# PROVO MUNICIPAL COUNCIL

## Regular Meeting Agenda

5:30 PM, Tuesday, November 14, 2023
Council Chambers (Room 100)
Hybrid meeting: 445 W. Center Street, Provo, UT 84601 or
https://www.youtube.com/provocitycouncil

The in-person meeting will be held in the **Council Chambers**. The meeting will be available to the public for live broadcast and on-demand viewing on YouTube and Facebook at: youtube.com/provocitycouncil and facebook.com/provocouncil. If one platform is unavailable, please try the other. If you do not have access to the Internet, you can join via telephone following the instructions below.

**TO MAKE A VIRTUAL PUBLIC COMMENT:**
To participate in the public comment portion(s) of the meeting, call in as an audience member as the presentation is wrapping up. Be sure to mute/silence any external audio on your end to reduce feedback (if you are viewing the live proceedings on YouTube, mute the YouTube video; you will be able to hear the meeting audio through the phone while you are on the line).

**Press *9 from your phone to indicate that you would like to speak.** When you are invited to speak, the meeting host will grant you speaking permission, calling on you by the last four digits of your phone number. Please begin by stating your first and last name, and city of residence for the record. After you have shared your comment, hang up. If you wish to comment on a later item, simply re-dial to rejoin the meeting for any subsequent comment period(s).

**November 14 Council Meeting: Dial 346 248 7799. Enter Meeting ID 840 1958 4572 and press #. When asked for a participant ID, press #. To join via computer, visit zoom.us and enter the meeting ID and passcode: 613577.**

## Decorum

The Council requests that citizens help maintain the decorum of the meeting by turning off electronic devices, being respectful to the Council and others, and refraining from applauding during the proceedings of the meeting.

## Opening Ceremony
## Roll Call
## Prayer
## Pledge of Allegiance

## Public Comment

Fifteen minutes have been set aside for any person to express ideas, concerns, comments, or issues that are not on the agenda:

Please state your name and city of residence into the microphone.
Please limit your comments to two minutes.
State Law prohibits the Council from acting on items that do not appear on the agenda.

## Action Agenda

1. Employee of the Month

2. A resolution requesting recertification of the Provo City Justice Court by the Utah Judicial Council. (23-079)

3. An ordinance amending Provo City Code regarding various administrative reports and other miscellaneous code updates. (23-025)

4. A resolution approving the appropriation of $1,313,300 in the Airport Fund from Airport Fund Balance. (23-006)

5. An ordinance amending Provo City Code Section 15.03.020 regarding general development standards 2024 updates. Citywide Application. PLOTA20230274

6. An ordinance amending Provo City Code section 14.34.480 regarding sidewalk cafes. Citywide application. PLOTA20230246

7. An ordinance enacting the Agritourism Overlay Zone. Citywide application. PLOTA20230221

8. An ordinance amending the zone map of approximately 16.9 acres, generally located at 1069 N Geneva Rd, from R1.8 to R1.8(PD) and authorizing a related development agreement. Lakeview North Neighborhood. PLRZ20230104

9. An ordinance amending the zone map of approximately 13.06 acres, generally located at 3410 W Center Street, from A1.10 to AI and authorizing a related development agreement. Fort Utah Neighborhood. PLRZ20220089

## Adjournment

If you have a comment regarding items on the agenda, please contact Councilors at council@provo.org or using their contact information listed at: provo.org/government/city-council/meet-the-council

Materials and Agenda: agendas.provo.org
Council meetings are broadcast live and available later on demand at youtube.com/ProvoCityCouncil
To send comments to the Council or weigh in on current issues, visit OpenCityHall.provo.org.

The next Board of Canvassers will be held on Wednesday, December 6, 2023. The meeting will be held in the Council Chambers, 445 W. Center Street, Provo, UT 84601 with an online broadcast. Work Meetings generally begin between 12 and 4 PM. Council Meetings begin at 5:30 PM. The start time for additional meetings may vary. All meeting start times are noticed at least 24 hours prior to the meeting.

**Notice of Compliance with the Americans with Disabilities Act (ADA)**
In compliance with the ADA, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting are invited to notify the Provo Council Office at 445 W. Center, Provo, Utah 84601, phone: (801) 852-6120 or email mdayley@provo.org at least three working days prior to the meeting. Council meetings are broadcast live and available for on demand viewing at youtube.com/ProvoCityCouncil.

## Notice of Telephonic Communications

One or more Council members may participate by telephone or Internet communication in this meeting. Telephone or Internet communications will be amplified as needed so all Council members and others attending the meeting will be able to hear the person(s) participating electronically as well as those participating in person. The meeting will be conducted using the same procedures applicable to regular Municipal Council meetings.

## Notice of Compliance with Public Noticing Regulations

This meeting was noticed in compliance with Utah Code 52-4-207(4), which supersedes some requirements listed in Utah Code 52-4-202 and Provo City Code 14.02.010. Agendas and minutes are accessible through the Provo City website at agendas.provo.org. Council meeting agendas are available through the Utah Public Meeting Notice website at utah.gov/pmn, which also offers email subscriptions to notices.

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** KNEVES
**Department:** Mayor Office
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** Employee of the Month

**RECOMMENDATION:** Provo City will be presenting the November 2023 Employee of the Month.

**BACKGROUND:** Provo City Legal Department will present the November 2023 Employee of the Month.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** Mayor Kaufusi - Brian Jones

**REQUESTED DURATION OF PRESENTATION:** 5 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:**

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** BRIANJ
**Department:** Legal
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** A resolution requesting recertification of the Provo City Justice Court by the Utah Judicial Council (23-079)

**RECOMMENDATION:** Approval of a resolution requesting recertification of the justice court.

**BACKGROUND:** Every four years the Provo City Justice Court needs to be recertified by the Utah Judicial Council. One of the required steps is a resolution from the Council requesting recertification.

**FISCAL IMPACT:** Continued funding of the operation of the justice court (already budgeted)

**PRESENTER'S NAME:** John Borget

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**
Public Services and Safety Goal #4
Promote a high quality of life for Provo residents, including our most vulnerable, by ensuring a continued commitment to providing exceptional public safety services.

**CITYVIEW OR ISSUE FILE NUMBER:** 23-079

RESOLUTION 2023-

A RESOLUTION REQUESTING THE RECERTIFICATION OF THE PROVO CITY JUSTICE COURT BY THE UTAH JUDICIAL COUNCIL. (23-079)

WHEREAS, Utah Code Section 78A-7-103 requires Justice Courts to be recertified at the end of each four-year term; and

WHEREAS, the term of the present Provo City Justice Court will expire in January 2024; and

WHEREAS, the members of the Provo City Municipal Council have received an opinion letter from Brian Jones, Provo City Attorney, that sets forth the requirements for the operation of a Justice Court and the feasibility of continuing to maintain the same; and

WHEREAS, the members of the Provo City Municipal Council have received a Court Certification Affidavit signed by Justice Court Judge Vernon F. (Rick) Romney, that certifies that the Provo City Justice Court meets or exceeds the minimum requirements and operational standards for a Class 1 Justice Court; and

WHEREAS, on November 14, 2023, the Municipal Council held a duly noticed public meeting to ascertain the facts regarding this matter, which facts are found in the meeting record; and

WHEREAS, after considering the facts presented, the Municipal Council finds that it is in the best interests of Provo City to continue to provide for a Provo City Justice Court.

NOW, THEREFORE, be it resolved by the Municipal Council of Provo City, Utah, as follows:

PART I:

The Municipal Council hereby (i) requests recertification of the Provo City Justice Court by the Utah Justice Courts Standards Committee and the Utah Judicial Council, and (ii) affirms its willingness to continue to meet all requirements set forth by the Judicial Council for continued operation of the Provo City Justice Court for the next four-year term of the court, except as to any requirement waived by the Utah Judicial Council.

PART II:

This resolution shall take effect immediately.

END OF RESOLUTION.

provo
LEGAL

TEL 801 852 6140
351 W CENTER ST
PO BOX 1849
PROVO, UT 84603

November 14, 2023

Provo City Municipal Council
445 West Center Street
Provo, Utah 84601

Re: Provo City Justice Court Update and Recertification

Dear Honorable Members of the Provo City Municipal Council:

On June 29, 2005, Provo City filed a written declaration of its intent to form a Class I Justice Court on July 1, 2007. Since that time, every four years the Justice Court has engaged in the recertification process, the last recertification occurring in 2019. It is now time for Provo City to initiate the recertification process for a new four-year term. This letter will affirm that Provo City has met and will continue to meet all the requirements for certification and request your official action to recertify the Provo City Justice Court.

Class I Court. The Justice Court has been serving Provo City's more than 113,000 residents. Based on past criminal court filings, the Provo City Justice Court is a Class I Court with more than 720 citations or cases filed per month. The Court is open daily and in full operation with one full-time justice court judge. Provo City is providing and compensating sufficient clerical personnel necessary to conduct the business of the court. The judge and the clerks attend court at regularly scheduled times consistent with requirement for a Class I Court. The Judge is compensated at a fixed rate and his compensation will not be reduced during his term of office.

Court Facility. The Court is located at 75 East 1700 South, Suite I00, Provo, Utah 84606. The court facility provides one dedicated courtroom, with a jury deliberation room; a judge's chambers; a court administrator's office; a prisoner transport sally port and holding cells; and various court clerk offices all located in the same facility. Hours of operation are posted conspicuously at the Justice Court and on the Provo City website.

We believe the court facility meets or exceeds the minimum Courtroom/Office standards adopted by the Judicial Council. The Justice Court provides suitable furnishings for a courtroom including a bench (desk) and chair for the judge on

appropriate risers, a gavel, a suitable desk and chairs for the court clerks, a witness chair, separate tables and appropriate chairs for plaintiffs and defendants, a Utah State flag, a United States flag, a separate area and chairs for at least four jurors, a separate area with appropriate seating for the public, an appropriate room for jury deliberations, and an appropriate area or room for victims and witnesses which is separate from the public.

Likewise, office space and furnishings include suitable desks and chairs for the judge and clerks, telephones for the judge and clerks, secure filing cabinets for the judge and the clerks, secure storage space, judicial robe, appropriate forms and office supplies to conduct court business, cash registers, and computers with word processing and other necessary software, and copy machines.

Prosecution and Indigent Defense. Provo City continues to screen and prosecute cases. Its prosecutors will represent the City in all pretrial, trial, and appellate court proceedings. Provo City provides funding for indigent defense counsel for any defendant who requests representation and qualifies. Provo City is responsible for payment of statutory juror and witness fees.

Law Enforcement, Court Security, and Security Plan. The law enforcement agencies that are regularly involved in law enforcement within the Court's jurisdiction include: the Provo City Police Department (currently staffed at 114 sworn peace officers), the Utah County Sheriff's Department, BYU Police Officers, and the Utah Highway Patrol. Security for the Court is provided at all times the Court is open by a contracted constable and deputy constables. The Court facility contains a sally port and secure prisoner holding facilities.

Legal Resources and Training. As required by law, copies of motor vehicle laws of the State of Utah, the Utah Code, the Provo City Code, the Justice Court Manual, the Utah Court Rules Annotated, the current Uniform Bail Schedule, Code of Judicial Administration, and the other legal resources as required under Utah Code section 78A-7-103(1)(h) are available at the Justice Court and kept current. Provo City is responsible for costs of the judges' attendance at Judicial Council training. Likewise, Provo City assumes the expenses of the travel of Court Clerks for the purposes of attending training sessions conducted by the Judicial Council.

Reporting and Auditing. Procedures are adopted and in place to ensure that fines, surcharges and assessments which are payable to the State will be forwarded as required by law. The Justice Court reports required case disposition information to DLD, BCI and the Administrative Office of the Courts electronically, via the internet,

or through such other method as the Utah Judicial Council directs. Procedures are in place to ensure that all reports and audits are made and timely filed as provided by law or by rule of the Utah Judicial Council.

The Justice Court has internet access, and appropriate software and security/encryption technology to allow for electronic reporting and access to the Driver License Division and the Bureau of Criminal Identification, as defined by the reporting and retrieval standards promulgated by the Department of Public Safety. The Justice Court is using the State of Utah's CORIS computer software to track cases and file reports and WebEx to conduct video arraignments. The Justice Court has procured the necessary equipment to digitally record court proceedings and retains the audio recordings for one year in compliance with section 78A-7-103(1)(a) of the Utah Code.

Based upon my review of Chapter 7 of Title 78A of the Utah Code, the Utah Code of Judicial Administration, and the Justice Court Standards for Recertification, I am of the opinion that Provo City is meeting or exceeding the requirements for recertification of the Provo City Justice Court. Should you wish additional information regarding recertification, I enclose the Administrative Office of the Courts' letter regarding recertification and the Justice Court Standards for Recertification of Existing Courts (October 2023). If we can supply you with any additional information regarding the recertification of the Provo City Justice Court, please let me know.

Sincerely,

J. Brian Jones

J. Brian Jones
Provo City Attorney

ENCLOSURES: Recertification letter from Justice Court Administrator James Peters,
Justice Court Standards for Recertification of Existing Courts (2023)

# Utah Code Jud. Admin. B

Appendix B - Justice Court Standards For Recertification

**Instructions to applicant for recertification**

As part of the application process, each entity should carefully review all requirements for the operation of Justice Courts. In order to aid governing bodies in obtaining the necessary information regarding the continuing obligations of an entity with respect to the operations of its Justice Court, the governing body of each entity must request a written opinion from its attorney advising the entity of all requirements for the operation of a Justice Court, and the feasibility of maintaining a Justice Court. In addition, prior to submission of this application, each entity must duly pass a resolution requesting recertification. The resolution must also affirm that the entity is willing to meet all requirements for the operation of the Justice Court during the period of certification. A copy of the attorney's opinion and the resolution must accompany the application.

A representative of the entity may appear before the Board of Justice Court Judges to present the application and may present any additional information which the applicant desires to present to the Board. In the event that additional information is deemed necessary, the Board may request such additional information from the applicant.

Certification will authorize the court to process all cases which come within the jurisdiction of the Justice Court including criminal, civil and small claims cases pursuant to Section 78A-7-106 of the Utah Code.

**(1) Statutory Requirements.** Statutes of the State of Utah require that certain standards be met in the operation of a Justice Court. These statutory requirements include:

(1)(A) All official court business shall be conducted in a courtroom or an office located in a public facility which is conducive and appropriate to the administration of justice (Section 78A-7-213 ).

(1)(B) Each court shall be open and judicial business shall be transacted every day as provided by law (Section 78A-7-213), although the judge is not required to be present during all hours that the court is open.

(1)(C) The hours that the court will be open shall be posted conspicuously at the court and in local public buildings (Section 78A-7-213).

(1)(D) The judge and the clerk of the court shall attend the court at regularly scheduled times (Section 78A-7-213).

(1)(E) The entity operating the Justice Court shall provide and compensate a judge and clerical personnel to conduct the business of the court (Section 78A-7-206 and Section 78A-7-207).

(1)(F) The entity operating a Justice Court shall assume the expenses of travel, meals, and lodging for the judge of that court to attend required judicial education and training (Section 78A-7-205).

(1)(G) The entity operating a Justice Court shall assume the cost of travel and training expenses of clerical personnel at training sessions conducted by the Judicial Council (Section 78A-7-103 ).

(1)(H) The entity operating the Justice Court shall provide a sufficient staff of public prosecutors to attend the court and perform the duties of prosecution (Section 78A-7-103).

(1)(I) The entity operating the court shall provide adequate funding for attorneys where persons are indigent as provided by law (Section 78A-7-103).

(1)(J) The entity operating the court shall provide sufficient local law enforcement officers to attend court when required and provide security for the court (Section 78A-7-103).

(1)(K) Witnesses and jury fees as required by law shall be paid by the entity which creates the Court (Section 10-7-76 and 17-50-319).

(1)(L) Any fine, surcharge, or assessment which is payable to the State shall be forwarded to the State as required by law (Section 78A-7-120 and 78A-7-121).

(1)(M) Every entity operating a court shall pay the judge of that court a fixed compensation within the range provided by statute (Section 78A-7-206).

(1)(N) Court shall be held within the jurisdiction of the court, except as provided by law (Section 78A-7-212 ).

(1)(O) The entity operating the court shall provide and keep current for the court a copy of the Motor Vehicle Laws of the State of Utah, appropriate copies of the Utah Code, the Justice Court Manual, state laws affecting local governments, local ordinances, and other necessary legal reference material (Section 78A-7-103).

(1)(P) All required reports and audits shall be filed as required by law or by rule of the Judicial Council pursuant to Section 78A-7-215.

**(2) Judicial Council Minimum Requirements.** In addition to those requirements which are directly imposed by statute, the Judicial Council has established additional requirements for the creation and certification of Justice Courts, as follows:

(2)(A) A clerk shall be available for at least one hour each day that the court is required to be open and during court hearings, as required by the judge. These hours shall be posted on the court's website.

(2)(B) The judge shall be available to conduct court business as needed, performing all duties required and exercising ultimate responsibility for the administration of justice as an independent branch of government.

(2)(C) All court hearings shall be conducted in a designated courtroom, including remote transmission, as permitted by the Judicial Council, or in another location authorized by the Presiding Judge.

(2)(D) That the minimum furnishings for a courtroom shall include: a desk and chair for the judge (on a riser at least six inches above the well), a desk and chair for the court clerk, chairs for witnesses, separate tables and appropriate chairs for plaintiffs and defendants, a Utah State flag, a United States flag, a separate area and chairs for at least four jurors, a separate area with appropriate seating for the public, an appropriate room for jury deliberations, and an appropriate area or room for victims and witnesses which is separate from the public. as well as a judicial robe, a gavel, and necessary forms and supplies.

(2)(E) Office space for the judge and clerk shall be appropriate (under certain circumstances this space may be shared, but if shared, the judge and clerk must have priority to use the space whenever needed). The office space shall include a desk for the judge and a desk for the clerk, secure filing cabinets for the judge and the clerk, a telephone for the judge and a telephone for the clerk, appropriate office supplies to conduct court business, a cash register or secured cash box for each clerk performing cashiering duties, a computer with word processing software, and access to a scanner and copy machine.

(2)(F) The court shall provide interpreters as required by Rule 3-306.04 of the Code of Judicial Administration.

(2)(G) The entity shall have at least one peace officer (which may be contracted).

(2)(H) A court security plan shall be submitted and approved as required by Rule 3-414 of the Code of Judicial Administration.

(2)(I) Each court shall have at least one computer with access to the internet, and appropriate software and security/encryption technology to allow for electronic reporting and access to Driver License Division and the Bureau of Criminal Identification, as defined by the reporting and retrieval standards promulgated by the Department of Public Safety.

(2)(J) Each court shall report required case disposition information to DLD, BCI and the Administrative Office of the Courts electronically, as described in Section (2)(I) above.

(2)(K) Clerks' education hours shall be reported to the AOC on an annual basis.

(2)(L) The appointment of the clerk(s) assigned to serve the court shall be subject to the judge's approval, who may participate in the interview and personnel evaluation process for the clerk(s) at his or her discretion.

(2)(M) Court staff shall be certified as contemplated by Rule 3-303 of the Code of Judicial Administration.

(2)(N) Any interlocal agreement relating to court operations, as amended to date, shall be provided to the Justice Court Administrator.

(2)(O) The court shall accept credit and debit cards through a system that integrates with CORIS.

(2)(P) The court shall have access to UCJIS.

(2)(Q) An audio recording system shall maintain a digital recording of all court proceedings (Section 78A-7-103).

(2)(Q)(i) For Class I and Class II justice courts, the system must:

(2)(Q)(i)(a) be a stand-alone unit that records and audibly plays back the recording;

(2)(Q)(i)(b) index, back-up and archive the recording and enable the record to be retrieved.

(2)(Q)(i)(c) have at least four recording channels;

(2)(Q)(i)(d) have a one-step "on" and "off" recording function;

(2)(Q)(i)(e) have conference monitoring of recorded audio;

(2)(Q)(i)(f) have external record archiving from the unit with local access;

(2)(Q)(i)(g) be capable of being integrated with the court's public address system; and

(2)(Q)(ii) For Class III and Class IV justice courts, the system must, at a minimum:

(2)(Q)(ii)(a) be a stand-alone unit that records and audibly plays back the recording;

(2)(Q)(ii)(b) index, back-up and archive the recording and enable the record to be retrieved; and

(2)(Q)(ii)(c) have at least two recording channels.

(2)(Q)(iii) The Board of Justice Court Judges may create a list of products that meet these criteria.

**(3) Classification of Courts Based on Case Filings.** In establishing minimum requirements, the Judicial Council has determined that Justice Courts with higher case filings require greater support services. To accommodate the great differences in judicial activity between Justice Courts within the state, the Council has divided courts into four classes based upon the average monthly cases filed in that court. Minimum standards have been set for each classification.

(3)(A) Class IV Courts. Courts which have an average of less than 61 cases filed each month are classified as Class IV Courts. The minimum requirements for a Class IV Court include both the statutory requirements and requirements promulgated by the Judicial Council, and are sometimes hereinafter referred to as "base requirements."

(3)(B) Class III Courts. Courts which have an average of more than 60 but less than 201 cases filed each month are classified as Class III Courts. In addition to the base requirements, a Class III Court must be open more hours each week, and court must be scheduled at least twice per month.

(3)(C) Class II Courts.Courts which have an average of more than 200 but less than 501 cases filed each month are classified as Class II Courts. In addition to the base requirements, Class II Courts are required to be open additional hours, the courtroom configuration is required to be permanent (although the courtroom may be used by another entity when the court is not in session), court must be scheduled at least weekly, the judge must be provided an appropriate

office (chambers) for his own use, clerical space may not be shared, at least one full-time clerk must be provided, and the courtroom, judge's chamber and clerk's office must be in the same building.

(3)(D) Class I Courts. Courts which have an average monthly filing of more than 500 cases are classified as Class I Courts. Class I Courts are considered to be full-time courts. In addition to the base requirements, a Class I Court must have a full-time judge, at least three full-time clerks, at least one of whom is available during regular business hours, it must have a courtroom which is dedicated for the exclusive use as a court and which meets the master plan guideline adopted by the Judicial Council, and the judge's chambers and clerk's office cannot be shared by another entity.

**(4) Waivers.** The State Legislature has provided that any Justice Court which continues to meet the minimum requirements for its class is entitled to be recertified. However, the Judicial Council also has authority to waive any minimum requirement which has not been specifically imposed by the Legislature (i.e. requirements (1)(A) (1)(Q) above. Waiver is at the discretion of the Judicial Council and will be based upon a demonstrated need for a court to conduct judicial business and upon public convenience. Any waiver will be for the entire term of the certification. A waiver must be obtained through the Judicial Council each time a court is recertified and, the fact that a waiver has been previously granted, will not be determinative on the issue of waiver for any successive application.

There is a great diversity in the needs of the Justice Courts. The needs of a particular Court are affected by the type of cases filed (some courts have a high percentage of traffic matters, while others handle significant numbers of criminal and small claims matters), the location of the Court, the number of law enforcement agencies served, the policies and procedures followed by each judge with respect to the operation of the Court, and many other factors. Clerical resources and judicial time are particularly sensitive to local conditions. In order to adequately function it is anticipated that some courts will exceed minimum requirements for clerical resources and judicial time. Similarly, the particular circumstances of a court may allow it to operate efficiently with less than the minimum requirements in the above areas; in such circumstances a waiver may be requested.

**(5) Extensions.** The statute also provides that the Judicial Council may grant an extension of time for any requirement which is not specifically required by statute. An extension may be granted at the discretion of the Judicial Council where individual circumstances temporarily prevent the entity from meeting a minimum requirement. An extension will be for a specific period of time and the certification of the court will terminate at the end of the extension period. In order for the court to continue to operate beyond the extension period, the court must be certified as meeting all requirements, obtain an additional extension, or obtain a waiver as provided above.

**(6) Judge Certificate.** Applications for existing courts for recertification shall be accompanied by a certificate of the judge, on a form approved by the Judicial Council, certifying that the operational standards for the court have been met during the prior year. Any exceptions to compliance with the minimum requirements or operational standards shall be noted on the above form. In addition, individual Justice Court Judges must meet with the

governing body of the entity which created the court at least once a year to review the budget of the court, review compliance with the requirements and operational standards of the court, and discuss other items of common concern and shall certify that this meeting has been held, and that the operational standards for the court have been met during the prior year.

**(7) Justice Court Standards Committee.** Upon submission of an application, the Board of Justice Court Judges will conduct an appropriate independent investigation and notify the entity of its initial recommendations, whether in favor or against certification. If the Board intends to recommend against certification, it shall specify the minimum requirements which have not been met. The entity may then present additional information to the Board, request an extension, or request a waiver. After making an appropriate investigation based upon any additional information or request made by the entity, the Board will then submit its recommendations to the Judicial Council. The recommendations shall specify whether or not a waiver or extension should be granted, if either has been requested. If the recommendation is against recertification, or against waiver, or against extension, the entity may request that it be allowed to make an appearance before the Judicial Council. Any request to appear before the Judicial Council must be filed within 15 days of notification of the Board's recommendations.

If you have any questions concerning this application, please contact James Peters, Justice Court Administrator, by calling (801) 578-3824 or emailing jamesp@utcourts.gov.

*Utah Code Jud. Admin. B*

Amended effective 11/1/2011; amended effective 5/12/2020; amended effective 5/12/2020; amended effective 5/1/2023.

casetext

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** MISANDERS
**Department:** Council
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** An ordinance amending Provo City Code regarding various administrative reports and other miscellaneous code updates. (23-025)

**RECOMMENDATION:** Approval of the ordinance to 1) amend various reporting requirements and deadlines and 2) repeal various required reports.

**BACKGROUND:** For the past several months, the Council Office has been reviewing the City Code looking for all the required administrative reports. Many of these have been forgotten over the years and have not been formally reported to the Council. During the August 22nd Work Meeting, the Council recieved a briefing from Staff. It was found that currently there are 29 reports required in Code. In an order to both increase transparency and aid in the Council's decision making process, all reports have been amended to include specific deadlines and reporting requirements. :

The following reports are proposed to be deleted:

Cemetery Sexton Report
Mobile Home Park Business License Report
Graffiti Removal Report

A full list of all regular and triggered reports along with due dates will be included in the Council Handbook.

**FISCAL IMPACT:** $0

**PRESENTER'S NAME:** Justin Harrison, Council Executive Director

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**
Provo City Code 2.50.130(2)(i): The Executive Director's powers and duties may include...Evaluate, report and make recommendations to the Council as to whether the general intent of Council policies, in the form of ordinances and resolutions, are being complied with and carried forth by the City, in order to determine whether additional ordinances, resolutions or policies are required

**CITYVIEW OR ISSUE FILE NUMBER:** 23-025

ORDINANCE 2023-____.

AN ORDINANCE AMENDING PROVO CITY CODE REGARDING VARIOUS ADMINISTRATIVE REPORTS AND OTHER MISCELLANEOUS CODE UPDATES. (23-025)

RECITALS:

It is proposed that Provo City Code be amended to update various administrative reporting requirements; and

Utah State Code 10-3b-203(1)(a)(ii) allows for the review of municipal administration; and

During the August 22nd Work Meeting, the Council heard a presentation detailing various options for cleaning up code sections regarding administrative reports; and

Accurate, informative, and timely delivery of reports will benefit the Municipal Council's decision-making process; and

On November 14, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

After considering the facts presented to the Municipal Council, the Council finds that (i) Provo City Code should be amended as set forth below, and (ii) such action furthers the health, safety, and general welfare of the citizens of Provo City.

THEREFORE, the Municipal Council of Provo City, Utah ordains as follows:

PART I:

The various sections of the Provo City Code listed therein are amended as shown in Exhibit A.

PART II:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance prevails.

B. This ordinance and its various sections, clauses, and paragraphs are severable. If any part, sentence, clause, or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance is not affected by that determination.

C. This ordinance takes effect immediately after it has been posted or published in accordance with Utah Code Section 10-3-711, presented to the Mayor in accordance with Utah Code Section 10-3b-204, and recorded in accordance with Utah Code Section 10-3-713.

D. The Municipal Council directs that the official copy of Provo City Code be updated to reflect the provisions enacted by this ordinance

EXHIBIT A

## 2.10.030 Mayor - Functions and Duties.

The Mayor shall be the chief executive officer of the City and its official head for ceremonial purposes. The Mayor's powers and duties include but are not limited to the following:

…

(13) Furnishing the Municipal Council with a written report, by the first day of the fourth quarter of each calendar year~~periodically as determined by ordinance~~, setting forth the amounts of all budget appropriations, the total disbursements to date from these appropriations, and the amount of indebtedness incurred or contracted against each appropriation~~s~~ (including disbursements and indebtedness incurred and not paid) and the percentage of the appropriations encumbered to date for the previous fiscal year, which reports shall be made available for public inspections;

…

(15) Preparing and submitting to the Municipal Council:

(a) a budget transmittal letter ~~State of the City report~~ to coincide with submittal of the budget;

(b) an annual report of the City's financial affairs, within 180 days following the close of the City's fiscal year (as established by State law);

…

(18) Ensuring that the Municipal Council is furnished with those reports required by State and City code. The Mayor may delegate responsibility to provide each such report to any executive branch employee. References within the code to reports to be provided by the Mayor automatically include any such delegee. The following table summarizes those reports.

| Name of Report | Code Chapter |
|---|---|
| Appropriations Report | 2.10.030(13) |
| Budget Transmittal Letter | 2.10.030(15)(a) |

| | |
|---|---|
| Annual Comprehensive Financial Report | 2.10.030(15)(b) |
| Library Report | 2.26.110 |
| Capital Improvement Project Report | 3.03.020(1) |
| Active Capital Improvement Project Report | 3.03.040 |
| Disposal of Property Report | 3.04.030(9) |
| Settled Claims Report | 3.10.050(5) |
| Utility Transportation Fund Report | 5.08.070 |
| Rental Dwelling License Report | 6.26.140 |
| Mobile Home Rental Dwelling License Report | 6.30.140 |
| State and Affairs of the Police Department Report | 9.01.100(2) |
| Airport Master Plan Implementation Report | 13.01.040(3) |
| Impact Fee Report | 15.08.115 |
| Sewer Connection Projection Report | 15.03.105(1)(a) |

…

## 2.15.030 Sexton - Charge of Cemeteries - Reports.

…

(2) The Sexton shall pay into the City treasury, all monies received by the Office of the Sexton.~~, and shall annually make a full and complete report of official doings to the Mayor, and shall make other reports as the Mayor or Municipal Council may from time to time require.~~

…

## 2.26.110 Board - Annual Reports.

The Library ~~Board of~~ Director~~s~~ shall ~~make~~ deliver a~~n~~ written annual report to the Municipal Council of the City on the operation, condition and ~~operation~~ affairs of the library, including a financial statement. The Library ~~d~~Director~~s~~ shall also ~~provide for the keeping of such records as shall be required by the Utah state library commission in its request for an annual report from the public libraries, and shall~~ submit such annual report to the ~~commission~~ State Library Board as required in Utah Code Title 9, Chapter 7, Part 2, Section 211 as amended.

…

## 2.37.020 Purpose.

The purpose of the Provo Youth City Council is to provide training and opportunity to local youth to interact with the Municipal Council and other important organizations, to allow for an opportunity for input from local youth to local government, to deal with local issues impacting Provo's youth. The program is a volunteer program under the direction of the Council Chair or the Council Chair's delegate. The Provo Youth City Council ~~shall~~ may communicate information on current City issues, hold meetings, report ~~back~~ to the Municipal Council, gather information on youth issues and assist in providing suggestions on policy to be implemented by the Municipal Council over issues involving youth, youth programs, and do any other thing to accomplish the goals of the Provo Youth City Council as determined by the Municipal Council which promotes and protects the public's health, safety, morals and general welfare.

…

## 3.03.020 Capital Improvements.

(1) By March 1 of each year, the Mayor or the Mayor's designee shall prepare and submit to the Municipal Council a written report detailing a capital improvement plan which shall include a summary of each capital improvement project consisting of at least the following information:

…

## 3.03.040 Capital Improvement Project Reporting.

Within thirty (30) days after completion of the annual City financial report and audit report as required by the Uniform Fiscal Procedures Act for Utah Cities, the Mayor or the Mayor's designee shall submit to the Municipal Council a written report on the status of each active capital improvement project which shall include at least the following information:

…

## 3.03.050 Emergency Expenditures.

…

(2) If expenditures are made for an emergency pursuant to Subsection (1) of this Section, the Mayor or the Mayor's designee shall notify the Municipal Council of such expenditure and shall within thirty (30) days submit to the Municipal Council a written report which describes the nature of the emergency and the source of additional funding. The Municipal Council may review such budgetary action at the next available Municipal Council meeting following submission of the report. As part of such review, the Municipal Council may either ratify the source of funds used or take such other budgetary actions as are determined to be appropriate in order to fund the costs of such emergency.

…

## 3.04.030 Disposal of Property - Surplus Property List.

…

(9) The Mayor or the Mayor's designee shall provide to the Municipal Council a~~n~~ written annual report, no later than the first Council meeting in the month of December, detailing all real properties sold, traded, encumbered or divested by the administration over the past year, which report shall contain:

…

## 3.10.050 Authority to Settle Claims.

…

(4) The following schedule shall be used in determining the delegation of authority for settling various classes of claims through financial reimbursement or compensation:

(a) Private property claims with a value of up to seven hundred fifty dollars ($750.00) may be settled by the responsible Department/Office with notification to the City Attorney's Office. Personal injury or bodily injury claims will not be settled within a Department/Office.

(b) Any type of claim with a value between seven hundred fifty dollars and one cent ($750.01) and twelve thousand dollars ($12,000.00) may be settled by the Legal Office. If circumstances warrant, however, claims in this class may be referred to the Chief Administrative Officer for a recommendation.

(c) Any type of claim with a value over twelve thousand dollars ($12,000.00) shall be reviewed by the Chief Administrative Officer and Director of Administrative Services and a recommendation for settlement shall be submitted to the Mayor for approval.

~~(d) The Municipal Council shall be notified by the Mayor of any settlement in excess of thirty thousand dollars ($30,000.00).~~

(~~e~~d) On July 1, 2025, and on July 1 every five (5) years thereafter, the dollar amounts in this Section shall automatically adjust for inflation by reference to the immediately preceding five (5) year actual percentage change in Consumer Price Index for All Urban Consumers, U.S. city average as published by the United States Bureau of Labor Statistics. Each resulting dollar amount after this calculation will then be rounded to the nearest one hundred dollars ($100.00).

(5) The Mayor or the Mayor's designee shall submit a written semiannual report of settled claims.

…

## 5.08.070 Annual Report and Gas Tax Revenues.

(1) ~~Each year during the annual budget process,~~ By the first day of the fourth quarter of each year, the Mayor or the Mayor's designee shall deliver a written report to the Municipal Council ~~shall receive an annual report~~ detailing the income and expenditures of the fund for the previous fiscal year. ~~This report shall be in writing and shall be presented at a meeting of the Municipal Council by representatives of the Public Works Department or the Finance Division of the Administrative Services Department.~~

…

## 5.08.100 Contribution ~~and Internal Revenue Code Section 501(c)(3) Exemption~~.

~~(1)~~ The fee shall not be charged to any person or entity that in lieu of paying the fee makes an advance voluntary contribution to the utility transportation fund in an amount equal to or greater than the amount of the fee imposed by this Chapter.

~~(2) The fee shall not be charged in regard to any property owned and operated by one (1) or more organizations described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Federal Tax Code"), that is:~~

~~(a) Not used primarily for the production of income that is taxable under Section 511 of the Federal Tax Code;~~

~~(b) Exempt from property tax; and~~

~~(c) Used primarily:~~

~~(i) To provide in-patient hospital care;~~

~~(ii) For the education, instruction or training of the individual at the collegiate level or for no more than a nominal charge: (A) on subjects useful to the individual and beneficial to the community; or (B) for the purpose of improving or developing an individual's capabilities; or~~

~~(iii) For religious purposes, including as a house of worship or to provide religious education for youth.~~

~~(3) Any entity seeking an Internal Revenue Code Section 501(c)(3) exemption pursuant to Subsection (2) of this Section shall make application for the exemption and provide proof of qualification.~~

…

## 6.26.140 Compliance Reports.

(1) ~~Within ten (10) days of the beginning~~ By the first day of the second and fourth~~, of each calendar~~ quarter, the Mayor or the Mayor's designee shall provide to the Municipal Council a ~~rental dwelling business license~~ semiannual written report for the second half of the previous calendar year and the first half of the current calendar year, respectively, regarding rental dwelling business licenses that ~~which~~ shows:

(a) the number of rental dwelling business licenses that have been:

(i) issued and have not expired or been revoked;

(ii) applied for but not issued; and

(iii) applied for and not issued which have been pending for more than six (6) months; and~~;~~

(b) the number of rental dwelling units authorized under all presently valid licenses.

(2) In conjunction with the report required under Subsection (1) of this section, the Mayor or the Mayor's designee shall provide a report to the Municipal Council which details the reasons why any license pending for more than one (1) year has not been issued.

…

## 6.30.140 Compliance Reports.

(1) ~~Within ten (10) days of the beginning~~ By the first day of the second and fourth~~, of each calendar~~ quarter, the Mayor or the Mayor's designee shall provide to the Municipal Council a ~~mobile home rental dwelling business license~~ semiannual written report for the second half of the previous calendar year and the first half of the current calendar year, respectively, regarding mobile home rental dwelling licenses that ~~which~~ shows:

(a) the number of mobile home rental dwelling business licenses that have been:

(i) issued and have not expired or been revoked;

(ii) applied for but not issued; and

(iii) applied for and not issued which have been pending for more than six (6) months; and;

(b) the number of mobile home rental dwelling units authorized under all presently valid licenses.

(2) In conjunction with the report required under Subsection (1) of this section, the Mayor or the Mayor's designee shall provide a report to the Municipal Council which details the reasons why any license pending for more than one (1) year has not been issued.

…

## ~~6.31.140 Compliance Reports.~~

~~(1) Within ten (10) days of the beginning of each calendar quarter the Mayor shall provide to the Municipal Council a mobile home park business license report which shows:~~

~~(a) the number of mobile home park licenses that have been:~~

~~(i) issued and have not expired or been revoked;~~

~~(ii) applied for but not issued; and~~

~~(iii) applied for and not issued which have been pending for more than six (6) months; and;~~

~~(b) the number and location of mobile home parks authorized under all presently valid licenses.~~

~~(2) In conjunction with the report required under Subsection (1) of this section, the Mayor shall provide a report to the Municipal Council which details the reasons why any license pending for more than one (1) year has not been issued.~~

…

## 7.05.060 Graffiti Removal.

(1) The Mayor shall establish:

(a) a program to educate the public, particularly minors, about the detrimental effects of graffiti and methods to reduce its proliferation; and

(b) a procedure whereby City personnel will, at least ninety-five (95) percent of the time, remove graffiti located in the City within forty-eight (48) hours or sooner after City receipt of a report thereof if:

(i) the responsible party does not sooner do so; and

(ii) the responsible party has consented to City clean-up of the graffiti. Consent may be granted on a per incident or calendar year basis.

~~(2) At the beginning of each calendar quarter the Mayor shall submit a report to the Municipal Council detailing the following activity for the prior quarter:~~

~~(a) number of reported graffiti incidents;~~

~~(b) cost of graffiti removal; and~~

~~(c) educational efforts undertaken.~~

…

## 9.01.100 Chief of Police - Duties Generally.

…

(2) The Chief shall consult and advise with the Mayor, and act with the Mayor's approval on all matters pertaining to the Police Department not herein specifically provided for, and shall from time to time make such reports as the Mayor shall require and shall annually during a regularly scheduled Council Meeting between the months of February and May ~~make~~ deliver a written report and presentation to the Municipal Council of the state of affairs and conditions of the Police Department.

…

## 9.80.070 Designation Process.

…

(6) Within one hundred twenty (120) days after directing that a study of the proposed permit parking area be undertaken, the City Parking Coordinator shall review the application and ~~submit~~ deliver a written report to the Mayor and Municipal Council which:

(a) Verifies and quantifies petition signatures, if applicable;

(b) Provides analysis from relevant City staff and other entities as appropriate, such as the Transportation and Mobility Advisory Committee, Planning Commission, etc., on the

proposed permit parking area in light of designation criteria set forth in Section 9.80.060, Provo City Code; and

(c) At a minimum, makes recommendations regarding the following:

(i) Permit parking area boundaries,

(ii) Parking time restrictions on public streets,

(iii) Time restriction exemptions, if any,

(iv) Permit cost (based on the total cost to administer program, and including a detail sheet showing number of residences and cost per vehicle in the proposed permit parking area),

(v) Planned enforcement method, and

(vi) Timeline for implementing the program.

…

## 9.90.050 Designation Process.

…

(2) *Development Services Director or the Director's Designee Initiation.*

(a) The Development Services Director or the Director's designee shall notify the Council of their intent to designate a new OSPM area. The Development Services Director or the Director's designee shall ~~bring~~ deliver a written report and recommendation to the Council within the next ninety (90) days. The report shall include the following:

(i) A map of the proposed OSPM area;

(ii) The reason for the proposal;

(iii) Proposed block faces for parking zones; and

(iv) Any input submitted by residents for and against the proposal.

…

(3) *Resident Initiation.*

(a) Any resident or property owner within the proposed OSPM area may submit an application to the Development Services Director or the Director's designee. The Development Services Director or the Director's designee shall notify the Council within thirty (30) days of receiving the application and ~~present~~ deliver a written report and recommendation no more than ninety (90) days after notification has been sent (one hundred twenty (120) days total).

…

## 12.02.010 Rates and Charges.

…

(3) *Adjustments.* The Municipal Council may by resolution permit the Director of the Energy Department to adjust the actual rates paid by consumers for electricity service where adjustments are made necessary or appropriate because of increases or decreases in the wholesale cost of power purchased by Provo City. A resolution adopted pursuant to this Subsection (3) of this Section may describe terms or conditions pursuant to which the Director may make rate adjustments. The Director shall annually, as part of the City budget process, submit to the Municipal Council a written summary report of all action taken by the Director pursuant to the authority granted by this Subsection (3) of this Section.

…

## 13.01.040 Master Plan - Adoption and Implementation.

…

(3) Within thirty (30) days following submittal of the capital improvements projects report required by Section 3.03.040 of this Code, the Mayor or the Mayor's designee shall deliver a written report to the Municipal Council ~~at a regularly scheduled Council meeting~~ regarding the activities, whether public or private, undertaken to implement the airport master plan.

…

## 15.08.115 Impact Fee Report.

In conjunction with submittal of annual tentative capital improvements budgets, the Mayor or the Mayor's designee shall ~~submit~~ deliver a~~n~~ written impact fee report to the Municipal Council which shows:

…

## 15.03.105 Temporary Limitations on Certain Sewer Connections.

(1) Due to limited sewer capacity within the catchment area of the thirty-six (36) inch sewer main that services the area west of the I-15 freeway and portions of the Grandview area and the potential for new development in that catchment area in excess of the capacity available, the following regulations apply to development projects in that catchment area:

a) The City shall monitor available sewer capacity and development projects that have been approved or submitted for approval and shall model the projected available sewer connections. Model projections for the upcoming calendar year shall be ~~reported~~ delivered in writing by the first ~~regularly to the Municipal Council~~ day of the second quarter of each calendar year by the Director of Public Works or the Director's designee and made available to the public. The model calculations are not a guarantee of available connections and each development project is subject to individual review regarding available sewer capacity.

…

# Administrative Reports Update

Justin Harrison, Council Executive Director

# Deleted Reports

- Mobile Home Business License Report
- Cemetery Sexton Report
- Graffiti Removal Report

# Changed Reports

| | |
|---|---|
| Insurance Claims Above $30,000 | Settled Claims Report |
| State of the City | Budget Transmittal Letter |

# Regular Reports

- Appropriations Report
- Budget Transmittal Letter
- Annual Comprehensive Financial Report
- Library Report
- Capital Improvement Project Report
- Active Capital Improvement Project Report
- Disposal of Property Report
- Settled Claims Report
- Utility Transportation Fund Report
- Rental Dwelling License Report
- Mobile Home Rental Dwelling License Report
- State and Affairs of the Police Department Report
- Airport Master Plan Implementation Report
- Impact Fee Report
- Sewer Connection Projection Report

# Triggered Reports

- Landmark Register Nomination Report
- Energy Rate Adjustments Report
- Emergency Expenditure Report
- Annexation Petition Report
- On Street Parking Management Area Report (City Application)
- On Street Parking Management Area Resident Application Report
- Proposed Parking Permit Program Study Report

# Proposed Amendment to Utility Transportation Fee Exemptions

**5.08.100 Contribution ~~and Internal Revenue Code Section 501(c)(3) Exemption~~.**

~~(1)~~ The fee shall not be charged to any person or entity that in lieu of paying the fee makes an advance voluntary contribution to the utility transportation fund in an amount equal to or greater than the amount of the fee imposed by this Chapter.

~~(2) The fee shall not be charged in regard to any property owned and operated by one (1) or more organizations described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Federal Tax Code"), that is:~~

~~(a) Not used primarily for the production of income that is taxable under Section 511 of the Federal Tax Code;~~

~~(b) Exempt from property tax; and~~

~~(c) Used primarily:~~

~~(i) To provide in patient hospital care;~~

~~(ii) For the education, instruction or training of the individual at the collegiate level or for no more than a nominal charge: (A) on subjects useful to the individual and beneficial to the community; or (B) for the purpose of improving or developing an individual's capabilities; or~~

~~(iii) For religious purposes, including as a house of worship or to provide religious education for youth.~~

~~(3) Any entity seeking an Internal Revenue Code Section 501(c)(3) exemption pursuant to Subsection (2) of this Section shall make application for the exemption and provide proof of qualification.~~

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** JOHNB
**Department:** Administrative Services
**Requested Meeting Date:** 10-17-2023

**SUBJECT:** A resolution approving the appropriation of $1,313,300 in the Airport Fund from Airport Fund Balance. (23-006)

**RECOMMENDATION:** Request Council appropriation of $1,313,300 and the addition of three full-time Airport Operations/Access Control Specialists funded by Airport Fund balance due to higher than budgeted revenue in FY2023. $1,148,000 will be appropriated in the Airport capital project function and $165,300 will be appropriated in the Airport Admin operating function corresponding with the three full-time positions.

**BACKGROUND:** With the addition of the new Provo Airport Terminal and the phenomenal increase in operations across the entire airport, especially in commercial flight operations, the demand placed on airport personnel is increasing rapidly and the airport is struggling to meet its staffing requirements with the current staffing levels. Additionally, as our airline partners increase operations with larger aircraft, the Airport is needing to prepare for the move from an ARFF index B to index C which requires increased emergency response availability requirements. Adding these three positions will help the City get closer to meeting the requirements of TSA and the FAA without having to utilize overtime. The capital project funding will go towards a new security badging software system and office space, Airport Apron lighting, a new parking toll system, and additional vehicle gate and associated security systems, and the repaving of Taxilane 18.

**FISCAL IMPACT:** $1,148,000 Aiport fund balance

**PRESENTER'S NAME:** Brian Torgerson, Airport Director & John Borget, Adminstraive Services Director

**REQUESTED DURATION OF PRESENTATION:** 15 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** 23-006

RESOLUTION 2023-____.

A RESOLUTION APPROVING THE APPROPRIATION OF $1,313,300 IN THE AIRPORT FUND FROM AIRPORT FUND BALANCE. (23-006)

RECITALS:

It is proposed that $1,313,300 be appropriated in the Airport fund to a) hire three full-time airport operations/access control specialists, and b) pay for various capital needs including a new security badging software system, office space, airport apron lighting, a new parking toll system, an additional vehicle gate, and the repaving of Taxilane 18; and

The funding source for the appropriation is Airport fund balance based on higher-than-anticipated revenues received fiscal year 2023; and

On November 14, 2023, the Municipal Council met to consider the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

After considering the facts presented to the Municipal Council, the Council finds that (i) the $1,313,300 appropriation in the Airport fund, and (ii) such action furthers the health, safety, and general welfare of the citizens of Provo City.

THEREFORE, the Municipal Council of Provo City, Utah resolves as follows:

PART I:

The Mayor is authorized to appropriate $1,313,300 in the Airport fund.

PART II

This resolution takes effect immediately.

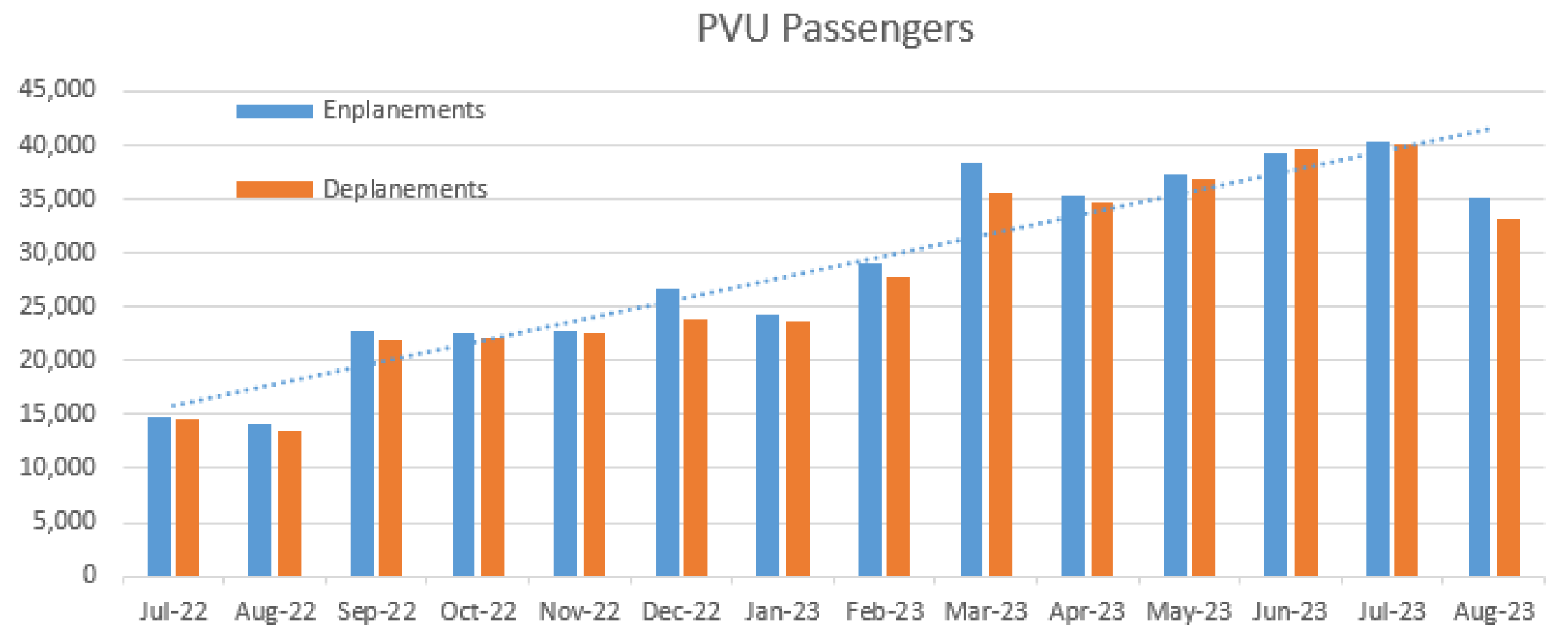
# Airport Appropriation

| Purpose | Amount |
|---|---|
| Security Badging Software System | $200,000 |
| New Parking Toll System | $300,000 |
| Security Badging Office Space | $300,000 |
| Apron Lighting | $80,000 |
| Taxilane 18 Repave | $168,000 |
| Signature Gate & Security | $100,000 |
| ***Airport Capital Function Subtotal*** | ***$1,148,000*** |
| | |
| 3 Airport Operations/Access Control Specialist positions | *$165,300* |
| ***Airport Admin Operating Function Subtotal*** | ***$165,300*** |
| | |
| **Grand Total** | **$1,313,300** |

# AIRPORT APPROPRIATION

10/17/23

provo PUBLIC WORKS


PVU Passengers
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Enplanements
Deplanements
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Jan-23
Feb-23
Mar-23
Apr-23
May-23
Jun-23
Jul-23
Aug-23

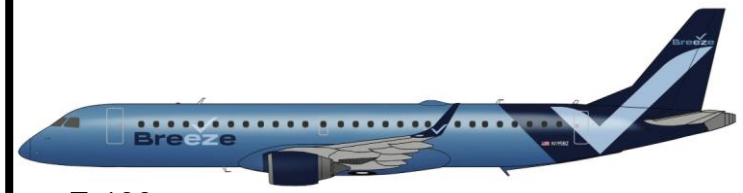
# Airport Appropriation

| Purpose | Amount |
|---|---|
| Security Badging Software System | $200,000 |
| New Parking Toll System | $300,000 |
| Security Badging Office Space | $300,000 |
| Apron Lighting | $80,000 |
| Taxilane 18 Repave | $168,000 |
| Signature Gate & Security | $100,000 |
| ***Airport Capital Function Subtotal*** | ***$1,148,000*** |
| | |
| 3 Airport Operations/Access Control Specialist positions | *$165,300* |
| ***Airport Admin Operating Function Subtotal*** | ***$165,300*** |
| | |
| **Grand Total** | **$1,313,300** |

# Airport ARFF Index

## ARFF Index B Aircraft

90 ft - 126 ft




E-190

A-319 & A-320

Average Daily Departures

1

6

Total

7

## ARFF Index C Aircraft

126 ft – 159 ft

A-220

B-737 Max

Average Daily Departures

2

0

Total

2

Less than 5

5 or more

## ARFF Index B Requirement

FF FF

3 MINUTES

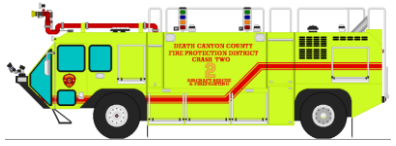
## ARFF Index C Requirement

FF

3 MINUTES

AO

4 MINUTES



AO

4 MINUTES

# Taxilane 18

# Taxilane 18

# Apron Lighting

ADMINISTRATIVE SERVICES
TEL 801 852 6504
351 W CENTER ST
PO BOX 1849
PROVO, UT 84603

**NOTICE OF PUBLIC HEARING BEFORE THE PROVO MUNICIPAL COUNCIL**

Notice is hereby given that the Municipal Council of Provo, Utah will hold a public hearing on the following item during the Council Meeting that will take place on Tuesday, November 14th, 2023 at 5:30 p.m. in the Council Chambers located at the Provo City Center Building, 445 West Center Street, Provo, Utah. Anyone interested is invited to attend.

**Provo City Council will consider an appropriation of $1,313,300 in the Airport fund. The funding source of the appropriation is Airport fund balance.**

The meeting will also be available to the public for live broadcast and on-demand viewing at: youtube.com/provocitycouncil. Those who would like to participate in the meeting virtually may do so via Zoom. To join the Zoom meeting, visit zoom.us/join and enter Meeting ID **840 1958 4572** and Passcode **613577**. To listen or comment via phone, dial **346-248-7799**, enter Meeting ID **840 1958 4572** and press **#**. Press **#** again for participant ID. Once connected, press ***9** to indicate that you would like to comment. For more information regarding how to comment in the electronic meeting, visit agendas.provo.org and click on the meeting agenda.

Kelsey Zarbock, Budget Officer

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** SWILMOTH
**Department:** Development Services
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** An ordinance amending Provo City Code Section 15.03.020 regarding general development standards 2024 updates. Citywide Application. PLOTA20230274

**RECOMMENDATION:** To be heard at the November 14, 2023 Work & Council Meeting. Please see supporting documents.

**BACKGROUND:** Provo City Planning has reviewed the proposed changes from Provo City Public Works and supports the updates and amendments proposed within the referenced application.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** David Day (801) 852-6735 dday@provo.org

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** PLOTA20230274

ORDINANCE 2023-.

AN ORDINANCE AMENDING PROVO CITY CODE SECTION 15.03.020 REGARDING GENERAL DEVELOPMENT STANDARDS 2024 UPDATES. CITYWIDE APPLICATION. (PLOTA20230274)

WHEREAS, it is proposed that Provo City Code Section 15.03.020 be amended; and

WHEREAS, on October 25, 2023, the Planning Commission held a duly noticed public hearing to consider the proposed amendment, and after such meeting, the Planning Commission recommended approval to the Municipal Council by a vote of 6:0; and

WHEREAS, on November 8, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation and facts and comments presented to the Municipal Council, the Council finds (i) Provo City Code should be amended as described herein and (ii) the proposed amendment reasonably furthers the health, safety and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

Provo City Code Section 15.03.020 is hereby amended as set forth in Exhibit A.

PART II:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Provo City Code be updated to reflect the provisions enacted by this ordinance.

D. This ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

END OF ORDINANCE.

# Exhibit A

**Section 15.03.020. General Development Standards.**

. . .

(3) Provo City adopts and incorporates by reference into this section:

(a) The following nationally recognized, industry standards:

(i) Manual of Standard Specifications, 2017, American Public Works Association;

(ii) Manual of Standard Plans, 2017, American Public Works Association;

(iii) Manual on Uniform Traffic Control Devices for Streets and Highways (the "MUTCD"), 2009 Edition, Federal Highway Administration;

(iv) A Policy on Geometric Design of Highways and Streets, 6th Edition, American Association of State Highway and Transportation Officials;

(v) Trip Generation Manual, 10th Edition, Institute of Transportation Engineers; and

(b) The following local standards, which supersede those standards adopted by Subsection (3)(a) of this Section to the extent there is any conflict:

(i) ~~2023~~ 2024 Provo Standard Drawing Details;

(ii) ~~2023~~ 2024 Provo City Public Works Department Development Design Standards;

(iii) Utah Manual on Uniform Traffic Control Devices, For Streets and Highways, (FHWA's MUTCD 2009 Edition as amended for use in Utah), 2011, Utah Department of Transportation;

(iv) 2017 Standard Specifications for Road and Bridge Construction, 2017, Utah Department of Transportation;

(v) 2017 Standard Drawings for Road and Bridge Construction, 2017, Utah Department of Transportation; and

(vi) Utah Administrative Rules Titles R305-R317

provo
DEVELOPMENT SERVICES

# Memorandum

To: Provo City Planning Commission
From: Development Services Department
Print Date: 10/17/2023
RE: Case Report on Public Works Standards Amendment - David Day (Applicant)

## Public Notice:

***ITEM 4** Public Works requests approval of an Ordinance Text Amendment to Section 15.03.020(3), Provo City Code, to update 2023 standards to 2024 standards. Citywide Application. David Day (801) 8526735 dday@provo.org PLOTA20230274

## Comments

Provo City Planning has reviewed the proposed changes from Provo City Public Works and supports the updates and amendments proposed within the referenced application above. The updates are as follows:

## Proposals

- Proposed Ordinance Text Amendment text for PLOTA20230274.

- Changes to 2023 for 2024 Provo Public Works Standard Drawings
  28 pages of Provo Public Works Standard Drawing were edited to clarify questions that have been asked by contractors, engineers and developers.
  2 pages were added and 3 pages were removed.

- Changes to 2023 for 2024 Provo Public Works Development Design Standards
  6 pages of Provo Public Works Development Design Standards were edited to clarify questions that have been asked by contractors, engineers and developers.

- Proposed 2024 Provo Public Works Standard Drawings
  Clean copy containing all proposed changes.

- Proposed 2024 Provo Public Works Development Design Standards
  Clean copy containing all proposed changes.

## Conclusion

Staff recommends that the Planning Commission forward a positive recommendation to the City Council of the proposed amendments to the Public Works design standards.

Provo City Planning Commission

# Report of Action

October 25, 2023

*ITEM 4 Provo City Public Works requests approval of an Ordinance Text Amendment to Section 15.03.020(3), Provo City Code, to update 2023 standards to 2024 standards. Citywide Application. David Day (801) 852-6735 dday@provo.org PLOTA20230274

The following action was taken by the Planning Commission on the above-described item at its regular meeting of October 25, 2023:

## RECOMMENDED APPROVAL

On a vote of 6:0, the Planning Commission recommended that the Municipal Council approve the above noted application.

Motion By: Daniel Gonzales
Second By: Robert Knudsen
Votes in Favor of Motion: Daniel Gonzales, Robert Knudsen, Barbara DeSoto, Andrew South, Lisa Jensen, Jonathon Hill
Daniel Gonzales was present as Chair.

- Includes facts of the case, analysis, conclusions and recommendations outlined in the Staff Report, with any changes noted; Planning Commission determination is generally consistent with the Staff analysis and determination.

**TEXT AMENDMENT**
The text of the proposed amendment is attached as Exhibit A.

**STAFF PRESENTATION**
The Staff Report to the Planning Commission provides details of the facts of the case and the Staff's analysis, conclusions, and recommendations.

**CITY DEPARTMENTAL ISSUES**
- The Coordinator Review Committee (CRC) has reviewed the application and given their approval.

**NEIGHBORHOOD MEETING DATE**
- Citywide application; all Neighborhood Chairs received notification.

**NEIGHBORHOOD AND PUBLIC COMMENT**
- This item was City-wide or affected multiple neighborhoods.

**CONCERNS RAISED BY PUBLIC**
Any comments received prior to completion of the Staff Report are addressed in the Staff Report to the Planning Commission. Key issues raised in written comments received subsequent to the Staff Report or public comment during the public hearing included the following: None.

**APPLICANT RESPONSE**
Key points addressed in the applicant's presentation to the Planning Commission included the following:
- David Day gave a brief overview of the changes.

**PLANNING COMMISSION DISCUSSION**
Key points discussed by the Planning Commission included the following:
- The Commission thanked staff for bringing this forward and updating the standards.

Planning Commission Chair

Director of Development Services

See Key Land Use Policies of the Provo City General Plan, applicable Titles of the Provo City Code, and the Staff Report to the Planning Commission for further detailed information. The Staff Report is a part of the record of the decision on this item. Where findings of the Planning Commission differ from findings of Staff, those will be noted in this Report of Action.

Legislative items are noted with an asterisk (*) and require legislative action by the Municipal Council following a public hearing; the Planning Commission provides an advisory recommendation to the Municipal Council following a public hearing.

Administrative decisions of the Planning Commission (items not marked with an asterisk) **may be appealed** by submitting an application/notice of appeal, with the required application and noticing fees to Development Services, 445 W Center St., Provo, Utah, **within fourteen (14) calendar days of the Planning Commission's decision** (Provo City office hours are Monday through Thursday, 7:00 a.m. to 6:00 p.m.).

BUILDING PERMITS MUST BE OBTAINED BEFORE CONSTRUCTION BEGINS

EXHIBIT A

**Section 15.03.020. General Development Standards.**

. . .

(3) Provo City adopts and incorporates by reference into this section:

(a) The following nationally recognized, industry standards:

(i) Manual of Standard Specifications, 2017, American Public Works Association;

(ii) Manual of Standard Plans, 2017, American Public Works Association;

(iii) Manual on Uniform Traffic Control Devices for Streets and Highways (the "MUTCD"), 2009 Edition, Federal Highway Administration;

(iv) A Policy on Geometric Design of Highways and Streets, 6th Edition, American Association of State Highway and Transportation Officials;

(v) Trip Generation Manual, 10th Edition, Institute of Transportation Engineers; and

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(v) 2017 Standard Drawings for Road and Bridge Construction, 2017, Utah Department of Transportation; and

(vi) Utah Administrative Rules Titles R305-R317

provo

WELCOME HOME

# City Council

November 14, 2023

# *ITEM 4

Provo City Public Works requests approval of an Ordinance Text Amendment to Section 15.03.020(3), Provo City Code, to update 2023 standards to 2024 standards.

***Citywide Application.***

PLOTA20230274

# PUBLIC WORKS ORDINANCE TEXT AMENDMENT TO SECTION 15.03.020(3) OF THE PROVO CITY CODE TO UPDATE STANDARDS FOR 2024, PLOTA20230274

Planning Commission

October 25, 2023

**Section 15.03.020. General Development Standards.**

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(3) Provo City adopts and incorporates by reference into this section:

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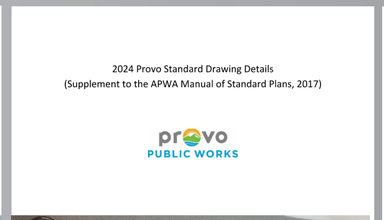
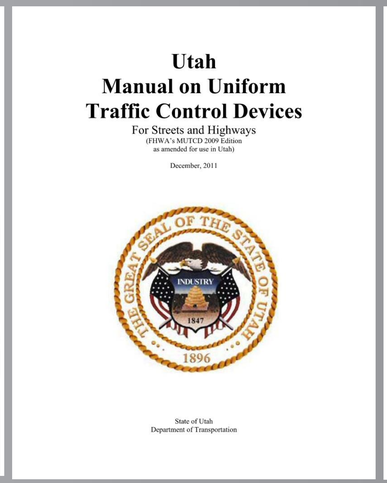
(vi) Utah Administrative Rules Titles R305-R317

2024 PROVO CITY
PUBLIC WORKS DEPARTMENT
DEVELOPMENT DESIGN STANDARDS
provo
PUBLIC WORKS


2024 Provo Standard Drawing Details
(Supplement to the APWA Manual of Standard Plans, 2017)
provo
PUBLIC WORKS


Utah
Manual on Uniform
Traffic Control Devices
For Streets and Highways
(FHWA's MUTCD 2009 Edition
as amended for use in Utah)
December, 2011
THE GREAT SEAL OF THE STATE OF UTAH
INDUSTRY
1847
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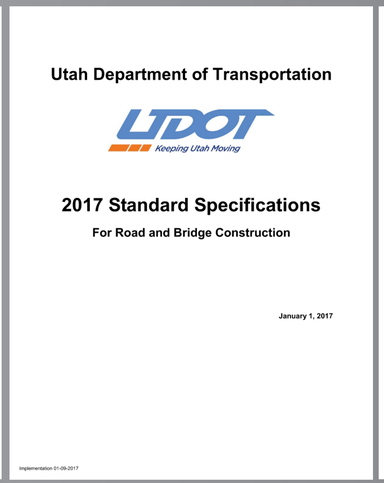
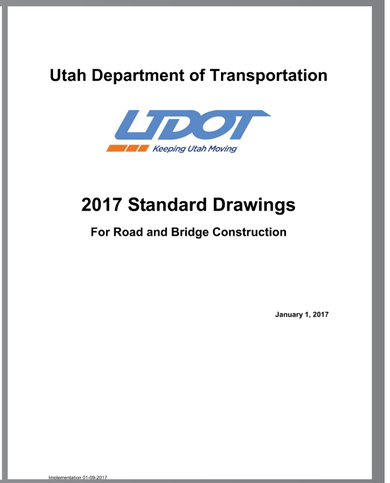
State of Utah
Department of Transportation


Utah Department of Transportation
UDOT
Keeping Utah Moving
2017 Standard Specifications
For Road and Bridge Construction
January 1, 2017
Implementation 01-09-2017


Utah Department of Transportation
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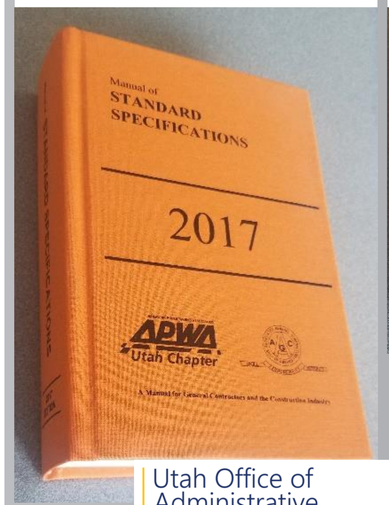
Manual of
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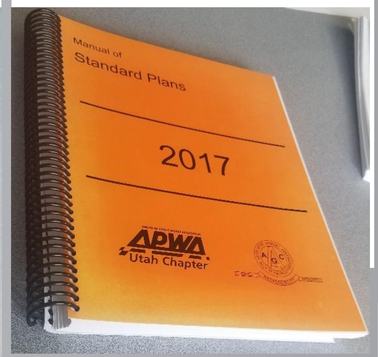
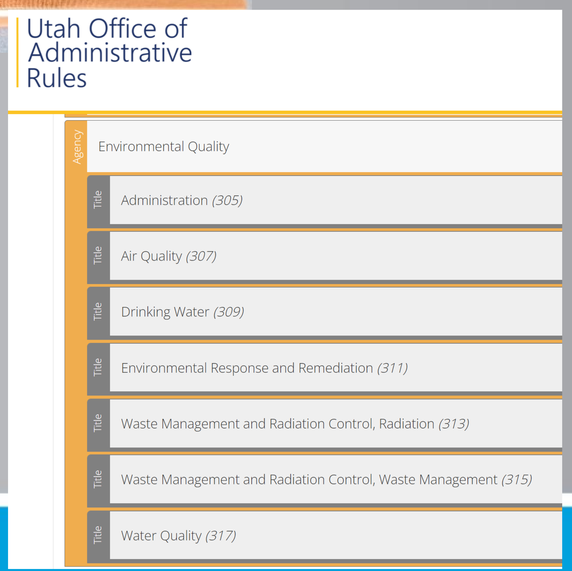
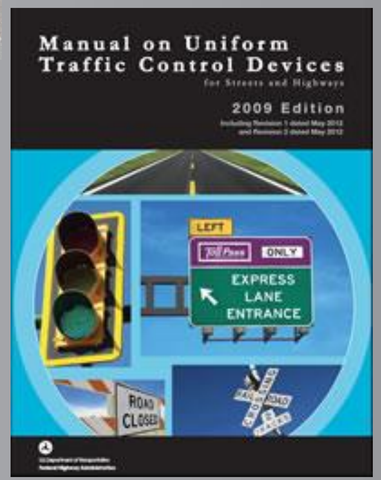
2017
APWA
Utah Chapter
A Manual for Featured Contractors and the Construction Industry


Manual of
Standard Plans
2017
APWA
Utah Chapter


Utah Office of
Administrative
Rules
Agency
Environmental Quality
Title
Administration (305)
Title
Air Quality (307)
Title
Drinking Water (309)
Title
Environmental Response and Remediation (311)
Title
Waste Management and Radiation Control, Radiation (313)
Title
Waste Management and Radiation Control, Waste Management (315)
Title
Water Quality (317)


Manual on Uniform
Traffic Control Devices
for Streets and Highways
2009 Edition
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EXPRESS
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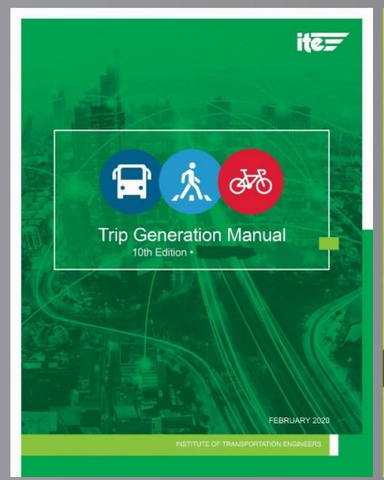
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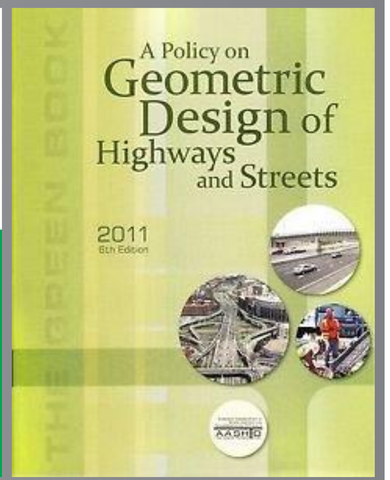
Trip Generation Manual
10th Edition •
FEBRUARY 2020
INSTITUTE OF TRANSPORTATION ENGINEERS


A Policy on
Geometric
Design of
Highways
and Streets
2011
6th Edition
THE GREEN BOOK
AASHTO

# References

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  - 2 pages were added and 3 pages were removed.

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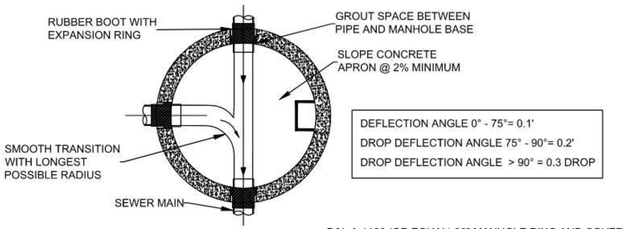
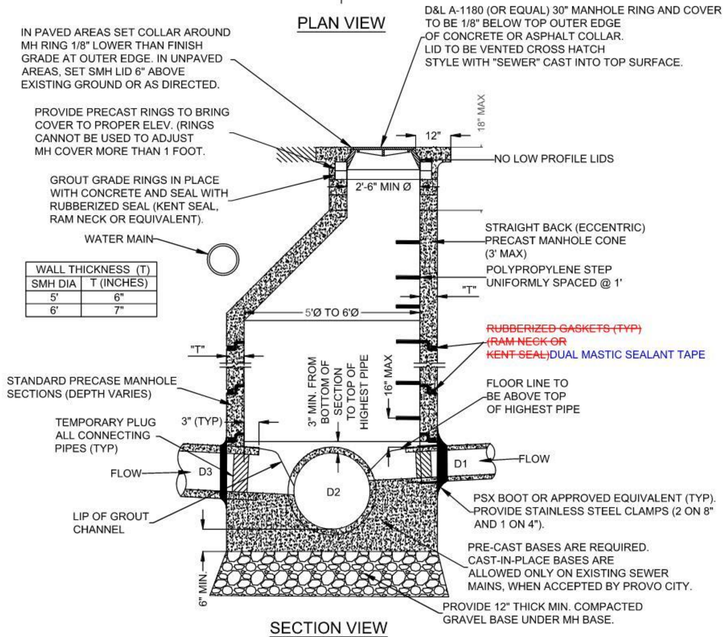



PLAN VIEW




| WALL THICKNESS (T) | |
|---|---|
| SMH DIA | T (INCHES) |
| 5' | 6" |
| 6' | 7" |

SECTION VIEW

SHEET 1 OF 2

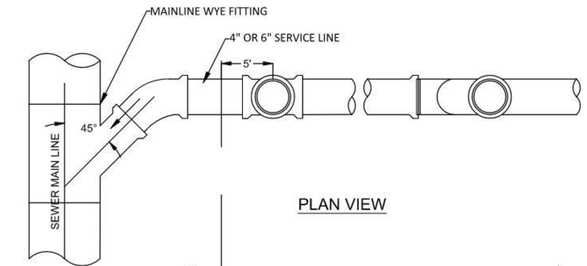
| | | |
|---|---|---|
| provo PUBLIC WORKS | *STANDARD MANHOLE* | STANDARD DETAIL P-411 NOT TO SCALE REVISED DATE: 10/24/22 |

Trench Backfill & Surface Restoration

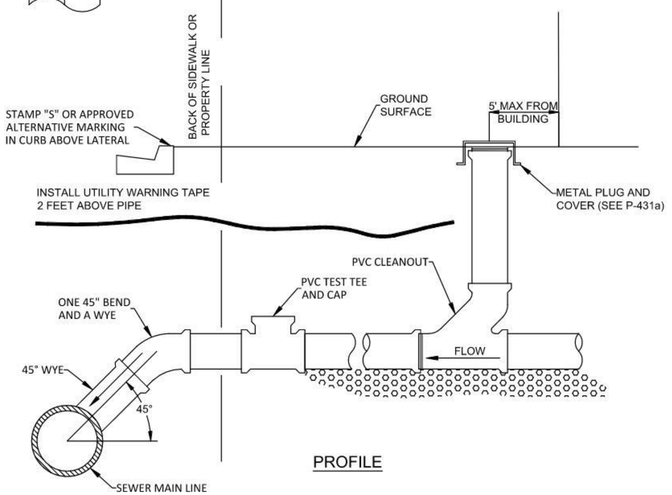
1. GENERAL
   - A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping to construct connections.
   - B. If grade allows, inverts of D1 and D3 shall match the 0.75 depth point of D2. Otherwise as approved by Provo City.
   - C. Manhole Size
     - C.A. Manhole diameter is determined by design and varies from 5 feet to 6 feet.
     - C.B. Diameter is 6 feet minimum: For sewers over 24 inches, or when directed by Provo City.
   - D. Standards apply to private and public systems.
2. PRODUCT
   - A. Gravel: Use 1 inch minus gravel.
   - B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   - C. Concrete: Class 4000, APWA Section 03 30 04.
   - D. Cone and Wall Sections: Conform to ASTM C-478.
   - E. Riser and Reducing Riser: ASTM C 478
   - F. Grout: 2 parts sand to 1 part cement mortar, ASTM C 1329.
   - G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. EXECUTION
   - A. Sewer rock or a granular backfill borrow in a geotextile wrap.
   - B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   - C. Poured in Place: If manhole is to be poured in place, follow the same pattern as shown except use 10 inch minimum wall and base thickness.
   - D. Invert Cover: During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan P-412.
   - E. Pipe Connections: Grout around all pipe openings.
   - F. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
   - G. Joints: Place flexible dual mastic sealant tape~~gasket-type sealant~~ in all riser joints. Finish with grout and ensure manhole is watertight.
   - H. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   - I. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
   - J. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Adhere to all backfilling and surface restoration requirements included in Plan P-255.
   - K. After all grading around manhole has been completed and final surfacing is in place, remove debris and temporary plugs.

SHEET 2 OF 2

| | | |
|---|---|---|
| provo PUBLIC WORKS | *STANDARD MANHOLE* | STANDARD DETAIL P-411 NOT TO SCALE REVISED DATE: 10/24/22 |




PLAN VIEW




PROFILE

SHEET 1 OF 3

| | | |
|---|---|---|
| provo PUBLIC WORKS | *STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT* | STANDARD DETAIL P-431a NOT TO SCALE REVISED DATE: 09/26/19 |

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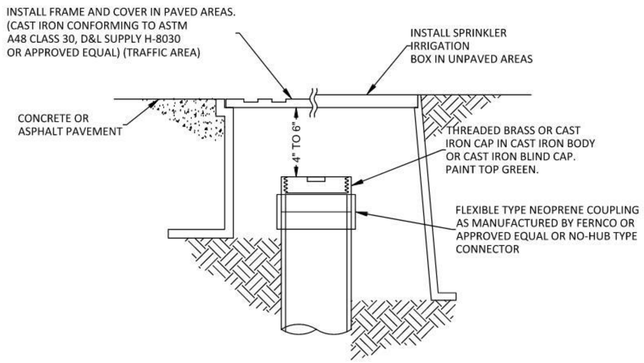



SHEET 2 OF 3

provo PUBLIC WORKS

*STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT*

STANDARD DETAIL
P-431b
NOT TO SCALE
REVISED DATE: 11/10/16

Sewer Lateral Connection

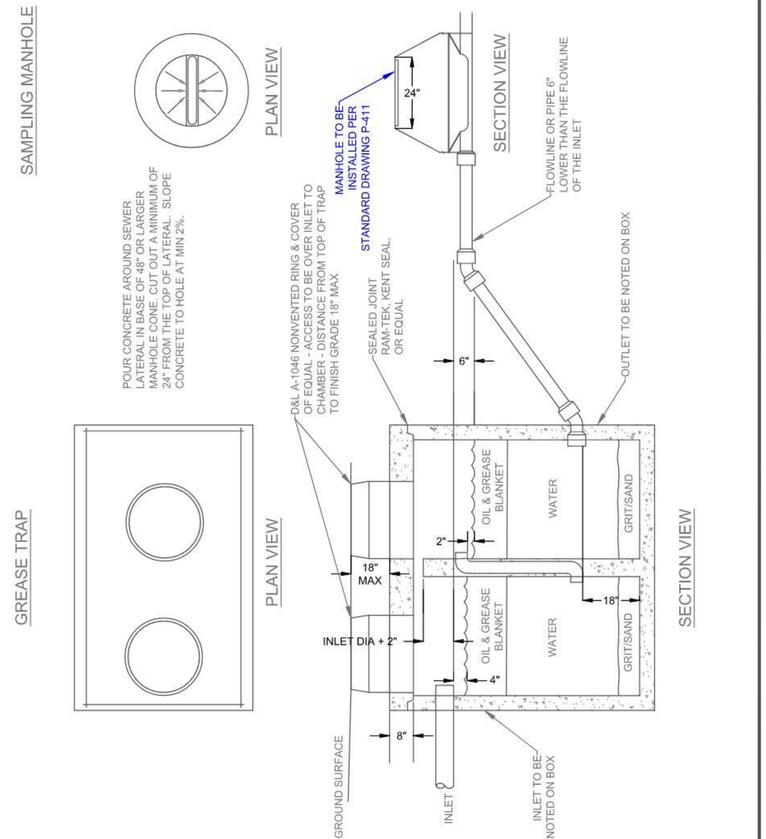
1. GENERAL
   - A. Laterals shall be 4-inch diameter minimum. A 6-inch or larger lateral is required for buildings with more than five equivalent residential units with a separate 4-inch lateral off the 6-inch to each unit.
   - B. Provide separate laterals for each unit. Provo Ciy approval required for all combined sewer laterals.
   - C. Minimum distance between 4-inch lateral connection shall be 4 feet.
   - D. Required grade of sewer laterals (ABS and PVC pipe) is 2%. Where it is impractical to run the sewer laterals at 2% due to the depth of the sewer main, a 6-inch or larger sewer lateral may be run a 1% grade when approved by Provo City.
   - E. Clean-outs shall be installed every 100 feet, and where there is a change in slope or direction of the lateral and within 5' of the building.
   - F. Distance between sewer laterals and water service lines shall be 10 feet.
   - G. Individual grinder pump systems require Provo City approval. Gravity flow required from property to main with a cleanout at transition.
2. PRODUCT
   - A. Sewer laterals shall be green or black in color. Do not use white.
   - B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   - D. Pipe Zone: Gravel, Provo Section 31 05 13M.
   - E. Provide agency approved connection for all laterals connecting to lines 8" in diameter or less.
   - F. Stainless steel and brass straps required for saddles.
   - G. Strong back RC series by Fernco with four stainless steel clamps or equal required for all plain end pipe connections.
   - H. Lateral Mainline Connections: All 4-inch connections to the main must be constructed with one 45 degree bend and wye. Direct nose-on connections to main are used when connecting to an existing main line. All nose-on work is to be inspected by city personnel.
   - I. Manhole Mainline Connections: All 6-inch and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main.
3. EXECUTION
   - A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   - B. Tape wrap pipe as required by soil conditions.
   - C. Core and remove plug from sewer main. Do not break into sewer main to make connection.
   - D. CONTRACTOR shall have all connections inspected and surveyed by Provo City before backfilling.
   - E. CONTRACTOR shall perform water test for lateral as directed by Provo City Inspector.
   - F. Provide backfill and surface restoration per Plan P-255.

SHEET 3 OF 3

provo PUBLIC WORKS

*STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT*

STANDARD DETAIL
P-431
NOT TO SCALE
REVISED DATE: 10/24/22




SHEET 1 OF 2

provo PUBLIC WORKS

*GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE*

STANDARD DETAIL
P-441
NOT TO SCALE
REVISED DATE: 11/25/15

provo

Grease ~~Trap~~Interceptor

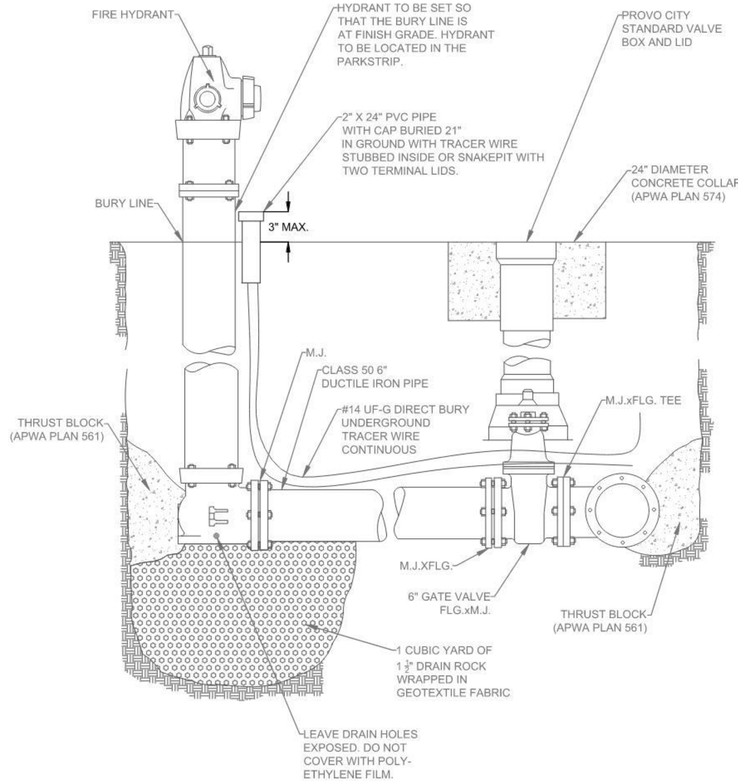
1. GENERAL
   A. Before backfilling around concrete box, secure inspection of installation by ENGINEER.
   B. Deep boxes are to be avoided whenever possible.
   C. Large traps will require three lids for access to clean.
   D. Sand-oil separator to be located outside parking garages in accessible location.
   E. Grease and sand/oil interceptors, as described by the international plumbing code (IPC), shall be required of any commercial user when the WRF determines they are necessary for the proper handling of wastewater containing FOGS in excessive amounts. Such interceptors shall not be required for residential dwelling units.~~Carwashes to have a minimum 300 gallon sediment volume sump with BMP SNOUT® pretreatment device of equal upstream of separator per bay.~~
   F. Any commercial user utilizing a three (3) compartment sink shall be required to have either a grease interceptor or grease trap installed at its own expense and shall be required to comply with maintaining the device as outlined in the Provo City Sewer Use Ordinance and Pretreatment Program.~~Automatic car washes will require a 600 gallon sediment volume sump with a BMP SNOUT® pretreatment device or equal upstream of separator per bay.~~
   G. All newly constructed commercial structures, strip malls, multi-tenant planned occupied buildings, or planned unoccupied buildings, shall install independent six-inch (6") wastewater discharge lines stubbed out within each designated future food establishment unit. If a new source commercial structure, strip mall, or multi-tenant building has planned occupancy by one or more businesses that do not generate FOG, and therefore do not need a grease interceptor, and the owner of the structure does not facilitate the installation of independent six-inch (6") wastewater discharge line and install a common interceptor, then no future food establishments shall be permitted, unless facilities are retrofitted for independent lines.~~Size to be determined by Plumbing Code unless otherwise by Pretreatment Coordinator. 750 gallon minimum.~~
   H. Alternate traps may be submitted for approval. Provide product information including removal rates.
   I. All newly constructed "stand-alone" commercial structures, strip malls, multi-tenant planned occupied buildings, where a three (3) compartment sink will be utilized, will be required to install a grease interceptor.
   J. Grease traps are only allowed in place of grease interceptors when in the opinion of the manager it is physically impossible to install a grease interceptor outside of the building or business. As such, a variance request from the owner or lessee of the property must be made to Provo City Pretreatment with a certification letter from a duly licensed Utah plumber or engineer.
2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   E. PVC Pipe: APWA Section 33 05 07.
   F. Box extenders to be used to keep top of box within 18 inches of ground surface.
3. EXECUTION
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 6-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 32 23 26.
   B. Reinforcement Placement: APWA Section 03 20 00.
   C. Concrete Placement: APWA Section 03 30 20. Provide 1/2-inch radius edges.
   D. Apply a broom finish. Apply a curing agent.
   E. Fill annular space around pipe wall penetrations with waterproof sealer.
   F. Backfill: Provide backfill against the box walls. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT ALLOWED. Adhere to all backfilling and surface restoration requirements included in Plan P-255.

SHEET 2 OF 2

provo PUBLIC WORKS

*GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE*

STANDARD DETAIL
P-441
NOT TO SCALE
REVISED DATE: 11/25/15




SHEET 1 OF 2

provo PUBLIC WORKS

*FIRE HYDRANT DETAIL*

STANDARD DETAIL
P-511
NOT TO SCALE
REVISED DATE: Aug. 2020

Fire Hydrant With Valve

1. GENERAL
   A. Before backfilling, secure inspection of installation by ENGINEER.
   B. Additional requirements are specified in APWA 33 11 00.
   C. On dead end line, locate shut off valve within 18 feet from the fire hydrant.
2. PRODUCT
   A. New materials only. Relocation of Hydrants not allowed.
   B. Hydrant: Dry barrel, AWWA C502; Waterous WB-67, Mueller A-423 or AVK 2780 Nostalgic.
   C. Polyethylene Wrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene film.
   D. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04. Sakrete is not allowed for thrust blocks.
   E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   F. Backfill: Provo Section 31 05 13M. Maximum particle size 2-inches.
      F.A. Sand Bedding: All waterlines are to be bedded in sand for a distance of one foot on all sides.
      F.B. Drain Rock: ASTM Size No. 3 (2" to 1") or larger.
      F.C. Other Type of Common Fill: per sppecification.
   G. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.
   H. Color: Fire hydrant is to be factory coated red.
   I. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Wire to extend 24" above surface at base of fire hydrants.
3. EXECUTION
   A. Installation:
      A.A. Provide at least 1 cubic yard of drain rock around drain hole at base of hydrant spool. Wrap geotextile around drain rock and tape geotextile to hydrant spool to prevent sitting of sewer rock.
      A.B. Apply non-oxide grease to all buried metal surface. Wrap with polyethylene sheet and tape wrap.
      A.C. Provide 12 inch sand bedding around all piping.
      A.D. Notify fire department at (801) 852-6300 as soon as hydrant is placed in service.
   B. Thrust Blocks:
      B.A. Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
      B.B. Not required for flange or welded pipe systems.
   C. Provide backfill and surface restoration per Plan P-255.
   D. Operation of Valves: Provo City water valves to be operated only be Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780

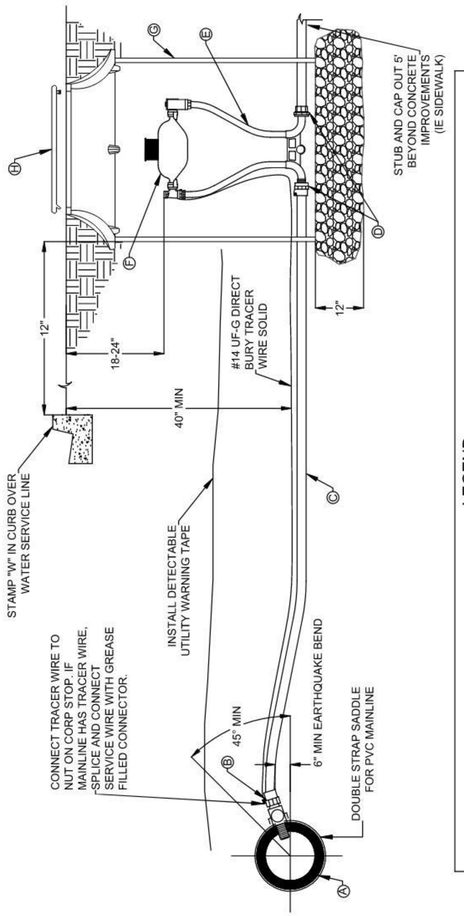
SHEET 2 OF 2

provo PUBLIC WORKS

*FIRE HYDRANT DETAIL*

STANDARD DETAIL
P-511
NOT TO SCALE
REVISED DATE: Aug. 2020

provo




## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1-inch COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1-inch COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | CMP. OR WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

SHEET 1 OF 2

provo PUBLIC WORKS

# 1" METER SERVICE

STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22

1" Meter

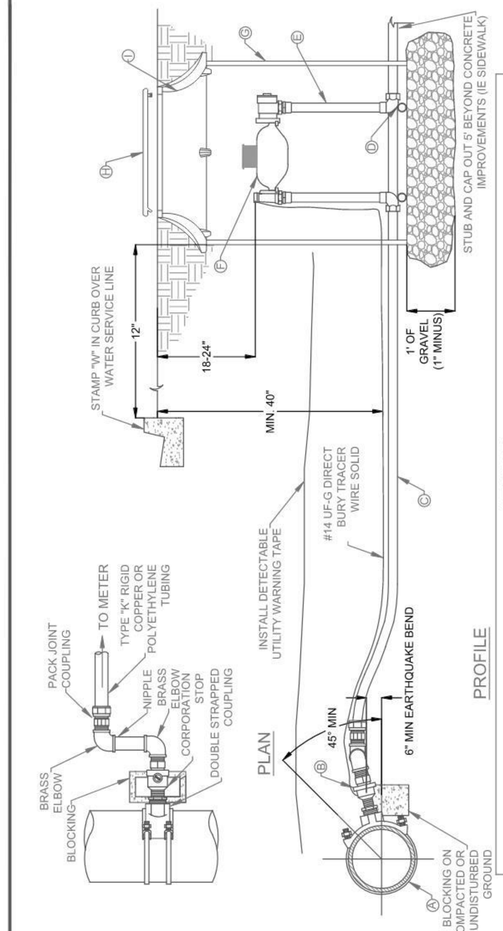
1. GENERAL
   - A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   - B. In new subdivisions, stake lot corners prior to installation of water meters.
   - C. In street surfaces or other vehicular traffic areas, (like driveway approaches), install the same type of meter box as required for 1 ½" and 2" serivce meters. See Plan P-522.
   - D. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connections Program Coordinator at (801) 852-6788.
   - E. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed. Contractors will be fined for using jumpers.
   - F. Maintain at least 2 feet between 1 inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.
2. PRODUCT
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   - B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   - D. Fittings: Use compression fittings (no flare). Mueller or Ford only.
   - E. Teflon tape and pipe dope to be used on all threaded pipe fittings.
3. EXECUTION
   - A. Meter Placement:
     - A.A. Install the meter box centered between curb and sidewalk at center of lot (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
     - A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   - B. Bed service line and tracer wire in one foot of sand all directions.
   - C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   - D. Lid must be to grade before meter will be installed. Top of lid must be even with top of sidewalk or top of curb.
   - E. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   - F. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   - G. Provide backfill and surface restoration per Plan P-255.
   - H. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780
   - I. Before a meter is set, 1) a permit must be issued, 2) meter lid must be the right type and even with top of sidewalk or curb 3) meter yoke, lid, or can must not be damaged in any way 4) there must be a shut off valve downstream of the meter so that the meter can be turned on and checked for leaks. Failure to meet these criteria would necessitate a second visit by city personnel and contractor will be charged a re-inspection fee.

SHEET 2 OF 2

provo PUBLIC WORKS

# 1" METER SERVICE

STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22




## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1 ½" OR 2" COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1 ½" OR 2" COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | ~~CMP. OR~~ WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

SHEET 1 OF 2

provo PUBLIC WORKS

# WATER SERVICE LATERAL LAYOUT 1 ½" & 2"

STANDARD DETAIL
P-522
NOT TO SCALE
REVISED DATE: 10/24/22

provo

Water Service Lateral Layout 1 1/2" and 2"

1. GENERAL
   - A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   - B. ~~Turbine meters are required on all systems used exclusively for irrigation or fire protection.~~
   - C. Where domestic use is applicable, use a standard City provided meter.
   - D. Connections serving buildings of three (3) stories or more (not to include basements) may not utilize a dual check valve device installed at the meter yoke as protection. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connection Program Coordinator at (801) 852-6788.
   - E. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed.
   - F. Maintain at least 4 feet between any connection that is larger than 1 inch and any other connection.
2. PRODUCT
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   - B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   - D. Meter yoke to be same size as service line regardless of meter size.
   - E. Teflon tape and pipe dope to be used on all threaded pipe fittings.
3. EXECUTION
   - A. Meter Placement:
     - A.A. Install the meter box centered between curb and sidewalk (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
     - A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   - B. Bed service line in one foot of sand all directions.
   - C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   - D. Bypass Valve: Lock in off position.
   - E. Blocking: Use clay brick or concrete block.
   - F. Concrete Box:
     - F.A. Center frame and cover over water meter.
     - F.B. Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   - G. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   - H. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   - I. Provide backfill and surface restoration per Plan P-255.
   - J. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780



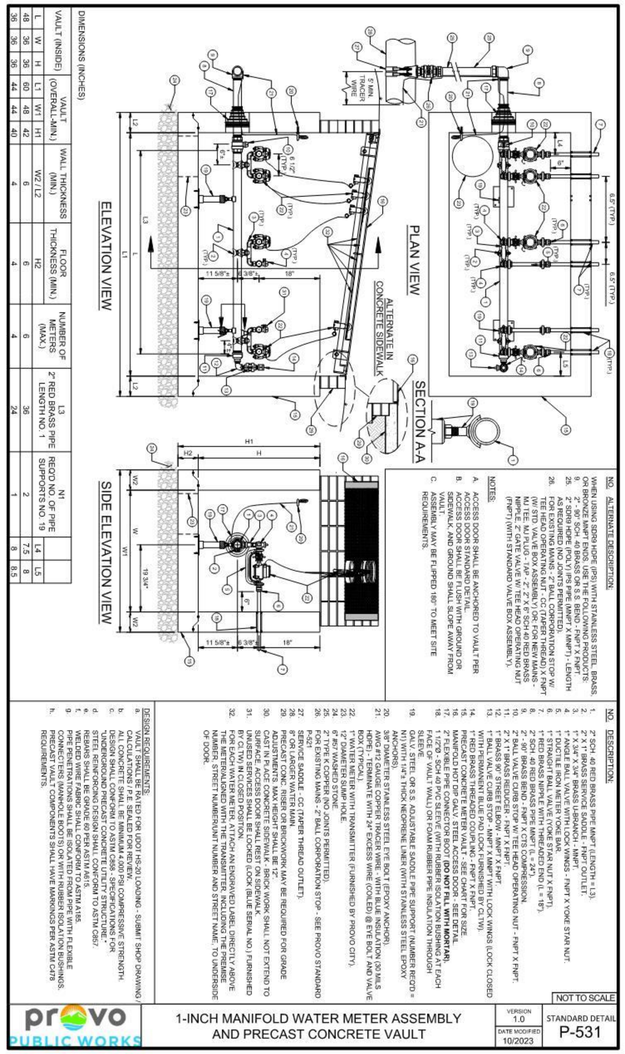
provo PUBLIC WORKS

*WATER SERVICE LATERAL LAYOUT 1 $\frac{1}{2}$" & 2"*

STANDARD DETAIL P-522

NOT TO SCALE

REVISED DATE: 10/24/22




DIMENSIONS (INCHES)

| VAULT (INSIDE) | | VAULT (OVERALL-MIN.) | | | WALL THICKNESS (MIN.) | FLOOR THICKNESS (MIN.) | NUMBER OF METERS (MAX.) | L3 2" RED BRASS PIPE LENGTH NO. 1 | N1 REQD NO. OF PIPE SUPPORTS NO. 19 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| L | W | L1 | W1 | H1 | W2 / L2 | H2 | | | | L4 | L5 |
| 48 | 36 | 60 | 48 | 42 | 6 | 6 | 6 | 36 | 2 | 7.5 | 8 |
| 36 | 36 | 48 | 36 | 44 | 6 | 6 | 4 | 24 | 1 | 8 | 8.5 |

NO. ALTERNATE DESCRIPTION:

WHEN USING IRON HOPE (IPS) WITH STAINLESS STEEL BRASS OR BRONZE MNPT ENDS, USE THE FOLLOWING PRODUCTS

25. 2" SDR9 HOPE (POLYTIPS PIPE MNPT X MNPT) - LENGTH VARIES
26. FOR EXISTING MAINS - 2" BALL CORPORATION STOP W/ TEE HEAD OPERATING NUT - CC (TAPER THREAD) X FNPT MJ TEE, MJ PLUG - 1/4" - 2" X 6" SCH 40 RED BRASS NIPPLE - 2" X FNPT - 2" BALL VALVE CURB STOP W/ TEE HEAD OPERATING NUT - NUT (FNPT) WITH STANDARD VALVE BOX ASSEMBLY).

NOTES:

A. ACCESS DOOR SHALL BE ANCHORED TO VAULT PER MANUFACTURER'S RECOMMENDATIONS.
B. ACCESS DOOR STANDARD DETAIL ACCESS DOOR SHALL BE FLUSH WITH GROUND OR RAISED 1/4" MAX. AND GROUND SHALL SLOPE AWAY FROM VAULT.
C. ACCESS DOOR MAY BE FLIPPED 180° TO MEET SITE REQUIREMENTS.

NO. DESCRIPTION:

1. 2" SCH. 40 RED BRASS PIPE MNPT (LENGTH +L3)
2. 2" X 1" BRASS SERVICE SADDLE - FNPT OUTLET.
3. 2" BRASS BALL VALVE WITH LOCK WINGS - FNPT X FNPT
4. 1" ANGLE BALL VALVE WITH LOCK WINGS - FNPT X YOKE STAR NUT.
5. 1" STRAIGHT BALL VALVE (YOKE & STAR NUT X FNPT).
6. 1" BRASS NIPPLE WITH THREADED END (L = 18").
7. 1" RED BRASS NIPPLE WITH THREADED END (L = 18").
8. 2" - 90° BRASS BEND - FNPT X CTS COMPRESSION.
9. 2" BRASS COUPLING - FNPT X FNPT.
10. 2" BALL VALVE CURB STOP W/ TEE HEAD OPERATING NUT - FNPT X FNPT.
11. 1" BRASS 90° STREET ELBOW - MNPT X FNPT.
12. 1" BRASS NIPPLE - LENGTH VARIES (LOCK CLOSED WITH PERMANENT BLUE PAD LOCK (FURNISHED BY CITY)).
13. 1" RED BRASS THREADED COUPLING - FNPT X FNPT.
14. 1" BRASS BALL VALVE - FNPT X FNPT.
15. MANIFOLD HOT DIP GALV. STEEL ACCESS DOOR - SEE DETAIL.
16. 1" TYPE K COPPER OR 1" SCH 40 PVC SERVICE LINE WITH RUBBER GASKET FACE OF VAULT WALL) OR FOAM RUBBER PIPE INSULATION THROUGH
17. 1" SCH. 40 PVC SLEEVE WITH RUBBER GASKET AT EACH
18. 1" SCH. 40 PVC SLEEVE WITH RUBBER GASKET AT EACH
19. 2" GALV. STEEL OR S.S. ADJUSTABLE SADDLE PIPE SUPPORT (NUMBER REQ'D = N1) WITH 1/4"± THICK NEOPRENE LINER (WITH STAINLESS STEEL EPOXY
20. 3/8" DIAMETER STAINLESS STEEL EYE BOLT (EPOXY ANCHOR).
21. HDPE) - TERMINATE WITH 24" EXCESS WIRE (COILED @ EYE BOLT AND VALVE BOX (TYPICAL).
22. 12" DIAMETER SUMP HOLE.
23. 2" TYPE K COPPER (NO JOINTS PERMITTED).
24. 2" BRASS BALL VALVE.
25. FOR EXISTING MAINS - 2" BALL CORPORATION STOP - SEE PROVO STANDARD
26. SERVICE SADDLE - CC (TAPER THREAD OUTLET).
27. PRECAST CONCRETE VAULT.
28. PRECAST CONCRETE RISER OR BRICKWORK MAY BE REQUIRED FOR GRADE ADJUSTMENTS. MAX HEIGHT SHALL BE 12".
29. ACCESS DOOR - MANHOLE FRAME AND COVER - BRICKWORK SHALL NOT EXTEND TO SURFACE. ACCESS DOOR SHALL REST ON SIDEWALK
30. UNUSED SERVICES SHALL BE LOCKED (LOCK (BLUE SEPAL NO.) FURNISHED BY PROVO CITY) AT CORPORATION STOP.
31. FOR EACH WATER METER, ATTACH AN ENGRAVED LABEL DIRECTLY ABOVE THE ELECTRONIC READ-OUT WITH THE LAST FOUR DIGITS OF THE METER NUMBER, STREET NUMBER/UNIT NUMBER AND STREET NAME TO UNDERSIDE OF DOOR.
32. PRECAST CONCRETE VAULT SHALL BE INSTALLED WITH POLYETHYLENE WRAP.

DESIGN REQUIREMENTS

a. VAULT SHALL BE RATED FOR HEAVY DUTY HS-20 LOADING - SUBMIT SHOP DRAWING
b. ALL CONCRETE SHALL BE MINIMUM 4,000 PSI COMPRESSIVE STRENGTH
c. DESIGN SHALL CONFORM TO PROVO CITY STANDARD DETAIL P-531 "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE."
d. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857
e. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
f. CONNECTORS (MANHOLE BOOTS) (OR WITH RUBBER INSULATION BUSHINGS, CONNECTORS (MANHOLE BOOTS) SHALL BE PROVIDED FOR ALL PIPE TO BE CAST IN PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.

NOT TO SCALE

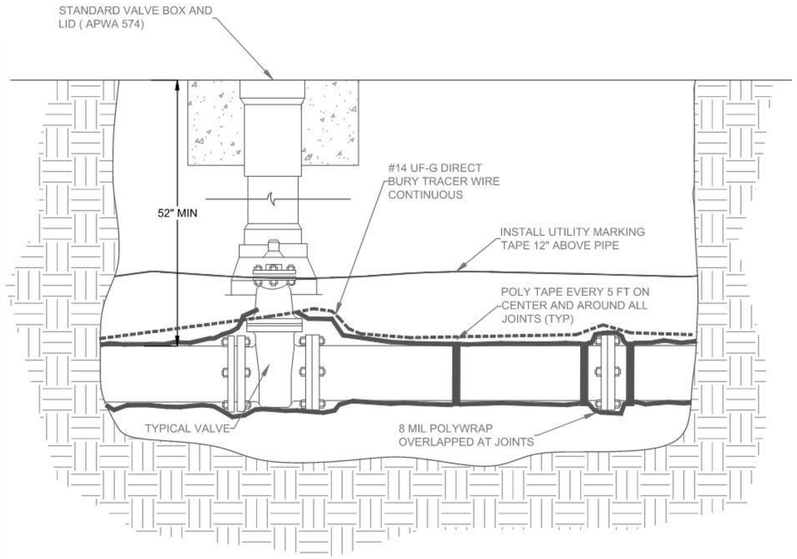
provo PUBLIC WORKS

1-INCH MANIFOLD WATER METER ASSEMBLY AND PRECAST CONCRETE VAULT

VERSION 1.0

DATE MODIFIED 10/2023

STANDARD DETAIL P-531






provo PUBLIC WORKS

*WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL P-594

NOT TO SCALE

REVISED DATE: Aug. 2020

provo

*Water Mainline, Polywrap, & Tracer Wire*

1. GENERAL
   - A. Maintain at least 2 feet between 1 inch and ¾ inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.
   - B. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
   - C. Waterline shall be installed within the street section in the location shown on Provo Standard Drawing P-914, unless otherwise approved.
2. PRODUCTS
   - A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. C900 PVC Pipe may be allowed with approval from director.
   - B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   - C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants. Provide excess wire to extend 24" above finished grade.
   - D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   - E. Bolts: Use all stainless steel bolts.
   - F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   - G. Double offset butterfly valves required for valves ~~12" or greater~~ greater than 12".
3. EXECUTION
   - A. Bed water mainline in one foot of sand all directions.
   - B. Pull polywrap tight around pipe and tape with poly tape.
   - C. Poly Tape:
     - a. Tape around valves.
     - b. Tape any cuts or tears.
     - c. Tape wire on top center of pipe outside of the polywrap.
   - C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   - D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill. All tracer wire shall be tested for continuity by an independent tester and written certification of continuity provided to Provo City inspectors prior to requesting continuity testing by Provo City. A re-inspection fee will be charged for any failed continuity test conducted by Provo City. Entire length of tracer wire shall be tested and approved by City prior to paving.
   - E. Inspection: Before backfilling, secure inspection and GPS of installation by City.
   - F. Provide backfill and surface restoration per Plan P-255.
   - G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.

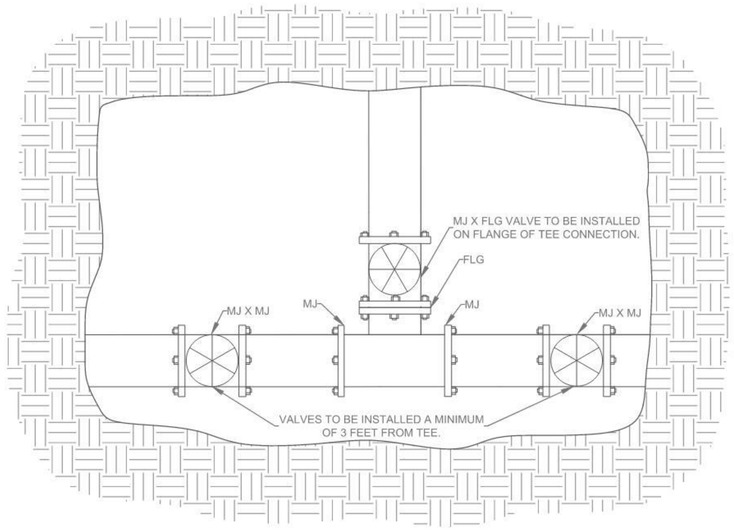
SHEET 2 OF 2

provo PUBLIC WORKS

*WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL
P-594
NOT TO SCALE
REVISED DATE: Aug. 2020

PLAN VIEW




SHEET 1 OF 1

provo PUBLIC WORKS

*WATER MAINLINE TEE*

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021

*Water Mainline, Polywrap, & Tracer Wire*

1. GENERAL
   - A. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
2. PRODUCTS
   - A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. Use ductile iron pipe for fire lines. All privately maintained pipe in public rights-of-ways shall be ductile iron.
   - B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   - C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants and at all valves. Wire to be brought up outside of valve box and stubbed into valve box 3 inches below the lid through a hole cut in the valve box. Provide excess wire to extend 24" above finished grade.
   - D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   - E. Bolts: All bolts need to be covered in FMH grease.
   - F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   - G. Double offset butterfly valves required for valves 12" or greater.
   - H. Sakrete is not allowed for thrust blocks.
3. EXECUTION
   - A. Bed water mainline in one foot of sand all directions.
   - B. Pull polywrap tight around pipe and tape with poly tape.
   - C. Poly Tape:
     - a. Tape around valves.
     - b. Tape any cuts or tears.
     - c. Tape wire on top center of pipe outside of the polywrap.
   - C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   - D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill.
   - E. Inspection: Before backfilling, secure inspection of installation by ENGINEER.
   - F. Provide backfill and surface restoration per Plan P-255.
   - G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.

SHEET 1 OF 1

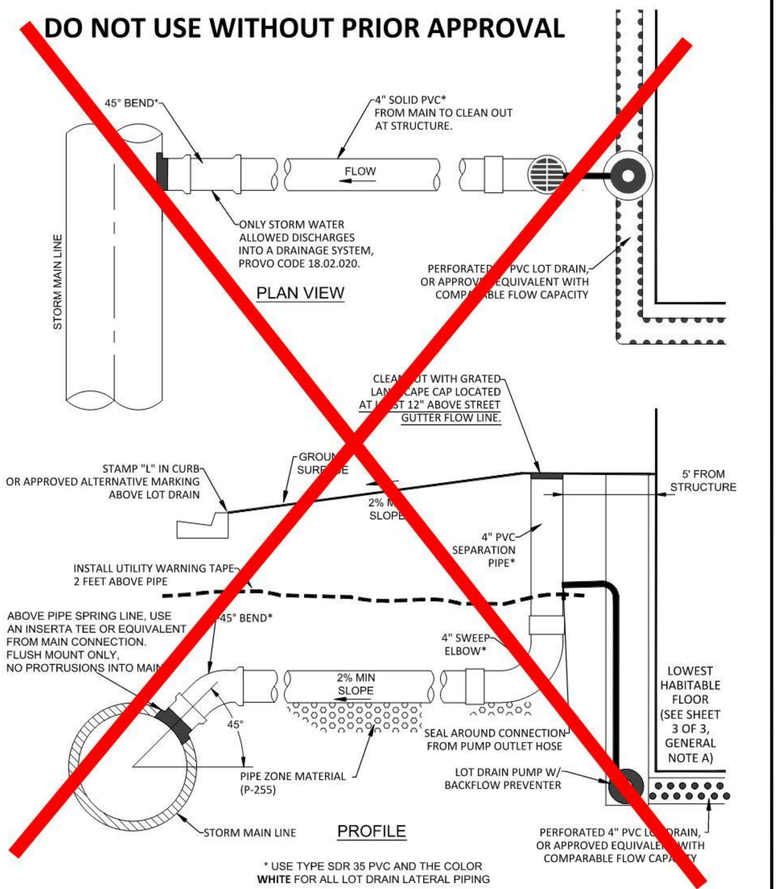
provo PUBLIC WORKS

*WATER MAINLINE TEE*

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021

provo

DO NOT USE WITHOUT PRIOR APPROVAL

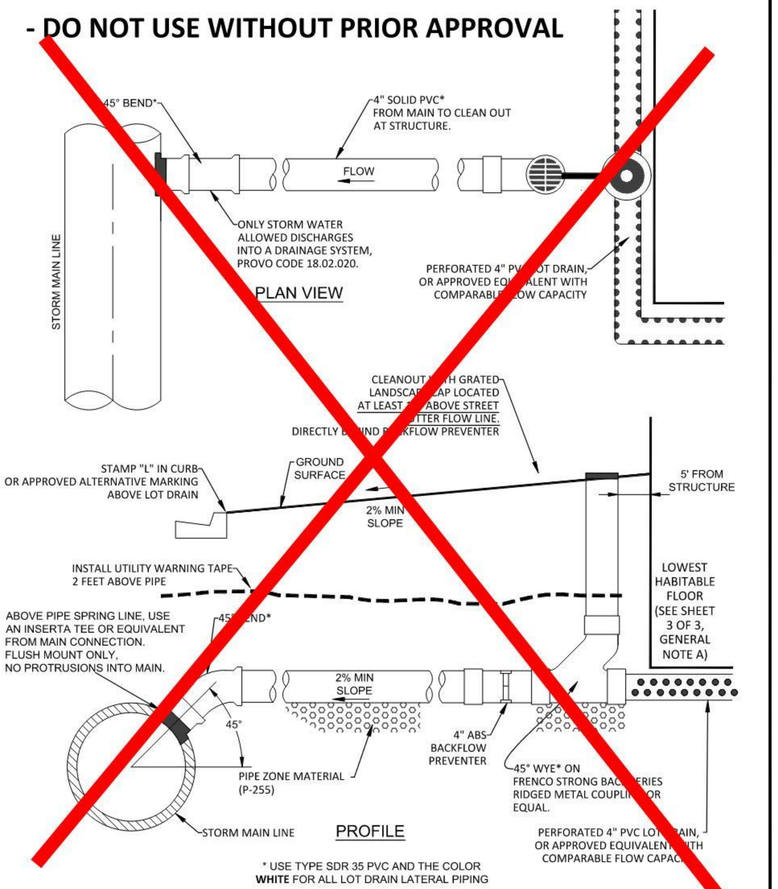



* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING

SHEET 1 OF 3

| | | |
|---|---|---|
| provo PUBLIC WORKS | *LOT DRAIN LATERAL WITH DRAIN PUMP* | STANDARD DETAIL P-392a NOT TO SCALE REVISED DATE: 10/07/2019 |

DO NOT USE WITHOUT PRIOR APPROVAL




* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING

SHEET 2 OF 3

| | | |
|---|---|---|
| provo PUBLIC WORKS | *LOT DRAIN LATERAL WITH GRAVITY FLOW* | STANDARD DETAIL P-392b NOT TO SCALE REVISED DATE: 10/07/19 |

***Lot Drain Lateral***

1. **GENERAL**
   - A. Standard Drawings P-392a and P-392b may be used under the following conditions:
     - A.A. Lot drains are sometimes required by IBC to drain backfilled areas around buildings in areas with tight native soils. Lot drains are not intended to drain high groundwater. The lowest habitable floor is recommended to be a minimum of 4 feet above groundwater elevation. Provo City may require a site specific geotechnical report identifying groundwater elevations and minimum FF elevations, to be reviewed and approved by the City Engineer or their designee.
     - A.B. Standard Drawing P-392a - The top of the landscape grate on the separation pipe shall be a minimum of 12 inches above the gutter flow line.
     - A.C. Standard Drawings P-392b - This drawing can only be used if (a) the storm drain main is designed to convey the City design storm with the HGL below top of pipe, AND (b) the lowest habitable floor is a minimum of 2 feet above the top of storm drain main at the lot drain connection. Otherwise, P-392a must be used.
   - B. It is unlawful for any person to cause or allow the discharge into a water body or storm drainage system, either directly or indirectly, of any substance not comprised entirely of storm water, refer to Provo City code 18.02.020 for prohibited discharges.
   - C. Minimum distance between lot drain connections to the storm main shall be 4 feet.
   - D. Minimum required grade of lot drains is 2%.
   - E. Clean-outs shall be installed at a minimum every 100 feet and wherever there is a change in slope or direction of pipe lateral and within 5 feet from structure.
   - F. If building construction is not imminent, terminate at a clean-out a minimum of 12 feet inside the property line. Cap and mark white for future connection.
2. **PRODUCT**
   - A. Lot drains shall use type SDR 35 PVC. The color of the pipe and fittings shall be white.
   - B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   - D. Pipe Zone: Gravel, Provo Section 32 05 13M.
   - E. Lot Drain Mainline Connections: 45 degree bend and Inserta Tee or equivalent.
3. **EXECUTION**
   - A. Before installation, secure acceptance by ENGINEER for all pipe, fittings and couplings to be used.
   - B. Core and remove plug from storm main. Do not break into storm main for connection.
   - C. Use an Inserta Tee or equivalent for a water tight connection at storm main. Protrusion into storm main pipe past inner wall is not allowed.
   - D. CONTRACTOR shall have ALL connections inspected and surveyed by Provo City before backfilling.
   - E. Provide backfill and surface restoration per Plan P-255.

SHEET 3 OF 3

| | | |
|---|---|---|
| provo PUBLIC WORKS | *LOT DRAIN LATERAL AND CLEAN-OUT* | STANDARD DETAIL P-392c NOT TO SCALE REVISED DATE: 10/07/19 |

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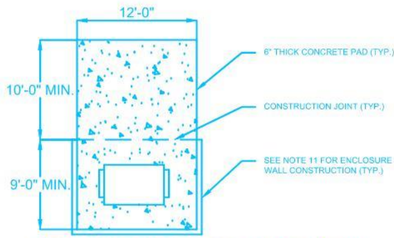
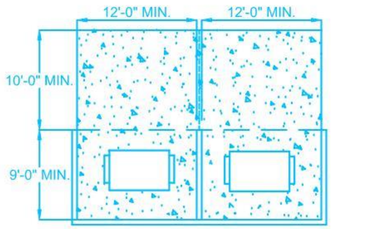
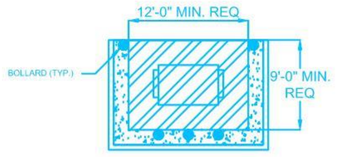



SINGLE-WIDE BIN ENCLOSURE CONFIGURATION

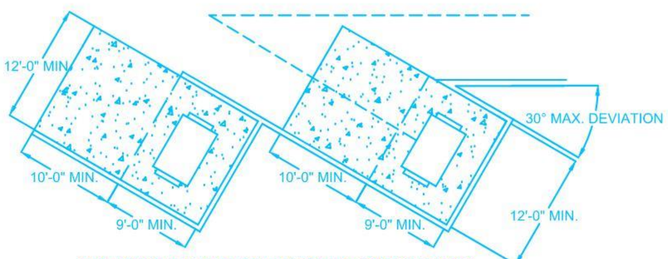



DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION

1. SINGLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 12 FEET.
2. DOUBLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 24 FEET WITHOUT MIDWALLS. ALTHOUGH NOT PREFERRED, DOUBLE-WIDE BIN ENCLOSURES CAN BE DESIGNED WITH MIDWALLS WITH A NET ENCLOSURE WIDTH OF 12 FEET ON EACH SIDE OF MIDWALL.
3. ENCLOSURES MAY BE DESIGNED WITH AN OPENING LESS THAN 12 FEET IF CONTAINER IS PLACED ON ROLLERS TO BE PULLED OUT FOR SOLID WASTE COLLECTION.
4. MULTI-UNIT RESIDENTIAL DEVELOPMENTS MAY BE DESIGNED WITH A TRIPLE WIDE ENCLOSURE TO ACCOMMODATE RECYCLING ADDITIONAL ENCLOSURES MAY BE NECESSARY DEPENDING ON NUMBER OF UNITS.
5. TRIPLE-WIDE ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 36 FEET AND SHALL BE DESIGNED WITHOUT MIDWALLS. GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING.
6. GATES, HINGES, & MOUNTING HARDWARE SHALL BE INSTALLED SO THERE IS A MIN. 9 FOOT DEPTH CREATED WITHIN EACH ENCLOSURE.
7. GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING SO THERE IS A MINIMUM 12' WIDTH WITHIN EACH ENCLOSURE.
8. CONTRACTION JOINTS MAY BE EITHER SCORED OR SAWCUT 1-INCH DEEP.
9. BINS THAT ARE VISIBLE FROM A PUBLIC ROADWAY SHALL HAVE ENCLOSURE GATES THAT SCREEN THE BINS FROM PUBLIC VIEW.
10. ENCLOSURES SHALL BE PLACED SO THAT THERE IS AT LEAST 45 FEET OF CLEARANCE BETWEEN THE ENTRANCE OF THE ENCLOSURE AND ANY OTHER OBSTRUCTIONS.
11. ENCLOSURE WALLS SHALL BE TALL ENOUGH AND MADE OF A MATERIAL SO THAT THE BIN IN EACH ENCLOSURE IS BLOCKED FROM PUBLIC VIEW.
12. MAINTAIN A 15' MIN. OVERHEAD CLEARANCE FOR ACCESS TO TRASH ENCLOSURE.
13. RECOMMENDED BOLLARDS TO PROTECT ENCLOSURE WALLS. BOLLARD DESIGN REQUIRES A MIN. 9' X 12' INSIDE OPERATIONAL SPACE.

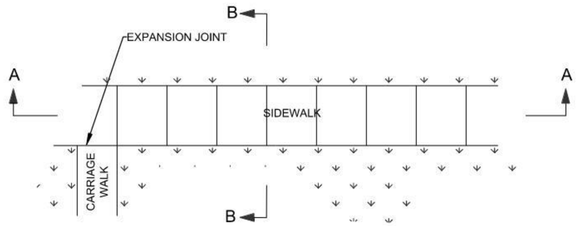



RECOMMENDED BOLLARDS SEE NOTE 13

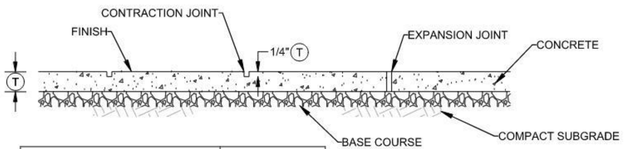



ANGLED DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION

| | |
|---|---|
| provo PUBLIC WORKS | *SOLID WASTE ENCLOSURE STANDARD* |
| SHEET 1 OF 1 | STANDARD DETAIL P-920 NOT TO SCALE REVISED DATE: 09/12/23 |



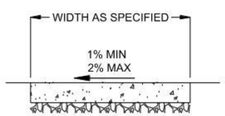

PLAN



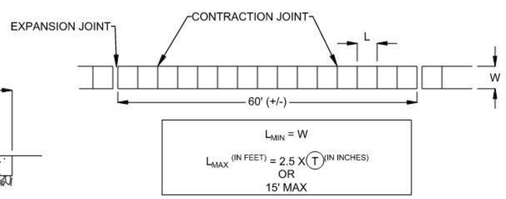

| STREET TYPE | (T) |
|---|---|
| RESIDENTIAL (WITH PARK STRIP) | 5" |
| RESIDENTIAL (NO PARK STRIP) | 5" |
| OTHER | |
| REPLACING EXISTING SIDEWALK | MATCH EXISTING (5" MIN.) |

SEE DRIVEWAY APPROACH PLANS FOR SIDEWALK THICKNESS AT DRIVEWAYS

SECTION A-A




SECTION B-B




SIDEWALK JOINT DETAIL

| | |
|---|---|
| provo PUBLIC WORKS | *SIDEWALK* |
| SHEET 1 OF 1 | STANDARD DETAIL P-231 NOT TO SCALE REVISED DATE: 08/2023 |

***Sidewalk***

1. **GENERAL**
   - A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   - B. Additional requirements are specified in APWA Section 32 16 13.
2. **PRODUCT**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   - C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   - D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
3. **EXECUTION**
   - A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   - B. Concrete Placement: APWA Section 03 30 10.
     - B.1. Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.
     - B.2. Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).
     - B.3. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.

| | |
|---|---|
| provo PUBLIC WORKS | *SIDEWALK* |
| SHEET 2 OF 2 | STANDARD DETAIL P-231 NOT TO SCALE REVISED DATE: 08/2023 |

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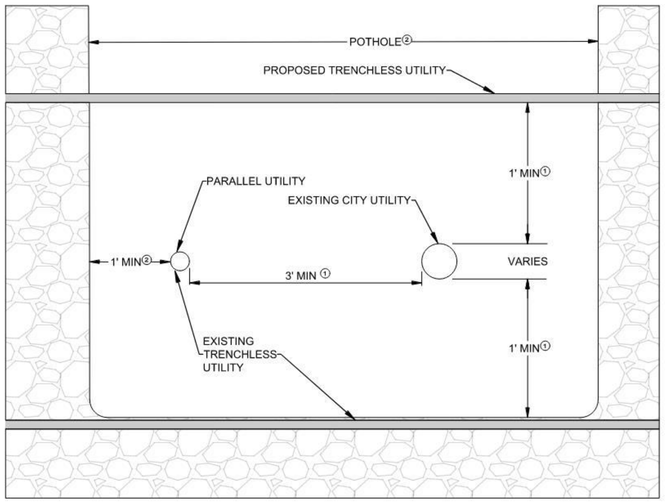
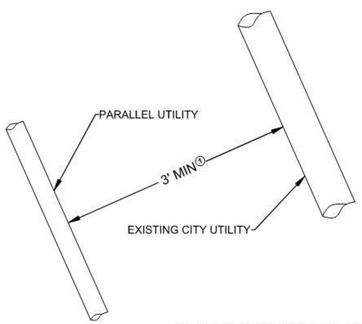



CROSS SECTION




PLAN VIEW PARLLEL UTILITY INSTALLATION

① Provide 1 foot minimum vertical clearance and 3 foot horizontal clearance edge to edge between city utility and trenchless utility.

② Expose city utility at crossing location for a minimum of 1 foot on all sides prior to trenchless installation.



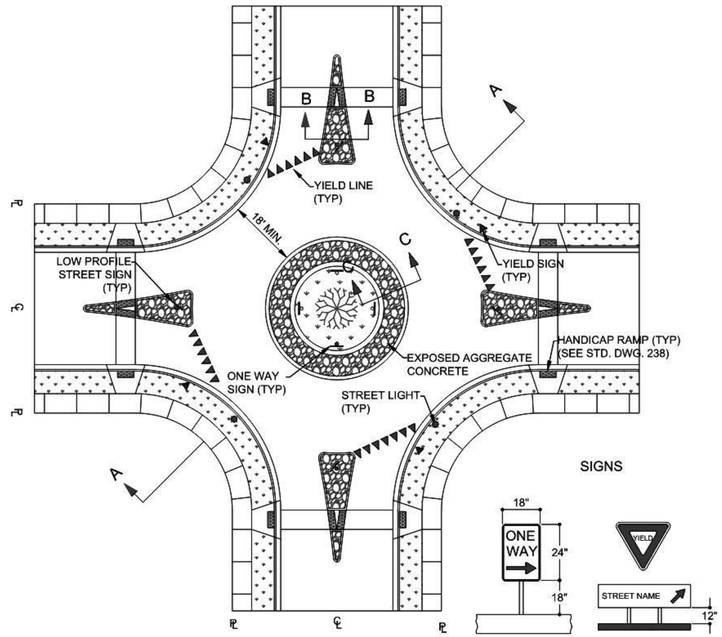
provo PUBLIC WORKS | *TRENCHLESS UTILITY INSTALLATION* | STANDARD DETAIL P-257 | NOT TO SCALE | REVISED DATE: 08/2023

Trenchless Utility Installation

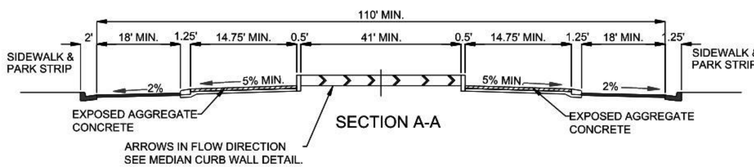
1. GENERAL
   A. All city utilities shall be potholed and exposed for one foot (1') on all sides.
   B. All parallel utilities shall be a minimum of three feet (3') from a city utility.
   C. Utilities should be buried between 36" and 48".
   D. If location of trenchless utility differs from what is represented on the permit, a new permit showing the revised location will be required.
2. PRODUCT
   A. If adequate compaction cannot be achieved around a city utility that has been potholed, flowable fill will be required.
3. EXECUTION
   A. Each utility shall be windowed and a person shall witness ~~the of~~ the trenchless utility crossing the existing utilities.
   B. Minimum 24 hour notice is required of any installation of a trenchless utility past a city utility.
   C. Pothole restoration shall conform to Provo City Standard P-255, "TRENCH BACKFILL AND SURFACE RESTORATION". If proper compaction cannot be obtained, flowable fill may be required.



provo PUBLIC WORKS | *TRENCHLESS UTILITY INSTALLATION* | STANDARD DETAIL P-257 | NOT TO SCALE | REVISED DATE: 08/2023



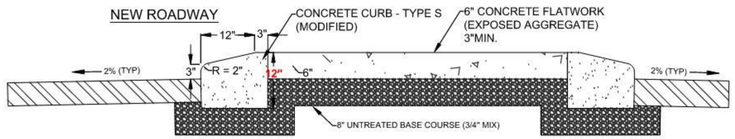

CHANGES CAN BE MADE
BASED ON DESIGN VEHICLE.

