Francis City Planning Commission Meeting

Thursday, January 16th, 2025, 6:00 pm
2317 South Spring Hollow Road, Francis, UT
New Francis City Hall

Comments may also be made by email to comments@francisutah.gov

The meeting will be streamed live on the Francis City YouTube channel:
https://www.youtube.com/channel/UC-9wahpEELShvGQZShXGIXg

Agenda:

1. Call Meeting to Order
2. Public Hearing – City Center Zone Architectural Review Code Text Amendment (to increase the limit on the maximum number of building stories from three to four)
3. Public Hearing – Town Center Hotel Conditional Use Permit
4. Public Hearing – Town Center Restaurant with Alcohol Service
5. Public Hearing – Town Center Drive-Through Restaurant 1
6. Public Hearing – Town Center Drive-Through Restaurant 2
7. Town Center Commercial Development
8. Wolf Creek Junction Commercial Development
9. Approval of Minutes
10. Staff Update
11. Adjourn

In Compliance with the Americans Disabilities Act, individuals needing special accommodations during this hearing should notify Antini Henderson at (435) 783-6236 at least three days prior to the hearing. I certify that this notice has been posted in two (2) public places and on the Utah State Public Notice Website and the Francis City website. Attested by Antini Henderson.

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Staff Report

To: Francis City Planning Commission
From: Katie Henneuse
Report Date: December 31, 2024
Meeting Date: January 15, 2025
Title: Number of Building Stories in City Center Zone
Type of Item: Code Text Amendment
Action: Legislative

Executive Summary:

Mayor Forman directed staff to initiate a code text amendment to consider increasing the maximum number of building stories allowed in the City Center Zone. The current Code limits structures to three stories and the amendment proposes increasing the limit to four stories.

A code amendment to increase the building height to 45 feet in the City Center Zone was approved in August 2024. This amendment should have been considered concurrently with the height amendment but was overlooked. The purpose of the height amendment was to incentivize development in the City Center Zone and to increase the amount of tax revenue the City will receive from development in this area.

The City Center Zone was established to create a strong commercial identity at the heart of Francis City. It includes roughly a 650-to-1,000-foot radius surrounding the flashing four-way stop at the intersection of SR-32 and SR-35.

General Plan Guidance:

Mission Statement: The City of Francis has a core mission to provide the highest quality of life in a rural atmosphere through essential infrastructure, public safety, and recreation by allowing responsible growth within the constraints of fiscally responsible government.

Land Use Vision: Francis will continue to be a rural and family friendly community. Preservation of our agricultural heritage, dark skies, scenic views, and open spaces are our priority. Growth will be sustainable, well-planned, and consistent with the zoning map and General Plan.

Economic Development Goal 1: The rate of commercial growth will be higher than the rate of residential growth.

Economic Development Policy 1A: Promote a positive environment for businesses to strengthen and improve the City's tax base and quality of life.

Economic Development Goal 2: Create and maintain a sustainable economic base for Francis City providing tax revenues, increase local employment, and convenience of shopping and restaurants.

Economic Development Policy 2A: Improve, diversify, and increase the tax base. Seek revenue growth from economic development activities to mitigate residential property tax increases.

Staff Recommendation:

Discuss the proposed amendment and make changes if needed. Motion one of three options:

- Positive recommendation if the amendment is in the best interest of the City.
- Negative recommendation if the amendment is not in the best interest of the City.
- Table if more time is needed to discuss the amendment.

Community Review:

A public hearing is required for this item. Adequate notice of the public hearing was given in accordance with State and local law.

Ordinance 2025-01, Exhibit A

18.57.060 Architectural review.

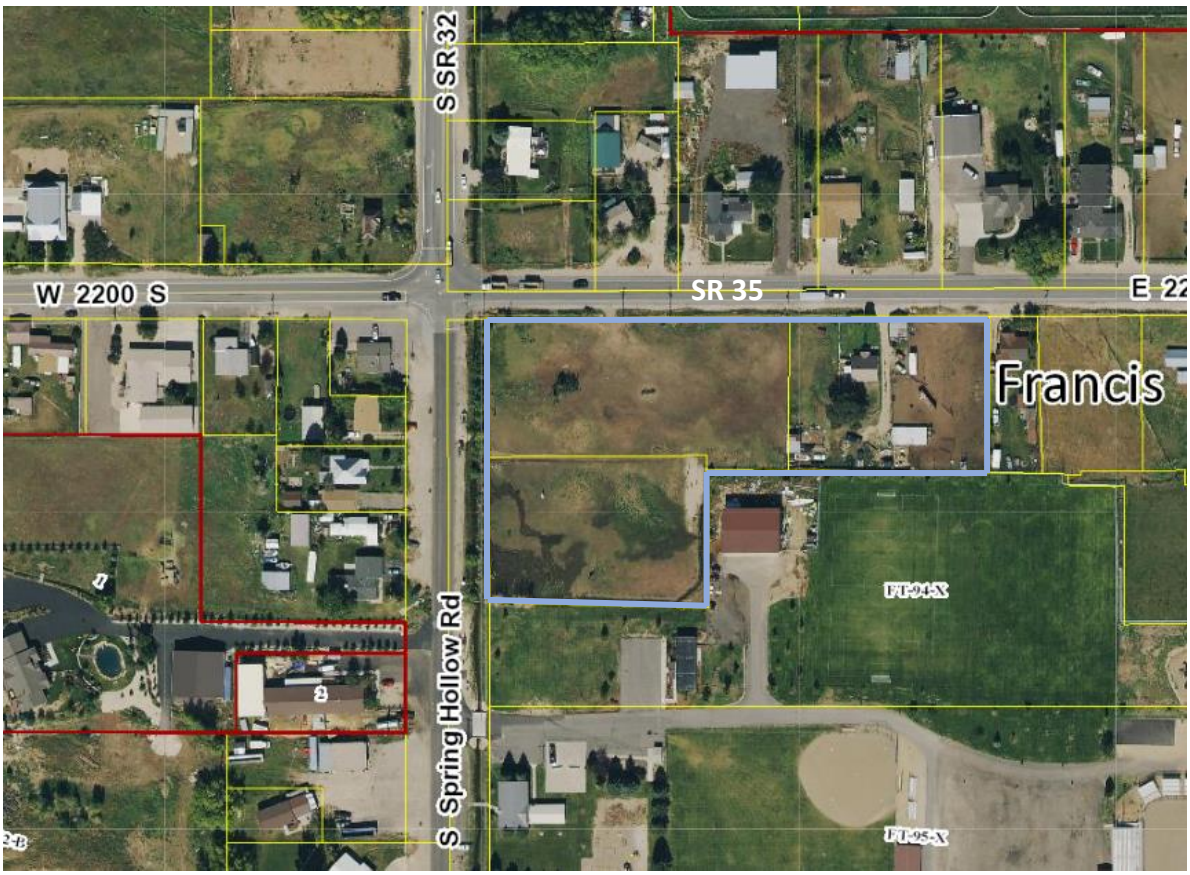
Proposed developments shall undergo an architectural review by the Planning Commission and City Council. The review will determine if the developer has effectively incorporated a mountain aesthetic with neutral colors that is in harmony with the surrounding landscape and structures. Structures are limited to ~~three~~ four stories. The maximum building coverage shall be 55 percent of the lot area.

Staff Report

To: Francis City Planning Commission
From: Katie Henneuse, City Planner and Brad Christopherson, City Attorney
Report Date: January 6, 2025
Meeting Date: January 16, 2025
Title: Town Center Commercial Development and CUPs
Type of Item: Administrative

Location:

This site of the proposed Town Center commercial development is located on the southeast corner of State Road 35 and Spring Hollow Road. It is adjacent to and directly north of the new Francis City Hall. Town Center will be built on parcels FT-90, FT-92, and FT-99. The combined parcel acreage is 3.49 acres. The parcels are in the City Center (CC) Zone.



Background:

Commercial Development plans for the Town Center project were approved in the fall of 2022. Two mixed-use commercial and residential structures on parcels FT-99 and FT-92 were approved at the time. Russ Witt was the applicant. The Town Center property was purchased by Rusty Webster in 2024. Webster also became the owner of the neighboring property, FT-90 in 2024.

Executive Summary:

The applicant, Rusty Webster, submitted five applications that will be considered in this report:

- Commercial Development updated plans
- Conditional Use Permit for a hotel
- Conditional Use Permit for a restaurant serving alcohol
- Conditional Use Permit for drive through 1
- Conditional Use Permit for drive through 2

The applicant also submitted a subdivision application that will be reviewed separately.

Webster is updating the commercial development plans to expand the Town Center project onto parcel FT-90, to add a hotel, and to add a building with a drive-through restaurant space, a retail space, and three apartments. The Town Center plans now include the following:

- Hotel with up to 70 rooms, a 1,400 square foot conference room, a convenience store, two hot tubs, a possible fitness center, business center, and a shared courtyard with a gas fireplace.
- Restaurant that offers full-service sit-down dining and alcohol service.
- Two drive-through restaurants.
- Retail space for up to 9 businesses - 14,000 sq ft
- Residential - 21 apartments (14 2-bedroom and 7 3-bedroom)

General Plan Guidance:

Mission Statement: The City of Francis has a core mission to provide the highest quality of life in a rural atmosphere through essential infrastructure, public safety, and recreation by allowing responsible growth within the constraints of fiscally responsible government.

Land Use Vision: Francis will continue to be a rural and family friendly community. Preservation of our agricultural heritage, dark skies, scenic views, and open spaces are our priority. Growth will be sustainable, well-planned, and consistent with the zoning map and General Plan.

Land Use Policy 2E: Condition development approval on construction of adequate culinary water, sewer, storm drainage, and transportation systems.

Land Use Policy 2F: Commercial uses should be highly accessible and provide adequate access and parking.

Economic Development Goal 1: The rate of commercial growth will be higher than the rate of residential growth.

Economic Development Policy 2A: Improve, diversify, and increase the tax base. Seek revenue growth from economic development activities to mitigate residential property tax increases.

Economic Development Policy 2C: Buffer commercial and industrial uses from existing single family residential areas.

City Code Guidance – Establishment of the City Center Zone (18.57.010):

The City Center zone, hereinafter also referred to as the CC zone, is established to:

1. Create a strong commercial identity at the heart of Francis City.
2. Encourage private and public investment, attract shoppers and visitors, and appeal to existing and new residents.
3. Promote a diverse mix of residential, business, commercial, office and institutional, educational, cultural and entertainment activities for employees, visitors, and residents.
4. Encourage pedestrian-oriented development within walking distance.
5. Create a place that represents a unique, attractive, and memorable destination for visitors and residents.
6. Enhance the community's character through the promotion of high-quality urban design.
7. To provide opportunities to increase the city sales tax base, thereby helping to fund public improvements and public services.

The economic feasibility study provided by the applicant shows that the project supports the General Plan Economic Development goals and policies and goal 7 in establishing the City Center.

Analysis – Commercial Development:

All requirements pertaining to the commercial (C-1) zone are applicable in the CC zone, excepting a few provisions unique to the CC Zone.

<u>Trash Storage - 18.45.100</u>

"All trash storage areas shall be screened and hidden from the public or adjoining residential area view by appropriate fencing or landscaping methods and placed in a rear area of the main building if possible. Trash storage plans must be presented to the Planning Commission or Planning Department for approval, as applicable, prior to issuance of a building permit."

Two enclosed dumpsters are shown on the site plan in the interior corners of the parking lot. The dumpsters will be hidden from public and residential view by a dumpster enclosure.

The trash storage area complies with the code.

Parking - 18.45.160, 18.57.050, 18.100.100)

"Parking is strongly encouraged to be located on the side and to the rear of any proposed structures, with minimum parking between the front of the building and the street. Parking shall not occur adjacent to any public street except when it has been established that such a location is needed or justified by other site conditions or building entrance location and the use is restricted to visitors/key employees."

The applicant estimates that 255 total parking spaces are required for the project. On-street parking on Spring Hollow was previously approved for the Town Center project. Most of the parking is planned behind the structures. The parking plan was previously approved with the expectation that there would be a 25% reciprocal use reduction and a shared parking agreement with Francis City.

During the business license approval process, the city will check that the applicant has adequate parking for each business use. The Planning Commission may authorize a reciprocal use reduction of up to 25% after the applicant demonstrates that they have overlapping daytime and nighttime uses.

They applicant is providing 170 stalls on-site and is seeking a shared parking agreement with the city for at least 21 stalls (see parking tabulation below). A positive recommendation of the parking plan should be contingent upon the applicant reaching a shared parking agreement for at least 21 stalls with Francis City.

Use	**City Code**	**Required Stalls**
Hotel - 70 rooms	1 per room	70
Restaurants - 198 seats	1 per 3 seats	66
Retail – 14,000 sq ft	4 per 1,000 sq ft	56
Residential - 21 units	3 per unit	63
Total Required		**255**
25% Reciprocal Reduction		-64
City Shared Parking		-21
Total at Town Center		**170**

Site Plan – 18.45.120 and 18.57.060

The building layout as shown on the site plan meets setback requirements.

"A site plan with grading, drainage, and clearing plans must be approved by the Planning Commission and City Council before any such activities may begin. Lot grading shall be kept to a minimum. Where possible, roads and development shall be designed for preservation of natural grade."

The lot is relatively flat and does not require significant grading. The city engineer determines whether the site plan is compliant with city code and standards.

Landscape Plan - 18.45.110 and 18.114.080

"No plans for any building, structure or other improvements shall be approved by the Planning Commission unless there shall also have been submitted separate landscape plans satisfactory to the Planning Commission."

"All submitted landscape plans shall be designed to encourage water conservation as a primary consideration. Lawn shall not be installed in park strips, paths or on slopes greater than 25 percent or 4:1 grade."

"All ground areas shall contain grass, or another ground cover acceptable to the Planning Commission, and shall be irrigated sufficiently. Shrubs, flower beds, decorative rocks, and other appropriate landscaping is highly encouraged. All landscaped areas shall be maintained using a sprinkling and/or irrigation system which is capable of being engaged automatically on a regular basis."

"Plant Materials

a. Sixty percent medium trees and shrubs in a combination with deciduous trees with a caliper from two to three inches and evergreen trees with a height from five to eight feet.
b. Forty percent small trees and shrubs in a combination with deciduous trees with a caliper of one and one-half to two inches and evergreen trees with a height of four feet.
c. Where possible, a 50/50 mix of deciduous and evergreen tree species shall be used for on-site landscaping.
d. Street trees with a minimum two-inch caliper shall be installed along all public rights-of-way by the developer of the property. The species, type, location, and spacing of trees shall be as shown on the approved landscape plan."

"Trees shall be planted at the rate of at least one tree per 20 feet along the public street. The applicant shall provide appropriate guarantees on the trees, or they shall have no less than a two-inch caliper. No trees shall be planted within 45 feet of an intersection clear view area. Trees may be planted in clusters to create a more natural and/or screening effect, if appropriate."

The applicant's landscape plan shows 66 2" caliper medium-sized deciduous trees (mixture of honey locust, quaking aspen, plum, and oak) and four medium-sized 8 ft spruce trees. 97 deciduous shrubs and 23 evergreen shrubs are planned throughout the development as well as two types of perennials and native shrub grasses. Crushed rock is planned as the predominant ground cover while Kentucky bluegrass park strips are planned on both sides of the State Road 35 entrance.

Eleven trees are planned along the Spring Hollow frontage (330 ft) and two trees are planned along the State Road 35 frontage (600 ft). In the previous approval, the Planning Commission allowed a reduced number of trees along the State Road 35 frontage so that the trees would not create a barrier in front of the street-facing store fronts.

The landscape plans include irrigation plans.

The site plan and landscape plans conflict. The site plan shows parking in areas where the landscaping plans show concrete planters and trees.

The landscape plan is not compliant with these code requirements and recommendations:

1. *A cluster of 4 aspen trees near the Spring Hollow entrance and two plum trees near the State Road 35 entrance are within the 45 foot intersection clear view area.*
2. *Kentucky bluegrass park strips are planned on both sides of the State Road 35 entrance. Lawn park strips are not allowed.*
3. *The number of deciduous and evergreen species is not the 50/50 recommended mix (4 evergreen and 66 deciduous trees planned).*
4. *Street trees are not planted at a rate of at least one tree per 20 feet on Spring Hollow Road and State Road 35.*

<u>Architectural Design and Materials -18.57.060</u>

"Proposed developments shall undergo an architectural review by the Planning Commission and City Council. The review will determine if the developer has effectively incorporated a mountain aesthetic with neutral colors that is in harmony with the surrounding landscape and structures. Structures are limited to three stories. The maximum building coverage shall be 55 percent of the lot area. Buildings in the CC zone shall not exceed 45 feet in height."

The applicant is proposing a four-story hotel. The building must be three stories or less to be compliant with code. A positive recommendation of the hotel architecture should be contingent upon the approval of Ordinance 2025-01 (increasing the limit on the number of stories in the CC Zone to four). The other buildings will be three stories and comply with code.

All the buildings are less than 45 feet and are compliant with code. The building coverage is less than 55 percent of the lot area and is compliant with code.

The applicant is utilizing a mountain design theme for the hotel that ties in with the previously approved architectural plans for the Town Center development. The hotel will be connected to the Town Center development by covered walkways. The Planning Commission should discuss whether the applicant has effectively incorporated a mountain aesthetic architecture that meets the intent of the City Center Code.

<u>Residential Density - Section 18.57.070</u>

"The maximum number of dwelling units allowed is eight units per acre."

Up to 28 units are allowed without deed restrictions on these parcels totaling 3.49 acres. 21 units are planned (14 2-bedroom and 7 3-bedroom units). The number of dwellings complies with the code.

Outdoor Lighting Plan - 18.118

"An outdoor lighting plan shall be submitted with the site/development plan. The plan must show the location, height, number, and type of fixtures to be used for all outdoor lighting."

"All outdoor lighting must be full cut-off directing the light downward."

"The maximum outdoor light output shall not exceed 100,000 lumens per acre."

"All fixtures shall be mounted no more than 18 feet high when adjacent to residential zones."

"Outdoor lighting shall be turned off or reduce total lumen usage output 50 percent by 11:00 pm except for the following conditions:

a. Operations that are open for 24 hours.
b. Lighting that has been approved by the City Council for security purposes."

The parcel is 3.49 acres, allowing up to 349,000 lumens.

Nine parking lot lights are planned at a height of 12 ft. Three types of parking lot lights are planned. The fixture is the same for all types, but some poles have two lights, and the lumen output varies. The fixture appears to be full cut-off.

Fifteen wall-mounted lights are planned around the sides of the buildings. They will be mounted at a height of 10 ft. The fixture appears to be full cut-off.

The applicant did not note that lighting will be turned off or reduced by 11:00 pm. The code gives an exception to this for operations that are open 24 hours, such as a hotel. The Planning Commission should discuss with the applicant whether lighting in other areas of the development is needed for security purposes after 11:00 pm.

The lighting plan complies with the code if the lighting does not need to be reduced after 11:00 pm for security purposes.

Light Type	**# of Fixtures**	**Height**	**Lumens/Fixture**	**Total Lumens**
Parking – SF1	6	12 ft	9,591	57,546
Parking – SF3	2	12 ft	19,182	38,364
Parking – SF4	1	12 ft	9,835	9,835
Wall – SF5	15	10 ft	4,883	73,245
Total				**178,990**

Analysis – Conditional Use Permits:

State Code - 10-9a-507 Conditional Uses

(1) (a) A municipality may adopt a land use ordinance that includes conditional uses and provisions for conditional uses that require compliance with objective standards set forth in an applicable ordinance.

(b) A municipality may not impose a requirement or standard on a conditional use that conflicts with a provision of this chapter or other state or federal law.

(2) (a) (i) A land use authority shall approve a conditional use if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards.

(ii) The requirement described in Subsection (2)(a)(i) to reasonably mitigate anticipated detrimental effects of the proposed conditional use does not require elimination of the detrimental effects.

(b) If a land use authority proposes reasonable conditions on a proposed conditional use, the land use authority shall ensure that the conditions are stated on the record and reasonably relate to mitigating the anticipated detrimental effects of the proposed use.

(c) If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the land use authority may deny the conditional use.

Note: The city planning and legal staff are in the process of revising the city code to bring it into compliance with recent changes from the state legislature. When state law and city code conflict, state law prevails because of the correlating supremacy clause in the Utah State Constitution.

City Code – 18.65.090 Standards for Review

The city shall review each of the following items when considering a conditional use permit and proposing or imposing conditions on the permit:

1. Size and location of the site.
2. Traffic considerations including capacity of the existing streets in the area, location and amount of off-street parking, and internal traffic circulation.
3. Utility capacity.
4. Emergency vehicle access and control of delivery and service vehicles, loading and unloading zones, and screening of trash pick-up or waste storage areas.
5. Fencing, screening, and landscaping to separate the use from adjoining uses.
6. Design, architectural detailing, building mass, bulk, orientation, and the location of buildings on the site including orientation to buildings on adjoining lots.
7. Usable and permanent open space considerations.
8. Signage and lighting.

9. Noise, vibration, pollution, odors, steam, or other mechanical factors that might affect people and property off site.
10. Potential for discharge into the air, ground water, surface and subsurface water, or soil.
11. Potential adverse impact on the ability of those who live or own property in the vicinity, including adverse effects to property values and the right to use and enjoy their property.
12. Other technical review matters as may be advised by the City.

Standards #1, 4, and 6 were reviewed as part of the commercial development portion of this report but should be considered as part of each CUP review as well. The city engineer will review standards #2, 3, and 4 in his staff report. Standards #7, 10, and 12 are not applicable to these CUP applications.

Staff have identified the following reasonably anticipated detrimental effects of the proposed conditional uses to adjoining residential properties: disruption of privacy, additional noise, outdoor lighting, additional traffic, decreased property value, and decreased enjoyment of property. These detrimental effects will be reviewed in relation to Review Standards #5, 8, 9, and 11 from Section 18.65.090. The measures proposed by the applicant and conditions proposed by the city to mitigate these effects are examined in the sections below. The city engineer will review the traffic impact study in his report.

The proposed development is on a corner of the main intersection at the heart of Francis City. There are several residential properties across the street from the proposed development on Spring Hollow Road and State Road 35. Additional noise and outdoor lighting from the project are not anticipated to significantly impact the residents living across State Road 35 because of the ambient levels of light and noise that already exist in this area from traffic. The residents that live across the street from the proposed development on Spring Hollow Road will be minimally impacted by noise and outdoor lighting because the main parking and loading/unloading areas will be behind the building. Very minimal wall lighting is planned on the front of the buildings. The on-street parking is about 100 feet from the residences. It is anticipated that noise impacts will be lessened by this distance by about 10 dB and will be in compliance with code. Therefore, the standards will be viewed in relation to their impact on the adjoining existing residence.

<u>Standard #5 – Fencing, Screening, Landscaping Buffers</u>

In Section 18.45.150 regarding buffers, fences, and walls, city code says, “The intent in having special buffer, fence, and wall requirements is to provide quality separation between incompatible commercial uses, and to provide physical and visual protection between commercial and residential uses.”

“Buffer treatment may be required whenever a change occurs between residential and nonresidential uses. Additional landscaping and screening may be required at the discretion of the Planning Commission and City Council within the setback which separates the uses. Fences or walls will be reviewed for their effectiveness in screening a view, and for their color and texture in relationship to building materials.

Where differing uses are to be developed adjacent to existing residential areas, special consideration shall be made to protect the privacy of residents and requirements shall be at the discretion of the Planning Commission and City Council. As a minimum, the negative effects of noise and artificial lighting shall be minimized to protect existing residents."

The applicant is proposing 6 ft vinyl fencing in an earth tone along the eastern property boundary adjoining a residential property as well as two property boundaries on the southern side of the development adjoining Francis City property near the soccer field and public works building.

Feather red grass is planned as a landscaping buffer along the fence on the eastern boundary of the project adjoining a residential property. An oak tree landscaping buffer is planned along the fenced portion of the southern property boundary with the city. The fencing planned will help mitigate the detrimental effect of disruption of privacy, additional noise, and outdoor lighting from the parking lot, building lights, and vehicle lights. Staff propose increasing the height of the fence to 8 feet to further mitigate disruption of privacy and outdoor lighting effects for the adjoining residential property owner.

The feather grass landscaping buffer may help to further mitigate additional noise. Since the feather grasses are placed in front of the fence, they will not mitigate lighting and privacy concerns. A tree buffer is planned at the boundary with the city property and will act as a landscaping buffer to help mitigate privacy, noise, and lighting concerns between the commercial property and the city property once the trees reach maturity. The primary purpose of landscape buffering is to provide a separation between residential and commercial uses. Staff propose replacing the feather buffer on the property line adjoining the residential property with a 12 ft tall tree buffer to further mitigate noise, lighting (specifically 12 ft parking lights), and privacy concerns.

<u>Standard #8 – Signage and Lighting</u>

18.105.150 "One monument sign less than six feet in height and 60 square feet measured from the farthest extent of the sign to form a rectangle is allowed per commercial project. If a commercial project includes more than five potential businesses the Planning Department may approve a sign up to 10 feet in height and 100 square feet measured from the farthest extent of the sign to form a rectangle. Application for additional monuments signs in a commercial project will be considered a conditional use. The applicant must demonstrate to the Planning Department that the additional sign(s) are necessary."

"One wall sign not to exceed 30 square feet measured from the farthest extent of the sign to form a rectangle is allowed on the wall facing the primary entrance to the commercial project. Except as otherwise provided in this section, every wall sign and painted wall sign in a commercial zone shall comply with the following requirements:

a. No part of any sign shall extend above the wall upon which it is situated.
b. No sign, including any light box or structural part, shall project more than 12 inches from the face of the pan of the building to which it is attached."

The applicant is planning a marquee sign for the development on the corner of Spring Hollow Road and State Road 35. They noted on the site plan, "Each business sign to meet Francis City signage code requirements. Any sign proposed not meeting Francis City signage code must be submitted for a conditional use review." Marquee signs typically have lighting around the perimeter of the sign, but no signage lighting was included on the outdoor lighting plan. The signage plans do not increase the listed detrimental effects.

18.45.150 "Outdoor lighting shall be designed to prevent exposure of light source to the view of residents."

18.118 "The applicant in nonresidential zones must also provide a plan on how outdoor lighting will minimize impacts on adjacent properties."

"All outdoor lighting must be full cut-off directing the light downward. The bulb or lighting source cannot be visible from the property line. Outdoor lighting cannot be directed towards any adjacent neighboring properties."

In each CUP application, the applicant states that they "do not anticipate any abnormal … lighting change … associated" with the use.

Outdoor lighting was evaluated in the commercial development section of this report. The city code allows up to 349,000 lumens of outdoor lighting for this development. The outdoor lighting planned totals 178,990 lumens – just over half of the allowed limit. All fixtures appear to be full cut-off. Lighting may not be directed at neighboring properties to be compliant with code.

The applicant did not note that lighting will be turned off or reduced by 11:00 pm. The code gives an exception to this for operations that are open 24 hours, such as a hotel. The Planning Commission should discuss with the applicant whether lighting in other areas of the development is needed for security purposes after 11:00 pm and perhaps add a condition that lighting be reduced at night.

Car lights will also be an additional source of light at night. The detrimental effects of outdoor lighting and car lights can be mitigated with an 8 ft privacy fence and a 12 ft tree buffer on the residential property line.

<u>Standard #9 – Noise or Odors</u>

8.10.0020 "The following sounds are prohibited pursuant to this chapter:

1. A sound measuring 70 decibels or more between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday, or between the hours of 9:00 a.m. and 10:00 p.m. on Sunday.
2. A sound measuring 55 decibels or more between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday, or between the hours of 10:00 p.m. Saturday and 9:00 a.m. on Sunday."

In each CUP application, the applicant states that they "do not anticipate any abnormal odors … or noise issues associated" with the use.

The Noise Disturbance Study performed by Francis City concludes that the detrimental effects of additional noise can be mitigated with a privacy fence and a landscaped tree buffer on the adjoining residential property line, restricting delivery hours to the daytime Monday – Saturday, and requiring that mechanical equipment for building 3 be placed as far from the adjacent existing residence as possible and be enclosed.

Standard #11 – Property Values and Property Use of Adjoining Owners

The city has no specific evidence of property value changes associated with this project.

The new City Hall is directly south of this development along with other city buildings and the soccer field.

A review of literature on the impacts of commercial development on nearby residential is inconclusive.

There is one residential property that borders the project on the east. The site plan has mitigation with fencing and landscaping to reduce noise and lighting impacts and staff has recommended additional conditions, so the impact complies with the city code.

Other residential properties exist across Spring Hollow and State Road 35. The residential homes are all at least 100 feet from the hotel and restaurants. This project is at the intersection of State Road 35 and Spring Hollow Road – which is the largest and most traveled intersection in the city. It is also located in the City Center zone, which was created to encourage development and begin to create a commercial center and bring commercial activity to the city. It is not unreasonable that development would arrive at this intersection. There are also commercial properties across the street to the west of this project. There are no Commercial or City Center Zones that are not abutting, adjacent, or across the street from residential areas.

This proposed project will not prevent any of the uses currently surrounding the project but will bring increased traffic, noise, and lighting. These anticipated increases can be mitigated with measures taken by the applicant and the conditions proposed by staff.

Hotel

Hotels are a conditional use in the City Center Zone. (18.57.020)

The hours of operation of the hotel are 24 hours a day, 7 days a week.

The detrimental effects of decreased privacy, additional noise, and lighting caused by the hotel can be mitigated with an 8 ft privacy fence and a 12 ft tree buffer on the adjoining residential property line. Noise disturbances can be further mitigated by allowing deliveries only between the hours of 7:00 am and 7:00 pm.

The applicant is planning a 4-story hotel. The adjoining residential property will be visible from the upper floors of the hotel even with a 12 ft tree buffer. The adjoining residential property is

more than 550 ft (in a straight line) from the hotel. The impact of decreased privacy from the hotel will also be mitigated by this distance.

Restaurant with Alcohol Service

"Any application for a permit to operate an establishment that offers alcoholic beverages for sale must first be reviewed for local consent by the City Council, which the City Council may grant or deny, in its sole and absolute discretion. If the City Council votes to grant local consent, the application will then be considered by the Planning Commission and City Council as a conditional use in accordance with FCC Title 17 and this title and in accordance with governing Utah law." (18.15.110)

The City Council granted local consent on January 9, 2025.

The applicant's stated hours of operation for the restaurant will be between 5:30 am and 11:00 pm.

The detrimental effects of decreased privacy, additional noise, and lighting caused by the restaurant serving alcohol can be mitigated with an 8 ft privacy fence and a 12 ft tree buffer on the adjoining residential property line. Noise disturbances can be further mitigated by allowing deliveries only between the hours of 7:00 am and 7:00 pm.

Drive-Through Restaurants 1 and 2

Drive-through restaurants are a conditional use in the City Center Zone. (18.57.020)

The applicant's stated hours of operation for the drive-through restaurants will be between 5:30 am and 11:00 pm.

Drive-through restaurant 2 will be one of the closest businesses in the development to the adjoining residential property owner. The detrimental effects of decreased privacy, additional noise, and lighting caused by the drive-through restaurants can be mitigated with an 8 ft privacy fence and a 12 ft tree buffer on the adjoining residential property line. Noise disturbances can be further mitigated by allowing deliveries only between the hours of 7:00 am and 7:00 pm.

Staff Recommendation:

Commercial Development

Trash Storage - Approve the trash storage plan.

Parking - Positively recommend approval of the parking plan contingent upon the applicant reaching a shared parking agreement for at least 21 stalls with Francis City.

Site Plan - Positive or negative recommendation. Follow the city engineer's recommendation.

Landscape Plan - Table and ask the applicant to update the plan so that it complies with the code and does not conflict with the site plan.

Architectural Design – Positive or negative recommendation. Discuss whether the renderings meet the intent of code. If a positive recommendation is given, make it contingent upon the approval of Ordinance 2025-01 (increasing the limit on the number of stories in the CC Zone to four).

Outdoor Lighting Plan – Positively recommend approval of the outdoor lighting plan if the lighting does not need to be reduced after 11:00 pm for security purposes.

Conditional Use Permits

Hotel – Positively recommend approval with the following conditions:

1. 8 ft privacy fence on property boundaries where site plan shows proposed fencing.
2. Plant 12 ft trees as a buffer on the east property line adjoining existing residence.
3. Deliveries are only allowed between the hours of 7:00 am and 7:00 pm.

Restaurant with Alcohol Service – Positively recommend approval with the following conditions:

1. 8 ft privacy fence on property boundaries where site plan shows proposed fencing.
2. Plant 12 ft trees as a buffer on the east property line adjoining existing residence.
3. Hours of operation are between 5:30 am and 11:00 pm.
4. Deliveries are only allowed between the hours of 7:00 am and 7:00 pm.

Drive-Through Restaurant 1 – Positively recommend approval with the following conditions:

1. 8 ft privacy fence on property boundaries where site plan shows proposed fencing.
2. Plant 12 ft trees as a buffer on the east property line adjoining existing residence.
3. Hours of operation are between 5:30 am and 11:00 pm.
4. Deliveries are only allowed between the hours of 7:00 am and 7:00 pm.

Drive-Through Restaurant 2 – Positively recommend approval with the following conditions:

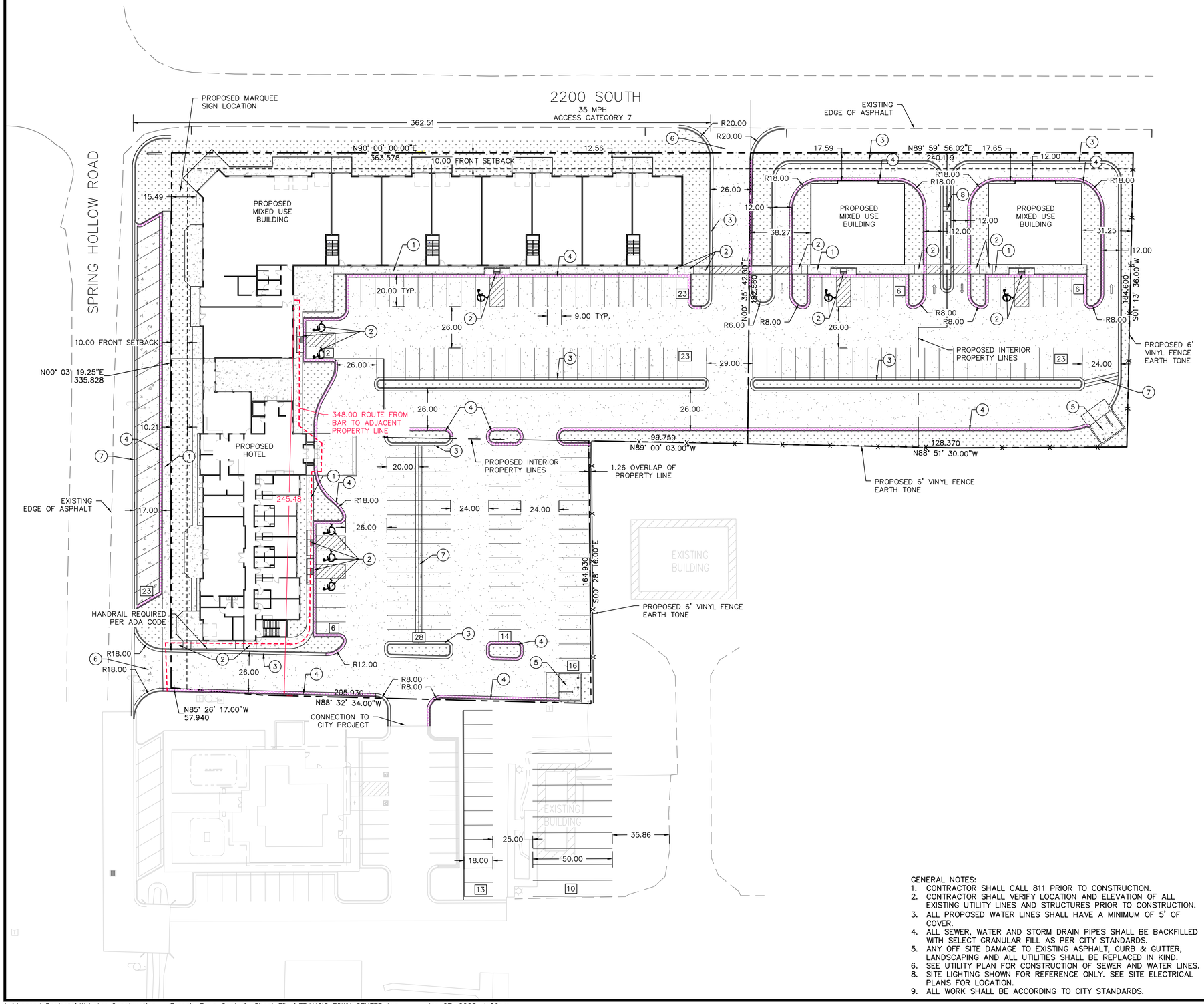
1. 8 ft privacy fence on property boundaries where site plan shows proposed fencing.
2. Plant 12 ft trees as a buffer on the east property line adjoining existing residence.
3. Hours of operation are between 5:30 am and 11:00 pm.
4. Deliveries are only allowed between the hours of 7:00 am and 7:00 pm.
5. Mechanical equipment for this building be placed as far from the adjacent existing residence as possible and be enclosed.

Community Review:

A public hearing will be held for each of the four conditional use permits. The public hearings were noticed in accordance with State and local law. A public hearing is not required for the commercial development application.

SIGNAGE NOTES:

EACH BUSINESS SIGN TO MEET FRANCIS CITY SIGNAGE CODE REQUIREMENTS.
ANY SIGN PROPOSED NOT MEETING FRANCIS CITY SIGNAGE CODE MUST BE SUBMITTED FOR A CONDITIONAL USE REVIEW.



LEGEND

- LOT LINES (PROPERTY)
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- SETBACK LINE
- EXISTING FENCE
- LANDSCAPE AREA
- CONCRETE AREA
- ASPHALT AREA
- REVERSE PAN CURB

SITE DATA

WEST LOT AREA:	108,028	SF (2.48 ACRES)
BUILDING AREA:	30,240	SF± 28.0%
PAVEMENT AREA:	64,985	SF± 60.2%
LANDSCAPE AREA:	12,803	SF± 11.8%
EAST LOT AREA:	44,064	SF (1.01 ACRES)
BUILDING AREA:	6,045	SF± 13.7%
PAVEMENT AREA:	27,857	SF± 63.2%
LANDSCAPE AREA:	10,162	SF± 23.1%

BUILDING DATA

ZONE: CC (CITY CENTER)

SETBACKS:
- FRONT YARD: 10'
- SIDE YARD: 0'
- REAR YARD: 0'

PARKING TABULATION

REQUIRED: RETAIL = 4 PER 1,000 SF
RESTAURANT = 1 PER 3 SEATS OR 1 PER 100 SF
HOTEL = 1 PER ROOM
RESIDENTIAL = 3 PER DWELLING UNIT
REDUCTION: 25% RETAIL REDUCTION FOR RECIPROCAL USES
REQUIRED: RETAIL = 56 STALLS (14,000 SF)
RESTAURANT = 66 STALLS (198 SEATS)
HOTEL = 70 STALLS (70 ROOMS)
RESIDENTIAL = 63 STALLS (21 UNITS)
REQUIRED: 255 STALLS
REDUCTION: 191 STALLS
PROVIDED: 147 STALLS ON-SITE + 23 STALLS ON-STREET
8 ADA STALLS

SEEKING SHARED PARKING WITH CITY OF 21 STALLS.

