1.16.040 D (Flushing Inspection).



TYPICAL STREET INTERSECTION WITH UTILITIES

LEGEND

CB= COMBO BOX
G= NATURAL GAS
SS= SANITARY SEWER
SD= STORM DRAIN
W= CULINARY WATER
UP= POWER
TC= TELECOMMUNICATIONS
LD= LAND DRAIN

NOTE:
1. EXACT UTILITY PLACEMENT TO BE DETERMINED BY TOWN AND UTILITY COMPANIES

STATEMENT OF USE

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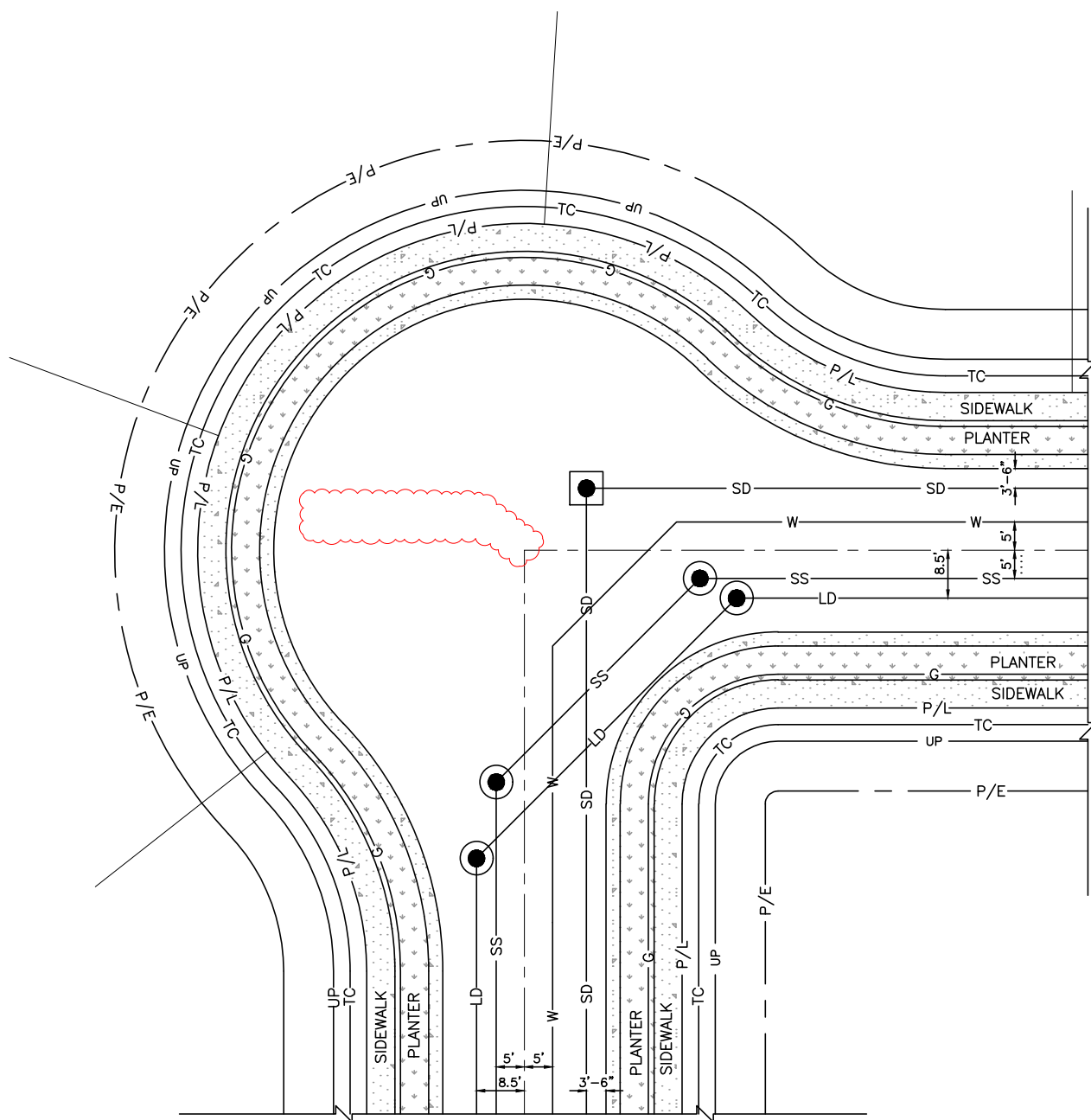
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1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HARDEN, ALLEN & LUCE	DCS	CHT	8/12/20
3				
4				



STANDARD STREET INTERSECTION AND UTILITY LOCATIONS

VINEYARD

STANDARD DRAWING NUMBER:	1
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



TYPICAL STREET KNUCKLE WITH UTILITIES

LEGEND

CB= COMBO BOX
 G= NATURAL GAS
 SS= SANITARY SEWER
 SD= STORM DRAIN
 W= CULINARY WATER
 UP= POWER
 TC= TELECOMMUNICATIONS
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NOTE:
 1. EXACT UTILITY PLACEMENT TO BE
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 COMPANIES

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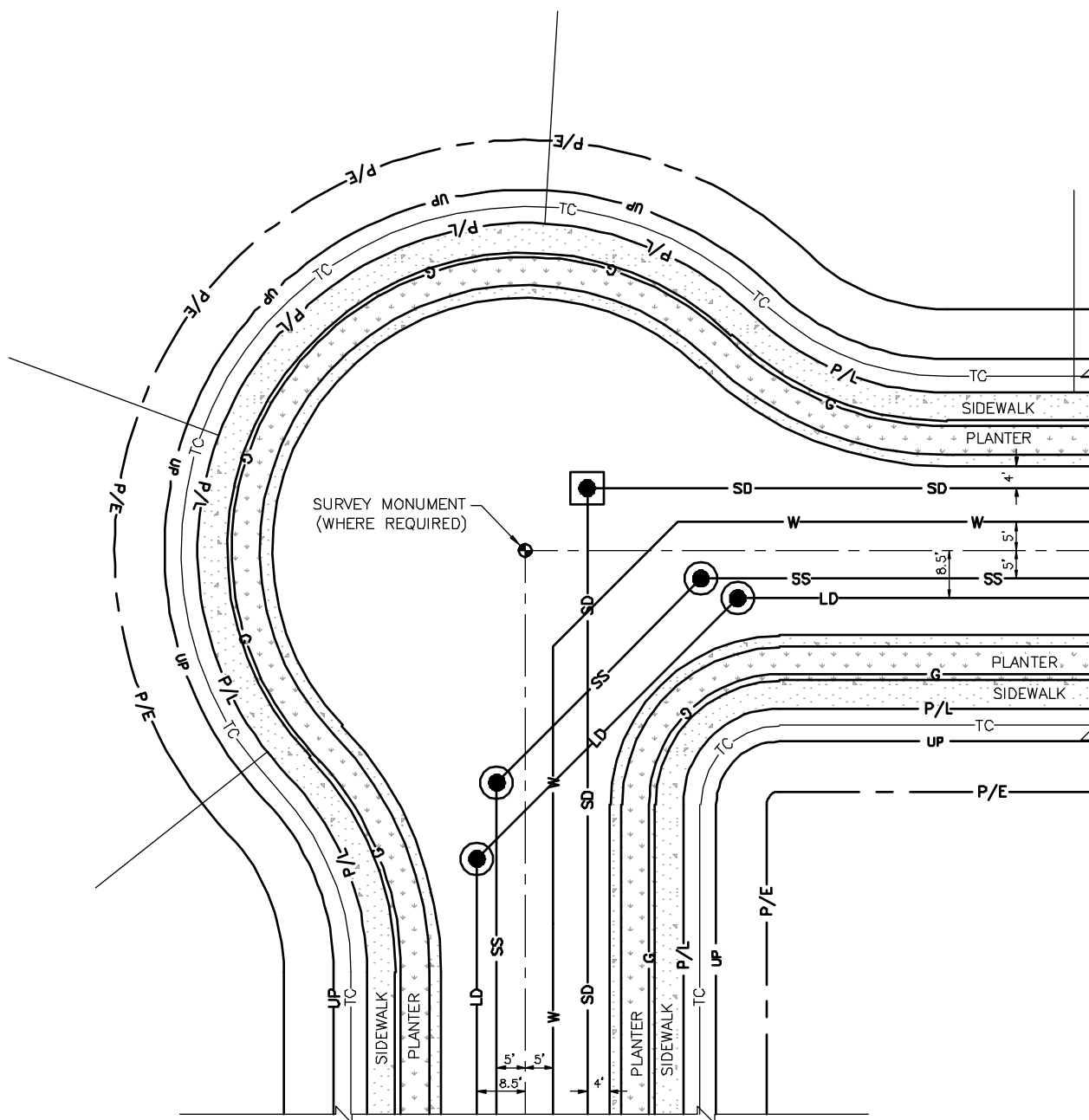
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1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HARDEN, ALLEN & LUCE	DCS	CHT	8/12/20
3				
4				



STANDARD UTILITY LOCATIONS IN KNUCKLE

VINEYARD

STANDARD DRAWING NUMBER:	2
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHT
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



TYPICAL STREET KNUCKLE WITH UTILITIES

LEGEND

CB= COMBO BOX
 G= NATURAL GAS
 SS= SANITARY SEWER
 SD= STORM DRAIN
 W= CULINARY WATER
 UP= POWER
 TC= TELECOMMUNICATIONS
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NOTE:
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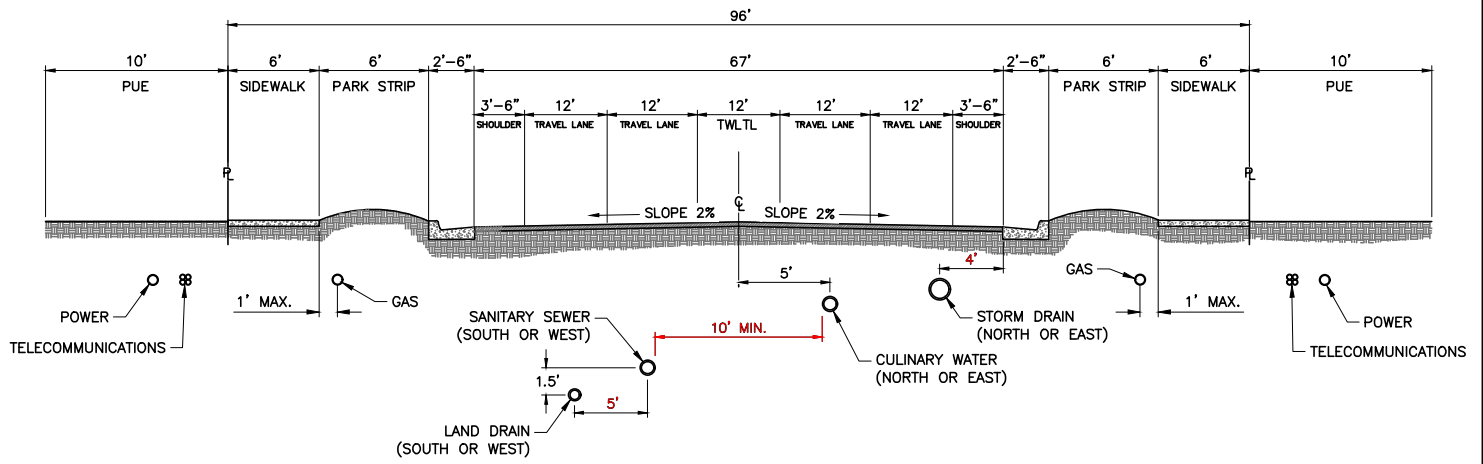
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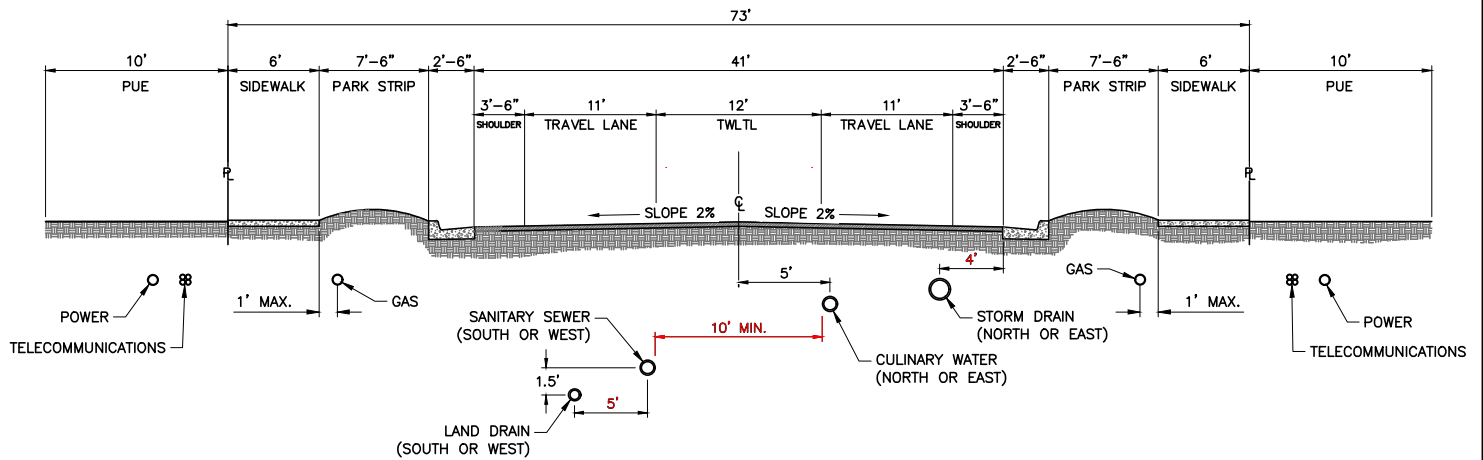
STANDARD UTILITY LOCATIONS IN KNUCKLE

TOWN OF VINEYARD

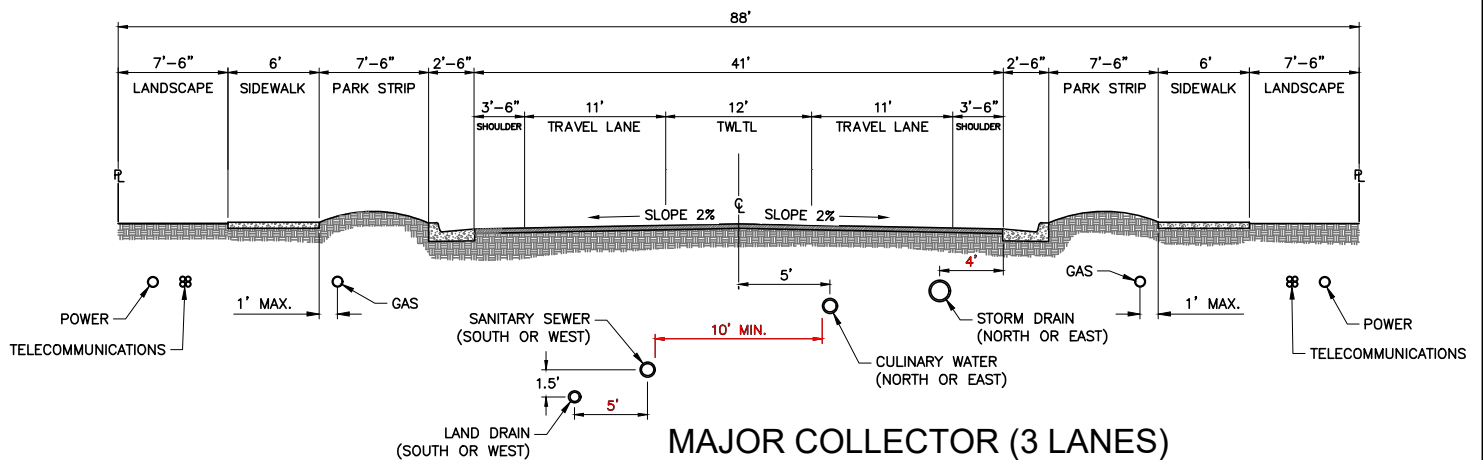
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NUMBER: **1A**
 CAD DWG: V-STD-DWGS
 PLOT SCALE: 1.000
 DRAWN BY: JMM
 DESIGN BY: CHM
 CHECKED BY: DEO
 ADOPTED DATE:
 SEPTEMBER 1, 2016



MAJOR ARTERIAL (5 LANES) 96+ ' ROW



MINOR ARTERIAL (3 LANES) 73 ' ROW



MAJOR COLLECTOR (3 LANES) 88 ' ROW

NOTES:

- WHEREVER POSSIBLE, CULINARY WATER LINES SHALL BE INSTALLED ON THE NORTH AND EAST SIDE OF THE CENTERLINE.
- FIRE HYDRANT PLACEMENT: REFER TO DESIGN CRITERIA FOR PUBLIC IMPROVEMENTS SECTION 4.02 SUB-SECTION B.
- NO CULINARY WATER LINE SMALLER THAN 8" DIA. SHALL BE INSTALLED WITHOUT APPROVAL OF TOWN ENGINEER.
- IMPORTED GRANULAR MATERIAL, ROADBASE AND WHERE NECESSARY ASPHALT THICKNESS WILL BE DETERMINED BY PAVEMENT DESIGN.
- REQUIRED COVER OVER UTILITY LINES ARE AS FOLLOWS:
 CULINARY WATER = 48" MINIMUM
 SANITARY SEWER = PER DESIGN
 STORM DRAIN = PER DESIGN
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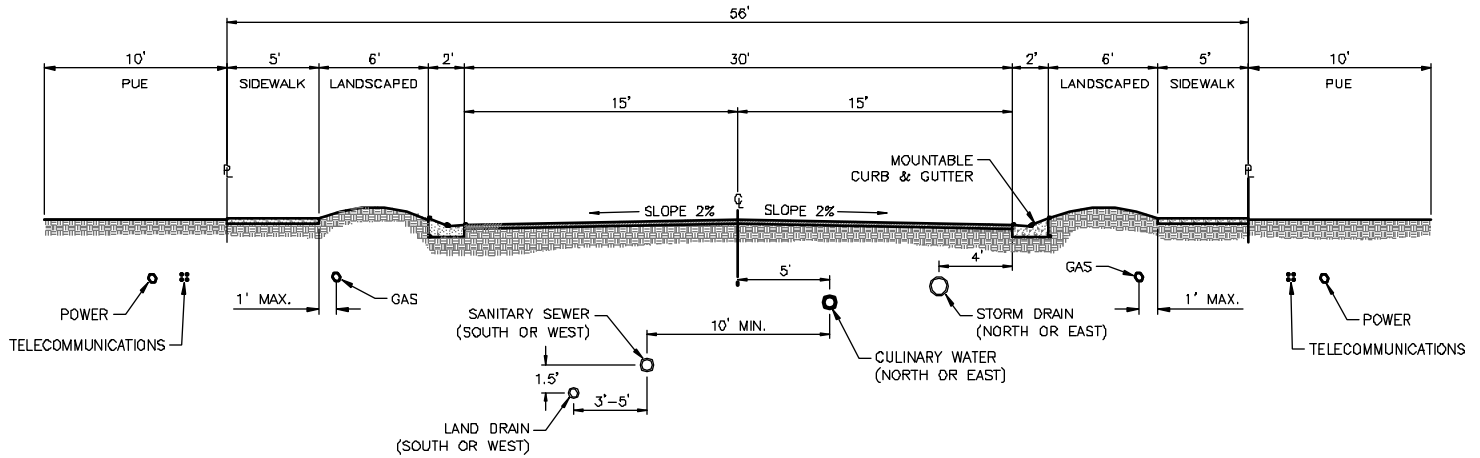
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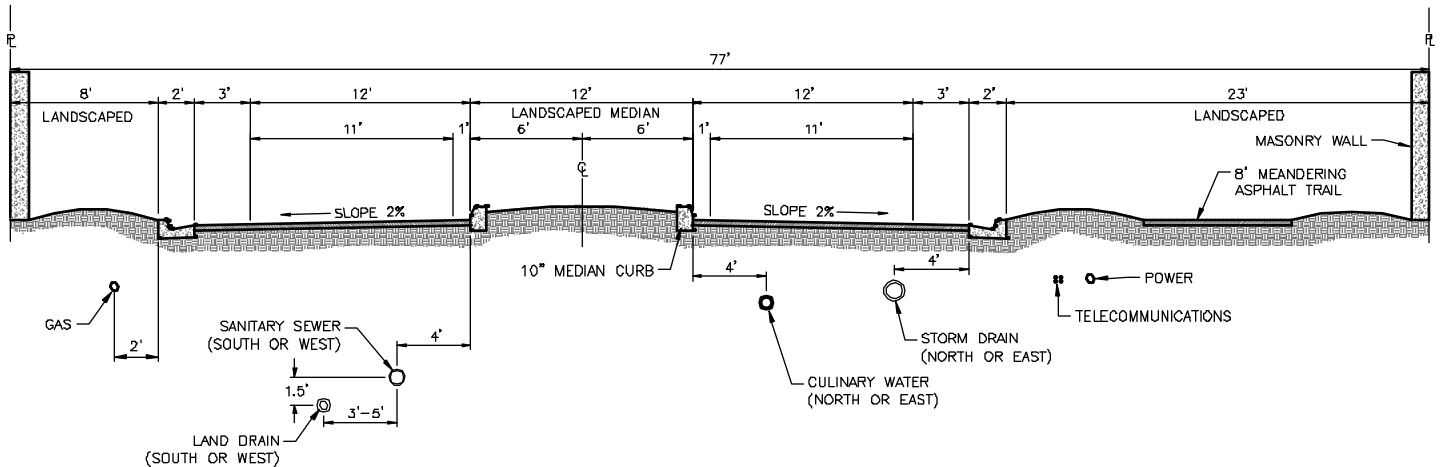
STANDARD STREET CROSS SECTIONS AND UTILITY LOCATIONS

VINEYARD

STANDARD DRAWING NUMBER:	3
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



**56' LOCAL STREET CROSS-SECTION
LOOKING NORTH OR WEST**



**77' PARKWAY STREET CROSS-SECTION
LOOKING NORTH OR WEST**

NOTES:

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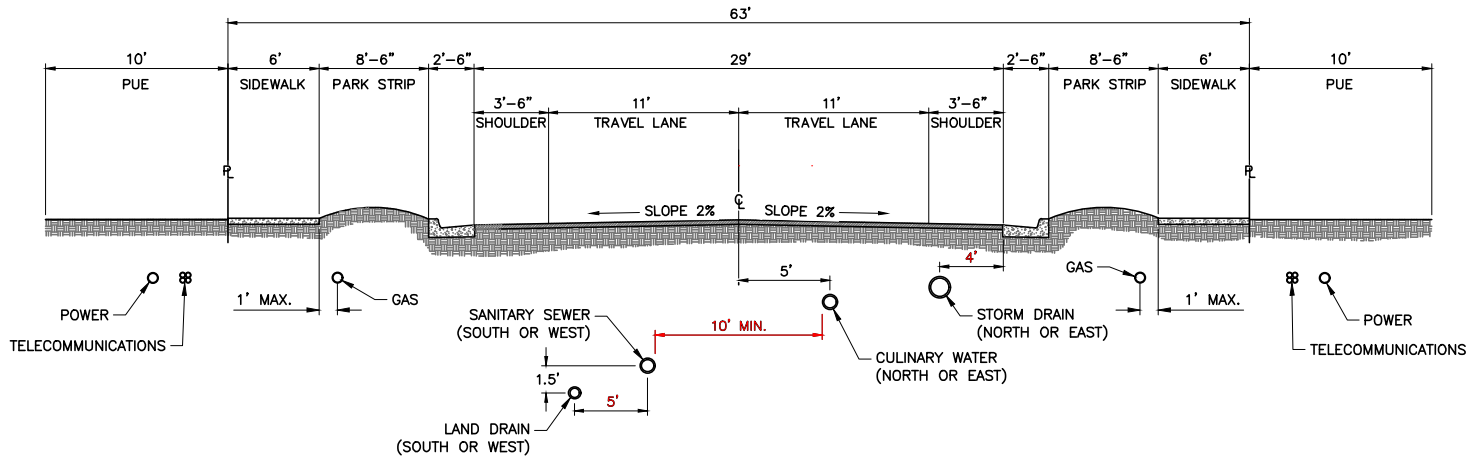
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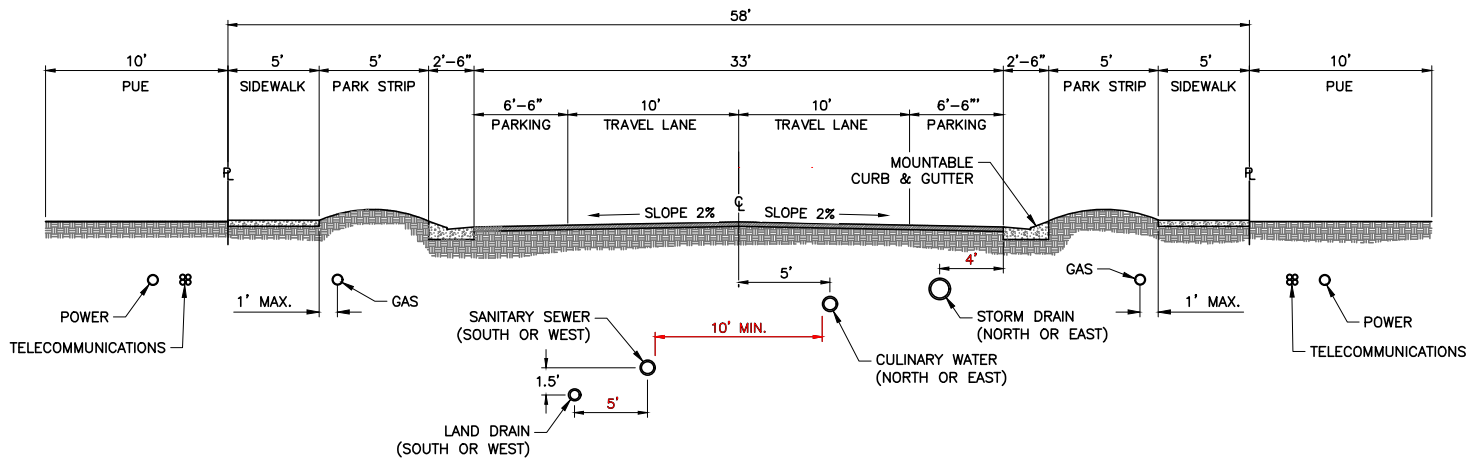
**STANDARD STREET CROSS SECTIONS
AND UTILITY LOCATIONS**

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	2
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PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



**MINOR COLLECTOR (2 LANES)
63' ROW**



**LOCAL (2 LANES)
58' ROW**

NOTES:

1. WHEREVER POSSIBLE, CULINARY WATER LINES SHALL BE INSTALLED ON THE NORTH AND EAST SIDE OF THE CENTERLINE.
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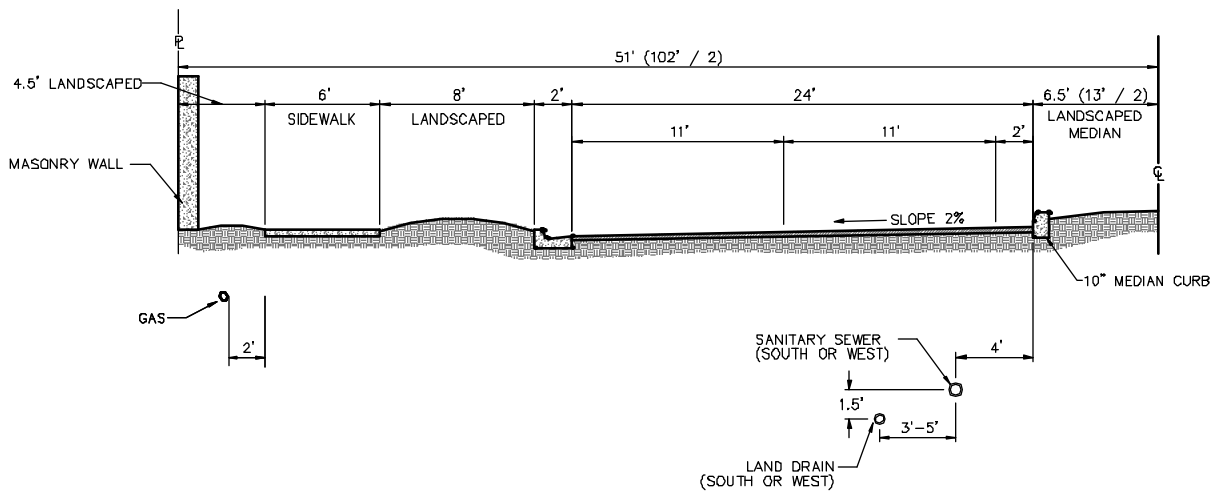
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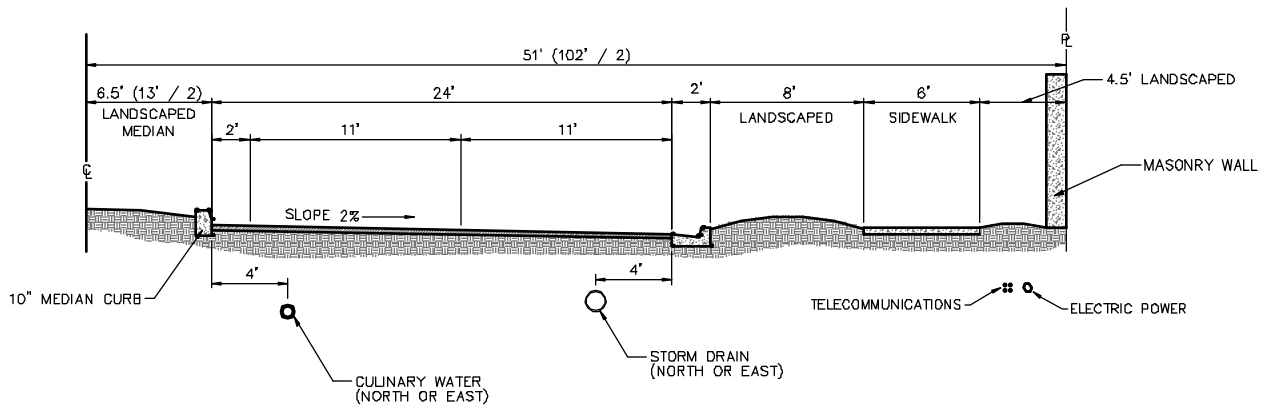
**STANDARD STREET CROSS SECTIONS
AND UTILITY LOCATIONS**

VINEYARD

STANDARD DRAWING NUMBER:	4
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHT
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ADOPTED DATE:	SEPTEMBER 1, 2016



LEFT SIDE HALF WIDTH



RIGHT SIDE HALF WIDTH

102' BOULEVARD STREET CROSS-SECTION LOOKING NORTH OR WEST

NOTES:

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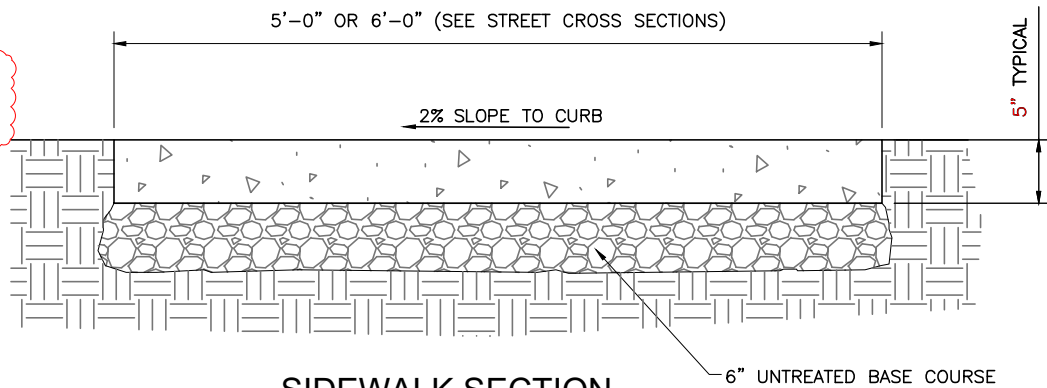
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BOULEVARD STREET CROSS SECTION AND UTILITY LOCATIONS

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	3
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



SIDEWALK SECTION

NOTES:

1. SIDEWALK: USE APWA PLAN 231 SIDEWALK. CONTRACTION JOINTS SHALL BE PLACED EVERY 5' FOR 5' WALKS AND EVERY 6' FOR 6' WALKS. EXPANSION JOINTS SHALL BE PLACED EVERY 50' MAXIMUM.
2. CURB AND GUTTER: USE APWA PLAN 205.1 TYPE A – 30" CURB AND GUTTER UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER TO MATCH EXISTING.
3. MOUNTABLE CURB AND GUTTER: USE APWA PLAN 205.3 TYPE H – 30" STANDARD CURB AND GUTTER UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER TO MATCH EXISTING.
4. CROSS GUTTER: USE APWA PLAN 211 AND 213 6' WATERWAY UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER TO MATCH EXISTING.

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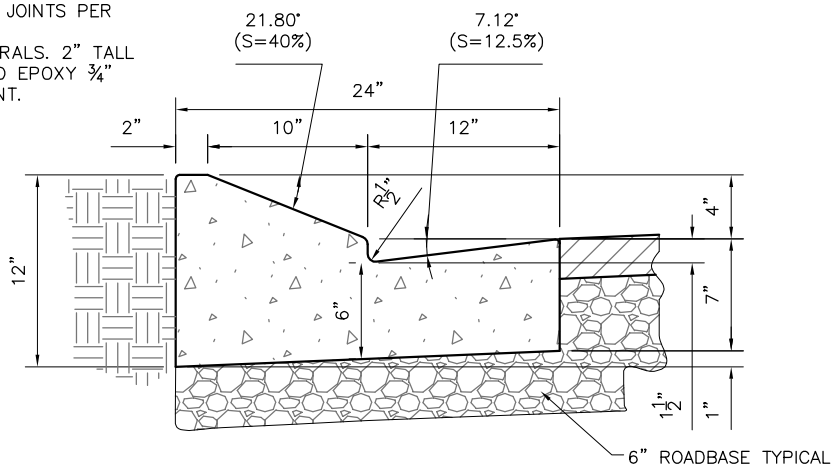
CURB, GUTTER, AND SIDEWALK

VINEYARD

STANDARD DRAWING NUMBER:	5
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHT
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016

NOTE:

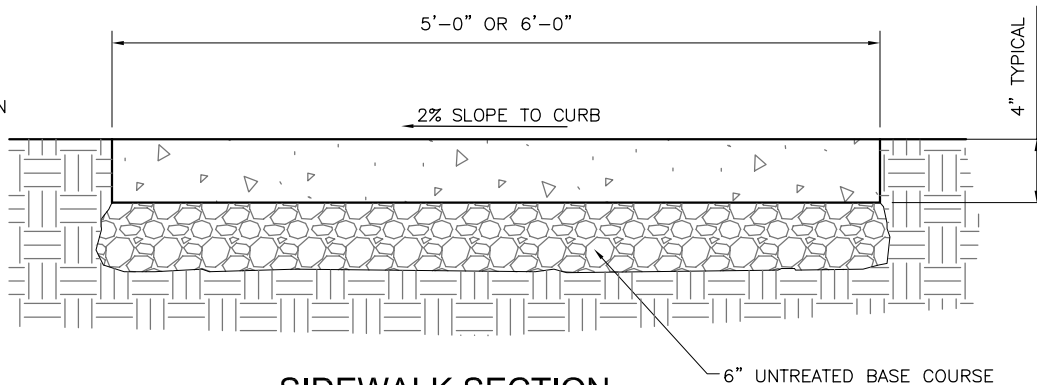
1. CONTRACTION AND EXPANSION JOINTS PER APWA STANDARDS.
2. S, W, OR L MARKER FOR LATERALS. 2" TALL WET SET LETTER OR DRILL AND EPOXY 3/4" BRASS WITH 1" MIN. EMBEDMENT.



MOUNTABLE CURB

NOTE:

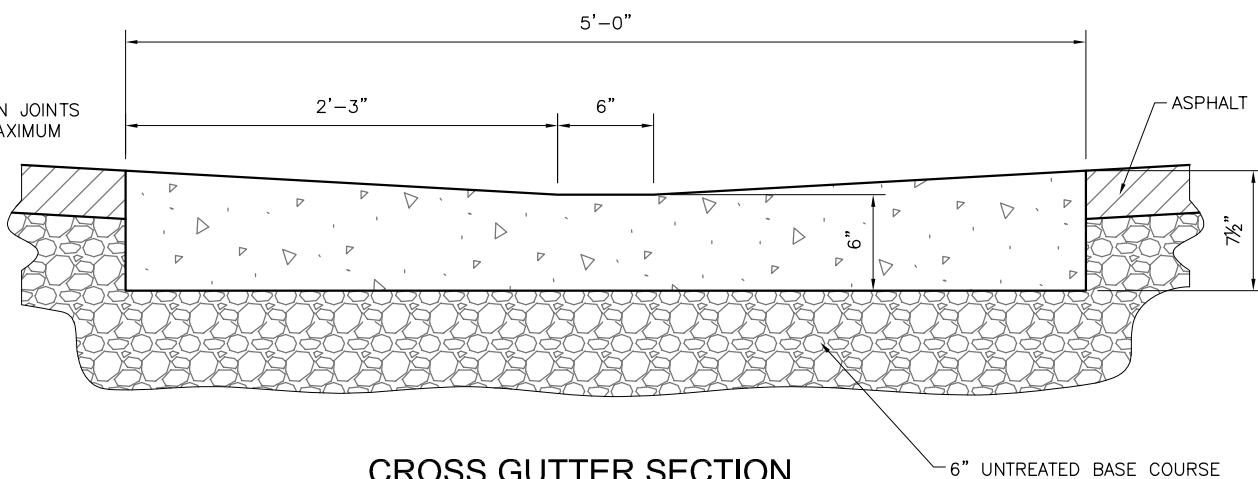
- CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM



SIDEWALK SECTION

NOTE:

- CONTRACTION JOINTS EVERY 5' MAXIMUM



CROSS GUTTER SECTION

NOTE:

1. CROSS GUTTERS ARE NOT PERMITTED WITHOUT TOWN ENGINEER APPROVAL.



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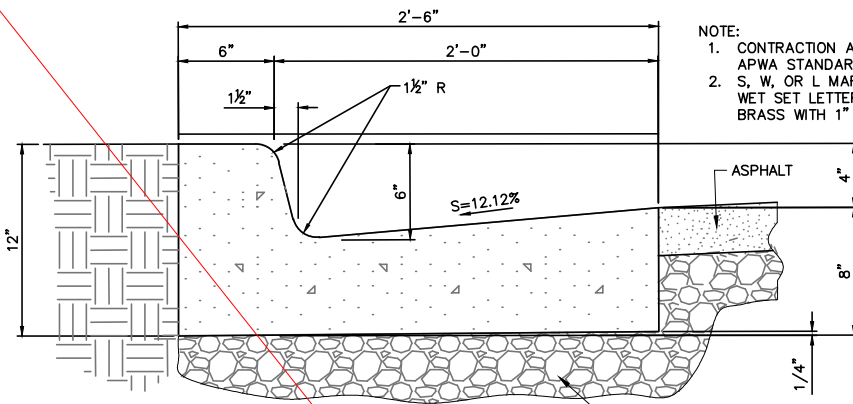


VINEYARD
STAY CONNECTED

CURB, GUTTER, AND SIDEWALK
DETAILS

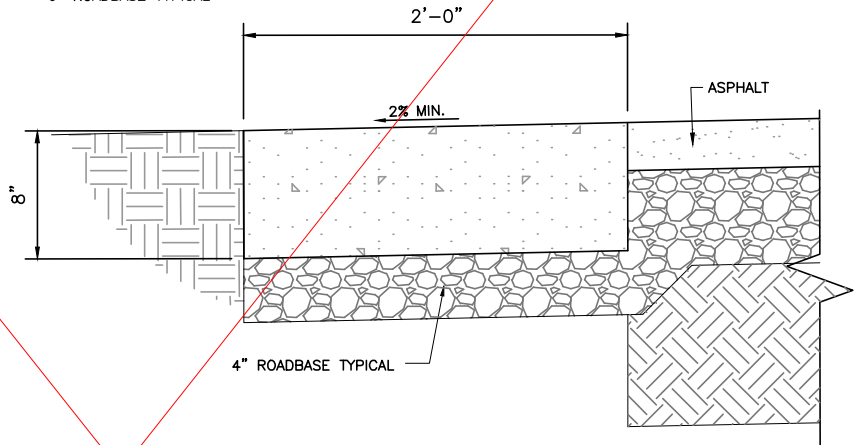
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	4
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DRAWN BY:	JMM
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CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



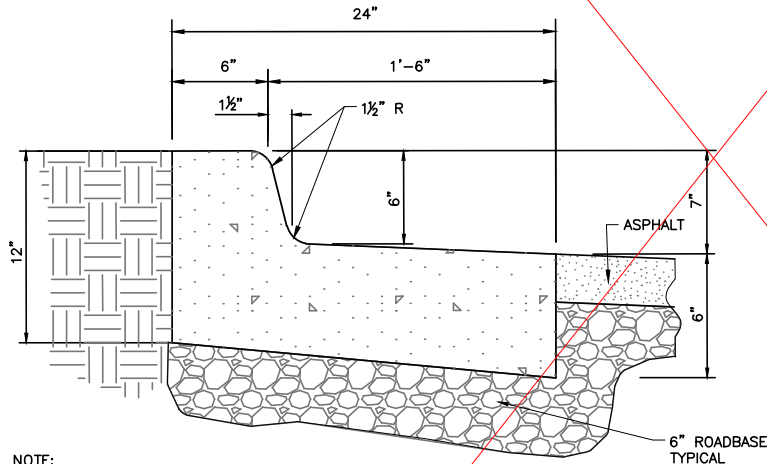
- NOTE:
1. CONTRACTION AND EXPANSION JOINTS PER APWA STANDARDS.
 2. S, W, OR L MARKER FOR LATERALS. 2" TALL WET SET LETTER OR DRILL AND EPOXY 3/4" BRASS WITH 1" MIN. EMBEDMENT.

TYPICAL CURB & GUTTER



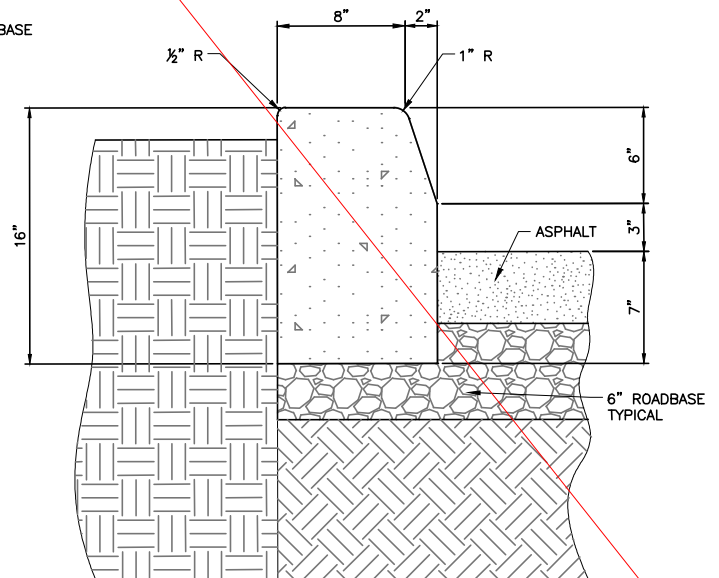
- NOTE:
- CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM.