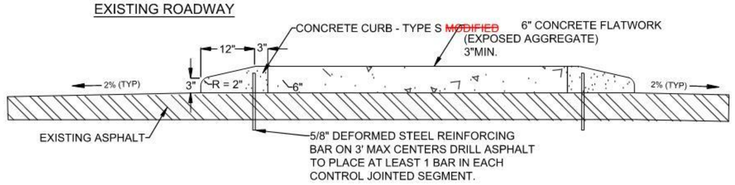




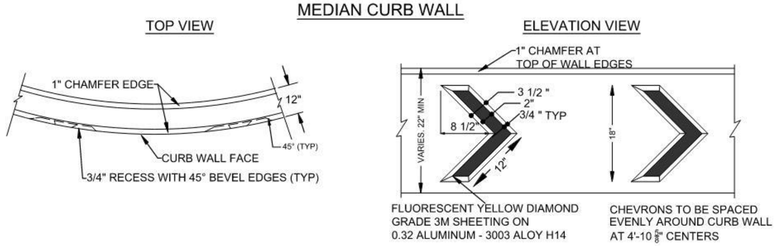

provo PUBLIC WORKS | *TYPICAL ROUNDABOUT* | STANDARD DETAIL P-912 | NOT TO SCALE | REVISED DATE: 08/2023

## SECTION B-B

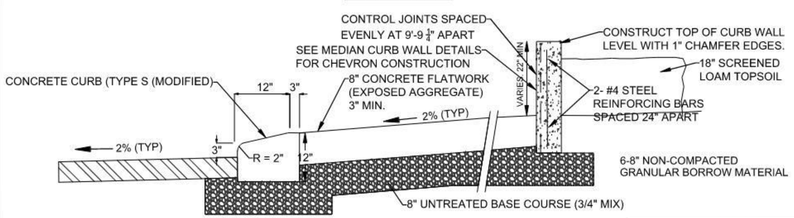


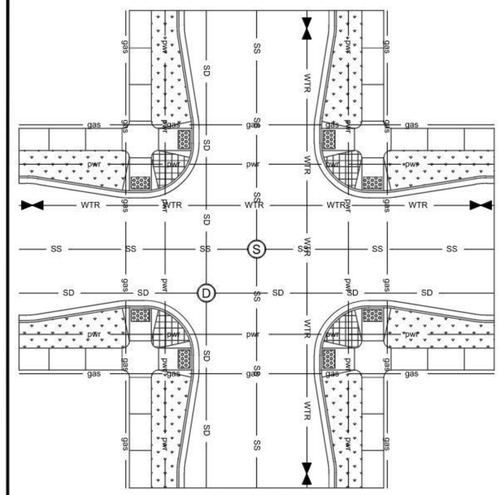

## MEDIAN CURB WALL




## SECTION C-C




| | | |
|---|---|---|
| provo PUBLIC WORKS | *TYPICAL ROUNDABOUT* | SHEET 2 OF 2<br>STANDARD DETAIL<br>P-912<br>NOT TO SCALE<br>REVISED DATE: 08/2023 |




NOTES:

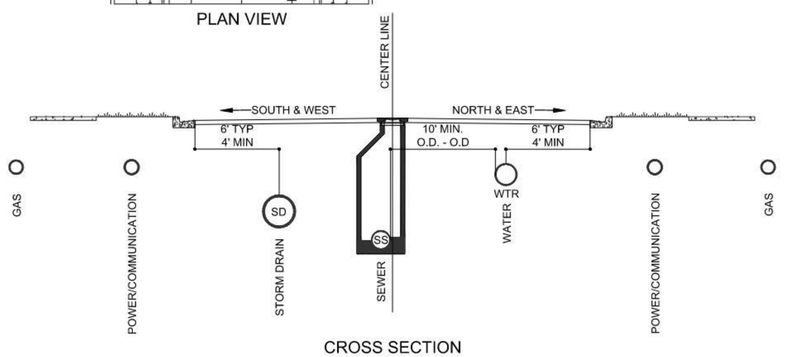
WATER LINES: ~~TYPICALLY~~ 6' FROM THE LIP OF CURB ON THE NORTH AND EAST SIDES OF THE ROAD.

SEWER LINES: ~~TYPICALLY~~ ON CENTER LINE OF ROAD.

STORM DRAIN: ~~TYPICALLY~~ 6' FROM THE LIP OF CURB ON THE SOUTH AND WEST SIDES OF THE ROAD.

DETAIL DOES NOT APPLY TO 24' ASPHALT WIDTH ROADS.

BURY DEPTH FOR COMMUNICATION UTILITIES SHOULD BE BETWEEN 36-INCHES AND 48-INCHES.




| | | |
|---|---|---|
| provo PUBLIC WORKS | *UTILITY LOCATION IN CITY R.O.W.* | SHEET 1 OF 1<br>STANDARD DETAIL<br>P-914<br>NOT TO SCALE<br>REVISED DATE: 08/2023 |

## SECTION 32 12 05M
## BITUMINOUS CONCRETE
REVISED 8-22-23

This Section modifies portions of Section 32 12 05 entitled "Bituminous Concrete" (Amendment 1 - APWA 2017 as outlined below).

**Add to Article 1.4, paragraph B.2 the following:**

a. Hot mix plant must fall within a 25-mile maximum radius from the job site.

**Delete Article 1.4, paragraph C.7 and replace with the following:**

7. Binder target percentage, dust to binder ratio, and the following as applicable.
   a. For Superpave mix design provide (1) voids in the mineral aggregate (VMA), (2) voids filled with bituminous binder (VFA), and (3) Hamburg Wheel Tracker results.
   b. For Marshall mix design provide (1) tensile strength ratio (moisture sensitivity), (2) voids in the mineral aggregate (VMA), (3) stability, (4) flow, (5) voids in the bituminous mix, (6) voids filled with bituminous binder (VFA), (7) virgin binder replacement, (8) RAP asphalt content, and (9) effective asphalt content.

**Add to Article 1.6, paragraph E.1 the following:**

**Table 2 – Pay Factors – Marshall Mix Design**

| Criteria | Pay Factor | Range of Mean of Deviations of Test Results from the Binder and Gradation Targets in Percentage Points | | | | |
|---|---|---|---|---|---|---|
| | | 500 Tons | 1,000 Tons | 1,500 Tons | 2,000 Tons | ≥2,500 Tons |
| Binder Content | 1.00 | 0.00–0.70 | 0.00-0.54 | 0.00-0.46 | 0.00-0.41 | 0.00-0.38 |
| | 0.975 | 0.71–0.80 | 0.55-0.61 | 0.47-0.52 | 0.42-0.46 | 0.39-0.43 |
| | 0.95 | 0.81–0.90 | 0.62-0.68 | 0.53-0.58 | 0.47-0.52 | 0.44-0.47 |
| | 0.90 | 0.91-1.00 | 0.69-0.75 | 0.59-0.64 | 0.53-0.56 | 0.48-0.52 |
| | 0.85 | 1.01–1.10 | 0.76-0.82 | 0.65-0.69 | 0.57-0.61 | 0.53-0.56 |
| 1/2" and larger Sieve | 1.00 | 0.0-10.9 | 0.0-7.3 | 0.0-6.5 | 0.0-5.6 | 0.0-5.2 |
| | 0.975 | 11.00-12.9 | 7.4-8.3 | 6.6-7.1 | 5.7-6.3 | 5.3-5.8 |
| | 0.95 | 13.0-13.9 | 8.4-9.3 | 7.2-7.9 | 6.4-7.0 | 5.9-6.4 |
| | 0.90 | 14.0-14.9 | 9.4-10.3 | 8.0-8.7 | 7.1-7.7 | 6.5-7.1 |
| | 0.85 | 15.0-16.0 | 10.4-11.3 | 8.8-9.5 | 7.8-8.4 | 7.2-7.7 |
| 3/8" Sieve | 1.00 | 0.0-9.9 | 0.0-6.9 | 0.0-5.9 | 0.0-5.3 | 0.0-4.9 |
| | 0.975 | 10.0-10.9 | 7.0-7.8 | 6.0-6.6 | 5.4-6.9 | 5.0-5.5 |
| | 0.95 | 11.0-11.9 | 7.9-8.7 | 6.7-7.3 | 6.0-6.6 | 5.6-6.1 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | 0.90 | 12.0-13.9 | 8.8-9.6 | 7.4-8.0 | 6.7-7.2 | 6.2-6.6 |
| | 0.85 | 14.0-15.0 | 9.7-10.5 | 8.1-8.9 | 7.3-7.9 | 6.7-7.2 |
| | 1.00 | 0.0-9.9 | 0.0-6.7 | 0.0-5.7 | 0.0-5.2 | 0.0-4.8 |
| | 0.975 | 10.0-11.0 | 6.8-7.6 | 5.8-6.3 | 5.3-5.8 | 4.9-5.4 |
| No. 4 Sieve | 0.95 | 11.1-11.9 | 7.7-8.5 | 6.4-6.9 | 5.9-6.4 | 5.5-5.9 |
| | 0.90 | 12.0-12.9 | 8.6-9.4 | 7.0-7.5 | 6.5-7.0 | 6.0-6.5 |
| | 0.85 | 13.0-14.0 | 9.5-10.2 | 7.6-8.0 | 7.1-7.6 | 6.6-7.0 |
| | 1.00 | 0.0-7.9 | 0.0-5.6 | 0.0-4.8 | 0.0-4.3 | 0.0-4.0 |
| | 0.975 | 8.0-8.9 | 5.7-6.3 | 4.9-5.4 | 4.4-4.8 | 4.1-4.5 |
| No. 8 Sieve | 0.95 | 9.0-9.9 | 6.4-7.0 | 5.5-6.0 | 4.9-5.3 | 4.6-4.9 |
| | 0.90 | 10.0-10.9 | 7.1-7.7 | 6.1-6.6 | 5.4-5.8 | 5.0-5.4 |
| | 0.85 | 11.0-12.0 | 7.8-8.5 | 6.7-7.2 | 5.9-6.4 | 5.5-5.8 |
| | 1.00 | 0.0-7.9 | 0.0-5.2 | 0.0-4.6 | 0.0-4.2 | 0.0-3.9 |
| | 0.975 | 8.0-8.9 | 5.3-5.8 | 4.7-5.1 | 4.3-4.6 | 4.0-4.3 |
| No. 16 Sieve | 0.95 | 9.0-9.9 | 5.9-6.4 | 5.2-5.6 | 4.7-5.1 | 4.4-4.7 |
| | 0.90 | 10.0-10.9 | 6.5-7.0 | 5.7-6.1 | 5.2-5.5 | 4.8-5.1 |
| | 0.85 | 11.0-12.0 | 7.1-7.6 | 6.2-6.6 | 5.6-5.9 | 5.2-5.4 |
| | 1.00 | 0.0-6.9 | 0.0-4.3 | 0.0-3.8 | 0.0-3.4 | 0.0-3.2 |
| | 0.975 | 7.0-7.9 | 4.4-4.8 | 3.9-4.1 | 3.5-3.8 | 3.3-3.5 |
| No. 50 Sieve | 0.95 | 8.0-8.9 | 4.9-5.3 | 4.2-4.5 | 3.9-4.1 | 3.6-3.8 |
| | 0.90 | 9.0-9.9 | 5.4-5.8 | 4.6-4.9 | 4.2-4.4 | 3.9-4.1 |
| | 0.85 | 10.0-11.0 | 5.9-6.4 | 5.0-5.5 | 4.5-4.9 | 4.2-4.5 |
| | 1.00 | 0.0-3.0 | 0.0-2.4 | 0.0-2.0 | 0.0-1.8 | 0.0-1.7 |
| | 0.975 | 3.1-3.5 | 2.5-2.7 | 2.1-2.2 | 1.9-2.0 | 1.8-1.9 |
| No. 200 Sieve | 0.95 | 3.6-4.0 | 2.8-3.0 | 2.3-2.4 | 2.1-2.2 | 2.0-2.1 |
| | 0.90 | 4.1-4.5 | 3.1-3.3 | 2.5-2.7 | 2.3-2.4 | 2.2-2.3 |
| | 0.85 | 4.6-5.0 | 3.4-3.6 | 2.8-3.0 | 2.5-2.6 | 2.4-2.5 |

NOTES
(a) Test binder content using a burn-off oven, ASTM D6307.
(b) Determine aggregate gradation by extraction. ASTM D5444.

**Add to Article 2 the following:**

**2.1 Binder**

A. Asphalt Cement (AC)

1. Performance graded asphalt binder (PGAB) may be substituted for asphalt cement as follows.

| Asphalt Cement | Substitute |
|---|---|
| AC-10 | PG 58-28 |
| AC-20 | PG 64-22 |

**Delete Article 2.3, paragraph D and replace with the following:**



D. RAP or ROSP: Free of detrimental quantities of deleterious materials.

1. Allowed up to 15 percent by weight of RAP or binder, whichever is lesser, with no change in specified binder grade.
2. Allowed from 15 to 25 percent by weight of RAP or binder, whichever is lesser, if the binder grade is adjusted according to AASHTO M323 to meet the specified binder grade.
3. Determine RAP binder content by chemical extraction.

**Add to Article 2.4, paragraph B with the following:**

**Table 4A - Master Grading Band limits - Marshall Mix Design**

| Sieve | Aggregate Grade | | | | | | |
|---|---|---|---|---|---|---|---|
| | DM-1 | DM-3/4 | DM-1/2 | DM-3/8 | OM-1/2 | FM-1 | FM-1/2 |
| 1 inch | 100 | | | | | | |
| 3/4 inch | | 100 | | | | 100 | |
| 1/2 inch | 75 - 91 | | 100 | | 100 | 90 - 100 | 100 |
| 3/8 inch | | 75-91 | | 100 | 93 - 100 | 60 - 100 | 90 - 100 |
| No. 4 | 47 - 61 | 46-62 | 60 - 80 | 60 - 80 | 36 - 44 | 15 - 40 | 30 - 50 |
| No. 8 | | | | | 14 - 21 | 4 - 12 | 5 - 15 |
| No. 16 | 23 - 33 | 22-34 | 28 - 42 | 28 - 42 | | | |
| No. 50 | 12 - 22 | 11-23 | 11 - 23 | 11 - 23 | | | 2 - 5 |
| No. 200 | 3 - 7 | 3-7 | 3 - 7 | 3 - 7 | 2 - 4 | 2 - 5 | |

NOTES
(a) Gradation is expressed in percent passing by weight. ASTM C136. Percentage of fines passing No. 200 sieve determined by washing, ASTM C117.
(b) Friction Mixture, ASTM D 3515.
(c) The alpha portion of the grade designator (DM, OM, FM) represents dense mix, open mix, and friction mix. The numerical portion ( 1, 3/4, 1/2 ) represents the ***maximum*** sieve size.

**Add to Article 2.4, paragraph D with the following:**

D. **Design Parameters:** Table 6, determined by AI MS2.

**Table 6 - Mix Design Parameters**

| Criteria | | Marshall | |
|---|---|---|---|
| Mix Designator | (a) | 50 blow | 75 blow |
| Compaction (blows) | (b) | 50 | 75 |
| Compaction (gyrations) | | - | |
| Design Air Void Target, percent | | 3.5 | |
| Stability, lbs., minimum | (c) | 1200 | 1800 |



| | | |
|---|---|---|
| Flow, in 0.01 inch units (d) | 10-18 | |
| Voids in Mineral Aggregate (VMA), percent, minimum, relative to maximum or nominal sieve size grading and calculated using Gsb (dry) for virgin aggregate and RAP aggregate | ASTM D 6927 | |
| | Nominal Grading | |
| | 1 | 13.0 |
| | 3/4 | 14.0 |
| | 1/2 | 15.0 |
| | 3/8 | 16.5 |
| RAP or ROSP specific gravity for calculations | Gsb (dry) by chemical extraction | |
| Dust to Binder Ratio, maximum | 1.6 | |
| Tensile Strength Ratio (moisture sensitivity), minimum (e) | 0.80 | |
| Rutting (Hamburg rut test) (f) | | |
| Road Class I | - | - |
| Road Class II | - | - |
| Road Class III | - | - |

NOTES
(a) Road Class is defined in Section 32 01 31
(b) 100Nd mix is for very high traffic applications only as defined by ENGINEER. 100Nd mix is intended for lower lift applications or surface applications with proactive seal coat program.
(c) Number of compaction blows each end of specimen.
(d) Design Density Target: ASTM D 2041. Percent of maximum theoretical specific gravity
(e) Stability, Flow, Voids: ASTM D 6927.
(f) Tensile Strength Ratio (moisture sensitivity): ASTM D 4867. Use freeze thaw conditioning. Compact test specimen to seven (7) percent plus or minus one (1) percent air voids.
(g) With testing performed at temperatures representing the specified binder grade in the Hamburg rut test, the average rut depth of two (2) mix design test samples is less than amount shown for the respective Road Classes.

END OF SECTION

a. Minimum allowable water main diameter shall be eight inches (8").
b. Main lines larger than the minimums shown above may be required if necessary for fire flow or pressure. Developer shall be responsible for an upsize based on providing sufficient capacity for the development.
c. If the Master Plan requires a larger pipe size than described in paragraphs (a) and (b), City may require the developer to install the larger size.

B. Waterline shall be Ductile Iron with polywrap, grease on bolts and #14 copper tracer wire per Provo Standard Drawing P-594 and installed per AWWA Standard C600-10. C900 PVC Pipe may be allowed with approval from director. HDPE, Steel, or other pipe material are not allowed unless expressly permitted by the Public Works Division of Water Resources. All construction and installation shall conform to standards referenced in R309-550-8 of the Utah Administrative Code.
   a. ~~.~~ Continuity of tracer wire shall be confirmed by an independent tester prior to requesting verification of continuity by Provo City and positive test results presented to City inspectors before City inspectors will check for continuity. Failure of a continuity test conducted by a City inspector will result in a re-inspection fee as set forth in the Consolidated Fee Schedule.

C. Waterline shall ~~should typically~~ be installed within the street section in the location shown on Provo Standard Drawing P-914~~.~~, unless otherwise approved.

D. Provide a minimum of ten (10) feet horizontal clearance between a water and sewer edge to edge per Utah Administrative Code R317-3-2 and R309-550-7 (laterals, services and main lines).
   a. Where a water main and a sewer line must cross, the water main shall be at least 18 inches above the sewer line. Separation distances shall be measured edge-to-edge (i.e. from the nearest edges of the facilities).
   b. Water mains and sewer lines shall not be installed in the same trench.
   c. Where local conditions make it impossible to install water or sewer lines at separation distances required by subsection (a), the sewer pipes are in good condition, and there is not high groundwater in the area, it may be acceptable if the design includes a minimum horizontal separation of 6 feet and a minimum vertical clearance of 18 inches with the waterline being above. In order to determine whether the design is acceptable, the following information shall be submitted as part of the plans for review.
      1. reason for not meeting the minimum separation standard;
      2. location where the water and sewer line separation is not being met;
      3. horizontal and vertical clearance that will be achieved;
      4. sewer line information including pipe material, condition, size, age, type of joints, thickness or pressure class, whether the pipe is pressurized or not, etc.;
      5. water line information including pipe material, condition, size, age, type of joints, thickness or pressure class, etc.; 6. ground water and soil conditions; and,
      7. any mitigation efforts.

E. Minimum cover required shall be 52 inches (52").



F. All new water infrastructure shall be pressure tested by maintaining 200 psi for two hours.
G. All materials that may come in contact with drinking water, including pipes, gaskets, lubricants and O-Rings, shall be ANSI-certified as meeting the requirements of ANSI/NSF Standard 61, Drinking Water System Components - Health Effects. To permit field-verification of this certification, all components shall be appropriately stamped with the NSF logo.
H. Pipe, joints, fittings, valves, and fire hydrants shall conform to ANSI/NSF Standard 61, and applicable sections of AWWA Standards C104-A21.4-08 through C550-05 and C900-07 through C950-07.

3. VALVES
   A. Valves shall be provided in all intersections and shall equal number of legs.
   B. Mainline valves on either side of tee shall be located a minimum of three feet (3') off a tee or cross and shall be MJ x MJ valves.
   C. Mainline Valves shall be located a minimum of three feet (3') from any fitting and shall be MJ x MJ valves.
      a. An exception would be a flanged connection on the stem of a tee.
   D. All valves larger than 12 inches (12") shall be butterfly design.
   E. All butterfly valves shall be of the double offset design and shall meet or exceed the requirements of AWWA C504-15.
   F. Provide concrete collars on valve boxes at ¼" below finished asphalt.
   G. Place valves at intersections per Provo Standard Drawing P-914.

4. WATER SERVICES
   A. No service line connections shall be made to Provo City's water distribution system or to main water lines on private property without authorization. The party making the connection shall be required to obtain a permit for the same and to pay the fees associated with that permit as shown on the Consolidated Fee Schedule.
   B. Water taps on public or private mains shall be installed by a qualified and licensed plumber or a pre-qualified utility contractor and inspected by the City.
   C. Minimum size shall be one-inch (1") diameter for service lines and meter yokes.
   D. Engineering calculations shall be required to show that meter size is adequate to meet demand for any uses other than detached single family residential or townhomes.
   E. The water service shall extend perpendicularly from the main line to meter ~~be~~ in front of the property it services and shall not cross through other properties.
   F. No common use water services shall be allowed unless approved by the Water Resources Director.
      a. Service lines must be so arranged that the supply to each separate house or premises are controlled by a separate valve, placed within and near the line of the street curb.



b. Common use water services shall be eliminated as redevelopment of the site occurs, or if repair or replacement is needed. The construction or repair cost will be the responsibility of the Owner.
c. Master meter(s) or combined building meters may be allowed for private developments if approved by the Water Resources Director. All lines within the private development shall be private including those from the private mainline to the meter. The developer shall provide the City with an agreement defining who is responsible for maintenance and show the lines as private on the plat and utility plans. Individual shutoffs located near the curb are required for each unit.
d. Legal and physical access shall be provided to all meters.
e. All service lines shall be capped downstream of the meter box until connected for service.

5. ~~ABANDONDED SERVICE LINES~~ABANDONMENT OF WATER UTILITIES
   A. Whenever a water service line is abandoned in favor of a different service line, the old service line shall be disconnected from the main line and the old service tap shall be plugged at the main line. The cost of all such work shall be the responsibility of the owner of the property being serviced by the new water service line. Any work described in this Section shall be inspected by Provo City before backfilling. Prior to demolition of proposed site ~~permit approval~~, water services and fire lines shall be abandoned per Provo City standards.

6. FIRE HYDRANTS
   A. Provide minimum fire flow required by the Uniform Fire Code for proposed structures and fire flow calculations at all hydrant locations. Unless project specific information is provided, the following will be assumed:

**Provo City Minimum Operational and Performance Criteria for Planning and Design**

| Component | Criteria |
|---|---|
| **Fire Flow Requirements (flow [gpm] @ duration [hours]) [a]** | |
| Single-Family Residential | 1,500 gpm @ 2 hrs |
| Other | IFC or Fire Marshall |
| **Water Distribution Line Sizing** | |
| Max day plus Fire Flow or Average Peak Day Demand Condition | |
| Minimum Pressure, psi | 50 psi (20 psi for fire flow) |
| Maximum Velocity, ft/sec | 7 fps (excluding fire flow) |

[a] Typical minimum flow will be verified by City on a case by case basis

   B. Install fire hydrants per Provo Standard Drawing P-511.
      a. Hydrants shall be connected to a minimum eight-inch (8") main using a minimum six-inch (6") diameter pipe.

C. Sewer mainlines and laterals shall be marked with a detectable green colored locator tape.

D. Minimum depth of the sewer mainlines shall be seven (7) feet below finish grade. In areas where basements are allowed, sewer mains shall be deep enough to service basements.

E. Sewer mainline grades are as follows:

| Minimum Sewer Main Pipe Slope* | |
|---|---|
| 8 inch sewer lines** | 0.40% |
| 10 inch sewer lines | 0.28% |
| 12 inch sewer lines | 0.22% |
| 15 inch sewer lines | 0.15% |
| 18 inch sewer line | 0.12% |
| 21 inch and larger sewer lines | 0.10% |
| * Sewer mains may not be upsized only for the purpose of installing at a flatter slope unless information is provided by the engineer showing that there is adequate scour volume to keep the line clean without increased maintenance. ** The first segment(s) of 8 inch sewer mains may be required to be placed at 1% min slope if there is not sufficient flow to provide adequate scour volume. | |

F. All sewers which are designed to flow at 10 feet per second or greater shall be reviewed by City for approval or alternate design consideration. Suitable thrust blocks, concrete anchors or equivalent restraints shall be provided per R317-3-2 of the Utah Code when pipe slopes are 10% or greater.

G. Horizontal clearance to any culinary water line shall be at least 10 feet (10') edge of pipe to edge of pipe per R309-550 and R317-3-2.
   a. Utilities crossing sewer mains shall cross as close to a right angle as possible.
   b. Provide a minimum vertical clearance of eighteen inches (18") between water and sewer with water main lines and service above the sewer measured from the outside of the pipes.
   c. When utilities are bored near sewer mains, laterals and all crossings, the sewer utilities shall be TV inspected.

H. No curvilinear sewer mains shall be allowed.

3. MANHOLE DESIGN STANDARDS
   A. Manholes shall conform to Provo Standard Drawing P-411.
   B. Depth transitions shall occur between manholes. Drop manholes are discouraged and may only be used with explicit written approval and shall conform to Provo Standard Drawing P-433.
   C. Sewer manholes shall be installed:
      a. At a maximum spacing of four hundred (400) feet.
      b. At all changes in grade, size or alignment, and at all intersections with other mainlines.
      c. At the end of main lines (no cleanouts allowed on mainlines).



d. All six-inch (6") and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main. D. Sewer manholes shall be sized based on the following:
   a. Five (5) foot Diameter manholes required at three-way manholes, 90° bends, over 15" and 18" pipes, manholes over 10' deep, and in manholes with over one foot of drop across manhole.
   b. Six (6) foot Diameter manholes required over pipes 24" and greater, and at three-way manholes where the deflection exceeds 90° and height of manhole exceeds 16'.

4. ABANDONMENT OF SEWER UTILITIES~~LATERALS~~
   A. Whenever an existing sewer lateral(s) is abandoned in favor of a new lateral, the Owner shall disconnect the existing sewer lateral from the main and plug the lateral tap into the main. All costs associated with labor and material for such work shall be the responsibility of the property owner causing the lateral to be abandoned. All work shall be inspected by Provo City before backfilling. Prior to demolition of proposed site~~permit approval~~, sewer laterals shall be abandoned per Provo City standards.

5. SEWER LATERAL DESIGN STANDARDS
   A. Sewer taps will be performed by the contractor and inspected by a City Inspector.
      a. Sewer taps into an existing eight (8) inch main shall not be greater than four (4) inches.
         1. Direct nose-on connections may only be used when connecting to an existing mainline. The installation must be inspected and a saddle used when warranted.
         2. Connections to new mains shall be with a wye and a forty-five degree (45º) bend.
      b. Minimum distance between connections shall be four feet.
      c. Sewer laterals shall connect to sewer main lines and not discharge into manholes.
   B. At the time of significant remodel or change of use, reuse of existing laterals may be allowed for use only if the following conditions are met: a. The existing lateral is of sufficient size and slopes for the proposed use.
      b. The existing lateral is in good condition, free from damage, bellies, leaks, or deviations in slope.
      c. If the above criteria cannot be met the Owner shall abandon the existing lateral at the main and provide a new lateral that meets all current Provo Standards and Specifications.
      d. The existing lateral is ABS (Acrylonitrile-Butadiene-Styrene) or PVC.
   C. Allowable sanitary sewer lateral pipe material shall be as follows:
      a. ABS (Acrylonitrile-Butadiene-Styrene) schedule 40, black in color. For use in sewer laterals only.



b. PVC (Polyvinyl Chloride) SDR 35 or other approved wall thickness for laterals (green in color).
c. Lining is allowed only after review and approval of CCTV of lateral by Provo City personnel.

D. Minimum lateral size shall be as follows:
   a. Single family residential: four (4) inches in diameter with 2% minimum slope.
   b. Individual lateral serving five (5) or fewer residential equivalent units: four (4) inches in diameter with a minimum slope of 2%.
   c. All other uses: minimum six inches (6") diameter with a slope of 2%. A 1% minimum slope may be used if approved as part of the City review.
      1. The sewer lateral size shall be based on actual project flows, but in no case shall the lateral be less than six inches (6") in diameter.
      2. The sewer lateral shall be in front of the property it services and shall not cross through other properties.

E. The policy of the City regarding the number of separate service laterals for residential and commercial structures is as follows:
   a. Each separate lot, parcel, dwelling unit, building, house, business or premises shall be served by an individual lateral except as allowed in paragraph (c).
   b. For one- and two-family dwelling structures, a separate service lateral for each dwelling unit is required.
   c. For multiple-family dwelling structures, stacked dwelling units, or commercial structures separate service laterals for each unit shall be the general rule. However, where design dictates otherwise, a common lateral for multiple units (or fewer laterals than the number otherwise specified) may be permitted where the applicant provides adequate documentation, including signed and stamped engineering calculations, and guarantees to assure adequacy of sewer/wastewater collection and responsibility for payment and maintenance. Easements may also be necessary where common laterals cross property lines. In any such case, the Water Resources Director has sole discretion to permit or reject a reduction in the required number of service laterals accordingly.
   d. Common sewer laterals approved under paragraph (c) shall be have a minimum diameter of six (6) inches for all laterals serving more than five residential equivalent units.

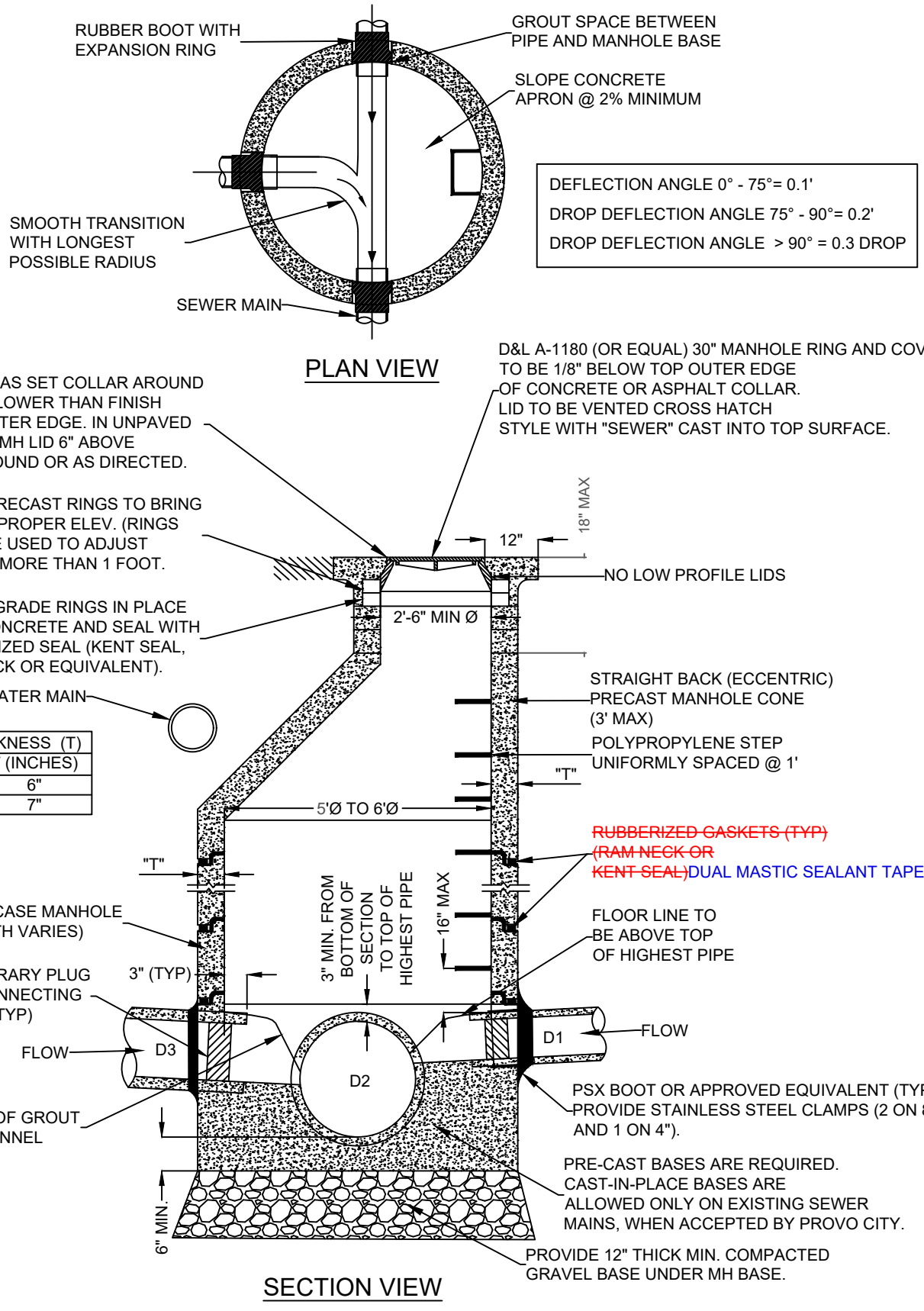
F. Sewer laterals shall not be allowed to connect into any private sewer system without permission from the owner of said system.

G. Cleanouts shall be required at a minimum of every 100 feet (100') and at bends forty-five degrees (45°) or greater. All laterals shall have at least one cleanout.

H. Sump pumps (ground water) shall not be discharged into the street or into the sanitary sewer system; but shall require outfall into a storm drain.

6. PRETREATMENT
   A. Pretreatment
      a. Pretreatment will ~~generally~~ be required for each use producing excessive grease, sand, oil or sewer load different from a standard residential unit.

Discussion/Questions




| WALL THICKNESS (T) | |
|---|---|
| SMH DIA | T (INCHES) |
| 5' | 6" |
| 6' | 7" |



provo PUBLIC WORKS

# STANDARD MANHOLE

STANDARD DETAIL
P-411
NOT TO SCALE
REVISED DATE: 10/24/22

Trench Backfill & Surface Restoration

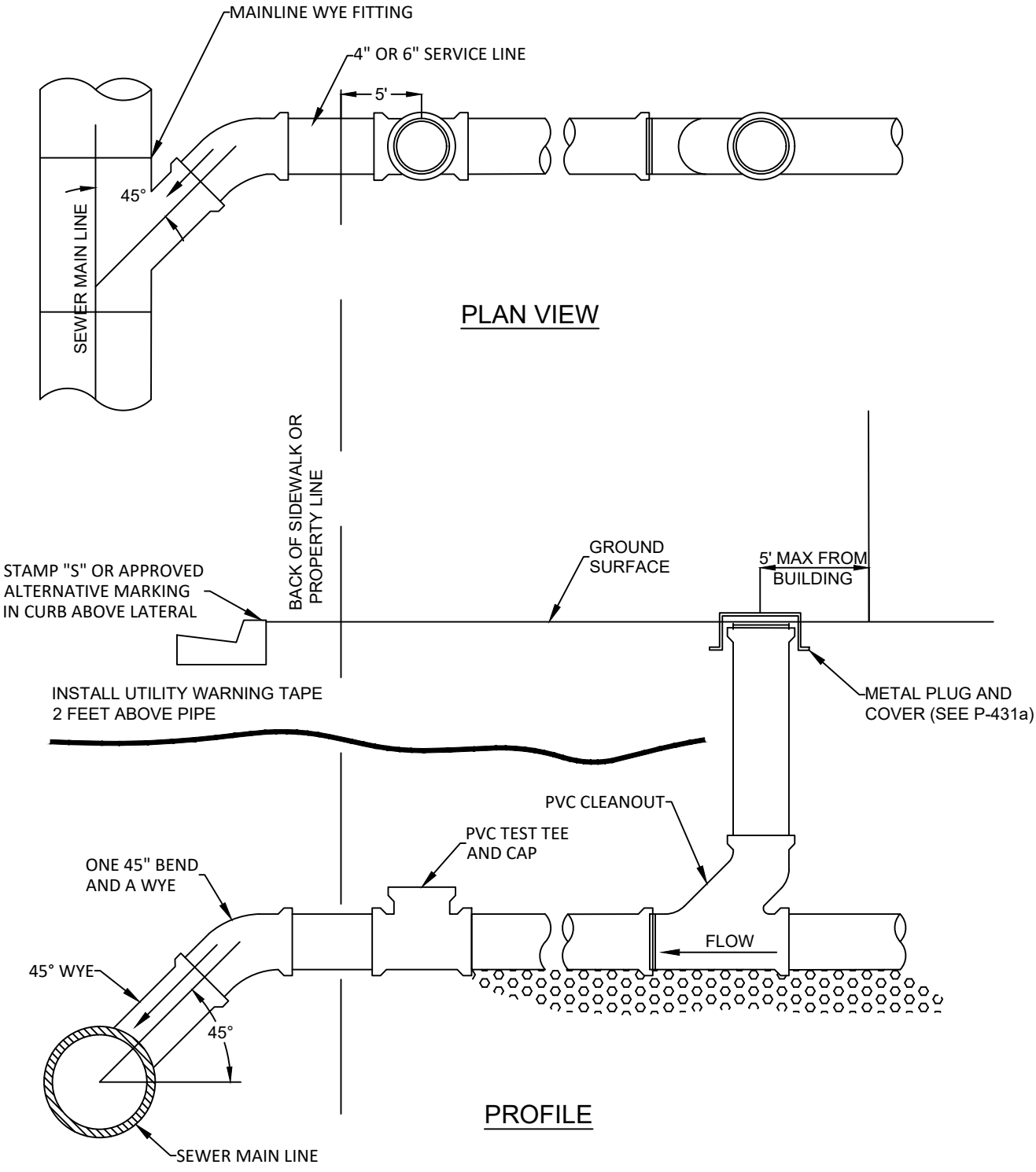
1. GENERAL
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping to construct connections.
   B. If grade allows, inverts of D1 and D3 shall match the 0.75 depth point of D2. Otherwise as approved by Provo City.
   C. Manhole Size
      C.A. Manhole diameter is determined by design and varies from 5 feet to 6 feet.
      C.B. Diameter is 6 feet minimum: For sewers over 24 inches, or when directed by Provo City.
   D. Standards apply to private and public systems.
2. PRODUCT
   A. Gravel: Use 1 inch minus gravel.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Cone and Wall Sections: Conform to ASTM C-478.
   E. Riser and Reducing Riser: ASTM C 478
   F. Grout: 2 parts sand to 1 part cement mortar, ASTM C 1329.
   G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. EXECUTION
   A. Sewer rock or a granular backfill borrow in a geotextile wrap.
   B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   C. Poured in Place: If manhole is to be poured in place, follow the same pattern as shown except use 10 inch minimum wall and base thickness.
   D. Invert Cover: During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan P-412.
   E. Pipe Connections: Grout around all pipe openings.
   F. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
   G. Joints: Place flexible dual mastic sealant tape~~gasket-type sealant~~ in all riser joints. Finish with grout and ensure manhole is watertight.
   H. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   I. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
   J. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Adhere to all backfilling and surface restoration requirements included in Plan P-255.
   K. After all grading around manhole has been completed and final surfacing is in place, remove debris and temporary plugs.



provo PUBLIC WORKS

# STANDARD MANHOLE

STANDARD DETAIL
P-411
NOT TO SCALE
REVISED DATE: 10/24/22




SHEET 1 OF 3

PUBLIC WORKS

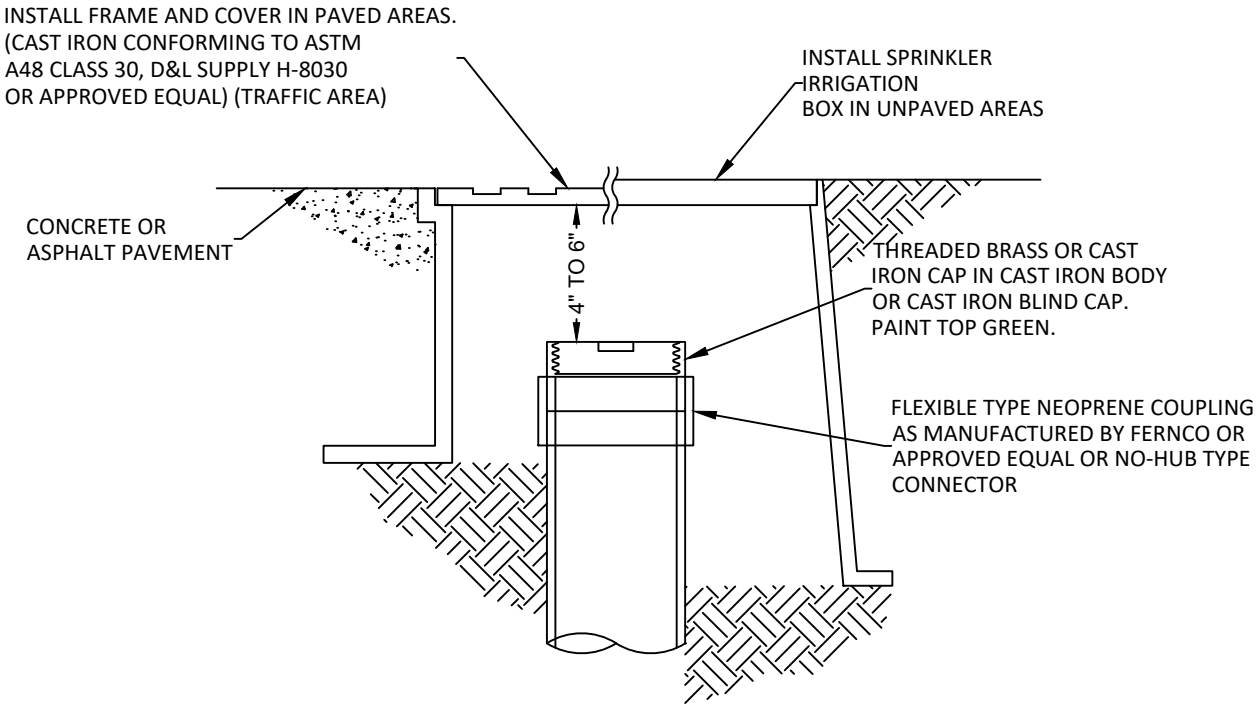
# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL

P-431a

NOT TO SCALE

REVISED DATE: 09/26/19






PUBLIC WORKS

# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL
P-431b

NOT TO SCALE

REVISED DATE: 11/10/16

1. GENERAL
   A. Laterals shall be 4-inch diameter minimum. A 6-inch or larger lateral is required for buildings with more than five equivalent residential units with a separate 4-inch lateral off the 6-inch to each unit.
   B. Provide separate laterals for each unit. Provo Ciy approval required for all combined sewer laterals.
   C. Minimum distance between 4-inch lateral connection shall be 4 feet.
   D. Required grade of sewer laterals (ABS and PVC pipe) is 2%. Where it is impractical to run the sewer laterals at 2% due to the depth of the sewer main, a 6-inch or larger sewer lateral may be run a 1% grade when approved by Provo City.
   E. Clean-outs shall be installed every 100 feet, and where there is a change in slope or direction of the lateral and within 5' of the building.
   F. Distance between sewer laterals and water service lines shall be 10 feet.
   G. Individual grinder pump systems require Provo City approval. Gravity flow required from property to main with a cleanout at transition.
2. PRODUCT
   A. Sewer laterals shall be green or black in color. Do not use white.
   B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   D. Pipe Zone: Gravel, Provo Section 31 05 13M.
   E. Provide agency approved connection for all laterals connecting to lines 8" in diameter or less.
   F. Stainless steel and brass straps required for saddles.
   G. Strong back RC series by Fernco with four stainless steel clamps or equal required for all plain end pipe connections.
   H. Lateral Mainline Connections: All 4-inch connections to the main must be constructed with one 45 degree bend and wye. Direct nose-on connections to main are used when connecting to an existing main line. All nose-on work is to be inspected by city personnel.
   I. Manhole Mainline Connections: All 6-inch and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main.
3. EXECUTION
   A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   B. Tape wrap pipe as required by soil conditions.
   C. Core and remove plug from sewer main. Do not break into sewer main to make connection.
   D. CONTRACTOR shall have all connections inspected and surveyed by Provo City before backfilling.
   E. CONTRACTOR shall perform water test for lateral as directed by Provo City Inspector.
   F. Provide backfill and surface restoration per Plan P-255.



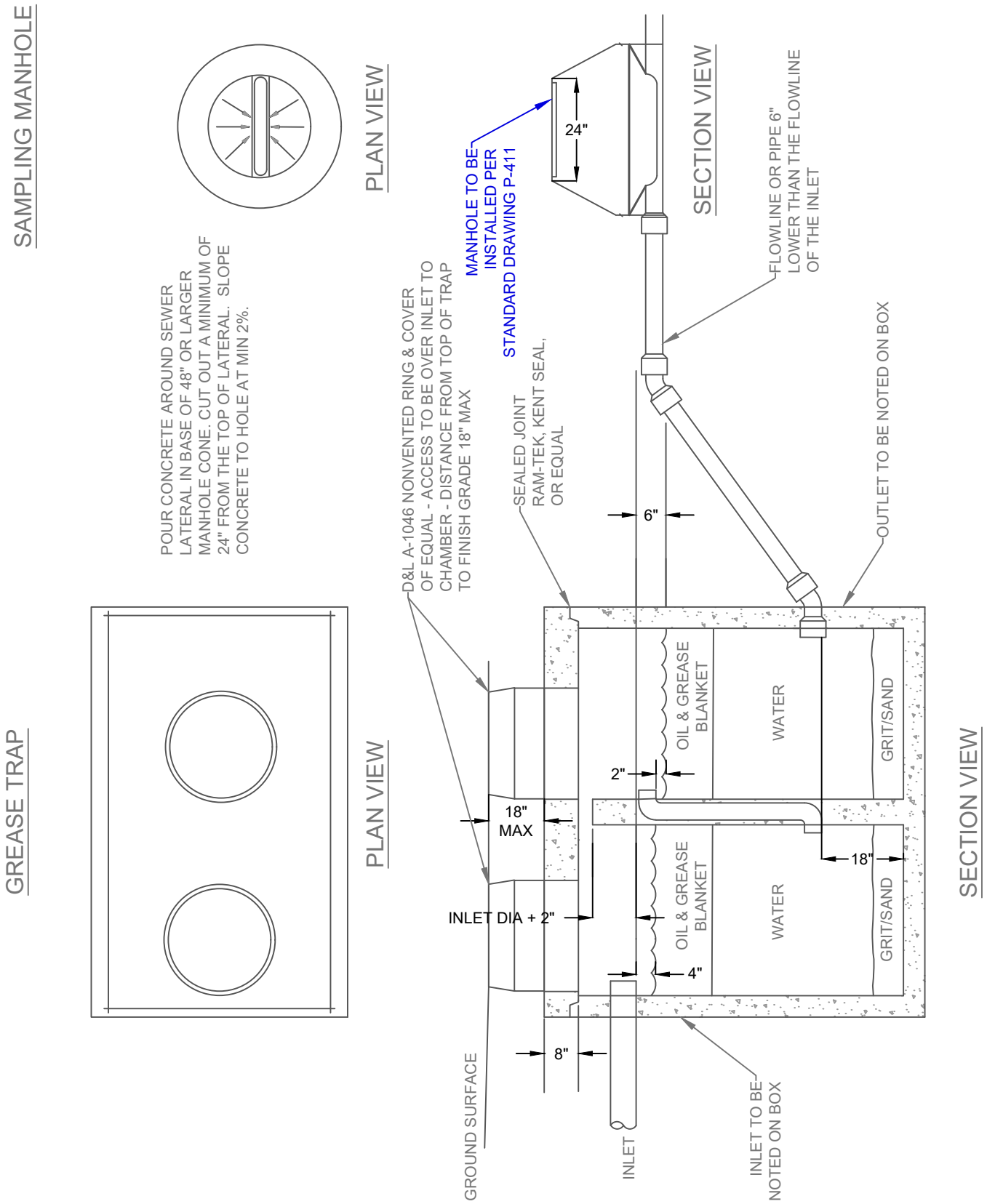
provo PUBLIC WORKS

# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL
P-431

NOT TO SCALE

REVISED DATE: 10/24/22




SHEET 1 OF 2

PUBLIC WORKS

# GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE

STANDARD DETAIL

P-441

NOT TO SCALE

REVISED DATE: 11/25/15

Grease ~~Trap~~Interceptor

1. GENERAL
   A. Before backfilling around concrete box, secure inspection of installation by ENGINEER.
   B. Deep boxes are to be avoided whenever possible.
   C. Large traps will require three lids for access to clean.
   D. Sand-oil separator to be located outside parking garages in accessible location.
   E. Grease and sand/oil interceptors, as described by the international plumbing code (IPC), shall be required of any commercial user when the WRF determines they are necessary for the proper handling of wastewater containing FOGS in excessive amounts. Such interceptors shall not be required for residential dwelling units.~~Carwashes to have a minimum 300 gallon sediment volume sump with BMP SNOUT® pretreatment device of equal upstream of separator per bay.~~
   F. Any commercial user utilizing a three (3) compartment sink shall be required to have either a grease interceptor or grease trap installed at its own expense and shall be required to comply with maintaining the device as outlined in the Provo City Sewer Use Ordinance and Pretreatment Program.~~Automatic car washes will require a 600 gallon sediment volume sump with a BMP SNOUT® pretreatment device or equal upstream of separator per bay.~~
   G. All newly constructed commercial structures, strip malls, multi-tenant planned occupied buildings, or planned unoccupied buildings, shall install independent six-inch (6") wastewater discharge lines stubbed out within each designated future food establishment unit. If a new source commercial structure, strip mall, or multi-tenant building has planned occupancy by one or more businesses that do not generate FOG, and therefore do not need a grease interceptor, and the owner of the structure does not facilitate the installation of independent six-inch (6") wastewater discharge line and install a common interceptor, then no future food establishments shall be permitted, unless facilities are retrofitted for independent lines.~~Size to be determined by Plumbing Code unless otherwise by Pretreatment Coordinator. 750 gallon minimum.~~
   H. Alternate traps may be submitted for approval. Provide product information including removal rates.
   I. All newly constructed “stand-alone” commercial structures, strip malls, multi-tenant planned occupied buildings, where a three (3) compartment sink will be utilized, will be required to install a grease interceptor.
   J. Grease traps are only allowed in place of grease interceptors when in the opinion of the manager it is physically impossible to install a grease interceptor outside of the building or business. As such, a variance request from the owner or lessee of the property must be made to Provo City Pretreatment with a certification letter from a duly licensed Utah plumber or engineer.

2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   E. PVC Pipe: APWA Section 33 05 07.
   F. Box extenders to be used to keep top of box within 18 inches of ground surface.

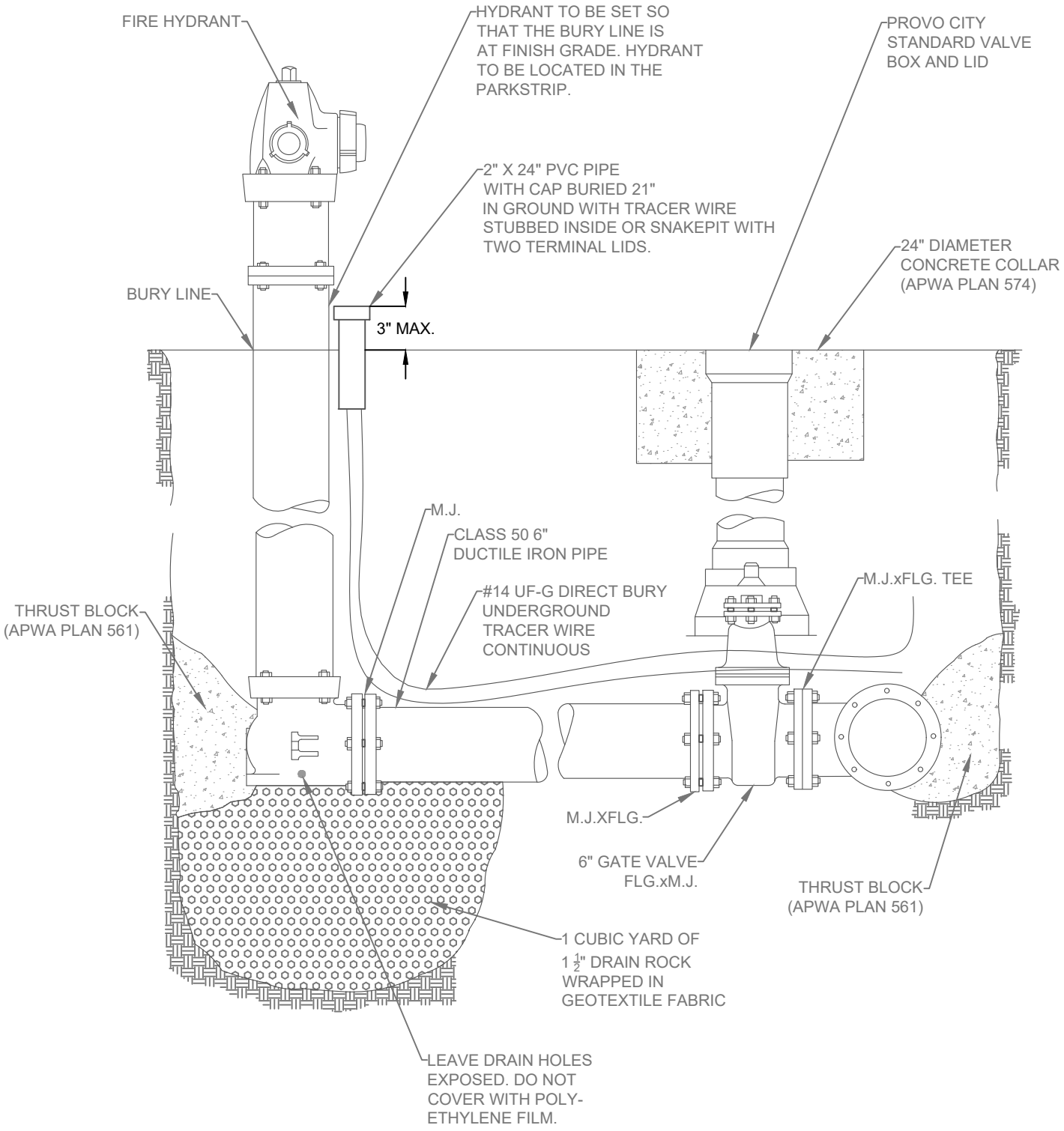
3. EXECUTION
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 6-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 32 23 26.
   B. Reinforcement Placement: APWA Section 03 20 00.
   C. Concrete Placement: APWA Section 03 30 20. Provide 1/2-inch radius edges.
   D. Apply a broom finish. Apply a curing agent.
   E. Fill annular space around pipe wall penetrations with waterproof sealer.
   F. Backfill: Provide backfill against the box walls. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT ALLOWED. Adhere to all backfilling and surface restoration requirements included in Plan P-255.



provo PUBLIC WORKS

# GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE

STANDARD DETAIL
P-441
NOT TO SCALE
REVISED DATE: 11/25/15






PUBLIC WORKS

# FIRE HYDRANT DETAIL

STANDARD DETAIL
P-511

NOT TO SCALE

REVISED DATE: Aug. 2020

1. GENERAL
   A. Before backfilling, secure inspection of installation by ENGINEER.
   B. Additional requirements are specified in APWA 33 11 00.
   C. On dead end line, locate shut off valve within 18 feet from the fire hydrant.
2. PRODUCT
   A. New materials only. Relocation of Hydrants not allowed.
   B. Hydrant: Dry barrel, AWWA C502; Waterous WB-67, Mueller A-423 or AVK 2780 Nostalgic.
   C. Polyethylene Wrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene film.
   D. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04. Sakrete is not allowed for thrust blocks.
   E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   F. Backfill: Provo Section 31 05 13M. Maximum particle size 2-inches.
      F.A. Sand Bedding: All waterlines are to be bedded in sand for a distance of one foot on all sides.
      F.B. Drain Rock: ASTM Size No. 3 (2" to 1") or larger.
      F.C. Other Type of Common Fill: per sppecification.
   G. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.
   H. Color: Fire hydrant is to be factory coated red.
   I. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Wire to extend 24" above surface at base of fire hydrants.
3. EXECUTION
   A. Installation:
      A.A. Provide at least 1 cubic yard of drain rock around drain hole at base of hydrant spool. Wrap geotextile around drain rock and tape geotextile to hydrant spool to prevent sitting of sewer rock.
      A.B. Apply non-oxide grease to all buried metal surface. Wrap with polyethylene sheet and tape wrap.
      A.C. Provide 12 inch sand bedding around all piping.
      A.D. Notify fire department at (801) 852-6300 as soon as hydrant is placed in service.
   B. Thrust Blocks:
      B.A. Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
      B.B. Not required for flange or welded pipe systems.
   C. Provide backfill and surface restoration per Plan P-255.
   D. Operation of Valves: Provo City water valves to be operated only be Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780



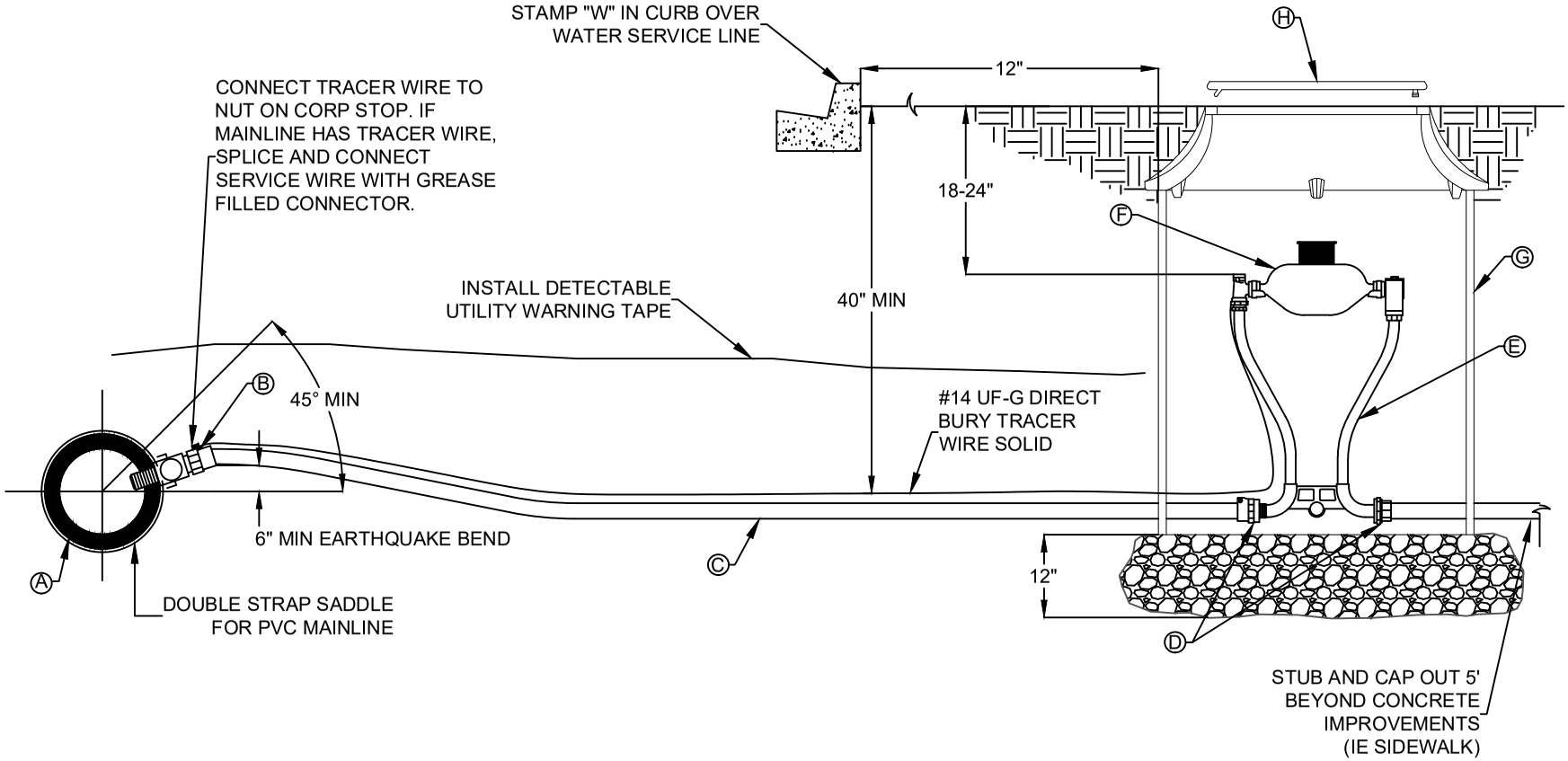
provo PUBLIC WORKS

# FIRE HYDRANT DETAIL

STANDARD DETAIL
P-511
NOT TO SCALE
REVISED DATE: Aug. 2020

PROVO PUBLIC WORKS

# 1" METER SERVICE




## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1-inch COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1-inch COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | CMP, OR WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22

1. GENERAL
   A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   B. In new subdivisions, stake lot corners prior to installation of water meters.
   C. In street surfaces or other vehicular traffic areas, (like driveway approaches), install the same type of meter box as required for 1 $\frac{1}{2}$" and 2" serivce meters. See Plan P-522.
   D. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connections Program Coordinator at (801) 852-6788.
   E. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed. Contractors will be fined for using jumpers.
   F. Maintain at least 2 feet between 1 inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.

2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   D. Fittings: Use compression fittings (no flare). Mueller or Ford only.
   E. Teflon tape and pipe dope to be used on all threaded pipe fittings.

3. EXECUTION
   A. Meter Placement:
      A.A. Install the meter box centered between curb and sidewalk at center of lot (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
      A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   B. Bed service line and tracer wire in one foot of sand all directions.
   C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   D. Lid must be to grade before meter will be installed. Top of lid must be even with top of sidewalk or top of curb.
   E. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   F. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   G. Provide backfill and surface restoration per Plan P-255.
   H. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780
   I. Before a meter is set, 1) a permit must be issued, 2) meter lid must be the right type and even with top of sidewalk or curb 3) meter yoke, lid, or can must not be damaged in any way 4) there must be a shut off valve downstream of the meter so that the meter can be turned on and checked for leaks. Failure to meet these criteria would necessitate a second visit by city personnel and contractor will be charged a re-inspection fee.



provo PUBLIC WORKS

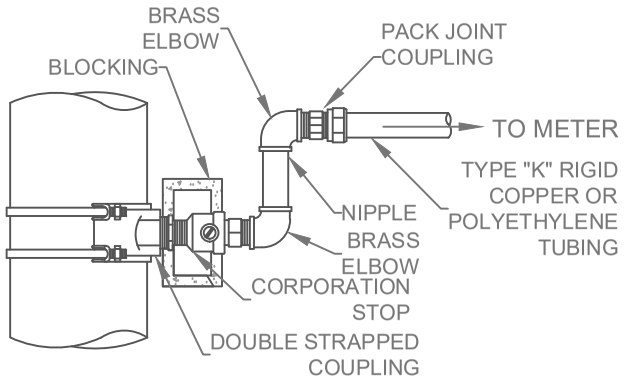
# 1" METER SERVICE

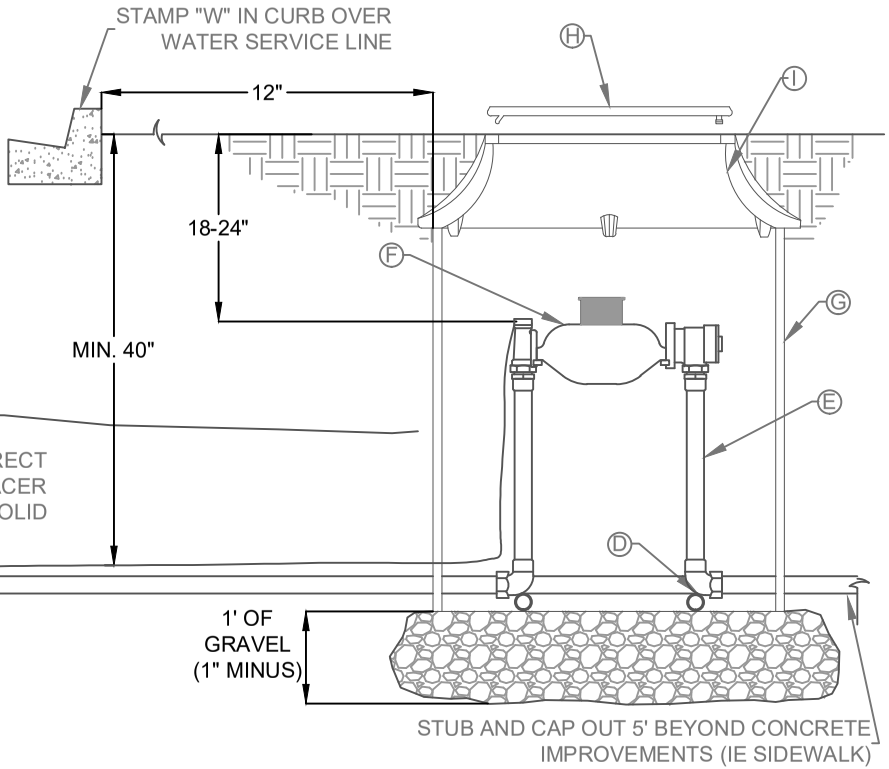
STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22

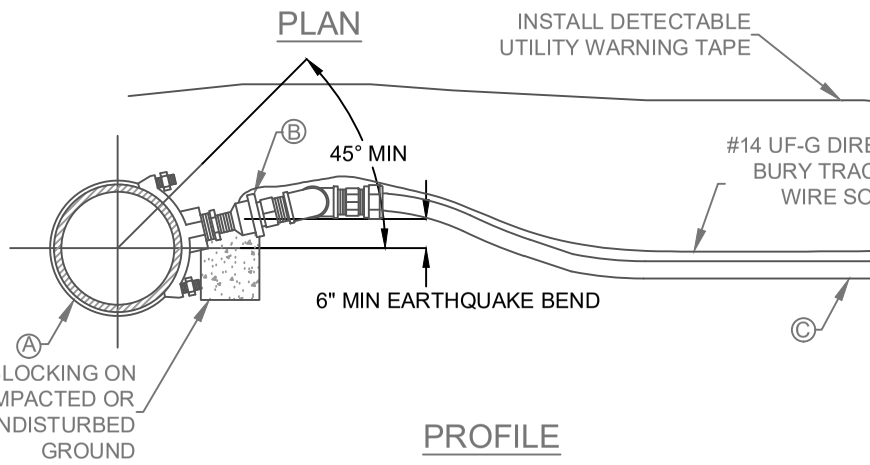
PUBLIC WORKS

provo

# WATER SERVICE LATERAL
## LAYOUT 1 1/2" & 2"




PROFILE

## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1 1/2" OR 2" COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1 1/2" OR 2" COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | ~~CMP, OR~~ WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

STANDARD DETAIL
P-522
NOT TO SCALE
REVISED DATE: 10/24/22

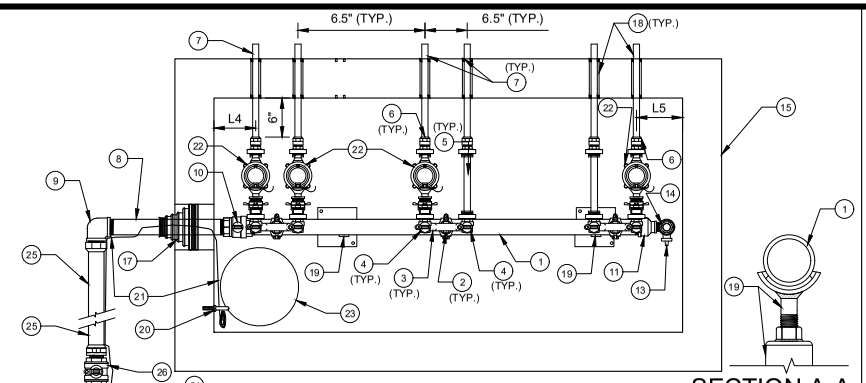
1. GENERAL
   A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   B. ~~Turbine meters are required on all systems used exclusively for irrigation or fire protection.~~
   C. Where domestic use is applicable, use a standard City provided meter.
   D. Connections serving buildings of three (3) stories or more (not to include basements) may not utilize a dual check valve device installed at the meter yoke as protection. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connection Program Coordinator at (801) 852-6788.
   E. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed.
   F. Maintain at least 4 feet between any connection that is larger than 1 inch and any other connection.
2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   D. Meter yoke to be same size as service line regardless of meter size.
   E. Teflon tape and pipe dope to be used on all threaded pipe fittings.
3. EXECUTION
   A. Meter Placement:
      A.A. Install the meter box centered between curb and sidewalk (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
      A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   B. Bed service line in one foot of sand all directions.
   C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   D. Bypass Valve: Lock in off position.
   E. Blocking: Use clay brick or concrete block.
   F. Concrete Box:
      F.A. Center frame and cover over water meter.
      F.B. Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   G. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   H. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   I. Provide backfill and surface restoration per Plan P-255.
   J. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780



provo PUBLIC WORKS

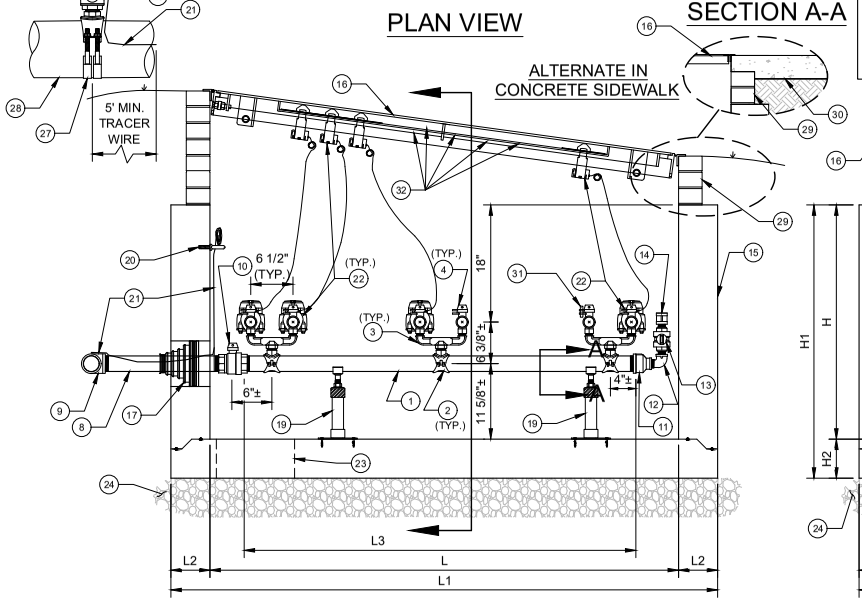
# WATER SERVICE LATERAL LAYOUT 1 $\frac{1}{2}$" & 2"

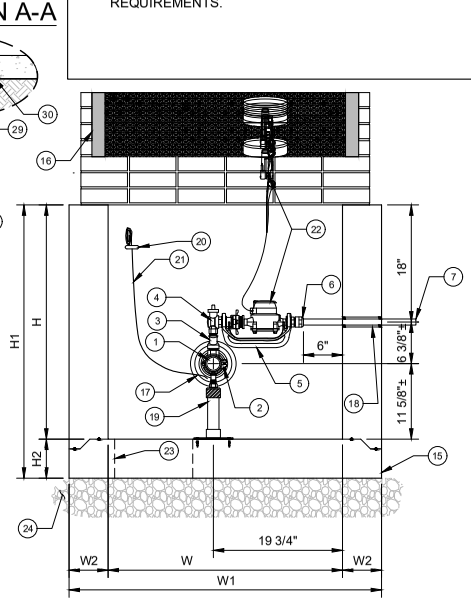
STANDARD DETAIL
P-522
NOT TO SCALE
REVISED DATE: 10/24/22










NO. ALTERNATE DESCRIPTION:

WHEN USING SDR9 HDPE (IPS) WITH STAINLESS STEEL, BRASS, OR BRONZE MNPT ENDS, USE THE FOLLOWING PRODUCTS:

9. 2" - 90° SCH. 40 BRASS OR S.S. BEND - FNPT X FNPT.
25. 2" SDR9 HDPE (POLY) IPS PIPE (MNPT X MNPT) - LENGTH AS REQUIRED (NO JOINTS PERMITTED).
26. FOR EXISTING MAINS - 2" BALL CORPORATION STOP W/ TEE HEAD OPERATING NUT - CC (TAPER THREAD) X FNPT (W/ STD. VALVE BOX ASSEMBLY) OR; FOR NEW MAINS - MJ TEE, MJ PLUG - TAP - 2", 2" X 6" SCH 40 RED BRASS NIPPLE, 2" GATE VALVE W/ TEE HEAD OPERATING NUT (FNPT) (WITH STANDARD VALVE BOX ASSEMBLY).

NOTES:

A. ACCESS DOOR SHALL BE ANCHORED TO VAULT PER ACCESS DOOR STANDARD DETAIL.
B. ACCESS DOOR SHALL BE FLUSH WITH GROUND OR SIDEWALK, AND GROUND SHALL SLOPE AWAY FROM VAULT.
C. ASSEMBLY MAY BE FLIPPED 180° TO MEET SITE REQUIREMENTS.

NO. DESCRIPTION:

1. 2" SCH. 40 RED BRASS PIPE MNPT (LENGTH = L3).
2. 2" X 1" BRASS SERVICE SADDLE - FNPT OUTLET.
3. 1" X 3/4" X 3/4" BRASS U-BRANCH - MNPT.
4. 1" ANGLE BALL VALVE WITH LOCK WINGS - FNPT X YOKE STAR NUT.
5. 1" DUCTILE IRON METER YOKE BAR.
6. 1" STRAIGHT BALL VALVE (YOKE STAR NUT X FNPT).
7. 1" RED BRASS NIPPLE WITH THREADED END (L = 18").
8. 2" SCH. 40 RED BRASS PIPE MNPT (L = 24").
9. 2" - 90° BRASS BEND - FNPT X CTS COMPRESSION.
10. 2" BALL VALVE CURB STOP W/ TEE HEAD OPERATING NUT - FNPT X FNPT.
11. 2" X 1" BRASS REDUCER - FNPT X FNPT.
12. 1" BRASS 90° STREET ELBOW - MNPT X FNPT.
13. 1" BALL VALVE CURB STOP - MNPT X MNPT WITH LOCK WINGS (LOCK CLOSED WITH PERMANENT BLUE PAD LOCK FURNISHED BY CLTW).
14. 1" RED BRASS THREADED COUPLING - FNPT X FNPT.
15. PRECAST CONCRETE METER VAULT - SEE CHART FOR SIZE.
16. MANIFOLD HOT DIP GALV. STEEL ACCESS DOOR - SEE DETAIL.
17. 2" FLEXIBLE PIPE CONNECTOR BOOT **(DO NOT FILL WITH MORTAR).**
18. 1 1/2"Ø - SCH 40 PVC SLEEVE (WITH RUBBER ISOLATION BUSHING AT EACH FACE OF VAULT WALL) OR FOAM RUBBER PIPE INSULATION THROUGH SLEEVE.
19. GALV. STEEL OR S.S. ADJUSTABLE SADDLE PIPE SUPPORT (NUMBER REQ'D = N1) WITH 1/4"± THICK NEOPRENE LINER (WITH STAINLESS STEEL EPOXY ANCHORS).
20. 3/8" DIAMETER STAINLESS STEEL EYE BOLT (EPOXY ANCHOR).
21. AWG #12 GAUGE COPPER TRACER WIRE - WITH BLUE INSULATION (30 MILS HDPE) - TERMINATE WITH 24" EXCESS WIRE (COILED) @ EYE BOLT AND VALVE BOX (TYPICAL).
22. 1" WATER METER WITH TRANSMITTER (FURNISHED BY PROVO CITY).
23. 12" DIAMETER SUMP HOLE.
24. 6" #57 WASHED STONE.
25. 2" TYPE K COPPER (NO JOINTS PERMITTED).
26. FOR EXISTING MAINS - 2" BALL CORPORATION STOP - SEE PROVO STANDARD P-521
27. SERVICE SADDLE - CC (TAPER THREAD OUTLET).
28. 8" OR LARGER WATER MAIN.
29. PRECAST CONC. RISER OR BRICKWORK MAY BE REQUIRED FOR GRADE ADJUSTMENTS. MAX HEIGHT SHALL BE 12".
30. CAST IN PLACE CONCRETE SIDEWALK - BRICK WORK SHALL NOT EXTEND TO SURFACE, ACCESS DOOR SHALL REST ON SIDEWALK.
31. UNUSED SERVICES SHALL BE LOCKED (LOCK (BLUE SERIAL NO.) FURNISHED BY CLTW) IN CLOSED POSITION.
32. FOR EACH WATER METER, ATTACH AN ENGRAVED LABEL DIRECTLY ABOVE THE METER/ALIGNED WITH THE TRANSMITTER, INCLUDING THE PREMISE NUMBER, STREET NUMBER/UNIT NUMBER AND STREET NAME, TO UNDERSIDE OF DOOR.

DESIGN REQUIREMENTS:

a. VAULT SHALL BE RATED FOR UDOT HS-20 LOADING - SUBMIT SHOP DRAWING / CALCULATIONS / P.E. SEALED FOR REVIEW.
b. ALL CONCRETE SHALL BE MINIMUM 4,000 PSI COMPRESSIVE STRENGTH.
c. DESIGN SHALL CONFORM TO ASTM C858 - SPECIFICATIONS FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE."
d. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857.
e. REBARS SHALL BE GRADE 60 PER ASTM A615.
f. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
g. PIPE PENETRATIONS SHALL BE ISOLATED FROM PIPE WITH FLEXIBLE CONNECTERS (MANHOLE BOOTS) OR WITH RUBBER ISOLATION BUSHINGS.
h. PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.

DIMENSIONS (INCHES)

| VAULT (INSIDE) | | | VAULT (OVERALL-MIN.) | | | WALL THICKNESS (MIN.) | FLOOR THICKNESS (MIN.) | NUMBER OF METERS (MAX.) | L3 2" RED BRASS PIPE LENGTH NO. 1 | N1 REQ'D NO. OF PIPE SUPPORTS NO. 19 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | W | H | L1 | W1 | H1 | W2 / L2 | H2 | | | | L4 | L5 |
| 48 | 36 | 36 | 60 | 48 | 42 | 6 | 6 | 6 | 36 | 2 | 7.5 | 8 |
| 36 | 36 | 36 | 44 | 44 | 40 | 4 | 4 | 4 | 24 | 1 | 8 | 8.5 |

NOT TO SCALE

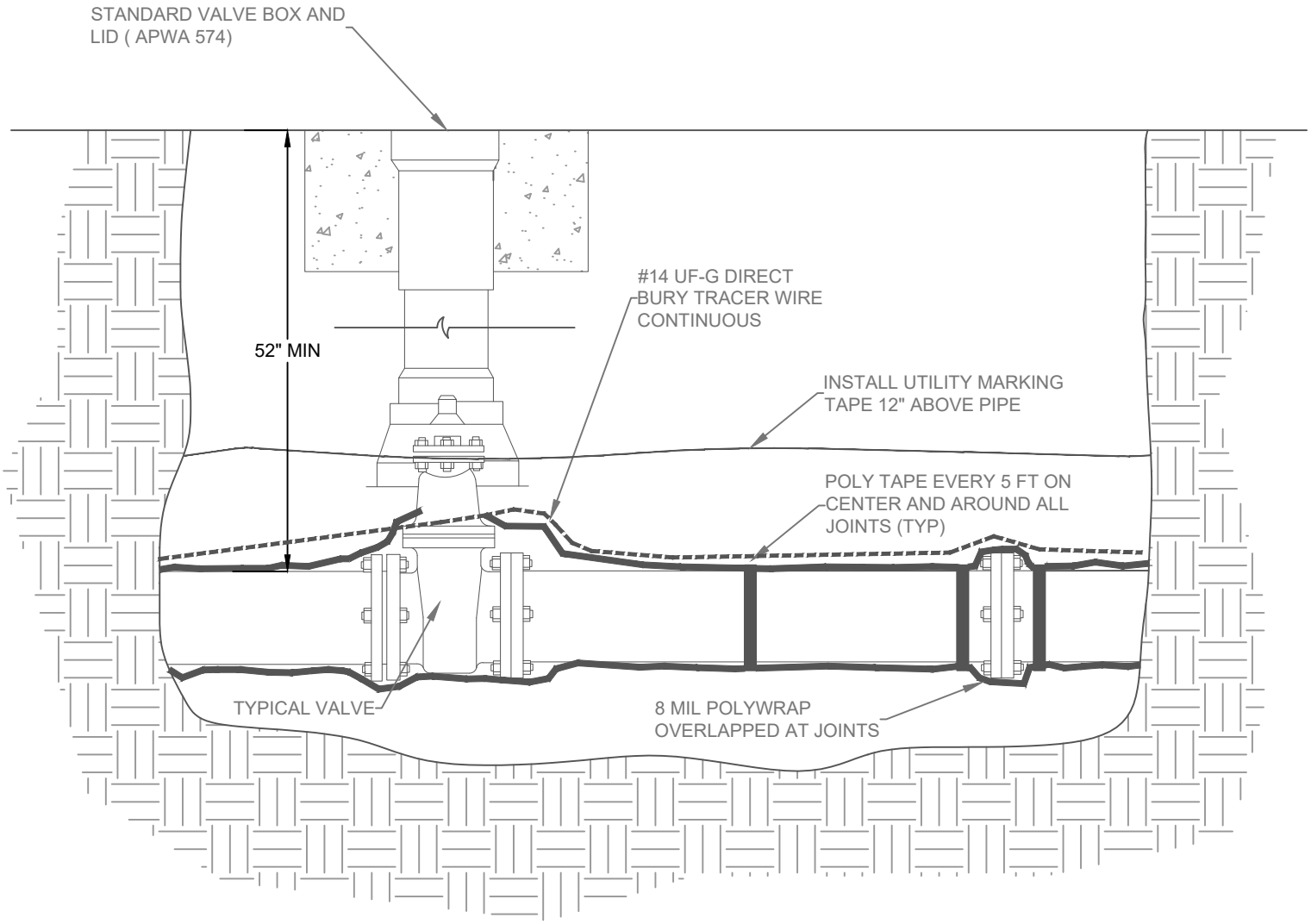
STANDARD DETAIL P-531

VERSION 1.0

DATE MODIFIED 10/2023

# 1-INCH MANIFOLD WATER METER ASSEMBLY AND PRECAST CONCRETE VAULT

provo PUBLIC WORKS






PUBLIC WORKS

# *WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL
P-594

NOT TO SCALE

REVISED DATE: Aug. 2020

1. **GENERAL**
   A. Maintain at least 2 feet between 1 inch and ¾ inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.
   B. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
   C. Waterline shall be installed within the street section in the location shown on Provo Standard Drawing P-914, unless otherwise approved.

2. **PRODUCTS**
   A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. C900 PVC Pipe may be allowed with approval from director.
   B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants. Provide excess wire to extend 24" above finished grade.
   D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   E. Bolts: Use all stainless steel bolts.
   F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   G. Double offset butterfly valves required for valves ~~12" or greater.~~greater than 12".

3. **EXECUTION**
   A. Bed water mainline in one foot of sand all directions.
   B. Pull polywrap tight around pipe and tape with poly tape.
   C. Poly Tape:
      a. Tape around valves.
      b. Tape any cuts or tears.
      c. Tape wire on top center of pipe outside of the polywrap.
   C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill. All tracer wire shall be tested for continuity by an independent tester and written certification of continuity provided to Provo City inspectors prior to requesting continuity testing by Provo City. A re-inspection fee will be charged for any failed continuity test conducted by Provo City. Entire length of tracer wire shall be tested and approved by City prior to paving.
   E. Inspection: Before backfilling, secure inspection and GPS of installation by City.
   F. Provide backfill and surface restoration per Plan P-255.
   G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.

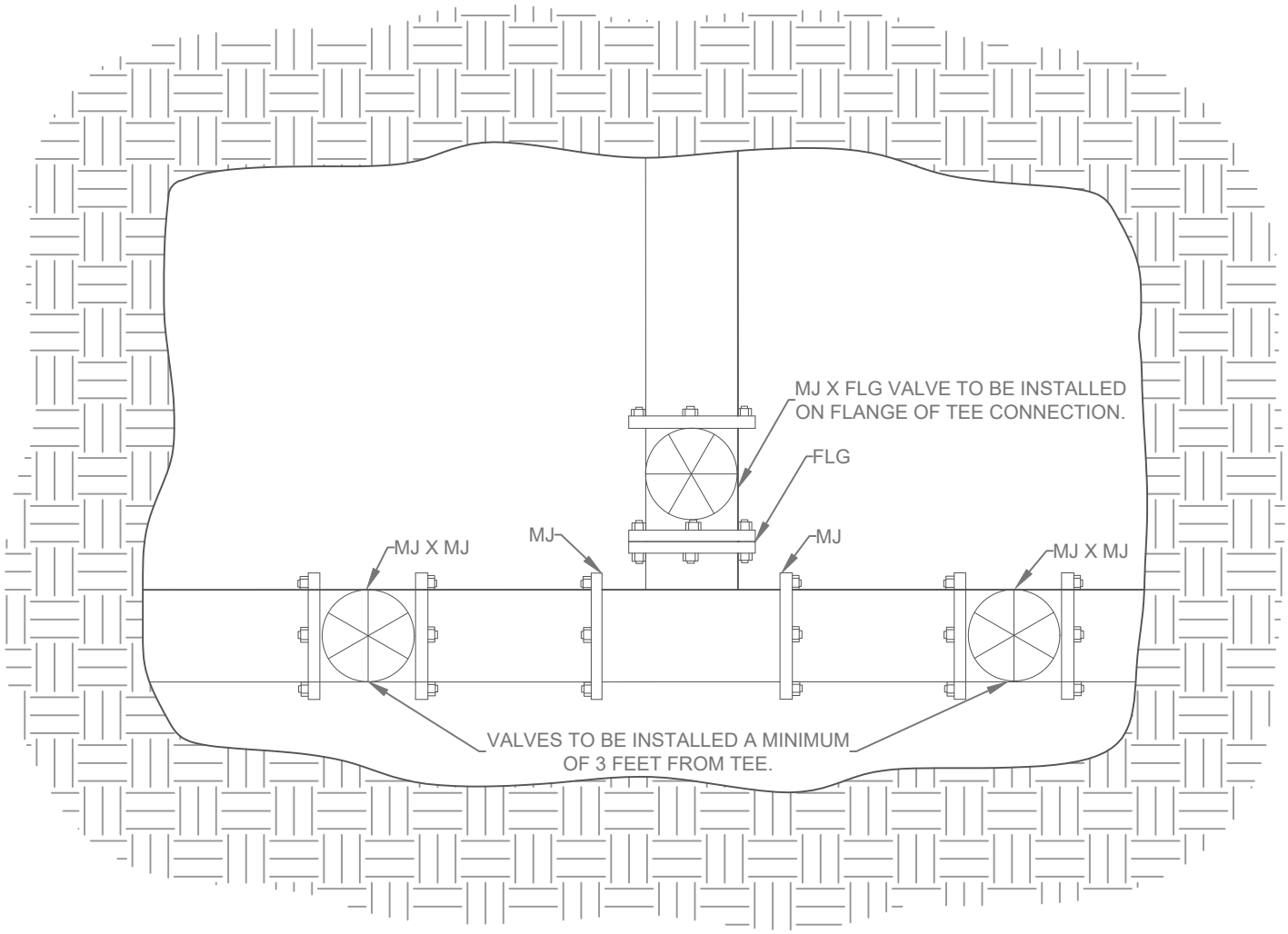


provo PUBLIC WORKS

# *WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL
P-594
NOT TO SCALE
REVISED DATE: Aug. 2020

PLAN VIEW




SHEET 1 OF 1

provo PUBLIC WORKS

# WATER MAINLINE TEE

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021

*Water Mainline, Polywrap, & Tracer Wire*

1. **GENERAL**
   A. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
2. **PRODUCTS**
   A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. Use ductile iron pipe for fire lines. All privately maintained pipe in public rights-of-ways shall be ductile iron.
   B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants and at all valves. Wire to be brought up outside of valve box and stubbed into valve box 3 inches below the lid through a hole cut in the valve box. Provide excess wire to extend 24" above finished grade.
   D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   E. Bolts: All bolts need to be covered in FMH grease.
   F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   G. Double offset butterfly valves required for valves 12" or greater.
   H. Sakrete is not allowed for thrust blocks.
3. **EXECUTION**
   A. Bed water mainline in one foot of sand all directions.
   B. Pull polywrap tight around pipe and tape with poly tape.
   C. Poly Tape:
      a. Tape around valves.
      b. Tape any cuts or tears.
      c. Tape wire on top center of pipe outside of the polywrap.
   C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill.
   E. Inspection: Before backfilling, secure inspection of installation by ENGINEER.
   F. Provide backfill and surface restoration per Plan P-255.
   G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.

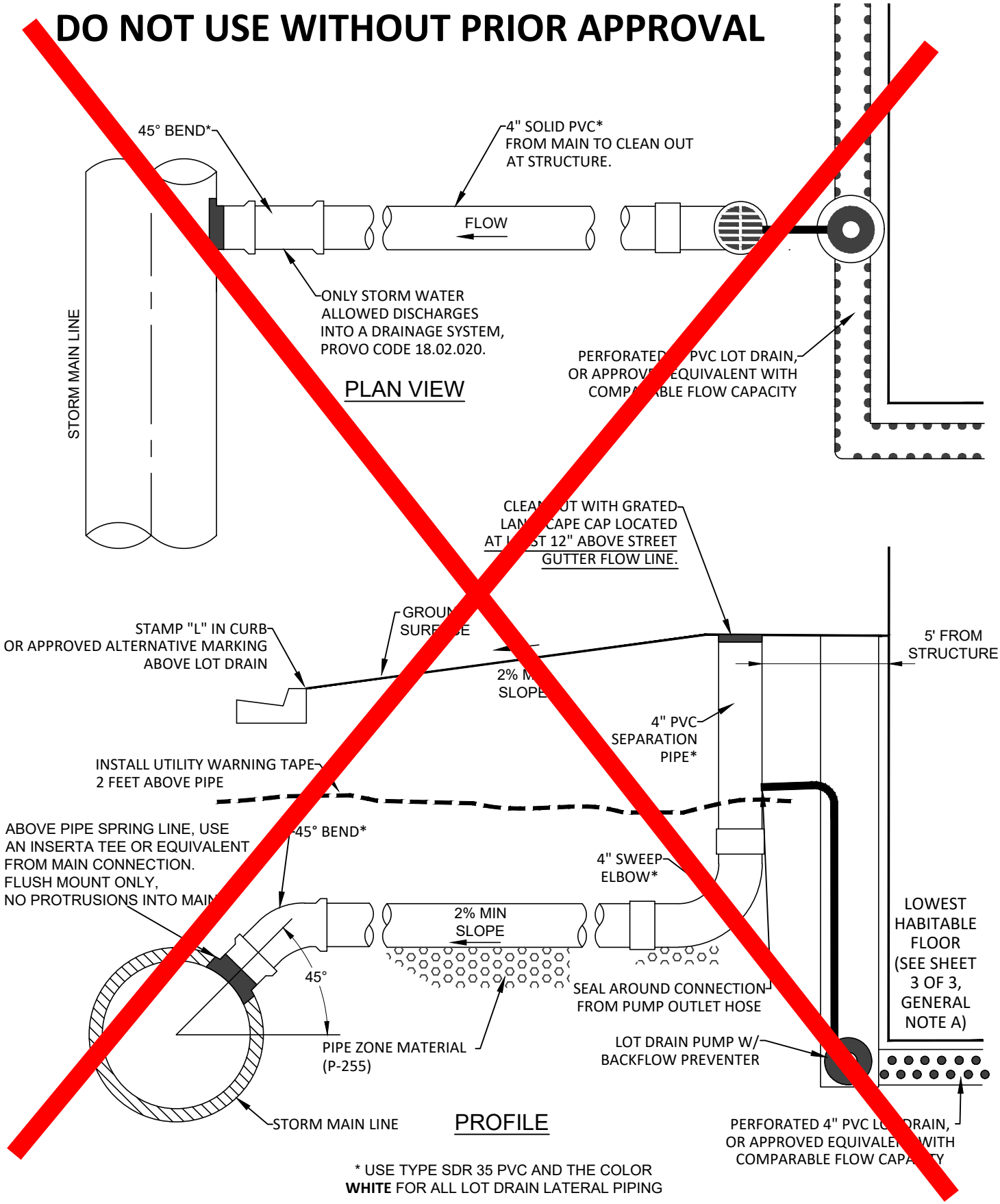


provo PUBLIC WORKS

# WATER MAINLINE TEE

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021

# DO NOT USE WITHOUT PRIOR APPROVAL




* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING

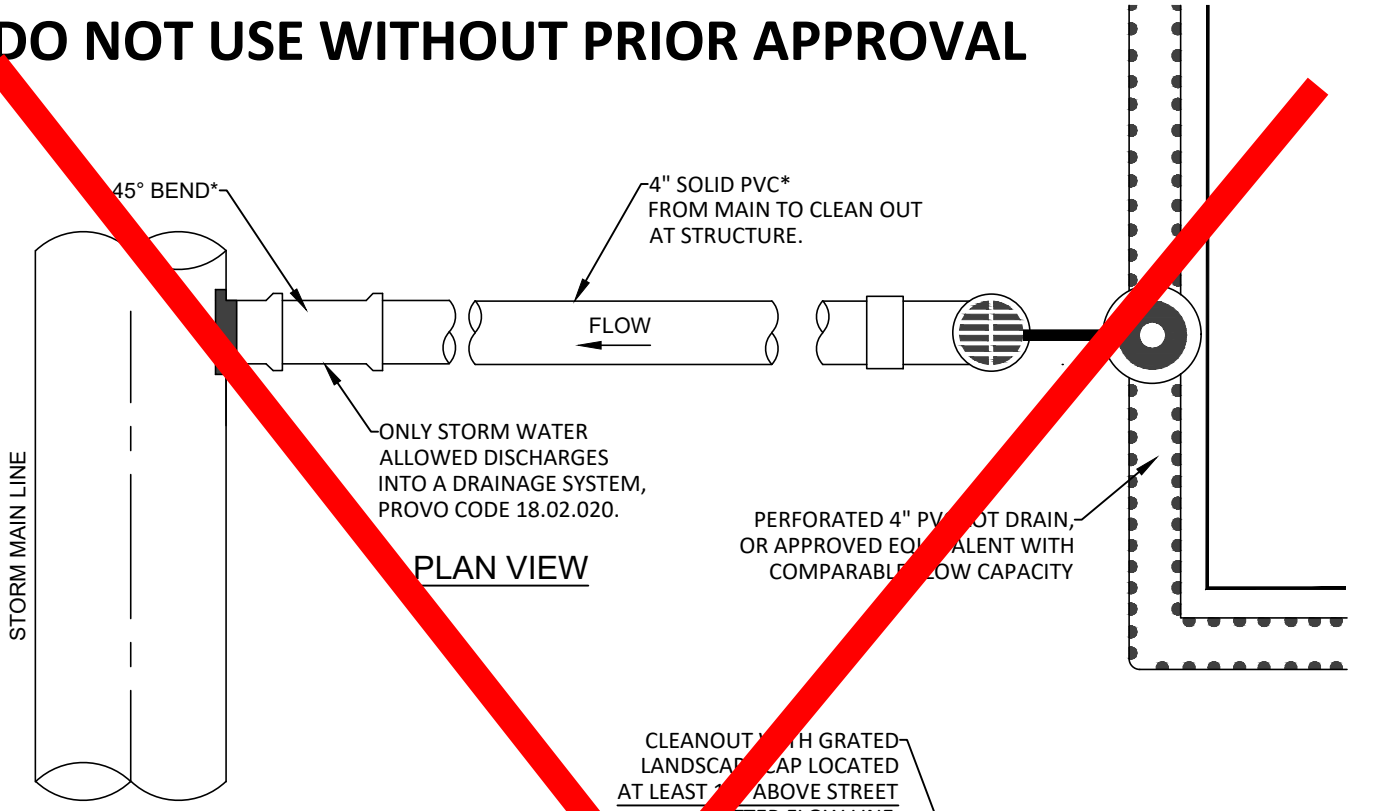
SHEET 1 OF 3

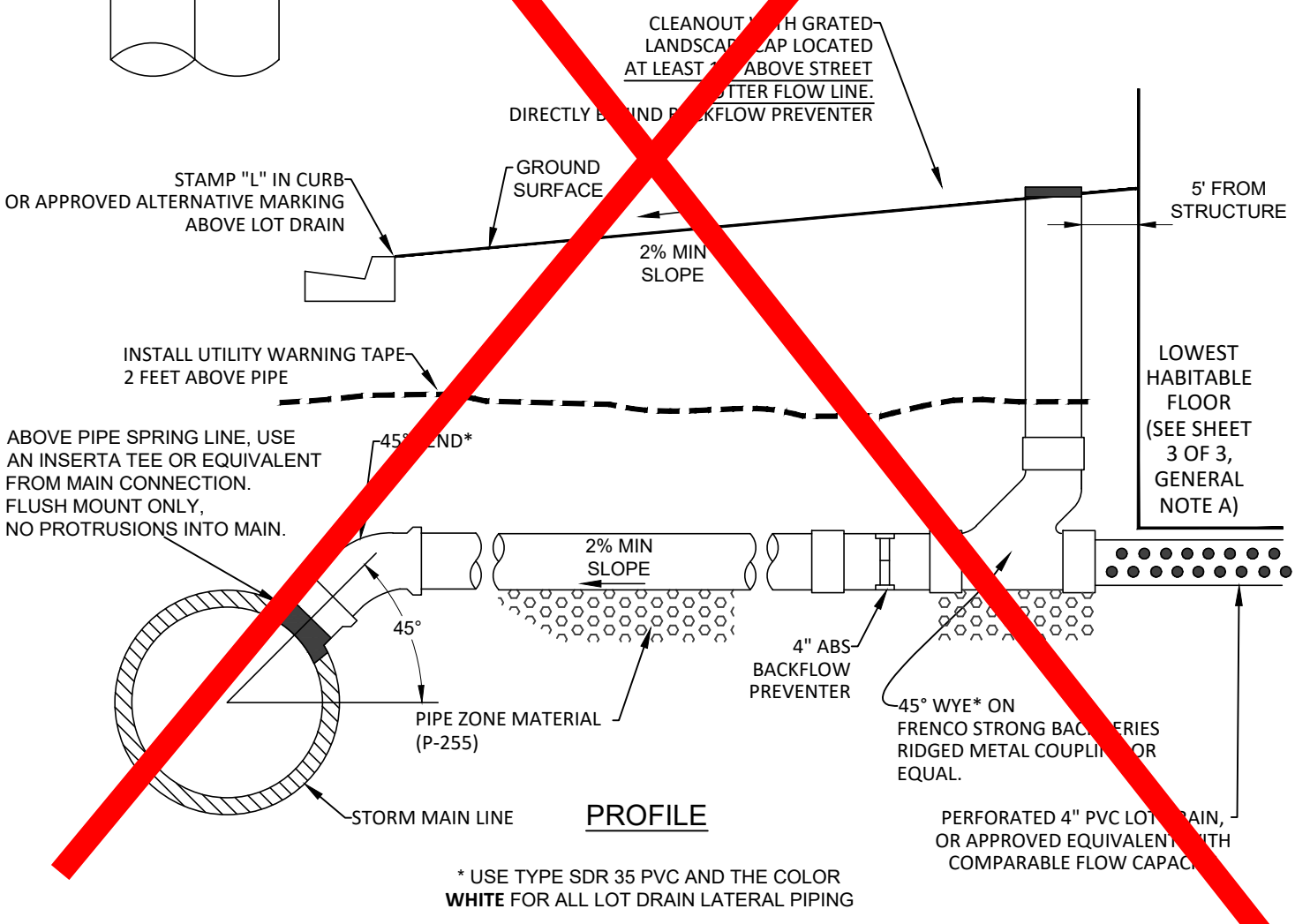
provo PUBLIC WORKS

# *LOT DRAIN LATERAL WITH DRAIN PUMP*

STANDARD DETAIL
P-392a
NOT TO SCALE
REVISED DATE: 10/07/2019

# - DO NOT USE WITHOUT PRIOR APPROVAL




* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING



provo PUBLIC WORKS

# *LOT DRAIN LATERAL WITH GRAVITY FLOW*

STANDARD DETAIL
P-392b
NOT TO SCALE
REVISED DATE: 10/07/19

*Lot Drain Lateral*

1. **GENERAL**
   A. Standard Drawings P-392a and P-392b may be used under the following conditions:
      A.A. Lot drains are sometimes required by IBC to drain backfilled areas around buildings in areas with tight native soils. Lot drains are not intended to drain high groundwater. The lowest habitable floor is recommended to be a minimum of 4 feet above groundwater elevation. Provo City may require a site specific geotechnical report identifying groundwater elevations and minimum FF elevations, to be reviewed and approved by the City Engineer or their designee.
      A.B. Standard Drawing P-392a - The top of the landscape grate on the separation pipe shall be a minimum of 12 inches above the gutter flow line.
      A.C. Standard Drawings P-392b - This drawing can only be used if (a) the storm drain main is designed to convey the City design storm with the HGL below top of pipe, AND (b) the lowest habitable floor is a minimum of 2 feet above the top of storm drain main at the lot drain connection. Otherwise, P-392a must be used.
   B. It is unlawful for any person to cause or allow the discharge into a water body or storm drainage system, either directly or indirectly, of any substance not comprised entirely of storm water, refer to Provo City code 18.02.020 for prohibited discharges.
   C. Minimum distance between lot drain connections to the storm main shall be 4 feet.
   D. Minimum required grade of lot drain is 2%.
   E. Clean-outs shall be installed at a minimum every 100 feet and wherever there is a change in slope or direction of pipe lateral and within 5 feet from structure.
   F. If building construction is not imminent, terminate at a clean-out a minimum of 12 feet inside the property line. Cap and mark white for future connection.

2. **PRODUCT**
   A. Lot drains shall use type SDR 35 PVC. The color of the pipe and fittings shall be white.
   B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   D. Pipe Zone: Gravel, Provo Section 32 05 13M.
   E. Lot Drain Mainline Connections: 45 degree bend and Inserta Tee or equivalent.

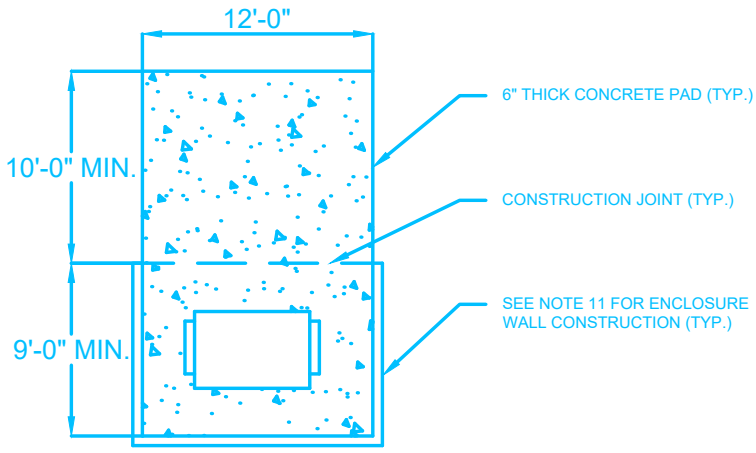
3. **EXECUTION**
   A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   B. Core and remove plug from storm main. Do not break into storm main for connection.
   C. Use an Inserta Tee or equivalent for a water tight connection at storm main. Protrusion into storm main pipe past inner wall is not allowed.
   D. CONTRACTOR shall have ALL connections inspected and surveyed by Provo City before backfilling.
   E. Provide backfill and surface restoration per Plan P-255.



PUBLIC WORKS

# LOT DRAIN LATERAL AND CLEAN-OUT

STANDARD DETAIL
P-392c
NOT TO SCALE
REVISED DATE: 10/07/19




SINGLE-WIDE BIN ENCLOSURE CONFIGURATION

1. SINGLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 12 FEET.

2. DOUBLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 24 FEET WITHOUT MIDWALLS. ALTHOUGH NOT PREFERRED, DOUBLE-WIDE BIN ENCLOSURES CAN BE DESIGNED WITH MIDWALLS WITH A NET ENCLOSURE WIDTH OF 12 FEET ON EACH SIDE OF MIDWALL.

3. ENCLOSURES MAY BE DESIGNED WITH AN OPENING LESS THAN 12 FEET IF CONTAINER IS PLACED ON ROLLERS TO BE PULLED OUT FOR SOLID WASTE COLLECTION.

4. MULTI-UNIT RESIDENTIAL DEVELOPMENTS MAY BE DESIGNED WITH A TRIPLE WIDE ENCLOSURE TO ACCOMMODATE RECYCLING ADDITIONAL ENCLOSURES MAY BE NECESSARY DEPENDING ON NUMBER OF UNITS. .

5. TRIPLE-WIDE ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 36 FEET AND SHALL BE DESIGNED WITHOUT MIDWALLS, GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING.

6. GATES, HINGES, & MOUNTING HARDWARE SHALL BE INSTALLED SO THERE IS A MIN. 9 FOOT DEPTH CREATED WITHIN EACH ENCLOSURE.

7. GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING SO THERE IS A MINIMUM 12' WIDTH WITHIN EACH ENCLOSURE.

8. CONTRACTION JOINTS MAY BE EITHER SCORED OR SAWCUT 1-INCH DEEP.

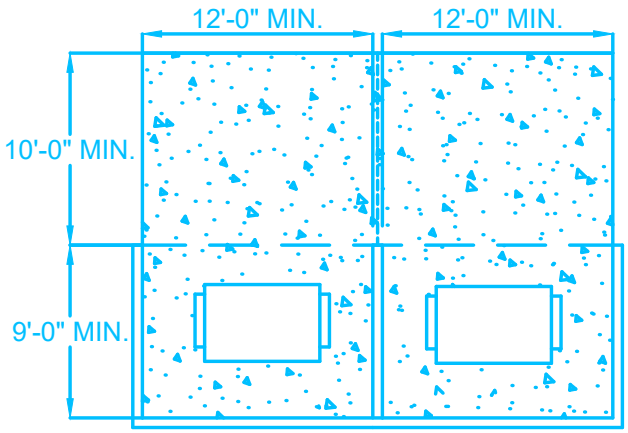
9. BINS THAT ARE VISIBLE FROM A PUBLIC ROADWAY SHALL HAVE ENCLOSURE GATES THAT SCREEN THE BINS FROM PUBLIC VIEW

10. ENCLOSURES SHALL BE PLACED SO THAT THERE IS AT LEAST 45 FEET OF CLEARANCE BETWEEN THE ENTRANCE OF THE ENCLOSURE AND ANY OTHER OBSTRUCTIONS.

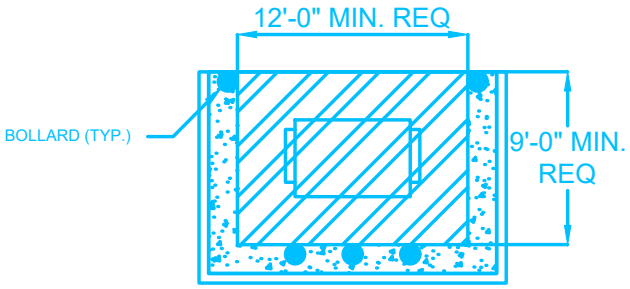
11. ENCLOSURE WALLS SHALL BE TALL ENOUGH AND MADE OF A MATERIAL SO THAT THE BIN IN EACH ENCLOSURE IS BLOCKED FROM PUBLIC VIEW.

12. MAINTAIN A 15' MIN. OVERHEAD CLEARANCE FOR ACCESS TO TRASH ENCLOSURE

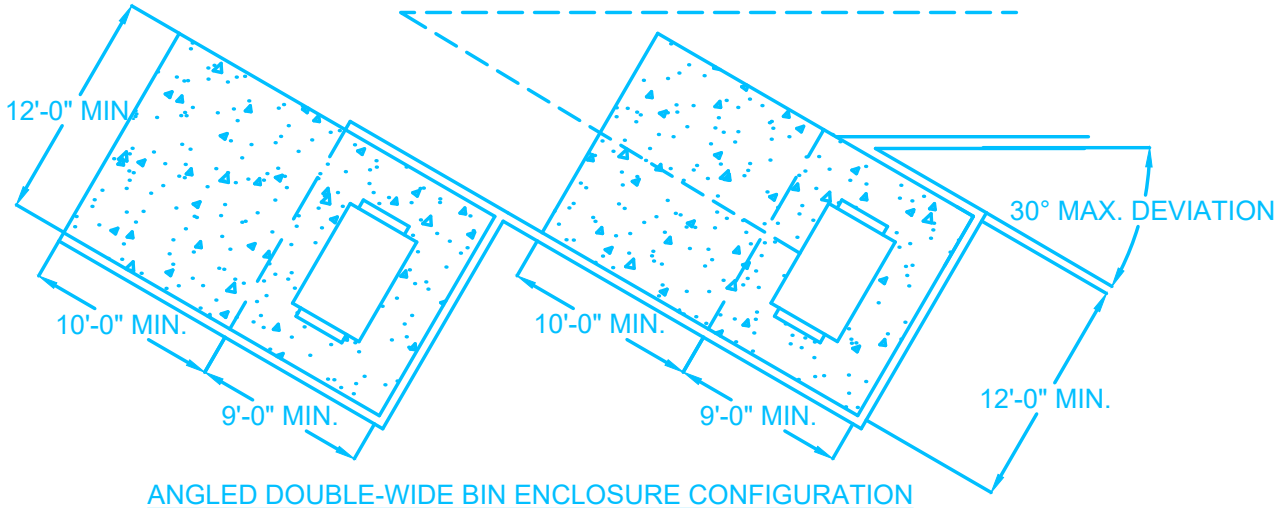
13. RECOMMENDED BOLLARDS TO PROTECT ENCLOSURE WALLS. BOLLARD DESIGN REQUIRES A MIN. 9' X 12' INSIDE OPERATIONAL SPACE.




DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION




RECOMMENDED BOLLARDS
SEE NOTE 13




ANGLED DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION

SHEET 1 OF 1

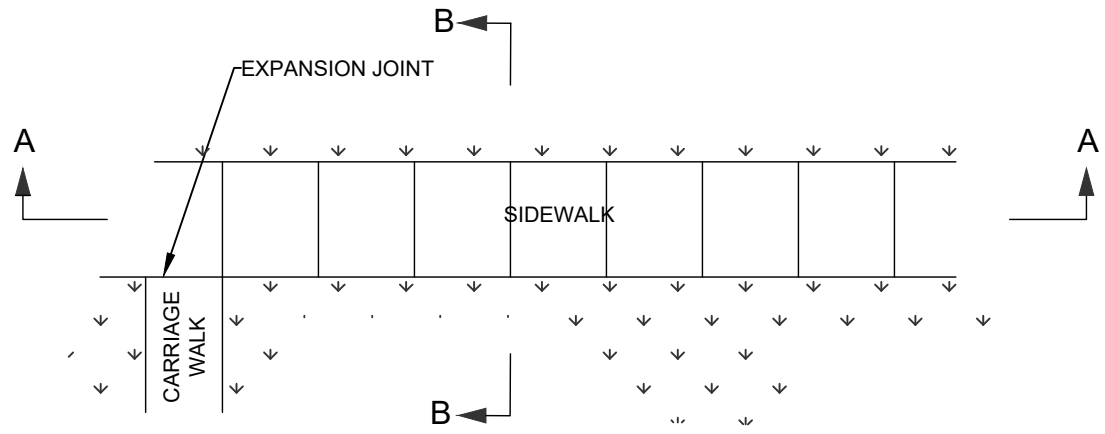
provo PUBLIC WORKS

# SOLID WASTE ENCLOSURE STANDARD

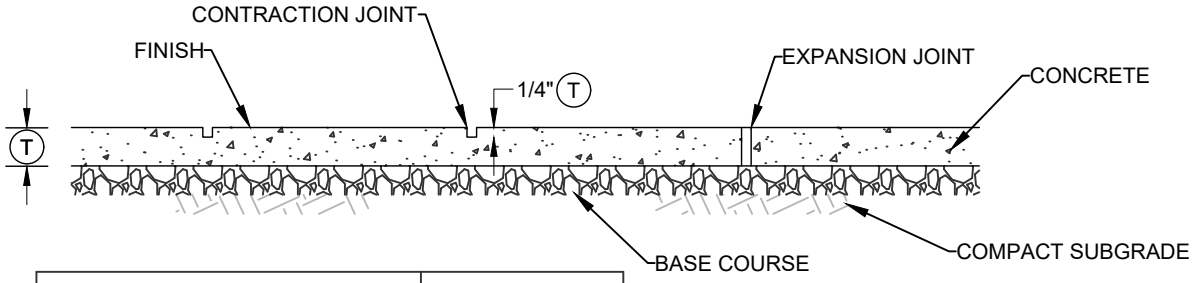
STANDARD DETAIL
P-920

NOT TO SCALE

REVISED DATE: 09/12/23



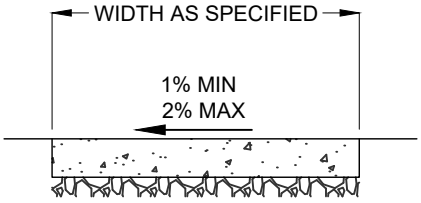

PLAN



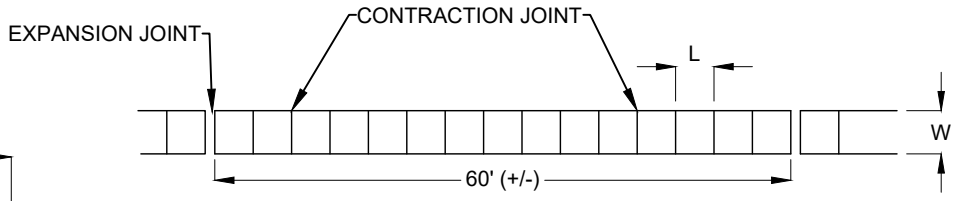

| STREET TYPE | T |
|---|---|
| RESIDENTIAL (WITH PARK STRIP) | 5" |
| RESIDENTIAL (NO PARK STRIP) | 5" |
| OTHER | |
| REPLACING EXISTING SIDEWALK | MATCH EXISTING (5" MIN.) |

SEE DRIVEWAY APPROACH PLANS FOR SIDEWALK THICKNESS AT DRIVEWAYS

SECTION A-A




SECTION B-B




$L_{MIN} = W$

$L_{MAX}$ (IN FEET) $= 2.5 \times T$ (IN INCHES)
OR
15' MAX

SIDEWALK JOINT DETAIL

SHEET 1 OF 1

PUBLIC WORKS

# *SIDEWALK*

STANDARD DETAIL
P-231
NOT TO SCALE
REVISED DATE: 08/2023

**1. GENERAL**

A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.

B. Additional requirements are specified in APWA Section 32 16 13.

**2. PRODUCT**

A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.

B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.

C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.

D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

**3. EXECUTION**

A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

B. Concrete Placement: APWA Section 03 30 10.

B.1. Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.

B.2. Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).

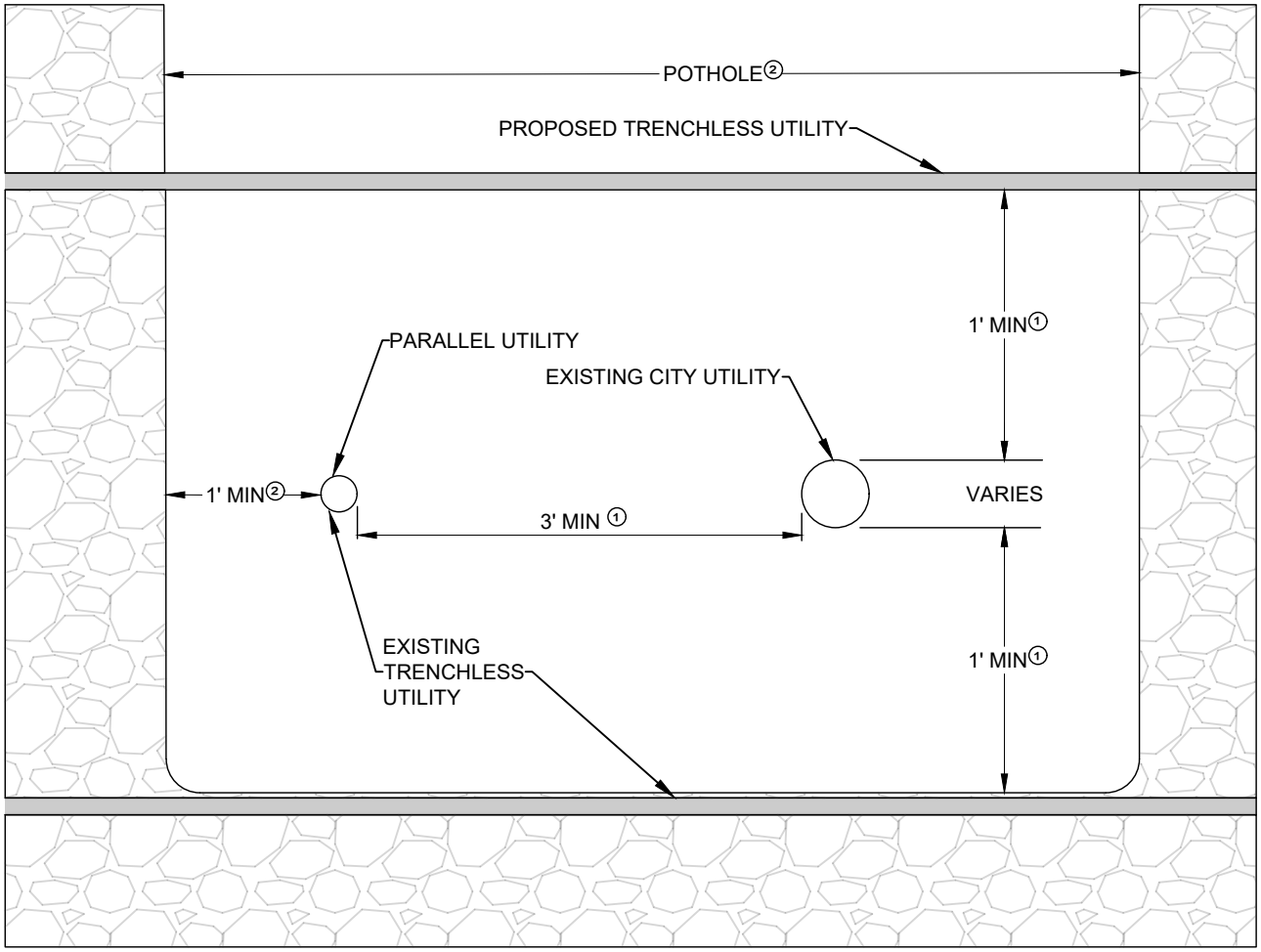
B.3. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.



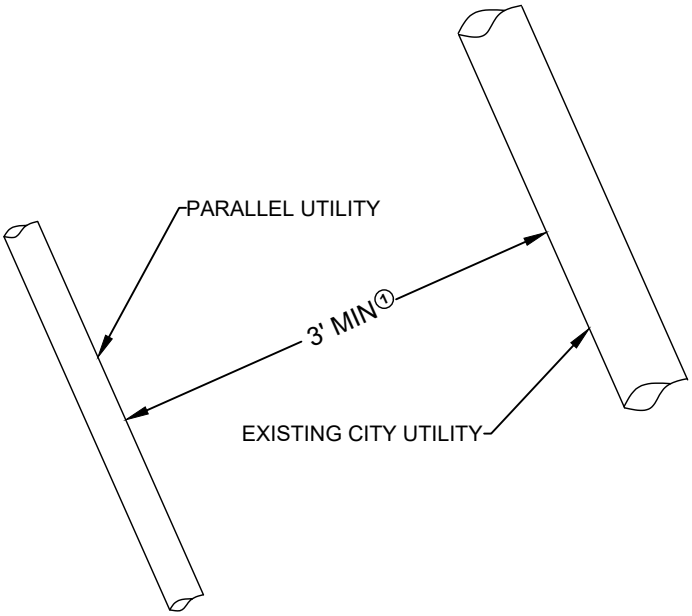
provo PUBLIC WORKS

# *SIDEWALK*

STANDARD DETAIL
P-231
NOT TO SCALE
REVISED DATE: 08/2023




CROSS SECTION




PLAN VIEW PARLLEL UTILITY INSTALLATION

① Provide 1 foot minimum vertical clearance and 3 foot horizontal clearance edge to edge between city utility and trenchless utility.

② Expose city utility at crossing location for a minimum of 1 foot on all sides prior to trenchless installation.



provo PUBLIC WORKS

# *TRENCHLESS UTILITY INSTALLATION*

STANDARD DETAIL
P-257
NOT TO SCALE
REVISED DATE: 08/2023

Trenchless Utility Installation

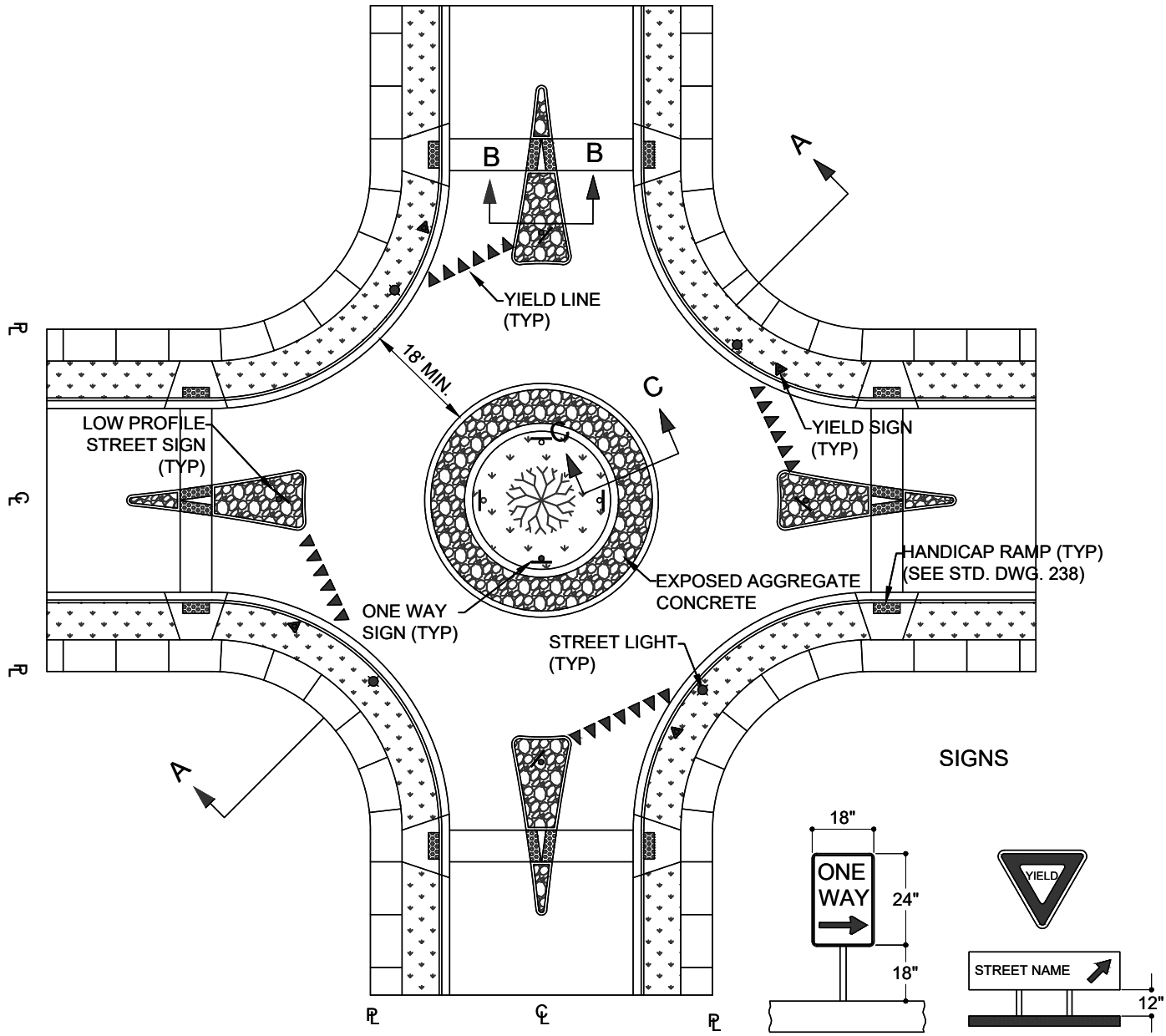
1. GENERAL
   A. All city utilities shall be potholed and exposed for one foot (1') on all sides.
   B. All parallel utilities shall be a minimum of three feet (3') from a city utility.
   C. Utilities should be buried between 36" and 48".
   D. If location of trenchless utility differs from what is represented on the permit, a new permit showing the revised location will be required.
2. PRODUCT
   A. If adequate compaction cannot be achieved around a city utility that has been potholed, flowable fill will be required.
3. EXECUTION
   A. Each utility shall be windowed and a person shall witness ~~the of~~ the trenchless utility crossing the existing utilities.
   B. Minimum 24 hour notice is required of any installation of a trenchless utility past a city utility.
   C. Pothole restoration shall conform to Provo City Standard P-255, "TRENCH BACKFILL AND SURFACE RESTORATION". If proper compaction cannot be obtained, flowable fill may be required.



provo PUBLIC WORKS

# TRENCHLESS UTILITY INSTALLATION

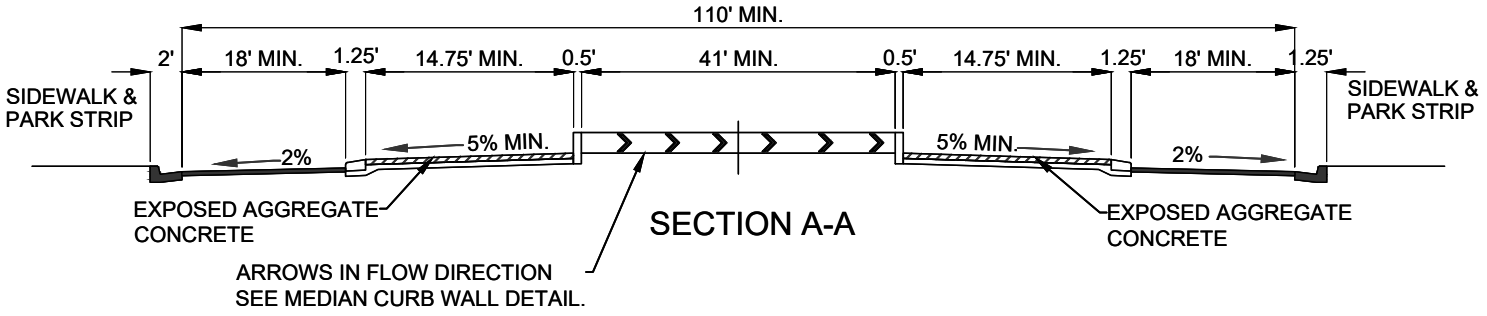
STANDARD DETAIL
P-257
NOT TO SCALE
REVISED DATE: 08/2023




SIGNS




CHANGES CAN BE MADE
BASED ON DESIGN VEHICLE.