SITE DESIGN NOTES:

1. PROPOSED SIDEWALK PER APWA PLAN 231. SEE SHEET C-4 FOR DETAILS.
2. ALL ADA STALLS AND RAMPS TO BE INSTALLED PER ADA STANDARDS AND CITY STANDARD STREETS-5. SEE SHEET C-4 FOR DETAILS.
3. PROPOSED CURB & GUTTER PER APWA PLAN 205 TYPE E. SEE SHEET C-4 FOR DETAILS.
4. PROPOSED REVERSE PAN CURB AND GUTTER PER DETAIL 1. SEE SHEET C-4 FOR DETAILS.
5. PROPOSED DUMPSTER LOCATION. SEE ARCHITECTURAL PLANS FOR DETAILS.
6. COMMERCIAL DRIVE APPROACH PER CITY STANDARD STREETS-7. SEE SHEET C-4 FOR DETAILS.
7. PROPOSED 4' WATERWAY PER APWA PLAN 211. SEE SHEET C-4 FOR DETAILS.
8. PROPOSED CURB CUT. SEE SHEET C-4 FOR DETAILS.

GENERAL NOTES:
1. CONTRACTOR SHALL CALL 811 PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITY LINES AND STRUCTURES PRIOR TO CONSTRUCTION.
3. ALL PROPOSED WATER LINES SHALL HAVE A MINIMUM OF 5' OF COVER.
4. ALL SEWER, WATER AND STORM DRAIN PIPES SHALL BE BACKFILLED WITH SELECT GRANULAR FILL AS PER CITY STANDARDS.
5. ANY OFF SITE DAMAGE TO EXISTING ASPHALT, CURB & GUTTER, LANDSCAPING AND ALL UTILITIES SHALL BE REPLACED IN KIND.
6. SEE UTILITY PLAN FOR CONSTRUCTION OF SEWER AND WATER LINES.
8. SITE LIGHTING SHOWN FOR REFERENCE ONLY. SEE SITE ELECTRICAL PLANS FOR LOCATION.
9. ALL WORK SHALL BE ACCORDING TO CITY STANDARDS.

811

N

0 30 60 90
1" = 30'
Scale in Feet

CONCEPT

NO.	REVISIONS	BY	DATE

ENGINEER: CJ CHECKED BY: LR

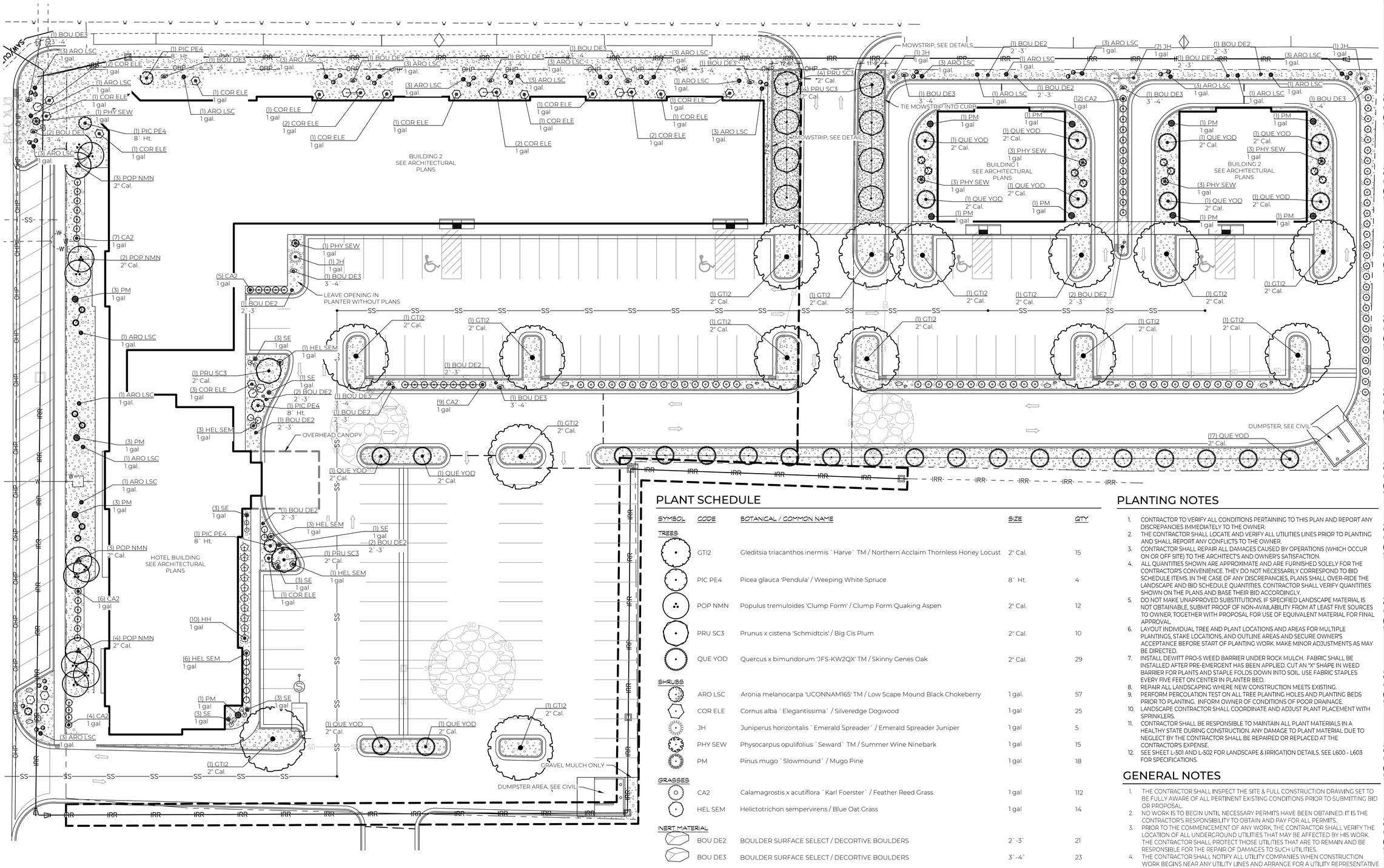
LEGEND ENGINEERING
52 WEST 100 NORTH
HEBER CITY, UT 84032
PHONE: 435-654-4828
www.legendengineering.com

FRANCIS TOWN CENTER
SITE PLAN
2217 S SPRING HOLLOW ROAD, FRANCIS, UTAH 84036

PROFESSIONAL ENGINEER
No. 11316562-2202
CALVIN S JOHNSON
STATE OF UTAH

SHEET: C-1

DATE: 1/7/2025



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	QTY
TREES				
	GTI2	Gleditsia triacanthos inermis `Harve` TM / Northern Acclaim Thornless Honey Locust	2" Cal.	15
	PIC PE4	Picea glauca 'Pendula' / Weeping White Spruce	8` Ht.	4
	POP NMN	Populus tremuloides 'Clump Form' / Clump Form Quaking Aspen	2" Cal.	12
	PRU SC3	Prunus x cistena 'Schmidtcis' / Big Cis Plum	2" Cal.	10
	QUE YOD	Quercus x bimundorum 'JFS-KW2QX' TM / Skinny Genes Oak	2" Cal.	29
SHRUBS				
	ARO LSC	Aronia melanocarpa 'UCONNAM165' TM / Low Scape Mound Black Chokeberry	1 gal.	57
	COR ELE	Cornus alba `Elegantissima` / Silveredge Dogwood	1 gal	25
	JH	Juniperus horizontalis `Emerald Spreader` / Emerald Spreader Juniper	1 gal	5
	PHY SEW	Physocarpus opulifolius `Seward` TM / Summer Wine Ninebark	1 gal	15
	PM	Pinus mugo `Slowmound` / Mugo Pine	1 gal	18
GRASSES				
	CA2	Calamagrostis x acutiflora `Karl Foerster` / Feather Reed Grass	1 gal	112
	HEL SEM	Helictotrichon sempervirens / Blue Oat Grass	1 gal	14
INERT MATERIAL				
	BOU DE2	BOULDER SURFACE SELECT / DECORTIVE BOULDERS	2`-3`	21
	BOU DE3	BOULDER SURFACE SELECT / DECORTIVE BOULDERS	3`-4`	23
PERENNIALS				
	HH	Hemerocallis x `Happy Returns` / Happy Returns Daylily	1 gal	10
	SE	Sedum x `Autumn Fire` / Autumn Fire Sedum	1 gal	17

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
GROUND COVERS					
	CR	Crushed Angular Rock 1"-2" / Owner to Select Color	N/A		23,640 sf
	POA PRA	Kentucky Bluegrass / Kentucky Bluegrass	sod		1,738 sf

PLANTING NOTES

1. CONTRACTOR TO VERIFY ALL CONDITIONS PERTAINING TO THIS PLAN AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
2. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE OWNER.
3. CONTRACTOR SHALL REPAIR ALL DAMAGES CAUSED BY OPERATIONS (WHICH OCCUR ON OR OFF SITE) TO THE ARCHITECT'S AND OWNER'S SATISFACTION.
4. ALL QUANTITIES SHOWN ARE APPROXIMATE AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THEY DO NOT NECESSARILY CORRESPOND TO BID SCHEDULE ITEMS. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVER-RIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.
5. DO NOT MAKE UNAPPROVED SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO OWNER, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.
6. LAYOUT INDIVIDUAL TREE AND PLANT LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS, STAKE LOCATIONS, AND OUTLINE AREAS AND SECURE OWNER'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS MAY BE DIRECTED.
7. INSTALL DEWITT PRO-5 WEED BARRIER UNDER ROCK MULCH. FABRIC SHALL BE INSTALLED AFTER PRE-EMERGENT HAS BEEN APPLIED. CUT AN "X" SHAPE IN WEED BARRIER FOR PLANTS AND STAPLE FOLDS DOWN INTO SOIL. USE FABRIC STAPLES EVERY FIVE FEET ON CENTER IN PLANTER BED.
8. REPAIR ALL LANDSCAPING WHERE NEW CONSTRUCTION MEETS EXISTING.
9. PERFORM PERCOLATION TEST ON ALL TREE PLANTING HOLES AND PLANTING BEDS PRIOR TO PLANTING. INFORM OWNER OF CONDITIONS OF POOR DRAINAGE.
10. LANDSCAPE CONTRACTOR SHALL COORDINATE AND ADJUST PLANT PLACEMENT WITH SPRINKLERS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL PLANT MATERIALS IN A HEALTHY STATE DURING CONSTRUCTION. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. SEE SHEET L-501 AND L-502 FOR LANDSCAPE & IRRIGATION DETAILS. SEE L600 - L603 FOR SPECIFICATIONS.

GENERAL NOTES

1. THE CONTRACTOR SHALL INSPECT THE SITE & FULL CONSTRUCTION DRAWING SET TO BE FULLY AWARE OF ALL PERTINENT EXISTING CONDITIONS PRIOR TO SUBMITTING BID OR PROPOSAL.
2. NO WORK IS TO BEGIN UNTIL NECESSARY PERMITS HAVE BEEN OBTAINED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR ALL PERMITS.
3. PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY HIS WORK. THE CONTRACTOR SHALL PROTECT THOSE UTILITIES THAT ARE TO REMAIN AND BE RESPONSIBLE FOR THE REPAIR OF DAMAGES TO SUCH UTILITIES.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHEN CONSTRUCTION WORK BEGINS NEAR ANY UTILITY LINES AND ARRANGE FOR A UTILITY REPRESENTATIVE BE PRESENT IF THE CONTRACTOR'S CLOSE OPERATIONS COULD CREATE A HAZARDOUS CONDITION. UTILITIES SHOWN ON PLAN ARE BASED OF AERIAL IMAGERY INFORMATION AND HAVE SOME DISCREPANCIES.
5. THE CONTRACTOR SHALL PROTECT EXISTING BUILDINGS, WALKS, DRIVES, CURBS, ETC. THAT ARE TO REMAIN AND SHALL REPAIR ANY DAMAGE THAT MAY RESULT FROM CONSTRUCTION OPERATIONS.
6. THE LANDSCAPE AND IRRIGATION CONTRACTORS SHALL COORDINATE THEIR WORK WITH ANY OTHER CONTRACTORS AND TRADES WORKING ON THIS PROJECT. PROVIDE SLEEVES AS REQUIRED FOR DRAINAGE, IRRIGATION AND ELECTRICAL LINES, ETC. PRIOR TO PAVING AND LANDSCAPE WORK.
7. THE CONTRACTOR IS RESPONSIBLE FOR ANY UNAUTHORIZED DAMAGE INSIDE AND OUTSIDE THE LIMIT OF WORK LINE DUE TO CONTRACT OPERATIONS AND SHALL RESTORE DAMAGED AREAS TO ORIGINAL CONDITIONS AT NO COST TO THE OWNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR YARD AND BUILDING CLEANUP AT THE COMPLETION OF WORK.

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

PRIME
LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER

2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
DUSTIN KIRK HISLOP
NO. 7830
PROFESSIONAL LICENSE
LICENSED LANDSCAPE ARCHITECT

REVISIONS

NO.	DATE	DESCRIPTION

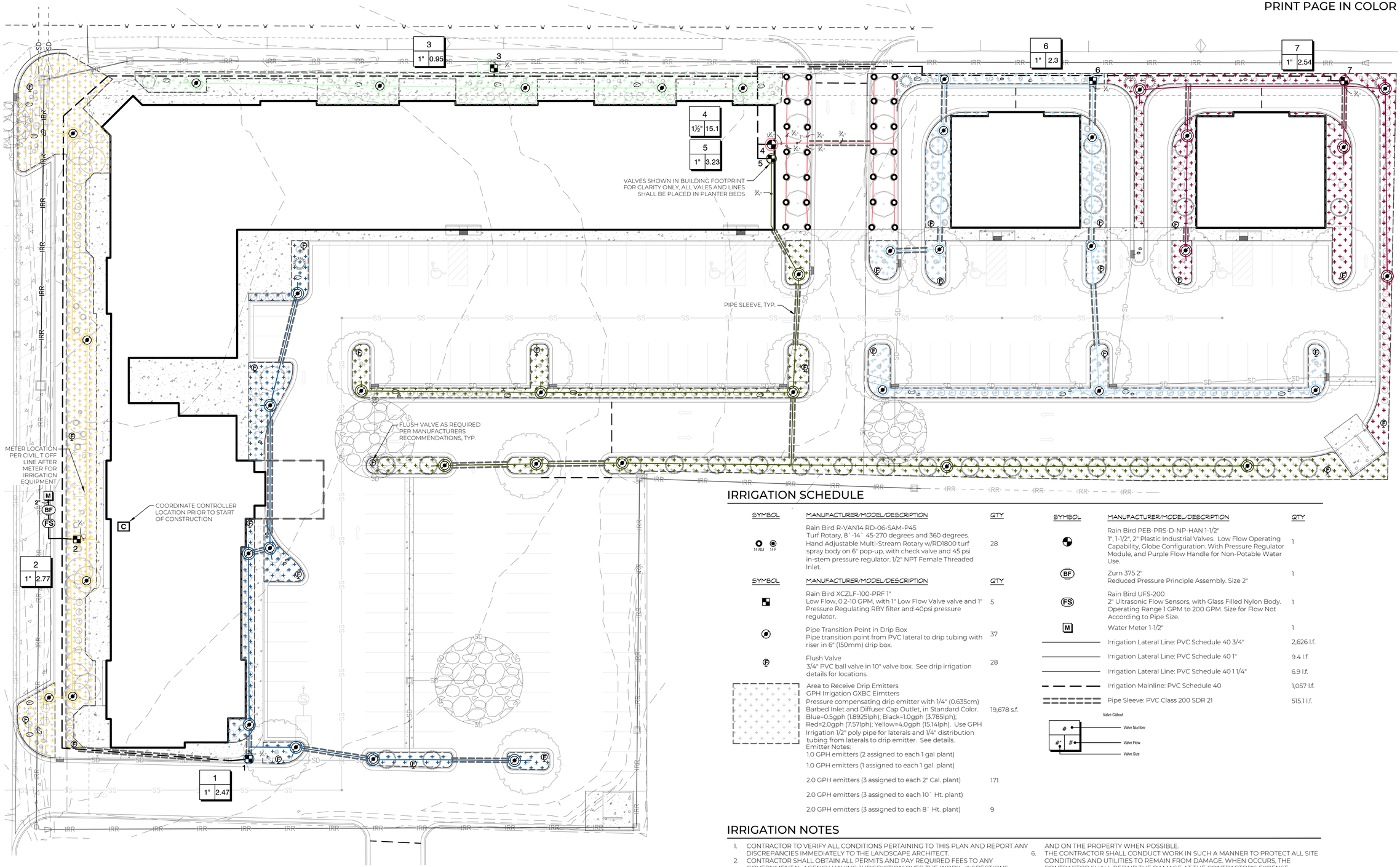
PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L100

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PRINT PAGE IN COLOR



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
14 ADJ 14 F	Rain Bird R-VAN14 RD-06-SAM-P45 Turf Rotary, 8` -14` 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6" pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2" NPT Female Threaded Inlet.	28

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZLF-100-PRF 1" Low Flow, 0.2-10 GPM, with 1" Low Flow Valve valve and 1" Pressure Regulating RBY filter and 40psi pressure regulator.	5
	Pipe Transition Point in Drip Box Pipe transition point from PVC lateral to drip tubing with riser in 6" (150mm) drip box.	37
	Flush Valve 3/4" PVC ball valve in 10" valve box. See drip irrigation details for locations.	28
	Area to Receive Drip Emitters GPH Irrigation GXBC Eimtters Pressure compensating drip emitter with 1/4" (0.635cm) Barbed Inlet and Diffuser Cap Outlet, in Standard Color. Blue=0.5gph (1.8925lph); Black=1.0gph (3.785lph); Red=2.0gph (7.57lph); Yellow=4.0gph (15.14lph). Use GPH Irrigation 1/2" poly pipe for laterals and 1/4" distribution tubing from laterals to drip emitter. See details. Emitter Notes: 1.0 GPH emitters (2 assigned to each 1 gal plant) 1.0 GPH emitters (1 assigned to each 1 gal. plant) 2.0 GPH emitters (3 assigned to each 2" Cal. plant) 2.0 GPH emitters (3 assigned to each 10` Ht. plant) 2.0 GPH emitters (3 assigned to each 8` Ht. plant)	19,678 s.f. 171 9

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB-PRS-D-NP-HAN 1-1/2" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulator Module, and Purple Flow Handle for Non-Potable Water Use.	1
BF	Zurn 375 2" Reduced Pressure Principle Assembly. Size 2"	1
FS	Rain Bird UFS-200 2" Ultrasonic Flow Sensors, with Glass Filled Nylon Body. Operating Range 1 GPM to 200 GPM. Size for Flow Not According to Pipe Size.	1
M	Water Meter 1-1/2"	1
	Irrigation Lateral Line: PVC Schedule 40 3/4"	2,626 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1"	9.4 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	6.9 l.f.
	Irrigation Mainline: PVC Schedule 40	1,057 l.f.
	Pipe Sleeve: PVC Class 200 SDR 21	515.1 l.f.

Valve Callout
Valve Number
Valve Flow
Valve Size

IRRIGATION NOTES

1. CONTRACTOR TO VERIFY ALL CONDITIONS PERTAINING TO THIS PLAN AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
2. CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY REQUIRED FEES TO ANY GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THE WORK. INSPECTIONS REQUIRED BY LOCAL ORDINANCES DURING CONSTRUCTION SHALL BE ARRANGED AND CONDUCTED BY THE CONTRACTOR.
3. BEFORE ANY TRENCHING, EXCAVATION OR DIGGING BELOW THE SURFACE FOR ANY REASON IS BEGUN, THE CONTRACTOR SHALL HAVE THE AREA "BLUE STAKED" IN ORDER TO DETERMINE AS CLOSE AS POSSIBLE THE LOCATIONS OF ALL UNDERGROUND UTILITIES. SHOULD UTILITIES NOT SHOWN ON THE PLANS BE FOUND DURING EXCAVATIONS THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
4. THE DESIGN PRESSURE FOR THE IRRIGATION SYSTEM IS 40 PSI AT THE FARTHEST SPRAY HEAD. REPORTED AVAILABLE STATIC PRESSURE IS 70 PSI. CONTRACTOR SHALL VERIFY THE AVAILABLE STATIC PRESSURE AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
5. IRRIGATION DESIGN IS DIAGRAMMATIC. PIPING, IRRIGATION VALVES AND OTHER IRRIGATION EQUIPMENT ARE OFTEN SHOWN FOR CLARITY IN AREAS ADJACENT TO LOCATIONS WHERE THEY WILL BE INSTALLED. IRRIGATION LINES AND EQUIPMENT MAY BE SHOWN ON PAVEMENT, INSIDE BUILDINGS OR ACROSS PROPERTY LINES. THE CONTRACTOR SHALL PLACE ALL IRRIGATION LINES, VALVES, ETC. IN PLANTING AREAS AND ON THE PROPERTY WHEN POSSIBLE.
6. THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER TO PROTECT ALL SITE CONDITIONS AND UTILITIES TO REMAIN FROM DAMAGE. WHEN OCCURS, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT THE CONTRACTOR'S EXPENSE.
7. ALL LINE SIZES SHOWN ARE FOR IRRIGATION PIPE. SEE SPECIFICATIONS AND DETAILS FOR SLEEVE SIZES.
8. SLEEVE CONTROL WIRES IN A 2 INCH CONDUIT NEXT TO, OR UNDER, IRRIGATION MAINLINE AS SHOWN IN DETAILS.
9. INSTALL MANUAL DRAINS AT ALL LOW POINTS ON THE MAINLINE.
10. ADJUST ALL RADII ON SPRINKLERS TO NOT SPRAY ONTO BUILDINGS, WALLS, WALKS, SIGNS, OR FENCES.
11. LANDSCAPE CONTRACTOR TO COORDINATE PLANT PLACEMENT WITH SPRINKLERS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER COVERAGE OF ALL IRRIGATED AREAS.
13. INSTALL (WALL MOUNT CONTROLLER IN THE BUILDING, COORDINATE EXACT LOCATION WITH OWNER AND ENSURE SLEEVES RUN TO CONTROLLER FROM OUTSIDE. PROVIDE 120V ELECTRICAL SERVICES FOR THE CONTROLLER (COORDINATE WITH ELECTRICAL ENGINEER).
14. SEE SHEET L-501 AND L-502 FOR LANDSCAPE DETAILS.

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

0 20 40 60 feet
SCALE: 1" = 20'

NORTH

PRIME LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER

2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
JUSTIN KIRK HISLOP
LICENSED LANDSCAPE ARCHITECT
NO. 7841271-5301
180874

REVISIONS

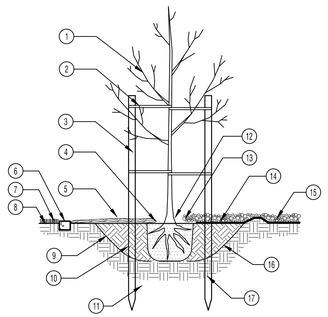
NO.	DATE	DESCRIPTION

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CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L200

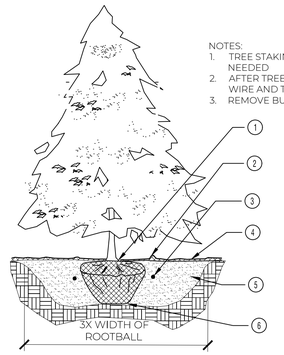
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1. TREE (SEE PLANT SCHEDULE)
2. "CHAINLOCK" OR EQUAL TREE TIE MATERIAL (1" WIDTH). NAIL OR STAPLE TREE TIE MATERIAL TO STAKE TO HOLD VERTICALLY. LOOSELY LOOP EACH TIE AROUND HALF OF TREE TO PROVIDE 1" SLACK FOR TRUNK GROWTH
3. SUPPORT TREE WITH (2) 2" DIA. TREATED LODGEPOLE PINE DOWELED TREE STAKES (8'-0" LENGTH)
4. AFTER PLACING TREE IN HOLE, REMOVE WIRE AND BURLAP FROM THE UPPER HALF OF THE ROOT BALL (MORE IF THE ROOT BALL IS STABLE)
5. 3" DEEP SOIL PEP IN 3' DIA. TREE RING. SEE PLANS FOR TYPE OF EDGING
6. CONCRETE OR TRENCH EDGING, SEE PLANS
7. GRASS
8. FINISH GRADE
9. PLANT PIT SHALL BE THREE TIMES LARGER THAN ROOTBALL. SLOPE EDGES AT 45° AND SCARIFY SIDE BEFORE PLANTING
10. BACKFILL PLANTING PIT WITH WITH NATIVE SOIL OR 1/2 NATIVE SOIL AND 1/2 SPECIFIED BACKFILL MIX
11. DRIVE STAKES 6" TO 1'-0" INTO UNDISTURBED SOIL BEFORE BACKFILLING
12. KEEP MULCH 3" AWAY FROM TREE TRUNK
13. PLACE 1-2" DEPTH OF MULCH OVER ROOT BALL
14. PLACE LANDSCAPE FABRIC UNDER MULCH WITH 12" CLEAR CIRCLE AROUND TREE TRUNK
15. ROCK OR SHREDDED BACK MULCH, SEE PLANS
16. EXCAVATE PLANTING PIT SO THAT THE ROOT FLARE SHALL BE 1-2" ABOVE FINAL GRADE OR 10% OF ROOT BALL
17. UNDISTURBED SUBGRADE

NOTES:
1. TREES ARE PLACED IN EITHER GRASS AREA OR PLANTER BED. SEE PLANS FOR LOCATION.
2. INSTALLATION INCLUDES STAKE REMOVAL ONE YEAR AFTER INSTALLATION.

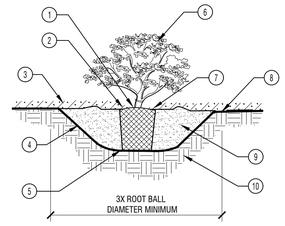
1 TREE PLANTING
3/8" = 1'-0" P-CO-FRA-04



NOTES:
1. TREE STAKING SHOULD ONLY OCCUR WHEN NEEDED
2. AFTER TREE PLACEMENT CUT AND REMOVE ALL WIRE AND TIES FROM ROOTBALL
3. REMOVE BURLAP FROM TOP 2/3 OF ROOTBALL

1. SET BOTTOM OF ROOT FLARE 1"-2" ABOVE FINISH GRADE
2. MULCH SAUCER, EXTENDED 6" PAST ROOTBALL, TYP.
3. PLANT TABLET, TYP.
4. FINISH GRADE, SEE PLANS FOR MULCH MATERIAL AND DEPTH
5. BACKFILL PER SPECIFICATIONS
6. SET ROOTBALL ON NATIVE UNDISTURBED SOIL

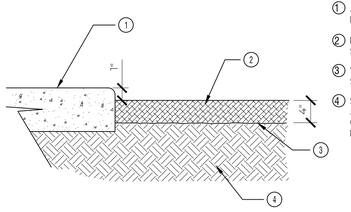
2 STANDARD EVERGREEEN PLANTING
1" = 1" P-CO-FRA-14



1. KEEP MULCH 3" AWAY FROM TRUNK
2. NO MORE THAN 1" OF MULCH ON TOP OF ROOT BALL
3. 3" DEEP MULCH
4. SLOPE SIDES AND LOOSEN SOIL
5. ROOT BALL TO REST ON EXISTING OR RE-COMPACTED SOIL
6. SHRUB - SEE PLANTING PLAN
7. SOIL BACKFILL SHALL NOT BE ABOVE ROOT COLLAR
8. FINISH GRADE
9. BACKFILL MIXTURE
10. EXISTING SOIL

NOTES:
1. RETAIN NATURAL SHAPE OF SHRUB.
2. DO NOT PRUNE PRIOR TO INSTALLATION.

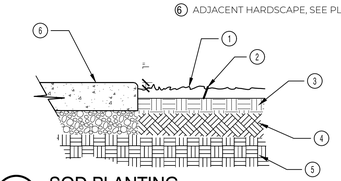
3 SHRUB PLANTING
3/8" = 1'-0" P-CO-FRA-02



1. ADJACENT HARDSCAPE (SEE PLAN FOR MATERIAL)
2. ROCK MULCH PER LANDSCAPE SCHEDULE
3. WEED BARRIER FABRIC WHEN SPECIFIED AS ROCK MULCH
4. SUBGRADE - REMOVE HIGH AND LOW POINTS TO PROVIDE CONSISTENT APPLICATION OF MULCH

NOTES:
SEE PLAN FOR MULCH MATERIAL, COLOR & TYPE
SUBMIT 1 GAL. SAMPLES TO OWNER FOR APPROVAL

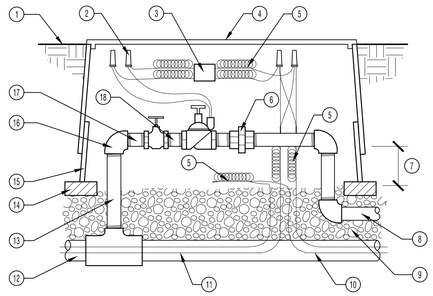
4 MULCH
1" = 1" P-CO-FRA-05



1. SOD
2. TIGHT BEVELED JOINTS
3. TOP SOIL 4" MINIMUM
4. TRANSITION LAYER TOP SOIL & NATIVE SOIL MIX
5. UNDISTURBED OR COMPACTED SUBGRADE
6. ADJACENT HARDSCAPE, SEE PLAN

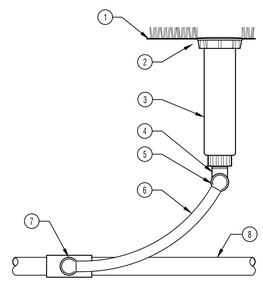
NOTES:
1. ENSURE SMOOTH TRANSITION WHEN PATCHING OR TYING INTO EXISTING LAWNS.
2. MATCH SPECIES OF ADJACENT TURF.

5 SOD PLANTING
1" = 1'-0" P-CO-FRA-16



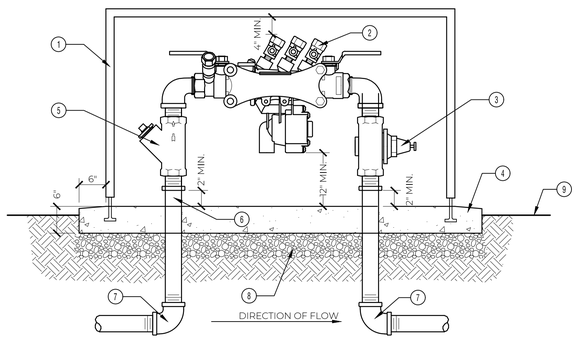
1. FINISH GRADE
2. WATERTIGHT WIRE SPLICE (TYP.)
3. VALVE DECODER
4. RECTANGULAR HEAVY DUTY PLASTIC VALVE BOX
5. 36" COILED SPARE WIRE (TYP.)
6. SCH. 80 PVC NIPPLE
7. 4" CLEARANCE BETWEEN GRAVEL AND VALVE
8. SCH. 40 PVC LATERAL (12" DEEP MIN.)
9. 6" DEEP GRAVEL SUMP
10. TWO-WIRE CONTROL CABLE
11. TAPE WIRE TO SIDE OF MAINLINE AT 10'-0" O.C.
12. SCH. 40 PVC MAINLINE (18" DEEP MIN.)
13. SCH. 80 PVC SS T.O.E. NIPPLE (TYP.)
14. PAVING BRICK (TYP.)
15. VALVE BOX EXTENSION AS REQUIRED
16. SCH. 80 TT90 (TYP.)
17. SCH. 80 PVC NIPPLE AND GATE VALVE
18. SCH. 80 PVC THREADED NIPPLE

6 REMOTE CONTROL VALVE
1 1/2" = 1'-0" P-CO-FRA-17



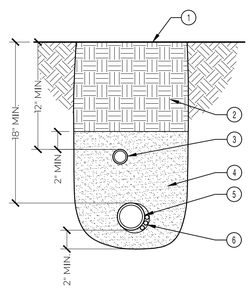
1. FINISH GRDE
2. FIRM SOIL IMMEDIATELY AROUND HEAD
3. POP-UP SPRAY HEAD
4. 90° MARLEX STREET ELL
5. 90° MARLEX ELL BARBED INSERT FITTING
6. LINEAR LOW DENSITY POLYETHYLENE PIPE (14" LONG MINIMUM, 24" LONG MAXIMUM)
7. 90° MARLEX ELL BARBED INSERT FITTING
8. PVC LATERAL LINE

7 4"-6" POP UP SPRAY HEAD
3" = 1'-0" P-CO-FRA-09



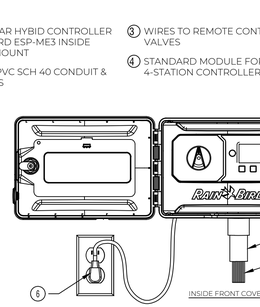
1. BACKFLOW ENCLOSURE
2. REDUCED PRESSURE BACKFLOW PREVENTER
3. PRESSURE REGULATOR
4. SLOPE TO DRAIN. 0.5% MIN (TYP.)
5. WYE STRAINER
6. GALVANIZED NIPPLE
7. GALVANIZED ELBOW
8. 6" GRANULAR FILL
9. FINISH GRADE

8 BACKFLOW PREVENTOR W/ ENCLOSURE
3/4" = 1'-0" P-CO-FRA-11



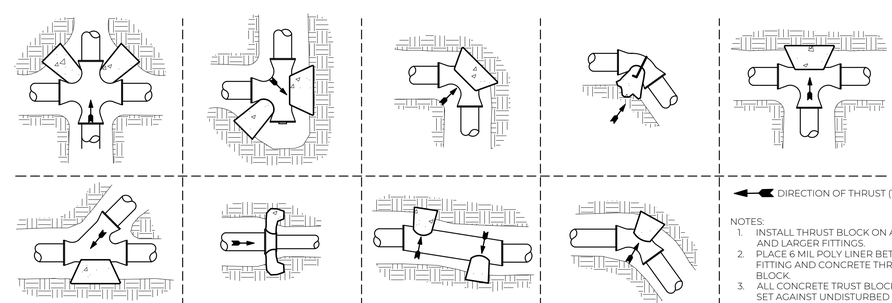
1. FINISH GRADE
2. COMPACTED BACKFILL
3. LATERAL PVC LINE (18" DEEP FOR ROTOR HEAD INSTALLATIONS)
4. 2" SAND OR ROCK-FREE SOIL AROUND ALL PIPE
5. PVC MAINLINE
6. TAPE WIRES TO SIDE OF MAINLINE AT 10'-0" O.C.

9 TRENCH SECTION
1 1/2" = 1'-0" P-CO-FRA-12



1. MODULAR HYBID CONTROLLER RAIN BIRD ESP-ME3 INSIDE WALL MOUNT
2. 1 INCH PVC SCH 40 CONDUIT & FITTINGS
3. WIRES TO REMOTE CONTROL VALVES
4. STANDARD MODULE FOR 4-STATION CONTROLLERS
5. OPTIONAL MODULES AS NEEDED PER PLAN
6. STANDARD 120 V PLUG
7. 120 VAC, 60 HZ INTERNAL TRANSFORMER

10 ESP-ME3 MODULAR HYRBRID CONTROLLER
3/4" = 1'-0" P-CO-FRA-10



DIRECTION OF THRUST (TYP.)

NOTES:
1. INSTALL THRUST BLOCK ON ALL 3" AND LARGER FITTINGS.
2. PLACE 6 MIL POLY LINER BETWEEN FITTING AND CONCRETE THRUST BLOCK.
3. ALL CONCRETE TRUST BLOCKS TO BE SET AGAINST UNDISTURBED SOIL.
4. FITTINGS SHALL BE CAST IRON WITH MEGA-LUGS.

11 THRUST BLOCKS
1" = 1'-0" P-CO-FRA-13

PRIME
LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER
2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
DUSTIN KIRK HISLOP
NO. 8067409-5301
LICENSED LANDSCAPE ARCHITECT

REVISIONS

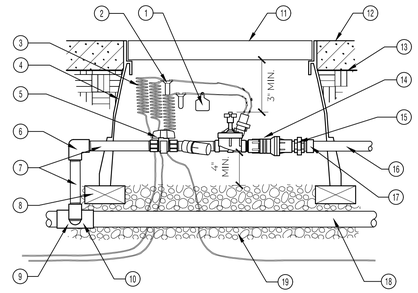
NO.	DATE	DESCRIPTION

PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
PLANTING IRRIGATION DETAILS

SHEET NUMBER:
L500

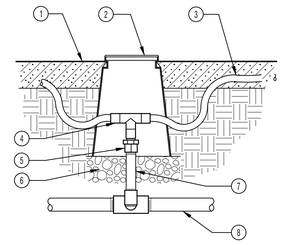
© COPYRIGHT PRIME LANDSCAPE ARCHITECTURE



1. VALVE ID TAG
2. WATER PROOF CONNECTORS
3. 24" COILED WIRE (TYP.)
4. VALVE BOX EXTENSION AS REQUIRED
5. BALL VALVE
6. SCH. 80 PVC ELL
7. SCH. 80 PVC NIPPLE (LENGTH AS REQUIRED)
8. PAVING BRICK (TYP.)
9. SCH. 40 PVC TEE OR ELL
10. SCH. 80 PVC NIPPLE (2" LENGTH, HIDDEN) AND SCH. 40 PVC ELL
11. RECTANGULAR HEAVY DUTY PLASTIC VALVE BOX
12. TOP OF MULCH
13. FINISH GRADE
14. DRIP IRRIGATION ZONE ASSEMBLY
15. SCH. 80 PVC NIPPLE AND UNION
16. PVC LATERAL
17. SCH. 40 PVC MALE ADAPTER
18. MAINLINE
19. 6" DEEP GRAVEL SUMP

1 DRIP REMOTE CONTROL VALVE

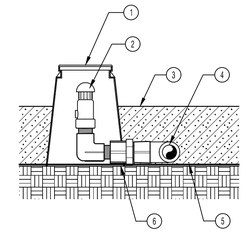
1 1/2" = 1'-0" P-CO-FRA-01



1. TOP OF MULCH
2. 6" ROUND BOX
3. DRIP TUBING
4. COMPRESSION TEE
5. 3/4" FPT X 1/2" DRIP TUBING ADAPTER
6. 3" LAYER OF WASHED GRAVEL. THE BOX SHALL REST ON THE ROCK BED. DO NOT EXTEND GRAVEL INTO BOX
7. 3/4" SCHEDULE 80 NIPPLE, LENGTH AS REQUIRED
8. PVC LATERAL LINE

2 DRIPLINE CONNECTION IN BOX

1 1/2" = 1'-0" P-CO-FRA-07



1. 6" ROUND VALVE BOX
2. AIR RELIEF VALVE
3. TOP OF MULCH
4. DRIPLINE BARBED OR COMPRESSION TEE
5. LANDSCAPE FABRIC
6. FINISH GRADE

3 DRIPLINE AIR RELEIF VALVE

1 1/2" = 1'-0" P-CO-FRA-03

1. RECTANGULAR PLASTIC VALVE BOX
2. FINISH GRADE
3. TOP OF MULCH
4. PRESSURE GAUGE FACE UP
5. PVC SCH. 80 NIPPLE
6. BALL VALVE
7. PVC SCH. 40 TEE
8. 4" DEEP GRAVEL SUMP
9. 18" MINIMUM FLEXIBLE HOSE
10. EXTENSION AS REQUIRED
11. PVC DRIPLINE HEADER
12. PAVING BRICK (TYP.)

4 DRIPLINE FLUSH VALVE

1" = 1'-0" P-CO-FRA-06

NOTES:
1. BOTH PRESSURE COMPENSATION EMITTER WITH DIFFUSION CAP OR XERI-BUG EMITTER WITH DIFFUSER BUG CAP ARE SHOWN. SEE IRRIGATION EQUIPMENT SCHEDULE FOR WHICH DEVICE TO BE USED.
2. MORE EMITTERS MAY BE REQUIRED. SEE IRRIGATION EQUIPMENT SCHEDULE.