FLAT CURB BORDER



- NOTE:
- CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM

NON-CARRY TYPE CURB & GUTTER



- NOTE:
- CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM

BARRIER CURB

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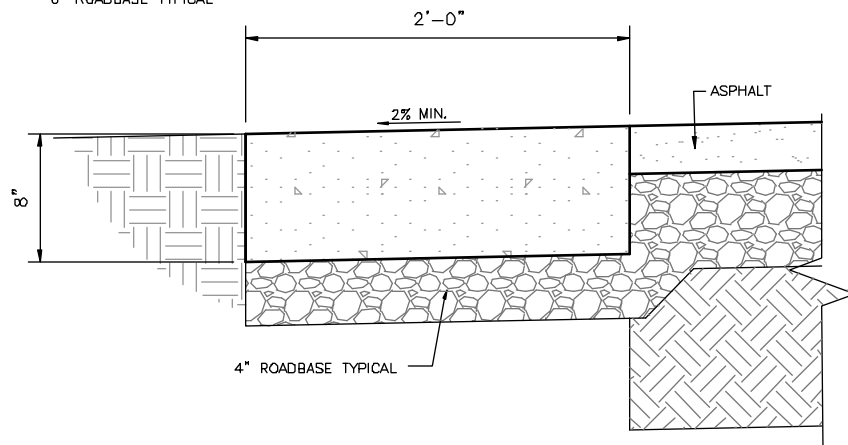
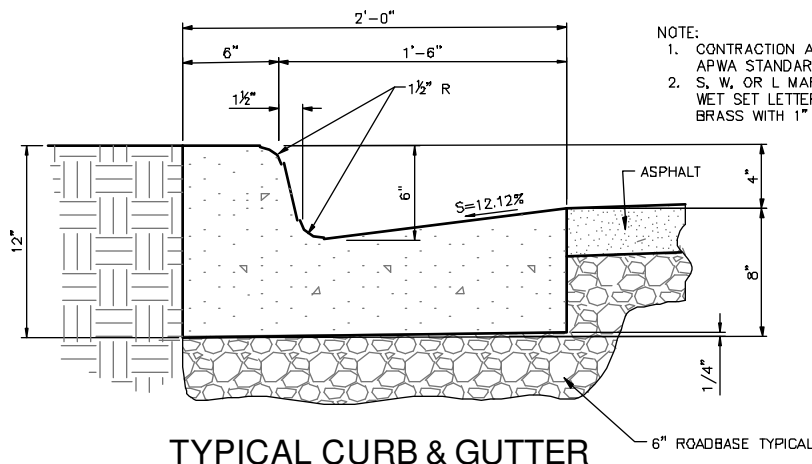
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CURB DETAILS

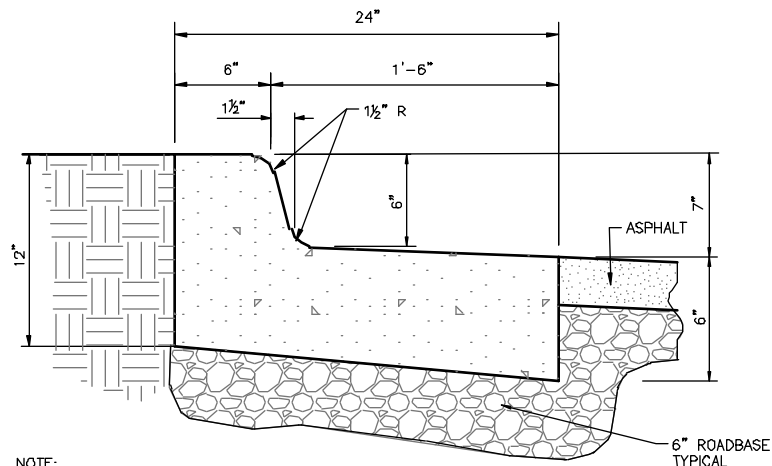
VINEYARD

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CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



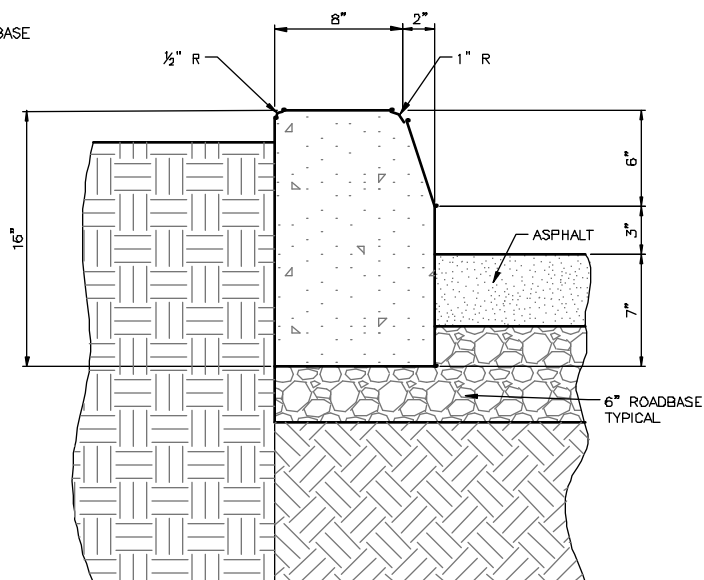
NOTE:
CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM.

FLAT CURB BORDER



NOTE:
CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM

NON-CARRY TYPE CURB & GUTTER



NOTE:
CONTRACTION JOINTS EVERY 10' MAXIMUM AND EXPANSION JOINTS EVERY 50' MAXIMUM

BARRIER CURB

CURB DETAILS

TOWN OF VINEYARD



STATEMENT OF USE

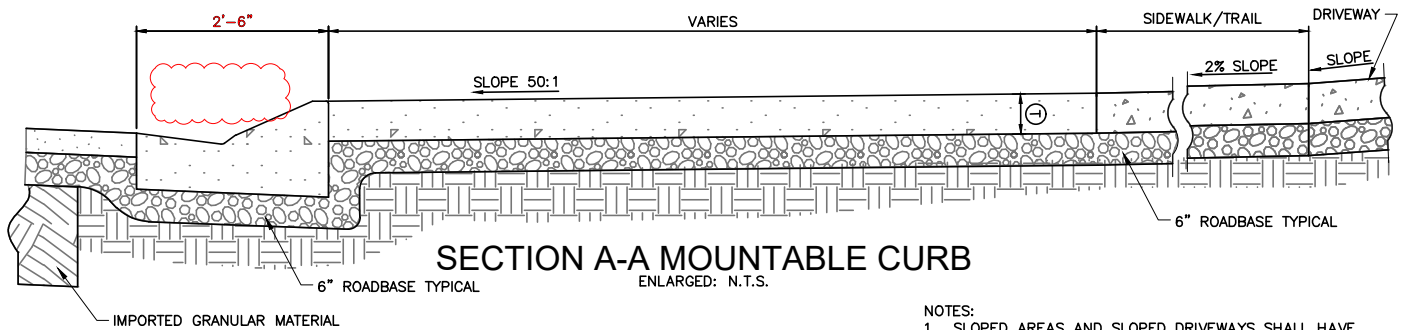
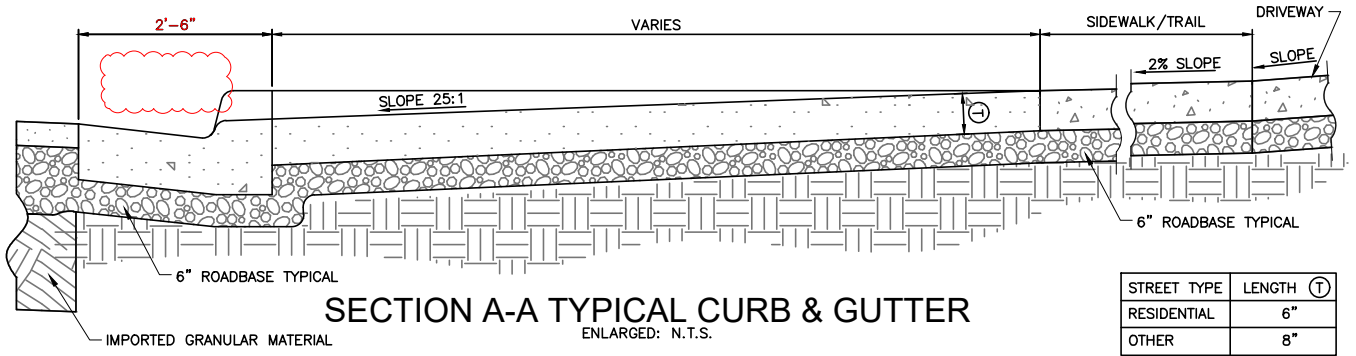
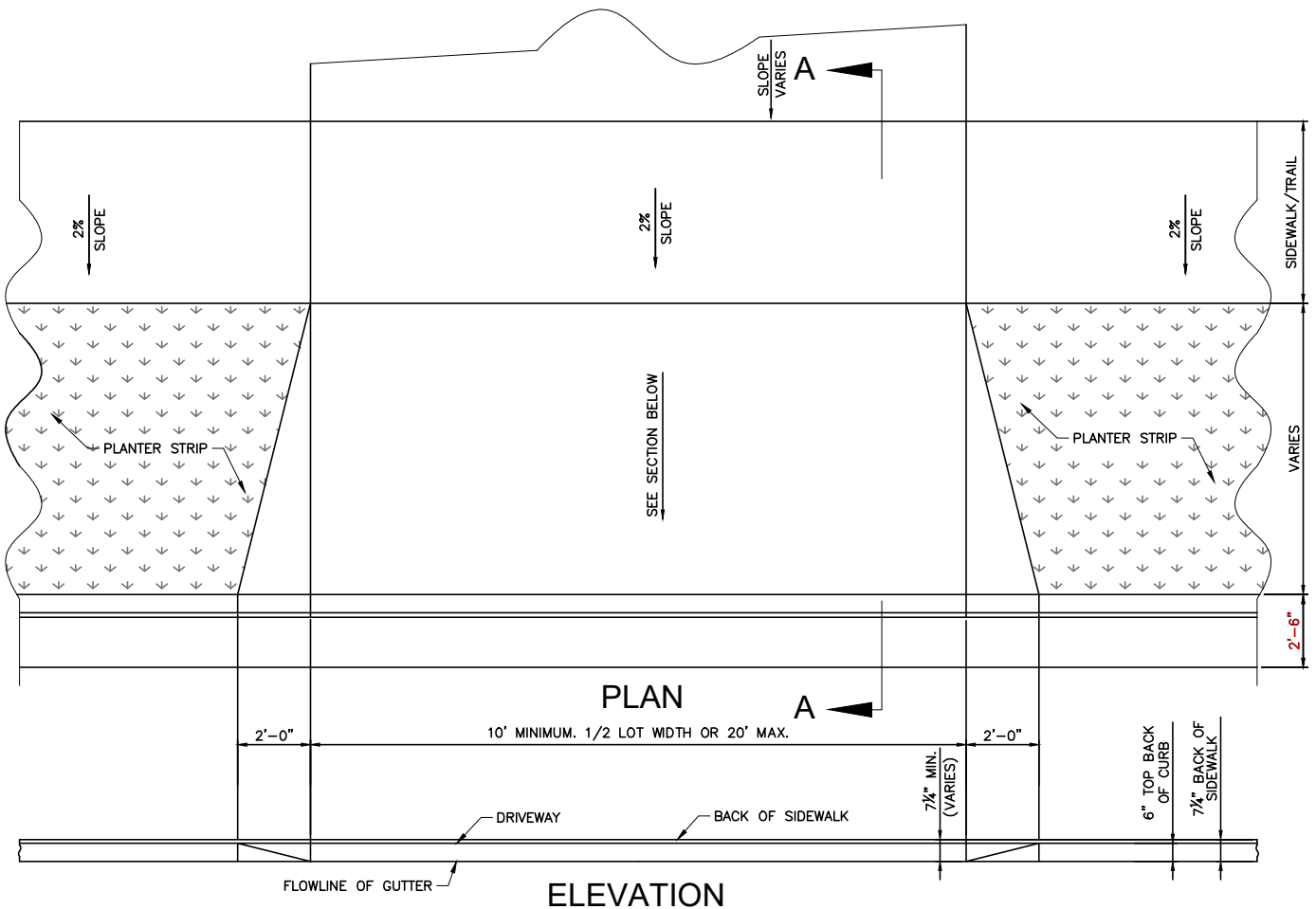
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STANDARD DRAWING NUMBER:	5
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
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- NOTES:
1. SLOPED AREAS AND SLOPED DRIVEWAYS SHALL HAVE A COARSE BROOM FINISH.
 2. THE DRIVEWAY, AT A POINT 4' BEHIND THE SIDEWALK, SHALL BE AT LEAST 7" HIGHER THAN THE FLOWLINE OF THE GUTTER.

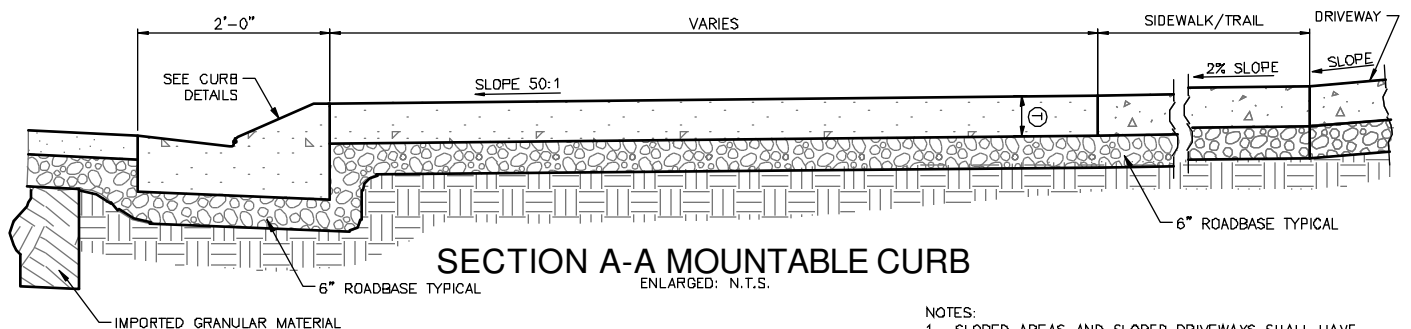
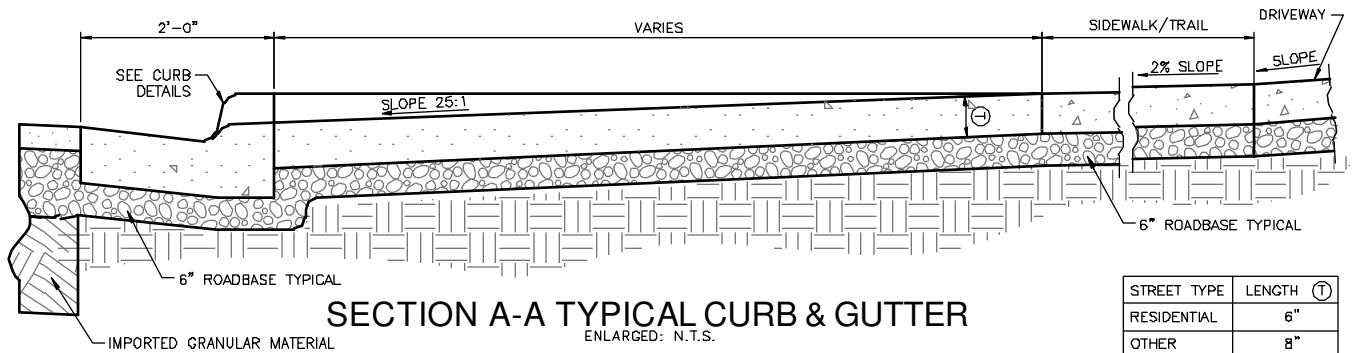
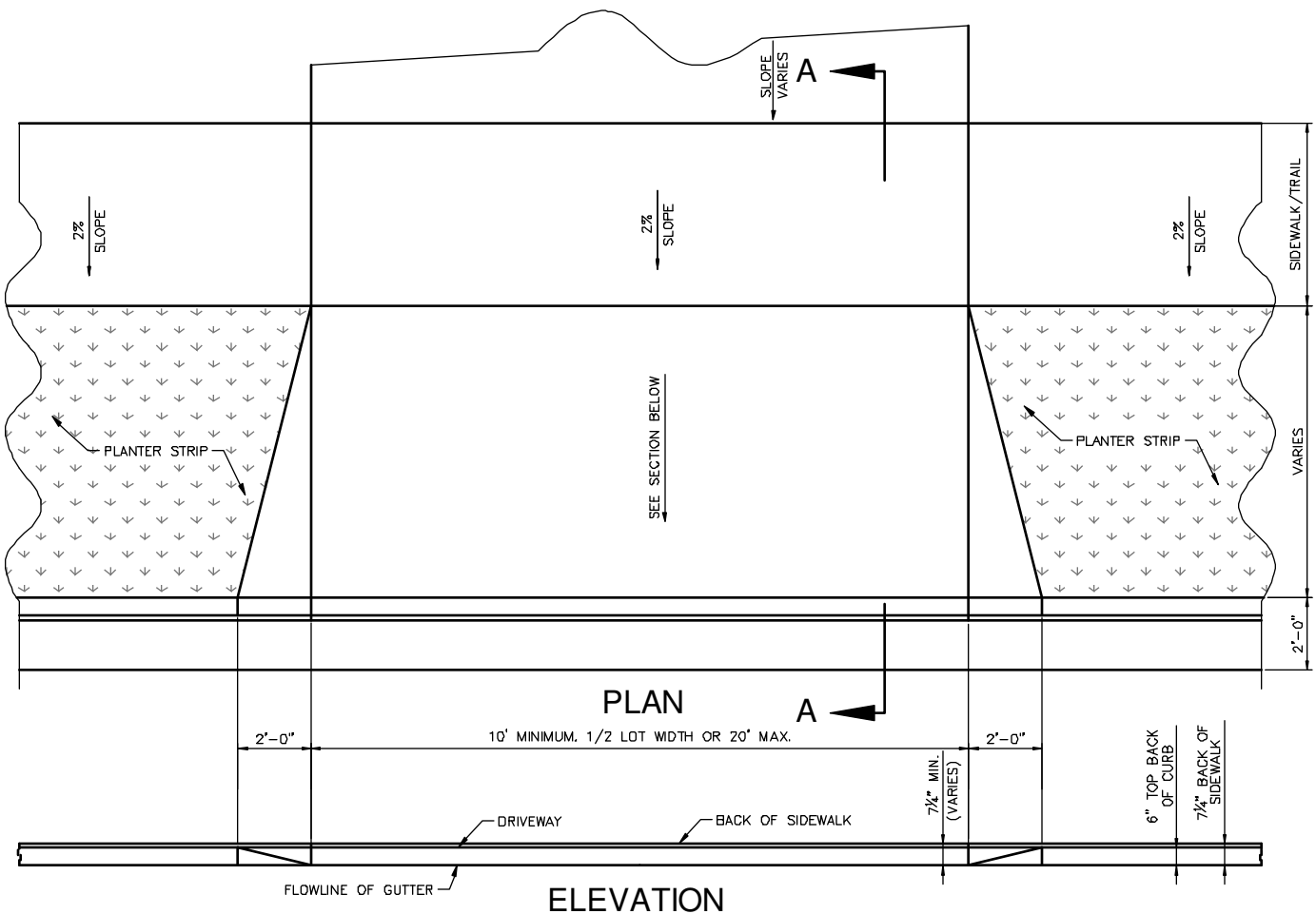
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REVISION			
1	STANDARDS UPDATE	JMM	DED 8/08/19
2	HARDEN, ALLEN & LUCE	DCS	CMF 8/12/20
3			
4			
NO.	DESCRIPTION	BY	APR. DATE



TYPICAL
CURB APPROACH

VINEYARD

STANDARD DRAWING NUMBER:	6
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CMF
CHECKED BY:	DED
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

1. SLOPED AREAS AND SLOPED DRIVEWAYS SHALL HAVE A COARSE BROOM FINISH.
2. THE DRIVEWAY, AT A POINT 4' BEHIND THE SIDEWALK, SHALL BE AT LEAST 7" HIGHER THAN THE FLOWLINE OF THE GUTTER.



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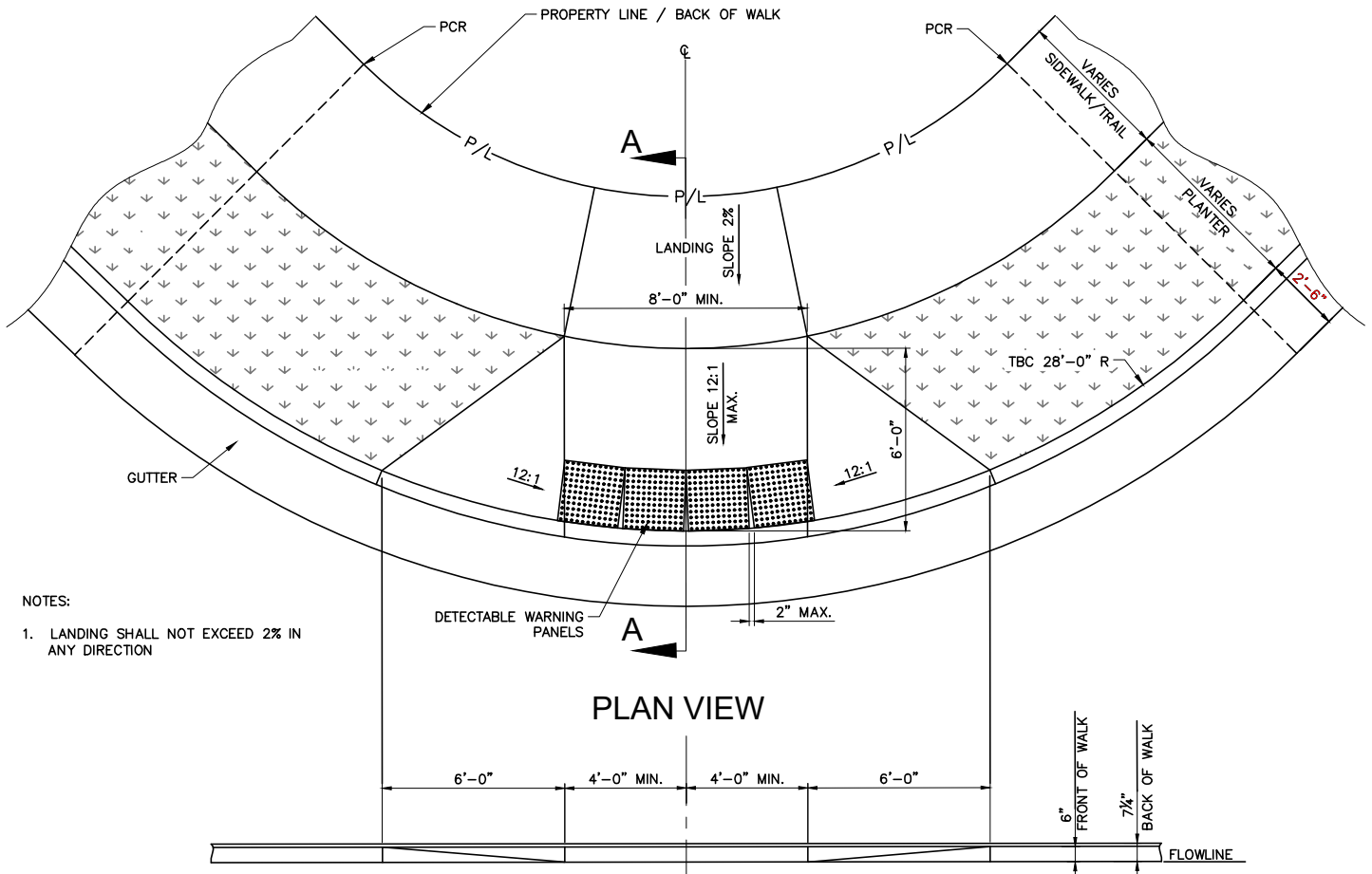
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NO.	DESCRIPTION	BY	APR.	DATE
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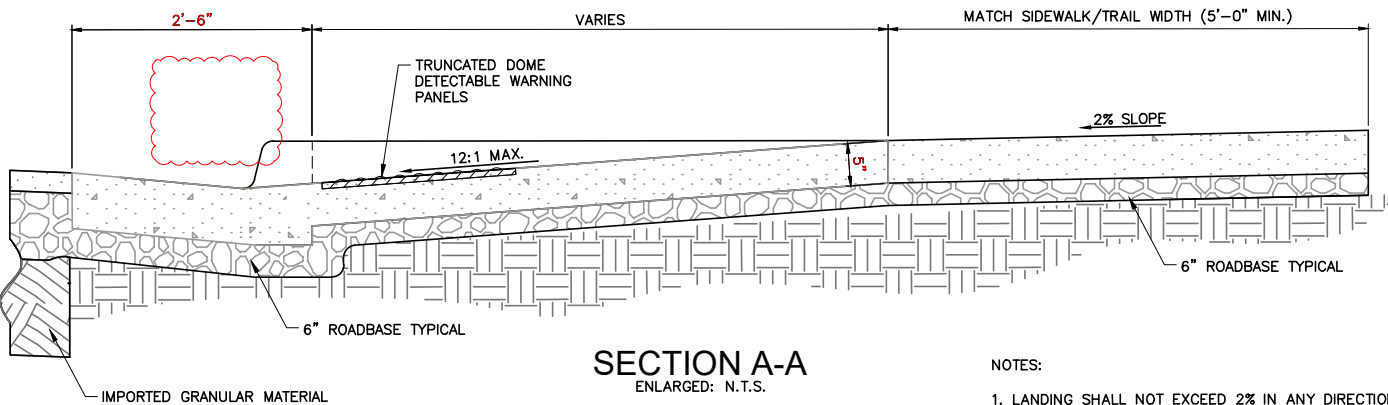
**TYPICAL
CURB APPROACH**
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	6
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JAM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



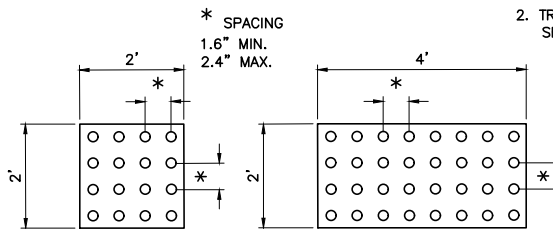
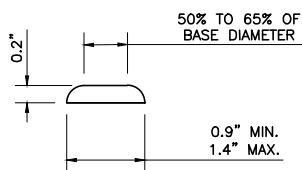
NOTES:

1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION



NOTES:

1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
2. TRUNCATED DOME DETECTABLE WARNING PANEL SHALL BE CAST IRON.



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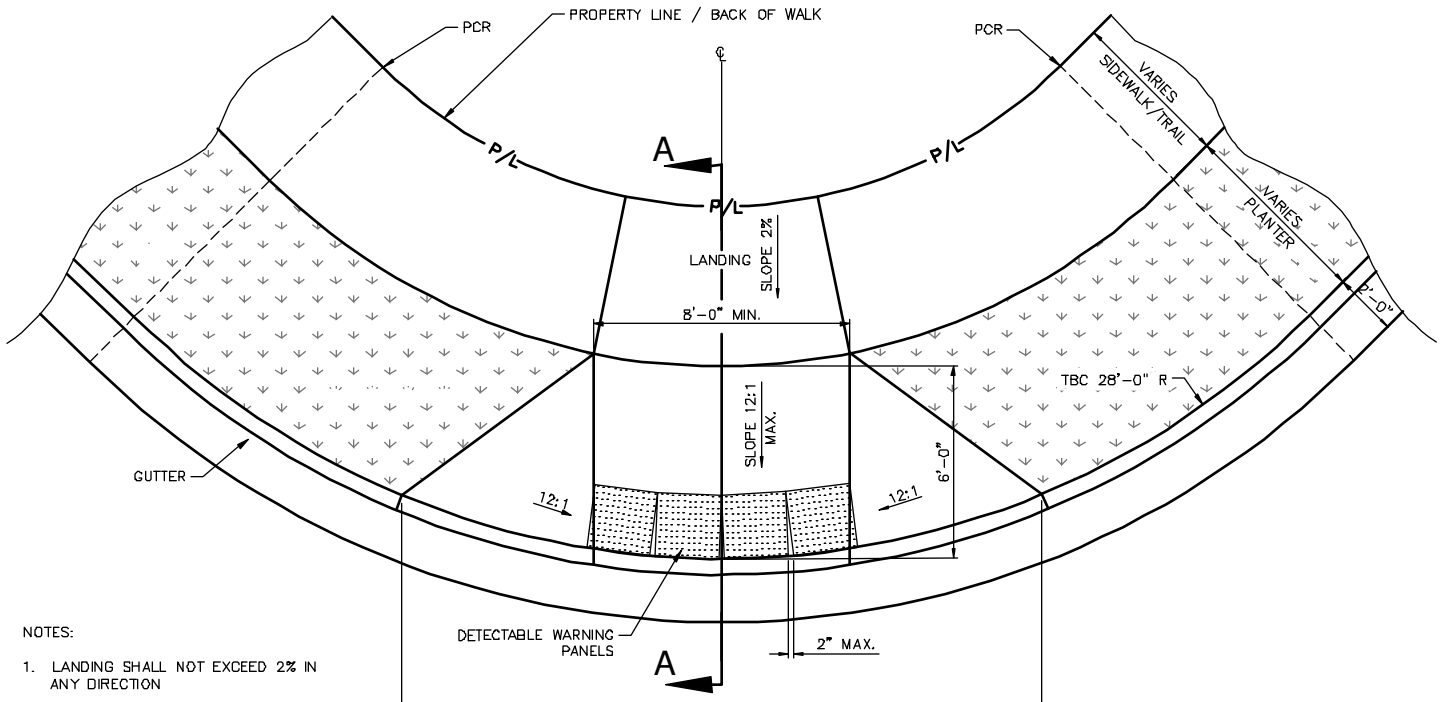
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2	HANSEN, ALLEN & LUCK	DES	CMF	8/12/20
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STANDARD CURB RETURN AT INTERSECTION

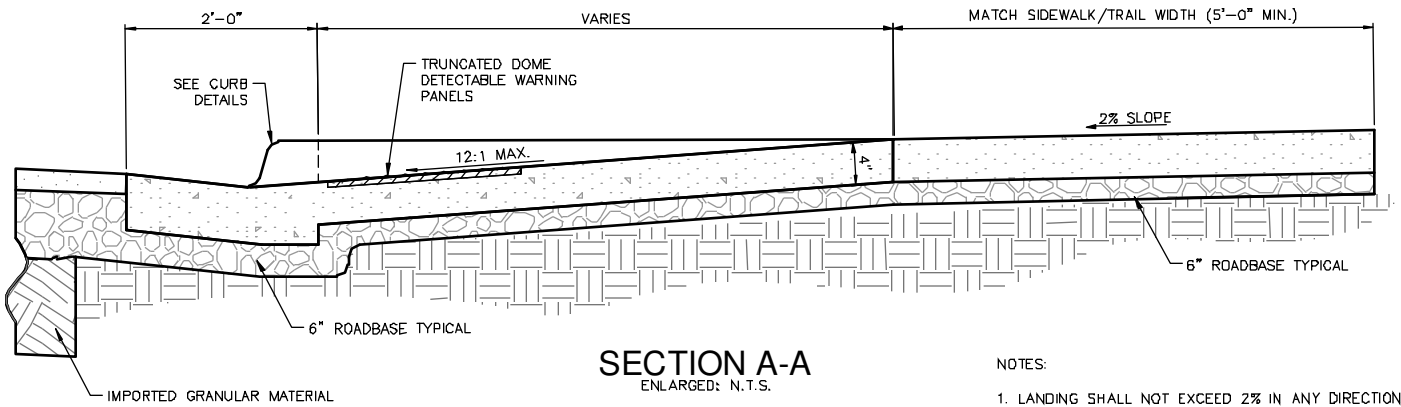
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ADOPTED DATE:	SEPTEMBER 1, 2016



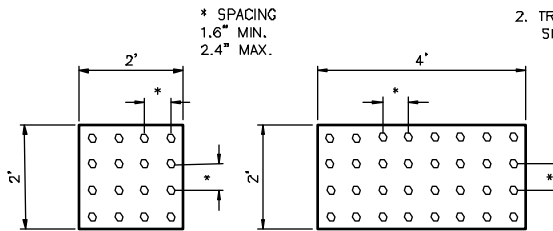
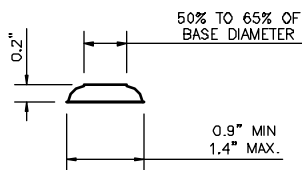
PLAN VIEW

ELEVATION



NOTES:

1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
2. TRUNCATED DOME DETECTABLE WARNING PANEL SHALL BE YELLOW POLYMER COMPOSITE/FIBERGLASS.



DOMES DETAIL

DETECTABLE WARNING PANEL

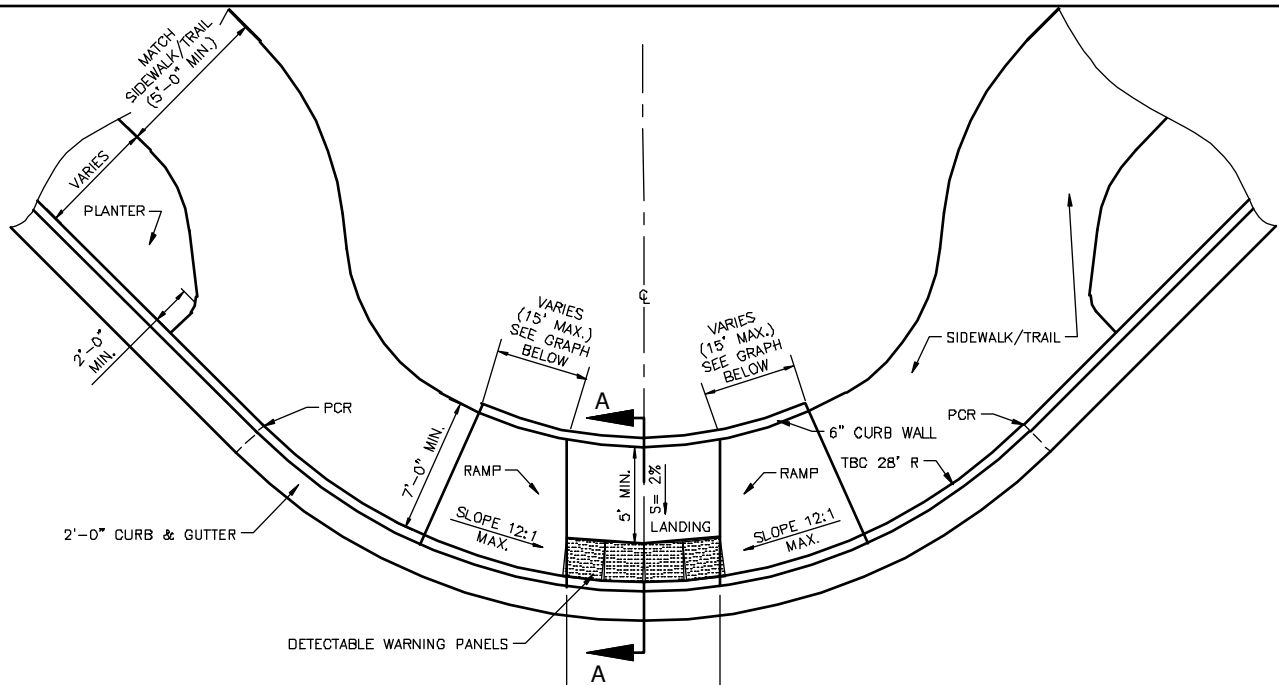
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REVISION			
NO.	DESCRIPTION	BY	DATE
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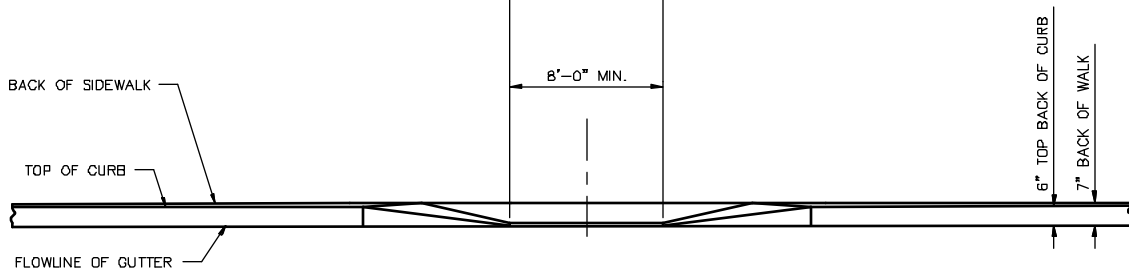
STANDARD CURB RETURN AT INTERSECTION

TOWN OF VINEYARD

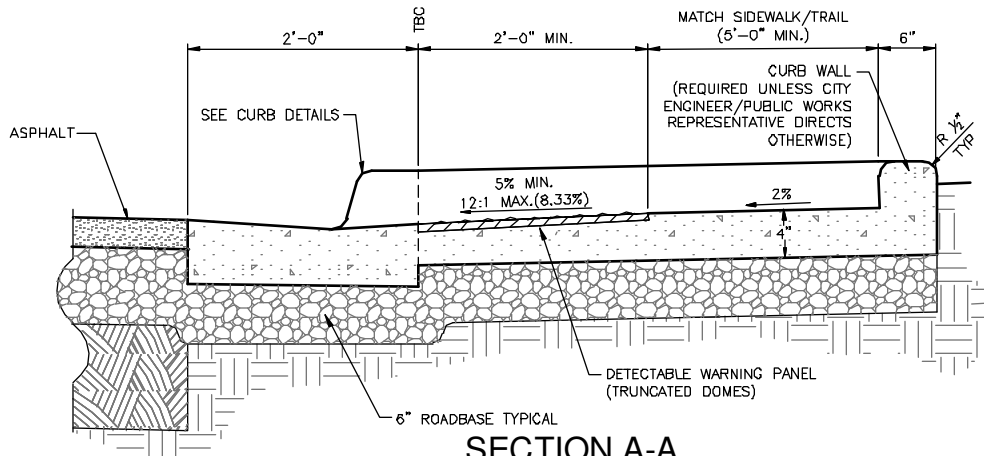
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DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



PLAN VIEW

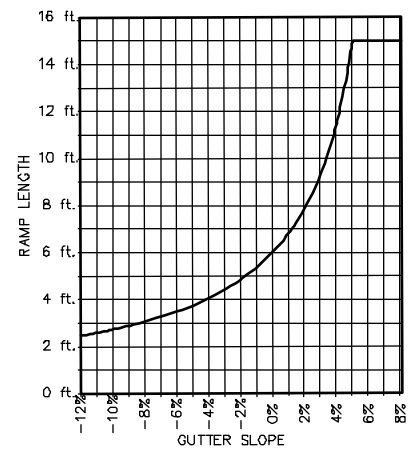


ELEVATION



SECTION A-A

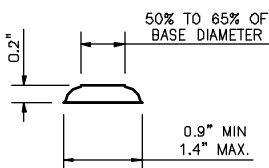
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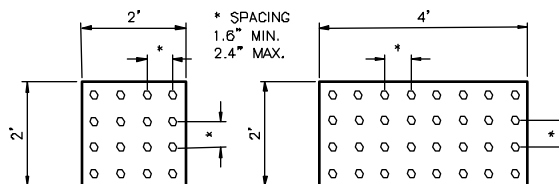
MINIMUM RAMP LENGTH

NOTES:

1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
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DOMES DETAIL



DETECTABLE WARNING PANEL



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REVISION

NO.	DESCRIPTION	BY	APR.	DATE
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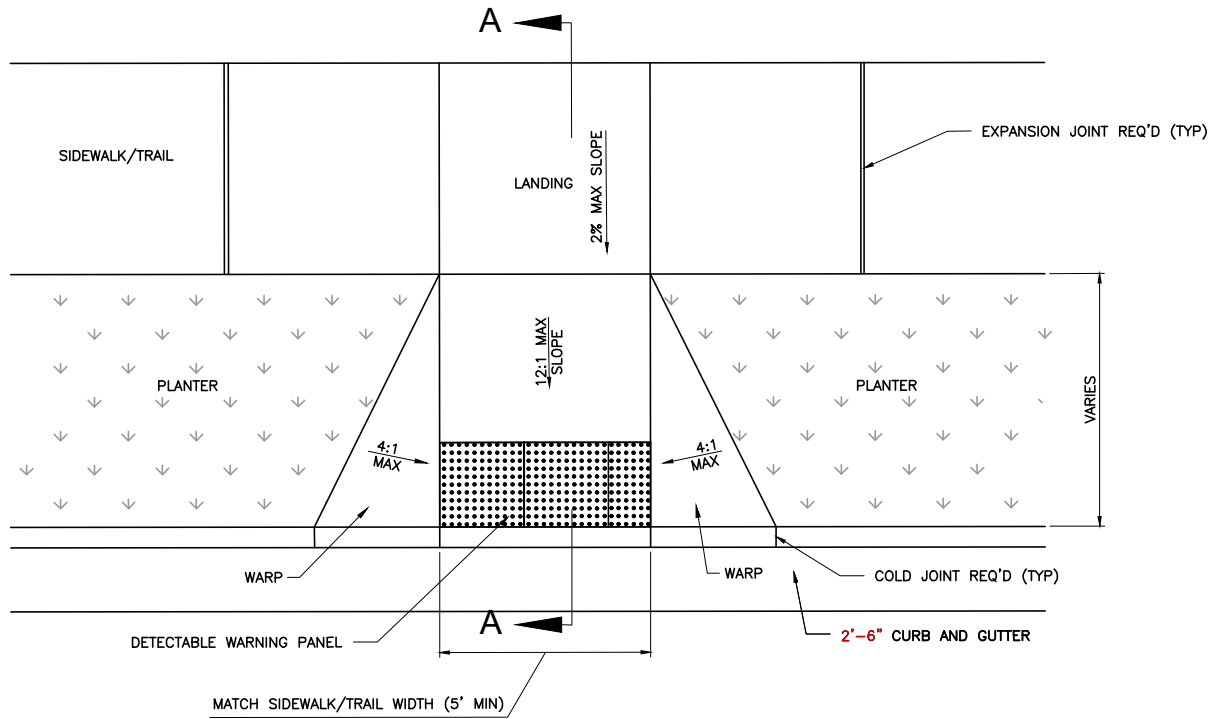


VINEYARD
STAY CONNECTED

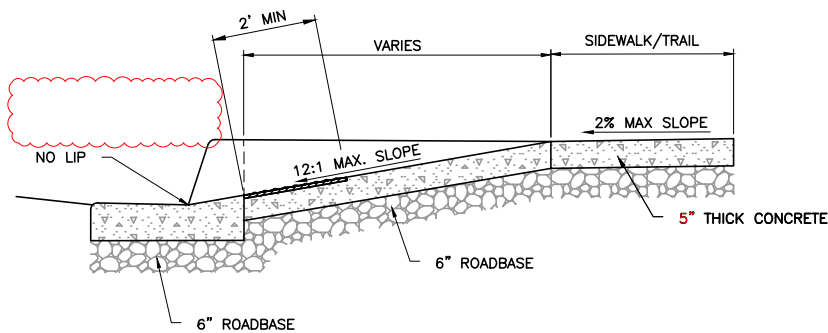
PEDESTRIAN ACCESS

TOWN OF VINEYARD

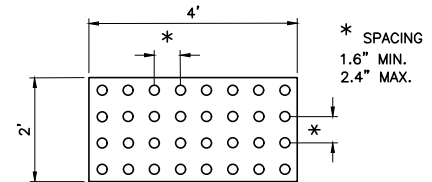
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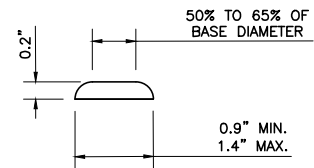
PLAN VIEW



SECTION A-A



DETECTABLE WARNING PANEL



DOME DETAIL

- NOTES:
1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 2. TRUNCATED DOME DETECTABLE WARNING PANEL SHALL BE YELLOW POLYMER COMPOSITE/FIBERGLASS.

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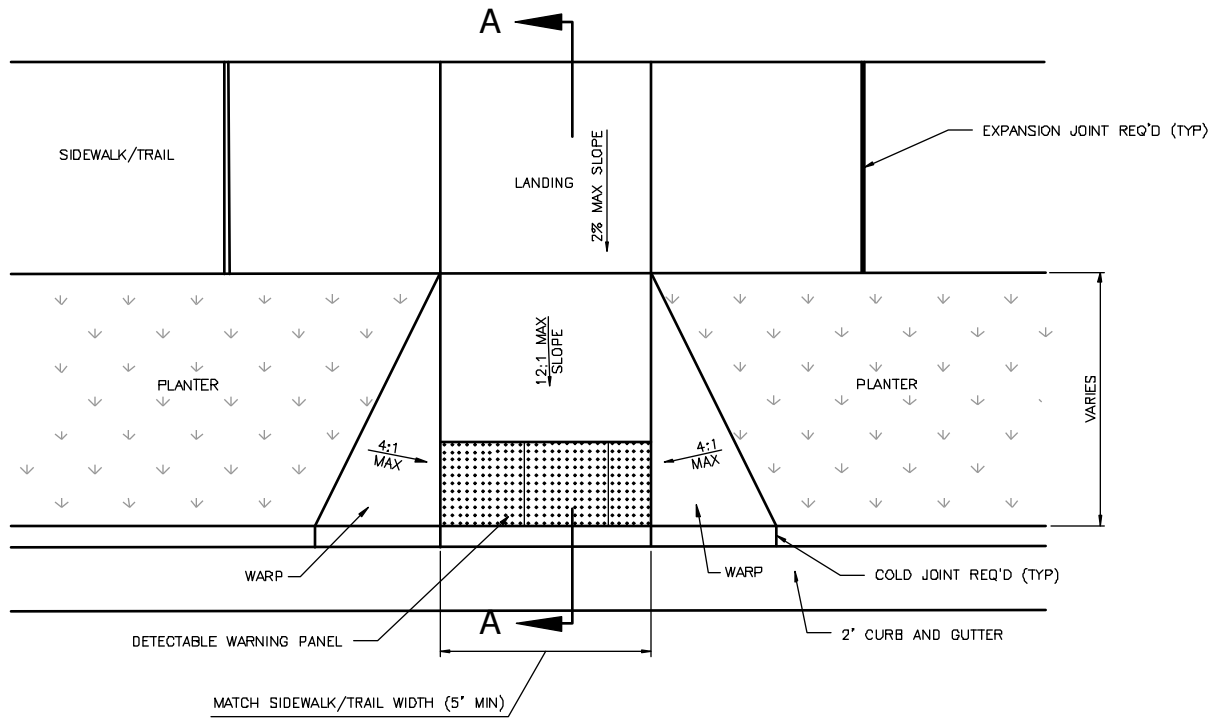
NO.	DESCRIPTION	BY	APR.	DATE
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2	HANSEN, ALLEN & LUCE	DS	CHT	8/12/20
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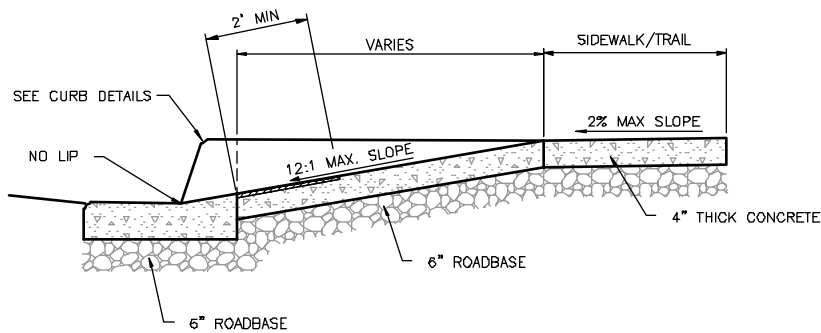
PEDESTRIAN ACCESS
MID BLOCK

VINEYARD

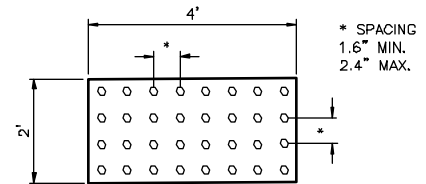
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ADOPTED DATE:	SEPTEMBER 1, 2016



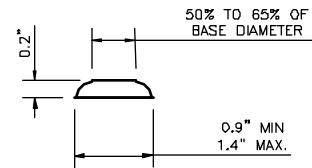
PLAN VIEW



SECTION A-A



DETECTABLE WARNING PANEL



DOME DETAIL

- NOTES
1. LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 2. TRUNCATED DOME DETECTABLE WARNING PANEL SHALL BE YELLOW POLYMER COMPOSITE/FIBERGLASS.