SECTION A-A



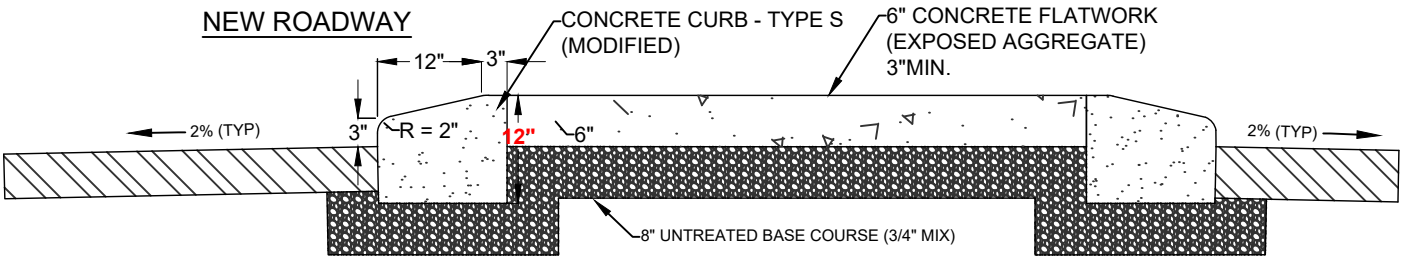
PUBLIC WORKS

# TYPICAL ROUNDABOUT

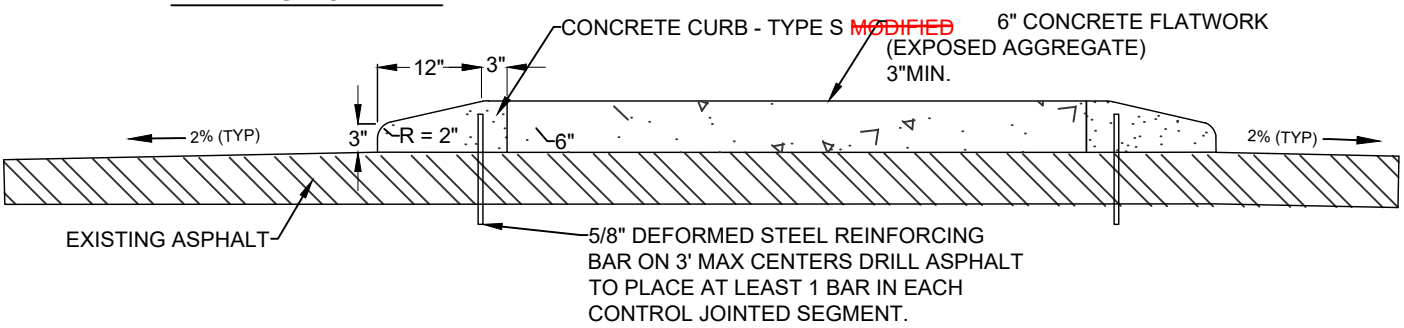
STANDARD DETAIL
P-912
NOT TO SCALE
REVISED DATE: 08/2023

## SECTION B-B

### NEW ROADWAY

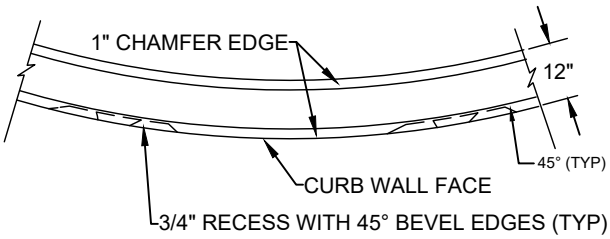



### EXISTING ROADWAY

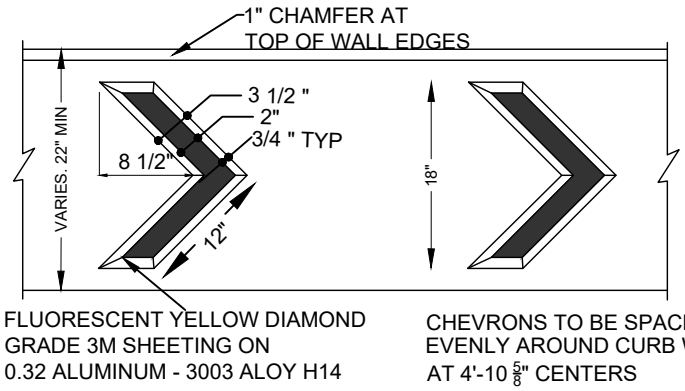



## MEDIAN CURB WALL

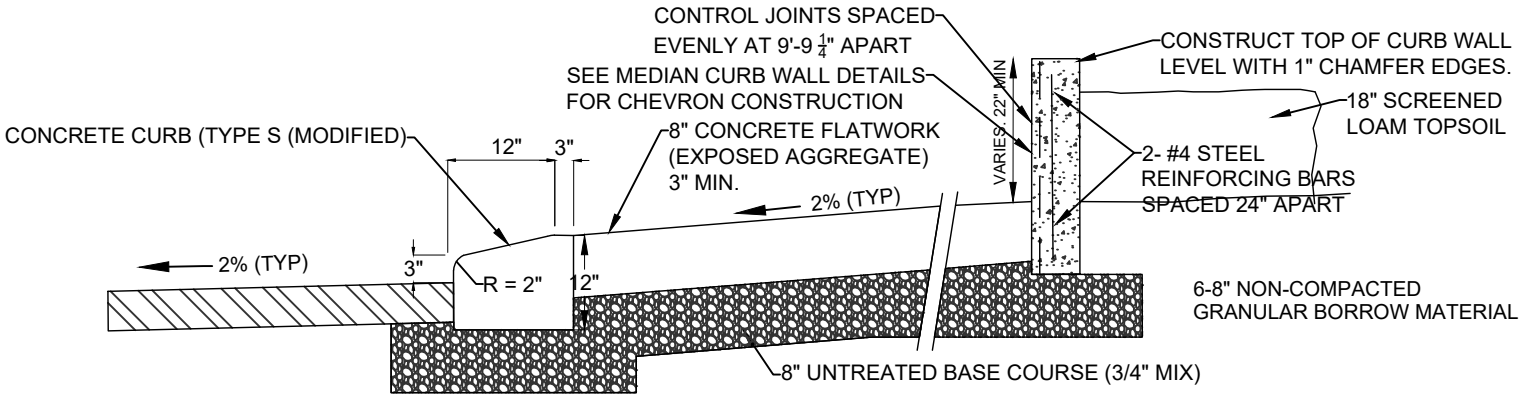
### TOP VIEW




### ELEVATION VIEW




## SECTION C-C






PUBLIC WORKS

# *TYPICAL ROUNDABOUT*

STANDARD DETAIL
P-912
NOT TO SCALE
REVISED DATE: 08/2023

NOTES:

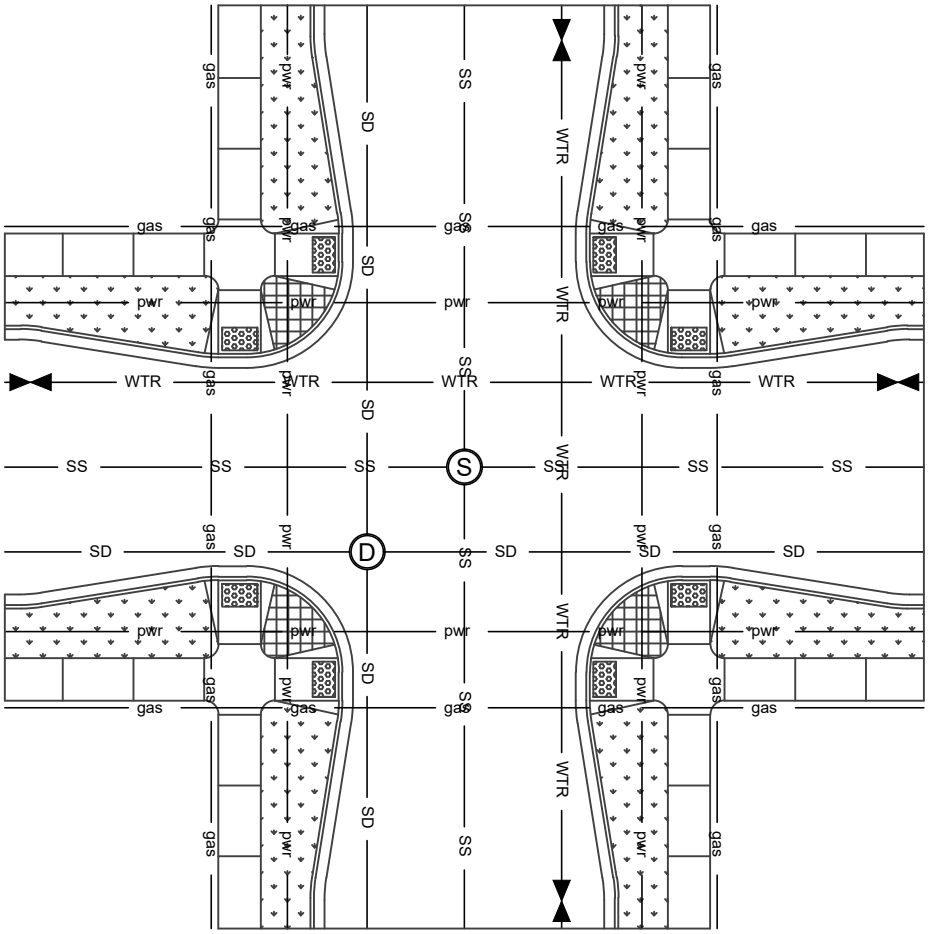
WATER LINES: ~~TYPICALLY~~ 6' FROM THE LIP OF CURB ON THE NORTH AND EAST SIDES OF THE ROAD.

SEWER LINES: ~~TYPICALLY~~ ON CENTER LINE OF ROAD.

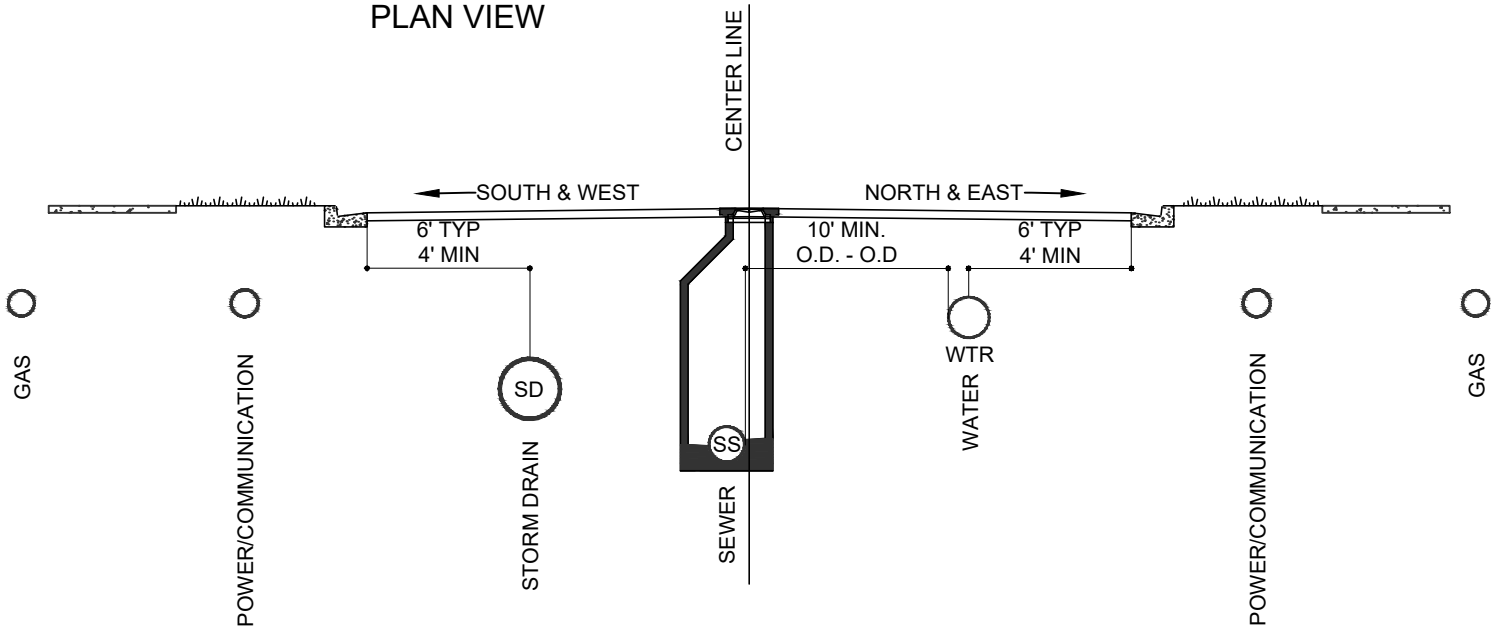
STORM DRAIN: ~~TYPICALLY~~ 6' FROM THE LIP OF CURB ON THE SOUTH AND WEST SIDES OF THE ROAD.

DETAIL DOES NOT APPLY TO 24' ASPHALT WIDTH ROADS.

BURY DEPTH FOR COMMUNICATION UTILITIES SHOULD BE BETWEEN 36-INCHES AND 48-INCHES.




PLAN VIEW




CROSS SECTION

SHEET 1 OF 1

PUBLIC WORKS

# *UTILITY LOCATION IN CITY R.O.W.*

STANDARD DETAIL

**P-914**

NOT TO SCALE

REVISED DATE: 08/2023

# SECTION 32 12 05M
# BITUMINOUS CONCRETE
REVISED 8-22-23

This Section modifies portions of Section 32 12 05 entitled "Bituminous Concrete" (Amendment 1 - APWA 2017 as outlined below).

**Add to Article 1.4, paragraph B.2 the following:**

a. Hot mix plant must fall within a 25-mile maximum radius from the job site.

**Delete Article 1.4, paragraph C.7 and replace with the following:**

7. Binder target percentage, dust to binder ratio, and the following as applicable.
   a. For Superpave mix design provide (1) voids in the mineral aggregate (VMA), (2) voids filled with bituminous binder (VFA), and (3) Hamburg Wheel Tracker results.
   b. For Marshall mix design provide (1) tensile strength ratio (moisture sensitivity), (2) voids in the mineral aggregate (VMA), (3) stability, (4) flow, (5) voids in the bituminous mix, (6) voids filled with bituminous binder (VFA), (7) virgin binder replacement, (8) RAP asphalt content, and (9) effective asphalt content.

**Add to Article 1.6, paragraph E.1 the following:**

**Table 2 – Pay Factors – Marshall Mix Design**

| Criteria | Pay Factor | Range of Mean of Deviations of Test Results from the Binder and Gradation Targets in Percentage Points | | | | |
|---|---|---|---|---|---|---|
| | | 500 Tons | 1,000 Tons | 1,500 Tons | 2,000 Tons | ≥2,500 Tons |
| Binder Content | 1.00 | 0.00–0.70 | 0.00-0.54 | 0.00-0.46 | 0.00-0.41 | 0.00-0.38 |
| | 0.975 | 0.71–0.80 | 0.55-0.61 | 0.47-0.52 | 0.42-0.46 | 0.39-0.43 |
| | 0.95 | 0.81–0.90 | 0.62-0.68 | 0.53-0.58 | 0.47-0.52 | 0.44-0.47 |
| | 0.90 | 0.91-1.00 | 0.69-0.75 | 0.59-0.64 | 0.53-0.56 | 0.48-0.52 |
| | 0.85 | 1.01–1.10 | 0.76-0.82 | 0.65-0.69 | 0.57-0.61 | 0.53-0.56 |
| 1/2" and larger Sieve | 1.00 | 0.0-10.9 | 0.0-7.3 | 0.0-6.5 | 0.0-5.6 | 0.0-5.2 |
| | 0.975 | 11.00-12.9 | 7.4-8.3 | 6.6-7.1 | 5.7-6.3 | 5.3-5.8 |
| | 0.95 | 13.0-13.9 | 8.4-9.3 | 7.2-7.9 | 6.4-7.0 | 5.9-6.4 |
| | 0.90 | 14.0-14.9 | 9.4-10.3 | 8.0-8.7 | 7.1-7.7 | 6.5-7.1 |
| | 0.85 | 15.0-16.0 | 10.4-11.3 | 8.8-9.5 | 7.8-8.4 | 7.2-7.7 |
| 3/8" Sieve | 1.00 | 0.0-9.9 | 0.0-6.9 | 0.0-5.9 | 0.0-5.3 | 0.0-4.9 |
| | 0.975 | 10.0-10.9 | 7.0-7.8 | 6.0-6.6 | 5.4-6.9 | 5.0-5.5 |
| | 0.95 | 11.0-11.9 | 7.9-8.7 | 6.7-7.3 | 6.0-6.6 | 5.6-6.1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 0.90<br>0.85 | 12.0-13.9<br>14.0-15.0 | 8.8-9.6<br>9.7-10.5 | 7.4-8.0<br>8.1-8.9 | 6.7-7.2<br>7.3-7.9 | 6.2-6.6<br>6.7-7.2 |
| No. 4 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-9.9<br>10.0-11.0<br>11.1-11.9<br>12.0-12.9<br>13.0-14.0 | 0.0-6.7<br>6.8-7.6<br>7.7-8.5<br>8.6-9.4<br>9.5-10.2 | 0.0-5.7<br>5.8-6.3<br>6.4-6.9<br>7.0-7.5<br>7.6-8.0 | 0.0-5.2<br>5.3-5.8<br>5.9-6.4<br>6.5-7.0<br>7.1-7.6 | 0.0-4.8<br>4.9-5.4<br>5.5-5.9<br>6.0-6.5<br>6.6-7.0 |
| No. 8 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-10.9<br>11.0-12.0 | 0.0-5.6<br>5.7-6.3<br>6.4-7.0<br>7.1-7.7<br>7.8-8.5 | 0.0-4.8<br>4.9-5.4<br>5.5-6.0<br>6.1-6.6<br>6.7-7.2 | 0.0-4.3<br>4.4-4.8<br>4.9-5.3<br>5.4-5.8<br>5.9-6.4 | 0.0-4.0<br>4.1-4.5<br>4.6-4.9<br>5.0-5.4<br>5.5-5.8 |
| No. 16 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-10.9<br>11.0-12.0 | 0.0-5.2<br>5.3-5.8<br>5.9-6.4<br>6.5-7.0<br>7.1-7.6 | 0.0-4.6<br>4.7-5.1<br>5.2-5.6<br>5.7-6.1<br>6.2-6.6 | 0.0-4.2<br>4.3-4.6<br>4.7-5.1<br>5.2-5.5<br>5.6-5.9 | 0.0-3.9<br>4.0-4.3<br>4.4-4.7<br>4.8-5.1<br>5.2-5.4 |
| No. 50 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-6.9<br>7.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-11.0 | 0.0-4.3<br>4.4-4.8<br>4.9-5.3<br>5.4-5.8<br>5.9-6.4 | 0.0-3.8<br>3.9-4.1<br>4.2-4.5<br>4.6-4.9<br>5.0-5.5 | 0.0-3.4<br>3.5-3.8<br>3.9-4.1<br>4.2-4.4<br>4.5-4.9 | 0.0-3.2<br>3.3-3.5<br>3.6-3.8<br>3.9-4.1<br>4.2-4.5 |
| No. 200 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-3.0<br>3.1-3.5<br>3.6-4.0<br>4.1-4.5<br>4.6-5.0 | 0.0-2.4<br>2.5-2.7<br>2.8-3.0<br>3.1-3.3<br>3.4-3.6 | 0.0-2.0<br>2.1-2.2<br>2.3-2.4<br>2.5-2.7<br>2.8-3.0 | 0.0-1.8<br>1.9-2.0<br>2.1-2.2<br>2.3-2.4<br>2.5-2.6 | 0.0-1.7<br>1.8-1.9<br>2.0-2.1<br>2.2-2.3<br>2.4-2.5 |
| NOTES<br>(a) Test binder content using a burn-off oven, ASTM D6307.<br>(b) Determine aggregate gradation by extraction. ASTM D5444. | | | | | | |

**Add to Article 2 the following:**

**2.1 Binder**

A. Asphalt Cement (AC)

1. Performance graded asphalt binder (PGAB) may be substituted for asphalt cement as follows.

| Asphalt Cement | Substitute |
|---|---|
| AC-10 | PG 58-28 |
| AC-20 | PG 64-22 |

**Delete Article 2.3, paragraph D and replace with the following:**

D. RAP or ROSP: Free of detrimental quantities of deleterious materials.

1. Allowed up to 15 percent by weight of RAP or binder, whichever is lesser, with no change in specified binder grade.
2. Allowed from 15 to 25 percent by weight of RAP or binder, whichever is lesser, if the binder grade is adjusted according to AASHTO M323 to meet the specified binder grade.
3. Determine RAP binder content by chemical extraction.

**Add to Article 2.4, paragraph B with the following:**

| Table 4A - Master Grading Band limits - Marshall Mix Design | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sieve** | **Aggregate Grade** | | | | | | |
| | **DM-1** | **DM-3/4** | **DM-1/2** | **DM-3/8** | **OM-1/2** | **FM-1** | **FM-1/2** |
| 1 inch | 100 | | | | | | |
| 3/4 inch | | 100 | | | | 100 | |
| 1/2 inch | 75 - 91 | | 100 | | 100 | 90 - 100 | 100 |
| 3/8 inch | | 75-91 | | 100 | 93 - 100 | 60 - 100 | 90 - 100 |
| No. 4 | 47 - 61 | 46-62 | 60 - 80 | 60 - 80 | 36 - 44 | 15 - 40 | 30 - 50 |
| No. 8 | | | | | 14 - 21 | 4 - 12 | 5 - 15 |
| No. 16 | 23 - 33 | 22-34 | 28 - 42 | 28 - 42 | | | |
| No. 50 | 12 - 22 | 11-23 | 11 - 23 | 11 - 23 | | | 2 - 5 |
| No. 200 | 3 - 7 | 3-7 | 3 - 7 | 3 - 7 | 2 - 4 | 2 - 5 | |

NOTES

(a) Gradation is expressed in percent passing by weight. ASTM C136. Percentage of fines passing No. 200 sieve determined by washing, ASTM C117.

(b) Friction Mixture, ASTM D 3515.

(c) The alpha portion of the grade designator (DM, OM, FM) represents dense mix, open mix, and friction mix. The numerical portion ( 1, 3/4, 1/2 ) represents the ***maximum*** sieve size.

**Add to Article 2.4, paragraph D with the following:**

D. **Design Parameters:** Table 6, determined by AI MS2.

| Table 6 - Mix Design Parameters | | | |
|---|---|---|---|
| **Criteria** | | **Marshall** | |
| Mix Designator | (a) | 50 blow | 75 blow |
| Compaction (blows) | (b) | 50 | 75 |
| Compaction (gyrations) | | - | |
| Design Air Void Target, percent | | 3.5 | |
| Stability, lbs., minimum | (c) | 1200 | 1800 |

| | | |
|---|---|---|
| Flow, in 0.01 inch units (d) | 10-18 | |
| Voids in Mineral Aggregate (VMA), percent, minimum, relative to maximum or nominal sieve size grading and calculated using Gsb (dry) for virgin aggregate and RAP aggregate | ASTM D 6927 | |
| | Nominal Grading | |
| | 1 | 13.0 |
| | 3/4 | 14.0 |
| | 1/2 | 15.0 |
| | 3/8 | 16.5 |
| RAP or ROSP specific gravity for calculations | Gsb (dry) by chemical extraction | |
| Dust to Binder Ratio, maximum | 1.6 | |
| Tensile Strength Ratio (moisture sensitivity), minimum (e) | 0.80 | |
| Rutting (Hamburg rut test) (f) | | |
| Road Class I | - | - |
| Road Class II | - | - |
| Road Class III | - | - |

NOTES

(a) Road Class is defined in Section 32 01 31

(b) 100Nd mix is for very high traffic applications only as defined by ENGINEER. 100Nd mix is intended for lower lift applications or surface applications with proactive seal coat program.

(c) Number of compaction blows each end of specimen.

(d) Design Density Target: ASTM D 2041. Percent of maximum theoretical specific gravity

(e) Stability, Flow, Voids: ASTM D 6927.

(f) Tensile Strength Ratio (moisture sensitivity): ASTM D 4867. Use freeze thaw conditioning. Compact test specimen to seven (7) percent plus or minus one (1) percent air voids.

(g) With testing performed at temperatures representing the specified binder grade in the Hamburg rut test, the average rut depth of two (2) mix design test samples is less than amount shown for the respective Road Classes.

END OF SECTION

a. Minimum allowable water main diameter shall be eight inches (8”).
b. Main lines larger than the minimums shown above may be required if necessary for fire flow or pressure. Developer shall be responsible for an upsize based on providing sufficient capacity for the development.
c. If the Master Plan requires a larger pipe size than described in paragraphs (a) and (b), City may require the developer to install the larger size.

B. Waterline shall be Ductile Iron with polywrap, grease on bolts and #14 copper tracer wire per Provo Standard Drawing P-594 and installed per AWWA Standard C600-10. C900 PVC Pipe may be allowed with approval from director. HDPE, Steel, or other pipe material are not allowed unless expressly permitted by the Public Works Division of Water Resources. All construction and installation shall conform to standards referenced in R309-550-8 of the Utah Administrative Code.
   a. ~~.~~ Continuity of tracer wire shall be confirmed by an independent tester prior to requesting verification of continuity by Provo City and positive test results presented to City inspectors before City inspectors will check for continuity. Failure of a continuity test conducted by a City inspector will result in a re-inspection fee as set forth in the Consolidated Fee Schedule.

C. Waterline shall~~should typically~~ be installed within the street section in the location shown on Provo Standard Drawing P-914~~.~~, unless otherwise approved.

D. Provide a minimum of ten (10) feet horizontal clearance between a water and sewer edge to edge per Utah Administrative Code R317-3-2 and R309-550-7 (laterals, services and main lines).
   a. Where a water main and a sewer line must cross, the water main shall be at least 18 inches above the sewer line. Separation distances shall be measured edge-to-edge (i.e. from the nearest edges of the facilities).
   b. Water mains and sewer lines shall not be installed in the same trench.
   c. Where local conditions make it impossible to install water or sewer lines at separation distances required by subsection (a), the sewer pipes are in good condition, and there is not high groundwater in the area, it may be acceptable if the design includes a minimum horizontal separation of 6 feet and a minimum vertical clearance of 18 inches with the waterline being above. In order to determine whether the design is acceptable, the following information shall be submitted as part of the plans for review.
      1. reason for not meeting the minimum separation standard;
      2. location where the water and sewer line separation is not being met;
      3. horizontal and vertical clearance that will be achieved;
      4. sewer line information including pipe material, condition, size, age, type of joints, thickness or pressure class, whether the pipe is pressurized or not, etc.;
      5. water line information including pipe material, condition, size, age, type of joints, thickness or pressure class, etc.; 6. ground water and soil conditions; and,
      7. any mitigation efforts.

E. Minimum cover required shall be 52 inches (52”).

F. All new water infrastructure shall be pressure tested by maintaining 200 psi for two hours.
G. All materials that may come in contact with drinking water, including pipes, gaskets, lubricants and O-Rings, shall be ANSI-certified as meeting the requirements of ANSI/NSF Standard 61, Drinking Water System Components - Health Effects. To permit field-verification of this certification, all components shall be appropriately stamped with the NSF logo.
H. Pipe, joints, fittings, valves, and fire hydrants shall conform to ANSI/NSF Standard 61, and applicable sections of AWWA Standards C104-A21.4-08 through C550-05 and C900-07 through C950-07.

3. VALVES
   A. Valves shall be provided in all intersections and shall equal number of legs.
   B. Mainline valves on either side of tee shall be located a minimum of three feet (3') off a tee or cross and shall be MJ x MJ valves.
   C. Mainline Valves shall be located a minimum of three feet (3') from any fitting and shall be MJ x MJ valves.
      a. An exception would be a flanged connection on the stem of a tee.
   D. All valves larger than 12 inches (12") shall be butterfly design.
   E. All butterfly valves shall be of the double offset design and shall meet or exceed the requirements of AWWA C504-15.
   F. Provide concrete collars on valve boxes at ¼" below finished asphalt.
   G. Place valves at intersections per Provo Standard Drawing P-914.

4. WATER SERVICES
   A. No service line connections shall be made to Provo City's water distribution system or to main water lines on private property without authorization. The party making the connection shall be required to obtain a permit for the same and to pay the fees associated with that permit as shown on the Consolidated Fee Schedule.
   B. Water taps on public or private mains shall be installed by a qualified and licensed plumber or a pre-qualified utility contractor and inspected by the City.
   C. Minimum size shall be one-inch (1") diameter for service lines and meter yokes.
   D. Engineering calculations shall be required to show that meter size is adequate to meet demand for any uses other than detached single family residential or townhomes.
   E. The water service shall extend perpendicularly from the main line to meter~~be~~ in front of the property it services and shall not cross through other properties.
   F. No common use water services shall be allowed unless approved by the Water Resources Director.
      a. Service lines must be so arranged that the supply to each separate house or premises are controlled by a separate valve, placed within and near the line of the street curb.

b. Common use water services shall be eliminated as redevelopment of the site occurs, or if repair or replacement is needed. The construction or repair cost will be the responsibility of the Owner.
c. Master meter(s) or combined building meters may be allowed for private developments if approved by the Water Resources Director. All lines within the private development shall be private including those from the private mainline to the meter. The developer shall provide the City with an agreement defining who is responsible for maintenance and show the lines as private on the plat and utility plans. Individual shutoffs located near the curb are required for each unit.
d. Legal and physical access shall be provided to all meters.
e. All service lines shall be capped downstream of the meter box until connected for service.

5. ~~ABANDONDED SERVICE LINES~~ABANDONMENT OF WATER UTILITIES
   A. Whenever a water service line is abandoned in favor of a different service line, the old service line shall be disconnected from the main line and the old service tap shall be plugged at the main line. The cost of all such work shall be the responsibility of the owner of the property being serviced by the new water service line. Any work described in this Section shall be inspected by Provo City before backfilling. Prior to demolition of proposed site~~permit approval~~, water services and fire lines shall be abandoned per Provo City standards.

6. FIRE HYDRANTS
   A. Provide minimum fire flow required by the Uniform Fire Code for proposed structures and fire flow calculations at all hydrant locations. Unless project specific information is provided, the following will be assumed:

**Provo City Minimum Operational and Performance Criteria for Planning and Design**

| Component | Criteria |
|---|---|
| **Fire Flow Requirements (flow [gpm] @ duration [hours]) [a]** | |
| Single-Family Residential | 1,500 gpm @ 2 hrs |
| Other | IFC or Fire Marshall |
| **Water Distribution Line Sizing** | |
| Max day plus Fire Flow or Average Peak Day Demand Condition | |
| Minimum Pressure, psi | 50 psi (20 psi for fire flow) |
| Maximum Velocity, ft/sec | 7 fps (excluding fire flow) |

[a] Typical minimum flow will be verified by City on a case by case basis

B. Install fire hydrants per Provo Standard Drawing P-511.
   a. Hydrants shall be connected to a minimum eight-inch (8") main using a minimum six-inch (6") diameter pipe.

C. Sewer mainlines and laterals shall be marked with a detectable green colored locator tape.

D. Minimum depth of the sewer mainlines shall be seven (7) feet below finish grade. In areas where basements are allowed, sewer mains shall be deep enough to service basements.

E. Sewer mainline grades are as follows:

| Minimum Sewer Main Pipe Slope* | |
|---|---|
| 8 inch sewer lines** | 0.40% |
| 10 inch sewer lines | 0.28% |
| 12 inch sewer lines | 0.22% |
| 15 inch sewer lines | 0.15% |
| 18 inch sewer line | 0.12% |
| 21 inch and larger sewer lines | 0.10% |
| * Sewer mains may not be upsized only for the purpose of installing at a flatter slope unless information is provided by the engineer showing that there is adequate scour volume to keep the line clean without increased maintenance.<br>** The first segment(s) of 8 inch sewer mains may be required to be placed at 1% min slope if there is not sufficient flow to provide adequate scour volume. | |

F. All sewers which are designed to flow at 10 feet per second or greater shall be reviewed by City for approval or alternate design consideration. Suitable thrust blocks, concrete anchors or equivalent restraints shall be provided per R317-3-2 of the Utah Code when pipe slopes are 10% or greater.

G. Horizontal clearance to any culinary water line shall be at least 10 feet (10') edge of pipe to edge of pipe per R309-550 and R317-3-2.
   a. Utilities crossing sewer mains shall cross as close to a right angle as possible.
   b. Provide a minimum vertical clearance of eighteen inches (18") between water and sewer with water main lines and service above the sewer measured from the outside of the pipes.
   c. When utilities are bored near sewer mains, laterals and all crossings, the sewer utilities shall be TV inspected.

H. No curvilinear sewer mains shall be allowed.

3. MANHOLE DESIGN STANDARDS

A. Manholes shall conform to Provo Standard Drawing P-411.

B. Depth transitions shall occur between manholes. Drop manholes are discouraged and may only be used with explicit written approval and shall conform to Provo Standard Drawing P-433.

C. Sewer manholes shall be installed:
   a. At a maximum spacing of four hundred (400) feet.
   b. At all changes in grade, size or alignment, and at all intersections with other mainlines.
   c. At the end of main lines (no cleanouts allowed on mainlines).

d. All six-inch (6”) and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main. D. Sewer manholes shall be sized based on the following:

a. Five (5) foot Diameter manholes required at three-way manholes, 90° bends, over 15” and 18” pipes, manholes over 10’ deep, and in manholes with over one foot of drop across manhole.

b. Six (6) foot Diameter manholes required over pipes 24” and greater, and at three-way manholes where the deflection exceeds 90° and height of manhole exceeds 16'.

4. ABANDONMENT OF SEWER UTILITIES~~LATERALS~~

A. Whenever an existing sewer lateral(s) is abandoned in favor of a new lateral, the Owner shall disconnect the existing sewer lateral from the main and plug the lateral tap into the main. All costs associated with labor and material for such work shall be the responsibility of the property owner causing the lateral to be abandoned. All work shall be inspected by Provo City before backfilling. Prior to demolition of proposed site~~permit approval~~, sewer laterals shall be abandoned per Provo City standards.

5. SEWER LATERAL DESIGN STANDARDS

A. Sewer taps will be performed by the contractor and inspected by a City Inspector.

a. Sewer taps into an existing eight (8) inch main shall not be greater than four (4) inches.

1. Direct nose-on connections may only be used when connecting to an existing mainline. The installation must be inspected and a saddle used when warranted.
2. Connections to new mains shall be with a wye and a forty-five degree (45º) bend.

b. Minimum distance between connections shall be four feet.

c. Sewer laterals shall connect to sewer main lines and not discharge into manholes.

B. At the time of significant remodel or change of use, reuse of existing laterals may be allowed for use only if the following conditions are met: a. The existing lateral is of sufficient size and slopes for the proposed use.

b. The existing lateral is in good condition, free from damage, bellies, leaks, or deviations in slope.

c. If the above criteria cannot be met the Owner shall abandon the existing lateral at the main and provide a new lateral that meets all current Provo Standards and Specifications.

d. The existing lateral is ABS (Acrylonitrile-Butadiene-Styrene) or PVC.

C. Allowable sanitary sewer lateral pipe material shall be as follows:

a. ABS (Acrylonitrile-Butadiene-Styrene) schedule 40, black in color. For use in sewer laterals only.

b. PVC (Polyvinyl Chloride) SDR 35 or other approved wall thickness for laterals (green in color).
c. Lining is allowed only after review and approval of CCTV of lateral by Provo City personnel.

D. Minimum lateral size shall be as follows:
a. Single family residential: four (4) inches in diameter with 2% minimum slope.
b. Individual lateral serving five (5) or fewer residential equivalent units: four (4) inches in diameter with a minimum slope of 2%.
c. All other uses: minimum six inches (6") diameter with a slope of 2%. A 1% minimum slope may be used if approved as part of the City review.
1. The sewer lateral size shall be based on actual project flows, but in no case shall the lateral be less than six inches (6") in diameter.
2. The sewer lateral shall be in front of the property it services and shall not cross through other properties.

E. The policy of the City regarding the number of separate service laterals for residential and commercial structures is as follows:
a. Each separate lot, parcel, dwelling unit, building, house, business or premises shall be served by an individual lateral except as allowed in paragraph (c).
b. For one- and two-family dwelling structures, a separate service lateral for each dwelling unit is required.
c. For multiple-family dwelling structures, stacked dwelling units, or commercial structures separate service laterals for each unit shall be the general rule. However, where design dictates otherwise, a common lateral for multiple units (or fewer laterals than the number otherwise specified) may be permitted where the applicant provides adequate documentation, including signed and stamped engineering calculations, and guarantees to assure adequacy of sewer/wastewater collection and responsibility for payment and maintenance. Easements may also be necessary where common laterals cross property lines. In any such case, the Water Resources Director has sole discretion to permit or reject a reduction in the required number of service laterals accordingly.
d. Common sewer laterals approved under paragraph (c) shall be have a minimum diameter of six (6) inches for all laterals serving more than five residential equivalent units.

F. Sewer laterals shall not be allowed to connect into any private sewer system without permission from the owner of said system.

G. Cleanouts shall be required at a minimum of every 100 feet (100') and at bends forty-five degrees (45°) or greater. All laterals shall have at least one cleanout.

H. Sump pumps (ground water) shall not be discharged into the street or into the sanitary sewer system; but shall require outfall into a storm drain.

6. PRETREATMENT

A. Pretreatment
a. Pretreatment will ~~generally~~ be required for each use producing excessive grease, sand, oil or sewer load different from a standard residential unit.

# 2024 Provo Standard Drawing Details
# (Supplement to the APWA Manual of Standard Plans, 2017)

provo
PUBLIC WORKS

# PREFACE

The primary purpose of this document is to clearly define the current engineering standards to be used in Provo City. Provo City has adopted the 2012 APWA Manual of Standard Plans, however, while the City recognizes the extensive effort that APWA has executed to create a document that can be widely used across many municipalities, there are specific differences between many APWA standards and Provo City Standards. This document serves to identify any modifications to or replacement of APWA Specifications and Manual of Standard Plans.

Provo City has modified some of the APWA Specifications to reflect local requirements. The following modified specifications have been included as a part of this document:

Section 01 55 26M – Traffic Control
Section 31 05 13M – Common Fill
Section 32 12 05M – Bituminous Concrete
Section 32 16 13M – Driveway, Sidewalk, Curb, Gutter
Section 33 05 05M – Ductile Iron Pipe
Section 33 11 00M – Water Distribution and Transmission

The structure of the remainder of this document follows the same basic structure of the APWA Manual of Standard Plans Table of Contents; however, there are some differences. Following is an explanation of the structure of this document:

1. Numbering – The plan numbers listed refer to the APWA plan number. A plan number having a prefix of "P-" means that the APWA plan has been modified or replaced by the Provo City Standard included as part of this document. The Provo City Standard drawing may replace more than one APWA drawing. In this case the P drawing number may not match the APWA number.
2. Description – The title of the plan with reference to the accepted plan, shown in parentheses.
    a. (APWA Plan ###) indicates that the APWA plan is accepted in its entirety.
    b. (Provo Standard Detail) indicates that the APWA drawing has been completely replaced by a Provo drawing.
    c. (Replaced by Provo City Standard Detail P- ###) indicates that the APWA plan has been replaced by a Provo City Standard that replaces multiple APWA plans and the P number does not match the APWA number.
    d. (Do Not Use) indicates that the APWA plan is not typically used in Provo City. The specified plan may be used in Provo City only after written consent is granted from the Public Works Director or his/her designee.

This document is intended to be altered periodically to ensure that the most current Provo City Standards are available for public use. This document will be revised and published on the City's web site annually, during the first week of January.

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**General**

292 Street Name Signpost (APWA Plan 292)

## PART 3 – STORM DRAIN

**Abbreviations and Symbols**

301 Abbreviations and Symbols for Storm Drains (APWA Plan 301)

**Low Impact Development**

P-301a Rain Garden (Provo Standard Detail)
P-301b Rain Garden in Street Planter (Provo Standard Detail)
P-302 Bioretention Cell (Provo Standard Detail)
P-303 Bioswale (Provo Standard Detail)
P-304 Infiltration Basin (Provo Standard Detail)
P-305 Infiltration Trench (Provo Standard Detail)
P-306 Vegetated Strip (Provo Standard Detail)

**Catch Basins, Inlets, Outlets and Hardware**

302 30” Frame and Cover (APWA Plan 302)
Type A (APWA Plan 302)

Type B (APWA Plan 302)

303 44” Frame and Cover (APWA Plan 303)

304 48” Frame and Cover (Do Not Use)

305 51” Frame and Cover (Do Not Use)

Cover (Do Not Use)

Frame A (Do Not Use)

Frame B, C, D (Do Not Use)

308 35 ½ ” Grate and Frame (APWA Plan 308)

309 47 ¾ ” Grate and Frame

Vane Grate (APWA Plan 309)

Grid Grate (Do Not Use)

310 48” Grate and Frame (Do Not Use)

P-315a Pre-Cast Curb Face and Inlet Box (Provo Standard Detail)

P-315b Double Pre-Cast Curb Face and Inlet Box (Provo Standard Detail)

P-315c Double Catch Basin – Precast (Provo Standard Detail)

P-315d Double Catch Basin – Cast-in Place (Provo Standard Detail)

P-316 Combination Catch Basin and Clean Out Box (Provo Standard Detail)

(Do Not Use)

317 Curb Face Inlet Box (Do Not Use)

320 Debris Grate Inlet (APWA Plan 320)

321 Backflow Preventer

Flap Gate (Do Not Use)

Pinch Valve (AWPA Plan 321)

322 Curb Face Inlet Box /Bubble Up Box (Provo Standard Detail P-315)

323 Pipe Outfall (APWA Plan 323)

Round with flare (APWA Plan 323)

Elliptical with flare (APWA Plan 323)

Access control rack (APWA Plan 323)

**Cleanout Box and Hardware**

331 Cleanout Box

Type A (Do Not Use)

Type B (APWA Plan 331)

Type C (APWA Plan 331)

332 Precast Box (APWA Plan 332)

335 Adjust Reinforced Concrete Deck to Grade (APWA Plan 335)

**Manhole and Hardware**

341 Precast Manhole (APWA Plan 341)

Cast in place base (APWA Plan 341)

Pipe pass through base (APWA Plan 341)

345 Concrete Deck (APWA Plan 345)

360 Raise Frame to Grade (APWA Plan 360)

Grade ring (APWA Plan 360)

Plastic form (APWA Plan 360)

362 Cover Collar for Storm Drains (APWA Plan 362)

**Piping**

P-372 Area Drain (Provo Standard Detail) Do Not Use

373 Concrete Pier (APWA Plan 373)

P-375 Sump (Provo Standard Detail)

**Trenching**

381 Trench Backfill (Replaced by Provo City Standard Detail P-255)

382 Pipe Zone Backfill (Replaced by Provo City Standard Detail P-255)

**Miscellaneous**

P- 390 Lot Grading Plan (Provo Standard Detail)

P- 391 Lot Grading Plan Profiles (Provo Standard Detail)

P-394 Site Drainage Profile (Provo Standard Detail)

## PART 4 – SANITARY SEWER

**Abbreviations and Symbols**

401 Abbreviations and Symbols for Sewer (Do Not Use)

**Manholes and Hardware**

402 30” Frame and Cover (APWA Plan 402)

P-411 Sanitary Sewer Manhole (Provo City Standard Detail)

412 Invert Cover (APWA Plan 412)

413 Cover Collar for Sanitary Sewer Manhole (APWA Plan 413)

**Piping**

P-431a Sewer Lateral Connection (Provo City Standard Detail)

P-431b Sewer Cleanout (Provo Standard Detail)

432 Sewer Lateral Relocation (Do Not Use)

**Liquid Separation Systems**

P-441 Grease Trap/Sand/Oil Separator (Provo City Standard Detail)

**Trenching**

See Provo City Standard Detail P-255 for Trenching Requirements

## PART 5 – WATER SYSTEMS

**Abbreviations and Symbols**

501 Abbreviations and Symbols for Water (Do Not Use)

**Concrete Boxes and Hardware**

502 27” Frame and Cover (Do Not Use)

503 38” Frame and Double Cover (Do Not Use)

505 Concrete Meter Boxes (Do Not Use)

**Fire Hydrants**

P-511 Fire Hydrant with Valve (Provo City Standard Detail)

**Meters**

P-521 ¾" and 1" Meter (Provo City Standard Detail)
P-522 1 ½" and 2" Meter (Provo City Standard Detail)
523 3" and 4" Compound Meter with 2" Bypass (Replaced by Provo City Standard Detail P-525)
P-525 6" Compound Meter with 2" Bypass (Provo City Standard Detail)
527 8" Compound Meter with 2" Bypass (Do Not Use)
529 10" Turbo Meter with 6" Turbo Meter and 2" Bypass (Do Not Use)
P-531 1-Inch Manifold Water Meter Assembly and Precast Concrete Vault (Provo City Standard Detail)

**Monitoring Systems**

535 Electrolysis Monitoring Station Details (Do Not Use)

**Piping**

541 Water Service Line (Replaced by Provo City Standard Detail P-521)
542 Water Service Line Loop (Do Not Use)
543 Water Main Loop (Do Not Use)
Style A (Do Not Use)
Style B,C (Do Not Use)
546 Fire Hydrant Replacement or Relocation (Do Not Use)
551 ¾" and 1" Service Taps (Replaced by Provo City Standard Detail P-521)
552 1 ½" and 2" Service Taps (Replaced by Provo City Standard Detail P-522)

**Thrust Blocks**

561 Direct Bearing Thrust Block (APWA Plan 561)
562 Tie-down Thrust Restraints (APWA Plan 562)

**Trenching**

See Provo City Standard Detail P-255 for Trenching Requirements

**Valves**

571 4" Washout Valve (Do Not Use)
572 Detector Check Valve with ¾" Bypass Meter (Do Not Use)
573 6" Pressure Reducing Valve with 2" Bypass (Do Not Use)
574 Cover Collar for Water Valve Box (APWA Plan 574)
575 Air Release Assembly (Do Not Use)

**General**

593 Pressurized Irrigation Water and Potable Water Interface (Do Not Use)
Type A – Pump Interconnect (Do Not Use)
Type B – Backflow Preventer Interconnect (Do Not Use)
P-594 Water Mainline, Polywrap, &Tracer Wire Detail (Provo City Standard Detail)
P-595 Water Mainline Tee Detail (Provo City Standard Detail)

**PART 6 – IRRIGATION AND LANDSCAPING**

**Abbreviations and Symbols**

601 Abbreviations and Symbols for Irrigation and Landscaping (APWA Plan 601)

**Gravity Flow System**

611 Curb Face Inlet – Irrigation (Do Not Use)
613 Irrigation Diversion Box (Do Not Use)
614 Irrigation Diversion Box (Do Not Use)

**Heads**

621 Stationary Head (APWA Plan 621)
622 Pop-up Head (APWA Plan 622)

**Valves**

P-631 Backflow Preventer (Provo City Standard Detail)
P-631a Outdoor Reduced Pressure Principal Assembly (RP) (Provo City Standard Detail)
P-631b Indoor Reduced Pressure Principal Assembly (RP) (Provo City Standard Detail)
P-631c Pressure Vacuum Breaker (PVB) (Provo City Standard Detail)
P-631d Spill Resistant Pressure Vacuum Breaker (SVB) (Provo City Standard Detail)
P-631e Atmospheric Vacuum Breaker (AVB) (Provo City Standard Detail)
P-631f Atmospheric Vacuum Breaker (AVB) (Provo City Standard Detail)
632 Drain Valve (APWA Plan 632)
633 Control Valve (APWA Plan 633)
635 Isolation Valve (APWA Plan 635)

**Electrical**

651 Wire Runs for Landscape Irrigation (APWA Plan 651)

**Trees and Plants**

681 Tree (APWA Plan 681)
683 Shrubs and Bushes (APWA Plan 683)

**PART 7 – LIGHTING, TRAFFIC CONTROL**

**Street Lighting**

702 Abbreviations and Symbols for Traffic Signals (APWA Plan 702)
710 Riser (APWA Plan 710)

730 Collar for Street Light Pole (APWA Plan 730)
731 Junction Box (APWA Plan 731)
732 Trench for Buried Electrical Conduit (APWA Plan 732)
Park Strip (APWA Plan 732)
Roadway (APWA Plan 732)
733 Joint Use Trench (APWA Plan 733)

736 Street Light Pole Terminal (APWA Plan 736)
737 Street Light Meter Pedestal (APWA Plan 737)

741 Screw-in Base Street Light Pole (APWA Plan 741)
742 Direct Burial Street Light Pole (APWA Plan 742)

743 Concrete Base for Street Light Pole (APWA Plan 743)

**TRAFFIC CONTROL**

**Signals**

751 Signal Pole Foundation (APWA Plan 751)
752 Signal Pole Wiring (APWA Plan 752)
753 Signal Light Head (APWA Plan 753)
Types and Drawing Symbols (APWA Plan 753)
Placement (APWA Plan 753)
754 Single Cabinet Base (APWA Plan 754)
Type 5 (APWA Plan 754)
Type 6 (APWA Plan 754)
755 Pedestrian Push Button Pole (APWA Plan 755)

**Speed Humps**

761 Speed Bump (Do Not Use)
762 Speed Table (Do Not Use)

**PART 8 – GENERAL FACILITIES**

**Design Standards**

802 Defective Concrete (APWA Plan 802)
805 Design Vehicle (APWA Plan 805)
Type A (APWA Plan 805)
Type B (APWA Plan 805)

**Security Fencing**

831 Chain Link Fence (APWA Plan 831)

**Miscellaneous**

880 Bus Stop Pad (APWA Plan 880)

**PART 9 – TYPICAL STREET STANDARDS**

**Design Standards**

P-900 Typical Street Section (Provo City Standard)
P-901 Typical Street Section (Provo City Standard)
P-902 Clear Vision Requirements (Provo City Standard)
P-903 Typical Local Street T-Intersection (Provo City Standard)
P-904 Typical Collector Street T-Intersection (Provo City Standard)
P-905 Typical Local Street T-Intersection (Provo City Standard)
P-910 Cul-de-sac with Planter (Provo City Standard)
P-912 Local Street Roundabout (Provo City Standard)
P-913 Minimum Pavement Design (Provo City Standard)
P-914 Utility Location in R.O.W. (Provo City Standard)
P-915 Overhead Utility Location (Provo City Standard)

# SPECIFICATIONS

# SECTION 01 55 26M
# TRAFFIC CONTROL

REVISDED 12-08-2015

**Delete section 01 55 26 and replace with the following:**

## PART 1 GENERAL

### 1.1 SECTION INCLUDES

A. Traffic control Requirements

### 1.2 RELATED SECTIONS

A. Section 01 11 00S: Scope of Work

### 1.3 REFERENCES

A. AASHTO Roadside Design Guide, Current Edition

B. ASTM D 4956: Retroreflective Sheeting for Traffic Control.

C. ATSSA: American Traffic Safety Services Association, Inc.

D. Instructions to Flaggers. Publication of UDOT.

E. MUTCD: Manual on Uniform Traffic Control Devices, Current Edition.

F. Work Zone Traffic Control Guide: Publication of the Utah LTAP Center.

G. ADA: Americans with Disabilities Act.

### 1.4 SUBMITTALS

A. Traffic Control Plan at least 10 days prior to commencement of any portion of the WORK.

B. Flagger or traffic control technician certificates when requested by ENGINEER.

### 1.5 SPECIAL TRAFFIC CONTROL PROVISIONS

A. IN GENERAL:

1. Unless otherwise approved by the ENGINEER, CONTRACTOR shall maintain at least one 12-foot wide travel lane for each direction of travel at all times.

2. Full road and/or intersection closures will only be approved under extreme circumstances as determined by the ENGINEER. Street and/or lane closure fees may be assessed for closures determined to be for CONTRACTOR convenience in completing the Work.

3. If a lane, intersection, or road closure is approved by the ENGINEER, the CONTRACTOR shall be required to provide advance public notification. This shall be done using electronic message boards (variable message signs) at the beginning and end of each reach to be closed, and in all four directions at intersections, as well as flyers to the residents in the vicinity. The CONTRACTOR shall post both types of messages at least 7 days prior to closure.
4. A copy of the approved Traffic Control Plan shall be maintained on the job site at all times.
5. Unless otherwise approved by the Engineer, CONTRACTOR shall remove all traffic control devices from roadway at the end of each day. All advance warning signs not being used should be turned around until the traffic control placement the following day.
6. CONTRACTOR shall implement traffic control measures to safely and properly secure the work area, equipment, residents, and personnel throughout the duration of the project. This requirement also applies to portions of the work being performed by subcontractors.

B. INTERSECTIONS:

1. Use uniformed police officer when construction activities are impacting an operating signalized intersection.
2. Use of flaggers at a signalized intersection is permitted only when signals have been turned to red flash mode or are inoperable.
    a. Control each approach by separate flaggers.
        1) Flaggers can control only two lanes of approach traffic.
            a) Third lane control permitted when left or right turn bays are present.
    b. Coordinate all modifications to signal operations with the Provo City Traffic Engineer.
3. For unsignalized intersections – provide a certified flagger for each approach.
4. Existing left turn lanes may be used for through traffic movement when the need to reduce the through traffic to one lane at the approach to signalized intersections. Install appropriate channelization and install “No Left Turn” signs stating “Bus Exception” message.

C. ACCESS:

1. CONTRACTOR shall provide access to all affected properties except for durations of less than 8 hours. In all cases:
    a. Provide alternate access whenever normal access is blocked and an alternate access method is possible.

b. Notify property owners 48 hours in advance of change or loss of access detailing duration and frequency of access closures.

D. PARKING RESTRICTIONS:

1. CONTRACTOR shall be responsible to notify residents and/or businesses of any necessary parking restrictions that may be required to complete the Work.

2. CONTRACTOR shall post "NO PARKING" signs every 50 feet 24 hours in advance of the anticipated need for parking restrictions.

E. PUBLIC TRANSIT:

1. CONTRACTOR shall contact the Utah Transit Authority (UTA) and coordinate necessary alternations in UTA's bus service. Details of alternate bus routes are to be submitted with the Traffic Control Plan.

2. CONTRACTOR shall keep bus stops open and clear of debris and minimize disruption to current bus services in and around bus stops.

F. MOMENTARY PARTIAL OR COMPLETE LANE CLOSURE AUTHORIZATION (WITHOUT PERMIT):

1. Provide flagger when work momentarily affects travel lanes. Example: A backhoe maneuvering in a travel lane outside of the construction work zone.

a. Activities requiring momentary partial or complete lane closures shall be kept to a minimum. Lane closure fees may be assessed as determined appropriate by the ENGINEER for excessive momentary closures.

## 1.6 TRAFFIC CONTROL PLAN

A. CONTRACTOR shall develop and submit a Traffic Control Plan which satisfies OWNER's requirements and shall conform to the requirements of this section and the requirements, limitations, and phasing identified in Construction Documents. Traffic Control Plan to be created using the recommendations and guidelines outlined in the following resources. Resolve discrepancies between resources in descending order as shown:

1. MUTCD.

2. Work Zone Traffic Control Guide

3. ATSSA

B. CONTRACTOR shall be responsible to provide a Traffic Control Plan for all phases, segments, and portions of the WORK including items of the WORK performed by Subcontractors.

C. The Traffic Control Plan shall be prepared using CAD software showing the appropriate scale and space relationship between traffic control devices and intersections, high volume driveways, and other pertinent roadway features.

D. OWNER may require that the Traffic Control Plan be produced, signed, and sealed by a professional engineer licensed in the State of Utah at no additional cost to the OWNER.

E. CONTRACTOR shall coordinate with the Provo City Traffic Engineer in the preparation and implementation of the Traffic Control Plan.

F. Include the following documentation as part of the traffic control plan:

1. Written description and phasing.
2. Drawing showing phasing (if required for clarity)
3. Drawing showing placement of traffic control devices.

G. Show how to move pedestrians through or around the Work site.

H. Show how traffic control at signalized intersections will be addressed.

I. Provide concrete barrier or other positive protection for workers and all hazards located within the AASHTO clear zone for approach traffic.

J. Meet grade, slope and protection requirements of the Americans with Disabilities Act (ADA).

## 1.7 TRAFFIC CONTROL TECHNICIAN

A. Certified by UDOT, ATSSA, or Associated General Contractors (AGC).

B. Authority

1. Obtains and uses all labor, equipment, and materials necessary to maintain traffic control.
2. Changes traffic control operations according to the approved traffic control plan.

C. Responsibilities and Duties

1. Oversees all traffic control operations.
2. Will be present and active participant during the installation, maintenance, and removal of Temporary Traffic Control Devices.
3. Implements the Traffic Control Plan.
4. Remains available 24 hours a day, seven days a week, and can be on-site within 30 minutes of notification.
5. Corrects deficiencies immediately upon verbal or written notification from Engineer or his representative.
6. Document the traffic control activities and inspections on a form acceptable to the Engineer. Inspect at least four times each day with at least one of the inspections conducted during nighttime hours:

a. Before beginning of shift

b. At mid-shift

c. Half-hour after shift ends

d. At midpoint of the off-shift period

7. Coordinate project traffic control with emergency services and local law enforcement agencies.
8. Inspect and document traffic control inspections twice each day when no construction work is being done.
    a. Once during daylight hours and once during nighttime hours.
    b. Conduct inspections a minimum of eight hours apart.
9. Submit traffic control activities and inspection forms each week on a day and time acceptable to the ENGINEER.
10. Monitor traffic queue lengths and adjust advanced warning signs to provide adequate warning to the actual back of queue resulting from construction activities.

### 1.8 FLAGGER

A. Certified by ATSSA, AGC, or UDOT.

B. Equipment:
    1. 24" X 24" "Stop/Slow" sign.
    2. 6" to 8" long red wand for night flagging.
    3. Light plant for night flagging.

C. Clothing:
    1. Clothed; full length pants and long or short sleeved shirt.
    2. Hard toed shoes.
    3. Lime green, orange, or red-orange hardhat and vest.
    4. Night clothing to be reflectorized.

## PART 2 PRODUCTS

### 2.1 PAVEMENT MARKINGS, SIGNS, BARRICADES

A. MUTCD.

B. Channelizing Devices: Crash worthy plastic cones, drums and barricades.
    1. Only drums, barricades, and vertical panels will be allowed for nighttime use. No cones will be allowed for nighttime use.

C. Reflective Sheeting: ASTM D 4956.

D. Pavement Markings: Section 32 17 23.

1. Temporary striping: by CONTRATOR
2. Permanent striping: by CONTRACTOR
    a. ENGINEER will provide layout for new pavement striping where striping has been completely removed.
    b. CONTRACTOR shall be responsible to provide traffic control for ENGINEER during striping layout operations
3. Permanent rumble strips: by CONTRACTOR
    a. To follow installation of permanent striping and requires restriping following grinding of rumble strips.

## PART 3 EXECUTION

### 3.1 FLAGGING

A. MUTCD

B. ATSSA

### 3.2 TRAFFIC CONTROL DEVICES

A. Install traffic control devices before work activities begin.

B. Maintain devices to ensure proper, continuous function.

C. Wash devices weekly unless conditions warrant more frequent cleaning.

D. Replace damaged devices missing any part of the message or background.

E. Remove when no longer needed.

F. Concrete barriers are not to be used as road closure devices.

END OF SECTION

# SECTION 31 05 13M
# COMMON FILL

REVISDED 12-08-2015

**Delete Article 2.2 GRANULAR BORROW in its entirety and replace with the following:**

2.1 **GRANULAR BORROW**

A. Classification: A-1-a

B. Non-Plastic, well graded, 3-inch maximum

**Delete Article 2.5 NATIVE in its entirety and replace with the following:**

2.5 **NATIVE**

A. Material obtained from Excavation may be used as fill, provided that the material meets the specifications for BORROW outlined in this Section and provided that all organic material, rubbish, debris, and other objectionable materials are removed.

B. CONTRACTOR shall provide material testing data, i.e. gradation analysis, Atterburg limits, appropriate proctor, etc. on a weekly basis as a minimum, or upon request by the ENGINEER, or if a noticeable change to the NATIVE material being excavated is observed.

C. It shall be the CONTRACTOR's responsibility to verify the suitability of NATIVE material prior to backfilling operations. Failure to comply with these specifications for trench backfill may result in rejections of portions of the WORK where backfill is not in compliance.

**Delete Article 2.7 SAND in its entirety and replace with the following:**

2.7 **SAND**

A. Use cyclone sand or equivalent.

B. Do not use pea gravel, recycled RAP, squeegee, or crushed fines.

C. Friable river or bank aggregate, free of loam and organic matter.

D. Meet the following gradation:

| Sand Gradation | |
|---|---|
| **Sieve Size** | **Percent Passing** |
| 3/8 inch | 100 |
| No. 100 | 1-10 |

**Delete Article 2.8 GRAVEL in its entirety and replace with the following:**

## 2.8 GRAVEL

A. Use 100 percent crushed mineral aggregate.

B. Meet the following gradation:

| Gravel Gradation | |
|---|---|
| **Sieve Size** | **Percent Passing** |
| 1.5 inch | 100 |
| 1 inch | 95 to 100 |
| 1/2 inch | 25 to 60 |
| No. 4 | 0 to 10 |
| No. 200 | 0 to 5 |

**Delete Article 2.10 SLAG, PUMICE, SCORIA in its entirety and replace with the following:**

## 2.10 SLAG, PUMICE, SCORIA

A. Not Allowed.

END OF SECTION

# SECTION 32 12 05M
# BITUMINOUS CONCRETE
REVISED 8-22-23

This Section modifies portions of Section 32 12 05 entitled "Bituminous Concrete" (Amendment 1 - APWA 2017 as outlined below).

**Add to Article 1.4, paragraph B.2 the following:**

a. Hot mix plant must fall within a 25-mile maximum radius from the job site.

**Delete Article 1.4, paragraph C.7 and replace with the following:**

7. Binder target percentage, dust to binder ratio, and the following as applicable.
   a. For Superpave mix design provide (1) voids in the mineral aggregate (VMA), (2) voids filled with bituminous binder (VFA), and (3) Hamburg Wheel Tracker results.
   b. For Marshall mix design provide (1) tensile strength ratio (moisture sensitivity), (2) voids in the mineral aggregate (VMA), (3) stability, (4) flow, (5) voids in the bituminous mix, (6) voids filled with bituminous binder (VFA), (7) virgin binder replacement, (8) RAP asphalt content, and (9) effective asphalt content.

**Add to Article 1.6, paragraph E.1 the following:**

**Table 2 – Pay Factors – Marshall Mix Design**

| Criteria | Pay Factor | Range of Mean of Deviations of Test Results from the Binder and Gradation Targets in Percentage Points | | | | |
|---|---|---|---|---|---|---|
| | | 500 Tons | 1,000 Tons | 1,500 Tons | 2,000 Tons | ≥2,500 Tons |
| Binder Content | 1.00 | 0.00–0.70 | 0.00-0.54 | 0.00-0.46 | 0.00-0.41 | 0.00-0.38 |
| | 0.975 | 0.71–0.80 | 0.55-0.61 | 0.47-0.52 | 0.42-0.46 | 0.39-0.43 |
| | 0.95 | 0.81–0.90 | 0.62-0.68 | 0.53-0.58 | 0.47-0.52 | 0.44-0.47 |
| | 0.90 | 0.91-1.00 | 0.69-0.75 | 0.59-0.64 | 0.53-0.56 | 0.48-0.52 |
| | 0.85 | 1.01–1.10 | 0.76-0.82 | 0.65-0.69 | 0.57-0.61 | 0.53-0.56 |
| 1/2" and larger Sieve | 1.00 | 0.0-10.9 | 0.0-7.3 | 0.0-6.5 | 0.0-5.6 | 0.0-5.2 |
| | 0.975 | 11.00-12.9 | 7.4-8.3 | 6.6-7.1 | 5.7-6.3 | 5.3-5.8 |
| | 0.95 | 13.0-13.9 | 8.4-9.3 | 7.2-7.9 | 6.4-7.0 | 5.9-6.4 |
| | 0.90 | 14.0-14.9 | 9.4-10.3 | 8.0-8.7 | 7.1-7.7 | 6.5-7.1 |
| | 0.85 | 15.0-16.0 | 10.4-11.3 | 8.8-9.5 | 7.8-8.4 | 7.2-7.7 |
| 3/8" Sieve | 1.00 | 0.0-9.9 | 0.0-6.9 | 0.0-5.9 | 0.0-5.3 | 0.0-4.9 |
| | 0.975 | 10.0-10.9 | 7.0-7.8 | 6.0-6.6 | 5.4-6.9 | 5.0-5.5 |
| | 0.95 | 11.0-11.9 | 7.9-8.7 | 6.7-7.3 | 6.0-6.6 | 5.6-6.1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 0.90<br>0.85 | 12.0-13.9<br>14.0-15.0 | 8.8-9.6<br>9.7-10.5 | 7.4-8.0<br>8.1-8.9 | 6.7-7.2<br>7.3-7.9 | 6.2-6.6<br>6.7-7.2 |
| No. 4 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-9.9<br>10.0-11.0<br>11.1-11.9<br>12.0-12.9<br>13.0-14.0 | 0.0-6.7<br>6.8-7.6<br>7.7-8.5<br>8.6-9.4<br>9.5-10.2 | 0.0-5.7<br>5.8-6.3<br>6.4-6.9<br>7.0-7.5<br>7.6-8.0 | 0.0-5.2<br>5.3-5.8<br>5.9-6.4<br>6.5-7.0<br>7.1-7.6 | 0.0-4.8<br>4.9-5.4<br>5.5-5.9<br>6.0-6.5<br>6.6-7.0 |
| No. 8 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-10.9<br>11.0-12.0 | 0.0-5.6<br>5.7-6.3<br>6.4-7.0<br>7.1-7.7<br>7.8-8.5 | 0.0-4.8<br>4.9-5.4<br>5.5-6.0<br>6.1-6.6<br>6.7-7.2 | 0.0-4.3<br>4.4-4.8<br>4.9-5.3<br>5.4-5.8<br>5.9-6.4 | 0.0-4.0<br>4.1-4.5<br>4.6-4.9<br>5.0-5.4<br>5.5-5.8 |
| No. 16 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-10.9<br>11.0-12.0 | 0.0-5.2<br>5.3-5.8<br>5.9-6.4<br>6.5-7.0<br>7.1-7.6 | 0.0-4.6<br>4.7-5.1<br>5.2-5.6<br>5.7-6.1<br>6.2-6.6 | 0.0-4.2<br>4.3-4.6<br>4.7-5.1<br>5.2-5.5<br>5.6-5.9 | 0.0-3.9<br>4.0-4.3<br>4.4-4.7<br>4.8-5.1<br>5.2-5.4 |
| No. 50 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-6.9<br>7.0-7.9<br>8.0-8.9<br>9.0-9.9<br>10.0-11.0 | 0.0-4.3<br>4.4-4.8<br>4.9-5.3<br>5.4-5.8<br>5.9-6.4 | 0.0-3.8<br>3.9-4.1<br>4.2-4.5<br>4.6-4.9<br>5.0-5.5 | 0.0-3.4<br>3.5-3.8<br>3.9-4.1<br>4.2-4.4<br>4.5-4.9 | 0.0-3.2<br>3.3-3.5<br>3.6-3.8<br>3.9-4.1<br>4.2-4.5 |
| No. 200 Sieve | 1.00<br>0.975<br>0.95<br>0.90<br>0.85 | 0.0-3.0<br>3.1-3.5<br>3.6-4.0<br>4.1-4.5<br>4.6-5.0 | 0.0-2.4<br>2.5-2.7<br>2.8-3.0<br>3.1-3.3<br>3.4-3.6 | 0.0-2.0<br>2.1-2.2<br>2.3-2.4<br>2.5-2.7<br>2.8-3.0 | 0.0-1.8<br>1.9-2.0<br>2.1-2.2<br>2.3-2.4<br>2.5-2.6 | 0.0-1.7<br>1.8-1.9<br>2.0-2.1<br>2.2-2.3<br>2.4-2.5 |

NOTES
(a) Test binder content using a burn-off oven, ASTM D6307.
(b) Determine aggregate gradation by extraction. ASTM D5444.

**Add to Article 2 the following:**

**2.1 Binder**

A. Asphalt Cement (AC)

1. Performance graded asphalt binder (PGAB) may be substituted for asphalt cement as follows.

| Asphalt Cement | Substitute |
|---|---|
| AC-10 | PG 58-28 |
| AC-20 | PG 64-22 |

**Delete Article 2.3, paragraph D and replace with the following:**

D. RAP or ROSP: Free of detrimental quantities of deleterious materials.

1. Allowed up to 15 percent by weight of RAP or binder, whichever is lesser, with no change in specified binder grade.
2. Allowed from 15 to 25 percent by weight of RAP or binder, whichever is lesser, if the binder grade is adjusted according to AASHTO M323 to meet the specified binder grade.
3. Determine RAP binder content by chemical extraction.

**Add to Article 2.4, paragraph B with the following:**

| Table 4A - Master Grading Band limits - Marshall Mix Design | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sieve** | **Aggregate Grade** | | | | | | |
| | **DM-1** | **DM-3/4** | **DM-1/2** | **DM-3/8** | **OM-1/2** | **FM-1** | **FM-1/2** |
| 1 inch | 100 | | | | | | |
| 3/4 inch | | 100 | | | | 100 | |
| 1/2 inch | 75 - 91 | | 100 | | 100 | 90 - 100 | 100 |
| 3/8 inch | | 75-91 | | 100 | 93 - 100 | 60 - 100 | 90 - 100 |
| No. 4 | 47 - 61 | 46-62 | 60 - 80 | 60 - 80 | 36 - 44 | 15 - 40 | 30 - 50 |
| No. 8 | | | | | 14 - 21 | 4 - 12 | 5 - 15 |
| No. 16 | 23 - 33 | 22-34 | 28 - 42 | 28 - 42 | | | |
| No. 50 | 12 - 22 | 11-23 | 11 - 23 | 11 - 23 | | | 2 - 5 |
| No. 200 | 3 - 7 | 3-7 | 3 - 7 | 3 - 7 | 2 - 4 | 2 - 5 | |

NOTES

(a) Gradation is expressed in percent passing by weight. ASTM C136. Percentage of fines passing No. 200 sieve determined by washing, ASTM C117.

(b) Friction Mixture, ASTM D 3515.

(c) The alpha portion of the grade designator (DM, OM, FM) represents dense mix, open mix, and friction mix. The numerical portion ( 1, 3/4, 1/2 ) represents the ***maximum*** sieve size.

**Add to Article 2.4, paragraph D with the following:**

D. **Design Parameters:** Table 6, determined by AI MS2.

| Table 6 - Mix Design Parameters | | | |
|---|---|---|---|
| **Criteria** | | **Marshall** | |
| Mix Designator | (a) | 50 blow | 75 blow |
| Compaction (blows) | (b) | 50 | 75 |
| Compaction (gyrations) | | - | |
| Design Air Void Target, percent | | 3.5 | |
| Stability, lbs., minimum | (c) | 1200 | 1800 |

| | | |
|---|---|---|
| Flow, in 0.01 inch units (d) | 10-18 | |
| Voids in Mineral Aggregate (VMA), percent, minimum, relative to maximum or nominal sieve size grading and calculated using Gsb (dry) for virgin aggregate and RAP aggregate | ASTM D 6927 | |
| | Nominal Grading | |
| | 1 | 13.0 |
| | 3/4 | 14.0 |
| | 1/2 | 15.0 |
| | 3/8 | 16.5 |
| RAP or ROSP specific gravity for calculations | Gsb (dry) by chemical extraction | |
| Dust to Binder Ratio, maximum | 1.6 | |
| Tensile Strength Ratio (moisture sensitivity), minimum (e) | 0.80 | |
| Rutting (Hamburg rut test) (f) | | |
| Road Class I | - | - |
| Road Class II | - | - |
| Road Class III | - | - |

NOTES

(a) Road Class is defined in Section 32 01 31

(b) 100Nd mix is for very high traffic applications only as defined by ENGINEER. 100Nd mix is intended for lower lift applications or surface applications with proactive seal coat program.

(c) Number of compaction blows each end of specimen.

(d) Design Density Target: ASTM D 2041. Percent of maximum theoretical specific gravity

(e) Stability, Flow, Voids: ASTM D 6927.

(f) Tensile Strength Ratio (moisture sensitivity): ASTM D 4867. Use freeze thaw conditioning. Compact test specimen to seven (7) percent plus or minus one (1) percent air voids.

(g) With testing performed at temperatures representing the specified binder grade in the Hamburg rut test, the average rut depth of two (2) mix design test samples is less than amount shown for the respective Road Classes.

END OF SECTION

# SECTION 32 16 13M
# DRIVEWAY, SIDEWALK, CURB, GUTTER

**Delete Article 3.1 and replace with the following:**

## 3.1 CONSTRUCTION EQUIPMENT

A. Slip Form Machines:

1. Placement must produce required cross-section, line, grade, finish, and jointing as specified for formed concrete.
2. If results are not acceptable, remove and replace work with formed concrete.
3. Slip Form must be used for curb and gutter lengths over 200 feet, unless written approved is given by ENGINEER.

END OF SECTION

# SECTION 33 05 05M
# DUCTILE IRON PIPE

REVISED 12-08-2015

**Add the following to Article 1.1 (page 723)**

**1.1 SECTION INCLUDES**

B. Polyethylene wrap and tracer wire

**Add the following to Article 2.1, A (page 724)**

**2.1 PIPE AND FITTING**

A. Buried Applications:

7. Polyethylene wrap for all pipe and fitting, ANSI/AWWA C105/A21.5-10
8. Tracer Wire: #14 UF-G direct bury blue or red tracer wire.

END OF SECTION

# SECTION 33 11 00M
# WATER DISTRIBUTION AND TRANSMISSION

REVISED 12-08-2015

**Add the following to Article 1.2 (page 781)**

**1.2 REFERENCES**

B. AWWA Standards:

ANSI/AWWA C105/A21.5-10 Installation of Polyethylene wrap

**Add the following to Article to 2.8 (page 784)**

**2.8 ACCESSORIES**

I. Tracer Wire: #14 UF-G direct bury blue tracer wire.

**Add the following to Article to 3.4 (page 785)**

**3.4 INSTALLATION – PIPE AND FITTINGS**

C. Ductile Iron Pipe: AWWA C600.

1. Apply eight (8) mil thick polyethylene wrap

I. Tracer Wire required on all water lines. Wire to surface at base of fire hydrants.

**Add the following to Article to 3.10 (page 787)**

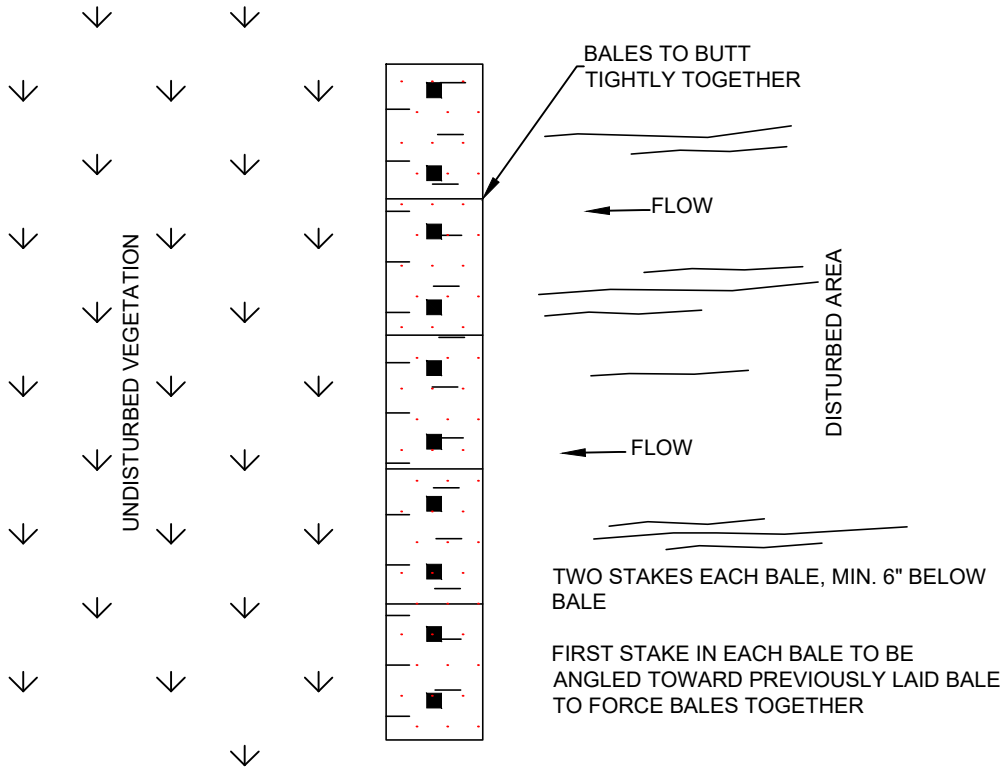
**3.10 INSTALLATION – WATERMAIN LOOP (SYPHON)**

G. Apply eight (8) mil thick polyethylene wrap to Ductile Iron Pipe and Fittings

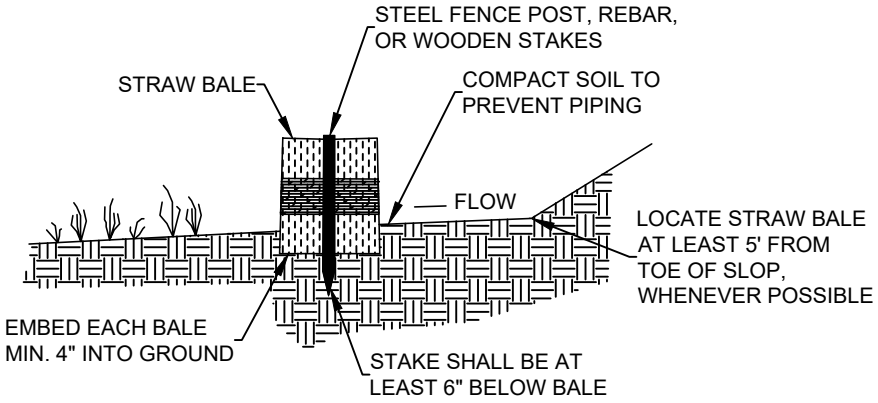
END OF SECTION

DRAWINGS

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND MAY BE MODIFIED AS NEEDED IN CONSULTATION WITH CITY STORM WATER STAFF.




PLAN




SECTION



PUBLIC WORKS

# STRAW BALE BARRIER

STANDARD DETAIL
P-121
NOT TO SCALE
REVISED DATE: 10/15/17

***Straw Bale Barrier***

**1. GENERAL**

A. Description. A temporary sediment barrier consisting of a row of entrenched and achored straw bales.

B. Application. To intercept and detain small amounts of sediment from small disturbed areas. To decrease the velocity of sheet flows and low- to moderate-level channel flows.

**2. PRODUCT** (not used)

**3. EXECUTION**

A. Place bales lengthwise in a single row, with ends of adjacent bales tightly abutting each other for the following conditions:

A.1. Perimeter Control: Place barrier at down gradient limits of disturbance.

A.2. Sediment Barrier: Place barrier at toe of slope or soil stockpile.

A.3. Protection of Existing Waterways: Place barrier at top of stream bank.

A.4. Area inlet protection: See Provo City Plan P-124.3.

B. Wire-bound or string-tie all bales. Install so straw bindings are oriented around the sides rather than along the top and bottom of the bale (to prevent deterioration of bindings).

C. Chink the gaps between bales (filled by wedging) with straw to prevent unfiltered water from flowing through the gaps. Loose straw scatter over the area immediately uphill from the straw bale barrier tends to increase barrier efficiency.

D. When bales are installed at the toe of slope, whenever possible place bales 5-feet or more away from slope for increased storage capacity.

E. Remove straw bale barriers when they have served their usefulness, but not before the up-slope areas have been permanently stabilized.

F. Maintenance:

F.1. Inspect straw bale barrier after every large storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable).

F.2. Pay close attention to the repair of damaged bales, end runs, and undercutting beneath bales.

F.3. Bales must be promptly repaired or replaced when they have deteriorated.

F.4. Remove sediment deposits when the level of deposition reaches $\frac{1}{2}$ the height of the bale(s).

F.5. Realign bales when necessary to provide a continuous barrier and fill gaps.

F.6. Recompact soil around bales as necessary to prevent piping.



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# *STRAW BALE BARRIER*

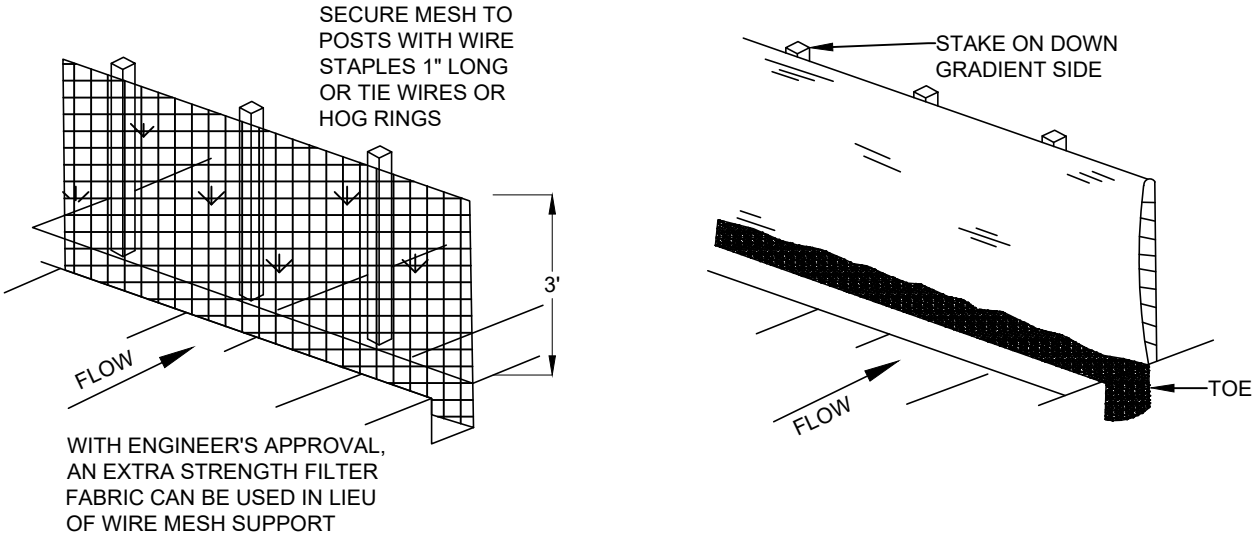
STANDARD DETAIL

P-121

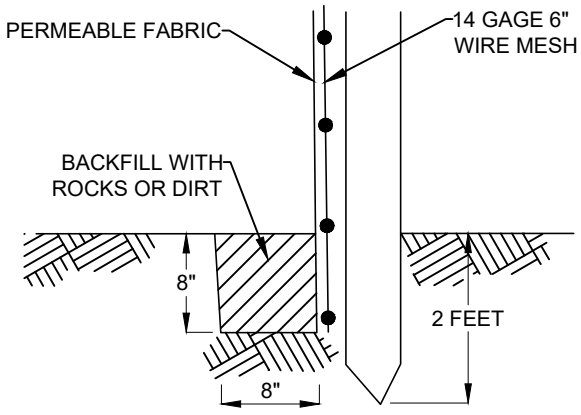
NOT TO SCALE

REVISED DATE: 10/15/17

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND MAY BE MODIFIED AS NEEDED IN CONSULTATION WITH CITY STORM WATER STAFF.




## INSTALLATION SWEQUENCE




## TOE DETAIL



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# *SILT FENCE*

STANDARD DETAIL
P-122
NOT TO SCALE
REVISED DATE: 10/15/17

*Silt Fence Barrier*

**1. GENERAL**

A. Description. A temporary sediment barrier consisting of an entrenched, permeable filter fabric stretched across and attached to supporting posts.

B. Application. To intercept sediment from disturbed areas of limited extent.

B.1. Perimeter Control: Place barrier at down gradient limits of disturbed area.

B.2. Sediment Barrier: Place barrier at toe of slope or soil stockpile.

B.3. Protection of Existing Waterways: Place barrier at top of stream bank. Do not place silt fence within stream banks.

B.4. Inlet Protection: see Provo City Plan P-124.3.

**2. PRODUCT**

A. Fabric. Synthetic filter fabric shall be a permeable sheet of propylene, nylon, polyester, or polyethylene yarn. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 deg F to 120 deg F.

B. Burlap. 10 ounces per square yard of fabric.

C. Posts. At least 2"x2" wood, or 1.33 pounds per linear foot steel with a minimum length of 5 feet, or steel posts with projections for fastening wire to them.

**3. EXECUTION**

A. See attached plan for sequencing. Install wire mesh first.

B. Secure the fabric toe in a minimum 8"x8" trench.

C. When attaching two silt fences together, place the end of post of the second fence insider the end post of the first fence. Rotate both posts at least 180 degrees to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap in the trench.

D. When used to control sediments from a steep slope, place silt fences away from the toe of the slope for increased holding capacity. A minimum of 5 feet from the slope is required where feasible.

E. Maintenance:

E.1. Inspect silt fence barrier after every storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable). During prolonged rainfall, inspect daily.

E.2. Should be fabric on a silt fence decompose or become ineffective while a barrier is still necessary, replace the fabric promptly.

E.3. Remove sediment deposits when the level of deposition reaches $\frac{1}{2}$ the height of the fence, or when deposition deforms the fence and hinders its ability to provide adequate protection.

E.4. Re-anchor fence as necessary to prevent shortcutting.

E.5. Inspect for runoff bypassing ends or undercutting barriers.



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# *SILT FENCE*

STANDARD DETAIL
P-122

NOT TO SCALE

REVISED DATE: 10/15/17

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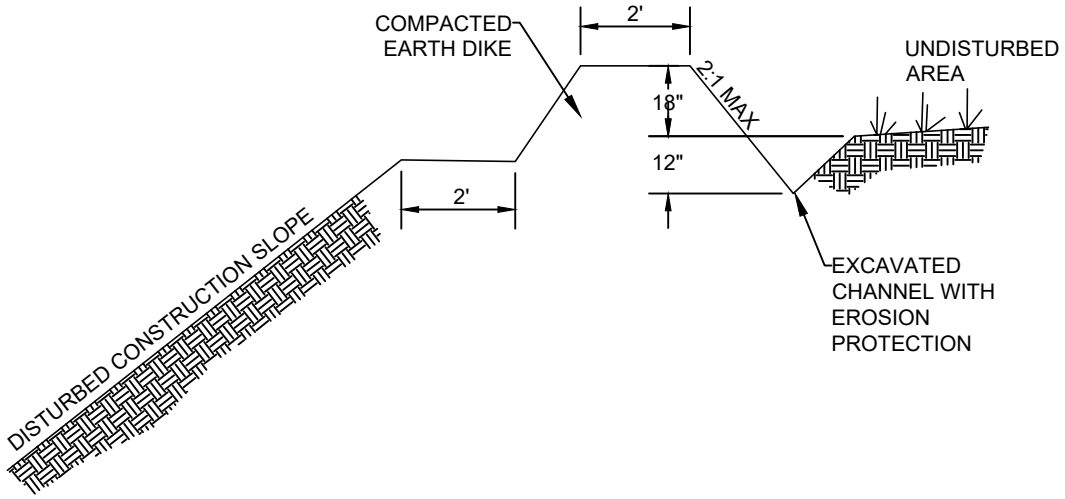
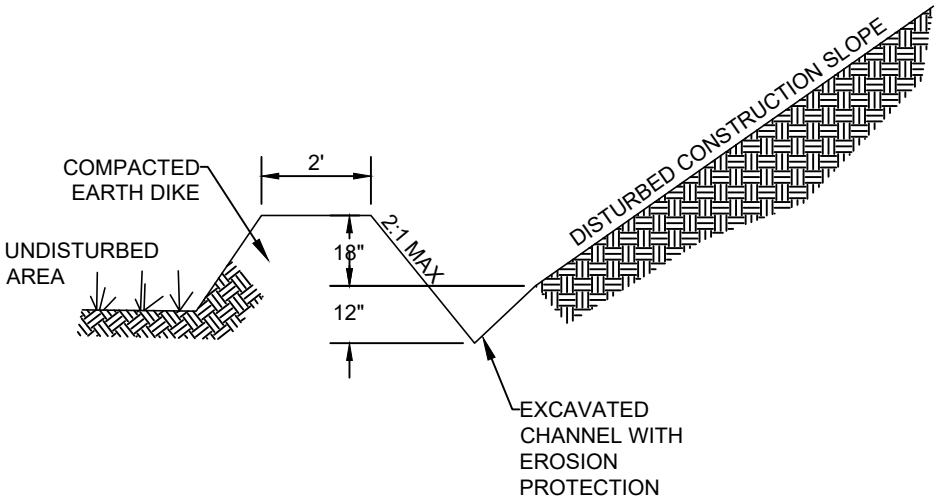



TOP OF SLOPE (TYP)




BASE OF SLOPE (TYP)



PUBLIC WORKS

# *DIVERSION DIKE*

STANDARD DETAIL
P-123
NOT TO SCALE
REVISED DATE: 10/15/17

***Diversion Dike***

**1. GENERAL**

A. Description. A temporary ridge of compacted soil located at the top or base of a sloped disturbed area.

B. Purpose. To intercept up gradient runoff and convey around construction site, and to divert sediment laden runoff.

**2. PRODUCT** (Not used)

**3. EXECUTION**

A. Potential construction locations.

A.1. Upstream of construction slope to intercept runoff and convey to controlled discharge point away from disturbed slope..

A.2. At base of soil stockpile or construction slope to capture sediment.

A.3. Around perimeter of disturbed areas to capture sediment.

B. Locate the dike where it will not be damaged by construction operations and traffic.

C. Clear and grub dike area, and construct dike before construction begins.

D. Excavate channel and place soil for dike on down gradient side.

E. Shape and machine compact excavated soil to form ridge.

F. Place erosion protections (such as rock rip rap) at outlet. Stabilize the channel and ridge with mulch, gravel, or vegetative cover. Temporary or permanent seeding and mulch shall be applied to the dike within 15 days of construction.

G. Calculations for sizing and armoring are required if area discharging to the diversion dike is over $\frac{1}{2}$ acre, or if the channel slope exceeds 2%.

H. Maintenance:

H.1. Inspect after every storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable). During prolonged rainfall, inspect daily.

H.2. Look for runoff breaching the dike or eroding the channel or side slopes.

H.3. Check discharge point for erosion or bypassing of flows.

H.4. Repair and stabilize the dike, channel, and outlet immediately whenever erosion, breaching, or bypassing is occurring.

H.5. Check for and repair any traffic damage immediately.



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# *DIVERSION DIKE*

STANDARD DETAIL

P-123

NOT TO SCALE

REVISED DATE: 10/15/17

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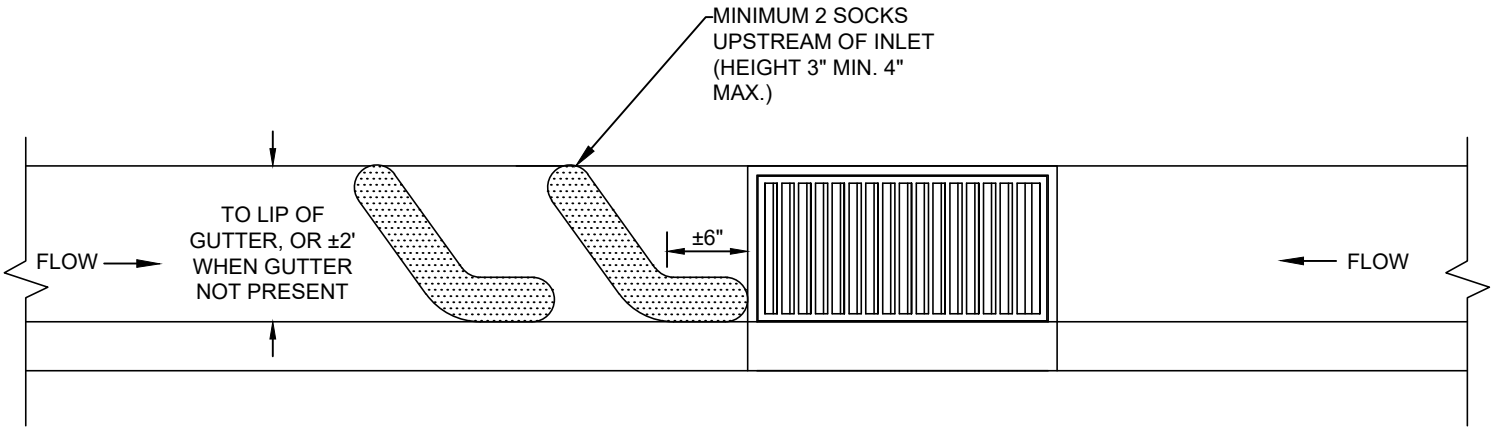
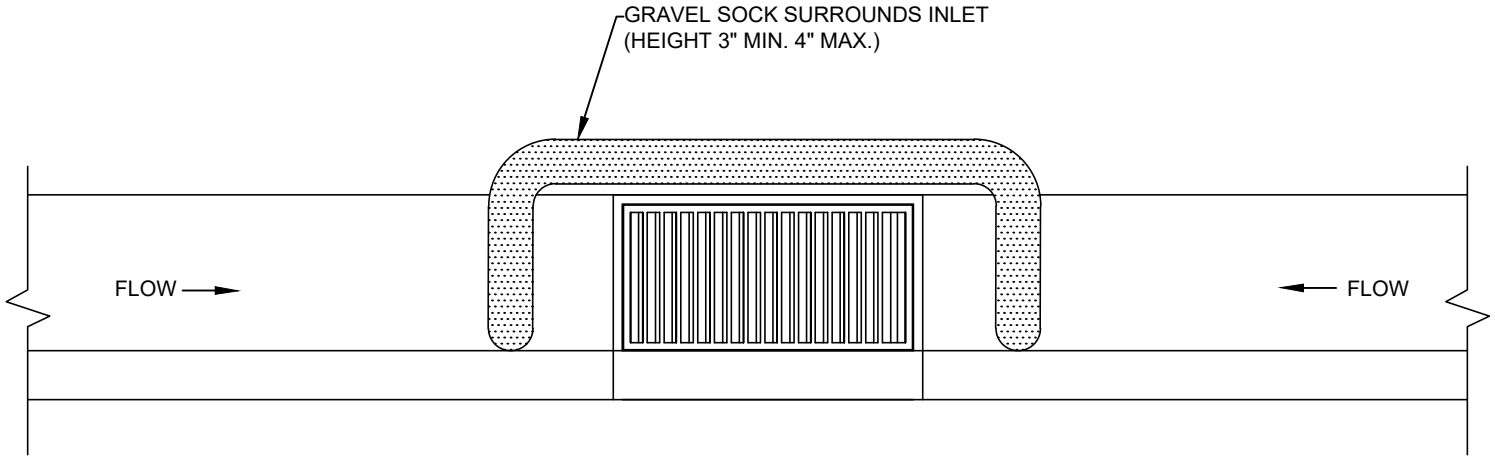



ON-GRADE INLET PROTECTION




SUMP INLET PROTECTION



PUBLIC WORKS

# *INLET PROTECTION - GRAVEL SOCK*

STANDARD DETAIL
P-124a
NOT TO SCALE
REVISED DATE: 9/28/17

1. GENERAL
   A. Description. Placement of gravel sock upstream of curb inlets to filter water runoff.
   B. Application. Used at inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. PRODUCT (not used)
3. EXECUTION
   A. Provide inlet protection, except when blocking the inlet would cause excessive flooding or undesirable results. Notify Provo City storm water staff immediately for concurrence if inlet protection is to be removed.
   B. Prepare gravel sock (or other media approved by City storm water staff) in accordance with the manufacturers recommendation.
   C. On-grade inlet protection:
      C.1. Install at least two (2) gravel socks upstream of the inlet, as shown on the attached plan.
      C.2. Gravel sock shall butt tightly against the face of the curb, with ±6" of the sock against the curb to ensure a tight fit. The remainder of the sock is placed at an angle away from the curb to trap runoff between the sock and the curb.
      C.3. The sock should be 3-4" high, allowing excessive flows to flow either around or over the sock prior to overtopping the curb.
   D. Sump inlet protection:
      D.1. Install sock around around the entire perimeter of the inlet, leaving a min. 3" between the grate and sock.
      D.2. Gravel sock shall butt tightly against the face of the curb on both sides of the inlet.
      D.3. The sock should be 3-4" high, allowing excessive flows to flow over the sock prior to overtopping the curb.
   E. Maintenance:
      E.1. Inspect inlet protection after every large storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable).
      E.2. Remove sediment accumulated when it reaches 2-inches in depth.
      E.3. Replace media and/or sock when damage has occured or when it has stopped functioning as intended.
      E.4. Expect minor ponding after rain between maintenance. If ponding is deeper than 2-inches, either sediment has accumulated and needs to be removed, or the media and/or sock is plugged and needs to be replaced.



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# *INLET PROTECTION - GRAVEL SOCK*

STANDARD DETAIL
P-124a
NOT TO SCALE
REVISED DATE: 9/28/17

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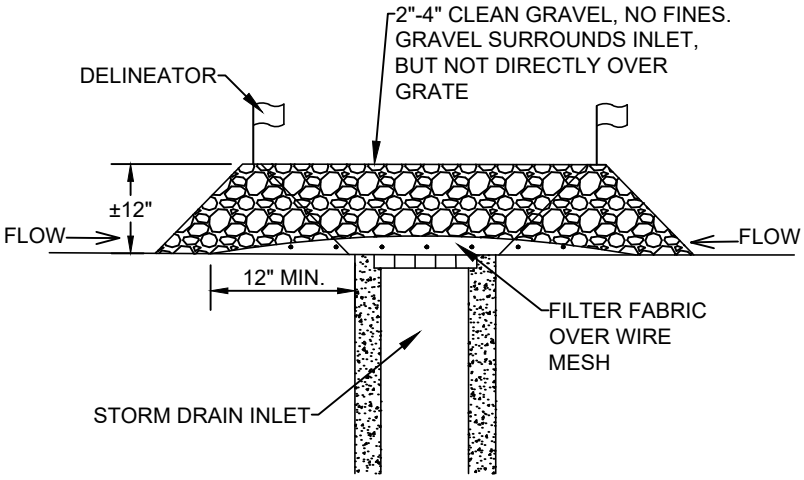
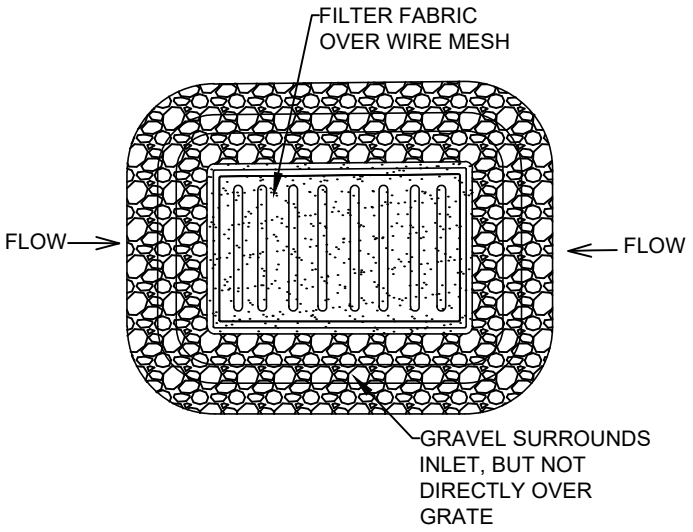
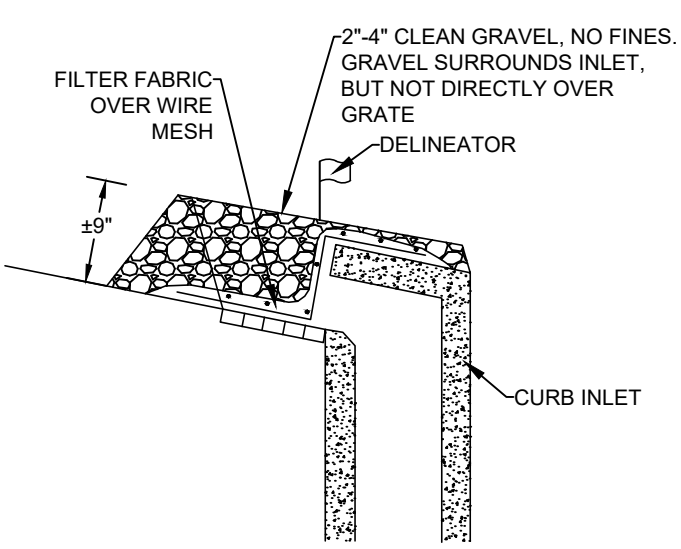



SECTION




PLAN

## AREA DRAIN PROTECTION

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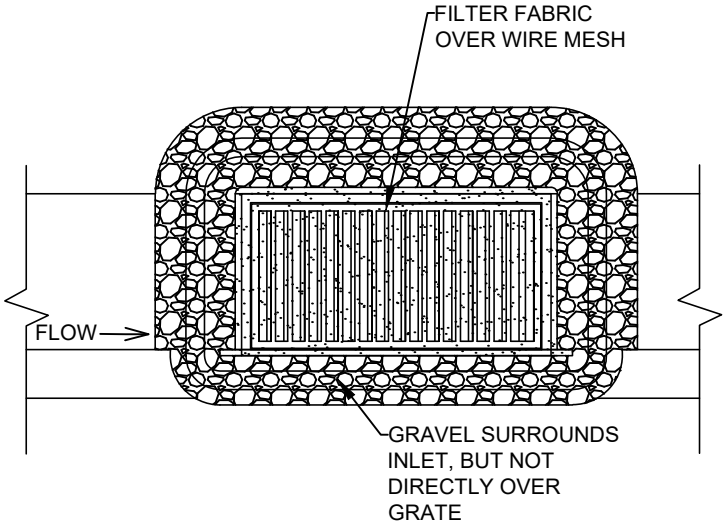



PLAN

## CURB INLET PROTECTION



PROVO PUBLIC WORKS

# *INLET PROTECTION - GRAVEL*

STANDARD DETAIL
P-124b
NOT TO SCALE
REVISED DATE: 9/28/17

***Inlet Protection - Gravel***

1. **GENERAL**
   A. Description. Placement of gravel filter around storm drain inlet for filter water runoff.
   B. Application. Used at inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. **PRODUCT** (not used)
3. **EXECUTION**
   A. Place $\frac{1}{4}$-inch to $\frac{1}{2}$-inch opening wire mesh over the inlet grate existing one foot past the grate in all directions. For curb inlets, also place wire mesh over curb opening.
   B. Place permeable filter fabric over the mesh
   C. Berm the gravel (2-inch to 4-inch in size, without fines) to the depths shown on the attached details, forming a wall around the grate on all sides. Slope sides so that area over the grate and curb opening are not covered by gravel.
   D. The filter fabric immediately over the grate needs to remain exposed so it can be visually inspected.
   E. Place at least two brightly colored delineators (such as painted staking laths or flags) on top of the gravel inlet protection to signify the gravel should not be graded or moved.
   F. Maintenance:
      F.1. Inspect inlet protection after every large storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable).
      F.2. Remove sediment accumulated when it reaches 4-inches in depth.
      F.3. Replace filter fabric and clean or replace gravel when clogging is apparent.
      F.4. Gravel shall be bermed in a clean and orderly fashion per plan. Loose gravel over the grate or surrounding the inlet shall be promptly removed.

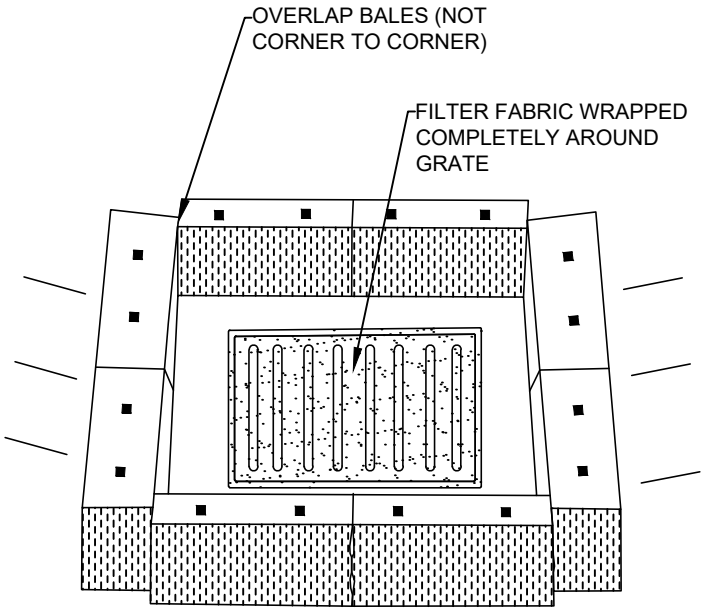


provo PUBLIC WORKS

# *INLET PROTECTION - GRAVEL*

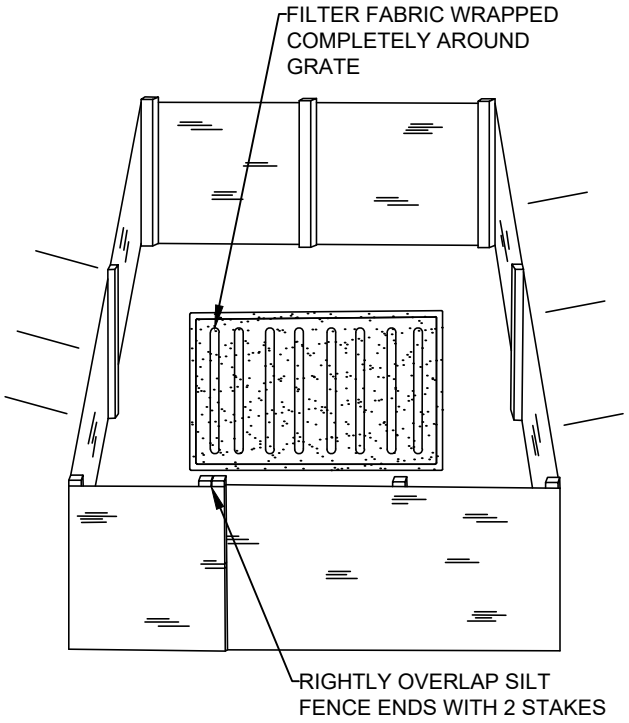
STANDARD DETAIL
P-124b
NOT TO SCALE
REVISED DATE: 9/28/17

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND MAY BE MODIFIED AS NEEDED IN CONSULTATION WITH CITY STORM WATER STAFF.




STRAW BALE BARRIER

(SEE PLAN NO. 121 FOR INSTALLATION)




SILT FENCE

(SEE PLAN NO. 122 FOR INSTALLATION)



PROVO PUBLIC WORKS

# INLET PROTECTION - FENCE OR STRAW BALE

STANDARD DETAIL
P-124c

NOT TO SCALE

REVISED DATE: 10/15/17

***Inlet Protection - Gravel***

1. **GENERAL**
   A. Description. Placement of gravel filter around storm drain inlet for filter water runoff.
   B. Application. Used at inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. **PRODUCT** (not used)
3. **EXECUTION**
   A. Place $\frac{1}{4}$-inch to $\frac{1}{2}$-inch opening wire mesh over the inlet grate existing one foot past the grate in all directions. For curb inlets, also place wire mesh over curb opening.
   B. Place permeable filter fabric over the mesh
   C. Berm the gravel (2-inch to 4-inch in size, without fines) to the depths shown on the attached details, forming a wall around the grate on all sides. Slope sides so that area over the grate and curb opening are not covered by gravel.
   D. The filter fabric immediately over the grate needs to remain exposed so it can be visually inspected.
   E. Place at least two brightly colored delineators (such as painted staking laths or flags) on top of the gravel inlet protection to signify the gravel should not be graded or moved.
   F. Maintenance:
      F.1. Inspect inlet protection after every large storm event, at a minimum twice monthly, and with every SWPPP inspection required by the UPDES permit (if applicable).
      F.2. Remove sediment accumulated when it reaches 4-inches in depth.
      F.3. Replace filter fabric and clean or replace gravel when clogging is apparent.
      F.4. Gravel shall be bermed in a clean and orderly fashion per plan. Loose gravel over the grate or surrounding the inlet shall be promptly removed.

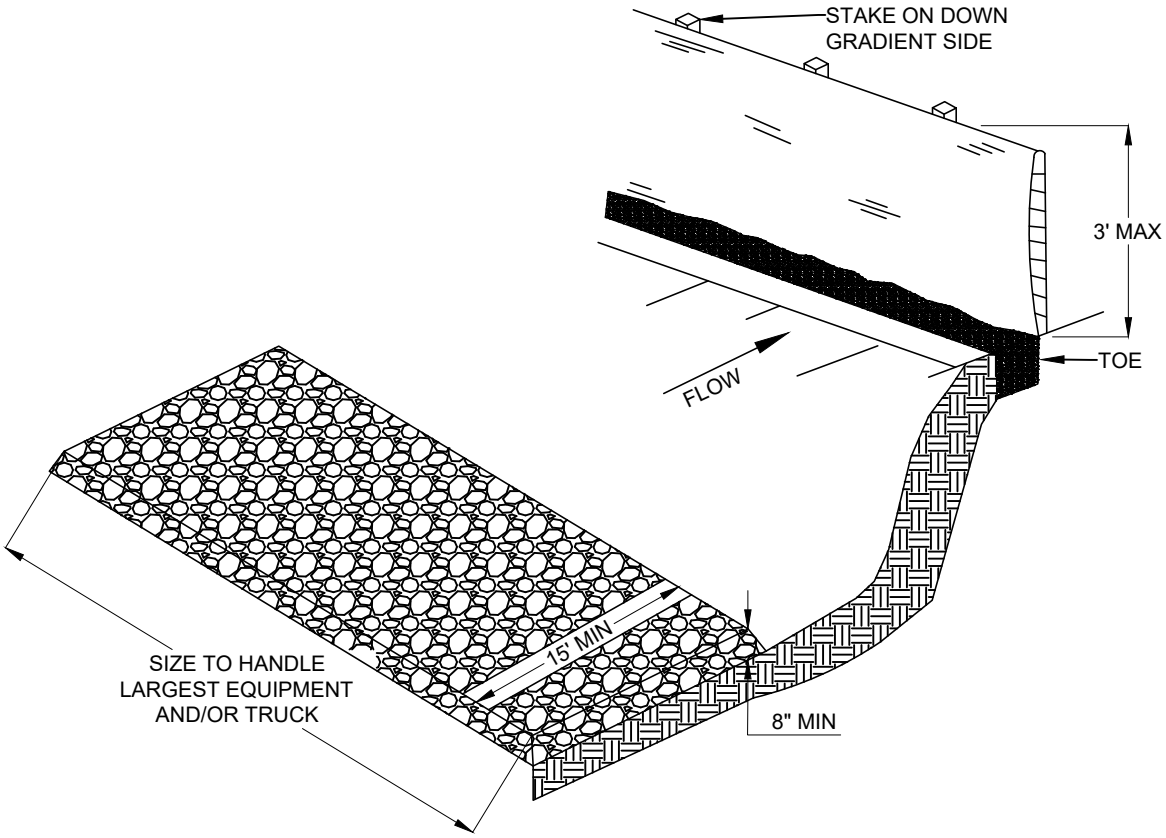


PROVO PUBLIC WORKS

# *INLET PROTECTION - FENCE OR STRAW BALE*

STANDARD DETAIL
P-124c
NOT TO SCALE
REVISED DATE: 10/15/17

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND MAY BE MODIFIED AS NEEDED IN CONSULTATION WITH CITY STORM WATER STAFF.






PUBLIC WORKS

# EQUIPMENT AND VEHICLE WASH DOWN AREA

STANDARD DETAIL
P-125
NOT TO SCALE
REVISED DATE: 10/15/17

***Diversion Dike***

1. **GENERAL**
   A. Description. A temporary stabilized pad of gravel for general washing of equipment and construction vehicles. Intended solely for sediment control. Cannot be utilized for washing equipment or vehicles that may cause contamination of runoff (such as fertilizer equipment or concrete equipment).
   B. Application. At any site where regular washing of vehicles and equipment will occur. May also be used as a filling point for water trucks, limiting erosion caused by overflow or spillage of water.

2. **PRODUCT** (Not used)

3. **EXECUTION**
   A. Wash down areas for vehicles should be located as close as possible to the stabilized construction entrance, to minimize picking up dirt and mud after the vehicle has been washed down.
   B. Clear and grub area, and grade down to provide maximum slope of 1 percent away from paved roadway.
   C. Compact subgrade.
   D. Place filter fabric under gravel pad consisting of 2-4" coarse aggregate (no fines). Gravel pad shall be a minimum of 8" thick.
   E. Gravel pad should be sized for the largest equipment and/or truck used onsite to fit comfortably on the pad. Additional area is recommended to increase percolation and mitigate against excessive standing water.
   F. Place silt fence on sides of wash down area (not entrance and exit).
   G. Maintenance:
      G.1. Inspect daily for loss of gravel or sediment build-up.
      G.2. Top dressing additional stone or removing, cleaning, and replacing the stone will be required when accumulated mud or sediment impedes the effectiveness of the wash down area.
      G.3. Keep the wash area in a condition which will prevent tracking or flowing of mud onto public rights-of-way.
      G.4. Repair any structures used to trap sediments.
      G.5. Inspect adjacent area for sediment deposit and install additional controls as necessary.
      G.6. Maintain silt fence as outlined in Plan P-122.

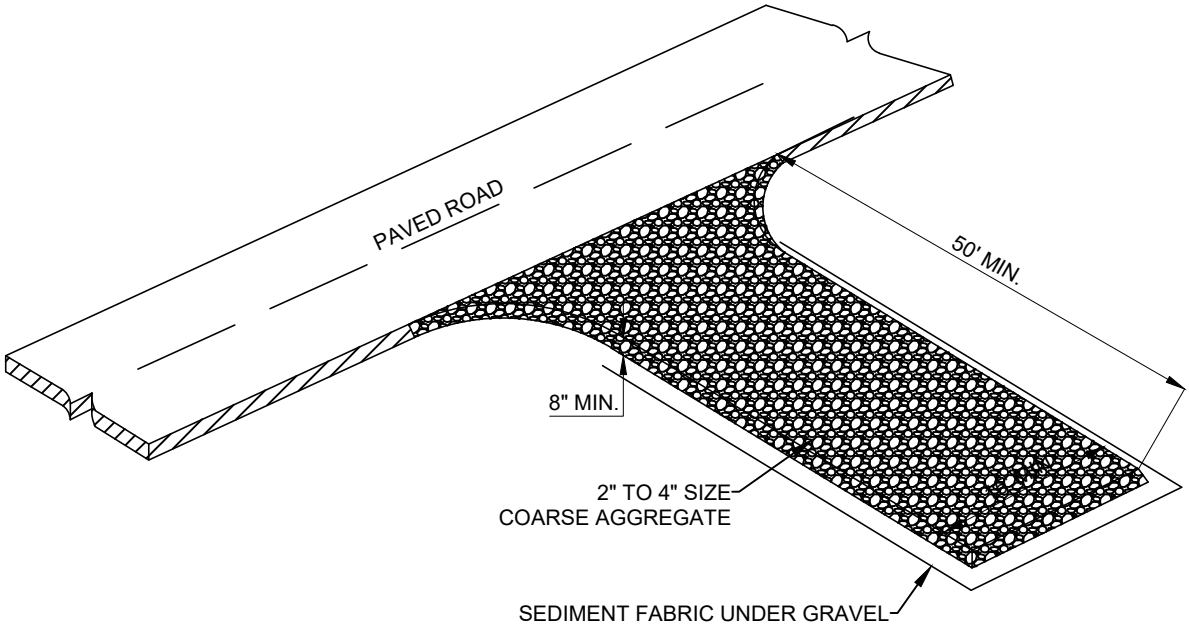


provo PUBLIC WORKS

# *EQUIPMENT AND VEHICLE WASH DOWN AREA*

STANDARD DETAIL
P-125
NOT TO SCALE
REVISED DATE: 10/15/17

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND MAY BE MODIFIED AS NEEDED IN CONSULTATION WITH CITY STORM WATER STAFF.






PUBLIC WORKS

# STABILIZED ROADWAY ENTRANCE

STANDARD DETAIL
P-126

NOT TO SCALE

REVISED DATE: 10/15/17

***Stabilized Roadway Entrance***

**1. GENERAL**

A. Description. A temporary stabilized pad of gravel for controlling equipment and construction vehicle access to the site.

B. Application. At any site where vehicles and equipment enter the public right of way.

**2. PRODUCT** (Not used)

**3. EXECUTION**

A. Clear and grub area, and grade down to provide maximum slope of 1 percent away from paved roadway.

B. Compact subgrade.

C. Place filter fabric under gravel pad consisting of 2-4" coarse aggregate (no fines). Gravel pad shall be a minimum of 8" thick.

D. Maintenance:

D.1. Prevent tracking or flow of mud into the public right-of-way.

D.2. Inspect daily for loss of gravel or sediment build-up.

D.3. Top dressing additional stone or removing, cleaning, and replacing the stone will be required when accumulated mud or sediment impedes the effectiveness of the wash down area.

D.4. Inspect adjacent roadway for sediment deposit and implement additional controls as necessary (such as street sweeping), to keep the public roadway free of accumulated sediment and debris.

D.5. Expand stabilized area as required to accommodate activities.



provo PUBLIC WORKS

# *STABILIZED ROADWAY ENTRANCE*

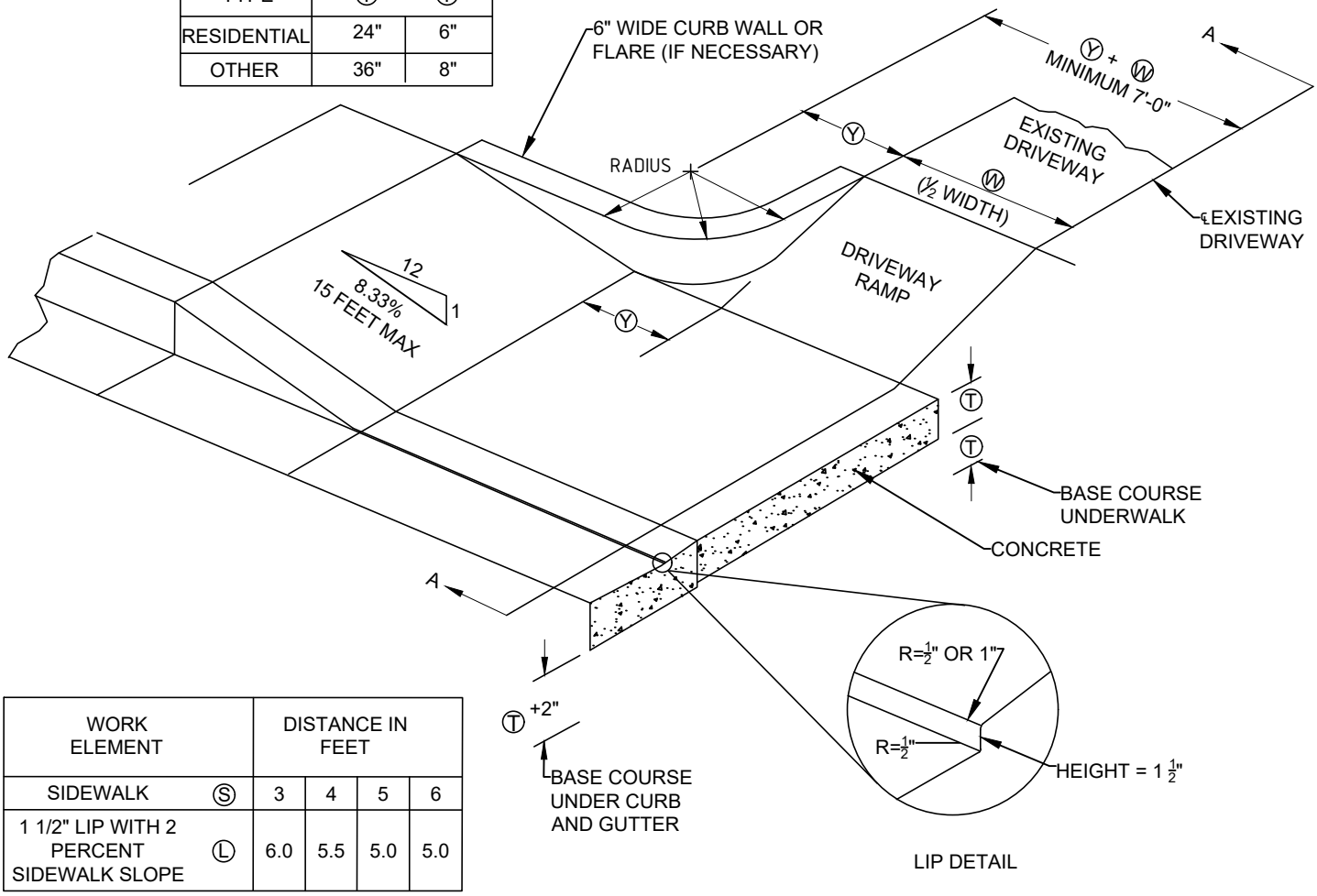
STANDARD DETAIL

P-126

NOT TO SCALE

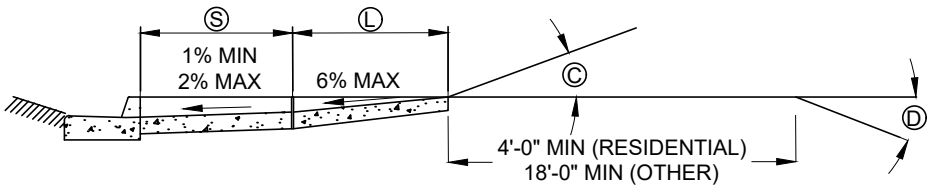
REVISED DATE: 10/15/17

| STREET TYPE | LENGTH Ⓨ | LENGTH Ⓣ |
|---|---|---|
| RESIDENTIAL | 24" | 6" |
| OTHER | 36" | 8" |



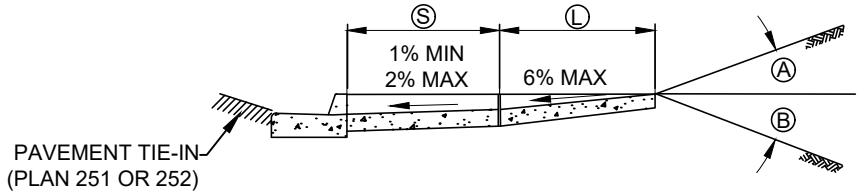

| WORK ELEMENT | DISTANCE IN FEET | | | |
|---|---|---|---|---|
| SIDEWALK Ⓢ | 3 | 4 | 5 | 6 |
| 1 1/2" LIP WITH 2 PERCENT SIDEWALK SLOPE Ⓛ | 6.0 | 5.5 | 5.0 | 5.0 |

## OBLIQUE




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓒ | BREAK OVER ANGLE (MAX) Ⓓ |
|---|---|---|
| RESIDENTIAL | 16% | 6% |
| OTHER | 6% | 2% |

## SECTION A-A - APPROACH REQUIRING SERVICE TRUCK ACCESS




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓐ | BREAK OVER ANGLE (MAX) Ⓑ |
|---|---|---|
| RESIDENTIAL | 16% | 12% |
| OTHER | 6% | 8% |

## SECTION A-A - TYPICAL DRIVEWAY APPROACH



PROVO PUBLIC WORKS

# *DIP DRIVEWAY APPROACH*

STANDARD DETAIL
P-215

NOT TO SCALE

REVISED DATE: 11/25/15

**1. GENERAL**

A. Variance from specified dimensions and slopes must be acceptable to the engineer. System configuration may be changed at ENGINEER's discretion.

B. Additional requirements are specified in APWA Section 32 16 13.

**2. PRODUCT**

A. Base Course: Untreated base course. APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.

B. Expansion Joint Filler: 1/2-inch thick type F1 full depth. APWA Section 32 13 73.

C. Concrete: Class 4000. APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.

D. Reinforcement: Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.

E. Concrete Curing Agent: Clear Membrane forming compound with fugitive dye (Type ID Class A), APWA Sectoin 03 39 00.

**3. EXECUTION**

A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 32 23 26.

B. Concrete Placement: APWA Section 03 30 10.

B.1. Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.

B.2. Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slap is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).

B.3. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.