1. PRESSURE COMPENSATING MODULE WITH DIFFUSING CAP
2. 1/4" BARB TRANSFER TEE
3. DIFUSSER BUG CAP
4. SINGLE OUTLET EMITTER: RAIN BIRD XERI-BUG
5. 1/4" TUBING STAKE
6. 1/2" OR 3/4" SUPPLY TUBING

5 EMITTERS AROUND PLANT

6" = 1'-0" P-CO-FRA-08

PRIME LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER
2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
DUSTIN KIRK HISLOP
LICENSED LANDSCAPE ARCHITECT
NO. 8067409-5301

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
IRRIGATION DETAILS

SHEET NUMBER:
L501

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SECTION 32 8423

UNDERGROUND SPRINKLERS

PART 1 GENERAL

1.01 SUMMARY

A. THE WORK COVERED BY THESE SPECIFICATIONS CONSISTS OF FURNISHING ALL LABOR, MATERIAL, EQUIPMENT AND SUPPLIES IN PERFORMING ALL OPERATIONS IN CONNECTION WITH PROVIDING AN IRRIGATION SYSTEM AND ALL SITE WORK IN STRICT ACCORDANCE WITH PROVIDED SPECIFICATIONS, DETAILS, AND DRAWINGS.

B. ANY MINOR ITEMS OF LABOR AND/OR MATERIALS NOT SPECIFICALLY NOTED ON THE DRAWINGS OR SPECIFICATIONS; BUT OBVIOUSLY NECESSARY FOR THE PROPER COMPLETION OF THE WORK, ARE TO BE CONSIDERED AS INCIDENTAL TO AND ARE TO BE INCLUDED IN THE CONTRACT. CONTRACTOR SHALL NOTE SUCH ITEMS AND PRESENT THEM TO OWNER BEFORE BID OPENING.

C. CONTRACTOR SHOULD SUBMIT CONSTRUCTION SCHEDULE OF ANTICIPATED WORK TIME TO FACILITATE TIMELY VISITS FOR REVIEW OF WORK. SUCH PROPOSAL SHALL INCLUDE A PROJECTED TIME FRAME FOR INSTALLING THE SYSTEM. IT SHOULD REFLECT, IN CALENDAR DAYS, THE ANTICIPATED TIME REQUIRED FROM THE DAY OF THE AWARD TO COMPLETION OF THE SYSTEM IN A FULLY OPERATIONAL MODE. THIS SCHEDULE SHOULD REFLECT ANTICIPATED TIME FOR ORDERING AND RECEIVING ALL COMPONENTS, STARTING AND ENDING TIMES FOR INSTALLATION, SYSTEM START-UP, ETC.

D. IT IS THE DESIRE OF THE OWNER TO HAVE A FULLY OPERATIONAL SYSTEM AS SOON AS POSSIBLE. SET DATE WITH OWNER BASED ON APPROVED CONSTRUCTION SCHEDULE. OWNER RESERVES THE RIGHT TO DEDUCT TWO HUNDRED DOLLARS ($200) PER DAY FOR WORK COMPLETED AFTER THE TIME LIMIT EXPIRES.

1.02 SECTION INCLUDES

A. PIPE AND FITTINGS, VALVES, SPRINKLER HEADS, AND ACCESSORIES.

B. PROVIDE AUTOMATIC IRRIGATION SYSTEM DESIGN AND INSTALLATION FOR ALL LANDSCAPED AREA PROVIDING ADEQUATE WATERING TO ALL TREES, SHRUBS, PERENNIALS, GROUNDCOVERS, AND TURF.

1.03 DEFINITION

A. CIRCUIT PIPING: DOWNSTREAM FROM CONTROL VALVES TO SPRINKLERS, SPECIALTIES, AND DRAIN VALVES. PIPING IS UNDER PRESSURE DURING FLOW.

B. DRAIN PIPING: DOWNSTREAM FROM CIRCUIT-PIPING DRAIN VALVES. PIPING IS NOT UNDER PRESSURE.

C. MAINLINE PIPING: DOWNSTREAM FROM POINT OF CONNECTION TO WATER DISTRIBUTION PIPING TO AND INCLUDING CONTROL VALVES. PIPING IS UNDER WATER DISTRIBUTION SYSTEM PRESSURE.

1.04 PROJECT CONDITIONS

A. IRRIGATION WATER SHALL BE PROVIDED BY THE FOLLOWING:

1. WATER SYSTEM TO BE CONNECTED TO EXISTING MAINLINE.
2. DESIGN PRESSURE OF THE IRRIGATION DESIGN IS 95 PSI.

1.05 SYSTEM PERFORMANCE REQUIREMENTS

A. MINIMUM WATER COVERAGE:

1. IRRIGATION HEADS IN LAWN AREAS SHALL BE SPACED 85% OF THE RADIUS FOR ROTORS AND 90% OF THE RADIUS FOR SPRAY HEADS.
2. SHRUBS, PERENNIALS, AND GROUNDCOVERS SHALL HAVE ADEQUATE WATER APPLIED TO THE ROOT ZONES TO ENSURE PLANT HEALTH AND DEVELOPMENT.

B. THE IRRIGATION SYSTEM SHALL PROVIDE THE MANUFACTURER'S RECOMMENDED MINIMUM OPERATION PRESSURE TO EVERY HEAD. THE PIPE SYSTEM SHALL HAVE SUFFICIENT PRESSURE TO OVERCOME THE LOSSES DUE TO FRICTION IN PIPING, FITTINGS, AND ALL OTHER EQUIPMENT. WATER SPEED IN THE PIPES SHALL NOT EXCEED 5 FEET PER SECOND IN THE IRRIGATION MAINLINE AND LATERAL PIPING.

C. THE IRRIGATION SYSTEM SHALL PROVIDE THE MANUFACTURER'S RECOMMENDED MINIMUM OPERATION PRESSURE TO EVERY IRRIGATION HEAD.

D. GROUP IRRIGATION HEADS INTO CIRCUITS HAVING SIMILAR HYDROZONE REQUIREMENTS.

E. MINIMUM WORKING PRESSURES: THE FOLLOWING ARE MINIMUM PRESSURE REQUIREMENTS FOR PIPING,

VALVES, AND SPECIALTIES, UNLESS OTHERWISE INDICATED:

1. PRESSURE PIPING: 200 PSIG.
2. CIRCUIT PIPING: 150 PSIG.
3. DRAIN PIPING: 100 PSIG.

1.06 REFERENCE STANDARDS

A. ASTM D2241 - STANDARD SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PRESSURE-RATED PIPE

(SDR SERIES); 2015.

B. NEMA 250 - ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM); 2014.

1.07 SUBMITTALS

A. SEE SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL PROCEDURES.

B. PRODUCT DATA: SUBMIT TECHNICAL PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR IRRIGATION SYSTEM MATERIALS AND PRODUCTS.

C. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS OR "AS BUILT" DRAWINGS FOR IRRIGATION SYSTEMS SHOWING PIPING MATERIALS, SIZES, LOCATIONS, AND ELEVATIONS. INCLUDE DETAILS OF UNDERGROUND STRUCTURES, CONNECTIONS, THRUST BLOCKS, AND ANCHORING. SHOW INTERFACE AND SPATIAL RELATIONSHIP BETWEEN PIPING AND PROXIMATE STRUCTURES.

D. OPERATION AND MAINTENANCE DATA: INCLUDE IN MAINTENANCE MANUALS SPECIFIED IN DIVISION 1.

INCLUDE DATA FOR THE FOLLOWING:

1. PROVIDE TYPEWRITTEN INSTRUCTIONS FOR OPERATION AND MAINTENANCE OF SYSTEM AND CONTROLS, SEASONAL ACTIVATION AND SHUTDOWN, AND MANUFACTURER'S PARTS CATALOG.
2. PROVIDE SCHEDULE INDICATING LENGTH OF TIME EACH VALVE IS REQUIRED TO BE OPEN TO PROVIDE A DETERMINED AMOUNT OF WATER.
3. SUBMIT MANUALS WITH RECORD DRAWINGS. THE MANUAL SHALL ALSO CONTAIN:

a. IDENTIFICATION READABLE FROM THE OUTSIDE OF THE COVER STATING BY WHOM THE INFORMATION WAS COMPILED.

b. NEATLY TYPE-WRITTEN INDEX NEAR THE FRONT OF THE MANUAL, FURNISHING IMMEDIATE

INFORMATION AS TO THE LOCATION IN THE MANUAL OF ALL EMERGENCY DATA REGARDING THE

INSTALLATION.

c. COMPLETE NOMENCLATURE OF ALL REPLACEABLE PARTS, THEIR PART NUMBERS, CURRENT COST, AND

NAME AND ADDRESS OF THE NEAREST VENDOR OF REPLACEMENT PARTS.

d. COMPLETE OUTLINE OF FUTURE WATERING SCHEDULES AND WHEN THEY SHOULD BE CHANGED FROM

THE INITIAL INSTALLATION SCHEDULE. THE INITIAL SCHEDULE IS CALCULATED FOR A WATERING RATE TO

ESTABLISH LAWN.

e. COPY OF ALL GUARANTEES AND WARRANTIES ISSUED ON THE INSTALLATION SHOWING ALL DATES OF EXPIRATION.

E. RECORD DRAWINGS: AS INSTALLATION OCCURS, PREPARE ACCURATE RECORD DRAWINGS OF PIPING SYSTEM TO BE SUBMITTED PRIOR TO FINAL INSPECTION THAT ALSO INCLUDES:

1. DETAIL AND DIMENSION CHANGES MADE DURING CONSTRUCTION
2. SIGNIFICANT DETAILS AND DIMENSIONS NOT SHOWN IN THE APPROVED CONTRACT DOCUMENTS.
3. FIELD DIMENSIONED LOCATIONS OF VALVE BOXES, MANUAL DRAINS, CONTROL WIRE RUNS NOT IN MAINLINE DITCH, AND BOTH ENDS OF SLEEVES.
4. TAKE DIMENSIONS FROM PERMANENT CONSTRUCTED SURFACES OR EDGES LOCATED AT OR ABOVE FINISH GRADE.
5. TAKE AND RECORD DIMENSIONS AT TIME OF INSTALLATION.

F. PROVIDE REDUCED COPY OF RECORD DRAWINGS AT HALF-SIZE WITH COLOR KEY CIRCUITS AND LAMINATE BOTH SIDES WITH 5 MIL THICK OR HEAVIER PLASTIC. MOUNT ON 1/4 INCH PLYWOOD BOARD. DRILL TWO 1/2 INCH HOLES AT TOP OF BOARD AND HANG ON HOOKS IN CUSTODIAL ROOM OR AS DIRECTED BY PROJECT REPRESENTATIVE.

G. MAINTENANCE MATERIALS: PROVIDE THE FOLLOWING FOR OWNER'S USE IN MAINTENANCE OF PROJECT.

1. EXTRA SPRINKLER HEADS: ONE OF EACH TYPE AND SIZE.
2. EXTRA VALVE BOX KEYS: ONE.
3. WRENCHES: ONE FOR EACH TYPE HEAD CORE AND FOR REMOVING AND INSTALLING EACH TYPE HEAD.

H. WARRANTY DOCUMENTS: WARRANTY DOCUMENTS SHALL BE SUBMITTED TO OWNER AT THE TIME OF FINAL INSPECTION.

I. IN ORDER TO RECEIVE CREDIT IN THE RAIN BIRD "MAXI DOLLAR" PROGRAM THE OWNER REQUIRES THAT THE CONTRACTOR SUBMIT COPIES OF ALL INVOICES SHOWING RAIN BIRD PRODUCTS PURCHASED FOR THE PROJECT COMPLETE WITH PRICING AND QUANTITIES.

1.08 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS: LICENSED FIRMS REGULARLY ENGAGED IN MANUFACTURE OF IRRIGATION SYSTEM PRODUCTS OF TYPES, MATERIALS AND SIZES SPECIFIED, WHOSE PRODUCTS HAVE BEEN IN USE IN SIMILAR SERVICE.

B. WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH LATEST RULES AND REGULATIONS, AND OTHER APPLICABLE STATE OR LOCAL LAWS. NOTHING IN APPROVED CONTRACT DOCUMENTS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

C. PRE-INSTALLATION MEETING: SCHEDULE MEETING AFTER EXCAVATION OF TRENCHES AND INSTALLATION OF SLEEVES, BUT PRIOR TO INSTALLATION OF PIPE.

D. INSTALLER QUALIFICATIONS: LICENSED CONTRACTING FIRM REGULARLY ENGAGED IN SUCCESSFUL INSTALLATION OF IRRIGATION SYSTEMS SIMILAR IN SIZE AND SCOPE OF THIS CONTRACT. OWNER RESERVES THE RIGHT TO ASK FOR AND VERIFY REFERENCES FROM CONTRACTORS PAST PORTFOLIO OF WORK BEFORE AWARD OF CONTRACT.

1.09 CODES AND STANDARDS

A. PLUMBING CODE COMPLIANCE: COMPLY WITH ANY APPLICABLE PORTIONS OF THE UTAH STATE PLUMBING

CODE PERTAINING TO THE SELECTION OF MATERIALS AND THE INSTALLATION OF IRRIGATION SYSTEMS.

B. WATER PURVEYOR COMPLIANCE: COMPLY WITH REQUIREMENTS OF PURVEYOR SUPPLYING WATER TO THE PROJECT.

C. ANY PERMITS THAT ARE NEEDED FOR THE INSTALLATION OF CONSTRUCTION OF ANY WORK INCLUDED UNDER THIS CONTRACT, WHICH ARE REQUIRED BY THE AUTHORITIES OF JURISDICTION, SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR FOLLOWING WHATEVER ORDINANCES, REGULATIONS AND CODES REQUIRING THE PERMITS. IF THE AUTHORITIES OF THE JURISDICTION REQUIRE INSPECTION AT SAID POINTS OF THE INSTALLATION, THE CONTRACTOR SHALL ARRANGE FOR, AND BE PRESENT AT, ANY SUCH INSPECTIONS.

D. ADDITIONAL WORK OR FURNISHING OF MATERIALS REQUIRED DUE TO INSPECTION BY THE AUTHORITIES OF JURISDICTION SHALL BE FURNISHED AT NO COST TO THE OWNER. IN THE EVENT THAT THE SPECIFICATIONS FOR THIS PROJECT AND EXISTING ORDINANCES, REGULATIONS OR CODES ARE IN CONFLICT, THE CONFLICT SHALL BE NOTED IN WRITING BY THE CONTRACTOR TO THE OWNER'S AUTHORIZED REPRESENTATIVE, AND ANY NECESSARY CHANGES IN WORK SHALL FOLLOW AN ESTABLISHED PROCEDURE FOR CLAIMS FOR EXTRA COMPENSATION.

1.10 CONTRACTORS USE OF PREMISES

A. CONTRACTOR IS RESPONSIBLE FOR DAMAGES AND INTERRUPTION OF ALL EXISTING UTILITIES.

B. CONTRACTOR SHALL NOT UNREASONABLY ENCUMBER SITE WITH MATERIALS AND EQUIPMENT.

C. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PROTECTION AND SECURITY OF MATERIALS AND EQUIPMENT STORED ON JOB SITE.

D. CONTRACTOR SHALL CONFINE OPERATIONS TO AREAS WITHIN HIS CONTRACT LIMITS.

E. ANY DAMAGES TO EXISTING STRUCTURES, SURFACES, OR UTILITIES CAUSED BY CONTRACTOR OR CONTRACTOR'S EMPLOYEES SHALL BE CONSIDERED CONTRACTOR'S RESPONSIBILITY AND WILL BE PART OF THIS CONTRACT TO BE CORRECTED TO SATISFACTION OF OWNER.

F. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY LOCATING SERVICES AND KEEPING UTILITIES CLEARLY MARKED ON THE JOB SITE. SCHOOL-OWNED UTILITIES AND PIPING WILL BE MARKED BY SCHOOL DISTRICT PERSONNEL; HOWEVER, CONTRACTOR IS RESPONSIBLE TO CONTACT THE DISTRICT MAINTENANCE DEPARTMENT TO SCHEDULE LOCATING AND MUST GIVE ADEQUATE TIME FOR LOCATING TO BE DONE. ANY UTILITIES, WIRING, OR PIPING DAMAGED BY CONTRACTOR WITHOUT FOLLOWING THESE GUIDELINES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

G. CONTRACTOR IS RESPONSIBLE FOR SAFETY ON JOB SITE. BARRICADING OR COVERING OPEN TRENCHES, ELIMINATING TRIP HAZARDS, AND OTHER SAFETY ISSUES ARE A PRIORITY. RENTAL OR SUPPLYING OF BARRICADES IS CONTRACTOR'S RESPONSIBILITY.

1.11 PERFORMANCE BOND/BID BOND/INSURANCE

A. THE OWNER SHALL HAVE THE RIGHT TO REQUIRE THE CONTRACTOR TO FURNISH BONDS COVERING FAITHFUL PERFORMANCE OF THE CONTRACT AND PAYMENT OF OBLIGATIONS ARISING THEREUNDER AS STIPULATED IN BIDDING REQUIREMENTS. A BID BOND, CERTIFIED CHECK, OR CASHIERS CHECK EXECUTED IN FAVOR OF OWNER IN THE AMOUNT OF FIVE PERCENT (5%) OF THE TOTAL BID PRICE MUST BE SUBMITTED WITH THE PROPOSAL AS GUARANTEE THAT BIDDER IS WILLING TO ENTER INTO A CONTRACT. BIDDER MUST ALSO BE ABLE TO PROVIDE A ONE HUNDRED PERCENT (100%) PERFORMANCE AND PAYMENT BOND AT TIME OF AWARD OF CONTRACT.

B. SUCCESSFUL CONTRACTOR MUST MEET FEDERAL, STATE, COUNTY AND CITY CODES AND REGULATIONS. PROOF OF LIABILITY INSURANCE AND WORKMEN'S COMPENSATION MUST BE SUBMITTED WITH BID.

1.12 SUPERVISION

A. THE CONTRACTOR SHALL PROVIDE A COMPETENT SUPERINTENDENT AND ANY NECESSARY ASSISTANTS ON THE PROJECT WHEN WORK IS IN PROGRESS. THE SUPERINTENDENT SHALL NOT BE CHANGED DURING THE PROJECT WITHOUT THE CONSENT OF THE OWNER'S REPRESENTATIVE UNLESS THE SUPERINTENDENT CEASES HIS STATUS AS AN EMPLOYEE OF THE CONTRACTOR. THE SUPERINTENDENT SHALL REPRESENT THE CONTRACTOR IN THE CONTRACTOR'S ABSENCE, AND ALL DIRECTIONS GIVEN TO HIM BY THE OWNER'S REPRESENTATIVE SHALL BE BINDING AS IF THEY WERE GIVEN TO THE CONTRACTOR.

B. THE CONTRACTOR'S SUPERINTENDENT SHALL SUPERVISE THE CONTRACTOR'S EMPLOYEES ON THE JOB SITE AND BE RESPONSIBLE FOR THEIR ACTIONS AND CONDUCT ON THE JOB SITE.

1.13 GUARANTEE

A. SUBMIT ONE-YEAR WRITTEN GUARANTEE SIGNED BY UNDERGROUND SPRINKLER CONTRACTOR, AGREEING TO REPAIR OR REPLACE ALL DEFECTS IN MATERIAL, EQUIPMENT, AND WORKMANSHIP.

B. GUARANTEE SHALL ALSO COVER REPAIR OF DAMAGE TO ANY PART OF THE PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIAL, EQUIPMENT, AND WORKMANSHIP TO THE SATISFACTION OF THE OWNER. REPAIRS IF REQUIRED, SHALL BE DONE PROMPTLY AT NO COST TO THE OWNER.

1.14 SEQUENCING AND SCHEDULING

A. MAINTAIN UNINTERRUPTED WATER SERVICE TO BUILDING DURING NORMAL WORKING HOURS. ARRANGE FOR TEMPORARY WATER SHUTOFF WITH OWNER.

B. COORDINATE LAWN IRRIGATION PIPING WITH WORK SPECIFIED IN DIVISION 32 9223 "SODDING" AND 32 9300 "PLANTS".

C. COORDINATE LAWN IRRIGATION PIPING WITH UTILITY WORK.

PART 2 PRODUCTS

2.01 IRRIGATION SYSTEM

A. MANUFACTURERS:

1. RAIN BIRD SALES, INC: WWW.RAINBIRD.COM/#SLE.
2. HYDROPOINT DATA SYSTEMS, INC.: WWW.HYRDOPOINT.COM

2.02 FILL MATERIAL

A. BACKFILL MATERIAL

1. BACKFILL MATERIAL FOR IRRIGATION PIPE SHALL CONSIST OF SAND, NATIVE MATERIAL OR TOPSOIL WITH NO ROCKS LARGER THAN 1/4 INCH IN ANY DIMENSION FOR PIPE BEDDING HAUNCHES AND INITIAL BACKFILL ABOVE THE PIPE. ABOVE THE INITIAL BACKFILL, THE TRENCH SHALL BE FILLED WITH SOIL WITH NO DEBRIS OR ROCKS GREATER THAN 1-1/2 INCH IN ANY DIRECTION. LANDSCAPE ARCHITECT SHALL APPROVE ON-STIE MATERIAL FOR BACKFILL OPERATION.
2. BACKFILL FOR IRRIGATION SLEEVES UNDER PAVEMENT SHALL CONSIST OF GRANULAR MATERIAL WITH NO ROCK SIZE LARGER THAN 1/4 INCH IN ANY DIMENSION UP TO THE BASE FOR THE PAVING ABOVE THE PIPE.
3. IMPORTED BACKFILL MATERIAL SHALL BE CLEAN SOIL, FREE FROM ORGANIC MATERIAL, TRASH, DEBRIS, RUBBISH, BROKEN CEMENT, ASPHALT MATERIAL, OR OTHER OBJECTIONABLE SUBSTANCES AND APPROVED BY THE LANDSCAPE ARCHITECT.

B. DRAINAGE FILL MATERIAL

1. WASHED, EVENLY GRADED MIXTURE OF CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL, WITH 100% PASSING A 1-1/2 INCH SIEVE AND NOT MORE THAN 5% PASSING A NO. 4 SIEVE.

2.03 PIPE MATERIALS

A. PVC PIPE: ASTM D2241; 200 PSI (1.38 MPA) PRESSURE RATED UPSTREAM FROM CONTROLS, 160 PSI (1.10 MPA) DOWNSTREAM; SOLVENT WELDED SOCKETS.

1. ALL LATERAL PIPING SMALLER THAN 3", SHALL BE SCHEDULE 40 PRESSURE RATED PVC GLUE JOINT PIPE WITH RATINGS PRINTED ON OUTSIDE OF PIPE.
2. ALL MAIN LINE PIPE 3" AND LARGER SHALL BE CLASS 200 PRESSURE RATED PVC GASKET JOINT PIPE WITH RATINGS PRINTED ON OUTSIDE OF PIPE, UNLESS OTHERWISE NOTED ON DRAWINGS OR DETAILS.
3. ALL LATERAL PIPE AND FITTINGS SHALL BE SCHEDULE 40 PRESSURE RATED PVC UNLESS SPECIFICALLY NOTED ON DRAWINGS.
4. ALL MAIN PRESSURE SIDE VALVE MANIFOLD PIPING SHALL BE DOMESTIC GALVANIZED IRON PIPE AND FITTINGS. ALL GALVANIZED IRON PIPE AND FITTING CONFIGURATIONS SHALL MATCH DETAIL DRAWINGS EXACTLY.

B. POLYETHYLENE PIPE:

1. PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH MANUFACTURER'S NAME, SIZE, SCHEDULE, TYPE, AND WORKING PRESSURE.
2. ALL IRRIGATION LATERAL PIPING SHALL BE POLYETHYLENE PLASTIC PIPE ID CONTROLLED PE 3408, ASTM 2239.

C. FITTINGS:

1. MAINLINES SHALL HAVE PVC SCH. 40 FITTINGS FOR PIPE SIZES 3/4 INCH THROUGH 1-1/2 INCH, PVC 80 FOR PIPE SIZES 2 INCH THROUGH 3 INCH AND PUSH ON DUCTILE OR MECHANICAL CAST IRON FITTINGS ON PVC MAINLINE 4 INCH AND LARGER.
2. MAIN LINE PRESSURE FITTINGS SHALL BE CAST IRON MANUFACTURED BY HARCO OR APPROVED EQUAL.
3. ALL POLYETHYLENE PIPE FITTINGS SHALL BE COMPRESSION FITTINGS OR INSERT BARBED FITTINGS SECURED WITH STAINLESS STEEL CLAMPS.
4. REMOTE CONTROL VALVE CONNECTION TO MAINLINE SHALL BE PVC SST TEE, EPOXY COATED DOUBLE STRAP SADDLE, M.J. TEE, OR HARCO DUCTILE IRONS SERVICE TEES.
5. JOINT RESTRAINT SHALL BE LEEMCO OR APPROVED EQUAL.

D. SLEEVE MATERIAL:

1. SLEEVE DIAMETER SHALL BE TWO TIMES LARGER THAN PIPE THAT IS TO BE INSTALLED IN SLEEVE. SLEEVES 4" AND SMALLER DIAMETER SHALL BE PVC SCHEDULE 40. SLEEVES 4 INCH AND LARGER SHALL BE CLASS 200 PVC OR PVC SEWER PIPE.
2. PIPING AND CONTROL WIRES UNDER WALKS, ROADS, OR OTHER HARD SURFACES SHALL BE INSTALLED IN CLASS 200 PVC SLEEVES OF ADEQUATE SIZE OR AS NOTED ON DRAWINGS.
3. SLEEVES FOR ELECTRICAL CONDUIT SHALL BE ADEQUATE TO ACCOMMODATE MINIMUM CONDUIT SIZES AS REQUIRED BY UNIFORM ELECTRICAL CODE.
4. WIRE SLEEVES SHALL BE PVC PIPE OR ELECTRICAL TUBING. MAXIMUM NUMBER OF 14-GAUGE WIRE IN SLEEVE SHALL BE AS FOLLOWS:

a. 1-10 WIRES IN A 1 INCH SLEEVE

b. 11-18 WIRES IN A 1-1/4 INCH SLEEVE

c. 19-25 WIRES IN A 1-1/2" SLEEVE

d. 26-40 WIRES IN A 2" SLEEVE

e. 41-56 WIRES IN A 2-1/2" SLEEVE

f. 57-88 WIRES IN A 3" SLEEVE

E. PIPE CONNECTION MATERIAL

1. P-70 PRIMER
2. 711 SOLVENT/GLUE
3. TEFLON TAPE

2.04 OUTLETS

A. MANUFACTURERS:

1. RAIN BIRD.

B. ALL SPRINKLER HEADS SHALL BE THE BRAND, MODEL, SIZE, AND TYPE SHOWN ON DRAWINGS.

C. ALL SPRINKLER HEADS SHALL BE INSTALLED ON A "SWING JOINT" ASSEMBLY. LAWN SPRAY HEADS AND SMALL ROTORS WITH AN INLET SIZE 3/4" AND SMALLER SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS WITH "FUNNY PIPE" AND "SWING ELLS" AS MANUFACTURED BY RAIN BIRD OR APPROVED EQUAL. ALL LARGE STREAM ROTOR AND IMPACT HEADS SHALL BE INSTALLED WITH THREE 1" SCHEDULE 40 MARLEX STREET ELLS AND ONE SCHEDULE 80 1"X12" NIPPLE. PREFABRICATED SWING JOINT ASSEMBLIES BY SPEARS MANUFACTURING OR OTHER APPROVED EQUAL CAN BE SUBSTITUTED IF DESIRED. ALL "SWING JOINT" CONFIGURATIONS SHALL MATCH DETAIL DRAWINGS EXACTLY.

D. ROTARY TYPE SPRINKLER HEAD: POP-UP TYPE WITH SCREENS; FULLY ADJUSTABLE FOR FLOW AND PRESSURE; SIZE AS INDICATED; WITH LETTER OR SYMBOL DESIGNATING DEGREE OF ARC AND ARROW INDICATING CENTER OF SPRAY PATTERN.

1. RAIN BIRD ROTARY HEADS: RVAN 1724, ROTARY NOZZLES, AND 5000 MPR.
2. RAIN BIRD ROTORS: 3500, 5000, 6504, AND 8005.

E. SPRAY TYPE SPRINKLER HEAD: POP-UP HEAD WITH FULL CIRCLE PATTERN OR HEAD PER PLAN.

1. RAIN BIRD SPRAY HEADS: 1800 SAM PRS, RD1800 SAM PRS, HE VAN SERIES SAM PRS,

AND U-SERIES SAM PRS FOR ALL SPRAY SPRINKLER HEADS.

F. QUICK COUPLER & HOSE BIBS:

1. RAINBIRD 44NP ON SECONDARY WATER SYSTEMS OR 44LRC ON CULINARY WATER SYSTEMS OR APPROVED EQUAL WITH CORRESPONDING 2049 UNLOCK KEY AND 44K VALVE KEY.

G. RISERS: STATIONARY SPRAY POP-UP SPRINKLER HEADS, SHRUB SPRAY HEADS, STATIONARY SPRAY SPRINKLER HEADS AND ROTOR HEADS SHALL HAVE RISERS MADE UP OF ONE OF THE FOLLOWING WAYS:

1. RISERS FOR IRRIGATION HEADS WITH INLET SIZE OF 1/2 INCH SHALL BE SWING PIPE 14 INCHES LONG MINIMUM AND 24 INCHES MAXIMUM. SWING PIPE WITH SPIRAL BARB FITTINGS AND STREET "L" SHALL BE ASSEMBLED ACCORDING TO PLAN DETAILS. EQUAL AS APPROVED BY LANDSCAPE ARCHITECT BEFORE BIDDING.
2. RISER FOR IRRIGATION HEADS WITH 3/4 INCH TO 1 INCH INLETS SHALL HAVE A SWING JOINT ASSEMBLY ACCORDING TO DETAILS ON DRAWING.

2.05 VALVES

A. MANUFACTURERS:

1. RAIN BIRD
2. CARSON
3. HYRDOPOINT

B. ALL CONTROL/MASTER VALVE/QUICK COUPLER VALVES

C. GATE VALVES: BRONZE CONSTRUCTION NON-RISING STEM.

1. NIBCO OR CLOW OR MATCO-NORCA NON-RISING STEM, RESILIENT WEDGE, GATE VALVE, OR APPROVED EQUAL. BRONZE CONSTRUCTION, DESIGNED FOR WORKING PRESSURE OF 150 PSI MINIMUM.
2. VALVES SIZED TWO AND A HALF (2-1/2) INCHES AND LARGER SHALL HAVE FLANGED CONNECTIONS. VALVES TWO INCHES AND SMALLER SHALL HAVE THREADED CONNECTIONS WITH UNIONS ON EACH SIDE OF THE VALVE.
3. BURIED VALVES SHALL HAVE CROSS HANDLES OR 2" SQUARE NUT DESIGNED TO RECEIVE OPERATING KEY. VALVES INSIDE STRUCTURES OR VAULTS SHALL HAVE WHEEL HANDLES.

D. REMOTE CONTROL VALVES:

1. ALL CONTROL VALVES USED SHALL BE SCRUBBER VALVES.
2. RAIN BIRD PESB-R PRS-D WITH PRESSURE REGULATION, SCRUBBER SCREENS AND PURPLE HANDLE FOR RECLAIMED WATER.

E. VALVE BOX AND COVER: ALL BOXES TO HAVE LOCKING LIDS.

1. VALVES IN LARGE AREAS OR IN GROUPS OF THREE OR MORE ARE LOCATED IN PRE-CAST CONCRETE VALVE BOXES. CHECK WITH OWNER AND DRAWINGS FOR LOCATIONS AND DETAILS.
2. CONTROL VALVE BOXES SHALL BE APPROPRIATE SIZE, MADE OF HDPE PLASTIC, GREEN IN COLOR, WITH BOLT DOWN LID. VALVE BOXES SHALL BE MADE BY CARSON INDUSTRIES OR APPROVED EQUAL. NO MORE THAN ONE VALVE SHALL BE LOCATED IN EACH PLASTIC BOX.
3. VALVES LOCATED IN HARD SURFACE AREAS SHALL BE HOUSED IN A CAST IRON 3-PIECE ADJUSTABLE EXTENSION BOX.
4. CIRCUIT OR ISOLATION VALVE: CARSON 1220 JUMBO BOX OR APPROVED EQUAL.
5. VALVE BOX SUPPORTS: STANDARD SIZE FIRED CLAY PAVING BRICKS WITHOUT HOLES.

F. DRAIN VALVES:

1. NIBCO BRASS BALL GAS COCK WITH TEFLON SEAT OR APPROVED EQUAL. BRASS BALL VALVE SHALL HAVE "T" HANDLE ON MAIN LINES AND SHALL BE IN VALVE BOXES ON LATERAL LINES.
2. FORD B11-444 NLFEMALE PIPE THREAD WITH AND NO LEAD ALLOYS. BALL VALVE SHALL HAVE "T" HANDLE ON MAIN LINES AND SHALL BE IN VALVE BOXES ON LATERAL LINES.

G. STOP & WASTE VALVE:

1. 2" MUELLER MARK II ORISEAL.

H. MASTER VALVE:

1. MASTER VALVE SHALL BE PROVIDED WITH A MANUAL-OPERATING FEATURE TO ENABLE VALVE TO BE OPENED MANUALLY OR IN CASE OF POWER OUTAGE.
2. RAIN BIRD 300 BPES BRASS MASTER VALVE.

I. COMBINATION AIR & VACUUM RELIEF VALVE:

1. CRISPIN UNIVERSAL AIR VALVE OR APPROVED EQUAL.
2. BERNAD MODEL 02-ARC-1 OR APPROVED EQUAL.

J. FLOW SENSOR & CONTROL:

1. HYDROPOINT WTFLOWHD-I-600

2.06 CONTROLS

A. MANUFACTURERS:

1. HYRDOPOINT
2. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

B. CONTROLLER: HYDROPOINT WTOXR-C (SEE IRRIGATION PLAN)

1. REMOTE PHONE CONNECTION TO CONTROLLER.
2. PROVIDE ANY WIRING, COMMUNICATION, LINKS COMPUTER PROGRAMS TO MAKE WEATHER STATION AND CONTROLLER OPERATIONAL.

C. CONTROLLER HOUSING: NEMA 250 TYPE 3; WEATHERPROOF, WATERTIGHT, WITH LOCKABLE ACCESS DOOR.

D. WIRE CONDUCTORS:

1. ELECTRICAL WIRE:

a. ALL WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE.

2. TRADITIONAL WIRING:

a. CONTROL WIRE SHALL BE UL LISTED DIRECT BURIAL CABLE NOT SMALLER THAN 14 GAUGE. IN SOME CASES 18-GAUGE MULTI-STRAND WIRE IS USED IN SPECIAL SITUATIONS AS SHOWN ON DRAWINGS AND APPROVED BY OWNER.

b. MAXICOM COMMUNICATION AND FLOW SENSOR WIRE TO SHALL BE A THREE PAIR SHIELDED CABLE SPECIFIED BY RAIN BIRD. WIRE MUST BE PE-39 CABLE AS SUPPLIED BY A RAIN BIRD DISTRIBUTOR.

c. ADD EXTRA WIRES AS SHOWN ON DRAWINGS FOR FUTURE USE. WIRE SHALL BE OF A DIFFERENT COLOR OR MARKED AS AN EXTRA WIRE.

d. COLORS OF WIRE SHALL BE AS FOLLOWS:

1) CONTROL WIRE FOR TURF AREAS: RED

2) CONTROL WIRE FOR SHRUB AREAS: YELLOW

3) CONTROL WIRE TO MASTER VALVE: BLUE

4) CONTROL WIRE TO FILTER BLOWOUT VALVE: BROWN

5) COMMON WIRE: WHITE

6) EXTRA WIRES ORANGE

3. EXPANSION CURLS: SHALL BE PROVIDED WITHIN THREE (3) FEET OF EACH WIRE CONNECTION TO SOLENOID AND AT LEAST EVERY THREE HUNDRED (300) FEET IN LENGTH. (EXPANSION CURLS ARE FORMED BY WRAPPING 36" OF WIRE AROUND A ROD OR PIPE 1" OR MORE IN DIAMETER, THEN WITHDRAWING THE ROD FOR SINGLE STRAND WIRE AND LOOSELY COILED FOR TWO WIRE CABLE).

2.07 OTHER COMPONENTS

A. WYE STRAINER: ZURN MODEL SXL WYE STRAINER.

B. FLOW SENSOR: SEE IRRIGATION SCHEDULE FOR FLOW SENSOR.

C. MIXES: CONCRETE FOR THRUST BLOCKS ON IRRIGATION PIPE 3" OR LARGER.

1. ONE CU. FT. CEMENT, 2 CU. FT. SAND, 4 CU. FT. GRAVEL, AND 5 GALLONS MINIMUM TO 6 GALLONS MAXIMUM WATER.
2. MIX THOROUGHLY BEFORE PLACING.

D. SUBMIT OTHER COMPONENTS RECOMMENDED BY MANUFACTURER FOR ARCHITECT'S REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.

E. PROVIDE COMPONENTS NECESSARY TO COMPLETE AND MAKE SYSTEM OPERATIONAL.

F. FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS. DELIVER EXTRA MATERIALS TO OWNER.

1. TWO VALVE BOX COVER KEYS.
2. TWO QUICK COUPLER KEYS WITH BRASS HOSE SWIVEL.
3. TWO MANUAL DRAIN VALVE KEYS.
4. TWO SETS OF SPRINKLER WRENCHES FOR ADJUSTING, CLEANING OR DISASSEMBLY OF

PART 3 EXECUTION

3.01 OWNERS SALVAGE RIGHTS

A. ANY ITEMS REMOVED AND NOT REUSED IN CONTRACT WILL REMAIN OWNER'S PROPERTY AND WILL BE RETURNED TO OWNER AT HIS DISCRETION.

3.02 EXAMINATION

A. VERIFY LOCATION OF EXISTING UTILITIES.

B. VERIFY THAT REQUIRED UTILITIES ARE AVAILABLE, IN PROPER LOCATION, AND READY FOR USE.

C. PRIOR TO INSTALLATION OF IRRIGATION SYSTEM, THE CONTRACTOR MUST VERIFY THE SUPPLY PRESSURE AT THE WORK SITE. IF THERE IS A FAILURE TO OBTAIN THE NEEDED PRESSURE OR IF AN EXCESS PRESSURE SITUATION EXISTS FOR NORMAL OPERATION, THE CONTRACTOR MUST CONTACT THE OWNER FOR ANY ADJUSTMENTS TO THE SUPPLY OR IRRIGATION SYSTEM DESIGN. FAILURE TO REPORT ANY DISCREPANCIES IN PRESSURE DUE TO ANY REASON, AND ANY INSTALLATION DONE PRIOR TO NOTIFICATION OF OWNER SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

3.03 PREPARATION

A. DURING CONSTRUCTION AND STORAGE, PROTECT MATERIALS FROM DAMAGE AND PROLONGED EXPOSURE TO SUNLIGHT.

B. WORK DAMAGED DURING COURSE OF WORK IN THIS SECTION SHALL BE REPLACED OR REPAIRED AT NO

ADDITIONAL COST TO OWNER. IF DAMAGED WORK IS NEW, REPAIR OR REPLACEMENT SHALL BE PERFORMED BY INSTALLER OF ORIGINAL WORK.

C. LAYOUT AND STAKE LOCATIONS OF SYSTEM COMPONENTS.

D. REVIEW LAYOUT REQUIREMENTS WITH OTHER AFFECTED WORK. COORDINATE LOCATIONS OF SLEEVES UNDER

PAVING TO ACCOMMODATE SYSTEM.

E. ALL LATERAL LINES SHALL RUN PARALLEL WITH PLANTING AREAS AND AVOID CONFLICT WITH THE LOCATION OF PLANT MATERIALS. WHERE TRENCHING IS REQUIRED IN PROXIMITY TO PLANT MATERIALS CARE SHALL BE TAKEN TO AVOID DAMAGE TO ROOTS. DO NOT CUT EXISTING TREE ROOTS MEASURING OVER 2 INCHES IN DIAMETER.

3.04 TRENCHING

A. TRENCH SIZE:

1. MINIMUM COVER OVER INSTALLED SUPPLY PIPING: 18 INCHES (457 MM).
2. MINIMUM COVER OVER INSTALLED BRANCH PIPING: 12 INCHES (305 MM).