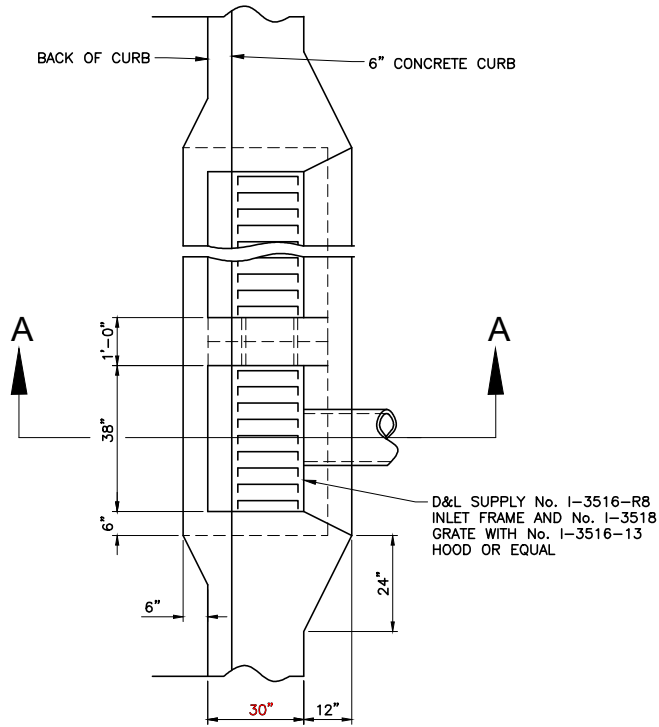


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REVISION			
NO.	DESCRIPTION	BY	DATE
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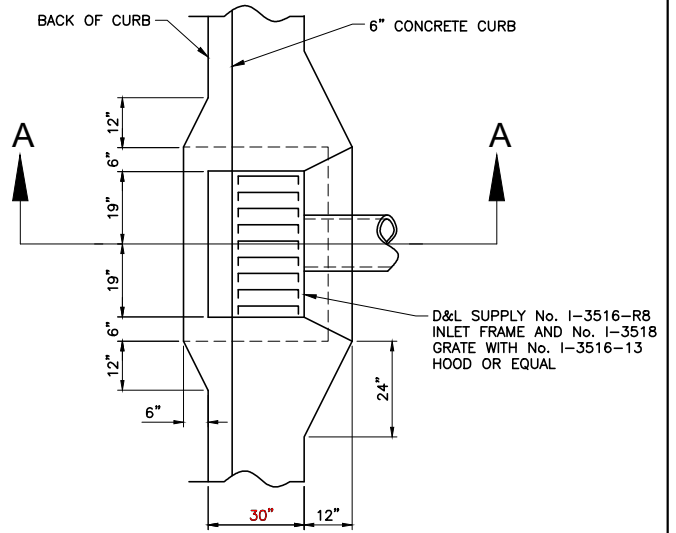


PEDESTRIAN ACCESS
MID BLOCK
TOWN OF VINEYARD

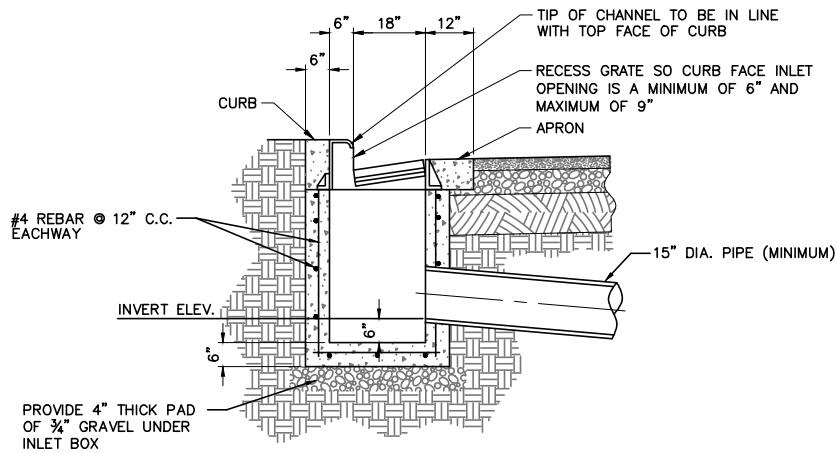
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DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



MULTIPLE INLET PLAN VIEW



SINGLE INLET PLAN VIEW



SECTION A-A

NOTE:
1. INSTALL "SNOUT" BMP "F" SERIES OIL-WATER-DEBRIS SEPARATOR OR APPROVED EQUIVALENT WHEN LEAVING PRIVATE DEVELOPMENT TO CITY SYSTEM.

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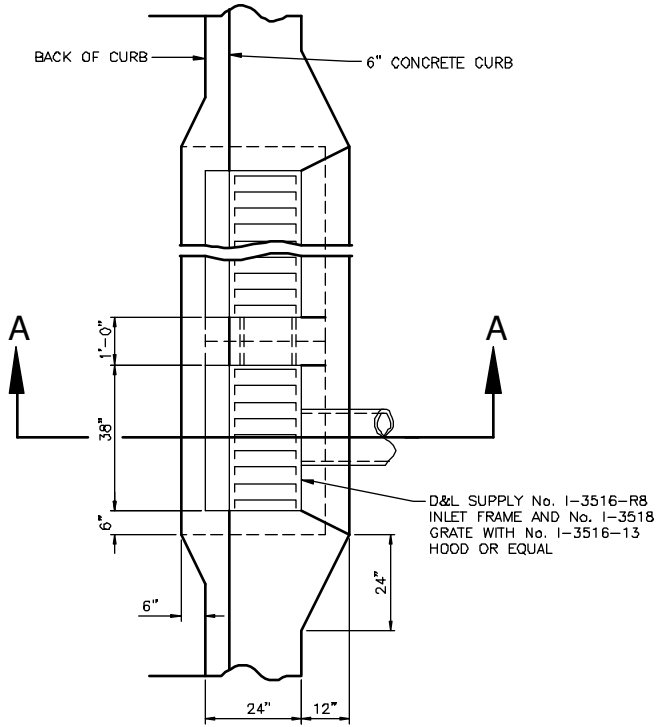
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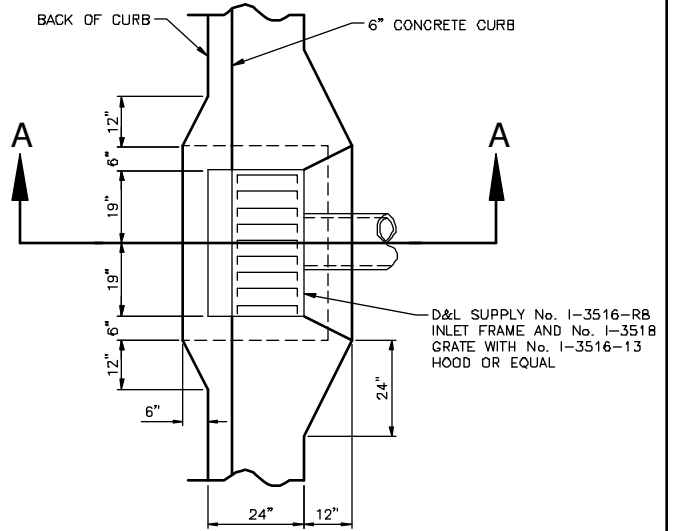
STANDARD CURB FACE INLET
DETAIL

VINEYARD

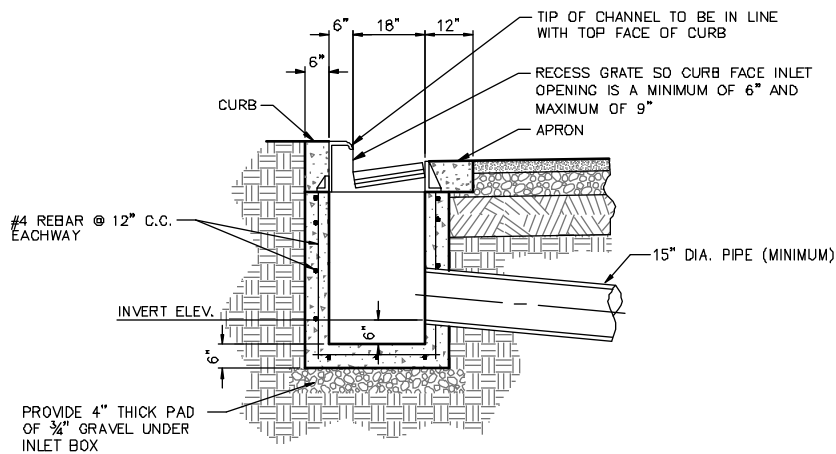
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CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



MULTIPLE INLET PLAN VIEW



SINGLE INLET PLAN VIEW



SECTION A-A



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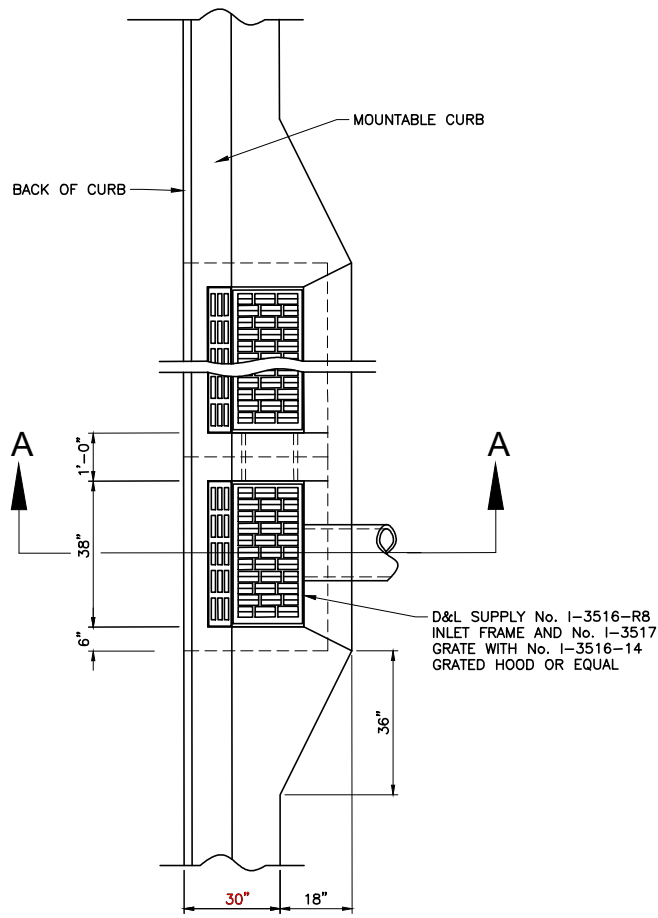
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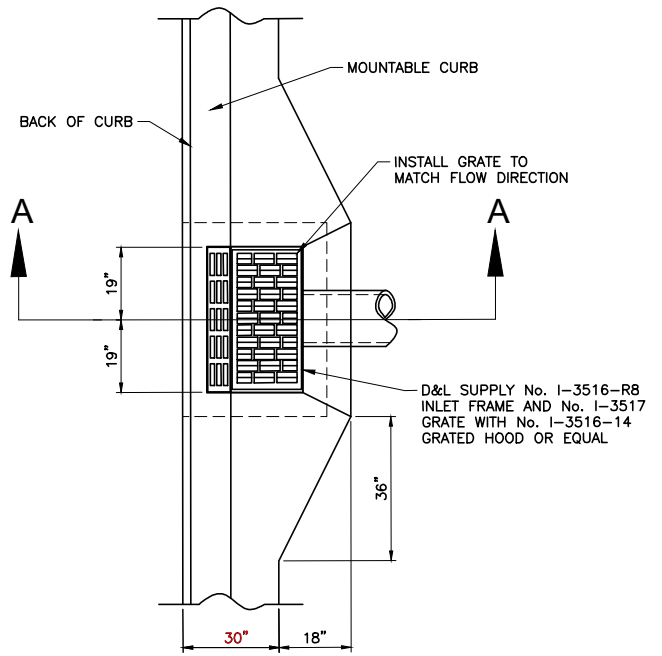
STANDARD CURB FACE INLET
DETAIL

TOWN OF VINEYARD

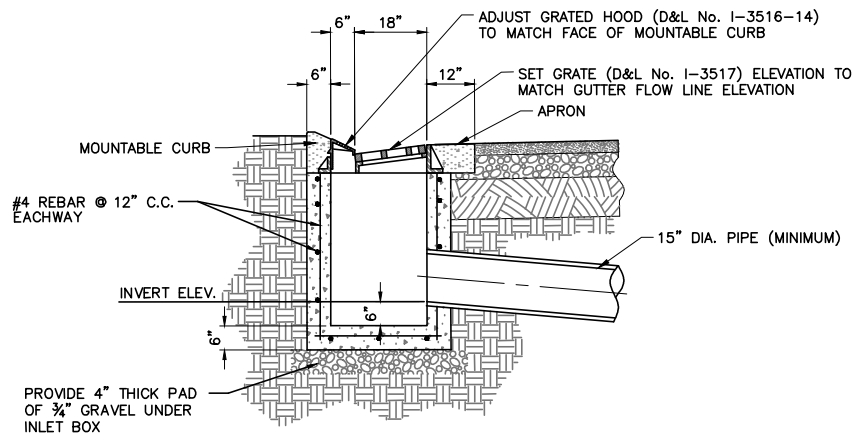
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DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



MULTIPLE INLET PLAN VIEW



SINGLE INLET PLAN VIEW



SECTION A-A

NOTE:
1. INSTALL "SNOUT" BMP "F" SERIES OIL-WATER-DEBRIS SEPARATOR OR APPROVED EQUIVALENT WHEN LEAVING PRIVATE DEVELOPMENT TO CITY SYSTEM.

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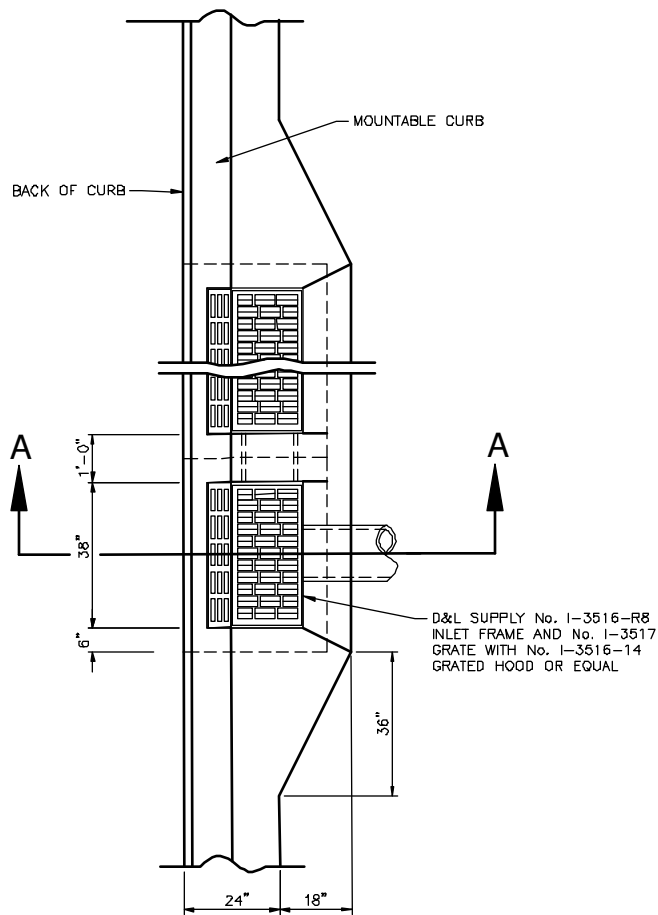
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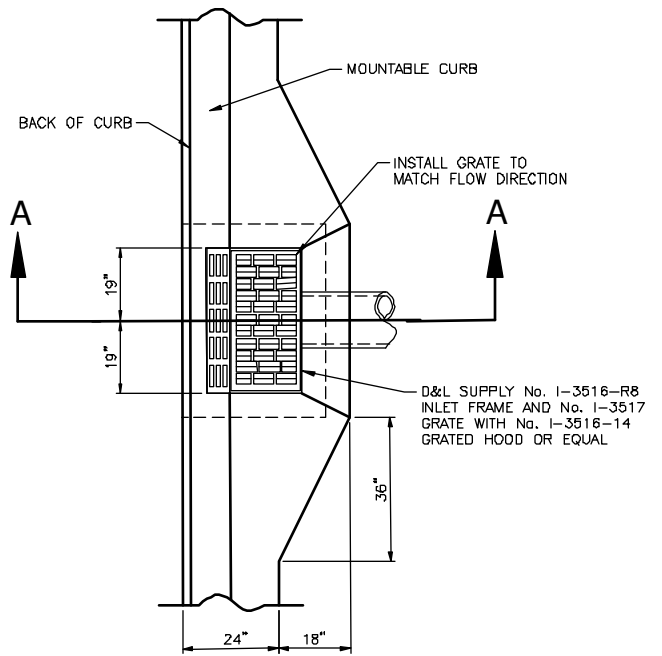
MOUNTABLE CURB INLET
DETAIL

VINEYARD

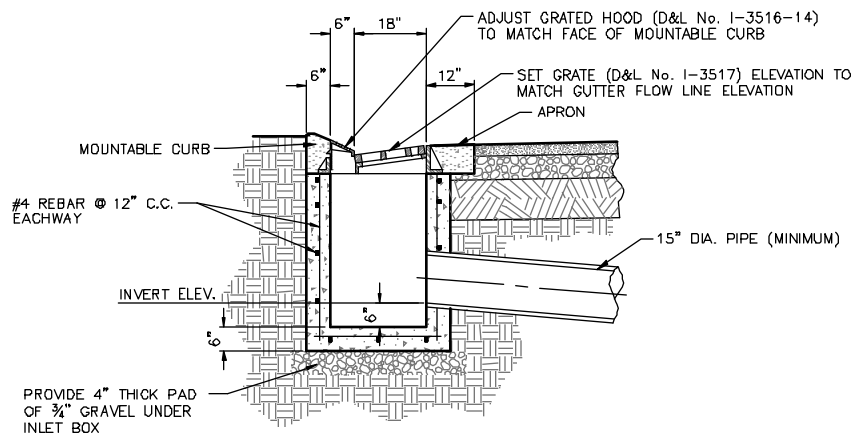
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CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



MULTIPLE INLET PLAN VIEW



SINGLE INLET PLAN VIEW



SECTION A-A



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REVISION			
1	REVISION/UPDATE	CRM	DES 10/17/19
2			
3			
4			
NO.	DESCRIPTION	BY	APPR. DATE



MOUNTABLE CURB INLET DETAIL

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	8A
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	CRM
DESIGN BY:	CRM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016

SECTION A-A

LID TOP VIEW

BOX TOP VIEW

TOP VIEW WITH
FIBER REINFORCED
CONCRETE COLLAR

NOTE - PIPE LOCATIONS VARY

SECTION B-B

MANHOLE ACCESS CURB INLET BOX (COMBO BOX) DETAILS

NOTES:

1. MANHOLE COVER TO BE A SOLID LID CONTAINING ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1181 (OR EQUAL).
2. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY TOWN ENGINEER.
3. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.

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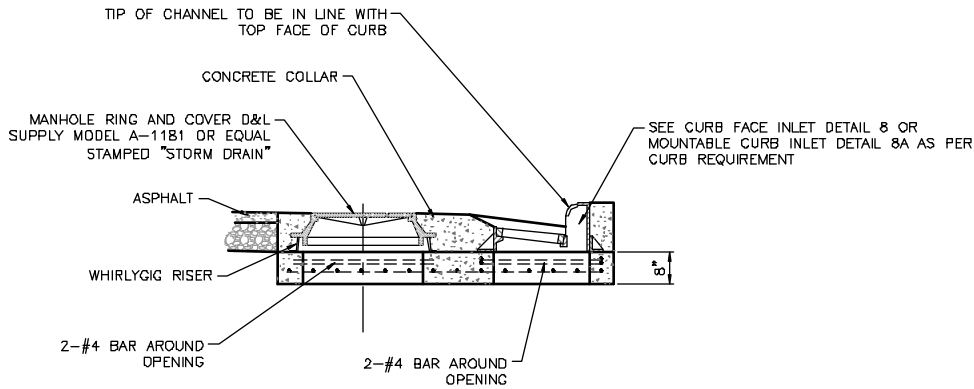
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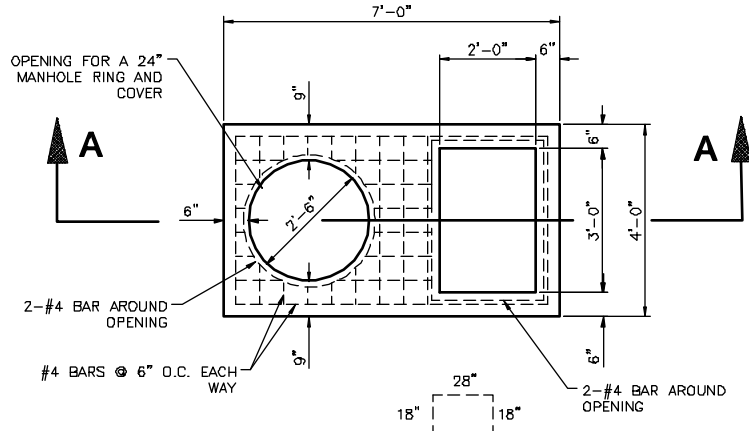
MANHOLE ACCESS CURB INLET BOX
(COMBO BOX) DETAIL

VINEYARD

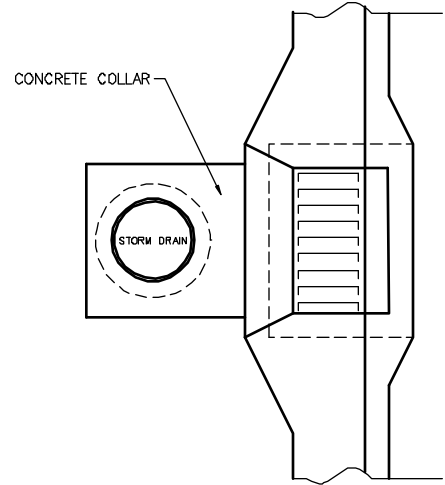
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ADOPTED DATE:	SEPTEMBER 1, 2016



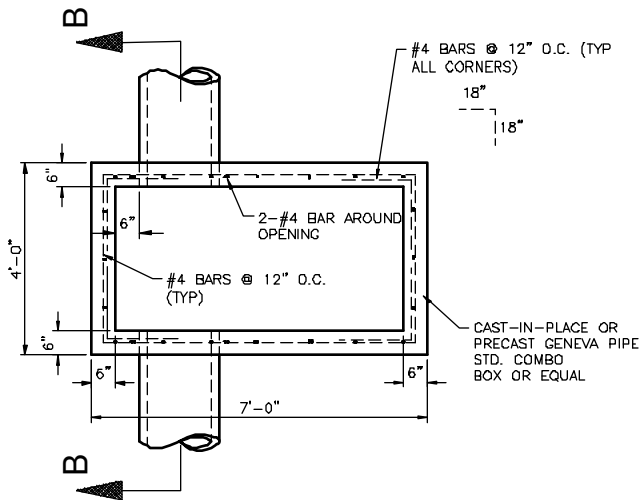
SECTION A-A



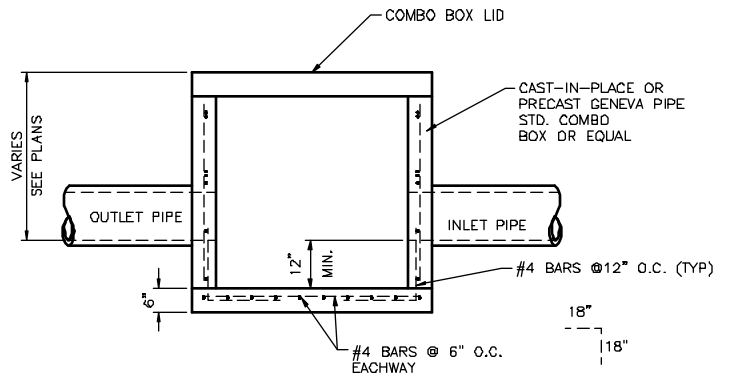
LID TOP VIEW



TOP VIEW WITH CONCRETE COLLAR



BOX TOP VIEW



NOTE - PIPE LOCATIONS VARY

SECTION B-B

MANHOLE ACCESS CURB INLET BOX (COMBO BOX) DETAILS

NOTES:

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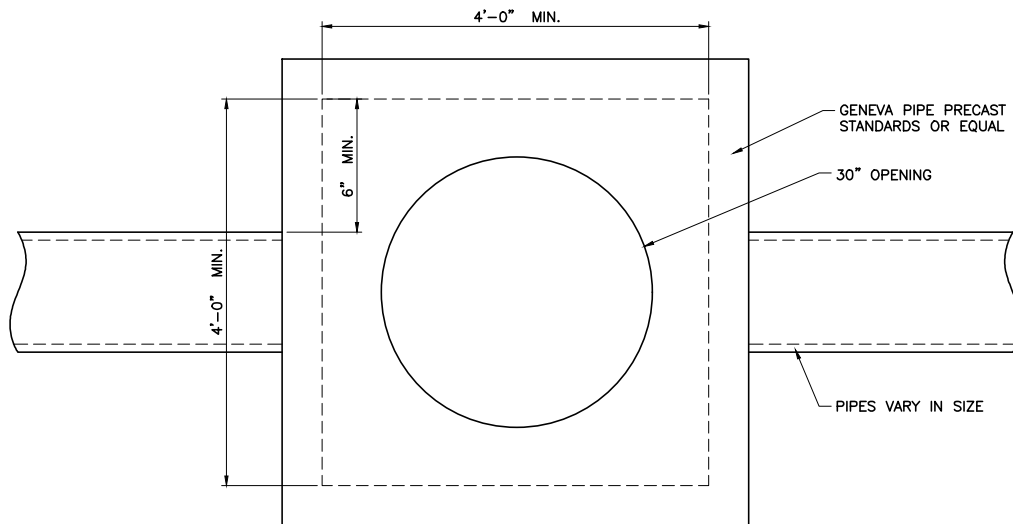
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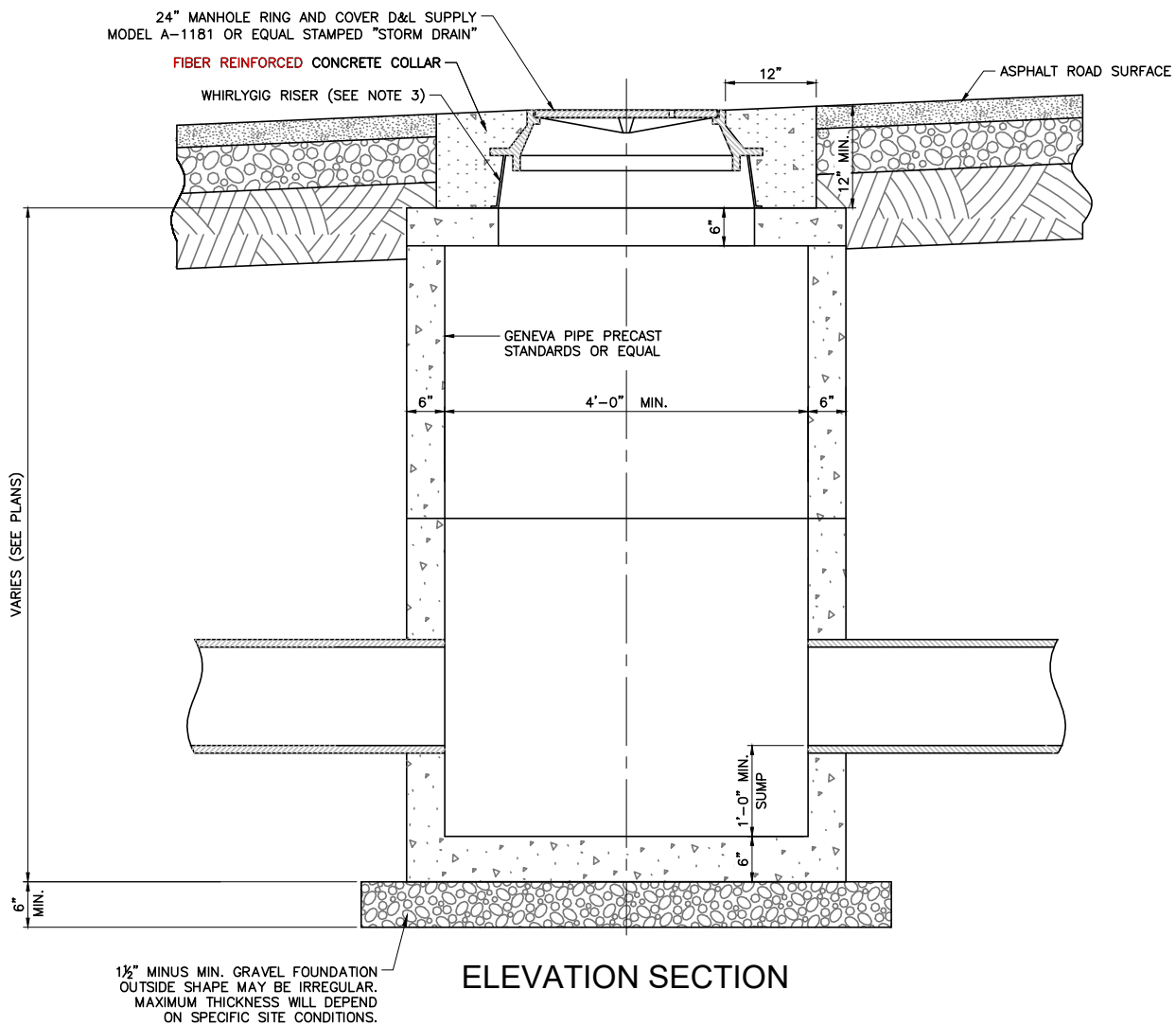
MANHOLE ACCESS CURB INLET BOX (COMBO BOX) DETAIL

TOWN OF VINEYARD

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PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



PLAN VIEW



ELEVATION SECTION

NOTES:

1. MANHOLE COVER TO BE A SOLID LID CONTAINING ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1181 (OR EQUAL).
2. FLAT LIDS SHALL MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY TOWN ENGINEER.
3. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.
4. 18" MAXIMUM WHIRLYGIG RISER HEIGHT.

STATEMENT OF USE

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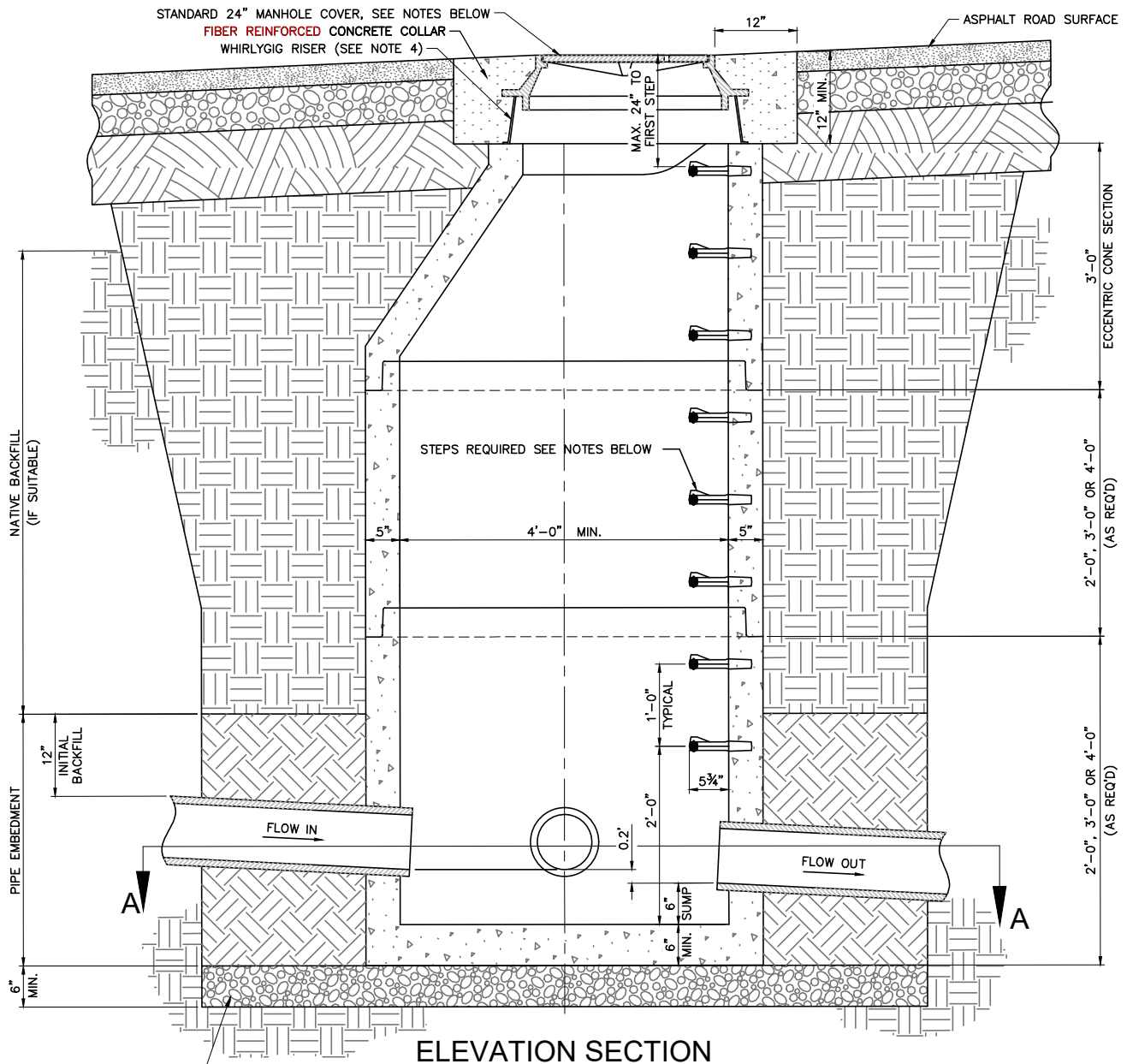
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	12/17/17
2	HANSEN, ALLEN & LUCK	DES.	CMF	8/12/20
3				
4				



STORM DRAIN JUNCTION BOX
DETAIL

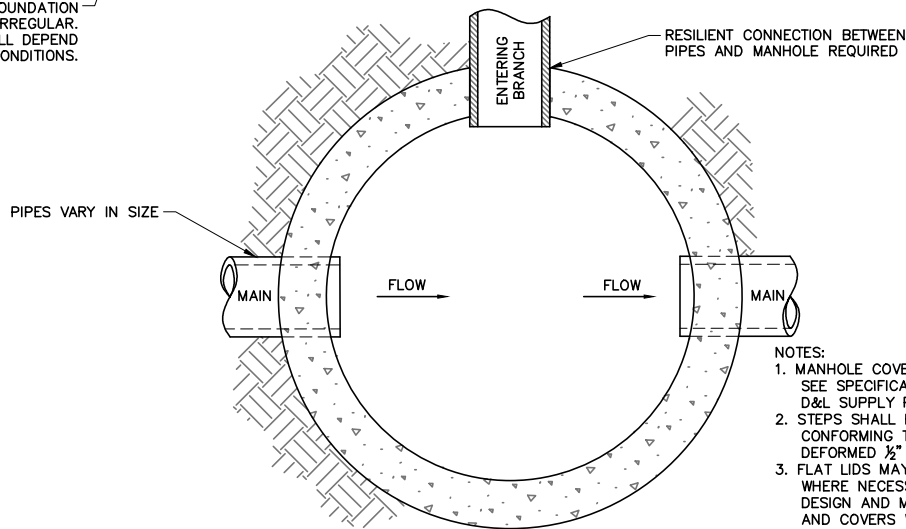
VINEYARD

STANDARD DRAWING NUMBER:	13
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
ON SPECIFIC SITE CONDITIONS.



SECTION A-A

NOTES:

1. MANHOLE COVER TO CONTAIN ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1181 (OR EQUAL).
2. STEPS SHALL BE MADE OF COPOLYMER POLYPROPYLENE CONFORMING TO ASTM D-4101. REINFORCING STEEL TO BE DEFORMED ½" DIAMETER GRADE 60 ROD.
3. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY PUBLIC WORKS.
4. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.
5. 18" MAXIMUM RISER HEIGHT.

STATEMENT OF USE

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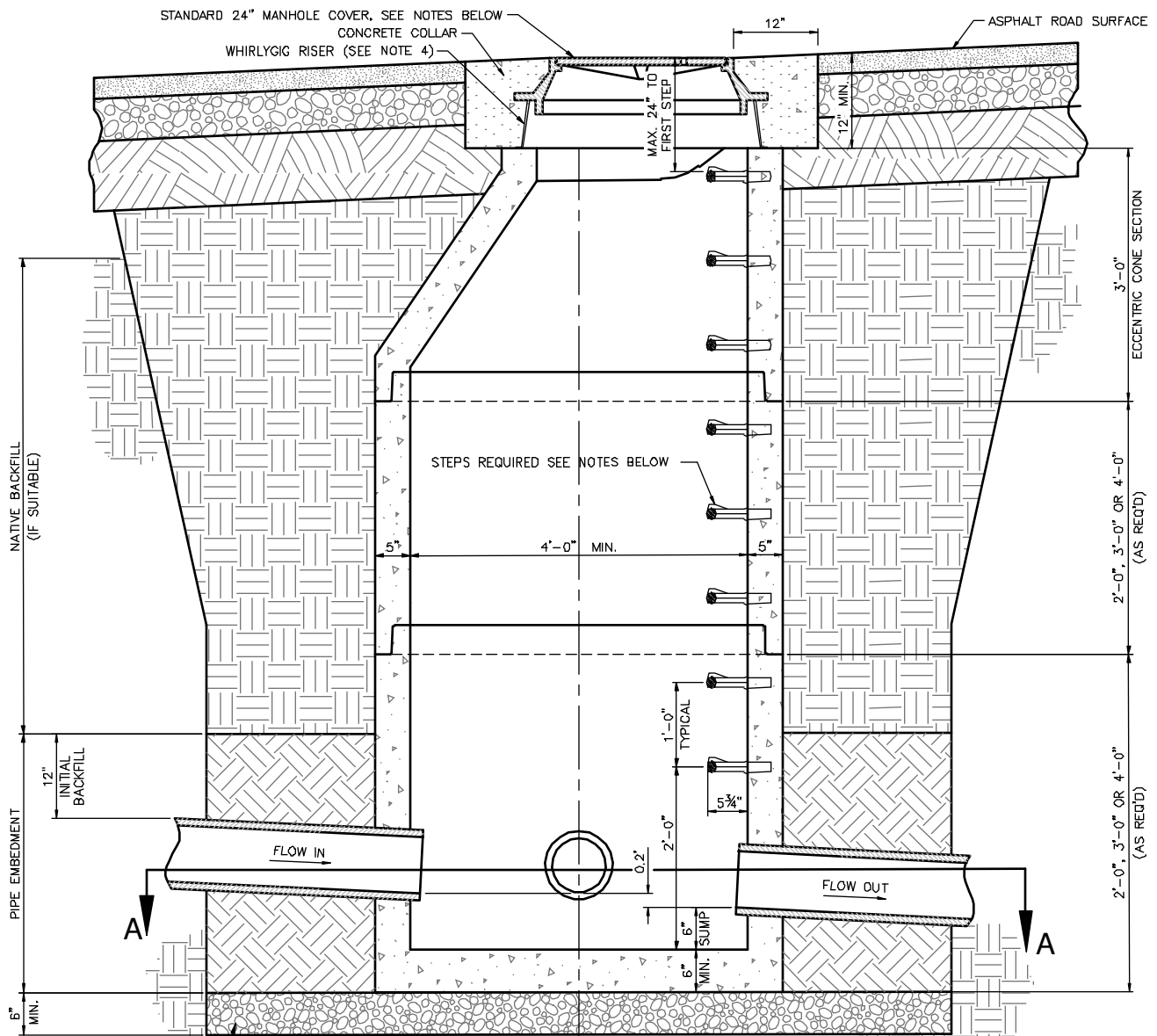
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DES.	8/08/19
2	HARDEN, ALLEN & LUCE	DES.	CHG.	8/12/20
3				
4				



TYPICAL
LAND DRAIN MANHOLE DETAIL

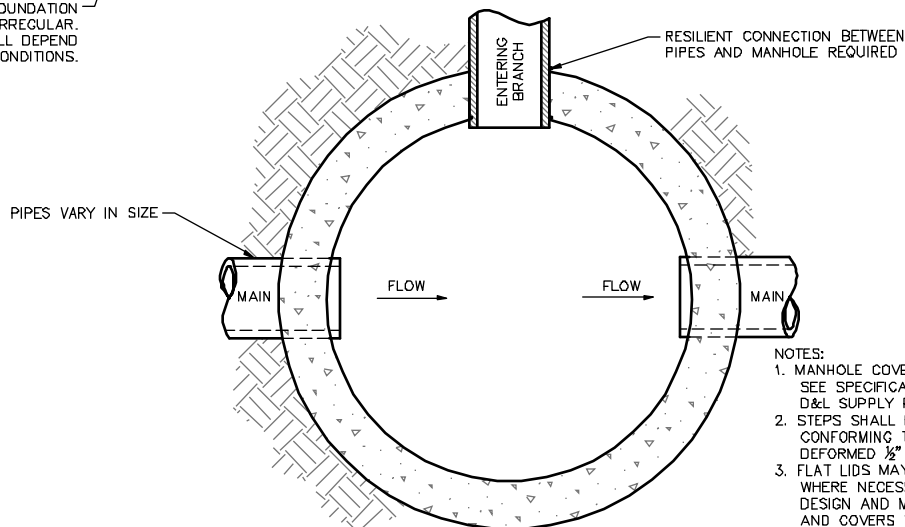
VINEYARD

STANDARD DRAWING NUMBER:	14
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1 1/2" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
ON SPECIFIC SITE CONDITIONS.



SECTION A-A

NOTES:

1. MANHOLE COVER TO CONTAIN ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1181 (OR EQUAL).
2. STEPS SHALL BE MADE OF COPOLYMER POLYPROPYLENE CONFORMING TO ASTM D-4101. REINFORCING STEEL TO BE DEFORMED 1/2" DIAMETER GRADE 60 ROD.
3. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY PUBLIC WORKS.
4. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.
5. 18" MAXIMUM RISER HEIGHT.