C. Protection and Repair. Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



provo PUBLIC WORKS

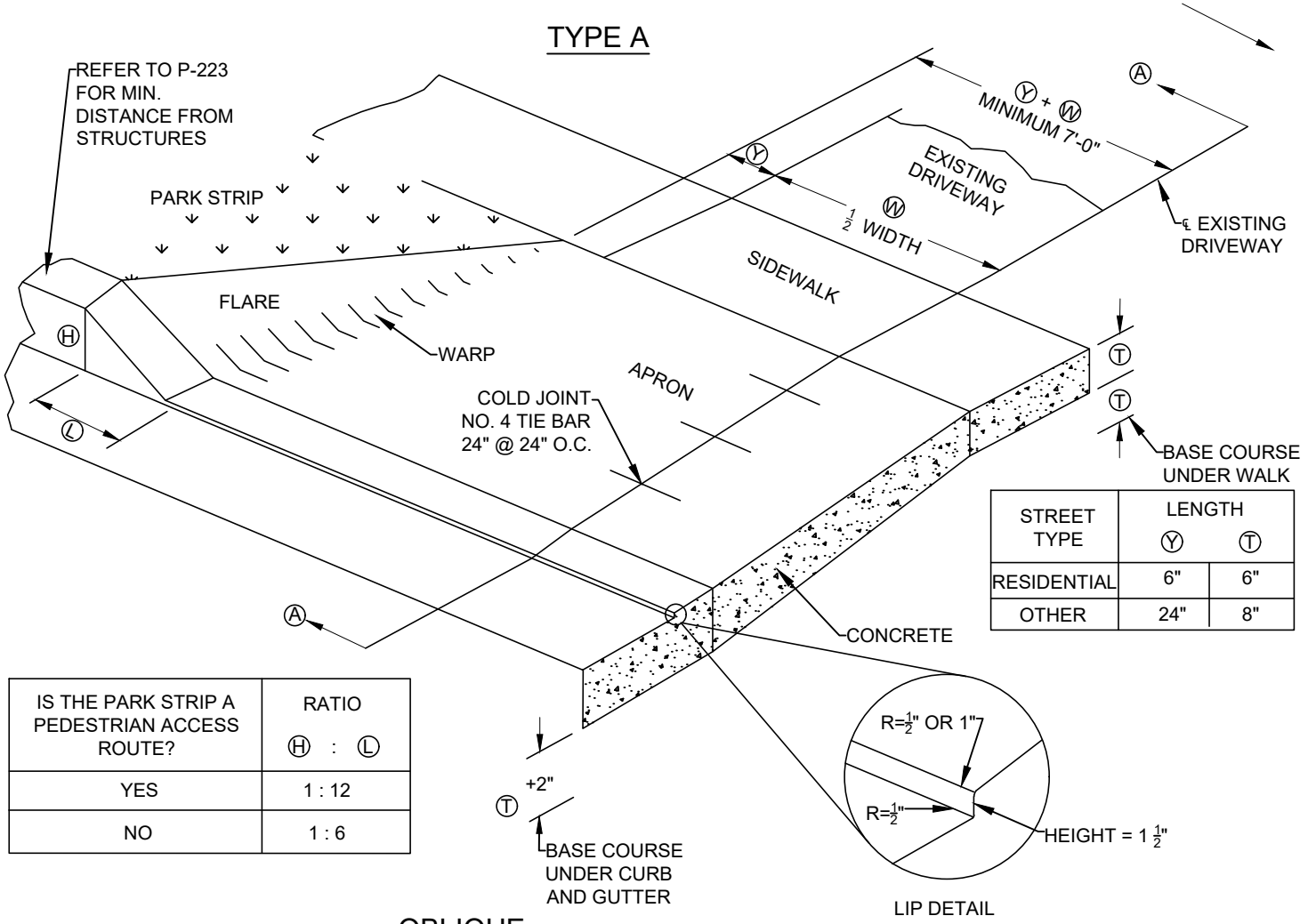
# *DIP DRIVEWAY APPROACH*

STANDARD DETAIL
P-215

NOT TO SCALE

REVISED DATE: 11/25/15

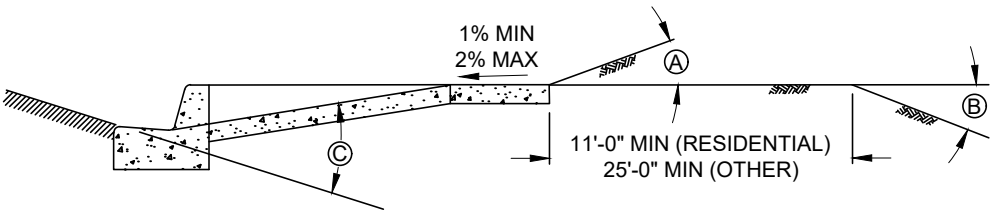
## TYPE A




| STREET TYPE | LENGTH Ⓨ | LENGTH Ⓣ |
|---|---|---|
| RESIDENTIAL | 6" | 6" |
| OTHER | 24" | 8" |

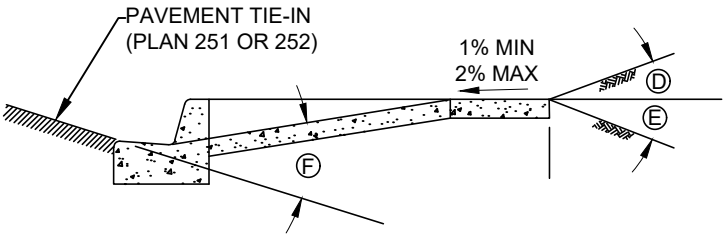
| IS THE PARK STRIP A PEDESTRIAN ACCESS ROUTE? | RATIO Ⓗ : Ⓛ |
|---|---|
| YES | 1 : 12 |
| NO | 1 : 6 |

## OBLIQUE




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓐ | Ⓑ | Ⓒ |
|---|---|---|---|
| RESIDENTIAL | 16% | 12% | 16% |
| OTHER | 6% | 8% | 10% |

## SECTION A-A - APPROACH REQUIRING SERVICE TRUCK ACCESS




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓓ | Ⓔ | Ⓕ |
|---|---|---|---|
| RESIDENTIAL | 16% | 12% | 16% |
| OTHER | 6% | 8% | 10% |

## SECTION A-A - TYPICAL DRIVEWAY APPROACH

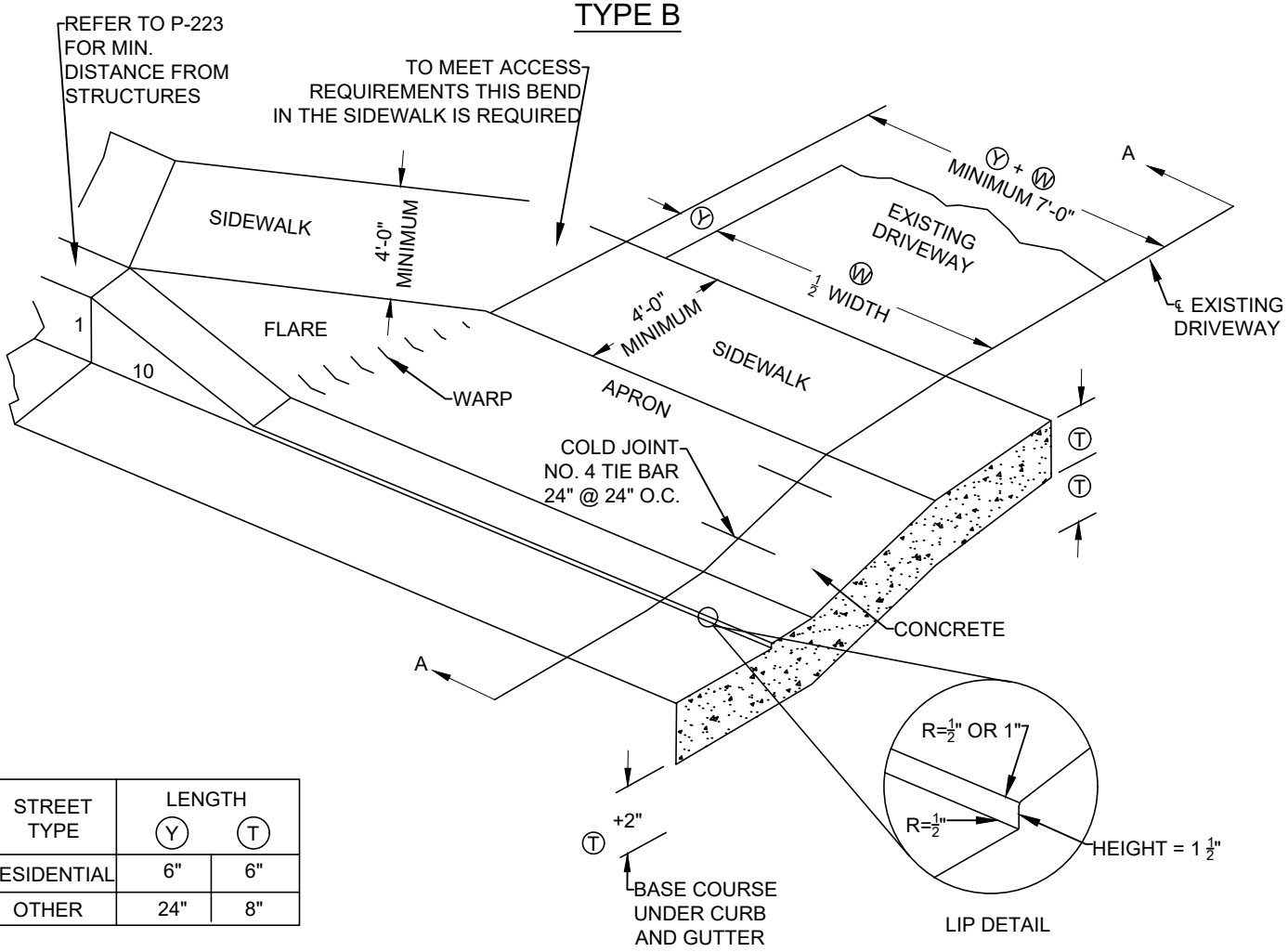


provo PUBLIC WORKS

# *FLARE DRIVEWAY APPROACH*

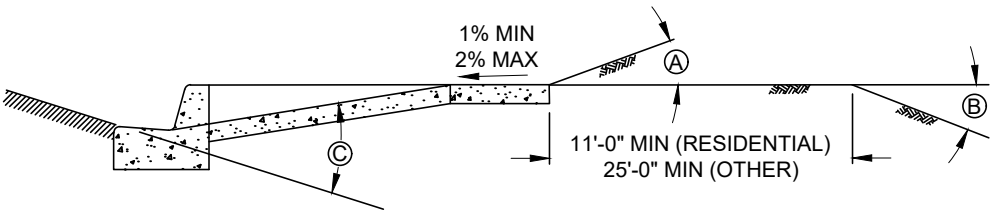
STANDARD DETAIL
P-221a
NOT TO SCALE
REVISED DATE: 11/25/15

## TYPE B



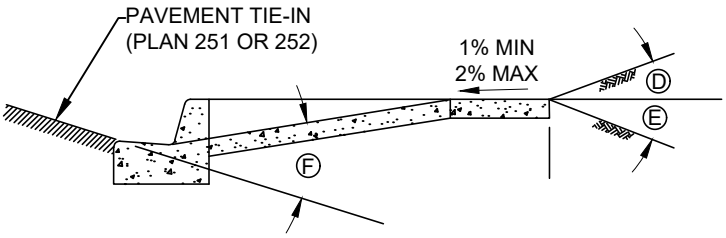

| STREET TYPE | LENGTH Ⓨ | LENGTH Ⓣ |
|---|---|---|
| RESIDENTIAL | 6" | 6" |
| OTHER | 24" | 8" |

## OBLIQUE




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓐ | Ⓑ | Ⓒ |
|---|---|---|---|
| RESIDENTIAL | 16% | 12% | 16% |
| OTHER | 6% | 8% | 10% |

## SECTION A-A - APPROACH REQUIRING SERVICE TRUCK ACCESS




| STREET TYPE | BREAK OVER ANGLE (MAX) Ⓓ | Ⓔ | Ⓕ |
|---|---|---|---|
| RESIDENTIAL | 16% | 12% | 16% |
| OTHER | 6% | 8% | 10% |

## SECTION A-A - TYPICAL DRIVEWAY APPROACH



provo PUBLIC WORKS

# *FLARE DRIVEWAY APPROACH*

STANDARD DETAIL
P-221b

NOT TO SCALE

REVISED DATE: 11/25/15

**1. GENERAL**

A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.

B. Field Changes to Slope Requirements:

B.1. Grades may have a 6 percent change in slope over a 11 feet wheel base run for both crest or sag vertical curves.

B.2. Where heavy truck use and fire truck access applies, or to improve design speed, design grades should be cut in half.

B.3. Specific uses or site conditions may require profile design submittal for review and acceptance.

C. Additional requirements are specified in APWA 32 16 13.

**2. PRODUCT**

A. Base Course: Untreated base course. APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.

B. Expansion Joint Filler: 1/2-inch thick type F1 full depth. APWA Section 32 13 73.

C. Concrete: Class 4000. APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.

D. Reinforcement: Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.

E. Concrete Curing Agent: Clear Membrane forming compound with fugitive dye (Type ID Class A), APWA Sectoin 03 39 00.

**3. EXECUTION**

A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 32 23 26.

B. Reinforcement: No required if driveway apron is constructed without a cold joint.

C. Concrete Placement: APWA Section 03 30 10.

C.1. Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.

C.2. Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slap is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).

C.3. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.

D. Protection and Repair. Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



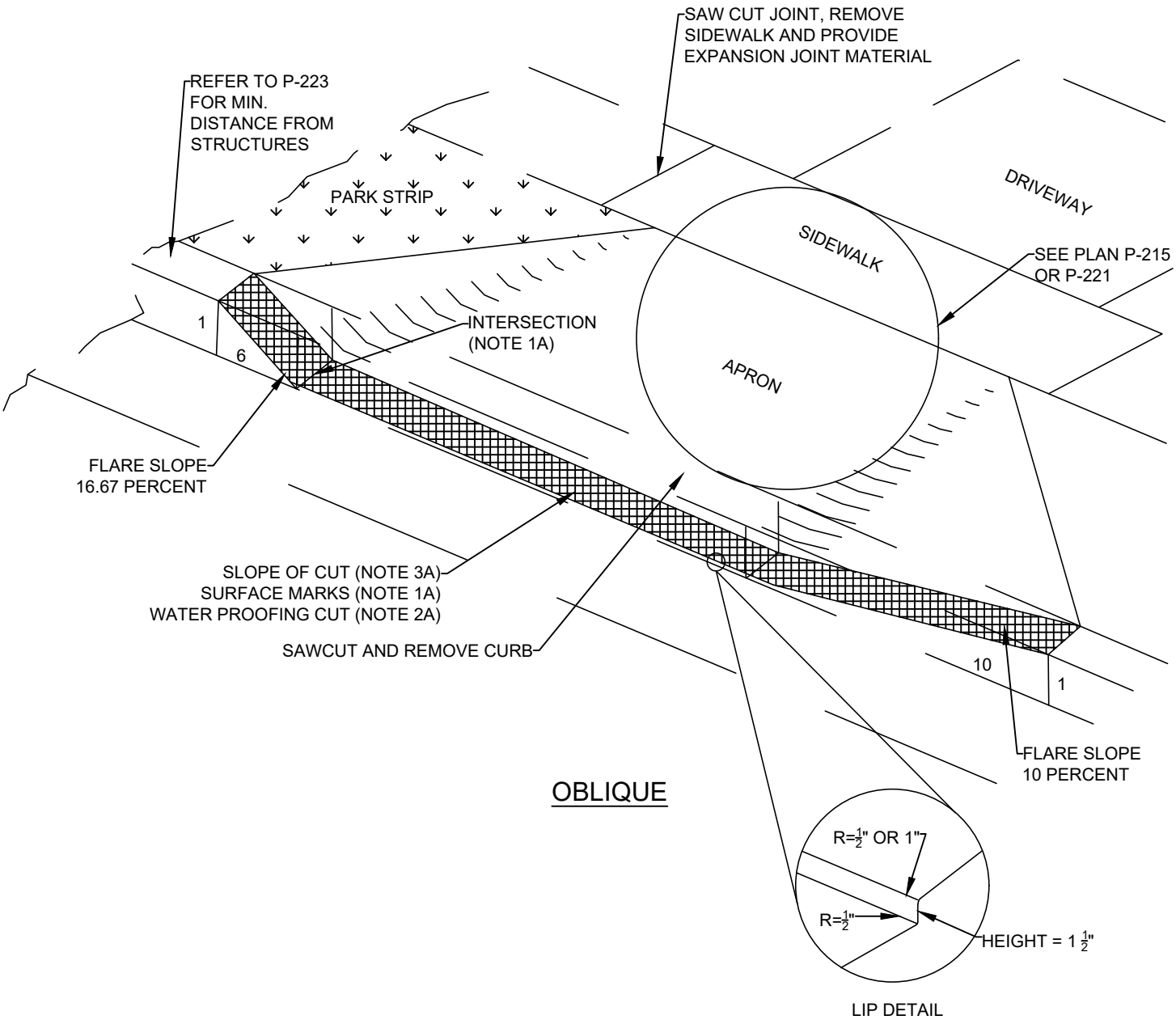
provo PUBLIC WORKS

# *FLARE DRIVEWAY APPROACH*

STANDARD DETAIL
P-221

NOT TO SCALE

REVISED DATE: 11/25/15




SHEET 1 OF 2

PUBLIC WORKS

# *SAW-CUT DRIVEWAY APPROACH*

STANDARD DETAIL

P-222

NOT TO SCALE

REVISED DATE: 11/25/15

**1. GENERAL**

A. The drawing shows sawing off and removing a curb for the construction of a new driveway approach. Additional requirements are specified in Plan 215 or Pan 221 for constructing driveway approach after curb is removed.

B. The slope of the right flare is required if a pedestrian access route abuts the curb. The slope of the left flare is required if a pedestrian acess route does not abut the curb.

C. Variance from specified slopes must be acceptable to the ENGINEER.

**2. PRODUCT**

A. Water Repellant: Penetrating compound, APWA Section 07 19 00.

B. Expansion Joint Filler: 1/2-inch thick type F1 full depth. APWA Section 32 13 73.

**3. EXECUTION**

A. At the apron, cut the curb off so the slope of the curb cut as measured perpendicular to the flow line is 16.67 percent (1:6). Unless specified otherwise, make the curb cut intersect the flow line.

B. At the flare, cur the curb off so the slope of curb cut as measured parallel to the flow line is as follows.

B.1. 8.33 percent (1:12) if curb borders a surface used by pedestrians.

B.2. 16.67 percent (1:6) if curb does not border a surface used by pedestrians.

C. No over-cutting where cuts merge. Grind sawed surface so no blade marks remain.

D. Water Proofing: Apply full coverage water repellant over cut concrete.

E. Expansion Joint: Vertical, full depth, with top of filler set flush with concrete surface.



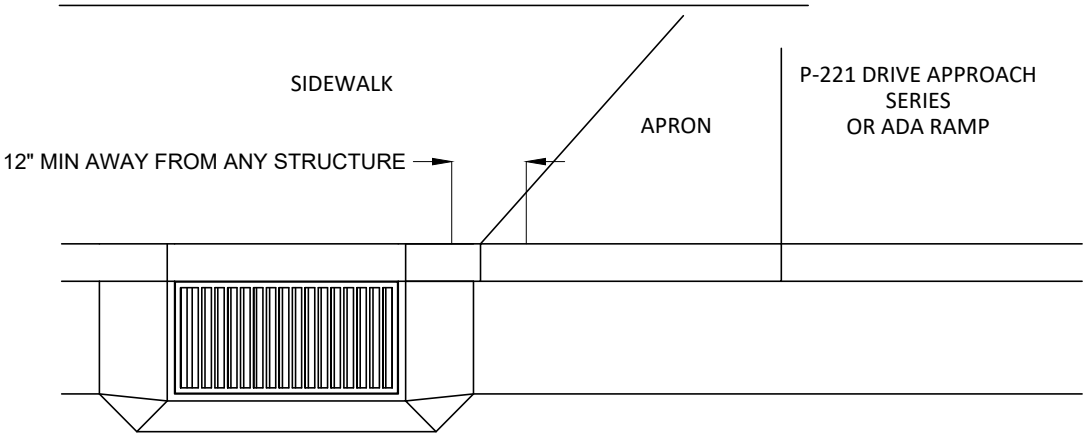
provo PUBLIC WORKS

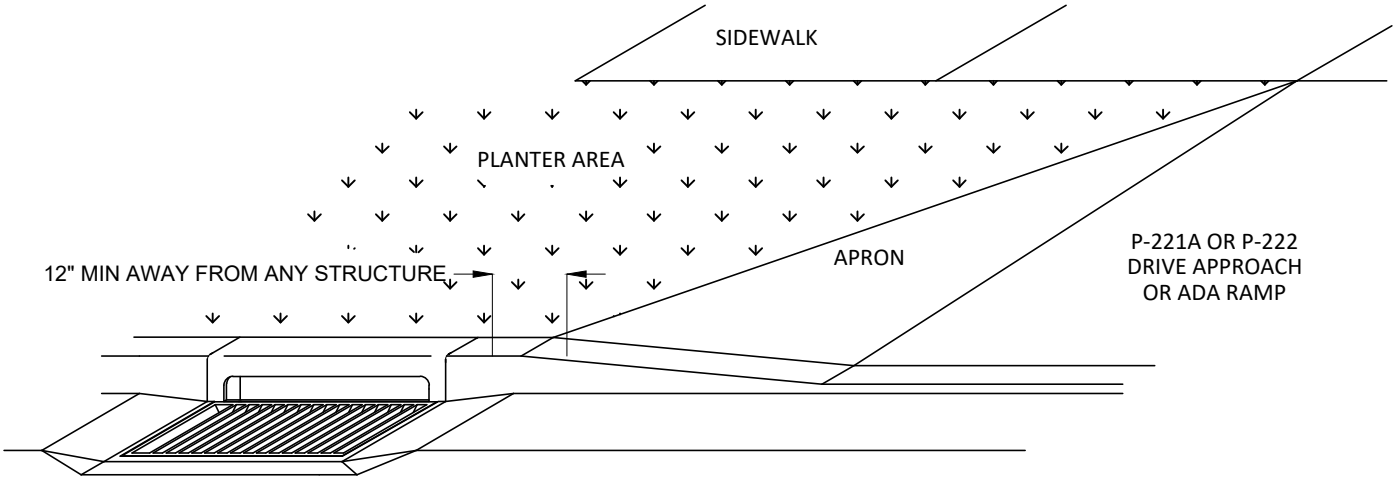
# *SAW-CUT DRIVEWAY APPROACH*

STANDARD DETAIL
P-222

NOT TO SCALE

REVISED DATE: 11/25/15




SHEET 1 OF 1

PUBLIC WORKS

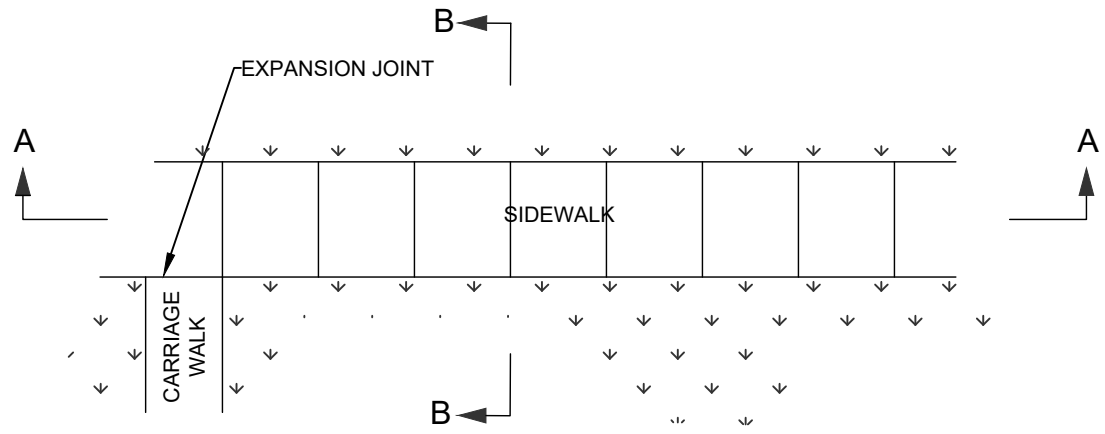
# STORM DRAIN INLET FROM DRIVE APPROACH

STANDARD DETAIL

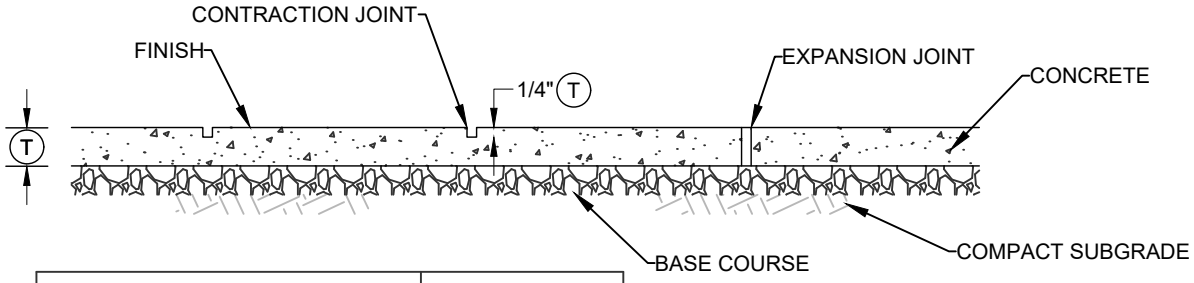
P-223

NOT TO SCALE

REVISED DATE: 11/11/16



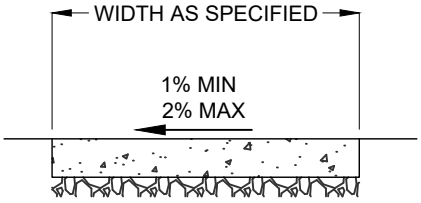

PLAN



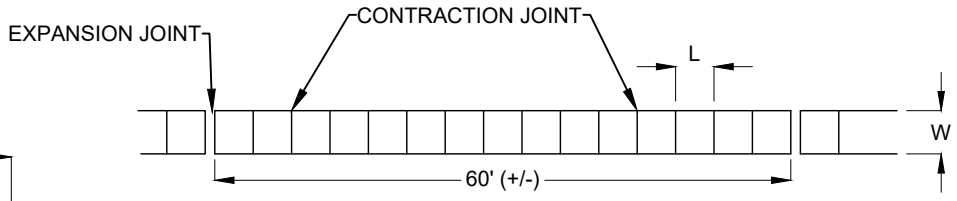

| STREET TYPE | T |
|---|---|
| RESIDENTIAL (WITH PARK STRIP) | 5" |
| RESIDENTIAL (NO PARK STRIP) | 5" |
| OTHER | |
| REPLACING EXISTING SIDEWALK | MATCH EXISTING (5" MIN.) |

SEE DRIVEWAY APPROACH PLANS FOR SIDEWALK THICKNESS AT DRIVEWAYS

SECTION A-A




SECTION B-B




$L_{MIN} = W$

$L_{MAX}$ (IN FEET) $= 2.5 \times T$ (IN INCHES)
OR
15' MAX

SIDEWALK JOINT DETAIL

SHEET 1 OF 1

PUBLIC WORKS

# *SIDEWALK*

STANDARD DETAIL
P-231
NOT TO SCALE
REVISED DATE: 08/2023

**1. GENERAL**

A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.

B. Additional requirements are specified in APWA Section 32 16 13.

**2. PRODUCT**

A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.

B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.

C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.

D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

**3. EXECUTION**

A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

B. Concrete Placement: APWA Section 03 30 10.

B.1. Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.

B.2. Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).

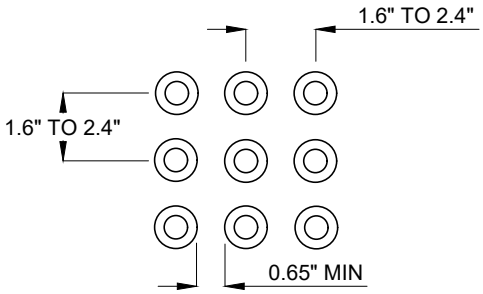
B.3. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.

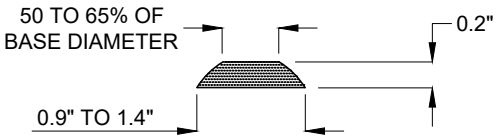


provo PUBLIC WORKS

# *SIDEWALK*

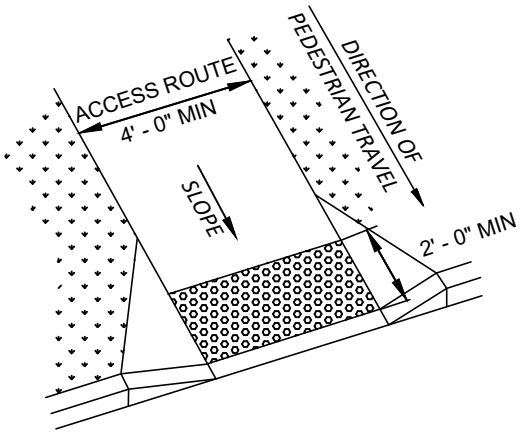
STANDARD DETAIL
P-231
NOT TO SCALE
REVISED DATE: 08/2023



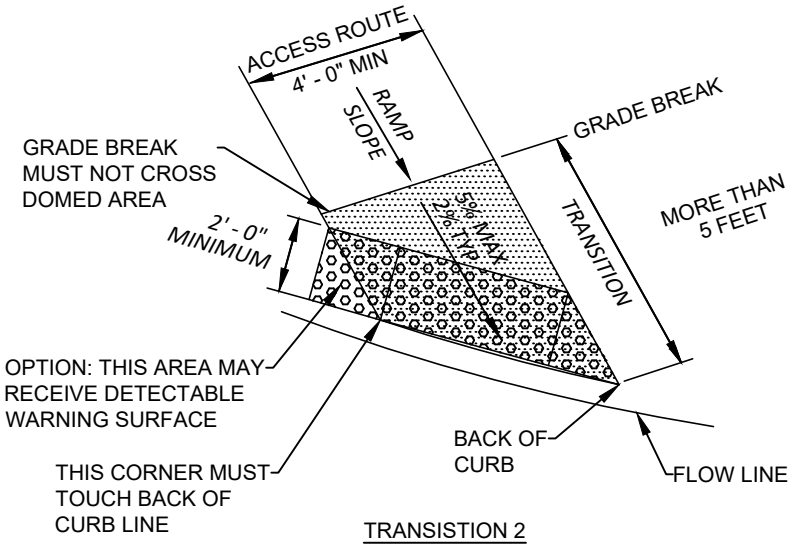




SECTION

## TRUNCATED DOME DETAIL

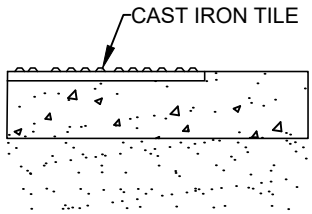



PERPENDICULAR ASSEMBLY




TRANSITION 2

NON-PERPENDICULAR ASSEMBLY




STYLE T

TRANSITION 1

SHEET 1 OF 2

PUBLIC WORKS

# DETECTABLE WARNING SURFACE

STANDARD DETAIL
P-238
NOT TO SCALE
REVISED DATE: 11/25/15

**1. GENERAL**

A. Detectable warnings consist of a surface of truncated domes aligned in a square or radical grid pattern with dome size, dome spacing, contrast and panel size as indicated.

B. definitions and supplemental requirements are specified in APWA Section 32 16 14.

**2. PRODUCT**

A. Cast Iron Panels:

A.1. Must not be cut or manipulated. When resizing is needed, panel must be remanufactured.

A.2. Radius Panels are required on all radius curbs.

A.3. See Standard Plan P-235 for installation.

**3. EXECUTION**

A. Layout:

A.1. Joints Between Units: $\frac{3}{16}$ inch or manufacturer's recommendation.

A.2. Flares: Do not install detectable warning units on flared surfaces.

A.3. Alignment: Where a ramp, turning space, or blended transition provides access to the street continuously around a corner, align the vertical rows of truncated domes to be perpendicular or radial to the grade break between the ramp and the street for a 4 feet minimum width for each crosswalk served.

A.4. Transition 1 or 2: Selection is by ENGINEER unless indicated elsewhere.

A.5. At Rail Crossings: The edge of the detectable warning surface nearest the rail crossing is 6 feet minimum and 15 feet maximum from the center line of the nearest rail.



provo PUBLIC WORKS

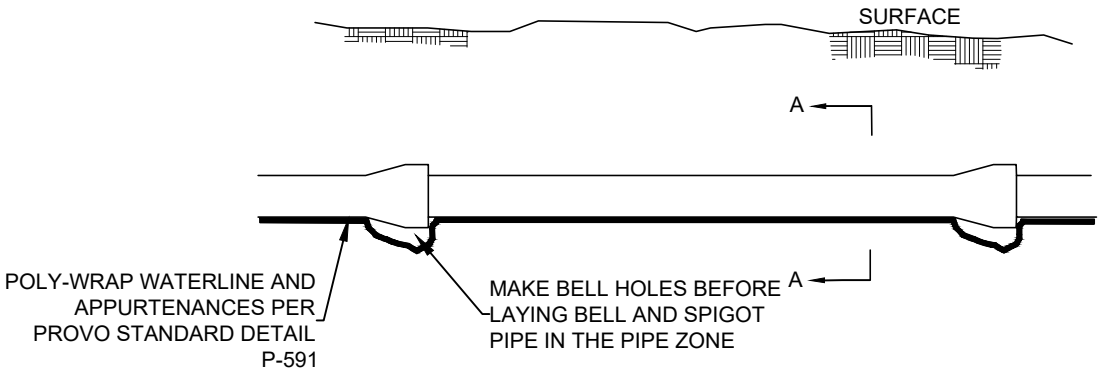
# *DETECTABLE WARNING SURFACE*

STANDARD DETAIL

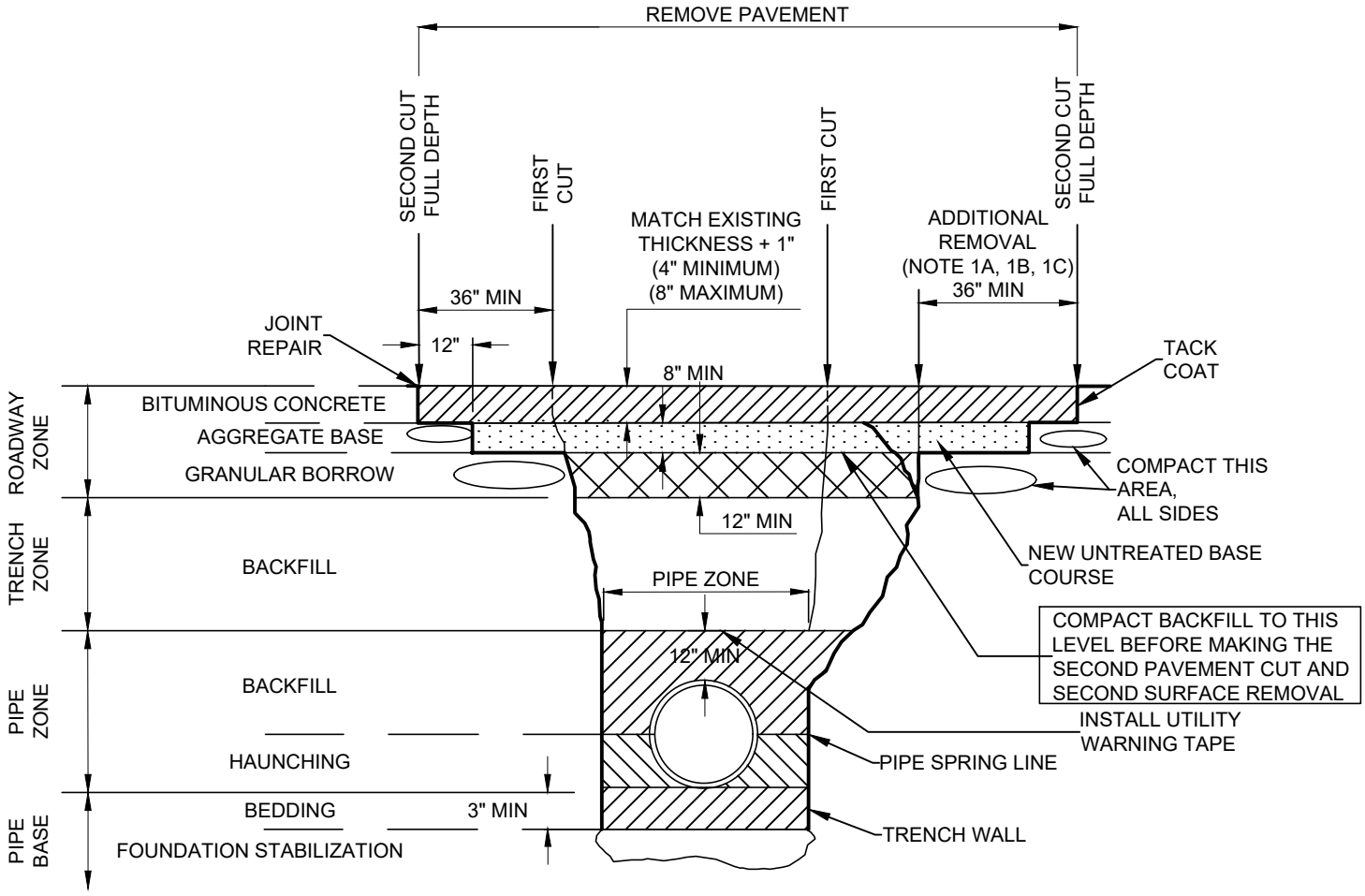
P-238

NOT TO SCALE

REVISED DATE: 11/25/15




## ELEVATION VIEW




| STORM DRAIN | |
|---|---|
| LOCATION IN TRENCH | REQUIRED MATERIAL |
| **PIPE BASE** | |
| FOUNDATION STABILIZATION | COMMON FILL |
| BEDDING | GRAVEL OR UNTREATED BASE COURSE |
| **PIPE ZONE** | |
| HAUNCHING | GRAVEL |
| BACKFILL | GRAVEL |
| TRENCH ZONE | |
| BACKFILL | BORROW OR FLOWABLE FILL* |
| **ROADWAY ZONE** | |
| GRANULAR BORROW | GRANULAR BORROW |
| AGGREGATE BASE | UNTREATED BASE COURSE |
| BITUMINOUS CONCRETE | BITUMINOUS CONCRETE |

| WATER LINE | |
|---|---|
| LOCATION IN TRENCH | REQUIRED MATERIAL |
| **PIPE BASE** | |
| FOUNDATION STABILIZATION | COMMON FILL |
| BEDDING | SAND |
| **PIPE ZONE** | |
| HAUNCHING | SAND |
| BACKFILL | SAND |
| TRENCH ZONE | |
| BACKFILL | BORROW OR FLOWABLE FILL* |
| **ROADWAY ZONE** | |
| GRANULAR BORROW | GRANULAR BORROW |
| AGGREGATE BASE | UNTREATED BASE COURSE |
| BITUMINOUS CONCRETE | BITUMINOUS CONCRETE |

| SANITARY SEWER | |
|---|---|
| LOCATION IN TRENCH | REQUIRED MATERIAL |
| **PIPE BASE** | |
| FOUNDATION STABILIZATION | COMMON FILL |
| BEDDING | GRAVEL OR UNTREATED BASE COURSE |
| **PIPE ZONE** | |
| HAUNCHING | GRAVEL |
| BACKFILL | GRAVEL |
| TRENCH ZONE | |
| BACKFILL | BORROW OR FLOWABLE FILL* |
| **ROADWAY ZONE** | |
| GRANULAR BORROW | GRANULAR BORROW |
| AGGREGATE BASE | UNTREATED BASE COURSE |
| BITUMINOUS CONCRETE | BITUMINOUS CONCRETE |



PROVO PUBLIC WORKS

# TRENCH BACKFILL AND SURFACE RESTORATION

STANDARD DETAIL
P-255

NOT TO SCALE

REVISED DATE: 11/25/15

## 1. GENERAL

A. The offset for the second asphalt cut shall be measured from the edge of the final trench wall which may result from undermining of the asphalt or sloughing of the trench wall during the construction process as shown in the detail.

B. If a saw cut in the direction of vehicular travel is within a wheel path, ENGINEER may order additional pavement removal so saw cut falls outside of a wheel path.

C. If the width of existing pavement left in place between trenches and/or curb and gutter, waterways, edge of pavement, etc. is less than 3 feet, CONTRACTOR shall remove the additional existing pavement and restore pavement according to the typical pavement restoration details.

D. Install pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.

## 2. PRODUCT

A. Common Fill: Section 31 05 13M. Maximum particle size 2-inches.

B. Gravel: Section 31 05 13M. Do not use pea gravel or recycled RAP aggregate.

C. Untreated Base Course: Untreated base course, Grade $\frac{3}{4}$, APWA Section 32 11 23.

D. Sand: Section 31 05 13M. Do not use pea gravel or recycled RAP aggregate.

E. Flowable Fill: APWA Section 31 05 15. Target is 60 psi in 28-days and 90 psi maximum in 28 days. Material must flow easily requiring no vibration for consolidation.

F. Borrow: Section 31 05 13M. Maximum particle size 3-inches.

G. Granular Borrow: Section 31 05 13M. Maximum particle size 3-inches.

H. Tack Coat: APWA Section 32 12 13.

I. Bituminous Concrete: AC-10-DM-3/4. Section 32 12 05M.

J. Utility Warning Tape: Install between pipe zone and trench zone. Minimum tape width 3-inches.

## 3. EXECUTION

A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes an necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.

B. Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.

C. Pipe Base Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipent or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

D. Flowable Fill: Where Required, place controlled low strength material in the trench, APWA Section 31 05 15. Cure to initial set before placing aggregate base or asphalt pavement. Prevent pipe floatation by installing in lifts and providing pipe restraints as required by pipe manufacturer. Reset pipe to line and grade if pipe "floats" out of position.

E. Trench Backfill: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill. Water jetting is NOT allowed. Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time. Provide results of tests immediately upon request. Native material obtained from excavation may be used as fill upon removal of organic material, rubbish, debris, and other objectionable materials are removed.

F. Task Coat: Clean all horizontal and vertical surface. Apply full coverage.

G. Asphalt Pavement: Match existing thickness plus 1 inch but not more than 6-inches on local streets or 8-inches on collector and arterial streets (as identified by Provo City). Install in lifts no greater than 3-inches after compaction. Compact to 94 percent of ASTM D 2041 (rice density) plus or minus 2 percent. If asphalt pavement is substituted for concrete substrate, omit rebar and provide 1.25-inches of pavement for each 1-inch of concrete substrate substituted.

H. Concrete Substrate: Cure to initial set before placing new asphalt concrete patch.

I. Reinforcement: Required if thickness of existing Portland-cement concrete substrate is 6-inches or greater. Not required if (1) less than 6-inches thick, (2) if existing concrete is deteriorating, (3) if excavation is less than 3 feet square, of (4) if asphalt pavement is substituted for Portland-cement concrete substrate.

J. Surface Restoration:

J.A. Landscaped Surface: Rake to match existing grade. Replace vegetation to match pre-construction conditions. Follow APWA Section 32 92 00 (turf or grass).

J.B. Paved Surface: Do not install asphalt of concrete surfacing until trench compaction is acceptable to ENGINEER. Follow APWA Section 33 05 25 (asphalt surfacing).

K. Joint Repair: If a Crack Occurs at a connection to the existing pavement or at any street fixture, flush and seal the crack per APWA Plan 265.

L. Patch Repair: Repair patch if any of the following conditions within the patch occur.

L.A. Pavement surface distortion exceeds $\frac{1}{4}$-inch deviation in 10-feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03.

L.B. Cracks at least 1-foot long and 1/4-inch wide occur more often than 1 in 10 square feet. Repair option: Crack seal, APWA Section 32 01 17.

L.C. Asphalt raveling is greater than 1 square foot per 100 square feet. Repair Option: Mill and inlay.



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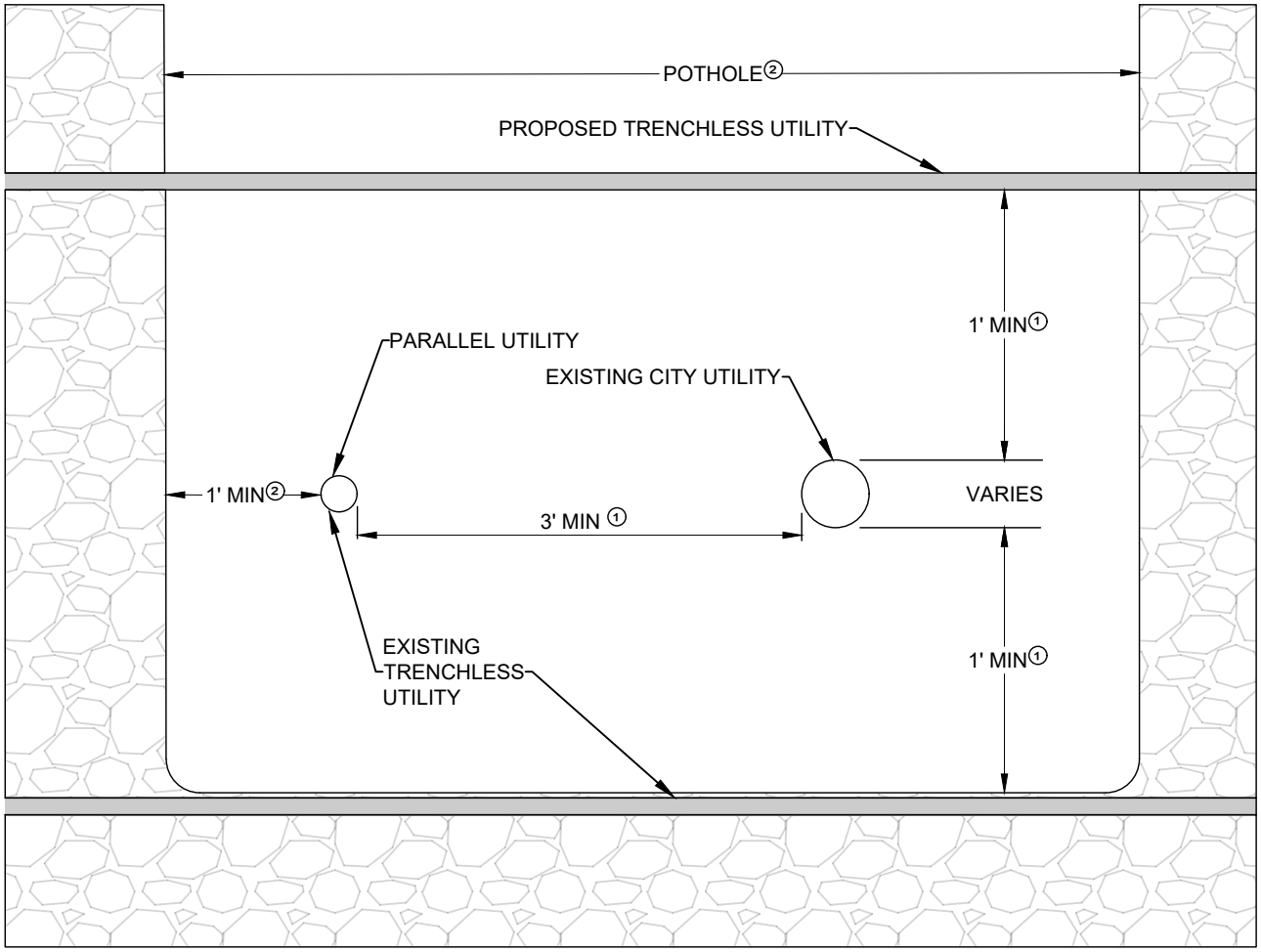
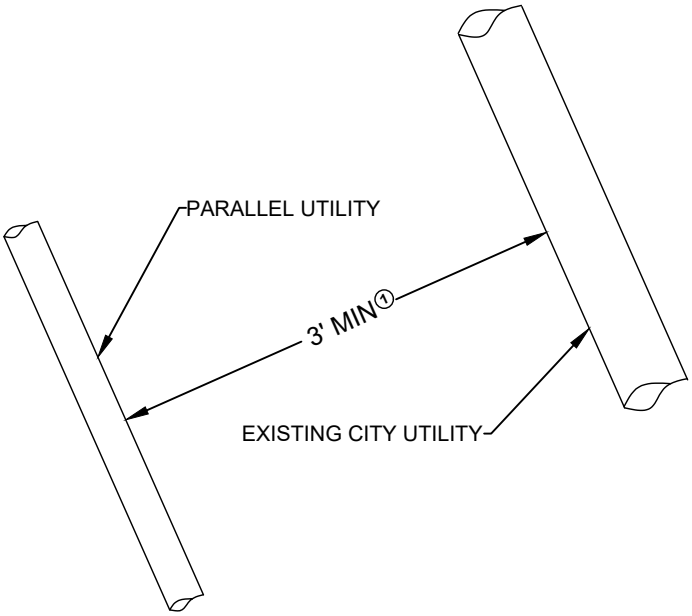
# *TRENCH BACKFILL AND SURFACE RESTORATION*

STANDARD DETAIL
P-255
NOT TO SCALE
REVISED DATE: 11/25/15




CROSS SECTION




PLAN VIEW PARLLEL UTILITY INSTALLATION

① Provide 1 foot minimum vertical clearance and 3 foot horizontal clearance edge to edge between city utility and trenchless utility.

② Expose city utility at crossing location for a minimum of 1 foot on all sides prior to trenchless installation.



provo PUBLIC WORKS

# *TRENCHLESS UTILITY INSTALLATION*

STANDARD DETAIL
P-257
NOT TO SCALE
REVISED DATE: 08/2023

Trenchless Utility Installation

1. GENERAL
   A. All city utilities shall be potholed and exposed for one foot (1') on all sides.
   B. All parallel utilities shall be a minimum of three feet (3') from a city utility.
   C. Utilities should be buried between 36" and 48".
   D. If location of trenchless utility differs from what is represented on the permit, a new permit showing the revised location will be required.
2. PRODUCT
   A. If adequate compaction cannot be achieved around a city utility that has been potholed, flowable fill will be required.
3. EXECUTION
   A. Each utility shall be windowed and a person shall witness the trenchless utility crossing the existing utilities.
   B. Minimum 24 hour notice is required of any installation of a trenchless utility past a city utility.
   C. Pothole restoration shall conform to Provo City Standard P-255, "TRENCH BACKFILL AND SURFACE RESTORATION". If proper compaction cannot be obtained, flowable fill may be required.



provo PUBLIC WORKS

# TRENCHLESS UTILITY INSTALLATION

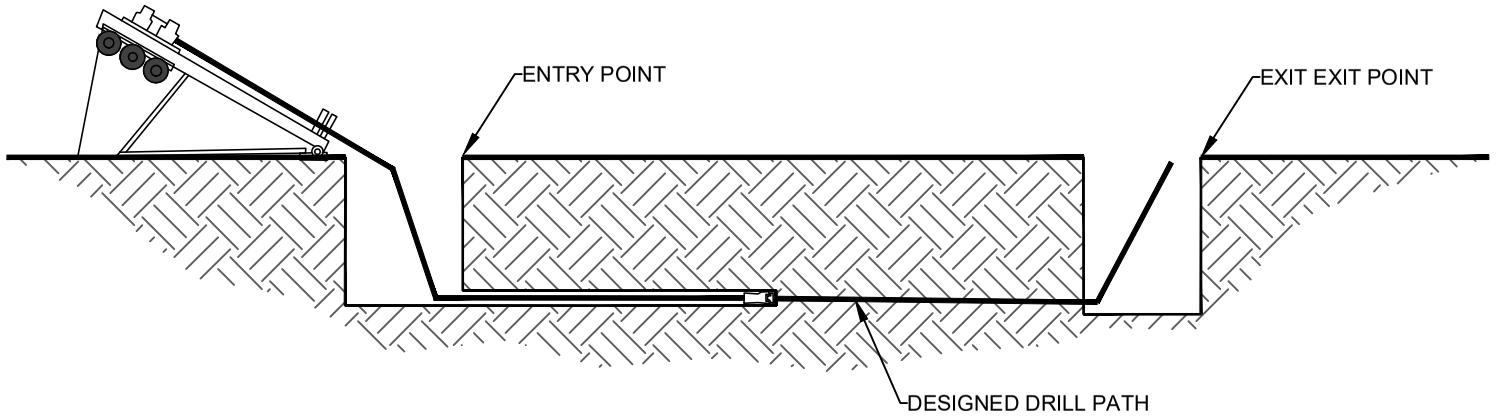
STANDARD DETAIL
P-257
NOT TO SCALE
REVISED DATE: 08/2023

PUBLIC WORKS

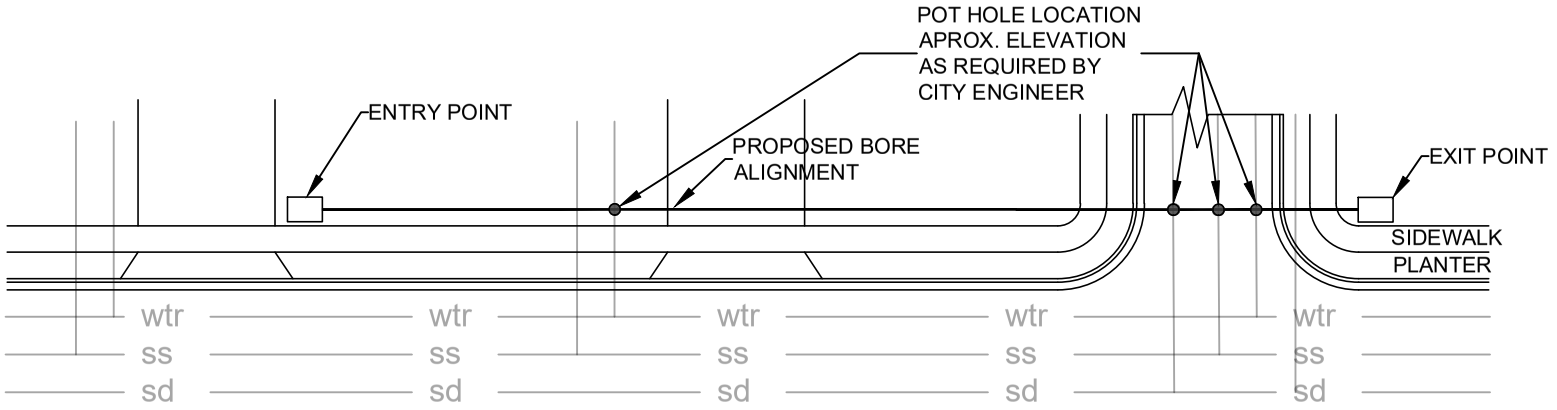
provo

# DIRECTIONAL BORE

## PLAN REQUIREMENTS




## PLAN REQUIREMENTS




### PLAN REQUIREMENTS

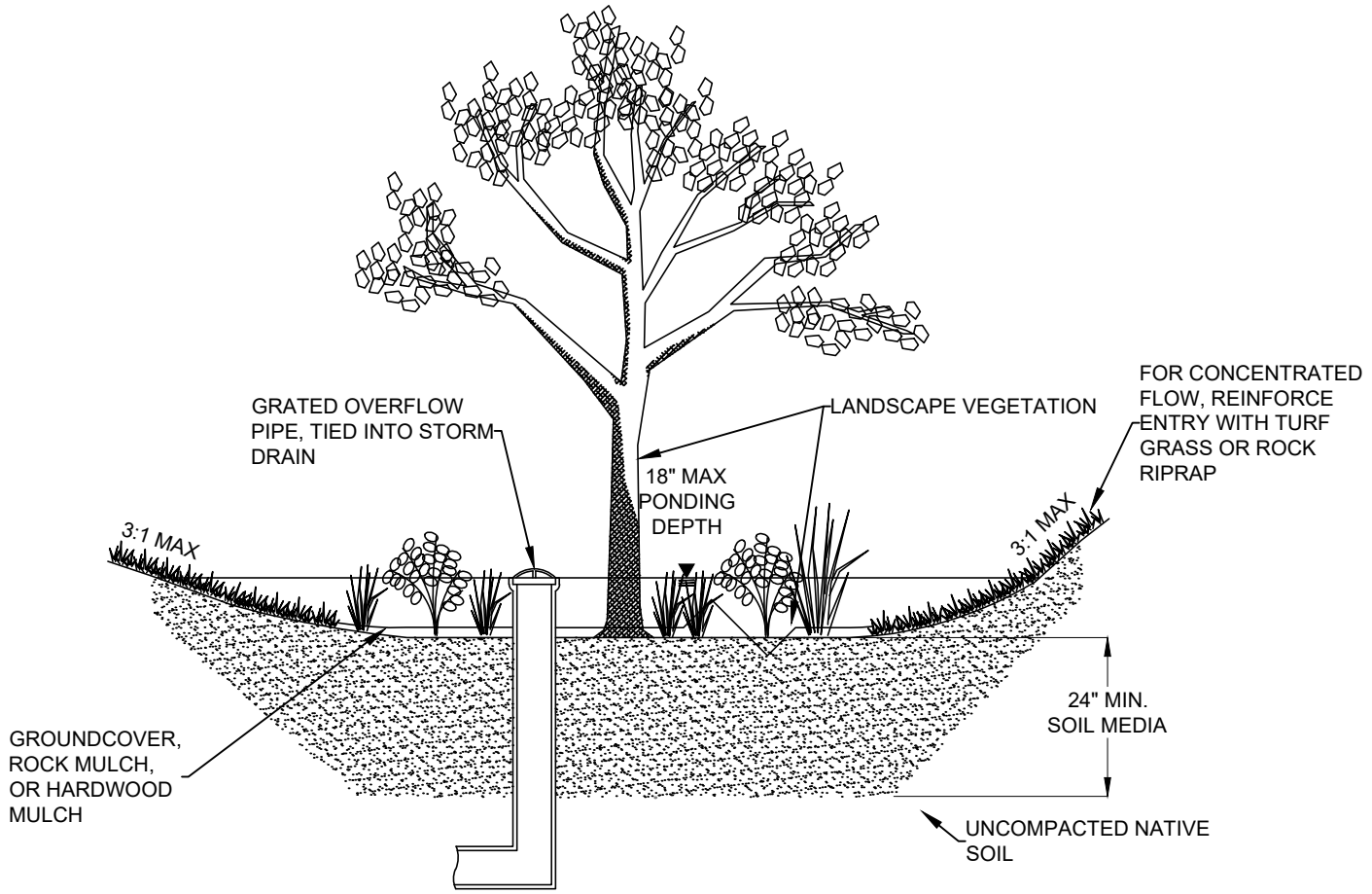
1. ENGINEERED DRAWINGS.
2. ENTRY AND EXIT POINTS MUST BE CLEARLY IDENTIFIED.
3. IDENTIFY CURB, GUTTER, AND SIDEWALK REMOVAL LOCATIONS, AND QUANTITIES.
4. IDENTIFY PROPOSED BORE DEPTH, LENGTH, AND ALIGNMENT. MINIMUM BORE DEPTH OF 36".
5. IDENTIFY LOCATION AND DEPTHS OF EXISTING CITY UTILITIES, INCLUDING, WATER, SEWER, STORM DRAIN, AND POWER.
6. TRAFFIC CONTROL PLAN
7. ADDITIONAL INFORMATION AS REQUIRED BY CITY ENGINEER.

### NOTES

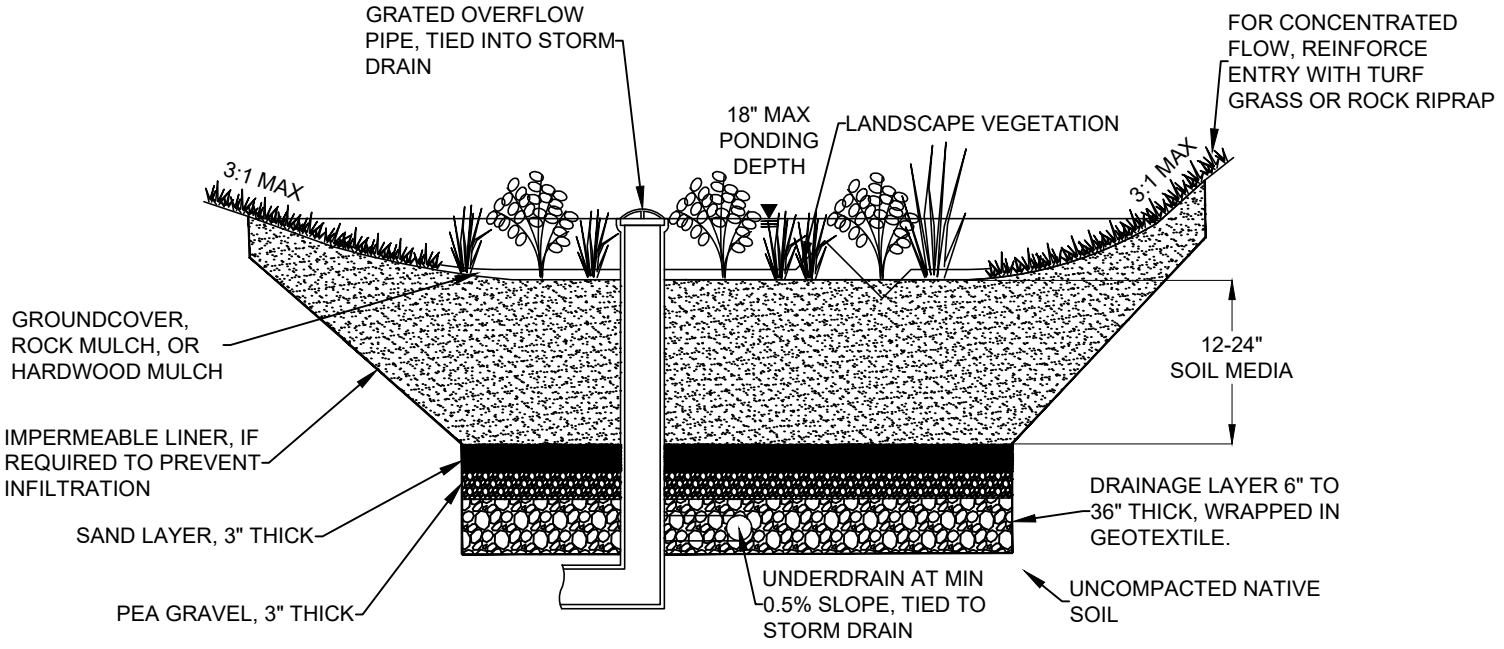
1. MAINTAIN MINIMUM SEPARATION OF 2 FOOT VERTICALLY AND HORIZONTALLY FROM EXISTING CITY UTILITIES.
2. CITY UTILITIES THAT ARE WITHIN 2 FEET OF BORE ARE TO BE WINDOWED AND OBSERVED AS BORE CROSSES UTILITY.
3. PERPENDICULAR CROSSINGS ARE REQUIRED FOR CITY UTILITIES.
4. PRIVATE UTILITY CROSSINGS ARE TO BE COORDINATED WITH THE CORRESPONDING OWNER.
5. APPROVED SET OF PLANS AND PUBLIC WORKS PERMIT ARE REQUIRED TO BE ON JOB SITE AT ALL TIMES.
6. COORDINATE ANY PLAN CHANGES THROUGH THE CITY ENGINEER PRIOR TO CONSTRUCTION.

STANDARD DETAIL
P-258
NOT TO SCALE
REVISED DATE: 03/21/17

SHEET 1 OF 1




## RETENTION AND INFILTRATION




## FILTRATION WITH UNDERDRAIN



provo PUBLIC WORKS

# *RAIN GARDEN*

STANDARD DETAIL
P-301a
NOT TO SCALE
REVISED DATE: Sep-2020

1. GENERAL
   A. Submit before use:
      A.A. Soil Media: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.
      A.B. Sand, Pea Gravel, Sewer Rock, Rock Mulch, Rock Riprap: Name of supplier and source.
      A.C. Underdrain, Geotextile, Impermeable Liner, Hardwood Mulch: Sample and manufacturer's certification that material meets requirements specified below.

2. PRODUCT
   A. Landscape Vegetation: See Section 15.20, Provo City Code for landscape vegetation requirements. Refer to the Utah DEQ'S *A Guide to Low Impact Development within Utah* for additional guidance on plant selection in BMPs. Minimum 65% vegetative cover. Wood mulch only allowed where design floods are diverted around or ponded within rain garden (not conveyed through with velocity). Rain gardens requiring impermeable liner or underdrains shall be located at least 5' from trees or large, woody shrubs with roots that may compromise the liner or clog the underdrain.
   B. Soil Media: Native, amended, or engineered soil with organics to support plant growth, maximum 5% clay, minimum 60% gravelly sand or sand, with a long-term (safety factor applied) infiltration rate of at least 1 in/hr at 85% compaction.
   C. Sand Layer: Sand Per Utah Chapter APWA Specification 31 05 13.
   Pea Gravel: 3/8" to 1/2" pea gravel per Utah Chapter APWA Specification 31 05 13.
   E. Drainage Layer: ASTM Size 3-4 Sewer Rock per Utah Chapter APWA Specification 31 05 13.
   F. Underdrain: Min. 4" schedule 40 perforated PVC pipe, or equivalent with prior City approval.
   G. Geotextile: Drainage Geotextile per Utah Chapter APWA Specification 31 05 19. Class A if the drainage layer is very sharp and angular; otherwise, Class B.
   H. Impermeable Liner: Impermeable, nonbiodigradable, inert to soil chemicals, resistant to molds, mildew, acids and alkalis, and within a pH range of 3 to 12.
   I. Rock Riprap: Loose-placed riprap per Utah Chapter APWA Specification 31 37 00.
   J. Rock Mulch: Decorative rock at least 1" in diameter.
   K. Hardwood Mulch: Well-aged, hardwood mulch placed at least 3" thick.

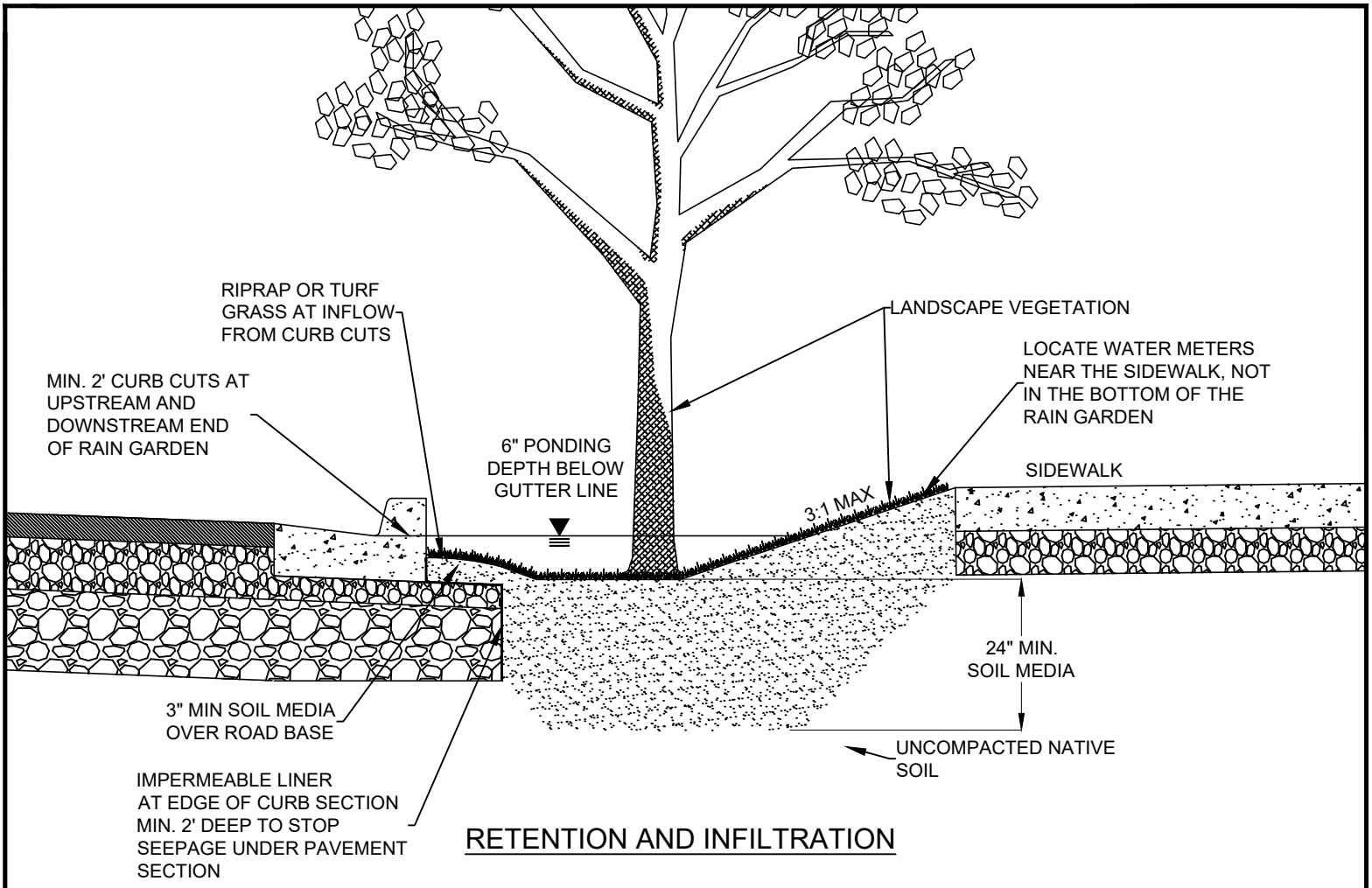
**3. EXECUTION**
   A. Rain garden native subgrades shall not be compacted, and heavy construction equipment shall not be allowed within the rain garden footprint.
   B. Install all utilities prior to constructing the rain garden. Avoid BMP footprint when possible.
   C. Construction of rain garden shall commence after adjacent and tributary areas are stabilized.
   D. If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.
   I. If underdrain is required, inspect elevations prior to installation to ensure min. 0.5% slope. Follow manufacturer's recommendations for geotextile overlapping around drainage layer.
   J. If impermeable liner is required, inspect subgrade and remove items that may puncture.
   K. Install soil media in maximum 18" lifts, with only light compaction (85% maximum).
   L. Adhere to approved construction SWPPP, including any BMPs required to protect the rain garden during construction. If silt or other debris enters the rain garden during construction, remove before construction resumes.



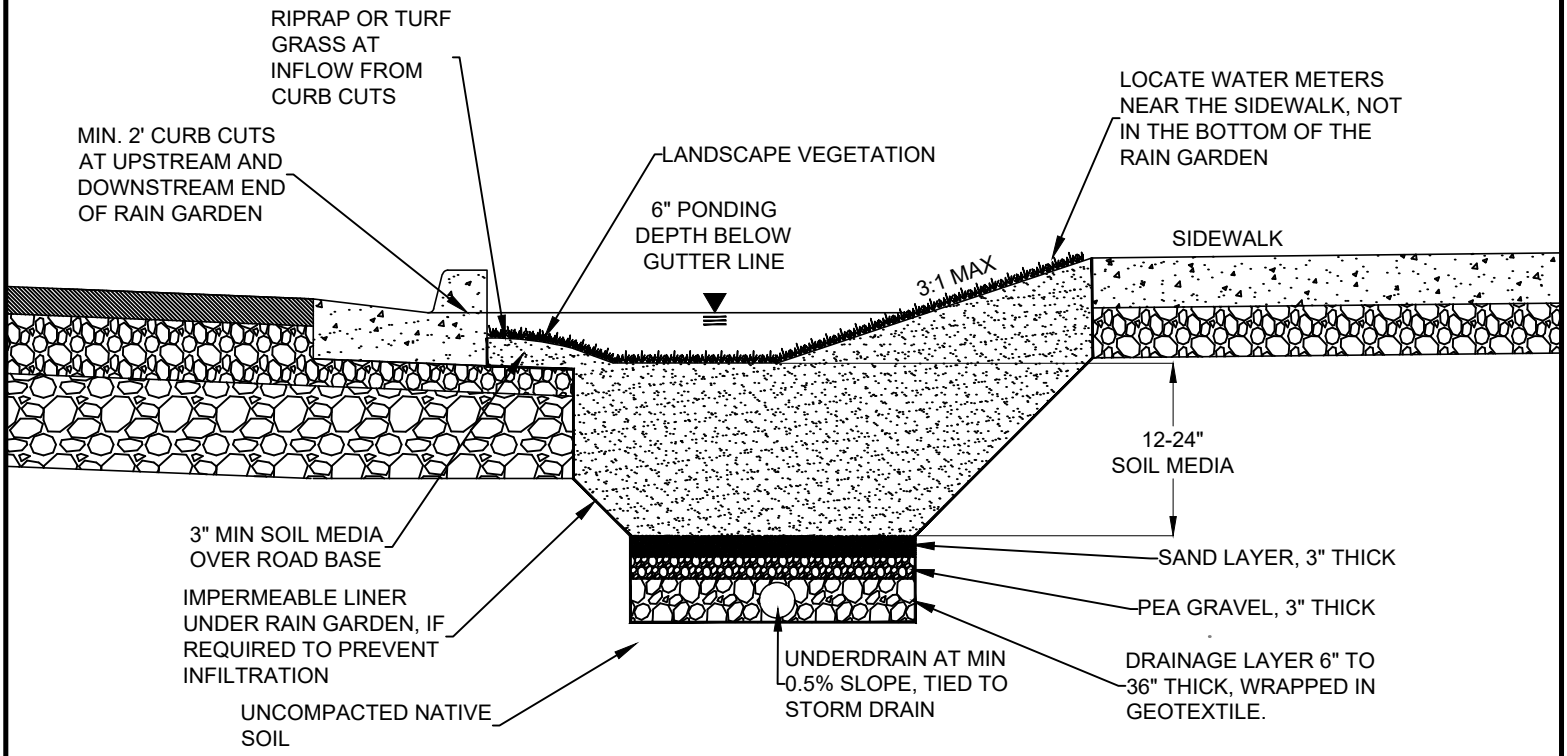
provo PUBLIC WORKS

# *RAIN GARDEN*

STANDARD DETAIL
P-301a
NOT TO SCALE
REVISED DATE: Sep-2020




## RETENTION AND INFILTRATION




## FILTRATION WITH UNDERDRAIN



PUBLIC WORKS

# *RAIN GARDEN IN STREET PLANTER STRIP*

STANDARD DETAIL
P-301b

NOT TO SCALE

REVISED DATE: Sep-2020

*Rain Garden in Street Parkway*

**1. GENERAL**

A. Submit before use:

A.1. Soil Media: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.

A.2. Sand, Pea Gravel, Sewer Rock, Rock Mulch, Riprap: Name of supplier and source.

A.3. Underdrain, Geotextile,Impermeable Liner: Sample and manufacturer's certification that material meets requirements specified below.

**2. PRODUCTS**

A. Landscape Vegetation: See Section 15.20.120 - Parkways, Provo City Code for vegetation requirements. Refer to the Utah DEQ's *A Guide to Low Impact Development within Utah* for additional guidance on plant selection within BMPs. Minimum 65% vegetative cover. Either (a) turf grass or (b) rock mulch and low maintenance plants that do not require regular pruning must be installed for new residential developments, for ease of maintenance by homeowner. No wood mulch allowed in rain gardens in street planter strips. Rain gardens requiring impermeable liner or underdrains shall be located at least 5' from trees or large, woody shrubs with roots that may compromise the liner or clog the underdrain.

B. Soil Media: Native, amended, or engineered soil with organics to support plant growth, maximum 5% clay, minimum 60% gravelly sand or sand, with a long-term (safety factor applied) infiltration rate of at least 1 in/hr at 85% compaction.

C. Sand Layer: Sand per Utah Chapter APWA Specification 31 05 13.

D. Pea Gravel: 3/8" to 1/2" pea gravel per Utah Chapter APWA Specification 31 05 13.

E. Drainage Layer: ASTM Size 3-4 Sewer Rock per Utah Chapter APWA Specification 31 05 13.

F. Underdrain: Min. 4" schedule 40 perforated PVC pipe, or equivalent with prior City approval.

G. Geotextile: Drainage Geotextile per Utah Chapter APWA Specification 31 05 19. Class A if the drainage layer is very sharp and angular; otherwise, Class B.

H. Impermeable Liner: Impermeable, nonbiodigradable, inert to soil chemicals, resistant to molds, mildew, acids and alkalis, and within a pH range of 3 to 12.

J. Rock Riprap: Loose-placed riprap per Utah Chapter APWA Specification 31 37 00.

K. Rock Mulch: Decorative rock at least 1" in diameter.

**3. EXECUTION**

A. Rain garden native subgrades shall not be compacted, and heavy construction equipment shall not be allowed within the rain garden footprint.

B. Install all utilities (including gas and communication/power conduits) prior to constructing the rain garden. Locate with consideration of the rain garden's drainage characteristics.

C. Construction of rain garden shall commence after adjacent and tributary areas are stabilized.

D. If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.

I. If underdrain is required, inspect elevations prior to installation to ensure min. 0.5% slope. Follow manufacturer's recommendations for geotextile overlapping around drainage layer.

J. If impermeable liner is required, inspect subgrade and remove items that may puncture.

K. Install soil media in maximum 18" lifts, with only light compaction (85% maximum).

L. Adhere to approved construction SWPPP, including any BMPs required to protect the rain garden during construction. If silt or other debris enters the rain garden during construction, remove before construction resumes.



provo PUBLIC WORKS

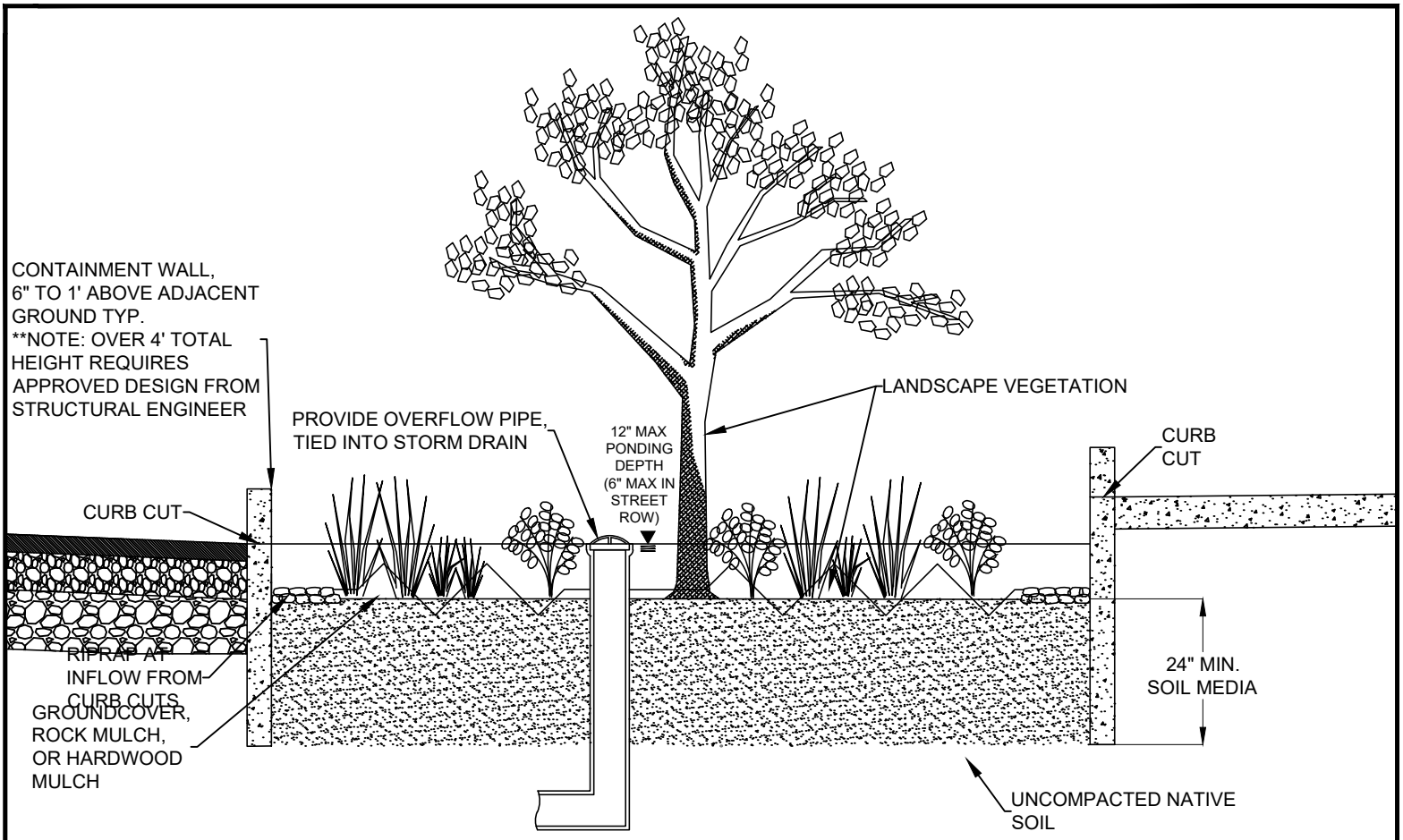
# *RAIN GARDEN IN STREET PLANTER STRIP*

STANDARD DETAIL

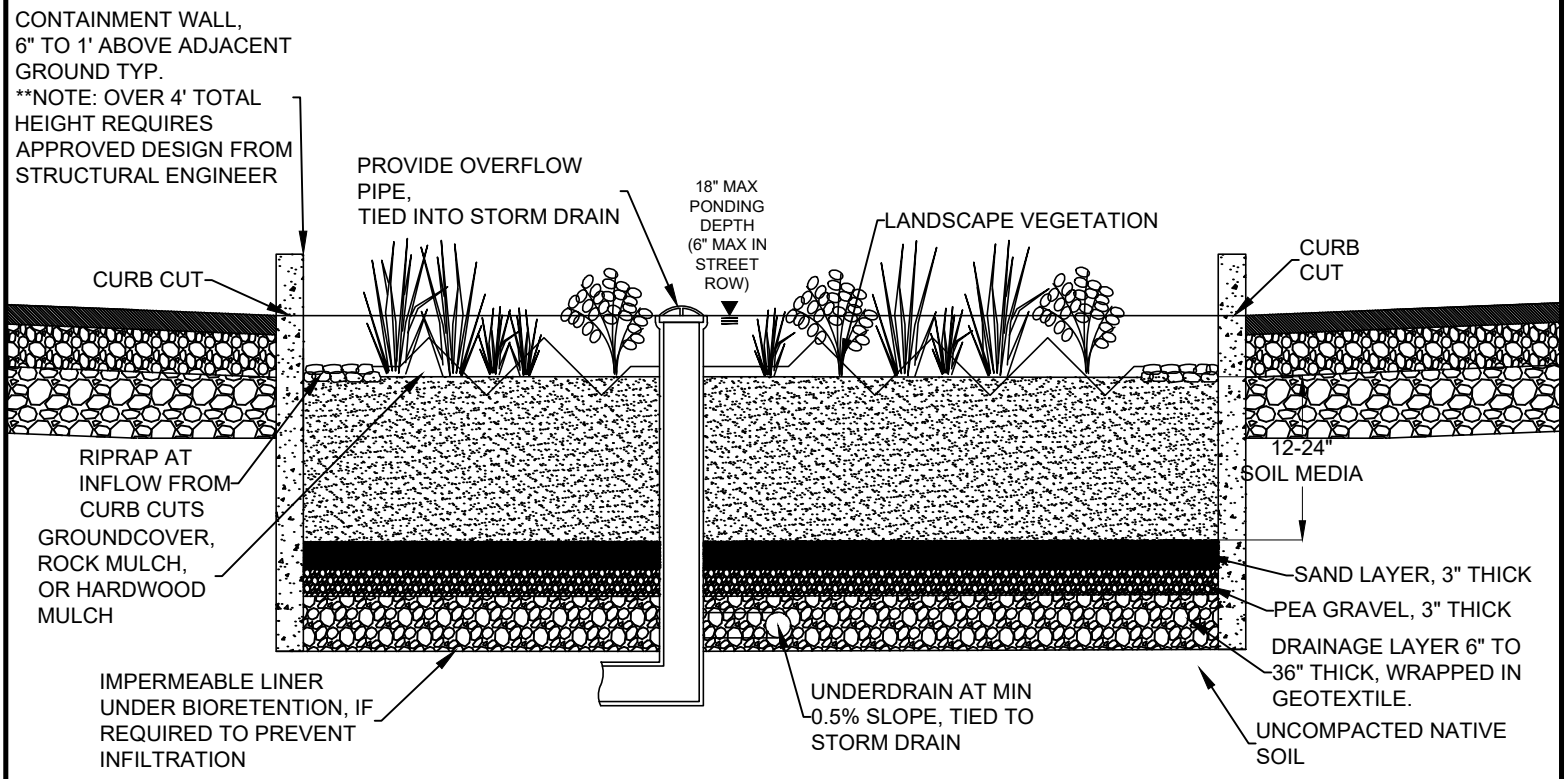
P-301b

NOT TO SCALE

REVISED DATE: Sep-2020




## RETENTION AND INFILTRATION




## FILTRATION WITH UNDERDRAIN



PROVO PUBLIC WORKS

# *BIORETENTION CELL*

STANDARD DETAIL
P-302

NOT TO SCALE

REVISED DATE: Sep-2020

**1. GENERAL**

A. Submit before use:

A.1. Soil Media: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.

A.2. Sand, Pea Gravel, Sewer Rock, Rock Mulch, Rock Riprap: Name of supplier and source.

A.3. Underdrain, Geotextile,Impermeable Liner, Hardwood Mulch: Sample and manufacturer's certification that material meets requirements specified below.

**2. PRODUCTS**

A. Landscape Vegetation: See Section 15.20, Provo City Code for landscape vegetation requirements. Refer to the Utah DEQ's *A Guide to Low Impact Development within Utah* for additional guidance on plant selection within BMPs. Minimum 65% vegetative cover. Wood mulch only allowed where design floods are diverted around or ponded within bioretention cell (not conveyed through with velocity). No wood mulch in cells in street planter strips. Bioretention cells requiring impermeable liner or underdrains shall be located at least 5' from trees or large, woody shrubs with roots that may compromise the liner or clog the underdrain.

B. Soil Media: Native, amended, or engineered soil with organics to support plant growth, maximum 5% clay, minimum 60% gravelly sand or sand, with a long-term (safety factor applied) infiltration rate of at least 1 in/hr at 85% compaction.

C. Sand Layer: Sand per Utah Chapter APWA Specification 31 05 13.

D. Pea Gravel: 3/8" to 1/2" pea gravel per Utah Chapter APWA Specification 31 05 13.

E. Drainage Layer: ASTM Size 3-4 Sewer Rock per Utah Chapter APWA Specification 31 05 13.

F. Underdrain: Min. 4" schedule 40 perforated PVC pipe, or equivalent with prior City approval.

G. Geotextile: Drainage Geotextile per Utah Chapter APWA Specification 31 05 19. Class A if the drainage layer is very sharp and angular; otherwise, Class B.

H. Impermeable Liner: Impermeable, nonbiodigradable, inert to soil chemicals, resistant to molds, mildew, acids and alkalis, and within a pH range of 3 to 12.

I. Rock Riprap: Loose-placed riprap per Utah Chapter APWA Specification 31 37 00.

J. Rock Mulch: Decorative rock at least 1" in diameter.

K. Hardwood Mulch: Well-aged, hardwood mulch placed at least 3" thick.

**3. EXECUTION**

A. Native subgrades under bioretention shall not be compacted, and heavy construction equipment shall not be allowed within the bioretention cell footprint.

B. Install all utilities prior to constructing the bioretention. Avoid BMP footprint when possible.

C. Construction of bioretention cell shall commence after adjacent and tributary areas are stabilized.

D. If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.

I. If underdrain is required, inspect elevations prior to installation to ensure min. 0.5% slope. Follow manufacturer's recommendations for geotextile overlapping around drainage layer.

J. If impermeable liner is required, inspect subgrade and remove items that may puncture.

K. Install soil media in maximum 18" lifts, with only light compaction (85% maximum).

L. Adhere to approved construction SWPPP, including any BMPs required to protect the bioretention cell during construction. If silt or other debris enters the bioretention cell during construction, remove before construction resumes.



provo PUBLIC WORKS

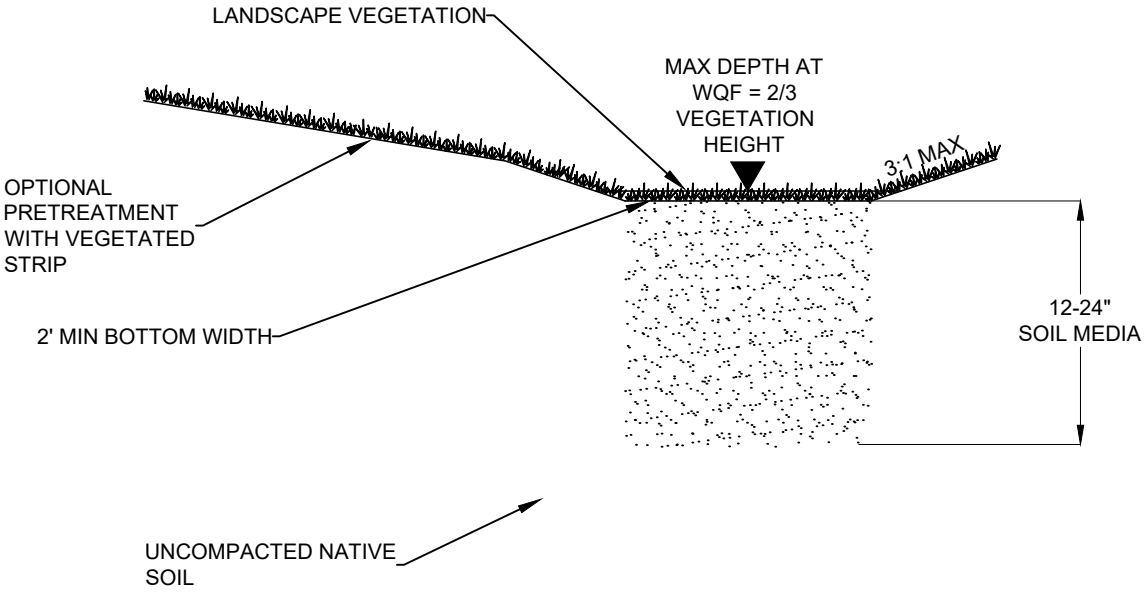
# *BIORETENTION CELL*

STANDARD DETAIL

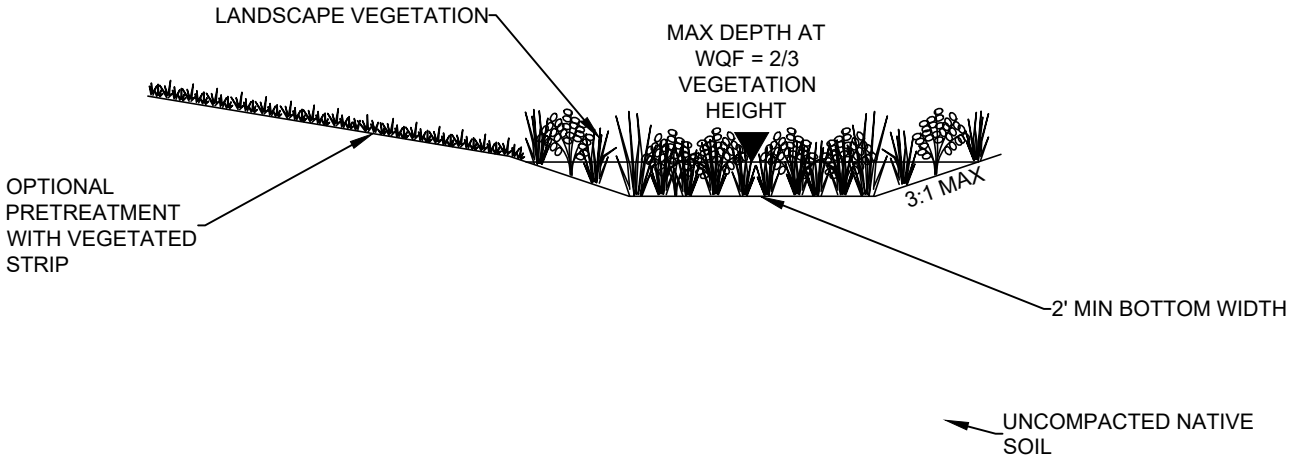
P-302

NOT TO SCALE

REVISED DATE: Sep-2020




BIOFILTRATION AND INFILTRATION




BIOFILTRATION ONLY



PUBLIC WORKS

# *BIOSWALE*

STANDARD DETAIL
P-303

NOT TO SCALE

REVISED DATE: Sep-2020

**1. GENERAL**

A. Submit before use:

A.1. Soil Media: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.

**2. PRODUCTS**

A. Landscape Vegetation: See Section 15.20, Provo City Code for landscape vegetation requirements. Refer to the Utah DEQ's *A Guide to Low Impact Development within Utah* for additional guidance on plant selection within BMPs. Minimum 65% vegetative cover. Wood mulch not allowed in bioswales due to the swale being intended to convey flow with velocity.

B. Soil Media: Native, amended, or engineered soil with organics to support plant growth, maximum 5% clay, minimum 60% gravelly sand or sand, with a long-term (safety factor applied) infiltration rate of at least 1 in/hr at 85% compaction.

C. Rock Mulch: Decorative rock at least 1" in diameter. Size rock to withstand design velocities.

**3. EXECUTION**

A. Bioswales using the bottom section shall have a longitudinal slope of 1% or greater. See design plans for design slope.

B. Bioswale native subgrades shall not be compacted if infiltration is required, and heavy construction equipment shall not be allowed within the bioswale footprint.

C. Install all utilities (including gas and communication/power conduits) prior to constructing the bioswale. Locate with consideration of the bioswale's drainage characteristics.

D. Construction of bioswale shall commence after adjacent and tributary areas are stabilized.

E. For infiltration bioswales: If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.

I. Install soil media in maximum 18" lifts, with only light compaction (85% maximum).

J. Adhere to approved construction SWPPP, including any BMPs required to protect the rain garden during construction. If silt or other debris enters the rain garden during construction, remove before construction resumes.



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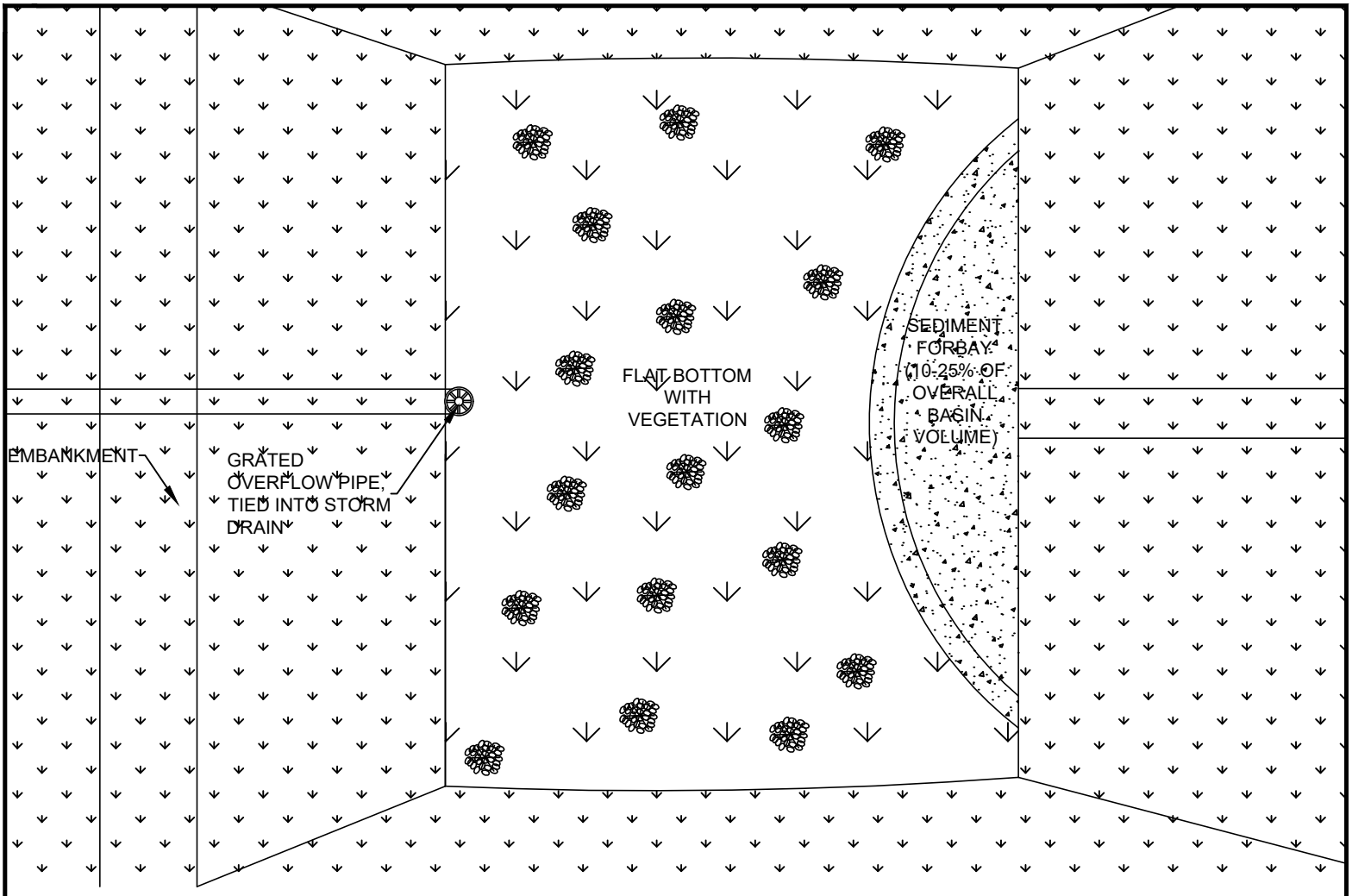
# *BIOSWALE*

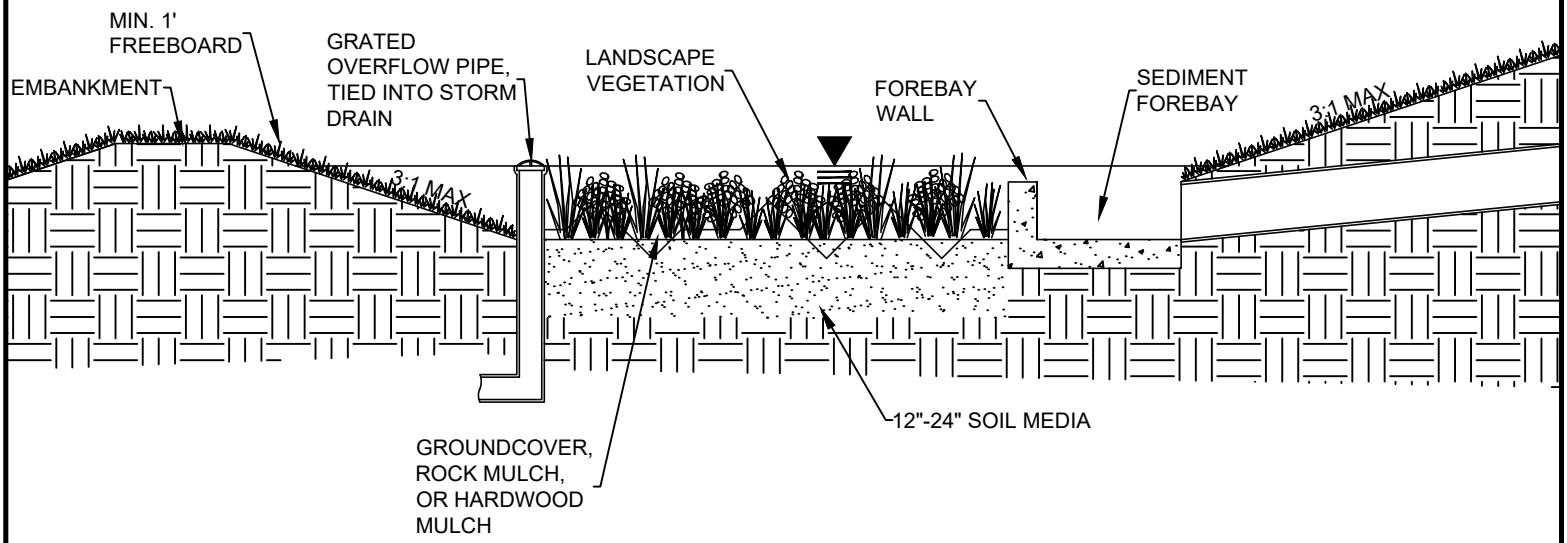
STANDARD DETAIL

P-303

NOT TO SCALE

REVISED DATE: Sep-2020






provo PUBLIC WORKS

# *INFILTRATION BASIN*

STANDARD DETAIL
P-304
NOT TO SCALE
REVISED DATE: Sep-2020

**1. GENERAL**

A. Submit before use:

A.1. Soil Media: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.

A.2. Rock Mulch: Name of supplier and source.

A.3. Hardwood Mulch: Sample and manufacturer's certification that material meets requirements specified below.

**2. PRODUCTS**

A. Landscape Vegetation: See Section 15.20, Provo City Code for landscape vegetation requirements. Refer to the Utah DEQ's A *Guide to Low Impact Development within Utah* for additional guidance on plant selection in BMPs. Minimum 65% vegetative cover.

B. Soil Media: Native, amended, or engineered soil with organics to support plant growth, maximum 5% clay, minimum 60% gravelly sand or sand, with a long-term (safety factor applied) infiltration rate of at least 1 in/hr at 85% compaction.

C. Rock Mulch: Decorative rock at least 1" in diameter.

D. Hardwood Mulch: Well-aged, hardwood mulch placed at least 3" thick.

**3. EXECUTION**

A. Infiltration basin native subgrades shall not be compacted, and heavy construction equipment shall not be allowed within the rain garden footprint.

B. Install all utilities prior to constructing the basin. Avoid BMP footprint when possible.

C. Construction of infiltration basin shall commence after adjacent and tributary areas are stabilized.

D. If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.

I. Install soil media in maximum 18" lifts, with only light compaction (85% maximum).

J. Adhere to approved construction SWPPP, including any BMPs required to protect the rain garden during construction. If silt or other debris enters the rain garden during construction, remove before construction resumes.



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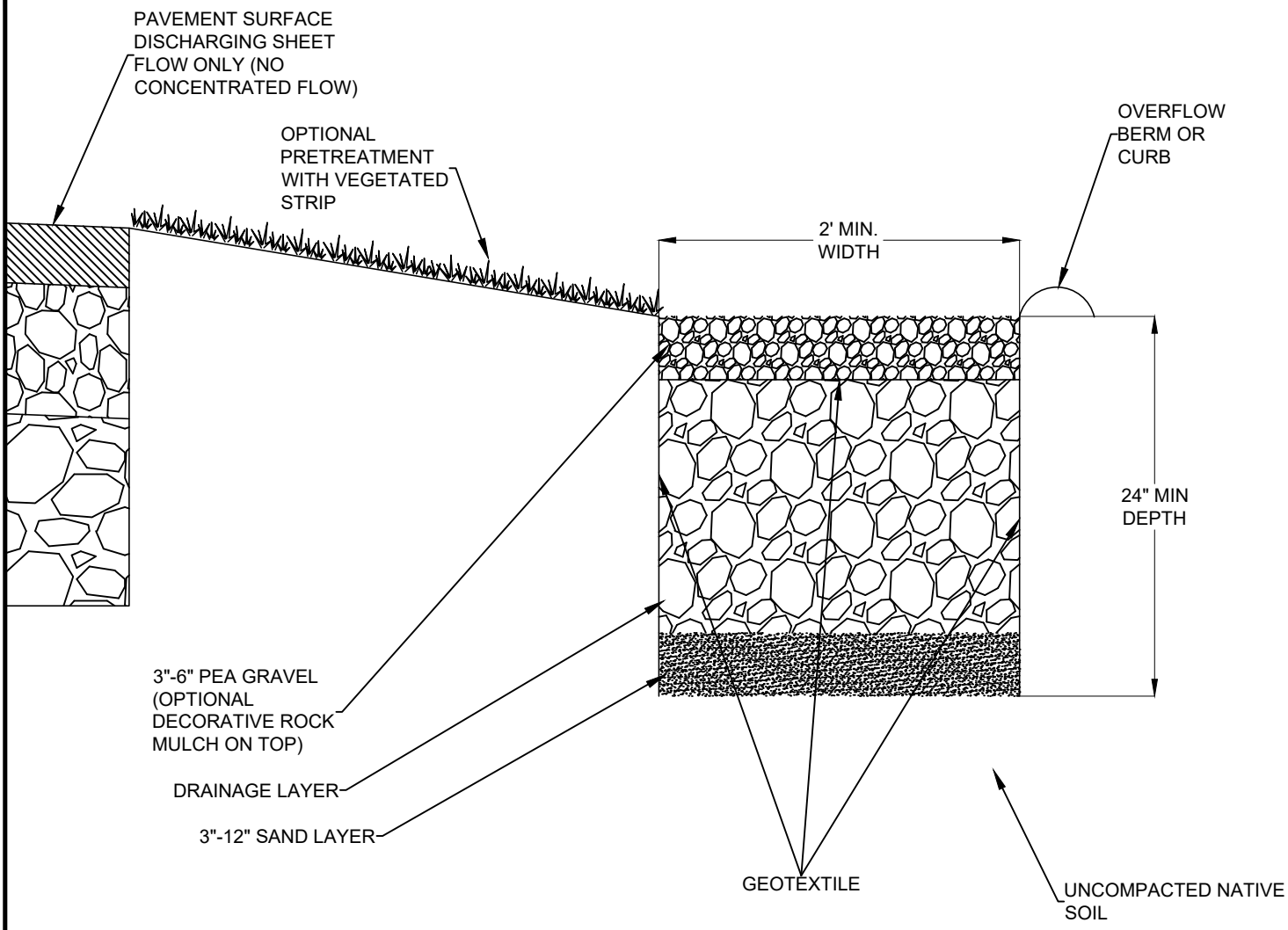
# *INFILTRATION BASIN*

STANDARD DETAIL

P-304

NOT TO SCALE

REVISED DATE: Sep-2020






PUBLIC WORKS

# *INFILTRATION TRENCH*

STANDARD DETAIL
P-305

NOT TO SCALE

REVISED DATE: Sep-2020

**1. GENERAL**

A. Submit before use:

A.1. Sand, Pea Gravel, Sewer Rock: Name of supplier and source.

A.2. Geotextile: Sample and manufacturer's certification that material meets requirements specified below.

**2. PRODUCTS**

A. Sand Layer: Sand per Utah Chapter APWA Specification 31 05 13.

B. Pea Gravel: 3/8" to 1/2" pea gravel per Utah Chapter APWA Specification 31 05 13.

C. Drainage Layer: ASTM Size 3-4 Sewer Rock per Utah Chapter APWA Specification 31 05 13.

D. Geotextile: Drainage Geotextile per Utah Chapter APWA Specification 31 05 19. Class A if the drainage layer is very sharp and angular; otherwise, Class B.

E. Rock Mulch (optional): Decorative rock at least 1" in diameter.

**3. EXECUTION**

A. Native subgrades under trench shall not be compacted, and heavy construction equipment shall not be allowed within the infiltration trench footprint.

B. Install all utilities prior to constructing the trench. Avoid BMP footprint when possible.

C. Construction of infiltration trench shall commence after adjacent and tributary areas are stabilized.

D. If no or only light compaction occurred on native soil during adjacent construction, loosen native subgrade (e.g. scarify top 6-9" of native soil with an excavator bucket). If significant compaction occurred, excavate 1' deep by 1' wide trenches every 6' and backfill with sand.

I. Follow manufacturer's recommendations for geotextile overlapping .

J. Infiltration trenches longitudinal slopes shall be 1% max. No longitudinal slope preferred.

K. Adhere to approved construction SWPPP, including any BMPs required to protect the infiltration trench during construction. If silt or other debris enters the trench during construction, remove before construction resumes.



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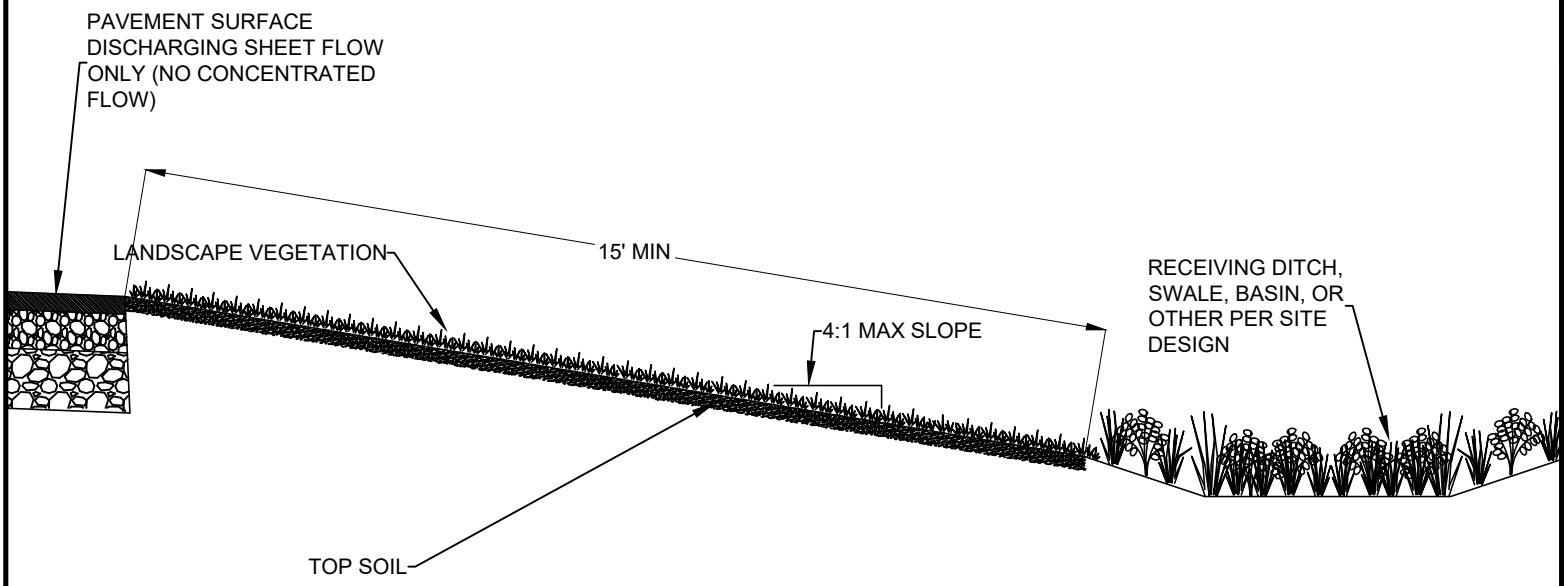
# *INFILTRATION TRENCH*

STANDARD DETAIL

P-305

NOT TO SCALE

REVISED DATE: Sep-2020






PUBLIC WORKS

# *VEGETATED STRIP*

STANDARD DETAIL

P-306

NOT TO SCALE

REVISED DATE: Sep-2020

**1. GENERAL**

A. Submit before use:

A.1. Top Soil: Certification from supplier or testing from native or amended soil, showing material meets requirements specified below.

**2. PRODUCTS**

A. Landscape Vegetation: See Section 15.20, Provo City Code for landscape vegetation requirements. Refer to the Utah DEQ's *A Guide to Low Impact Development within Utah* for additional guidance on plant selection within BMPs. Minimum 80% vegetated cover.

B. Top Soil: Per Utah Chapter APWA Specification 31 05 13.

**3. EXECUTION**

A. Vegetated strips shall have a maximum slope of 4:1, and minimum length of 15'. See design plans for design slope and length.

B. Install all utilities (including gas and communication/power conduits) prior to constructing the vegetated strip. Locate with consideration of the vegetated strip and receiving water body's drainage characteristics.

C. Construction of vegetated strip shall commence after adjacent and tributary areas are stabilized.

D. Adhere to approved construction SWPPP, including any BMPs required to protect the rain garden during construction. If silt or other debris enters the rain garden during construction, remove before construction resumes.



provo PUBLIC WORKS

# *VEGETATED STRIP*

STANDARD DETAIL

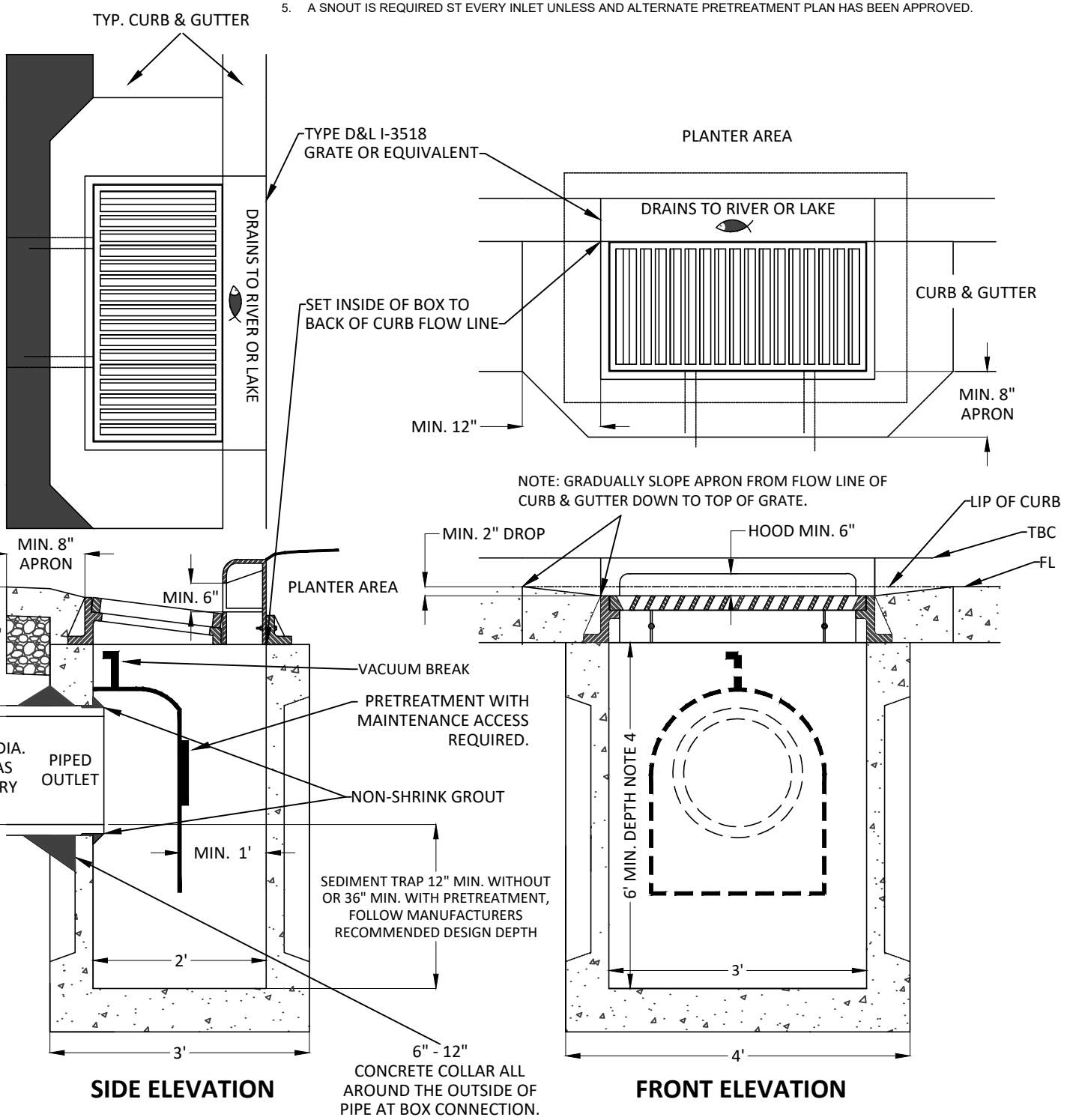
P-306

NOT TO SCALE

REVISED DATE: Sep-2020

NOTE:

1. FOR GRATE & FRAME DETAILS SEE D.&L. SUPPLY CATALOG #I-3518 OR EQUIVALENT.
2. REQUIRED STAMPED HOOD, "DRAINS TO RIVER OR LAKE" WITH FISH LOGO.
3. ALL BOXES AND FRAMES MUST SUPPORT A HS-20 LOADING.
4. REFER TO THE APPROVED PROJECT PLANS FOR PIPE SIZE, LOCATION, SEDIMENT DEPTH, PRETREATMENT AND OTHER STRUCTURE DESIGN REQUIREMENTS.
   - 4.1. 15" DIA. PIPE LATERAL MIN. BOX INSIDE DEPTH IS 6 FEET AND FOLLOWS PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
   - 4.2. 18" DIA. PIPE AS NECESSARY. BOX INSIDE DEPTH IS 7 FEET AND FOLLOWS PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
   - 4.3. *24" DIA. SPECIAL APPROVAL IS REQUIRED IN ADDITION TO INLET STRUCTURE DESIGN. THE MIN. DEPTH FROM OUT LET PIPE FLOW LINE TO FLOOR OF INLET BOX IS 6.0 FEET
5. A SNOUT IS REQUIRED ST EVERY INLET UNLESS AND ALTERNATE PRETREATMENT PLAN HAS BEEN APPROVED.




SHEET 1 OF 1

PUBLIC WORKS

# PRE-CAST CURB FACE AND INLET BOX

STANDARD DETAIL

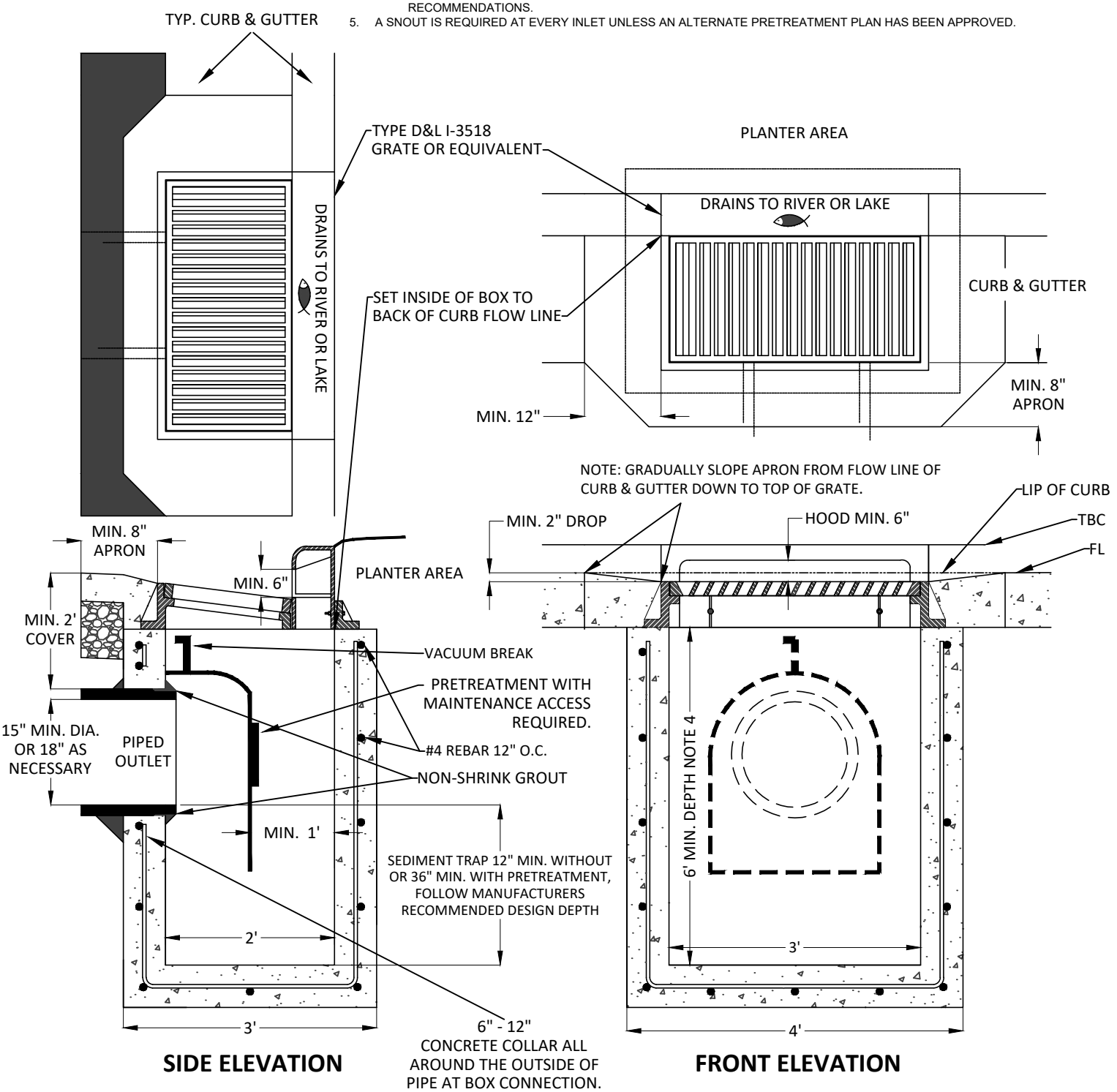
P-315a

NOT TO SCALE

REVISED DATE: 09/26/19

NOTE:

1. FOR GRATE & FRAME DETAILS SEE D.&L. SUPPLY CATALOG #I-3518 OR EQUIVALENT.
2. REQUIRED STAMPED HOOD, "DRAINS TO RIVER OR LAKE" WITH FISH LOGO.
3. ALL BOXES AND FRAMES MUST SUPPORT A HS-20 LOADING.
4. REFER TO THE APPROVED PROJECT PLANS FOR PIPE SIZE, LOCATION, SEDIMENT DEPTH, PRETREATMENT AND OTHER STRUCTURE DESIGN REQUIREMENTS.
   - 4.1. 15" DIA. PIPE LATERAL, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 3.75 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS. MIN. BOX INSIDE DEPTH IS 6 FEET.
   - 4.2. 18" DIA. PIPE AS NECESSARY, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 4.5 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS. MIN. BOX INSIDE DEPTH IS 7 FEET.
   - 4.3. *24" DIA. SPECIAL APPROVAL IS REQUIRED IN ADDITION TO INLET STRUCTURE DESIGN. THE MINIMUM DEPTH FROM OUT LET PIPE FLOW LINE TO FLOOR OF INLET BOX IS 6.0 FEET. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
5. A SNOUT IS REQUIRED AT EVERY INLET UNLESS AN ALTERNATE PRETREATMENT PLAN HAS BEEN APPROVED.




SHEET 1 OF 1

PUBLIC WORKS

# CAST-IN-PLACE CURB FACE AND INLET BOX

STANDARD DETAIL
P-315b

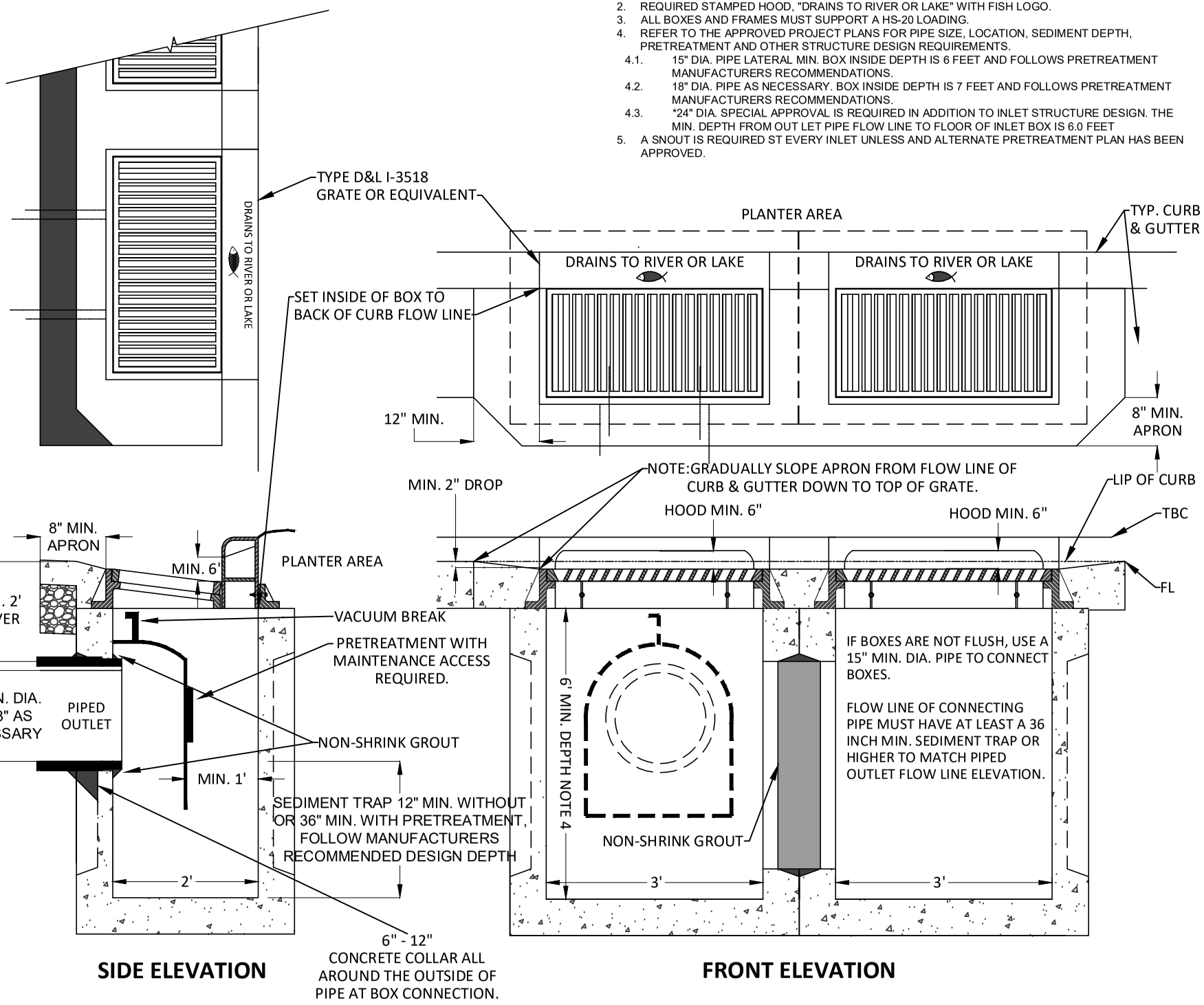
NOT TO SCALE

REVISED DATE: 09/26/19

PROVO PUBLIC WORKS

# DOUBLE PRE-CAST CURB FACE AND INLET BOX

NOTE:
1. FOR GRATE & FRAME DETAILS SEE D.&L. SUPPLY CATALOG #I-3518 OR EQUIVALENT.
2. REQUIRED STAMPED HOOD, "DRAINS TO RIVER OR LAKE" WITH FISH LOGO.
3. ALL BOXES AND FRAMES MUST SUPPORT A HS-20 LOADING.
4. REFER TO THE APPROVED PROJECT PLANS FOR PIPE SIZE, LOCATION, SEDIMENT DEPTH, PRETREATMENT AND OTHER STRUCTURE DESIGN REQUIREMENTS.
   - 4.1. 15" DIA. PIPE LATERAL MIN. BOX INSIDE DEPTH IS 6 FEET AND FOLLOWS PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
   - 4.2. 18" DIA. PIPE AS NECESSARY. BOX INSIDE DEPTH IS 7 FEET AND FOLLOWS PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
   - 4.3. *24" DIA. SPECIAL APPROVAL IS REQUIRED IN ADDITION TO INLET STRUCTURE DESIGN. THE MIN. DEPTH FROM OUT LET PIPE FLOW LINE TO FLOOR OF INLET BOX IS 6.0 FEET
5. A SNOUT IS REQUIRED ST EVERY INLET UNLESS AND ALTERNATE PRETREATMENT PLAN HAS BEEN APPROVED.




**SIDE ELEVATION**

**FRONT ELEVATION**

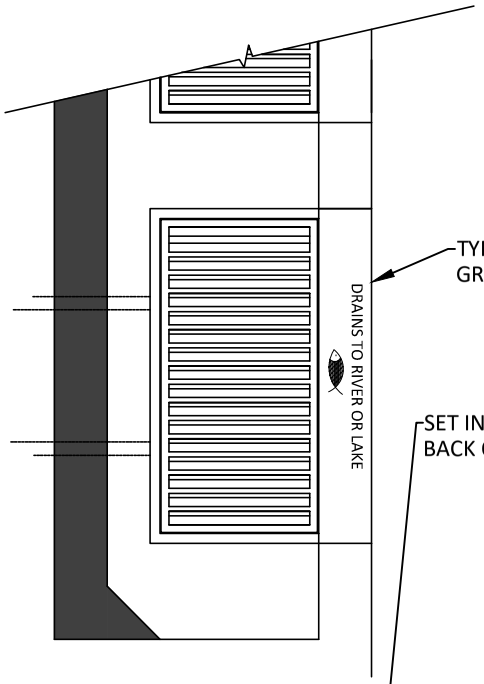
STANDARD DETAIL
**P-315c**
NOT TO SCALE
REVISED DATE: 09/26/19

SHEET 1 OF 1

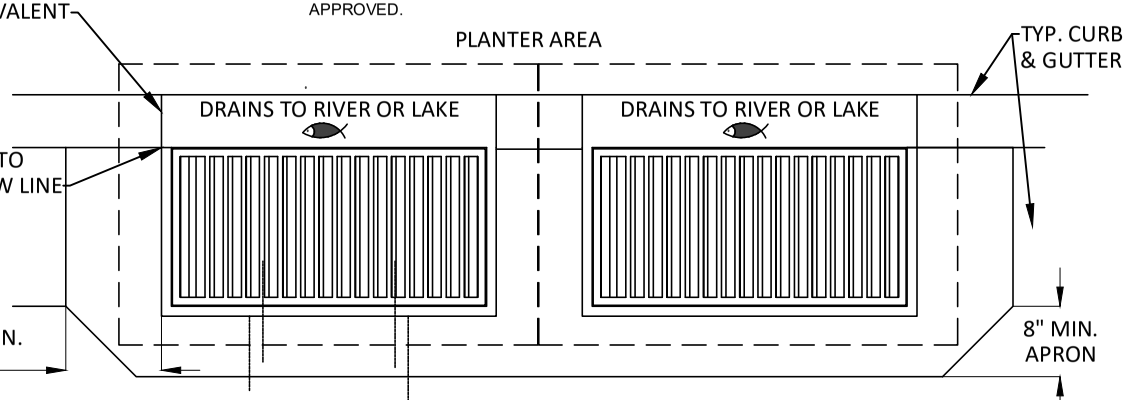
provo
PUBLIC WORKS

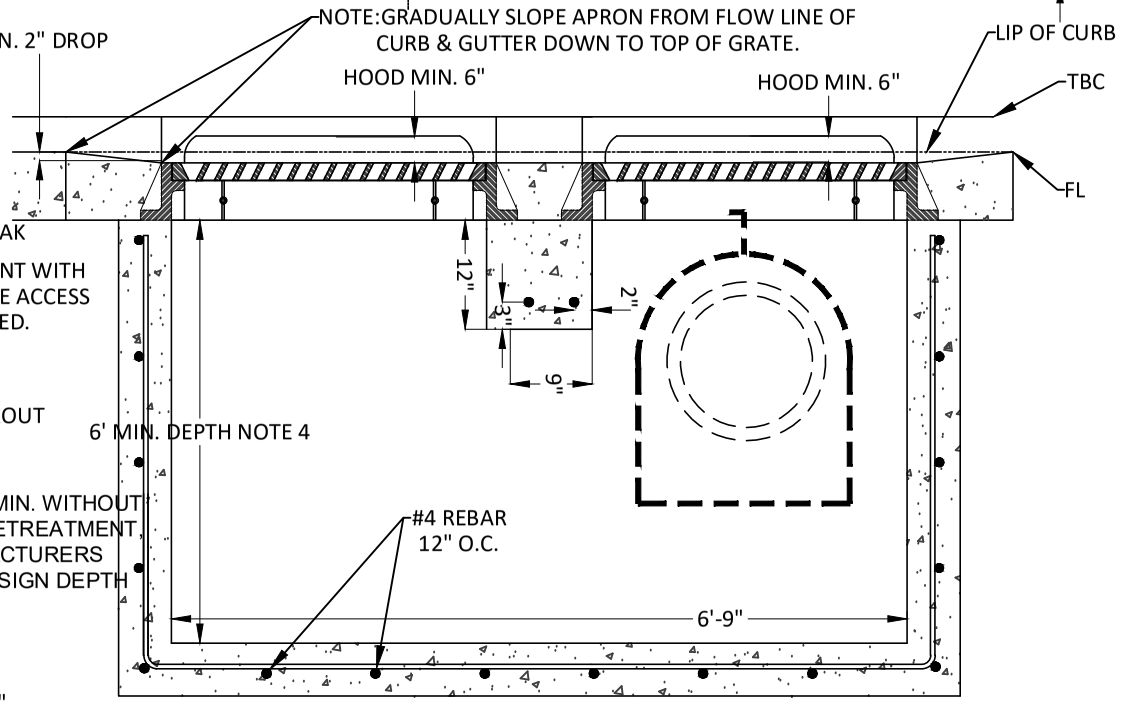
# DOUBLE PRE-CAST CURB FACE AND INLET BOX

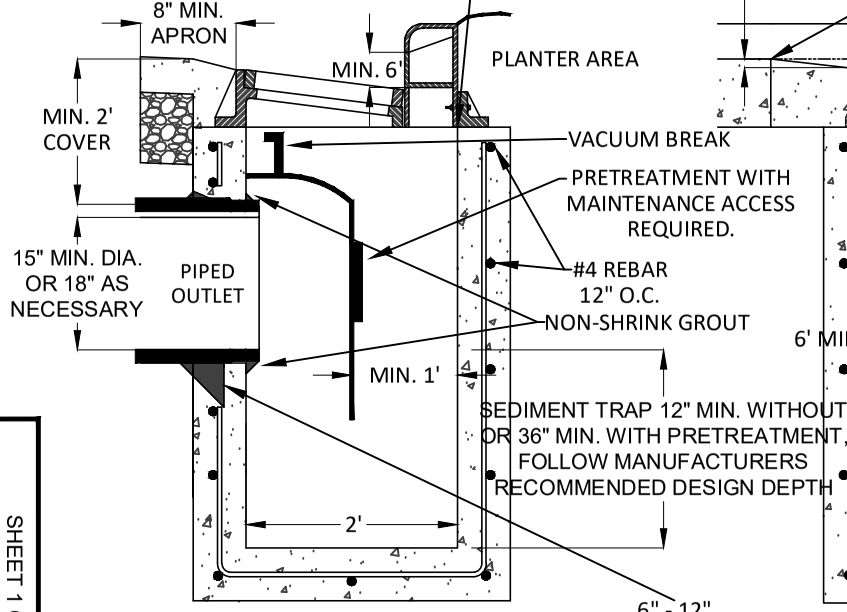
NOTE:
1. FOR GRATE & FRAME DETAILS SEE D.&L. SUPPLY CATALOG #I-3518 OR EQUIVALENT.
2. REQUIRED STAMPED HOOD, "DRAINS TO RIVER OR LAKE" WITH FISH LOGO.
3. ALL BOXES AND FRAMES MUST SUPPORT A HS-20 LOADING.
4. REFER TO THE APPROVED PROJECT PLANS FOR PIPE SIZE, LOCATION, SEDIMENT DEPTH, PRETREATMENT AND OTHER STRUCTURE DESIGN REQUIREMENTS.
   - 4.1. 15" DIA. PIPE LATERAL, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 3.75 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS. MIN. BOX INSIDE DEPTH IS 6 FEET.
   - 4.2. 18" DIA. PIPE AS NECESSARY, MINIMUM DEPTH FROM OUTLET OF PIPE FLOW LINE TO FLOOR OF INLET BOX IS 4.5 FEET OR DEEPER. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS. MIN. BOX INSIDE DEPTH IS 7 FEET.
   - 4.3. *24" DIA. SPECIAL APPROVAL IS REQUIRED IN ADDITION TO INLET STRUCTURE DESIGN. THE MINIMUM DEPTH FROM OUT LET PIPE FLOW LINE TO FLOOR OF INLET BOX IS 6.0 FEET. FOLLOW PRETREATMENT MANUFACTURERS RECOMMENDATIONS.
5. A SNOUT IS REQUIRED AT EVERY INLET UNLESS AN ALTERNATE PRETREATMENT PLAN HAS BEEN APPROVED.