B. TRENCH TO ACCOMMODATE GRADE CHANGES.

C. MAINTAIN TRENCHES FREE OF DEBRIS, MATERIAL, OR OBSTRUCTIONS THAT MAY DAMAGE PIPE.

D. PULLING OF PIPE IS NOT PERMITTED.

E. WHEN DIGGING ON PROJECT SITE, THE AREA SHALL BE "BLUE STAKED" TO IDENTIFY THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES AND STRUCTURES.

F. EXCAVATION WORK SHALL BE AS DEEP AND AS WIDE AS REQUIRED TO SAFELY PERFORM THE WORK, SUCH AS MAKING MAINLINE CONNECTIONS OR FORMING VAULTS. WHERE TRENCHING IS DONE IN ESTABLISHED LAWN, CARE MUST BE TAKEN TO KEEP THE TRENCHES ONLY AS WIDE AS IS NECESSARY TO ACCOMPLISH THE WORK.

G. IF MORE THAN ONE LINE IS REQUIRED IN A SINGLE TRENCH, THAT TRENCH SHALL BE DEEP AND WIDE ENOUGH TO ALLOW FOR AT LEAST 3 INCHES OF SEPERATION BETWEEN PIPES. INSTALL THE PIPING IN A MANNER FOR EASY REPAIR IN THE FUTURE.

H. OVER-EXCAVATE TRENCHES 2 INCHES AND BRING BACK TO INDICATED DEPTH BY FILLING WITH BACKFILL MATERIAL AS SPECIFIED UNDER PART 2 - PRODUCTS. SEPARATE OUT ROCKS LARGER THAN 1-1/2 INCH IN ANY DIRECTION UNCOVERED IN TRENCHING OPERATION FROM EXCAVATED MATERIAL AND REMOVE FROM AREAS TO RECEIVE LANDSCAPING.

I. WHERE IS BECOMES NECESSARY TO EXCAVATE BEYOND THE LIMITS OF NORMAL EXCAVATION LINES TO REMOVE ROCK OR OTHER INTERFERING OBJECTS, THE VOID REMAINING AFTER THE REMOVAL OF THE OBJECT SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED AS PER THE "EARTHWORK" SECTION. THE REMOVAL OF ALL ROCK OR OTHER INTERFERING OBJECTS AND THE BACKFILLING OF VOIDS LEFT BY SUCH REMOVALS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

J. ANY EXISTING UTILITY LINES DAMAGED DURING EXCAVATING OR TRENCHING SHALL BE REPAIRED IMMEDIATELY AFTER NOTIFICATION OF THE UTILITY OWNER AND TO HIS/HER SATISFACTION. SHOULD UTILITY LINES BE ENCOUNTERED, WHICH ARE NOT INDICATED ON PLANS, THE PROJECT REPRESENTATIVE SHALL BE NOTIFIED. THE REPAIR OF ANY DAMAGE SHALL BE DONE AS SOON AS POSSIBLE BY THE CONTRACTOR OR THE UTILITY OWNER AND PROPER COMPENSATION WILL BE NEGOTIATED BY THE OWNER. SUCH UTILITY LOCATIONS SHALL BE NOTED ON THE "AS-BUILT" DRAWINGS.

3.05 INSTALLATION

A. GENERAL:

1. INSTALL PIPE, VALVES, CONTROLS, AND OUTLETS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. CONNECT TO UTILITIES.
3. SET OUTLETS AND BOX COVERS AT FINISH GRADE ELEVATIONS.
4. PROVIDE FOR THERMAL MOVEMENT OF COMPONENTS IN SYSTEM.

B. PIPES:

1. INSTALL PIPE IN MANNER TO PROVIDE FOR EXPANSION AND CONTRACTIONS AS RECOMMENDED BY MANUFACTURER.
2. UNLESS OTHERWISE INDICATED ON APPROVED DRAWINGS, INSTALL MAIN LINES AND LATERAL LINES CONNECTING ROTOR POP-UP SPRINKLERS WITH MINIMUM COVER OF 18 INCHES BASED ON FINISHED GRADE. INSTALL REMAINING LATERAL LINES WITH MINIMUM OF 12 INCHES OF COVER BASED ON FINISH GRADE.
3. INSTALL PIPE AND WIRES UNDER DRIVEWAYS OR PARKING AREAS IN SPECIFIED SLEEVES 18 INCHES MINIMUM BELOW FINISH GRADE OR AS SHOWN ON APPROVED DRAWINGS.
4. SLOPE PIPES UNDER PARKING AREAS OR DRIVEWAYS TO DRAIN OUTSIDE THESE AREAS.
5. LOCATE SPRINKLER HEADS NO CLOSER THAN 12 INCHES FROM BUILDING FOUNDATION. HEADS IMMEDIATELY ADJACENT TO MOW STRIPS, WALKS, OR CURBS SHALL BE ONE INCH BELOW TOP OF MOW STRIP, WALK, OR CURB AND HAVE 1 TO 3 INCHES CLEARANCE BETWEEN HEAD AND MOW STRIP, WALK, OR CURB.
6. SLOPE PIPING FOR SELF DRAINAGE TO CONTROL BOX WHERE POSSIBLE.
7. WHERE THIS IS NOT POSSIBLE, SLOPE PIPE TO A MINIMUM NUMBER OF LOW POINTS. INSTALL AT THESE LOW POINTS:

a. 3/4 INCH MANUAL DRAIN

b. INSTALL 2 INCH CLASS 200 PVC PIPE OVER TOP OF MANUAL DRAIN AND CUT AT FINISH GRADE,

c. INSTALL RUBBER VALVE CAP MARKER FLUSH WITH FINISHED GRADE.

d. DO NOT USE AUTOMATIC DRAIN VALVES.

8. CUT PLASTIC PIPE SQUARE. REMOVE BURRS AT CUT ENDS PRIOR TO INSTALLATION SO UNOBSTRUCTED FLOW WILL RESULT.
9. MAKE SOLVENT WELD JOINTS AS FOLLOWS:

a. DO NOT MAKE SOLVENT WELD JOINTS IF AMBIENT TEMPERATURE IS BELOW 40 DEGREES F.

b. CLEAN MATING PIPE AND FITTING WITH CLEAN, DRY CLOTH AND APPLY ONE COAT OF P-70 PRIMER TO EACH.

c. APPLY UNIFORM COAT OF 711 SOLVENT TO OUTSIDE OF PIPE.

d. APPLY SOLVENT TO FITTING IN A SIMILAR MANNER.

e. RE-APPLY LIGHT COAT OF SOLVENT TO PIPE AND QUICKLY INSERT INTO FITTING.

f. GIVE PIPE OR FITTING A QUARTER TURN TO ENSURE EVEN DISTRIBUTION OF SOLVENT AND MAKE SURE PIPE IS INSERTED TO FULL DEPTH OF FITTING SOCKET.

g. HOLD IN POSITION FOR 15 SECONDS MINIMUM OR LONG ENOUGH TO SECURE JOINT.

h. WIPE OFF SOLVENT APPEARING AT OUTER SHOULDER OF FITTING.

i. DO NOT USE EXCESSIVE AMOUNT OF SOLVENT THEREBY CAUSING OBSTRUCTION TO FORM ON INSIDE OF PIPE.

j. ALLOW JOINTS TO SET AT LEAST 24 HOURS BEFORE APPLYING PRESSURE TO PVC PIPE.

10. THREADED CONNECTIONS SHALL BE MADE WITH TEFLON TAPE.

C. SLEEVING:

1. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE INSTALLATION OF SLEEVING WITH THE WORK OF OTHER

TRADES (I.E. CONCRETE, ASPHALT PAVING, ETC.)

2. SLEEVE IRRIGATION WATER LINES AND CONTROL WIRES UNDER WALKS AND PAVING. EXTEND SLEEVES 6 INCHES MINIMUM BEYOND WALK OR PAVEMENT EDGE. CAP SLEEVES UNTIL PIPES AND WIRES ARE INSTALLED TO KEEP SLEEVE CLEAN AND FREE OF DIRT AND DEBRIS.
3. USE ONE WATER PIPE MAXIMUM PER SLEEVE. SLEEVE CONTROL WIRING IN SEPERATE SLEEVE.
4. POSITION SLEEVES WITH RESPECT TO BUILDINGS AND OTHER OBSTRUCTIONS SO PIPE CAN BE EASILY REMOVED.

D. OUTLETS:

1. USE THREADED NIPPLES FOR RISERS TO EACH OUTLET.
2. SPRINKLER HEADS:

a. PRIOR TO INSTALLATION OF SPRINKLER HEADS, OPEN CONTROL VALVES AND USE FULL HEAD OF WATER TO FLUSH OUT SYSTEM.

b. SET SPRINKLER HEADS AND QUICK-COUPLING VALVES PERPENDICULAR TO FINISH GRADE.

c. DO NOT INSTALL SPRINKLERS USING SIDE INLETS. INSTALL USING BASE INLETS ONLY.

d. SET SPRINKLERS AT A CONSISTENT DISTANCE FROM EXISTING WALKS, CURBS, AND OTHER PAVED AREAS AND TO GRADE.

e. SHRUB SPRAY HEADS SHALL BE INSTALLED ON RISERS A MINIMUM OF 12 INCHES ABOVE FINISH GRADE OF PLANTING AREA WHERE NOT ADJACENT TO PEDESTRIAN AREAS. AT SHRUB AREAS ADJACENT TO PEDESTRIAN ACCESS USE 12" POP-UP SPRAY HEADS.

E. CONTROLS:

1. INSTALL IRRIGATION CONTROLLER PER MANUFACTURER'S RECOMMENDATION AND WITH PROPER GROUNDING

FOR SURGE AND LIGHTNING PROTECTION.

2. INSTALL IRRIGATION CONTROLLER IN MECHANICAL ROOM PER DRAWINGS.

F. VALVES & VALVE BOXES:

1. INSTALL CONTROL WIRES, AND VALVES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PER ELECTRICAL CODE.
2. INSTALL VALVES, IN PLASTIC BOXES WITH LOCKING REINFORCED HEAVY-DUTY PLASTIC COVERS. LOCATE VALVE BOX TOPS AT FINISH GRADE. DO NOT INSTALL MORE THAN TWO VALVES IN A SINGLE BOX.
3. PLACE PEA GRAVEL A MINIMUM OF 6 INCHES DEEP BELOW VALVE FOR DRAINAGE. EXTEND WASHED GRAVEL 3 INCH MINIMUM BEYOND LIMITS OF VALVE BOX. MAINTAIN 4 INCH MINIMUM BETWEEN BOTTOM OF VALVE AND TOP OF GRAVEL AND 3 INCHES MINIMUM CLEARANCE BETWEEN THE TOP OF THE VALVE TO THE BOTTOM OF VALVE COVER. SET VALVE BOXES OVER VALVE SO ALL PARTS OF VALVE CAN BE REACHED FOR SERVICE. SET COVER OF VALVE BOX EVEN WITH FINISH GRADE. VALVE BOX SHALL BE REASONABLY FREE FROM DIRT AND DEBRIS.
4. INSTALL 3/4 INCH BRASS BALL VALVE IN VALVE BOX ON DOWNSTREAM SIDE OF AUTOMATIC VALVES IF LATERAL LINE SLOPES TOWARD VALVE BOX.
5. INSTALL QUICK COUPLING VALVES IN APPROPRIATE LOCATIONS IN VALVE BOXES.
6. ISOLATION VALVES, AND ANY OTHER EQUIPMENT REQUIRED BY LOCAL AUTHORITIES SHALL BE INSTALLED ACCORDING TO LOCAL CODES AND REQUIREMENTS IN ORDER TO MAKE THIS SYSTEM COMPLETE.
7. INSTALL ISOLATION VALVES, AIR RELEASE VALVE, MASTER CONTROL VALVES AND FLOW SENSORS ACCORDING TO DETAILS PLANS AND MANUFACTURES RECOMMENDATIONS.
8. INSTALL ANY OTHER EQUIPMENT REQUIRED BY LOCAL AUTHORITIES ACCORDING TO LOCAL CODES AND REQUIREMENTS IN ORDER TO MAKE THIS SYSTEM COMPLETE.

G. WIRING:

1. STANDARD WIRE:

a. TAPE CONTROL WIRE TO SIDE OF MAIN LINE EVERY 10 FEET. WHERE CONTROL WIRE LEAVES MAIN OR LATERAL LINE, ENCLOSE IT IN CLASS 200 PVC CONDUIT.

b. PLACE ALL WATERPROOF WIRE SPLICE CONNECTORS INSIDE VALVE BOXES.

c. USE WHITE OR GRAY COLOR FOR COMMON WIRE AND OTHER COLORS FOR ALL OTHER WIRE. EACH COMMON WIRE MAY SERVE ONLY ONE CONTROLLER. PROVIDE 12 INCHES OF EXPANSION LOOP SLACK WIRE AT ALL CONNECTIONS INSIDE VALVE BOX.

d. RUN ONE EXTRA CONTROL WIRE FROM PANEL CONTINUOUSLY FROM VALVE TO VALVE THROUGHOUT SYSTEM LIKE THE COMMON WIRE FOR USE IF THE COMMON WIRE FAILS. WIRE SHALL BE A DIFFERENT COLOR THAN ALL OTHER WIRES AND SHALL BE MARKED IN CONTROL BOX AS AN EXTRA WIRE. EXTEND EXTRA CONTROL WIRES 24 INCHES AND LEAVE COILED IN EACH VALVE BOX.

H. EARTH GROUNDING:

1. EARTH GROUNDING ROD(S) OR PLATE(S) SHALL PROVIDE A MINIMUM RESISTANCE OF 10 OMHS OR LESS. A MINIMUM OF ONE ROD IS REQUIRED BUT SECOND ROD A PLATE OR MULTIPLE RODS AND PLATES MAY BE REQUIRED IF THE RODS OR PLATES RESISTANCE ARE OVER 10 OMHS.
2. GROUND RODS AND PLATS SHALL BE ATTACHED TO GROUND WIRE BY CADWELD CONNECTION.
3. ELECTRICAL DISCHARGE AREAS FOR RODS AND PLATES ARE TO BE KEPT MOIST. INSTALL IN LAWN AREA OR PROVIDE IRRIGATION FOR TO MAINTAIN SOIL MOISTURE AS NEEDED.
4. INSTALL GROUND ENHANCEMENT MATERIALS IF NECESSARY, TO IMPROVE SOIL CONDUCTIVITY.
5. PROVIDE INGROUND SURGE PROTECTION FOR IRRIGATION CONTROLLER AS PER DETAILS AND ENVIRONMENTAL CONDITIONS.
6. RAINBIRD AND WEATHERTRAK WT2W-LSP INSTALL IN LINE SURGE PROTECTORS FOR TWO WIRE CONTROL SYSTEMS EVERY 500 FEET OR EVERY 5 DECODERS WHICH EVERY IS SMALLEST AND AT THE END OF EACH TWO-WIRE PATH OVER 25'.
7. GROUNDING TEST SHALL BE DONE. TESTER MUST BE APPROVED BY OWNER. OWNER CAN PROVIDE TESTER TO BE PAID BY THE CONTRACTOR.

I. FLOW SENSOR: INSTALL FLOW SENSOR PER MANUFACTURES' RECOMMENDATIONS. SET FLOW SENSOR IN A LOCATION WHERE THERE IS AT LEAST 10 UPSTREAM AND 5 DOWNSTREAM DIAMETERS OF PIPE HAVING A STRAIGHT UNINTERRUPTED FLOW.

J. AFTER PIPING IS INSTALLED, BUT BEFORE OUTLETS ARE INSTALLED AND BACKFILLING COMMENCES, OPEN VALVES AND FLUSH SYSTEM WITH FULL HEAD OF WATER.

3.06 FIELD QUALITY CONTROL

A. NOTIFY LANDSCAPE ARCHITECT TWO WORKING DAYS MINIMUM PRIOR TO TESTING.

B. PRIOR TO BACKFILLING, TEST SYSTEM FOR LEAKAGE AT MAIN PIPING TO MAINTAIN 100 PSI (690 KPA) PRESSURE FOR SIX HOURS MINIMUM.

C. SYSTEM IS ACCEPTABLE IF NO LEAKAGE OR LOSS OF PRESSURE OCCURS AND SYSTEM SELF DRAINS DURING TEST PERIOD.

3.07 BACKFILLING

A. COVER BOTH TOP AND SIDES OF PIPE WITH 3 INCH (75 MM) OF BACKFILL MATERIAL AS SPEFICIED UNDER PART 2 - PRODUCTS.

B. BACKFILL TRENCH AND COMPACT TO WITHIN 5 INCHES (127 MM) OF FINISH GRADE AS SPECIFIED IN RELATED SECTIONS. PROTECT PIPING FROM DISPLACEMENT. TOP 5 INCHES (127 MM) OF BACKFILL SHALL BE TOPSOIL AS SPECIFIED IN RELATED SECTION.

C. DO NOT COVER PRESSURE MAIN, SPRINKLER PIPE, OR FITTINGS UNTIL PRESSURE TEST HAS BEEN COMPLETED

AND ARCHITECT HAS INSPECTED AND APPROVED THE SYSTEM

D. AFTER BACKFILLING, PERFORM AN OPERATING TEST OF THE ENTIRE SYSTEM. OPERATE THE ENTIRE SYSTEM THROUGH ONE CYCLE OF THE CONTROLLER FOR THE PURPOSE OF CHECKING COVERAGE AND ASSURING THE ABSENCE OF LEAKS. REPAIR WATER LINES, VALVES, OR CONNECTIONS WHICH SHOW EVIDENCE OF LEAKAGE.

E. ALL TRENCHES SHALL BE BACKFILLED AND THEN SATURATED WITH WATER SUFFICIENTLY TO ENSURE NO SETTLING OF THE SURFACE AFTER LAWN IN PLANTED.

F. ANY PORTION OF THE SYSTEM WHICH SHOWS DEFECTS OR LEAKAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND OWNER OR BE REPLACED. AFTER ALL REPAIRS OR REPLACEMENTS HAVE BEEN MADE AND APPROVED BY THE LANDSCAPE ARCHITECT, THE ABOVE REQUIRED TEST SHALL BE MADE AGAIN.

3.08 SYSTEM STARTUP

A. PREPARE AND START SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. ADJUST CONTROL SYSTEM TO ACHIEVE TIME CYCLES REQUIRED TO PROVIDE PROPER AMOUNTS OF WATER TO ALL PLANTS.

C. ADJUST HEADS TO PROPER GRADE WHEN TURF IS SUFFICIENTLY ESTABLISHED TO ALLOW WALKING ON IT WITHOUT APPRECIABLE HARM. SUCH LOWERING OR RAISING OF HEADS SHALL BE PART OF ORIGINAL CONTRACT WITH NO ADDITIONAL COST TO OWNER.

D. ADJUST SPRINKLER HEADS FOR PROPER DISTRIBUTION AND SO SPRAY DOES NOT FALL ON BUILDING.

3.09 CLOSEOUT ACTIVITIES

A. AT THE POINT OF SUBSTANTIAL COMPLETION OF WORK OUTLINED IN THESE PLANS, THE LANDSCAPE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND ARRANGE FOR A WALK THROUGH TO VERIFY THE INSTALLATION OF THE SYSTEM. A COVERAGE TEST WILL BE COMPLETED AND THE SYSTEM INSTALLATION INSPECTED AND A PUNCH LIST OF FINAL ITEMS NEEDING COMPLETION MADE.

B. AT THE TIME OF FINAL INSPECTION, THE ENTIRE SYSTEM MUST BE TESTED IN THE PRESENCE OF OWNER'S REPRESENTATIVE. IT MUST BE FULLY OPERATIONAL IN A SATISFACTORY CONDITION, WITH FULL UNIFORM COVERAGE OF THE AREAS INDICATED TO BE IRRIGATED. ALL HEADS SHALL BE ADJUSTED TO PATTERN, RADIUS, AND GRADE LEVEL.

C. BEFORE THE INSPECTION IS COMPLETE, THE CONTRACTOR MUST FURNISH THE "AS BUILT" DRAWINGS. THESE DRAWINGS SHOULD BE UPDATED ON A DAILY BASIS TO ENSURE ACCURACY. THESE DRAWINGS MUST SHOW THE LOCATION OF ALL PIPING, VALVES, HEADS, WIRE SPLICES AND OTHER PERTINENT INFORMATION. THESE DRAWINGS AND ALL MAINTENANCE MANUALS MUST BE SUBMITTED AT THE TIME OF FINAL INSPECTION IN ACCORDANCE WITH THESE SPECIFICATIONS.

D. IF AT THE TIME OF THE FINAL INSPECTION THERE IS ANY ADDITIONAL WORK TO SATISFY CONTRACT REQUIREMENTS, IT WILL BE NOTED ON A "PUNCH LIST". CONTRACTOR WILL HAVE 10 DAYS IN ORDER TO SATISFY, OR MAKE SUITABLE ARRANGEMENTS WITH OWNER TO SATISFY ITEMS ON THE "PUNCH LIST". AT OWNER'S DISCRETION FINAL PAYMENT OR A PORTION THEREOF, COULD BE HELD PENDING COMPLETION OF "PUNCH LIST" ITEMS.

E. INSTRUCT OWNER'S PERSONNEL IN OPERATION AND MAINTENANCE OF THE SYSTEM, INCLUDING ADJUSTING OF SPRINKLER HEADS. USE OPERATION AND MAINTENANCE DATA AS BASIS FOR DEMONSTRATION.

3.10 CLEAN-UP AND MAINTENANCE

A. REMOVE FROM SITE ALL DEBRIS RESULTING FROM WORK OF THIS SECTION.

B. SEE SECTION 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS, FOR ADDITIONAL REQUIREMENTS RELATING TO MAINTENANCE SERVICE.

C. PROVIDE ONE COMPLETE SPRING START-UP AND A FALL SHUTDOWN BY INSTALLER, AT NO EXTRA COST TO OWNER.

3.11 WARRANTY

A. ALL WORK SHALL BE WARRANTED FOR COMPLIANCE WITH THE CONTRACT REQUIREMENTS, INCLUDING REPLACEMENT, FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. IF AN UNSATISFACTORY CONDITION DEVELOPS DURING THE WARRANTY PERIOD AND IS DUE TO NEGLIGENCE, FAULTY MATERIALS, OR WORKMANSHIP, CONTRACTOR SHALL IMMEDIATELY REPLACE SUCH ITEMS IN A SATISFACTORY CONDITION. ALL WARRANTEES SHALL BE IN WRITING, SIGNED BY CONTRACTOR OR LEGAL REPRESENTATIVE, AND WORDED AS APPROVED BY OWNER. WARRANTY DOCUMENTS SHALL BE PRESENTED TO OWNER AT THE TIME OF FINAL INSPECTION.

B. DURING ONE-YEAR WARRANTY PERIOD, CONTRACTOR WILL COMPLY WITH THE FOLLOWING:

1. FILL AND REPAIR LOW AREAS AND REPLACE PLANTINGS DUE TO SETTLEMENT OF EXCAVATED AREAS.
2. AT THE END OF THE FIRST WATERING SEASON, CONTRACTOR SHALL SHUT OFF AND WINTERIZE THE SYSTEM.
3. AT THE BEGINNING OF THE NEXT SEASON, CONTRACTOR SHALL RESTART SYSTEM AND MAKE ANY REPAIRS OR ADJUSTMENTS NEEDED TO MAKE SYSTEM FULLY OPERATIONAL.

END OF SECTION

PRIME
LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER
2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
LICENSED
DUSTIN KIRK HISLOP
NO. 7887409-5301
LANDSCAPE ARCHITECT

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
IRRIGATION SPECS

SHEET NUMBER:
L601

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SECTION 32 9113

SOIL PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PERFORM SOIL PREPARATION WORK.

B. FURNISH AND APPLY SOIL AMENDMENTS.

C. PERFORM FINE GRADING WORK REQUIRED TO PREPARE SITE FOR PAVING FINISH GRADING AND FOR LANDSCAPE FINISH GRADING.

1.02 REFERENCES

A. ASTM D1557 - STANDARD TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT.

1.03 SUBMITTALS

A. PRODUCT DATA: PRODUCT LITERATURE AND CHEMICAL /NUTRIENT ANALYSIS OF SOIL AMENDMENTS AND FERTILIZERS.

B. INFORMATIONAL SUBMITTALS:

1. FIELD QUALITY CONTROL SUBMITTALS:

a. SUBMIT TESTS ON IMPORTED AND SITE TOPSOIL BY LICENSED LABORATORY BEFORE USE.

1) BEFORE USE, TOPSOIL SHALL MEET MINIMUM SPECIFIED REQUIREMENTS AND BE APPROVED BY ARCHITECT.

2) IF NECESSARY, SUBMIT PROPOSED AMENDMENTS AND APPLICATION RATES NECESSARY TO BRING TOPSOIL UP TO MINIMUM SPECIFIED REQUIREMENTS.

b. SUBMIT REPORT STATING LOCATION OF SOURCE OF IMPORTED TOPSOIL AND ACCOUNT OF RECENT USE.

PART 2 PRODUCTS

2.01 MATERIALS

A. TOPSOIL:

1. TOPSOIL USED IN LANDSCAPED AREAS, WHETHER IMPORTED, STOCKPILED, OR IN PLACE, SHALL BE FERTILE, LOOSE, FRIABLE SOIL MEETING THE FOLLOWING CRITERIA:

a. CHEMICAL CHARACTERISTICS:

1) ACIDITY / ALKALINITY RANGE: PH 5.5 TO 8.0.

2) SOLUBLE SALTS: LESS THAN 3.0 MMHOS/CM.

3) SODIUM ABSORPTION RATIO (SAR): LESS THAN 6.0.

4) ORGANIC MATTER: GREATER THAN ONE PERCENT.

b. PHYSICAL CHARACTERISTICS:

1) GRADATION AS DEFINED BY USDA TRIANGLE OF PHYSICAL CHARACTERISTICS AS MEASURED BY HYDROMETER.

(a) SAND: 15 TO 60 PERCENT

(b) SILT: 10 TO 60 PERCENT

(c) CLAY: 5 TO 30 PERCENT

2) CLEAN AND FREE FROM TOXIC MINERALS AND CHEMICALS, NOXIOUS WEEDS, ROCKS LARGER THAN 1-1/2 INCH IN ANY DIMENSION, AND OTHER OBJECTIONABLE MATERIALS.

3) SOIL SHALL NOT CONTAIN MORE THAN 2 PERCENT BY VOLUME OF ROCKS MEASURING OVER 3/32 INCH IN LARGEST SIZE.

c. FERTILITY REQUIREMENTS:

1) NITRATE-NITROGEN PPM > 20

2) PHOSPHOROUS PPM > 15

3) POTASSIUM PPM > 150

4) IRON PPM > 10

B. SOIL AMENDMENTS:

1. INCORPORATE FOLLOWING SOIL AMENDMENTS INTO TOPSOIL, EITHER IMPORT OR STOCKPILED, USED ON SITE. ADJUST APPLICATION RATES AND ADD AMENDMENTS THAT SHALL BRING THE SOIL TO COMPLY WITH SOILS TEST:

a. ACCEPTABLE SOIL AMENDMENTS AND APPLICATION RATES:

1) SULFUR - 0.5 LBS. PER 1000 SQ. FT.

2) EQUAL AS APPROVED BY ARCHITECT BEFORE INSTALLATION.

b. ACCEPTABLE FERTILIZERS AND APPLICATION RATES:

1) LAWNS: PHOSPHORUS 1-2 LBS PER 1000 SQ. FT., POTASSIUM 2 LBS. PER 1000 SQ.FT., AND NITROGEN 2-4 LBS. PER 1000 SQ. FT.

2) SHRUBS: PHOSPHORUS 1-2 LBS PER 1000 SQ. FT., POTASSIUM 2 LBS. PER 1000 SQ.FT., AND NITROGEN 1-2 LBS. PER 1000 SQ. FT.

3) EQUAL AS APPROVED BY ARCHITECT BEFORE INSTALLATION.

c. ACCEPTABLE SOIL CONDITIONERS AND APPLICATION RATES:

1) TYPE ONE ACCEPTABLE PRODUCTS.

(a) SOIL CONDITIONER THAT MEETS THE REQUIRED FERTILIZER AND SOIL AMENDMENTS STATED ABOVE CAN BE USED AT THE DISCRETION OF THE CONTRACTOR.

PART 3 EXECUTION

3.01 PERFORMANCE

A. PROTECTION OF IN-PLACE CONDITIONS: PROTECT UTILITIES AND SITE ELEMENTS FROM DAMAGE.

B. SOIL AMENDMENTS:

1. ADD SPECIFIED SOIL AMENDMENTS AT SPECIFIED RATES TO LAWN AREAS.
2. ROTO-TILL OR OTHERWISE MIX AMENDMENTS EVENLY INTO TOP 4 INCHES OF TOPSOIL.
3. INCORPORATE AND LEACH SOIL AMENDMENTS WHICH REQUIRE LEACHING, SUCH AS GYPSUM, WITHIN SUCH TIME LIMITS THAT SOIL IS SUFFICIENTLY DRY TO ALLOW PROPER APPLICATION OF FERTILIZER AND SOIL CONDITIONERS.

C. SURFACE PREPARATION:

1. LANDSCAPING AND PLANTING AREAS:

a. BEFORE GRADING, DIG OUT WEEDS FROM PLANTING AREAS BY THEIR ROOTS AND REMOVE FROM SITE. REMOVE ROCKS LARGER THAN 1-1/2 INCHES IN SIZE AND FOREIGN MATTER SUCH AS BUILDING RUBBLE, WIRE, CANS, STICKS, CONCRETE, ETC.

b. BEFORE BEGINNING MAINTENANCE PERIOD, PLANTS SHALL BE IN AT LEAST AS SOUND, HEALTHY, VIGOROUS, AND IN APPROVED CONDITION AS WHEN DELIVERED TO SITE, UNLESS ACCEPTED BY ARCHITECT IN WRITING AT FINAL LANDSCAPE INSPECTION.

c. REMOVE IMPORTED PAVING BASE MATERIAL PRESENT IN PLANTING AREAS DOWN TO NATURAL SUBGRADE OR OTHER MATERIAL ACCEPTABLE TO ARCHITECT.

D. PERFORMANCE:

1. DO NOT EXPOSE OR DAMAGE EXISTING SHRUB OR TREE ROOTS.
2. TOLERANCES:

a. LANDSCAPING AND PLANTING TOLERANCES:

1) MAXIMUM VARIATION FROM REQUIRED GRADES SHALL BE 1/10 OF ONE FOOT.

2) TO ALLOW FOR FINAL FINISH GRADES OF PLANTING AREAS, FINE GRADE ELEVATIONS BEFORE PLACING TOPSOIL AND MULCH ARE:

(a) SOD AREAS: 5.5 INCHES BELOW TOP OF WALK OR CURB.

(b) PLANTER BED AREAS: 16 INCHES BELOW TOP OF WALK OR CURB.

3. DO NOT EXPOSE OR DAMAGE EXISTING SHRUB OR TREE ROOTS. REDISTRIBUTE APPROVED EXISTING TOPSOIL STORED ON SITE. REMOVE ORGANIC MATERIAL, ROCKS AND CLODS GREATER THAN 1-1/2 INCH IN ANY DIMENSION, AND OTHER OBJECTIONABLE MATERIALS.
4. SLOPE GRADE AWAY FROM BUILDING AS SPECIFIED. DIRECT SURFACE DRAINAGE IN MANNER INDICATED ON DRAWINGS BY MOLDING SURFACE TO FACILITATE NATURAL RUN-OFF. FILL LOW SPOTS AND POCKETS WITH SPECIFIED FILL MATERIAL AND GRADE TO DRAIN PROPERLY.

END OF SECTION

SECTION 32 9223

SODDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PLACING TOPSOIL.

B. FERTILIZING.

C. SOD INSTALLATION.

D. MAINTENANCE.

1.02 RELATED REQUIREMENTS

A. SECTION 31 2200 - GRADING: PREPARATION OF SUBSOIL AND PLACEMENT OF TOPSOIL IN PREPARATION FOR THE WORK OF THIS SECTION.

1.03 DEFINITIONS

A. WEEDS: INCLUDES DANDELION, JIMSONWEED, QUACKGRASS, HORSETAIL, MORNING GLORY, RUSH GRASS, MUSTARD, LAMBSQUARTER, CHICKWEED, CRESS, CRABGRASS, CANADIAN THISTLE, NUTGRASS, POISON OAK, BLACKBERRY, TANSY RAGWORT, BERMUDA GRASS, JOHNSON GRASS, POISON IVY, NUT SEDGE, NIMBLE WILL, BINDWEED, BENT GRASS, WILD GARLIC, PERENNIAL SORREL, AND BROME GRASS.

1.04 REFERENCE STANDARDS

A. 21 CFR 11 - PART 11, ELECTRONIC RECORDS; ELECTRONIC SIGNATURES — SCOPE AND APPLICATION; CURRENT EDITION.

B. TPI (SPEC) - GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING; 2006.

1.05 QUALITY ASSURANCE

A. SOD PRODUCER: COMPANY SPECIALIZING IN SOD PRODUCTION AND HARVESTING WITH MINIMUM FIVE YEARS EXPERIENCE, AND CERTIFIED BY THE STATE OF UTAH.

B. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS COMPLETED LANDSCAPING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL LANDSCAPE ESTABLISHMENT.

1.06 DELIVERY, STORAGE, AND HANDLING

A. DELIVER SOD IN ROLLS. PROTECT EXPOSED ROOTS FROM DEHYDRATION.

B. DO NOT DELIVER MORE SOD THAN CAN BE LAID WITHIN 24 HOURS.

C. HARVEST, DELIVER, STORE, AND HANDLE SOD ACCORDING TO THE REQUIREMENTS OF THE AMERICAN SOD PRODUCER'S ASSOCIATION (ASPA) "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS AND TRANSPLANTING/INSTALLING".

1.07 PROJECT CONDITIONS

A. UTILITIES: DETERMINE LOCATION OF ABOVE GRADE AND UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNERS WHICH WILL AVOID DAMAGE. HAND EXCAVATE AS REQUIRED. MAINTAIN GRADE STAKES UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.

B. EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.

1.08 COORDINATION AND SCHEDULING

A. COODINATE INSTALLATION OF PLANTING MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF PLANT MATERIAL REQUIRED.

1.09 WARRANTY

A. GENERAL WARRANTY: THE SPECIAL WARRANTY SPECIFIED IN THIS ARTICLE SHALL NOT DEPRIVE THE OWNER OF OTHER RIGHTS THE OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS AND SHALL BE IN ADDITION TO AND RUN CONCURRENT WITH OTHER WARRANTIES MADE BY THE CONTRACTOR UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

B. SPECIAL WARRANTY: WARRANT ALL LAWN AREAS FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLECT, OR ABUSE BY OWNER, ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.

C. REMOVE AND REPLACE DEAD MATERIALS IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON.

D. A LIMIT OF ONE REPLACEMENT OF EACH PLANT MATERIAL WILL BE REQUIRED, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.

PART 2 PRODUCTS

2.01 MATERIALS

A. SOD: TPI (SPEC), CERTIFIED TURFGRASS SOD QUALITY; CULTIVATED GRASS SOD; TYPE INDICATED IN PLANT SCHEDULE ON DRAWINGS; WITH STRONG FIBROUS ROOT SYSTEM, FREE OF STONES, BURNED OR BARE SPOTS; CONTAINING NO MORE THAN 5 WEEDS PER 1000 SQ FT. MINIMUM AGE OF 18 MONTHS, WITH ROOT DEVELOPMENT THAT WILL SUPPORT ITS OWN WEIGHT WITHOUT TEARING, WHEN SUSPENDED VERTICALLY BY HOLDING THE UPPER TWO CORNERS.

1. KENTUCKY BLUE GRASS TYPE: 3 CULTIVAR MINIMUM.
2. THICKNESS: "THIN" SOD, MINIMUM 1/2 INCH AND MAXIMUM 1 INCH TOPSOIL BASE.
3. THICKNESS: "THICK" SOD, MINIMUM 1 INCH AND MAXIMUM 1-3/8 INCH TOPSOIL BASE.
4. CUT SOD IN AREA NOT EXCEEDING 1 SQ YD.
5. MACHINE CUT SOD AND LOAD ON PALLETS IN ACCORDANCE WITH TPI (SPEC) GUIDELINES.

B. TOPSOIL: FERTILE, AGRICULTURAL SOIL, TYPICAL FOR LOCALITY, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, TAKEN FROM DRAINED SITE; FREE OF SUBSOIL, CLAY, OR IMPURITIES, PLANTS, WEEDS AND ROOTS; PH VALUE OF MINIMUM 5.4 AND MAXIMUM 7.0. BRING SURFACE TO SPECIFIED ELEVATION RELATIVE TO WALK OR CURB.

C. COMMERCIAL FERTILIZER: COMPLETE FERTILIZER OF NEUTRAL CHARACTER; RECOMMENDED FOR GRASS, WITH FIFTY PERCENT OF THE ELEMENTS DERIVED FROM ORGANIC SOURCES; OF PROPORTION NECESSARY TO ELIMINATE ANY DEFICIENCIES OF TOPSOIL, TO THE FOLLOWING PROPORTIONS:

1. NITROGEN: >16% (OF WHICH 50% WILL BE ORGANIC). PROVIDE NITROGEN IN A FORM THAT WILL BE AVAILABLE TO LAWN DURING INITIAL PERIOD OF GROWTH.
2. PHOSPHORIC ACID: 16%
3. SOLUBLE POTASH: 8%

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY THAT PREPARED SOIL BASE IS READY TO RECEIVE THE WORK OF THIS SECTION. EXAMINE AREAS TO RECEIVE LANDSCAPING FOR COMPLIANCE WITH REQUIREMENTS AND FOR CONDITIONS AFFECTING PERFORMANCE OF WORK IF THIS SECTION. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.02 PREPARATION

A. PLACE TOPSOIL IN ACCORDANCE WITH SECTION 31 2200.

B. LOOSEN SUB-GRADE TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES LARGER THAN 1-1/2 INCHES IN ANY DIMENSION, STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATERIALS.

C. SPREAD PLANTING SOIL MIXTURE TO DEPTH REQUIRED TO MEET THICKNESS, GRADES, AND ELEVATIONS SHOWN, AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUB-GRADE IS FROZEN.

1. PLACE APPROXIMATELY 1/2 THE THICKNESS OF PLANTING SOIL MIXTURE REQUIRED. WORK INTO TOP OF LOOSENED SUB-GRADE TO CREATE TRANSITION LAYER AND THEN PLACE REMAINDER OF PLANTING SOIL MIXTURE.
2. ALLOW FOR SOD THICKNESS IN AREAS TO BE SODDED.

D. PREPARATION OF UNCHANGED GRADES: WHERE LAWNS ARE TO BE PLANTED IN AREAS UNALTERED OR UNDISTURBED BY EXCAVATING, GRADING, OR SURFACE SOIL STRIPPING OPERATIONS, PREPARE SOIL AS FOLLOWS:

1. TILL SURFACE SOIL TO A DEPTH OF AT LEAST 6 INCHES. APPLY REQUIRED SOIL AMENDMENTS AND INITIAL FERTILIZERS AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOIL. TRIM HIGH AREAS AND FILL IN DEPRESSIONS. TILL SOIL TO A HOMOGENOUS MIXTURE OF FINE TEXTURE
2. CLEAN SURFACE SOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

E. GRADE LAWN AND GRASS AREAS TO A SMOOTH, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE. REMOVE TRASH, DEBRIS, STONES LARGER THAN 1-1/2 INCHES IN ANY DIMENSION, AND OTHER OBJECTS THAT MAY INTERFERE WITH PLANTING OR MAINTENANCE OPERATIONS.

F. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING WHEN SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.

G. RESTORE PREPARED AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINE GRADING AND BEFORE PLANTING.

H. TOPSOIL DEPTH SHALL BE A MINIMUM OF 4 INCHES.

3.03 FERTILIZING

A. APPLY FERTILIZER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. APPLY AFTER SMOOTH RAKING OF TOPSOIL AND PRIOR TO INSTALLATION OF SOD.