STATEMENT OF USE

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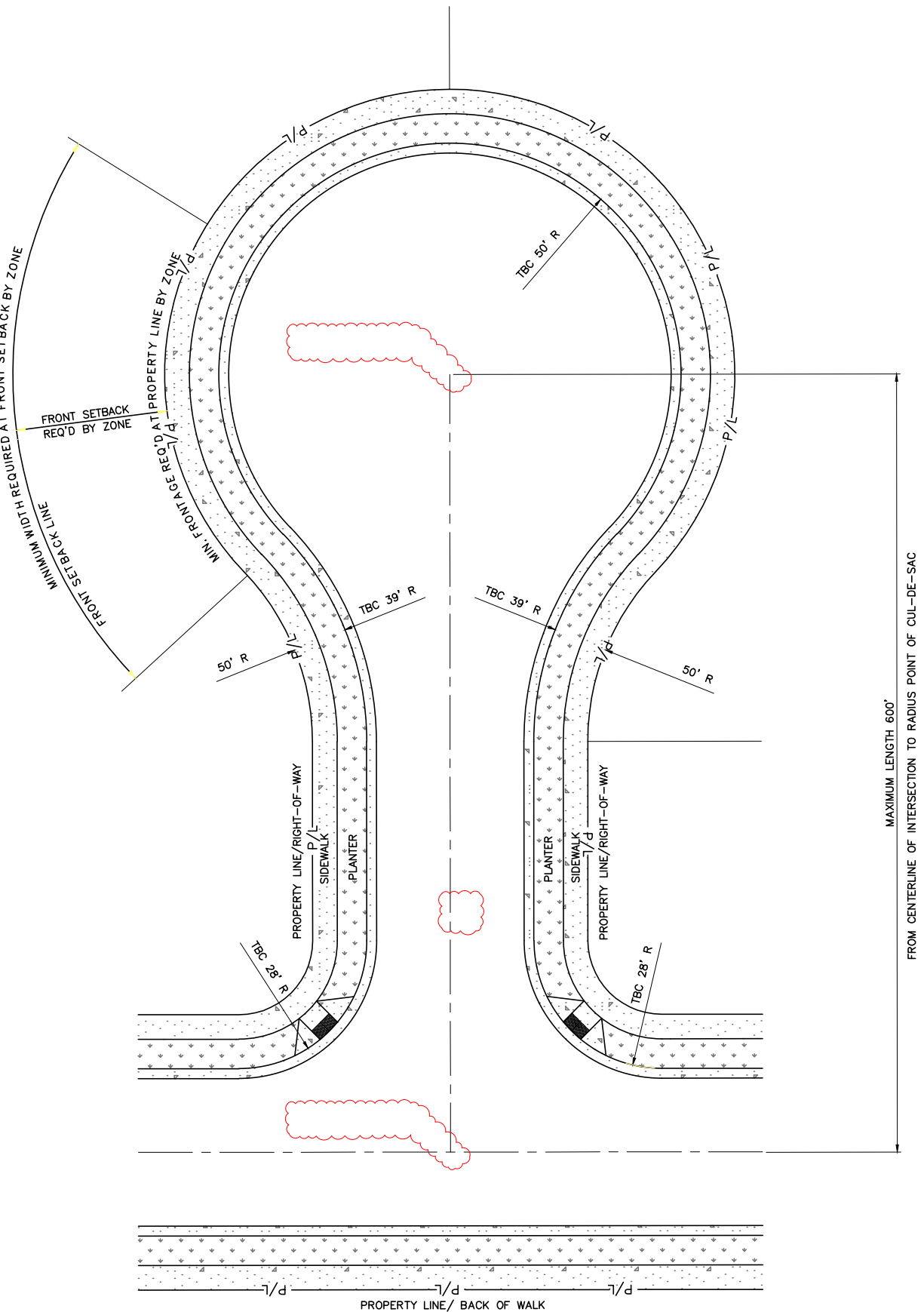
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TYPICAL
LAND DRAIN MANHOLE DETAIL

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	10
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JUU
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



STATEMENT OF USE

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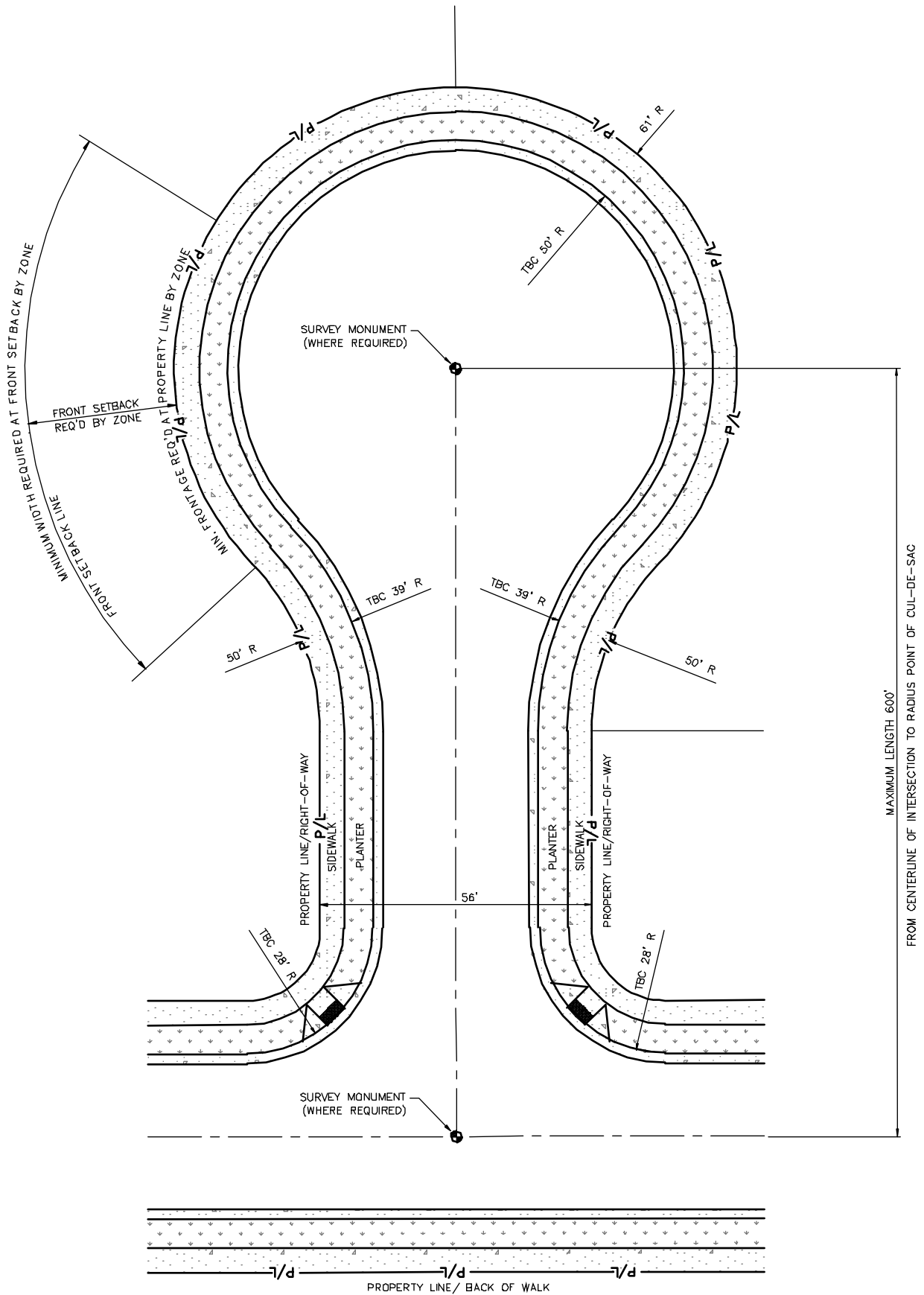
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1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HARDEN, ALLEN & LUCE	DCS	CMT	8/12/20
3				
4				



STANDARD CUL-DE-SAC

VINEYARD

STANDARD DRAWING NUMBER:	15
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



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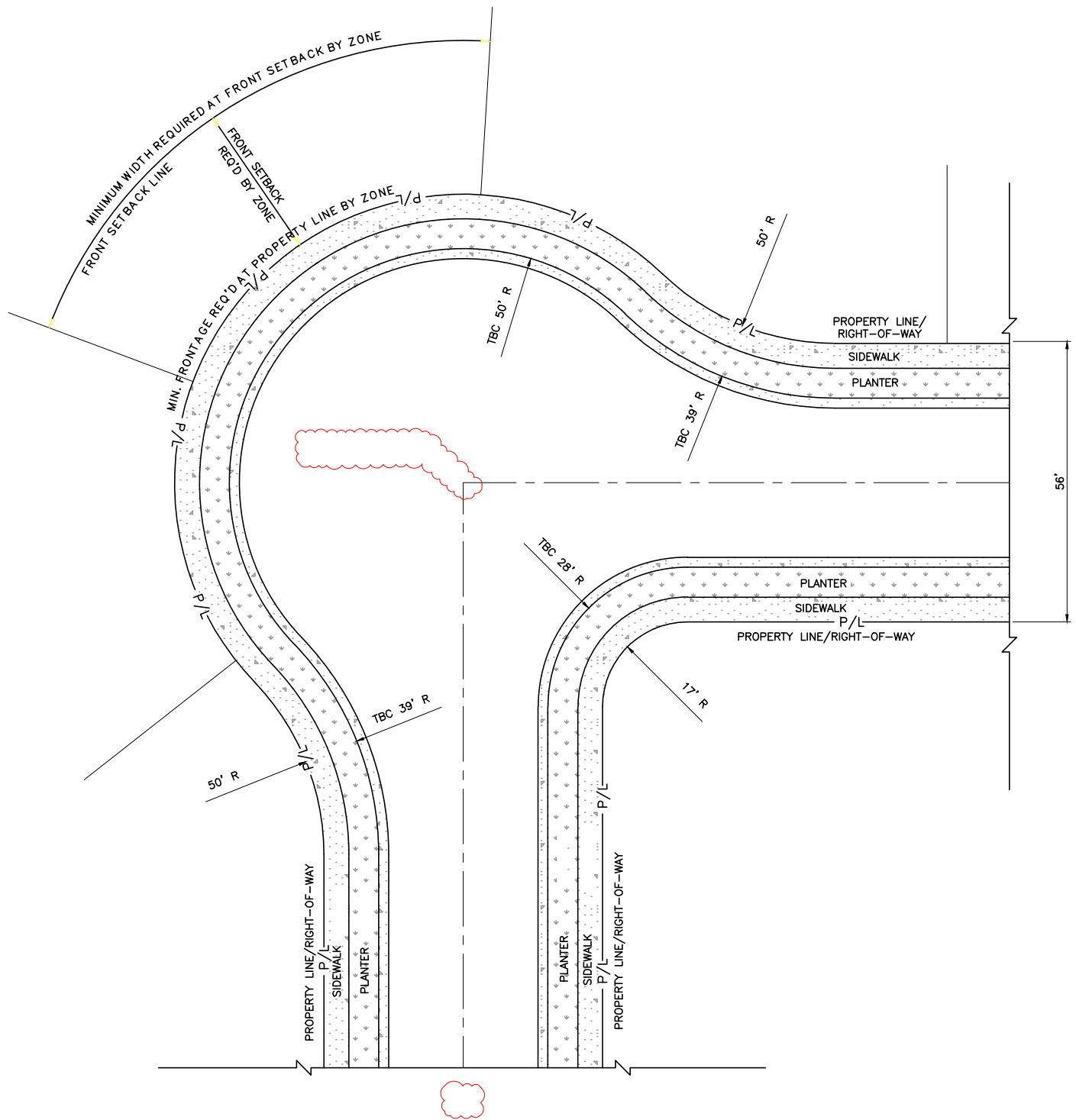
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NO.	DESCRIPTION	BY	DATE
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2			
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STANDARD CUL-DE-SAC

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	11
CAD DWG:	V-STD-DWGS
PLOT SCALE:	1:000
DRAWN BY:	JUB
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



STATEMENT OF USE

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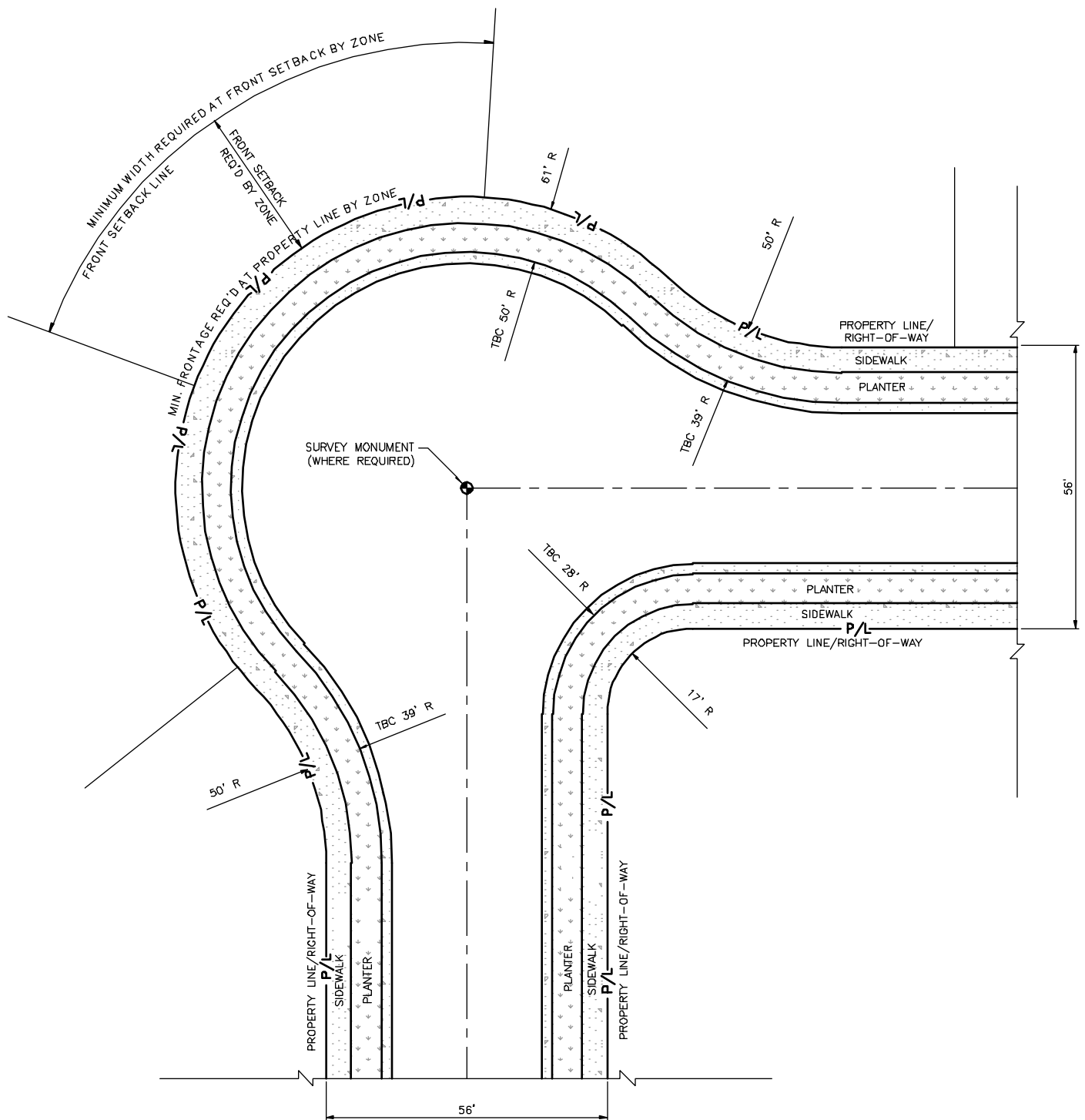
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1	STANDARDS UPDATE	JMM	DES	8/08/19
2	HARDEN, ALLEN & LUCE	DES	CHT	8/12/20
3				
4				



STANDARD KNUCKLE

VINEYARD

STANDARD DRAWING NUMBER:	16
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHT
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



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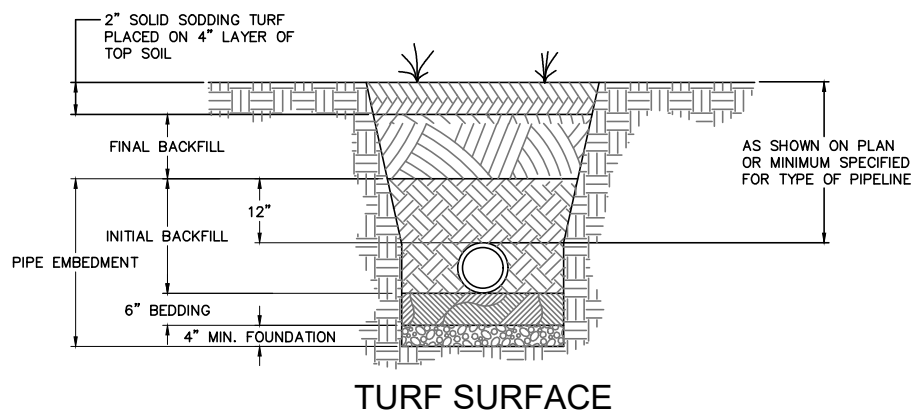
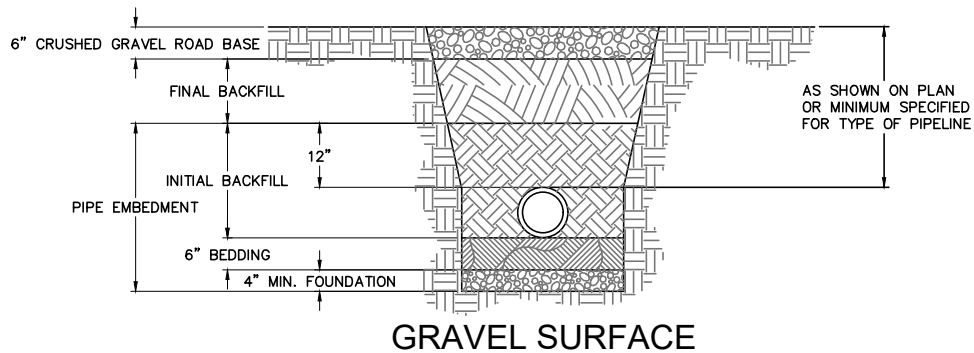
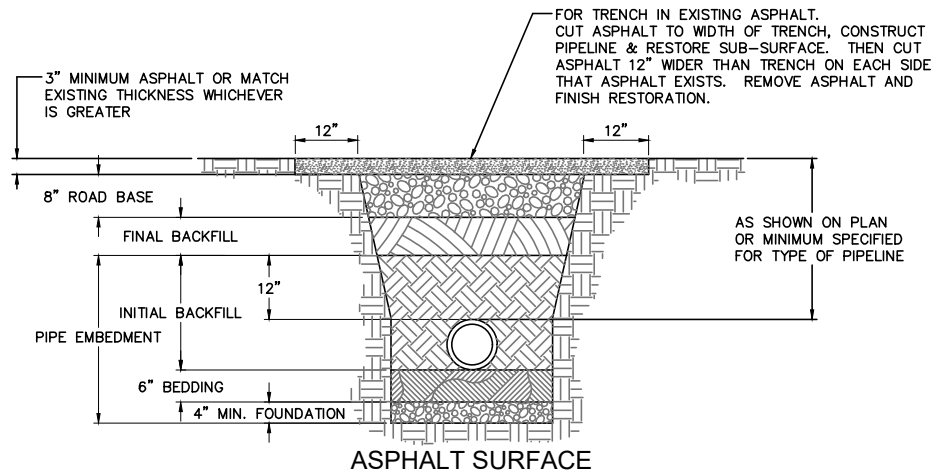
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3				
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STANDARD KNUCKLE

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	12
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



- NOTES:
1. SLOPE TRENCH TO MEET OSHA REQUIREMENTS (LATEST EDITION) OR USE TRENCH BOX.
 2. FOUNDATION AND BEDDING MATERIAL AS REQUIRED.
 3. INSTALL PIPELINES ON STABLE FOUNDATION WITH UNIFORM BEARING FOR FULL LENGTH OF BARREL, EXCAVATE IN BEDDING FOR ALL PIPE JOINTS.
 4. NO PATCHES WITHIN EXISTING PATCHES.

STATEMENT OF USE

THIS DOCUMENT AND ANY ILLUSTRATIONS HEREON ARE PROVIDED AS STANDARD CONSTRUCTION DETAILS WITHIN THE TOWN OF VINEYARD. DEVIATION FROM THIS DOCUMENT REQUIRES APPROVAL FROM THE TOWN OF VINEYARD. THE TOWN OF VINEYARD CORPORATION CAN NOT BE HELD LIABLE FOR MISUSE OR CHANGES REGARDING THIS DOCUMENT.

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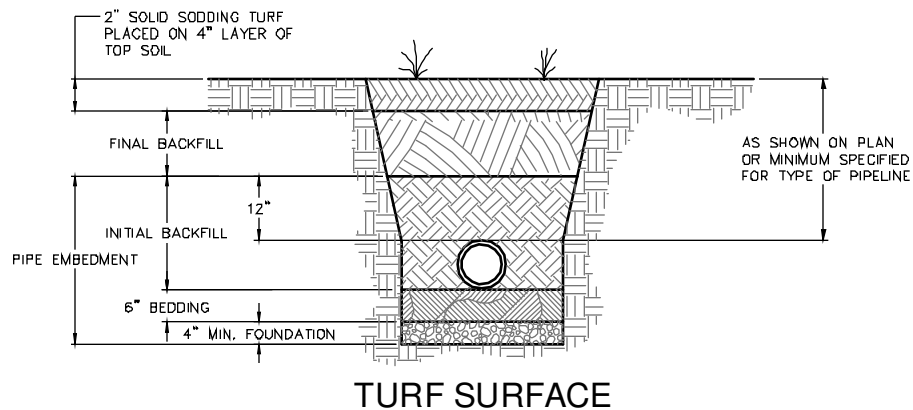
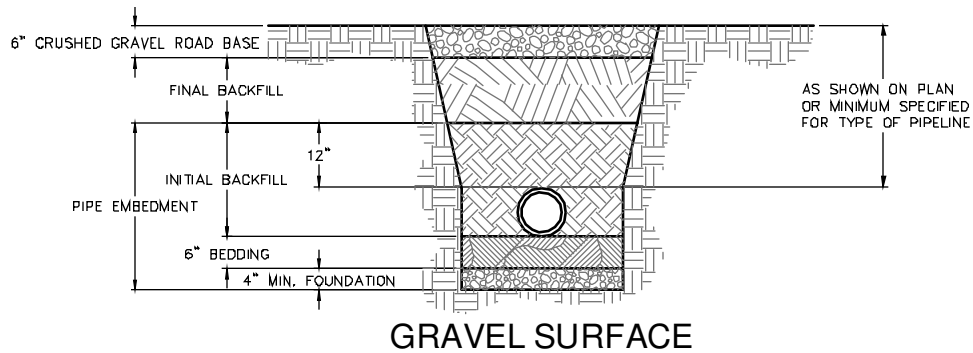
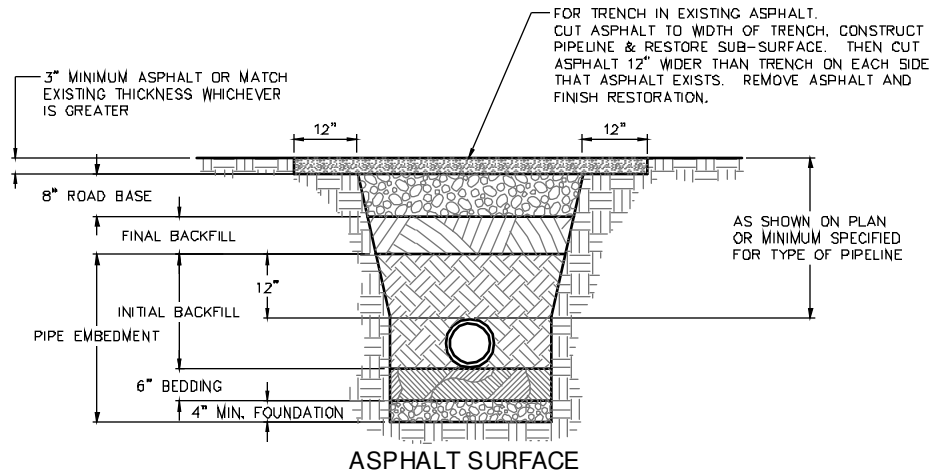
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1	STANDARDS UPDATE	JMM	DES	8/08/19
2	HANSEN, ALLEN & LUCK	DES	CMF	8/12/25
3				
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TYPICAL TRENCH SECTION

VINEYARD

STANDARD DRAWING NUMBER:	17
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRM
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



- NOTES:
1. SLOPE TRENCH TO MEET OSHA REQUIREMENTS (LATEST EDITION) OR USE TRENCH BOX.
 2. FOUNDATION AND BEDDING MATERIAL AS REQUIRED.
 3. INSTALL PIPELINES ON STABLE FOUNDATION WITH UNIFORM BEARING FOR FULL LENGTH OF BARREL, EXCAVATE IN BEDDING FOR ALL PIPE JOINTS.
 4. NO PATCHES WITHIN EXISTING PATCHES.



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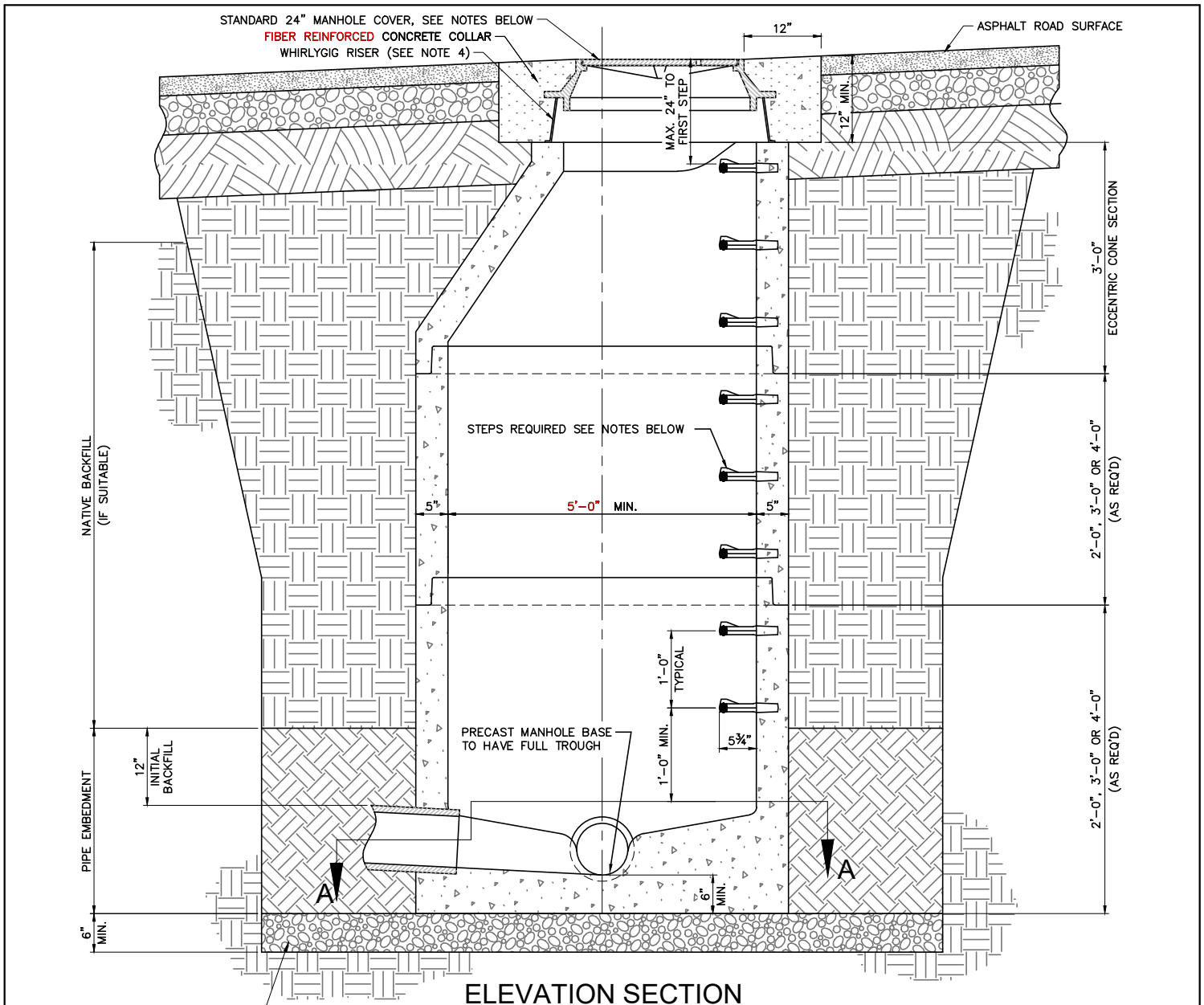
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TYPICAL TRENCH SECTION

TOWN OF VINEYARD

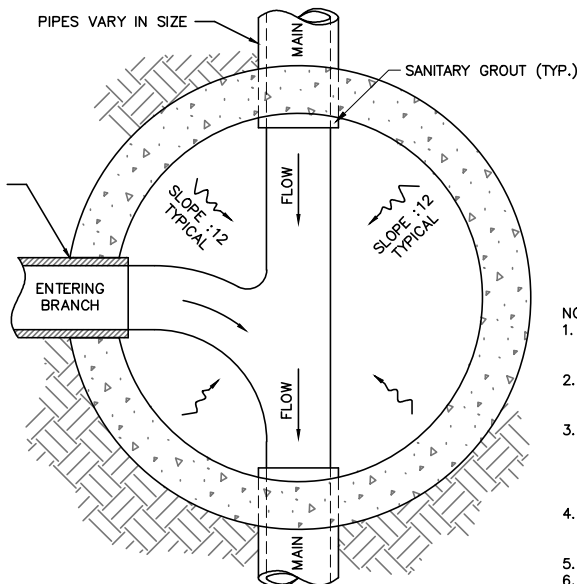
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PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
ON SPECIFIC SITE CONDITIONS.

RESILIENT CONNECTION BETWEEN
PIPES AND MANHOLE REQUIRED



SECTION A-A

NOTES:

1. MANHOLE COVER TO CONTAIN ONE PICK HOLE.
SEE SPECIFICATION DIVISION 5 FOR COVER LABEL.
D&L SUPPLY P/N A-1180 VENTED (OR EQUAL).
2. STEPS SHALL BE MADE OF COPOLYMER POLYPROPYLENE
CONFORMING TO ASTM D-4101. REINFORCING STEEL TO BE
DEFORMED ½" DIAMETER GRADE 60 ROD.
3. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES
WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC
DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING
AND COVERS WILL BE ALLOWED UNLESS APPROVED BY
PUBLIC WORKS.
4. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF
GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO
GRADE.
5. 18" MAXIMUM RISER HEIGHT.
6. REFER TO DESIGN CRITERIA FOR INVERT REQUIREMENTS.

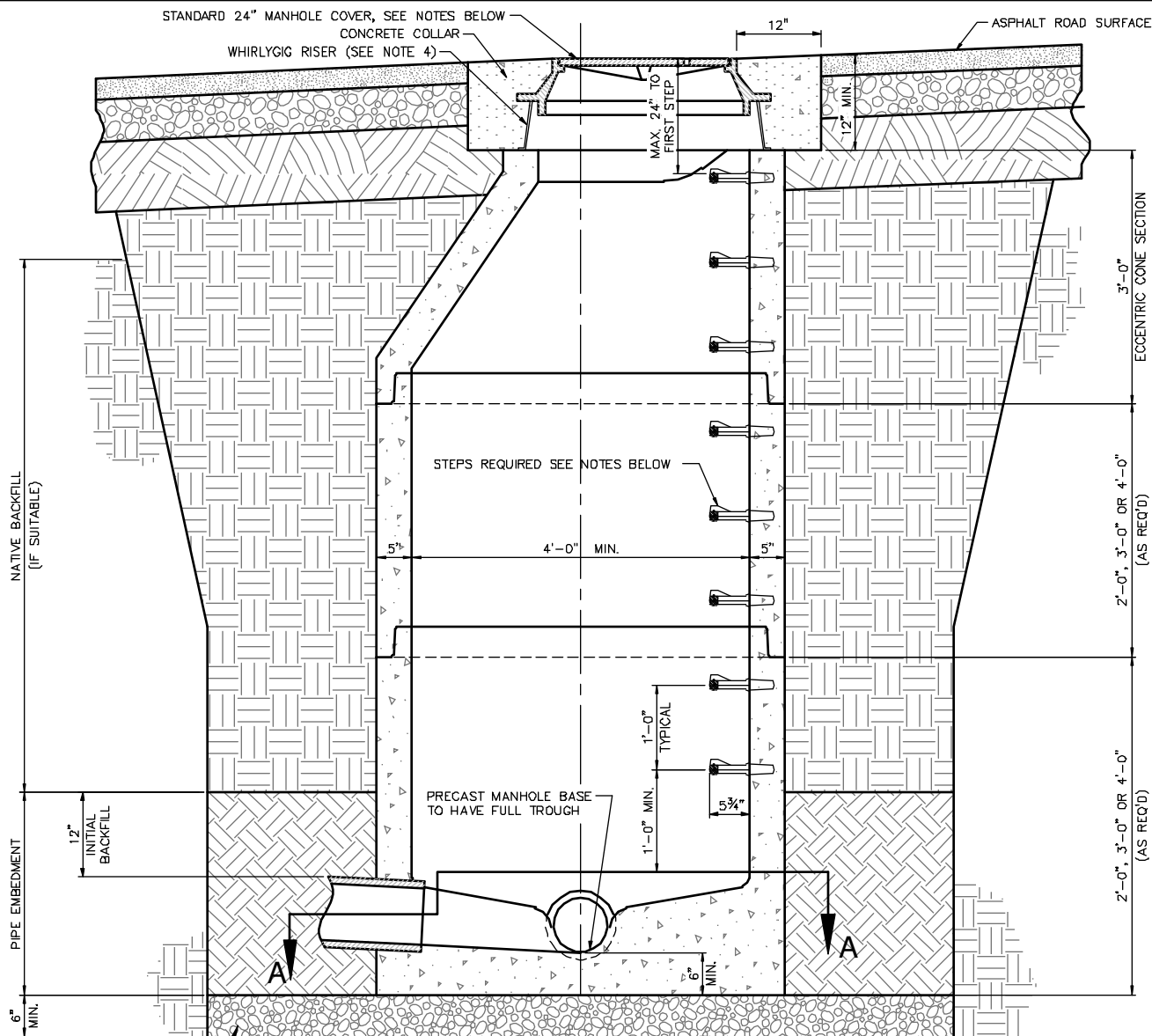
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REVISION			
1	STANDARDS UPDATE	JMM	DES 8/08/19
2	HANSEN, ALLEN & LUCK	DES	CMF 8/12/25
3			
4			
NO.	DESCRIPTION	BY	APR. DATE



TYPICAL
SEWER MANHOLE DETAIL

VINEYARD

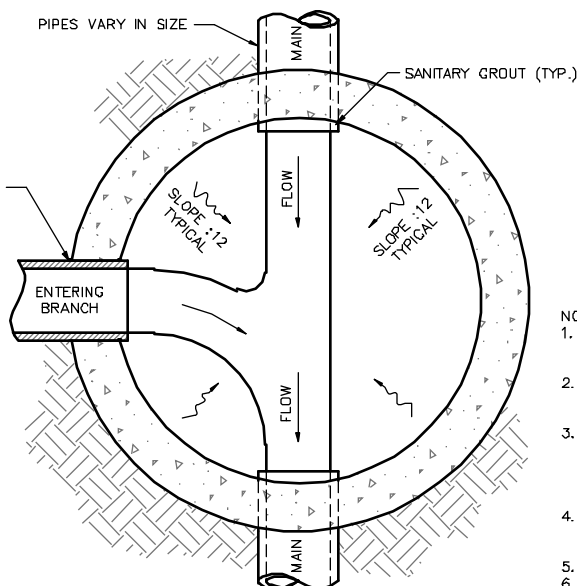
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PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CMF
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
ON SPECIFIC SITE CONDITIONS.

RESILIENT CONNECTION BETWEEN
PIPES AND MANHOLE REQUIRED



SECTION A-A

NOTES:

1. MANHOLE COVER TO CONTAIN ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1180 VENTED (OR EQUAL).
2. STEPS SHALL BE MADE OF COPOLYMER POLYPROPYLENE CONFORMING TO ASTM D-4101. REINFORCING STEEL TO BE DEFORMED ½" DIAMETER GRADE 60 ROD.
3. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY PUBLIC WORKS.
4. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.
5. 18" MAXIMUM RISER HEIGHT.
6. REFER TO DESIGN CRITERIA FOR INVERT REQUIREMENTS.



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NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARD UPDATE			12/07/15
2				
3				
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TYPICAL
SEWER MANHOLE DETAIL

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	14
CAD DWG: V-STD-DWG	
PLOT SCALE:	1:000
DRAWN BY:	JUB
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016

STANDARD PRECAST MANHOLE SECTIONS (DEPTH VARIES), SEE STANDARD MANHOLE DETAIL

SET DOGHOUSE BASE ON 8x8x16 SOLID CONCRETE BLOCKS, TYP OF 4

PRECAST DOGHOUSE BASE

REVIEW PIPE OPENING SIZE W/ INSPECTOR PRIOR TO CUTTING. SAWCUT UPPER 1/3 OF PIPE AFTER COMPLETION OF MANHOLE. SAWCUT FOR NEW PIPES AS APPROVED BY INSPECTOR.

PLAN VIEW

STANDARD PRECAST MANHOLE SECTIONS (DEPTH VARIES), SEE STANDARD MANHOLE DETAIL

NON-SHRINK GROUT INSIDE DOGHOUSE OPENING AROUND OPENING TOP OF EXISTING PIPE

WRAP KENT SEAL (RAM-NECK) AROUND EXISTING PIPE AT MANHOLE PENETRATION

PRECAST DOGHOUSE BASE

SET DOGHOUSE BASE ON 8x8x16 SOLID CONCRETE BLOCKS, TYP OF 4

6" MIN. FROM BOT OF SECTION TO TOP OF DOG HOUSE OPENING

10" MIN.

FLOW

TEMPORARY PLUG

FLOOR LINE TO BE ABOVE TOP OF HIGHEST PIPE

POUR CAST-IN-PLACE CONCRETE AROUND EXISTING PIPE INSIDE PRECAST BASE

12" MIN. THICK GRAVEL OR AS DIRECTED BY INSPECTOR BASED ON SOIL CONDITIONS

DOGHOUSE OPENING SHALL BE PERFORMED BY MANUFACTURER OR SAW CUT TO FIT PIPE OUTSIDE DIAMETER PLUS 6 INCHES.

ALLOW CONCRETE TO FLOW A MINIMUM OF 1 FT BEYOND BASE OF STRUCTURE

SECTION A-A

NOTES:

1. IF GRADE ALLOWS, INVERT D1 SHALL MATCH THE 0.75 DEPTH POINT OF D2. OTHERWISE, MATCH TOP OF PIPE FOR D1 TO TOP OF PIPE OF D2 AS APPROVED BY INSPECTOR.
2. AFTER ALL GRADING AROUND MANHOLE HAS BEEN COMPLETED AND FINAL SURFACING IS IN PLACE, REMOVE DEBRIS AND TEMPORARY PLUGS OR PLYWOOD FROM INSIDE OF MANHOLES.
3. IF MANHOLE IS TO BE POURED IN PLACE, FOLLOW SAME PATTERN AS SHOWN EXCEPT USE 10" MIN. WALL THICKNESS.
4. CONTACT INSPECTOR 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION.
5. STUBS FOR FUTURE CONNECTIONS SHALL BE PLUGGED UNTIL ACTIVATION IS APPROVED BY INSPECTOR.

STATEMENT OF USE

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NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEO	8/08/19
2	HANSEN, ALLEN & LUCK	DES.	CMF	8/12/25
3				
4				



TYPICAL MANHOLE ON EXISTING PIPE

VINEYARD

STANDARD DRAWING NUMBER:	19
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016

STANDARD PRECAST MANHOLE SECTIONS (DEPTH VARIES), SEE STANDARD MANHOLE DETAIL

SET DOGHOUSE BASE ON 8x8x16 SOLID CONCRETE BLOCKS, TYP OF 4

PRECAST DOGHOUSE BASE

REVIEW PIPE OPENING SIZE W/ INSPECTOR PRIOR TO CUTTING. SAWCUT UPPER 1/3 OF PIPE AFTER COMPLETION OF MANHOLE. SAWCUT FOR NEW PIPES AS APPROVED BY INSPECTOR.

PLAN VIEW

STANDARD PRECAST MANHOLE SECTIONS (DEPTH VARIES), SEE STANDARD MANHOLE DETAIL

NON-SHRINK GROUT INSIDE DOGHOUSE OPENING AROUND OPENING TOP OF EXISTING PIPE

WRAP KENT SEAL (RAM-NECK) AROUND EXISTING PIPE AT MANHOLE PENETRATION

PRECAST DOGHOUSE BASE

SET DOGHOUSE BASE ON 8x8x16 SOLID CONCRETE BLOCKS, TYP OF 4

6" MIN. FROM BOT OF SECTION TO TOP OF DOGHOUSE OPENING

FLOW

TEMPORARY PLUG

FLOOR LINE TO BE ABOVE TOP OF HIGHEST PIPE

POUR CAST-IN-PLACE CONCRETE AROUND EXISTING PIPE INSIDE PRECAST BASE

12" MIN. THICK GRAVEL OR AS DIRECTED BY INSPECTOR BASED ON SOIL CONDITIONS

DOGHOUSE OPENING SHALL BE PERFORMED BY MANUFACTURER OR SAW CUT TO FIT PIPE OUTSIDE DIAMETER PLUS 6 INCHES.

ALLOW CONCRETE TO FLOW A MINIMUM OF 1 FT BEYOND BASE OF STRUCTURE

SECTION A-A

NOTES:

1. IF GRADE ALLOWS, INVERT D1 SHALL MATCH THE 0.75 DEPTH POINT OF D2. OTHERWISE, MATCH TOP OF PIPE FOR D1 TO TOP OF PIPE OF D2 AS APPROVED BY INSPECTOR.
2. AFTER ALL GRADING AROUND MANHOLE HAS BEEN COMPLETED AND FINAL SURFACING IS IN PLACE, REMOVE DEBRIS AND TEMPORARY PLUGS OR PLYWOOD FROM INSIDE OF MANHOLES.
3. IF MANHOLE IS TO BE POURED IN PLACE, FOLLOW SAME PATTERN AS SHOWN EXCEPT USE 10" MIN. WALL THICKNESS.
4. CONTACT INSPECTOR 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION.
5. STUBS FOR FUTURE CONNECTIONS SHALL BE PLUGGED UNTIL ACTIVATION IS APPROVED BY INSPECTOR.



STATEMENT OF USE

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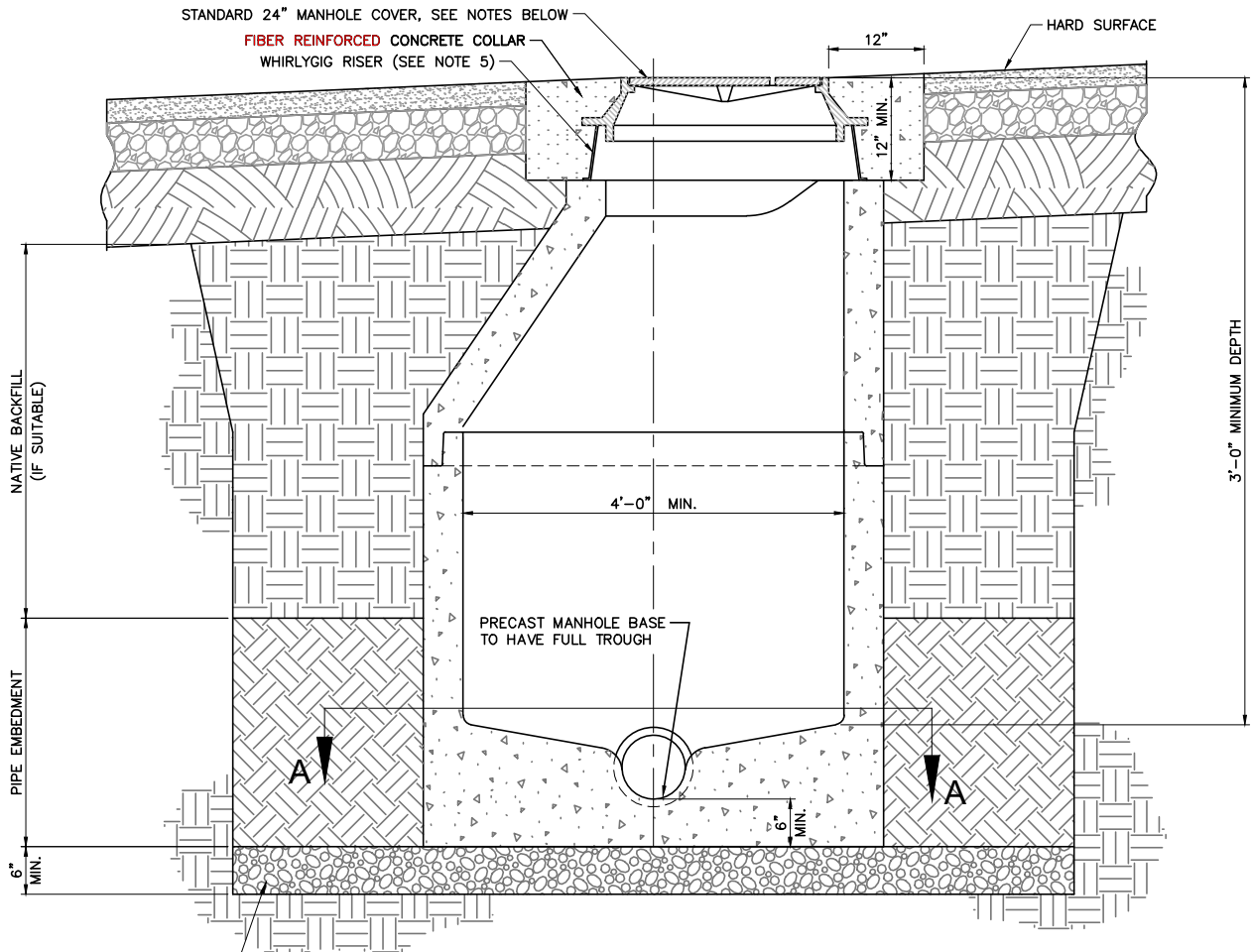
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TYPICAL MANHOLE ON EXISTING PIPE

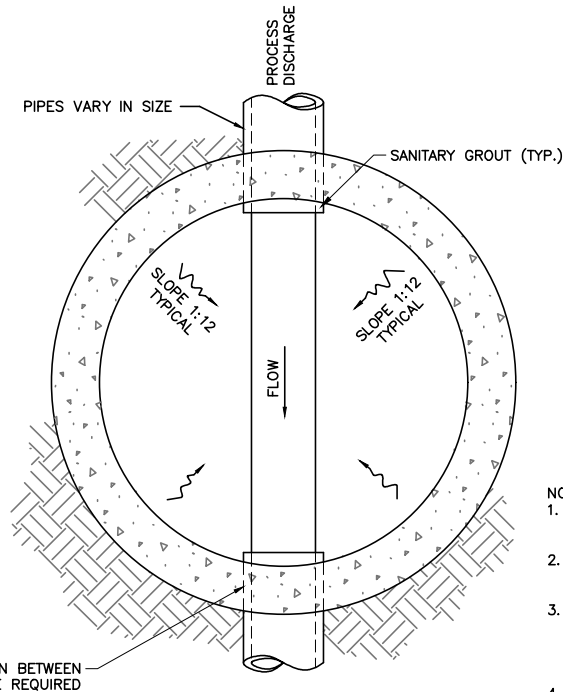
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	14A
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
ON SPECIFIC SITE CONDITIONS.



SECTION A-A

NOTES:

1. MANHOLE COVER TO CONTAIN ONE PICK HOLE. SEE SPECIFICATION DIVISION 5 FOR COVER LABEL. D&L SUPPLY P/N A-1180 VENTED (OR EQUAL).
2. STEPS SHALL BE MADE OF COPOLYMER POLYPROPYLENE CONFORMING TO ASTM D-4101. REINFORCING STEEL TO BE DEFORMED ½" DIAMETER GRADE 60 ROD.
3. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY PUBLIC WORKS.
4. WHIRLYGIG RISER OR EQUAL SHALL BE USED INSTEAD OF GRADE RINGS TO ADJUST MANHOLE RING AND COVER TO GRADE.
5. 18" MAXIMUM RISER HEIGHT.
6. REFER TO DESIGN CRITERIA FOR INVERT REQUIREMENTS.