TYPE D&L I-3518 GRATE OR EQUIVALENT



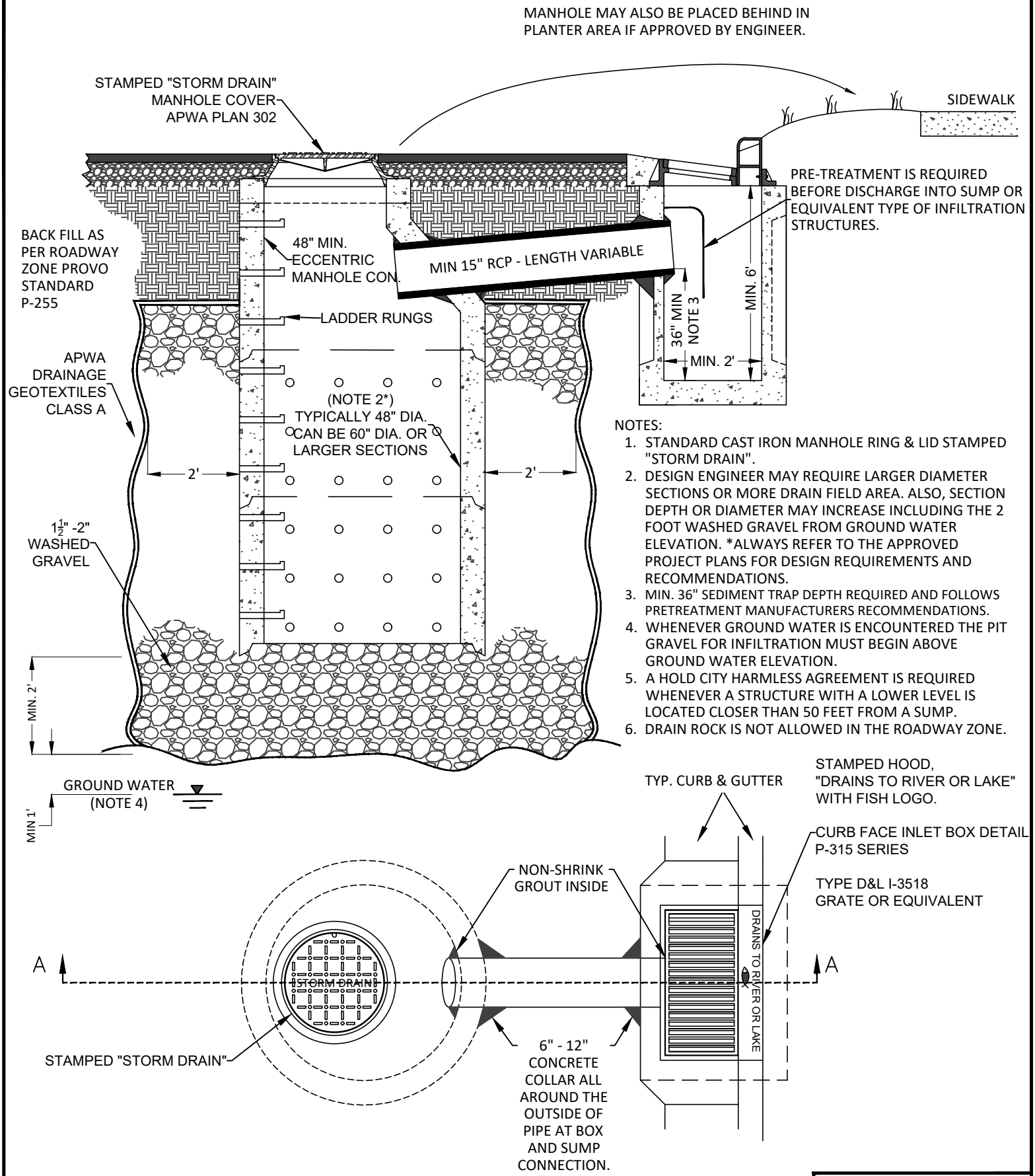




**SIDE ELEVATION**

**FRONT ELEVATION**

STANDARD DETAIL
**P-315d**
NOT TO SCALE
REVISED DATE: 09/26/19

SHEET 1 OF 1




SHEET 1 OF 1

PUBLIC WORKS

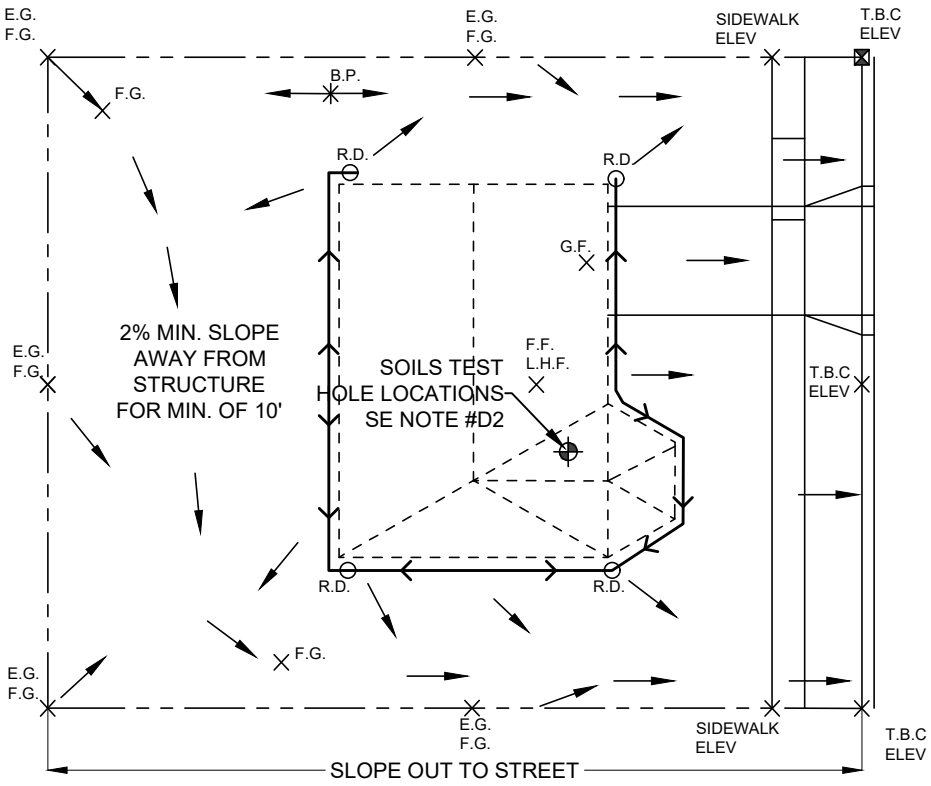
# CURB AND GUTTER - DROP INLET AND SUMP

STANDARD DETAIL
P-375

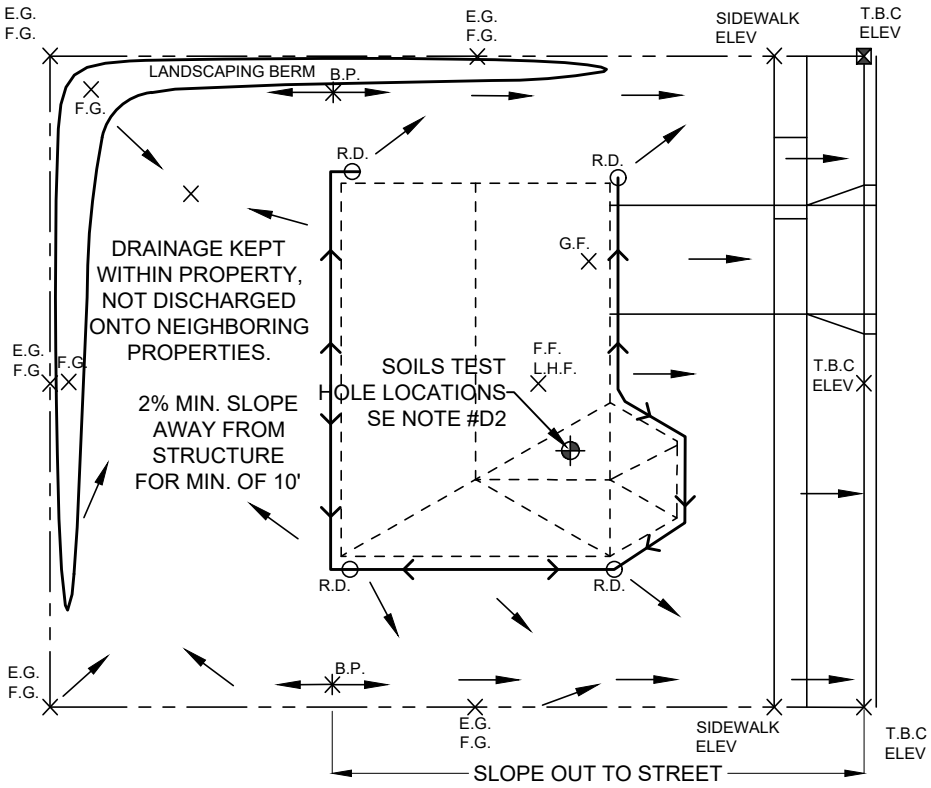
NOT TO SCALE

REVISED DATE: 10/08/18

## TYPE 1 LOT




## TYPE 2 LOT




LEGEND

- B.P. - BREAK POINT
- T.B.C. - TOP BACK OF CURB
- G.F. - GARAGE FLOOR
- L.H.F. - LOWEST HABITABLE FLOOR
- F.F. - FINISH FLOOR
- F.G. - FINISH GRADE
- E.G. - EXISTING OR PRE-CONSTRUCTION GRADE
- FLOW DIRECTION
- BENCH MARK (T.B.C. OR PERMANENT FEATURE)
- R.D. - ROOF DRAIN

REFER TO SHEET P-390 2 OF 2 FOR ADDITIONAL NOTES

REFERE TO SHEET P-319 FOR LOT GRADING PORFILES

PUBLIC WORKS

# *LOT GRADING PLAN*

SHEET 1 OF 2

STANDARD DETAIL

P-390

NOT TO SCALE

REVISED DATE: 10/8/19

***Lot Grading Plan Notes***

1. **GENERAL**
   A. Per Section 18.03.080, Provo City Code, it shall be the responsibility of the property owner to ensure that the private drainage generated within the private property is adequately handled and does not create a nuisance on neighboring properties. Provide a site grading plan with existing and final elevation information.
2. **PRODUCT (not used)**
3. **EXECUTION**
   A. Drain as much surface flows, especially hard (impervious) surfaces, as possible out to the street fronting the lot. This includes the following; all front of building, as much roof as possible, driveway, walks, and so forth. Any areas unable to be sloped to the street shall be addressed within own lot boundaries and not discharged into any neighboring properties.
   B. Garage floor (G.F.) shall follow the requirements detailed in Provo standard drawing P-394.
   C. Identify existing spot elevations for at least 5-6 different locations, especially along the property boundary to ensure adequate tie0in to neighboring properties. Provide final grade elevations for same spots, significant grade changes, and other locations necessary to show intended grading design.
   D. Any time there is a lower level in a structure a soils engineer letter may be requested to determine the ground water elevations relative to the basement floor. Refer to the Storm Drainage Systems Design and Management Manual for requirements for lowest habitable floor elevations in relation to groundwater. Identify all test hole locations and depths relative to the benchmark (i.e. top of curb at property corner, or other permanent feature).



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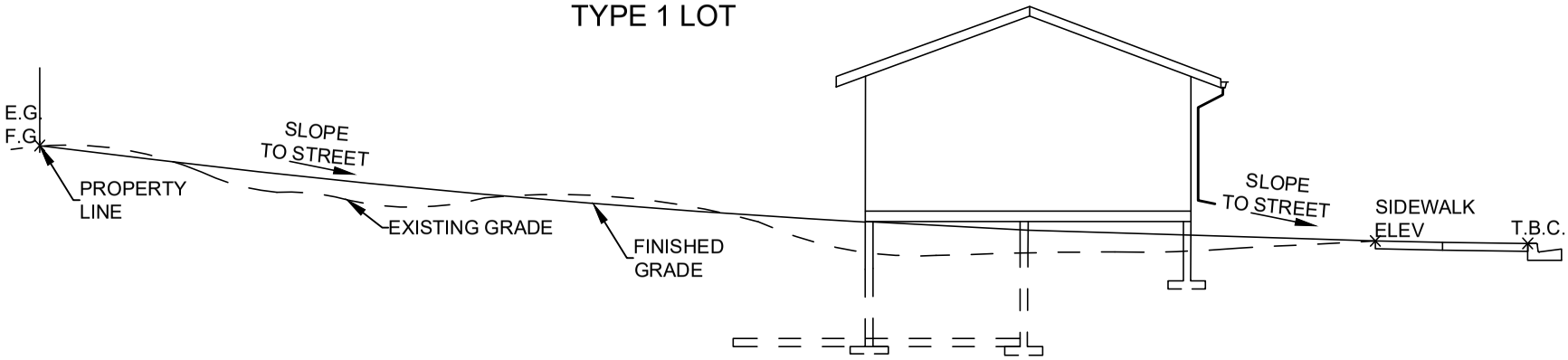
# *LOT GRADING PLAN*

STANDARD DETAIL
P-390
NOT TO SCALE
REVISED DATE: 10/08/19

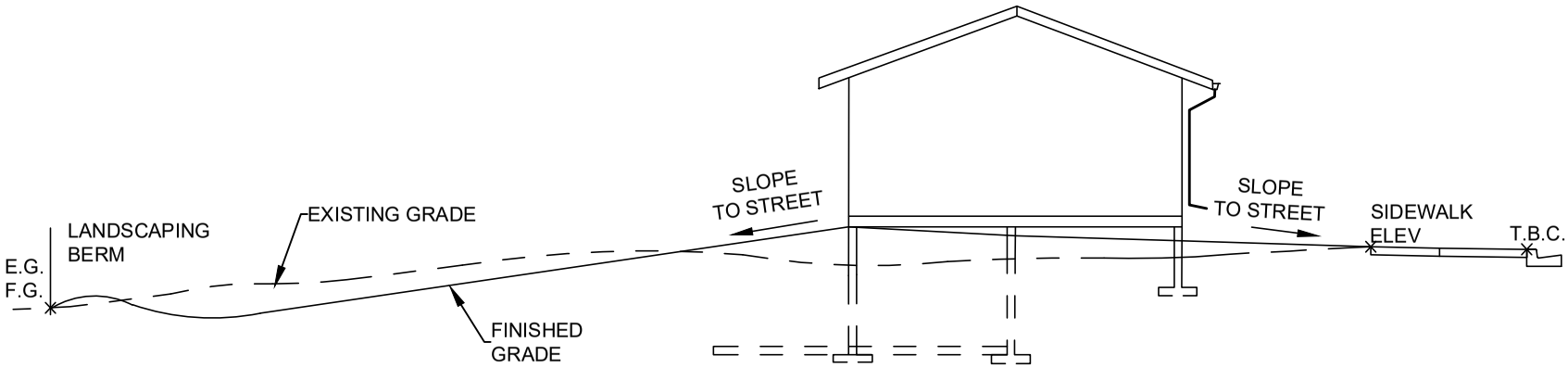
PROVO PUBLIC WORKS

# LOT GRADING PROFILES

## TYPE 1 LOT




## TYPE 2 LOT

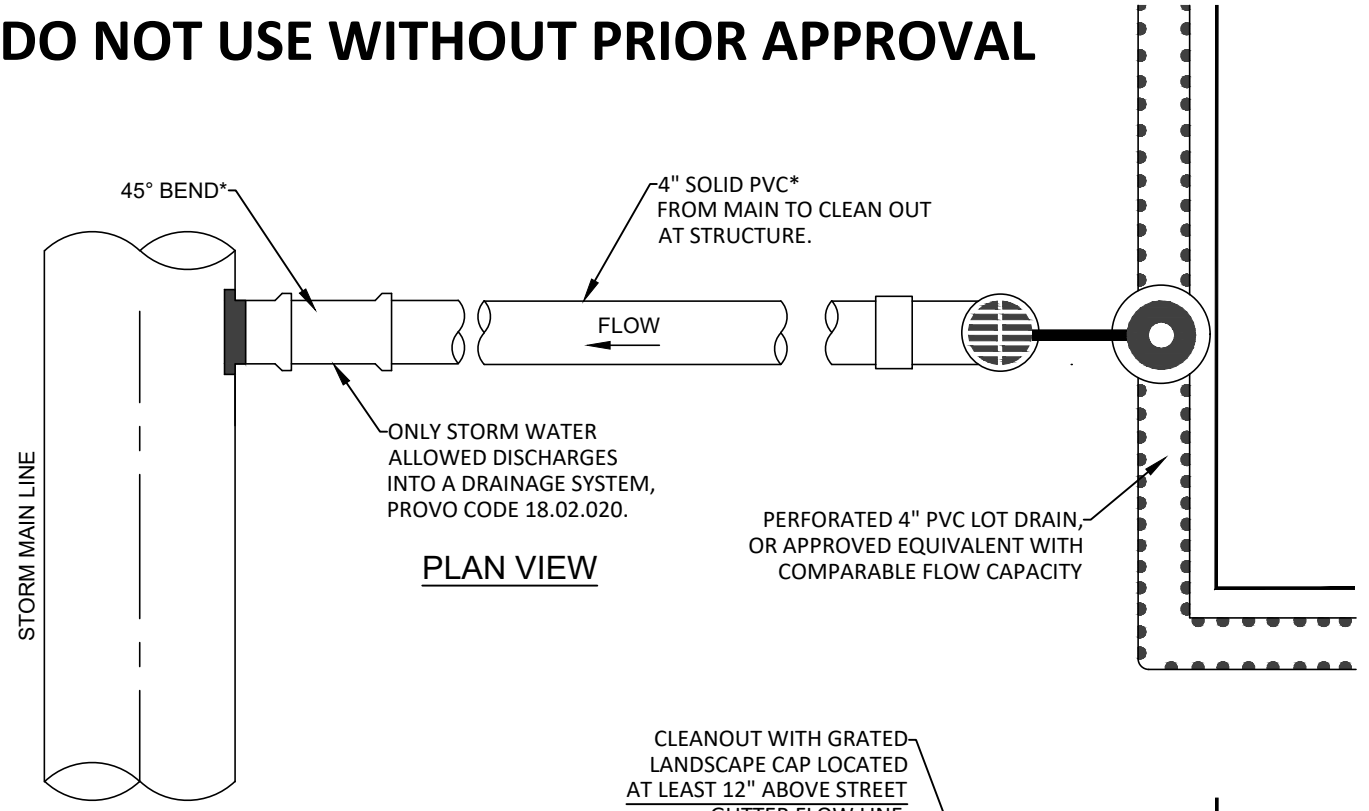



PLAN REQUIREMENTS

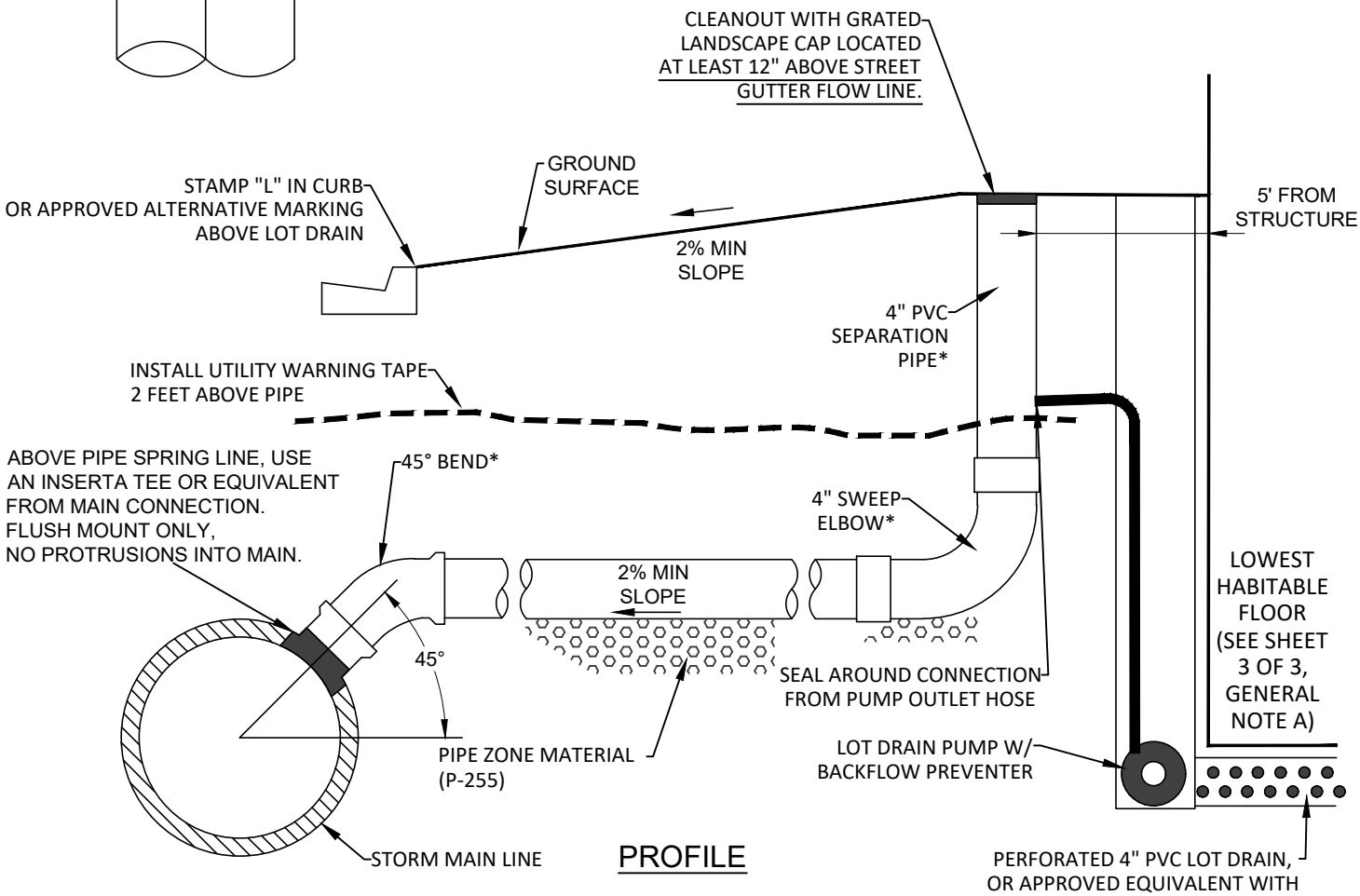
1. Existing and proposed grades (label and extend past property lines).
2. Elevations on key structural points, walls, slabs, driveways, garage, etc.
3. Retaining wall locations, and engineered design if required.
4. Other requirements as per geotechnical investigation reports if required.

STANDARD DETAIL
P-391
NOT TO SCALE
REVISED DATE: 10/8/19

# - DO NOT USE WITHOUT PRIOR APPROVAL




PLAN VIEW




PROFILE

* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING

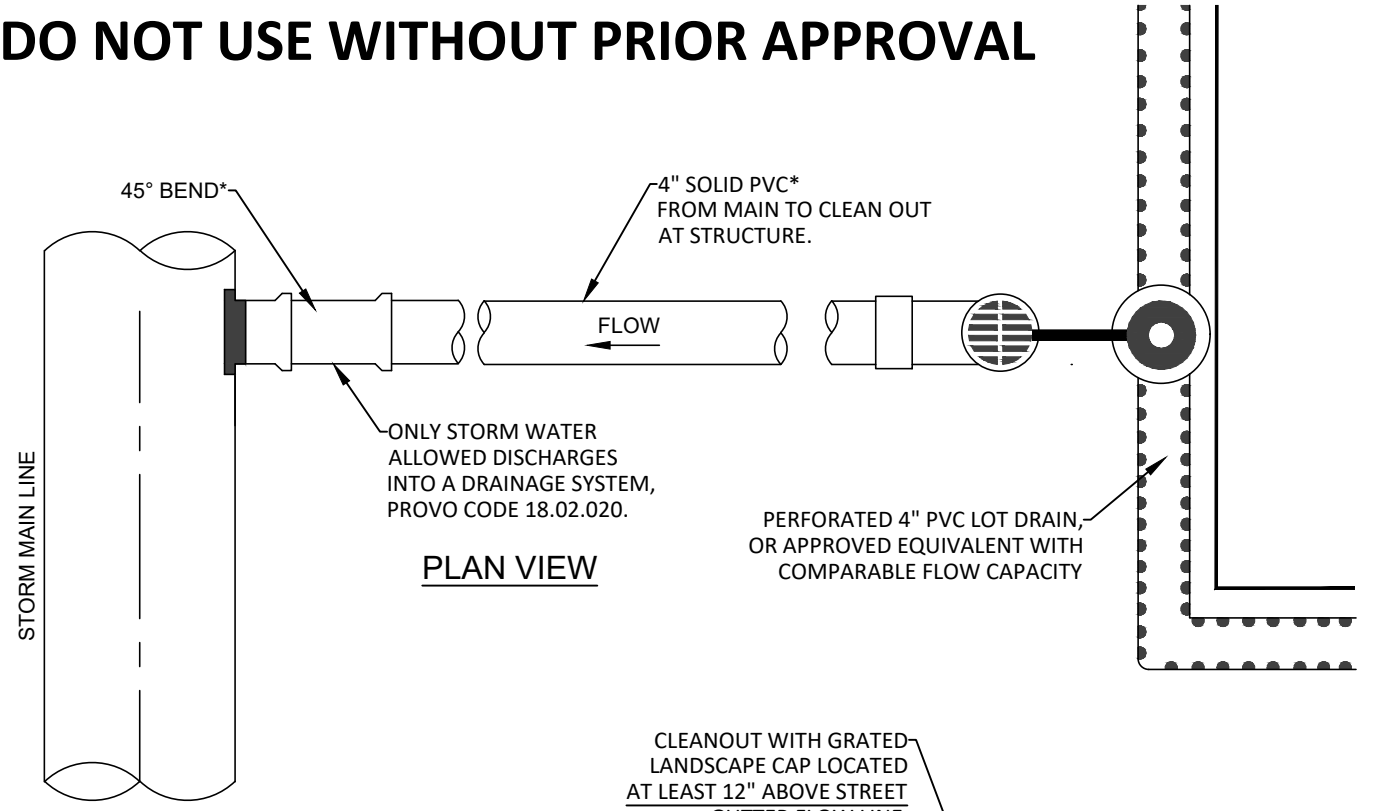


provo PUBLIC WORKS

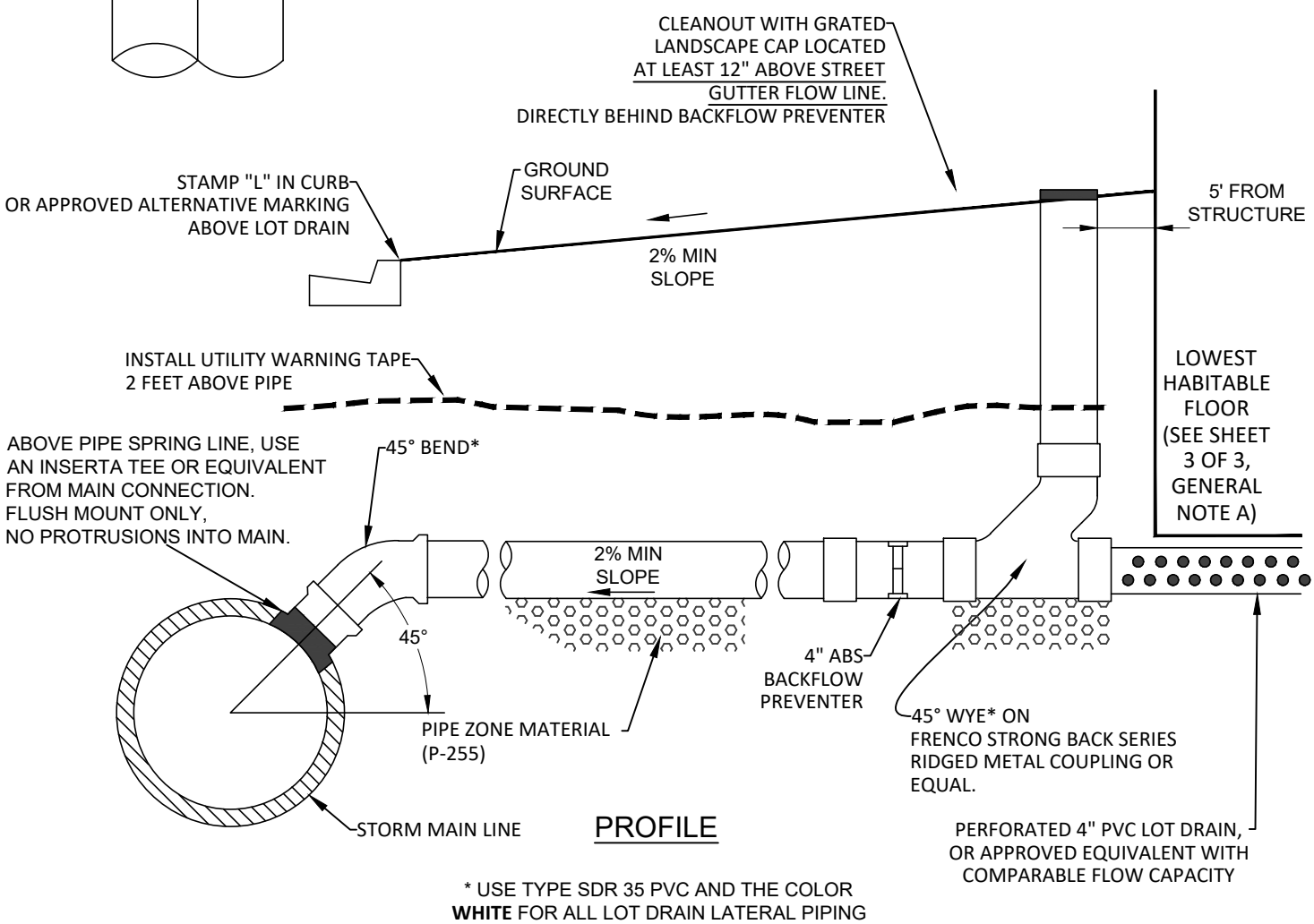
# *LOT DRAIN LATERAL WITH DRAIN PUMP*

STANDARD DETAIL
P-392a
NOT TO SCALE
REVISED DATE: 10/07/2019

# - DO NOT USE WITHOUT PRIOR APPROVAL




PLAN VIEW




PROFILE

* USE TYPE SDR 35 PVC AND THE COLOR **WHITE** FOR ALL LOT DRAIN LATERAL PIPING



provo PUBLIC WORKS

# *LOT DRAIN LATERAL WITH GRAVITY FLOW*

STANDARD DETAIL
P-392b
NOT TO SCALE
REVISED DATE: 10/07/19

**1. GENERAL**

A. Standard Drawings P-392a and P-392b may be used under the following conditions:

A.A. Lot drains are sometimes required by IBC to drain backfilled areas around buildings in areas with tight native soils. Lot drains are not intended to drain high groundwater. The lowest habitable floor is recommended to be a minimum of 4 feet above groundwater elevations. Provo City may require a site specific geotechnical report identifying groundwater elevations and minimum FF elevations, to be reviewed and approved by the City Engineer or their designee.

A.B. Standard Drawing P-392a - The top of the landscape grate on the separation pipe shall be a minimum of 12 inches above the gutter flow line.

A.C. Standard Drawings P-392b - This drawing can only be used if (a) the storm drain main is designed to convey the City design storm with the HGL below top of pipe, AND (b) the lowest habitable floor is a minimum of 2 feet above the top of storm drain main at the lot drain connection. Otherwise, P-392a must be used.

B. It is unlawful for any person to cause or allow the discharge into a water body or storm drainage system, either directly or indirectly, of any substance not comprised entirely of storm water, refer to Provo City code 18.02.020 for prohibited discharges.

C. Minimum distance between lot drain connections to the storm main shall be 4 feet.

D. Minimum required grade of lot drain is 2%.

E. Clean-outs shall be installed at a minimum every 100 feet and wherever there is a change in slope or direction of pipe lateral and within 5 feet from structure.

F. If building construction is not imminent, terminate at a clean-out a minimum of 12 feet inside the property line. Cap and mark white for future connection.

**2. PRODUCT**

A. Lot drains shall use type SDR 35 PVC. The color of the pipe and fittings shall be white.

B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.

C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.

D. Pipe Zone: Gravel, Provo Section 32 05 13M.

E. Lot Drain Mainline Connections: 45 degree bend and Inserta Tee or equivalent.

**3. EXECUTION**

A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.

B. Core and remove plug from storm main. Do not break into storm main for connection.

C. Use an Inserta Tee or equivalent for a water tight connection at storm main. Protrusion into storm main pipe past inner wall is not allowed.

D. CONTRACTOR shall have ALL connections inspected and surveyed by Provo City before backfilling.

E. Provide backfill and surface restoration per Plan P-255.



provo PUBLIC WORKS

# *LOT DRAIN LATERAL AND CLEAN-OUT*

STANDARD DETAIL

P-392c

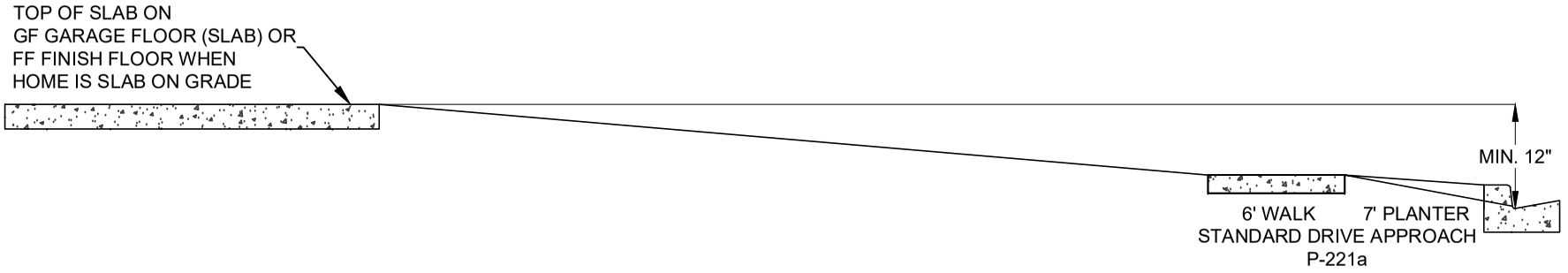
NOT TO SCALE

REVISED DATE: 10/07/19

PUBLIC WORKS

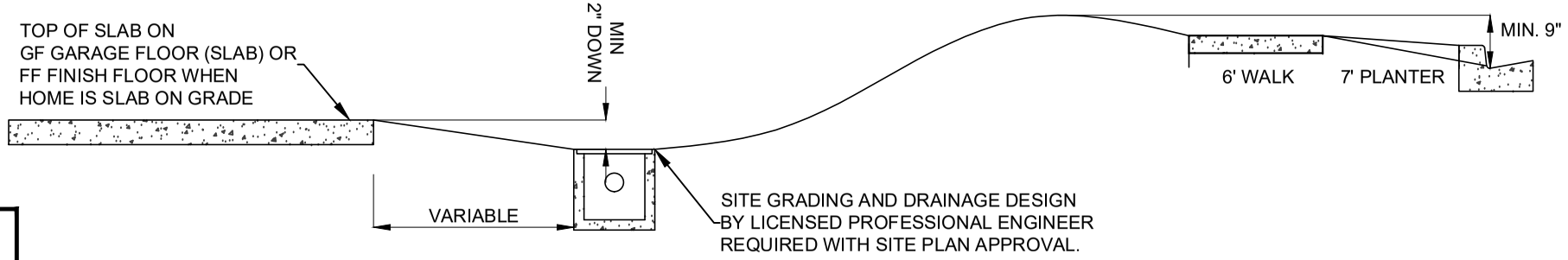
# SITE DRAINAGE PROFILES

## OPTION 1
## (STANDARD)



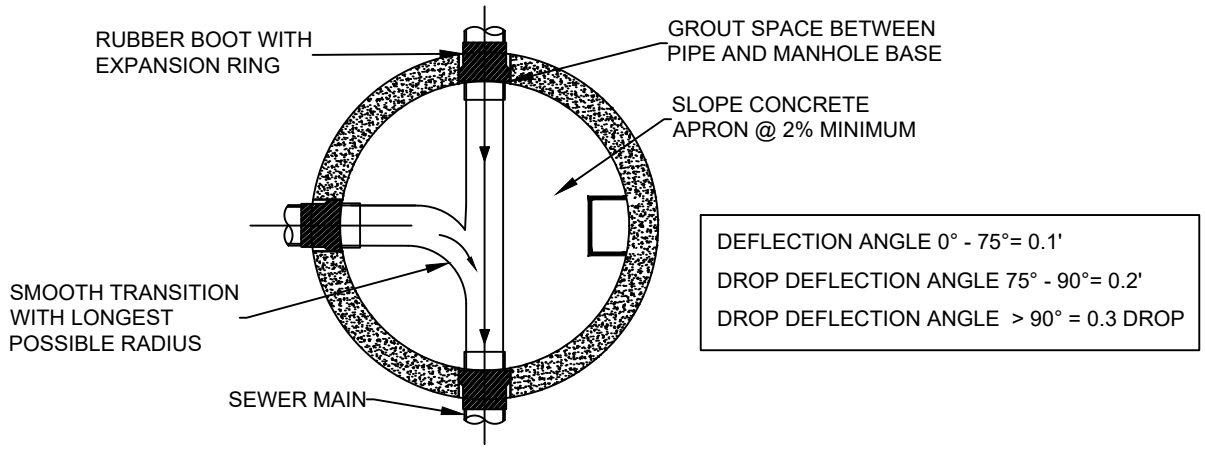

FOR EXISTING DRIVE APROACH TYPES,
REFER TO THE APPROPRIATE PROVO CITY
P-221 SERIES FOR DETAILS AND NOTES

## OPTION 2
## (ONLY FOR USE WHEN APPROVED BY CITY ENGINEER OR THEIR DESIGNEE WITH A SITE PLAN APPROVAL.)

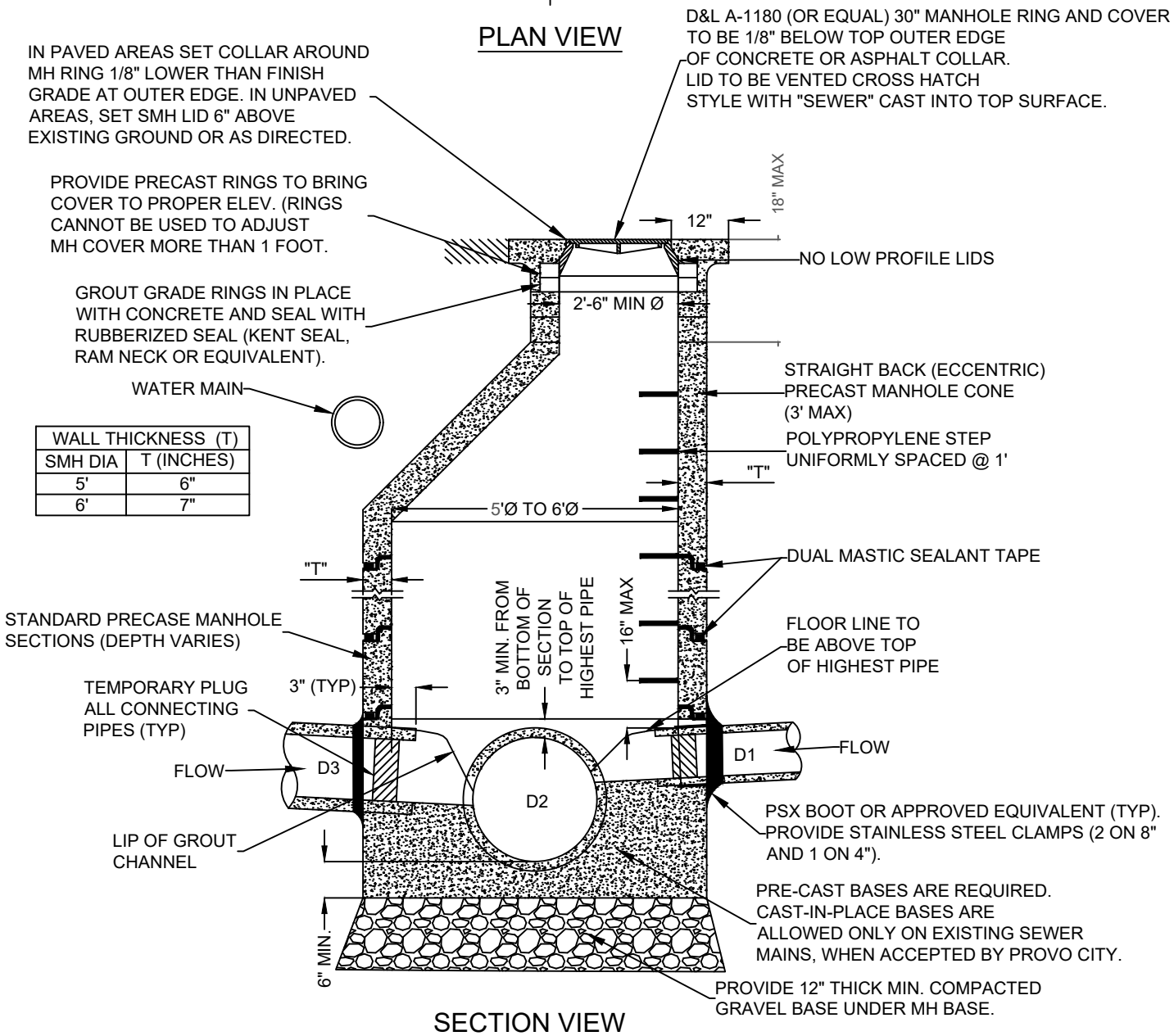



STANDARD DETAIL
P-394
NOT TO SCALE
REVISED DATE: 10/07/2019

SHEET 1 OF 1




PLAN VIEW




| WALL THICKNESS (T) | |
|---|---|
| SMH DIA | T (INCHES) |
| 5' | 6" |
| 6' | 7" |

SECTION VIEW



provo PUBLIC WORKS

# STANDARD MANHOLE

STANDARD DETAIL
P-411
NOT TO SCALE
REVISED DATE: 10/24/22

Trench Backfill & Surface Restoration

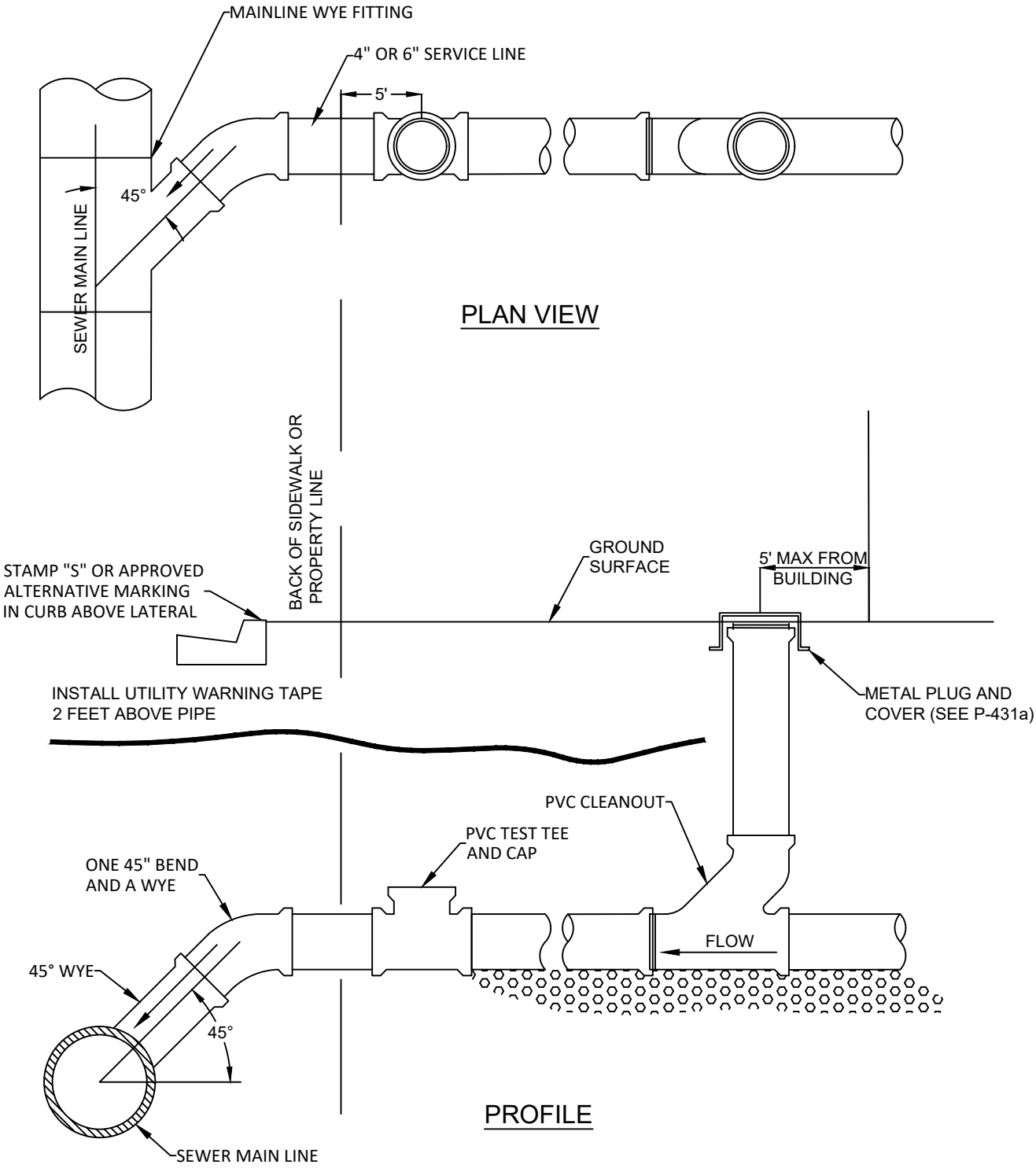
1. GENERAL
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping to construct connections.
   B. If grade allows, inverts of D1 and D3 shall match the 0.75 depth point of D2. Otherwise as approved by Provo City.
   C. Manhole Size
      C.A. Manhole diameter is determined by design and varies from 5 feet to 6 feet.
      C.B. Diameter is 6 feet minimum: For sewers over 24 inches, or when directed by Provo City.
   D. Standards apply to private and public systems.
2. PRODUCT
   A. Gravel: Use 1 inch minus gravel.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Cone and Wall Sections: Conform to ASTM C-478.
   E. Riser and Reducing Riser: ASTM C 478
   F. Grout: 2 parts sand to 1 part cement mortar, ASTM C 1329.
   G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. EXECUTION
   A. Sewer rock or a granular backfill borrow in a geotextile wrap.
   B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   C. Poured in Place: If manhole is to be poured in place, follow the same pattern as shown except use 10 inch minimum wall and base thickness.
   D. Invert Cover: During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan P-412.
   E. Pipe Connections: Grout around all pipe openings.
   F. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
   G. Joints: Place flexible dual mastic sealant tape in all riser joints. Finish with grout and ensure manhole is watertight.
   H. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   I. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
   J. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Adhere to all backfilling and surface restoration requirements included in Plan P-255.
   K. After all grading around manhole has been completed and final surfacing is in place, remove debris and temporary plugs.



provo PUBLIC WORKS

# STANDARD MANHOLE

STANDARD DETAIL
P-411
NOT TO SCALE
REVISED DATE: 10/24/22




SHEET 1 OF 3

PUBLIC WORKS

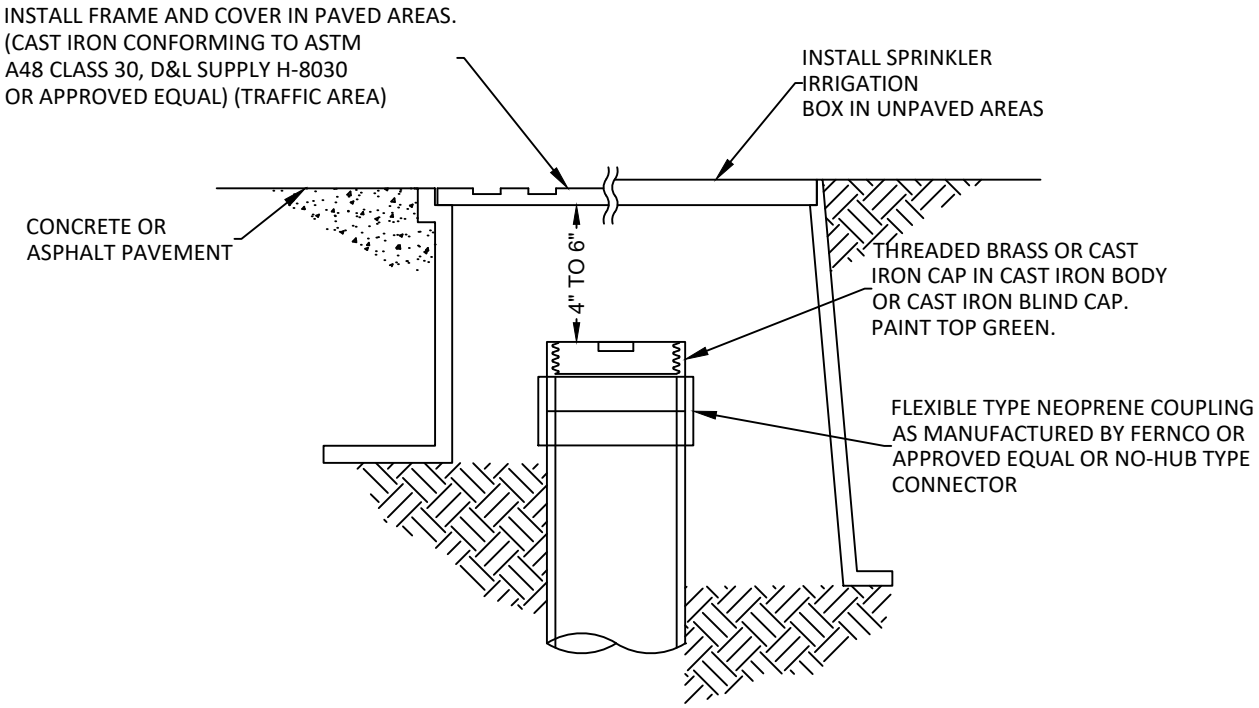
# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL

P-431a

NOT TO SCALE

REVISED DATE: 09/26/19






PUBLIC WORKS

# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL
P-431b

NOT TO SCALE

REVISED DATE: 11/10/16

1. GENERAL
   A. Laterals shall be 4-inch diameter minimum. A 6-inch or larger lateral is required for buildings with more than five equivalent residential units with a separate 4-inch lateral off the 6-inch to each unit.
   B. Provide separate laterals for each unit. Provo Ciy approval required for all combined sewer laterals.
   C. Minimum distance between 4-inch lateral connection shall be 4 feet.
   D. Required grade of sewer laterals (ABS and PVC pipe) is 2%. Where it is impractical to run the sewer laterals at 2% due to the depth of the sewer main, a 6-inch or larger sewer lateral may be run a 1% grade when approved by Provo City.
   E. Clean-outs shall be installed every 100 feet, and where there is a change in slope or direction of the lateral and within 5' of the building.
   F. Distance between sewer laterals and water service lines shall be 10 feet.
   G. Individual grinder pump systems require Provo City approval. Gravity flow required from property to main with a cleanout at transition.
2. PRODUCT
   A. Sewer laterals shall be green or black in color. Do not use white.
   B. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   C. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   D. Pipe Zone: Gravel, Provo Section 31 05 13M.
   E. Provide agency approved connection for all laterals connecting to lines 8" in diameter or less.
   F. Stainless steel and brass straps required for saddles.
   G. Strong back RC series by Fernco with four stainless steel clamps or equal required for all plain end pipe connections.
   H. Lateral Mainline Connections: All 4-inch connections to the main must be constructed with one 45 degree bend and wye. Direct nose-on connections to main are used when connecting to an existing main line. All nose-on work is to be inspected by city personnel.
   I. Manhole Mainline Connections: All 6-inch and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main.
3. EXECUTION
   A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   B. Tape wrap pipe as required by soil conditions.
   C. Core and remove plug from sewer main. Do not break into sewer main to make connection.
   D. CONTRACTOR shall have all connections inspected and surveyed by Provo City before backfilling.
   E. CONTRACTOR shall perform water test for lateral as directed by Provo City Inspector.
   F. Provide backfill and surface restoration per Plan P-255.



provo PUBLIC WORKS

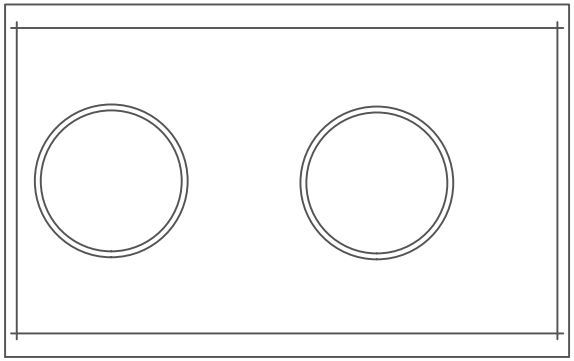
# STANDARD SEWER SERVICE CONNECTIONS AND CLEAN-OUT

STANDARD DETAIL
P-431
NOT TO SCALE
REVISED DATE: 10/24/22

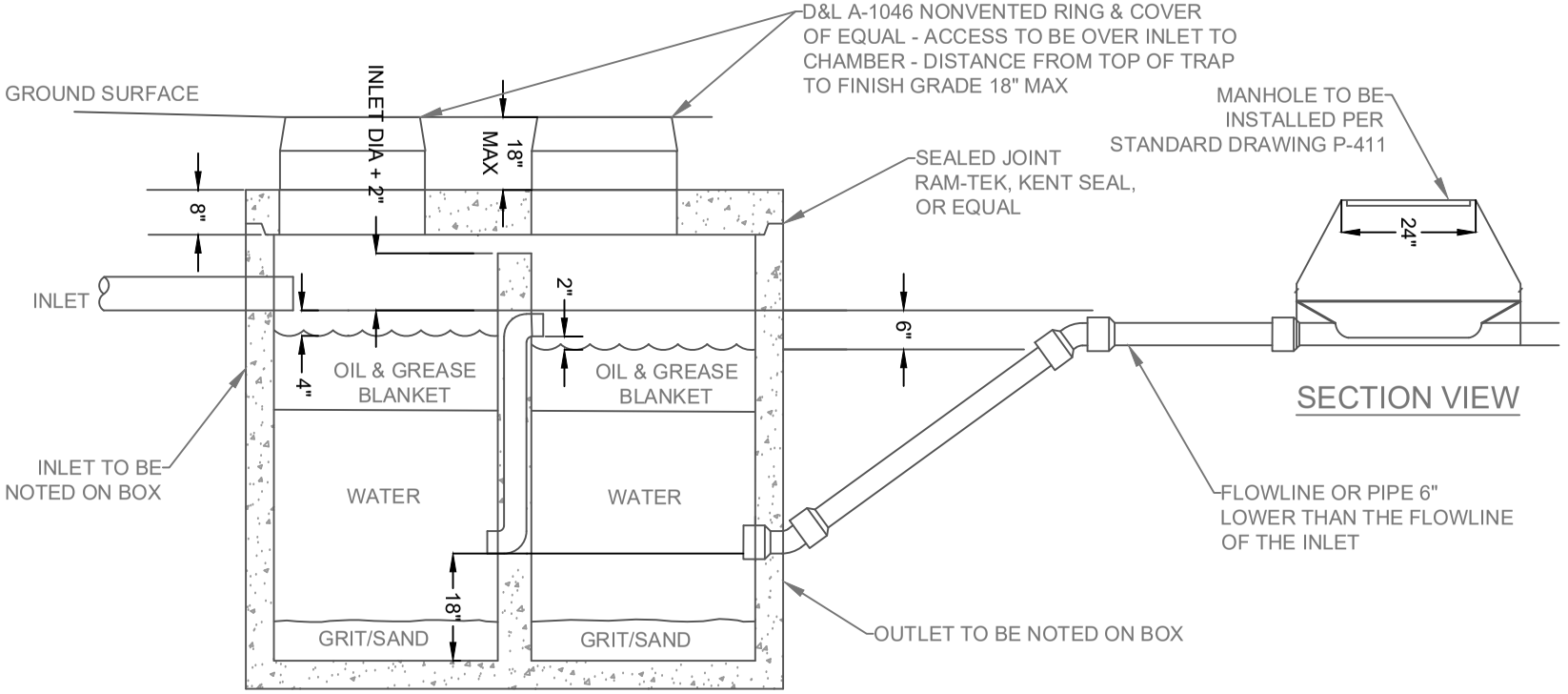
PUBLIC WORKS

# GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE

## GREASE TRAP



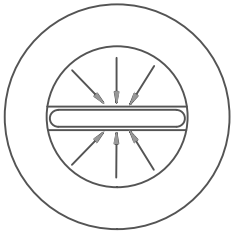
PLAN VIEW




SECTION VIEW

## SAMPLING MANHOLE

POUR CONCRETE AROUND SEWER LATERAL IN BASE OF 48" OR LARGER MANHOLE CONE. CUT OUT A MINIMUM OF 24" FROM THE TOP OF LATERAL. SLOPE CONCRETE TO HOLE AT MIN 2%.



PLAN VIEW




SECTION VIEW

STANDARD DETAIL
P-441
NOT TO SCALE
REVISED DATE: 11/25/15

SHEET 1 OF 2

1. GENERAL
   A. Before backfilling around concrete box, secure inspection of installation by ENGINEER.
   B. Deep boxes are to be avoided whenever possible.
   C. Large traps will require three lids for access to clean.
   D. Sand-oil separator to be located outside parking garages in accessible location.
   E. Grease and sand/oil interceptors, as described by the international plumbing code (IPC), shall be required of any commercial user when the WRF determines they are necessary for the proper handling of wastewater containing FOGS in excessive amounts. Such interceptors shall not be required for residential dwelling units.
   F. Any commercial user utilizing a three (3) compartment sink shall be required to have either a grease interceptor or grease trap installed at its own expense and shall be required to comply with maintaining the device as outlined in the Provo City Sewer Use Ordinance and Pretreatment Program.
   G. All newly constructed commercial structures, strip malls, multi-tenant planned occupied buildings, or planned unoccupied buildings, shall install independent six-inch (6") wastewater discharge lines stubbed out within each designated future food establishment unit. If a new source commercial structure, strip mall, or multi-tenant building has planned occupancy by one or more businesses that do not generate FOG, and therefore do not need a grease interceptor, and the owner of the structure does not facilitate the installation of independent six-inch (6") wastewater discharge line and install a common interceptor, then no future food establishments shall be permitted, unless facilities are retrofitted for independent lines.
   H. Alternate traps may be submitted for approval. Provide product information including removal rates.
   I. All newly constructed “stand-alone” commercial structures, strip malls, multi-tenant planned occupied buildings, where a three (3) compartment sink will be utilized, will be required to install a grease interceptor.
   J. Grease traps are only allowed in place of grease interceptors when in the opinion of the manager it is physically impossible to install a grease interceptor outside of the building or business. As such, a variance request from the owner or lessee of the property must be made to Provo City Pretreatment with a certification letter from a duly licensed Utah plumber or engineer.

2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   E. PVC Pipe: APWA Section 33 05 07.
   F. Box extenders to be used to keep top of box within 18 inches of ground surface.

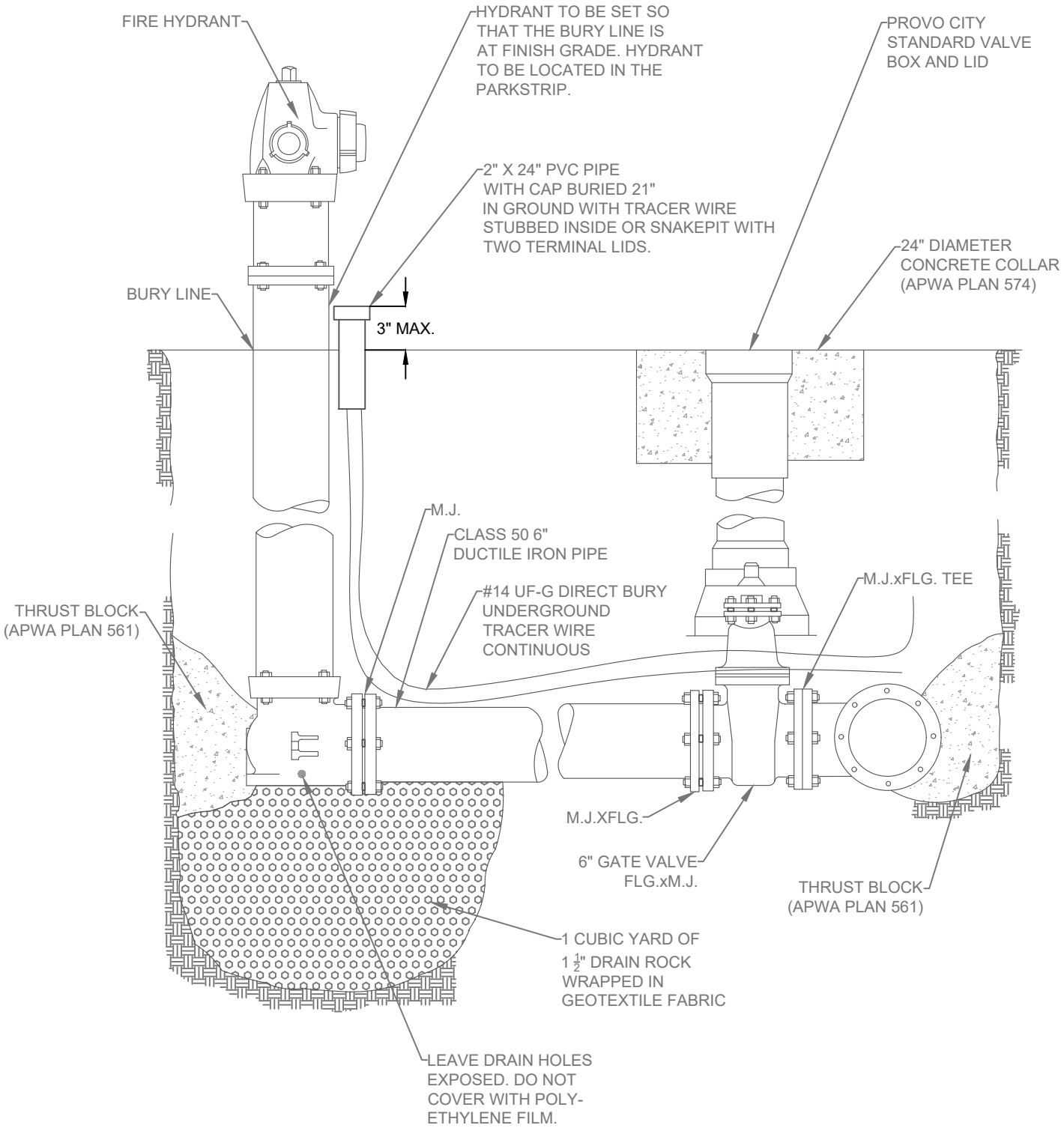
3. EXECUTION
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 6-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 32 23 26.
   B. Reinforcement Placement: APWA Section 03 20 00.
   C. Concrete Placement: APWA Section 03 30 20. Provide 1/2-inch radius edges.
   D. Apply a broom finish. Apply a curing agent.
   E. Fill annular space around pipe wall penetrations with waterproof sealer.
   F. Backfill: Provide backfill against the box walls. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT ALLOWED. Adhere to all backfilling and surface restoration requirements included in Plan P-255.



provo PUBLIC WORKS

# GREASE TRAP/SAND/OIL SEPARATOR AND SAMPLING MANHOLE

STANDARD DETAIL
P-441
NOT TO SCALE
REVISED DATE: 11/25/15






PUBLIC WORKS

# FIRE HYDRANT DETAIL

STANDARD DETAIL
P-511

NOT TO SCALE

REVISED DATE: Aug. 2020

Fire Hydrant With Valve

1. GENERAL
   A. Before backfilling, secure inspection of installation by ENGINEER.
   B. Additional requirements are specified in APWA 33 11 00.
   C. On dead end line, locate shut off valve within 18 feet from the fire hydrant.
2. PRODUCT
   A. New materials only. Relocation of Hydrants not allowed.
   B. Hydrant: Dry barrel, AWWA C502; Waterous WB-67, Mueller A-423 or AVK 2780 Nostalgic.
   C. Polyethylene Wrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene film.
   D. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04. Sakrete is not allowed for thrust blocks.
   E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
   F. Backfill: Provo Section 31 05 13M. Maximum particle size 2-inches.
      F.A. Sand Bedding: All waterlines are to be bedded in sand for a distance of one foot on all sides.
      F.B. Drain Rock: ASTM Size No. 3 (2" to 1") or larger.
      F.C. Other Type of Common Fill: per sppecification.
   G. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.
   H. Color: Fire hydrant is to be factory coated red.
   I. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Wire to extend 24" above surface at base of fire hydrants.
3. EXECUTION
   A. Installation:
      A.A. Provide at least 1 cubic yard of drain rock around drain hole at base of hydrant spool. Wrap geotextile around drain rock and tape geotextile to hydrant spool to prevent sitting of sewer rock.
      A.B. Apply non-oxide grease to all buried metal surface. Wrap with polyethylene sheet and tape wrap.
      A.C. Provide 12 inch sand bedding around all piping.
      A.D. Notify fire department at (801) 852-6300 as soon as hydrant is placed in service.
   B. Thrust Blocks:
      B.A. Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
      B.B. Not required for flange or welded pipe systems.
   C. Provide backfill and surface restoration per Plan P-255.
   D. Operation of Valves: Provo City water valves to be operated only be Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780



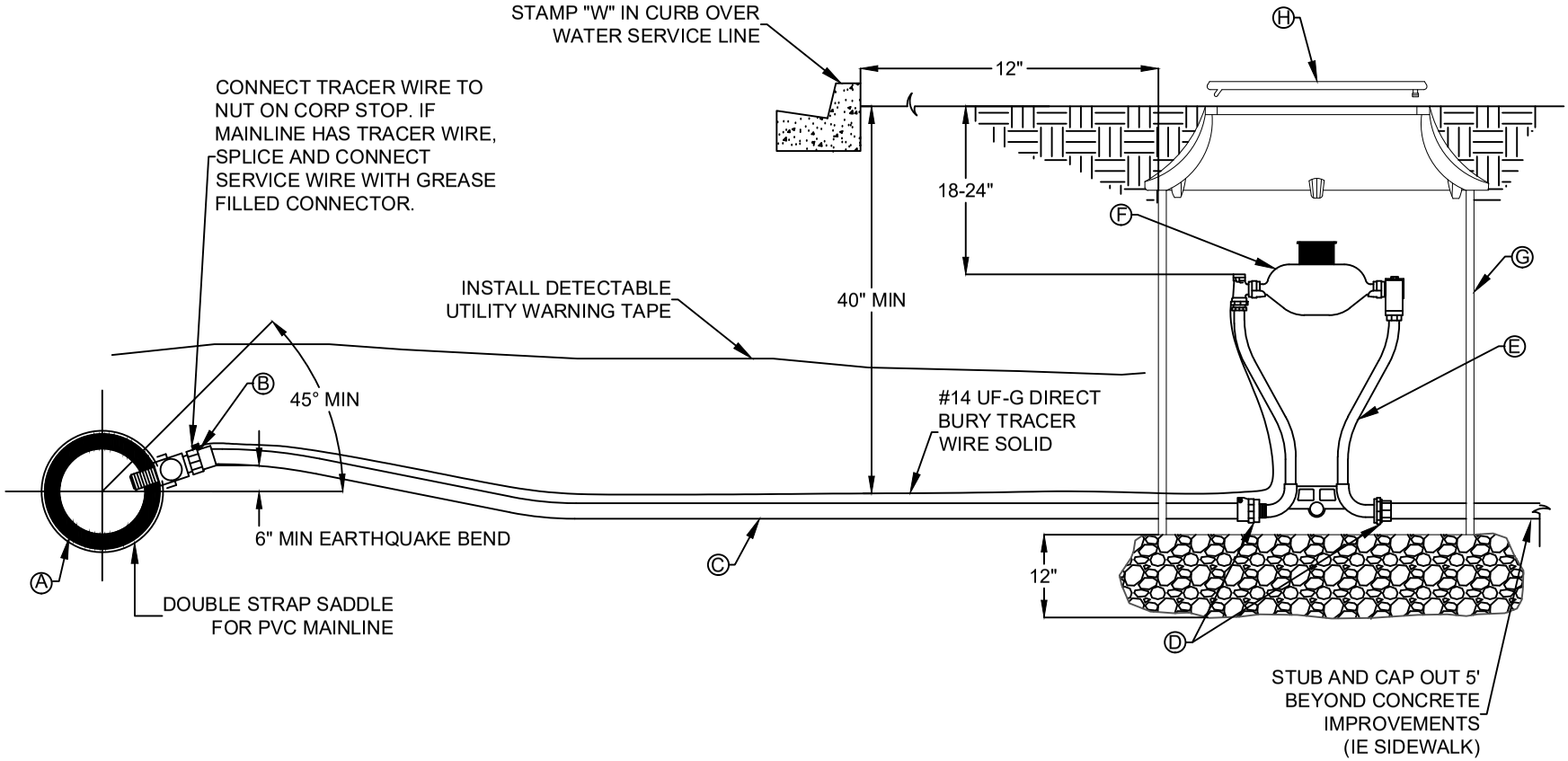
provo PUBLIC WORKS

# FIRE HYDRANT DETAIL

STANDARD DETAIL
P-511
NOT TO SCALE
REVISED DATE: Aug. 2020

PROVO PUBLIC WORKS

# 1" METER SERVICE




## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1-inch COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1-inch COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | CMP, OR WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22

1. GENERAL
   A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   B. In new subdivisions, stake lot corners prior to installation of water meters.
   C. In street surfaces or other vehicular traffic areas, (like driveway approaches), install the same type of meter box as required for 1 $\frac{1}{2}$" and 2" serivce meters. See Plan P-522.
   D. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connections Program Coordinator at (801) 852-6788.
   E. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed. Contractors will be fined for using jumpers.
   F. Maintain at least 2 feet between 1 inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.

2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   D. Fittings: Use compression fittings (no flare). Mueller or Ford only.
   E. Teflon tape and pipe dope to be used on all threaded pipe fittings.

3. EXECUTION
   A. Meter Placement:
      A.A. Install the meter box centered between curb and sidewalk at center of lot (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
      A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   B. Bed service line and tracer wire in one foot of sand all directions.
   C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   D. Lid must be to grade before meter will be installed. Top of lid must be even with top of sidewalk or top of curb.
   E. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   F. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   G. Provide backfill and surface restoration per Plan P-255.
   H. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780
   I. Before a meter is set, 1) a permit must be issued, 2) meter lid must be the right type and even with top of sidewalk or curb 3) meter yoke, lid, or can must not be damaged in any way 4) there must be a shut off valve downstream of the meter so that the meter can be turned on and checked for leaks. Failure to meet these criteria would necessitate a second visit by city personnel and contractor will be charged a re-inspection fee.



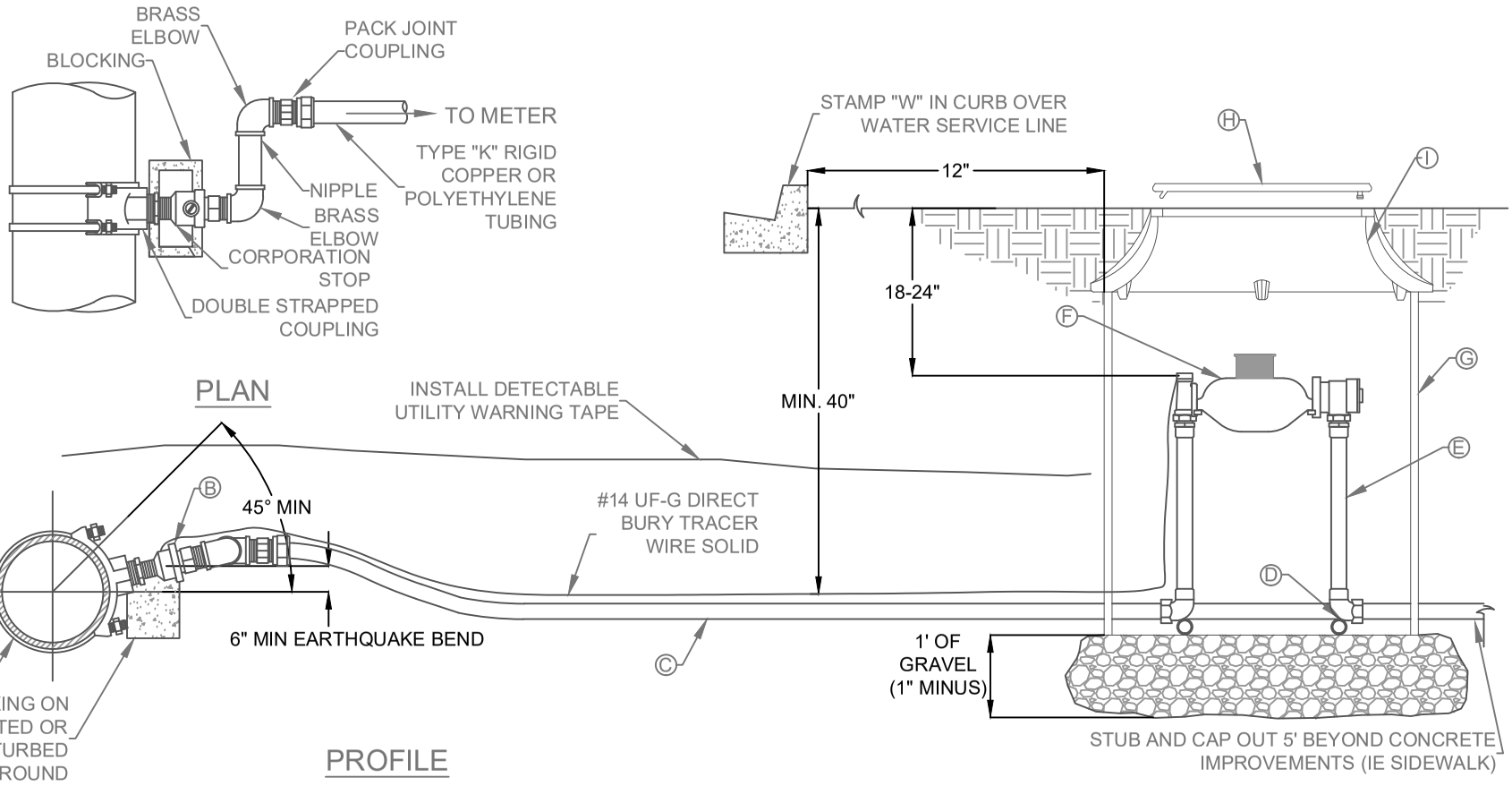
provo PUBLIC WORKS

# 1" METER SERVICE

STANDARD DETAIL
P-521
NOT TO SCALE
REVISED DATE: 10/24/22

PROVO PUBLIC WORKS

# WATER SERVICE LATERAL
# LAYOUT 1 ½" & 2"




## LEGEND

| No. | ITEM | DESCRIPTION |
|---|---|---|
| Ⓐ | CONNECTION TO MAIN | USE DOUBLE STRAP BRASS SADDLE |
| Ⓑ | CORPORATION STOP | BRASS WITH TRACER WIRE NUT (MUELLER OR FORD CC x COMPRESSION DIRECT TAP IN DUCTILE IRON) (IRON PIPE THREAD x COMPRESSION IN PVC SADDLE) |
| Ⓒ | PIPE | 1 ½" OR 2" COPPER - TYPE "K" SOFT OR BLUE PC 200, DR9 POLYETHYLENE TUBING MEETING AWWA C901 & NSF 61 WITH #14 TRACER WIRE AND METAL INSERTS |
| Ⓓ | ADAPTER | BRASS - MALE x COMPRESSION |
| Ⓔ | METER YOKE | 1 ½" OR 2" COPPER - EQUIP WITH INLET VALVE, VERTICAL DUAL CHECK VALVE, STABILIZER BARS PERPENDICULAR TO SETTER, & SOLID BAR BETWEEN INLET & OUTLET AT BASE AND HALFWAY UP METER YOKE |
| Ⓕ | METER | NEPTUNE AMI SMART METER WITH ANTENNA TO BE INSTALLED BY CITY. PROTECT FROM DAMAGE |
| Ⓖ | METER BOX | WHITE HDPE (21" DIA x 30" HEIGHT (MIN)) |
| Ⓗ | RING AND LID | D&L FOUNDRY AND SUPPLY L-2244 RING WITH UNIVERSAL COVER FOR NEPTUNE R450 RADIO ANTENNA; D-6018-09 IN DRIVEWAYS AND CONCRETE |

STANDARD DETAIL
P-522
NOT TO SCALE
REVISED DATE: 10/24/22

1. GENERAL
   A. Do not install meter in driveways, sidewalks or curb and gutter without express written permission from Provo City.
   B. Where domestic use is applicable, use a standard City provided meter.
   C. Connections serving buildings of three (3) stories or more (not to include basements) may not utilize a dual check valve device installed at the meter yoke as protection. Above ground reduced pressure backflow prevention valve (RP) may be required in some applications. For more information, contact Provo City Cross Connection Program Coordinator at (801) 852-6788.
   D. To get access to water, contact Provo City at 311 for water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed.
   E. Maintain at least 4 feet between any connection that is larger than 1 inch and any other connection.
2. PRODUCT
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as base course without ENGINEER's permission.
   B. Backfill: Common fill, Provo Section 31 05 13M. Maximum particle size 2-inches.
   C. Castings: Grey iron class 35 minimum per ASTM A 48, coated with asphalt based paint or better.
   D. Meter yoke to be same size as service line regardless of meter size.
   E. Teflon tape and pipe dope to be used on all threaded pipe fittings.
3. EXECUTION
   A. Meter Placement:
      A.A. Install the meter box centered between curb and sidewalk (if there is no curb, install within 7' of the property line) and within the public right-of-way and in the center of the lot.
      A.B. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
   B. Bed service line in one foot of sand all directions.
   C. Meter Box: Set box so grade of the frame and cover matches the finish grade of the surrounding surface.
   D. Bypass Valve: Lock in off position.
   E. Blocking: Use clay brick or concrete block.
   F. Concrete Box:
      F.A. Center frame and cover over water meter.
      F.B. Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   G. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   H. Inspection: Before backfilling around meter box, secure inspection of installation by ENGINEER.
   I. Provide backfill and surface restoration per Plan P-255.
   J. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780



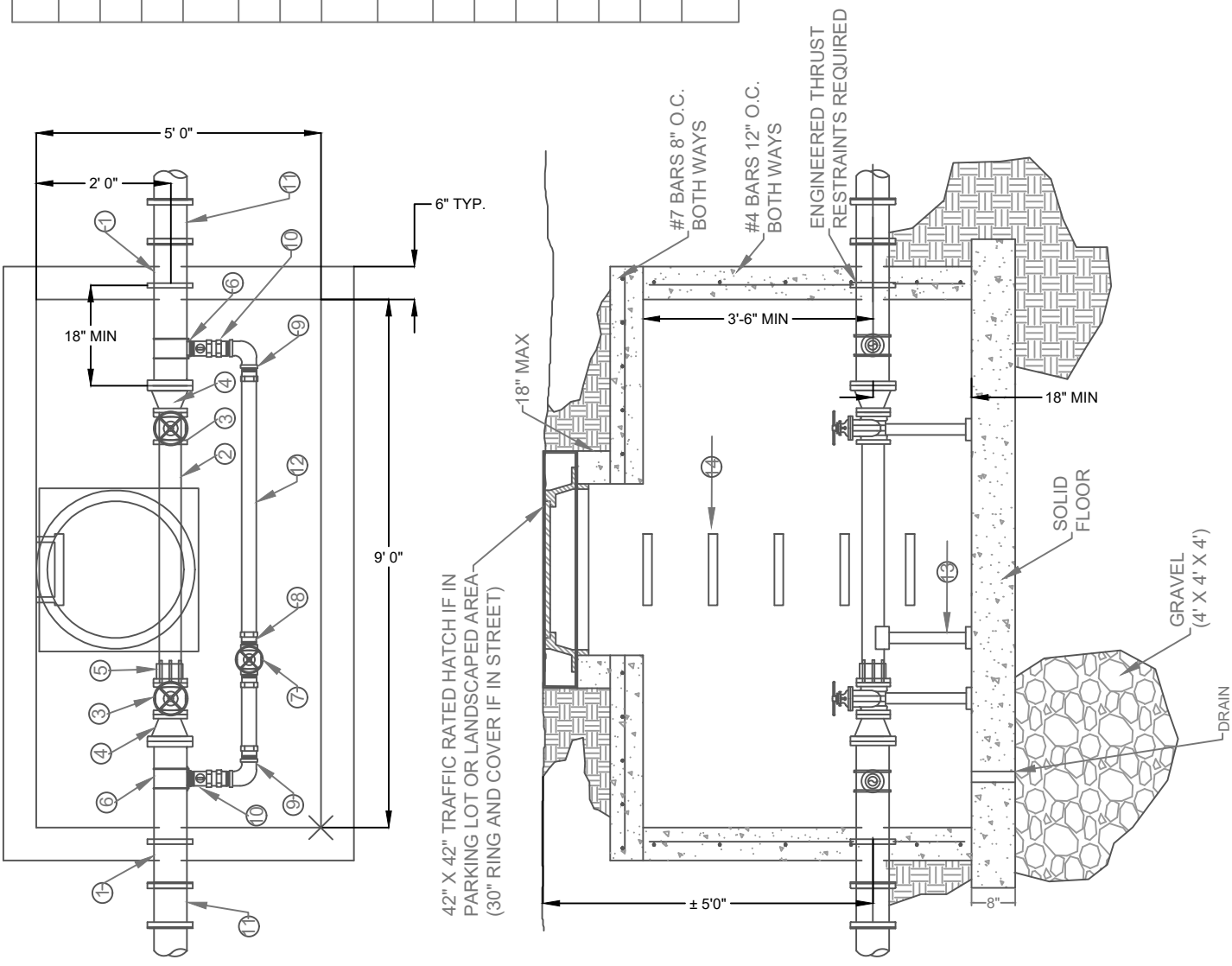
provo PUBLIC WORKS

# WATER SERVICE LATERAL LAYOUT 1 $\frac{1}{2}$" & 2"

STANDARD DETAIL
P-522
NOT TO SCALE
REVISED DATE: 10/24/22

## FITTING SCHEDULE

| No. | DESCRIPTION |
|---|---|
| ① | FL X PLAIN END W/THRUST RING |
| ② | 48" FL X PLAIN END SPOOL |
| ③ | EPOXY COATED GATE VALVE WITH HANDWHEEL |
| ④ | REDUCER WHEN REQUIRED |
| ⑤ | FLANGED COUPLING ADAPTER OR COUPLER |
| ⑥ | DOUBLE STRAP BRASS/STAINLESS STEEL SADDLE |
| ⑦ | EPOXY COATED GATE VALVE WITH HANDWHEEL |
| ⑧ | IP X COMPRESSIONS ADAPTOR (TYP) |
| ⑨ | BRASS ELBOW |
| ⑩ | IP X COMPRESSION CORP STOP |
| ⑪ | SLEEVE |
| ⑫ | RIGID COPPER |
| ⑬ | PIPE SUPPORT FOR METER AND VALVES |
| ⑭ | POLYPROPYLENE STEPS (PARSON ENVIRONMENTAL P-14938 OR EQUAL. |




SHEET 1 OF 2

PUBLIC WORKS

# 3", 4" AND 6" METER VAULT AND PIPING

STANDARD DETAIL
P-525

NOT TO SCALE

REVISED DATE: 10/24/17

**1. GENERAL**

A. Additional requirements are specified in APWA Section 33 12 16.

B. Meter placement in street only with Provo City approval.

C. If use is such that water cannot be shut off, a bypass with a backflow prevention device is required.

D. Meter to be supplied and installed by Provo City.

E. Backflow prevention assembly required in separate vault downstream of meter connection or in a mechanical room before any other connection.

F. Other backflow requirements may apply. For more information, contact Provo City Cross Connection Program Coordinator at (801) 852-6788.

G. To get access to water, contact Provo City at 311 for a water meter to be installed. Access to water will be downstream and outside of the meter box. No jumpers allowed.

A. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.

**2. PRODUCTS**

A. Small Fittings: Brass. Do not use galvanized materials.

B. Pipe Support: Adjustable pipe supports required.

C. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.

D. Drain Gravel: Sewer rock, ASTM size no. 3 (2" to 1") or equal, PROVO Section 31 05 13M.

**3. EXECUTION**

A. Control Valve: Install valve with valve box adjacent to main.

B. Center frame and cover over water meter.

C. Bed service line in one foot of sand all directions.

D. Inspection: Before backfilling, secure inspection of installation by ENGINEER.

E. Provide backfill and surface restoration per Plan P-255.

F. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.



provo PUBLIC WORKS

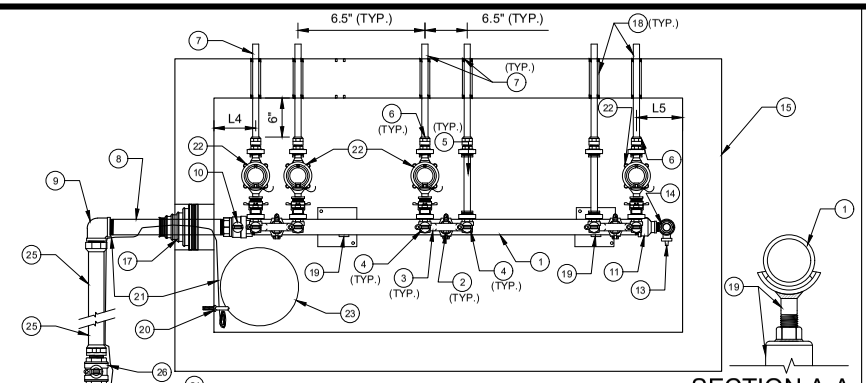
# 3", 4" AND 6" METER VAULT AND PIPING

STANDARD DETAIL

P-525

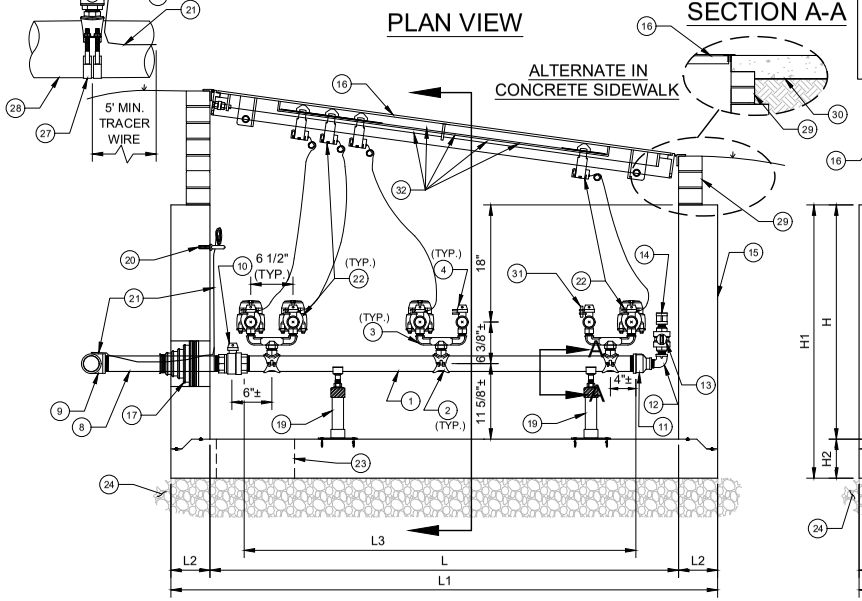
NOT TO SCALE

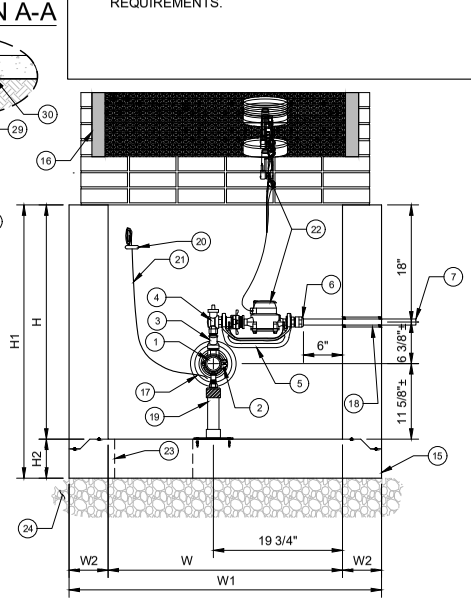
REVISED DATE: 10/24/17










NO. ALTERNATE DESCRIPTION:

WHEN USING SDR9 HDPE (IPS) WITH STAINLESS STEEL, BRASS, OR BRONZE MNPT ENDS, USE THE FOLLOWING PRODUCTS:

9. 2" - 90° SCH. 40 BRASS OR S.S. BEND - FNPT X FNPT.
25. 2" SDR9 HDPE (POLY) IPS PIPE (MNPT X MNPT) - LENGTH AS REQUIRED (NO JOINTS PERMITTED).
26. FOR EXISTING MAINS - 2" BALL CORPORATION STOP W/ TEE HEAD OPERATING NUT - CC (TAPER THREAD) X FNPT (W/ STD. VALVE BOX ASSEMBLY) OR; FOR NEW MAINS - MJ TEE, MJ PLUG - TAP - 2", 2" X 6" SCH 40 RED BRASS NIPPLE, 2" GATE VALVE W/ TEE HEAD OPERATING NUT (FNPT) (WITH STANDARD VALVE BOX ASSEMBLY).

NOTES:

A. ACCESS DOOR SHALL BE ANCHORED TO VAULT PER ACCESS DOOR STANDARD DETAIL.
B. ACCESS DOOR SHALL BE FLUSH WITH GROUND OR SIDEWALK, AND GROUND SHALL SLOPE AWAY FROM VAULT.
C. ASSEMBLY MAY BE FLIPPED 180° TO MEET SITE REQUIREMENTS.

NO. DESCRIPTION:

1. 2" SCH. 40 RED BRASS PIPE MNPT (LENGTH = L3).
2. 2" X 1" BRASS SERVICE SADDLE - FNPT OUTLET.
3. 1" X 3/4" X 3/4" BRASS U-BRANCH - MNPT.
4. 1" ANGLE BALL VALVE WITH LOCK WINGS - FNPT X YOKE STAR NUT.
5. 1" DUCTILE IRON METER YOKE BAR.
6. 1" STRAIGHT BALL VALVE (YOKE STAR NUT X FNPT).
7. 1" RED BRASS NIPPLE WITH THREADED END (L = 18").
8. 2" SCH. 40 RED BRASS PIPE MNPT (L = 24").
9. 2" - 90° BRASS BEND - FNPT X CTS COMPRESSION.
10. 2" BALL VALVE CURB STOP W/ TEE HEAD OPERATING NUT - FNPT X FNPT.
11. 2" X 1" BRASS REDUCER - FNPT X FNPT.
12. 1" BRASS 90° STREET ELBOW - MNPT X FNPT.
13. 1" BALL VALVE CURB STOP - MNPT X MNPT WITH LOCK WINGS (LOCK CLOSED WITH PERMANENT BLUE PAD LOCK FURNISHED BY CLTW).
14. 1" RED BRASS THREADED COUPLING - FNPT X FNPT.
15. PRECAST CONCRETE METER VAULT - SEE CHART FOR SIZE.
16. MANIFOLD HOT DIP GALV. STEEL ACCESS DOOR - SEE DETAIL.
17. 2" FLEXIBLE PIPE CONNECTOR BOOT **(DO NOT FILL WITH MORTAR).**
18. 1 1/2"Ø - SCH 40 PVC SLEEVE (WITH RUBBER ISOLATION BUSHING AT EACH FACE OF VAULT WALL) OR FOAM RUBBER PIPE INSULATION THROUGH SLEEVE.
19. GALV. STEEL OR S.S. ADJUSTABLE SADDLE PIPE SUPPORT (NUMBER REQ'D = N1) WITH 1/4"± THICK NEOPRENE LINER (WITH STAINLESS STEEL EPOXY ANCHORS).
20. 3/8" DIAMETER STAINLESS STEEL EYE BOLT (EPOXY ANCHOR).
21. AWG #12 GAUGE COPPER TRACER WIRE - WITH BLUE INSULATION (30 MILS HDPE) - TERMINATE WITH 24" EXCESS WIRE (COILED) @ EYE BOLT AND VALVE BOX (TYPICAL).
22. 1" WATER METER WITH TRANSMITTER (FURNISHED BY PROVO CITY).
23. 12" DIAMETER SUMP HOLE.
24. 6" #57 WASHED STONE.
25. 2" TYPE K COPPER (NO JOINTS PERMITTED).
26. FOR EXISTING MAINS - 2" BALL CORPORATION STOP - SEE PROVO STANDARD P-521
27. SERVICE SADDLE - CC (TAPER THREAD OUTLET).
28. 8" OR LARGER WATER MAIN.
29. PRECAST CONC. RISER OR BRICKWORK MAY BE REQUIRED FOR GRADE ADJUSTMENTS. MAX HEIGHT SHALL BE 12".
30. CAST IN PLACE CONCRETE SIDEWALK - BRICK WORK SHALL NOT EXTEND TO SURFACE, ACCESS DOOR SHALL REST ON SIDEWALK.
31. UNUSED SERVICES SHALL BE LOCKED (LOCK (BLUE SERIAL NO.) FURNISHED BY CLTW) IN CLOSED POSITION.
32. FOR EACH WATER METER, ATTACH AN ENGRAVED LABEL DIRECTLY ABOVE THE METER/ALIGNED WITH THE TRANSMITTER, INCLUDING THE PREMISE NUMBER, STREET NUMBER/UNIT NUMBER AND STREET NAME, TO UNDERSIDE OF DOOR.

DESIGN REQUIREMENTS:

a. VAULT SHALL BE RATED FOR UDOT HS-20 LOADING - SUBMIT SHOP DRAWING / CALCULATIONS / P.E. SEALED FOR REVIEW.
b. ALL CONCRETE SHALL BE MINIMUM 4,000 PSI COMPRESSIVE STRENGTH.
c. DESIGN SHALL CONFORM TO ASTM C858 - SPECIFICATIONS FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE."
d. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857.
e. REBARS SHALL BE GRADE 60 PER ASTM A615.
f. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
g. PIPE PENETRATIONS SHALL BE ISOLATED FROM PIPE WITH FLEXIBLE CONNECTERS (MANHOLE BOOTS) OR WITH RUBBER ISOLATION BUSHINGS.
h. PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.

DIMENSIONS (INCHES)

| VAULT (INSIDE) | | | VAULT (OVERALL-MIN.) | | | WALL THICKNESS (MIN.) | FLOOR THICKNESS (MIN.) | NUMBER OF METERS (MAX.) | L3 2" RED BRASS PIPE LENGTH NO. 1 | N1 REQ'D NO. OF PIPE SUPPORTS NO. 19 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | W | H | L1 | W1 | H1 | W2 / L2 | H2 | | | | L4 | L5 |
| 48 | 36 | 36 | 60 | 48 | 42 | 6 | 6 | 6 | 36 | 2 | 7.5 | 8 |
| 36 | 36 | 36 | 44 | 44 | 40 | 4 | 4 | 4 | 24 | 1 | 8 | 8.5 |

NOT TO SCALE

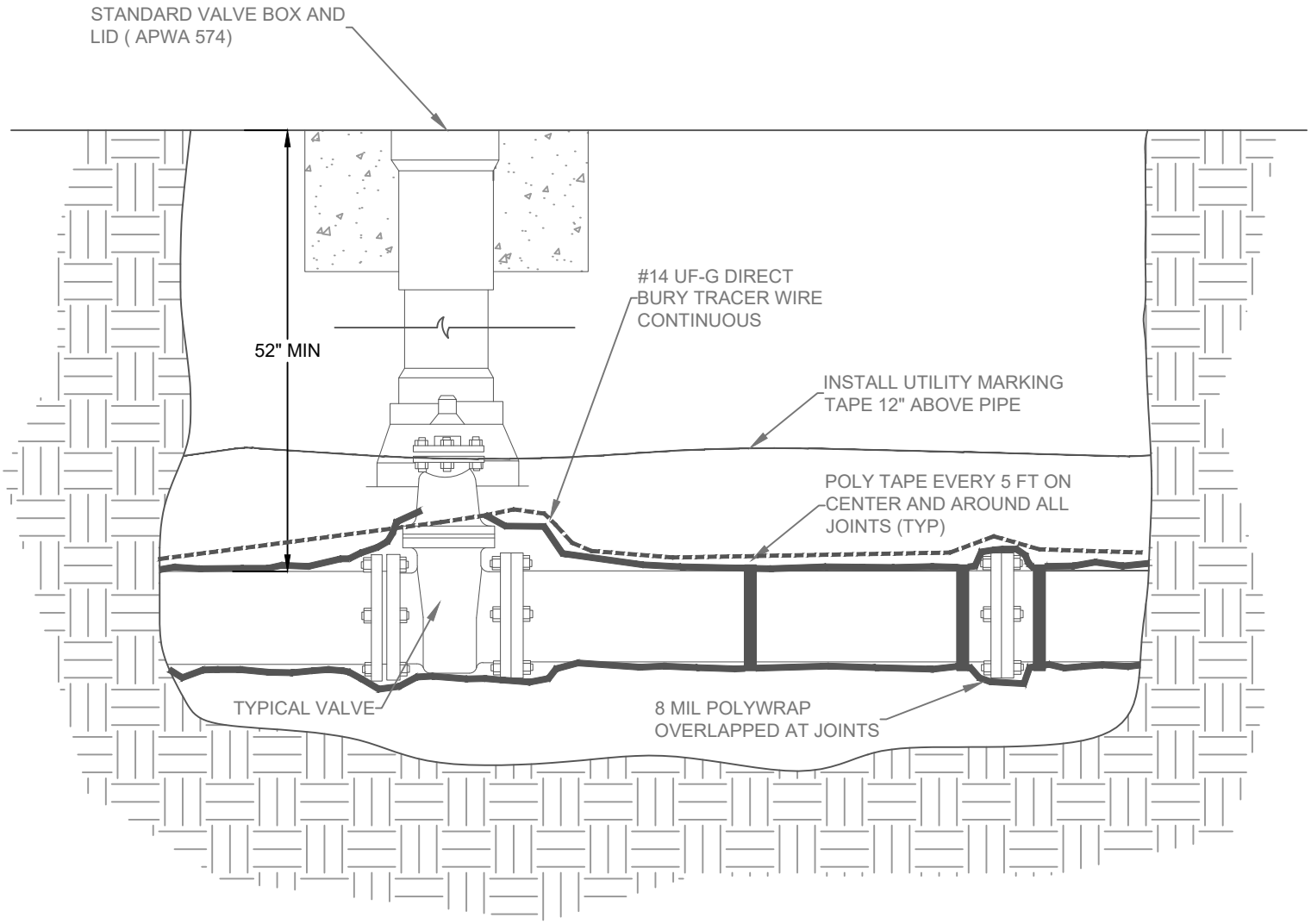
STANDARD DETAIL P-531

VERSION 1.0

DATE MODIFIED 10/2023

# 1-INCH MANIFOLD WATER METER ASSEMBLY AND PRECAST CONCRETE VAULT

provo PUBLIC WORKS






PUBLIC WORKS

# *WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL
P-594

NOT TO SCALE

REVISED DATE: Aug. 2020

1. **GENERAL**
   A. Maintain at least 2 feet between 1 inch and ¾ inch service line taps. Maintain 4 feet between any connection that is larger than 1 inch and any other connection.
   B. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
   C. Waterline shall be installed within the street section in the location shown on Provo Standard Drawing P-914, unless otherwise approved.

2. **PRODUCTS**
   A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. C900 PVC Pipe may be allowed with approval from director.
   B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants. Provide excess wire to extend 24" above finished grade.
   D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   E. Bolts: Use all stainless steel bolts.
   F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   G. Double offset butterfly valves required for valves greater than 12".

3. **EXECUTION**
   A. Bed water mainline in one foot of sand all directions.
   B. Pull polywrap tight around pipe and tape with poly tape.
   C. Poly Tape:
      a. Tape around valves.
      b. Tape any cuts or tears.
      c. Tape wire on top center of pipe outside of the polywrap.
   C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill. All tracer wire shall be tested for continuity by an independent tester and written certification of continuity provided to Provo City inspectors prior to requesting continuity testing by Provo City. A re-inspection fee will be charged for any failed continuity test conducted by Provo City. Entire length of tracer wire shall be tested and approved by City prior to paving.
   E. Inspection: Before backfilling, secure inspection and GPS of installation by City.
   F. Provide backfill and surface restoration per Plan P-255.
   G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.

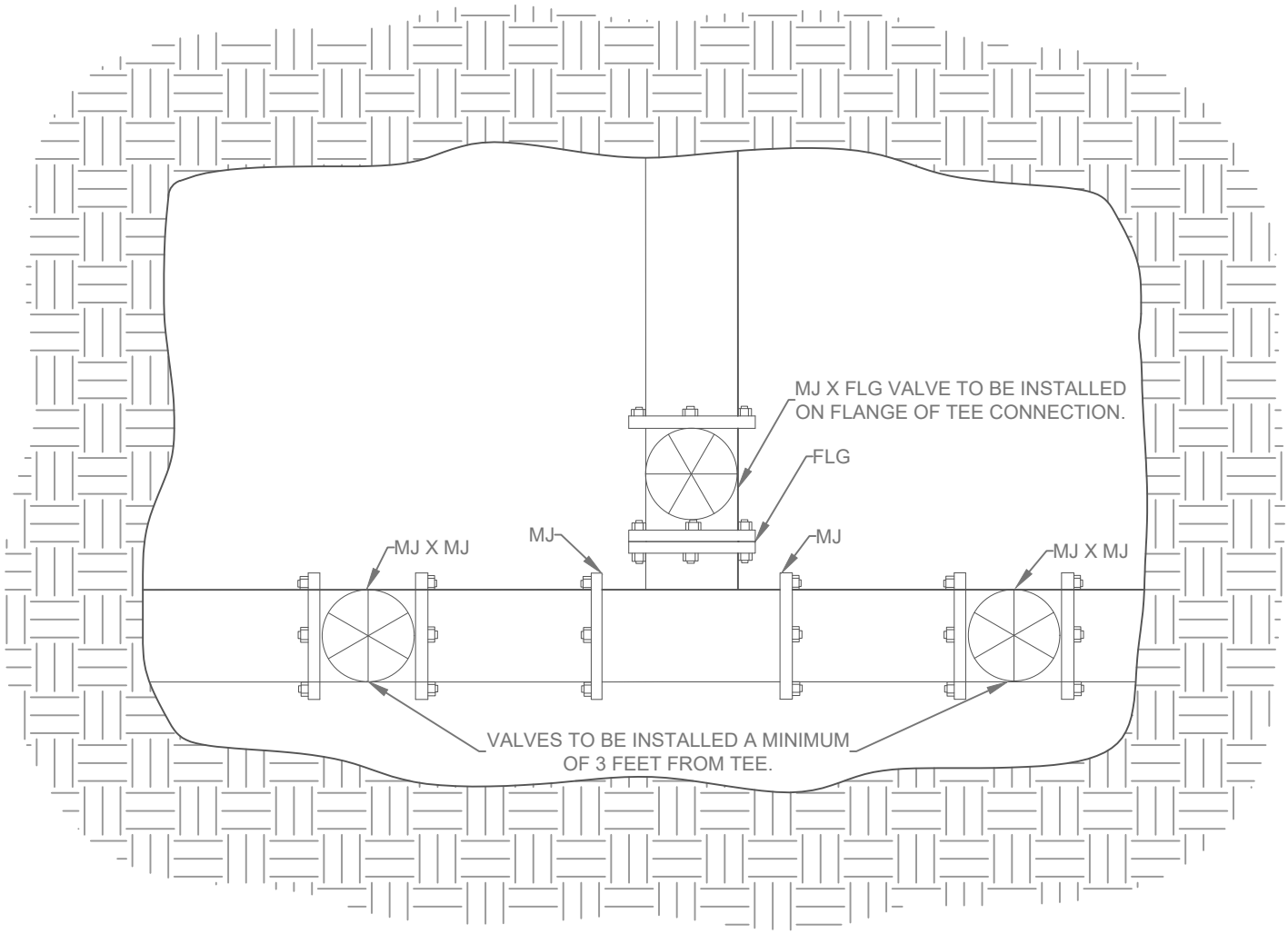


provo PUBLIC WORKS

# *WATER MAINLINE, POLYWRAP, & TRACER WIRE*

STANDARD DETAIL
P-594
NOT TO SCALE
REVISED DATE: Aug. 2020

PLAN VIEW






provo PUBLIC WORKS

# *WATER MAINLINE TEE*

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021

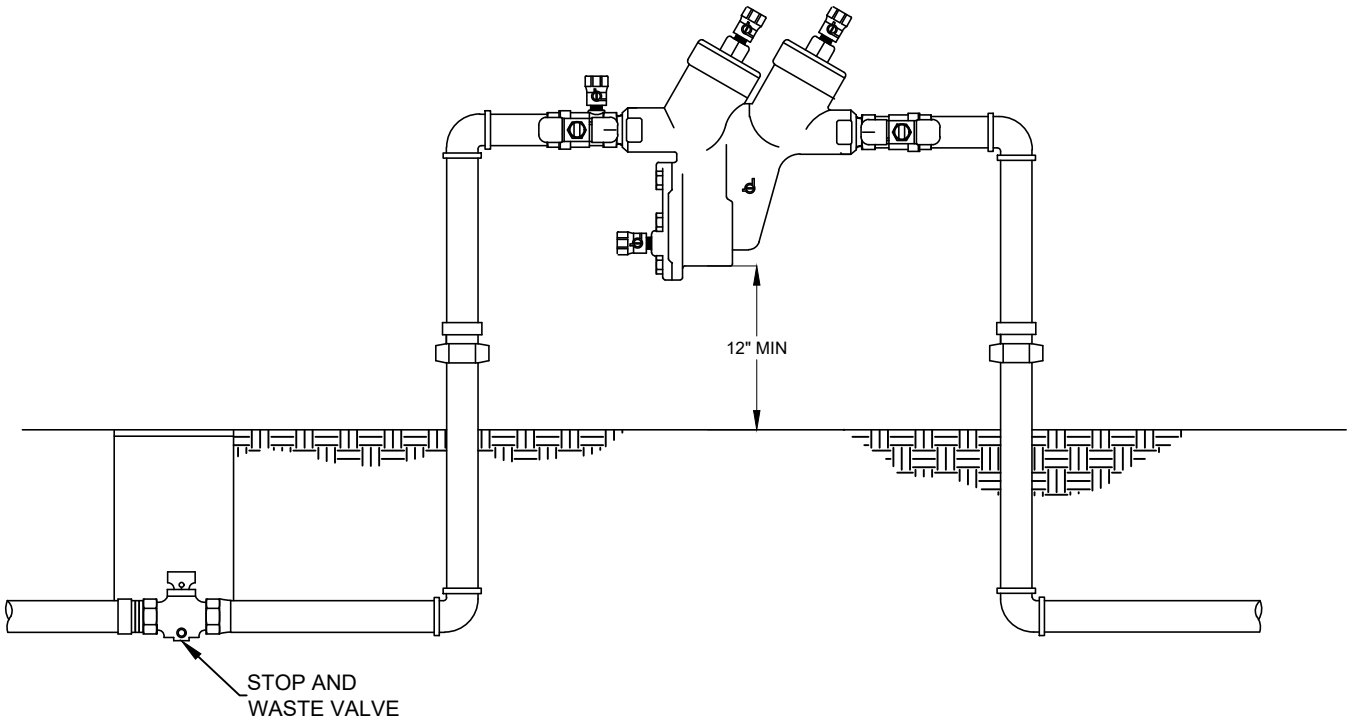
1. **GENERAL**
   A. Waterline installation to meet all requirements of Sections 33 05 05M and 33 11 00M.
2. **PRODUCTS**
   A. Pipe: All city maintained pipe in rights-of-ways or easements shall be ductile iron. Use ductile iron pipe for fire lines. All privately maintained pipe in public rights-of-ways shall be ductile iron.
   B. Polywrap: All metal including pipe, couplings, joints, and valves shall be sleeved or wrapped with 8 mil. Polyethylene.
   C. Tracer Wire: #14 UF-G direct bury red or blue tracer wire required on all water lines. Provide wire at base of fire hydrants and at all valves. Wire to be brought up outside of valve box and stubbed into valve box 3 inches below the lid through a hole cut in the valve box. Provide excess wire to extend 24" above finished grade.
   D. Tape: Use poly tape around pipe and tracer wire at all joints and at ±5 foot intervals.
   E. Bolts: All bolts need to be covered in FMH grease.
   F. Backfill: Common fill, PROVO Section 31 05 13M. Maximum particle size 2-inches.
   G. Double offset butterfly valves required for valves 12" or greater.
   H. Sakrete is not allowed for thrust blocks.
3. **EXECUTION**
   A. Bed water mainline in one foot of sand all directions.
   B. Pull polywrap tight around pipe and tape with poly tape.
   C. Poly Tape:
      a. Tape around valves.
      b. Tape any cuts or tears.
      c. Tape wire on top center of pipe outside of the polywrap.
   C. Place valves at property lines. On existing construction valves may be placed 3 feet from tee when expressly allowed by Provo City.
   D. When splicing tracer wire, use a grease filled connector. Wire is to be continuous underground where practical. Underground splices must be inspected before backfill.
   E. Inspection: Before backfilling, secure inspection of installation by ENGINEER.
   F. Provide backfill and surface restoration per Plan P-255.
   G. Operation of Valves: Provo City water valves to be operated only by Provo City Water Resources employees, even in emergencies. For assistance call (801) 852-6780.



provo PUBLIC WORKS

# *WATER MAINLINE TEE*

STANDARD DETAIL
P-595
NOT TO SCALE
REVISED DATE: Oct-2021




DIRECTION OF FLOW

NOTES:

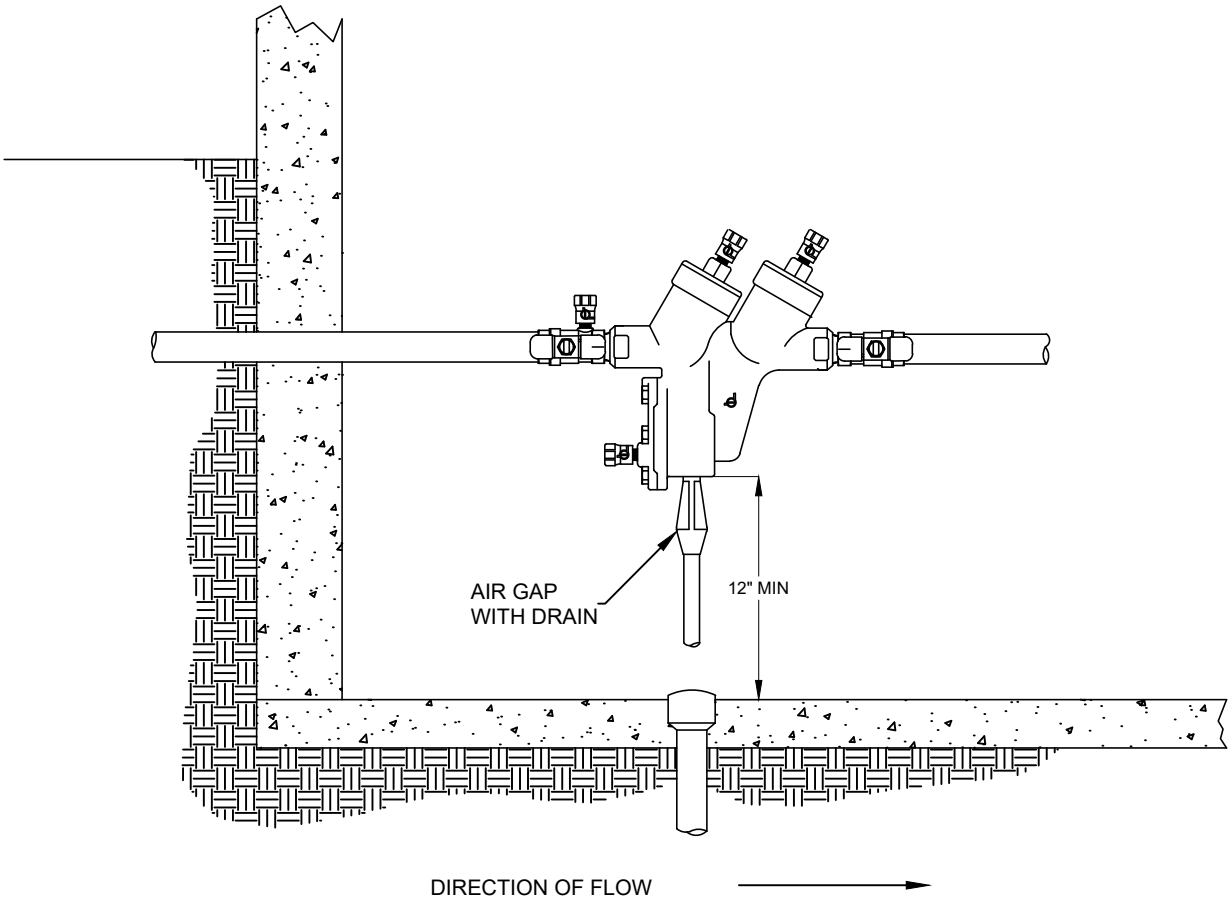
A. THE OUTDOOR REDUCED PRESSURE PRINCIPAL ASSEMBLY/REDUCED PRESSURE ZONE (RP) BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND VANDALISM.
B. THE BOTTOM OF THE ASSEMBLY SHALL BE A MINIMUM OF 12 INCHES ABOVE THE GROUND OR FLOOR. THE ASSEMBLY OWNER, WHEN NECESSARY SHALL PROVIDE DEVICES OR STRUCTURES TO FACILITATE TESTING, REPAIR AND MAINTENANCE.
C. THE BODY OF THE ASSEMBLY SHALL NOT BE CLOSER THAN 12 INCHES TO ANY WALL, CEILING OR ENCUMBRANCE AND SHALL BE ACCESSIBLE FOR TESTING, REPAIR AND MAINTENANCE.
D. RP BACKFLOW ASSEMBLIES SHALL NOT BE INSTALLED IN A PIT.
E. THE RELIEF VALVE OF THE ASSEMBLY SHALL NOT BE DIRECTLY CONNECTED TO ANY WASTE DISPOSAL LINE, INCLUDING SANITARY SEWER AND STORM DRAIN.
F. RP BACKFLOW ASSEMBLIES SHALL BE MAINTAINED AS AN ASSEMBLY. TWO (2) TURN OFF VALVES, FOUR (4) TEST CLOCKS.
G. THE ASSEMBLY SHALL BE INSTALLED IN A HORIZONTAL POSITION UNLESS SPECIFICALLY DESIGNED FOR VERTICAL USE.
H. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.
I. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.



provo PUBLIC WORKS

# OUTDOOR REDUCED PRESSURE PRINCIPAL ASSEMBLY (RP)

STANDARD DETAIL
P-631a
NOT TO SCALE
REVISED DATE: 11/25/15




NOTES:

A. THE INDOOR REDUCED PRESSURE PRINCIPAL ASSEMBLY/REDUCED PRESSURE ZONE (RP) BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND VANDALISM.

B. THE BOTTOM OF THE ASSEMBLY SHALL BE A MINIMUM OF 12 INCHES ABOVE THE GROUND OR FLOOR. THE ASSEMBLY OWNER, WHEN NECESSARY SHALL PROVIDE DEVICES OR STRUCTURES TO FACILITATE TESTING, REPAIR AND MAINTENANCE.

C. THE BODY OF THE ASSEMBLY SHALL NOT BE CLOSER THAN 12 INCHES TO ANY WALL, CEILING OR ENCUMBRANCE AND SHALL BE ACCESSIBLE FOR TESTING, REPAIR AND MAINTENANCE.

D. RP BACKFLOW ASSEMBLIES SHALL NOT BE INSTALLED IN A PIT.

E. THE RELIEF VALVE OF THE ASSEMBLY SHALL NOT BE DIRECTLY CONNECTED TO ANY WASTE DISPOSAL LINE, INCLUDING SANITARY SEWER AND STORM DRAIN.

F. RP BACKFLOW ASSEMBLIES SHALL BE MAINTAINED AS AN ASSEMBLY. TWO (2) TURN OFF VALVES, FOUR (4) TEST CLOCKS.

G. THE ASSEMBLY SHALL BE INSTALLED IN A HORIZONTAL POSITION UNLESS SPECIFICALLY DESIGNED FOR VERTICAL USE.

H. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.

I. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.

J.



provo PUBLIC WORKS

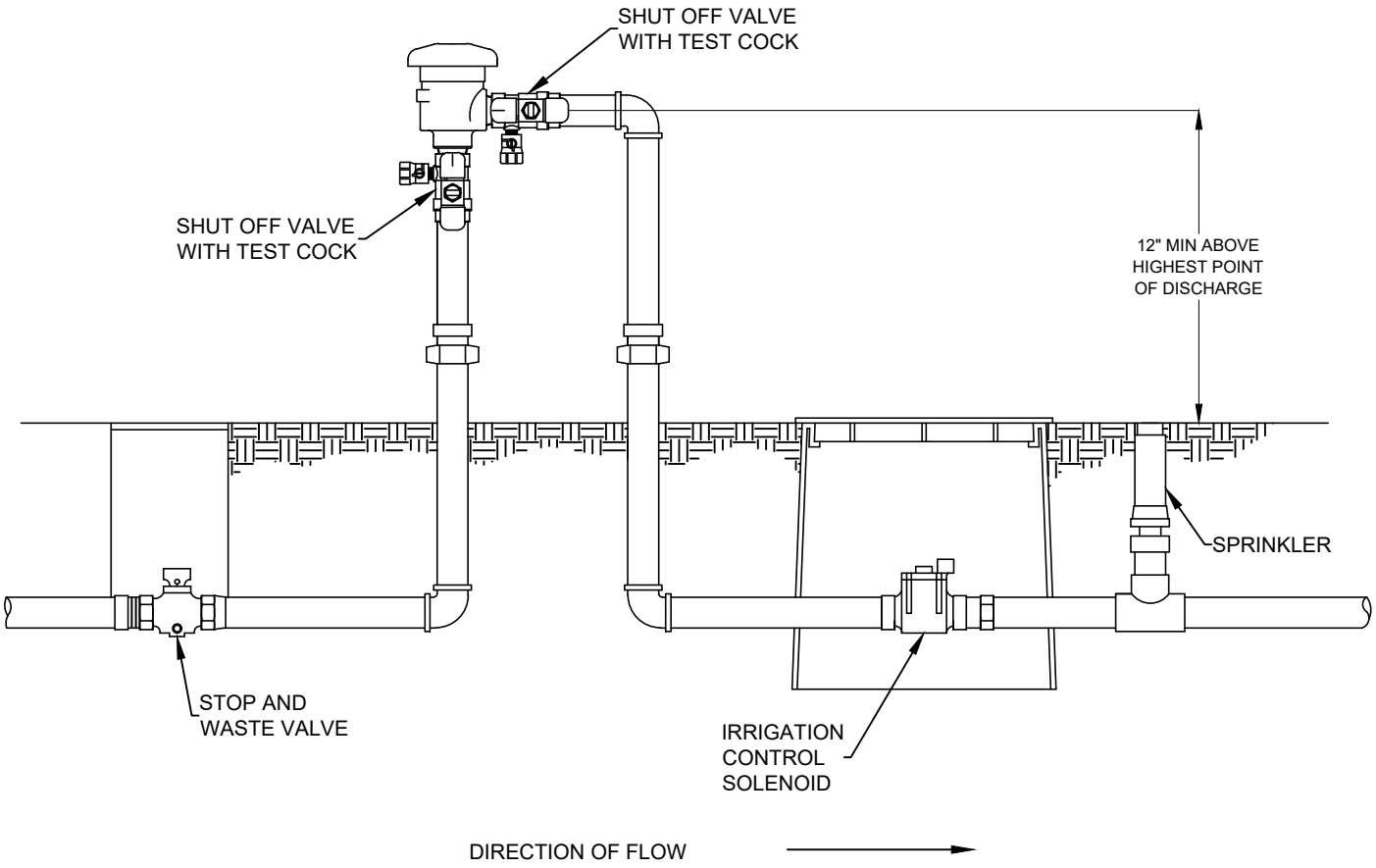
# *INDOOR REDUCED PRESSURE PRINCIPAL ASSEMBLY (RP)*

STANDARD DETAIL

P-631b

NOT TO SCALE

REVISED DATE: 11/25/15




NOTES:

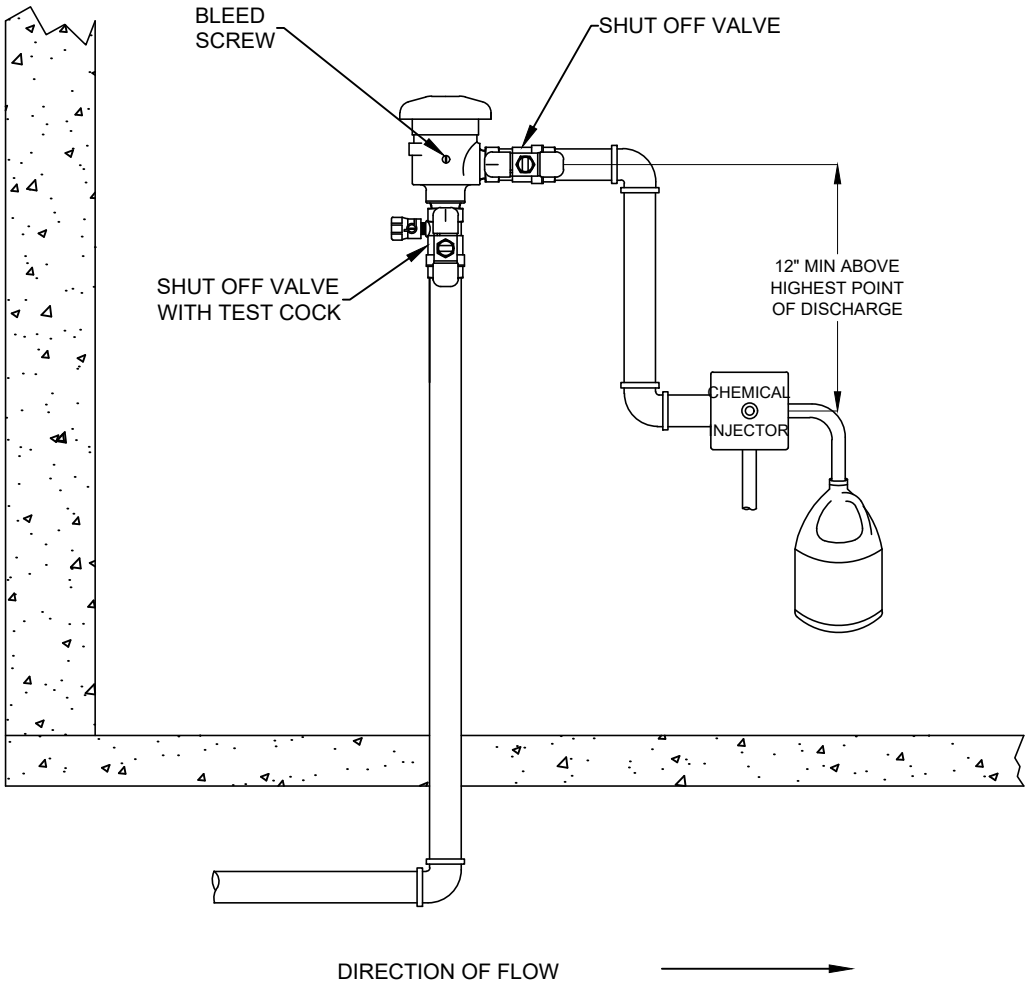
A. THE PRESSURE VACUUM BREAKER (PVB) SHALL NOT BE INSTALLED IN AN AREA THAT COULD BE SUBJECTED TO BACK PRESSURE.
B. THE ASSEMBLY SHALL BE INSTALLED A MINIMUM OF 12 INCHES ABOVE THE HIGHEST POINT OF USE.
C. THE ASSEMBLY SHALL BE READILY ACCESSIBLE FOR TESTING, REPAIR AND MAINTENANCE.
D. THE ASSEMBLY SHALL NOT BE INSTALLED BELOW GROUND (VAULT OR PIT).
E. THE PVB SHALL BE MAINTAINED AS AN ASSEMBLY.
F. THE PVB SHALL BE INSTALLED IN A VERTICAL POSITION.
G. THE PVB MAY BE INSTALLED WITH DOWNSTREAM VALUES.
H. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.
I. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.