C. APPLY FERTILIZER NO MORE THAN 48 HOURS BEFORE LAYING SOD.

D. MIX THOROUGHLY INTO UPPER 2 INCHES OF TOPSOIL.

E. LIGHTLY WATER TO AID THE DISSIPATION OF FERTILIZER.

3.04 LAYING SOD

A. MOISTEN PREPARED SURFACE IMMEDIATELY PRIOR TO LAYING SOD.

B. LAY SOD WITHIN 24 HOURS AFTER HARVESTING TO PREVENT DETERIORATION. DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN.

C. LAY SOD SMOOTH AND TIGHT WITH NO OPEN JOINTS VISIBLE, AND NO OVERLAPPING; STAGGER END JOINTS 12 INCHES MINIMUM. DO NOT STRETCH OR OVERLAP SOD PIECES.

D. WHERE NEW SOD ADJOINS EXISTING GRASS AREAS, ALIGN TOP SURFACES.

E. WHERE SOD IS PLACED ADJACENT TO HARD SURFACES, SUCH AS CURBS, PAVEMENTS, ETC., PLACE TOP ELEVATION OF SOD $\frac{1}{2}$ INCH BELOW TOP OF HARD SURFACE.

F. LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING 1:3.

G. ON SLOPES 6 INCHES PER FOOT AND STEEPER, LAY SOD PERPENDICULAR TO SLOPE AND SECURE EVERY ROW WITH WOODEN PEGS AT MAXIMUM 2 FEET ON CENTER. DRIVE PEGS FLUSH WITH SOIL PORTION OF SOD.

H. WATER SODDED AREAS IMMEDIATELY AFTER INSTALLATION. SATURATE SOD TO 4 INCHES OF SOIL. DURING FIRST WEEK, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1-1/2 INCHES BELOW THE SOD.

I. AFTER SOD AND SOIL HAVE DRIED, ROLL SODDED AREAS TO ENSURE GOOD BOND BETWEEN SOD AND SOIL AND TO REMOVE MINOR DEPRESSIONS AND IRREGULARITIES.

3.05 CLEAN-UP AND PROTECTION

A. DURING LANDSCAPING, KEEP PAVEMENT CLEAN AND WORK AREA IN AN ORDERLY CONDITION.

B. PROTECT LANDSCAPING FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

3.06 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF THE OWNER'S PROPERTY.

3.07 MAINTENANCE

A. PROVIDE MAINTENANCE AT NO EXTRA COST TO OWNER; OWNERWILL PAY FOR WATER.

B. MAINTAIN SODDED AREAS IMMEDIATELY AFTER PLACEMENT UNTIL GRASS IS WELL ESTABLISHED AND EXHIBITS A VIGOROUS

C. GROWING CONDITION, BUT NOT LESS THAN 30 DAYS AFTER DATE OF SUBSTANTIAL COMPLETION AND SECOND FULL MOWING HAS

D. BEEN PERFORMED.

E. C. MOW GRASS AT REGULAR INTERVALS TO MAINTAIN AT A MAXIMUM HEIGHT OF 2-1/2 INCHES. DO NOT CUT MORE THAN 1/3 OF GRASS BLADE AT ANY ONE MOWING. DO NOT DELAY MOWING UNTIL GRASS BLADES BEND OVER AND BECOME MATTED. DO NOT MOW GRASS WHEN WET.

F. APPLY FERTILIZER TO LAWN AFTER FIRST MOWING AND WHEN GRASS IS DRY. USE FERTILIZER THAT WILL PROVIDE ACTUAL NITROGEN OF AT LEAST 1 LB. PER 1000 SQ. FT. OF LAWN AREA.

G. NEATLY TRIM EDGES AND HAND CLIP WHERE NECESSARY.

H. IMMEDIATELY REMOVE CLIPPINGS AFTER MOWING AND TRIMMING.

I. WATER TO PREVENT GRASS AND SOIL FROM DRYING OUT TO A UNIFORM DEPTH OF 4 INCHES. WATER LAWN AT THE MINIMUM RATE OF 1 INCH PER WEEK.

J. ROLL SURFACE TO REMOVE IRREGULARITIES.

K. CONTROL GROWTH OF WEEDS. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMEDY DAMAGE RESULTING FROM IMPROPER USE OF HERBICIDES.

L. IMMEDIATELY REPLACE SOD TO AREAS THAT SHOW DETERIORATION OR BARE SPOTS.

M. PROTECT SODDED AREAS WITH WARNING SIGNS DURING MAINTENANCE PERIOD.

END OF SECTION

SECTION 32 9300

PLANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PREPARATION OF SUBSOIL.

B. TOPSOIL BEDDING.

C. NEW TREES AND PLANTS.

D. RELOCATED TREES AND PLANTS.

E. FERTILIZER.

F. MAINTENANCE.

G. TREE AND SHRUB PRUNING.

1.02 DEFINITIONS

A. WEEDS: ANY PLANT LIFE NOT SPECIFIED OR SCHEDULED.

B. PLANTS: LIVING TREES, PLANTS, AND GROUND COVER SPECIFIED IN THIS SECTION, AND DESCRIBED IN ANSI Z60.1.

1.03 REFERENCE STANDARDS

A. ANSI A300 PART 1 - AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS -- TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE -- STANDARD PRACTICES; 2017.

B. ANSI/AHIA Z60.1 - AMERICAN NATIONAL STANDARD FOR NURSERY STOCK; 2014.

1.04 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS COMPLETED LANDSCAPING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH AT LEAST 3 YEARS EXPERIENCE AND A RECORD OF SUCCESSFUL LANDSCAPE ESTABLISHMENT.

B. PROVIDE QUALITY, SIZE, GENUS, SPECIES, AND VARIETY OF TREES, SHRUBS, AND PLANTS INDICATED COMPLYING WITH THE APPLICABLE REQUIREMENTS OF ANSI/AHIA Z60.1.

C. MEASURE TREES AND SHRUBS ACCORDING TO ANSI/AHIA Z60.1 WITH BRANCHES AND TRUNKS OR CANES IN THEIR NORNAL POSITION. DO NOT PRUNE TO OBTAIN REQUIRED SIZES. TAKE CALIPER MEASUREMENTS 6 INCHES ABOVE GROUND FOR TREES UP TO 4 INCH CALIPER SIZE AND 12 INCHES ABOVE GROUND FOR LARGER SIZES. MEASURE MAIN BODY OF TREE OR SHRUB FOR HEIGHT AND SPREAD; DO NOT MEASURE BRANCHES OR ROOTS TIP-TO-TIP.

D. TREE PRUNING: COMPLY WITH ANSI A300 PART 1.

1.05 DELIVERY, STORAGE, AND HANDLING

A. TREES AND SHRUBS: DELIVER FRESHLY DUG TREES AND SHRUBS. DO NOT PRUNE BEFORE DELIVERY, EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING DELIVERY. DO NOT DROP TREES AND SHRUBS DURING DELIVERY.

B. HANDLE BALLED AND BURLAPPED STOCK BY THE ROOT BALL.

C. DELIVER TREES, SHRUBS, AND PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, SET PLANTING MATERIALS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

1. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
2. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.
3. WATER ROOT SYSTEMS OF TREES AND SHRUBS STORED ON SITE WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST CONDITION.

D. PROTECT AND MAINTAIN PLANT LIFE UNTIL PLANTED.

E. DELIVER PLANT LIFE MATERIALS IMMEDIATELY PRIOR TO PLACEMENT. KEEP PLANTS MOIST.

1.06 FIELD CONDITIONS

A. DO NOT INSTALL PLANT LIFE WHEN AMBIENT TEMPERATURES MAY DROP BELOW 35 DEGREES F (2 DEGREES C) OR RISE ABOVE 90 DEGREES F (32 DEGREES C).

B. DO NOT INSTALL PLANT LIFE WHEN WIND VELOCITY EXCEEDS 30 MPH (48 K/HR).

C. UTILITIES: DETERMINE LOCATION OF ABOVE GRADE AND UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID DAMAGE. HAND EXCAVATE AS REQUIRED. MAINTAIN GRADE STAKES UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.

D. EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.

1.07 COORDINATION AND SCHEDULING

A. COORDINATE INSTALLATION OF PLANTING MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF PLANT MATERIAL REQUIRED.

1.08 WARRANTY

A. GENERAL WARRANTY: THE SPECIAL WARRANTY SPECIFIED IN THIS ARTICLE SHALL NOT DEPRIVE THE OWNER OF OTHER RIGHTS THE OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS AND SHALL BE IN ADDITION TO AND RUN CONCURRENT WITH OTHER WARRANTIES MADE BY THE CONTRACTOR UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

B. SPECIAL WARRANTY: WARRANT TREES, SHRUBS, AND PLANTS FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLECT, OR ABUSE BY OWNER, ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.

C. REPLACEMENTS: PLANTS OF SAME SIZE AND SPECIES AS SPECIFIED, PLANTED IN THE NEXT GROWING SEASON, WITH A NEW WARRANTY COMMENCING ON DATE OF REPLACEMENT.

1. REMOVE AND REPLACE DEAD PLANTING MATERIALS IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON.
2. REPLACE PLANTING MATERIALS THAT ARE MORE THAN 25% DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD.
3. A LIMIT OF ONE REPLACEMENT OF EACH PLANT MATERIAL WILL BE REQUIRED, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.

PART 2 PRODUCTS

2.01 TREE AND SHRUB MATERIAL

A. PLANTS: SPECIES AND SIZE IDENTIFIED IN PLANT SCHEDULE, GROWN IN CLIMATIC CONDITIONS SIMILAR TO THOSE IN LOCALITY OF THE WORK.

B. GENERAL: FURNISH NURSERY-GROWN TREES AND SHRUBS CONFORMING TO ANSI/AHIA Z60.1, WITH HEALTHY ROOT SYSTEMS, DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL SHAPED, FULLY-BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.

C. GRADE: PROVIDE TREES AND SHRUBS OF SIZES AND GRADES CONFORMING TO ANSI/AHIA Z60.1 FOR TYPE OF TREES AND SHRUBS REQUIRED. TREES AND SHRUBS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO LANDSCAPE ARCHITECT WITH PROPORTIONATE INCREASE IN SIZE OF ROOTS AND BALL.

D. LABEL AT LEAST 1 TREE AND 1 SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANNICAL AND COMMON NAME.

2.02 SHADE AND FLOWERING TREES

A. SHADE TREES: SINGLE-STEM TREES WITH STRAIGHT TRUNK, WELL-BALANCED CROWN, AND INTACT LEADER, OF HEIGHT AND CALIPER INDICATED, CONFORMING TO ANSI/AHIA Z60.1 FOR TYPE OF TREES REQUIRED.

B. SMALL TREES: SMALL UPRIGHT OR SPREADING TYPE, BRANCHED OR PRUNED NATURALLY ACCORDING TO SPECIES AND TYPE, AND WITH RELATIONSHIP OF CALIPER, HEIGHT, AND BRANCHING RECOMMENDED BY ANSI/AHIA Z60.1.

C. PROVIDE BALLED AND BURLAPPED TREES WHEN SPECIFIED ON APPROVED PLANS.

2.03 CONIFEROUS EVERGREENS

A. FORM & SIZE: NOMAL QUALITY, WELL-BALANCED. CONIFEROUS EVERGREENS, OF TYPE, HEIGHT, SPREAD, AND SHAPE REQURIED, COMPLYING WITH ANSI/AHIA Z60.1

2.04 SHRUBS AND PERENNIALS

A. FORM AND SIZE: SHRUBS WITH NOT LESS THAN THE MINIMUM NUMBER OF CANES REQUIRED BY AND MEASURED ACCORDING TO ANSI/AHIA Z60.1 FOR TYPE, SHAPE, AND HEIGHT OF SHRUB.

B. PROVIDE BALLED AND BURLAPPED OR CONTAINER SHRUBS AND PERENNIALS.

2.05 SOIL MATERIALS

A. PROVIDE APPROVED IMPORTED TOPSOIL REQUIRED TO BRING SURFACE TO SPECIFIED ELEVATION RELATIVE TO WALK OR CURB.

B. TOPSOIL: FERTILE, AGRICULTURAL SOIL, TYPICAL FOR LOCALITY, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, TAKEN FROM DRAINED SITE; FREE OF SUBSOIL, CLAY OR IMPURITIES, PLANTS, WEEDS AND ROOTS; SEE SECTION 32 9113: SOIL PREPARATION FOR REQUIRED CHEMICAL AND PHYSICAL CHARACTERISTICS.

PRIME
LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER
2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

LICENSED
STATE OF UTAH
AUSTIN KIRK HISLOP
NO. 6176429
(801)409-5301
LANDSCAPE ARCHITECT

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

SHEET NAME:
PLANTING SPECS

SHEET NUMBER:
L602

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2.06 SOIL AMENDMENT MATERIALS

A. FERTILIZER FOR TREES AND SHRUBS: CONTAINING FIFTY PERCENT OF THE ELEMENTS DERIVED FROM ORGANIC SOURCES; OF PROPORTION NECESSARY TO ELIMINATE ANY DEFICIENCIES OF TOPSOIL, TO THE FOLLOWING PROPORTIONS:

1. NITROGEN: >20% (OF WHICH 50% WILL BE ORGANIC).
2. PHOSPHORIC ACID: 10%.
3. SOLUBLE POTASH: 5%.

2.07 ACCESSORIES

A. STAKES: SOFTWOOD LUMBER, POINTED END.

B. CABLE, WIRE, EYE BOLTS AND TURNBUCKLES: NON-CORROSIVE, OF SUFFICIENT STRENGTH TO WITHSTAND WIND PRESSURE AND RESULTING MOVEMENT OF PLANT LIFE.

PART 3 EXECUTION

3.01 EXAMINATION

A. EXAMINE AREAS TO RECEIVE LANDSCAPING FOR COMPLIANCE WITH REQUIREMENTS AND FOR CONDITIONS AFFECTING PERFORMANCE OF WORK OF THIS SECTION. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

B. VERIFY THAT PREPARED SUBSOIL AND PLANTERS ARE READY TO RECEIVE WORK.

C. SATURATE SOIL WITH WATER TO TEST DRAINAGE.

3.02 PREPARATION OF SUBSOIL

A. PREPARE SUBSOIL TO ELIMINATE UNEVEN AREAS. MAINTAIN PROFILES AND CONTOURS. MAKE CHANGES IN GRADE GRADUAL. BLEND SLOPES INTO LEVEL AREAS.

B. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION, FOREIGN MATERIALS, STICKS, RUBBISH, WEEDS AND UNDESIRABLE PLANTS AND THEIR ROOTS. REMOVE CONTAMINATED SUBSOIL.

C. SCARIFY SUBSOIL TO A DEPTH OF 6 INCHES (150 MM) WHERE PLANTS ARE TO BE PLACED. REPEAT CULTIVATION IN AREAS WHERE EQUIPMENT, USED FOR HAULING AND SPREADING TOPSOIL, HAS COMPACTED SUBSOIL.

3.03 PLACING TOPSOIL

A. TOPSOIL DEPTH SHALL BE A MINIMUM OF 12 INCHES.

B. SPREAD TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES (150 MM) OVER AREA TO BE PLANTED. WORK INTO TOP OF LOOSENED SUB GRADE TO CREATE A TRANSITION LAYER AND THEN PLACE REMAINDER OF PLANTING SOIL MIXTURE.

C. TILL SOIL IN BEDS TO A MINIMUM DEPTH OF 8 INCHES AND MIX WITH SPECIFIED SOIL AMENDMENTS AND FERTILIZERS.

D. PLACE TOPSOIL DURING DRY WEATHER AND ON DRY UNFROZEN SUBGRADE.

E. REMOVE VEGETABLE MATTER AND FOREIGN NON-ORGANIC MATERIAL FROM TOPSOIL WHILE SPREADING.

F. GRADE TOPSOIL TO ELIMINATE ROUGH, LOW OR SOFT AREAS, AND TO ENSURE POSITIVE DRAINAGE.

3.04 FERTILIZING

A. APPLY FERTILIZER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. APPLY AFTER INITIAL RAKING OF TOPSOIL AND TILL IN TO BEDS.

C. MIX THOROUGHLY INTO UPPER 8 INCHES (203 MM) OF TOPSOIL.

D. LIGHTLY WATER TO AID THE DISSIPATION OF FERTILIZER.

3.05 EXCAVATION FOR TREES AND SHRUBS

A. PITS AND TRENCHES: EXCAVATE WITH BOTTOM OF EXCAVATION SLIGHTLY RAISED AT CENTER TO ASSIST DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION.

1. BALLED AND BURLAPPED TREES AND SHRUBS: EXCAVATE APPROXIMATELY 3 TIMES AS WIDE AS BALL DIAMETER AND EQUAL TO BALL DEPTH.
2. CONTAINER-GROWN TREES AND SHRUBS: EXCAVATE APPROXIMATELY 3 TIMES AS WIDE AS CONTAINER DIAMETER AND EQUAL TO ROOT MASS DEPTH.

B. DISPOSE OF SUBSOIL REMOVED FROM LANDSCAPE EXCAVATIONS. DO NOT MIX WITH PLANTING SOIL OR USE AS BACKFILL.

C. OBSTRUCTIONS: NOTIFY LANDSCAPE ARCHITECT IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.

D. DRAINAGE: NOTIFY LANDSCAPE ARCHITECT IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PITS.

E. FILL EXCAVATION WITH WATER AND ALLOW TO PERCOLATE OUT BEFORE PLACING SETTING LAYER AND POSITIONING TREES AND SHRUBS.

3.06 PLANTING

A. LAYOUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, AND SECURE LANDSCAPE ARCHITECTS ACCEPTANCE BEFORE THE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS NEEDED.

B. SET BALLED AND BURLAPPED STOCK PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF BALL RAISED ABOVE ADJACENT FINISH GRADES AS INDICATED.

1. PLACE STOCK ON UNDISTURBED OR COMPACTED TOPSOIL.
2. REMOVE BURLAP AND WIRE BASKETS FROM TOPS AND AT LEAST UPPER HALF OF ROOT BALL (MORE IF THE ROOT BALL IS STABLE), BUT DO NOT REMOVE FROM UNDER ROOT BALL. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
3. PLACE BACKFILL AROUND BALL IN LAYERS, TAMPING TO SETTLE BACKFILL AND ELIMINATE VOIDS AND AIR POCKETS.
4. BACKFILL TO CONSIST OF ONE (1) PART TOPSOIL AND ONE (1) PART NATIVE SOIL CLEAN AND FREE FROM TOXIC MINERAL AND CHEMICALS, NOXIOUS WEEDS, ROCKS LARGER THAN 1-1/2 INCH IN ANY DIMENSION, AND OTHER OBJECTIONABLE MATERIALS.
5. WHEN PIT IS APPROXIMATELY 1/2 BACKFILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE IS ABSORBED. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF BACKFILL.

C. SET CONTAINER-GROWN STOCK PLUMB IN CENTER OF PIT OR TRENCH WITH TOP OF BALL RAISED ABOVE ADJACENT FINISH GRADES AS INDICATED.

1. CAREFULLY REMOVE CONTAINERS SO AS NOT TO DAMAGE ROOT BALLS.
2. PLACE STOCK ON UNDISTURBED OR COMPACTED TOPSOIL.
3. PLACE BACKFILL AROUND BALL IN LAYERS, TAMPING TO SETTLE BACKFILL AND ELIMINATE VOIDS AND AIR POCKETS.
4. BACKFILL TO CONSIST OF ONE (1) PART TOPSOIL AND ONE (1) PART NATIVE SOIL CLEAN AND FREE FROM TOXIC MINERAL AND CHEMICALS, NOXIOUS WEEDS, ROCKS LARGER THAN 1-1/2 INCH IN ANY DIMENSION, AND OTHER OBJECTIONABLE MATERIALS.
5. WHEN PIT IS APPROXIMATELY 1/2 BACKFILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE IS ABSORBED. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF BACKFILL.

D. DISH AND TAMP TOP OF BACKFILL TO FORM A 3 INCH HIGH MOUND AROUND THE RIM OF THE PIT. DO NOT COVER TOP OF ROOT BALL WITH BACKFILL.

3.07 PLANT SUPPORT

A. BRACE PLANTS VERTICALLY WITH PLANT PROTECTOR WRAPPED GUY WIRES AND STAKES TO THE FOLLOWING:

1. TREE CALIPER: 1 INCH (25 MM); TREE SUPPORT METHOD: 1 STAKE WITH ONE TIE

3.08 TREE PRUNING

A. PRUNE TREES AS RECOMMENDED IN ANSI A300 PART 1.

B. UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT, DO NOT CUT TREE LEADERS, REMOVE ONLY DEAD, BROKEN, AND SPLIT BRANCHES.

C. PRUNE SHRUBS TO RETAIN NATURAL CHARACTER. SHRUB SIZES INDICATED ARE SIZE AFTER PRUNING.

3.09 FIELD QUALITY CONTROL

A. PLANTS WILL BE REJECTED IF A BALL OF EARTH SURROUNDING ROOTS HAS BEEN DISTURBED OR DAMAGED PRIOR TO OR DURING PLANTING.

3.10 CLEAN-UP AND PROTECTION

A. DURING LANDSCAPING, KEEP PAVEMENT CLEAN AND WORK AREA IN ORDERLY CONDITION.

B. PROTECT LANDSCAPING FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

3.11 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF THE OWNER'S PROPERTY.

3.12 MAINTENANCE

A. PROVIDE MAINTENANCE AT NO EXTRA COST TO OWNER; OWNER WILL PAY FOR WATER.

B. MAINTAIN PLANT LIFE FOR 60 DAYS AFTER DATE OF SUBSTANTIAL COMPLETION.

C. IRRIGATE SUFFICIENTLY TO SATURATE ROOT SYSTEM AND PREVENT SOIL FROM DRYING OUT.

D. REMOVE DEAD OR BROKEN BRANCHES AND TREAT PRUNED AREAS OR OTHER WOUNDS.

E. NEATLY TRIM PLANTS WHERE NECESSARY.

F. IMMEDIATELY REMOVE CLIPPINGS AFTER TRIMMING.

G. CONTROL GROWTH OF WEEDS. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

H. CONTROL INSECT DAMAGE AND DISEASE. APPLY PESTICIDES IN ACCORDANCE WITH MANUFACTURERS

INSTRUCTIONS.

I. REMEDY DAMAGE FROM USE OF HERBICIDES AND PESTICIDES.

J. MAINTAIN WRAPPINGS, GUYS, AND STAKES. REPAIR OR REPLACE ACCESSORIES WHEN REQUIRED.

END OF SECTION

SECTION 32 9419

LANDSCAPE SURFACING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. CRUSHED ROCK.

B. WEED BARRIER

C. MAINTENANCE.

1.02 SUBMITTALS

A. SEE SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL PROCEDURES.

1.03 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS COMPLETED LANDSCAPING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT WITH AT LEAST 3 YEARS EXPERIENCE AND A RECORD OF SUCCESSFUL LANDSCAPE ESTABLISHMENT.

1.04 FIELD CONDITIONS

A. DO NOT INSTALL MULCH WHEN WIND VELOCITY EXCEEDS 30 MPH (48 K/HR).

1.05 WARRANTY

A. GENERAL WARRANTY: THE SPECIAL WARRANTY SPECIFIED IN THIS ARTICLE SHALL NOT DEPRIVE THE OWNER OF OTHER RIGHTS THE OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS AND SHALL BE IN ADDITION TO AND RUN CONCURRENT WITH OTHER WARRANTIES MADE BY THE CONTRACTOR UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

PART 2 PRODUCTS

2.01 ACCESSORIES

A. WEED CONTROL BARRIER: 5 OZ. WOVEN, NEEDLE-PUNCHED POLYPROPYLENE FABRIC. DEWITT PRO 5 WEED BARRIER OR LANDSCAPE ARCHITECT'S APPROVED EQUIVALENT.

B. ANTIDESICCANT: WATER-INSOLUBLE EMULSION, PERMEABLE MOISTURE RETARDER, FILM FORMING, FOR TREES AND SHRUBS. DELIVER IN ORIGINAL, SEALED, AND FULLY LABELED CONTAINERS AND MIX ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

PART 3 EXECUTION

3.01 EXAMINATION

A. EXAMINE AREAS TO RECEIVE LANDSCAPING FOR COMPLIANCE WITH REQUIREMENTS AND FOR CONDITIONS AFFECTING PERFORMANCE OF WORK OF THIS SECTION. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

B. VERIFY THAT PREPARED SUBSOIL AND PLANTERS ARE READY TO RECEIVE WORK.

3.02 MULCHING

A. WEED CONTROL BARRIERS: INSTALL WEED CONTROL BARRIERS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND BEFORE MULCHING. COMPLETELY COVER AREA TO BE MULCHED, LAPPING EDGES A MINIMUM OF 6 INCHES.

B. PLACE SOIL PEP IN ALL 3 FOOT DIAMETER TREE RINGS.

C. AGGREGATE: PLACE 6 INCH DEPTH AGGREGATE IN AREAS AS SHOWN ON PLANS AND ACCORDING TO DETAIL.

D. ROCK: PLACE 3 INCH DEPTH ROCK IN AREAS AS SHOWN ON PLANS WITH WEED CONTROL BARRIER BENEATH.

3.03 ACCESSORIES

A. APPLY ANTIDESICCANT USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM ON TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE. WHEN DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL-LEAF, SPRAY WITH ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN 2 WEEKS AFTER PLANTING.

3.04 CLEAN-UP AND PROTECTION

A. DURING LANDSCAPING, KEEP PAVEMENT CLEAN AND WORK AREA IN ORDERLY CONDITION.

B. PROTECT LANDSCAPING FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

3.05 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF THE OWNER'S PROPERTY.

3.06 MAINTENANCE

A. REPLACE SOIL PEP WHEN DETERIORATED.

END OF SECTION

PRIME
LANDSCAPE ARCHITECTURE

FRANCIS TOWN CENTER
2217 S SPRING HOLLOW ROAD
FRANCIS, UTAH 84036

STATE OF UTAH
DUSTIN KIRK HISLOP
LICENSED LANDSCAPE ARCHITECT
NO. 8287409-5301

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT: 50002
CHECKED BY: HISLOP
ISSUED: 11-19-2024

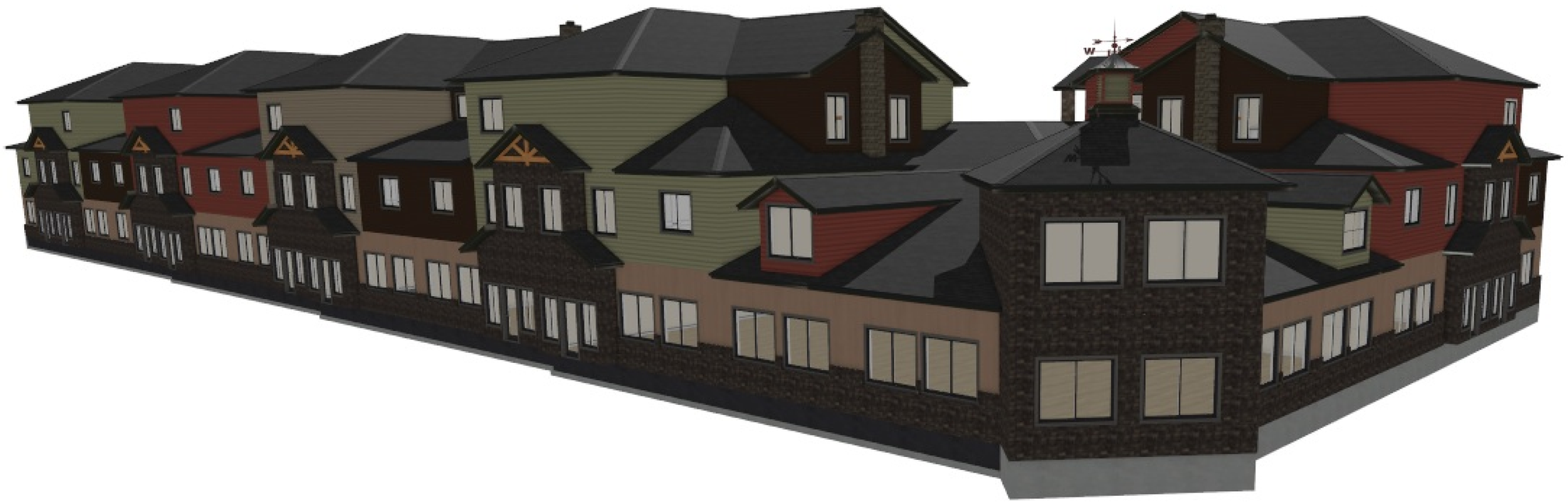
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PLANTING SPECS

SHEET NUMBER:
L603

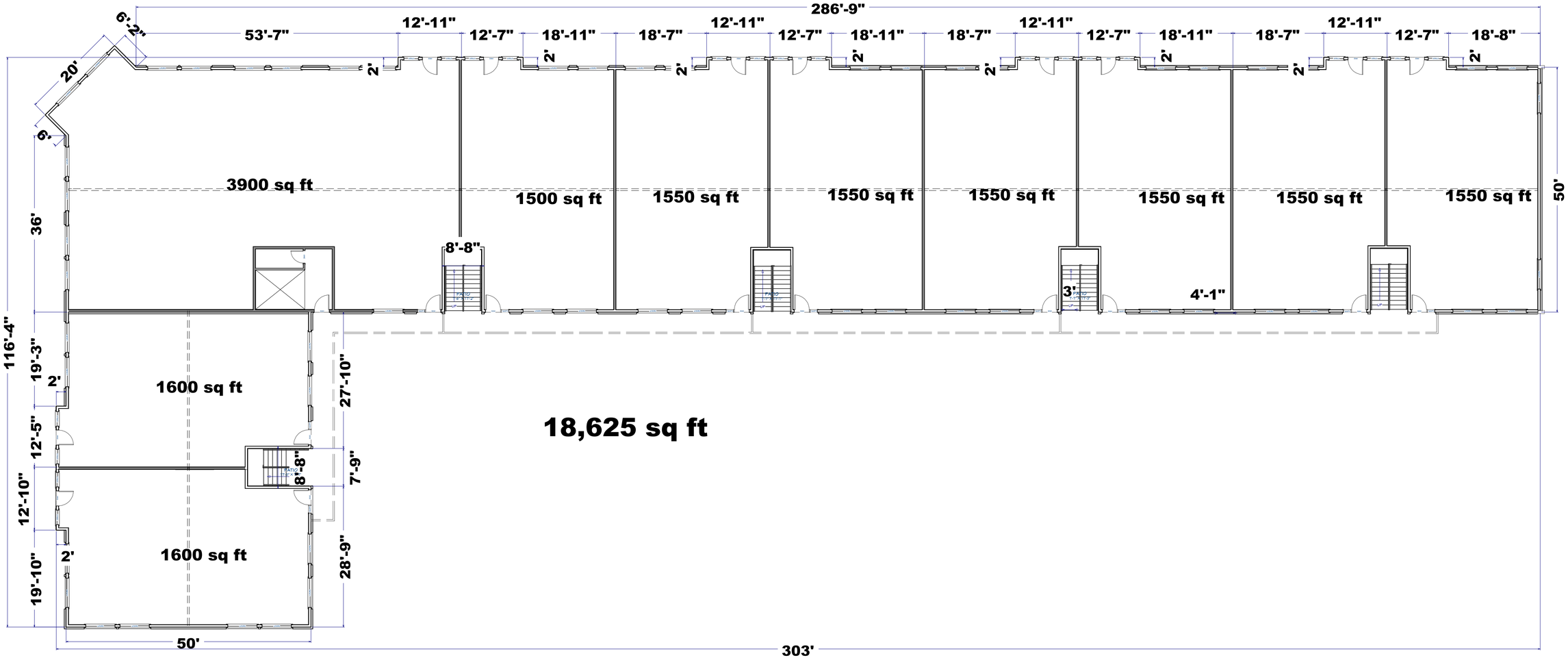
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FRANCIS TOWN COMMONS
BUILDING 2





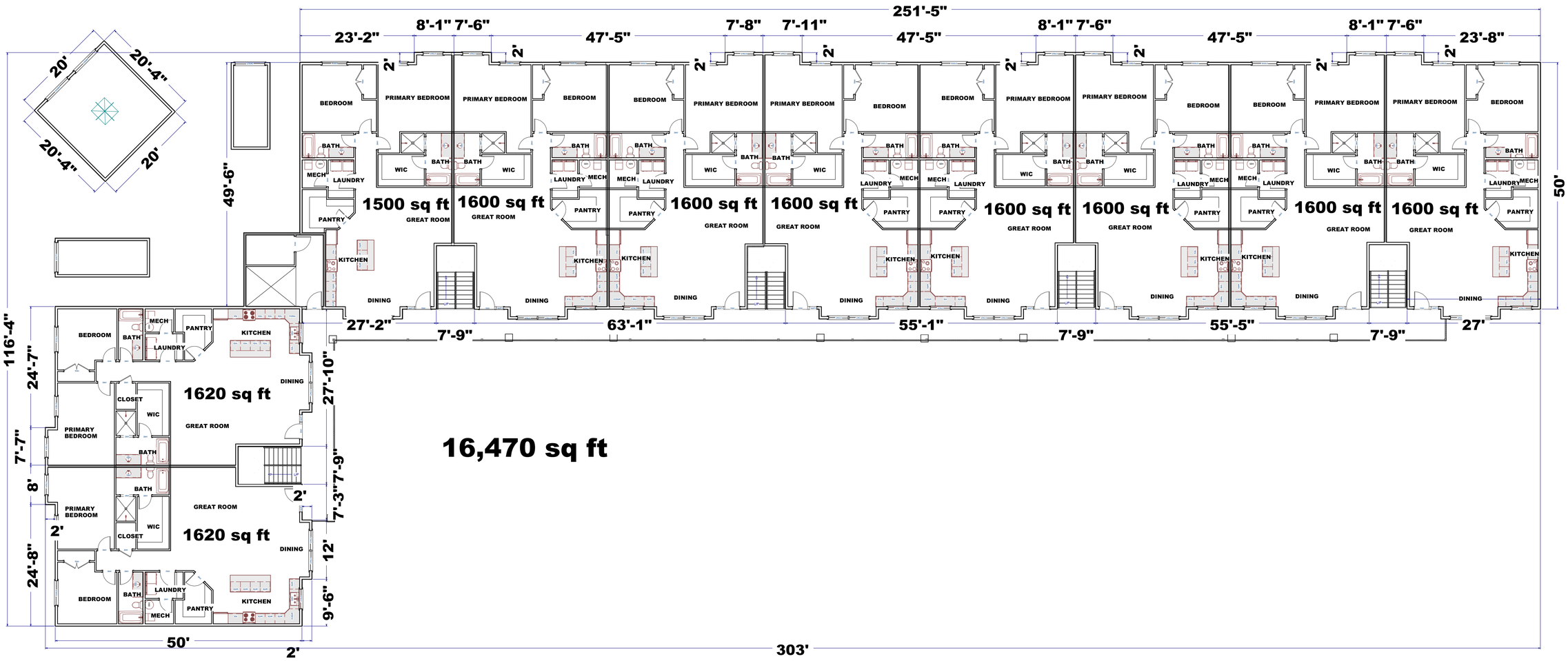
FRANCIS TOWN COMMON



18,625 sq ft

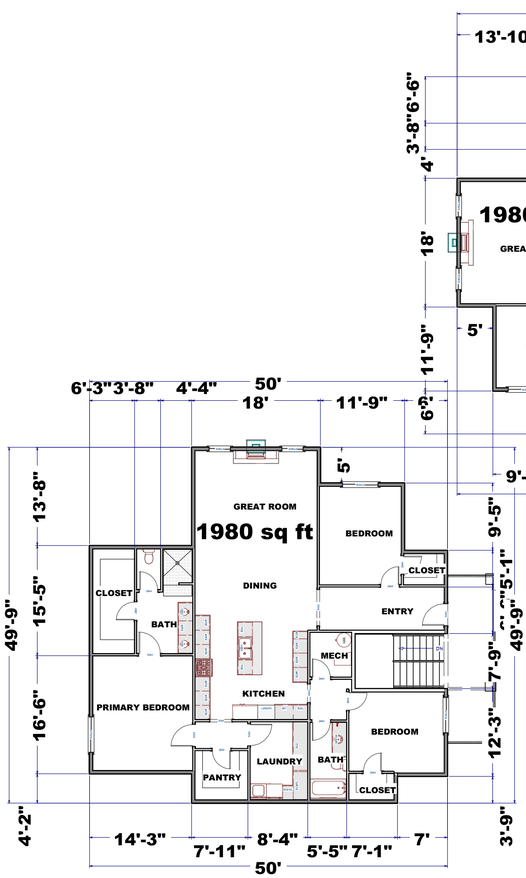
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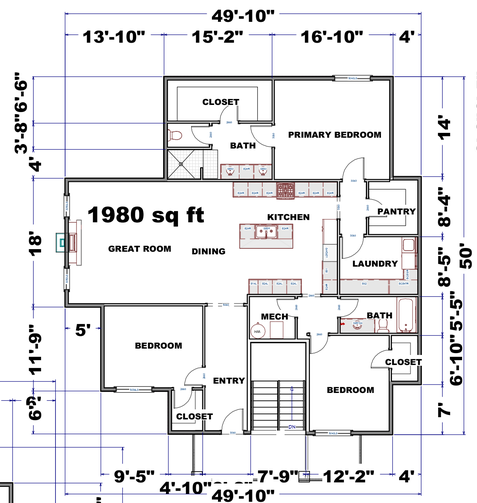
FRANCIS TOWN COMMON

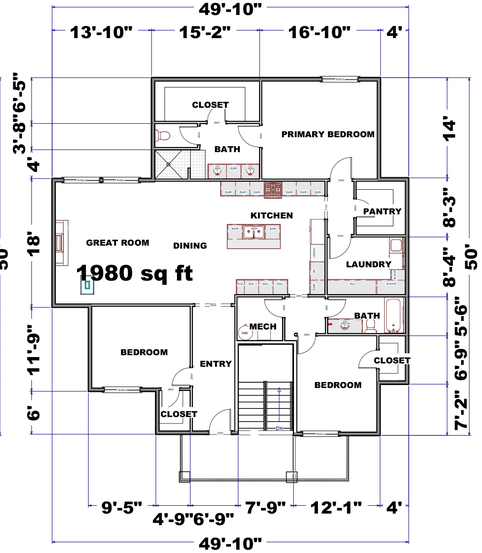


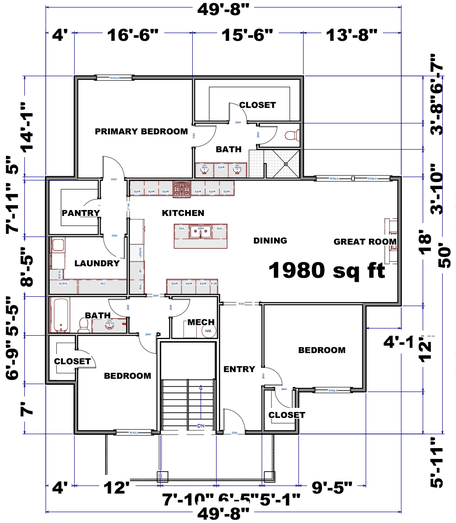
SECOND FLOOR PLAN - 1/10"=1'-0"

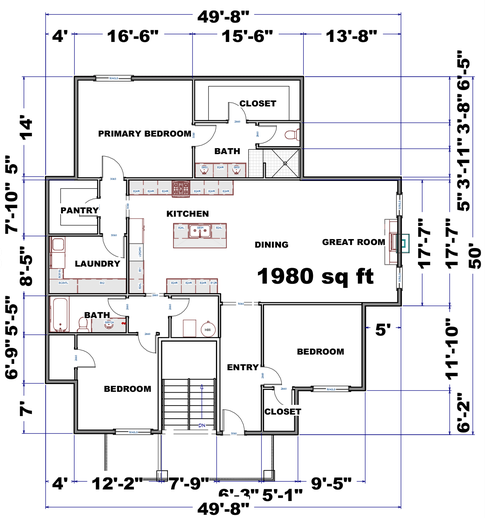
FRANCIS TOWN COMMON











10,370 sq ft

THIRD FLOOR PLAN - 1/10"=1'-0"