STATEMENT OF USE

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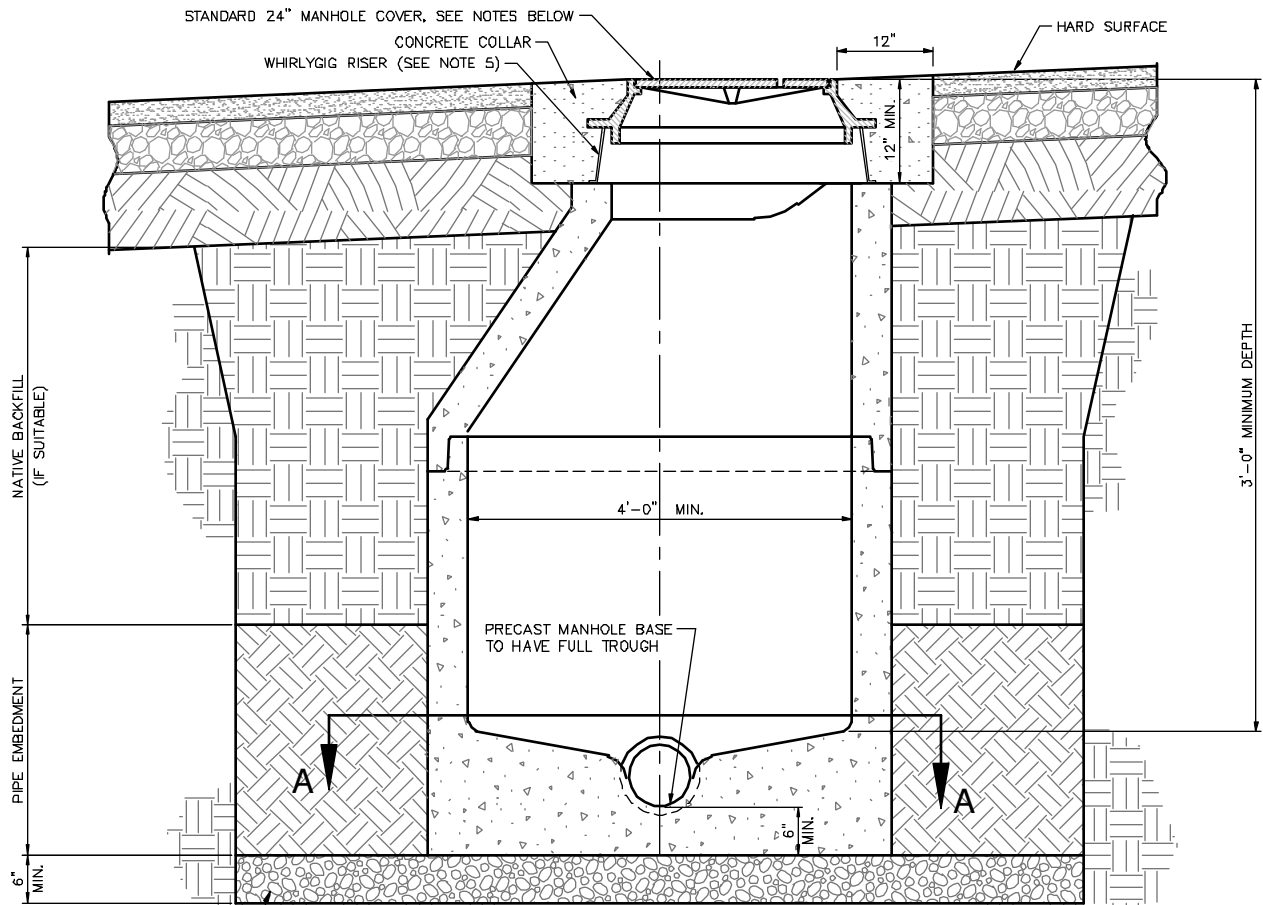
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2	HARDEN, ALLEN & LUCK	DES	CHP	8/12/20
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TYPICAL
SAMPLING MANHOLE

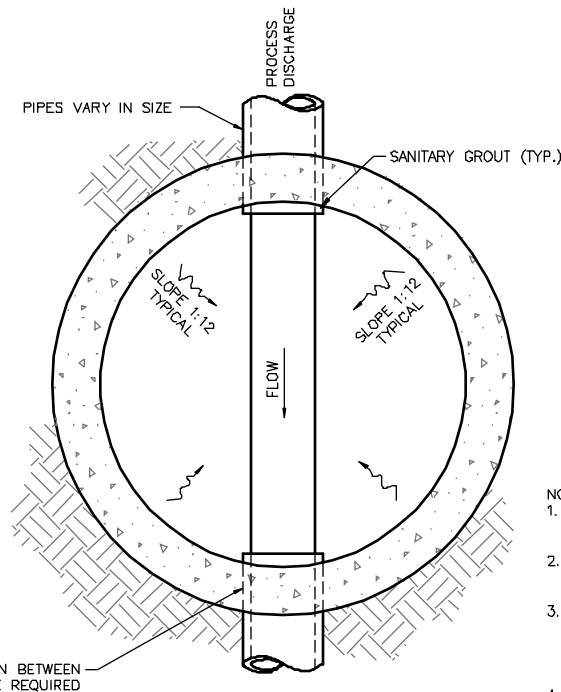
VINEYARD

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PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHP
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
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SECTION A-A

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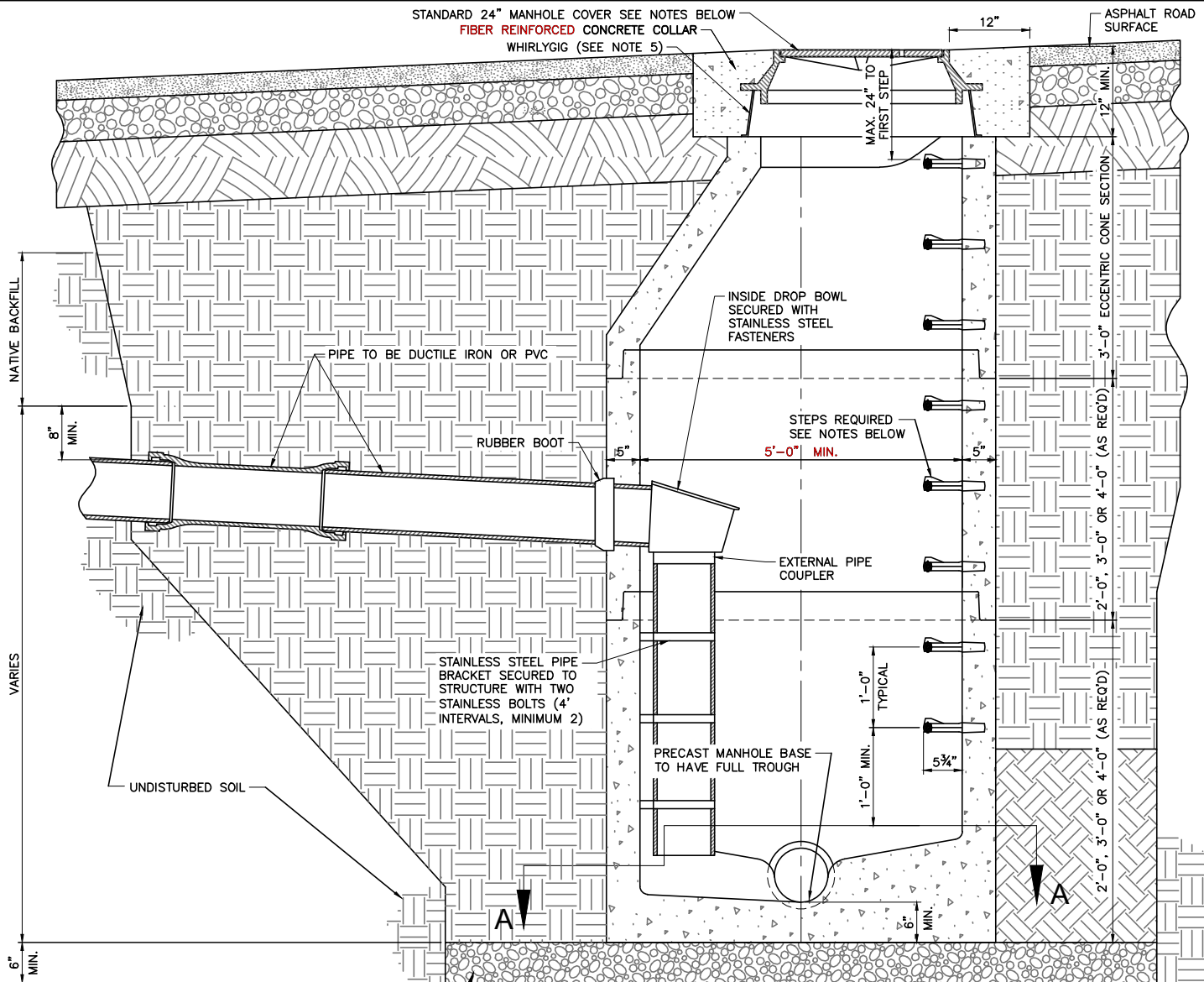
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TYPICAL
SAMPLING MANHOLE

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	15
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DRAWN BY:	JAM
DESIGN BY:	CHM
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ADOPTED DATE:	SEPTEMBER 1, 2016



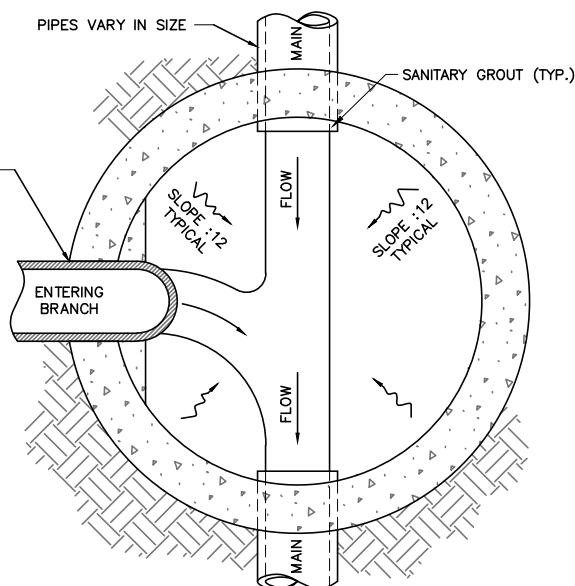
ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
MAXIMUM THICKNESS WILL DEPEND
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4. USE FERNCO COUPLING TO TRANSITION TO CONCRETE
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6. 18" MAXIMUM RISER HEIGHT.
7. REFER TO DESIGN CRITERIA FOR INVERT REQUIREMENTS.

RESILIENT CONNECTION BETWEEN
PIPES AND MANHOLE REQUIRED



SECTION A-A

TYPICAL SEWER
DROP MANHOLE

VINEYARD

STATEMENT OF USE

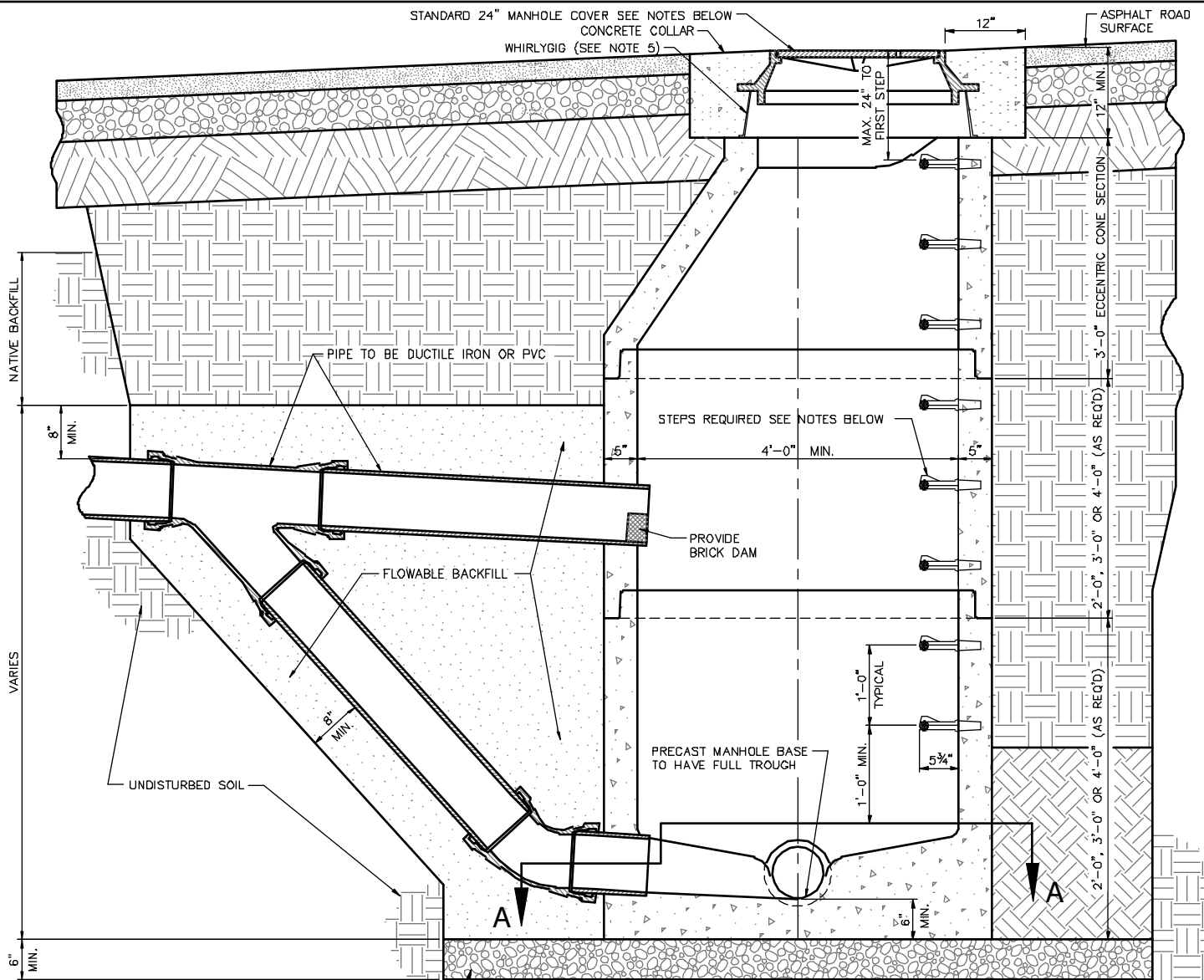
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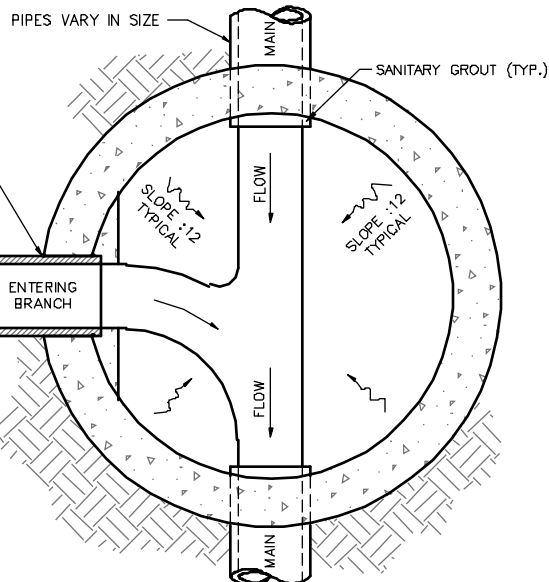


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PLOT SCALE:	DRAWING
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DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



ELEVATION SECTION

1½" MINUS MIN. GRAVEL FOUNDATION
OUTSIDE SHAPE MAY BE IRREGULAR.
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SECTION A-A

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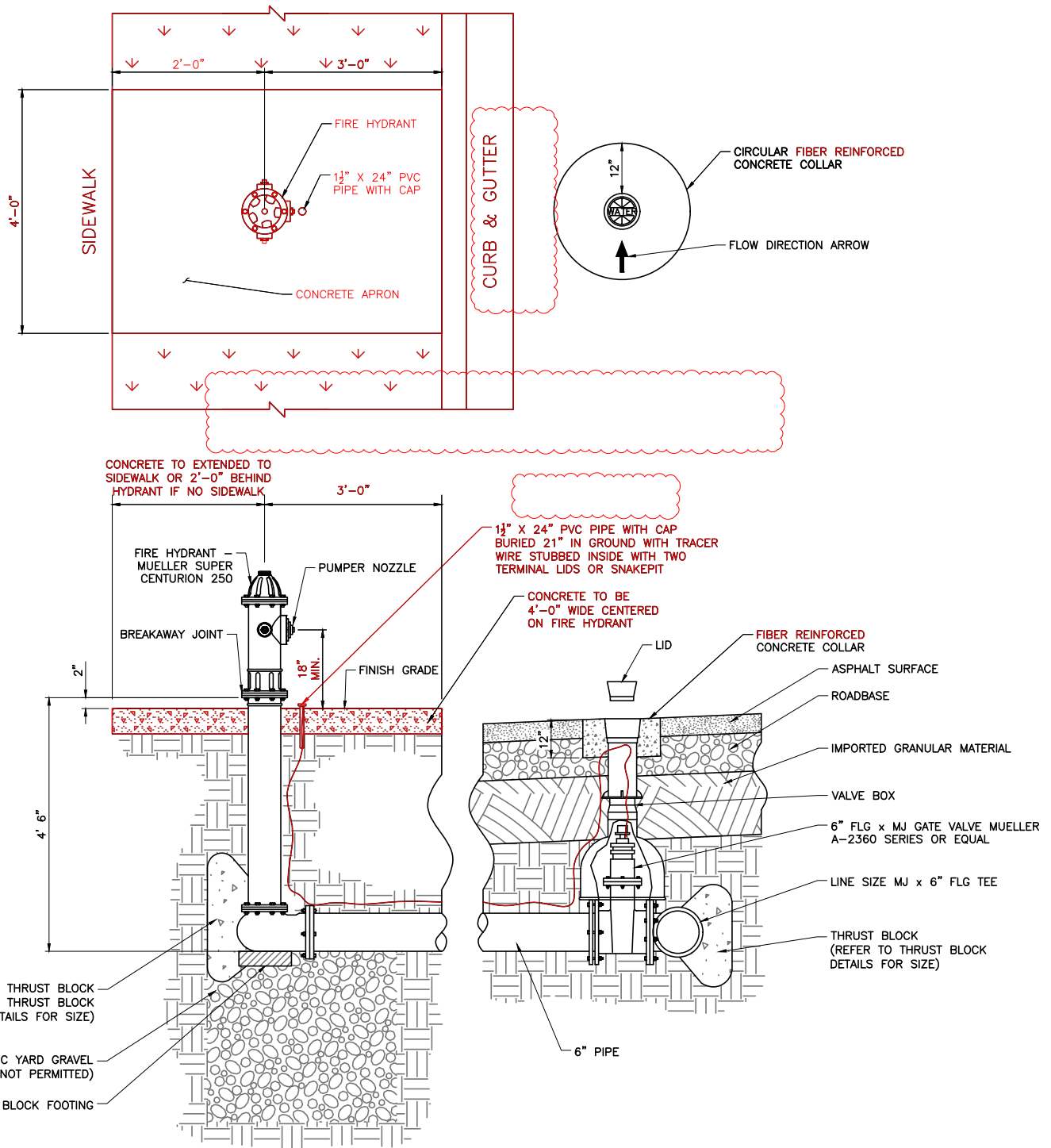
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TYPICAL SEWER
OUTSIDE DROP MANHOLE

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	16
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



FIRE HYDRANT & WATER VALVE

NOTES:

- BOLTS: APPLY ONE (1) COAT OF FM2 GREASE (FOOD GRADE) TO ALL EXPOSED SURFACES OF BOLTS AND TO ALL BOLT THREADS AFTER INSTALLATION OF PIPING, FITTINGS, VALVES, AND COUPLINGS.
- VALVES, FITTINGS, CONNECTIONS, ETC.: ENCASE ALL BURIED DUCTILE IRON VALVES, FITTINGS, CONNECTIONS AND SPECIALTIES IN MINIMUM 8 MIL. BLACK POLYETHYLENE SHEETS IN ACCORDANCE WITH AWWA C-105. SECURE POLYETHYLENE SHEETS TO THE PIPE AS SPECIFIED ABOVE.
- DUCTILE IRON PIPE: ENCASE BURIED DUCTILE IRON PIPE IN MINIMUM 8 MIL. POLYETHYLENE SHEETS IN ACCORDANCE WITH AWWA C105 IN ALL AREAS AND SOIL TYPES AS SHOWN ON THE PROJECT PLANS OR AS SPECIFIED BY THE ENGINEER.
- NO RISER KITS SHALL BE INSTALLED ABOVE FINISHED GRADE.

STATEMENT OF USE

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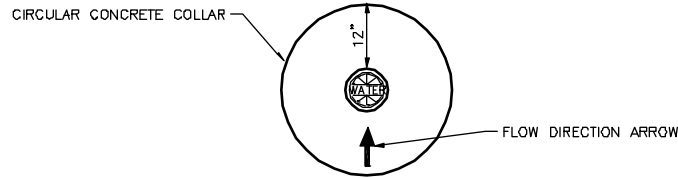
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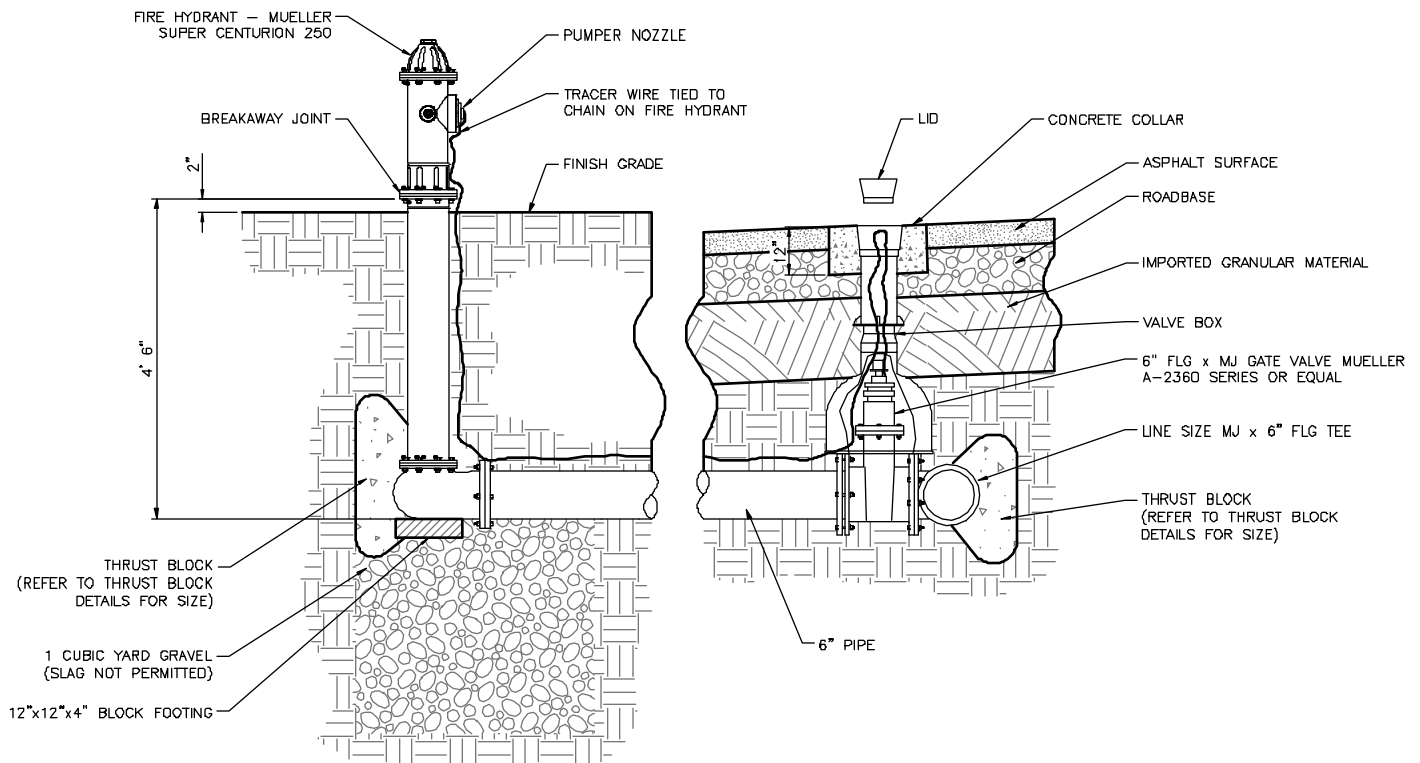
FIRE HYDRANT AND WATER VALVE DETAIL

VINEYARD

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DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



CULINARY WATER VALVE CONCRETE COLLAR



FIRE HYDRANT & WATER VALVE

NOTES:

1. BOLTS: APPLY ONE (1) COAT OF FM2 GREASE (FOOD GRADE) TO ALL EXPOSED SURFACES OF BOLTS AND TO ALL BOLT THREADS AFTER INSTALLATION OF PIPING, FITTINGS, VALVES, AND COUPLINGS.
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4. NO RISER KITS SHALL BE INSTALLED ABOVE FINISHED GRADE.



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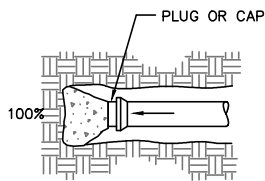
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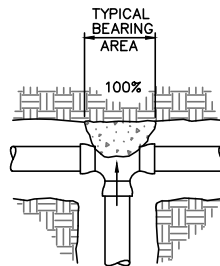
FIRE HYDRANT AND WATER VALVE DETAIL

TOWN OF VINEYARD

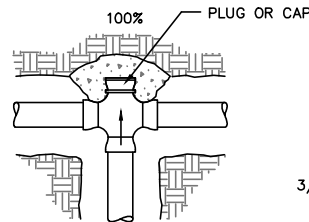
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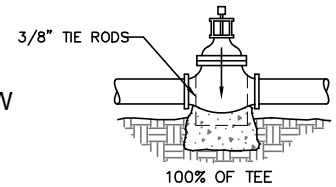
DEAD END PLAN VIEW



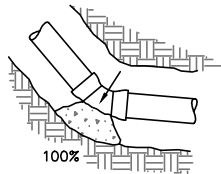
TEE PLAN VIEW



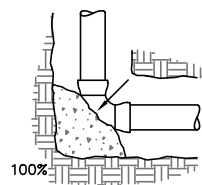
CROSS W/PLUG PLAN VIEW



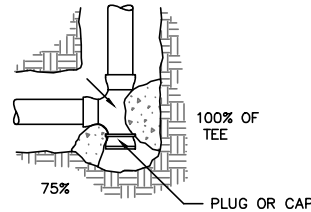
VALVE ELEVATION VIEW



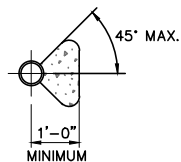
ELBOW PLAN VIEW



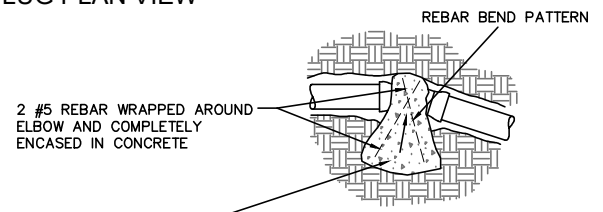
ELBOW PLAN VIEW



TEE W/PLUG PLAN VIEW



TYPICAL SECTION THRU THRUST BLOCK



WEIGHT OF CONCRETE TO RESIST 100% OF TOTAL THRUST

GRAVITY THRUST BLOCK ELEVATION VIEW

- NOTES:
1. THE FIGURE (100%) AT THE THRUST BLOCK INDICATES PER CENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.
 2. THE ARROW (—) INDICATES THRUST DIRECTION.
 3. CONCRETE FOR THRUST BLOCKS TO BE 3000 P.S.I.
 4. ALL MJ AND FLANGED FITTINGS TO BE WRAPPED WITH 8 MIL POLYETHYLENE PRIOR TO PLACING CONCRETE THRUST BLOCK
 5. WHERE SUFFICIENT BEARING SURFACE IS NOT AVAILABLE FOR THRUST BLOCK, MEGALUG THRUST RESTRAINING GLANDS MAY BE USED. MEGALUG THRUST RESTRAINING GLANDS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION INCLUDING ANY JOINT RESTRAINT. ANY USE OF MEGALUG OR CHANGE TO THE THRUST BEARING CHART MUST BE REVIEWED BY THE ENGINEER.
 6. MEGALUGS OR EQUAL REQ'D AT ALL FITTING TO PIPE JOINTS.

TABLE 1

USE WHEN LINE PRESSURE AND SOIL BEARING STRENGTH ARE KNOWN.							
LINE PRESSURE: psi TEST PRESSURE (sf = 1.5): psi SOIL BEARING STRENGTH: psf (SOIL BEARING STRENGTH DETERMINED FROM A GEOTECHNICAL INVESTIGATION.)							
SIDE THRUST (lbs.) PER 1 PSI LINE PRESSURE							
PIPE SIZE (")	PIPE AREA (sq. in.)	DEAD END OR TEE (lbs.)	90° BEND (lbs.)	45° BEND (lbs.)	22.5° BEND (lbs.)	11.25° BEND (lbs.)	
4	14.39	22	31	17	9	5	
6	31.17	49	69	37	19	10	
8	56.88	86	121	66	34	17	
10	86.92	131	185	100	51	26	
12	124.29	187	264	143	73	37	
14	168.33	253	358	194	99	50	
16	219.56	330	466	253	129	65	
18	277.59	417	589	319	163	82	
20	342.41	514	727	394	201	101	
24	490.09	736	1040	563	287	145	
30	757.69	1137	1608	870	444	223	

EXAMPLE FOR TABLE 1:
8-INCH 90° BEND
LINE PRESSURE = 100 psi
FROM TABLE: THRUST PER 1 psi = 121 lbs.
CALCULATE TOTAL THRUST: 100 psi x 121 lbs/psi = 12,100 lbs
SOIL BEARING STRENGTH = 2,000 psf
AREA OF BEARING REQUIRED FOR THRUST BLOCK IS 6.1 sq. ft. (12,100 lbs / 2,000 psf = 6.1 sf. ft.)

* PIPE AREA IS BASED ON LARGEST ACTUAL INSIDE DIAMETER OF DUCTILE IRON PIPE.

TABLE 2

USE WHEN LINE PRESSURE AND SOIL BEARING STRENGTH ARE NOT KNOWN.							
LINE PRESSURE: 120 psi TEST PRESSURE (sf = 1.5): 180 psi SOIL BEARING STRENGTH: 1,500 psi							
AREA OF BEARING REQUIRED (sq. ft.)							
PIPE SIZE (")	PIPE AREA (sq. in.)	DEAD END OR TEE (lbs.)	90° BEND (lbs.)	45° BEND (lbs.)	22.5° BEND (lbs.)	11.25° BEND (lbs.)	
4	14.39	1.7	2.4	1.3	0.7	0.3	
6	31.17	3.9	5.5	3.0	1.5	0.8	
8	56.88	6.8	9.7	5.2	2.7	1.3	
10	86.92	10.4	14.8	8.0	4.1	2.0	
12	124.29	14.9	21.1	11.4	5.8	2.9	
14	168.33	20.2	28.6	15.5	7.9	4.0	
16	219.56	26.3	37.3	20.2	10.3	5.2	
18	277.59	33.3	47.1	25.5	13.0	6.5	
20	342.41	41.1	58.1	31.4	16.0	8.1	
24	490.09	58.8	83.2	45.0	22.0	11.5	
30	757.69	90.9	128.6	69.6	35.5	17.8	

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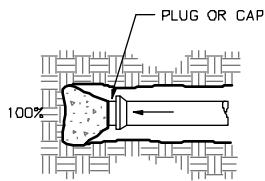
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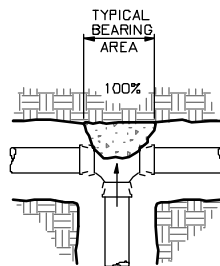
THRUST BLOCK DETAILS

VINEYARD

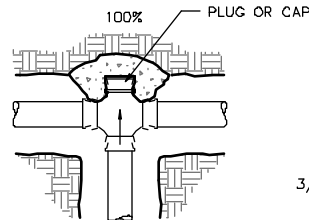
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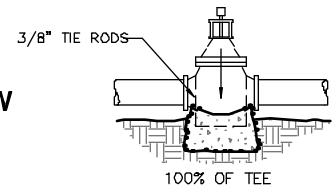
DEAD END PLAN VIEW



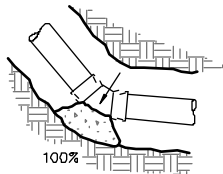
TEE PLAN VIEW



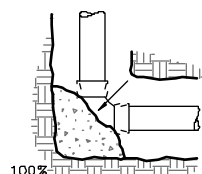
CROSS W/PLUG PLAN VIEW



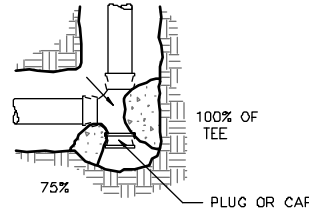
VALVE ELEVATION VIEW



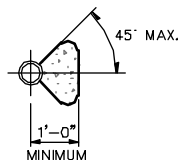
ELBOW PLAN VIEW



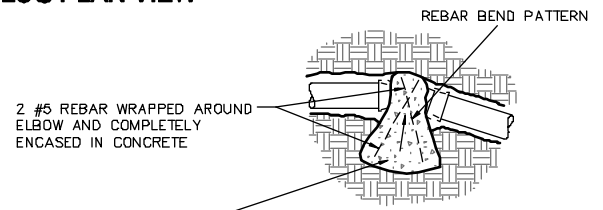
ELBOW PLAN VIEW



TEE W/PLUG PLAN VIEW



TYPICAL SECTION THRU THRUST BLOCK



GRAVITY THRUST BLOCK ELEVATION VIEW

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14	168.33	253	358	194	99	50
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20	342.41	514	727	394	201	101
24	490.09	736	1040	563	287	145
30	757.69	1137	1608	870	444	223

TABLE 2

USE WHEN LINE PRESSURE AND SOIL BEARING STRENGTH ARE NOT KNOWN.						
LINE PRESSURE: 120 psi TEST PRESSURE (sf = 1.5): 180 psi SOIL BEARING STRENGTH: 1,500 psi						
AREA OF BEARING REQUIRED (sq. ft.)						
PIPE SIZE (")	PIPE AREA (sq. in.)	DEAD END OR TEE (lbs.)	90° BEND (lbs.)	45° BEND (lbs.)	22.5° BEND (lbs.)	11.25° BEND (lbs.)
4	14.39	1.7	2.4	1.3	0.7	0.3
6	31.17	3.9	5.5	3.0	1.5	0.8
8	56.88	6.8	9.7	5.2	2.7	1.3
10	86.92	10.4	14.8	8.0	4.1	2.0
12	124.29	14.9	21.1	11.4	5.8	2.9
14	168.33	20.2	28.6	15.5	7.9	4.0
16	219.56	26.3	37.3	20.2	10.3	5.2
18	277.59	33.3	47.1	25.5	13.0	6.5
20	342.41	41.1	58.1	31.4	16.0	8.1
24	490.09	58.8	83.2	45.0	22.0	11.5
30	757.69	90.9	128.6	69.6	35.5	17.8

EXAMPLE FOR TABLE 1:
 8-INCH 90° BEND
 LINE PRESSURE = 100 psi
 FROM TABLE: THRUST PER 1 psf = 121 lbs.
 CALCULATE TOTAL THRUST: 100 psi x 121 lbs/psf = 12,100 lbs
 SOIL BEARING STRENGTH = 2,000 psf
 AREA OF BEARING REQUIRED FOR THRUST BLOCK IS 6.1 sq. ft. (12,100 lbs / 2,000 psf = 6.1 sf. ft.)

* PIPE AREA IS BASED ON LARGEST ACTUAL INSIDE DIAMETER OF DUCTILE IRON PIPE.



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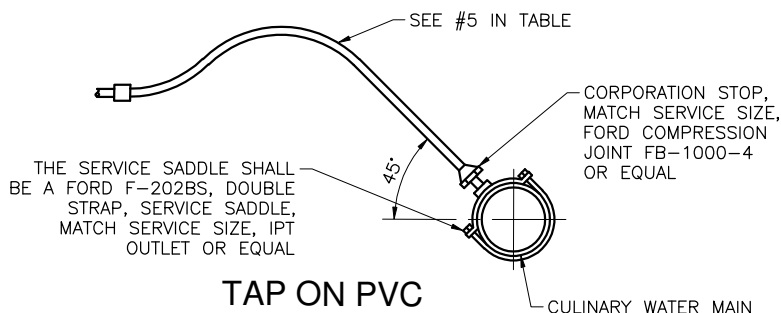
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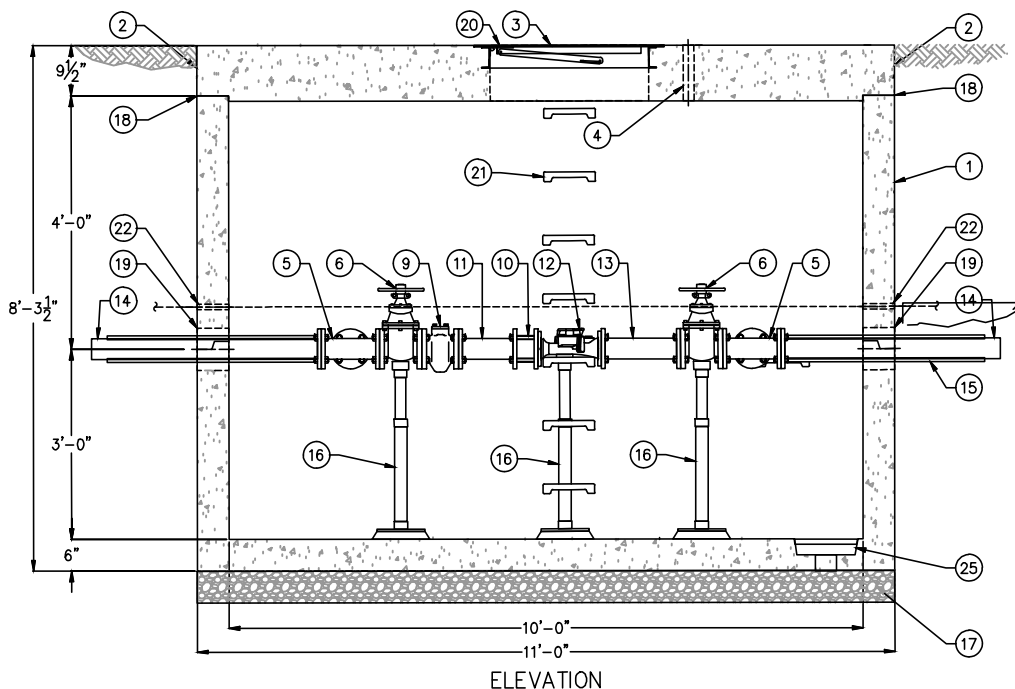
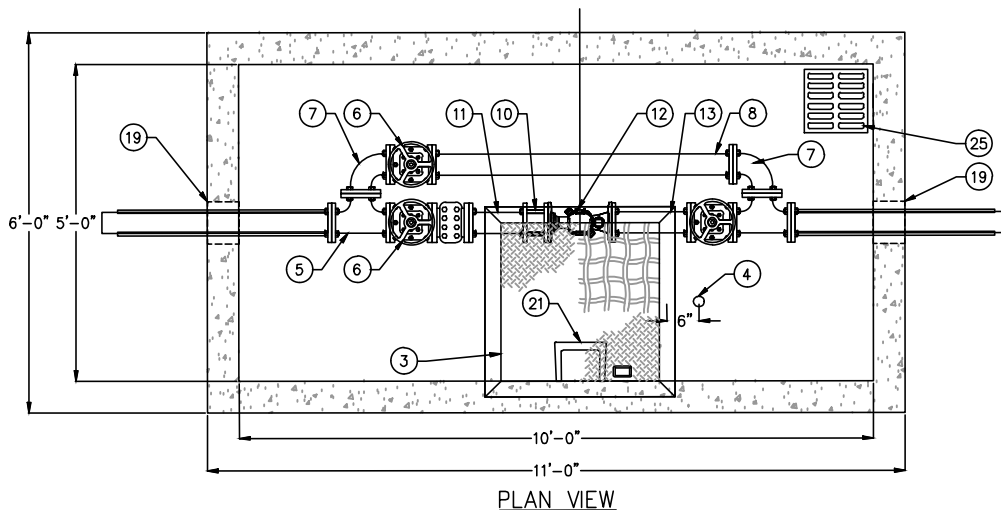


THRUST BLOCK DETAILS

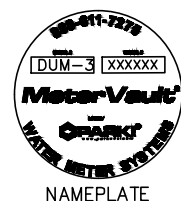
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	18
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JUB
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016





KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	5'-0"x10'-0" I.D. PRECAST CONCRETE VAULT
2	1	8" THK FLAT CONCRETE TOP
3	1	30"x30" ALUMINUM HATCHWAY w/ SAFETY NET, EXTEND 6" ABOVE VAULT LID IF COVERED BY LANDSCAPING
4	1	2" HOLE IN LID FOR AMR TRANSMITTER
5	2	3" FLG TEE
6	3	3" NRS GATE VALVE
7	2	3" FLG 90° ELL
8	1	3" FLG x FLG SPOOL, 54" LONG
9	1	3" FLG STRAINER
10	1	3" FLANGE COUPLING ADAPTER
11	1	3" FLG x PE SPOOL, 15" LONG
12	1	3" BADGER E-SERIES G2 ULTRASONIC METER
13	1	3" FLG x FLG SPOOL, 15" LONG
14	2	3" DI STUB-OUT
15	2	GALVANIZED ALL-THREAD RETAINER ROD
16	3	ADJUSTABLE PIPE SUPPORTS
17	1	GRAVEL BED (BY OTHERS)
18	2	ALL JOINTS MADE WATER-TIGHT WITH PLASTIC FLEXIBLE GASKET (RAMNEK)
19	2	PIPE PENETRATION FILLED w/ NON-SHRINK GROUT
20	1	NAMEPLATE INDICATING: MFG: NUMBER: MODEL: DATE MANUFACTURED
21	7	MANHOLE STEPS
22	2	1" PVC PIPE FOR TRACER WIRE (TRACER WIRE PROVIDED BY OTHERS)
23	-	NOT USED
24	-	NOT USED
25	1	12"x12"x3" DEEP SUMP w/ CAST IRON GRATE (OPTIONAL KNOCKOUT TO DRAIN)



SPECIFICATIONS

CONCRETE:

CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 5000 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. COMBINED ASSEMBLY WEIGHT OF APPROXIMATELY 46,000 LBS.

REINFORCEMENT:

GRADE 60 REINFORCED. STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING & PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS FOR PRECAST CONCRETE. LIFTING INSERTS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

HATCHWAY:

1/4" ALUMINUM DIAMOND PLATE COVER, WITH 1/4" EXTRUDED ALUMINUM FRAME. HATCH TO BE FURNISHED WITH 316 STAINLESS STEEL SNAP LOCK & BRASS HINGES.