PROVO PUBLIC WORKS

# PRESSURE VACUUM BREAKER (PVB)

STANDARD DETAIL
P-631c
NOT TO SCALE
REVISED DATE: 11/25/15




NOTES:

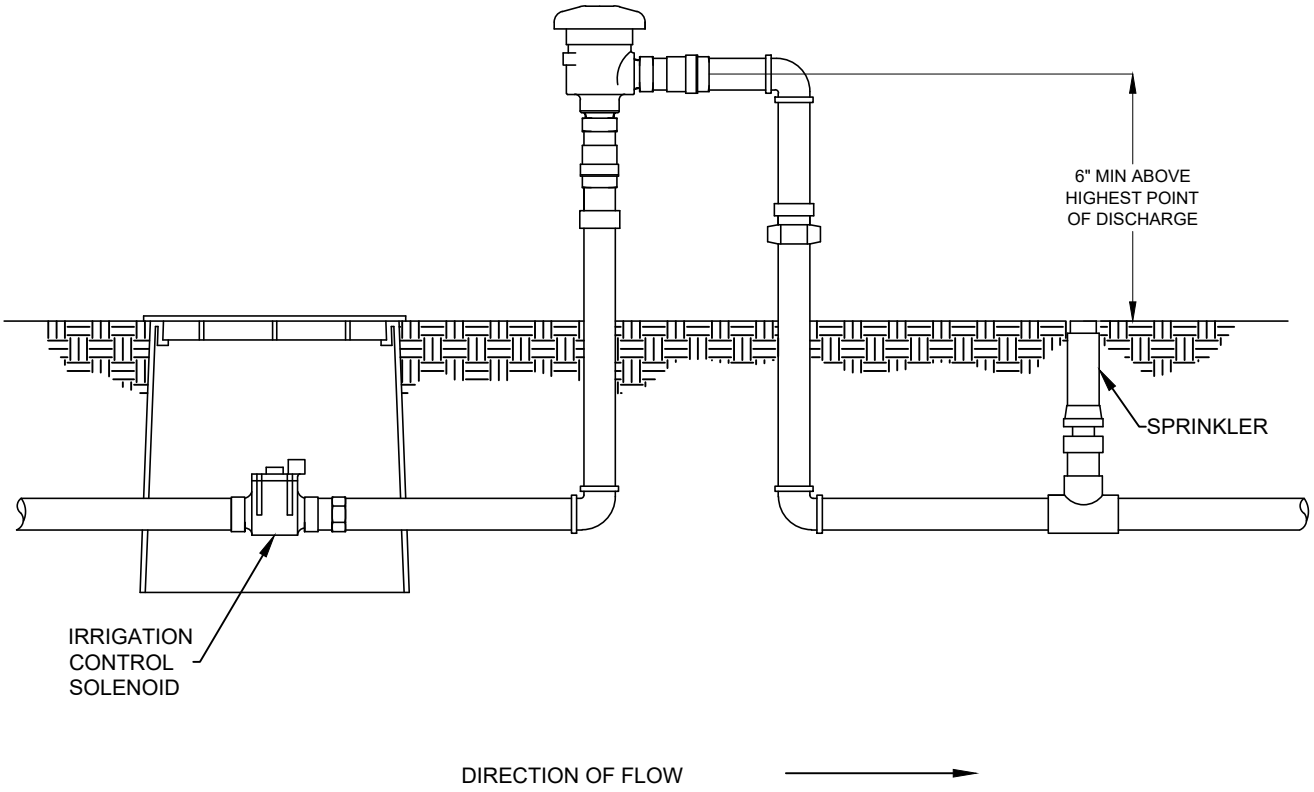
A. THE SPILL RESISTANT PRESSURE VACUUM BREAKER (SVB) SHALL NOT BE INSTALLED IN AN AREA THAT COULD BE SUBJECTED TO BACK PRESSURE.
B. THE ASSEMBLY SHALL BE INSTALLED A MINIMUM OF 12 INCHES ABOVE THE HIGHEST POINT OF USE.
C. THE ASSEMBLY SHALL BE READILY ACCESSIBLE FOR TESTING, REPAIR AND MAINTENANCE.
D. THE ASSEMBLY SHALL NOT BE INSTALLED BELOW GROUND (VAULT OR PIT).
E. THE SVB SHALL BE MAINTAINED AS AN ASSEMBLY.
F. THE SVB SHALL BE INSTALLED IN A VERTICAL POSITION.
G. THE SVB MAY BE INSTALLED WITH DOWNSTREAM VALUES.
H. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.
I. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.



PROVO PUBLIC WORKS

# SPILL RESISTANT PRESSURE VACUUM BREAKER (SVB)

STANDARD DETAIL
P-631d
NOT TO SCALE
REVISED DATE: 11/25/15




NOTES:

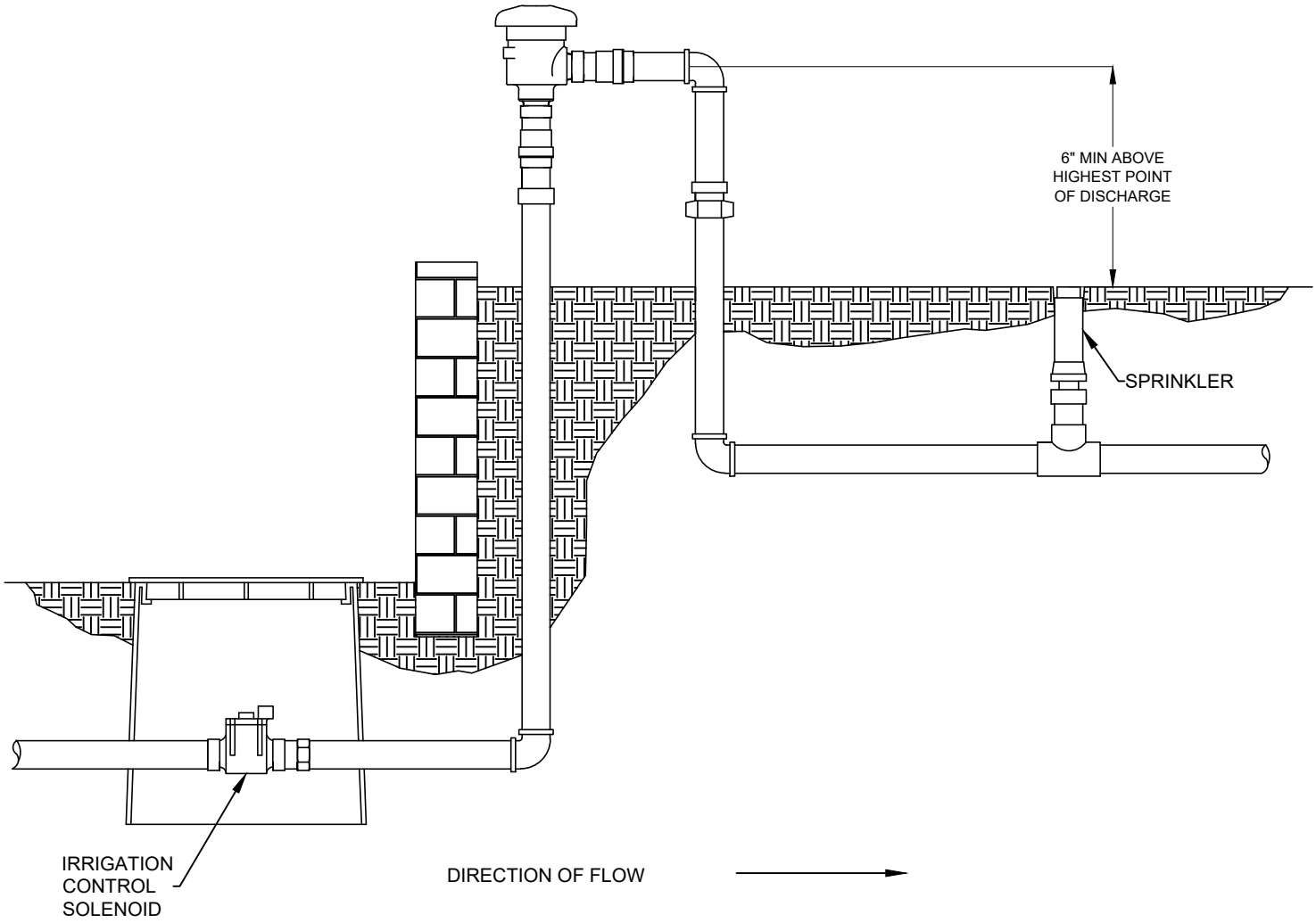
A. THE ATMOSPHERIC VACUUM BREAKER (AVB) SHALL NOT BE INSTALLED IN AN AREA THAT COULD BE SUBJECTED TO BACK PRESSURE OR BACK DRAINAGE.
B. THE AVB SHALL NOT BE INSTALLED WHERE IT MAY BE SUBJECTED TO CONTINUOUS PRESSURE FOR MORE THAN 12 CONSECUTIVE HOURS.
C. THE AVB SHALL BE INSTALLED A MINIMUM OF 6 INCHES ABOVE THE HIGHEST POINT OF USE.
D. THE AVB SHALL BE INSTALLED ON THE DISCHARGE SIDE OF THE LAST CONTROL VALVE.
E. THE AVB SHALL BE INSTALLED IN A VERTICAL POSITION.
F. INSPECT AT LEAST ONCE A YEAR, REMOVE POPPET HOOD AND VISUALLY INSPECT SEAL AND POPPET.
G. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.
H. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.



provo PUBLIC WORKS

# ATMOSPHERIC VACUUM BREAKER (AVB)

STANDARD DETAIL
P-631e
NOT TO SCALE
REVISED DATE: 11/25/15




NOTES:

A. THE ATMOSPHERIC VACUUM BREAKER (AVB) SHALL NOT BE INSTALLED IN AN AREA THAT COULD BE SUBJECTED TO BACK PRESSURE OR BACK DRAINAGE.
B. THE AVB SHALL NOT BE INSTALLED WHERE IT MAY BE SUBJECTED TO CONTINUOUS PRESSURE FOR MORE THAN 12 CONSECUTIVE HOURS.
C. THE AVB SHALL BE INSTALLED A MINIMUM OF 6 INCHES ABOVE THE HIGHEST POINT OF USE.
D. THE AVB SHALL BE INSTALLED ON THE DISCHARGE SIDE OF THE LAST CONTROL VALVE.
E. THE AVB SHALL BE INSTALLED IN A VERTICAL POSITION.
F. INSPECT AT LEAST ONCE A YEAR, REMOVE POPPET HOOD AND VISUALLY INSPECT SEAL AND POPPET.
G. FOR NOTES RELATING TO ALL BACKFLOW ASSEMBLIES, REFER TO TECHNICAL SPECIFICATIONS ON PLAN P-631.
H. IF YOU HAVE ANY QUESTIONS OR NEED MORE INFORMATION, PLEASE CONTACT PROVO CITY CROSS CONNECTION CONTROL COORDINATOR (801) 852-6788.



provo PUBLIC WORKS

# ATMOSPHERIC VACUUM BREAKER (AVB)

STANDARD DETAIL
P-631f
NOT TO SCALE
REVISED DATE: 11/25/15

**1. GENERAL**

A. Prior to the installation of any backflow prevention assembly, the Property Owner must be notified that the installation of a backflow prevention assembly may create a closed system, thereby creating a thermal expansion hazard. A thermal expansion device must be installed.

B. If any unapproved backflow prevention assembly is found within any water system, that assembly shall be removed and replaced with a state approved assembly.

C. All backflow assemblies shall be tested within 10 days of initial use.

D. All backflow assemblies shall be tested at least once a year.

E. All backflow assemblies shall be tested whenever relocated or repaired.

F. A copy of the test report must be sent to the Provo City.

G. Testers must have a current backflow assembly tester certificate.

**2. PRODUCTS**

A. Provide Outdoor or Indoor Reduced Pressure Principle Assembly (RP), Pressure Vacuum Breaker (PVB), Spill Resistant Pressure Vacuum Breaker (SVB), or Atmospheric Vacuum Breaker (AVB) per Provo City Standards.

B. Doublecheck assemblies are not allowed on landscape irrigation in Utah.

C. Above ground outdoor systems need to be galvanized steel, ductile iron or copper. No PVC allowed.

**3. EXECUTION**

A. Backflow Prevention Assembly type shall be approved by Provo City prior to installation.

B. Follow installation instructions on the backflow prevention assembly drawing.

C. Air Gap -

C.1. The Air gap shall be a minimum of one inch, or twice the diameter of the incoming pipe (within 10 pipe diameters of termination of the line).

C.2. Where the air gap is within two pipe diameters (horizontal measurement) of a wall, the air gap shall be increased to three times the incoming pipe diameter. High hazard air gaps shall be inspected on an annual basis.



PUBLIC WORKS

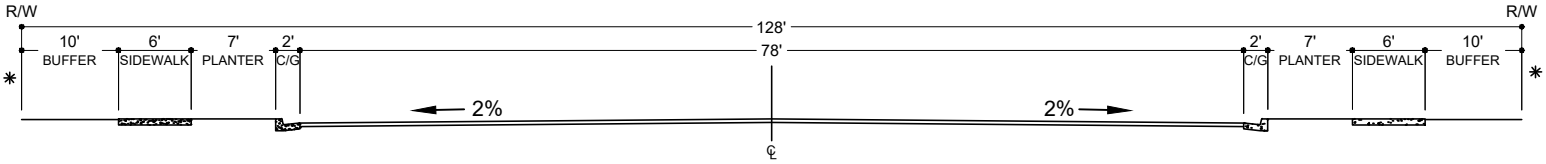
# *BACKFLOW PREVENTION ASSEMBLIES*

STANDARD DETAIL

P-631

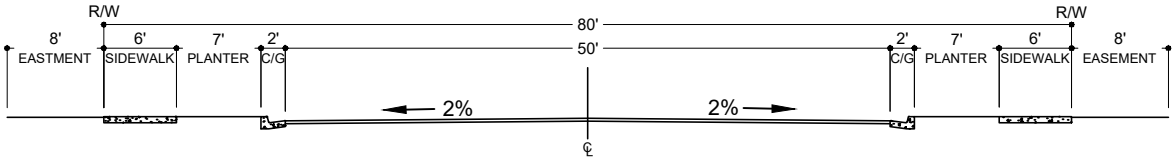
NOT TO SCALE

REVISED DATE: 11/10/16



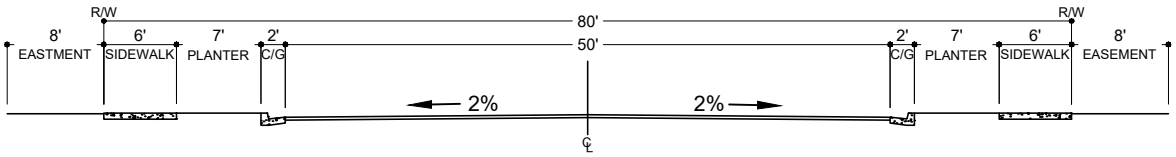

ARTERIAL STREET

(78' PAVEMENT)




MINOR ARTERIAL STREET

(50' PAVEMENT)




COLLECTOR STREET

(50' PAVEMENT)

NOTE:

* 8' PUBLIC UTILITY EASEMENT

SHEET 1 OF 1

PUBLIC WORKS

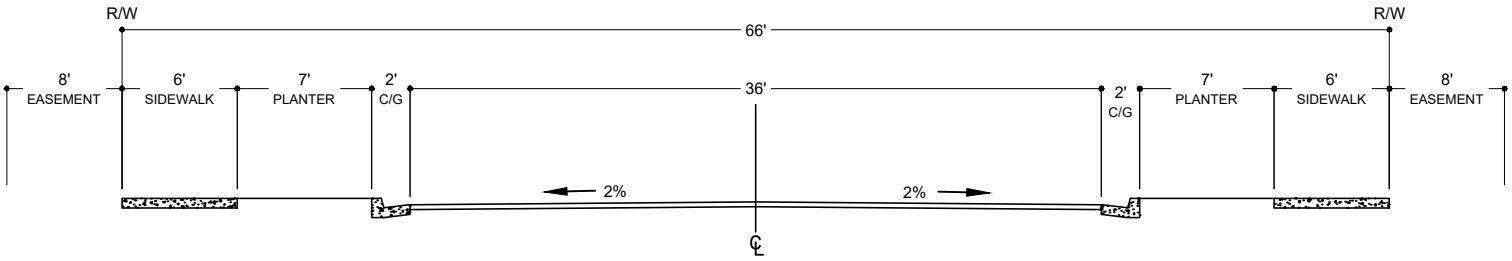
# *TYPICAL STREET SECTIONS*

STANDARD DETAIL

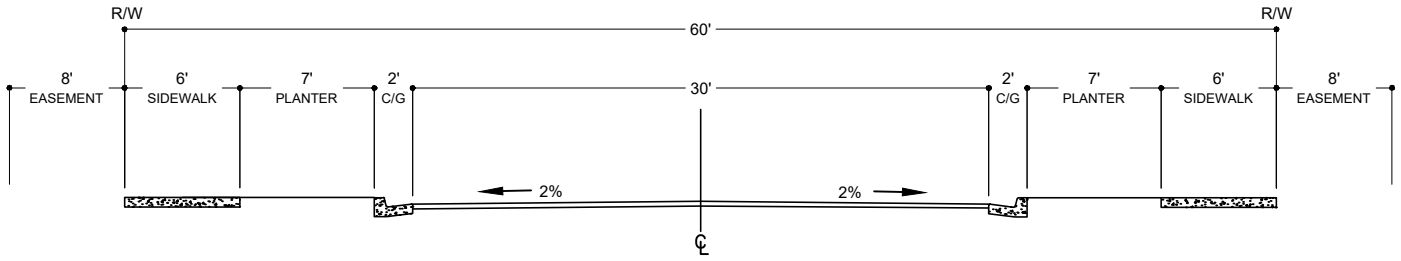
P-900

NOT TO SCALE

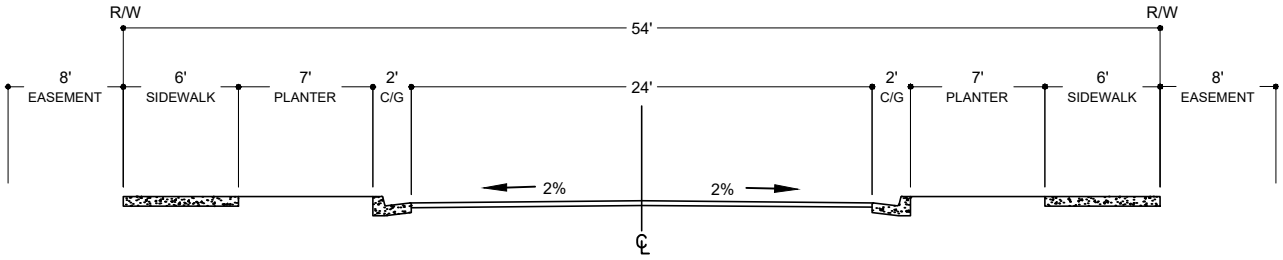
REVISED DATE: 4/20/19




LOCAL STREET
(36' PAVEMENT)




LOCAL STREET
(30' PAVEMENT)




LOCAL STREET (Parking on one side)
(24' PAVEMENT)

NOTE:
8' PUBLIC UTILITY EASEMENT

SHEET 1 OF 1

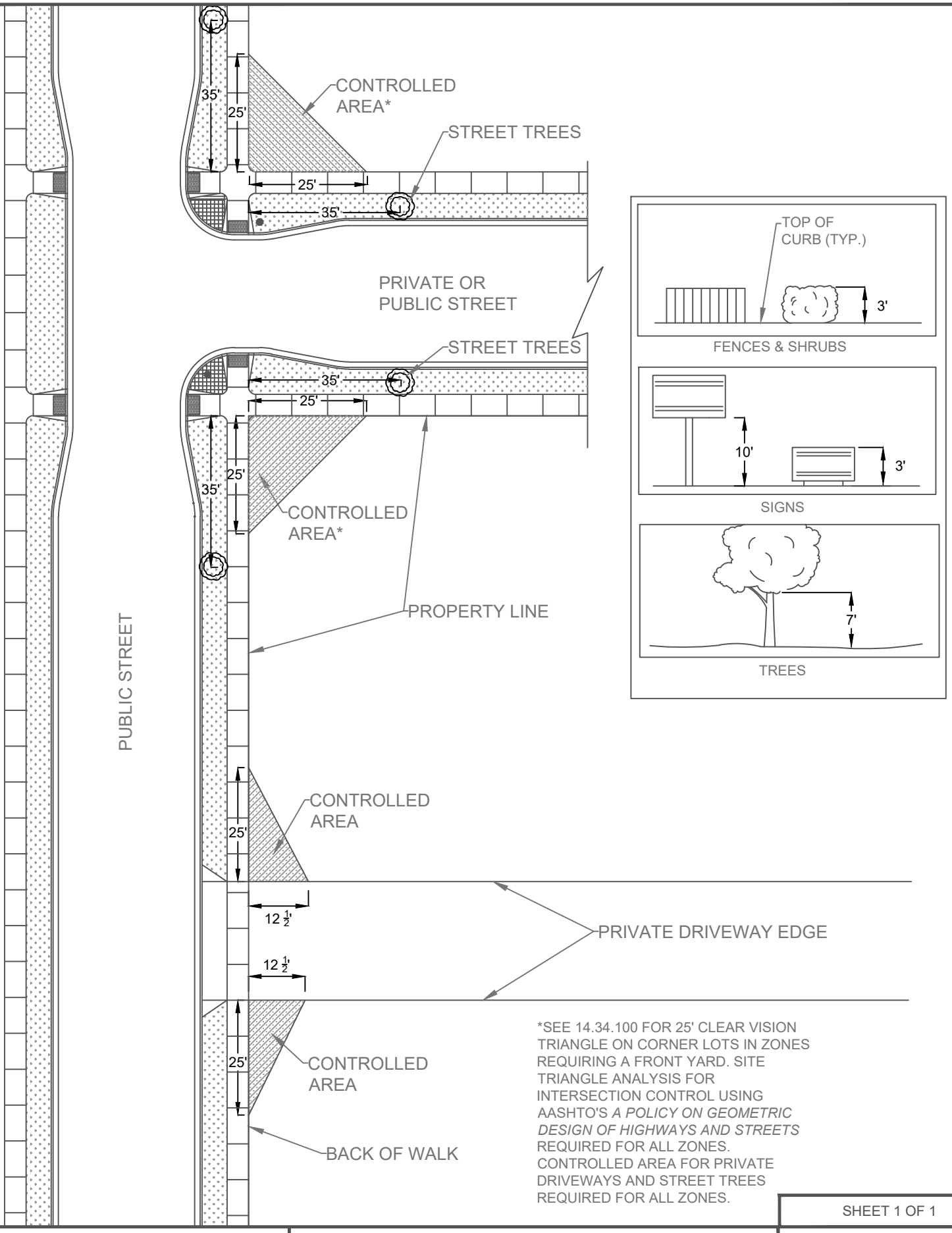
PUBLIC WORKS

# *TYPICAL STREET SECTIONS*

STANDARD DETAIL
P-901

NOT TO SCALE

REVISED DATE: 4/20/19




*SEE 14.34.100 FOR 25' CLEAR VISION TRIANGLE ON CORNER LOTS IN ZONES REQUIRING A FRONT YARD. SITE TRIANGLE ANALYSIS FOR INTERSECTION CONTROL USING AASHTO'S *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS* REQUIRED FOR ALL ZONES. CONTROLLED AREA FOR PRIVATE DRIVEWAYS AND STREET TREES REQUIRED FOR ALL ZONES.

SHEET 1 OF 1

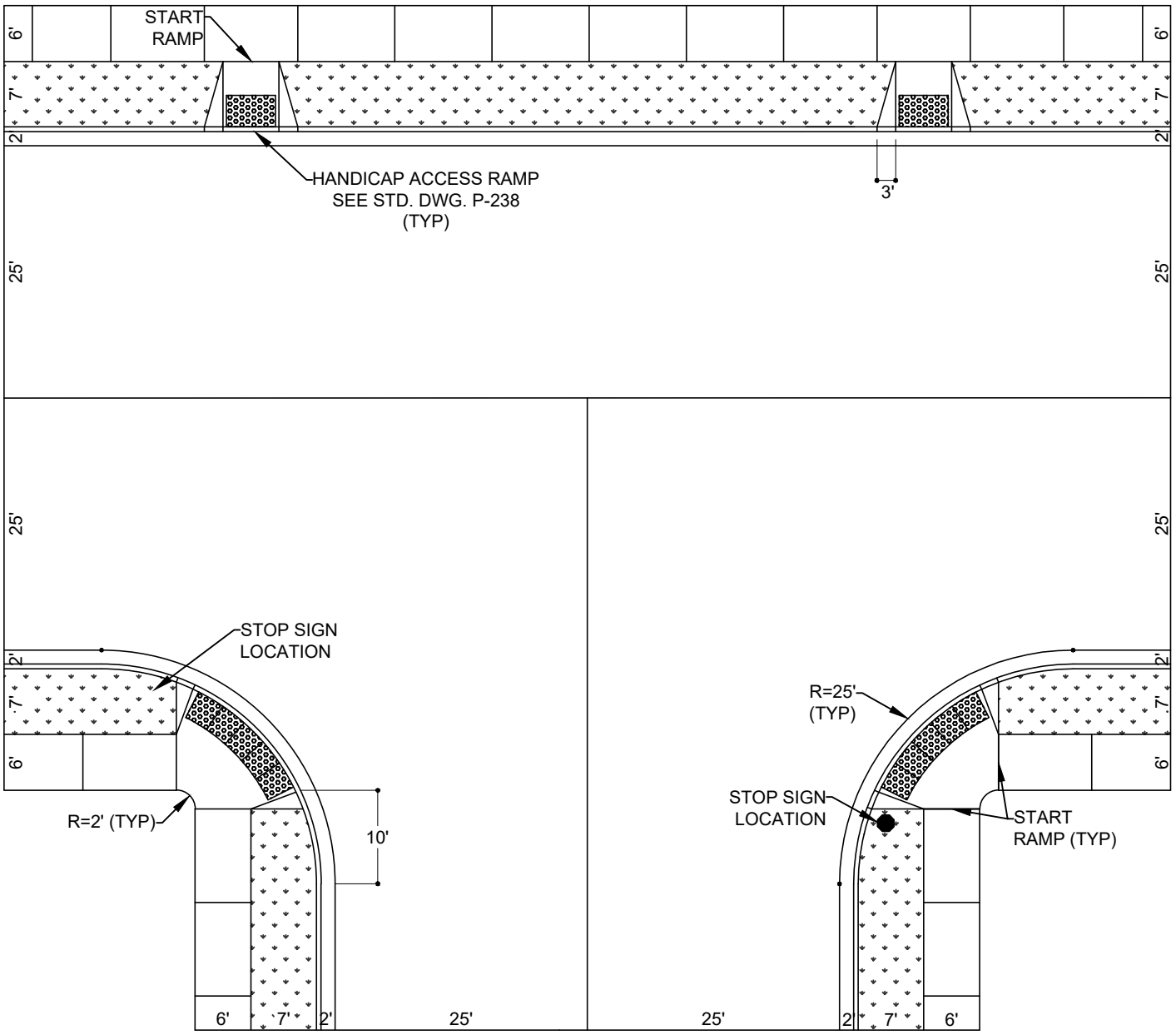
provo PUBLIC WORKS

# *CLEAR VISION REQUIREMENTS*

STANDARD DETAIL
P-902

NOT TO SCALE

REVISED DATE: 10/04/2022




## COLLECTOR STREET TO COLLECTOR STREET

NOTE: HANDICAP ACCESSIBLE RAMPS SHALL BE PROVIDED AT ALL CROSSING LOCATIONS.

SHEET 1 OF 1

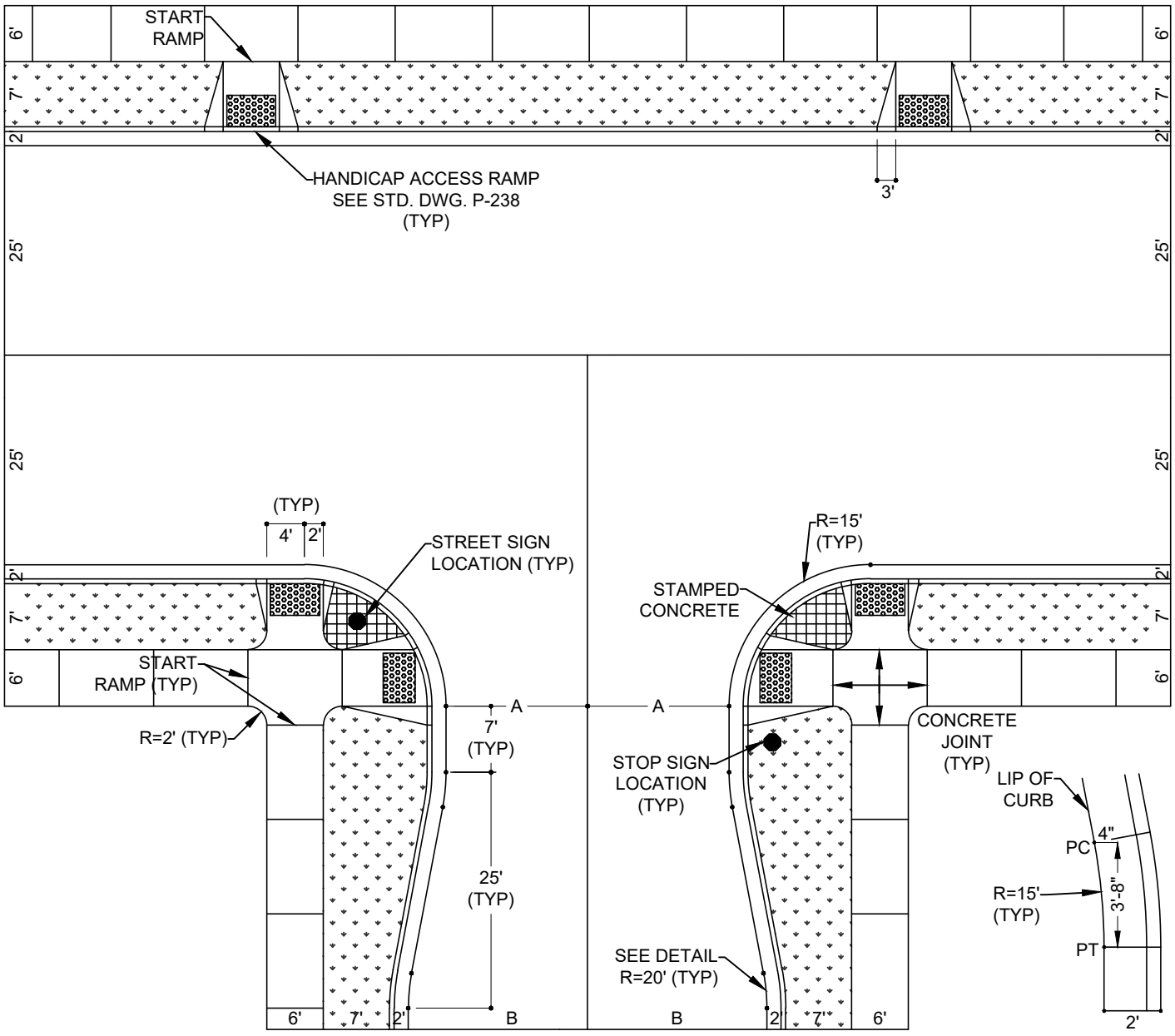
PUBLIC WORKS

# *TYPICAL COLLECTOR STREET T-INTERSECTION*

STANDARD DETAIL
P-903

NOT TO SCALE

REVISED DATE: 10/14/19




| ROAD WIDTH | | |
|---|---|---|
| | A | B |
| 30' PAVEMENT | 12' | 15' |
| 36' PAVEMENT | 14' | 18' |

MODIFICATIONS TO THIS STANDARD MUST BE APPROVED BY THE CITY ENGINEER

NOTE: HANDICAP ACCESSIBLE RAMPS SHALL BE PROVIDED AT ALL CROSSING LOCATIONS.

PUBLIC WORKS

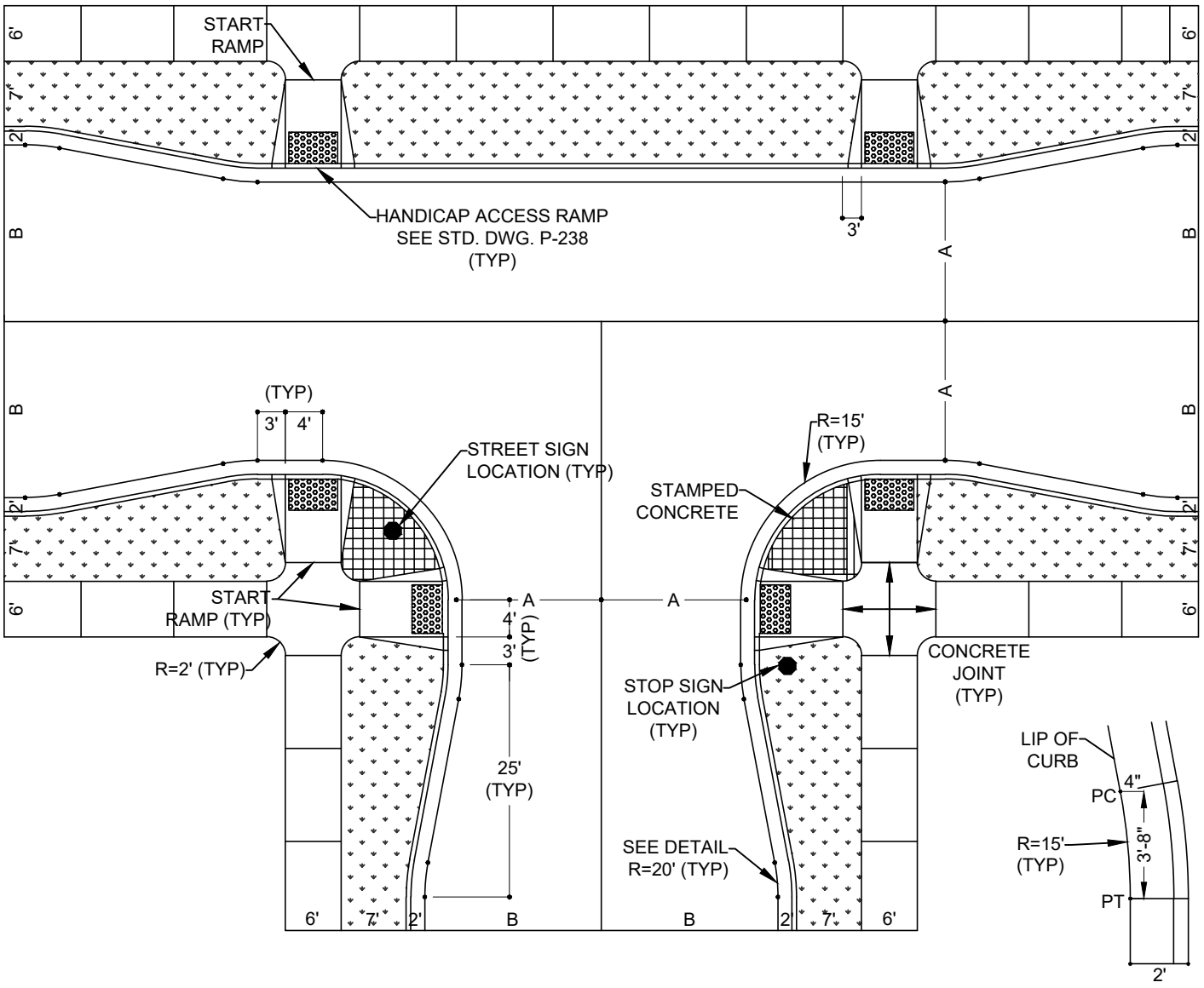
# TYPICAL LOCAL TO COLLECTOR STREET T-INTERSECTION

SHEET 1 OF 1

STANDARD DETAIL
P-904

NOT TO SCALE

REVISED DATE: 10/14/19




| ROAD WIDTH | | |
|---|---|---|
| | A | B |
| 30' PAVEMENT | 12' | 15' |
| 36' PAVEMENT | 14' | 18' |

MODIFICATIONS TO THIS STANDARD MUST BE APPROVED BY THE CITY ENGINEER

NOTE: HANDICAP ACCESSIBLE RAMPS SHALL BE PROVIDED AT ALL CROSSING LOCATIONS.

PROVO PUBLIC WORKS

# TYPICAL LOCAL TO LOCAL STREET T-INTERSECTION

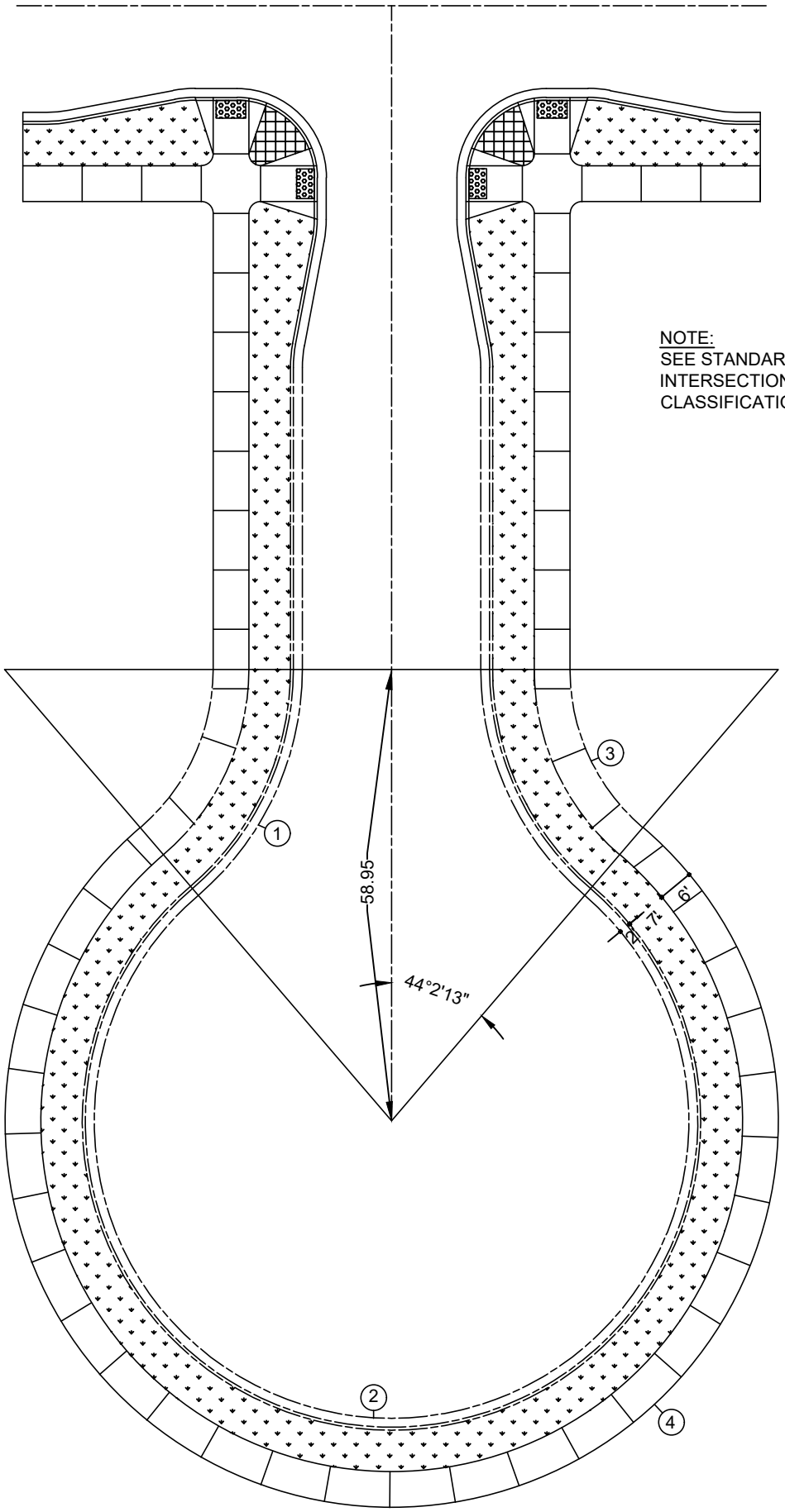
SHEET 1 OF 1

STANDARD DETAIL

P-905

NOT TO SCALE

REVISED DATE: 10/14/19




NOTE:
SEE STANDARD DRAWINGS 904 THROUGH 909 FOR INTERSECTION DETAILS DEPENDANT ON THE STREET CLASSIFICATION.

CURVE TABLE

| CURVE | RADIUS |
|---|---|
| 1 | 41.00° |
| 2 | 41.00° |
| 3 | 26.00° |
| 4 | 56.00° |

PUBLIC WORKS

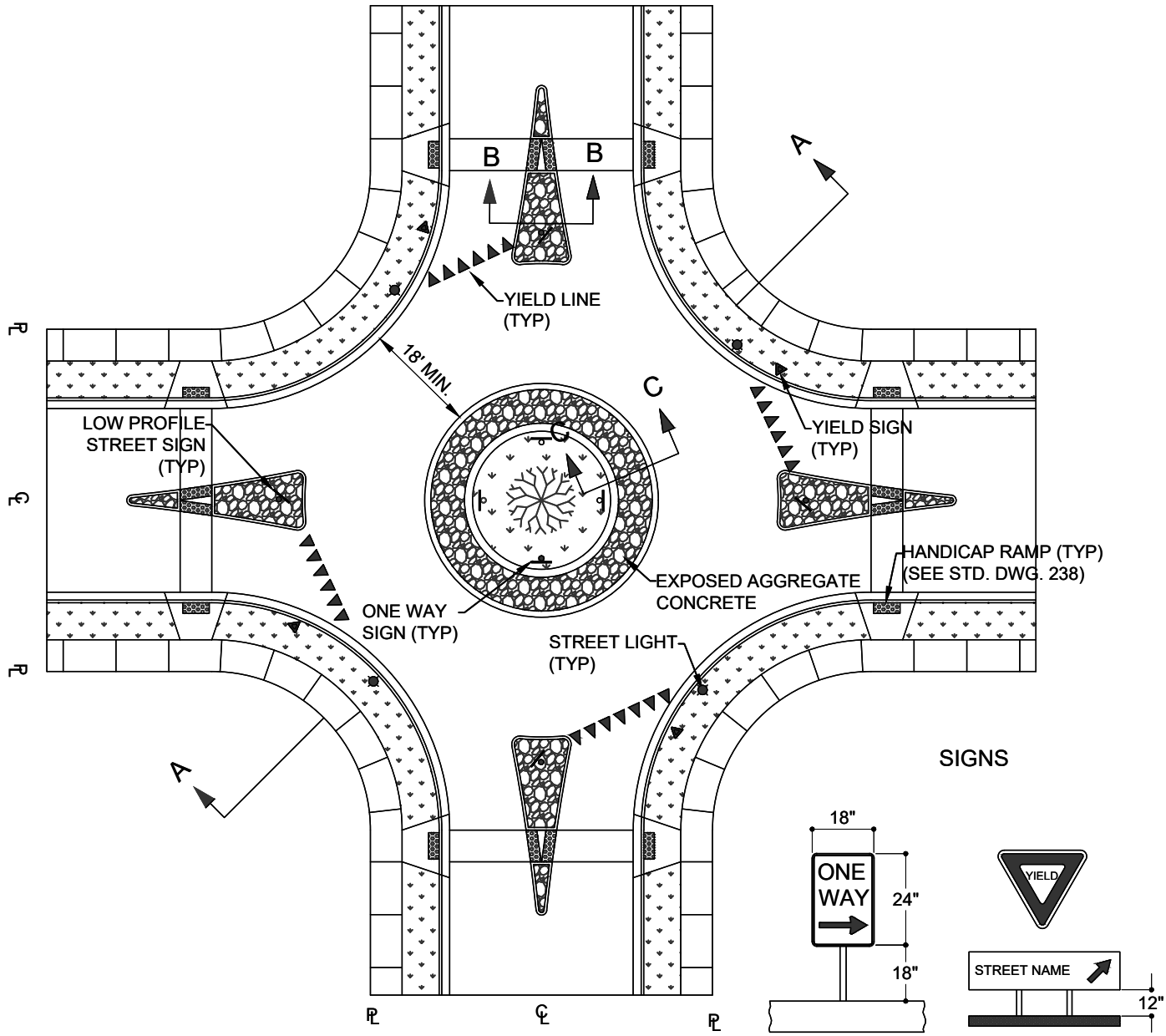
# CUL-DE-SAC WITH PLANTER

SHEET 1 OF 1

STANDARD DETAIL
P-910

NOT TO SCALE

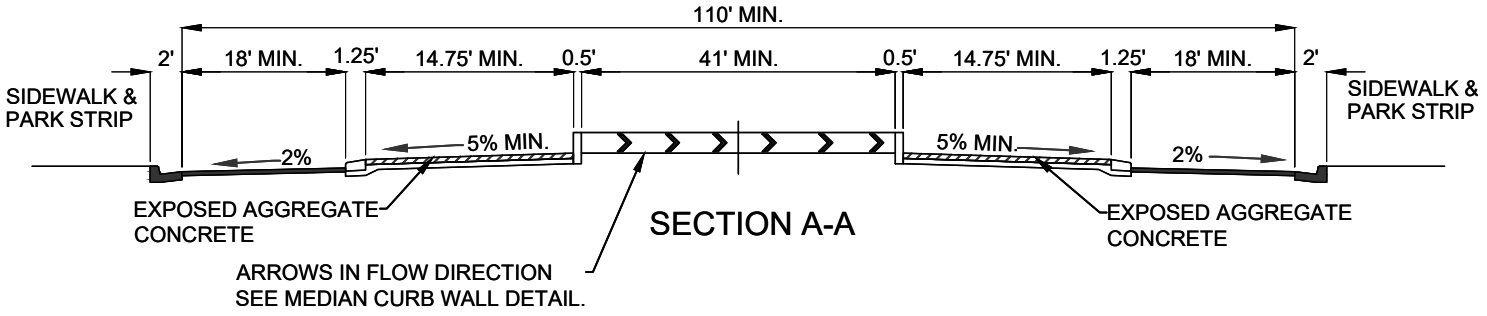
REVISED DATE: 09/28/2021




SIGNS




CHANGES CAN BE MADE
BASED ON DESIGN VEHICLE.




SECTION A-A



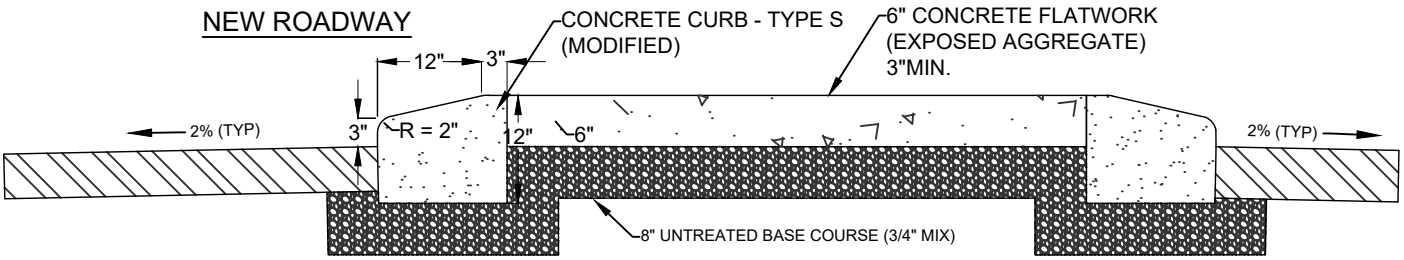
PUBLIC WORKS

# TYPICAL ROUNDABOUT

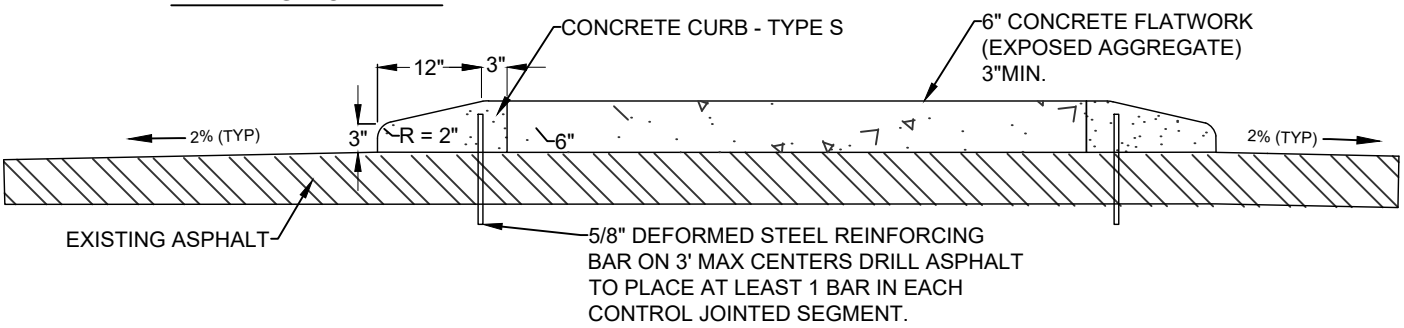
STANDARD DETAIL
P-912
NOT TO SCALE
REVISED DATE: 08/2023

## SECTION B-B

### NEW ROADWAY

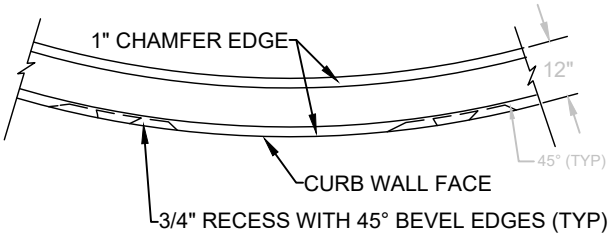



### EXISTING ROADWAY

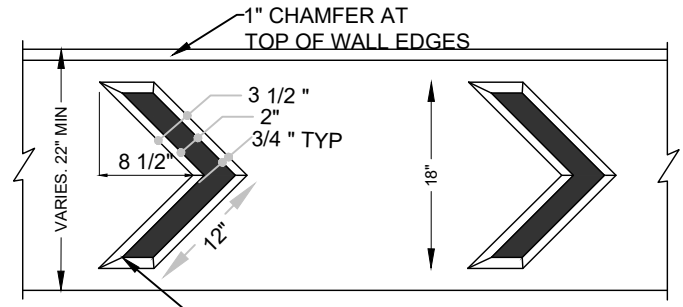



## MEDIAN CURB WALL

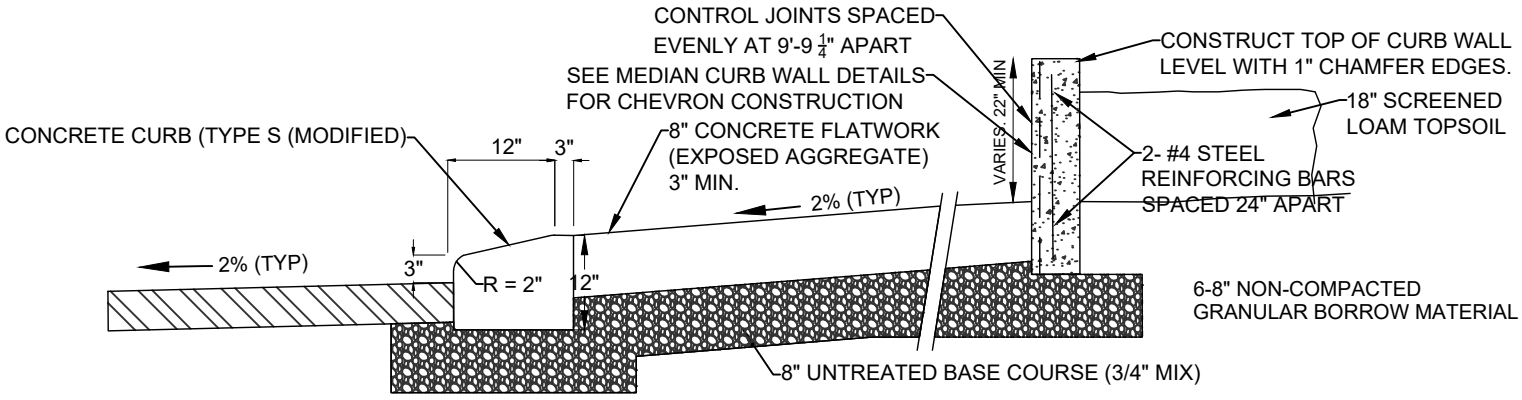
### TOP VIEW




### ELEVATION VIEW




## SECTION C-C

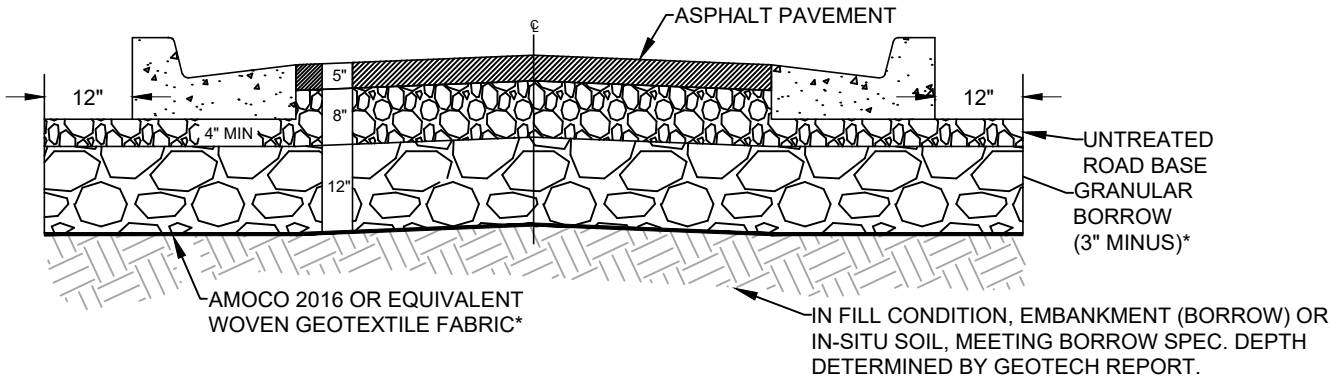




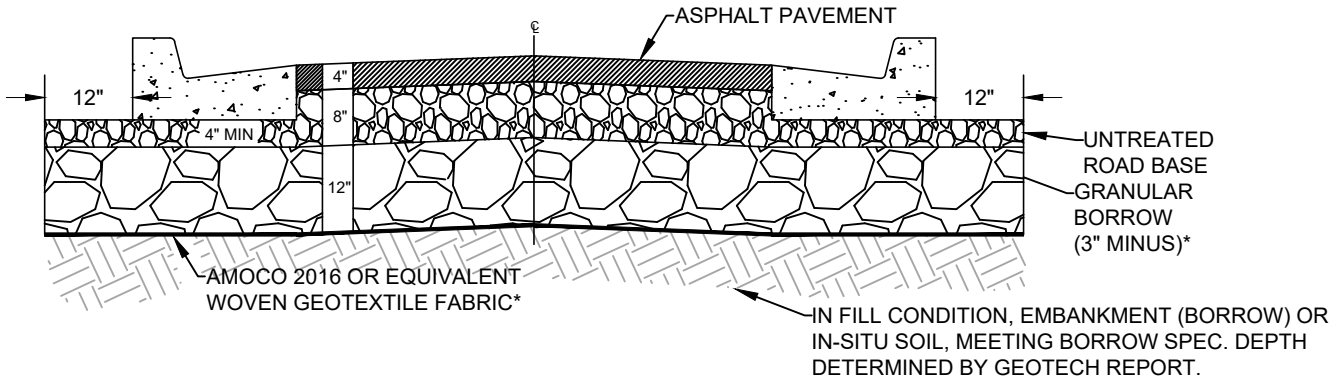

PUBLIC WORKS

# *TYPICAL ROUNDABOUT*

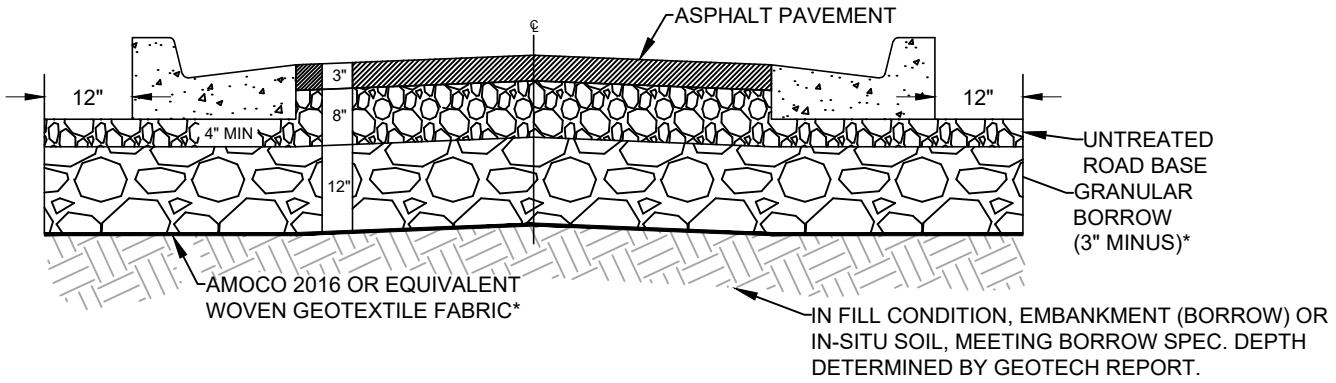
STANDARD DETAIL
P-912
NOT TO SCALE
REVISED DATE: 08/2023



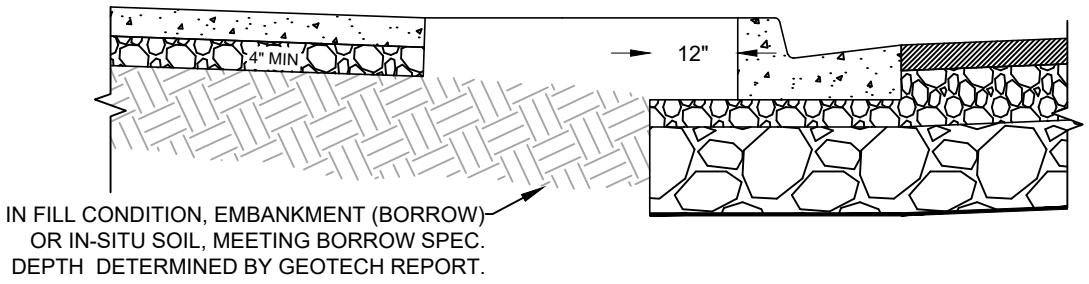

## ARTERIAL STREETS




## COLLECTOR STREETS




## LOCAL\PRIVATE STREETS




## TYPICAL SIDE DETAIL

*REQUIRED IN SENSITIVE LANDS, OR AS REQUIRED BY CITY ENGINEER

SHEET 1 OF 1

provo PUBLIC WORKS

# *MINIMUM PAVEMENT DESIGN*

STANDARD DETAIL
P-913

NOT TO SCALE

REVISED DATE: 09/28/21

NOTES:

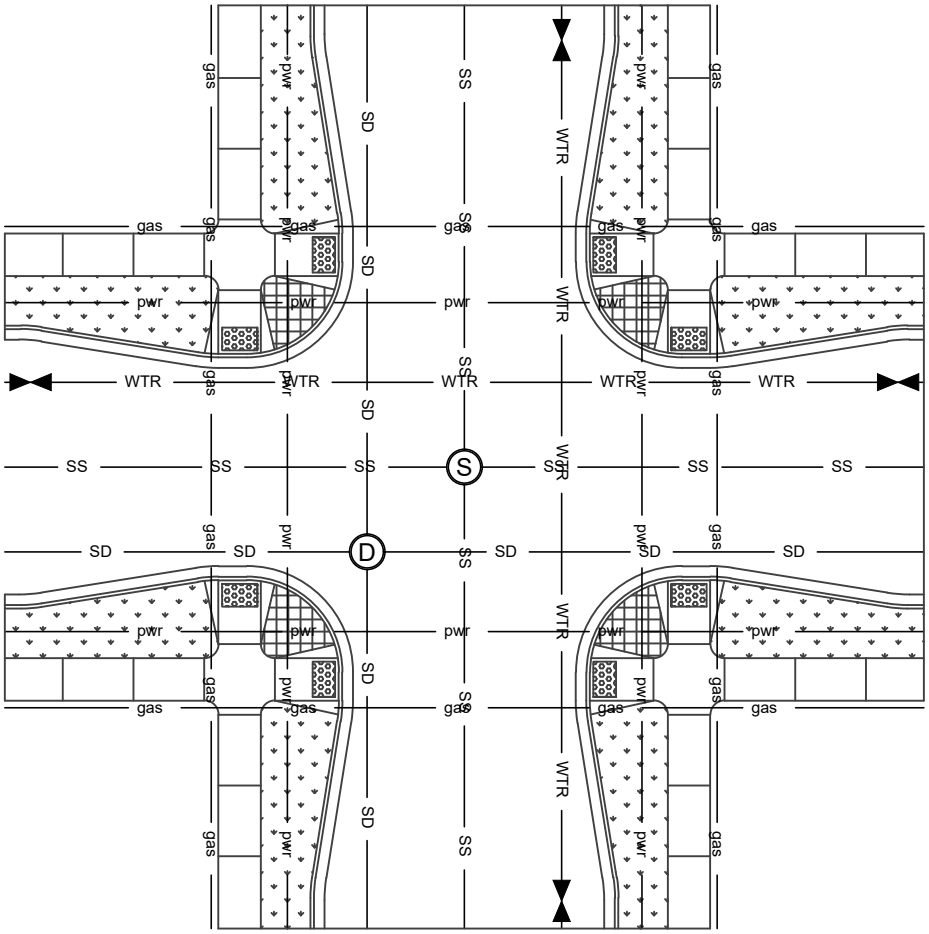
WATER LINES: 6' FROM THE LIP OF CURB ON THE NORTH AND EAST SIDES OF THE ROAD.

SEWER LINES: ON CENTER LINE OF ROAD.

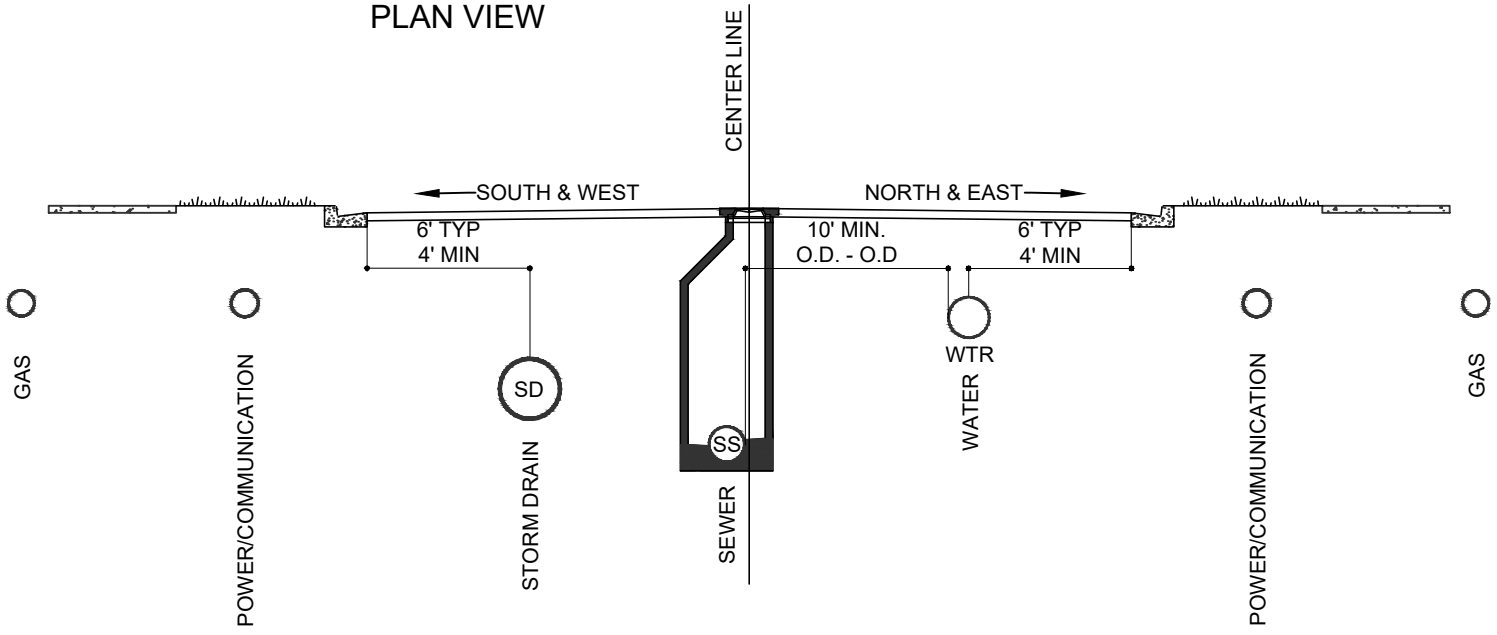
STORM DRAIN: 6' FROM THE LIP OF CURB ON THE SOUTH AND WEST SIDES OF THE ROAD.

DETAIL DOES NOT APPLY TO 24' ASPHALT WIDTH ROADS.

BURY DEPTH FOR COMMUNICATION UTILITIES SHOULD BE BETWEEN 36-INCHES AND 48-INCHES.




PLAN VIEW




CROSS SECTION

SHEET 1 OF 1

PUBLIC WORKS

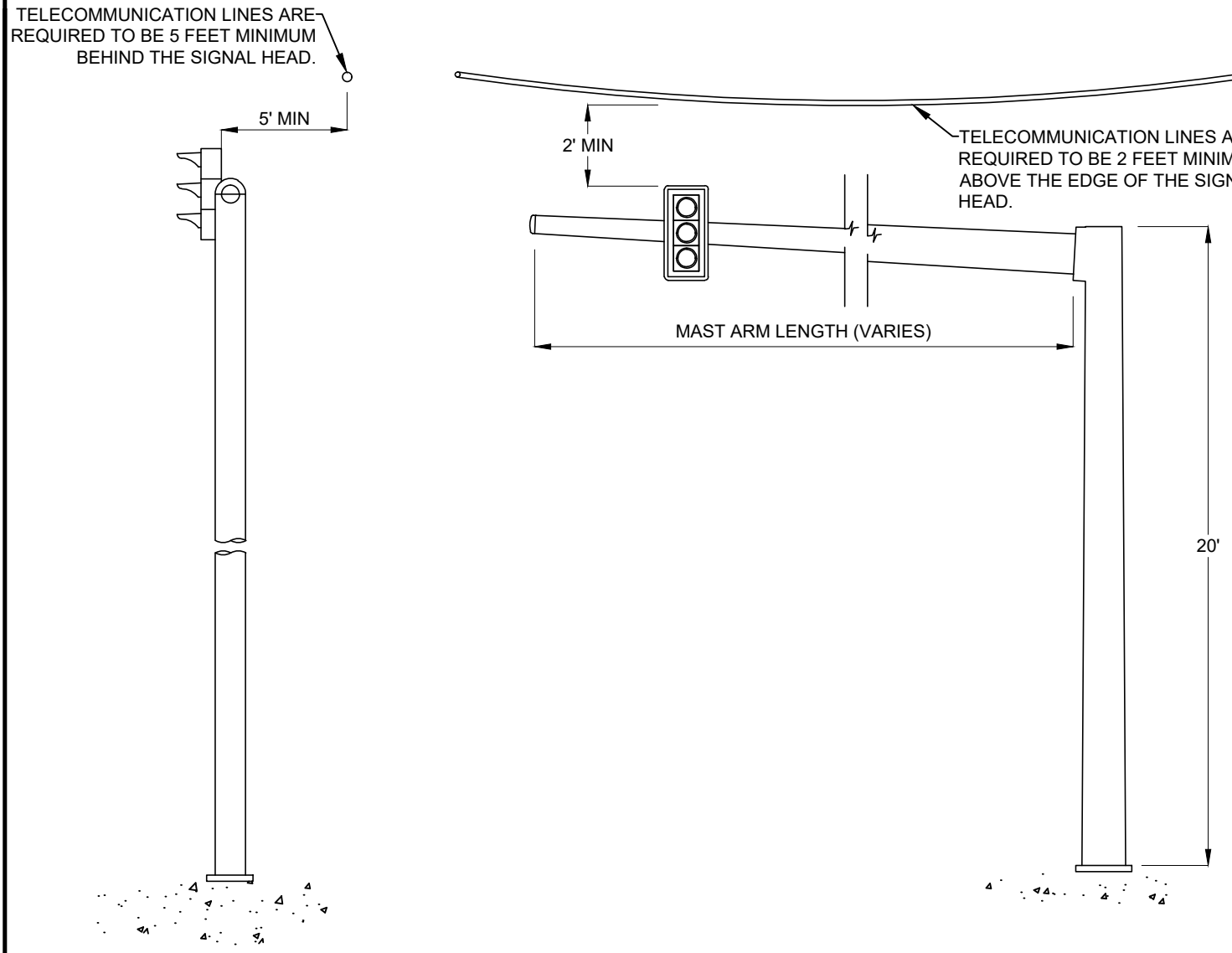
# *UTILITY LOCATION IN CITY R.O.W.*

STANDARD DETAIL

P-914

NOT TO SCALE

REVISED DATE: 08/2023




NOTES:
THIS STANDARD IS TO BE FOLLOWED AT ALL CURRENT AND FUTURE SIGNALIZED INTERSECTIONS



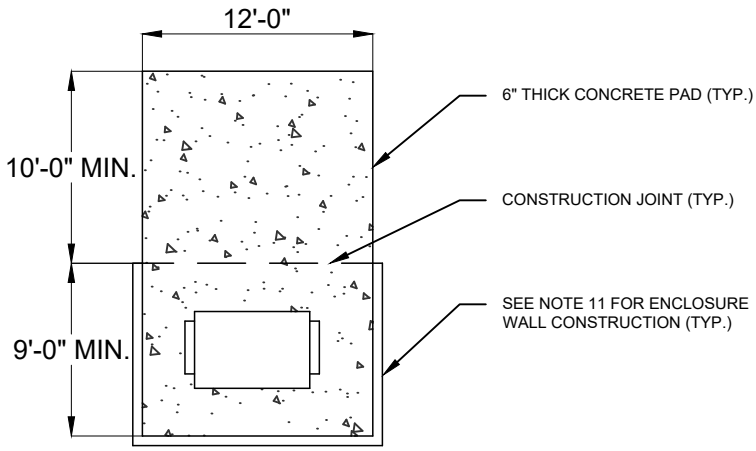
PUBLIC WORKS

# *OVERHEAD UTILITY LOCATION*

STANDARD DETAIL
P-915

NOT TO SCALE

REVISED DATE: 10/14/19




SINGLE-WIDE BIN ENCLOSURE CONFIGURATION

1. SINGLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 12 FEET.

2. DOUBLE-WIDE BIN ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 24 FEET WITHOUT MIDWALLS. ALTHOUGH NOT PREFERRED, DOUBLE-WIDE BIN ENCLOSURES CAN BE DESIGNED WITH MIDWALLS WITH A NET ENCLOSURE WIDTH OF 12 FEET ON EACH SIDE OF MIDWALL.

3. ENCLOSURES MAY BE DESIGNED WITH AN OPENING LESS THAN 12 FEET IF CONTAINER IS PLACED ON ROLLERS TO BE PULLED OUT FOR SOLID WASTE COLLECTION.

4. MULTI-UNIT RESIDENTIAL DEVELOPMENTS MAY BE DESIGNED WITH A TRIPLE WIDE ENCLOSURE TO ACCOMMODATE RECYCLING ADDITIONAL ENCLOSURES MAY BE NECESSARY DEPENDING ON NUMBER OF UNITS. .

5. TRIPLE-WIDE ENCLOSURES SHALL HAVE A NET ENCLOSURE OPENING OF 36 FEET AND SHALL BE DESIGNED WITHOUT MIDWALLS, GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING.

6. GATES, HINGES, & MOUNTING HARDWARE SHALL BE INSTALLED SO THERE IS A MIN. 9 FOOT DEPTH CREATED WITHIN EACH ENCLOSURE.

7. GATES, HINGES, AND MOUNTING HARDWARE SHALL NOT INTRUDE UPON MINIMUM NET ENCLOSURE OPENING SO THERE IS A MINIMUM 12' WIDTH WITHIN EACH ENCLOSURE.

8. CONTRACTION JOINTS MAY BE EITHER SCORED OR SAWCUT 1-INCH DEEP.

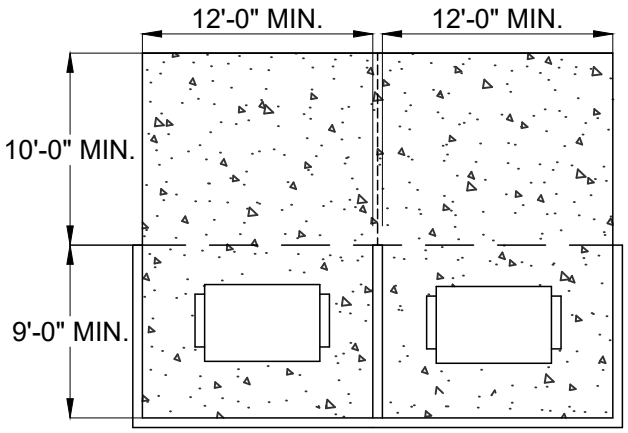
9. BINS THAT ARE VISIBLE FROM A PUBLIC ROADWAY SHALL HAVE ENCLOSURE GATES THAT SCREEN THE BINS FROM PUBLIC VIEW

10. ENCLOSURES SHALL BE PLACED SO THAT THERE IS AT LEAST 45 FEET OF CLEARANCE BETWEEN THE ENTRANCE OF THE ENCLOSURE AND ANY OTHER OBSTRUCTIONS.

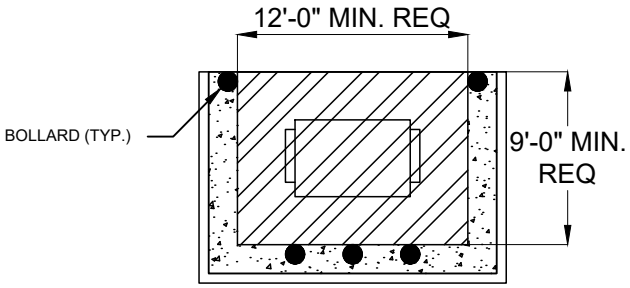
11. ENCLOSURE WALLS SHALL BE TALL ENOUGH AND MADE OF A MATERIAL SO THAT THE BIN IN EACH ENCLOSURE IS BLOCKED FROM PUBLIC VIEW.

12. MAINTAIN A 15' MIN. OVERHEAD CLEARANCE FOR ACCESS TO TRASH ENCLOSURE

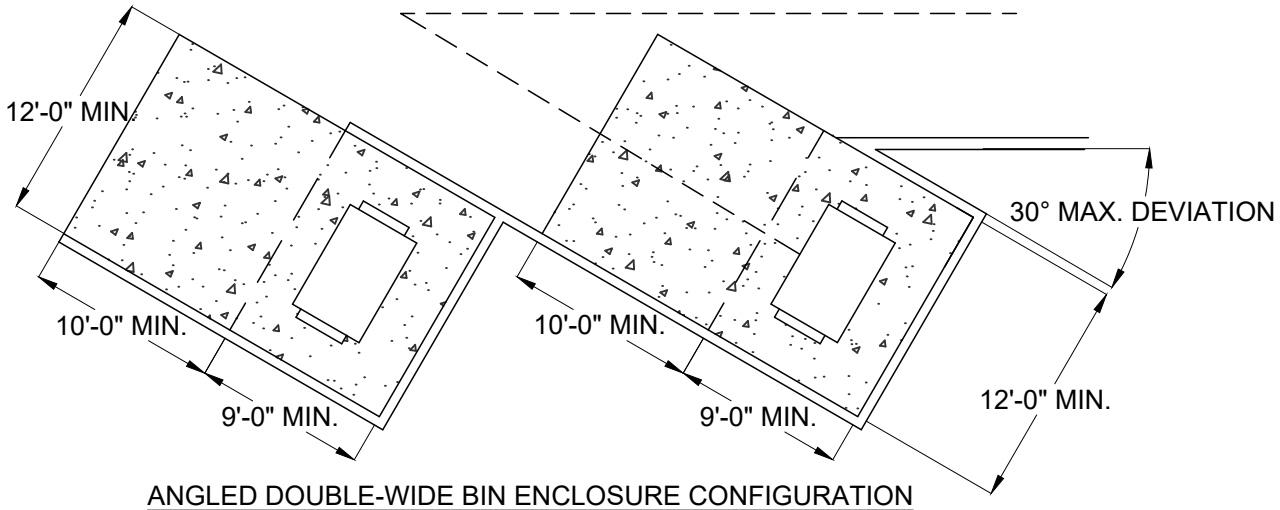
13. RECOMMENDED BOLLARDS TO PROTECT ENCLOSURE WALLS. BOLLARD DESIGN REQUIRES A MIN. 9' X 12' INSIDE OPERATIONAL SPACE.




DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION




RECOMMENDED BOLLARDS
SEE NOTE 13




ANGLED DOUBLE-WIDE BIN ENCLOSURE CONFIGURATION

SHEET 1 OF 1

PUBLIC WORKS

# SOLID WASTE ENCLOSURE STANDARD

STANDARD DETAIL
P-920

NOT TO SCALE

REVISED DATE: 09/12/23

# 2024 PROVO CITY
# PUBLIC WORKS DEPARTMENT
# DEVELOPMENT DESIGN STANDARDS

provo
PUBLIC WORKS

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## INTRODUCTION

This document has been prepared and compiled by the Engineering Staff of the Public Works Department. This document is to assist developers in understanding the current procedures for the review and approval, by the Public Works Department, for developments within the City.

The review process may require multiple reviews and approvals. These include the Concept Plan Approval, Preliminary Plan Approval, and Final Plan Approval.

In addition to the previously mentioned reviews and approvals, developments may also require review and approvals for annexation and rezone requests.

This document includes a TABLE OF CONTENTS which directs the user to a specific topic and page; a process to guide the developer through the review and approval process; and information

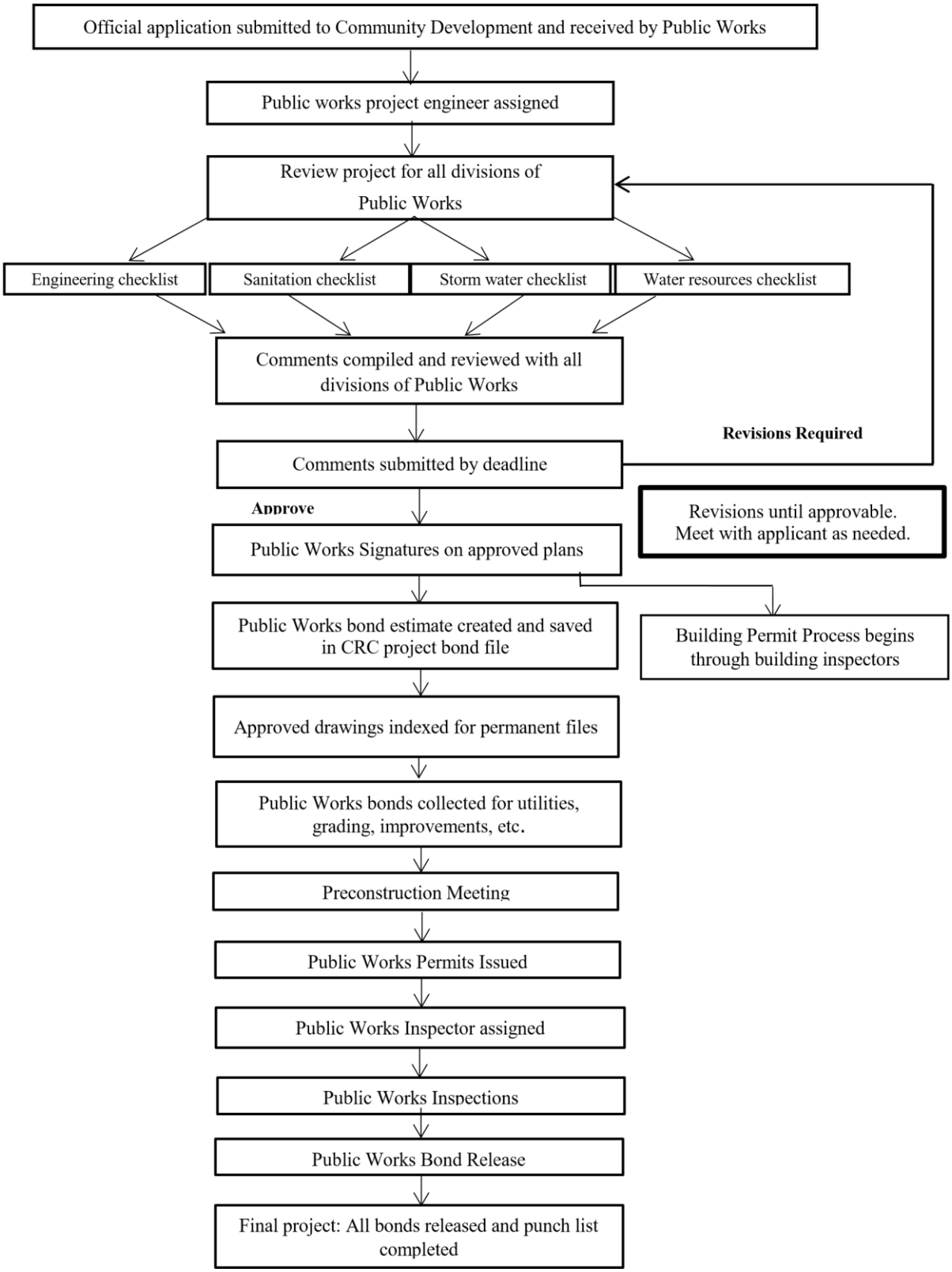
required to be included in the submittal process. All drawings shall be saved in the datum NAD 83, Utah State Plane, Central Zone, US Survey Foot, NAVD 88.

The items contained in the document have been prepared as a supplement to the adopted subdivision ordinances and standards, and are provided as an aid to the Developer. Through the use of this document, the Developer will be able to more closely comply with adopted standards.

This document is not intended to fully represent the current adopted subdivision ordinance, construction standards and drawings, master plans, or other City requirements. The Developer shall be responsible to comply with all of the adopted ordinances and standards of Provo City

## PUBLIC WORKS DEVELOPMENT

# REVIEW PROCESS



# CONCEPT PLAN CHECKLIST

This type of application must first be reviewed by the Coordinator's Review Committee (CRC) consisting of Provo City Staff. All submittals shall be submitted to Community Development. The City staff will make a recommendation to the Provo City Planning Commission for consideration. The Planning Commission has the authority to either approve or deny the request.

Below is a list of information that is required to be submitted with the application in order for City staff to process the request. If any of the required information is not submitted, the application will be considered incomplete and will not be accepted.

In compliance with the Provo City Code a concept plan application shall include:

1. Application form submitted it to the City
2. Receipt of all paid application fees
3. Plan submitted electronically showing the proposed development layout with the following information:
    a. Total acreage of the site and the percentages designated for various uses
    b. Proposed traffic circulation pattern
    c. Proposed recreation facilities and improvements
    d. General location of all dwellings and other structures
    e. Indication of proposed population and building densities (units per net acre).
    f. Preliminary elevations or perspectives of all building types including floor plans.
    g. A workable infrastructure plan for providing necessary streets, water, sewer, storm drainage, and electrical distribution for the entire tract.

Based on the size or complexity of the development proposal, staff may require any or all of the following additional information in order to obtain concept plan approval:

1. Complete and accurate legal description of the property
2. Preliminary title search showing legal ownership of the property.
3. Grading plan of the entire site
4. Preliminary subdivision layout
5. Phasing plan with a construction timetable for all phases

Staff will review the application and record that the information has been submitted. Upon receipt of a complete application with all necessary supporting drawings and documents, the plan shall be distributed to the various City departments for review, comments and approval. After each City department reviews the plan, they shall either request revisions to the submittal or approve the project as submitted. If the plan must be revised, then a revised concept plan shall be prepared which addresses the matters raised by City staff and then shall be resubmitted to the Community Development Department for review and approval.

# PRELIMINARY PLAN CHECKLIST

This type of application must first be reviewed by the Coordinator's Review Committee (CRC) consisting of Provo City Staff. The City staff will make a recommendation to the Provo City Planning Commission for consideration. The Planning Commission has the authority to either approve or deny the request.

Applicant submits the preliminary project plan with a completed application, required fees and all supporting documents as required. Upon receipt of a complete application with all necessary supporting drawings and documents, the plan shall be distributed to the various City departments for review, comments and approval. After each City department review the plan, they shall either request revisions to the submittal or approve the project as submitted. If the plan must be revised, then a revised preliminary project plan shall be prepared which addresses the matters raised by City staff and then shall be resubmitted to the Community Development Department for review and approval. A preliminary project plan shall demonstrate compliance with application provisions of the Provo City Code. Concurrent with any request to rezone or annex property, a preliminary project development plan shall be submitted to the Community Development Department.

Any development plan that includes a preliminary subdivision greater than three (3) acres shall comply with Section 15.03.300 and Section 15.04.130, Provo City Code.

The preliminary project plan shall be submitted in a pdf electronic format.

Below is a list of information that is required to be submitted with the application in order for City staff to process the request. If any of the required information is not submitted, the application will be considered incomplete and will not be accepted.

Staff will review the application and check the boxes if the information has been submitted. As part of the application provide the following.

1. A complete and accurate legal description of the real property which is the subject of development.
2. A preliminary title search showing legal ownership of the property. If the applicant is not the property owner, the applicant shall also provide written proof that the applicant has sufficient legal claim on the property, and each parcel therein, to proceed with development plans. Such proof may be in the form of options, deeds, or contracts on which the developer shall be entitled to black out confidential information such as the amount of consideration paid or periodic payment amounts.
3. Topographic maps of the entire site, including contour intervals no greater than two (2) feet.
4. A tabulation of the total acreage of the site and the percentages thereof to be designated for various uses, i.e. parking, residential units, open space, public streets, private streets, landscaping, etc.
5. Proposed traffic circulation pattern including private driveways, public and private streets, pedestrian paths, location of parking spaces and ingress or egress.

6. Parks, common opens spaces, playgrounds, school sites, and other public or private recreation facilities and improvements proposed within the planned development.
7. General location of all dwellings and other structures in the planned development, and an indication of proposed population densities and building densities (units per net acre).
8. A general landscaping plan showing what areas are to be landscaped and what types of plants and materials are to be used together with their numbers and sizes.
9. Preliminary elevations or perspectives of all building types proposed within the development including floor plans.
10. Preliminary subdivision plat, if the site is being divided, showing a general layout of all proposed lots.
11. A workable infrastructure plan for providing necessary streets, water, sewer, storm drainage, and electrical distribution for the entire tract including the point from which said services are to be extended.
12. If applicable, a draft of the declaration of covenants, conditions, and restrictions.
13. If applicable, a phasing plan which including a construction timetable for all phases.
14. An existing features site analysis plan which shows the location of severely constraining elements such as steep slopes thirty percent (30%) or greater, wetlands, watercourses, drainage channels, one hundred (100) year flood plains, potential landslide areas, fault lines, rock fall areas, or any other sensitive land area. The site analyses plan shall also show the location of significant features such as but not limited to woodlands, tree lines, open fields or meadows, scenic views, rock outcrops, roads, tracks, underground utilities, power lines, trails, etc.
15. If applicable, a development agreement.
16. For all developments three (3) acres or greater or ten (10) housing units or greater, and as may be required for other developments as reasonably determined by the City Engineer, a traffic study addressing key traffic issues identified by the Provo City Traffic Engineer. In determining whether to require a traffic study the City Engineer shall consider existing and projected traffic patterns and volume, and whether a traffic study will yield information useful for undertaking review of a proposed project plan or other development plan. Items to be addressed in a traffic study shall include but not be limited to the following:
17. Trip generation rates for the development.
18. Threshold volumes and percent of threshold for the surrounding street system.
19. A local area street plan.

# PLAT APPROVAL

1. INFORMATION TO BE INCLUDED
    A. The name of the subdivision in bold heading at the top of the drawing.
    B. Section, Township and Range
    C. City and County name
    D. Signature blocks for the Community Development Director, City Engineer, Mayor, and City Recorder.
    E. Signature blocks for owner dedication with proper attest blocks.
    F. Owners dedication narrative
    G. Boundary description narrative
        a. Must include the point of beginning tied to a found PLSS monument.
        b. Must have a tie to a second found PLSS monument for the establishment of the basis of bearing. Two found Provo City Centerline monuments may be used in the Provo City Block System.
    H. Boundary description as a drawing, matching the narrative.
    I. Dedication plat restrictions i.e. utility restrictions, setback restrictions, access restrictions, or other are required as part of development.
    J. Types and locations of all existing and proposed easements.
    K. Public utility and drainage easements are required in all subdivisions. The minimum width of easements shall be:
        a. On rear lot lines; eight feet on each side
        b. On front lot lines; eight feet
        c. On side lot lines; eight feet.
    L. In circumstances where a City utility traverses a lot or parcel to be developed the easement width shall be provided as required by the City Engineer. M. Slope easements shall be shown where required.
    N. Easements on street frontages shall be labeled as sidewalk and public utility easements.
    O. The placement/location of Public Utility Easements, Drainage Easements, and Sidewalk Easements may be adjusted with the approval from the City Engineer.

2. DESCRIPTION CLOSURE REQUIREMENTS
    A. The boundary must close to within 0.04 feet.
        a. The boundary description shall be traversed in a clockwise direction around the subdivision boundary.
        b. The street centerline must close to the boundary within 0.04 feet. The centerline is placed using the boundary information.
        c. Individual lot boundaries must close to within 0.04 feet to the street boundary and to the subdivision boundary.

d. The boundary to conform with adjacent parcels.

3. CENTERLINE INFORMATION
    A. Distances from monument to monument.
    B. Distance from PC to PT.
    C. Curve data to include
        a. Delta
        b. Radius
        c. Arc Length
        d. Chord bearing and distance
            i. Non-tangent curves to the approach and departure segments must also show the bearing to the center of the curve or the bearing for a tangent approach line.
        e. Prepare a table for numerous curves

4. PROPERTY AND LOT INFORMATION
    A. The square footage of the lot shall be shown.
    B. Addresses will be assigned by the Provo City Engineering Department

5. TITLE REPORT INFORMATION
    A. The title report is used to determine the proper owner's signature blocks; the location of existing easements; and to determine that the dedication plat and the property owned are the same parcel.
        a. The Title Report and the Dedication Plat must match exactly or include the entire subdivision and additional property. The report cannot be smaller than the subdivision.
        b. All easements shown on the Title Report must be shown on the Dedication Plat AND the easement owner must sign the Dedication Plat.
        c. The City Surveyor will review the Title Report and may direct the owner to remove specific easements or other encumbrances.

6. UTAH COUNTY RECORDER STANDARDS
    A. The plat shall have a border no larger than 24" X 36"
    B. The notary seal or lettering must be clear and legible.
    C. The subdivision title or heading must be consistent throughout all narratives.
    D. The owner(s)' signatures must be exactly as found on the Title Report.
    E. The scale must be clearly shown and must conform to the accepted standard, i.e. 1"=20', 30', 40', 50', 60' or 100'.
    F. All names shall be consistent on all narratives.

7. MONUMENT PLACEMENT
    A. Monuments shall be installed at all street intersections.

B. Monuments shall be installed at the PI of all curves, or where the PI is outside C. All monuments installed to Provo City Standards

8. PLAT REVIEW CHECKLIST

All plats will be reviewed according to the current plat review checklist

## FINAL PROJECT PLAN CHECKLIST

Final project plans must be submitted if the proposed project includes an industrial, commercial, institutional or multiple-family residential building, structure or use.

The following plans shall be submitted in an electronic pdf format. Upon approval CAD files shall be submitted which are applicable to Public Works, including fiber optic, water, sewer, stormwater assets, etc.

### Site Plan

1. Legal description of property.
2. Dimensions of existing and proposed property lines.
3. Distances from buildings to property lines.
4. Square footage of existing and proposed structures.
5. Use of existing and proposed structures.
6. Location of all fire hydrants within 500' or fire suppression methods where applicable.
7. Trash storage container location, size and how enclosed.
8. Eight foot public utility easements along all property lines where applicable.
9. Location of existing and proposed easements and/or right-of-ways.
10. Location of power, telephone, and cable facilities, including poles, anchors, transformers, and connection pedestals.
11. Areas devoted to public or open space use.
12. A proposed density range of each phase/lot.
13. An existing features site analysis which shows the location of significant features and severely constraining elements.

### Parking Plan

1. Parking space count.
2. Parking space dimensions, including back up area.
3. Ingress and egress.
4. Parking for people with disabilities.
5. Location of supporting columns in subgrade parking.

### Landscaping Plan

1. Location and dimensions of landscaped area, showing existing and proposed landscaping.

2. Types and sizes of existing and proposed landscaping materials, plants, and trees.
3. Percent of landscaping.
4. Location and type of proposed and existing retaining walls, hedges or fences.
5. Proposed and existing sprinkler/irrigation system.

## Building Design Plan

1. Exterior elevations of proposed buildings, indicating roofing materials, type of construction, exterior materials and colors.
2. Conceptual sign plans.
3. Total square footage for all floors, including rough floor plans.
4. Note all existing buildings proposed for use or for demolition.

## Traffic Study

1. Any project with 3 acres or greater of area or 10 housing units or greater must complete a final traffic report addressing the following:
    a. Trip generation for the development using Provo Transportation Master Plan trip rates;
    b. Threshold volumes and percent of threshold for the surrounding street system;
    c. Local area street plan; and
    d. All other items as determined by the Provo City Engineer.
2. Direction of traffic flow through project.
3. Location and width of proposed and existing ingress and egress.
4. Evidence of Utah Department of Transportation access approval (if applicable.) 5. Proposed street layout and design.

## Utility Plan

1. Location and size of existing and proposed water, sewer mains, laterals, power lines and utilities, gas lines and utilities, telephone utilities and connections.
2. A utility site plan for layout and design for new electrical facilities.

## Drainage Plan

1. Location of existing and proposed storm drain structures.
2. Proposed drainage system.
3. Location of irrigation pipes, ditches, canals, waterways and detention basins.
4. Detailed drainage plans with calculations based on 10 year storm event, including total impervious surface area, drainage flows from roofs or parking structures.
5. Sump details, storm sewer profiles and construction drawings.

## Grading Plan

1. Grading shall be defined as any work including filling, cutting, excavation or relocation of material which affects the contour, slope, elevation or drainage features of a parcel of property, or which involves more than fifty (50) cubic yards of material.
2. No grading shall be accomplished without first having obtained a grading permit from the City Engineer. A grading permit may be obtained at the office of the Provo City Engineer after completion of an application for permit complying with any and all permit requirements.

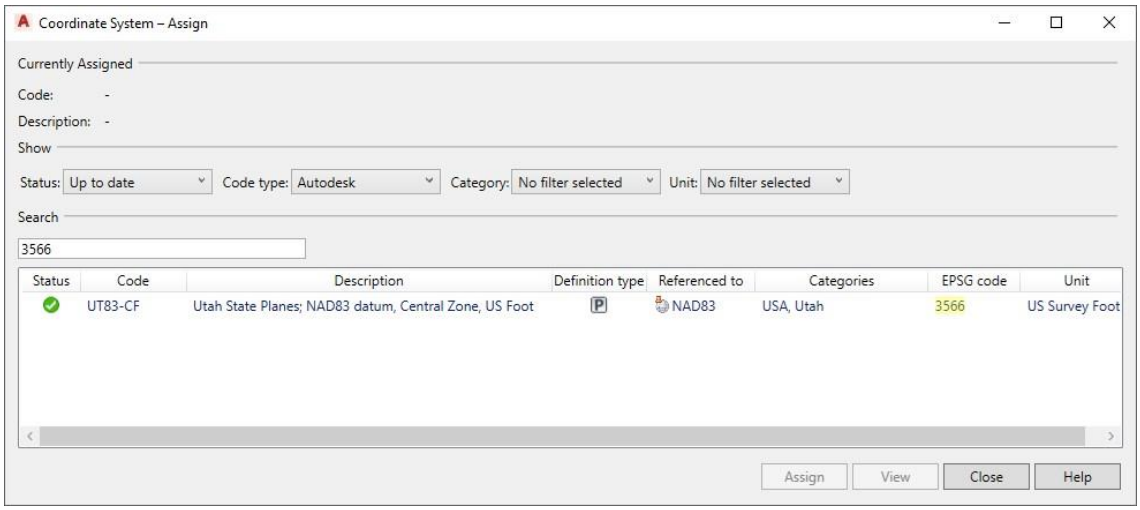
## Supporting Documents

1. Submitted plans should be accompanied with:
    a. A completed application,
    b. Required fees,
    c. Engineer or surveyor's computer generated information disc;
    d. Proof of single ownership or control of the subject property by title report, deeds, etc.;
    e. Market study or cost/benefit study if required by the Development Services Director;
    f. Phasing plan if the project is to be completed in phases;
    g. Final subdivision plat when determined applicable;
    h. Development agreement where applicable;
    i. Other information or studies to aid the Planning Commission in its deliberations;
    j. Other documents that require compliance with Provo City Code.

## CAD Files

1. CAD files are required of approved plans and are submitted to Public Works adhering to the following standards:

    a. DWG file submitted must match the information represented on the mylars at the time of submittal for approval.
    b. DWG file must be defined in the NAD83 State Plane Utah Central Survey Feet (FIPS 4302; WKID 3421; EPSG 3566) coordinate system.

c. 


d. DWG file must contain data specific to utilities and reference data only and be named with an underscore "PW" (i.e. PROJECTNAME_PW).
e. The CAD data must be stored using simple points, polylines and closed polylines representing asset centers, centerlines, and boundary extents.
f. CAD data stored in the CAD layers must be contiguous and coincident where appropriate. For example, a sewer main pipe will be drawn using a polyline that extends to and whose endpoint is coincident with the end of the adjoining sewer main pipe. The coincident endpoints will also be coincident with the point representing the center of the sewer manhole located between the two sewer main pipes.
g. Each drawing layer in the CAD file may only store a single data type. For example, if a layer is created to store proposed water valves, only simple points representing water valves may be stored in that layer. Extraneous information such as text blocks, annotation, leader lines, etc. may not be stored in the data layer. CAD layers must adhere to the following naming convention.
    i. A prefix of "EX_" or "PR_" or "_DM" will indicate whether the layer will store Existing, Proposed, or Demolish (remove) utility data.
    ii. A "W_" "S_" or "SW_" will indicate whether the layer will store data associated with the water system, sewer system, or stormwater system respectively.
    iii. The layer name will follow to indicate what type of data is stored in the layer, for example, MAIN for main pipes or LATERAL for lateral pipes. For example, PR_S_MAIN will be the layer storing polylines representing proposed sewer mains. The layer types are as follows:

| Prefix | System | Name | Feature Type | Description |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| EX_, PR_, DM_ | W_, S_, SW_ | MAIN | Polyline | Represents main pipe centerline. Drawn with straight polyline consisting of two end points. End points will be coincident with points representing a system valve, hydrant, meter, CCCD, pump assembly, reservoir, lift station, network structure, or fitting of all types except wye and true wye. |
| EX_, PR_, DM_ | W_, S_, SW_ | LATERAL | Polyline | Represents lateral pipe centerline. Drawn with straight polyline consisting of two end points. End points will be coincident with points representing a system valve, hydrant, meter, CCCD, network structure, cleanout, or fitting of all types. |
| EX_, PR_, DM_ | W_, S_, SW_ | CASING | Polyline | Represents extents of pipe encasement, typically drawn as a rectangular, closed polyline overlapping with a MAIN or LATERAL pipe. |
| EX_, PR_, DM_ | W_, S_, SW_ | EASEMENT | Polyline | Represents extents of easement drawn as a closed polyline. |
| EX_, PR_, DM_ | W_, S_, SW_ | SYSTEM_VALVE | Point | Represents horizontal center of valve operating nut |
| EX_, PR_, DM_ | W_ | HYDRANT | Point | Represents horizontal center of hydrant assembly |
| EX_, PR_, DM_ | W_, S_, SW_ | VAULT | Closed Polyline | Represents vault horizontal extents |
| EX_, PR_, DM_ | S_, SW_ | MANHOLE | Point | Represents horizontal center of manhole (not lid) |
| EX_, PR_, DM_ | W_, S_, SW_ | FITTING | Point | Represents horizontal center of fitting (types below) |
| EX_, PR_, DM_ | W_ | METER | Point | Represents horizontal center of meter |
| EX_, PR_, DM_ | W_ | CCCD | Point | Represents horizontal center of cross connection control device (backflow assembly) |

| | | | | |
|---|---|---|---|---|
| EX_, PR_, DM_ | W_, S_, SW_ | PUMP_ASSEMBLY | Point | Represents horizontal center of pump assembly |
| EX_, PR_, DM_ | W_ | RESERVOIR | Closed Polyline | Represents reservoir horizontal extents. Drawn with straight or curved lines closing to form an area. |
| EX_, PR_, DM_ | S_, SW_ | LIFTSTATION | Point | Represents horizontal center of sewer lift station |
| EX_, PR_, DM_ | W_, S_, SW_ | NETWORK_STRUCTURE | Point | Represents horizontal center of misc. (types below) |
| EX_, PR_, DM_ | S_ | CLEANOUT | Point | Represents horizontal center of sewer cleanout |
| EX_, PR_, DM_ | W_, S_, SW_ | SOGI | Point | Represents horizontal center of sand, oil and grease interceptor |

## FINAL SUBDIVISION CHECKLIST

The following is a brief outline of the submittal requirements that a developer should consider when submitting for an Annexation, Rezone, Concept Plan, Preliminary Plan or Final Plan Approval. This outline also lists the items that the Provo City Public Works Department will review at each approval level.

1. Annexation
    A. The Developer will provide a location map of the proposed annexation.
        a. The map will show the location of the parcel to be annexed, and will include the legal description of the parcel to be annexed.
            1. The legal description for the annexation will match the adjacent annexation parcels as recorded at the Utah County Recorder's Office or on file with the City recorder.
    B. The Public Works Department will provide a report concerning the actual annexation. The report will define the availability of water, sewer, storm drainage and street configuration for the proposed annexation area. This information will be of a general nature, and is not intended to be inclusive of all requirements for the proposed annexation area. The report will include development requirements that will be imposed as a condition of annexation.

C. The developer shall provide an Annexation Plat to be reviewed and approved by the Provo City Surveyor, City Engineer and Community Development Director.

2. Rezone
   A. The Developer will provide the site plan location map. The map will show the location of the parcel for rezone and will include the legal description for the rezone.
   B. The Public Works Department will provide a statement concerning the ~~actual~~ rezone. This will include a statement which defines the availability of water, sewer, storm drainage and the street configuration for the proposed rezone area. This information will be of a general nature, and is not intended to be inclusive of all requirements for the proposed rezone area.

3. Concept Plan
   A. The purpose of the concept plan approval is to provide a layout and design which is general in nature. The configuration of the lots and streets shall be included. B. The Developer will submit:
      a. Lot Configuration
         1. Concept plan with boundary legal description.
            a. The site plan shall include adjacent parcels.
            b. The site plan shall be scaled no smaller than 1" = 100'
         2. Area of each lot
         3. Contour lines with actual elevations referenced to Utah County information.
            a. 2 foot intervals shall be required. Additional contour information may be required.
4. Slopes exceeding 30% shown and are required to be avoided by development including grading and landscaping.
5. The site plan will show the location of any retainage structures that exceed a height of 10 feet that maybe will be required to be constructed prior to the construction of any home.

      b. Street configuration
         1. Proposed street grades shall be included. Maximum street grade is 12% for local streets though 8% maximum is encouraged.
         2. Proposed street cross section.
         3. Locations of cuts/fills exceeding 2 feet.
      c. Location of existing and proposed improvements
         1. Location of water, sewer, storm drainage, streets, and natural drainage path.
         2. Locations of existing easements, i.e. gas lines, irrigation lines, power lines, phone lines, private access easements.

C. The Public Works Department will provide the following information:

a. A written memorandum addressing the acceptability of the street configuration, the street cross-section, the slope of the lots. The Community Development Department will address the lot size and their configuration.
b. The memorandum will provide information concerning waterline size, possible off-site utility system improvements, sanitary sewer size and details, storm drain configuration, sub-surface drainage requirements, slope protection requirements (including easements and revegetation), and possibly other items specific to the development.
c. The memorandum will specify if a geotechnical report will be required. If the report is required, it must be submitted with the Preliminary Plan. 4. Preliminary Plan

A. The purpose of the Preliminary Plan is to show the feasibility of the proposed development and the conformance to the adopted standards. The Staff, and Planning Commission may require alterations to the Preliminary Plan as necessary such that the development conforms to the standards and specifications of the City. The preliminary approval will give the developer the direction needed to complete the improvement plans. The preliminary approval shall terminate one year after the Planning Commission has given approval.
B. The Developer shall submit a geotechnical study, if necessary, for the development area with the preliminary subdivision plan. The geotechnical report will contain the minimum information required, as shown in the geotechnical section of this booklet, and the improvement plans will reflect the recommendations of the geotechnical report.
C. The developer will submit an electronic pdf copy of the preliminary plan containing the following information.
    a. Lot configuration
        1. Preliminary subdivision plan with boundary legal description.
            a. The preliminary subdivision plan shall include adjacent parcels.
        2. Area of each lot
        3. Contour lines with actual elevations
            a. 2 foot intervals shall be required. Additional contour information may be required.
        4. Slopes exceeding 30% shown and are required to be avoided by development including grading and landscaping.
        5. The site plan will indicate that the maximum slope for a driveway shall be 15%.
    b. Street configuration
        1. Maximum street grade is 12% for local streets. 8% maximum shall be required unless approved by the City Engineer.
        2. Proposed street cross section conforming to City Street Standards.
        3. The preliminary plan shall include cross-section drawings at locations where the slopes will have cuts or fills exceeding two (2)

feet on either site of the street. The cross-section drawings shall be spaced no greater than 50 feet.

c. Location of existing improvements
    1. Location of water, sewer, storm drainage, streets, irrigation (open ditch or pressure lines) and natural drainage paths and/or creeks and streams.
    2. Locations of existing easements, i.e. gas lines, irrigation lines, power lines, communication lines~~,~~ and private access easements.
        a. All easements shall be shown on the preliminary subdivision plat.
    3. Location of all cuts/fills exceeding two (2) feet at the right-of-way line.

d. Proposed configuration of public utilities, i.e., sanitary sewer, culinary water, storm drainage, sub-surface drainage, pressure irrigation, communication, natural gas, electrical power and cable T.V.
    1. The sizes of the system(s) must be shown but the City has the right to require changes to location and sizes prior to final submittal.

e. Boundaries of areas subject to flooding or listed on the FEMA flood plan maps and drawings.
    1. Areas subject to flooding may include low areas created by street construction.

f. Written approval from affected entities.
    1. Stream alteration – State Engineer
    2. Irrigation system relocation – Irrigation users and company.
    3. Acknowledgement to grant easements on adjacent private property from the property owner(s).

D. The Public Works Department will provide written comments through the CRC review process the following information:
    a. The acceptability of the street configuration, street cross-sections~~,~~ and the grading and slope of the lots. The Community Development Department will address the lot size and their configuration.
    b. Information concerning waterline size, sanitary sewer size and details, storm drain configuration, sub-surface drainage requirements, slope protection requirements (including easements and revegetation), possible off-site utility system improvements and other items specific to the development.
    c. If a geotechnical report will be required for the development, project review will not be completed until the geotechnical report has been submitted and reviewed.

# CULINARY WATER SYSTEMS

1. WATER MAIN LINE UPSIZING OR EXTENSIONS
    A. The developer of a project which requires the extension or upsizing of water main lines shall pay the cost of such work.
    B. All subdivisions shall have a complete water distribution system installed before such subdivisions are accepted by the City.
        a. The design and construction of such a water distribution system shall meet all applicable standards and be approved prior to installation.
        b. The developer shall install the water distribution system at the developer's own expense for all water mains which are necessary to provide all required water per State and City design standards. Minimum static pressure at the point of use shall be 50 psi. Maximum shall be 120 psi.
        c. The system shall include a properly designed redundant feed from the nearest adequately supplied locations in the City water distribution system. Provo City will use a hydraulic model where required by State Code to verify that the capacity for fire flow and water demand as specified in the project plans are available. The proposed system shall be modified to comply with the model findings.
        d. If the Director requires increased capacity above that required for the project, the developer may be eligible for reimbursement for the difference in material cost between the main required for the development and the larger diameter main actually installed.
    C. When any street is to be paved from curb to curb with a permanent type of pavement, an eight (8) inch or larger water main shall be installed in that street prior to the paving of the street. The cost of installation of such water main shall be borne by the developer.
    D. If a person installs a water main line extension to serve a parcel, said main line extension shall extend completely across the parcel of property being developed.
    E. If a new water main line is installed, all new and existing service connections shall be connected to the new main line without splicing and all appurtenances shall meet current standards as shown in Standard Detail P-521.
    F. Multiple water main lines in street are only permitted in exceptional circumstances (e.g., varying pressure zones in the area).
    G. A developer who pays the cost of an off-site water main line extension may have the right of reimbursement described in Provo City Code Chapter 10.02.050.

2. CULINARY WATER MAIN STANDARDS
    A. All water system installation and design must conform to Provo City's Water System Master Plan and all applicable state administrative rules, particularly R309-550.

a. Minimum allowable water main diameter shall be eight inches (8”).
b. Main lines larger than the minimums shown above may be required if necessary for fire flow or pressure. Developer shall be responsible for an upsize based on providing sufficient capacity for the development.
c. If the Master Plan requires a larger pipe size than described in paragraphs (a) and (b), City may require the developer to install the larger size.

B. Waterline shall be Ductile Iron with polywrap, grease on bolts and #14 copper tracer wire per Provo Standard Drawing P-594 and installed per AWWA Standard C600-10. C900 PVC Pipe may be allowed with approval from director. HDPE, Steel, or other pipe material are not allowed unless expressly permitted by the Public Works Division of Water Resources. All construction and installation shall conform to standards referenced in R309-550-8 of the Utah Administrative Code.
    a. Continuity of tracer wire shall be confirmed by an independent tester prior to requesting verification of continuity by Provo City and positive test results presented to City inspectors before City inspectors will check for continuity. Failure of a continuity test conducted by a City inspector will result in a re-inspection fee as set forth in the Consolidated Fee Schedule.

C. Waterline shall be installed within the street section in the location shown on Provo Standard Drawing P-914, unless otherwise approved.

D. Provide a minimum of ten (10) feet horizontal clearance between a water and sewer edge to edge per Utah Administrative Code R317-3-2 and R309-550-7 (laterals, services and main lines).
    a. Where a water main and a sewer line must cross, the water main shall be at least 18 inches above the sewer line. Separation distances shall be measured edge-to-edge (i.e. from the nearest edges of the facilities).
    b. Water mains and sewer lines shall not be installed in the same trench.
    c. Where local conditions make it impossible to install water or sewer lines at separation distances required by subsection (a), the sewer pipes are in good condition, and there is not high groundwater in the area, it may be acceptable if the design includes a minimum horizontal separation of 6 feet and a minimum vertical clearance of 18 inches with the waterline being above. In order to determine whether the design is acceptable, the following information shall be submitted as part of the plans for review.
        1. reason for not meeting the minimum separation standard;
        2. location where the water and sewer line separation is not being met;
        3. horizontal and vertical clearance that will be achieved;
        4. sewer line information including pipe material, condition, size, age, type of joints, thickness or pressure class, whether the pipe is pressurized or not, etc.;
        5. water line information including pipe material, condition, size, age, type of joints, thickness or pressure class, etc.; 6. ground water and soil conditions; and,
        7. any mitigation efforts.

E. Minimum cover required shall be 52 inches (52”).

F. All new water infrastructure shall be pressure tested by maintaining 200 psi for two hours.
G. All materials that may come in contact with drinking water, including pipes, gaskets, lubricants and O-Rings, shall be ANSI-certified as meeting the requirements of ANSI/NSF Standard 61, Drinking Water System Components - Health Effects. To permit field-verification of this certification, all components shall be appropriately stamped with the NSF logo.
H. Pipe, joints, fittings, valves, and fire hydrants shall conform to ANSI/NSF Standard 61, and applicable sections of AWWA Standards C104-A21.4-08 through C550-05 and C900-07 through C950-07.

3. VALVES
   A. Valves shall be provided in all intersections and shall equal number of legs.
   B. Mainline valves on either side of tee shall be located a minimum of three feet (3') off a tee or cross and shall be MJ x MJ valves.
   C. Mainline Valves shall be located a minimum of three feet (3') from any fitting and shall be MJ x MJ valves.
      a. An exception would be a flanged connection on the stem of a tee.
   D. All valves larger than 12 inches (12") shall be butterfly design.
   E. All butterfly valves shall be of the double offset design and shall meet or exceed the requirements of AWWA C504-15.
   F. Provide concrete collars on valve boxes at ¼" below finished asphalt.
   G. Place valves at intersections per Provo Standard Drawing P-914.

4. WATER SERVICES
   A. No service line connections shall be made to Provo City's water distribution system or to main water lines on private property without authorization. The party making the connection shall be required to obtain a permit for the same and to pay the fees associated with that permit as shown on the Consolidated Fee Schedule.
   B. Water taps on public or private mains shall be installed by a qualified and licensed plumber or a pre-qualified utility contractor and inspected by the City.
   C. Minimum size shall be one-inch (1") diameter for service lines and meter yokes.
   D. Engineering calculations shall be required to show that meter size is adequate to meet demand for any uses other than detached single family residential or townhomes.
   E. The water service shall extend perpendicularly from the main line to meter in front of the property it services and shall not cross through other properties.
   F. No common use water services shall be allowed unless approved by the Water Resources Director.
      a. Service lines must be so arranged that the supply to each separate house or premises are controlled by a separate valve, placed within and near the line of the street curb.

b. Common use water services shall be eliminated as redevelopment of the site occurs, or if repair or replacement is needed. The construction or repair cost will be the responsibility of the Owner.
c. Master meter(s) or combined building meters may be allowed for private developments if approved by the Water Resources Director. All lines within the private development shall be private including those from the private mainline to the meter. The developer shall provide the City with an agreement defining who is responsible for maintenance and show the lines as private on the plat and utility plans. Individual shutoffs located near the curb are required for each unit.
d. Legal and physical access shall be provided to all meters.
e. All service lines shall be capped downstream of the meter box until connected for service.

5. ABANDONMENT OF WATER UTILITIES

A. Whenever a water service line is abandoned in favor of a different service line, the old service line shall be disconnected from the main line and the old service tap shall be plugged at the main line. The cost of all such work shall be the responsibility of the owner of the property being serviced by the new water service line. Any work described in this Section shall be inspected by Provo City before backfilling. Prior to demolition of proposed site, water services and fire lines shall be abandoned per Provo City standards.

6. FIRE HYDRANTS

A. Provide minimum fire flow required by the Uniform Fire Code for proposed structures and fire flow calculations at all hydrant locations. Unless project specific information is provided, the following will be assumed:

**Provo City Minimum Operational and Performance Criteria for Planning and Design**

| Component | Criteria |
|---|---|
| **Fire Flow Requirements (flow [gpm] @ duration [hours]) [a]** | |
| Single-Family Residential | 1,500 gpm @ 2 hrs |
| Other | IFC or Fire Marshall |
| **Water Distribution Line Sizing** | |
| Max day plus Fire Flow or Average Peak Day Demand Condition | |
| Minimum Pressure, psi | 50 psi (20 psi for fire flow) |
| Maximum Velocity, ft/sec | 7 fps (excluding fire flow) |

[a] Typical minimum flow will be verified by City on a case by case basis

B. Install fire hydrants per Provo Standard Drawing P-511.
a. Hydrants shall be connected to a minimum eight-inch (8") main using a minimum six-inch (6") diameter pipe.

b. No bends are allowed on fire hydrant laterals.
c. No services shall be allowed on fire hydrant laterals. C. Replace fire hydrant if the hydrant is to be moved.

E. Fire Hydrant spacing:
   a. Shall not exceed three hundred feet (300') in areas of multi-family dwellings, commercial and manufacturing uses.
   b. In single family dwelling use areas hydrant spacing shall not exceed five hundred feet (500 ft).
   c. Major roads shall have fire hydrants placed on both sides of the roadway to provide for Fire Department access to such hydrants.

F. Place fire hydrant within 100 feet (100') of the fire department connection (FDC).

G. Provide fire hydrants at the end of dead-end lines for flushing purposes.

H. Private fire service lines designed to provide fire protection to a building or buildings shall be constructed according to Provo City Standards at the expense of the owner of the building being serviced according to the following requirements:
   a. Maintenance associated with such fire service lines shall also be at the expense of said owner.
   b. Water service lines and meters may be connected to fire service lines when approved by the Director if the fire line has a redundant connection and said fire lines are intended to provide water to the building being serviced by the fire service line. In this case, the fire lines and service lines will be private and only appurtenances inside the meter box will be maintained by the City.
   c. Provide a valve on the mainline. Fire line after the valve shall be private.
   d. Fire suppression system and hydrants are not allowed on the same line unless the fire line has a redundant connection.
   e. Provide approved backflow prevention.

7. WATER VAULTS/METER BOXES

A. Whenever a new service line is installed connecting any premises to an unmetered private line which is supplied water from the water mains of Provo City, or whenever a service pipe is connected directly to the water system of said City, a water meter must be installed.

B. All water meters shall be installed in easily accessible locations.

C. No meter box shall be allowed in any street, driveway, driveway flare, or sidewalk without express written permission of Provo City.

D. At the time of a significant remodel or new construction, existing services and meter sets must be brought up to current standard with dual check valves in meter yoke and new can. If the service line is damaged, deteriorated, or galvanized pipe, the OWNER shall replace the water service from the mainline to the meter. Splices between the mainline and meter yoke are not allowed so if a meter location is changed to be farther from the mainline, a new service line from the main to meter yoke is required.

E. Water meters shall be furnished and installed by Provo City.

F. Water meters shall not be installed until:
   a. Proper demolition of old water lines and services has been completed or a bond for such demolition has been received.
   b. Newly installed main lines have been pressure tested, disinfected, and approved and service lines, including meter boxes and appurtenances, have been inspected and approved.
   c. No meters shall be installed until all applicable fees have been paid including water connection fees, impact fees and main line extension fees as appropriate.

8. THRUST RESTRAINTS

A. Concrete thrust blocks:
   a. Provide concrete thrust blocks at all taps, temporary dead ends and at the base of all hydrants.
   b. Place thrust blocks directly against undisturbed earth.
   c. Provide bond breakers on all thrust blocks.
   d. All other locations shall rely on restrained joints to handle thrust unless directed otherwise by City B. Joint Restraints:
   a. The number of joints that need to be restrained back from thrust producing fittings shall be determined by the design engineer and approved by the City.

9. BACKFLOW PREVENTION DEVICE

A. Install a backflow prevention assembly approved by the State of Utah downstream of all meters larger than 2-inch, residential services connected to a private water source and ahead of all outside irrigation systems. The backflow prevention device shall meet all requirements of Utah Administrative Rule R309-105 and the International Plumbing Code.
B. Reduced Pressure Zone (RPZ) backflow prevention and a swing check connection is required between all private water sources and the City water system. C. Comply with City Standard Drawings.
D. Contact cross connection coordinator at (801) 852-6788 for inspection of the backflow prevention devices other than dual check valves inside meter boxes.

10. WATER LINE LOOPING

A. Looping of water lines creates a vulnerability in the system; therefore, looping is highly discouraged. All other alternatives should be investigated prior to proposing looping, which should be the option of last resort.
B. If looping of water lines is approved by Provo, the Director may assess a fee for shutting down the existing line and to provide for future maintenance of the loop. The fee will vary based on the size of the line being looped.

11. EASEMENTS

A. Provide a minimum twenty feet wide (20') public utility easement for all public water mains installed outside of the street right of way or other City owned

property. Unless otherwise approved, the water line should be installed in the center of the easement.

12. OTHER APPURTENANCES

A. Provide pressure reducing stations if required by Water Resources Director.

B. Air relief valves and blow-offs at high points may be required if other means of air release are not provided. If used, air relief valves and blow-offs shall comply with the following:

a. The open end of the air relief vent pipe from automatic valves shall be provided with a #14 mesh, non-corrodible screen and a downward elbow, and where possible, be extended to at least one foot above grade. Alternatively, the open end of the pipe may be extended to as little as one foot above the top of the pipe if the valve's chamber is not subject to flooding, or if it meets the requirements of Chamber Drainage.

b. Blow-offs or air relief valves shall not be connected directly to a sewer.

c. Adequate number of hydrants or blow-offs shall be provided to allow periodic flushing and cleaning of water lines.

d. The air relief valve shall be installed in a manner to prevent it from freezing. A shut-off valve shall be provided to permit servicing of an air relief valve.

C. All booster proposed stations and storage tanks subject to Water Resources Director approval and shall meet all the following requirements:

a. All booster stations and storage tanks shall be identified as part of the City's master plan and shall be designed to service large City areas and not individual developments. Private booster stations are not allowed.

b. No booster stations shall be constructed without a storage tank of sufficient size to meet all sizing requirements of Utah Administrative Code R309-510. Said tank shall be located at an elevation sufficient to provide gravity flow to its service area and shall be designed to work cooperatively with all other components of the water source, storage and distribution system.

c. The booster station shall be located on a main with sufficient size and pressure to provide the required flow without causing any part of the water system to fail to meet pressure requirements.

D. Chambers, pits, 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. Chambers shall be provided with a drain to daylight, if possible. Where this is not possible, underground gravel-filled absorption pits may be used if the site is not subject to flooding and conditions will assure adequate drainage. Sump pumps may also be considered if a drain to daylight or absorption pit is not feasible.

13. SOURCE PROTECTION

A. Comply with 10.06.030 Provo City Code Annotated and R309-600 of Utah Administrative Code which require the protection of all sources of drinking water, including groundwater. Potential contamination sources such as gas stations, dry

cleaners, and surface water infiltration are not allowed in areas where a spill, leak, or contamination may adversely impact drinking water wells, springs, or other drinking water sources.

## SANITARY SEWER SYSTEMS

All Sanitary Sewer installation and design shall comply with Provo City's Wastewater Collection System Master Plan.

1. SEWER MAIN LINE UPSIZING OR EXTENSIONS
    A. The developer of a project which requires the extension or upsizing of sewer main lines shall pay the cost of such work.
    B. All subdivisions shall have a complete sewer distribution system installed before such subdivisions are accepted by the City.
        a. The design and construction of such a sewer distribution system shall meet all applicable standards and be approved prior to installation.
        b. The developer shall install the sewer distribution system at the developer's own expense for all sewer mains which are necessary to provide all required sewer per State and City design standards.
            1. Design 8"-15" pipes to flow no more than Half Full at Peak Flow.
            2. Design 18" and Larger Pipes to flow no more than 75% Full at Peak Flow.
            3. Include inflow and infiltration in sizing calculations.
            4. Provo City may use a sewer model to verify sewer capacity is available for the proposed project as specified in the project plans. The proposed system shall be modified to comply with the model findings and offsite improvements may be required prior to development.
            5. Ensure that transmission pipes sizes are sufficient for future growth in the area per the most recent Provo City's Wastewater Collection System Master Plan. If the Master Plan requires a larger pipe than the development, City may pay for the difference in material cost between the size required for the development and the larger size.
    C. When any street is to be paved from curb to curb with a permanent type of pavement, an eight (8) inch or larger sewer main shall be installed in that street prior to the paving of the street. The cost of installation of such sewer main shall be borne by the developer.
    D. If a person installs a sewer main line extension to serve a parcel of property, said main line extension shall extend completely across the parcel of property being developed.
    E. A developer who pays the cost of an off-site sewer main line extension may have the right of reimbursement described in Provo City Code Chapter 10.03.040.
2. SEWER PIPE MAIN STANDARDS
    A. Minimum mainline size shall be 8" in diameter. Actual size of mainlines shall provide adequate flow for current and future development.
    B. Provide green PVC (polyvinyl Chloride) SDR 35 or approved equal.

C. Sewer mainlines and laterals shall be marked with a detectable green colored locator tape.

D. Minimum depth of the sewer mainlines shall be seven (7) feet below finish grade. In areas where basements are allowed, sewer mains shall be deep enough to service basements.

E. Sewer mainline grades are as follows:

| Minimum Sewer Main Pipe Slope* | |
|---|---|
| 8 inch sewer lines** | 0.40% |
| 10 inch sewer lines | 0.28% |
| 12 inch sewer lines | 0.22% |
| 15 inch sewer lines | 0.15% |
| 18 inch sewer line | 0.12% |
| 21 inch and larger sewer lines | 0.10% |
| * Sewer mains may not be upsized only for the purpose of installing at a flatter slope unless information is provided by the engineer showing that there is adequate scour volume to keep the line clean without increased maintenance.<br>** The first segment(s) of 8 inch sewer mains may be required to be placed at 1% min slope if there is not sufficient flow to provide adequate scour volume. | |

F. All sewers which are designed to flow at 10 feet per second or greater shall be reviewed by City for approval or alternate design consideration. Suitable thrust blocks, concrete anchors or equivalent restraints shall be provided per R317-3-2 of the Utah Code when pipe slopes are 10% or greater.

G. Horizontal clearance to any culinary water line shall be at least 10 feet (10') edge of pipe to edge of pipe per R309-550 and R317-3-2.
   a. Utilities crossing sewer mains shall cross as close to a right angle as possible.
   b. Provide a minimum vertical clearance of eighteen inches (18") between water and sewer with water main lines and service above the sewer measured from the outside of the pipes.
   c. When utilities are bored near sewer mains, laterals and all crossings, the sewer utilities shall be TV inspected.

H. No curvilinear sewer mains shall be allowed.

3. MANHOLE DESIGN STANDARDS

A. Manholes shall conform to Provo Standard Drawing P-411.

B. Depth transitions shall occur between manholes. Drop manholes are discouraged and may only be used with explicit written approval and shall conform to Provo Standard Drawing P-433.

C. Sewer manholes shall be installed:
   a. At a maximum spacing of four hundred (400) feet.
   b. At all changes in grade, size or alignment, and at all intersections with other mainlines.
   c. At the end of main lines (no cleanouts allowed on mainlines).

d. All six-inch (6”) and larger laterals on commercial or multi-family laterals require a manhole at the connection to the public main. D. Sewer manholes shall be sized based on the following:
a. Five (5) foot Diameter manholes required at three-way manholes, 90° bends, over 15” and 18” pipes, manholes over 10’ deep, and in manholes with over one foot of drop across manhole.
b. Six (6) foot Diameter manholes required over pipes 24” and greater, and at three-way manholes where the deflection exceeds 90° and height of manhole exceeds 16'.

4. ABANDONMENT OF SEWER UTILITIES
   A. Whenever an existing sewer lateral(s) is abandoned in favor of a new lateral, the Owner shall disconnect the existing sewer lateral from the main and plug the lateral tap into the main. All costs associated with labor and material for such work shall be the responsibility of the property owner causing the lateral to be abandoned. All work shall be inspected by Provo City before backfilling. Prior to demolition of proposed site, sewer laterals shall be abandoned per Provo City standards.

5. SEWER LATERAL DESIGN STANDARDS
   A. Sewer taps will be performed by the contractor and inspected by a City Inspector.
      a. Sewer taps into an existing eight (8) inch main shall not be greater than four (4) inches.
         1. Direct nose-on connections may only be used when connecting to an existing mainline. The installation must be inspected and a saddle used when warranted.
         2. Connections to new mains shall be with a wye and a forty-five degree (45º) bend.
      b. Minimum distance between connections shall be four feet.
      c. Sewer laterals shall connect to sewer main lines and not discharge into manholes.
   B. At the time of significant remodel or change of use, reuse of existing laterals may be allowed for use only if the following conditions are met: a. The existing lateral is of sufficient size and slopes for the proposed use.
      b. The existing lateral is in good condition, free from damage, bellies, leaks, or deviations in slope.
      c. If the above criteria cannot be met the Owner shall abandon the existing lateral at the main and provide a new lateral that meets all current Provo Standards and Specifications.
      d. The existing lateral is ABS (Acrylonitrile-Butadiene-Styrene) or PVC.
   C. Allowable sanitary sewer lateral pipe material shall be as follows:
      a. ABS (Acrylonitrile-Butadiene-Styrene) schedule 40, black in color. For use in sewer laterals only.

b. PVC (Polyvinyl Chloride) SDR 35 or other approved wall thickness for laterals (green in color).
c. Lining is allowed only after review and approval of CCTV of lateral by Provo City personnel.