FRANCIS TOWN COMMON



FRONT ELEVATION VIEW 1/8"=1'-0"



REAR ELEVATION VIEW 1/8"=1'-0"

FRANCIS TOWN COMMON



RIGHT ELEVATION VIEW 1/8"=1'-0"



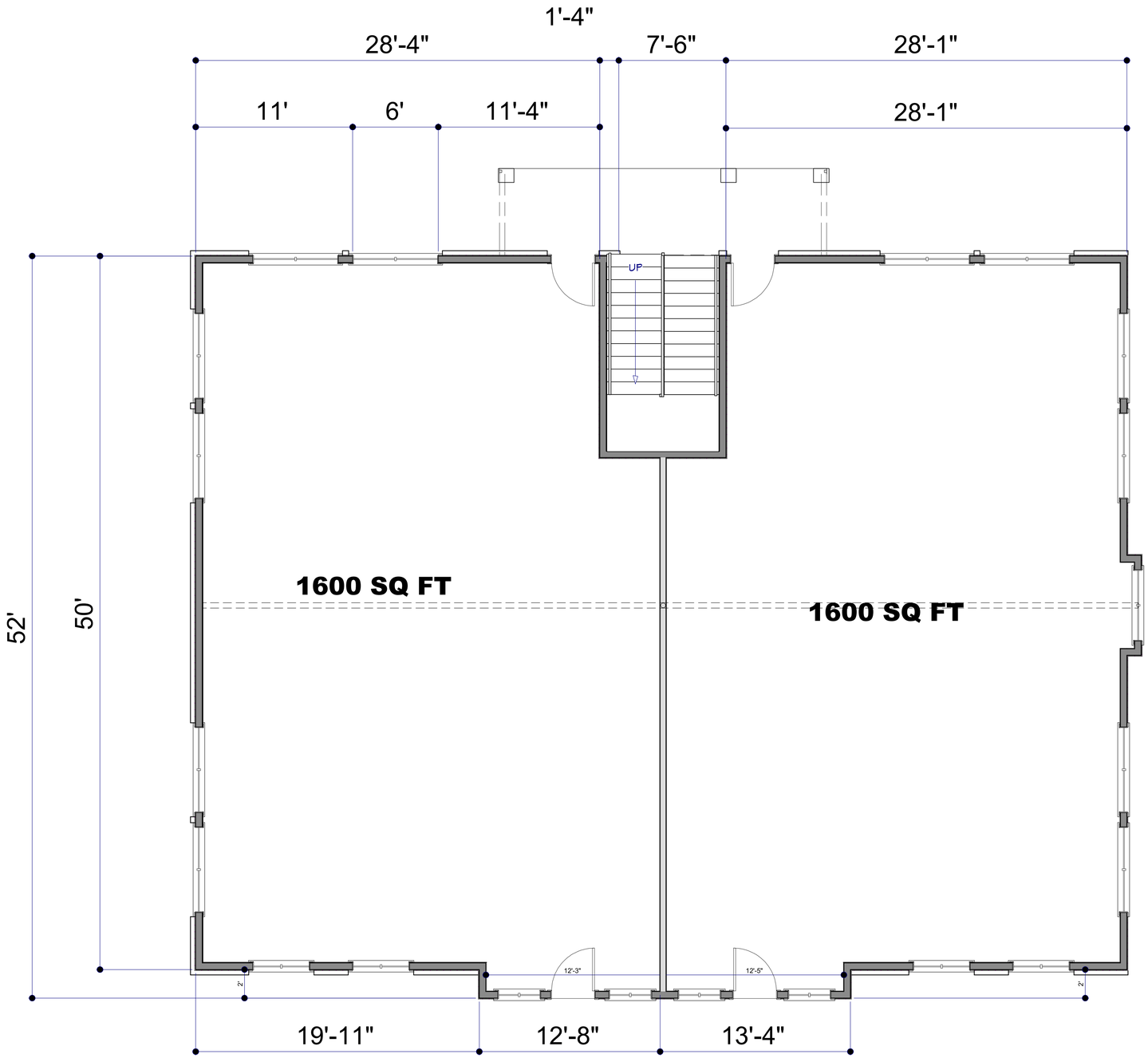
LEFT ELEVATION VIEW 1/8"=1'-0"

FRANCIS TOWN COMMON

FRANCIS TOWN COMMONS
BUILDING 3



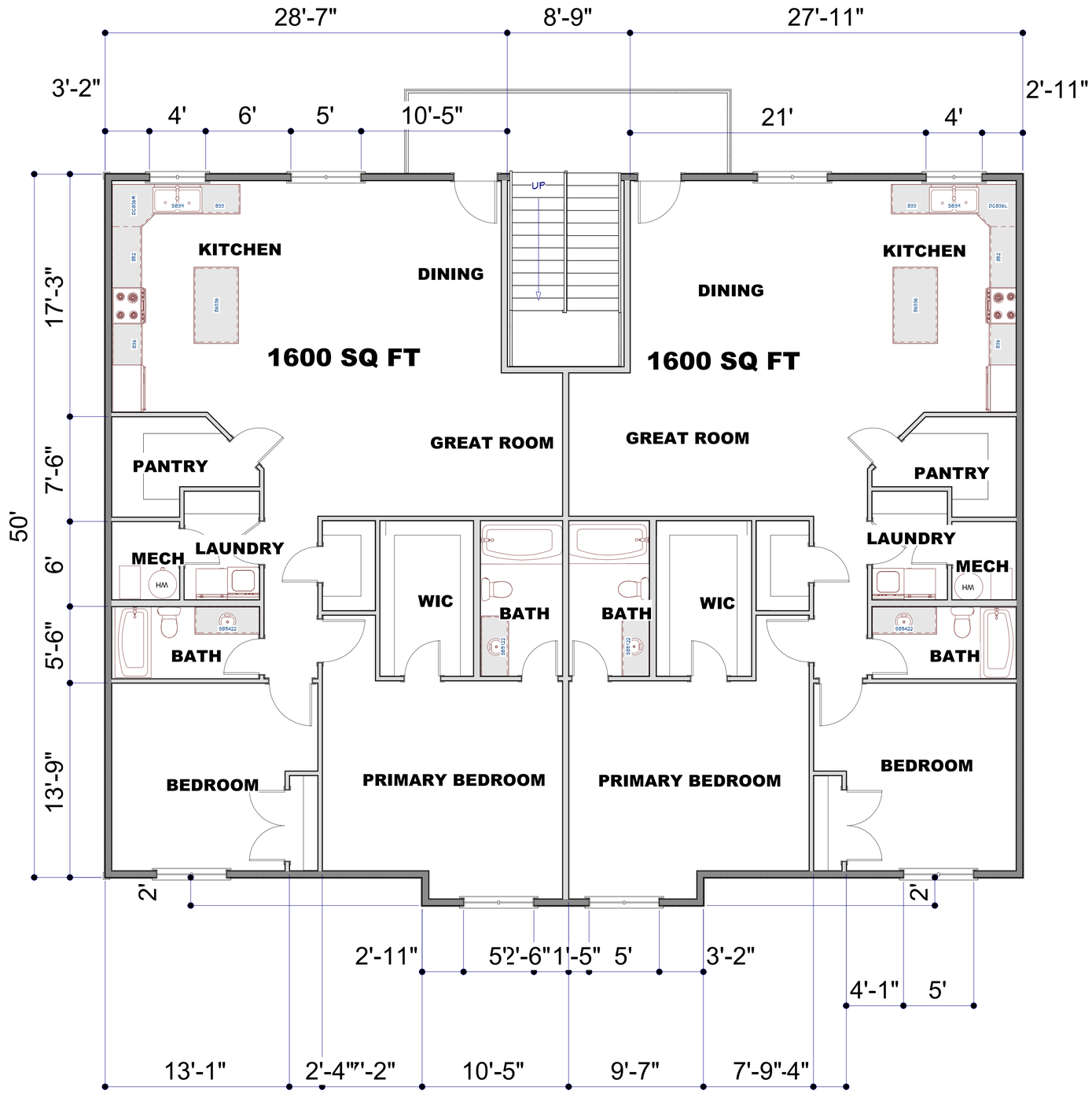
FRANCIS TOWN COMMON



3200 SQ FT

MAIN FLOOR PLAN - 1/4"=1'-0"

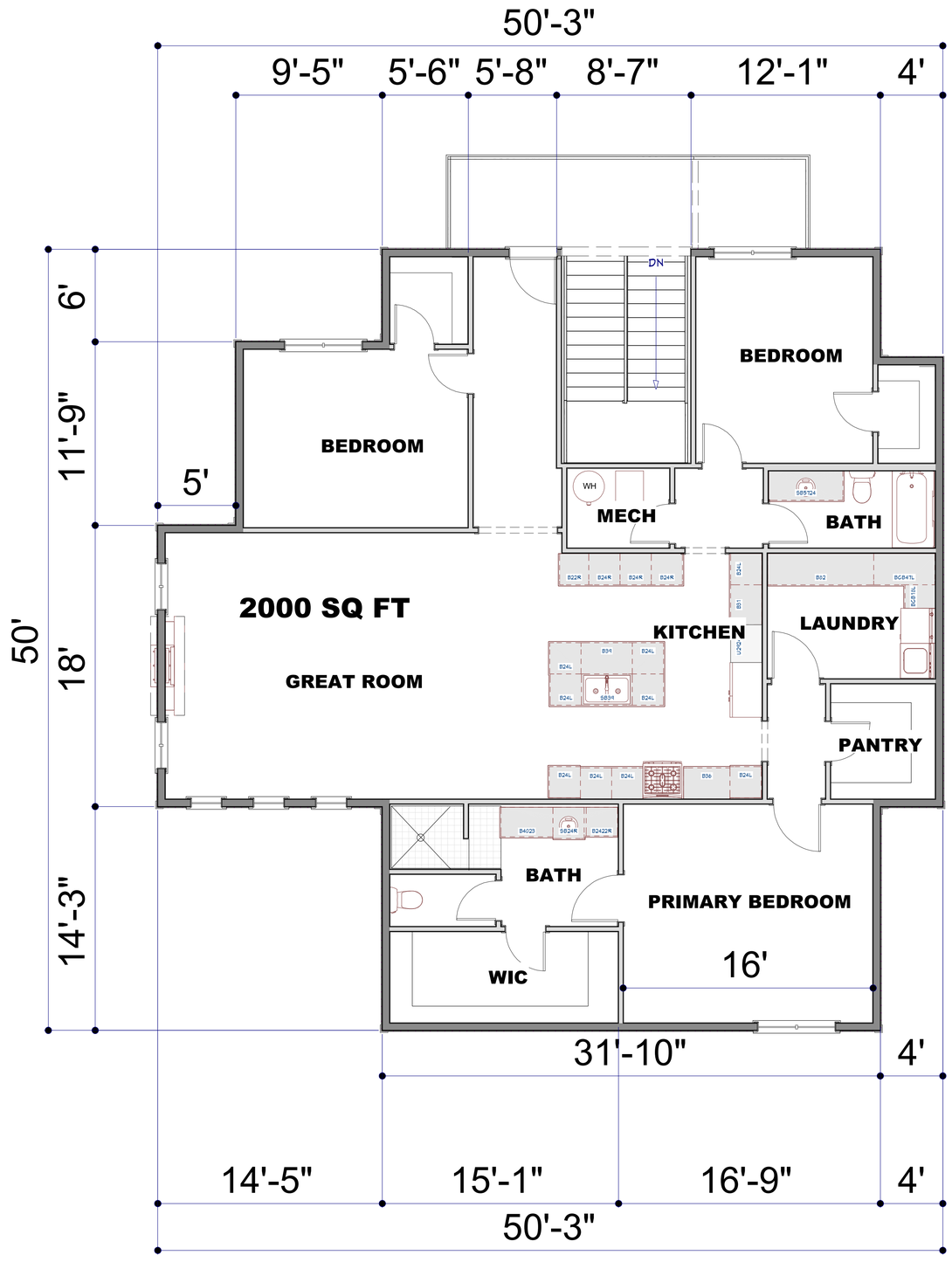
FRANCIS TOWN COMMON



SECOND FLOOR PLAN - 1/4"=1'-0"

FRANCIS TOWN COMMON

2400 SQ FT



THIRD FLOOR PLAN - 1/4"=1'-0"

FRANCIS TOWN COMMON



FRONT ELEVATION VIEW 3/16"=1'-0"



REAR ELEVATION VIEW 1/4"=1'-0"

FRANCIS TOWN COMMON



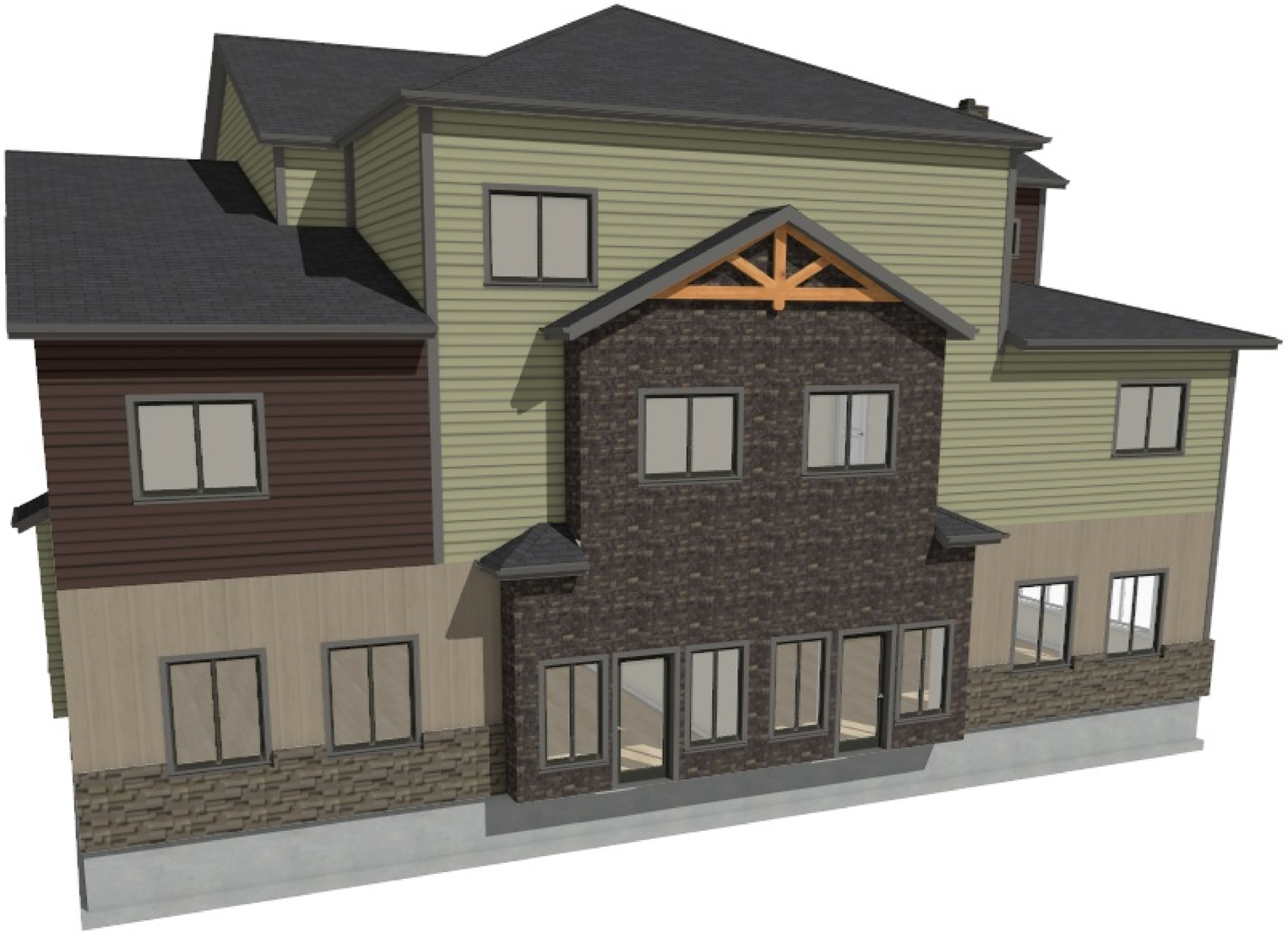
RIGHT ELEVATION VIEW 3/16"=1'-0"



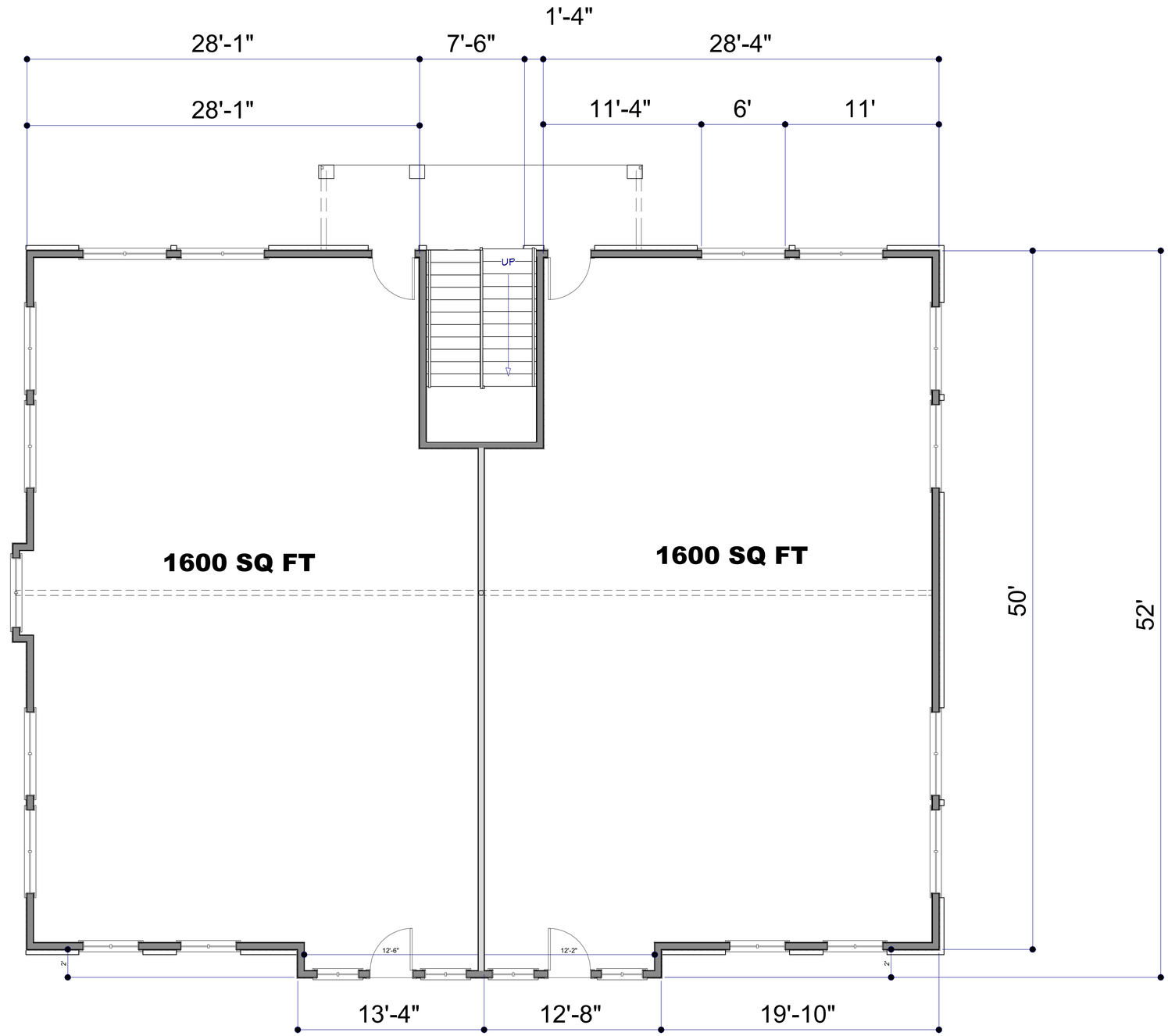
LEFT ELEVATION VIEW 3/16"=1'-0"

FRANCIS TOWN
COMMON

FRANCIS TOWN COMMONS
BUILDING 1

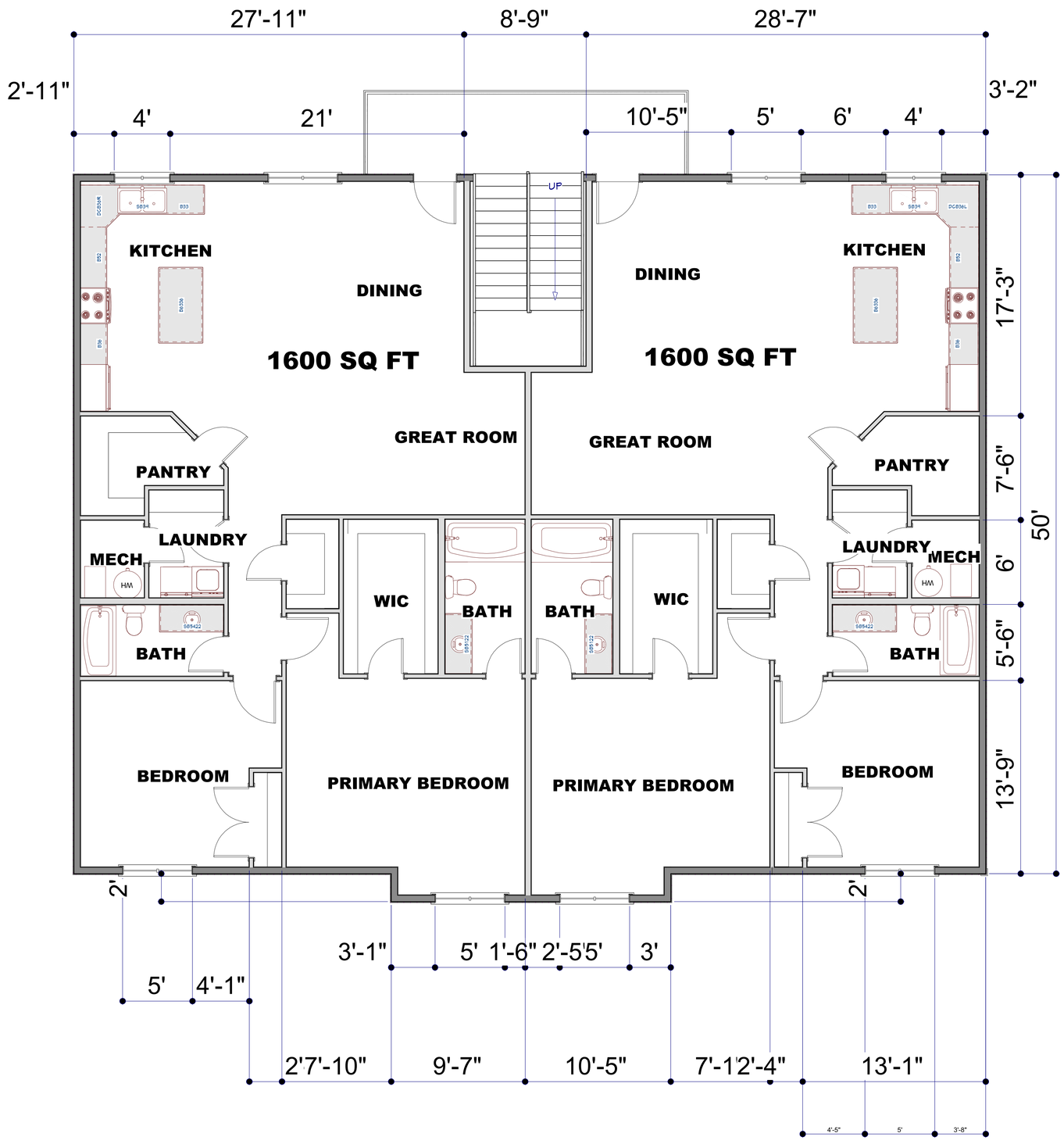


FRANCIS TOWN
COMMON



FRANCIS TOWN COMMON

MAIN FLOOR PLAN - 1/4"=1'-0"

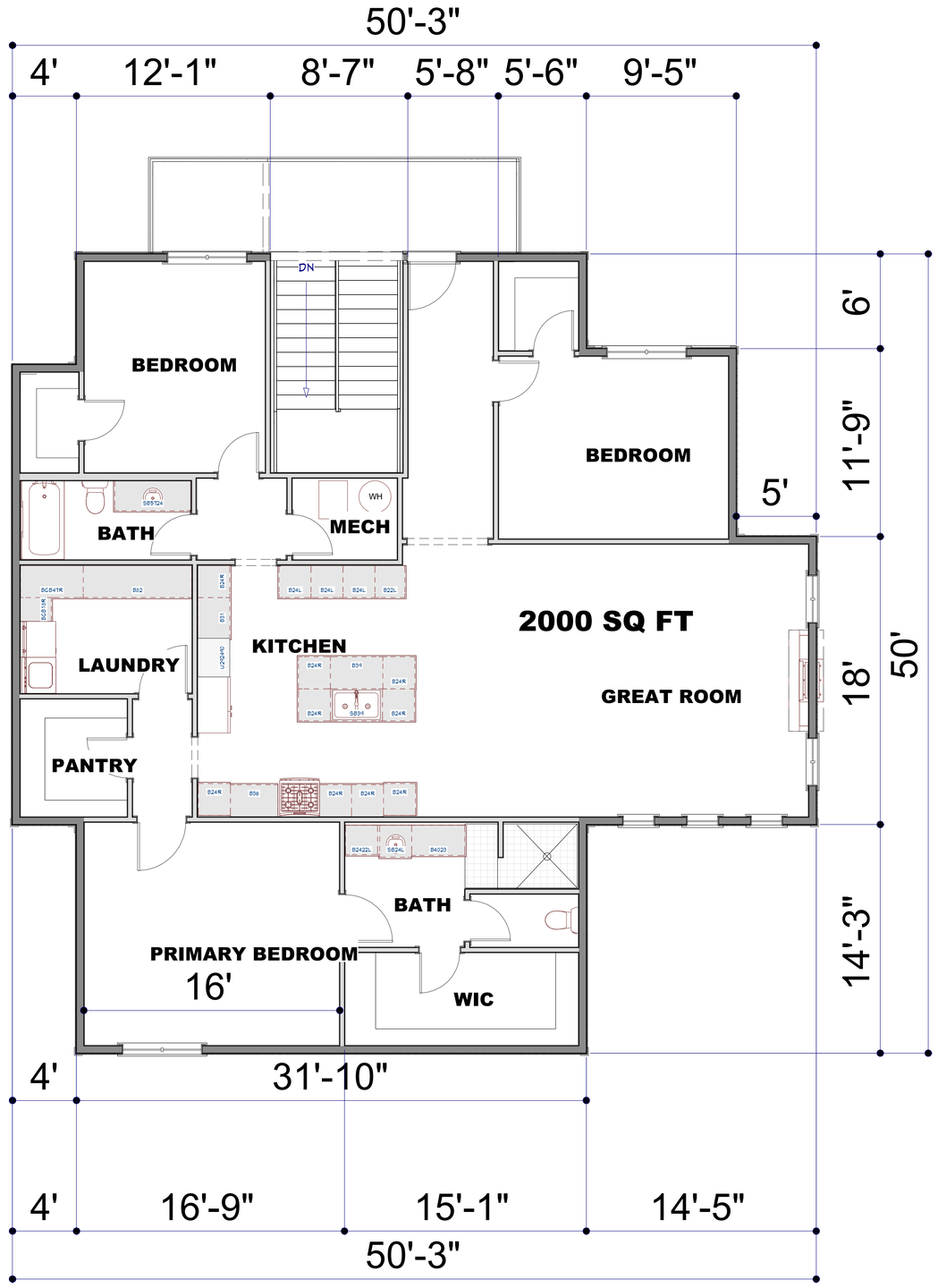


3200 SQ FT

SECOND FLOOR PLAN - 1/4"=1'-0"

FRANCIS TOWN COMMON

2400 SQ FT



THIRD FLOOR PLAN - 1/4"=1'-0"

FRANCIS TOWN COMMON



FRONT ELEVATION VIEW 3/16"=1'-0"



REAR ELEVATION VIEW 3/16"=1'-0"

FRANCIS TOWN COMMON



RIGHT ELEVATION VIEW 3/16"=1'-0"



LEFT ELEVATION VIEW 3/16"=1'-0"

FRANCIS TOWN
COMMON

ELECTRICAL GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
2. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
3. ELECTRICAL CONTRACTOR TO REFER TO THE CIVIL ENGINEER'S DRAWING AND COORDINATE ELECTRICAL INSTALLATION WITH ALL UTILITIES.
4. ELECTRICAL CONTRACTOR TO VERIFY ALL THE UTILITY COMPANY SERVICE (POWER, TELEPHONE, ETC.) TERMINATION POINTS PRIOR TO ROUGH-IN. PROVIDE CONDUIT AS REQUIRED TO ACCOMMODATE ALL UTILITY COMPANY SERVICES. REPORT ANY CONFLICTING CONDITIONS TO THE ARCHITECT.
5. EVERY CIRCUIT SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE PER NEC 408.4(A).
6. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
7. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
8. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
9. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
10. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
11. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
12. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.

ELECTRICAL SYMBOLS

SYMBOL	EXPLANATION	SYMBOL	EXPLANATION	SYMBOL	EXPLANATION
———	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL	F1	FIXTURE TYPE SYMBOL		TAMPER AND FLOW
- - - -	BRANCH CIRCUIT CONCEALED IN GROUND OR FLOOR		LINIER FIXTURE (TYPICAL)	FACP	FIRE ALARM CONTROL PANEL
A-1,3	BRANCH CIRCUIT HOMERUNS TO PANEL		EMERGENCY LIGHTING UNIT	RFAA	REMOTE FIRE ALARM ANNUNCIATOR PANEL
135	ROOM NUMBER		SURFACE OR PENDANT MOUNTED FIXTURE	NAC	FIRE ALARM NAC PANEL
CH 1	MECHANICAL EQUIPMENT SYMBOL		RECESSED FIXTURE	VOICE	FIRE ALARM VOICE PANEL
1	KEYED NOTE REFERENCE		WALL MOUNTED FIXTURE	D/H	DOOR HOLDER
42X	FEEDER TAG (SEE FEEDER SCHEDULE)		WALL PACK	F/S	FIRE/SMOKE DAMPER
FLUSH / SURFACE	LIGHTING AND POWER PANELBOARD		STRIP FIXTURE		FIRE ALARM PULL STATION
NON-FUSED / FUSED	DISCONNECT SWITCH		TRACK LIGHTING		FIRE ALARM STROBE
NON-FUSED / FUSED	DISCONNECT SWITCH WITH MOTOR STARTER	BUGEYE / EXPRESS	EMERGENCY LIGHTING UNIT		FIRE ALARM HORN/STROBE
	MOTOR STARTER		WALL MOUNTED EXIT LIGHT (SINGLE FACE)	LF	FIRE ALARM HORN/STROBE (LF = LOW FREQUENCY)
VFD	VARIABLE FREQUENCY DRIVE		WALL MOUNTED EXIT LIGHT (DOUBLE FACE)		FIRE ALARM HORN/STROBE WITH PROTECTIVE COVER
C	CONDUIT STUB		CEILING MOUNTED EXIT LIGHT (SINGLE FACE)		FIRE ALARM SPEAKER/STROBE
J	JUNCTION BOX		CEILING MOUNTED EXIT LIGHT (DOUBLE FACE)	LF	FIRE ALARM SPEAKER/STROBE (LF = LOW FREQUENCY)
EV	ELECTRIC VEHICLE CHARGING STATION (EVSE)		EXIT LIGHT WITH PROTECTIVE COVER		FIRE ALARM SPEAKER
WP — MODIFIER A-1 — PANEL SPACE ASSIGNMENT REF — EQUIPMENT DESIGNATION		$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)	LF	FIRE ALARM SPEAKER (LF = LOW FREQUENCY)
+44	MOUNTING HEIGHT ABOVE FLOOR OR GRADE GIVEN IN INCHES.	2	TWO POLE SWITCH		FIRE ALARM HORN
GFCI	PROTECTED BY FAULT CIRCUIT INTERRUPTER	3	3-WAY SWITCH	LF	FIRE ALARM HORN (LF = LOW FREQUENCY)
TR	TAMPER RESISTANT	4	4-WAY SWITCH		FIRE ALARM STROBE CEILING MOUNTED
WP	WEATHERPROOF COVER & LISTED WEATHER RESISTANT DEVICE	D	DIMMER SWITCH		FIRE ALARM HORN/STROBE CEILING MOUNTED
DISP	DISPOSAL	K	KEYED SWITCH	LF	FIRE ALARM HORN/STROBE CEILING MOUNTED (LF = LOW FREQUENCY)
DW	DISHWASHER	T	TIMER SWITCH		FIRE ALARM HORN CEILING MOUNTED
EWC	ELECTRIC WATER COOLER	M	MANUAL STARTER WITH THERMAL OVERLOAD	LF	FIRE ALARM HORN CEILING MOUNTED (LF = LOW FREQUENCY)
REF	REFRIGERATOR	F	PADDLE FAN SPEED CONTROL (CANARM "CH" SERIES)		SMOKE DETECTOR (SUBSCRIPT AS INDICATED BELOW)
USB	HUBBELL USB15ACSW OR EQUAL DUPLEX PLUS USB CHARGER	OC	OCCUPANCY SENSOR SWITCH	B	SMOKE ALARM BATTERY-BACKED
WASH	WASHING MACHINE	LV	LOW VOLTAGE CONTROL SWITCH	C	SMOKE/CARBON MONOXIDE ALARM COMBO BATTERY-BACKED
		LV/D	LOW VOLTAGE CONTROL SWITCH WITH DIMMER	CS/LF	SMOKE/CARBON MONOXIDE DETECTOR WITH LOW FREQUENCY SOUNDER BASE
		OC/D	OCCUPANCY SENSOR CONTROL SWITCH WITH DIMMER	D	DUCT SMOKE DETECTOR
		OC/2	DUAL RELAY OCCUPANCY SENSOR CONTROL SWITCH	R	SMOKE DETECTOR WITH ADDRESSABLE RELAY
	SIMPLEX RECEPTACLE OUTLET			S/LF	SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE
	DUPLEX RECEPTACLE OUTLET	$$	DOUBLE GANG SWITCH		HEAT DETECTOR
	QUAD RECEPTACLE OUTLET	a,b,c / S	LOW VOLTAGE MULTI BUTTON CONTROL SWITCH (LETTER INDICATES CONTROL OF CORRESPONDING FIXTURES)		GAS DETECTOR
	SPLIT WIRED DUPLEX RECEPTACLE OUTLET	$$$	CONTROLLING SWITCH (LETTER INDICATES CONTROL OF CORRESPONDING FIXTURES)	CO CO/NO2	CARBON MONOXIDE DETECTOR CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR (GARAGE)
	220V RECEPTACLE OUTLET	S	OCCUPANCY SENSOR (CEILING MOUNTED)		ADA TWO-WAY COMMUNICATIONS SYSTEM
	ISOLATED GROUND RECEPTACLE OUTLET	DT PIR	DUAL TECHNOLOGY OCCUPANCY SENSOR (CEILING MOUNTED) PASSIVE INFRARED OCCUPANCY SENSOR (CEILING MOUNTED)	KP	ACCESS CONTROL KEY PAD
	SPECIAL RECEPTACLE OUTLET	RC	ROOM CONTROLLER	CR	ACCESS CONTROL CARD READER
T	THERMOSTAT OUTLET	LS	DAYLIGHT SENSOR	Sos	ACCESS CONTROL DOOR STRIKE
S	REMOTE SENSOR OUTLET	P	PHOTOCELL	ML	ACCESS CONTROL MAG LOCK
▽(#)	COMPUTER DATA OUTLET (#) INDICATES JACK QUANTITIES	V	VOLUME CONTROL	DS	ACCESS CONTROL DOOR SENSOR
▽	NETWORK AND VOICE OUTLET		WALL SPEAKER		ACCESS CONTROL REQUEST TO EXIT
	WIRELESS ACCESS POINT CEILING MOUNTED		CEILING SPEAKER		PUSHBUTTON
TV	TELEVISION OUTLET		SURVEILLANCE CAMERA	B	BELL
	MOTOR OUTLET	DVR	SURVEILLANCE DIGITAL VIDEO RECORDER		
	EXHAUST FAN	NURSE	NURSE CALL ANNUNCIATOR PANEL		
	FLOOR MOUNTED DEVICE	N	NURSE CALL EMERGENCY CALL DEVICE		
	CEILING MOUNTED DEVICE	N	NURSE CALL EMERGENCY CALL LIGHT		

NOTE: ALL SYMBOLS MAY NOT BE USED.

ABBREVIATIONS INDEX

#	NUMBER	DC	DIRECT CURRENT	KW	KILOWATT	PT	POTENTIAL TRANSFORMER
Φ	PHASE	DISP	DISPOSAL	LRA	LOCKED ROTOR AMPS	PV	PHOTOVOLTAIC
1Φ	SINGLE PHASE	DRY	DRYER	LTG	LIGHTING	PVC	POLYVINYL CHLORIDE
2P	TWO-POLE	DW	DISHWASHER	MATV	MASTER ANTENNA TELEVISION	(R)	RELOCATE
3Φ	THREE PHASE	DWG	DRAWING	MAX	MAXIMUM	RECP	RECEPTACLE
4P	FOUR-POLE	EC	EMPTY CONDUIT	MB	MAIN BUS	REF	REFRIGERATOR
AC	ALTERNATING CURRENT	EM	EMERGENCY	MCB	MAIN CIRCUIT BREAKER	REQ	REQUIRED
AFF	ABOVE FINISHED FLOOR	EMG	EMERGENCY GENERATOR	MCC	MOTOR CONTROL CENTER	RLA	RATED LOAD AMPS
AFG	ABOVE FINISHED GRADE	EMT	ELECTRICAL METALLIC TUBING	MCM	1000 CIRCULAR MILLS	RMS	ROOT MEAN SQUARE
AFP	ARC FAULT PROTECTOR	EPO	EMERGENCY POWER OFF	MH	MANHOLE	SE	SERVICE ENTRANCE
AHJ	AUTHORITY HAVING JURISDICTION	EWC	ELECTRIC WATER COOLER	MIC	MICROPHONE	SPD	SURGE PROTECTION DEVICE
AIC	AMP INTERRUPTING CURRENT (SYMMETRICAL)	EWH	ELECTRIC WALL HEATER	MIN	MINIMUM	SPEC	SPECIFICATION
AL	ALUMINUM	(E)	EXISTING	MLO	MAIN LUGS ONLY	SPK	SPEAKER
AM	AMPS METER	(F)	FUTURE	MNF	MANUFACTURER	SS	SELECTOR SWITCH
AMP	AMPERE	FA	FIRE ALARM	MTG	MOUNTING	SW	SWITCH
ANN	ANNUNCIATOR	FACP	FIRE ALARM CONTROL PANEL	MTR	MOTOR	SWBD	SWITCHBOARD
ATS	AUTOMATIC TRANSFER SWITCH	FC	FOOT CANDLE	MW	MICROWAVE	SWGR	SWITCHGEAR
AUX	AUXILIARY	FLA	FULL LOAD AMPS	(N)	NEW	TTB	TELEPHONE TERMINAL BOARD
AWG	AMERICAN WIRE GAUGE	FT	FOOT	N/A	NOT APPLICABLE	TBC	TELEPHONE TERMINAL CABINET
BC	BARE COPPER	FRZ	FREEZER	NC	NORMALLY CLOSED	TV	TELEVISION
BFG	BELOW FINISH GRADE	FS	FUSED SWITCH	NEC	NATIONAL ELECTRICAL CODE	TYP	TYPICAL
C	CONDUIT	GFAF	DUAL FUNCTION GFCI/AFCI CIRCUIT BREAKER	NEMA	NATIONAL MANUFACTURING ASSOCIATION	UG	UNDERGROUND
CAB	CABINET	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NFC	NATIONAL FIRE CODE	UNO	UNLESS NOTED OTHERWISE
CATB	COMMUNITY ANTENNA TELEVISION	GFEP	GROUND-FAULT EQUIPMENT PROTECTION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	UPS	UNINTERRUPTIBLE POWER SUPPLY
CATV	CABLE TELEVISION	GFP	GROUND FAULT PROTECTOR	NFS	NON FUSED SWITCH	V	VOLT (KV-KILOVOLT)
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	GRC	GALVANIZED RIGID CONDUIT	NIC	NOT IN CONTRACT	VA/R	VOLT-AMPS/REACTIVE
CKT	CIRCUIT	GRD	GROUND	NL	NIGHT LIGHT	VM	VOLT METER
CLG	CEILING	HP	HORSE POWER	NO	NORMALLY OPEN	W	WATTS
CNTR	CONTRACTOR	HZ	HERTZ	NTS	NOT TO SCALE	W/	WITH
CO	CONVENIENCE OUTLET	IG	ISOLATED GROUND	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	W/SH	WASHER
CRT	COMPUTER TERMINAL	IMC	INTERMEDIATE METALLIC CONDUIT	OFOI	OWNER FURNISHED OWNER INSTALLED	WH	WATTHOUR
CT	CURRENT TRANSFORMER	IN	INCH	OS&Y	OUTSIDE SCREW AND YOKE	W/O	WITHOUT
CU	COPPER	J-BOX	JUNCTION BOX	PB	PUSH BUTTON	WP	WEATHER PROOF
C/W	CONDUIT WITH	KV	KILOVOLT	PF	POWER FACTOR	XFMR	TRANSFORMER
(D)	DEMOLISH/DELETE	KVA	KILOVOLT AMPERES	PFR	PHASE FAILURE RELAY	XFMR-SW	TRANSFORMER SWITCH
DB	DECIBEL	KVAR	KILOVARS	PNL	PANEL	XP	EXPLOSION PROOF

NOTE: THIS IS A TYPICAL ABBREVIATION LIST. NOT ALL ABBREVIATIONS MAY BE USED ON THIS PROJECT.