ENGINEERING DATA:

FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF ASSEMBLY. USE DIMENSIONAL DATA AS SHOWN. PIPE, VALVES AND FITTING OF THE ASSEMBLY ARE APPROVED BY ONE OR MORE OF THE FOLLOWING ASSOCIATIONS

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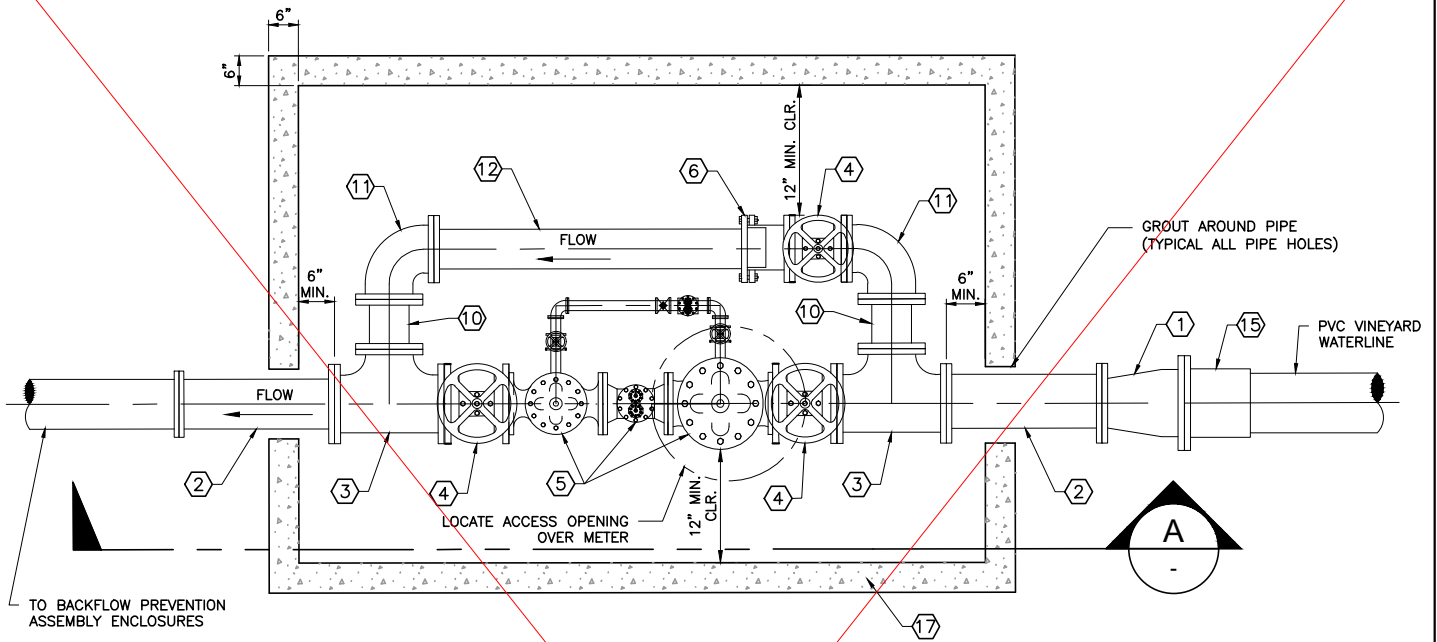
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4				



**LARGE
METER ASSEMBLY**
VINEYARD

STANDARD DRAWING NUMBER:	25
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PLOT SCALE:	DRAWING
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DESIGN BY:	
CHECKED BY:	
ADOPTED DATE:	

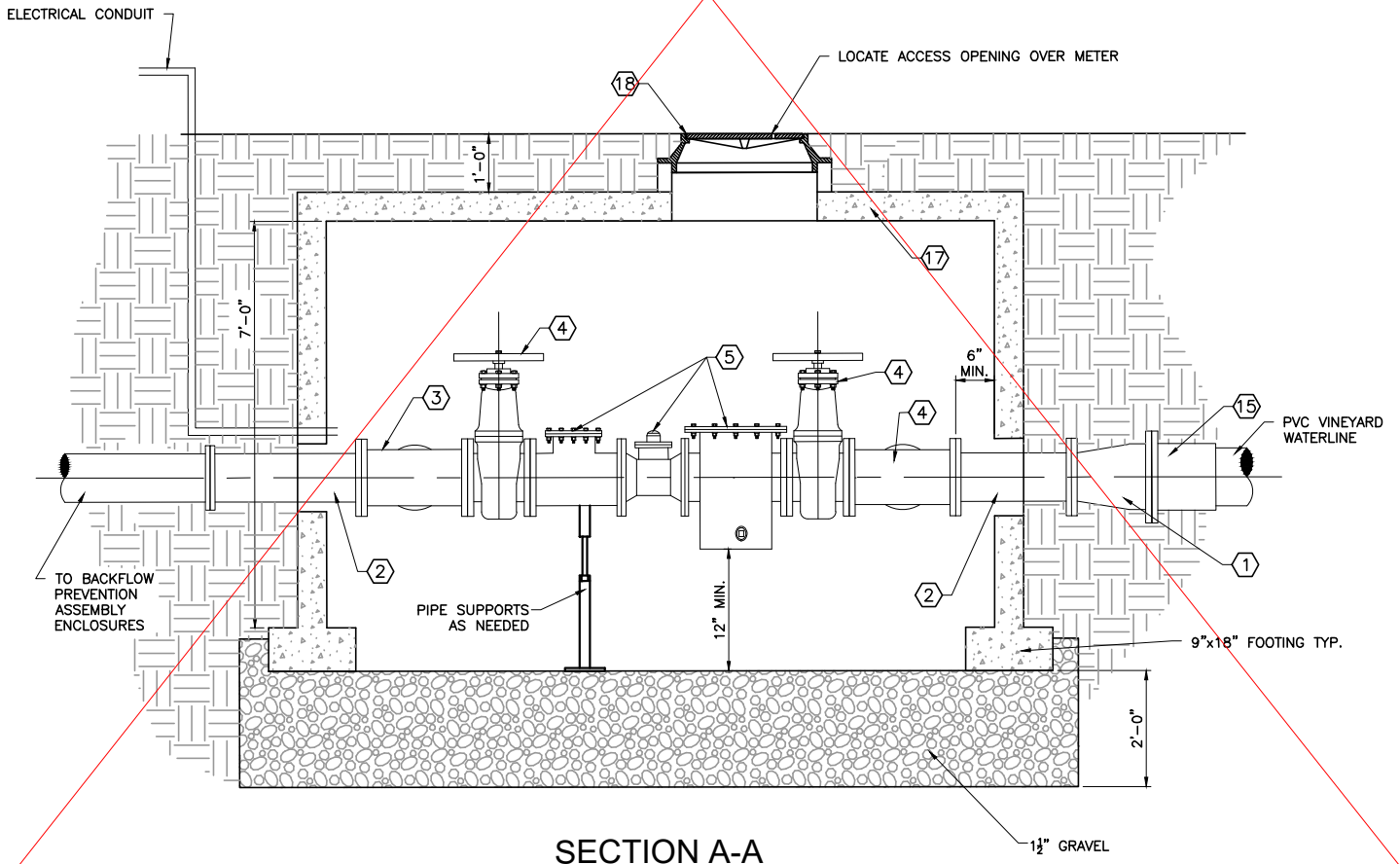
NO PREVIOUS VERSION



METER ASSEMBLY VAULT

NOTES:

1. FOR LIST OF MATERIALS SEE STANDARD DRAWING 19A.
2. VAULT TO BE LOCATED OUTSIDE OF THE ROADWAY.



SECTION A-A

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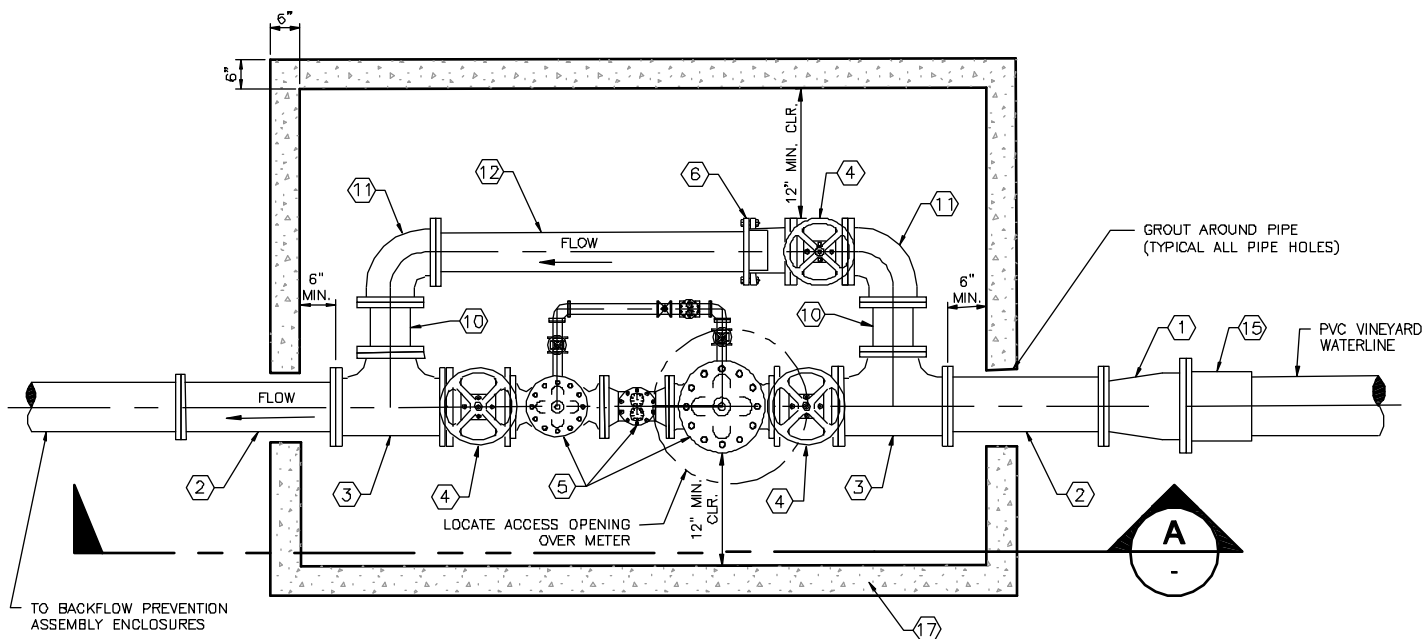
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2	HARDEN, ALLEN & LUCE	DES.	CHG.	8/12/20
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TYPICAL METER ASSEMBLY

VINEYARD

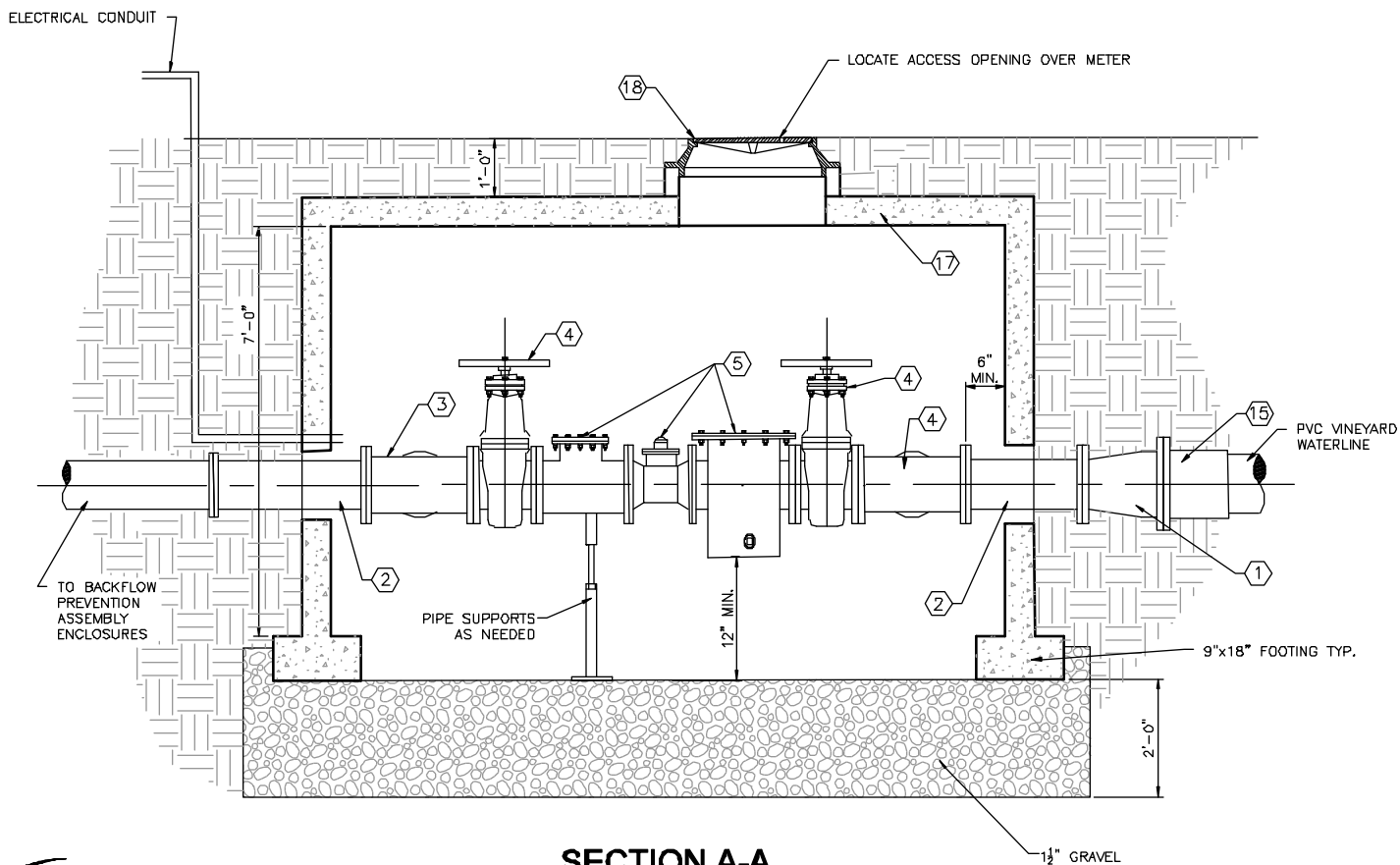
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CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



METER ASSEMBLY VAULT

NOTES:

1. FOR LIST OF MATERIALS SEE STANDARD DRAWING 19A.
2. VAULT TO BE LOCATED OUTSIDE OF THE ROADWAY.



SECTION A-A



VINEYARD
STAY CONNECTED

TYPICAL METER ASSEMBLY

TOWN OF VINEYARD

STANDARD
DRAWING
NUMBER: **19A**

CAD DWG: V-STD-DWGS
PLOT SCALE: 1.000
DRAWN BY: JMM
DESIGN BY: CHM
CHECKED BY: DEO
ADOPTED DATE: SEPTEMBER 1, 2016

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NO.	DESCRIPTION	BY	DATE
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3			
4			

LIST OF MATERIALS

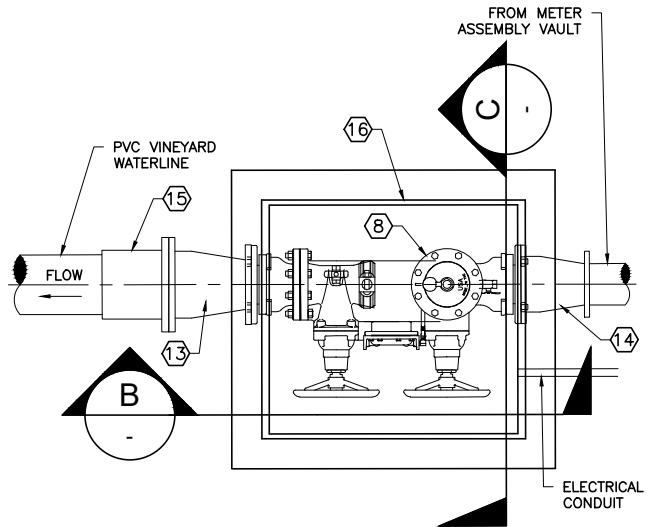
ITEM	QTY	SIZE	DESCRIPTION
1	1	A x B	MJ x FE DUCTILE IRON REDUCER
2	1	B x AS REQ'D	FLG x FLG DUCTILE IRON SPOOL
3	2	B x B	FLG x FLG DUCTILE IRON TEE
4	3	B	FLG x FLG GATE VALVE
5	1	B	BADGERMETER FSAA-01 FIRE SERIES METER W/SIZE ON SIZE BYPASS
6	1	B	DRESSER FLANGED ADAPTER STYLE 128
7	2	C x AS REQ'D	FLG x PE DUCTILE IRON PIPE
8	1	B	FEBCO MODEL LF880V (UP TO 8") OR FEBCO MODEL LF860V (FOR 10") OR EQUAL
9	1	C	FEBCO SERIES 611 VALVE SETTERS MJ x FLG OR EQUAL
10	2	B x 12"	FLG x FLG DUCTILE IRON SPOOL
11	2	B	FLG x FLG DUCTILE IRON 90° ELBOW
12	1	B x AS REQ'D	FLG x PE DUCTILE IRON PIPE W/ ALL THREAD
13	1	A x C	MJ x FLG DUCTILE IRON REDUCER
14	1	B x C	MJ x FLG DUCTILE IRON REDUCER
15	2	A	FLG x MJ C900 FLANGE ADAPTOR
16	1	ENCLOSURE	SAFE-T-COVER MODEL # 1000LU880-AL (UP TO 8") (OR EQUAL) SAFE-T-COVER MODEL # 1000-AL (10") (OR EQUAL)
17	1	VAULT	PRECAST VAULT SIZE SHALL MEET MINIMUM CLEARANCE REQ'D
18	1	30"	MANHOLE RING & COVER D&L SUPPLY # A-1181 W/ 6" GRADE RING
19	1	HEATER	SAFE-T-COVER MODEL NO. HCH2000-120 (OR EQUAL)

NOTE: ALL DUCTILE IRON PIPE AND FITTINGS TO BE POLYWRAPPED.

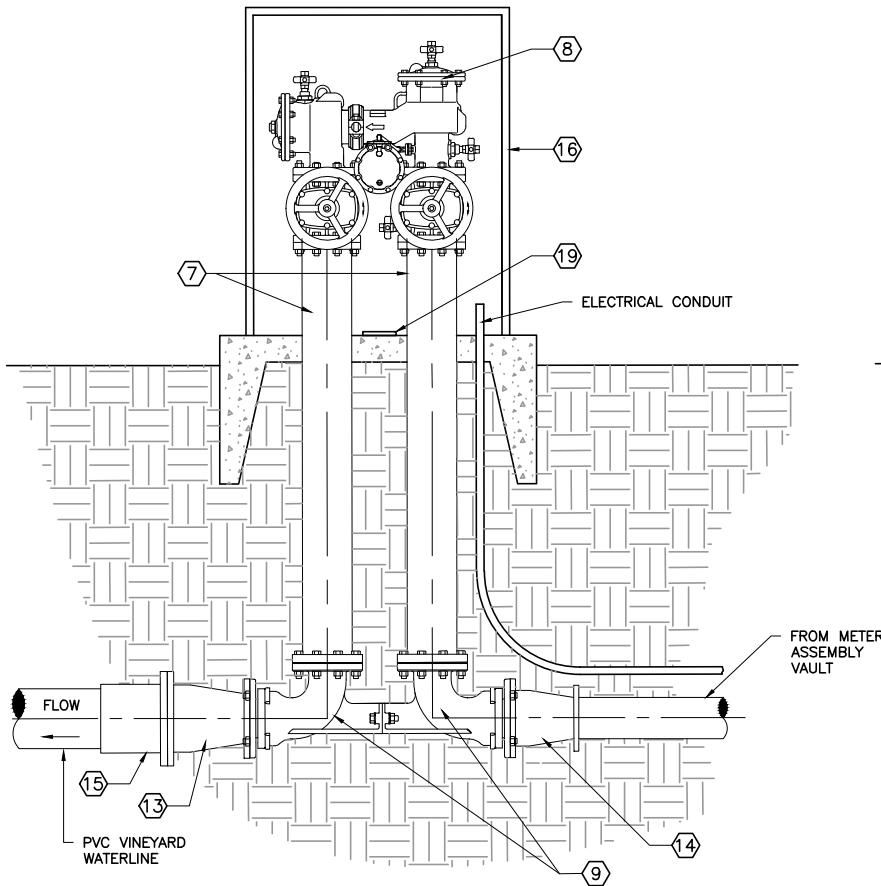
"A" = MAIN LINE SIZE.

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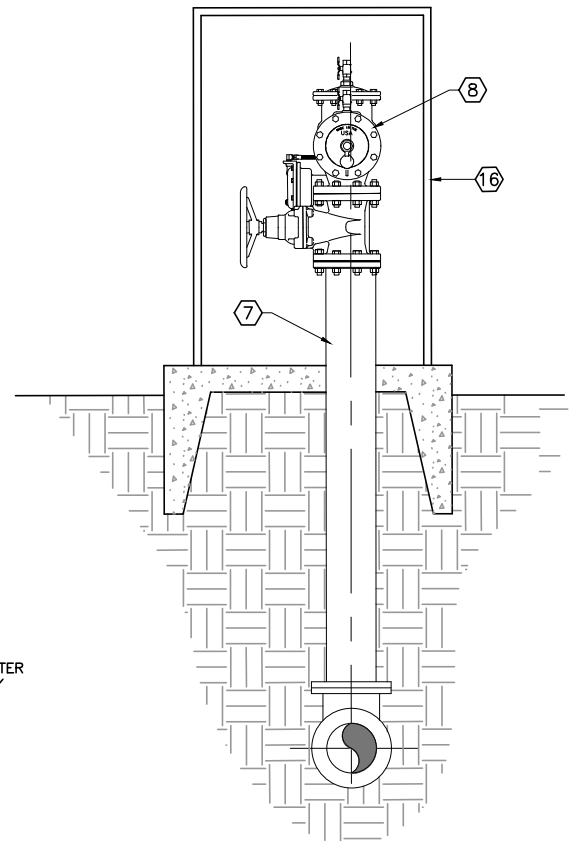
"C" = SIZE BACKFLOW ASSEMBLY TO MATCH METER FLOW (CFS).



BACKFLOW PREVENTION ASSEMBLY ENCLOSURES



SECTION B-B



SECTION C-C

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NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DES	8/08/19
2	HARDEN, ALLEN & LUCE	DES	CMF	8/12/20
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4				



BACKFLOW PREVENTION ASSEMBLY

VINEYARD

STANDARD DRAWING NUMBER: 26

CAD DWG: STANDARD

PLOT SCALE: DRAWING

DRAWN BY: JMM

DESIGN BY: CRW

CHECKED BY: DEO

ADOPTED DATE: SEPTEMBER 1, 2016

LIST OF MATERIALS

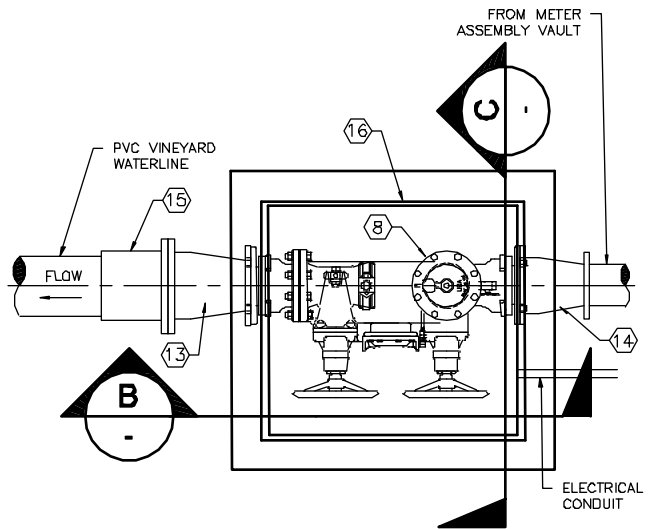
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1	1	A x B	MJ x FE DUCTILE IRON REDUCER
2	1	B x AS REQ'D	FLG x FLG DUCTILE IRON SPOOL
3	2	B x B	FLG x FLG DUCTILE IRON TEE
4	3	B	FLG x FLG GATE VALVE
5	1	B	BADGERMETER FSAA-01 FIRE SERIES METER W/SIZE ON SIZE BYPASS
6	1	B	DRESSER FLANGED ADAPTER STYLE 128
7	2	C x AS REQ'D	FLG x PE DUCTILE IRON PIPE
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9	1	C	FEBCO SERIES 611 VALVE SETTERS MJ x FLG OR EQUAL
10	2	B x 12"	FLG x FLG DUCTILE IRON SPOOL
11	2	B	FLG x FLG DUCTILE IRON 90° ELBOW
12	1	B x AS REQ'D	FLG x PE DUCTILE IRON PIPE W/ ALL THREAD
13	1	A x C	MJ x FLG DUCTILE IRON REDUCER
14	1	B x C	MJ x FLG DUCTILE IRON REDUCER
15	2	A	FLG x MJ C900 FLANGE ADAPTOR
16	1	ENCLOSURE	SAFE-T-COVER MODEL # 1000LU880-AL (UP TO 8") (OR EQUAL) SAFE-T-COVER MODEL # 1000-AL (10") (OR EQUAL)
17	1	VAULT	PRECAST VAULT SIZE SHALL MEET MINIMUM CLEARANCE REQ'D
18	1	30"	MANHOLE RING & COVER D&L SUPPLY # A-1181 W/ 6" GRADE RING
19	1	HEATER	SAFE-T-COVER MODEL NO. HCH2000-120 (OR EQUAL)

NOTE: ALL DUCTILE IRON PIPE AND FITTINGS TO BE POLYWRAPPED.

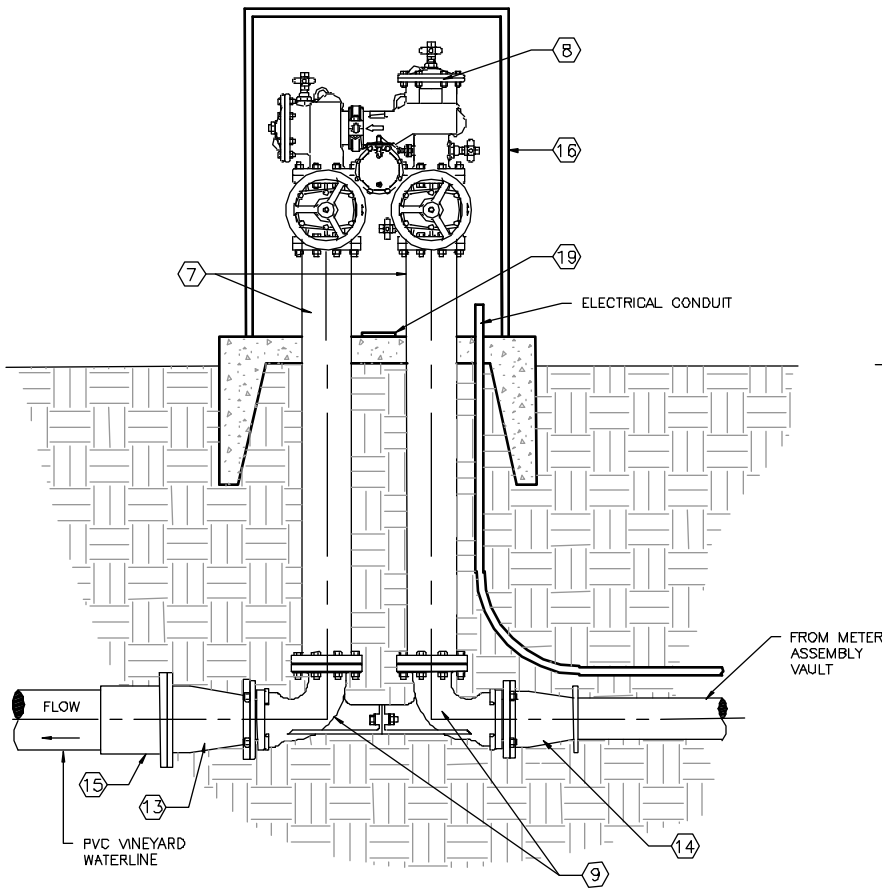
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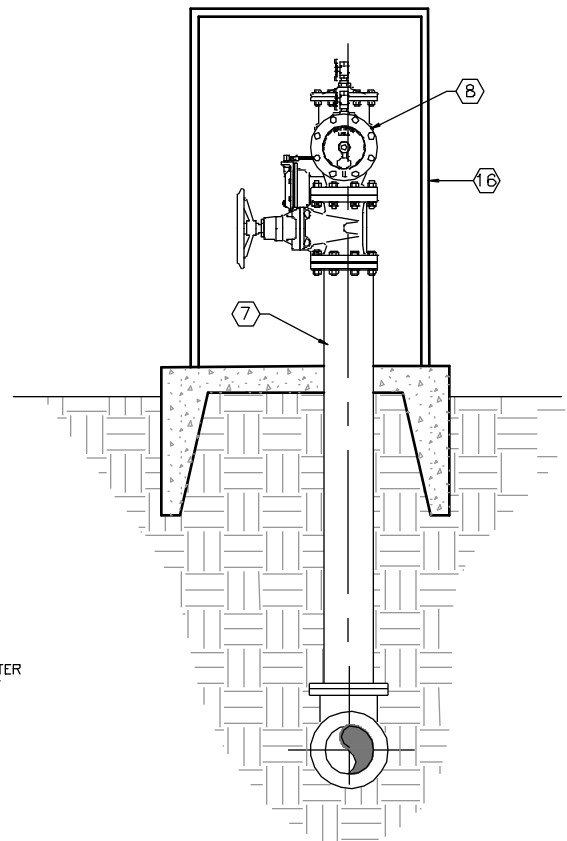
"C" = SIZE BACKFLOW ASSEMBLY TO MATCH METER FLOW (CFS).



BACKFLOW PREVENTION ASSEMBLY ENCLOSURES



SECTION B-B



SECTION C-C



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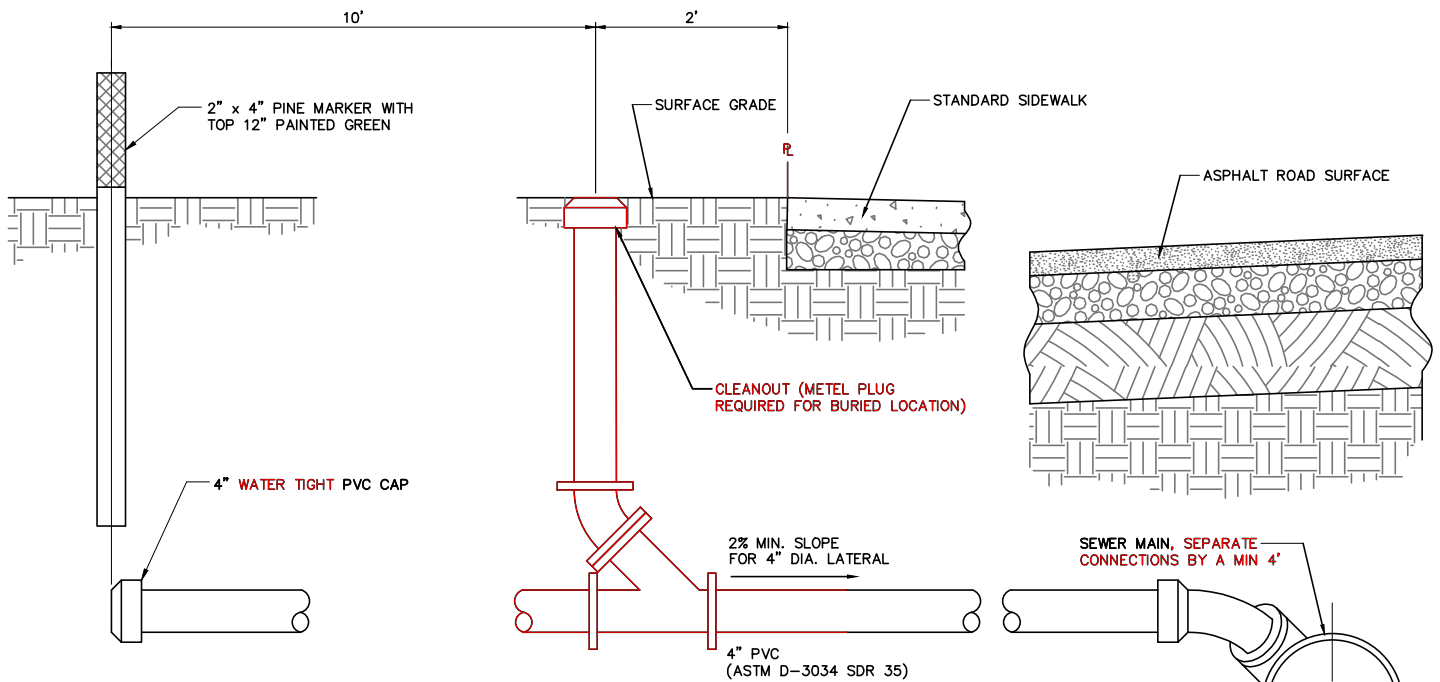
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BACKFLOW PREVENTION ASSEMBLY

TOWN OF VINEYARD

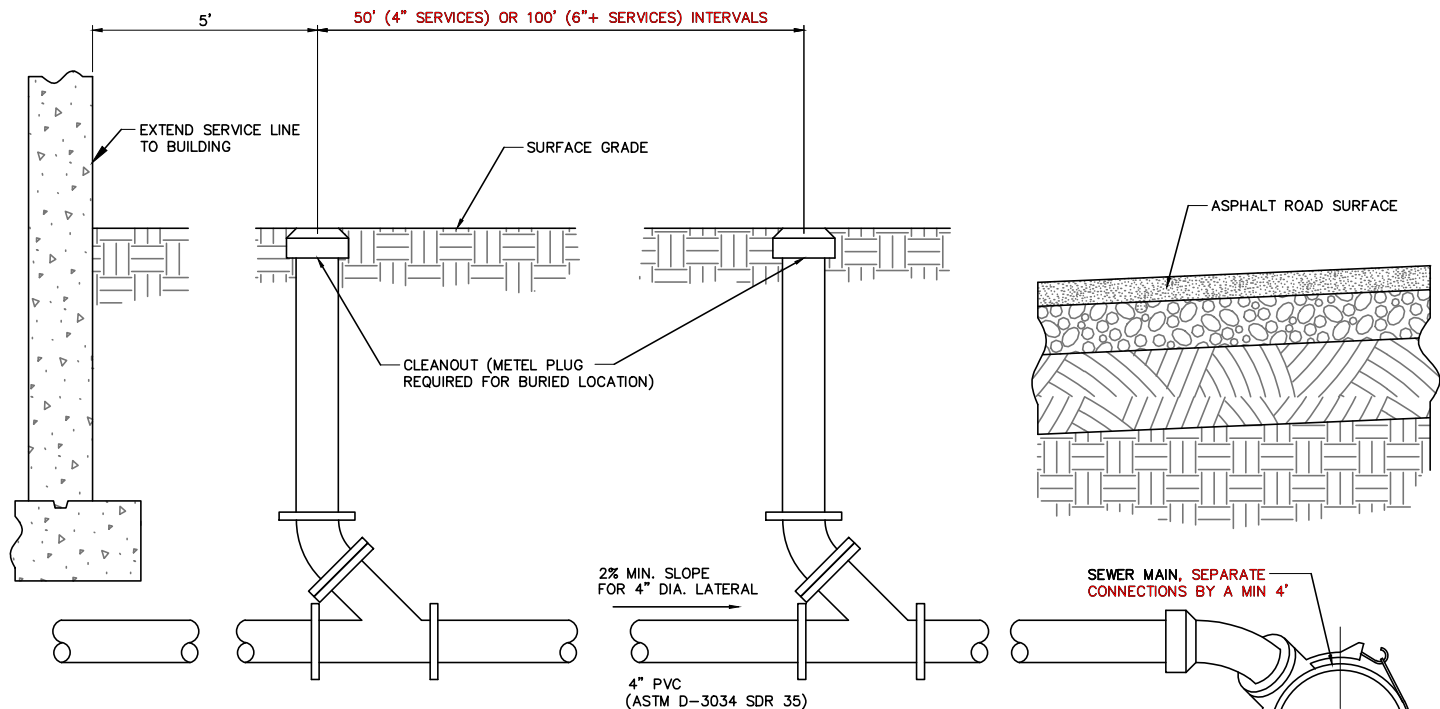
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CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



STUB FOR NEW CONSTRUCTION

NOTES FOR CONNECTING TO NEW SEWER MAIN:

1. CONNECTION TO MAIN SHALL BE BY WYE'S OR TEE'S INSTALLED AS PART OF THE SEWER MAIN CONSTRUCTION.
2. LOCATION OF STUB TO BE LOCATED PER APPROVED UTILITY PLAN.
3. SHOW CENTERLINE STATION OF THE LATERAL FROM THE NEAREST DOWNSTREAM MANHOLE. USE SAME STATIONING USED FOR SEWER MAIN.
4. TRAFFIC RATED CLEANOUT LID REQ'D IF LOCATED IN TRAFFIC AREAS.



TIE TO EXISTING CONSTRUCTION

NOTES FOR CONNECTING TO EXISTING SEWER MAIN:

1. CONNECTION TO BE MADE IN PRESENCE OF PUBLIC WORKS INSPECTOR.
2. INSERTA-TEE OR EQUAL INSTALLED PER MANUFACTURER RECOMMENDATIONS.
3. TRAFFIC RATED CLEANOUT LID REQ'D IF LOCATED IN TRAFFIC AREAS.
4. CLEAN-OUTS REQUIRED AT PROPERTY LINE, EVERY 100' FOR 6" SERVICES AND 50' FOR 4" SERVICES AND AT EVERY COMBINATION OF BEND TOTALING 90'.

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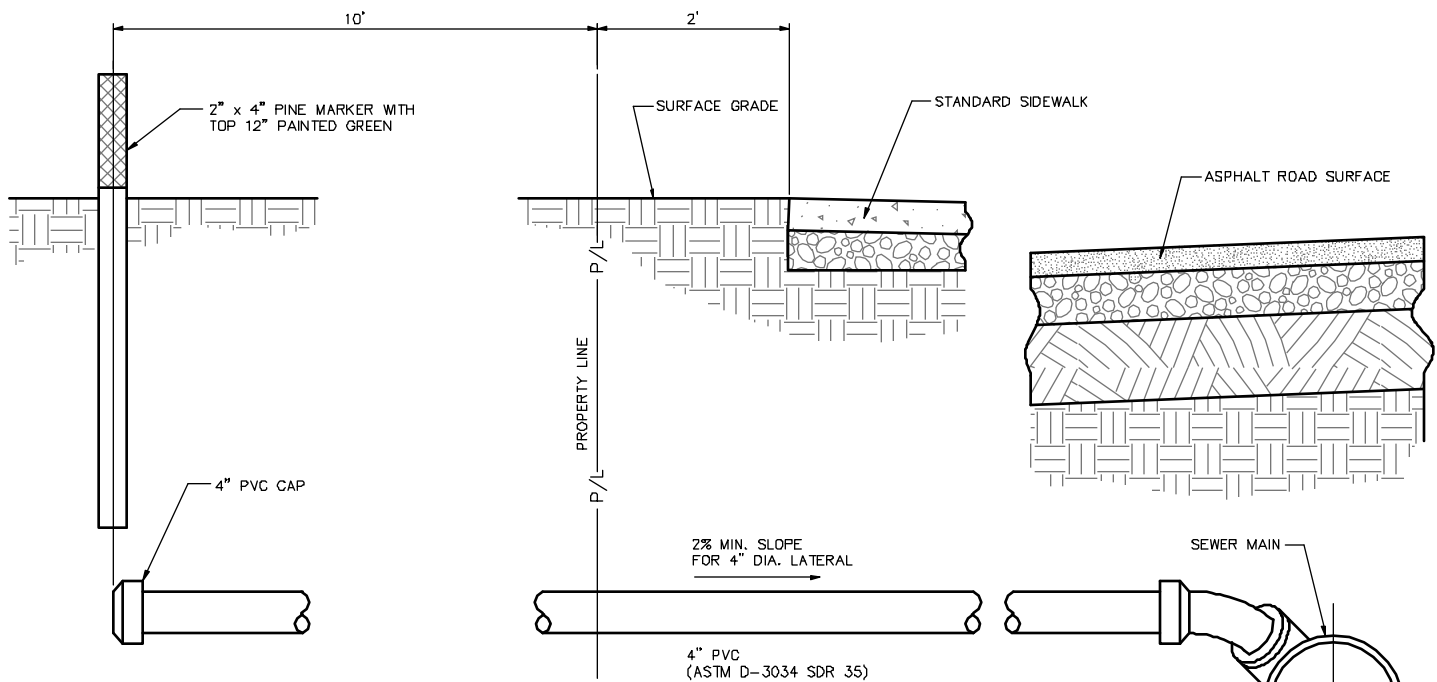
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2	HARDEN, ALLEN & LUCI	URS	CHP	8/12/25
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TYPICAL SEWER LATERAL

VINEYARD

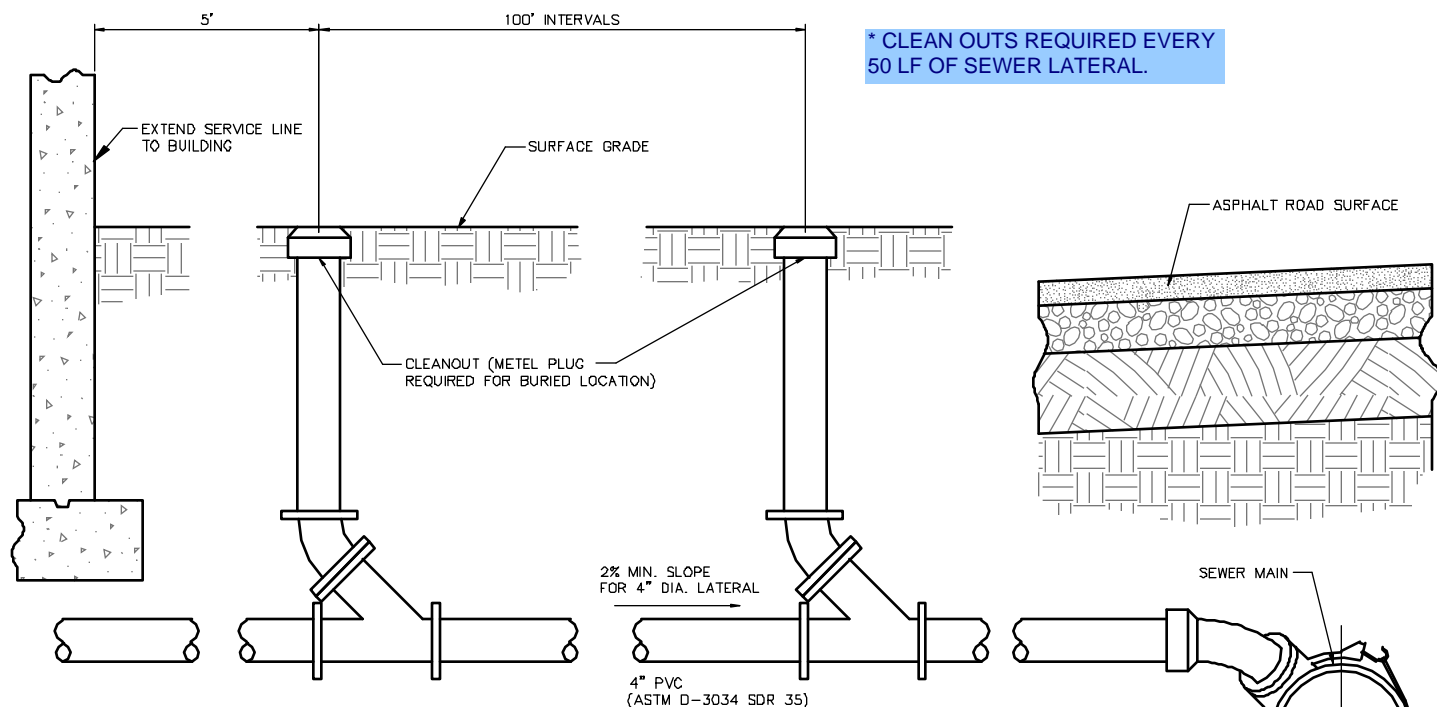
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PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



STUB FOR NEW CONSTRUCTION

NOTES FOR CONNECTING TO NEW SEWER MAIN:

1. CONNECTION TO MAIN SHALL BE BY WYE'S OR TEE'S INSTALLED AS PART OF THE SEWER MAIN CONSTRUCTION.
2. LOCATION OF STUB TO BE LOCATED PER APPROVED UTILITY PLAN.
3. SHOW CENTERLINE STATION OF THE LATERAL FROM THE NEAREST DOWNSTREAM MANHOLE. USE SAME STATIONING USED FOR SEWER MAIN.
4. TRAFFIC RATED CLEANOUT LID REQ'D IF LOCATED IN TRAFFIC AREAS.



*** CLEAN OUTS REQUIRED EVERY 50 LF OF SEWER LATERAL.**

TIE TO EXISTING CONSTRUCTION

NOTES FOR CONNECTING TO EXISTING SEWER MAIN:

1. CONNECTION TO BE MADE IN PRESENCE OF PUBLIC WORKS INSPECTOR.
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3. TRAFFIC RATED CLEANOUT LID REQ'D IF LOCATED IN TRAFFIC AREAS.