D. Minimum lateral size shall be as follows:
a. Single family residential: four (4) inches in diameter with 2% minimum slope.
b. Individual lateral serving five (5) or fewer residential equivalent units: four (4) inches in diameter with a minimum slope of 2%.
c. All other uses: minimum six inches (6") diameter with a slope of 2%. A 1% minimum slope may be used if approved as part of the City review.
1. The sewer lateral size shall be based on actual project flows, but in no case shall the lateral be less than six inches (6") in diameter.
2. The sewer lateral shall be in front of the property it services and shall not cross through other properties.

E. The policy of the City regarding the number of separate service laterals for residential and commercial structures is as follows:
a. Each separate lot, parcel, dwelling unit, building, house, business or premises shall be served by an individual lateral except as allowed in paragraph (c).
b. For one- and two-family dwelling structures, a separate service lateral for each dwelling unit is required.
c. For multiple-family dwelling structures, stacked dwelling units, or commercial structures separate service laterals for each unit shall be the general rule. However, where design dictates otherwise, a common lateral for multiple units (or fewer laterals than the number otherwise specified) may be permitted where the applicant provides adequate documentation, including signed and stamped engineering calculations, and guarantees to assure adequacy of sewer/wastewater collection and responsibility for payment and maintenance. Easements may also be necessary where common laterals cross property lines. In any such case, the Water Resources Director has sole discretion to permit or reject a reduction in the required number of service laterals accordingly.
d. Common sewer laterals approved under paragraph (c) shall be have a minimum diameter of six (6) inches for all laterals serving more than five residential equivalent units.

F. Sewer laterals shall not be allowed to connect into any private sewer system without permission from the owner of said system.

G. Cleanouts shall be required at a minimum of every 100 feet (100') and at bends forty-five degrees (45°) or greater. All laterals shall have at least one cleanout.

H. Sump pumps (ground water) shall not be discharged into the street or into the sanitary sewer system; but shall require outfall into a storm drain.

6. PRETREATMENT

A. Pretreatment
a. Pretreatment will be required for each use producing excessive grease, sand, oil or sewer load different from a standard residential unit.

b. All covered parking lots, car washes, restaurants, auto shops and interior floor drains that are subject to receipt of sand, silts, chemicals, petroleum products, or other contaminants must have a grease trap, sand/oil separator, or other appropriately designed system to pretreat all process waste water before it enters the collections system.
c. Grease Interceptors shall be sized according to the current manual of the Uniform Plumbing Code (UPC) with a minimum size of 750 gallons and be installed per Provo Standard Drawing P-441.
    1. All drainage fixtures in any food and beverage preparation area or any process which produces fats, oils, or greases (FOG) shall be routed through a grease interceptor.
    2. Food grinders or disposals are heavily discouraged.
    3. Restroom waste shall not be routed through grease interceptor.
d. Include note on plans to contact the Pretreatment Coordinator at 801-852-6793 regarding required pretreatment and grease interceptors.
e. The Interceptor shall have manhole rings and covers rated for traffic loading.
f. A sampling manhole shall be installed no more than 10 feet (10') downstream from any interceptor.
    1. The required vault will be a four-foot (4') manhole unless otherwise approved by the pretreatment coordinator.
    2. Sampling vault should be at flowline with no hydraulic jumps.
    3. A six inch (6") minimum clearance is required from the end of the inlet pipe to the bottom of the sampling manhole flowline.
    4. The bottom of the sampling manhole shall be formed to slope the water towards the outlet pipe.
    5. If the inlet is greater than six inches (6") a plan will need to be submitted and approved by the City.

7. EASEMENTS

A. Provide a minimum twenty feet wide (20') public utility easement for all public sewer mains installed outside of the street right of way or other City owned property. Unless otherwise approved, the sewer line should be installed in the center of the easement.

8. LIFT STATIONS

A. No temporary or private lift stations shall be allowed.
B. In extenuating circumstances, a single grinder pump servicing a single residential home may be allowed with prior approval.

9. SHALLOW SEWER

A. Provide the following note on the plat for sewer main line depths less than 10 feet (10'):

a. “Shallow Sewer Depths! Contractor shall verify sewer lateral depth and set foundation elevation to provide adequate fall into sewer lateral. Buildings with a basement may not have sewer service available for basement.”

B. Provide the following note on the plat for property on one side of the street is low enough to make providing sewer to the property from the street difficult:

a. “Low Lots! Contractor shall verify sewer lateral depth and set foundation elevation to provide adequate fall into sewer lateral. Buildings with a basement may not have gravity sewer service available for basement.”

## STORM DRAIN SYSTEM

This section of the Development Design Standards is intended as a “quick guide” to storm drainage requirements. More complete guidance is contained in the Provo City Storm Drainage System Design and Management Manual (Drainage Manual), which can be found on the Provo City Public Works – Storm Water web page.

1. DRAINAGE SUBMITTAL REQUIREMENTS (Chapter 3 of the Drainage Manual)
   A. A geotechnical report identifying groundwater elevation is required for all developments that lie within the high Water Table Area, as defined in Section 15.03.010(2), Provo City Code, and for other areas determined by the Public Works Director or their designee as likely to have shallow ground water.
   B. Sites proposing retention and infiltration are required to submit a field infiltration analysis measuring the in-situ infiltration rate. The design infiltration rate must use a safety factor of at least 2 in order to account for plugging, silting, and the creation of biofilms over time.
   C. A Lot Grading Plan shall be submitted for single-family residential lots, meeting the requirements of Section 3.2 of the Drainage Manual.
   D. Concept Plan drawings submitted as part of a rezone request shall include the information required in Section 3.3 of the Design Manual.
   E. A Storm Drainage Report and Management Plan shall be submitted for all developments requiring Project Plan approval, following the requirements in Section 3.4 of the Drainage Manual
   F. Regular Maintenance and inspections of private drainage facilities is the responsibility of the owner(s) of said facility. See Section 18.03.040 for minimum maintenance and inspection requirements.

G. All development located wholly or partially within the FEMA floodplain must obtain a Floodplain Development Permit from the City. Permit requirements are identified in Section 15.05.180, Provo City Code.
H. Storm Water Pollution Prevention Plans (SWPPPs) are required for all projects disturbing more than 1 acre, and for residential lots meeting the criteria for Common Plans of Development.

2. HYDROLOGY (Chapter 4 of the Drainage Manual)
   A. Acceptable hydrologic methods are the Rational Method (up to 200-acre drainage area for peak flow calculations, or up to 20-acre drainage area for volume calculations) and the SCS Curve Number Method using the Farmer-Fletcher distribution.
   B. Base criteria is that storm drains, minor ditches, detention, and retention facilities control the 10-year design storm. Single-family residential development and public streets may discharge flows to downstream storm drain facilities un-detained. All other development types must detain 10-year flows onsite, with a maximum discharge of 0.2 cfs/acre.
   C. If a project cannot show a positive overflow path for the 100-year design storm to downstream streets, major channels, or the Provo River without flooding homes, buildings, or other critical facilities, the 100-year design storm must be controlled onsite.
   D. Values used for rainfall depths and intensities are provided for three weather stations around Provo, as contained in Tables 4-2A through 4-3C in the Drainage Manual. The exhibit in Appendix A of the Drainage Manual shows the location of the three weather stations, and the areas where the corresponding table should be used.
   E. Rational Method Runoff Coefficients are contained in Table 4-4 of the Drainage Manual
   F. Rainfall distribution patterns for the Farmer-Fletcher distribution are contained in Tables 4-5 and 4-6 of the Drainage Manual.
   G. SCS Curve number models shall use a "base" curve number based on Table 4-7 of the Drainage Manual, with impervious cover accounted for separately.
3. STREET DRAINAGE (Chapter 5 of the Drainage Manual)
   A. Street inlets shall conform to Provo City Standard Details P-315a through P-315d.
   B. Inlets shall be placed on both sides of street at a distance of no more than four hundred (400) lineal feet of street curb and gutter, when gutter flows are =>3 cfs, and upstream of every intersection, ADA ramp, and reverse grade driveway. Additional inlets may be required to capture the 10-year design flow.
   C. A minimum of double inlets shall be required at low points of vertical curves and on steep slopes (5% or greater). Downhill-sloping cul-de-sacs and dead end are generally not allowed, but if they are specifically approved they shall require double inlets and a 100-year overflow path.

D. The use of combination inlet type of structures is generally not allowed, and shall require special permission in rare cases where a separate inlet and manhole is not feasible.

4. STORM DRAIN (Chapter 6 of the Drainage Manual)
    A. The minimum allowable pipe diameter is 18 inches for mainline and 15 inches for laterals from inlet to manhole.
    B. Public storm drain shall be reinforced concrete pipe (RCP).
    C. Storm drain manholes shall conform to APWA Standard Detail 341. Manholes shall be located no further than 400-feet apart, and at all pipe transitions including changes in direction, elevation, slope and pipe size.
    D. Normal depth calculations can be used for sizing only when calculations show all pipes are no more than 75% full. Alternatively, full hydraulic modeling can show flow under full pipe capacity, with the HGL no high than 1-foot below grade.
5. OPEN CHANNELS (Chapter 7 of the Drainage Manual)
    A. Open channel design shall be dictated by the maximum permissible velocity of the channel material/lining. See Table 7-1 in the Drainage Manual.
    B. Unless otherwise approved, channel side slopes shall not be steeper than 3H:1V.
    C. Open channels shall have a minimum of 1 foot of freeboard from design depth to top of bank.
6. CULVERTS AND BRIDGES (Chapter 8 of the Drainage Manual)
    A. Large bridges (more than just RCP or RCB) shall be design using UDOT bridge design criteria.
    B. A culvert blockage factor of 50 percent shall be used for culverts placed in drainages with upstream debris potential as determined by the City.
    C. A minimum of 2 feet of freeboard is required unless otherwise approved. Culverts within the FEMA floodplain may be subject to additional freeboard requirements.
7. DETENTION/RETENTION BASINS (Chapter 9 of the Drainage Manual)
    A. Sizing criteria is based on design storm and maximum discharge requirements shown in Chapter 4 of the Drainage Manual)
    B. The maximum ponding depth is 3 feet during the 10-year design storm for above ground basins. A minimum 1 foot of freeboard for the 10-year storm is required. C. Side slopes shall be 3H:1V or flatter for above ground basins.
    D. Minimum bottom slope for detention ponds is 2%, unless a flatter slope with a low flow channel or soil amendments to promote infiltration is approved by the Public Works Director or their designee.
    E. Retention/infiltration facilities are not allowed in well protection Zones 1 and 2.
8. SENSITIVE LANDS (Chapter 10 of the Drainage Manual)
    A. A geotechnical report identifying groundwater elevation is required for all developments that lie within the high Water Table Area, as defined in Section 15.03.010(2), Provo City Code, and for other areas determined by the Public Works Director or their designee as likely to have shallow ground water.

B. All development located wholly or partially within the FEMA floodplain must obtain a Floodplain Development Permit from the City. Permit requirements are identified in Section 15.05.180, Provo City Code.

C. Development must a minimum of 1-foot above the Utah Lake base flood (100year) elevation, including roadways, residential lots, and residential finished floors (including basements). Commercial buildings must either be 1 foot above or be flood proofed to that elevation.

D. Developments located within or adjacent to the Provo River floodplain and other floodplains identified on the FEMA FIRMs, must be 1-foot above the base flood (100-year) elevation, including roadways, parking lots, and residential finished floors (including basements).

E. The American Society of Civil Engineers (ASCE) Standard 14, adopted by reference in the International Building Code (IBC), has additional freeboard requirements of critical structures.

9. WATER QUALITY (Chapter 11 of the Drainage Manual)

A. Development project that disturb land greater than or equal to one acre, including project that are part of a larger common plan of development or sale which collectively disturbs land greater or equal to one acre, are subject to the water quality requirements in Chapter 11 of the Drainage Manual.

B. New development must retain the 80$^{th}$ percentile storm (see Table 11-1 of the Drainage Manual). Redevelopment projects must either provide a net gain to onsite retention or net reduction to impervious surface. Redevelopment projects increasing the impervious surface by greater than 10% must retain the net increase in the volume associated with the 80$^{th}$ percentile storm.

C. A Storm Water Quality Report shall be submitted for all projects meeting the applicability standard, using the template in Appendix F of the Drainage Manual. D. See Chapter 11 of the Drainage Manual for approved Best Management Practices (BMPs), and alternative methods if meeting the full retention standard is determined to be infeasible.

E. Standard Details for common BMPs are included in the Provo Standard Drawing Details (Supplement to the APWA Manual of Standard Plans).

10. MAINTENANCE ACCESS AND EASEMENTS (Chapter 12 of the Drainage Manual)

A. Storm water facilities located on private property shall generally be maintained at the expense of the property owner, unless it collects or conveys public storm water.

B. Private facilities that are owned or maintained by someone other than the property owner (such as irrigation lines owned and maintained by private irrigation companies, or drainage facilities maintained by the HOA) must be located in an easement in favor of the facility owner. Coordinate with the private facility owner for easement size requirements.

C. Easement and maintenance access requirements for facilities to be owned or maintained by the City are detailed in Chapter 12 of the Drainage Manual.

D. Regardless of ownership, open channels shall be a minimum of 20-feet from structures such as buildings, sheds, etc. Detention and retention basins shall be a

minimum of 40-feet from structures, or provide engineered water proofing measures. Storm drain shall be located a minimum of 10-feet from structures.

## SUB-SURFACE DRAIN – (AS REQUIRED)

1. SUB-SURFACE DRAIN SIZE DETERMINATION
    A. The minimum sub-surface drain size shall be eight (8)-inches.
    B. The sub-surface drain shall be sized to carry 0.8 cfs per 100 acres of developed area.
    C. The sub-surface drain shall have a minimum flow velocity of one (1) foot per second.
    D. The minimum slope on a sub-surface mainline drain shall be 0.4%.
    E. A sub-surface drain shall be a separate system from the storm drain system. A subsurface lateral shall not connect to storm drain lines.

2. SUB-SURFACE DRAIN LINE PLACEMENT
    A. The sub-surface drainage system shall be installed as determined by the City.
    B. Sub-surface drain lines shall not be placed in side lot or rear lot property lines unless approved by the City.
        a. Sub-surface drain lines that are approved for side lot or rear lot installation shall have a 20-foot easement provided.
        b. Sub-surface drain lines that are approved for side lot or rear lot installation shall provide for vehicular access to all manholes.
    C. The lines shall be installed with a minimum cover of 4.5 feet from the top of the pipe to the finish ground elevation.
    D. The design should insure that there will be no conflict between the land drain line and the sanitary sewer line.
    E. The lateral line will be installed within 5 feet of a common property line. The contractor will install identifier tape one foot over the lateral, running the length of the lateral, with the wording ‘Drain Line’ on the tape.

3. MANHOLE SIZE AND PLACEMENT DETERMINATION
    A. Manholes shall be installed as follows:
        a. Maximum spacing is 400 feet.

b. Change in alignment.
c. Change in slope.
d. Junction with other lines.

B. Minimum size manhole is four-foot (4) inside diameter.
C. Five-foot (5) inside diameter manholes shall be used for all locations as follows:
    a. Intersection of three land drain lines.
        1. A 6-inch multi-user/commercial line connecting to an 8 inch or larger requires a manhole.
    b.Change of grade with an algebraic difference of five percent (5.0%)
    c. Change in alignment where the interior angle is greater than 70 degrees but less than 90 degrees.
D. Manholes shall be placed at the end of all lines, including temporary dead-ends.

4. SUB-SURFACE DRAIN SERVICE LATERAL SIZE AND PLACEMENT
    A. All residential connections shall have an individual service connection. Sharing or joint use of lines is not allowed.
    B. Residential service lines shall be 4 inch White PVC pipe.
        a. The service lateral shall be installed as per Provo City Standards.
        b. The service lateral shall extend to the property on a minimum slope of 2.0%.
        c. The contractor will install identifier tape one foot over the top of the lateral the entire length of the lateral and the tape will say “Land Drain.”
    C. All commercial connections shall have individual connections based on unit ownership.
        a. If one building is divided into units one connection per unit will be required.

5. PIPE LINE MATERIALS, CONSTRUCTION AND TESTING
    A. 4 inch and 6 inch service lines shall be PVC ASTM 3034 pipe.
    B. 8 inch and 10 inch sub-surface drain lines may be concrete or PVC ASTM 3034 pipe.
        a. PVC pipe shall have a minimum of 6 inches of 1-1/2” drain rock placed for bedding-and covering the line.
        b.PVC lines shall be tested for deflection after the trench has been backfilled and compacted.
        c. Concrete pipe shall be bedded as per Provo City Standards.
        d.The backfill around and over the concrete pipe shall be compacted to a minimum of 95%.
    C. Manhole bases may be pre-cast using the design as a guide for stub orientation.
        a. Pre-cast manhole bases shall be placed on a minimum of 8 inches of gravel bedding.
    D. Poured-in-place manhole bases shall conform to the following standards:
        a. The concrete base shall be at least 10 inches thick.

b. The sub-grade material shall be gravel bedding.

E. Manhole sections shall be tongue & groove, pre-cast concrete sections with castin-place vinyl steps.

F. The frame and cover shall be cast iron.

## IRRIGATION SYSTEM IMPROVEMENTS

Submit a written approval for the relocation of the system.

1. FLOOD IRRIGATION SYSTEMS

A. The developer shall provide adequate conveyance for flood irrigation wastewater to pass around or through a developed subdivision.

a. The conveyance may be either a pipe system or open channel.

1. A pipe shall be required if the system crosses any street or access way.
2. The City Engineer and the owner shall approve the conveyance system.

B. The developer will be required to install a pipe system to convey any supply ditch that passes through the proposed subdivision.

a. The pipe size shall be determined by the owner and approved by the City Engineer and by the owner.

b. The location of the pipe system shall approved by the City Engineer.

## GRADING PLAN

1. Grading shall be defined as any work including filling, cutting, excavation or relocation of material which affects the contour, slope, elevation or drainage features of a parcel of property, or which involves more than fifty (50) cubic yards of material.
2. No grading shall be accomplished without first having obtained a grading permit from the City Engineer. A grading permit may be obtained at the office of the Provo City Engineer after completion of an application for permit complying with any and all permit requirements.

## STREET IMPROVEMENTS

1. STREET WIDTHS
    A. Proposed street shall have the minimum width for the rights-of-way. The width is measured from lot line to lot line. Street widths shall comply with street classifications as defined by the Master Street Plan or as approved by the City Engineer.
    B. The minimum asphalt width shall be attained whenever curb and gutters are installed.
    C. The asphalt on all public streets shall be bordered on both sides by Type E curb & gutter or as approved by the City Engineer.

2. STREET INTERSECTIONS
    A. On collector and local streets, four (4) way intersections may be designed with a roundabout according to Provo City Standards and as approved by the City Engineer.
    B. Streets shall intersect each other as near as possible at right angles.
    C. Offsets between intersections from ten (10) feet to one hundred twenty (120) feet, measured from street center line to street center line, shall be prohibited.
    D. Residential streets and alleys shall not extend more than five hundred (500) feet in length without an off-setting intersection to another street.
    E. Curb at all intersections shall be rounded with curves having a minimum lip of curb radius as per city standards.

3. STREET LAYOUT
    A. The arrangement of streets in new developments shall make provision for the continuation of the existing streets in adjoining areas or their proper projection where adjoining land is not subdivided.
        a. New streets shall be made at the same or greater width as the existing road, but in no case less than the required minimum width.
    B. Street alignments shall be selected to relate to the natural topography and other natural conditions.

C. Direct driveway access from residential property to collector and arterial streets shall not be permitted without approval of the City Engineer. Access to new residential development shall be provided by local streets.

4. STREET CURVE DESIGNS
   A. Where the street lines within a block deflect from each other, there should be a connecting curve that meets the minimum curve radii as per city standards.
   B. Local streets shall be designed with horizontal and vertical curves. (Refer to AASHTO– A Policy on Geometric Design of Highways and Streets.)

5. STREET SLOPES
   A. Street slopes shall be kept within minimum and maximum allowable slopes.
   B. Cross slope shall be designed at 2%. A minimum cross slope of 1% and a maximum cross slope of 4% is allowed by the City Engineer.

6. CURB & GUTTER/ SIDEWALK / WATERWAY
   A. Curb & Gutter shall be placed on each side of developed streets.
      a. 24" Type E curb & gutter shall be used on all streets.
      b. See APWA Plan 205 for design guidelines.
   B. Sidewalk shall be placed on each side of developed streets.
      a. Sidewalks shall be six (6) feet in width except where other widths are deemed appropriate by the City Engineer and comply with the latest Americans with Disabilities Act requirements.
      b. Planter strips of a minimum seven (7) feet in width shall be used in all street cross sections except as determined by the City Engineer
      c. See Provo City Standards and Specifications for design guidelines.
   C. Waterways
      a. Design street drainage to eliminate waterways. Waterways will only be allowed as approved by the City Engineer.
      b. Refer to APWA Plan 211 for design guidelines.

7. CUL-DE-SAC REQUIREMENTS
   A. Each cul-de-sac shall have a minimum right-of-way of fifty (50) feet and a radius of fifty (50) feet of right-of-way for the cul-de-sac bulb.
   B. The maximum length of a cul-de-sac shall not exceed five hundred (500) feet, unless;
      a. Physical conditions necessitate providing a longer cul-de-sac.
      b. A cul-de-sac street which exceeds five hundred (500) feet shall include an intermediate turnaround near the midpoint of the street as approved by the City Engineer.
   C. In no case shall a cul-de-sac street length exceed one thousand (1,000) feet.

8. SECOND ACCESS REQUIREMENTS
    A. A second street access is required under the following conditions:
        a. A development that has fourteen (14) or more residential lots. (250 ADT)
        b. A development that extends more than one thousand (1,000) feet from a connecting street. (Comply with the Fire Code)
9. ALLEYS
    A. Where access is desired to the side or rear of abutting properties, an alley may be provided. Alleys shall have a minimum width of twenty-four (24) feet of asphalt or concrete pavement measured from face of curb to face of curb. The design grade and alignment design of an alley shall conform to local street standards, except that the centerline radius may be reduced where appropriate, as determined by the City Engineer.

10. PRIVATE STREETS
    A. Private streets shall be designed to meet Provo City Street Standards. Any modifications require the approval of the City Engineer.
    B. Provo City shall not open, grade, pave, or perform any maintenance work on any private or undedicated street, road or alley
    C. Provo City shall refrain from laying utility lines in any street which has not:
        a. Been accepted by the City as a public street or alley
        b. Received approval of the Mayor as part of a final subdivision plat or development, unless an easement is granted therefor.
    D. The City shall not accept or maintain streets unless such streets have been constructed in accordance with Provo City standards and specifications.

11. RIGHT-OF-WAY SLOPE REQUIREMENTS
    A. The developer shall provide cross-section drawings of the right-of-way when the cut or fill exceeds 2 feet at the right-of-way line.
    B. The developer shall provide slope easements on the dedication plat when the cut or fill exceeds two (2) feet.
    C. The developer shall provide engineering drawings for slope retaining when the cut or fill requires retaining walls or structures.

12. GRADING PLAN
    A. Grading shall be defined as any work including filling, cutting, excavation or relocation of material which affects the contour, slope, elevation or drainage features of a parcel of property, or which involves more than fifty (50) cubic yards of material.
    B. No grading shall be accomplished without first having obtained a grading permit from the City Engineer. A grading permit may be obtained at the office of the

Provo City Engineer after completion of an application for permit complying with any and all permit requirements.

13. TRAFFIC STUDY

A. A traffic study shall be required for all developments three (3) acres or greater or ten (10) units or greater, and may be required for other developments as reasonably determined by the City Engineer.

B. The Developer and or Engineer shall be required to meet with the City Engineer prior to initiating the traffic study.

C. Items considered in a traffic study shall include:

a. A study of existing area conditions

b. Traffic projections (determined by trip generation rates obtained from the Provo Transportation Master Plan trip rates or approved by the City Engineer)

c. Traffic analysis

d. On- and off-site improvement analysis, conclusions, and recommendations

**Street Standard Values**

| | **Arterial Street** | **Minor Arterial Street** | **Collector Street** | **Local Street** |
|---|---|---|---|---|
| Minimum Street Width | 128 ft | 80 ft | 80 ft | 54 ft, 60 ft, 66 ft |
| Minimum Asphalt Width | 78 ft | 50 ft | 50 ft | • 24 ft where: land use is residential and connects to local roads and projected AADT is less than 400 and on-street parking on one side only<br>• 30 ft where: land use is residential or connects to collector road or projected AADT is greater than 400 and on-street parking is not prohibited<br>• 36 ft where: land use is commercial or industrial or connects to arterial road or projected AADT is greater than 1400 and on-street parking is not prohibited |
| Minimum Lip of Curb Radius at Intersection | 30 ft | 30 ft | 30 ft | 15 ft |
| Minimum Curve Radius at Street Deflection | 510 ft | 335 ft | 335 ft | 200 ft |
| Minimum Street Slope | 0.4% | 0.4% | 0.4% | 0.4% |
| Maximum Street Slope | 8.0% | 8.0% | 8.0% | 12.0% |
| Street Cross Slope | 2% | 2% | 2% | 2% |

# GEOTECHNICAL INFORMATION

If the City Engineer determines that an unsafe physical condition described in Section 15.05.020, Provo City Code, appears to exist in relation to the subject property, the developer shall submit a geologic report which shall include:

1. MINIMUM INFORMATION REQUIRED

    A. Project plan showing boring locations.
        a. Boring logs shall include the following:
            1. Elevation
            2. Drill or backhoe type
            3. Samples
            4. Field tests
            5. Ground water level fluctuations
    B. Laboratory Tests – Performed in general accordance with ASTM
        a. Sieve analysis
        b. Atterberg Limits
        c. CBR
        d. Direct Shear
        e. Consolidation
        f. Identify Soils according to USCS
        g. Moisture density curve(s)
    C. Engineer Analysis and recommendations
        a. Foundations and Retaining Walls
            1. Allowable bearing capacity
            2. Lateral loads friction coefficients
            3. Settlement
            4. Drainage – Backfill information
            5. Seismic loading
        b. Pavements
            1. Traffic loads
            2. Subgrade support value (CBR)
            3. Pavement thickness
        c. Special Considerations
            1. Site preparation – use of on-site materials
            2. Expansive soils
            3. Collapsible soil
            4. Slope stability
            5. Rock Fall
            6. Shallow ground water level – drainage, etc.
            7. Surcharge / preloading (if used, developer needs to install settlement monitors and elevations benchmark.)
            8. Identification of geological hazards.

The number and depth of borings/pits are to be determined for each specific project shall be determined by the geotechnical engineer. However, as a minimum, the depth should be deeper than any anticipated excavation (cuts, foundations, utilities, etc.). The number of borings shall be determined by the geotechnical engineer/geologist and shall be compatible with the complexity/simplicity of the geology, subsurface conditions and the type of project.

D. Following the construction of the utilities in the street(s) within the development and prior to the final paving of the street(s), the Developer must submit written documentation from the consulting Geotechnical Engineer, the Design Engineer and the Contractor, indicating that each have received and read the Geotechnical Report and have incorporated the recommendations into the design and construction of the development.

2. USE OF FILTER FABRIC FOR STREET CONSTRUCTION
    A. Normal woven or non-woven filter fabric is a viable material to use when a separation layer is needed over a soft subgrade and beneath granular fill. These materials provide some minor reinforcing for supporting loads, but primarily act to prevent the movement of many fines up into the overlying crushed base or other clean granular material.
    B. If reinforcement of soft subgrade is desired, a geo grid should be designed for the intended purpose.

3. FLOWABLE FILL
    A. Utility excavations and subsequent backfill are the source of many problems for paved streets. It is extremely difficult to nearly impossible to place the utility, and backfill the trench, so that some subsequent differential settlement does not occur at the pavement surface. Cost associated with supplying, placing in lifts and compaction conventional backfill materials is high and results are unsatisfactory to marginal. Therefore, “flowable fill” is a preferential backfill alternative for utility installations beneath paved streets where hydraulic equipment is difficult to use such as a trench narrower than 36 inches.

4. TRENCHLESS TECHNOLOGY
    A. Trenchless technology/directional drilling is encouraged to be used for many utilities placed beneath streets without making a pavement utility cut. This procedure should be used whenever feasible.

# WARRANTY PERIOD

The warranty period for the culinary water system, sanitary sewer system, sub-surface drainage system, storm drainage system, and street improvements as defined in Provo City Code 15.03.260.

The developer will be responsible for the placement of all sidewalks within the development. The placement of the sidewalk may be delayed until the actual construction of a house, but the developer will be required a keep a bond in place until the installation of the sidewalk has been completed.

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** SWILMOTH
**Department:** Development Services
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** An ordinance amending Provo City Code section 14.34.480 regarding sidewalk cafes. Citywide application. PLOTA20230246

**RECOMMENDATION:** To be heard at the November 14, 2023 Work & Council Meeting. Please see supporting documents.

**BACKGROUND:** The Development Services Department hopes to improve the standards for outdoor dining in Section 14.34.480 of the Provo City Code. This section was enacted in 2010 but has recently gained more attention as the desire for outdoor dining has increased in the last few years.

The purpose of the proposed amendments is to strengthen safety regulations, clarify responsibilities, and to define an operational period. Specifically, new improvements along Center Street for these spaces have triggered the need to redefine how to separate outdoor dining from adjacent roadways. Additionally, without a written standard, some table umbrellas have become hazards for pedestrians and clear sight triangles for vehicles. The amendments to these subsections have been reviewed and approved by Provo Engineering.

Another purpose of the proposal is to clarify who is responsible for cleanup and maintenance of these spaces, which was a priority for Provo Parks and Recreation, as they maintain a majority of Center Street public spaces. The final change is to add a regulation to only operate sidewalk cafes between March and October, removing private furniture outside of those months so snow removal can be done.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** Aaron Ardmore (801) 852-6404 aardmore@provo.org

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** PLOTA20230246

ORDINANCE 2023-.

AN ORDINANCE AMENDING PROVO CITY CODE SECTION 14.34.480 REGARDING SIDEWALK CAFES. CITYWIDE APPLICATION. (PLOTA20230246)

WHEREAS, it is proposed that Provo City Code Section 14.34.480 be amended; and

WHEREAS, on October 25, 2023, the Planning Commission held a duly noticed public hearing to consider the proposed amendment, and after such meeting, the Planning Commission recommended approval to the Municipal Council by a vote of 6:0; and

WHEREAS, on November 8, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation and facts and comments presented to the Municipal Council, the Council finds (i) Provo City Code should be amended as described herein and (ii) the proposed amendment reasonably furthers the health, safety and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

Provo City Code Section 14.34.480 is hereby amended as set forth in Exhibit A.

PART II:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Provo City Code be updated to reflect the provisions enacted by this ordinance.

D. This ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

END OF ORDINANCE.

# Exhibit A

## 14.34.480
## Sidewalk Cafes.

Where permitted by the underlying zone, and notwithstanding the provisions of Chapters 9.15 and 15.12, Provo City Code, a sidewalk cafe shall be permitted if the following requirements are met:

(1) An applicant submits scaled plans demonstrating that the cafe will conform to the following development standards:

(a) At least six (6) feet of clear, unobstructed sidewalk width will remain available for pedestrian use.

(b) Sidewalk cafes shall be separated from the street by either a six (6) inch curb and two (2) foot setback OR bollards every six (6) feet adjacent to a street. ~~have a five (5) foot setback between the dining area and a driveway, alley, street or another public sidewalk.~~

(c) If a sidewalk cafe is designed to have more than one (1) row of tables and chairs, a non-sight-obscuring removable barrier not more than three (3) feet high enclosing the tables and chairs shall be constructed. Barrier gates shall not swing into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(d) Awnings associated with the cafe will be installed in accordance with the International Building Code. Umbrellas under seven (7) feet in height shall not extend into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(e) Signs associated with the cafe will be installed in accordance with provisions of the underlying zone. One (1) freestanding menu sign is permitted for each sidewalk cafe subject to the sign being located within the approved cafe area and being no more than six (6) square feet in size.

(f) Adequate facilities for the storage of trash generated by the cafe will be provided at a convenient location by the café owner(s) or operator(s).

(2) A revocable license from the City is executed that includes the following provisions:

(a) Insurance will be continuously maintained to adequately co-insure Provo City against any liability associated with the sidewalk cafe, as reasonably determined by the City. The insurance certificate shall name the City as an “additional insured.” Cancellation of such insurance shall require at least thirty (30) days prior notice to the City.

(b) Provo City, its officers, agents and employees, will be held harmless from any claims, causes of action, injuries, losses, damages, expenses, fees and costs, including attorneys' fees, associated or arising from the operation of the cafe.

(c) The cafe owner and operator will be responsible for repair of any damage done to the public sidewalk due to the installation or removal of furnishings, barriers or other features of the sidewalk cafe.

(d) Hours of cafe use will be limited to not earlier than 6:00 A.M. and not later than 12:00 A.M. and will not exceed the operating hours of the associated eating or drinking establishment.

(e) Any music or entertainment shall meet the sound limitation requirements outlined in Chapter 9.06.

(f) The sidewalk cafe and surroundings will be maintained in a neat and clean condition at all times by the café owner(s) or operator(s).

(g) The Cafe owner and operator will remove cafe improvements if necessary for sidewalk repair or replacement, utility maintenance, or upon failure to comply with the terms of the agreement.

(h) Sidewalk cafes shall only be operated between March 1 and October 31. Furniture shall be removed from the right-of-way outside of these dates.

DEVELOPMENT SERVICES

# Planning Commission Hearing Staff Report
# Hearing Date: October 25, 2023

***ITEM 6** Development Services requests approval of Ordinance Text Amendments to Section 14.34.480 (Sidewalk Cafes) to update standards and regulations for outdoor seating. Citywide Application. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLOTA20230246

**Applicant:** Development Services

**Staff Coordinator:** Aaron Ardmore

**ALTERNATIVE ACTIONS**

1. **Continue** to a future date to obtain additional information or to further consider the information presented. *The next available meeting date is November 8, 2023, at 6:00 P.M.*

2. **Recommend Denial** the requested ordinance text amendments. *This action would not be consistent with the recommendations of the Staff Report. The Planning Commission should state new findings.*

**Relevant History:** Staff have recently been reviewing the standards and policies for outdoor dining and noted gaps in the code and licensing. This proposal is to address those gaps to ensure the right process is followed.

**Neighborhood Issues:** This is a citywide application that can affect multiple neighborhoods. The topic has been posted on Open City Hall and has received no comments.

**Summary of Key Issues:**

- The proposal updates buffer and umbrella height standards for outdoor dining.
- The proposal clarifies responsibility for maintenance of any sidewalk café.
- The proposal creates new operational seasons and requirements for furniture removal in the winter.

**Staff Recommendation:** Staff recommend that the proposed amendments are recommended for approval by the Planning Commission to the City Council.

## OVERVIEW

The Development Services Department hopes to improve the standards for outdoor dining in Section 14.34.480 of the Provo City Code. This section was enacted in 2010 but has recently gained more attention as the desire for outdoor dining has increased in the last few years.

The purpose of the proposed amendments is to strengthen safety regulations, clarify responsibilities, and to define an operational period. Specifically, new improvements along Center Street for these spaces have triggered the need to redefine how to separate outdoor dining from adjacent roadways. Additionally, without a written standard, some table umbrellas have become hazards for pedestrians and clear sight triangles for vehicles. The amendments to these subsections have been reviewed and approved by Provo Engineering.

Another purpose of the proposal is to clarify who is responsible for cleanup and maintenance of these spaces, which was a priority for Provo Parks and Recreation, as they maintain a majority of Center Street public spaces. The final change is to add a regulation to only operate sidewalk cafes between March and October, removing private furniture outside of those months so snow removal can be done.

## STAFF ANALYSIS

Staff will analyze these amendments against Section 14.02.020, Provo City Code, which states that “Before recommending an amendment to this Title, the Planning Commission shall determine whether such amendment is in the interest of the public and is consistent with the goals and policies of the Provo City General Plan.” The following guidelines shall be used to determine consistency with the General Plan: **(responses in bold)**

(a) Public purpose for the amendment in question.

**The public purpose for these amendments is to provide consistency, safety, and protect the health of Provo residents.**

(b) Confirmation that the public purpose is best served by the amendment in question.

**Defining buffers from vehicle traffic, responsibility for cleaning and maintenance, and solving issues with snow removal do help to meet the above public purpose.**

(c) Compatibility of the proposed amendment with General Plan policies, goals, and objectives.

**The proposed amendments align with goals in Chapter Three to “review and revise Provo City Code to make it more consistent and accessible”, in Chapter Five to “encourage . . . commercial properties that integrate both social and retail needs”, and in Chapter Seven to “Continue Provo City’s high standards of constructing and maintaining high quality facilities.”**

(d) Consistency of the proposed amendment with the General Plan’s “timing and sequencing” provisions on changes of use, insofar as they are articulated.

**There are no timing and sequencing provisions related to this request.**

(e) Potential of the proposed amendment to hinder or obstruct attainment of the General Plan's articulated policies.

**Staff believes that these amendments will only further the policies found in the General Plan, not hinder, or obstruct them.**

(f) Adverse impacts on adjacent landowners.

**There should not be any adverse impacts on adjacent landowners due to these code changes.**

(g) Verification of correctness in the original zoning or General Plan for the area in question.

**Does not apply.**

(h) In cases where a conflict arises between the General Plan Map and General Plan Policies, precedence shall be given to the Plan Policies.

**Does not apply.**

## CONCLUSIONS

Staff believe that these amendments will help to provide consistency and safety through commercial areas of Provo and help to implement standard licensing procedures to ensure that these areas are kept clean and properly maintained.

## ATTACHMENTS

1. Proposed Amendments

**ATTACHMENT 1 – PROPOSED AMENDMENTS**

## 14.34.480

## Sidewalk Cafes.

Where permitted by the underlying zone, and notwithstanding the provisions of Chapters 9.15 and 15.12, Provo City Code, a sidewalk cafe shall be permitted if the following requirements are met:

(1) An applicant submits scaled plans demonstrating that the cafe will conform to the following development standards:

(a) At least six (6) feet of clear, unobstructed sidewalk width will remain available for pedestrian use.

(b) Sidewalk cafes shall be separated from the street by either a six (6) inch curb and two (2) foot setback OR bollards every six (6) feet adjacent to a street. ~~have a five (5) foot setback between the dining area and a driveway, alley, street or another public sidewalk.~~

(c) If a sidewalk cafe is designed to have more than one (1) row of tables and chairs, a non-sight-obscuring removable barrier not more than three (3) feet high enclosing the tables and chairs shall be constructed. Barrier gates shall not swing into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(d) Awnings associated with the cafe will be installed in accordance with the International Building Code. Umbrellas under seven (7) feet in height shall not extend into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(e) Signs associated with the cafe will be installed in accordance with provisions of the underlying zone. One (1) freestanding menu sign is permitted for each sidewalk cafe subject to the sign being located within the approved cafe area and being no more than six (6) square feet in size.

(f) Adequate facilities for the storage of trash generated by the cafe will be provided at a convenient location by the café owner(s) or operator(s).

(2) A revocable license from the City is executed that includes the following provisions:

(a) Insurance will be continuously maintained to adequately co-insure Provo City against any liability associated with the sidewalk cafe, as reasonably determined by the City. The insurance certificate shall name the City as an "additional insured." Cancellation of such insurance shall require at least thirty (30) days prior notice to the City.

(b) Provo City, its officers, agents and employees, will be held harmless from any claims, causes of action, injuries, losses, damages, expenses, fees and costs, including attorneys' fees, associated or arising from the operation of the cafe.

(c) The cafe owner and operator will be responsible for repair of any damage done to the public sidewalk due to the installation or removal of furnishings, barriers or other features of the sidewalk cafe.

(d) Hours of cafe use will be limited to not earlier than 6:00 A.M. and not later than 12:00 A.M. and will not exceed the operating hours of the associated eating or drinking establishment.

(e) Any music or entertainment shall meet the sound limitation requirements outlined in Chapter 9.06.

(f) The sidewalk cafe and surroundings will be maintained in a neat and clean condition at all times by the café owner(s) or operator(s).

(g) The Cafe owner and operator will remove cafe improvements if necessary for sidewalk repair or replacement, utility maintenance, or upon failure to comply with the terms of the agreement.

(h) Sidewalk cafes shall only be operated between March 1 and October 31. Furniture shall be removed from the right-of-way outside of these dates.

Provo City Planning Commission

# Report of Action

October 25, 2023

*ITEM 6 Development Services requests approval of Ordinance Text Amendments to Section 14.34.480 (Sidewalk Cafes) to update standards and regulations for outdoor seating. Citywide impact. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLOTA20230246

The following action was taken by the Planning Commission on the above-described item at its regular meeting of October 25, 2023:

## RECOMMENDED APPROVAL

On a vote of 6:0, the Planning Commission recommended that the Municipal Council approve the above noted application.

Motion By: Jonathon Hill
Second By: Robert Knudsen
Votes in Favor of Motion: Jonathon Hill, Robert Knudsen, Daniel Gonzales, Barbara DeSoto, Lisa Jensen, Andrew South
Daniel Gonzales was present as Chair.

- Includes facts of the case, analysis, conclusions and recommendations outlined in the Staff Report, with any changes noted; Planning Commission determination is generally consistent with the Staff analysis and determination.

**TEXT AMENDMENT**
The text of the proposed amendment is attached as Exhibit A.

**STAFF PRESENTATION**
The Staff Report to the Planning Commission provides details of the facts of the case and the Staff's analysis, conclusions, and recommendations.

**CITY DEPARTMENTAL ISSUES**
- The Coordinator Review Committee (CRC) has reviewed the application and given their approval.

**NEIGHBORHOOD MEETING DATE**
- City-wide application; all Neighborhood Chairs received notification.

**NEIGHBORHOOD AND PUBLIC COMMENT**
- This item was City-wide or affected multiple neighborhoods.

**CONCERNS RAISED BY PUBLIC**
Any comments received prior to completion of the Staff Report are addressed in the Staff Report to the Planning Commission. Key issues raised in written comments received subsequent to the Staff Report or public comment during the public hearing included the following: None.

**APPLICANT RESPONSE**
Key points addressed in the applicant's presentation to the Planning Commission included the following:
- Staff responded to the questions below, specifically describing what outdoor dining is regulated by subsection (1)(c); stating that the businesses that use the outdoor dining will be responsible for maintaining them; and how the staff will be enforcing these regulations.

**PLANNING COMMISSION DISCUSSION**

Key points discussed by the Planning Commission included the following:

- The commission asked some clarifying questions regarding existing code from 14.34.080 and whether there is ownership of the sidewalk cafes and how they will be maintained.

Planning Commission Chair

Director of Development Services

See Key Land Use Policies of the Provo City General Plan, applicable Titles of the Provo City Code, and the Staff Report to the Planning Commission for further detailed information. The Staff Report is a part of the record of the decision on this item. Where findings of the Planning Commission differ from findings of Staff, those will be noted in this Report of Action.

Legislative items are noted with an asterisk (*) and require legislative action by the Municipal Council following a public hearing; the Planning Commission provides an advisory recommendation to the Municipal Council following a public hearing.

Administrative decisions of the Planning Commission (items not marked with an asterisk) **may be appealed** by submitting an application/notice of appeal, with the required application and noticing fees to Development Service, 445 W Center St., Provo, Utah, **within fourteen (14) calendar days of the Planning Commission's decision** (Provo City office hours are Monday through Thursday, 7:00 a.m. to 6:00 p.m.).

BUILDING PERMITS MUST BE OBTAINED BEFORE CONSTRUCTION BEGINS

## 14.34.480

## Sidewalk Cafes.

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(b) Sidewalk cafes shall be separated from the street by either a six (6) inch curb and two (2) foot setback OR bollards every six (6) feet adjacent to a street. ~~have a five (5) foot setback between the dining area and a driveway, alley, street or another public sidewalk.~~

(c) If a sidewalk cafe is designed to have more than one (1) row of tables and chairs, a non-sight-obscuring removable barrier not more than three (3) feet high enclosing the tables and chairs shall be constructed. Barrier gates shall not swing into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(d) Awnings associated with the cafe will be installed in accordance with the International Building Code. Umbrellas under seven (7) feet in height shall not extend into the required unobstructed sidewalk area required in Subsection (1)(a) of this Section.

(e) Signs associated with the cafe will be installed in accordance with provisions of the underlying zone. One (1) freestanding menu sign is permitted for each sidewalk cafe subject to the sign being located within the approved cafe area and being no more than six (6) square feet in size.

(f) Adequate facilities for the storage of trash generated by the cafe will be provided at a convenient location by the café owner(s) or operator(s).

(2) A revocable license from the City is executed that includes the following provisions:

(a) Insurance will be continuously maintained to adequately co-insure Provo City against any liability associated with the sidewalk cafe, as reasonably determined by the City. The insurance certificate shall name the City as an “additional insured.” Cancellation of such insurance shall require at least thirty (30) days prior notice to the City.

(b) Provo City, its officers, agents and employees, will be held harmless from any claims, causes of action, injuries, losses, damages, expenses, fees and costs, including attorneys' fees, associated or arising from the operation of the cafe.

(c) The cafe owner and operator will be responsible for repair of any damage done to the public sidewalk due to the installation or removal of furnishings, barriers or other features of the sidewalk cafe.

(d) Hours of cafe use will be limited to not earlier than 6:00 A.M. and not later than 12:00 A.M. and will not exceed the operating hours of the associated eating or drinking establishment.

(e) Any music or entertainment shall meet the sound limitation requirements outlined in Chapter 9.06.

(f) The sidewalk cafe and surroundings will be maintained in a neat and clean condition at all times by the café owner(s) or operator(s).

(g) The Cafe owner and operator will remove cafe improvements if necessary for sidewalk repair or replacement, utility maintenance, or upon failure to comply with the terms of the agreement.

(h) Sidewalk cafes shall only be operated between March 1 and October 31. Furniture shall be removed from the right-of-way outside of these dates.

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WELCOME HOME

# City Council

November 14, 2023

# *ITEM 6

Development Services requests approval of Ordinance Text Amendments to Section 14.34.480 (Sidewalk Cafes) to update standards and regulations for outdoor seating.

***Citywide Application.***

PLOTA20230246

# 14.34.080 Amendments

Background

- Staff have been discussing issues with DPI, Parks and Rec, and Engineering.
- Updating standards for safety and consistency.
- Plan to roll out new standards through licensing in next calendar year.
- Updates include:
    - New street separation requirements;
    - New umbrella height requirement;
    - Clarification of responsible parties;
    - Addition of seasonal operational period.

# 14.34.080 Amendments

**14.34.480**
**Sidewalk Cafes.**

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nsurance certificate shall name the City as an “additional insured.” Cancellation of such insurance shall require at least thirty (30) days prior notice to the City.

(b) Provo City, its officers, agents and employees, will be held harmless from any claims, causes of action, injuries, losses, damages, expenses, fees and costs, including attorneys’ fees, associated or arising from the operation of the cafe.

(c) The cafe owner and operator will be responsible for repair of any damage done to the public sidewalk due to the installation or removal of furnishings, barriers or other features of the sidewalk cafe.

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(f) The sidewalk cafe and surroundings will be maintained in a neat and clean condition at all times by the café owner(s) or operator(s).

(g) The Cafe owner and operator will remove cafe improvements if necessary for sidewalk repair or replacement, utility maintenance, or upon failure to comply with the terms of the agreement.

(h) Sidewalk cafes shall only be operated between March 1 and October 31. Furniture shall be removed from the right-of-way outside of these dates.

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** SWILMOTH
**Department:** Development Services
**Requested Meeting Date:** 01-01-2018

**SUBJECT:** An ordinance enacting the Agritourism Overlay Zone. Citywide application. PLOTA20230221

**RECOMMENDATION:** To be heard at the November 14, 2023 Work & Council Meeting. Please see supporting documents.

**BACKGROUND:** Development Services is proposing the city adopt the Agritourism Overlay Zone that could be applied to Agricultural Zones in Provo. The purposes of this new overlay zone are to open up additional ways for property owners to keep agricultural lands financially viable, help preserve existing farmlands, and create more human interest in these areas of the community.
The zone language was written by staff to incorporate all the main points brought up by the Planning Commission and City Council when the previous A1 amendments brought forward by the Finch family were discussed in July and August of this year. Staff have also incorporated additional regulations and standards to address any of the concerns raised about allowing event halls on agricultural properties.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** Aaron Ardmore (801) 852-6404 aardmore@provo.org

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** PLOTA20230221

ORDINANCE 2023-.

AN ORDINANCE ENACTING THE AGRITOURISM OVERLAY ZONE. CITYWIDE APPLICATION. (PLOTA20230221)

WHEREAS, it is proposed that Provo City Code Title 14 be amended to adopt Chapter 14.08A (Agritourism Overlay Zone); and

WHEREAS, on October 25, 2023, the Planning Commission held a duly noticed public hearing to consider the proposed amendment, and after such meeting, the Planning Commission recommended approval to the Municipal Council by a vote of 6:0; and

WHEREAS, on November 8, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation and facts and comments presented to the Municipal Council, the Council finds (i) Provo City Code should be amended as described herein and (ii) the proposed amendment reasonably furthers the health, safety and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

Provo City Code Chapter 14.08A is hereby enacted as set forth in Exhibit A.

PART II:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Provo City Code be updated to reflect the provisions enacted by this ordinance.

D. This ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

END OF ORDINANCE.

# Exhibit A

**CHAPTER 14.08A**
**AT – AGRITOURISM OVERLAY ZONE**


**14.08A.010 Purpose and Objectives.**
**14.08A.020 Permitted Uses.**
**14.08A.030 Development Standards.**
**14.08A.040 Lot Area.**
**14.08A.050 Permissible Site Coverage.**
**14.08A.060 Parking and Access.**
**14.08A.070 Project Plan Approval/Design Review.**
**14.08A.080 Design Standards.**
**14.08A.090 Hours of Operation.**
**14.08A.100 Event Hall Requirements.**
**14.08A.110 Other License Requirements.**


### 14.08A.010 Purpose and Objectives.

The Agritourism Overlay Zone (the AT Overlay) is provided to allow limited commercial activities within an agricultural setting to attract visitors to a farm, ranch, or other agricultural business to help preserve existing agricultural land in the city.

### 14.08A.020 Permitted Uses.

Uses permitted in the AT Overlay are limited to those listed as permitted uses in the A1 Zone, and the following:

(a) Commercial Tours
(b) Educational Classes
(c) Museums
(d) Event Halls (subject to 14.08A.100)

### 14.08A.030 Development Standards.

The AT Overlay may only be combined with A1 Zones and development within it must adhere to the development standards of the underlying zone unless otherwise specified in this Chapter.

### 14.08A.040 Lot Area.

Each lot or parcel of land in the AT Overlay must contain a minimum of five (5) acres. The AT Overlay may not be applied to an existing agricultural parcel that does not meet this requirement.

### 14.08A.050 Permissible Site Coverage.

(1) The maximum area of any permitted use in Section 14.08A.020 (other than the permitted uses of the underlying A1 Zone) is limited to thirty-three percent (33%) of the lot.

(2) Any agritourism building and associated open space or parking for the use will be counted towards permissible site coverage allowed by Section 14.08A.050(1).

**14.08A.060 Parking and Access.**

(1) Each use in the AT Overlay must have parking sufficient to meet the requirements of Provo City Code Chapter 14.37.

(2) All parking spaces must be designed in accordance with Provo City Code Sections 14.37.100 and 15.20.090.

**14.08A.070 Project Plan Approval/Design Review.**

All projects must comply with Provo City Code Sections 15.03.300 and 15.03.310 and Chapter 14.04A.

**14.08A.080 Design Standards.**

(1) Non-architectural metal is not a permitted facade material for agritourism buildings and may only be used as a roofing material.

(2) The design and architecture of buildings must be consistent with the agricultural setting and uses.

**14.08A.090 Hours of Operation.**

Permitted uses in the AT Overlay must cease operation:

(a) at 10 p.m. on Sunday thru Thursday until 8 a.m. the following day; and
(b) at 11 p.m. on Friday and Saturday until 8 a.m. the following day.

**14.08A.100 Event Hall Requirements**

(1) *On-Site Security.* Event Halls must provide one (1) privately contracted and licensed, on-site security officer per seventy-five (75) adult patrons when one or more of the following conditions exists:

(a) there is amplified music at the event; or
(b) alcohol is consumed at the event.

(2) *Distance Requirements.* No structure used for farm animals, feed, or waste may be constructed or maintained within fifty (50) feet of an Event Hall.

**14.08A.110 Other Requirements**

(1) An approved project or permit does not relieve the permittee of any other license requirement of the city or of any public agency.
(2) Noise levels for any event shall comply with Section 9.06.030, Provo City Code.

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DEVELOPMENT SERVICES

# Planning Commission Hearing Staff Report
# Hearing Date: October 25, 2023

***ITEM 5** Development Services requests approval of an Ordinance Text Amendment to adopt an Agritourism Overlay (AT) Zone. Citywide Application. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLOTA20230221

**Applicant:** Development Services

**Staff Coordinator:** Aaron Ardmore

**Relevant History:** During a Planning Commission hearing on July 12, 2023 on proposed amendments to the A1 (Agricultural) Zone, there was discussion on a possible solution of an overlay as opposed to amending the zone. The report of action from that meeting is attached for reference. *This item was continued at the September 27, 2023 hearing.*

**Neighborhood Issues:** This item is citywide and could impact many neighborhoods. Staff have not received any feedback at the time of this report.

**Summary of Key Issues:**

- This amendment would create a new overlay zone option for property owners in the A1 Zone.
- The overlay creates opportunities for tours, classes, museums, and event halls to be created on agricultural lands.
- There are minimum lot standards, maximum lot coverage, and design standards for agritourism uses.
- Event halls have additional regulations.

**ALTERNATIVE ACTIONS**

1. **Continue** to a future date to obtain additional information or to further consider information presented. *The next available meeting date is November 8, 2023, at 6:00 P.M.*

2. **Recommend Denial** of the requested ordinance text amendment. *This action would not be consistent with the recommendations of the Staff Report. The Planning Commission should state new findings.*

**Staff Recommendation:** Staff recommends that the Planning Commission recommend approval to the City Council on the proposed text amendments.

## OVERVIEW

Development Services is proposing the city adopt the Agritourism Overlay Zone that could be applied to Agricultural Zones in Provo. The purposes of this new overlay zone are to open up additional ways for property owners to keep agricultural lands financially viable, help preserve existing farmlands, and create more human interest in these areas of the community.

The zone language was written by staff to incorporate all the main points brought up by the Planning Commission and City Council when the previous A1 amendments brought forward by the Finch family were discussed in July and August of this year. Staff have also incorporated additional regulations and standards to address any of the concerns raised about allowing event halls on agricultural properties.

During the September Planning Commission hearing commissioners identified a list of changes that could be made and additional research to be done by staff, specifically further analysis on the following (updates provided in the following paragraphs):

1. Metal Façade definition
2. Distance requirement research and regulations
3. Lessening of security requirements by limiting use allowances and defining noise limits
4. Investigating if gravel can be a parking surface for permitted uses, and
5. Defining permitted uses and noise levels with uses

1. Staff have further detailed the design standards to remove confusion from the limits on metal facades.

2. Further research on adjacent city and county regulations identified that the requirements of fifty feet (50') for animal housing is reasonable as Utah County regulates the same distance to a adjacent structure, Provo requires a minimum of one-hundred feet (100') from the closest dwelling, and several Departments of Agriculture around the nation require manure to be a minimum of one-hundred feet (100') away.

3. Staff made changes to the noise and hour limits on event halls, modified the language for noise and removed event times as a standard for providing security on site.

4. After discussing treatments for driveway and parking, several departments determined that allowing gravel access and parking would pose too many issues with tracking and determining parking stalls and access lanes, so staff has continued the reference to Chapter 14.37, which calls for hard surface.

5. Staff feel that the changes made to Section 14.08A.100 will resolve the concerns associated with noise. In addition to changing "live music" to "amplified" in that section, staff added an additional reference to Provo noise level ordinances at the end of the Chapter.

## STAFF ANALYSIS

Staff believe that this proposal will help to meet the goals of the city and the objectives listed in the General Plan; and provide a good solution for agricultural landowners to continue using their land for agricultural related industries. To illustrate this, staff have reviewed the proposed

overlay zone against the standards for code amendments in Section 14.02.020, Provo City Code, as follows: (**staff responses in bold**)

> Before recommending an amendment to this Title, the Planning Commission shall determine whether such amendment is in the interest of the public and is consistent with the goals and policies of the Provo City General Plan. The following guidelines shall be used to determine consistency with the General Plan:
>
> (a) Public purpose for the amendment in question.

**Staff response: The public purposes for the amendment are to help preserve agricultural lands, provide farmers with another means of income, and provide additional venues for the community to use for celebrations.**

> (b) Confirmation that the public purpose is best served by the amendment in question.

**Staff response: Staff believes that the proposed amendment is the best way to address the above public purposes while protecting the city from unintended consequences. Adding a commercial use to be allowed in all agricultural zones would likely bring more issues to the neighborhood than it would benefit. However, creating an overlay zone that can be applied for helps the city to look at each request individually and make sure that there are no negative impacts.**

> (c) Compatibility of the proposed amendment with General Plan policies, goals, and objectives.

**Staff response: There are many goals that are met with the addition of the proposed overlay zone. The first goal in Chapter Three (Land Use) states the need to "strike a balanced approach in locating land uses". Staff thinks that allowing more variety in uses on agricultural land may help these areas thrive. The Economic Development chapter (Chapter 5) includes a desire to "employ innovative approaches to promote local business and create community". The uses permitted in the overlay zone should help to create and strengthen community. Lastly, Chapter Eight (Open Space and Recreation) identifies the value of "conservation of open spaces, scenic areas, and viable agricultural land". Again, this overlay can be used as a tool to preserve agricultural lands in Provo.**

> (d) Consistency of the proposed amendment with the General Plan's "timing and sequencing" provisions on changes of use, insofar as they are articulated.

**Staff response: There are no timing and sequencing issues related to this request.**

> (e) Potential of the proposed amendment to hinder or obstruct attainment of the General Plan's articulated policies.

**Staff response: Staff believes that this proposal would not hinder or obstruct General Plan policies.**

> (f) Adverse impacts on adjacent land owners.

**Staff response: The adverse impacts that staff have identified as possibilities to the new uses permitted through the overlay zone are related to the increased vehicular traffic in mostly residential neighborhoods, noise and light complaints in quiet parts of the city, and**

**an increased need for city services. Staff have tried to mitigate these impacts with the standards of the overlay zone and will further evaluate these as specific plans come in when an owner applies for the overlay zone.**

(g) Verification of correctness in the original zoning or General Plan for the area in question.

**Staff response: Does not apply.**

(h) In cases where a conflict arises between the General Plan Map and General Plan Policies, precedence shall be given to the Plan Policies.

**Staff response: Does not apply.**

## CONCLUSIONS

Staff have taken this proposed amendment through the Coordinator Review Committee (CRC) and incorporated all the comments received. This report should show that adopting this overlay zone should be a benefit to agricultural landowners, as well as the community as a whole. Staff appreciates the Planning Commissions thought and suggestions that improved the proposal, and believe it is ready to move to Council for a vote.

## ATTACHMENTS

1. Proposed Amendment

## ATTACHMENT 1 – PROPOSED AMENDMENT

**CHAPTER 14.08A**
**AT – AGRITOURISM OVERLAY ZONE**

**14.08A.010 Purpose and Objectives.**
**14.08A.020 Permitted Uses.**
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(d) Event Halls (subject to 14.08A.100)

**14.08A.030 Development Standards.**

The AT Overlay may only be combined with A1 Zones and development within it must adhere to the development standards of the underlying zone unless otherwise specified in this Chapter.

**14.08A.040 Lot Area.**

Each lot or parcel of land in the AT Overlay must contain a minimum of five (5) acres. The AT Overlay may not be applied to an existing agricultural parcel that does not meet this requirement.

**14.08A.050 Permissible Site Coverage.**

(1) The maximum area of any permitted use in Section 14.08A.020 is limited to thirty-three percent (33%) of the lot.

(2) Any agritourism building and associated open space or parking for the use will be counted towards permissible site coverage allowed by Section 14.08A.050(1).

**14.08A.060 Parking and Access.**

(1) Each use in the AT Overlay must have parking sufficient to meet the requirements of Provo City Code Chapter 14.37.

(2) All parking spaces must be designed in accordance with Provo City Code Sections 14.37.100 and 15.20.090.

**14.08A.070 Project Plan Approval/Design Review.**

All projects must comply with Provo City Code Sections 15.03.300 and 15.03.310 and Chapter 14.04A.

**14.08A.080 Design Standards.**

(1) Non-architectural metal is not a permitted facade material for agritourism buildings and may only be used as a roofing material.

(2) The design and architecture of buildings must be consistent with the agricultural setting and uses.

**14.08A.090 Hours of Operation.**

Permitted uses in the AT Overlay must cease operation:

(a) at 10 p.m. on Sunday thru Thursday until 8 a.m. the following day; and
(b) at 11 p.m. on Friday and Saturday until 8 a.m. the following day.

**14.08A.100 Event Hall Requirements**

(1) *On-Site Security.* Event Halls must provide one (1) privately contracted and licensed, on-site security officer per seventy-five (75) adult patrons when one or more of the following conditions exists:

(a) there is amplified music at the event; or
(b) alcohol is consumed at the event.

(2) *Distance Requirements.* No structure used for farm animals, feed, or waste may be constructed or maintained within fifty (50) feet of an Event Hall.

**14.08A.110 Other Requirements**

(1) An approved project or permit does not relieve the permittee of any other license requirement of the city or of any public agency.
(2) Noise levels for any event shall comply with Section 9.06.030, Provo City Code.

Provo City Planning Commission

# Report of Action

October 25, 2023

*ITEM 5 Development Services requests approval of an Ordinance Text Amendment to adopt an Agritourism Overlay (AT) Zone. Citywide application. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLOTA20230221

The following action was taken by the Planning Commission on the above-described item at its regular meeting of October 25, 2023:

## RECOMMENDED APPROVAL

On a vote of 6:0, the Planning Commission recommended that the Municipal Council approve the above noted application.

Motion By: Robert Knudsen
Second By: Lisa Jensen
Votes in Favor of Motion: Robert Knudsen, Lisa Jensen, Daniel Gonzales, Barbara DeSoto, Andrew South, Jonathon Hill
Daniel Gonzales was present as Chair.

- Includes facts of the case, analysis, conclusions and recommendations outlined in the Staff Report, with any changes noted; Planning Commission determination is generally consistent with the Staff analysis and determination.

**TEXT AMENDMENT**
The text of the proposed amendment is attached as Exhibit A.

**STAFF PRESENTATION**
The Staff Report to the Planning Commission provides details of the facts of the case and the Staff's analysis, conclusions, and recommendations.

**CITY DEPARTMENTAL ISSUES**
- The Coordinator Review Committee (CRC) has reviewed the application and given their approval.

**NEIGHBORHOOD MEETING DATE**
- City-wide application; all Neighborhood Chairs received notification.

**NEIGHBORHOOD AND PUBLIC COMMENT**
- This item was City-wide or affected multiple neighborhoods.
- Neighbors or other interested parties were present or addressed the Planning Commission.

**CONCERNS RAISED BY PUBLIC**
Any comments received prior to completion of the Staff Report are addressed in the Staff Report to the Planning Commission. Key issues raised in written comments received subsequent to the Staff Report or public comment during the public hearing included the following:

- Judy and Barry Finch sent an email stating concerns with the distance requirements for animals, security requirements for event halls, hours of operation, and parking requirements.
- Judy Finch addressed the commission and related comments from the previous hearing and referenced concerns in her letter and expressed a desire to move the proposal to the City Council.

**APPLICANT RESPONSE**

Key points addressed in the applicant's presentation to the Planning Commission included the following:

**PLANNING COMMISSION DISCUSSION**

Key points discussed by the Planning Commission included the following:

- The commission noted that this application has been discussed a lot and the end result is reflective of the good ideas and thoughts of the public, staff, and commissioners.

Planning Commission Chair

Director of Development Services

See Key Land Use Policies of the Provo City General Plan, applicable Titles of the Provo City Code, and the Staff Report to the Planning Commission for further detailed information. The Staff Report is a part of the record of the decision for this item. Where findings of the Planning Commission differ from findings of Staff, those will be noted in this Report of Action.

Legislative items are noted with an asterisk (*) and require legislative action by the Municipal Council following a public hearing; the Planning Commission provides an advisory recommendation to the Municipal Council following a public hearing.

Administrative decisions of the Planning Commission (items not marked with an asterisk) **may be appealed** by submitting an application/notice of appeal, with the required application and noticing fees to Development Services, 445 West Center St, Provo, Utah, **within fourteen (14) calendar days of the Planning Commission's decision** (Provo City office hours are Monday through Thursday, 7:00 a.m. to 6:00 p.m.).

BUILDING PERMITS MUST BE OBTAINED BEFORE CONSTRUCTION BEGINS

EXHIBIT A

**CHAPTER 14.08A**
**AT – AGRITOURISM OVERLAY ZONE**


**14.08A.010 Purpose and Objectives.**
**14.08A.020 Permitted Uses.**
**14.08A.030 Development Standards.**
**14.08A.040 Lot Area.**
**14.08A.050 Permissible Site Coverage.**
**14.08A.060 Parking and Access.**
**14.08A.070 Project Plan Approval/Design Review.**
**14.08A.080 Design Standards.**
**14.08A.090 Hours of Operation.**
**14.08A.100 Event Hall Requirements.**
**14.08A.110 Other License Requirements.**


**14.08A.010 Purpose and Objectives.**

The Agritourism Overlay Zone (the AT Overlay) is provided to allow limited commercial activities within an agricultural setting to attract visitors to a farm, ranch, or other agricultural business to help preserve existing agricultural land in the city.

**14.08A.020 Permitted Uses.**

Uses permitted in the AT Overlay are limited to those listed as permitted uses in the A1 Zone, and the following:

(a) Commercial Tours
(b) Educational Classes
(c) Museums
(d) Event Halls (subject to 14.08A.100)

**14.08A.030 Development Standards.**

The AT Overlay may only be combined with A1 Zones and development within it must adhere to the development standards of the underlying zone unless otherwise specified in this Chapter.

**14.08A.040 Lot Area.**

Each lot or parcel of land in the AT Overlay must contain a minimum of five (5) acres. The AT Overlay may not be applied to an existing agricultural parcel that does not meet this requirement.

**14.08A.050 Permissible Site Coverage.**

(1) The maximum area of any permitted use in Section 14.08A.020 is limited to thirty-three percent (33%) of the lot.

(2) Any agritourism building and associated open space or parking for the use will be counted towards permissible site coverage allowed by Section 14.08A.050(1).

**14.08A.060 Parking and Access.**

(1) Each use in the AT Overlay must have parking sufficient to meet the requirements of Provo City Code Chapter 14.37.

(2) All parking spaces must be designed in accordance with Provo City Code Sections 14.37.100 and 15.20.090.

**14.08A.070 Project Plan Approval/Design Review.**

All projects must comply with Provo City Code Sections 15.03.300 and 15.03.310 and Chapter 14.04A.

**14.08A.080 Design Standards.**

(1) Non-architectural metal is not a permitted facade material for agritourism buildings and may only be used as a roofing material.

(2) The design and architecture of buildings must be consistent with the agricultural setting and uses.

**14.08A.090 Hours of Operation.**

Permitted uses in the AT Overlay must cease operation:

(a) at 10 p.m. on Sunday thru Thursday until 8 a.m. the following day; and
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(1) *On-Site Security.* Event Halls must provide one (1) privately contracted and licensed, on-site security officer per seventy-five (75) adult patrons when one or more of the following conditions exists:

(a) there is amplified music at the event; or
(b) alcohol is consumed at the event.

(2) *Distance Requirements.* No structure used for farm animals, feed, or waste may be constructed or maintained within fifty (50) feet of an Event Hall.

**14.08A.110 Other Requirements**

(1) An approved project or permit does not relieve the permittee of any other license requirement of the city or of any public agency.
(2) Noise levels for any event shall comply with Section 9.06.030, Provo City Code.

provo

WELCOME HOME

# City Council

November 14, 2023

# *ITEM 5

Development Services requests approval of an Ordinance Text Amendment to adopt an Agritourism Overlay (AT) Zone.

***Citywide Application.***

PLOTA20230221

# Agritourism Overlay Zone

## Background

- Initial discussion on topic at July 12 Planning Commission meeting.
- Initial Proposal was discussed / continued at September 27th PC Hearing
- Topics to analyze from September 27th PC hearing:
  - Definition on metal as a building material;
  - Distance requirement between event hall and animal housing;
  - Security requirements on uses and noise limits;
  - Materials for parking and access;
  - Definition of live music and limits on noise.

# Agritourism Overlay Zone

**CHAPTER 14.08A**
**AT – AGRITOURISM OVERLAY ZONE**


**14.08A.010 Purpose and Objectives.**
**14.08A.020 Permitted Uses.**
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(1) *On-Site Security.* Event Halls must provide one (1) privately contracted and licensed, on-site security officer per seventy-five (75) adult patrons when one or more of the following conditions exists:

(a) there is amplified music at the event; or
(b) alcohol is consumed at the event.

*removed time regulation

(2) *Distance Requirements.* No structure used for farm animals, feed, or waste may be constructed or maintained within fifty (50) feet of an Event Hall.

**14.08A.110 Other Requirements**

(1) An approved project or permit does not relieve the permittee of any other license requirement of the city or of any public agency.
(2) Noise levels for any event shall comply with Section 9.06.030, Provo City Code.

**Finch Event Barn**

Barry and Judy Finch
358 S 2470 W
Provo UT 84601
uvjfinch@gmail.com

November 8, 2023

Provo City Council,
We would like to thank the Council for having Staff create this new Agra-Tourism Overlay Zone. We also appreciate that the work has been done in a timely way by the Staff.

We have followed the progress the Staff has made on this new zone, and have tried our best to make suggestions that will help farmers be successful in it. We have expressed these in letters that you are aware of.

It was decided by this Council on Aug. 1st that an Agra-Tourism Overlay Zone would be a way to protect the City's interest while at the same time help agriculture in Provo stay agriculture.

As the Staff and Planning Commission have continued to work on this new zone, however, we feel they have moved away from the original intent. The intent for this new zone was to allow farmers to develop new sources of income, and

to preserve open spaces that can be passed on to the next generation.

The restrictions that have been added by Staff to this new overlay and the cost attached to them will make it very difficult for farmers to create new income.

When we met with this Council in on Aug. 1st we were proposing a zone amendment to allow a wedding venue in an agricultural zone. It was agreed upon that this qualified as agri-tourism and would be in harmony with the long term plan for Provo, but a zone amendment was not the tool to get us there. Members of the Council expressed the desire to "make sure this was done right." The proposed zone amendment created a risk to the City due to its city wide application. Ideas to mediate those risks included restrictions and requirements that would hinder the success of the new businesses. The Council suggested that a new Agri-Tourism Overlay Zone would remove unnecessary restrictions for the applicant and at the same time protect the City from any consequences of a City wide zone amendment.

As the staff and Planning Commission continued to discuss this new zone, a few rather small and less meaningful changes were made making some of the restrictions a little less severe. On the other hand, some major and very costly new requirements were added.

Our First concern is the change to the parking lot requirements. When this was presented to the City Council on Aug 1st the parking requirement was:

(i) One (1) off-street parking space must be provided for every four (4) potential occupants, based on the maximum occupancy load for the use, and the use must comply with Provo City Code Chapter 14.37, Off-Street Parking Standards. There must be sufficient on-site parking for patrons and employees.

As you can see this requirement simply talks about appropriate number of parking spaces. At the time we felt that we were doing all we could do to accommodate the City by providing all parking spaces on our property with a closed perimeter gate.

But with the added code 15.20.090 we would now also be required to provide for our parking lot, asphalt, landscaping, curb and gutter, drainage, and lots of engineering cost. This would balloon our parking lot expenses to nearly $200,000 to comply with this code.

**code15.20.090**

(1) All parking lots designed for six (6) or more parking spaces shall provide landscaping in accordance with the provisions of this Section. Parking lots designed for five (5) or fewer parking spaces shall not be required to provide landscaping other than yard area landscaping and landscaped buffer requirements as specified in other sections of this Chapter.

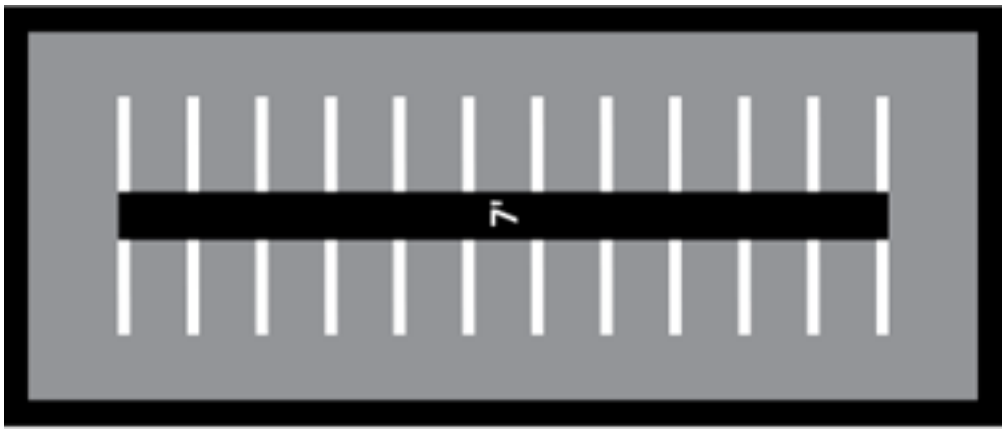
(2) Parking areas shall be landscaped at a rate of at least forty (40) square feet of landscaping per off-street parking stall. Landscaping areas located along the perimeter of a parking lot (beyond the curb or edge of pavement of the parking lot, up to a depth of ten (10) feet) may be included toward satisfying this requirement. Deciduous trees shall be planted within said parking area landscaping in a manner such that, at maturity of said trees, at least fifty percent (50%) of the paved surface area of the parking area will be shaded when the sun is directly overhead during the summer solstice.

(3) Landscaped areas shall be improved in conformance with the following requirements:

(a) Interior landscape design shall meet one (1) of the following options and must be designed to provide fifty percent (50%) tree canopy coverage within twenty (20) years of planting:

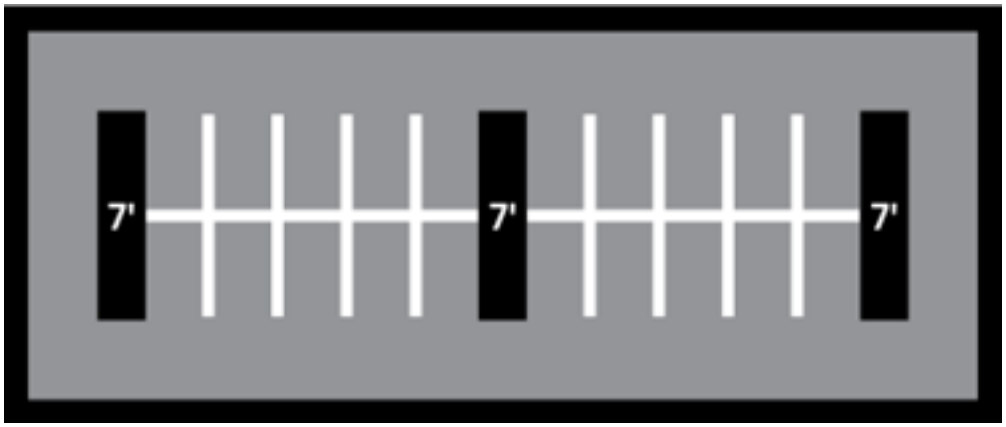
(i) Landscaped strips perpendicular to the parking spaces with a minimum width of seven (7) feet shall be required in front of or between rows of parking spaces, except when using vegetated drainage swales the minimum width shall be eight (8) feet; or

**Figure 1. Landscaped Strips**



(ii) Landscaped islands with a minimum width of seven (7) feet parallel to the parking spaces at a spacing of every five (5) stalls shall be required.

**Figure 2. Landscaped Islands**




(b) Two (2) feet of a parking space may have a clear overhang and count toward the required length of the parking space.

(c) Landscaped areas shall be sloped concavely to allow storm water infiltration.

(4) The plants used to improve the landscape areas defined above shall conform to the following:

(a) Primary plant materials used in the interior parking lot landscaping shall be deciduous shade trees.

(i) Ornamental trees, shrubbery, hedges, and other plants may be used to supplement the shade tree plantings in perimeter planting areas, but shall not be the only plants used in such landscaping.

(ii) Only tree species identified in the City of Provo Tree Selection Guide in the Class II list shall be planted in parking lot landscaping unless otherwise approved by the City Forester.

(b) Drought-tolerant species of turf are encouraged.

(c) Sub-surface irrigation is encouraged.

(d) One (1) shade tree shall be provided for every four (4) parking spaces; and

(i) When low impact development infiltration is infeasible (according to the Storm Drainage System Design and Management Manual, Chapter 11), the area of LID designs with underdrains or impermeable liners may be credited towards the required numbers of trees at the rate of two

hundred (200) square feet of LID area equal to one (1) tree; up to fifty percent (50%) of the number of required trees.

(e) Interior parking lot landscaping area shall be planted with ground cover at a density that will achieve forty percent (40%) cover within two (2) years.

(5) Six (6) inch by six (6) inch minimum poured concrete curb controls with drainage inlets or parking stops shall be installed around all required landscaping within the interior of parking lots for the protection of the landscaping.

We hope that the Council will view these parking requirements unnecessary and that a gravel parking lot would be sufficient. Remember: adding that huge of an expense on a parking lot would be hard for a new business to overcome. Gravel also seems to be more in line with agriculture than asphalt.

Our second concern is with the operation hour restriction. By restricting operation hours it will put any Agri-tourism Event Hall at a big disadvantage compared to other similar event centers. There are no operation hour restrictions on any other event centers in provo. If the concern is noise, the business is required to follow the noise ordinance and will have a plan in place to do so.

Lastly the distance requirement of a barn that houses animals to be 50 feet from the event hall. As was stated in our letter we could find no research to validate this requirement. If it is a health concern the City has, I would refer you to the letter we sent in October that has the guidelines from the CDC in

regards to animals and activities. It says nothing about distance requirements.

This Agri-Tourism Zone is made to go on top of an already existing Agriculture Zone. For us this is a living working farm with outbuildings and animals. To have restrictions that would require us to remove existing buildings seems excessive.

We are close to something that will be great for farmers and supports the long term plan for Provo. We hope the intent to help farmers will not be lost as restrictions and requirements are added. Creating too many restrictions or ones that are too costly would greatly hinder the overall success of this new Agri-Tourism Zone.

Thank you for your service on the City Council and for assisting with this new Agri-Tourism overlay zone

Barry and Judy Finch

**Judy and Barry Finch | October 24, 2023**
***AT Overlay zone.***

October 24, 2023

Provo City Council and Provo City Planning Commission

We are writing in regards to the Planning Commission Hearing Staff Report Hearing Date: October 25, 2023 requesting approval of an Ordinance Text Amendment to adopt an Agritourism Overlay (AT) Zone.

At the Planning Commission Meeting on September 27th the Commissioners identified 5 things for the Staff to take into consideration on the new overlay. These are

1. Metal Facade definition
2. Distance requirement research and regulations
3. Lessening of security requirements limiting use allowance and defining noise limits
4. Investigation if gravel can be a parking surface for permitted uses
5. Defining permitted uses and noise levels with uses

## Our first concern

**14.08A.100 Other Requirements (2) Distance Requirements.**

The proposed language is that "No structure used for farm animals, feed, or waste may be constructed or maintained within fifty feet of an Event Hall"

Staff's stated that their research of adjacent cities and of County regulations identified that the requirements of fifty feet (50') for animal housing is reasonable as Utah County regulates the same distance to a adjacent structure and Provo requires a minimum of one-hundred feet (100') from the closest dwelling, and several Departments of Agriculture around the nation require manure to be a minimum of one-hundred feet (100') away.

In researching this topic the only regulation we found in Provo regarding distance for animals referred to chickens that require only 6 feet from a dwelling. There is nothing on a farm stinkier than chickens and that carry more diseases and they can be virtually right next to a home. We found nothing with distance requirements beyond that.

8.02.190 keeping chickens

bThe coop shall be located in a rear yard at least fifteen (15) feet from any property line and six (6) feet from any dwelling.

Also, in driving around our own neighborhood we observed several people who would be in violation of this restriction. We noticed many people who own pastures and have horses grazing in them. Most of these pastures include a small barn or lean-to type structure for their animals. In almost all cases these structures were located close to homes.

Perhaps the most meaningful and accurate comparison to our project is a new barn constructed in 2022 on our very street—just three blocks away. It houses horses and feed and is about thirty feet from their home. This barn is owned by Matt Knudsen. Obviously this restriction has not been applied evenly throughout the city.

We propose that the regulation Staff has proposed of 50 feet for animal housing be changed to allow short term display of animals. In other words, animals could live and be fed somewhere else on the farm but would be allowed to be displayed in a structure adjacent to the event hall. This would allow guests to see and even interact with some animals in an area that would be cleaner than where the animals live—no matter how close it is to our event barn. Remember: if our barn is messy, dangerous or stinky our guests will be the first ones to demand we change. Let the market, not government guide our practices on this issue.

We agree that manure storage should be 100 feet away from closest dwelling.

Furthermore, our research found that the distance the animals are from the Meeting Hall is not what is going to keep people safe. It is the simple hand washing and keeping food and animals separate.

We found information from the CDC with guidelines in staying safe at animal exhibits. We suggest that any restrictions on this topic, if based on health issues, would follow the CDC recommendations rather than staffs.

https://www.cdc.gov/healthypets/specific-groups/stay-healthy-animal-exhibits.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fh ealthypets%2Fspecific-groups%2Fcontact-animals-public-settings.html#print

## How to stay healthy if you visit an animal exhibit

Animal encounters such as touching or petting, feeding, and holding animals are becoming more popular, especially at zoos and aquariums. An animal exhibit can be anything from a large zoo to a livestock show at the county fair. You might also encounter animals at schools, as part of local festivals, or just out and about. Wherever you are, it's important to know ways to stay healthy while enjoying animals.

## Protect yourself and your family

1. Wash your hands
    - Find where the hand washing stations are located.
    - Wash your hands right after touching animals or anything in the areas where they live, roam, or eat.
    - Wash your hands when you leave animal areas, even if you didn't touch the animals or if you wore gloves.
    - Running water and soap are best, but if they are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol and wash your hands with soap and running water as soon as you can.
2. Keep food and animals separate
    - Don't eat or drink around animals. Keep food and drinks away from animal areas.
    - Don't share your food with the animals, even if you think the food is part of the animal's regular diet. Animals should eat the food provided for them by the animal exhibit.

Design exhibits in ways that will help to prevent the spread of disease:

- Provide stations for hand washing at the exits of animal exhibits, including some that are low enough for children to reach.
- Educate staff and visitors on how to prevent illness after being around animals.
- Provide signs for guests on when and how to wash their hands, where they can eat, and areas for the animals. Use plain language and pictures.
- Keep dining and animal areas separate.
- Train staff and educate visitors on diseases animals may carry and how to prevent them.
- Teach staff about the risks of working around animals. Encourage them to talk to visitors about safety around animals, such as hand washing.

Notice that this very detailed guideline makes no mention of any distance requirements. We feel it is the responsibility of the Meeting Hall to keep the guest safe and follow the CDC recommendations. Distance between the animals and the Meeting Hall is not what will keep the guest safe, but rather, the use of good hand washing and keeping food and animals separate.

## Our second concern

**14.08A.100 Event Hall Requirements**

(1)On-Site Security. Event Halls must provide one (1) privately contracted and licensed, on-site security officer per seventy-five (75) adult patrons when one or more of the following conditions exists:

•(a) there is amplified music at the event; or

•(b) alcohol is consumed at the event

We feel that security should not be a required condition for this zone overlay, but it should be the choice and judgment call of the business owner, whether security is needed. Each event is different and will have different needs. The Event Hall will need to assess each event and have a plan in place to ensure the safety of the guest and the Event Hall. The best way to do this may not always be to have security. By requiring security it will put an Agri-tourism Event Hall at a big disadvantage compared to other similar event centers. Let the business owner as well as the market determine the need for security.

Mandating security for a small segment of the Meeting Hall for Rent market would seem to have little impact on the overall market as most venues will not be located in the new AT zone. The impact on the very few venues included in this new zone would be very punitive.

We are not saying that we won't have security. Of course we will. But other venues are free to determine their security needs and so should we. This was the whole point as explained by Councilwoman Whipple in the September Council meeting where she referred to security as "an unnecessary restriction that could threaten the viability of your future business". The security expert referred to it as "overkill".

Mandating security would cost us tens of thousands of dollars every year. If we hosted two parties per week for, say 40 of the possible 52 weeks and we averaged two security guards per event with an average of 6 hours per event that would cost us approximately $720 per night for a total of $57,600 per year. If we did more events that price would go higher.

Thats well over a half million dollars in the first 10 years in business. What business can sustain such an expense when their competition has no such expense?

## Our third concern

**14.08A.090 Hours of Operation.**

Permitted uses in the AT Overlay must cease operation:

(a) at 10 p.m. on Sunday through Thursday

(b) at 8 a.m. the following day; and (b) at 11 p.m. on Friday and Saturday until 8 a.m. the following day.

Our concerns with the time operations regulations is our lost revenue and competitive disadvantage compared to other venues that stay open later. We understand we are located in a different zone than many event halls in the downtown area but the ordinance regulating sound exists for everyone. It also gets more restrictive the later you go into the evening. Our feeling is that if we comply with the noise ordinance, we should be able to have the same business hours that our competitors have.

To impose these time regulations on just some business owners is in our opinion an overreach by local government. The sound ordinance governs this issue. It applies to everyone in every zone. It applies just as much at 11am or noon as 11pm or midnight. It already takes into account the need for tighter restrictions as night times begin. So, enforce the ordinance.

We may find that we have to initiate additional restrictions on our guest with the extended hours so to be in compliance with the noise ordinance. For example no loud sendoffs after 10pm and music with be kept at a lower level after 10pm. Other venues have these same requirements of their guest when using extended hours.

Additional restrictions are not needed and are not fair if not evenly applied to all business owners. Where we are located should have no bearing on our following the noise ordinance. If the sound ordnance is met, hours of operation should be left up to the business owner to regulate.

## Our forth concern

**14.08A.060 Parking and Access.**

(1) Each use in the AT Overlay must have parking sufficient to meet the requirements of Provo City Code Chapter 14.37.

(2) All parking spaces must be designed in accordance with Provo City Code Sections 14.37.100 and 15.20.090.

In the previous Planning Commission meeting, some of the commissioners felt that a gravel parking lot would be sufficient for an agricultural area—in fact more in line with agriculture than asphalt or concrete.

Staff overview stated that "After discussing treatments for driveway and parking, several departments determined that allowing gravel access and parking would pose too many issues with tracking and determining parking stalls and access lanes, so staff has continued the reference to Chapter 14.37, which calls for hard surface."

We have noticed that the norm for parking lots during Agritourism activities is gravel. Pumpkin patches, corn mazes, u-pick vegetables, and halloween venues all have gravel parking lots. Many Event Barns do as well. Some local examples include Hee Haw Farms, Jakers pumpkin patch, Sunshine Nursery Corn Maze, and NorthRidge Valley Event Barn in Mapleton to name just a few. There are many, many more.

Requiring an asphalt parking lot would cost us over $100,000. In most cases, projects in this new AT zone would be built in and among existing outbuildings on the farm. These are large spaces. In our case, the farm is still a working farm. Requiring asphalt where farm animals are found is dangerous and unnecessary.

The staff is ensuring that the barn we build fits in with the agricultural feel; and we believe that a gravel parking lot would fit the feel of agriculture in a similar way.

We are unclear as to why departments in Provo City would feel the need to "track" or "determine" parking stalls on a small, private, and closed parking lot that is completely on our property. In addition, the parking lot would most often be unused as events typically would occur only on Fridays and Saturdays. Lastly, we have confidence that we can help our guests to safely, quickly and to simply find a parking spot.

When attending a wedding at NorthRidge Valley a few weeks back a very competent 12 year old guided us into a gravel parking lot and we felt no stress or danger. (And to our knowledge there was no tracking or determining going on at this event.)

In summary, the whole purpose of creating this new Agritourism Zone was to support farmers in their efforts to find new ways to create revenue on their farms while at the same time preserving open spaces and having a positive impact in the community. It is our belief, and the understanding we came away with from the City Council, that creating this zone with so many harsh restrictions would undermine its very existence. According to the Long Term Plan for our area, local government is tasked with supporting farmers in their agritourism efforts and to eliminate obstacles for them to help ensure success. With these thoughts in mind, we submit this brief for your consideration.

We would like to thank Staff, City Planning Commissioners and the City Council members for all their time and efforts on our behalf. We are very grateful for the opportunity of this new overlay zone. We think it will be a resource to help keep agriculture in Provo.

Sincerely

Barry and Judy Finch

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** SWILMOTH
**Department:** Development Services
**Requested Meeting Date:** 01-01-2018

**SUBJECT:** An ordinance amending the zone map classification of approximately 16.9 acres of real property, generally located at 1069 N Geneva Road, from R1.8 (One Family Residential) to R1.8(PD) (One Family with Performance Development Overlay) and authorizing a related development agreement. Lakeview North Neighborhood. PLRZ20230104

**RECOMMENDATION:** To be heard at the November 14, 2023 Work & Council Meeting. Please see supporting documents.

**BACKGROUND:** Garrett Seely is requesting approval for a zone map amendment to apply the PD (Performance Development Overlay) Zone to a 16.49-acre piece of ground that is currently zoned R1.8. This application is accompanied by a preliminary subdivision concept plan near 1069 N Geneva Road.

The concept shows fifty-six (56) twin homes and two (2) single family lots on the eastern nine acres of the property, providing over seven acres of open space for the subdivision. The majority of the open space will be left natural as it is wetland area, while the rest will be maintained by an HOA described by the codes, covenants, and restrictions (CC&R's) provided by the applicant. The street network provides a curvilinear grid connecting the Meadows subdivision to the south and the Riverwood Village subdivision to the west. The layout also provides a future connection to the north at 2670 West and room on the northeast for a future connection to Geneva Road.

In addition to CC&R's, the applicant has proffered a development agreement to detail agreement to the zone standards, conceptual layout, and guarantee of a variety of housing types. The variety of housing types allows the developer to go above the base density by ten percent (10%) by code, which is needed for the 58 residential units over the 16.49-acre land.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** Aaron Ardmore (801) 852-6404 aardmore@provo.org

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** PLRZ20230104

ORDINANCE 2023-.

AN ORDINANCE AMENDING THE ZONE MAP CLASSIFICATION OF APPROXIMATELY 16.9 ACRES OF REAL PROPERTY, GENERALLY LOCATED AT 1069 N GENEVA ROAD, FROM R1.8 (ONE FAMILY RESIDENTIAL) TO R1.8(PD) (ONE FAMILY RESIDENTIAL WITH PERFORMANCE DEVELOPMENT OVERLAY) AND AUTHORIZING A RELATED DEVELOPMENT AGREEMENT. LAKEVIEW NORTH NEIGHBORHOOD. (PLRZ20230104)

WHEREAS, it is proposed that the classification on the Zone Map of Provo for approximately 16.9 acres of real property, generally located at 1069 N Geneva Road (an approximation of which is shown or described in Exhibit A and a more precise description of which will be attached hereto as Exhibit B after the Zone Map has been updated), be amended from R1.8 (One Family Residential) to R1.8(PD) (One Family Residential with Performance Development Overlay); and

WHEREAS, on October 25, 2023, the Planning Commission held a duly noticed public hearing to consider the proposal and after such hearing the Planning Commission recommended approval to the Municipal Council by a 4:2 vote; and

WHEREAS, the Planning Commission's recommendation was based on the project design presented to the Commission; and

WHEREAS, on November 14, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation, and facts and comments presented to the Municipal Council, the Council finds (i) the Zone Map of Provo, Utah, should be amended as described herein; and (ii) the proposed zone map classification amendment for the real property described herein reasonably furthers the health, safety and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

The Mayor is hereby authorized to negotiate and execute a development agreement as proposed by the applicant for this zone change, consistent with those commitments described in the development agreement and the representations made by the applicant and the applicant's representatives in the Council Meeting of November 14, 2023 in form substantially similar to the draft attached hereto as Exhibit C, an executed copy of which shall be attached hereto as Exhibit D after execution.

PART II:

The classification on the Zone Map of Provo, Utah is hereby amended from the R1.8 (One Family Residential) Zone to the R1.8(PD) (One Family Residential with Performance Development Overlay) Zone for approximately 16.9 acres of real property generally located at 1069 N Geneva Road, as described herein. The effective date of this zone map change shall be the date of final execution of the development agreement described in Part I.

PART III:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Zone Map of Provo City, Utah be updated and codified to reflect the provisions enacted by this ordinance.

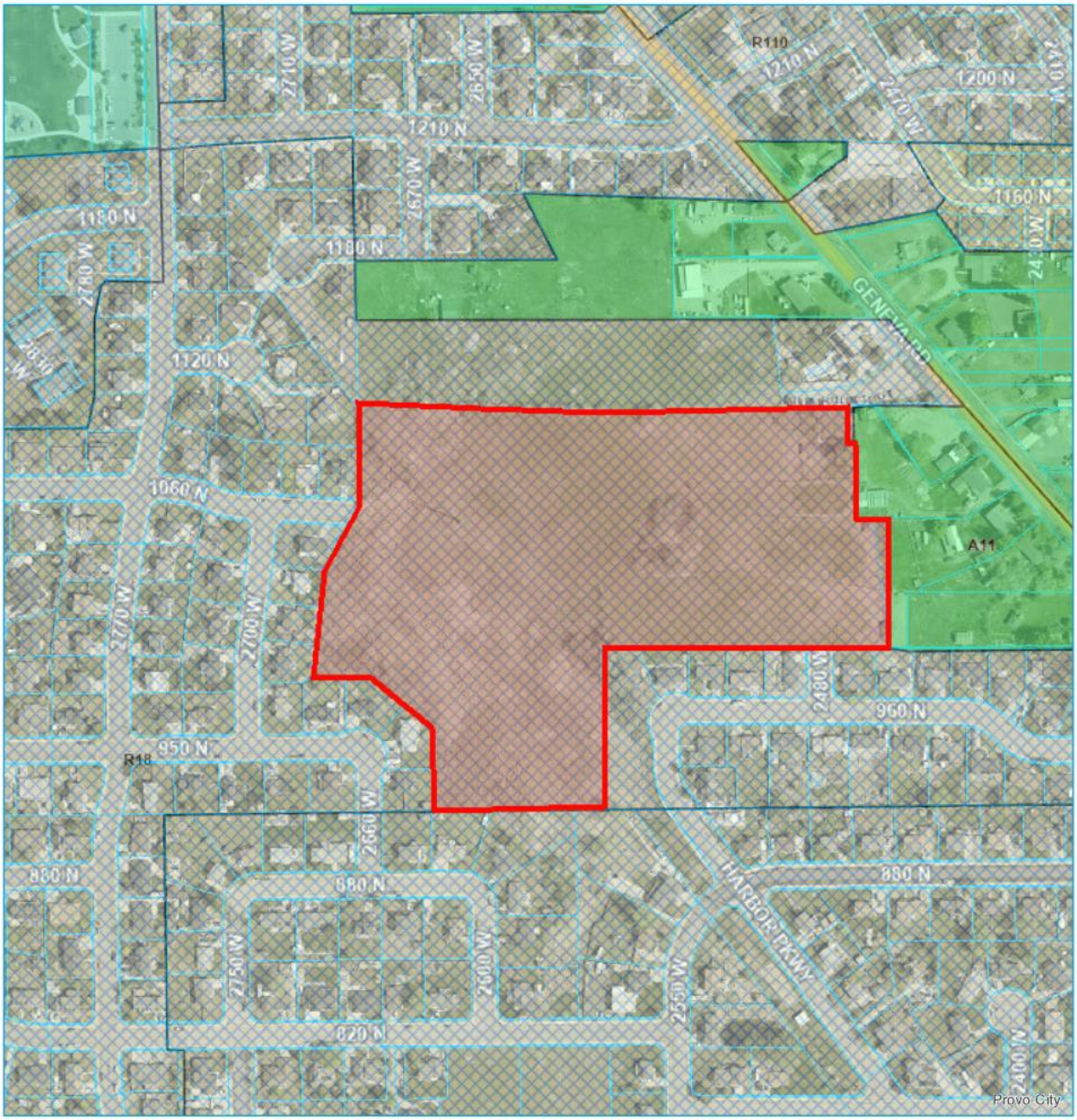
D. Except as otherwise stated in Part II, this ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

E. Notwithstanding any provision or language to the contrary in this ordinance, if the Development Agreement authorized in Part I has not been fully executed by the necessary parties within one year from the date of the Municipal Council's approval of this ordinance, the entire ordinance shall expire, becoming null and void as if it had never been approved. Because the zone classification change contemplated in Part II cannot come into effect if the Development Agreement is not executed, neither the applicant nor any successor(s) in interest shall have any vested rights under this ordinance if it expires.

END OF ORDINANCE

# EXHIBIT A – ZONE MAP

# Provo Map




provo

0 0.035 0.07 0.14 mi

Author: Provo City Date: 10/17/2023

This map is for graphical representation only and not for construction or defining feature locations.

**EXHIBIT B**

# EXHIBIT C – DRAFT DEVELOPMENT AGREEMENT

**DEVELOPMENT AGREEMENT**
**FOR**
**Valladolid Development**

**(1069 N Geneva Road)**

THIS DEVELOPMENT AGREEMENT ("Agreement") is made and entered into as of the _____ day of _____, 2023 (the "Effective Date"), by and between the CITY OF PROVO, a Utah municipal corporation, hereinafter referred to as "City," and Red Pine Investments, LLC, a Utah limited liability company, hereinafter referred to as "Developer." The City and Developer are hereinafter collectively referred to as "Parties."

**RECITALS**

A. Developer is the owner of approximately 16.9 acres of land located within the City of Provo as is more particularly described on EXHIBIT A, attached hereto and incorporated herein by reference (the "Property").

B. On _____, the City Council approved Ordinance _____, vesting zoning (the "Vesting Ordinance"), based on the Concept Plan set forth on EXHIBIT B ("Concept Plan"), attached hereto and incorporated herein by reference, which will govern the density, development and use of the Property (said density, development, and use constituting the "Project").

C. Developer is willing to design and construct the Project in a manner that is in harmony with and intended to promote the long range policies, goals, and objectives of the City's general plan, zoning and development regulations in order to receive the benefit of vesting for certain uses and zoning designations under the terms of this Agreement as more fully set forth below.

D. The City Council accepted Developer's proffer to enter into this Agreement to memorialize the intent of Developer and City and decreed that the effective date of the Vesting Ordinance be the date of the execution and delivery of this Agreement and the recording thereof as a public record on title of the Property in the office of the Utah County Recorder.

E. The City Council further authorized the Mayor of the City to execute and deliver this Agreement on behalf of the City.

F. The City has the authority to enter into this Agreement pursuant to Utah Code Section 10-9a-102(2) and relevant municipal ordinances, and desires to enter into this Agreement with the Developer for the purpose of guiding the development of the Property in accordance with the terms and conditions of this Agreement and in accordance with applicable City Ordinances.

G. This Agreement is consistent with, and all preliminary and final plats within the Property are subject to and shall conform with, the City's General Plan, Zoning Ordinances, and Subdivision Ordinances, and any permits issued by the City pursuant to City Ordinances and regulations.

H. The Parties desire to enter into this Agreement to specify the rights and responsibilities of the Developer to develop the Property as expressed in this Agreement and the rights and responsibilities of the City to allow and regulate such development pursuant to the requirements of this Agreement.

I. The Parties understand and intend that this Agreement is a "development agreement" within the meaning of, and entered into pursuant to, the terms of Utah Code Ann., §10-9a-102.

J. The Parties intend to be bound by the terms of this Agreement as set forth herein.

**AGREEMENT**

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Developer hereby agree as follows:

1. Incorporation of Recitals. The foregoing Recitals are hereby incorporated into this Agreement, as a substantive part hereof.

2. Zoning. The Property shall be developed in accordance with (i) the requirements of the R1.8PD Zone, (ii) all other features as generally shown on the Concept Plan, and (iii) this Agreement. The Developer shall not seek to develop the Property in a manner that deviates materially from the Concept Plan as permitted by the aforementioned zoning designations for the Property.

3. Governing Standards. The Concept Plan, the Vesting Ordinance and this Agreement establish the development rights for the Project, including the use, maximum density, intensity and general configuration for the Project. The Project shall be developed by the Developer in accordance with the Concept Plan, the Vesting Ordinance and this Agreement. All Developer submittals must comply generally with the Concept Plan, the Vesting Ordinance and this Agreement. Non-material variations to the Concept Plan, as defined and approved by the City's Community Development Director, such as exact building locations, exact locations of open space and parking may be varied by the Developer without official City Council or Planning Commission approval. Such variations however shall in no way change the maximum density, use and intensity of the development of the Project.

4. Additional Specific Developer Obligations. As an integral part of the consideration for this agreement, the Developer voluntarily agrees as follows:

a. The final development shall provide four (4) or more types of housing models defined by different floor plans, exterior materials, or roof lines.

b. The developer shall confirm wetland status with the Army Corp of Engineers.

c. Developer agrees to maintain all common open space on the property.

d. The number of residential units shall be capped at 58.

5. Construction Standards and Requirements. All construction on the Property at the direction of the Developer shall be conducted and completed in accordance with the City Ordinances, including, but not limited to setback requirements, building height requirements, lot coverage requirements and all off-street parking requirements.

6. Vested Rights and Reserved Legislative Powers.

a. Vested Rights. As of the Effective Date, Developer shall have the vested right to develop and construct the Project in accordance with the uses, maximum permissible densities, intensities, and general configuration of development established in the Concept Plan, as supplemented by the Vesting Ordinance and this Agreement (and all Exhibits), subject to compliance with the City Ordinances in existence on the Effective Date. The Parties intend that the rights granted to Developer under this Agreement are contractual and also those rights that exist under statute, common law and at equity. The Parties specifically intend that this Agreement grants to Developer "vested rights" as that term is construed in Utah's common law and pursuant to Utah Code Ann., §10-9a-509.

i. Examples of Exceptions to Vested Rights. The Parties understand and agree that the Project will be required to comply with future changes to City Laws that do not limit or interfere with the vested rights granted pursuant to the terms of this Agreement. The following are examples for illustrative purposes of a non-exhaustive list of the type of future laws that may be enacted by the City that would be applicable to the Project:

1. Developer Agreement. Future laws that Developer agrees in writing to the application thereof to the Project;

2. Compliance with State and Federal Laws. Future laws which are generally applicable to all properties in the City and which are required to comply with State and Federal laws and regulations affecting the Project;

3. Safety Code Updates. Future laws that are updates or amendments to existing building, plumbing, mechanical, electrical, dangerous buildings, drainage, or similar construction or safety related codes, such as the International Building Code, the APWA Specifications, AAHSTO Standards, the Manual of Uniform Traffic Control Devices or similar standards that are generated by a nationally or statewide recognized construction/safety organization, or by the State or Federal governments and are required to meet legitimate concerns related to public health, safety or welfare; or,

4. Taxes. Taxes, or modifications thereto, so long as such taxes are lawfully imposed and charged uniformly by the City to all properties, applications, persons and entities similarly situated.

5. Fees. Changes to the amounts of fees for the processing of Development Applications that are generally applicable to all

development within the City (or a portion of the City as specified in the lawfully adopted fee schedule) and which are adopted pursuant to State law.

6. Impact Fees. Impact Fees or modifications thereto which are lawfully adopted, imposed and collected.

b. Reserved Legislative Powers. The Developer acknowledges that the City is restricted in its authority to limit its police power by contract and that the limitations, reservations and exceptions set forth herein are intended to reserve to the City all of its police power that cannot be so limited. Notwithstanding the retained power of the City to enact such legislation of the police powers, such legislation shall not modify the Developer's vested right as set forth herein unless facts and circumstances are present which meet the exceptions to the vested rights doctrine as set forth in Section 10-9a-509 of the Municipal Land Use, Development, and Management Act, as adopted on the Effective Date, *Western Land Equities, Inc. v. City of Logan*, 617 P.2d 388 (Utah 1980), its progeny, or any other exception to the doctrine of vested rights recognized under state or federal law.

7. Default. An "Event of Default" shall occur under this Agreement if any party fails to perform its obligations hereunder when due and the defaulting party has not performed the delinquent obligations within sixty (60) days following delivery to the delinquent party of written notice of such delinquency. Notwithstanding the foregoing, if the default cannot reasonably be cured within that 60-day period, a party shall not be in default so long as that party commences to cure the default within that 60-day period and diligently continues such cure in good faith until complete.

a. Remedies. Upon the occurrence of an Event of Default, the non-defaulting party shall have the right to exercise all of the following rights and remedies against the defaulting party:

1. All rights and remedies available at law and in equity, including injunctive relief, specific performance, and termination, but not including damages or attorney's fees.

2. The right to withhold all further approvals, licenses, permits or other rights associated with the Project or development activity pertaining to the defaulting party as described in this Agreement until such default has been cured.

3. The right to draw upon any security posted or provided in connection with the Property or Project by the defaulting party.

The rights and remedies set forth herein shall be cumulative.

8. Notices. Any notices, requests and demands required or desired to be given hereunder shall be in writing and shall be served personally upon the party for whom intended, or if mailed, by certified mail, return receipt requested, postage prepaid, to such party at its address shown below:

To the Developer: Red Pine Investments, LLC_____
Attn: Garrett Seely

367 East 280 South
Alpine, UT 84004_____
Phone: 801-372-2077

To the City: City of Provo
Attention: City Attorney
445 W Center
Provo, UT 84601
Phone: (801) 852-6140

9. General Term and Conditions.

a. Headings. The headings contained in this Agreement are intended for convenience only and are in no way to be used to construe or limit the text herein.

b. Binding Effect. This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, representatives, officers, agents, employees, members, successors and assigns (to the extent that assignment is permitted). Without limiting the generality of the foregoing, a "successor" includes a party that succeeds to the rights and interests of the Developer as evidenced by, among other things, such party's submission of land use applications to the City relating to the Property or the Project.

c. Non Liability of City Officials and Employees. No officer, representative, consultant, attorney, agent or employee of the City shall be personally liable to the Developer, or any successor in interest or assignee of the Developer, for any default or breach by the City, or for any amount which may become due to the Developer, or its successors or assignees, or for any obligation arising under the terms of this Agreement. Nothing herein will release any person from personal liability for their own individual acts or omissions.

d. Third Party Rights. Except for the Developer, the City and other parties that may succeed the Developer on title to any portion of the Property, all of whom are express intended beneficiaries of this Agreement, this Agreement shall not create any rights in and/or obligations to any other persons or parties. The Parties acknowledge that this Agreement refers to a private development and that the City has no interest in, responsibility for, or duty to any third parties concerning any improvements to the Property unless the City has accepted the dedication of such improvements

e. Further Documentation. This Agreement is entered into by the Parties with the recognition and anticipation that subsequent agreements, plans, profiles, engineering and other documentation implementing and carrying out the provisions of this Agreement may be necessary. The Parties agree to negotiate and act in good faith with respect to all such future items.

f. Relationship of Parties. This Agreement does not create any joint venture, partnership, undertaking, business arrangement or fiduciary relationship between the City and the Developer.

g. Agreement to Run With the Land. This Agreement shall be recorded in the Office of the Utah County Recorder against the Property and is intended to and shall be deemed to run with the land, and shall be binding on and shall benefit all successors in the ownership of any portion of the Property.

h. Performance. Each party, person and/or entity governed by this Agreement shall perform its respective obligations under this Agreement in a manner that will not unreasonably or materially delay, disrupt or inconvenience any other party, person and/or entity governed by this Agreement, the development of any portion of the Property or the issuance of final plats, certificates of occupancy or other approvals associated therewith.

i. Applicable Law. 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.

j. Construction. This Agreement has been reviewed and revised by legal counsel for both the City and the Developer, and no presumption or rule that ambiguities shall be construed against the drafting party shall apply to the interpretation or enforcement of this Agreement.

k. Consents and Approvals. Except as expressly stated in this Agreement, the consent, approval, permit, license or other authorization of any party under this Agreement shall be given in a prompt and timely manner and shall not be unreasonably withheld, conditioned or delayed. Any consent, approval, permit, license or other authorization required hereunder from the City shall be given or withheld by the City in compliance with this Agreement and the City Ordinances.

l. Approval and Authority to Execute. Each of the Parties represents and warrants as of the Effective Date this Agreement, it/he/she has all requisite power and authority to execute and deliver this Agreement, being fully authorized so to do and that this Agreement constitutes a valid and binding agreement.

m. Termination.

i. Notwithstanding anything in this Agreement to the contrary, it is agreed by the parties hereto that in the event the final plat for the Property has not been recorded in the Office of the Utah County Recorder within ten (10) years from the date of this Agreement (the "Term"), or upon the occurrence of an event of default of this Agreement that is not cured, the City shall have the right, but not the obligation, at the sole discretion of the City Council, to terminate this Agreement as to the defaulting party (*i.e.*, the Developer). The Term may be extended by mutual agreement of the Parties.

ii. Upon termination of this Agreement for the reasons set forth herein, following the notice and process required hereby, the obligations of the City and the defaulting party to each other hereunder shall terminate, but none of the licenses, building permits, or certificates of occupancy granted prior to expiration of the Term or termination of this Agreement shall be rescinded or limited in any manner.

10. Assignability. The rights and responsibilities of Developer under this Agreement may be assigned in whole or in part by Developer with the consent of the City as provided herein.

a. Notice. Developer shall give Notice to the City of any proposed assignment and provide such information regarding the proposed assignee that the City may reasonably request in making the evaluation permitted under this Section. Such Notice shall include providing the City with all necessary contact information for the proposed assignee.

b. Partial Assignment. If any proposed assignment is for less than all of Developer's rights and responsibilities, then the assignee shall be responsible for the performance of each of the obligations contained in this Agreement to which the assignee succeeds. Upon any such approved partial assignment, Developer shall be released from any future obligations as to those obligations which are assigned but shall remain responsible for the performance of any obligations that were not assigned.

c. Grounds for Denying Assignment. The City may only withhold its consent if the City is not reasonably satisfied of the assignee's reasonable financial ability to perform the obligations of Developer proposed to be assigned.

d. Assignee Bound by this Agreement. Any assignee shall consent in writing to be bound by the assigned terms and conditions of this Agreement as a condition precedent to the effectiveness of the assignment.

11. Sale or Conveyance. If Developer sells or conveys parcels of land, the lands so sold and conveyed shall bear the same rights, privileges, intended uses, configurations, and density as applicable to such parcel and be subject to the same limitations and rights of the City as when owned by Developer and as set forth in this Agreement without any required approval, review, or consent by the City except as otherwise provided herein.

12. No Waiver. Any party's failure to enforce any provision of this Agreement shall not constitute a waiver of the right to enforce such provision. The provisions may be waived only in writing by the party intended to be benefited by the provisions, and a waiver by a party of a breach hereunder by the other party shall not be construed as a waiver of any succeeding breach of the same or other provisions.

13. Severability. If any portion of this Agreement is held to be unenforceable for any reason, the remaining provisions shall continue in full force and effect.

14. Force Majeure. Any prevention, delay or stoppage of the performance of any obligation under this Agreement which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefore; acts of nature; governmental restrictions, regulations or controls; judicial orders; enemy or hostile government actions; wars, civil commotions; fires or other casualties or other causes beyond the reasonable control of the party obligated to perform hereunder shall excuse performance of the obligation by that party for a period equal to the duration of that prevention, delay or stoppage.

15. Amendment. This Agreement may be amended only in writing signed by the Parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by and through their respective, duly authorized representatives as of the day and year first hereinabove written.

**CITY:**

CITY OF PROVO

ATTEST:

By: _____ By:_____
City Recorder Mayor Michelle Kaufusi

**DEVELOPER:**

Red Pine Investments, LLC, a Utah limited liability company

By: _____
Name: Garrett Seely
Title: Manager

STATE OF UTAH )
:ss
COUNTY OF UTAH )

On the ____ day of _____, 2023, personally appeared before me _____, who being by me duly sworn, did acknowledge that he/she executed the foregoing instrument in his/her official capacity as _____ of Provo City, a municipal corporation of the State of Utah.

_____
Notary Public

STATE OF UTAH )
:ss
COUNTY OF UTAH )

On the ____ day of _____, 2023, personally appeared before me _____, who being by me duly sworn, did say that he is the _____ of _____, a Utah limited liability company, and that the within and foregoing instrument was signed on behalf of said limited liability company with proper authority and duly acknowledged to me that he executed the same.

_____
Notary Public

## Exhibit A

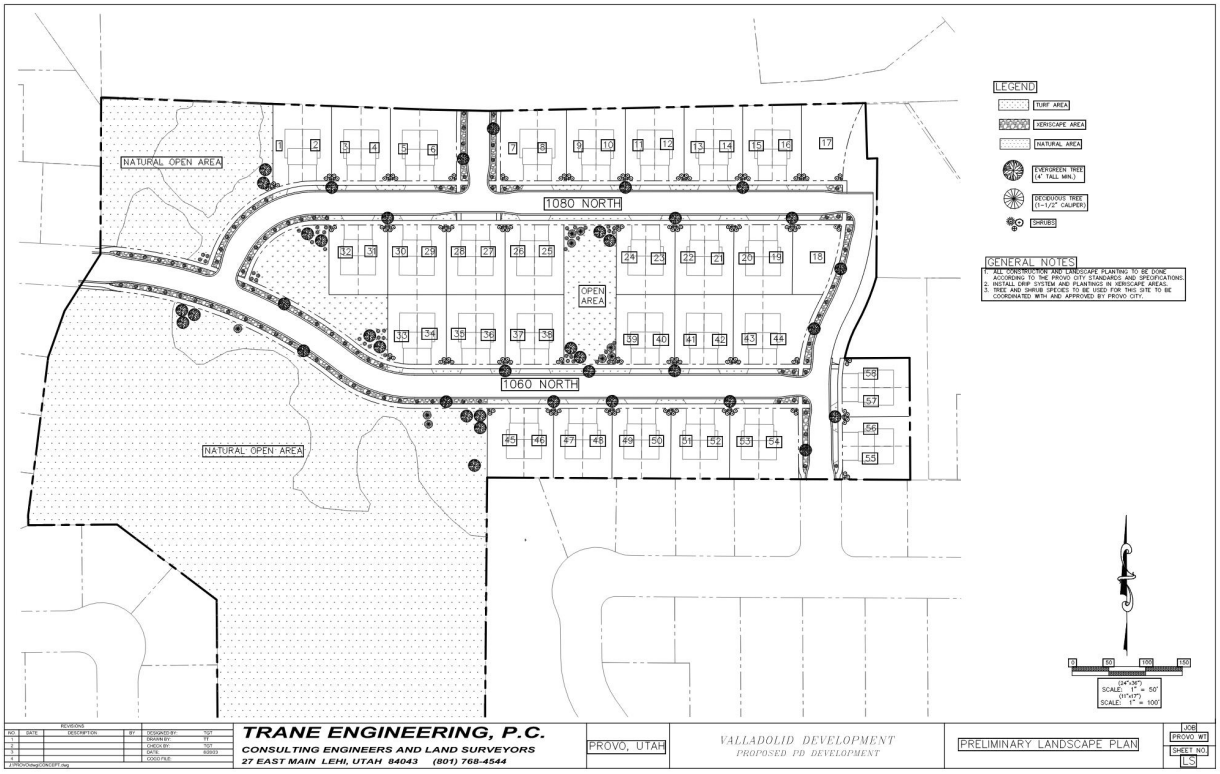
## Legal Description of the Property

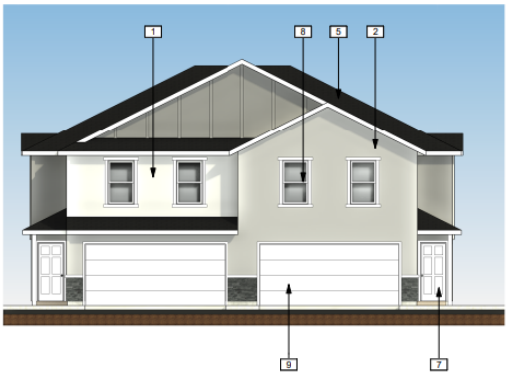
Parcel Number 19-045-0080 (Weight Property)

COM AT S 1/4 COR. SEC. 34, T6S, R2E, SLB&M.; S 1 DEG 15' 46" E 1.98 FT; S 89 DEG 35' 4" W 364.16 FT; N 0 DEG 24' 56" W 179.99 FT; N 52 DEG 54' 56" W 170 FT; S 89 DEG 35' 4" W 120.66 FT; N 1 DEG 15' 20" W 13.42 FT; N 7 DEG 14' 10" E 217.25 FT; N 19 DEG 30' 3" E 66.81 FT; N 32 DEG 27' 15" E 91.14 FT; N 0 DEG 15' 17" E 213.3 FT; S 87 DEG 52' 49" E 449.26 FT; S 88 DEG 47' 18" E 80.33 FT; N 88 DEG 47' 59" E 511.78 FT; S 1 DEG 42' 35" E 75.68 FT; N 87 DEG 48' 15" E 13.59 FT; S 0 DEG 23' 3" W 161.76 FT; S 88 DEG 17' 15" E 37.44 FT; S 7 DEG 12' 54" E 150.56 FT; S 6 DEG 27' 19" E 124.74 FT; N 89 DEG 40' 50" W 432.87 FT; S 89 DEG 52' 2" W 178 FT; S 1 DEG 15' 46" E 342.3 FT TO BEG. AREA 16.428 AC.

## Exhibit B

## Concept Plan






# FRONT ELEVATION

| MATERIAL LEGEND | |
|---|---|
| NUMBER | MATERIAL |
| 1 | STUCCO COLOR 1 |
| 2 | STUCCO COLOR 2 |
| 5 | ASPHALT SHINGLES |
| 7 | FIBERGLASS ENTRY DOOR |
| 8 | VINYL FRAMED WINDOWS |
| 9 | METAL SECTIONAL GARAGE DOOR |

Legacy Drafting and Design
962 W 800 N, OREM, UT, 84057
801.221.4777 | greg@legacyhomedesign.com
legacyhomedesign.com

Architectural Coalition
962 W 800 N, OREM, UT, 84057
801.491.0275 | archcoalition@msn.com

SQUARE FOOTAGE

| AVG UNIT | | BUILDING | |
|---|---|---|---|
| MAIN LVL | 652 SF | MAIN LVL | 1305 SF |
| SECOND LVL | 1070 SF | SECOND LVL | 2141 SF |
| TOTAL | 1723 SF | TOTAL | 3446 SF |
| GARAGE | 438 SF | GARAGE | 875 SF |

12/02/2021

A1

**EXHIBIT D**

DEVELOPMENT SERVICES

# Planning Commission Hearing Staff Report
# Hearing Date: October 25, 2023

***ITEM 3** Garrett Seely requests a Zone Map Amendment for a PD (Performance Development Overlay) Zone to be applied to 16.9 acres of land in the R1.8 (One Family Residential) Zone in order to create a 58-unit single family and twin home development, located approximately at 1069 N Geneva Road. Lakeview North Neighborhood. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLRZ20230104

**Applicant:** Garrett Seely

**Staff Coordinator:** Aaron Ardmore

**Property Owner:** Weight, Larry D & Karin

**Parcel ID#:** 19:045:0080

**Acreage:** 16.43

**Number of Properties:** 1

**Number of Lots:** 58

**ALTERNATIVE ACTIONS**

1. **Continue** to a future date to obtain additional information or to further consider information presented. *The next available meeting date is November 8th, 2023, at 6:00 P.M.*

2. **Recommend Denial** of the requested zone map amendment. *This action would not be consistent with the recommendations of the Staff Report. The Planning Commission should state new findings.*

**Current Legal Use:** The property is currently used for livestock and has some agricultural buildings on the east portion of the land.

**Relevant History:** The applicant had a pre-application meeting with staff to address any major concerns with the concept plan for twin homes in early 2023. Application for rezone to a R1.8PD and this concept preliminary subdivision was made in June 2023. Staff are still working through some final corrections with the applicant, but the concept showed sufficient progress to bring it forward to public hearings.

**Neighborhood Issues:** This proposal was brought to the July 20th, 2023, neighborhood meeting. Questions regarding the wetlands, open space, and HOA management were discussed, as well as street network should discourage speeding traffic. Additional comments on Open City Hall asked about compliance with neighborhood plans.

**Summary of Key Issues:**

- The proposal would bring 56 twin homes and two (2) single family lots, connecting existing subdivisions at 1060 North and 2480 West.
- Wetlands and heavy powerlines encourage the clustering of residential units with a PD overlay to the east of the property.
- Open space and lot layout would be guaranteed with a development agreement proffered by the applicant with the related rezone.

**Staff Recommendation:** Staff recommends that the Planning Commission recommend approval to the City Council, subject to approval of a Development Agreement.

## OVERVIEW

Garrett Seely is requesting approval for a zone map amendment to apply the PD (Performance Development Overlay) Zone to a 16.49-acre piece of ground that is currently zoned R1.8. This application is accompanied by a preliminary subdivision concept plan near 1069 N Geneva Road.

The concept shows fifty-six (56) twin homes and two (2) single family lots on the eastern nine acres of the property, providing over seven acres of open space for the subdivision. The majority of the open space will be left natural as it is wetland area, while the rest will be maintained by an HOA described by the codes, covenants, and restrictions (CC&R's) provided by the applicant. The street network provides a curvilinear grid connecting the Meadows subdivision to the south and the Riverwood Village subdivision to the west. The layout also provides a future connection to the north at 2670 West and room on the northeast for a future connection to Geneva Road.

In addition to CC&R's, the applicant has proffered a development agreement to detail agreement to the zone standards, conceptual layout, and guarantee of a variety of housing types. The variety of housing types allows the developer to go above the base density by ten percent (10%) by code, which is needed for the 58 residential units over the 16.49-acre land.

The surrounding area is primarily single-family detached housing in R1.8, R1.10, and A1.1 zones. However, approximately six-hundred feet to the northwest lays the Riderwood Village Townhomes in another R1.8PD development.

A final plat will be required if the zone map amendment is approved by the City Council. That final plat will be required to meet the PD overlay standards in Chapter 14.31 and the proffers of the development agreement.

## FINDINGS OF FACT

1. The current zone is the R1.8 Zone (Chapter 14.10, Provo City Code).
2. The proposed zone is the R1.8PD Zone (Chapters 14.10 and 14.31).
3. The General Plan for the property is Residential.
4. The proposed density is 3.5 units per acre (58 units on 16.49 acres).
5. The proposed open space is 7.5 acres (45%).
6. The required PD open space is ten percent (10%) (Section 14.31.080).

## STAFF ANALYSIS

Staff have indicated support for the concept plan and zone change. The General Plan provides additional criteria for evaluating rezones for housing (Ch. 4, page 45), as follows (**responses in bold**):

- Would the rezone promote one of the top 3 housing strategies? **Yes.**
    - Promote a mix of home types, sizes, and price points. **The plan itself will provide two different home types, a variety of floor plans, and materials. It also introduces a new home type and price point into the established neighborhood.**

  - Support zoning to promote ADUs and infill development. **The zoning already permits ADUs, and this development is an infill subdivision between two established subdivisions.**
  - Recognize the value of single-family neighborhoods. **The development blends well with the single-family neighborhoods.**

- Are utilities and streets currently within 300 feet of the property proposed for rezone? **Yes.**

- Would the rezone exclude land that is currently being used for agricultural use? **No, but the property is already zoned R1.8 for residential, there are legal, nonconforming agricultural uses that will be removed.**

- Does the rezone facilitate housing that has reasonable proximity (1/2 mile) to public transit stops or stations? **No, the nearest stop is approximately 1.1 miles away.**

- Would the rezone encourage development of environmentally or geologically sensitive, or fire or flood prone, lands? If so, has the applicant demonstrated these issues can reasonably be mitigated? **Yes. The development has wetlands and the applicant has demonstrated respect for these sensitive areas by clustering all the development away from the wetlands.**

- Would the proposed rezone facilitate the increase of on-street parking within 500 feet of the subject property? If so, is the applicant willing to guarantee use of a TDM in relation to the property to reduce the need for on-street parking? **No, each home would have three to four off-street parking spaces so there is no need for a TDM.**

- Would the rezone facilitate a housing development where a majority of the housing units are owner-occupied? Is the applicant willing to guarantee such? **The developer has not indicated a direction on this but could potentially have some requirements in the CC&Rs for owner-occupancy standards, whether that is a percentage of the development or a minimum time of owner-occupancy after purchase for any unit.**

- Would the proposed rezone facilitate a housing development where at least 10% of the housing units are attainable to those making between 50-79% AMI? Is the applicant willing to guarantee such? **The developer has not indicated a plan for this at the time of this report.**

In addition to the above analysis, Section 14.02.020 of the Provo City Code gives criteria to analyze amendments to determine consistency with the General Plan, as follows: (**responses in bold**)

a) Public purpose for the amendment in question.

**The applicant has stated the purpose of the zone map amendment is to give some flexibility on the subdivision lots without changing the character of the neighborhood, due to property constraints.**

(b) Confirmation that the public purpose is best served by the amendment in question.

**Staff understands that the property is constrained by wetlands and powerlines, and that the amendment to apply the overlay is the best way to develop the property while respecting the sensitive lands and character of the neighborhood.**

(c) Compatibility of the proposed amendment with General Plan policies, goals, and objectives.

**The amendment is compatible with General Plan policies as noted above, and the following specific goals:**

1. **Chapter Three, goal 2a: Encourage development in areas that are less prone to natural hazards.**
2. **Chapter Four, goal 1: Allow for different types of housing in neighborhoods and allow for a mix of home sizes at different price points, including ADUs.**
3. **Chapter Four, goal 2: Strive to increase the number of housing units of all types across the whole of Provo in appropriate and balanced ways.**
4. **Chapter Eight, goal 2: Give careful consideration to the conservation of open spaces, scenic areas, and viable agricultural land.**

(d) Consistency of the proposed amendment with the General Plan's "timing and sequencing" provisions on changes of use, insofar as they are articulated.

**This proposal doesn't equate to a change of use and is consistent with timing and sequencing policies.**

(e) Potential of the proposed amendment to hinder or obstruct attainment of the General Plan's articulated policies.

**This amendment should not hinder or obstruct attainment of any of the articulated policies.**

(f) Adverse impacts on adjacent land owners.

**Adjacent land owners may see small increases in daily traffic.**

(g) Verification of correctness in the original zoning or General Plan for the area in question.

**Staff have verified the correct zoning and General Plan designation for this land.**

(h) In cases where a conflict arises between the General Plan Map and General Plan Policies, precedence shall be given to the Plan Policies.