DESIGN CONTACTS

ELECTRICAL ENGINEER:	RYAN BEAGLES
ELECTRICAL TEAM LEAD:	JOE HUTCHINGS
ELECTRICAL DESIGNER:	RICH LARSEN

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E0.1	ELECTRICAL COVER SHEET
E0.2	PHOTOMETRIC SITE PLAN
E0.3	ELECTRICAL SITE PLAN
E5.1	ELECTRICAL DETAILS AND SCHEDULES
E5.2	LIGHTING CUT SHEETS
E7.1	ELECTRICAL SPECIFICATIONS

ROYAL ENGINEERING
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FAX: 801.375.2676
ELECTRICAL
1837 S. EAST BAY BLVD.
PHONE: 801.375.2228

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REGISTERED PROFESSIONAL ENGINEER
RYAN M. BEAGLES
11/13/24
STATE OF UTAH

REVISIONS:

FRANCIS TOWN CENTER

2200 SOUTH, SPRING HOLLOW ROAD
FRANCIS, UTAH

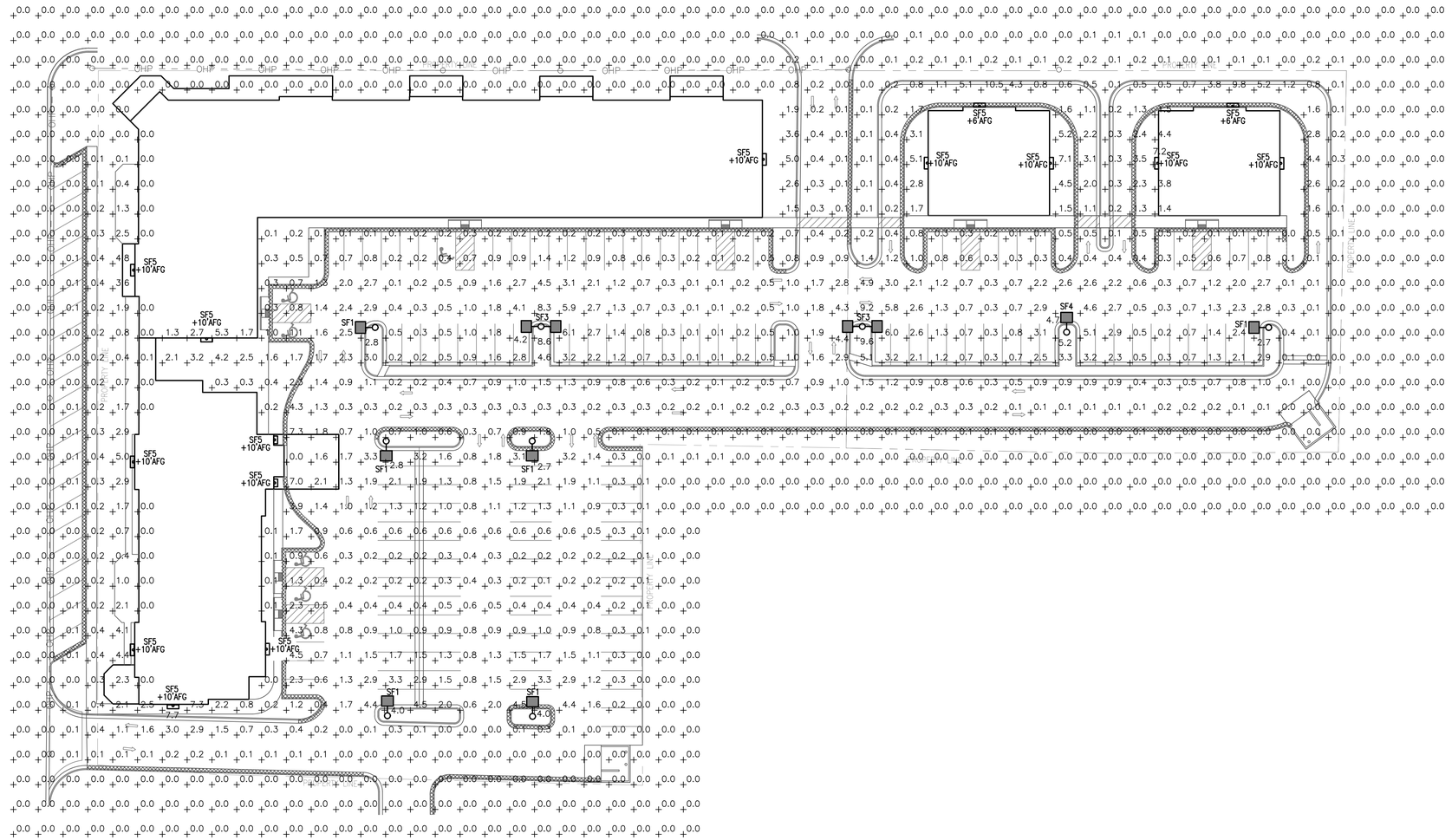
DRAWING TITLE:
ELECTRICAL COVER SHEET

DRAWN BY:	CHECKED BY:
RJL	MRB

DATE PLOTTED: 11/04/2024

PROJECT #: J24267.00

E0.1



PHOTOMETRIC SITE PLAN

SCALE: 1" = 30'-0"

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PROVO, UTAH 84606
FAX: 801.375.2676
ELECTRICAL
1837 S. EAST BAY BLVD.
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FRANCIS, UTAH

DRAWING TITLE:
PHOTOMETRIC SITE PLAN

DRAWN BY:	CHECKED BY:
RJL	MRB

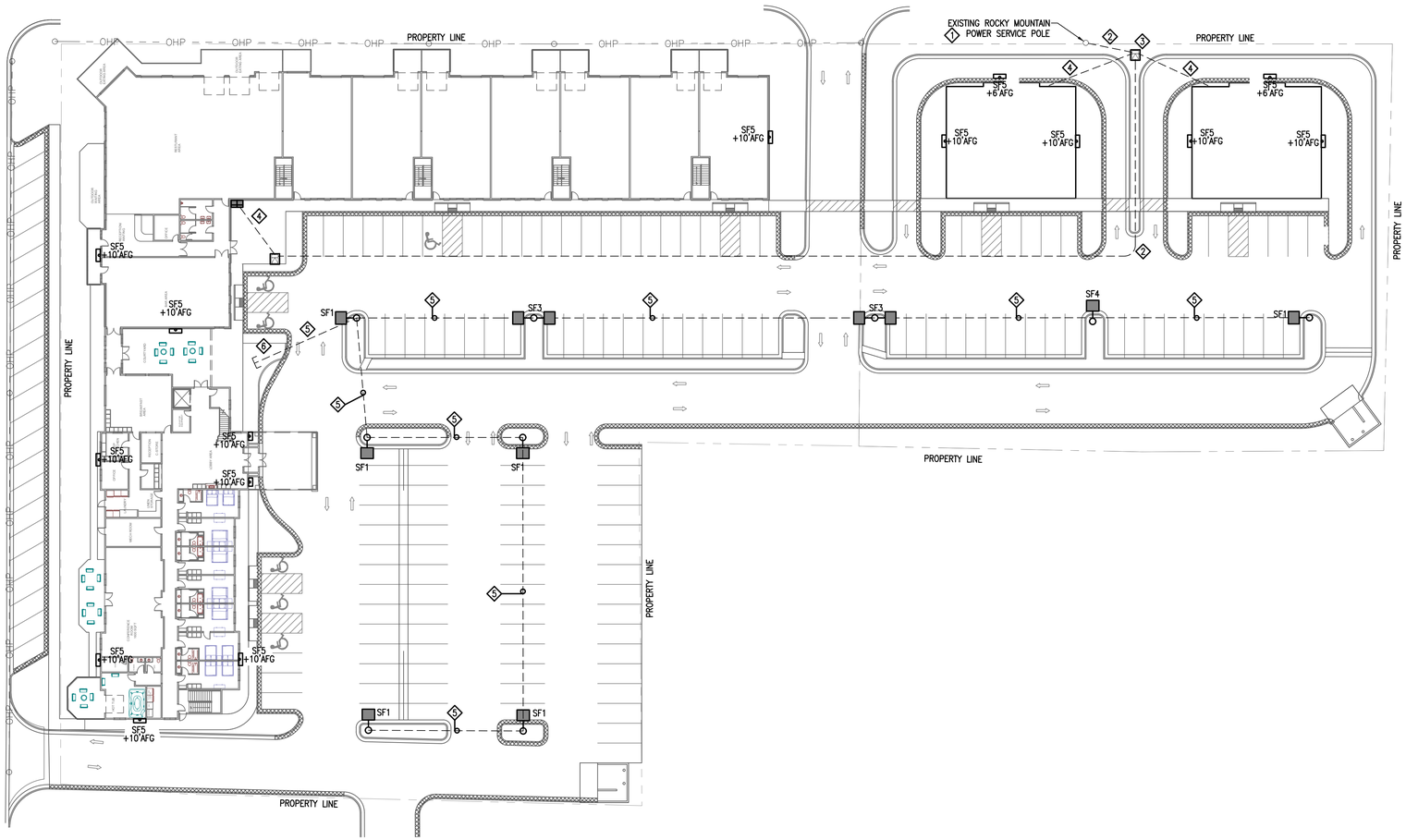
DATE PLOTTED: 11/04/2024

PROJECT #: J24267.00

E0.2

ELECTRICAL KEYED NOTES:

1. ELECTRICAL CONTRACTOR TO COORDINATE WITH ROCKY MOUNTAIN POWER FOR EXACT LOCATION OF TERMINATION POLE.
2. ELECTRICAL CONTRACTOR TO INSTALL 4" PVC CONDUIT PER ROCKY MOUNTAIN POWER STANDARDS. PROVIDE CONDUIT UP POLE WITH WEATHERHEAD AND STAND OFFS PER POWER COMPANY STANDARDS.
3. PROPOSED LOCATION OF ROCKY MOUNTAIN POWER TRANSFORMER. CONTRACTOR TO COORDINATE WITH ROCKY MOUNTAIN POWER FOR EXACT LOCATION. SEE DETAIL #1 SHEET E5.1
4. SECONDARY CONDUIT AND BUILDING METER/GEAR TO BE DETERMINED IN BUILDING PHASE.
5. PROVIDE 1" PVC CONDUIT WITH MULE TAPE PULL CORD.
6. STUB AND CAP 1" CONDUIT TO BE PICKED UP IN BUILDING PHASE.



ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

ROYAL ENGINEERING
MECHANICAL
PROVO, UTAH 84606
FAX: 801.375.2676
ELECTRICAL
1937 S. EAST BAY BLVD.
PHONE: 801.375.2228

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. BEAGLES
11/13/24
STATE OF UTAH

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FRANCIS, UTAH

DRAWING TITLE:
ELECTRICAL SITE PLAN

DRAWN BY:	CHECKED BY:
RJL	MRB

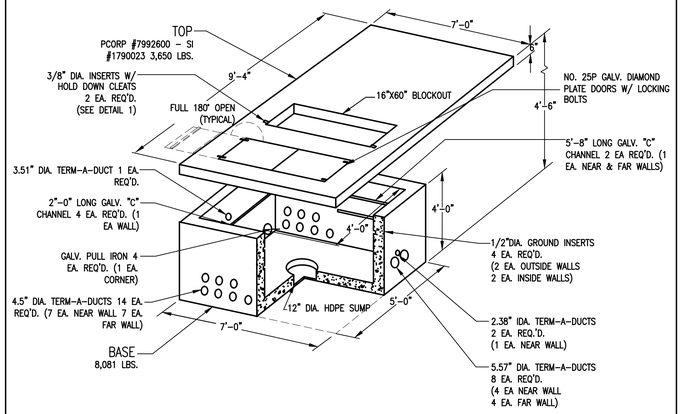
DATE PLOTTED: 11/04/2024

PROJECT #: J24267.00

E0.3

SITE LIGHTING FIXTURE SCHEDULE

FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	FIXTURE					POLE			REMARKS
			TYPE	VOLTS	WATTS	MOUNTING	#/POLE	MANUFACTURER	HEIGHT	CATALOG #	
SF1	McGRAW-EDISON	GLEON-SA2A-730-U-T4FT-HSS	LED 9591 LUMEN 70 CRI	208	66	POLE	1	LITHONIA GARDCO MCGRAW SPAULDING LTG CMT UNITED LSI	12'-0"	SSS 12 4C SSS-12-4-11 SSS-4A12-SFXXX SSS-12-40-1-**-SCBA ZA12-4-0-HS-PC-BC RPSQ-12-4-11 4SQBX-S11G-12-X-4BC	2'-6" BASE
SF3	McGRAW-EDISON	GLEON-SA2A-730-U-T4FT	LED 9,591 LUMEN 70 CRI	208	132	POLE	2	LITHONIA GARDCO MCGRAW SPAULDING LTG CMT UNITED LSI	12'-0"	SSS 12 4C SSS-12-4-11 SSS-4A12-SFXXX SSS-12-40-1-**-SCBA ZA12-4-0-HS-PC-BC RPSQ-12-4-11 4SQBX-S11G-12-X-4BC	2'-6" BASE
SF4	McGRAW-EDISON	GLEON-SA2A-730-U-5NQ	LED 9,835 LUMEN 70 CRI	208	66	POLE	1	LITHONIA GARDCO MCGRAW SPAULDING LTG CMT UNITED LSI	12'-0"	SSS 12 4C SSS-12-4-11 SSS-4A12-SFXXX SSS-12-40-1-**-SCBA ZA12-4-0-HS-PC-BC RPSQ-12-4-11 4SQBX-S11G-12-X-4BC	2'-6" BASE
SF5	McGRAW-EDISON	GWC-SA1A-730-U-T2	LED 4,883 LUMEN 70 CRI	120	34	WALL		NONE	N/A	NONE	



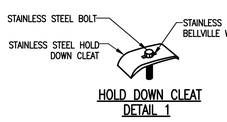
2.4 – 25kV, 3-PHASE TRANSFORMER PADVAULT WITH ACCESS STOCK ITEM 7992600-STOCK ITEM 1790023.

2.4 – 25kV, 3-PHASE TRANSFORMER PAD VAULT WITHOUT ACCESS, STOCK ITEM 7992601-STOCK ITEM 1790024.

2.4– 25kV, 3-PHASE TRANSFORMER PAD, STOCK ITEM 1790021
35kV, 3-PHASE TRANSFORMER PADVAULT WITH ACCESS, STOCK ITEM 7992603-STOCK ITEM 1008977.

35kV, 3-PHASE TRANSFORMER PADVAULT WITHOUT ACCESS STOCK ITEM 7992603-STOCK ITEM 1008975.

35kV, 3-PHASE TRANSFORMER PAD, STOCK ITEM 1008958.



HOLD DOWN CLEAT
DETAIL 1

1-1/4"X2-1/2" STAINLESS STEEL HOLD DOWN CLEAT – 2 REQ'D.
3/8" X 1-1/4" STAINLESS STEEL BOLT – 2 REQ'D.
3/8" STAINLESS STEEL BELLVILLE WASHER – 2 REQ'D.

TRANSFORMER DIMENSIONS OF BASE MEASURED IN FEET & INCHES

KVA SIZE	DEPTH/ LENGTH	WIDTH
75	3'6"	5'8"
150	3'7"	5'8"
225	3'9"	6'
300	3'11"	6'
500	4'	6'
750	4'8"	6'
1000	4'10"	6'
1500	5'3"	6'
2000	5'7"	6'8"
2500	6'9"	5'9"

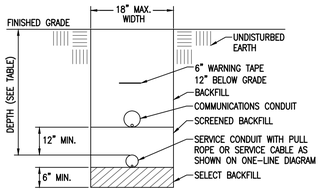
PADVAULTS S#1790023 WITH DOORS		
MEASURED IN FEET & INCHES		
25kV	9'4"	7'

1 ROCKY MOUNTAIN POWER TRANSFORMER PAD VAULT

SCALE: NTS

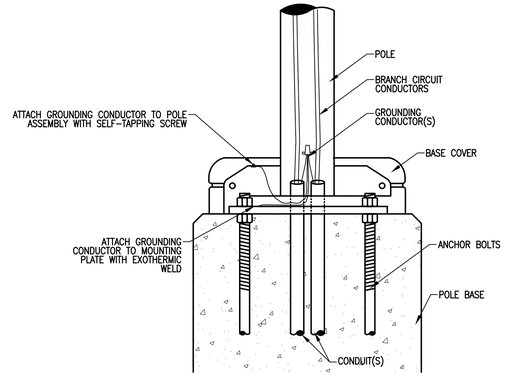
LOCATION DESCRIPTION	MIN. DEPTH
BELOW CONCRETE SLAB (NOT TRAFFIC)	18 INCHES
BELOW TRAFFIC SURFACES	24 INCHES
PARKING LOT (PAVED OR NON-PAVED)	24 INCHES
OTHER LOCATIONS	24 INCHES
UTILITY SECONDARY	24 INCHES*
UTILITY PRIMARY	48 INCHES*

(SEE NEC TABLE 300.5)
* VERIFY ALL DIMENSIONS WITH LOCAL POWER COMPANY STANDARDS AND SPECIFICATIONS.



2 TRENCHING DETAIL

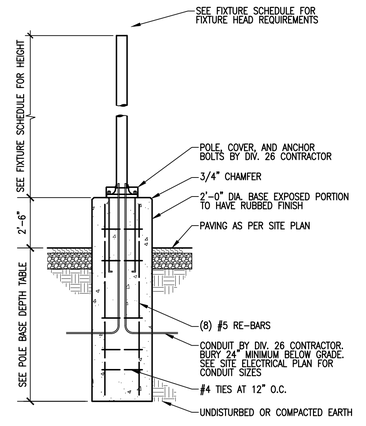
SCALE: NTS



3 POLE LIGHT GROUNDING DETAIL

SCALE: NTS

POLE BASE DEPTH TABLE	
POLE HEIGHT	FOOTING DEPTH
8'–0"	2'–6"
12'–0"	3'–0"
15'–0"	4'–0"
18'–0"	4'–0"
20'–0"	4'–0"
25'–0	5'–0"
30'–0"	5'–0"
40'–0"	6'–0"

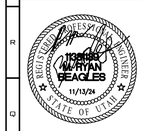


4 POLE BASE DETAIL

SCALE: NTS

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REVISIONS:

FRANCIS TOWN CENTER

2200 SOUTH, SPRING HOLLOW ROAD
FRANCIS, UTAH

DRAWING TITLE:
ELECTRICAL DETAILS & SCHEDULES

DRAWN BY:	CHECKED BY:
RJL	MRB

DATE PLOTTED: 11/04/2024

PROJECT #: J24267.00

E5.1

Project		Catalog #		Type	SF1, SF3 & SF4
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features

LumenAlly Technology · Light Architect™ · BAA

Product Certifications

DLC LISTED · DLC DLC PREMIUM · 3G VIB · IP66 · UL CERTIFIED · ida · 5 YEAR

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt
- Options to meet Buy American and other domestic preference requirements

Connected Systems

- WaveLinx
- Enlighted

Dimensional Details

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" QM Arm Length	"B" QML Length	"B" QMEA Length
1-4	15-1/2"	7"	10"	10-5/8"	--	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	--	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	10-5/16"	--
9-10	33-3/4"	7"	16"	--	10-5/16"	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions

Project		Catalog #		Type	SF5
Prepared by		Notes		Date	



McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features

Light Architect™ · BAA · DarkSky FSP DG

Product Certifications

DLC LISTED · DLC DLC PREMIUM · 3G VIB · CERTIFIED · FC CLASS A · IP66 · ida · 5 YEAR

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 6

Quick Facts

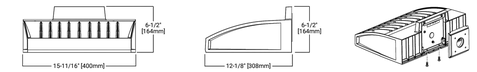
- Choice of thirteen high-efficiency, patented AccuLED Optics
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

Connected Systems

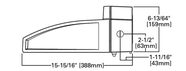
- WaveLinx
- Enlighted

Dimensional Details

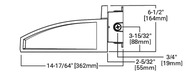
Net Weight: 17.0 lbs (7.7 kgs)



GWC with CBP option installed
(Thru-Branch Back Box accessory MA1059XX)



GWC with accessory BB/GWCXX Back Box installed



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions

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REGISTERED PROFESSIONAL ENGINEER · 7338845 · RYAN BEAGLES · 11/13/24 · STATE OF UTAH

REVISIONS:

FRANCIS TOWN CENTER

2200 SOUTH, SPRING HOLLOW ROAD
FRANCIS, UTAH

DRAWING TITLE:
LIGHTING CUT SHEET

DRAWN BY: RJL
CHECKED BY: MRB

DATE PLOTTED: 11/04/2024

PROJECT #: J24267.00

E5.2

ELECTRICAL SPECIFICATIONS

GENERAL PROVISION

A. REFERENCE
   1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.
   2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS
   1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
   2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
   3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
   4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS
   1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS
   1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES,AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUESTED
LIGHTING FIXTURES	CATALOG CUTS

E. GUARANTEES
   1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP
   1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
   2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
   3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS
   1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING
   1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
   2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
   3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

CODES AND FEES

A. CODES:
   1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:
   1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.
B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.
C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.
B. ALL UNDERGROUND CONDUITS SHALL BE PVC CONDUIT.
C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN ½" UNLESS OTHERWISE NOTED.
D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

GROUNDING

G. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER THE WIRE AND CABLE SECTION OF THIS SPECIFICATION.
H. ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.
I. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.
J. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC--250--24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.
K. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE: 2) THE GROUND PIGTAIL TO THE BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE BOXES.
L. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.
B. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.
C. ALL LIGHTING FIXTURES INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH AS INDICATED ON THE FIXTURE SCHEDULE.
D. ANY LIGHTING FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
E. ALL LIGHTING FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
F. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

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ELECTRICAL
1837 S. EAST BAY BLVD.
PHONE: 801.375.2228

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LICENSED PROFESSIONAL ENGINEER
TIGHE & RYAN BEAGLES
11/13/24
STATE OF UTAH

REVISIONS:

FRANCIS TOWN CENTER

2200 SOUTH, SPRING HOLLOW ROAD
FRANCIS, UTAH

DRAWING TITLE:
ELECTRICAL SPECIFICATIONS

DRAWN BY:	CHECKED BY:
RJL	MRB

DATE PLOTTED:
11/04/2024

PROJECT #:
J24267.00

E7.1

Town Center Commercial Development
Noise Disturbance Study

Date: January 9, 2025

Prepared By: Katie Henneuse, City Planner and Code Enforcement Officer

Introduction

The Town Center project proposes the construction of a hotel with up to 70 rooms, three restaurants including two drive-throughs, 14,000 square feet of retail space for up to 9 businesses, and 21 apartments. The development will be constructed on a vacant lot on the southeast corner of State Road 35 and Spring Hollow Road.

This report evaluates the proposed project's potential to generate noise in excess of standards established in the Francis City Code, Section 8.10.020:

"The following sounds are prohibited pursuant to this chapter:

1. A sound measuring 70 decibels or more between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday, or between the hours of 9:00 a.m. and 10:00 p.m. on Sunday.
2. A sound measuring 55 decibels or more between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday, or between the hours of 10:00 p.m. Saturday and 9:00 a.m. on Sunday."

Sound level was measured in decibels (dBA) using an Extech Type 2 Sound Level Meter.

Existing Noise Environment

Base level measurements were observed at different times during the day for a period of about three minutes. The low and high measurements were recorded. The noise level mode was also recorded (level of noise most frequent). The measurements were taken on-site at the proposed development, approximately 50 feet from the intersection.

The noise created by the intersection traffic had the most impact on the base level of noise. No other noise disturbances were noted on the day that measurements were recorded.

Time	Low	High	Mode	Site Activity Description
8:55 AM	48 dBA	72 dBA	55 dBA	Average traffic patterns for this time during the day. Several vehicles and some commercial trucks passing.
12:20 PM	45 dBA	71 dBA	54 dBA	Average traffic patterns for this time during the day. Several vehicles and a few large commercial trucks passing.
4:05 PM	48 dBA	66 dBA	55 dBA	Average traffic patterns for this time during the day. Several vehicles and some large commercial trucks passing.
8:00 PM	40 dBA	57 dBA	48 dBA	Average traffic patterns for this time during the day. A few vehicles and no large commercial trucks passing.

Expected Noise Disturbances from Development

The sound level of typical loud outdoor noises expected from the development were measured on-site about 20 ft from the source (correlating with the minimum distance from the development to the adjoining residential property). Measurements were recorded when there was base level of sound amplification of about 54 dBA.

Noise Source	Total Sound Level Measurement (Sound + Base)
Large diesel truck	71 dBA
Loud talking – 2 people	58 dBA
Truck door slamming	68 dBA

Mechanical HVAC equipment was not measured on-site, but typically generates a sound level between 50-60 dBA from a distance of 30 ft. (Source: Camino Real Hotel Noise and Vibration Assessment, 2021).

Note on sound measurement math – Decibel levels are based on logarithms. When you have multiple sources of sound in an environment, the sound levels do not add together. For example, one vacuum creates a sound of 80 dB, but the sound created by two vacuums is just 83 dBA.

Conclusion

The reasonable noise disturbances created by the Town Center project from a distance of 20 feet may exceed the levels allowed by the Francis City Code during the 70 dB (daytime) and 50 dB (nighttime) periods. The following mitigation measures are recommended for this project so that the noise disturbances are reduced for nearby residential property owners and comply with Francis City Code.

1. Privacy fencing in locations adjoining existing residence.
2. Tree landscape buffer in locations adjoining existing residence.
3. Deliveries allowed during daytime hours only Monday to Saturday.
4. Mechanical equipment for be building 3 placed as far from existing residence as possible and be enclosed.

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Town Center development located in Francis, Utah. The development is located at the southeast corner of the 2200 South / Spring Hollow Road intersection.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) and future (2029) conditions with and without the proposed project and to recommend mitigation measures as needed. The morning and evening peak hour level of service (LOS) results are shown in Table ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Peak Hour Level of Service Results

	Intersection	Level of Service							
		Existing (2024)				Future (2029)			
		BG		+P		BG		+P	
		AM	PM	AM	PM	AM	PM	AM	PM
1	2200 South / Spring Hollow Road & SR-32	A	A	A	A	A	A	A	A
2	Town Clerk Office Access / Spring Hollow Road	a	a	a	a	a	a	a	a
3	North Access / 2200 South	-	-	a	a	-	-	a	a
4	South Access / Spring Hollow Road	-	-	a	a	-	-	a	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)
2. BG = Background (without project traffic), +P = Plus Project (with project traffic)

Source: Hales Engineering, December 2024

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions	
• The development will consist of a mixed-use project with restaurants, retail space, residential units, and a hotel. • The project is anticipated to generate approximately 2,173 weekday daily trips, including 165 trips in the morning peak hour, and 197 trips in the evening peak hour • A SB LT lane at the North Access / Spring Hollow Road intersection may be recommended, however it may not be necessary due to the overall low volumes on Spring Hollow Road.	
2024	**Background**	**Plus Project**
Findings	• Acceptable LOS	• Acceptable LOS
2029	**Background**	**Plus Project**
Findings	• Acceptable LOS	• Acceptable LOS

Staff Report

To: Francis City Planning Commission
From: Katie Henneuse
Report Date: January 2, 2025
Meeting Date: January 16, 2025
Title: Wolf Creek Junction Commercial Development
Type of Item: Administrative

Executive Summary

Blind Rabbit LLC (represented by Barrie Primos) is the owner of parcel FT-14-B, located at 1349 S State Road 32. The parcel acreage is 2.26 acres and is zoned C-1 Commercial. A commercial development plan for the Blind Rabbit project was approved for this parcel in December 2022. The owner is working with a new architect and engineer to update the site plan and architectural plans for the development. The structures will be used as office and professional space.

The updated architectural plans utilize the same metal structures but have a different roof line. The front façade has an updated design and will be constructed with different materials. In the updated site plan, one structure was eliminated from the site, the retention pond was expanded, and parking was added where building #1 was planned. The landscape plan was updated, and an outdoor lighting plan was submitted.

Background

Falling Waters Landscaping was granted approval to construct a metal building on this parcel in January 2018. In accordance with the Commercial C-1 code, a landscape plan was approved along with the building architectural design and site plan. The building was completed but was sold shortly thereafter to Blind Rabbit LLC before the landscaping was complete.

Mr. Primos made some efforts to complete portions of the landscaping, adding trees and ground cover along the SR 32 frontage. Mr. Primos was granted approval to construct a parking structure (attached to the existing building). The building permit for the parking structure was issued in October 2022. In December 2022 a commercial development plan for five structures (known as the Blind Rabbit Project) was approved. A building permit for the shell of building #5 was issued in November 2023. Both permits expired but were recently renewed.

Analysis – City Code

Trash Storage – 18.45.100

"All trash storage areas shall be screened and hidden from the public or adjoining residential area view by appropriate fencing or landscaping methods and placed in a rear area of the main building if possible."

An enclosed dumpster storage area is shown on the site plan in the northeast corner of the lot. The dumpster will be screened from public and residential view by an enclosure. The trash storage area is compliant with code. There is no change in the location, size, or design of the trash storage area from the previous approval. A new approval is not required.

Parking Areas – 18.57.050 and 18.100

The layout of the parking areas meets the code requirements and the provision that "Parking shall not occur adjacent to any public street." The minimum number of parking spaces is set by the Off-Street Parking code. Two (2) spaces per 1,000 square feet are required for business or professional offices. The total building area of the existing and proposed structures is 18,840 square feet. 38 parking stalls are required, and 50 parking stalls are shown on the site plan, including 5 ADA accessible stalls. The parking area is compliant with code.

Site Plan – 18.45.070 and 18.45.120

The building layout as shown on the site plan meets setback requirements.

"A site plan with grading, drainage, and clearing plans must be approved by the Planning Commission and City Council before any such activities may begin. Lot grading shall be kept to a minimum. Where possible, roads and development shall be designed for preservation of natural grade."

The lot is relatively flat and does not require significant grading. The site plan depicts the 20' irrigation easement along the south property line. The City Engineer determines whether the site plan is compliant with city code and standards.

Landscape Plan – 18.45.110 and 18.114.080

"All submitted landscape plans shall be designed to encourage water conservation as a primary consideration."

"All ground areas shall contain grass, or another ground cover acceptable to the Planning Commission, and shall be irrigated sufficiently. Shrubs, flower beds, decorative rocks, and other appropriate landscaping is highly encouraged. All landscaped areas shall be maintained using a

sprinkling and/or irrigation system which is capable of being engaged automatically on a regular basis."

"Plant Materials

a. Sixty percent medium trees and shrubs in a combination with deciduous trees with a caliper from two to three inches and evergreen trees with a height from five to eight feet.
b. Forty percent small trees and shrubs in a combination with deciduous trees with a caliper of one and one-half to two inches and evergreen trees with a height of four feet.
c. Where possible, a 50/50 mix of deciduous and evergreen tree species shall be used for on-site landscaping.
d. Street trees with a minimum two-inch caliper shall be installed along all public rights-of-way by the developer of the property. The species, type, location, and spacing of trees shall be as shown on the approved landscape plan."

"Trees shall be planted at the rate of at least one tree per 20 feet along the public street. The applicant shall provide appropriate guarantees on the trees, or they shall have no less than a two-inch caliper. No trees shall be planted within 45 feet of an intersection clear view area. Trees may be planted in clusters to create a more natural and/or screening effect, if appropriate."

The landscape plan shows 23 6 ft conifers (two different species of junipers). Twenty-one 2" caliper deciduous trees are planned – 8 honey locust and 13 Japanese tree lilac. 15 trees are planned along the State Road 32 frontage, which is about 250 feet long (at an overall rate of about one tree per 17 ft). It appears that two of the honey locusts and two of the Japanese tree lilacs are placed in the irrigation easement. These trees should be removed or relocated. 47 deciduous shrubs and 33 evergreen shrubs are planned throughout the development as well as a variety of perennials and native shrub grasses. All ground areas will be covered by non-irrigated native grasses or crushed rock. No trees are planned within 45' of the State Road 32 intersection. The landscape plan is compliant with code and standards, except the trees in the irrigation easement.

<u>Architectural Design and Materials – 18.45.140</u>

"The treatment of building mass, materials and exterior appurtenances shall create an aesthetically pleasing building and site that is in character with the proportions of other surrounding developments. Proposed developments shall be designed with a common theme that reflects the heritage and community of Francis City. Themes shall be reviewed and approved by the Planning Commission and City Council and may include but are not limited to agricultural or mountain tourism."

"All sides of buildings shall receive equal design consideration, particularly where exposed to vehicular traffic and adjacent properties. Facade shifts shall be encouraged on structures with a width greater than 50 feet or at neighboring property lines."

Four 50 ft x 75 ft metal buildings are proposed in a canyon red color. Each building will have three units. The outside units have a matte black door and garage door. The center units have double entry doors and a mountain blend stone façade. Matte black metal canopies are planned above the doors and garage doors. Mountain blend stone will be placed around the lower portion of the building on all sides.

Nearby developments are the Premier Pet Lodge forest green metal building, the Premier Storage tan and brown metal buildings, and the planned modern farmhouse designed Route 32 development.

Outdoor Lighting Plan – 18.118

"An outdoor lighting plan shall be submitted with the site/development plan. The plan must show the location, height, number, and type of fixtures to be used for all outdoor lighting."

"All outdoor lighting must be full cut-off directing the light downward."

"The maximum outdoor light output shall not exceed 100,000 lumens per acre."

"All fixtures shall be mounted no more than 18 feet high when adjacent to residential zones."

"Outdoor lighting shall be turned off or reduce total lumen usage output 50 percent by 11:00 pm except for the following conditions:

a. Operations that are open for 24 hours.
b. Lighting that has been approved by the city council for security purposes."

The parcel is 2.26 acres, allowing up to 226,000 lumens.

Four parking lot lights are planned at a height of 20 ft. This parcel is adjacent to a residential zone, so the light height exceeds the maximum allowed height of 18 ft. Two types of parking lot lights are planned. The fixture is the same for both types, but the lumen output is different. The fixture is full cut-off. The OP1 fixtures (lower output) are planned near the front entrance and on the east property line. The OP2 fixtures (higher output) are planned on the south side of the existing building.

Twelve walkway lights are planned on the front of each building (a round sconce (OW2) is planned at each entrance and a wall sconce (OW1) is planned above each garage or double entry door). Two round sconces are planned at the exiting building's entrance. A wall sconce is planned on the south side of building #2. Walkway lights will be mounted at heights between 8 ft and 16 ft. The wall sconces and round sconce fixtures appear to be full cut-off.

The applicant did not note that lighting will be turned off or reduced by 11:00 pm. The Planning Commission should discuss with the applicant whether lighting in other areas of the development is needed for security purposes after 11:00 pm.

Light Type	# of Fixtures	Height	Lumens/Fixture	Total Lumens
Parking – OP1	2	20 ft	8,537	17,074
Parking – OP2	2	20 ft	10,102	20,204
Wall – OW1	13	12 ft – 16 ft	6,689	86,957
Wall – OW2	14	8 ft – 10 ft	2,000	28,000
Total	**31**			**152,235**

Staff Recommendation:

Parking – Positively recommend approval of the parking plan.

Site Plan – Positive or negative recommendation. Follow City Engineer's recommendation.

Landscape Plan – Approve with the condition that the two Japanese tree lilacs be moved to another location along the State Road 32 frontage outside of the irrigation easement and the two honey locust trees planned in the irrigation easement be removed or relocated.

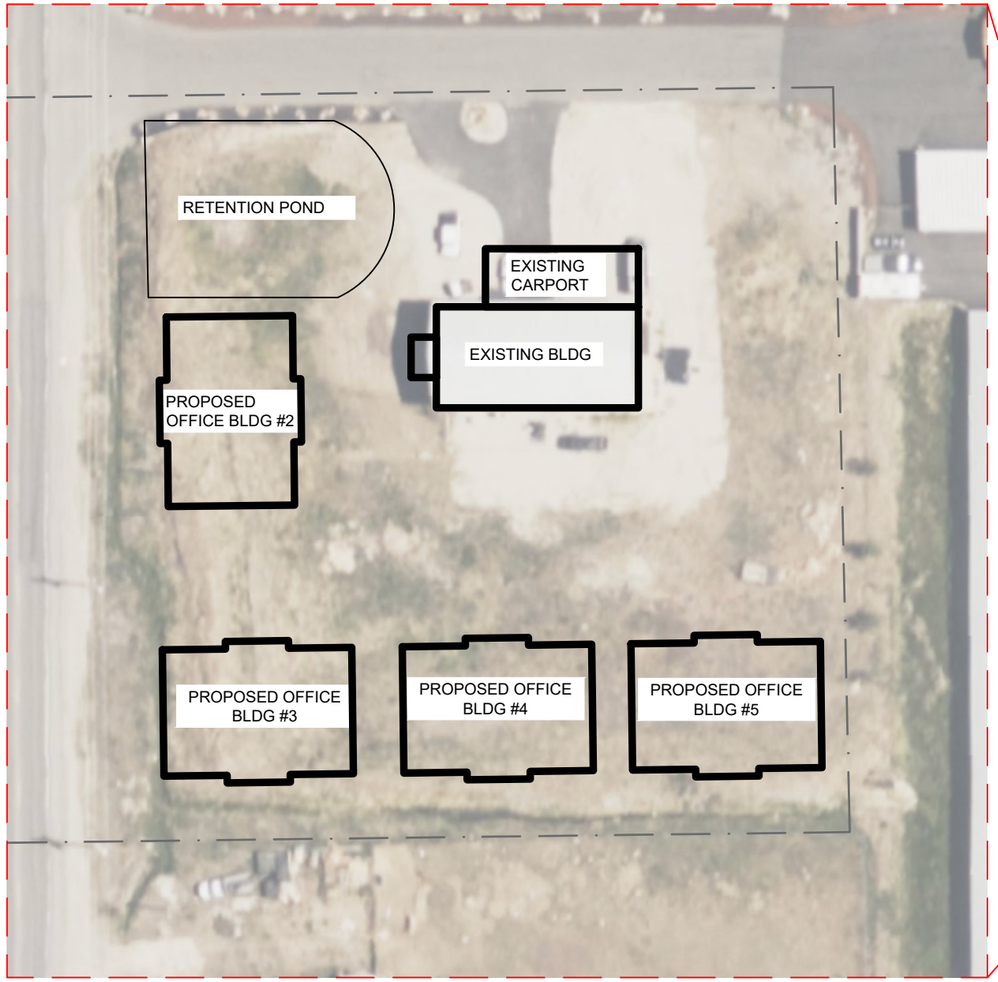
Architectural Design – Positive or negative recommendation. Discuss whether the renderings meet the intent of code.