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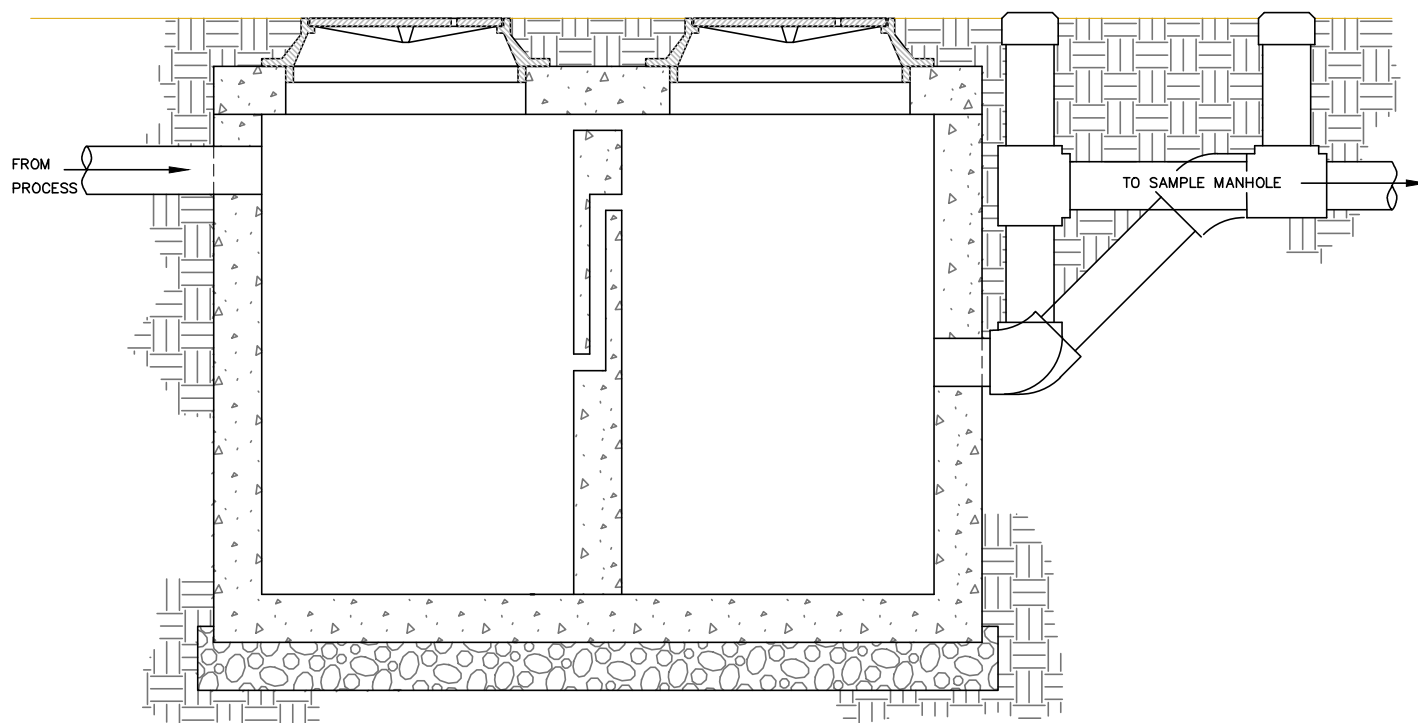
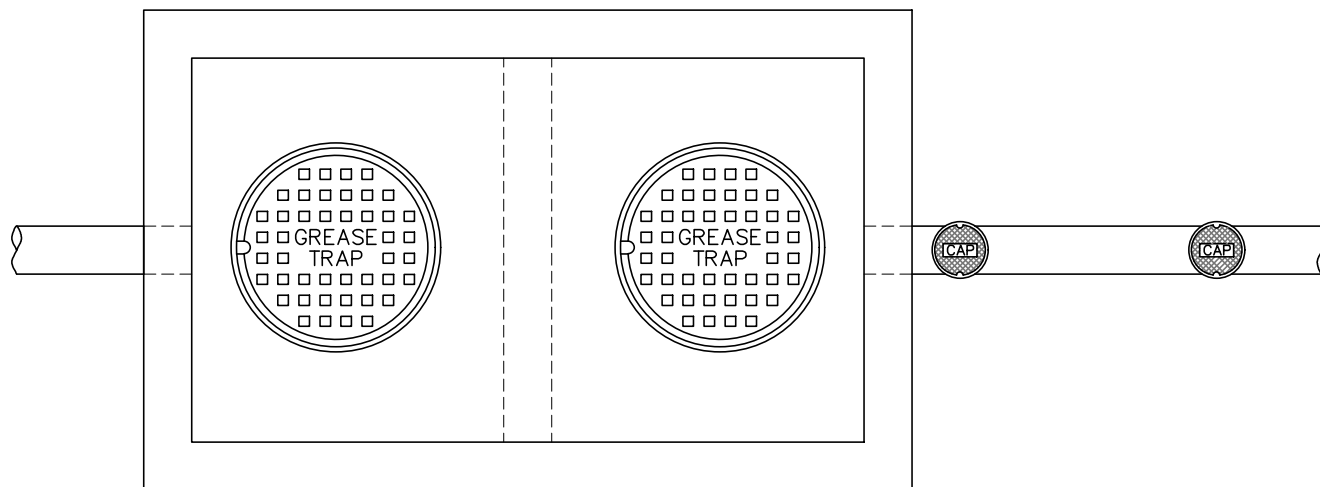


VINEYARD
STAY CONNECTED

TYPICAL SEWER LATERAL

TOWN OF VINEYARD

STANDARD
DRAWING
NUMBER: **20**
CAP DWG: V-STD-DWGS
PLOT SCALE: 1:000
DRAWN BY: JMM
DESIGN BY: CMM
CHECKED BY: DEO
ADOPTED DATE:
SEPTEMBER 1, 2016



REFER TO LATEST TIMPANOGOS SPECIAL SERVICE DISTRICT (TSSD) WASTEWATER COLLECTION SYSTEM STANDARDS AND SPECIFICATIONS FOR GREASE TRAP SIZING AND DETAILS

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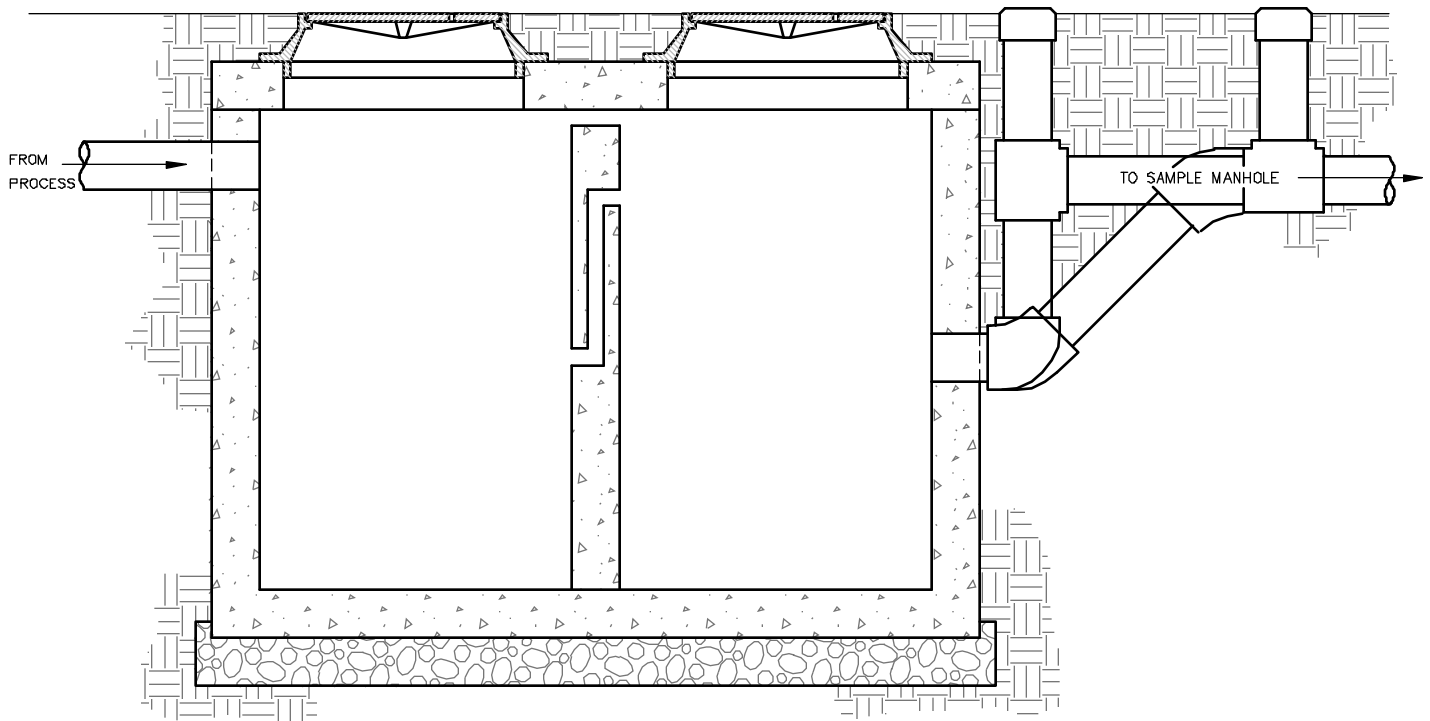
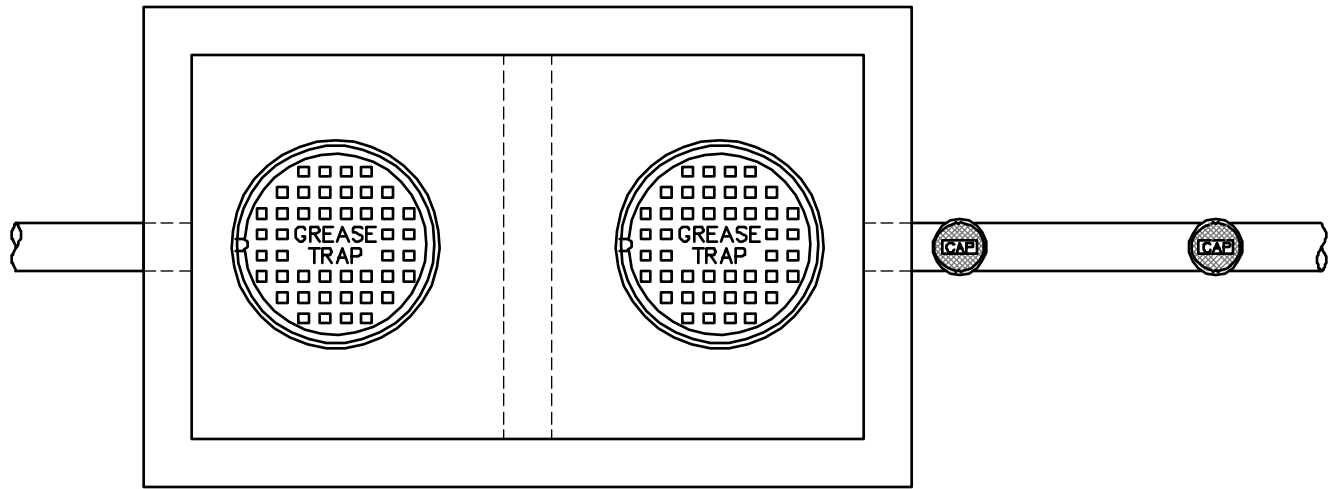
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2	HANSEN, ALLEN & LUCE	DES	CHG	8/12/25
3				
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TYPICAL
GREASE TRAP

VINEYARD

STANDARD DRAWING NUMBER:	28
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHW
CHECKED BY:	
ADOPTED DATE:	SEPTEMBER 1, 2016



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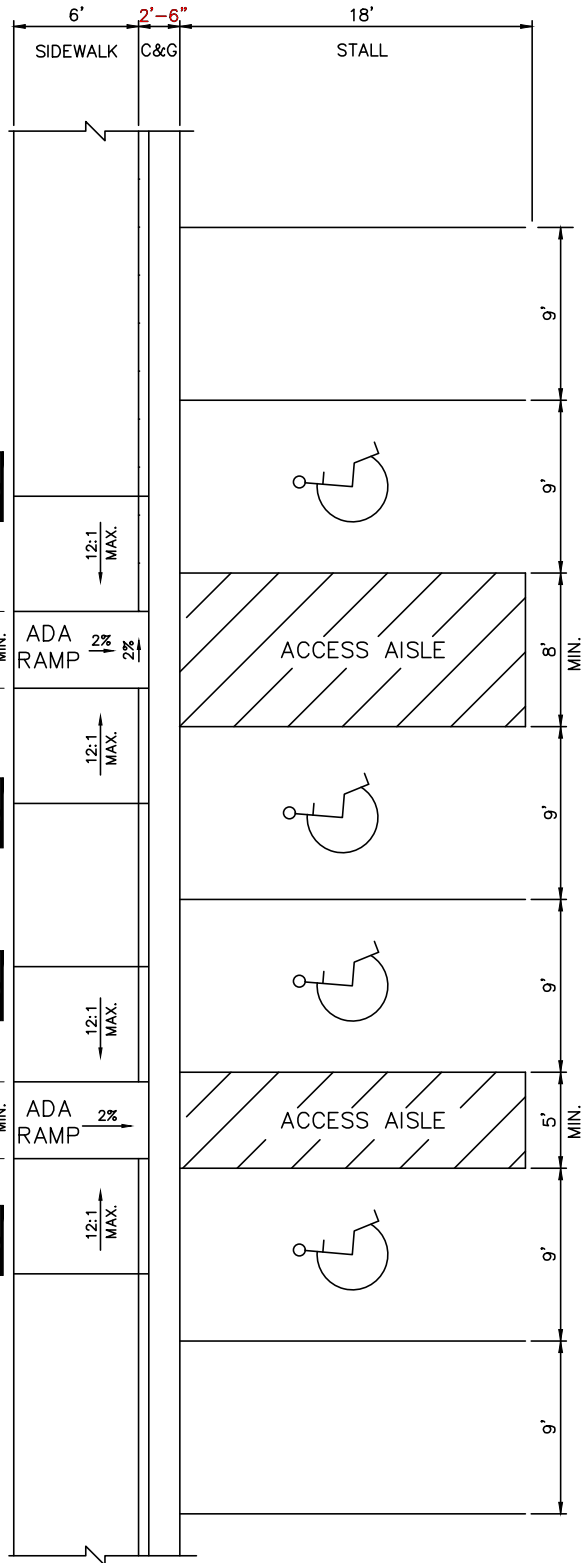


TYPICAL
GREASE TRAP
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	21
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PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016

SIGN WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY MOUNTED HIGH ENOUGH SO IT CAN BE SEEN WHILE A VEHICLE IS PARKED IN THE SPACE

SIGN WITH "VAN ACCESSIBLE" AND THE INTERNATIONAL SYMBOL OF ACCESSIBILITY MOUNTED HIGH ENOUGH SO IT CAN BE SEEN WHILE A VEHICLE IS PARKED IN THE SPACE



NOTES:

1. ACCESSIBLE PARKING SPACES MUST BE LOCATED ON THE SHORTEST ROUTE OF TRAVEL TO AN ACCESSIBLE FACILITY ENTRANCE.
2. DESIGNATED RESERVED SIGN BY EACH SPACE.
3. EACH PARKING LOT SHALL HAVE A MINIMUM OF ONE (1) "VAN ACCESSIBLE" SPACE
4. ONE IN EVERY EIGHT (8) ACCESSIBLE SPACES SHALL HAVE AN ACCESS AISLE 8'-0" WIDE AND SHALL BE SIGNED "VAN ACCESSIBLE".
5. SIGNS SHALL HAVE THE "ACCESSIBLE SYMBOL" WITH "VAN ACCESSIBLE" INDICATED BELOW.
6. RAMP MAXIMUM SLOPE 12:1.
7. OTHER AS REQUIRED BY ADA STANDARDS.

MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES
ADA STANDARD FOR ACCESSIBLE DESIGN 4.1.2(5)

TOTAL NUMBER OF PARKING SPACES PROVIDED (PER LOT)	TOTAL MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES (60" & 96" AISLES)	VAN ACCESSIBLE PARKING SPACES WITH MIN. 96" WIDE ACCESS AISLE	ACCESSIBLE PARKING SPACES WITH MIN. 60" WIDE ACCESS AISLE
1 TO 25	COLUMN A	1	0
26 TO 50	2	1	1
51 TO 75	3	1	2
76 TO 100	4	1	3
101 TO 150	5	1	4
151 TO 200	6	1	5
201 TO 300	7	1	6
301 TO 400	8	1	7
401 TO 500	9	2	7
501 TO 1000	2% OF TOTAL PARKING PROVIDED IN EACH LOT	1/8 OF COLUMN A *	7/8 OF COLUMN A **
1001 AND OVER	20 PLUS 1 FOR EACH 100 OVER 1000	1/8 OF COLUMN A *	7/8 OF COLUMN A **
* ONE OUT OF EVERY ACCESSIBLE SPACES ** 7 OUT OF EVERY 8 ACCESSIBLE PARKING SPACES			

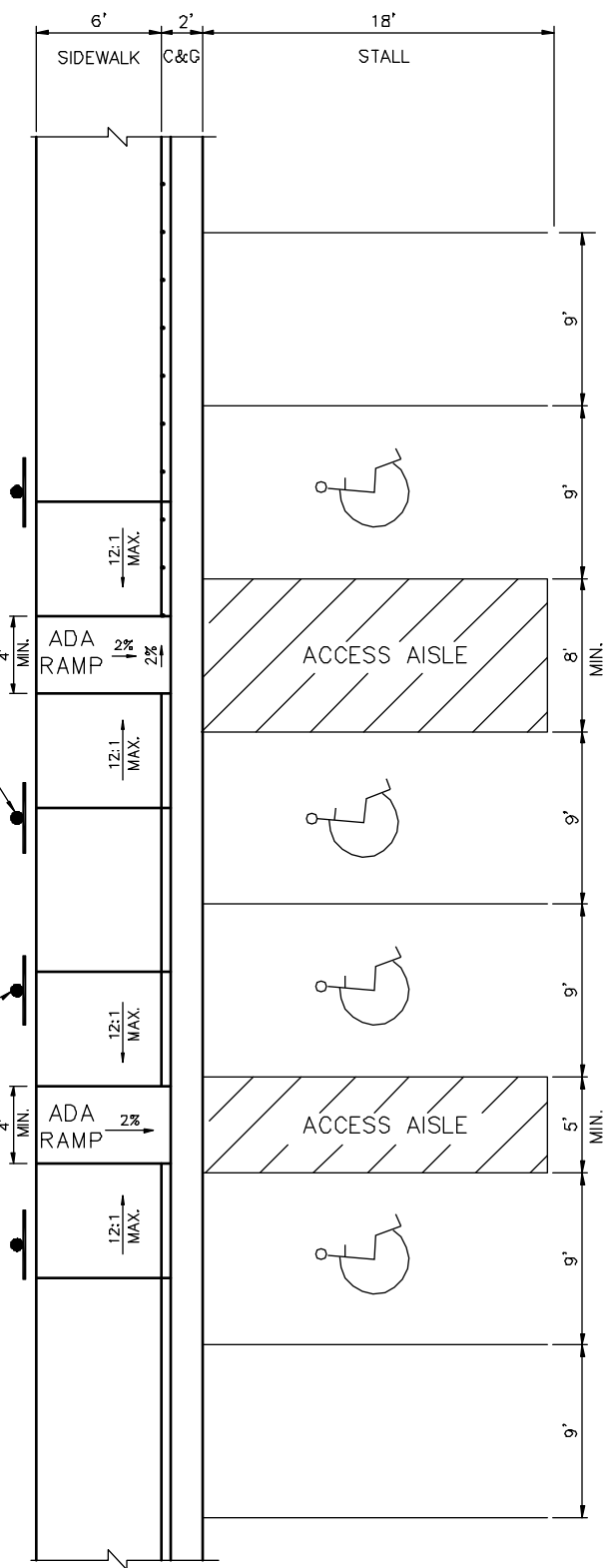
STATEMENT OF USE			
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REVISION			
1	STANDARDS UPDATE	JMM	DES 8/08/19
2	HARRISON, ALLEN & LUCK	DES	CMF 8/12/20
3			
4			
NO.	DESCRIPTION	BY	APR. DATE



ADA PARKING AND
PASSENGER LOADING ZONE

VINEYARD

STANDARD DRAWING NUMBER:	29
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CMF
CHECKED BY:	DES
ADOPTED DATE:	SEPTEMBER 1, 2016



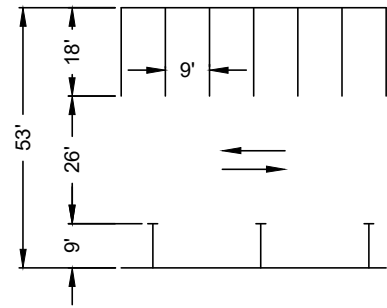
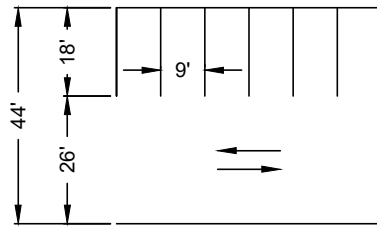
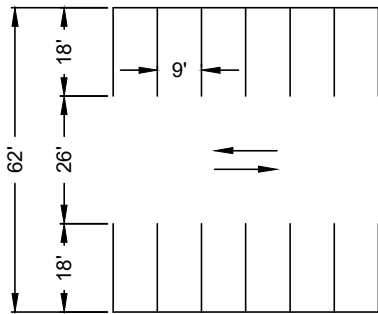
**MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES
ADA STANDARD FOR ACCESSIBLE DESIGN 4.1.2(5)**

TOTAL NUMBER OF PARKING SPACES PROVIDED (PER LOT)	TOTAL MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES (60" & 96" AISLES)	VAN ACCESSIBLE PARKING SPACES WITH MIN. 96" WIDE ACCESS AISLE	ACCESSIBLE PARKING SPACES WITH MIN. 60" WIDE ACCESS AISLE
1 TO 25	COLUMN A 1	1	0
26 TO 50	2	1	1
51 TO 75	3	1	2
76 TO 100	4	1	3
101 TO 150	5	1	4
151 TO 200	6	1	5
201 TO 300	7	1	6
301 TO 400	8	1	7
401 TO 500	9	2	7
501 TO 1000	2% OF TOTAL PARKING PROVIDED IN EACH LOT	1/8 OF COLUMN A *	7/8 OF COLUMN A **
1001 AND OVER	2D PLUS 1 FOR EACH 100 OVER 1000	1/8 OF COLUMN A *	7/8 OF COLUMN A **
* ONE OUT OF EVERY ACCESSIBLE SPACES ** 7 OUT OF EVERY 8 ACCESSIBLE PARKING SPACES			

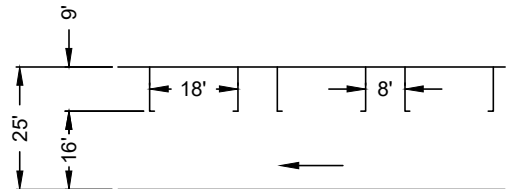
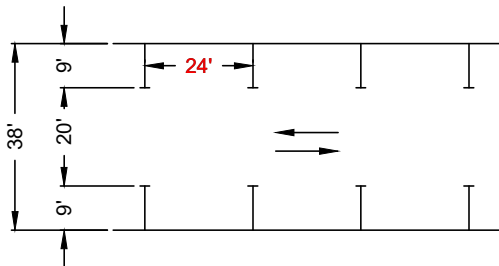
NOTES:

1. ACCESSIBLE PARKING SPACES MUST BE LOCATED ON THE SHORTEST ROUTE OF TRAVEL TO AN ACCESSIBLE FACILITY ENTRANCE.
2. DESIGNATED RESERVED SIGN BY EACH SPACE.
3. EACH PARKING LOT SHALL HAVE A MINIMUM OF ONE (1) "VAN ACCESSIBLE" SPACE
4. ONE IN EVERY EIGHT (8) ACCESSIBLE SPACES SHALL HAVE AN ACCESS AISLE 8'-0" WIDE AND SHALL BE SIGNED "VAN ACCESSIBLE".
5. SIGNS SHALL HAVE THE "ACCESSIBLE SYMBOL" WITH "VAN ACCESSIBLE" INDICATED BELOW.
6. RAMP MAXIMUM SLOPE 12:1.
7. OTHER AS REQUIRED BY ADA STANDARDS.

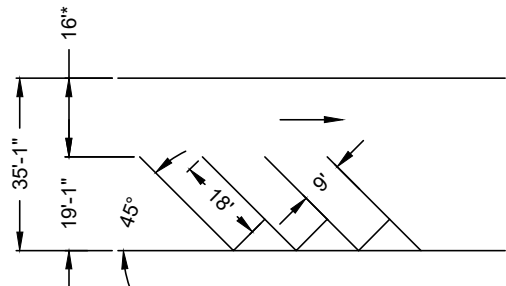
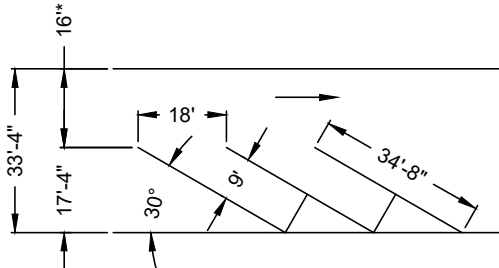




RIGHT ANGLE PARKING



PARALLEL PARKING

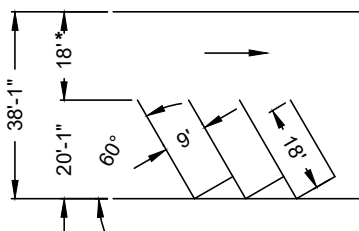


30 DEGREE ANGLE PARKING

MUST HAVE 20' TRAVEL LANE FOR 2 WAY TRAFFIC

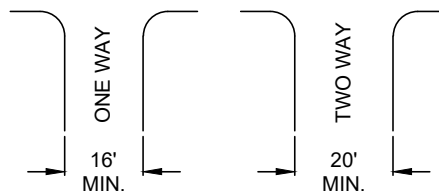
45 DEGREE ANGLE PARKING

MUST HAVE 22' TRAVEL LANE FOR 2 WAY TRAFFIC

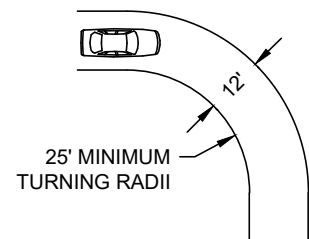


60 DEGREE ANGLE PARKING

MUST HAVE 24' TRAVEL LANE FOR 2 WAY TRAFFIC



DRIVEWAY WIDTHS



MINIMUM TURNING RADIUS

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REVISION

NO.	DESCRIPTION	BY	APR.	DATE
1	HANSEN, ALLEN & LUCE	URL	CHT	9/12/20
2				
3				
4				

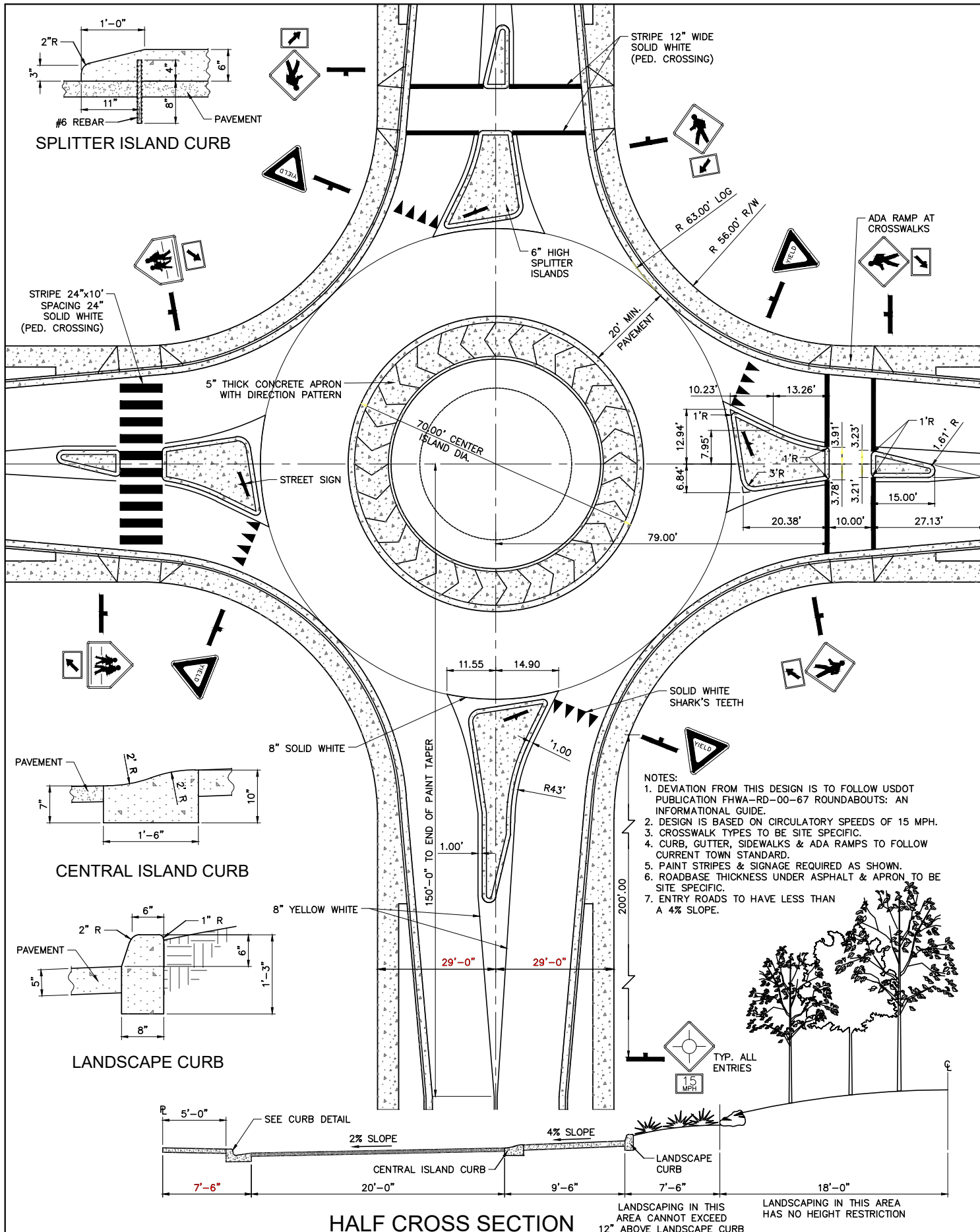


PARKING LOT

VINEYARD

STANDARD DRAWING NUMBER:	30
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	
DESIGN BY:	
CHECKED BY:	
ADOPTED DATE:	

NO PREVIOUS VERSION



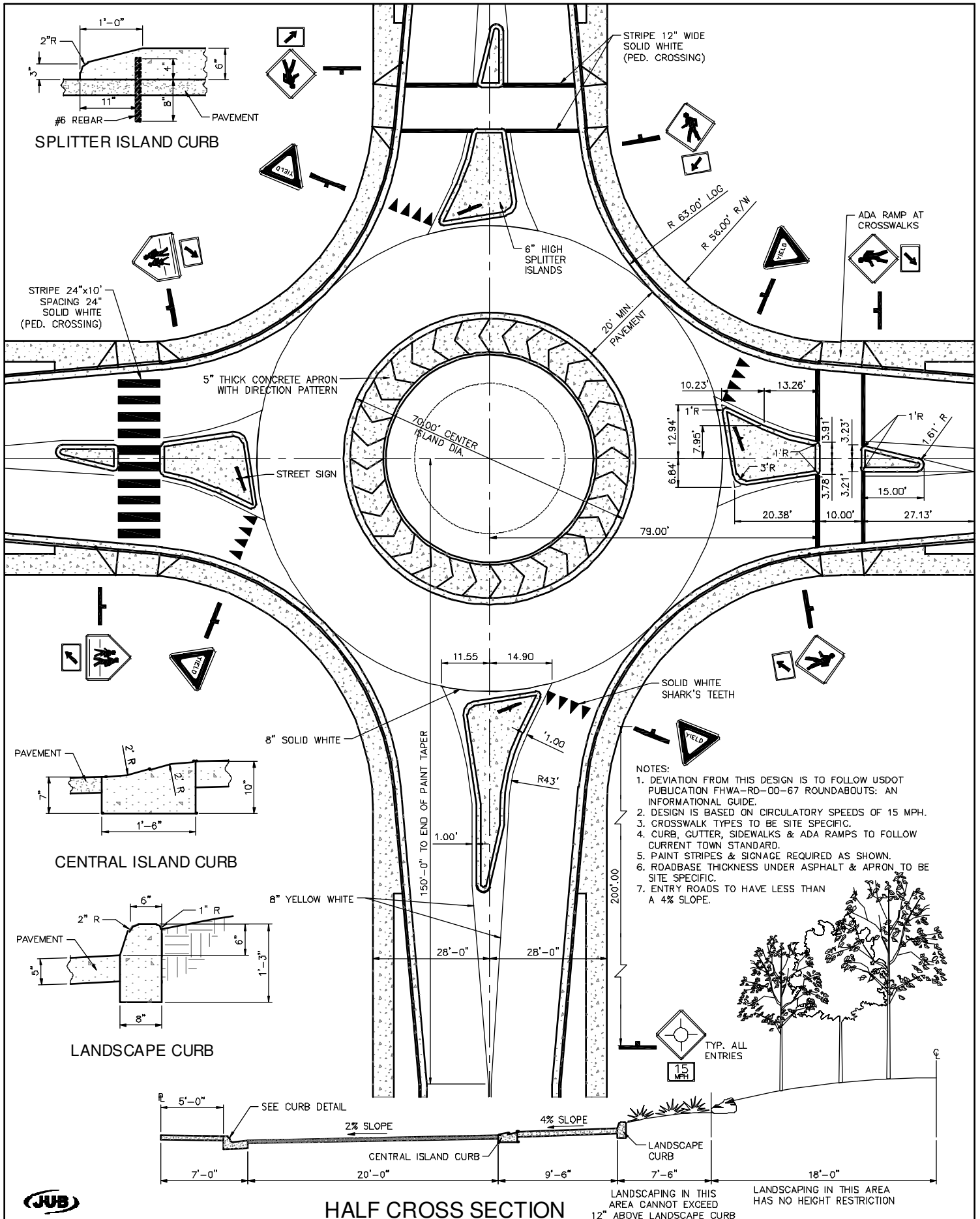
STATEMENT OF USE			
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REVISION			
1	STANDARD UPDATE	JMM	DES 8/08/19
2	HARDEN, ALLEN & LUCK	URS	CHG 8/12/20
3			
4			
NO.	DESCRIPTION	BY	APR. DATE



110-FOOT ROUNDABOUT FOR LOCAL STREET INTERSECTION

VINEYARD

STANDARD DRAWING NUMBER:	31
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



- NOTES:
1. DEVIATION FROM THIS DESIGN IS TO FOLLOW USDOT PUBLICATION FHWA-RD-00-67 ROUNDABOUTS: AN INFORMATIONAL GUIDE.
 2. DESIGN IS BASED ON CIRCULATORY SPEEDS OF 15 MPH.
 3. CROSSWALK TYPES TO BE SITE SPECIFIC.
 4. CURB, GUTTER, SIDEWALKS & ADA RAMP TO FOLLOW CURRENT TOWN STANDARD.
 5. PAINT STRIPES & SIGNAGE REQUIRED AS SHOWN.
 6. ROADBASE THICKNESS UNDER ASPHALT & APRON TO BE SITE SPECIFIC.
 7. ENTRY ROADS TO HAVE LESS THAN A 4% SLOPE.

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REVISION		DATE	BY	APPROVED
1	STANDARD UPDATE	12/07/19		
2				
3				
4				

VINEYARD
STAY CONNECTED

**110-FOOT ROUNDABOUT
FOR LOCAL STREET INTERSECTION**

TOWN OF VINEYARD

STANDARD DRAWING NUMBER: **23**

CAD DWG: V STD DWGS

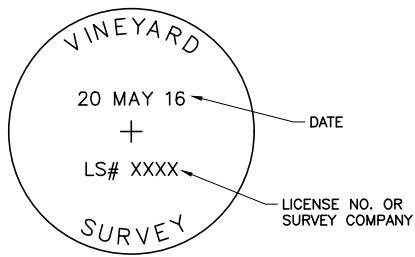
PLOT SCALE: 1.000

DRAWN BY: JUV

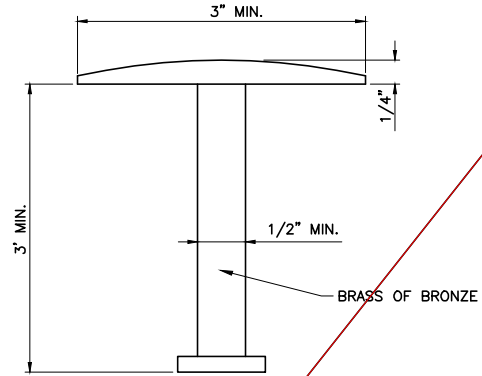
DESIGN BY: CHW

CHECKED BY: DEO

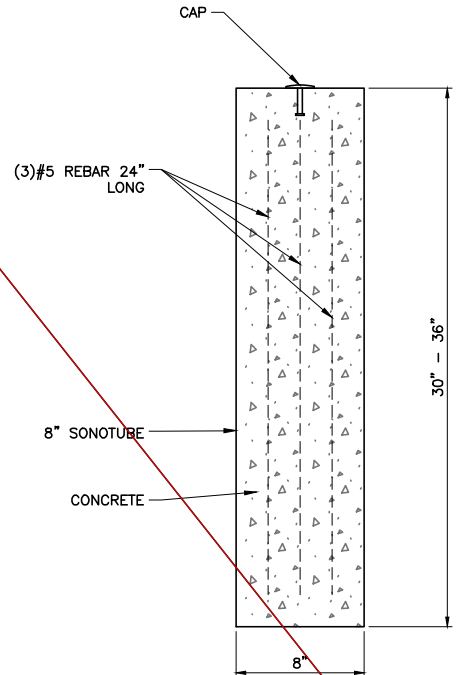
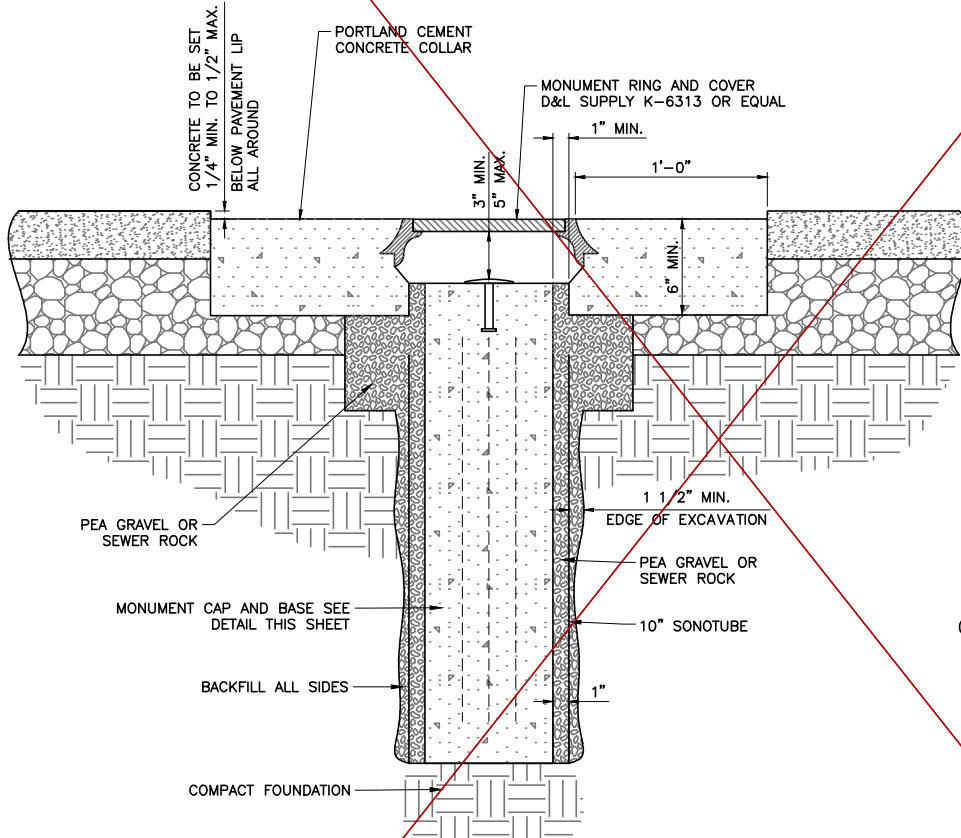
ADOPTED DATE: SEPTEMBER 1, 2016



CAP PLAN



CAP SECTION



SECTION OF BASE
(TYPICAL SETTING)

NOTES:

1. THE INSTALLED MONUMENT MUST BE INDEPENDENT OF THE ROADWAY PAVEMENT. VIBRATIONS OF THE PAVEMENT SURFACE MUST BE TRANSMITTED TO THE UNDERLYING SOILS AND NOT TO THE MONUMENT. THIS WILL ASSURE THE MONUMENT REMAINS UNDISTURBED.
2. MONUMENTS TO BE INSTALLED AT THE LOCATION SHOWN ON THE APPROVED SUBDIVISION PLAT.

STATEMENT OF USE

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REVISION

NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCK	DES	CHG	8/12/25
3				
4				



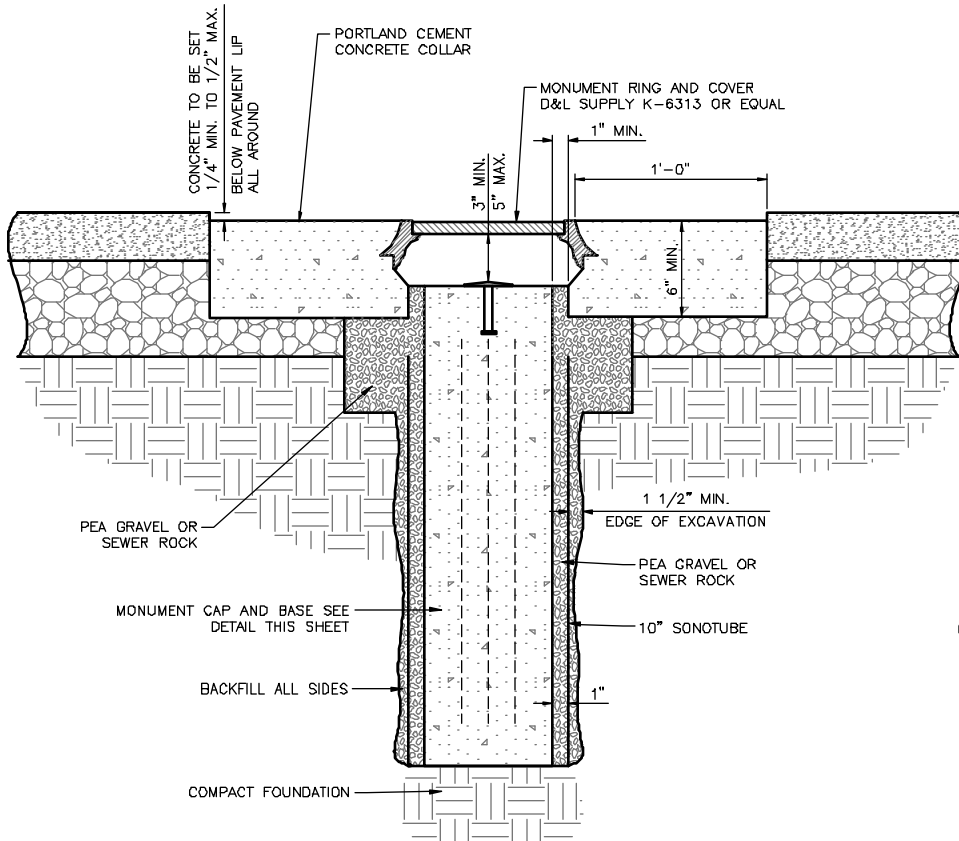
SURVEY MONUMENT PLACEMENT
IN PAVEMENT

VINEYARD

STANDARD DRAWING NUMBER:	31A
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016

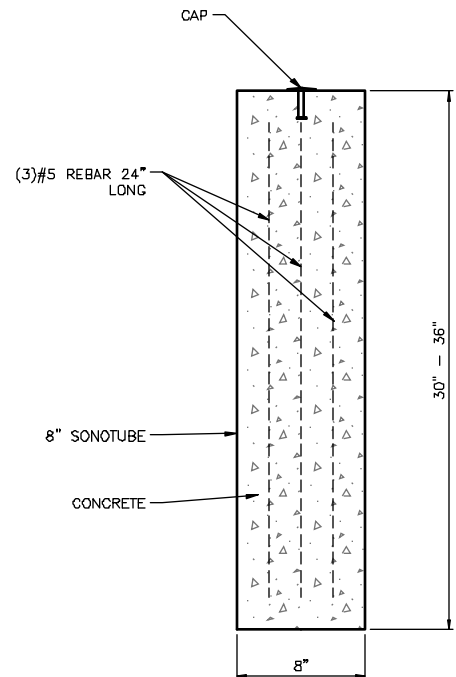
CAP PLAN

CAP SECTION



NOTES:

1. THE INSTALLED MONUMENT MUST BE INDEPENDENT OF THE ROADWAY PAVEMENT. VIBRATIONS OF THE PAVEMENT SURFACE MUST BE TRANSMITTED TO THE UNDERLYING SOILS AND NOT TO THE MONUMENT. THIS WILL ASSURE THE MONUMENT REMAINS UNDISTURBED.
2. MONUMENTS TO BE INSTALLED AT THE LOCATION SHOWN ON THE APPROVED SUBDIVISION PLAT.



SECTION OF BASE

(TYPICAL SETTING)



STATEMENT OF USE

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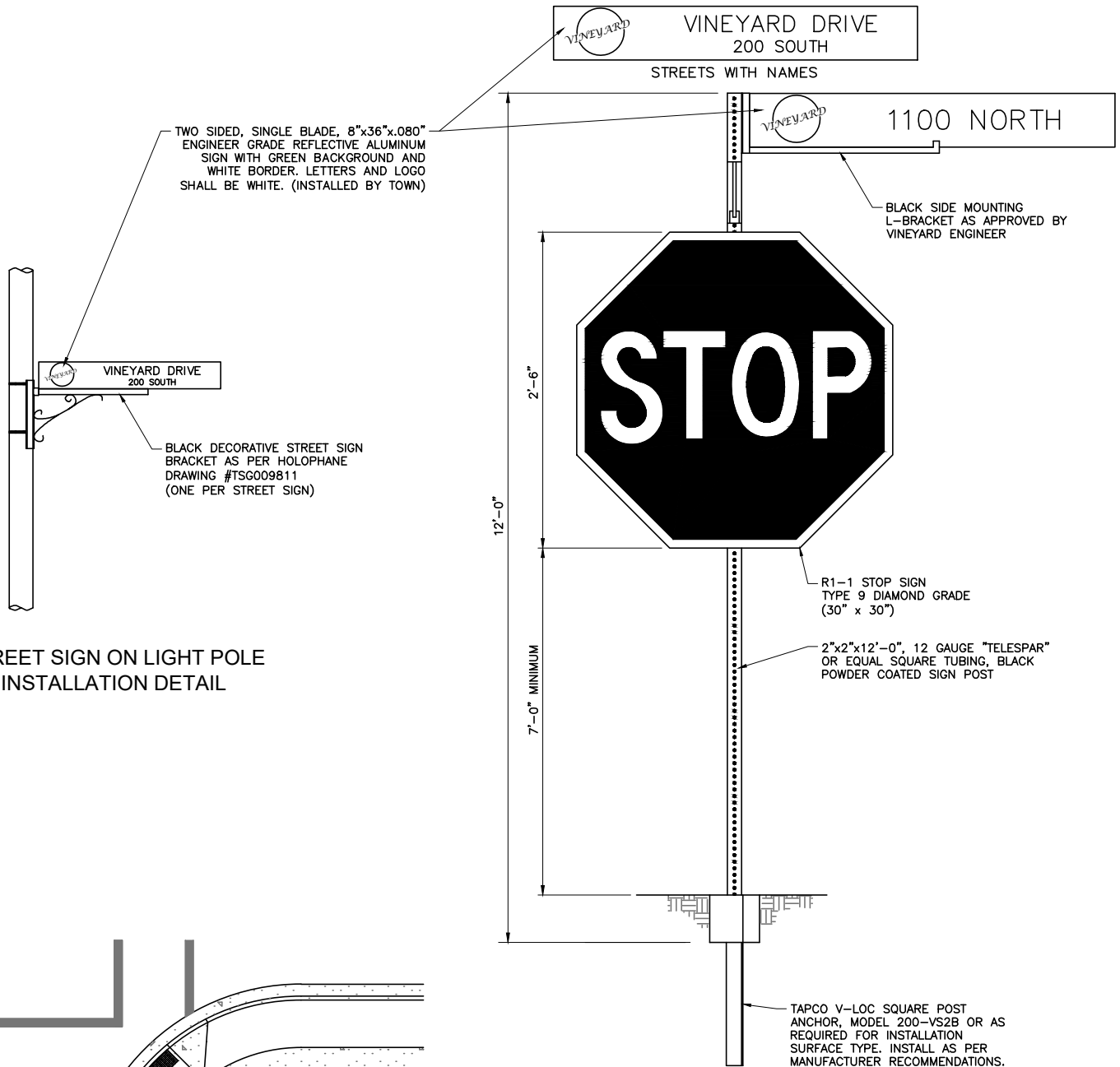
REVISION			
1	STANDARDS UPDATE	JUN	DEC
2			8/98/14
3			
4			
NO.	DESCRIPTION	BY	APR. DATE



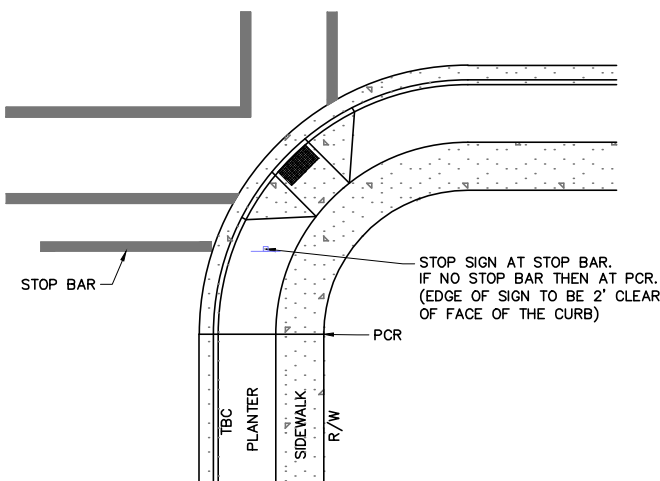
SURVEY MONUMENT PLACEMENT IN PAVEMENT

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	24
CAD DWG:	V STD DWGS
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



TYPICAL STREET/STOP SIGN INSTALLATION



NOTES:

- STREET SIGNS SHALL BE INSTALLED ON LIGHT POLES OR ABOVE STOP SIGNS. IF THE STREET HAS A NAME, THE NAME SHALL BE PLACED ABOVE AND THE NUMBER UNDERNEATH.
- SIGN POSTS SHALL BE "TELESPAR" OR EQUAL 2" SQUARE TUBING MANUFACTURED PRODUCTS INSTALLED IN V-LOC BREAK AWAY ANCHORS.
- ALL REGULATORY SIGN SHALL BE SIZED AND INSTALLED PER CURRENT MUTCD STANDARDS.