**No conflict in this case.**

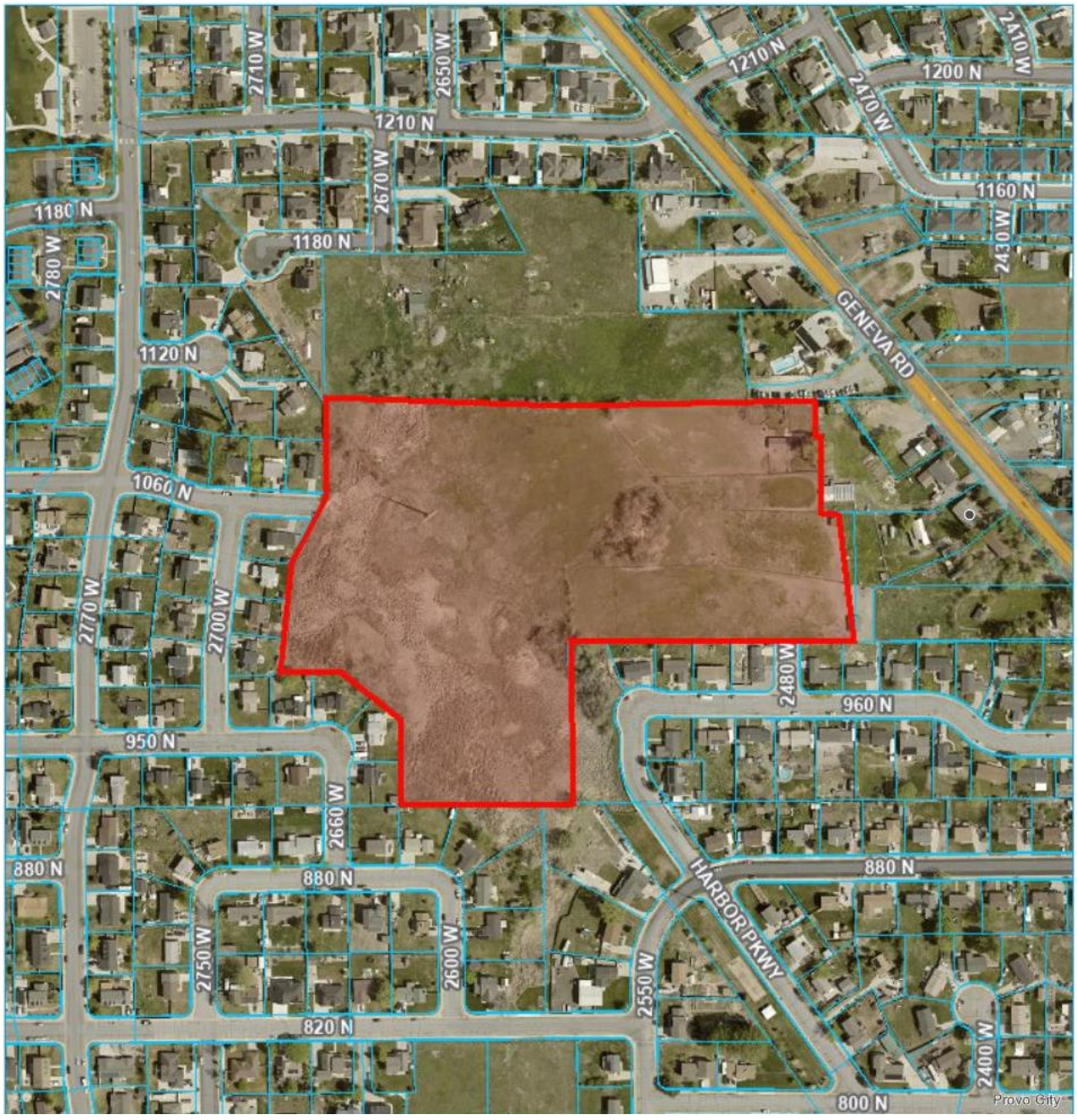
## CONCLUSIONS

Though staff are still reviewing the related concept plan through the Coordinator Review Committee (CRC) process, it has been found to meet the basic standards of the proposed zoning. Greater than that, it provides more than the minimum standards for open space, has great connectivity, and blends well with the surrounding areas. The twin homes should help to provide a better mix of housing in the Lakeview neighborhoods and create needed housing for the city. The amendment to apply the overlay, as stated above, helps to provide a mix of housing types, and protect wetlands.

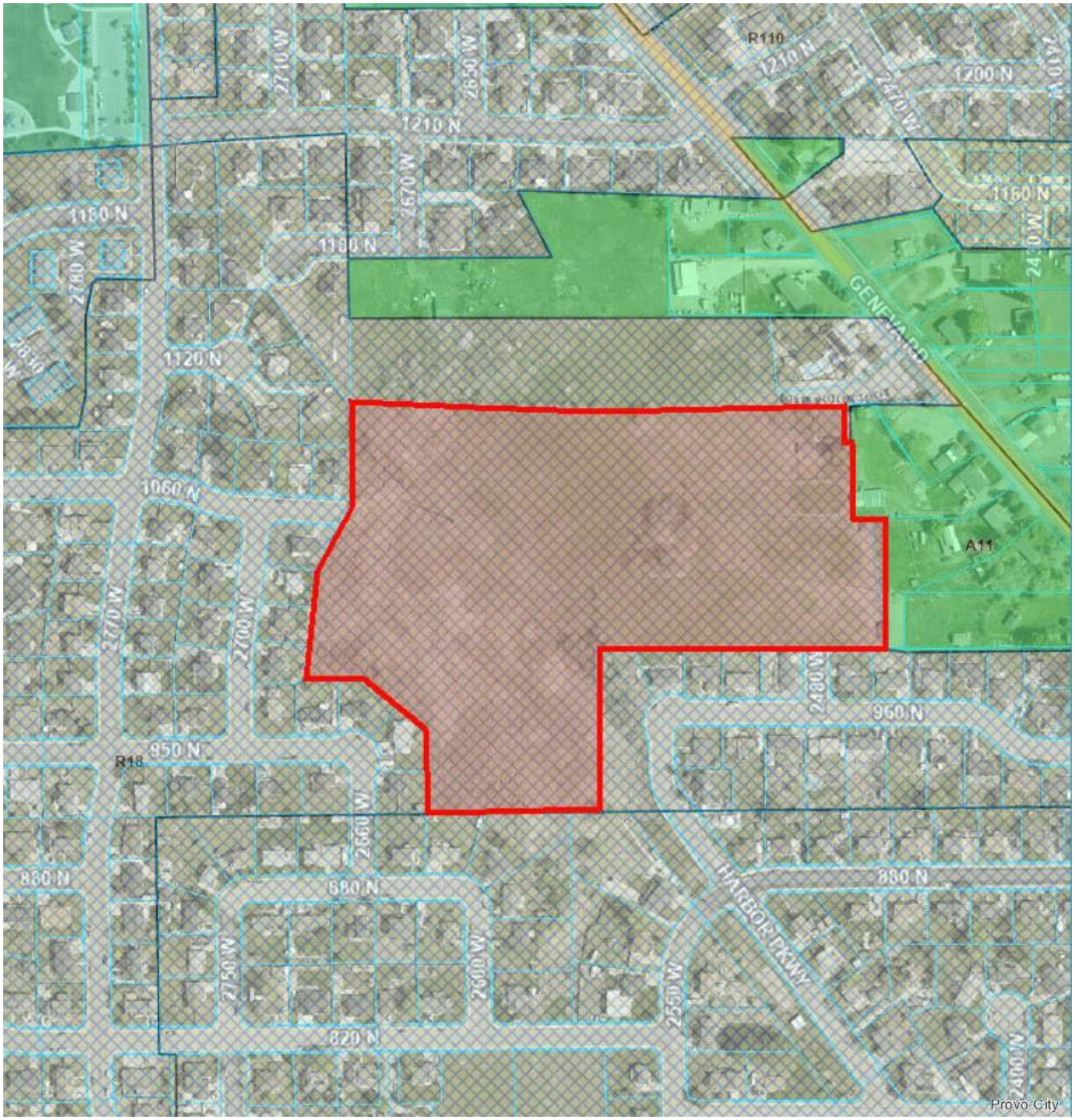
## ATTACHMENTS

1. Area Map
2. Zone Map
3. General Plan Map
4. Concept Preliminary Subdivision
5. Property Photos
6. Neighborhood Meeting Minutes

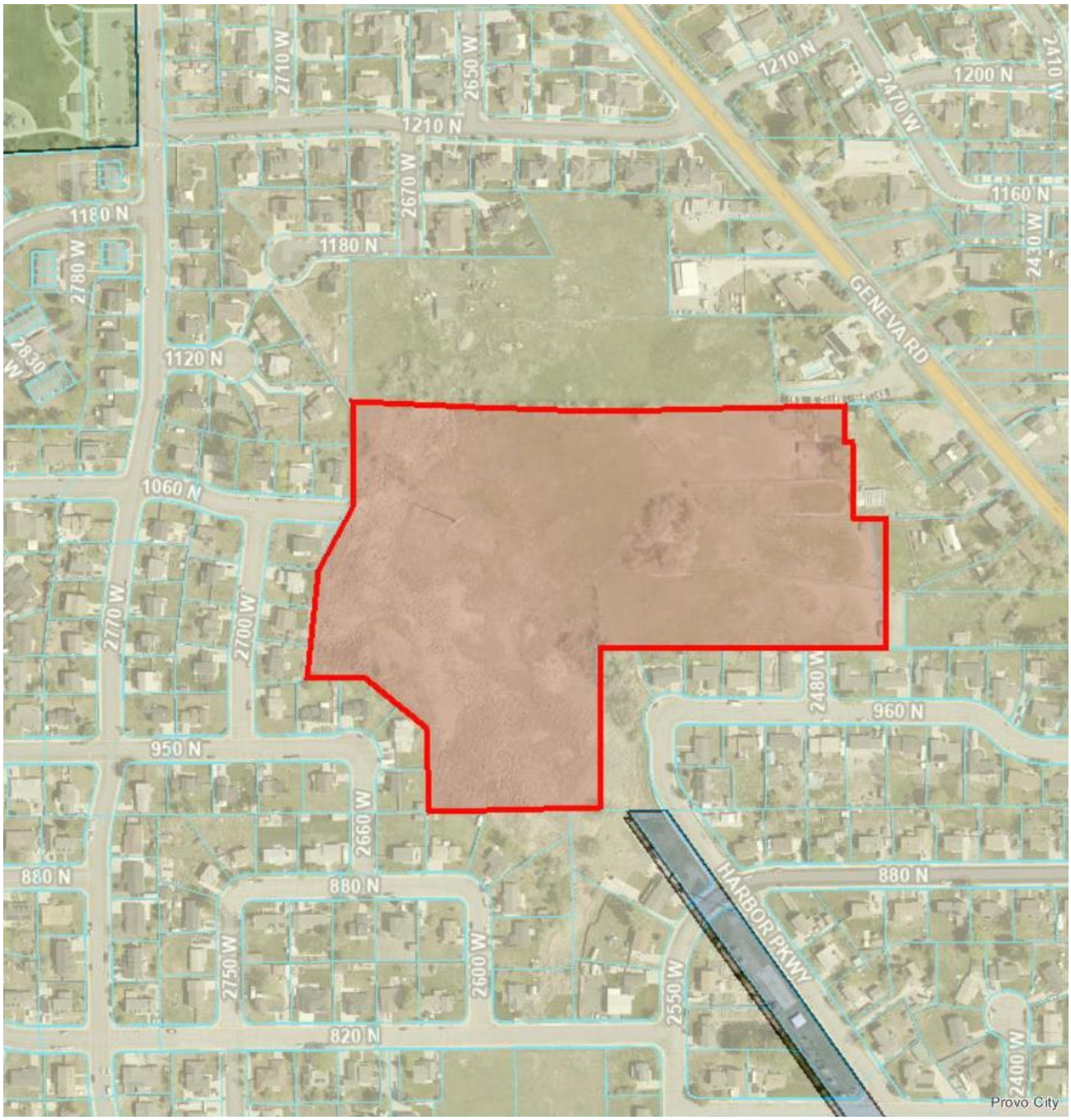
**ATTACHMENT 1 – AREA MAP**



**ATTACHMENT 2 – ZONE MAP**



**ATTACHMENT 3 – GENERAL PLAN MAP**



## ATTACHMENT 4 – CONCEPT PRELIMINARY SUBDIVISION

## ATTACHMENT 5 – PROPERTY PHOTOS

## ATTACHMENT 6 – NEIGHBORHOOD MEETING MINUTES

**Garrett Seely** - Zone Map Amendment request: Performance Development Overlay or PD Zone to be applied to 16.5 acres of land in the R1.8 (One Family Residential Zone to create a 56-unit Twin Home development at 1069 N Geneva Rd, Lakeview North neighborhood. City Contact Aaron Ardmore (801) 852-6404, aardmore@provo.org PLRZ20230104

i. Waite owned property 35 years, selling.
ii. Challenge 1: Large power transmission line cuts bottom west half cuts property on an angle.
iii. Challenge 2: Large well
iv. R18, asking to change to PD overlay. We will take the 16 acres, 56 lots as-is. We will condense those 56 lots to Twin Homes the the usable side. We will not disturb the wetlands, will not build under power lines.
v. Connect two roads. Powerlines section, wet area. Will need a 404 permit to connect this road through wetlands for connectivity.
vi. 404 permit goes through Army Corps of Engineers for displacement of the width of the road to connect there. Either have to pay to displace wetlands or create the same amount of wetlands on the site. However, there has been a recent finding with the Supreme Court in June talking about isolated wetlands. Talking with our wetland consultant: Caitl… Environmental, they believe this is an isolated wetland. It's piped, goes to another piped, not navigatable. If it's isolate, just need to connect the road. Official language ruling Sept 2023.
vii. How will you prevent further development in the wetlands later on.

1. Our intent when we do the … this whole area will be the PD overlay, nothing else will be built because we've used the full density and put it into one area. So further development is prohibited by the city.
2. We want to leave the wetland the way it is. We don't want to disturb it because once you disturb or take away the water that's there and try to re-use that resource, soil issues have to be dealt with, a lot of peat moss, will not just affect this area but would collect all the neighbors around it.

5. Picnic area and walking trails under the powerlines.
6. Middle open space is for amenities for residents there.
7. Will there be a walking trail around the wetlands? No just on sidewalks. Once start disturbing that area, more problematic.
8. How will this be managed? Will it be a mosquito trap/breeding ground?
9. Managed by an HOA. Going to the PD, the residents will then be paying for weed abatement, mosquito abatement, mowing, clean in general.
10. Will passage be restricted? Roads all public.
11. If you do not have to use that piece to mitigate wetlands, how will it be used? What you see is what we will do.
12. Will you do anything to mitigate it being bought by investors? HOAs can prohibit corporate purchases. Has to be owner-occupied for at least a year. Can you include that in your CCR? Not purchased by corporations to rent but ownership.
13. Regular 2-story building.
14. Increased area traffic, speeding. Speed bumps? Deal with planning and public works. Highly doubt it because there is no straight shot.
15. Subdivision like this, likelihood of speeding will not be an issue because of how tight this site is. It is not long and narrow.
16. Good street design because of turning movements and lots of intersections.
17. Powerlines go across, large power pole, slow people down and push them around.
18. Parking for visitors? Standard right of way built to city standards. 20-ft driveway, 2-car garage, on-street parking. Some areas can fill in additional parking but dont think its an issue. will work with planning.
19. Units 1495 to 1700 sf. good size units. 3-4 bedroom units. 2.5 baths. Garage in front.
20. Can you talk to Aaron about the CCR?

Provo City Planning Commission

# Report of Action

October 25, 2023

*ITEM 3 Garrett Seely requests a Zone Map Amendment for a PD (Performance Development Overlay) Zone to be applied to 16.9 acres of land in the R1.8 (One Family Residential) Zone in order to create a 58-unit single family and twin home development, located approximately at 1069 N Geneva Road. Lakeview North Neighborhood. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLRZ20230104

The following action was taken by the Planning Commission on the above described item at its regular meeting of October 25, 2023:

## RECOMMENDED APPROVAL

On a vote of 4:2, the Planning Commission recommended that the Municipal Council approve the above noted application and authorize the Mayor to sign the development agreement.

Motion By: Lisa Jensen
Second By: Barbara DeSoto
Votes in Favor of Motion: Lisa Jensen, Barbara DeSoto, Daniel Gonzales, Robert Knudsen
Votes Against the Motion: Andrew South, Jonathon Hill
Daniel Gonzales was present as Chair.

- Includes facts of the case, analysis, conclusions and recommendations outlined in the Staff Report, with any changes noted; Planning Commission determination is generally consistent with the Staff analysis and determination.

**LEGAL DESCRIPTION FOR PROPERTY TO BE REZONED**

The property to be rezoned to the R1.8PD Zone is described in the attached Exhibit A.

**RELATED ACTIONS**

The Planning Commission also approved the related concept preliminary subdivision at the October 25th hearing (PLPSUB20230147, Item #2)

**APPROVED/RECOMMENDED OCCUPANCY**

*58 Total Units
*Type of occupancy approved: Family
*Standard Land Use Code 1112, 1111

**DEVELOPMENT AGREEMENT**

- Applies - referred applicant to Council Attorney.

**STAFF PRESENTATION**

The Staff Report to the Planning Commission provides details of the facts of the case and the Staff's analysis, conclusions, and recommendations. Staff noted changes from the staff report on the concept plan for 58 total units on 16.9 acres of land.

**CITY DEPARTMENTAL ISSUES**

- There are remaining issues from the Coordinator Review Committee (CRC) review that need to be resolved.

**NEIGHBORHOOD MEETING DATE**

- A neighborhood meeting was held on 07/20/2023.

**NEIGHBORHOOD AND PUBLIC COMMENT**

- The Neighborhood Chair was not present or did not address the Planning Commission during the hearing.
- Neighbors or other interested parties were present or addressed the Planning Commission.

**CONCERNS RAISED BY PUBLIC**

Any comments received prior to completion of the Staff Report are addressed in the Staff Report to the Planning Commission. Key issues raised in written comments received subsequent to the Staff Report or public comment during the public hearing included the following:

- Deann Torsak emailed concerns with the site being dirty during construction, increased traffic as a result of the development, and the compatibility of twin homes in the neighborhood.
- Shantel Bjornn emailed concerns about the population growth, ability for the schools to handle additional students, increased density in the neighborhood, and the safety of surrounding streets. She also wondered if someone could come back later and add additional units.
- Jesse Ryan McAdam sent an email stating concerns about increased traffic, access to amenities, and impact on property values. He also shared his concerns for losing scenic open lands in his comments during the hearing.
- Joel Williams shared his concern about the groundwater on the site and increased traffic, and feared losing open natural lands and the wildlife they bring.
- Karen Weight (the current property owner) stated that growth happens, and she had the same concerns for development over the last forty years on the westside, but knows it is inevitable and wants to make sure it develops in a positive way.
- Tiffany Williams loves the concept, stating that it is a happy medium; but still has some concerns about traffic.
- Jon Senior hoped that the city could buy the open space in the plan.

**APPLICANT RESPONSE**

Key points addressed in the applicant's presentation to the Planning Commission included the following:

- Garrett Seely added that he hoped to be creative in developing the property but not overly densify in the neighborhood. He also responded to questions about the natural spring and confirmed that engineering would take necessary actions to ensure it does not affect the homes.
- Andy Flamm responded to questions about plans for owner-occupancy, that he did not have plans since he isn't the builder. He also stated that UDOT will control access to Geneva Road, but that their layout has provided the best scenario for a future connection.

**PLANNING COMMISSION DISCUSSION**

Key points discussed by the Planning Commission included the following:

- Commissioner Jensen asked about what guarantees the city has for the HOA to continue maintenance of the open areas over the years. *Staff responded that it is also in a Development Agreement proffered by the applicant.* She also confirmed that the plan complies with the General Plan and Southwest Neighborhoods Plan.
- The Commission discussed the powerline corridor and flood risks associated with the property and surrounding area. They also asked the applicant what maintenance would be done in the wetland areas. *Mr. Seely stated he would make sure that the growth is kept down for view corridors and safety.*
- The Commission confirmed with staff that the open areas will stay open and that no additional units would be able to be built there in the future. They also asked about the ability to work with the property to the north.
- There was some discussion about the natural spring in the middle of the development, how active it has been in recent years, and what dangers it could pose to the surrounding homes.
- During discussion on the road network and ability to connect to Geneva Road the commission showed support for the connection that the applicant has provided space for, and that it would require UDOT consultation.
- The commission appreciated the design, ability to keep open areas, and provide a different housing type.
- There was a lot of concern for this development becoming a rental community, **the commission voted 6:0 to forward a concern on owner-occupancy to the City Council with the rezone application.**
- **The commission also voted 6:0 to forward a concern to the City Council to address the natural spring.**

Planning Commission Chair

Director of Development Services

See Key Land Use Policies of the Provo City General Plan, applicable Titles of the Provo City Code, and the Staff Report to the Planning Commission for further detailed information. The Staff Report is a part of the record of the decision of this item. Where findings of the Planning Commission differ from findings of Staff, those will be noted in this Report of Action.

Legislative items are noted with an asterisk (*) and require legislative action by the Municipal Council following a public hearing; the Planning Commission provides an advisory recommendation to the Municipal Council following a public hearing.

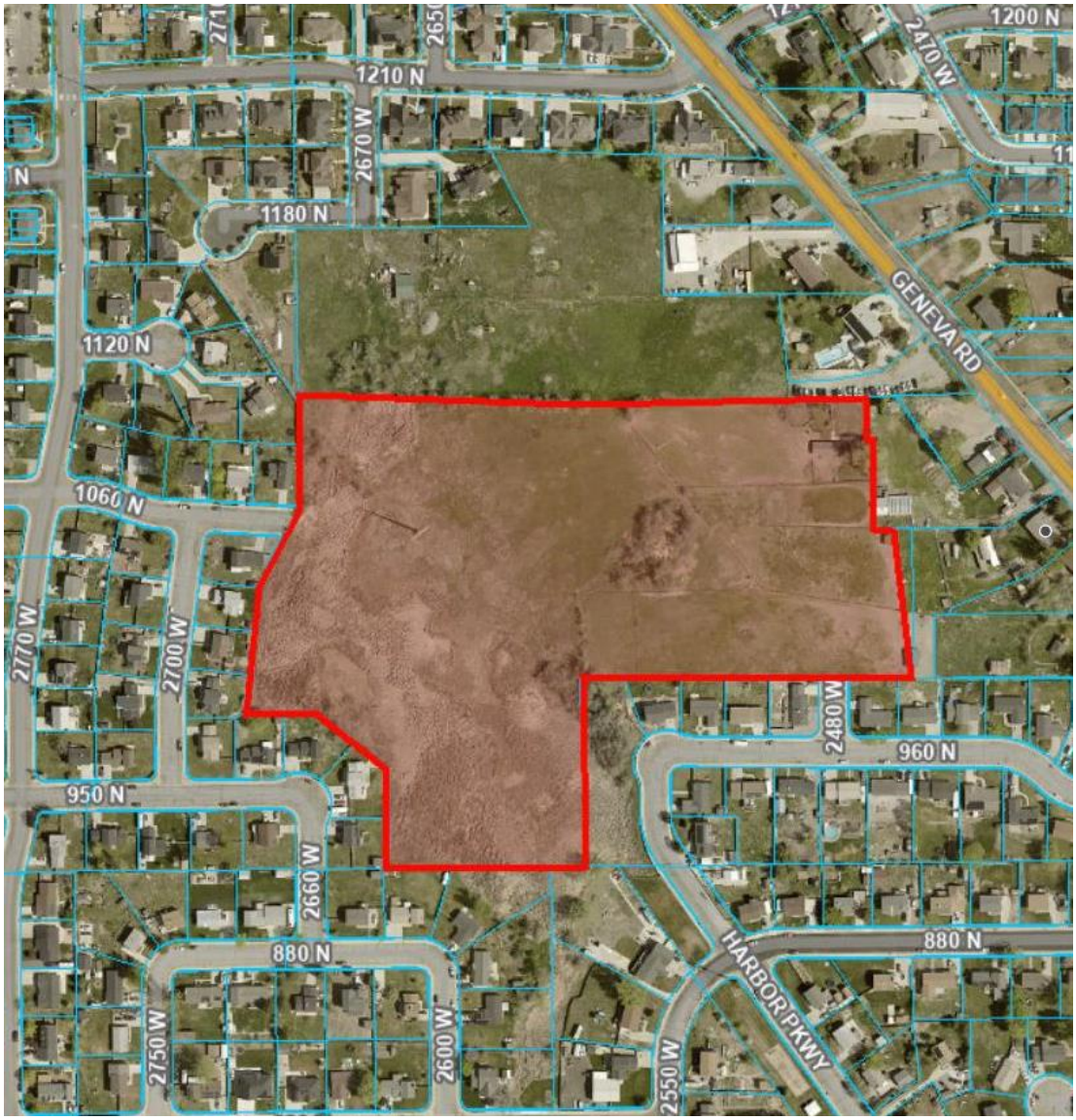
Administrative decisions of the Planning Commission (items not marked with an asterisk) **may be appealed** by submitting an application/notice of appeal, with the required application and noticing fees to Development Services, 445 W Center St., Provo, Utah, **within fourteen (14) calendar days of the Planning Commission's decision** (Provo City office hours are Monday through Thursday, 7:00 a.m. to 6:00 p.m.).

BUILDING PERMITS MUST BE OBTAINED BEFORE CONSTRUCTION BEGINS

EXHIBIT A

Parcel Number 19-045-0080 (Weight Property)

COM AT S 1/4 COR. SEC. 34, T6S, R2E, SLB&M.; S 1 DEG 15' 46" E 1.98 FT; S 89 DEG 35' 4" W 364.16 FT; N 0 DEG 24' 56" W 179.99 FT; N 52 DEG 54' 56" W 170 FT; S 89 DEG 35' 4" W 120.66 FT; N 1 DEG 15' 20" W 13.42 FT; N 7 DEG 14' 10" E 217.25 FT; N 19 DEG 30' 3" E 66.81 FT; N 32 DEG 27' 15" E 91.14 FT; N 0 DEG 15' 17" E 213.3 FT; S 87 DEG 52' 49" E 449.26 FT; S 88 DEG 47' 18" E 80.33 FT; N 88 DEG 47' 59" E 511.78 FT; S 1 DEG 42' 35" E 75.68 FT; N 87 DEG 48' 15" E 13.59 FT; S 0 DEG 23' 3" W 161.76 FT; S 88 DEG 17' 15" E 37.44 FT; S 7 DEG 12' 54" E 150.56 FT; S 6 DEG 27' 19" E 124.74 FT; N 89 DEG 40' 50" W 432.87 FT; S 89 DEG 52' 2" W 178 FT; S 1 DEG 15' 46" E 342.3 FT TO BEG. AREA 16.428 AC.



provo

WELCOME HOME

# City Council

November 14, 2023

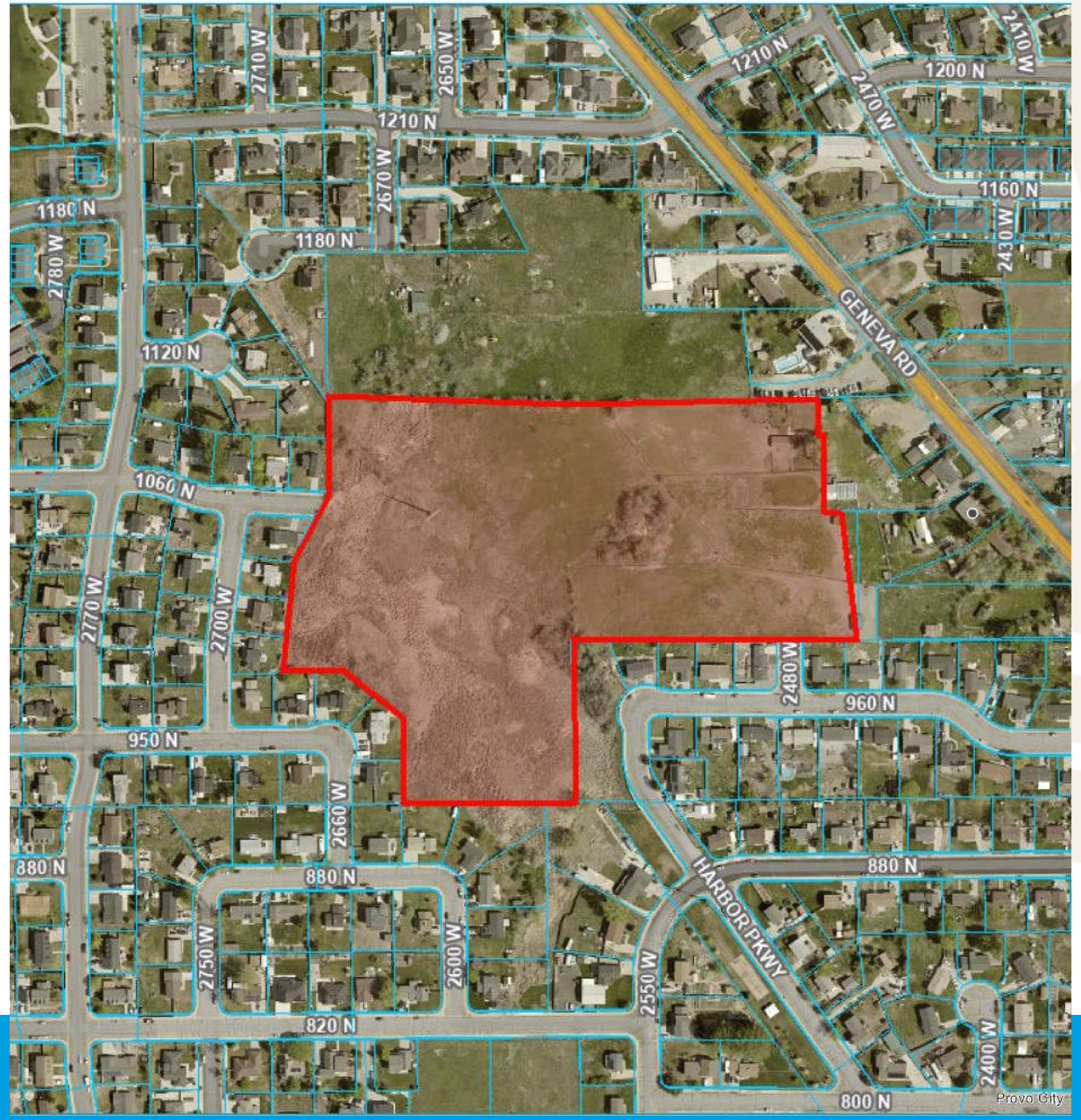
# *ITEM 3

Garrett Seely requests a Zone Map Amendment for a PD (Performance Development Overlay) Zone to be applied to 16.5 acres of land in the R1.8 (One Family Residential) Zone in order to create a 56-unit twin home development, located approximately at 1069 N Geneva Road.

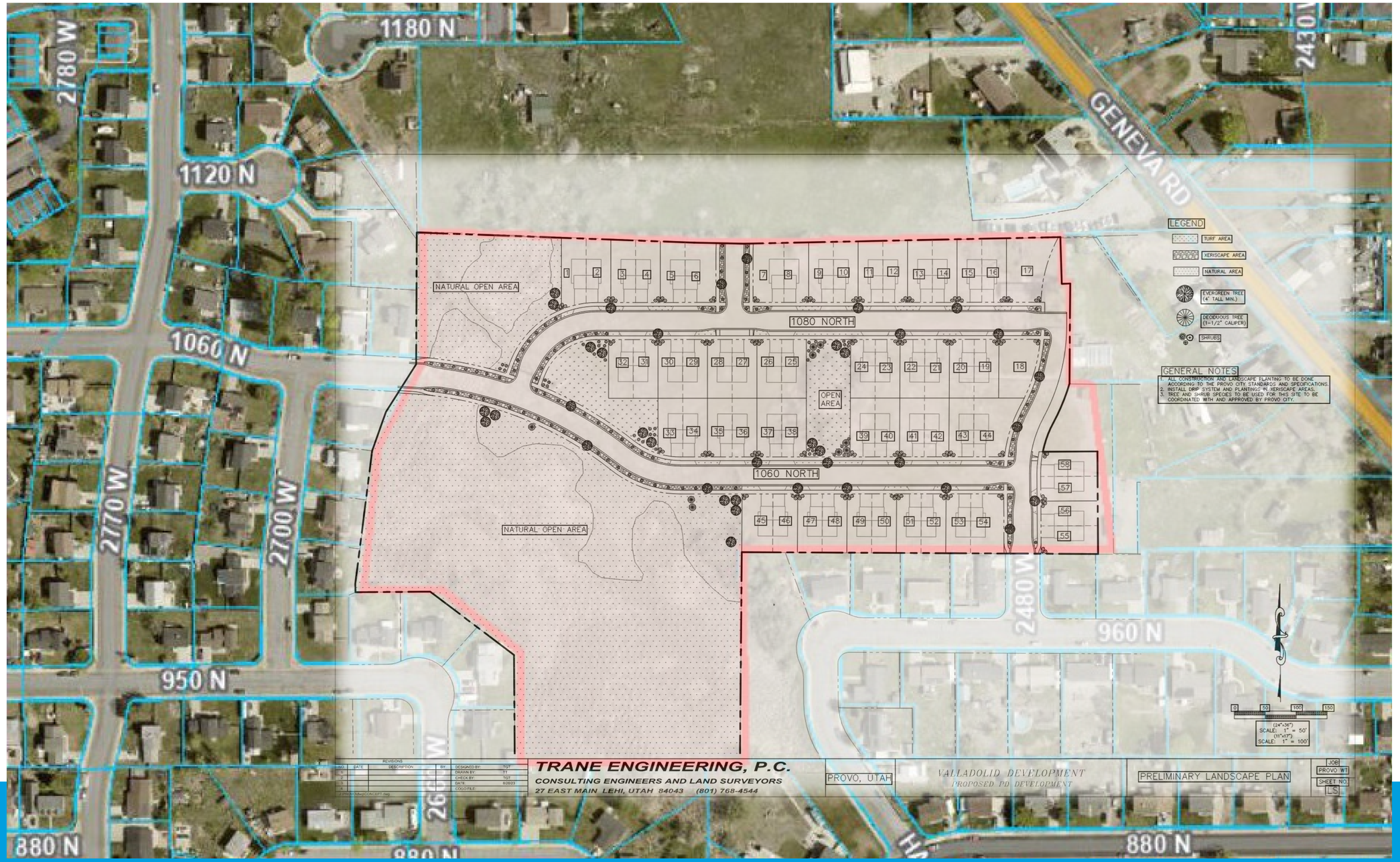
***Lakeview North Neighborhood***

PLRZ20230104

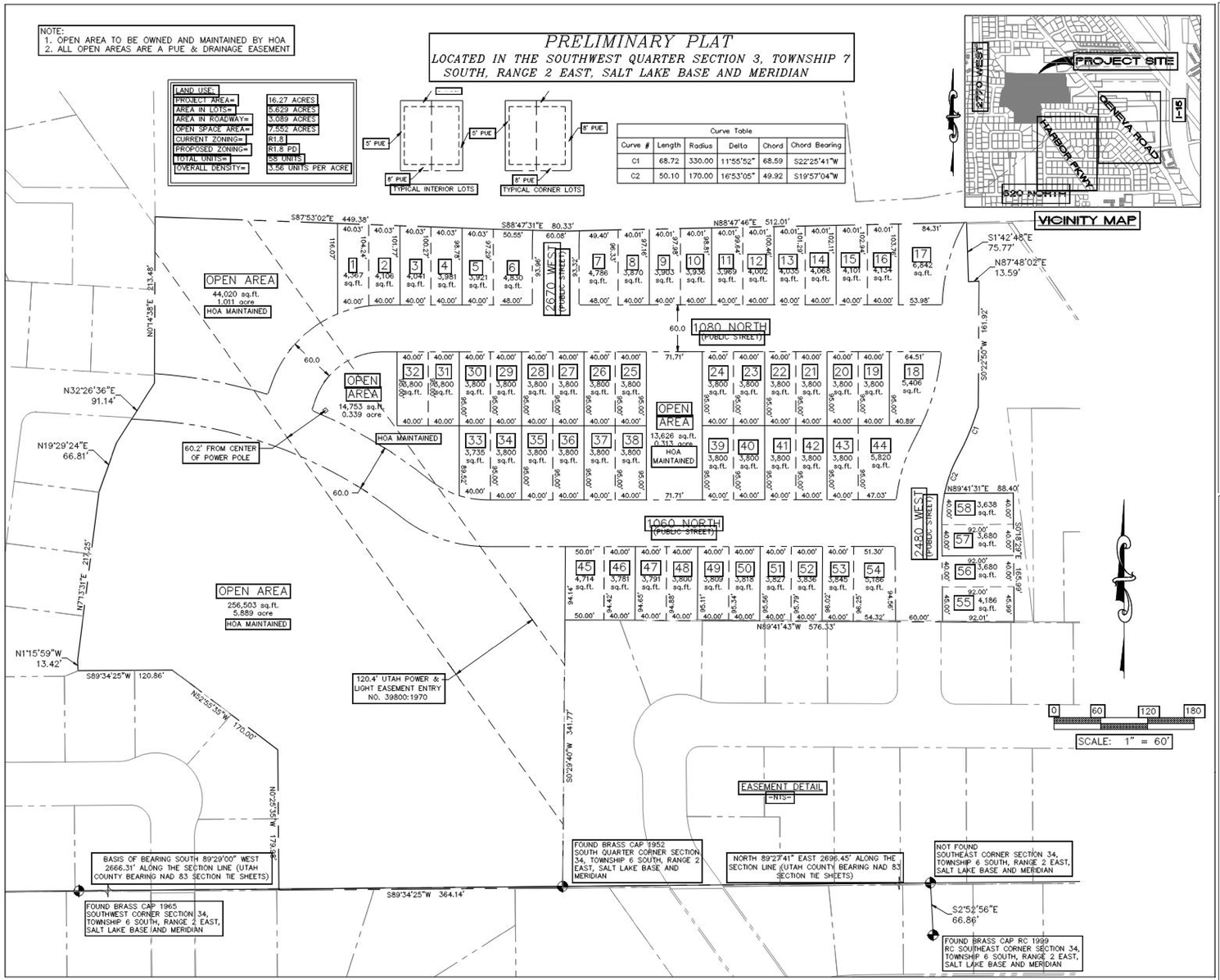
# Valladolid Subdivision

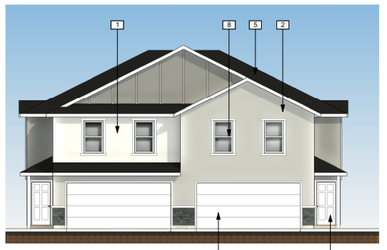


# Valladolid Subdivision



# Valladolid Subdivision



FRONT ELEVATION

| MATERIAL LEGEND | |
|---|---|
| NUMBER | MATERIAL |
| 1 | STUCCO COLOR 1 |
| 2 | STUCCO COLOR 2 |
| 5 | ASPHALT SHINGLES |
| 7 | FIBERGLASS ENTRY DOOR |
| 8 | VINYL FRAMED WINDOWS |
| 9 | METAL SECTIONAL GARAGE DOOR |

Legacy Drafting and Design

Architectural Coalition

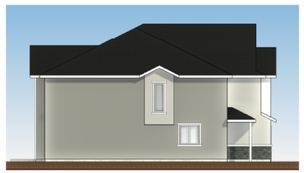
SQUARE FOOTAGE

| AVG UNIT | | BUILDING | |
|---|---|---|---|
| MAIN LVL | 652 SF | MAIN LVL | 1305 SF |
| SECOND LVL | 1070 SF | SECOND LVL | 2141 SF |
| TOTAL | 1723 SF | TOTAL | 3446 SF |
| GARAGE | 438 SF | GARAGE | 875 SF |

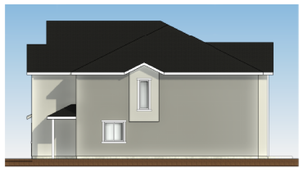
12/02/2021

A1

BACK ELEVATION



LEFT ELEVATION



RIGHT ELEVATION

Legacy Drafting and Design

Architectural Coalition

SQUARE FOOTAGE

| AVG UNIT | | BUILDING | |
|---|---|---|---|
| MAIN LVL | 652 SF | MAIN LVL | 1305 SF |
| SECOND LVL | 1070 SF | SECOND LVL | 2141 SF |
| TOTAL | 1723 SF | TOTAL | 3446 SF |

12/02/2021

A2

**Deann Torsak | October 23, 2023**
***Public Hearing RE:Garrett Seely Requests***

Hello Mr. Admore,

I live at 2479 W 960 N in Provo and recently got the notice regarding Garrett Seely's desire to put twin homes on what is currently 16.5 acres of agricultural land. I live directly across from 2480 W, which currently is the sole access to that lot. Recently someone brought in a lot of fill for that lot. There was heavy truck traffic- were horribly loud and dirty, leaving rock and dirt clumps all over 960 N. Not once did anyone from the trucks or whoever hired them come through and clean up the mess they made.

I have several issues of concern which I would like to voice to you, one is the traffic that so many twin homes will bring to our currently quiet neighborhood, without seeing Mr. Seely's desired plans for the lot - this is a huge concern. As stated above 960 N. is currently the only access, and because of the homes that surround the lot in question, there are minimal places to add more access without upsetting the private property of homeowners.

My biggest concern comes after reading the city code, particularly what I have included below:

"The purpose of the Performance Development Overlay Zone is to encourage imaginative and efficient utilization of land, to develop a sense of community, and to insure compatibility with the surrounding neighborhoods and environment."

There is NOTHING compatible with the surrounding neighborhoods and environment about twin homes! The 16.5 acre lot in question is smack dab in the middle of single-family homes. The property in question is completely surrounded by single-family homes!

Thank you for your time! Deann Torsak

---

**Shantel Bjornn | October 25, 2023**
***Regarding Garrett Seely's Subdivision Approval (items 2 and 3 at tonight's hearing)***

I am writing both as a PTA representative of Lakeview Elementary, and as a neighborhood homeowner who will be directly affected by the proposed development by Garrett Seeley.

I am so grateful for the time and care taken in order to preserve the wetlands in that land parcel. They are a gorgeous part of our community and mean so much to many of us homeowners, so thank you for striving to preserve as much of that as possible.

I have major concerns about two other factors, however. My first concern comes from the population growth this development will bring. Yes, the West Side is growing and changing, but this is an established area that is sandwiched in an established neighborhood. If it was a field on the end he of a neighborhood like further north, then the growth could be properly mediated. However, this community is being placed WITHIN another community. The area is not prepared for this much growth in such a small parcel.

For example: Lakeview Elementary is one of the larger elementary schools in the Provo School District. As it sits right now, it is home to just under 700 students. As a PTA board member and a staff member at the school, we do an amazing job at managing the students and creating a safe environment for learning

for all our students. However, it is my opinion that we do not have the facilities for the possibly 100 more students this development would bring. Mr. Seely's development is obviously catered to young families. The square footage of the homes, in addition to the twin home creation, shows that it is meant to be a more budget friendly solution for young families wishing to become homeowners. This is so needed in our community! I am not opposed to adding twin homes. My concern comes with the amount placed in this area.

I attended the previous neighborhood meeting in which this item was discussed. In that meeting it was stated that the density allowance for this parcel of land was being all moved to one portion of the land so as to preserve the wetlands. I understand in order to ensure the wetlands are not developed in the future, the maximum density must be developed now. I'm asking this be reconsidered and see if there is another way. Although there may already be the sewage and electrical infrastructure available for this density, there is more to a community than the utilities. Our school cannot handle this increased density.

My other concern comes from the increased traffic. I brought this up in the previous meeting and feel like it was not taken seriously by Mr. Seely. It was claimed that this community would be great for traffic and that the roads would be designed to prevent speeding. That is great. HOWEVER, that is not the only concern with traffic. Right now, 1090 N (the connecting road this community will be aiding) is a dead end road that connects to 2770 W. 2770 is a main traffic road for school traffic. It has been a hazard for many reasons, and is one of the main reasons why we as the Lakeview PTA have been pushing safety month for the month of October. We sat for over an hour at our last meeting discussing the dangers of that street and how our students are at risk everyday because of it. We have seen our students be in dangerous situations, nearly hit by cars and bikes, and even have had a couple be hit by cars along this main road. This road was not made for major school traffic, and yet it has become so out of necessity.

Thankfully, there are a few dead-end or cul-de-sac roads that are along 2770 that help to give some peace of mind to parents who send their children to school. I am one who is grateful that my kids only have to cross one busy road—2770 W at Lakeview Park. The other streets they cross are relatively calm streets with very little, if any, traffic. However by creating this new community and using 1090 N to connect it to the established roads, you are creating a new major school traffic road. It would be one thing if it were an already established road, with just an increase in traffic, but this is a previously never-used road that will now become a main travel street. In looking at the plans for the community, it is clear that 1090 will become the main travel for school-related traffic. It is a nearly straight-shot to the high school, and it is the most direct route for the elementary school. Our students will now have yet another dangerous intersection to cross on their walk or ride to school. Furthermore, the high school traffic will bring even more speeding and hazardous driving. Just a glance at the Lakeview North and Lakeview South Neighborhood Facebook pages shows how much of an issue this already is. We have had several people hit by, or nearly hit by, speeding students who are just starting to drive. And this isn't just the exaggeration of a disgruntled citizen. Looking at police reports in the neighborhood, especially along 2770 W, you can see several reports of accidents over the years. This neighborhood is already dealing with traffic issues, and this new community would really only exacerbate the situation. I am not trying to be alarmist, but this problem really does worry me.

As I said earlier, I am so grateful for the care and thought that has been put into this development. My house backs up to this land.  The wetlands and the view they give were a major reason why we bought

our property. I know a lot of time and effort was taken into preserving those wetlands, and I hope Mr. Seely knows that we recognize his effort and care. I just ask that more consideration be placed into these other issues. I understand there are many intricacies into planning a development, and I also know that I have absolutely no experience or expertise in these matters. I just want to see if there is any other way for us to satisfy keeping the wetlands, allowing Mr. Seely to to get his money's worth on his investment, and still maintaining the safety and security of our school and neighborhood. Is there any way the density can be lowered without creating a situation where the wetlands would be developed in the future? I feel like this would be the best solution to all the problems I have encountered.

Thank you for your time and consideration.

-Shantel Bjornn

Lakeview Elementary Lunch Clerk
Lakeview Elementary PTA President-Elect

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**Ryan McAdam |October 25, 2023**
***Concerns Regarding the Proposed 56-Unit Twin Home Subdivision near Geneva Road***

Honorable Members of the Planning Commission,

I am a concerned resident of our community and wish to voice my apprehensions about the proposed 56-unit twin-home subdivision. I understand the need for development and growth. I see it all over Provo and Orem. New townhomes, condos, and, twin homes seem to stretch as far as the eye can see. I assume these numbers suggest a healthy productive city for those looking from the outside in, but it's imperative that we consider the broader implications for our neighborhood. I know we on the lakeshore side of Provo are a small portion of the greater city but here are some specific concerns I'd like to address:

Increased Traffic and our Elementary School: Introducing 56 new units translates to a significant increase in vehicular traffic. Our elementary school is located within the vicinity and added traffic raises safety concerns for our children walking to and from school. Additionally, the increased vehicular movement through the neighborhood can affect the peace and tranquility we currently enjoy. Looking at the proposed development area I see no direct access from this new subdivision to Geneva Road which means there are only two roads to which all traffic will have to travel. One of these roads is near my home, to which I recently moved with my wife and children to get away from the noise and traffic generated by the new road construction to the Provo High School. That road is now constantly inundated by teens with souped-up, loud vehicles racing up and down the streets, along with individuals who see the new construction as an opportunity to test their ATVs and other off-road vehicles. More tightly packed homes mean more opportunities for inconsiderate people to annoy an already established community.

Access to Amenities: Our neighborhood is uniquely positioned in a manner that doesn't grant easy access to essential amenities like grocery stores, family restaurants, and other recreations, especially compared to areas on the other side of the freeway. Adding more residents without addressing these disparities will only amplify the inconvenience and potential dissatisfaction among community members.

Impact on Property Value: Historically, property values can be influenced by the type and density of surrounding homes. With the introduction of 56 twin homes, there's a legitimate concern about the potential impact on the value of surrounding single-family homes. We need to understand the long-term implications of this development on our investments.

In conclusion, while we recognize the importance of community growth and development, it's equally crucial to ensure that this growth is sustainable and beneficial to all existing and future residents. I urge the Planning Commission to consider these concerns seriously and evaluate the potential long-term implications of the proposed subdivision on our community's quality of life.

Thank you for your time and consideration.

Sincerely,
Jesse Ryan McAdam

**Deann Torsak | October 23, 2023**
***Public Hearing RE:Garrett Seely Requests***

Hello Mr. Admore,

I live at 2479 W 960 N in Provo and recently got the notice regarding Garrett Seely's desire to put twin homes on what is currently 16.5 acres of agricultural land. I live directly across from 2480 W, which currently is the sole access to that lot. Recently someone brought in a lot of fill for that lot. There was heavy truck traffic- were horribly loud and dirty, leaving rock and dirt clumps all over 960 N. Not once did anyone from the trucks or whoever hired them come through and clean up the mess they made.

I have several issues of concern which I would like to voice to you, one is the traffic that so many twin homes will bring to our currently quiet neighborhood, without seeing Mr. Seely's desired plans for the lot - this is a huge concern. As stated above 960 N. is currently the only access, and because of the homes that surround the lot in question, there are minimal places to add more access without upsetting the private property of homeowners.

My biggest concern comes after reading the city code, particularly what I have included below:

"The purpose of the Performance Development Overlay Zone is to encourage imaginative and efficient utilization of land, to develop a sense of community, and to insure compatibility with the surrounding neighborhoods and environment."

There is NOTHING compatible with the surrounding neighborhoods and environment about twin homes! The 16.5 acre lot in question is smack dab in the middle of single-family homes. The property in question is completely surrounded by single-family homes!

Thank you for your time! Deann Torsak

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**Shantel Bjornn | October 25, 2023**
***Regarding Garrett Seely's Subdivision Approval (items 2 and 3 at tonight's hearing)***

I am writing both as a PTA representative of Lakeview Elementary, and as a neighborhood homeowner who will be directly affected by the proposed development by Garrett Seeley.

I am so grateful for the time and care taken in order to preserve the wetlands in that land parcel. They are a gorgeous part of our community and mean so much to many of us homeowners, so thank you for striving to preserve as much of that as possible.

I have major concerns about two other factors, however. My first concern comes from the population growth this development will bring. Yes, the West Side is growing and changing, but this is an established area that is sandwiched in an established neighborhood. If it was a field on the end he of a neighborhood like further north, then the growth could be properly mediated. However, this community is being placed WITHIN another community. The area is not prepared for this much growth in such a small parcel.

For example: Lakeview Elementary is one of the larger elementary schools in the Provo School District. As it sits right now, it is home to just under 700 students. As a PTA board member and a staff member at the school, we do an amazing job at managing the students and creating a safe environment for learning

for all our students. However, it is my opinion that we do not have the facilities for the possibly 100 more students this development would bring. Mr. Seely's development is obviously catered to young families. The square footage of the homes, in addition to the twin home creation, shows that it is meant to be a more budget friendly solution for young families wishing to become homeowners. This is so needed in our community! I am not opposed to adding twin homes. My concern comes with the amount placed in this area.

I attended the previous neighborhood meeting in which this item was discussed. In that meeting it was stated that the density allowance for this parcel of land was being all moved to one portion of the land so as to preserve the wetlands. I understand in order to ensure the wetlands are not developed in the future, the maximum density must be developed now. I'm asking this be reconsidered and see if there is another way. Although there may already be the sewage and electrical infrastructure available for this density, there is more to a community than the utilities. Our school cannot handle this increased density.

My other concern comes from the increased traffic. I brought this up in the previous meeting and feel like it was not taken seriously by Mr. Seely. It was claimed that this community would be great for traffic and that the roads would be designed to prevent speeding. That is great. HOWEVER, that is not the only concern with traffic. Right now, 1090 N (the connecting road this community will be aiding) is a dead end road that connects to 2770 W. 2770 is a main traffic road for school traffic. It has been a hazard for many reasons, and is one of the main reasons why we as the Lakeview PTA have been pushing safety month for the month of October. We sat for over an hour at our last meeting discussing the dangers of that street and how our students are at risk everyday because of it. We have seen our students be in dangerous situations, nearly hit by cars and bikes, and even have had a couple be hit by cars along this main road. This road was not made for major school traffic, and yet it has become so out of necessity.

Thankfully, there are a few dead-end or cul-de-sac roads that are along 2770 that help to give some peace of mind to parents who send their children to school. I am one who is grateful that my kids only have to cross one busy road—2770 W at Lakeview Park. The other streets they cross are relatively calm streets with very little, if any, traffic. However by creating this new community and using 1090 N to connect it to the established roads, you are creating a new major school traffic road. It would be one thing if it were an already established road, with just an increase in traffic, but this is a previously never-used road that will now become a main travel street. In looking at the plans for the community, it is clear that 1090 will become the main travel for school-related traffic. It is a nearly straight-shot to the high school, and it is the most direct route for the elementary school. Our students will now have yet another dangerous intersection to cross on their walk or ride to school. Furthermore, the high school traffic will bring even more speeding and hazardous driving. Just a glance at the Lakeview North and Lakeview South Neighborhood Facebook pages shows how much of an issue this already is. We have had several people hit by, or nearly hit by, speeding students who are just starting to drive. And this isn't just the exaggeration of a disgruntled citizen. Looking at police reports in the neighborhood, especially along 2770 W, you can see several reports of accidents over the years. This neighborhood is already dealing with traffic issues, and this new community would really only exacerbate the situation. I am not trying to be alarmist, but this problem really does worry me.

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our property. I know a lot of time and effort was taken into preserving those wetlands, and I hope Mr. Seely knows that we recognize his effort and care. I just ask that more consideration be placed into these other issues. I understand there are many intricacies into planning a development, and I also know that I have absolutely no experience or expertise in these matters. I just want to see if there is any other way for us to satisfy keeping the wetlands, allowing Mr. Seely to to get his money's worth on his investment, and still maintaining the safety and security of our school and neighborhood. Is there any way the density can be lowered without creating a situation where the wetlands would be developed in the future? I feel like this would be the best solution to all the problems I have encountered.

Thank you for your time and consideration.

-Shantel Bjornn

Lakeview Elementary Lunch Clerk
Lakeview Elementary PTA President-Elect

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**Ryan McAdam |October 25, 2023**
***Concerns Regarding the Proposed 56-Unit Twin Home Subdivision near Geneva Road***

Honorable Members of the Planning Commission,

I am a concerned resident of our community and wish to voice my apprehensions about the proposed 56-unit twin-home subdivision. I understand the need for development and growth. I see it all over Provo and Orem. New townhomes, condos, and, twin homes seem to stretch as far as the eye can see. I assume these numbers suggest a healthy productive city for those looking from the outside in, but it's imperative that we consider the broader implications for our neighborhood. I know we on the lakeshore side of Provo are a small portion of the greater city but here are some specific concerns I'd like to address:

Increased Traffic and our Elementary School: Introducing 56 new units translates to a significant increase in vehicular traffic. Our elementary school is located within the vicinity and added traffic raises safety concerns for our children walking to and from school. Additionally, the increased vehicular movement through the neighborhood can affect the peace and tranquility we currently enjoy. Looking at the proposed development area I see no direct access from this new subdivision to Geneva Road which means there are only two roads to which all traffic will have to travel. One of these roads is near my home, to which I recently moved with my wife and children to get away from the noise and traffic generated by the new road construction to the Provo High School. That road is now constantly inundated by teens with souped-up, loud vehicles racing up and down the streets, along with individuals who see the new construction as an opportunity to test their ATVs and other off-road vehicles. More tightly packed homes mean more opportunities for inconsiderate people to annoy an already established community.

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Impact on Property Value: Historically, property values can be influenced by the type and density of surrounding homes. With the introduction of 56 twin homes, there's a legitimate concern about the potential impact on the value of surrounding single-family homes. We need to understand the long-term implications of this development on our investments.

In conclusion, while we recognize the importance of community growth and development, it's equally crucial to ensure that this growth is sustainable and beneficial to all existing and future residents. I urge the Planning Commission to consider these concerns seriously and evaluate the potential long-term implications of the proposed subdivision on our community's quality of life.

Thank you for your time and consideration.

Sincerely,
Jesse Ryan McAdam

# PROVO MUNICIPAL COUNCIL STAFF REPORT

**Submitter:** SWILMOTH
**Department:** Development Services
**Requested Meeting Date:** 11-14-2023

**SUBJECT:** An ordinance amending the zone map classification of approximately 13.06 acres or real property. Generally located at 3410 West Center Street, from A1.10 (Agricultural) to AI (Airport Industrial) and authorizing a related development agreement. Fort Utah Neighborhood. PLRZ20220089

**RECOMMENDATION:** To be heard at the November 14, 2023 Work & Council Meeting. Please see supporting documents.

**BACKGROUND:** Susan Palmer is requesting approval of a zone map amendment from the A1.10 Zone to the AI Zone in order to develop a flex industrial park on approximately thirteen (13) acres of land near 3410 West Center Street. This property was amended on the General Plan map from residential to airport industrial in 2022 as the first step to this proposal. The request for a zone change includes a development agreement tying the conceptual layout and amenities to the future project.

The concept provides two buildings with a total of 166,444 square feet of warehouse and flex space. These buildings are complemented with approximately four (4) acres of open space and 301 parking stalls. A key feature to the concept is the open space against the river. This space will provide workout areas, picnic spots, and a pedestrian pathway that will encircle the property. These features are tied to the draft development agreement, along with a commitment to provide open fencing along the river and parking lot connections to the west parcel for future development.

**FISCAL IMPACT:**

**PRESENTER'S NAME:** Aaron Ardmore, Planning Supervisor

**REQUESTED DURATION OF PRESENTATION:** 10 minutes

**COMPATIBILITY WITH GENERAL PLAN POLICIES, GOALS, AND OBJECTIVES:**

**CITYVIEW OR ISSUE FILE NUMBER:** PLRZ20220089

ORDINANCE 2023-.

AN ORDINANCE AMENDING THE ZONE MAP CLASSIFICATION OF APPROXIMATELY 13.06 ACRES OF REAL PROPERTY, GENERALLY LOCATED AT 3410 WEST CENTER STREET, FROM A1.10 (AGRICULTURAL) TO AI (AIRPORT INDUSTRIAL) AND AUTHORIZING A RELATED DEVELOPMENT AGREEMENT. FORT UTAH NEIGHBORHOOD. (PLRZ20220089)

WHEREAS, it is proposed that the classification on the Zone Map of Provo for approximately 13.06 acres of real property, generally located at 3410 West Center Street (an approximation of which is shown or described in Exhibit A and a more precise description of which will be attached hereto as Exhibit B after the Zone Map has been updated), be amended from A1.10 (Agricultural) to AI (Airport Industrial); and

WHEREAS, on November 8, 2023, the Planning Commission held a duly noticed public hearing to consider the proposal and after such hearing the Planning Commission recommended Approval to the Municipal Council by a 6:0 vote; and

WHEREAS, the Planning Commission's recommendation was based on the project design presented to the Commission; and

WHEREAS, on November 14, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation, and facts and comments presented to the Municipal Council, the Council finds (i) the Zone Map of Provo, Utah, should be amended as described herein; and (ii) the proposed zone map classification amendment for the real property described herein reasonably furthers the health, safety and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

The Mayor is hereby authorized to negotiate and execute a development agreement as proposed by the applicant for this zone change, consistent with those commitments described in the Development Agreement and the representations made by the applicant and the applicant's

representatives in the Council Meeting of November 14, 2023 [in form substantially similar to the draft attached hereto as Exhibit C], an executed copy of which shall be attached hereto as Exhibit D after execution.

PART II:

The classification on the Zone Map of Provo, Utah is hereby amended from the A1.10 (Agricultural) Zone to the AI (Airport Industrial) Zone for approximately 13.06 acres of real property generally located at 3410 West Center Street, as described herein. The effective date of this zone map change shall be the date of final execution of the development agreement described in Part I.

PART III:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Zone Map of Provo City, Utah be updated and codified to reflect the provisions enacted by this ordinance.

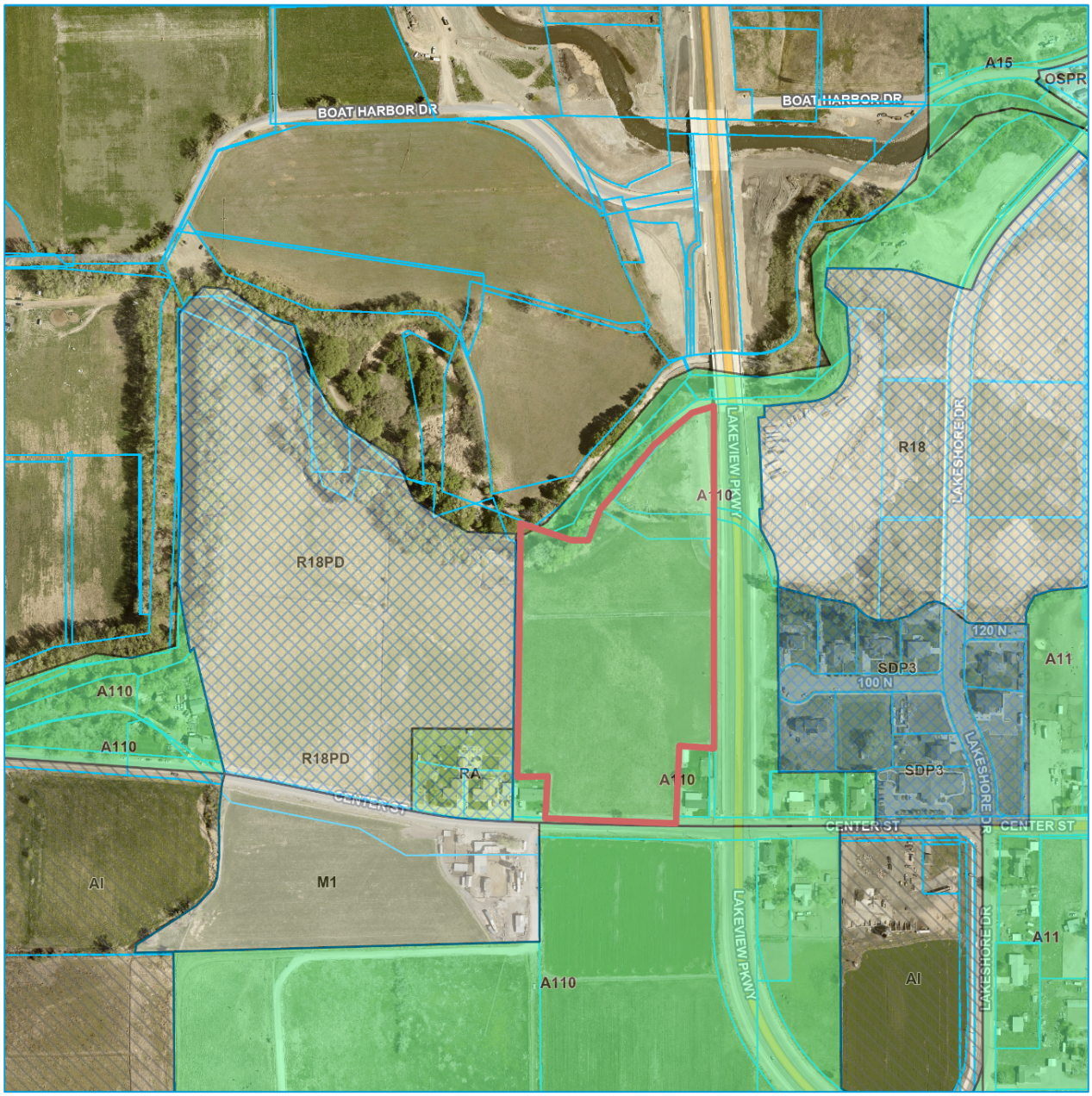
D. Except as otherwise stated in Part II, this ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

E. Notwithstanding any provision or language to the contrary in this ordinance, if the Development Agreement authorized in Part I has not been fully executed by the necessary parties within one year from the date of the Municipal Council's approval of this ordinance, the entire ordinance shall expire, becoming null and void as if it had never been approved. Because the zone classification change contemplated in Part II cannot come into effect if the Development Agreement is not executed, neither the applicant nor any successor(s) in interest shall have any vested rights under this ordinance if it expires.

END OF ORDINANCE

# EXHIBIT A – ZONE MAP

# Provo City




Date: 10/30/2023

This map is for graphical representation only and not for construction or defining feature locations.

provo

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**EXHIBIT B –**

# EXHIBIT C – DEVELOPMENT AGREEMENT DRAFT

**DEVELOPMENT AGREEMENT**
**FOR**
**BIRCH BEND INDUSTRIAL PARK**

**(3410 West Center Street)**

THIS DEVELOPMENT AGREEMENT ("Agreement") is made and entered into as of the _____ day of _____, 2023 (the "Effective Date"), by and between the CITY OF PROVO, a Utah municipal corporation, hereinafter referred to as "City," and Entitlement Management, LLC, a Utah limited liability company, hereinafter referred to as "Developer." The City and Developer are hereinafter collectively referred to as "Parties."

**RECITALS**

A. Developer is the owner of approximately 13.06 acres of land located within the City of Provo as is more particularly described on EXHIBIT A, attached hereto and incorporated herein by reference (the "Property").

B. On _____, the City Council approved Ordinance _____, vesting zoning (the "Vesting Ordinance"), based on the Concept Plan set forth on EXHIBIT B ("Concept Plan"), attached hereto and incorporated herein by reference, which will govern the density, development and use of the Property (said density, development, and use constituting the "Project").

C. Developer is willing to design and construct the Project in a manner that is in harmony with and intended to promote the long range policies, goals, and objectives of the City's general plan, zoning and development regulations in order to receive the benefit of vesting for certain uses and zoning designations under the terms of this Agreement as more fully set forth below.

D. The City Council accepted Developer's proffer to enter into this Agreement to memorialize the intent of Developer and City and decreed that the effective date of the Vesting Ordinance be the date of the execution and delivery of this Agreement and the recording thereof as a public record on title of the Property in the office of the Utah County Recorder.

E. The City Council further authorized the Mayor of the City to execute and deliver this Agreement on behalf of the City.

F. The City has the authority to enter into this Agreement pursuant to Utah Code Section 10-9a-102(2) and relevant municipal ordinances, and desires to enter into this Agreement with the Developer for the purpose of guiding the development of the Property in accordance with the terms and conditions of this Agreement and in accordance with applicable City Ordinances.

G. This Agreement is consistent with, and all preliminary and final plats within the Property are subject to and shall conform with, the City's General Plan, Zoning Ordinances, and Subdivision Ordinances, and any permits issued by the City pursuant to City Ordinances and regulations.

H. The Parties desire to enter into this Agreement to specify the rights and responsibilities of the Developer to develop the Property as expressed in this Agreement and the rights and responsibilities of the City to allow and regulate such development pursuant to the requirements of this Agreement.

I. The Parties understand and intend that this Agreement is a "development agreement" within the meaning of, and entered into pursuant to, the terms of Utah Code Ann., §10-9a-102.

J. The Parties intend to be bound by the terms of this Agreement as set forth herein.

**AGREEMENT**

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Developer hereby agree as follows:

1. Incorporation of Recitals. The foregoing Recitals are hereby incorporated into this Agreement, as a substantive part hereof.

2. Zoning. The Property shall be developed in accordance with (i) the requirements of the AI Airport Industrial Zone, (ii) all other features as generally shown on the Concept Plan, and (iii) this Agreement. The Developer shall not seek to develop the Property in a manner that deviates materially from the Concept Plan as permitted by the aforementioned zoning designations for the Property.

3. Governing Standards. The Concept Plan, the Vesting Ordinance and this Agreement establish the development rights for the Project, including the use, maximum density, intensity and general configuration for the Project. The Project shall be developed by the Developer in accordance with the Concept Plan, the Vesting Ordinance and this Agreement. All Developer submittals must comply generally with the Concept Plan, the Vesting Ordinance and this Agreement. Non-material variations to the Concept Plan, as defined and approved by the City's Community Development Director, such as exact building locations, exact locations of open space and parking may be varied by the Developer without official City Council or Planning Commission approval. Such variations however shall in no way change the maximum density, use and intensity of the development of the Project.

4. Additional Specific Developer Obligations. As an integral part of the consideration for this agreement, the Developer voluntarily agrees as follows:

a. Developer agrees that final plat cannot be recorded until the development has all services needed for the development. In the event that the entire development cannot be serviced and only a portion is able to be serviced, Developer may phase the development as long as it has adequate services for each phase prior to commencing development of that phase and meets the City's requirements.

b. Obligations along Provo River

1. Developer shall improve open space and trail area to a 10' wide asphalt trail with amenities as shown in Exhibit C.

2. Developer shall provide a minimum of three (3) trail accesses that will be located and identified on the final plat(s).

3. Developer agrees that any fencing along the river shall be at least 50% open, non-sight-obscuring fencing.

4. Developer will provide access to property to the west (parcel 21:029:0043) through the two interior parking access lanes shown on concept plan.

5. Construction Standards and Requirements. All construction on the Property at the direction of the Developer shall be conducted and completed in accordance with the City Ordinances, including, but not limited to setback requirements, building height requirements, lot coverage requirements and all off-street parking requirements.

6. Vested Rights and Reserved Legislative Powers.

a. Vested Rights. As of the Effective Date, Developer shall have the vested right to develop and construct the Project in accordance with the uses, maximum permissible densities, intensities, and general configuration of development established in the Concept Plan, as supplemented by the Vesting Ordinance and this Agreement (and all Exhibits), subject to compliance with the City Ordinances in existence on the Effective Date. The Parties intend that the rights granted to Developer under this Agreement are contractual and also those rights that exist under statute, common law and at equity. The Parties specifically intend that this Agreement grants to Developer "vested rights" as that term is construed in Utah's common law and pursuant to Utah Code Ann., §10-9a-509.

i. Examples of Exceptions to Vested Rights. The Parties understand and agree that the Project will be required to comply with future changes to City Laws that do not limit or interfere with the vested rights granted pursuant to the terms of this Agreement. The following are examples for illustrative purposes of a non-exhaustive list of the type of future laws that may be enacted by the City that would be applicable to the Project:

1. Developer Agreement. Future laws that Developer agrees in writing to the application thereof to the Project;

2. Compliance with State and Federal Laws. Future laws which are generally applicable to all properties in the City and which are required to comply with State and Federal laws and regulations affecting the Project;

3. Safety Code Updates. Future laws that are updates or amendments to existing building, plumbing, mechanical, electrical, dangerous buildings, drainage, or similar construction or safety related codes, such as the International Building Code, the APWA Specifications,

AAHSTO Standards, the Manual of Uniform Traffic Control Devices or similar standards that are generated by a nationally or statewide recognized construction/safety organization, or by the State or Federal governments and are required to meet legitimate concerns related to public health, safety or welfare; or,

4. Taxes. Taxes, or modifications thereto, so long as such taxes are lawfully imposed and charged uniformly by the City to all properties, applications, persons and entities similarly situated.

5. Fees. Changes to the amounts of fees for the processing of Development Applications that are generally applicable to all development within the City (or a portion of the City as specified in the lawfully adopted fee schedule) and which are adopted pursuant to State law.

6. Impact Fees. Impact Fees or modifications thereto which are lawfully adopted, imposed and collected.

b. Reserved Legislative Powers. The Developer acknowledges that the City is restricted in its authority to limit its police power by contract and that the limitations, reservations and exceptions set forth herein are intended to reserve to the City all of its police power that cannot be so limited. Notwithstanding the retained power of the City to enact such legislation of the police powers, such legislation shall not modify the Developer's vested right as set forth herein unless facts and circumstances are present which meet the exceptions to the vested rights doctrine as set forth in Section 10-9a-509 of the Municipal Land Use, Development, and Management Act, as adopted on the Effective Date, *Western Land Equities, Inc. v. City of Logan*, 617 P.2d 388 (Utah 1980), its progeny, or any other exception to the doctrine of vested rights recognized under state or federal law.

7. Default. An "Event of Default" shall occur under this Agreement if any party fails to perform its obligations hereunder when due and the defaulting party has not performed the delinquent obligations within sixty (60) days following delivery to the delinquent party of written notice of such delinquency. Notwithstanding the foregoing, if the default cannot reasonably be cured within that 60-day period, a party shall not be in default so long as that party commences to cure the default within that 60-day period and diligently continues such cure in gbood faith until complete.

a. Remedies. Upon the occurrence of an Event of Default, the non-defaulting party shall have the right to exercise all of the following rights and remedies against the defaulting party:

1. All rights and remedies available at law and in equity, including injunctive relief, specific performance, and termination, but not including damages or attorney's fees.

2. The right to withhold all further approvals, licenses, permits or other rights associated with the Project or development activity pertaining to the defaulting party as described in this Agreement until such default has been cured.

3. The right to draw upon any security posted or provided in connection with the Property or Project by the defaulting party.

The rights and remedies set forth herein shall be cumulative.

8. Notices. Any notices, requests and demands required or desired to be given hereunder shall be in writing and shall be served personally upon the party for whom intended, or if mailed, by certified mail, return receipt requested, postage prepaid, to such party at its address shown below:

To the Developer: Entitlement Management, LLC
Attn: Heath Johnston
947 S 500 E #300
American Fork, Utah 84003
Phone: 8010-764-9000

To the City: City of Provo
Attention: City Attorney
445 W Center
Provo, UT 84601
Phone: (801) 852-6140

9. General Term and Conditions.

a. Headings. The headings contained in this Agreement are intended for convenience only and are in no way to be used to construe or limit the text herein.

b. Binding Effect. This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, representatives, officers, agents, employees, members, successors and assigns (to the extent that assignment is permitted). Without limiting the generality of the foregoing, a "successor" includes a party that succeeds to the rights and interests of the Developer as evidenced by, among other things, such party's submission of land use applications to the City relating to the Property or the Project.

c. Non Liability of City Officials and Employees. No officer, representative, consultant, attorney, agent or employee of the City shall be personally liable to the Developer, or any successor in interest or assignee of the Developer, for any default or breach by the City, or for any amount which may become due to the Developer, or its successors or assignees, or for any obligation arising under the terms of this Agreement. Nothing herein will release any person from personal liability for their own individual acts or omissions.

d. Third Party Rights. Except for the Developer, the City and other parties that may succeed the Developer on title to any portion of the Property, all of whom are express intended beneficiaries of this Agreement, this Agreement shall not create any rights in and/or obligations to any other persons or parties. The Parties acknowledge that this Agreement refers to a private development and that the City has no interest in, responsibility for, or duty to any third parties concerning any improvements to the Property unless the City has accepted the dedication of such improvements

e. Further Documentation. This Agreement is entered into by the Parties with the recognition and anticipation that subsequent agreements, plans, profiles, engineering and other documentation implementing and carrying out the provisions of this Agreement may be necessary. The Parties agree to negotiate and act in good faith with respect to all such future items.

f. Relationship of Parties. This Agreement does not create any joint venture, partnership, undertaking, business arrangement or fiduciary relationship between the City and the Developer.

g. Agreement to Run With the Land. This Agreement shall be recorded in the Office of the Utah County Recorder against the Property and is intended to and shall be deemed to run with the land, and shall be binding on and shall benefit all successors in the ownership of any portion of the Property.

h. Performance. Each party, person and/or entity governed by this Agreement shall perform its respective obligations under this Agreement in a manner that will not unreasonably or materially delay, disrupt or inconvenience any other party, person and/or entity governed by this Agreement, the development of any portion of the Property or the issuance of final plats, certificates of occupancy or other approvals associated therewith.

i. Applicable Law. 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.

j. Construction. This Agreement has been reviewed and revised by legal counsel for both the City and the Developer, and no presumption or rule that ambiguities shall be construed against the drafting party shall apply to the interpretation or enforcement of this Agreement.

k. Consents and Approvals. Except as expressly stated in this Agreement, the consent, approval, permit, license or other authorization of any party under this Agreement shall be given in a prompt and timely manner and shall not be unreasonably withheld, conditioned or delayed. Any consent, approval, permit, license or other authorization required hereunder from the City shall be given or withheld by the City in compliance with this Agreement and the City Ordinances.

l. Approval and Authority to Execute. Each of the Parties represents and warrants as of the Effective Date this Agreement, it/he/she has all requisite power and authority to execute and deliver this Agreement, being fully authorized so to do and that this Agreement constitutes a valid and binding agreement.

m. Termination.

i. Notwithstanding anything in this Agreement to the contrary, it is agreed by the parties hereto that in the event the final plat for the Property has not been recorded in the Office of the Utah County Recorder within ten (10) years from the date of this Agreement (the "Term"), or upon the occurrence of an event of default of this Agreement that is not cured, the City shall have the right, but not the obligation, at the sole discretion of the City Council, to terminate this Agreement as to the defaulting

party (*i.e.*, the Developer). The Term may be extended by mutual agreement of the Parties.

ii. Upon termination of this Agreement for the reasons set forth herein, following the notice and process required hereby, the obligations of the City and the defaulting party to each other hereunder shall terminate, but none of the licenses, building permits, or certificates of occupancy granted prior to expiration of the Term or termination of this Agreement shall be rescinded or limited in any manner.

10. Assignability. The rights and responsibilities of Developer under this Agreement may be assigned in whole or in part by Developer with the consent of the City as provided herein.

a. Notice. Developer shall give Notice to the City of any proposed assignment and provide such information regarding the proposed assignee that the City may reasonably request in making the evaluation permitted under this Section. Such Notice shall include providing the City with all necessary contact information for the proposed assignee.

b. Partial Assignment. If any proposed assignment is for less than all of Developer's rights and responsibilities, then the assignee shall be responsible for the performance of each of the obligations contained in this Agreement to which the assignee succeeds. Upon any such approved partial assignment, Developer shall be released from any future obligations as to those obligations which are assigned but shall remain responsible for the performance of any obligations that were not assigned.

c. Grounds for Denying Assignment. The City may only withhold its consent if the City is not reasonably satisfied of the assignee's reasonable financial ability to perform the obligations of Developer proposed to be assigned.

d. Assignee Bound by this Agreement. Any assignee shall consent in writing to be bound by the assigned terms and conditions of this Agreement as a condition precedent to the effectiveness of the assignment.

11. Sale or Conveyance. If Developer sells or conveys parcels of land, the lands so sold and conveyed shall bear the same rights, privileges, intended uses, configurations, and density as applicable to such parcel and be subject to the same limitations and rights of the City as when owned by Developer and as set forth in this Agreement without any required approval, review, or consent by the City except as otherwise provided herein.

12. No Waiver. Any party's failure to enforce any provision of this Agreement shall not constitute a waiver of the right to enforce such provision. The provisions may be waived only in writing by the party intended to be benefited by the provisions, and a waiver by a party of a breach hereunder by the other party shall not be construed as a waiver of any succeeding breach of the same or other provisions.

13. Severability. If any portion of this Agreement is held to be unenforceable for any reason, the remaining provisions shall continue in full force and effect.

14. Force Majeure. Any prevention, delay or stoppage of the performance of any obligation under this Agreement which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefore; acts of nature; governmental restrictions, regulations or controls; judicial orders; enemy or hostile government actions; wars, civil commotions; fires or other casualties or other causes beyond the reasonable control of the party obligated to perform hereunder shall excuse performance of the obligation by that party for a period equal to the duration of that prevention, delay or stoppage.

15. Amendment. This Agreement may be amended only in writing signed by the Parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by and through their respective, duly authorized representatives as of the day and year first hereinabove written.

**CITY:**

CITY OF PROVO

ATTEST:

By: _____ By:_____
City Recorder Mayor Michelle Kaufusi

**DEVELOPER:**

ENTITLEMENT MANAGEMENT LLC, a Utah limited liability company

By: _____
Name: Heath Johnston
Title: Manager

STATE OF UTAH )
:ss
COUNTY OF UTAH )

On the ____ day of _____, 2023, personally appeared before me _____, who being by me duly sworn, did say that he is the _____ of _____, a Utah limited liability company, and that the within and foregoing instrument was signed on behalf of said limited liability company with proper authority and duly acknowledged to me that he executed the same.

_____
Notary Public
Residing at:

**Exhibit A**

**Legal Description of the Property**

TBD

BOAT HARBOR DR
BOAT HARBOR DR
LAKEVIEW PKWY
A110
R18PD
SD
100 N
A110
A110
R18PD
RA
A110
CENTER ST
CENTER ST
AI
M1
LAKEVIEW PKWY
A110

**Exhibit B**

**Concept Plan**

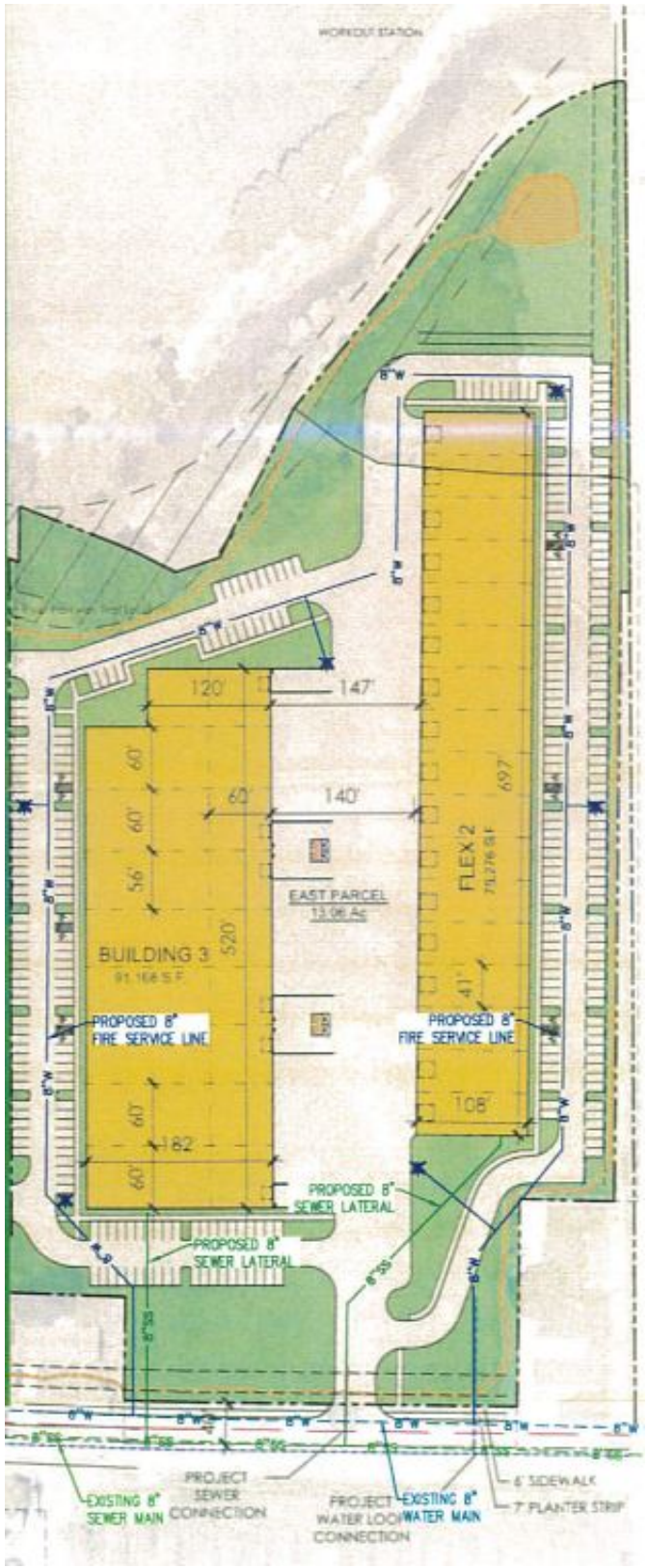

WORKOUT STATION
120'
147'
60'
60'
56'
60'
140'
697'
FLEX 2
EAST PARCEL
BUILDING 3
520'
41'
PROPOSED 8" FIRE SERVICE LINE
PROPOSED 8" FIRE SERVICE LINE
108'
60'
182'
60'
PROPOSED 8" SEWER LATERAL
PROPOSED 8" SEWER LATERAL
EXISTING 8" SEWER MAIN
PROJECT SEWER CONNECTION
PROJECT WATER LOOP CONNECTION
EXISTING 8" WATER MAIN
6' SIDEWALK
7' PLANTER STRIP

Exhibit C

Open Space and Trail Amenities

In addition to the 10’ wide asphalt trail along the Provo River, the Developer agrees to build the following recreational amenities along the river:

A. 3 – “Workout” areas
B. 1 – ”Picnic” area
C. 3 – “Outlook” areas

The Project will include a minimum of 1.1 acres of open space.

DEVELOPMENT SERVICES

# Planning Commission Hearing Staff Report
# Hearing Date: November 8, 2023

***ITEM 4** Susan Palmer requests a Zone Map Amendment from the A1.10 (Agricultural) zone to the AI (Airport Industrial) zone in order to develop a flex industrial park, located at approximately 3410 W Center Street. Fort Utah Neighborhood. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLRZ20220089

**Applicant:** Susan Palmer

**Staff Coordinator:** Aaron Ardmore

**Property Owner:** Prime Geo LLC (ET AL); Provo City Corporation

**Parcel ID#:** 21:029:0100; 21:029:0077

**Acreage:** 13.06

**Number of Properties:** 2

**ALTERNATIVE ACTIONS**

1. **Continue** to a future date to obtain additional information or to further consider information presented. *The next available meeting date is December 6th, 2023, at 6:00 P.M.*

2. **Deny** the requested zone map amendment. *This action would not be consistent with the recommendations of the Staff Report. The Planning Commission should state new findings.*

**Current Legal Use:** The current legal use for the land is agricultural on the main parcel with city-owned vacant land on the north parcel.

**Relevant History:** The applicant had been working with another developer to bring forward a plan for a flex industrial park for this property and the 24-acre parcel to the west. They worked together in 2022 to amend the General Plan Map from the Residential designation to the Airport Related designation for both pieces of property. Since that time the developers to the west fell out of contract, and this applicant has worked to get their rezone and concept plan application through staff review. The applicant has also begun discussions with the Provo City Property Manager on the north parcel to incorporate that into the concept and rezone.

**Neighborhood Issues:** The neighborhood met on this back with the General Plan amendment in 2022. The concerns at that time included the following:

- If the amenities shown would be built
- Utilization of the river and riverbank
- Increased truck traffic on Center Street

**Summary of Key Issues:**

- The concept ties into landlocked City-owned ground to provide for future improvement on vacant land.
- Provo River is addressed with open views and amenities.
- Additional warehouse space will meet the need and plans for the area.

**Staff Recommendation:** Staff recommends that the Planning Commission approve recommend approval of the proposed rezone to the City Council, subject to approval of a development agreement.

## OVERVIEW

Susan Palmer is requesting approval of a zone map amendment from the A1.10 Zone to the AI Zone in order to develop a flex industrial park on approximately thirteen (13) acres of land near 3410 West Center Street. This property was amended on the General Plan map from residential to airport industrial in 2022 as the first step to this proposal. The request for a zone change includes a development agreement tying the conceptual layout and amenities to the future project.

The concept provides two buildings with a total of 166,444 square feet of warehouse and flex space. These buildings are complemented with approximately four (4) acres of open space and 301 parking stalls. A key feature to the concept is the open space against the river. This space will provide workout areas, picnic spots, and a pedestrian pathway that will encircle the property. These features are tied to the draft development agreement, along with a commitment to provide open fencing along the river and parking lot connections to the west parcel for future development.

The properties are somewhat cutoff from adjacent uses with the river to the north, Lakeview Parkway to the east, and Center Street to the south. There are, however, two remaining residential parcels on the southeast and southwest corners of the project. The developer will need to provide walls and landscape buffers from these two homes if they remain when they come back for their Project Plan application. The other property with the most visual impact, across Center Street to the south, is currently open agricultural land and is designated for future airport related use in the General Plan.

## FINDINGS OF FACT

1. The current zone is the A1.10 Zone (Chapter 14.08, Provo City Code).
2. The proposed zone is the AI Zone (Chapter 14.17D).
3. The General Plan designation for the property is Airport Related.
4. The proposed use is 166,444 square feet of industrial flex space.

## STAFF ANALYSIS

Staff has the comfort of this proposal developing in a way that would benefit the city since the developer is committed to a number of improvements with the development agreement. In addition to those elements being reason to support the rezone, staff has analyzed the proposal against the guidelines from Subsection 14.02.020, Provo City Code below: (**staff response in bold)**

(a) Public purpose for the amendment in question. **The applicant stated the public purpose for the amendment is to "be more consistent with the use of the land in the area" and to "promote economic opportunity and vitality for the city".**

(b) Confirmation that the public purpose is best served by the amendment in question. **Staff believes that the above purposes are served by the proposed amendment. Since the General Plan has already been changed, there is an expectation that this area is zoned for, and developed as, airport industrial uses. Providing more flex warehouses helps to**

**meet the needs of the market, meet the goals for the area, and brings commercial tax to Provo.**

(c) Compatibility of the proposed amendment with General Plan policies, goals, and objectives. **The proposed amendment helps to meet goal two of the Economic Development Chapter of the General Plan (pg. 56) to "encourage economic development and business opportunities at and around the airport".**

(d) Consistency of the proposed amendment with the General Plan's "timing and sequencing" provisions on changes of use, insofar as they are articulated. **There will be infrastructure improvements required as part of this development plan, but the proposed map amendment is consistent with the General Plan provisions.**

(e) Potential of the proposed amendment to hinder or obstruct attainment of the General Plan's articulated policies. **The proposal will not hinder or obstruct attainment of the General Plan policies.**

(f) Adverse impacts on adjacent land owners. **Adverse impacts on adjacent landowners could include increased traffic and noise.**

(g) Verification of correctness in the original zoning or General Plan for the area in question. **Staff have verified the zoning and General Plan for the area.**

(h) In cases where a conflict arises between the General Plan Map and General Plan Policies, precedence shall be given to the Plan Policies. **There is a small conflict on the map designation for the city-owned parcel, but the proposal is consistent with the other General Plan policies and provides the best option for that small, land-locked parcel.**

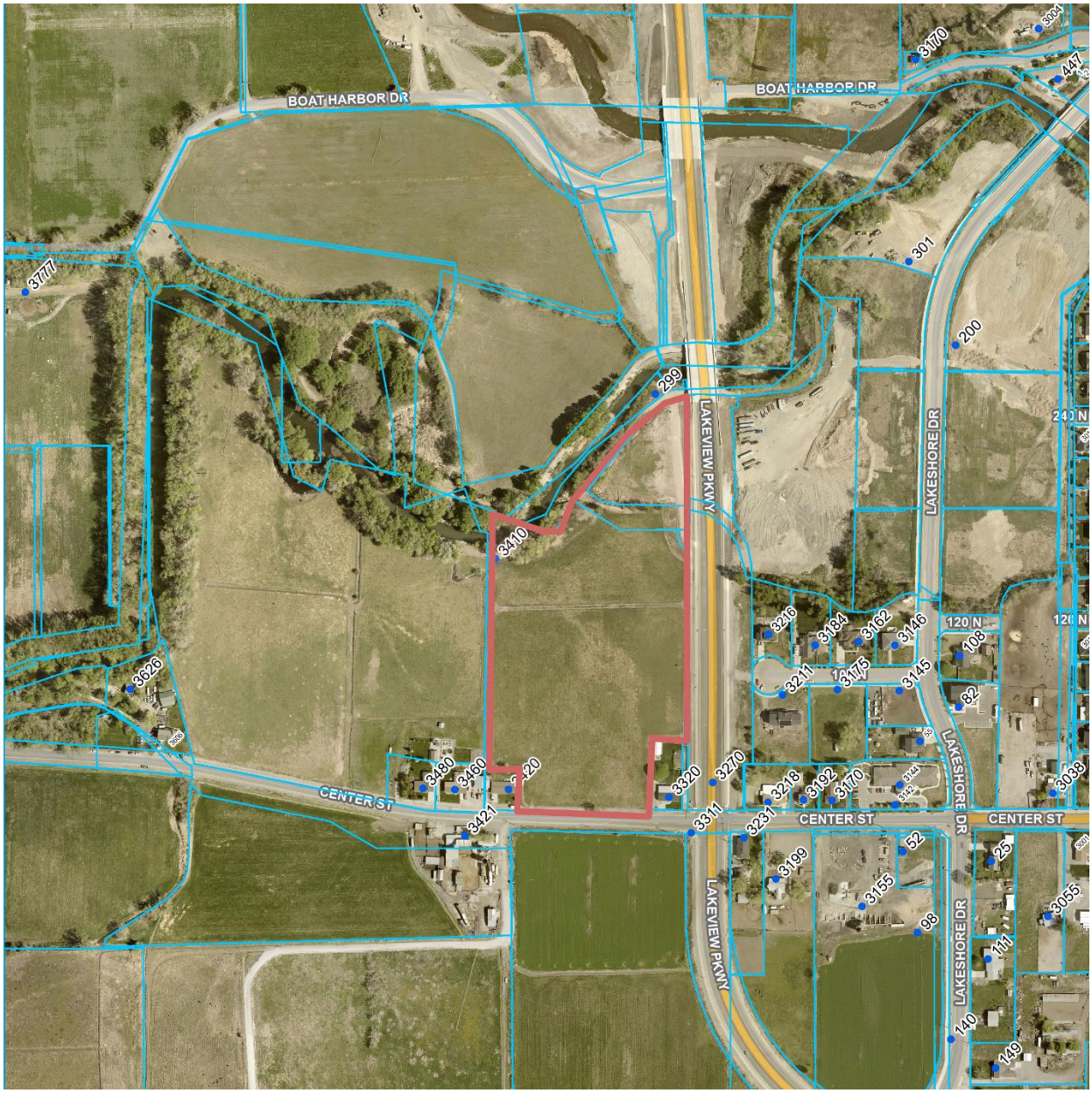
## CONCLUSIONS

Staff have worked closely with the applicant on this proposal since 2022 when the General Plan was amended to pave the pathway for this proposal. Initial concerns of addressing the Provo River, guaranteeing open space amenities, and not landlocking the city parcel have been addressed by the applicant with this version of the concept plan and the related development agreement proposal. Staff support this project continuing to move forward and meeting demand for additional warehouse space near Provo Airport and believe the concept plans should be approved.

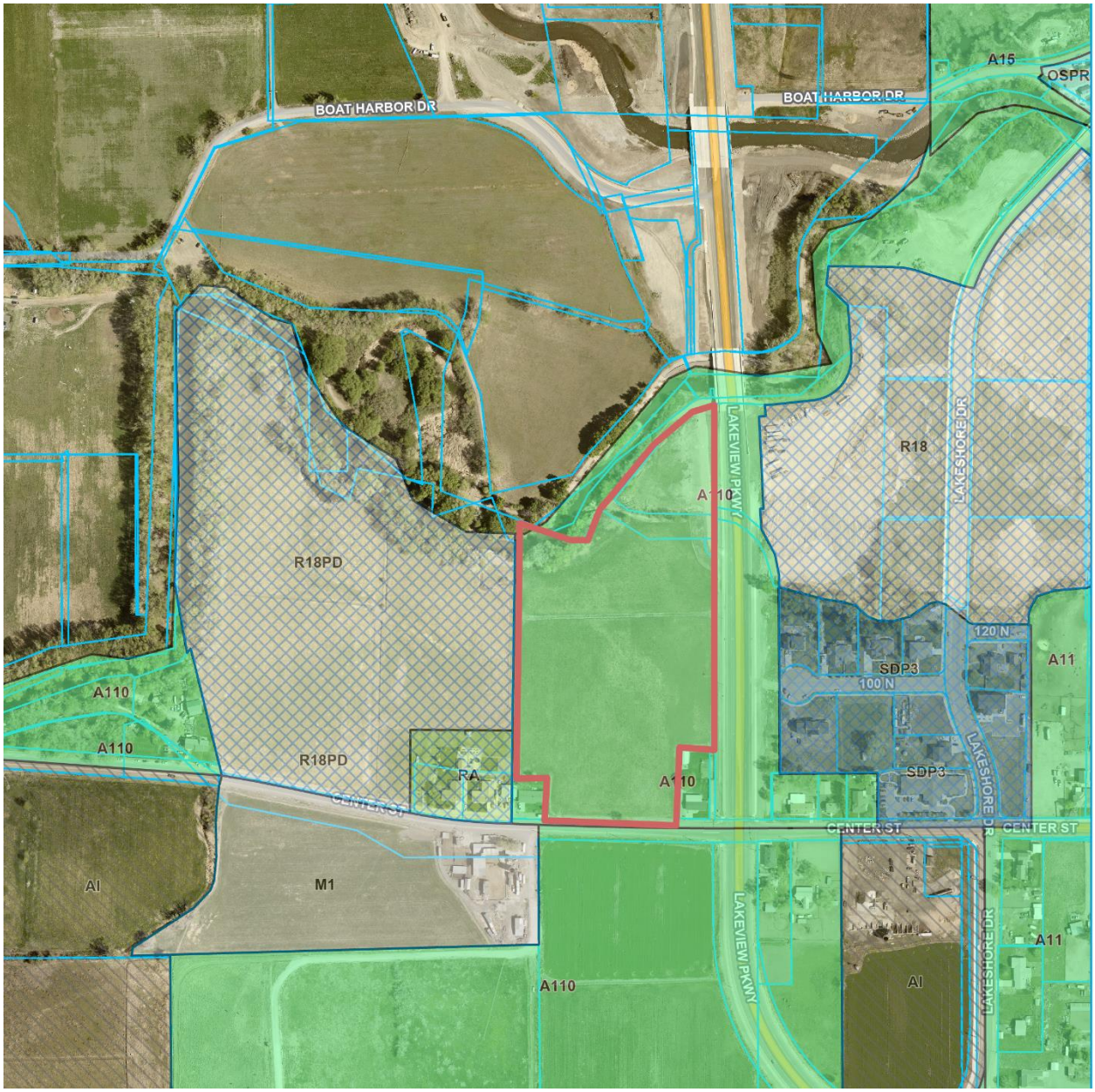
## ATTACHMENTS

1. Property Map
2. Zone Map
3. General Plan Map
4. Site Plan

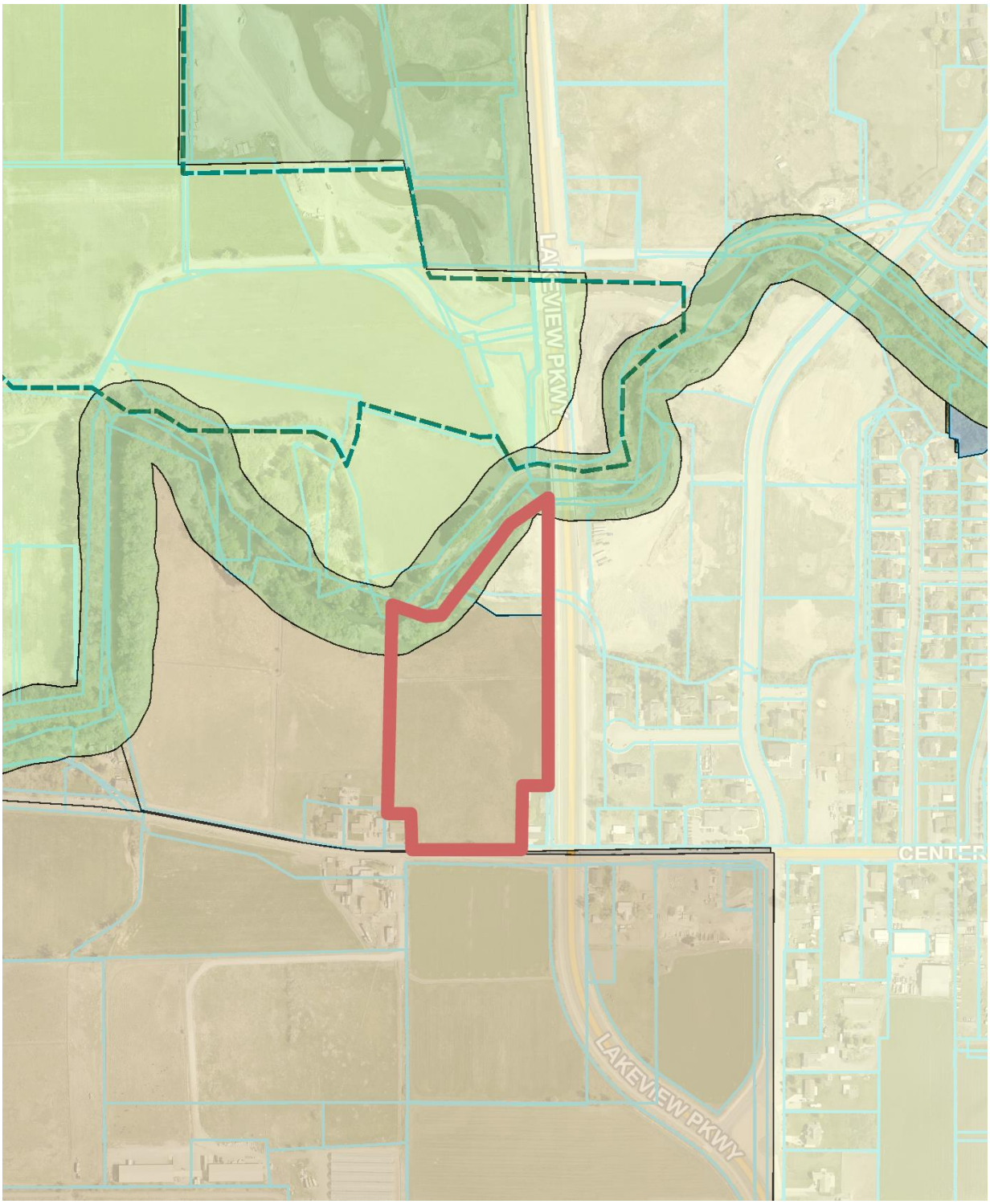
ATTACHMENT 1 – PROPERTY MAP



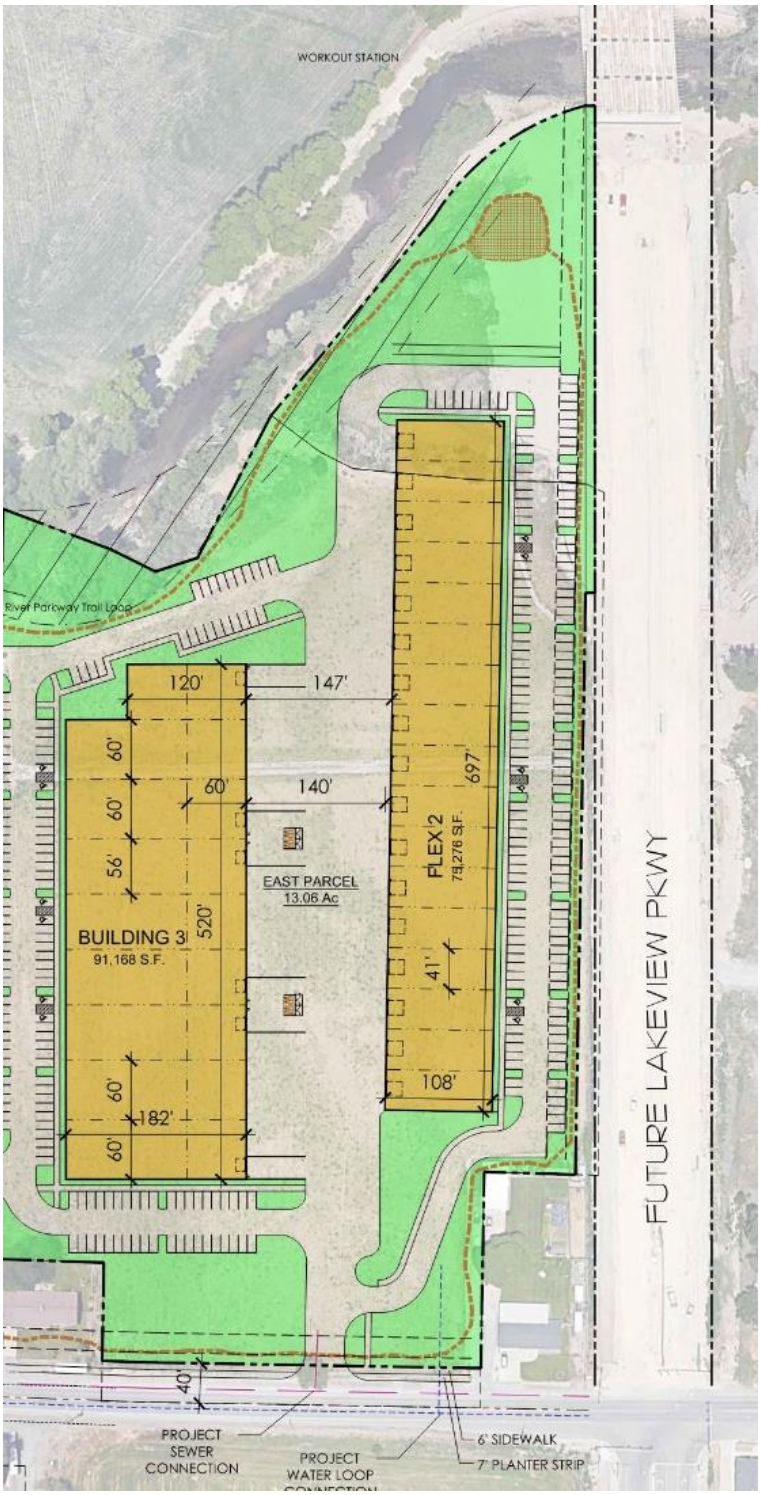
ATTACHMENT 2 – ZONE MAP



ATTACHMENT 3 – GENERAL PLAN MAP



ATTACHMENT 4 – SITE PLAN



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WELCOME HOME

# City Council

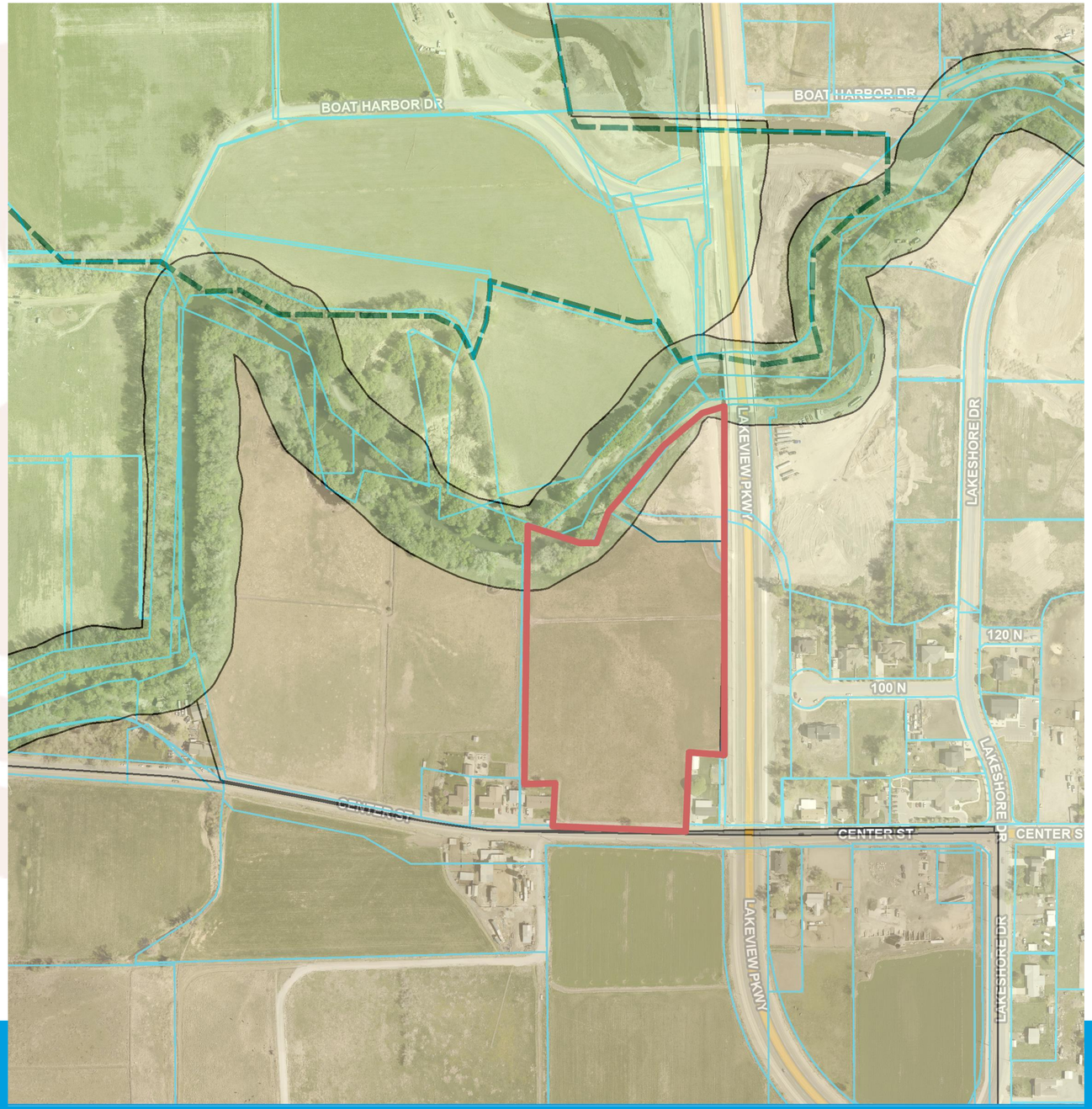
November 14, 2023

Susan Palmer requests a Zone Map Amendment from the A1.10 (Agricultural) zone to the AI (Airport Industrial) zone in order to develop a flex industrial park, located at approximately 3410 West Center Street.

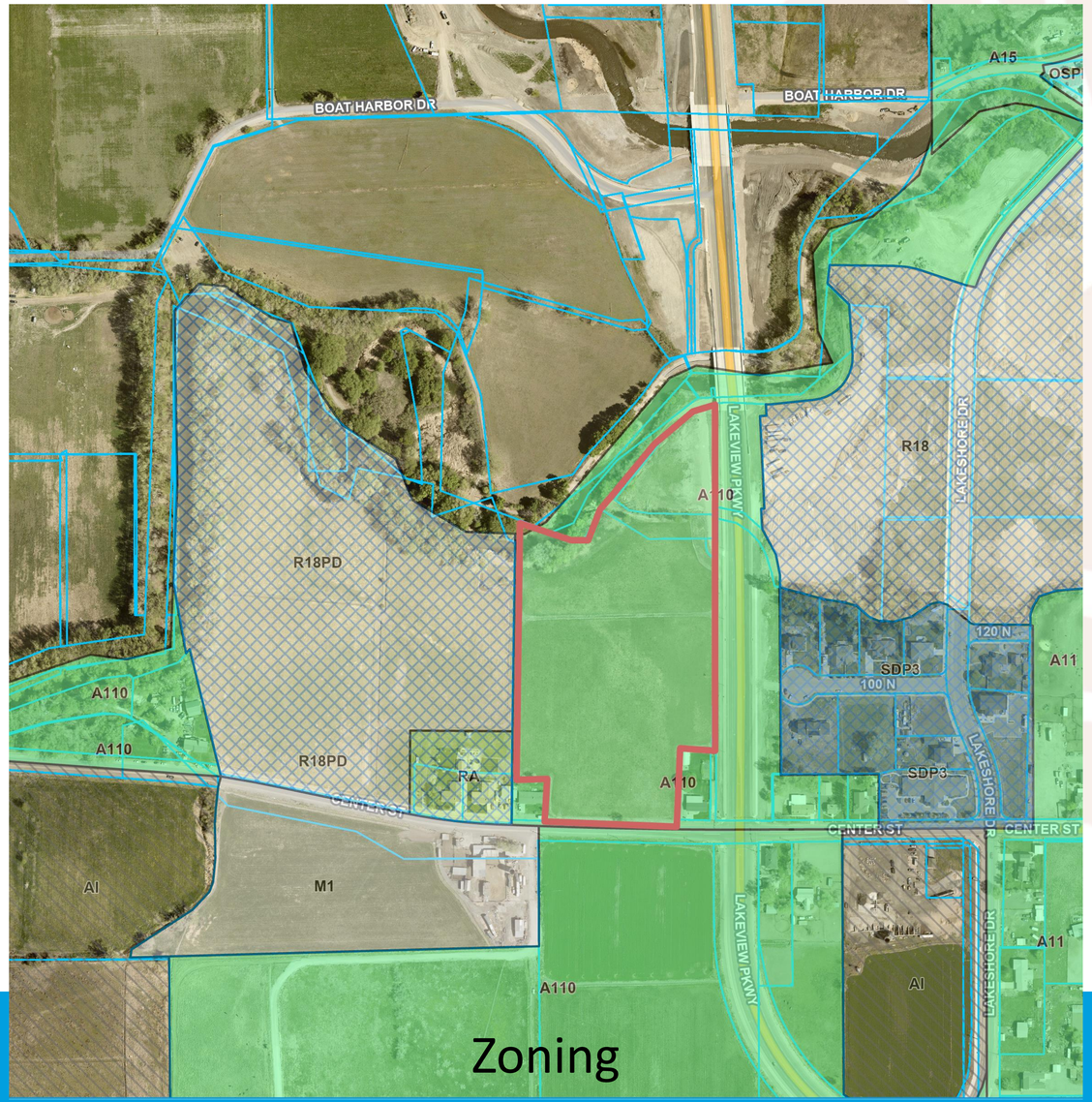
***Fort Utah Neighborhood***

PLRZ20220089

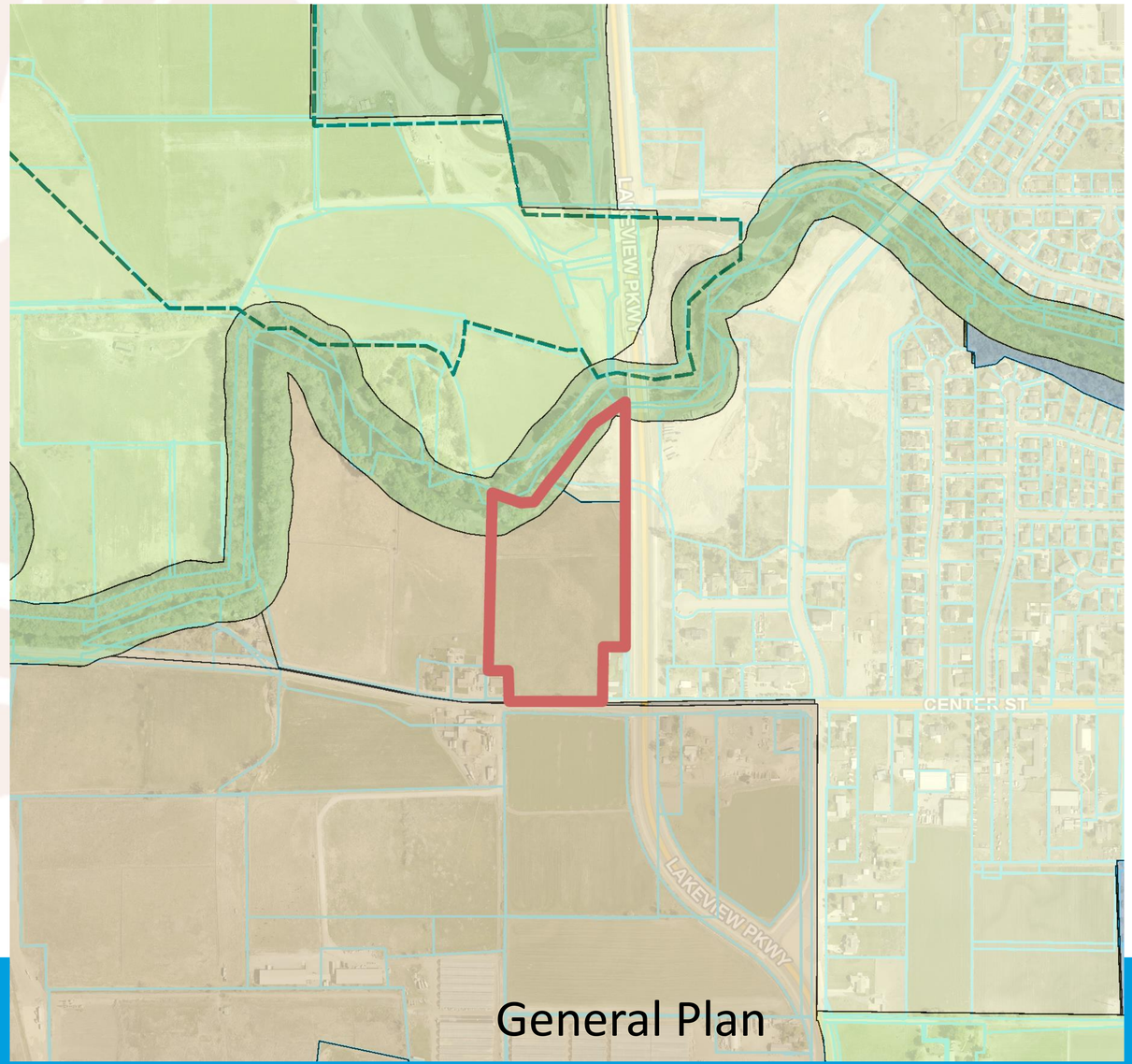
# Birch Bend Industrial Park



# Birch Bend Industrial Park




Zoning

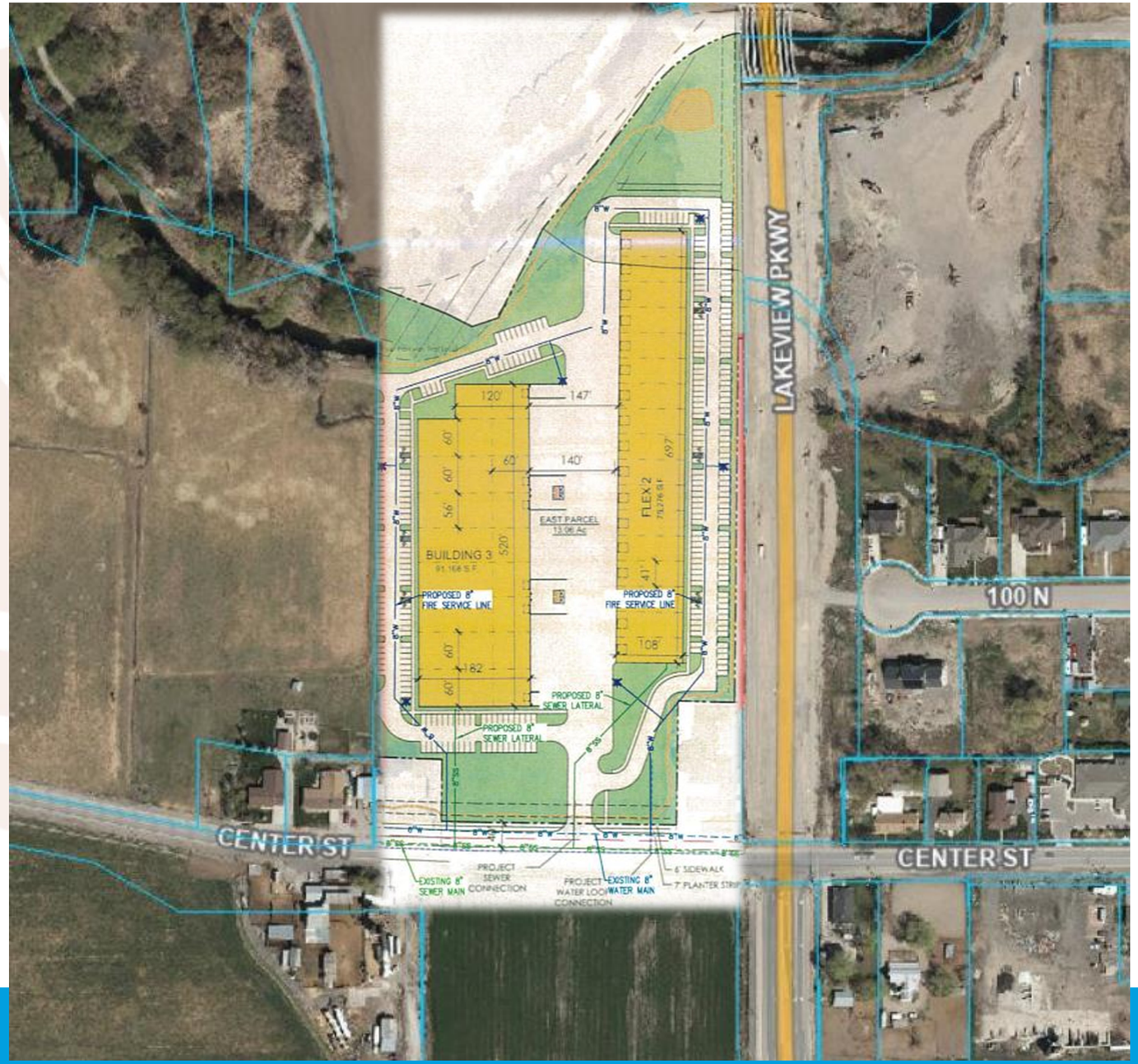



General Plan

# Birch Bend
# Industrial Park

aeurbia
architects and engineers

PROVO 4000
**4000 WEST CENTER STREET, PROVO, UTAH**



Provo City Planning Commission

# Report of Action

November 08, 2023

*ITEM 4 Susan Palmer requests a Zone Map Amendment from the A1.10 (Agricultural) zone to the AI (Airport Industrial) zone in order to develop a flex industrial park, located at approximately 3410 West Center Street. Fort Utah Neighborhood. Aaron Ardmore (801) 852-6404 aardmore@provo.org PLRZ20220089

The following action was taken by the Planning Commission on the above described item at its regular meeting of November 08, 2023:

## RECOMMENDED APPROVAL

On a vote of 6:0, the Planning Commission recommended that the Municipal Council approve the above noted application.

Conditions of Approval: That a Development Agreement be approved.

Motion By: Jonathon Hill
Second By: Barbara DeSoto
Votes in Favor of Motion: Jonathon Hill, Barbara DeSoto, Daniel Gonzales, Lisa Jensen, Robert Knudsen, Andrew South
Daniel Gonzales was present as Chair.

- Includes facts of the case, analysis, conclusions and recommendations outlined in the Staff Report, with any changes noted; Planning Commission determination is generally consistent with the Staff analysis and determination.

**LEGAL DESCRIPTION FOR PROPERTY TO BE REZONED**

The property to be rezoned to the AI Zone is described in the attached Exhibit A.

**RELATED ACTIONS**

The Planning Commission also approved the related Concept Plan at the November 8, 2023 hearing (Item 3, PLCP20220337).

**APPROVED/RECOMMENDED PARKING**

*277 Total parking stalls required
*301 Total parking stalls provided

**DEVELOPMENT AGREEMENT**

- Applies - referred applicant to Council Attorney.

**STAFF PRESENTATION**

The Staff Report to the Planning Commission provides details of the facts of the case and the Staff's analysis, conclusions, and recommendations. Staff addressed additional questions from the Commission during the hearing.

**CITY DEPARTMENTAL ISSUES**

- There are remaining issues from the Coordinator Review Committee (CRC) review that need to be resolved.
- Traffic study may be required with future stages of approval.

**NEIGHBORHOOD MEETING DATE**

- A neighborhood meeting was held in 2022.

**NEIGHBORHOOD AND PUBLIC COMMENT**

- The Neighborhood Chair was not present or did not address the Planning Commission during the hearing.

**CONCERNS RAISED BY PUBLIC**

Any comments received prior to completion of the Staff Report are addressed in the Staff Report to the Planning Commission. Key issues raised in written comments received subsequent to the Staff Report or public comment during the public hearing included the following: None were raised at the hearing.

**APPLICANT RESPONSE**

Key points addressed in the applicant's presentation to the Planning Commission included the following:

- Norm Avery addressed questions and concerns from the Commission and stated that the project will provide public access to the open space and make connection to trail network to the east; he will work with staff to guarantee such. He also stated that he will follow the ordinances for buffer requirements from the adjacent residential properties.

**PLANNING COMMISSION DISCUSSION**

Key points discussed by the Planning Commission included the following:

- Planning Commissioners asked questions to staff regarding the open space, parking, and traffic patterns associated with the proposal. There was more discussion on surrounding trail networks and a desire to connect to those.
- A formal motion made by Lisa Jensen and seconded by Barabara DeSoto recognized the concern and desire to require trail access and connection as the rezone request goes to the City Council. This was supported 6:0.
- The Commissioners discussed the proposal, stating that it is what was expected when the General Plan was amended in 2022, and that the details of the plan should be worked out as it moves forward.

Planning Commission Chair

Director of Development Services

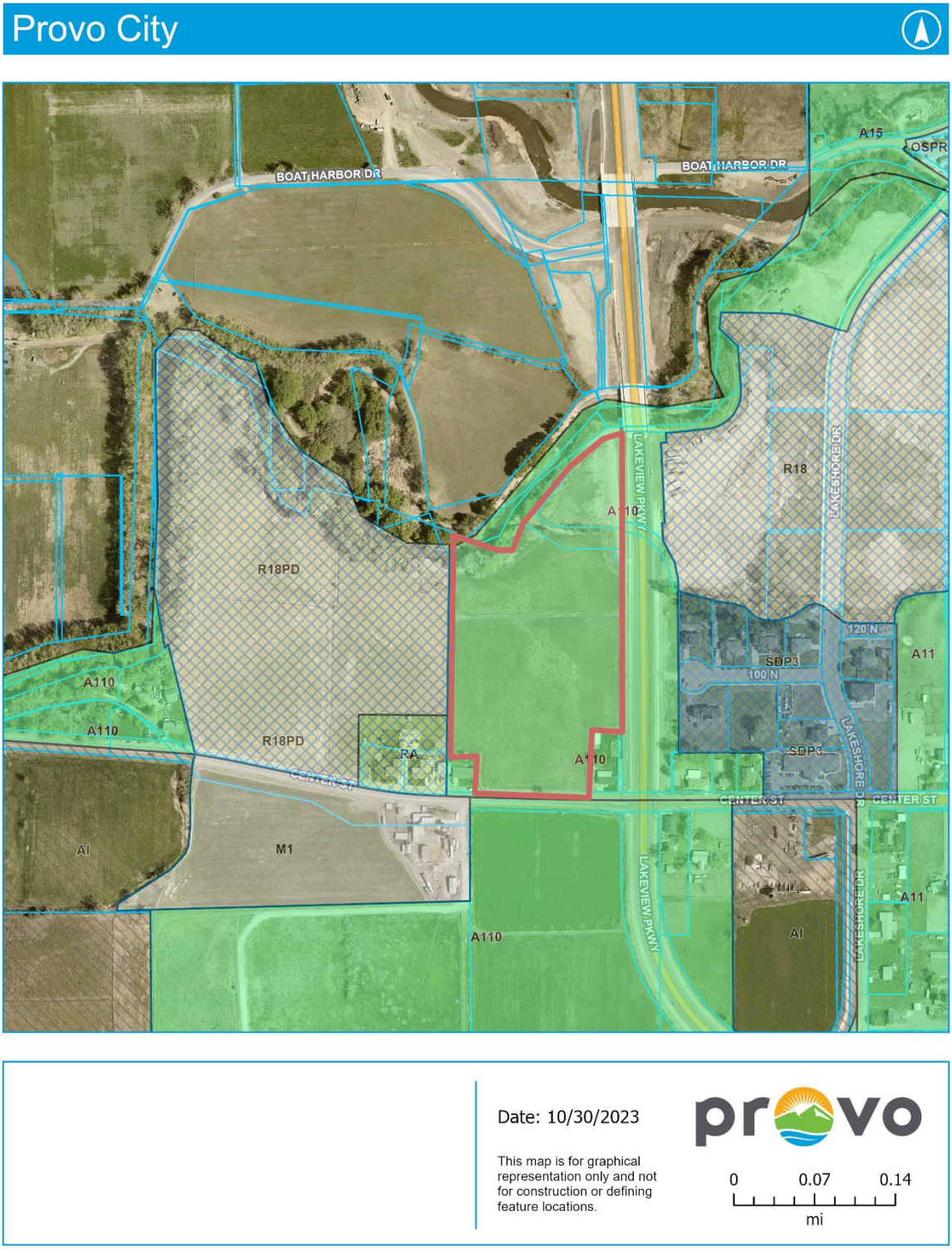
See Key Land Use Policies of the Provo City General Plan, applicable Titles of the Provo City Code, and the Staff Report to the Planning Commission for further detailed information. The Staff Report is a part of the record of the decision of this item. Where findings of the Planning Commission differ from findings of Staff, those will be noted in this Report of Action.

Legislative items are noted with an asterisk (*) and require legislative action by the Municipal Council following a public hearing; the Planning Commission provides an advisory recommendation to the Municipal Council following a public hearing.

Administrative decisions of the Planning Commission (items not marked with an asterisk) **may be appealed** by submitting an application/notice of appeal, with the required application and noticing fees to Development Services, 445 W Center St., Provo, Utah, **within fourteen (14) calendar days of the Planning Commission's decision** (Provo City office hours are Monday through Thursday, 7:00 a.m. to 6:00 p.m.).

BUILDING PERMITS MUST BE OBTAINED BEFORE CONSTRUCTION BEGINS

EXHIBIT A


Provo City
BOAT HARBOR DR
BOAT HARBOR DR
A15
OSPR
LAKEVIEW PKWY
R18
LAKESHORE DR
A110
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SDP3
100 N
A110
R18PD
RA
A110
SDP3
CENTER ST
CENTER ST
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M1
LAKEVIEW PKWY
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LAKESHORE DR
Date: 10/30/2023
This map is for graphical representation only and not for construction or defining feature locations.
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