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REVISION

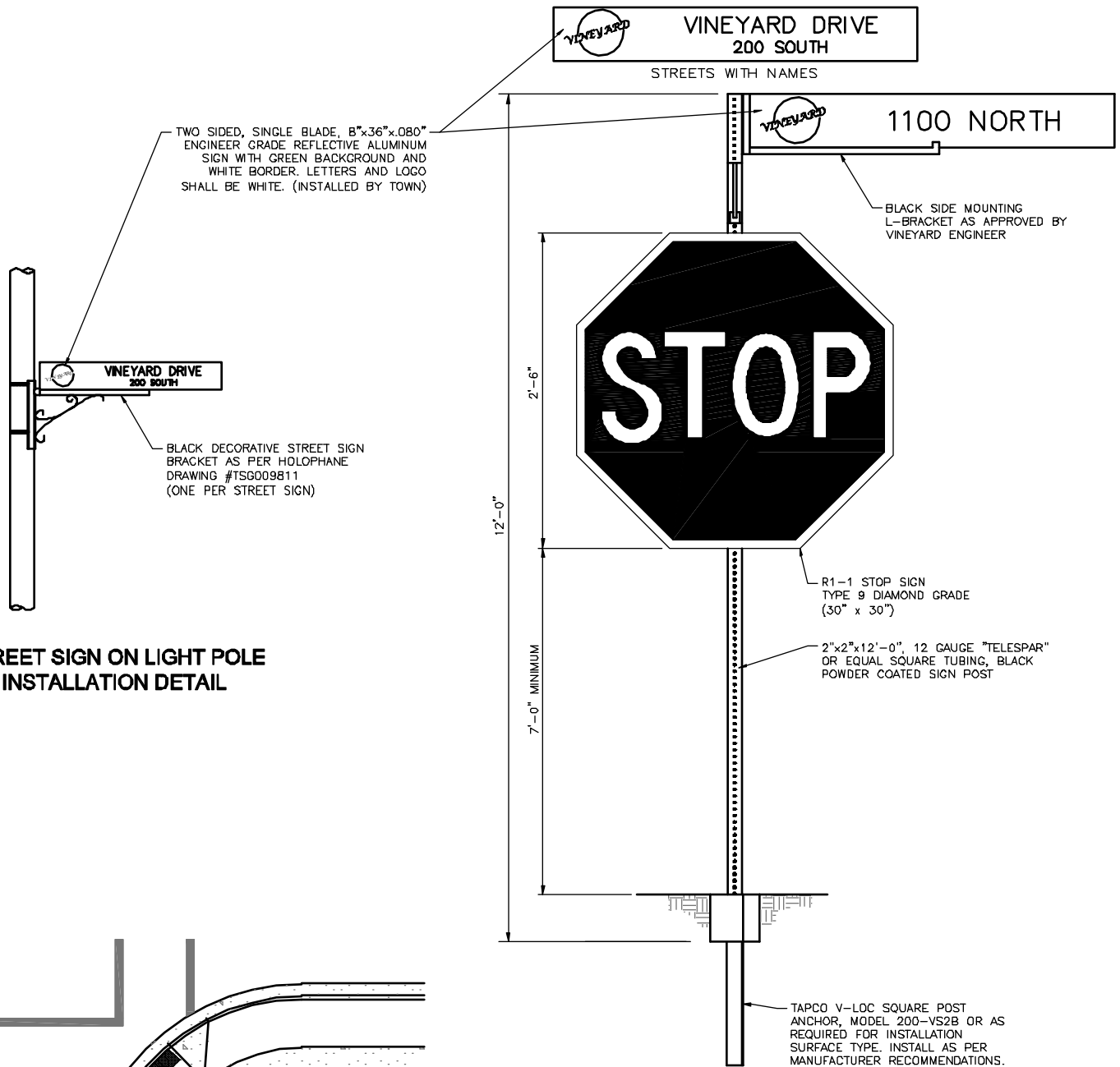
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCK	DES	CHG	8/12/25
3				
4				



TYPICAL STREET / STOP SIGN INSTALLATION DETAIL

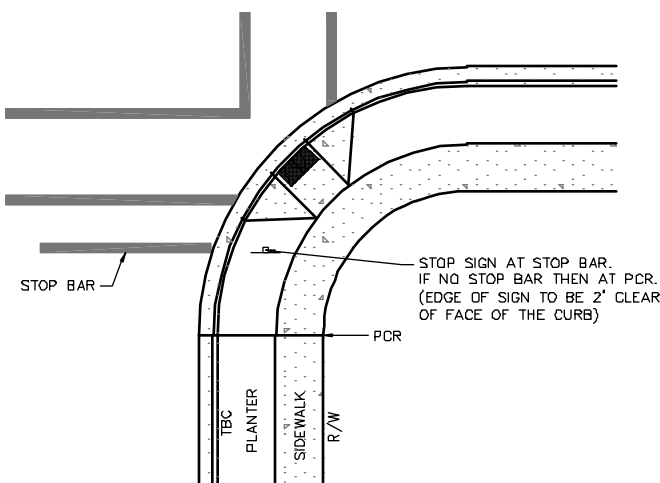
VINEYARD

STANDARD DRAWING NUMBER:	32
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



**STREET SIGN ON LIGHT POLE
INSTALLATION DETAIL**

TYPICAL STREET/STOP SIGN INSTALLATION



**TYPICAL STREET/STOP SIGN LOCATION
PLAN VIEW**

NOTES:

1. STREET SIGNS SHALL BE INSTALLED ON LIGHT POLES OR ABOVE STOP SIGNS. IF THE STREET HAS A NAME, THE NAME SHALL BE PLACED ABOVE AND THE NUMBER UNDERNEATH.
2. SIGN POSTS SHALL BE "TELESPAR" OR EQUAL 2" SQUARE TUBING MANUFACTURED PRODUCTS INSTALLED IN V-LOC BREAK AWAY ANCHORS.
3. ALL REGULATORY SIGN SHALL BE SIZED AND INSTALLED PER CURRENT MUTCD STANDARDS.

**TYPICAL STREET / STOP SIGN
INSTALLATION DETAIL**

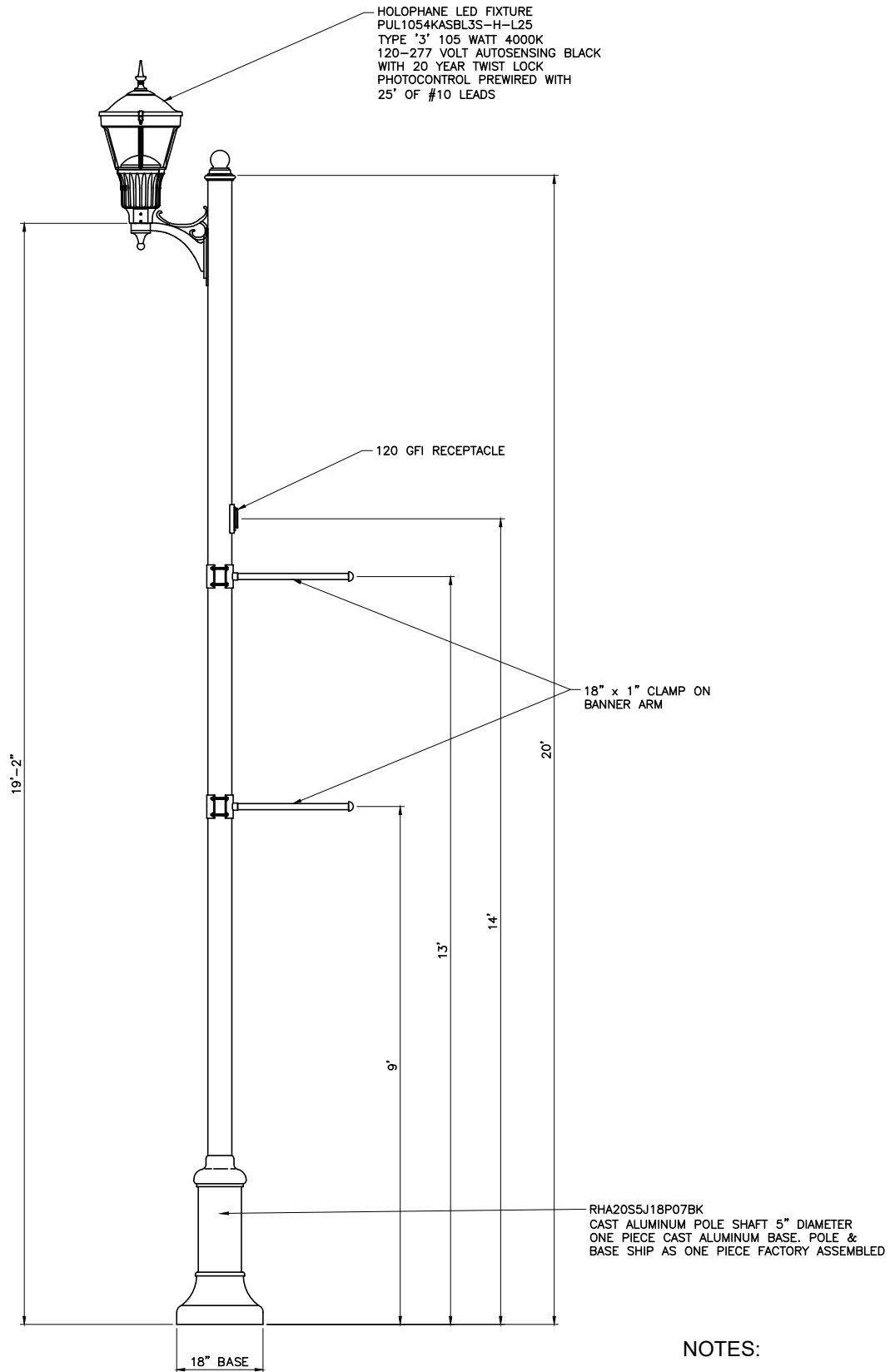
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	25
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



VINEYARD
STAY CONNECTED

STATEMENT OF USE				
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REVISION				
NO.	DESCRIPTION	BY	APPR.	DATE
1	STANDARD UPDATE	JMM	DES	10/01/16
2				
3				
4				



NOTES:

1. SUPPLIED BY HOLOPHANE.

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REVISION

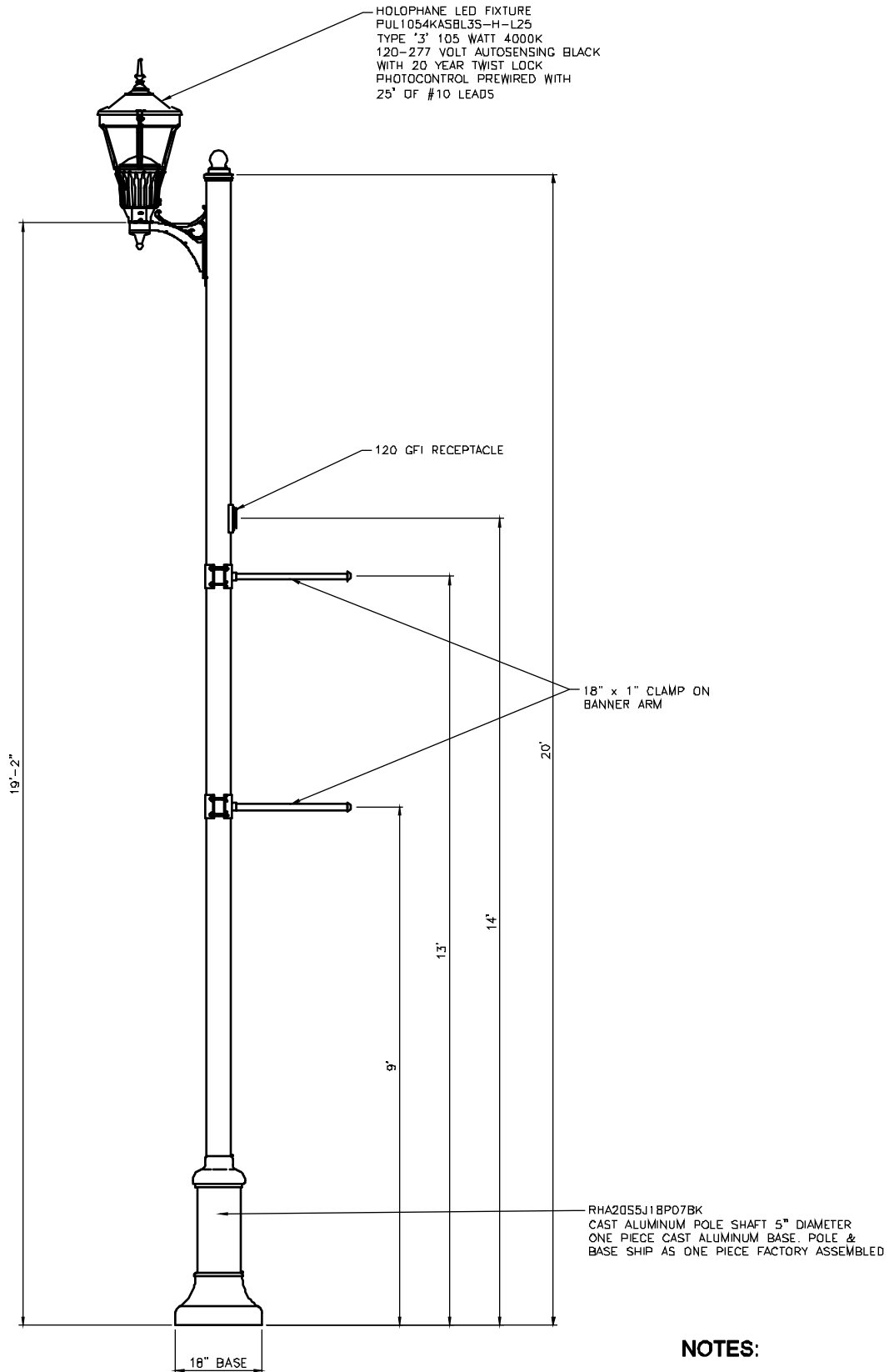
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCE	DOS	CHP	8/12/25
3				
4				



TYPICAL STREET LIGHT 1

VINEYARD

STANDARD DRAWING NUMBER:	33
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

1. SUPPLIED BY HOLOPHANE.



STATEMENT OF USE

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REVISION

NO.	DESCRIPTION	BY	APPR.	DATE
1	STANDARD UPDATE			10/07/19
2				
3				
4				

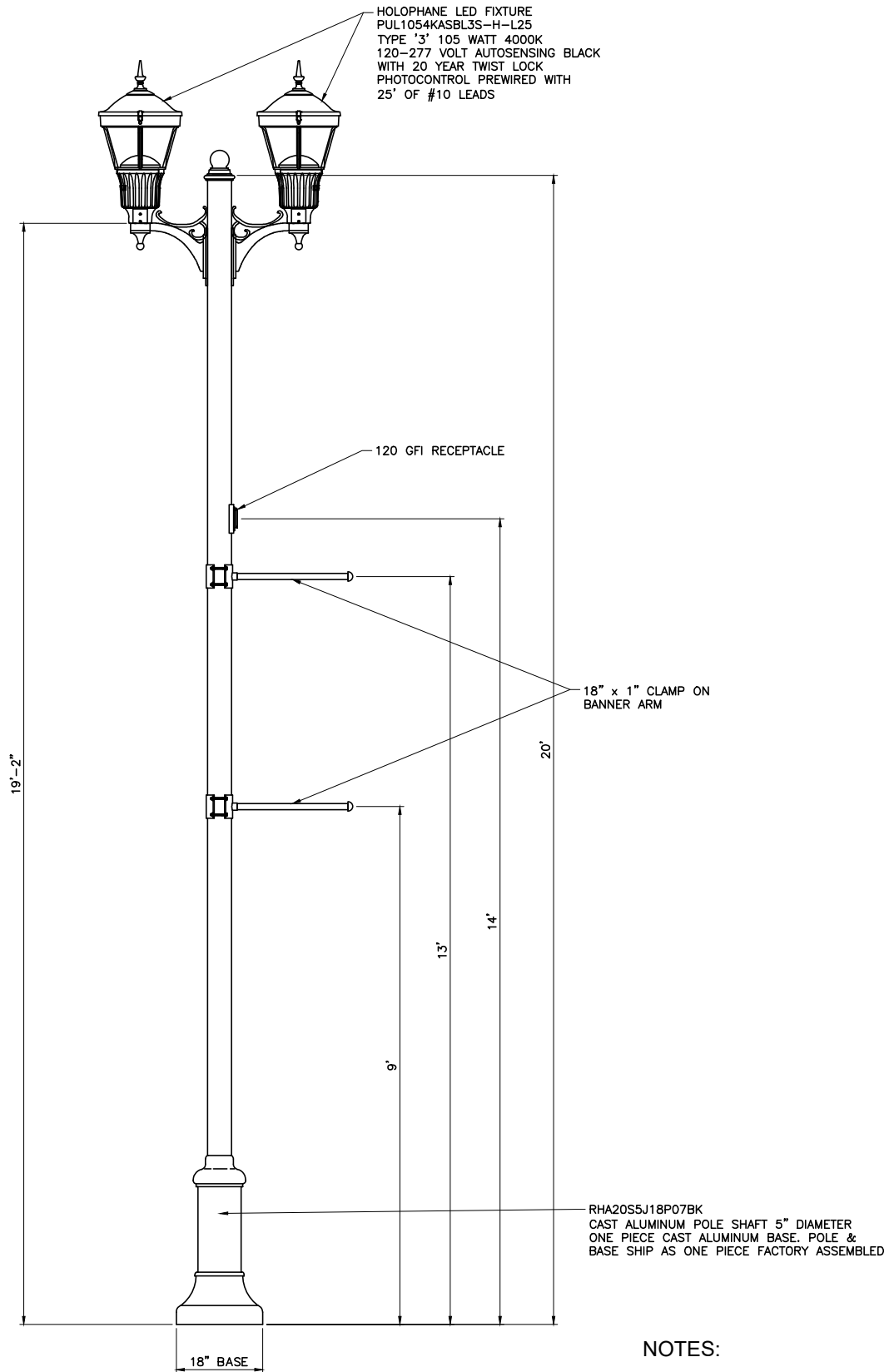


VINEYARD
STAY CONNECTED

TYPICAL STREET LIGHT 1

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	26
CAD DWG:	V-STD-DWGS
PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CRM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

- SUPPLIED BY HOLOPHANE.

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REVISION

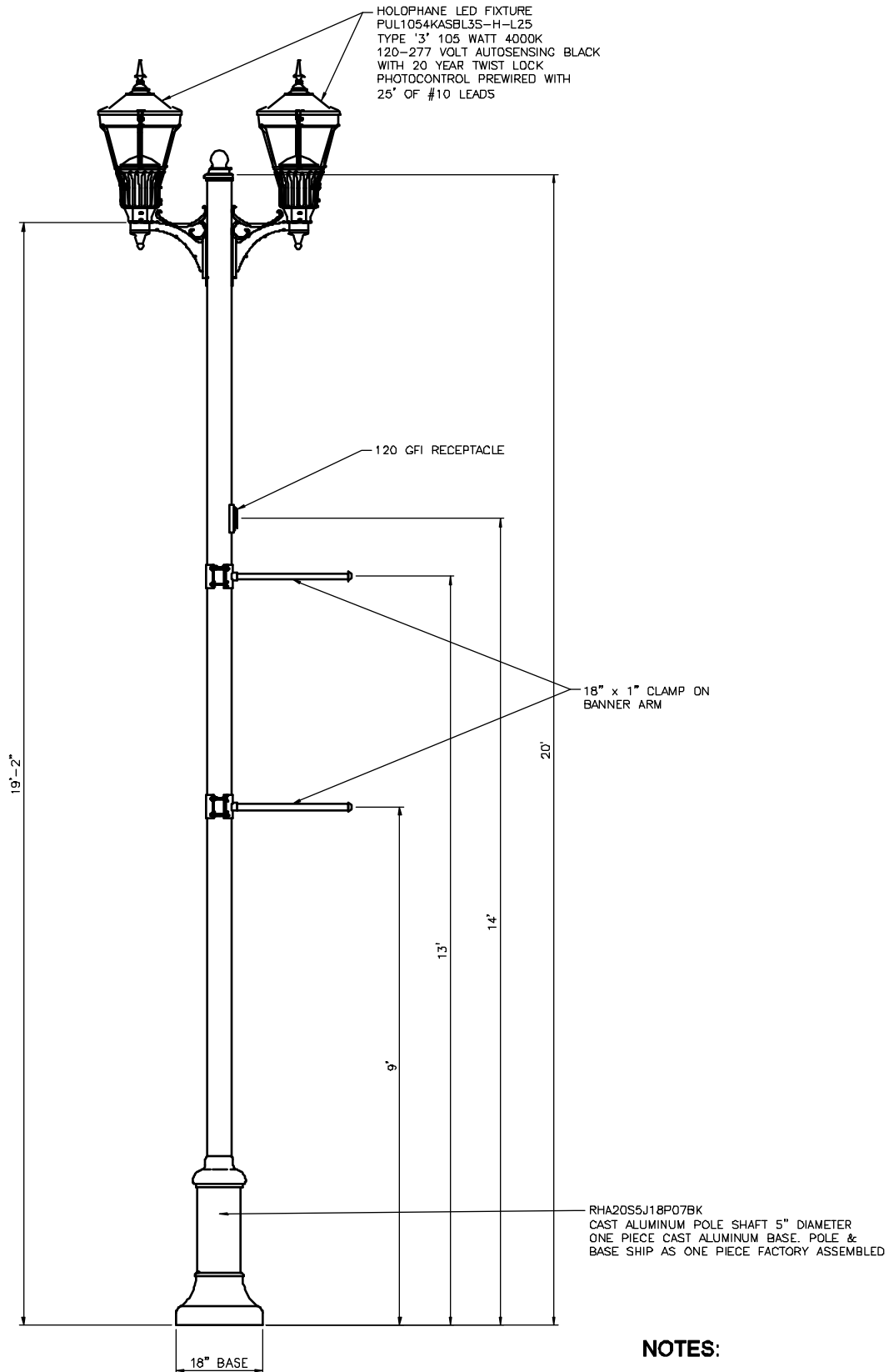
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCE	DCS	CHP	8/12/25
3				
4				



TYPICAL STREET LIGHT 2

VINEYARD

STANDARD DRAWING NUMBER:	34
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

- SUPPLIED BY HOLOPHANE.



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REVISION

NO.	DESCRIPTION	BY	APR	DATE
1	STANDARD UPDATE			
2				
3				
4				

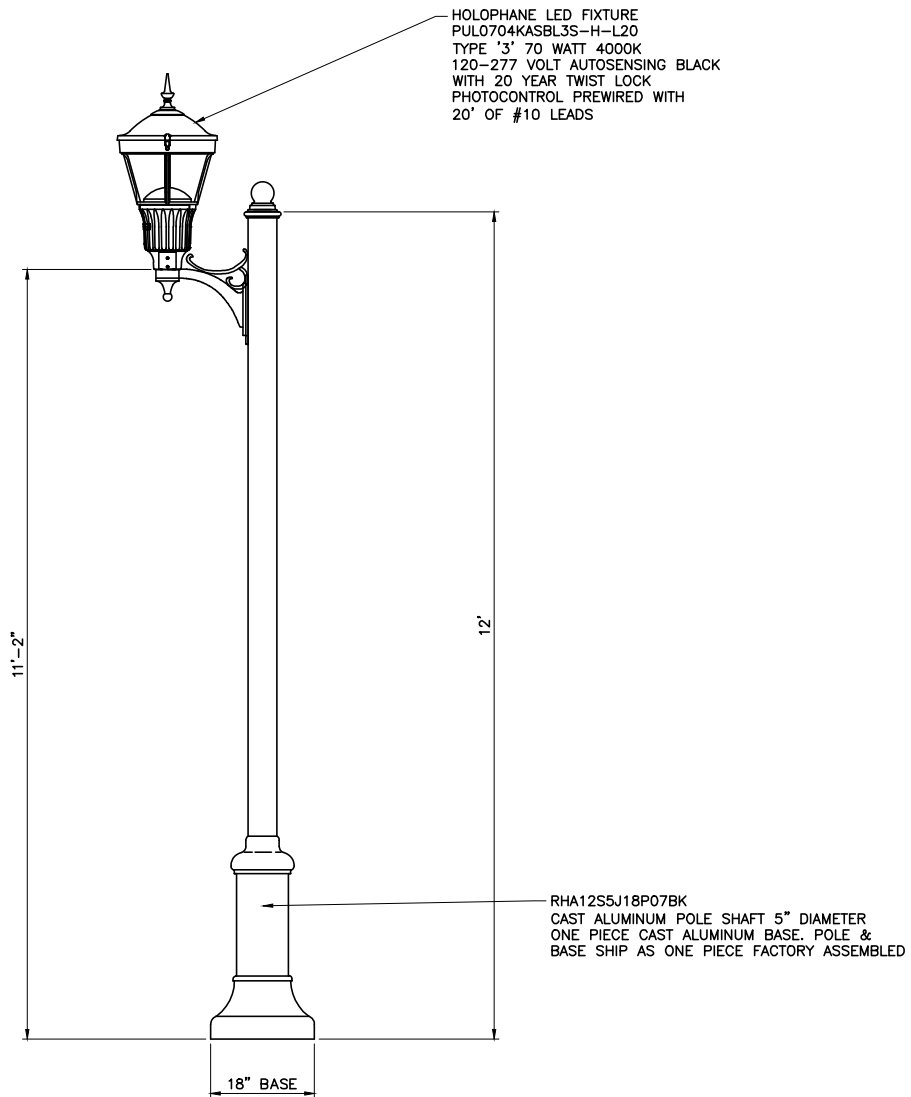


VINEYARD
STAY CONNECTED

TYPICAL STREET LIGHT 2

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	27
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

1. SUPPLIED BY HOLOPHANE.

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REVISION

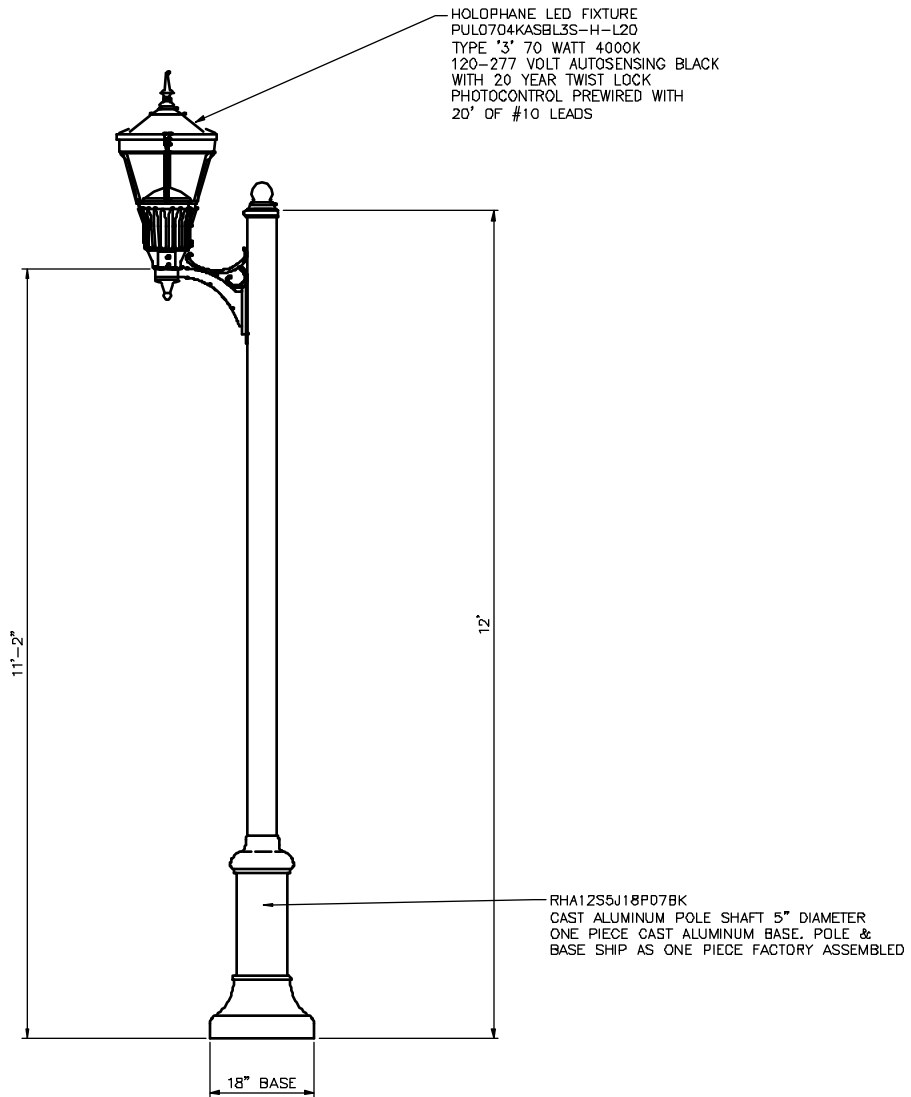
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCE	DS	CH	8/12/25
3				
4				



TYPICAL STREET LIGHT 3

VINEYARD

STANDARD DRAWING NUMBER:	35
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



NOTES:

- SUPPLIED BY HOLOPHANE.



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REVISION

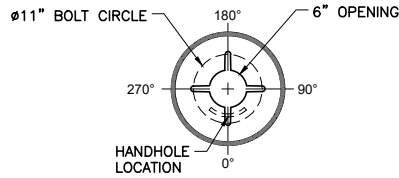
NO.	DESCRIPTION	BY	APR.	DATE
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3				
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TYPICAL STREET LIGHT 3

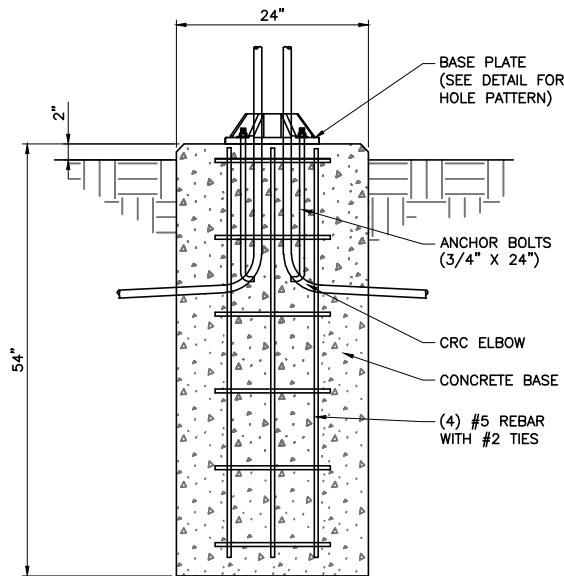
TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	28
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PLOT SCALE:	1:000
DRAWN BY:	JMM
DESIGN BY:	CRM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



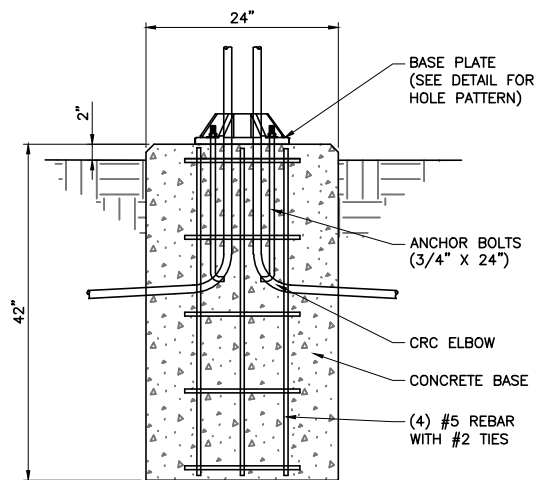
BOTTOM VIEW

(INDICATED POLE IS LAYING DOWN
WITH ACCESS COVER FACING UP)



CONCRETE POLE BASE TYPE A

CONCRETE BASE FOR TYPICAL
STREET LIGHT 1 AND 2



CONCRETE POLE BASE TYPE B

CONCRETE BASE FOR TYPICAL
STREET LIGHT 3

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REVISION

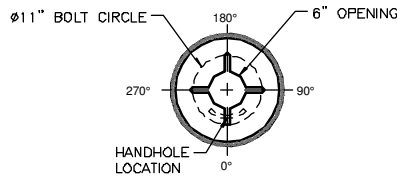
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1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCK	DCS	CHT	8/12/20
3				
4				



CONCRETE POLE BASE (STREET LIGHT)

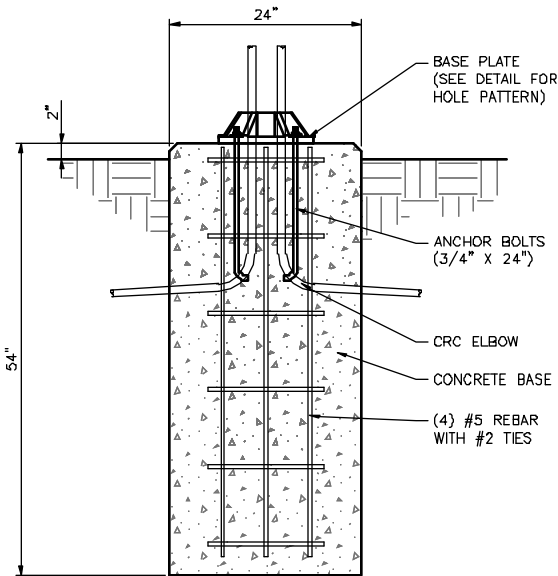
VINEYARD

STANDARD DRAWING NUMBER:	36
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



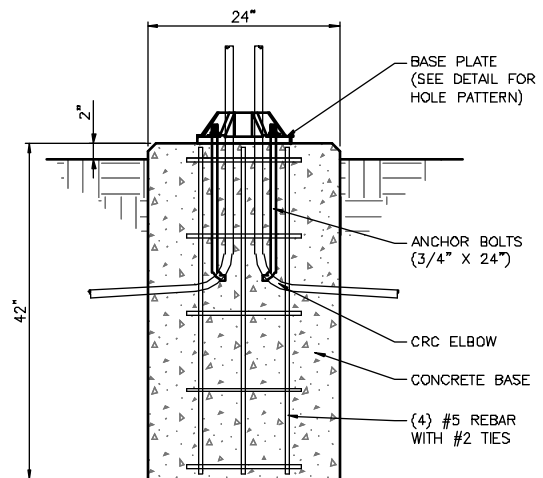
BOTTOM VIEW

(INDICATED POLE IS LAYING DOWN
WITH ACCESS COVER FACING UP)



CONCRETE POLE BASE TYPE A

CONCRETE BASE FOR TYPICAL
STREET LIGHT 1 AND 2



CONCRETE POLE BASE TYPE B

CONCRETE BASE FOR TYPICAL
STREET LIGHT 3



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REVISION

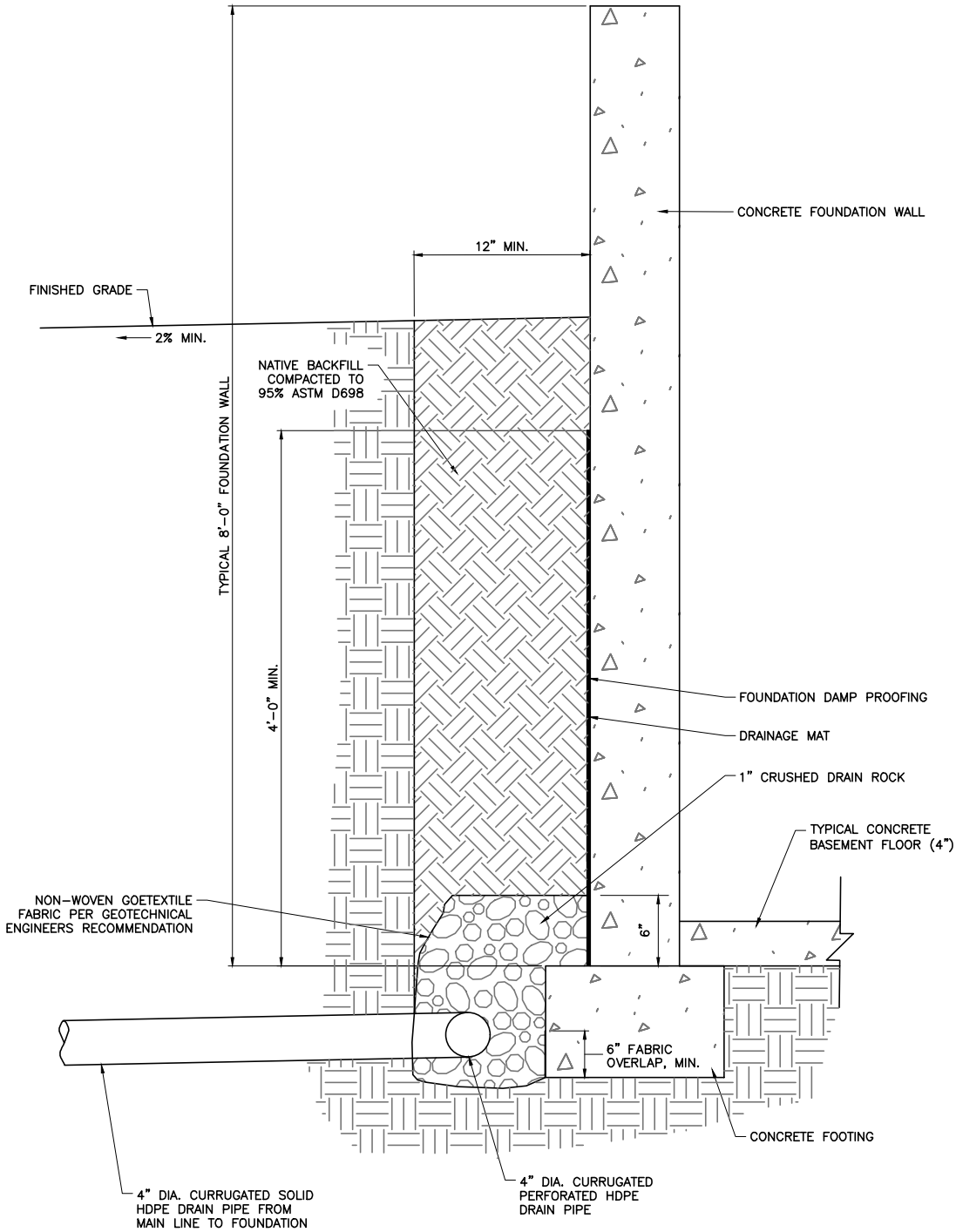
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARD UPDATE	JMM	DES	10/07/19
2				
3				
4				



CONCRETE POLE BASE (STREET LIGHT)

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	29
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHM
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016



4" FOUNDATION DRAIN DETAIL

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REVISION

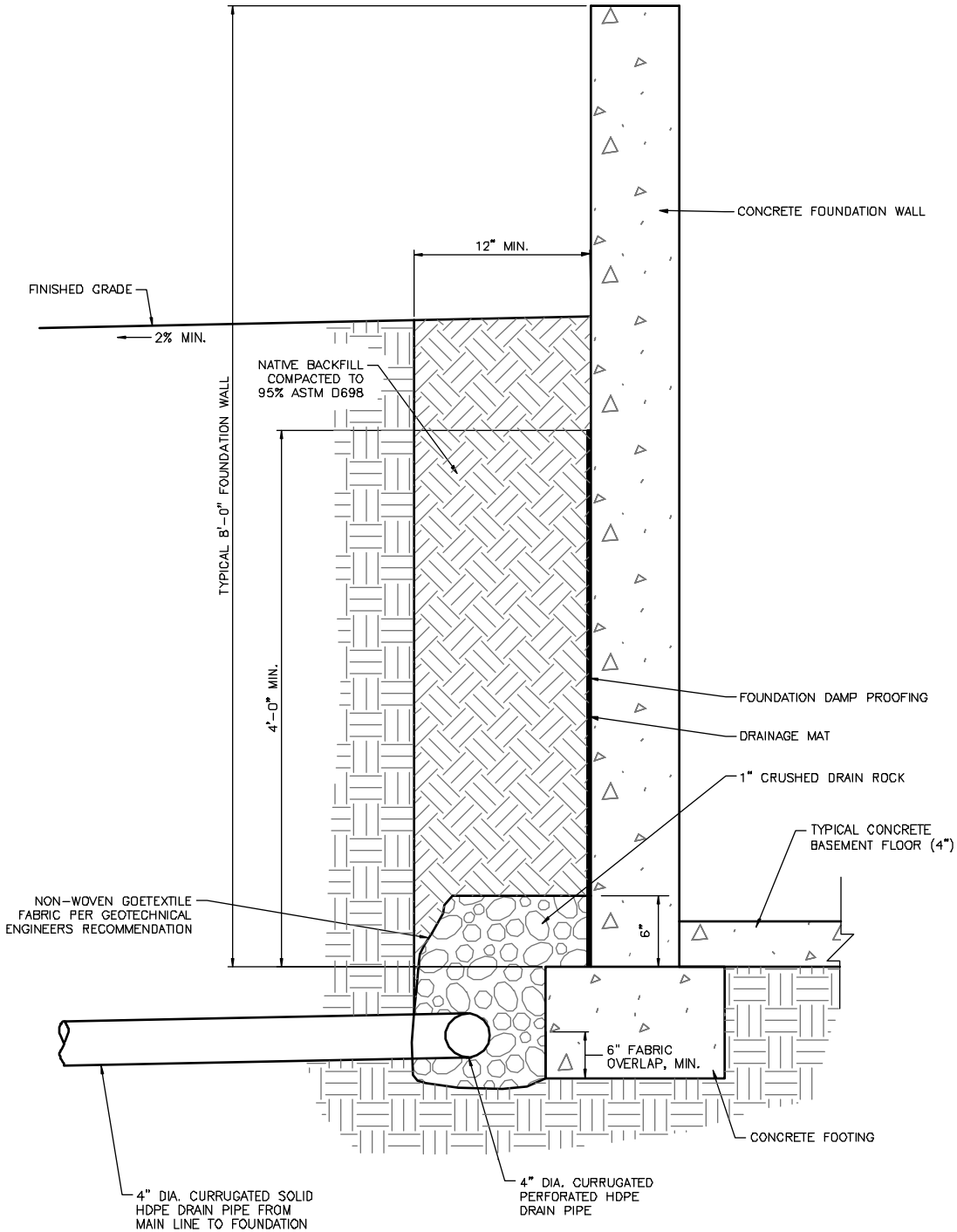
NO.	DESCRIPTION	BY	APR.	DATE
1	STANDARDS UPDATE	JMM	DEC	8/08/19
2	HANSEN, ALLEN & LUCE	DCS	CHP	8/12/25
3				
4				



4-INCH FOUNDATION DRAIN
DETAIL

VINEYARD

STANDARD DRAWING NUMBER:	37
CAD DWG:	STANDARD
PLOT SCALE:	DRAWING
DRAWN BY:	JMM
DESIGN BY:	CRW
CHECKED BY:	DEC
ADOPTED DATE:	SEPTEMBER 1, 2016



4" FOUNDATION DRAIN DETAIL



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REVISION				
NO.	DESCRIPTION	BY	APPR.	DATE
1	STANDARD UPDATE			10/09/19
2				
3				
4				



**4-INCH FOUNDATION DRAIN
DETAIL**

TOWN OF VINEYARD

STANDARD DRAWING NUMBER:	30
CAD DWG: V-STD-DWGS	
PLOT SCALE:	1.000
DRAWN BY:	JMM
DESIGN BY:	CHW
CHECKED BY:	DEO
ADOPTED DATE:	SEPTEMBER 1, 2016