Outdoor Lighting Plan – Positively recommend approval of the outdoor lighting plan if the lighting does not need to be reduced after 11:00 pm for security purposes and with the condition that the height of the parking lot lighting be reduced to 18 ft.

Community Review:

A public hearing is not required for this item. Neighbors of this project should be consulted to get their views and concerns.

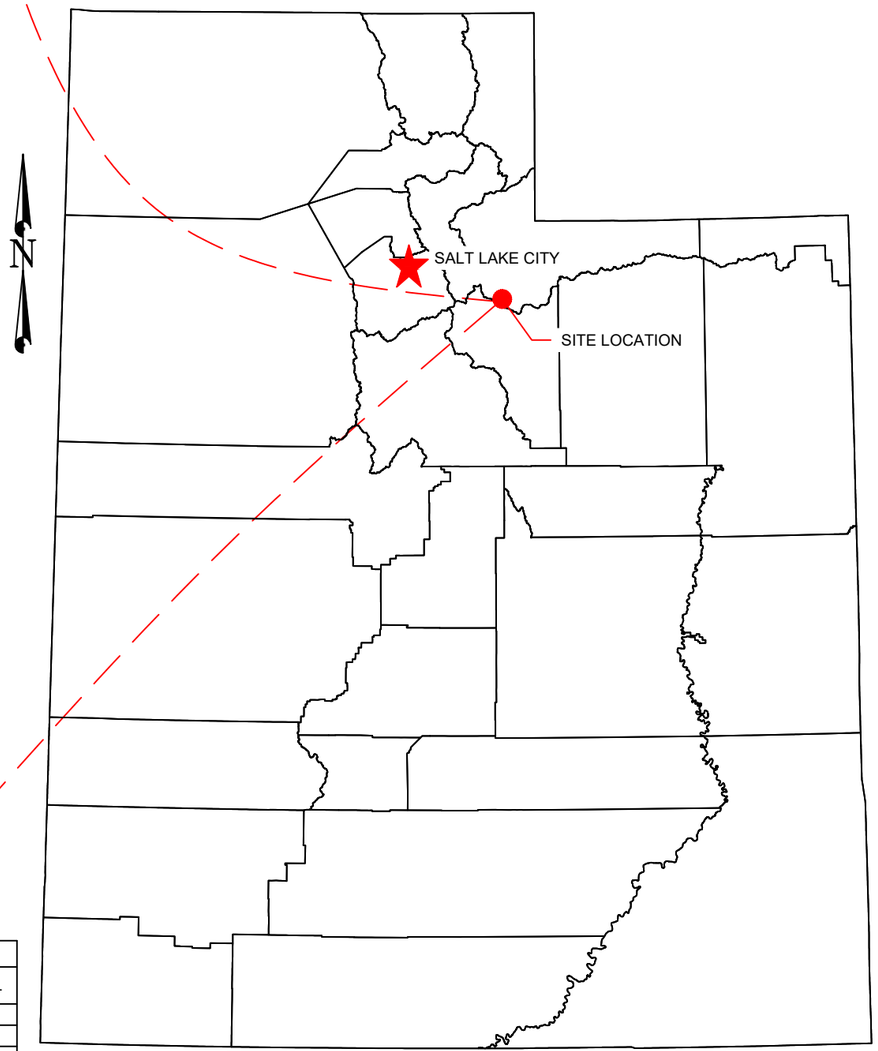
BLIND RABBIT, LLC. COMMERCIAL SITE DEVELOPMENT



01 **SITE OVERVIEW**
SCALE - 1" = 60'

SCALE IN FEET
0 30 60

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02 **STATE OF UTAH**

Sheet List Table	
Sheet Number	Sheet Title
G-01	COVER SHEET
C-01	SITE PLAN
CG-01	GRADING & DRAINAGE PLAN
CG-02	SITE PLAN - STAKING
CG-03	EARTHWORK CUT & FILL ESTIMATED QUANTITIES
CU-01	UTILITY PLAN OVERVIEW
CU-02	SEWER & STORM DRAIN PROFILES
HC-01	HORIZONTAL CONTROL
DT-01	DETAILS
DT-02	DETAILS
DT-03	DETAILS

TABLE 01: AREA OF IMPROVEMENTS

DESCRIPTION	SF	ACRES	% TOTAL
TOTAL AREA OF LOT	98,595	2.26	-
TOTAL AREA OF DEVELOPMENT	71,015	1.63	100%
ASPHALT AREA	37,823	0.87	53%
AREA OF BUILDING FOOTPRINTS	18,840	0.43	27%
TOTAL IMPERVIOUS	56,663	1.30	80%

General Notes

CITY STANDARD NOTES:
1. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING SEWER LATERAL.
2. ALL CONSTRUCTION SHALL COMPLY TO THE STANDARD TECHNICAL SPECIFICATIONS AND DRAWINGS FOR THE CITY OF FRANCIS, UTAH.
3. EXISTING UTILITIES HAVE BEEN NOTED TO THE BEST OF THE ENGINEERS KNOWLEDGE, IT IS THE OWNERS AND CONTRACTORS RESPONSIBILITY TO LOCATE UTILITIES IN THE FIELD AND NOTIFY ENGINEER AND CITY IF DISCREPANCIES EXIST PRIOR TO CONTINUING ANY CONSTRUCTION.
4. THE CITY AND BEAVER/SHINGLES IRRIGATION COMPANY RESERVES THE RIGHT TO CONDUCT POST-INSTALLATION INSPECTIONS TO VERIFY COMPLIANCE WITH THE CITY'S AND IRRIGATION COMPANY'S REQUIREMENTS, AND IF DEEMED APPROPRIATE, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO THE CITY OR IRRIGATION COMPANY.

OWNER: BLIND RABBIT LLC.

DATE: 10/10/2024

ADDRESS: 1349 S. STATE RD 32

TAX ID #: PF-14-B

2.26 ACRES

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

COVER SHEET

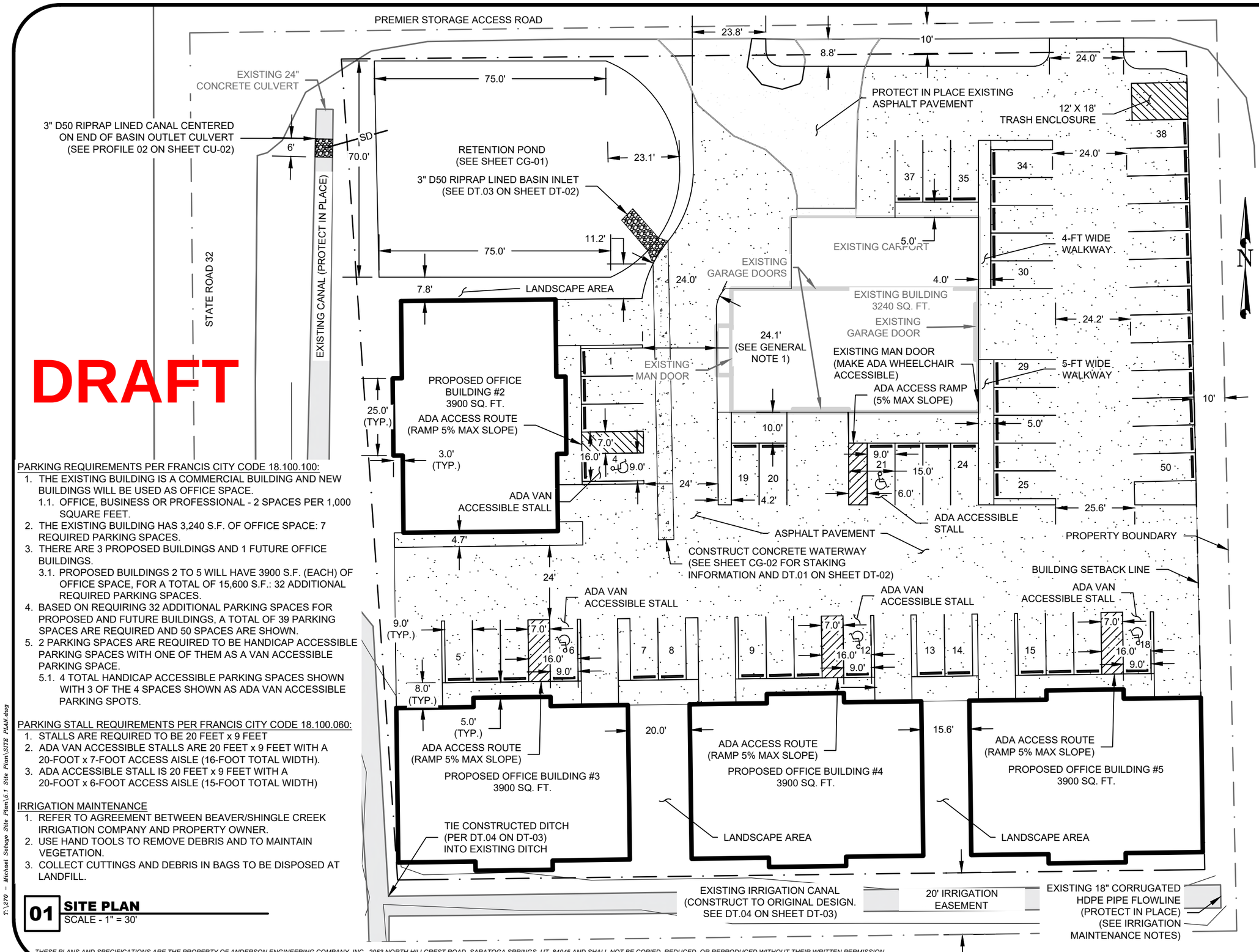
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project	270
Date	17-Oct-2024
Scale	AS SHOWN
Sheet	G-01

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DRAFT

PARKING REQUIREMENTS PER FRANCIS CITY CODE 18.100.100:

1. THE EXISTING BUILDING IS A COMMERCIAL BUILDING AND NEW BUILDINGS WILL BE USED AS OFFICE SPACE.
   1.1. OFFICE, BUSINESS OR PROFESSIONAL - 2 SPACES PER 1,000 SQUARE FEET.
2. THE EXISTING BUILDING HAS 3,240 S.F. OF OFFICE SPACE: 7 REQUIRED PARKING SPACES.
3. THERE ARE 3 PROPOSED BUILDINGS AND 1 FUTURE OFFICE BUILDINGS.
   3.1. PROPOSED BUILDINGS 2 TO 5 WILL HAVE 3900 S.F. (EACH) OF OFFICE SPACE, FOR A TOTAL OF 15,600 S.F.: 32 ADDITIONAL REQUIRED PARKING SPACES.
4. BASED ON REQUIRING 32 ADDITIONAL PARKING SPACES FOR PROPOSED AND FUTURE BUILDINGS, A TOTAL OF 39 PARKING SPACES ARE REQUIRED AND 50 SPACES ARE SHOWN.
5. 2 PARKING SPACES ARE REQUIRED TO BE HANDICAP ACCESSIBLE PARKING SPACES WITH ONE OF THEM AS A VAN ACCESSIBLE PARKING SPACE.
   5.1. 4 TOTAL HANDICAP ACCESSIBLE PARKING SPACES SHOWN WITH 3 OF THE 4 SPACES SHOWN AS ADA VAN ACCESSIBLE PARKING SPOTS.

PARKING STALL REQUIREMENTS PER FRANCIS CITY CODE 18.100.060:

1. STALLS ARE REQUIRED TO BE 20 FEET x 9 FEET
2. ADA VAN ACCESSIBLE STALLS ARE 20 FEET x 9 FEET WITH A 20-FOOT x 7-FOOT ACCESS AISLE (16-FOOT TOTAL WIDTH).
3. ADA ACCESSIBLE STALL IS 20 FEET x 9 FEET WITH A 20-FOOT x 6-FOOT ACCESS AISLE (15-FOOT TOTAL WIDTH)

IRRIGATION MAINTENANCE

1. REFER TO AGREEMENT BETWEEN BEAVER/SHINGLE CREEK IRRIGATION COMPANY AND PROPERTY OWNER.
2. USE HAND TOOLS TO REMOVE DEBRIS AND TO MAINTAIN VEGETATION.
3. COLLECT CUTTINGS AND DEBRIS IN BAGS TO BE DISPOSED AT LANDFILL.

01 SITE PLAN
SCALE - 1" = 30'

T:\270 - Michael Sotuyo Site Plan\5.1 Site Plan\SITE PLAN.dwg

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General Notes

1. ON THE WEST OF THE THE EXISTING BUILDING, REDUCE THE SIZE OF THE EXISTING ENTRY DOOR AWNING AND THE RAISED ENTRY WAY TO CONSTRUCT A 24-FT WIDE (MIN.) DRIVE ISLE BETWEEN THE BUILDING 2 PARKING STALLS AND THE MAN DOOR EXTERIOR LANDING PAD.

SCALE IN FEET
0 15 30

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

SITE PLAN

FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project 270	Sheet C-01
Date 17-Oct-2024	
Scale 1" = 30'	

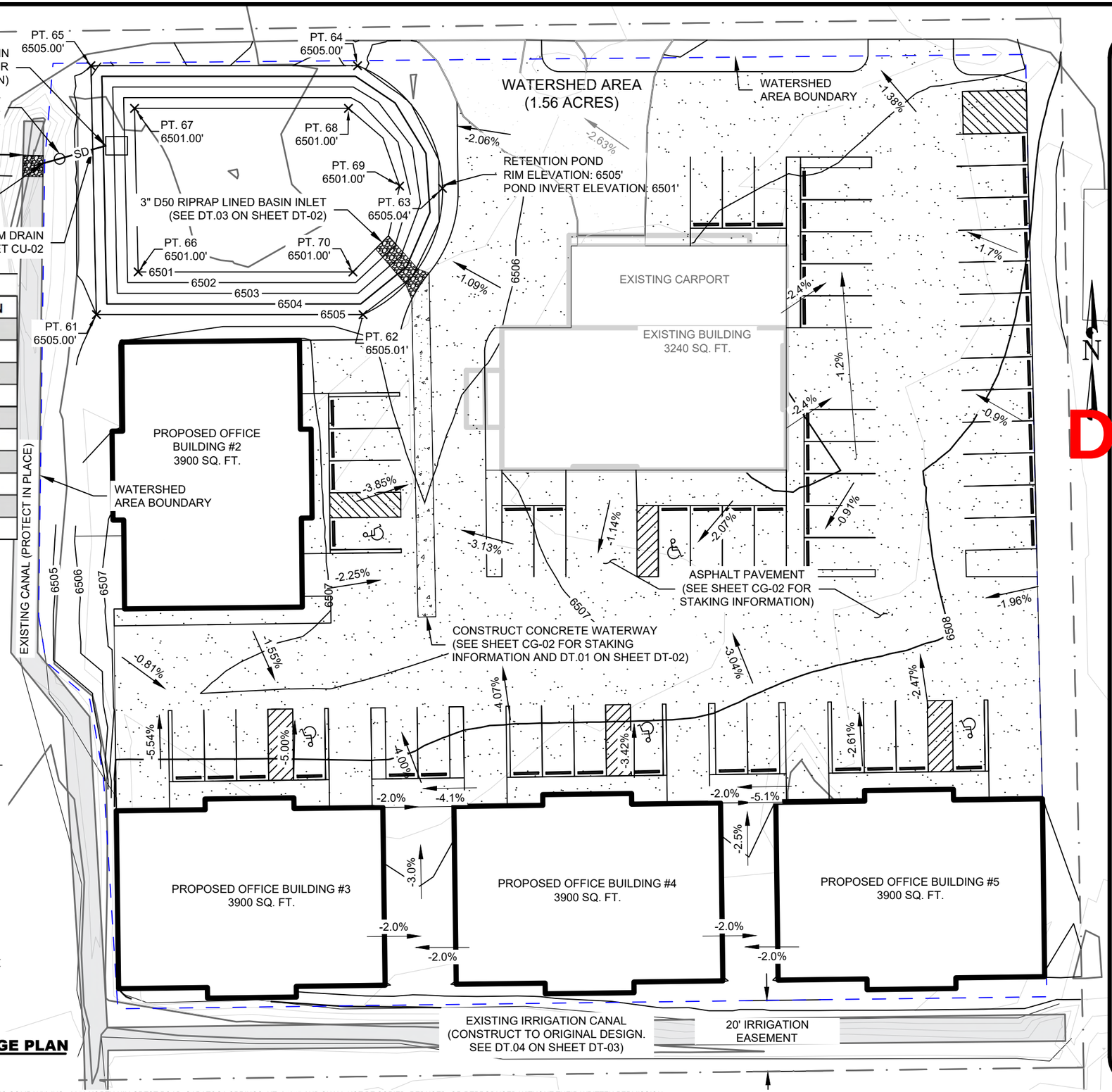


TABLE 01: BASIN STAKING POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
61	9217.05	10059.50	6505.00	BASIN RIM
62	9217.03	10134.50	6505.01	BASIN RIM
63	9252.54	10156.85	6505.04	BASIN RIM
64	9287.03	10132.96	6505.00	BASIN RIM
65	9287.03	10057.96	6505.00	BASIN RIM
66	9229.04	10071.24	6501.00	BASIN FL
67	9275.03	10070.22	6501.00	BASIN FL
68	9275.03	10130.41	6501.00	BASIN FL
69	9253.18	10144.81	6501.00	BASIN FL
70	9229.03	10131.65	6501.00	BASIN FL

DRAINAGE NOTES

1. THE PROPERTY WAS ANALYZED AS TWO WATERSHED AREAS, NORTH AND SOUTH. STORMWATER RUNOFF FROM THE SOUTH WATERSHED COLLECTS IN THE CONCRETE WATERWAY AND DISCHARGES INTO THE SITE RETENTION / DETENTION BASIN (BASIN). STORMWATER RUNOFF FROM THE NORTH WATERSHED DISCHARGES DIRECTLY AS SHEET AND SHALLOW CONCENTRATED FLOW INTO THE BASIN.
   - 1.1. NORTH PROPOSED & EXISTING DEVELOPED AREA: 0.74 ACRES (75.8% IMPERVIOUS)
   - 1.2. SOUTH PROPOSED DEVELOPMENT AREA: 0.83 ACRES (95.2% IMPERVIOUS)
2. AN OPERATION AND MAINTENANCE AGREEMENT (AGREEMENT) BETWEEN THE BEAVER/SHINGLE CREEK CANAL COMPANY SHALL BE SIGNED PRIOR TO THE CONSTRUCTION OF THE POND. THE POND IS SIZED TO RETAIN UP TO A 25-YR 24-HR STORM EVENT. FOR STORMS GREATER THAN A 25-YR AND EQUAL TO OR LESS THAN A 100-YR STORM EVENT, THE POND MAY DISCHARGE UNDER THE AGREEMENT AT A MAXIMUM RATE OF 0.1 CFS PER ACRE INTO THE EXISTING CANAL
3. THE DEVELOPMENT AREA IS 1.6 ACRES AND HAS AN ALLOWABLE DISCHARGE RATE FOR A 100-YR. 24-HR. STORM EVENT OF 0.16 CFS.
   - 3.1. REFER TO PROFILE VIEW 02 ON SHEET CU-02 FOR ORIFICE PLATE AND OVERFLOW GRATE INSTALLATION INSTRUCTIONS.
4. THE POND AND EXISTING CANAL WITHIN PROPERTY BOUNDARIES SHALL BE INSPECTED AND MAINTAINED BY THE PROPERTY OWNER/MANAGER AS DIRECTED IN THE OPERATION & MAINTENANCE AGREEMENT.

01 GRADING & DRAINAGE PLAN
SCALE - 1" = 30'

Construction Notes

1. A RIGHT-OF-WAY EXCAVATION / ENCROACHMENT PERMIT MUST BE OBTAINED FROM FRANCIS CITY.
2. A 2% MINIMUM GRADE FOR 10-FEET (OR MIDWAY BETWEEN BUILDINGS) AWAY AND PERPENDICULAR TO BUILDINGS IS REQUIRED FOR IMPERVIOUS SURFACES. A 5% MINIMUM GRADE FOR 10-FEET AWAY AND PERPENDICULAR TO BUILDINGS IS REQUIRED FOR LANDSCAPED (PERVIOUS) SURFACES.

DRAFT

SCALE IN FEET
0 15 30

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

GRADING & DRAINAGE PLAN

FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

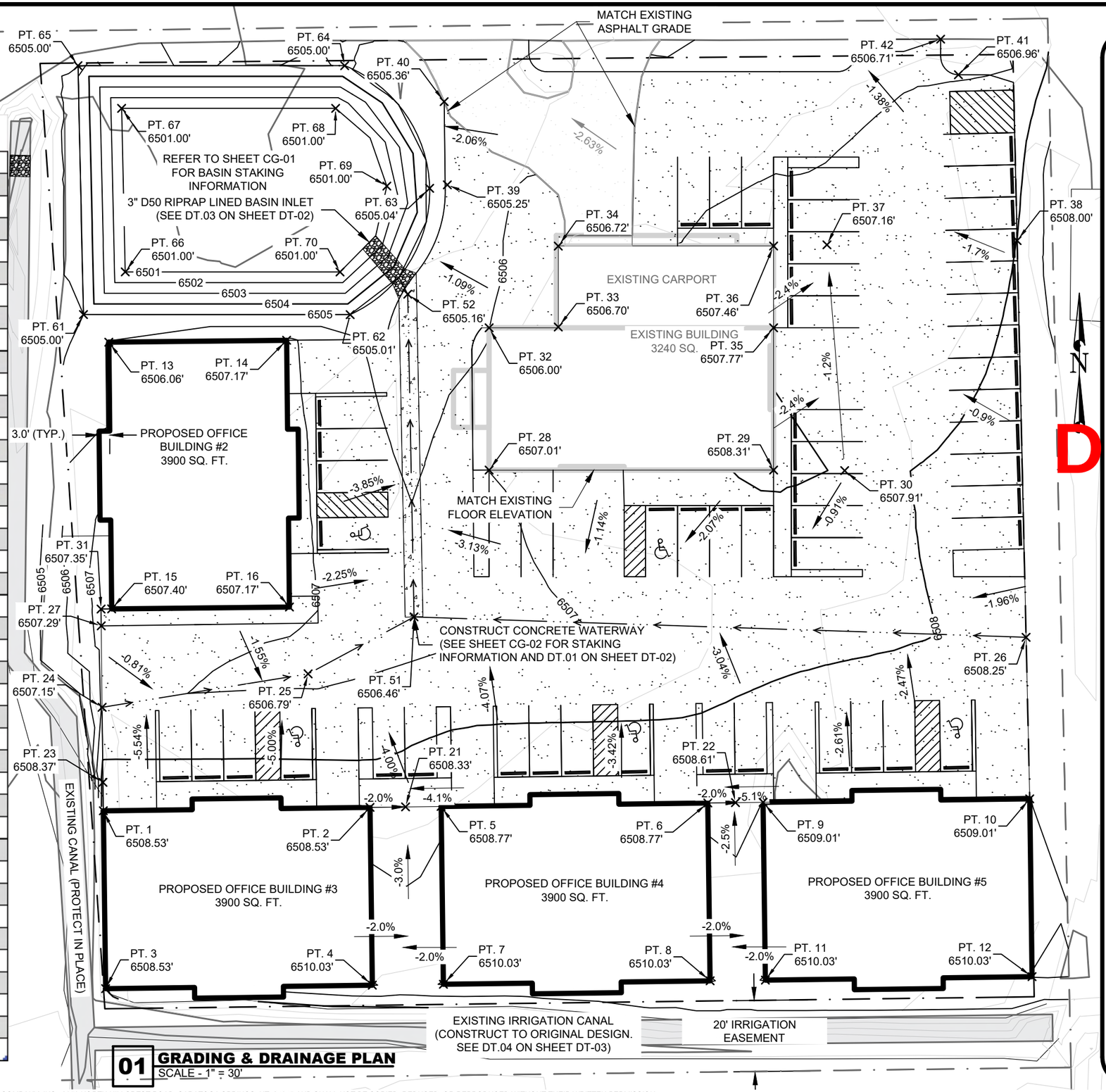
Project: 270	Sheet: CG-01
Date: 17-Oct-2024	
Scale: 1" = 30'	

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TABLE 01:
BUILDING CORNER & TOP OF ASPHALT GRADE POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	9077.52	10065.08	6508.53	BLDG CORNER
2	9078.49	10140.08	6508.53	BLDG CORNER
3	9027.52	10065.73	6508.53	BLDG CORNER
4	9028.49	10140.72	6510.03	BLDG CORNER
5	9078.75	10160.08	6508.77	BLDG CORNER
6	9079.72	10235.07	6508.77	BLDG CORNER
7	9028.75	10160.72	6510.03	BLDG CORNER
8	9029.72	10235.72	6510.03	BLDG CORNER
9	9079.92	10250.62	6509.01	BLDG CORNER
10	9080.89	10325.61	6509.01	BLDG CORNER
11	9029.92	10251.27	6510.03	BLDG CORNER
12	9030.89	10326.26	6510.03	BLDG CORNER
13	9209.28	10066.63	6506.06	BLDG CORNER
14	9209.81	10116.63	6507.17	BLDG CORNER
15	9134.29	10067.42	6507.40	BLDG CORNER
16	9134.82	10117.42	6507.17	BLDG CORNER
21	9078.62	10150.08	6508.33	ASPHALT
22	9079.82	10242.85	6508.61	ASPHALT
23	9085.52	10064.98	6508.37	ASPHALT
24	9106.62	10064.75	6507.15	ASPHALT
25	9116.03	10122.67	6506.79	ASPHALT
26	9126.31	10324.57	6508.25	ASPHALT
27	9129.52	10064.50	6507.29	ASPHALT
28	9173.32	10173.57	6507.01	ASPHALT
29	9173.32	10253.57	6508.31	ASPHALT
30	9173.17	10273.57	6507.91	ASPHALT
31	9134.26	10064.45	6507.35	ASPHALT
32	9213.32	10173.57	6506.00	ASPHALT
33	9213.55	10193.03	6506.70	ASPHALT
34	9236.30	10193.03	6506.72	ASPHALT
35	9213.32	10253.57	6507.77	ASPHALT
36	9236.33	10253.57	6507.46	ASPHALT
37	9236.66	10268.57	6507.16	ASPHALT
38	9237.85	10322.06	6508.00	ASPHALT
39	9253.51	10161.82	6505.25	ASPHALT
40	9276.91	10160.93	6505.36	ASPHALT
41	9284.47	10305.56	6506.96	ASPHALT
42	9294.48	10300.57	6506.71	ASPHALT
51	9132.04	10152.46	6506.46	WATERWAY FL
52	9222.76	10150.68	6505.16	WATERWAY FL



01 GRADING & DRAINAGE PLAN
SCALE - 1" = 30'

Construction Notes

1. PROPOSED BUILDING CORNER POINTS (WITH THE EXCEPTION OF POINTS 3, 4, 7, 8, 11, 12, & 13) REPRESENT EDGE OF ASPHALT TOP OF GRADE. IF RAISED WALKWAYS ARE INSTALLED IN FRONT OF BUILDINGS, ADJUST SLAB GRADES ACCORDINGLY; INCLUDING POINTS 21 & 22.
   1.1. ADJUST THE TOP OF ASPHALT ELEVATIONS AROUND THE EXISTING BUILDING FOR POINTS 29, 35, AND 36 IF A RAISED WALKWAY IS INSTALLED ALONG THE EAST SIDE OF THE EXISTING BUILDING.
2. REFER TO GRADING REQUIREMENT AROUND BUILDINGS ON SHEET CG-01.

DRAFT

SCALE IN FEET
0 15 30

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

SITE PLAN - STAKING

FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project	270
Date	17-Oct-2024
Scale	1" = 30'
Sheet	CG-02

T:\270 - Michael Sotuyo Site Plan\5.1 Site Plan\SITE PLAN.dwg

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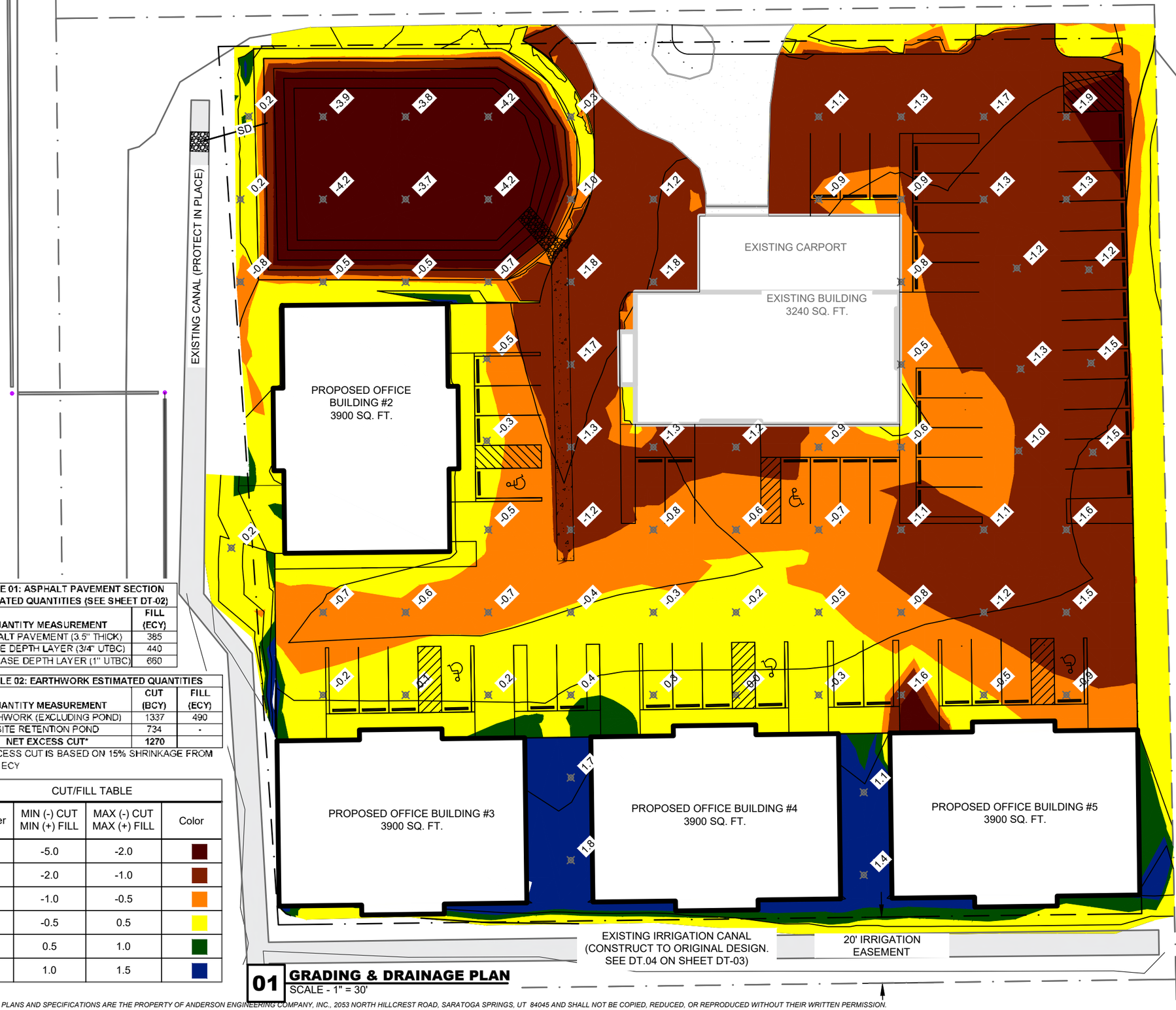


TABLE 01: ASPHALT PAVEMENT SECTION ESTIMATED QUANTITIES (SEE SHEET DT-02)

QUANTITY MEASUREMENT	FILL (ECY)
ASPHALT PAVEMENT (3.5" THICK)	385
4" BASE DEPTH LAYER (3/4" UTBC)	440
6" SUBBASE DEPTH LAYER (1" UTBC)	660

TABLE 02: EARTHWORK ESTIMATED QUANTITIES

QUANTITY MEASUREMENT	CUT (BCY)	FILL (ECY)
EARTHWORK (EXCLUDING POND)	1337	490
SITE RETENTION POND	734	-
NET EXCESS CUT*	**1270**	

NET EXCESS CUT IS BASED ON 15% SHRINKAGE FROM BCY TO ECY

CUT/FILL TABLE

Number	MIN (-) CUT MIN (+) FILL	MAX (-) CUT MAX (+) FILL	Color
1	-5.0	-2.0	
2	-2.0	-1.0	
3	-1.0	-0.5	
4	-0.5	0.5	
5	0.5	1.0	
6	1.0	1.5	

01 GRADING & DRAINAGE PLAN
SCALE - 1" = 30'

Construction Notes

1. CONTOURS SHOWN REPRESENT ASPHALT PAVEMENT SUBGRADE OR TOP OF GRADE IN LANDSCAPE (BASIN) AREAS.
2. CUT / FILL TICK MARKS AND DEPTHS SHOWN ARE TO ASPHALT PAVEMENT SUBGRADE OR TOP OF LANDSCAPE (BASIN) GRADE.

DRAFT

SCALE IN FEET
0 15 30

No.	Revision/Issue	Date

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ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

EARTHWORK CUT & FILL ESTIMATED QUANTITIES

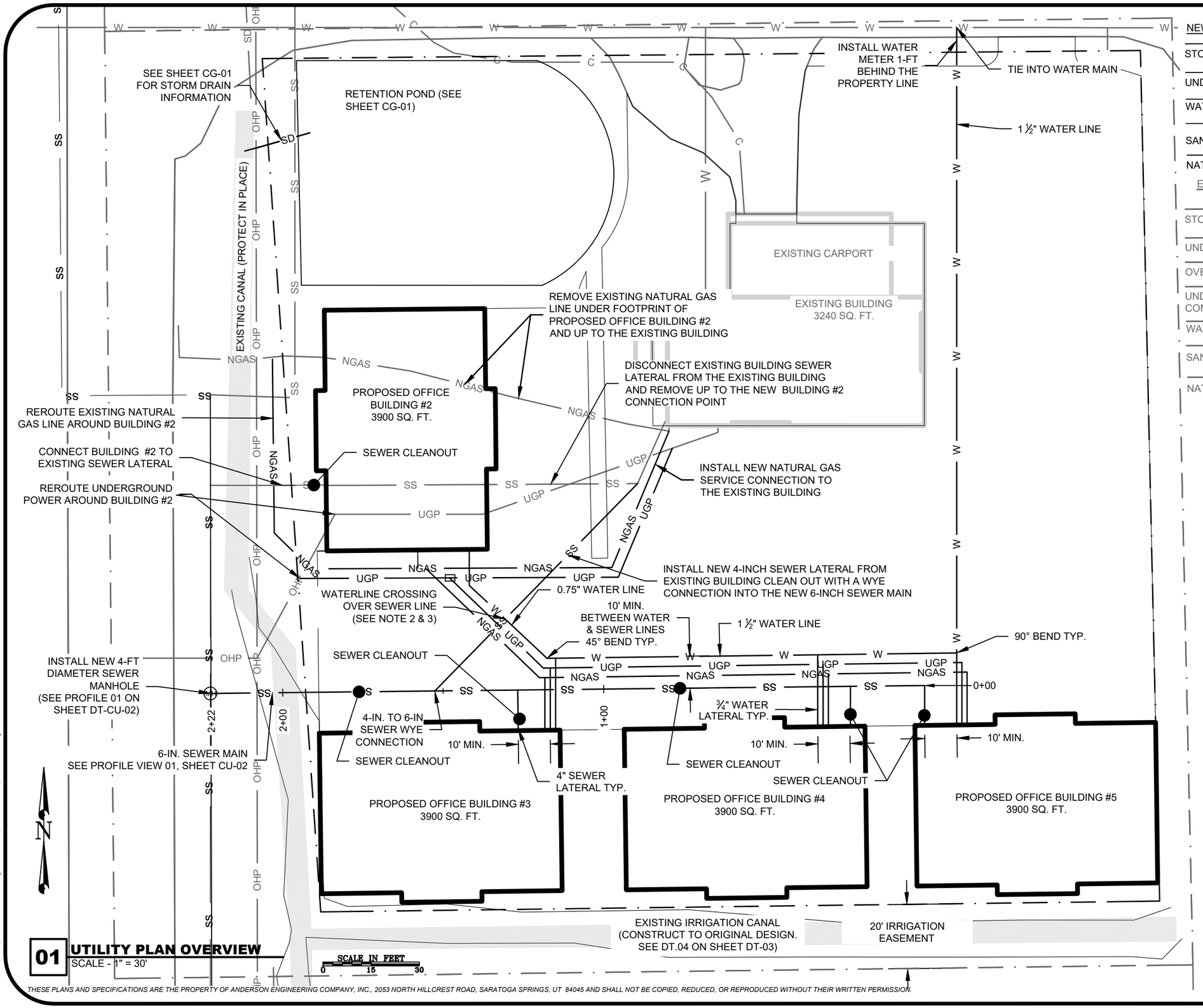
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project	270	Sheet	CG-03
Date	17-Oct-2024		
Scale	1" = 30'		

T:\270 - Michael Sotuyo Site Plan\5.1 Site Plan\SITE PLAN.dwg

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01 UTILITY PLAN OVERVIEW
SCALE - 1" = 30'

NEW UTILITIES LEGEND
- SD — STORM DRAIN
- UGP — UNDERGROUND POWER
- W — WATER
- SS — SANITARY SEWER
- NGAS — NATURAL GAS

EXISTING UTILITIES LEGEND
- SD — STORM DRAIN
- UGP — UNDERGROUND POWER
- OHP — OVERHEAD POWER
- C — UNDERGROUND COMMUNICATION
- W — WATER
- SS — SANITARY SEWER
- NGAS — NATURAL GAS

General Notes

1. A PRECONSTRUCTION CONFERENCE SHALL BE HELD BEFORE ANY EXCAVATION OR OTHER WORK IS BEGUN A RIGHT-OF-WAY EXCAVATION / ENCROACHMENT PERMIT MUST BE OBTAINED FROM FRANCIS CITY. REFER TO FRANCIS CONSTRUCTION SPECIFICATIONS.
2. MINIMUM COVER DEPTH OVER WATERLINES IS 36-INCHES.
3. INSTALL WATERLINES AT A 10 FOOT MIN. HORIZONTALLY OFFSET FROM SEWER PIPELINES. WATERLINES SHALL BE INSTALLED 18-INCHES MIN. ABOVE SEWER PIPES AT CROSSINGS.
4. WATER MAIN PIPE SHALL BE 1.5 INCH C900 PVC WATER PIP. (REFER TO FRANCIS CONSTRUCTION SPECIFICATION 02668.)
   - 4.1. WATER LATERAL PIPES SHALL BE 0.75 INCH C900 PVC WATER PIPE.
   - 4.2. RECORD ACTUAL LOCATIONS OF PIPING MAINS, VALVES, CONNECTIONS, THRUST RESTRAINTS, AND INVERT ELEVATIONS.
5. SEWER PIPE AND FITTINGS SHALL MEET OR EXCEED ALL OF THE REQUIREMENTS OF ASTM SPECIFICATION D-3034. (REFER TO FRANCIS CITY CONSTRUCTION SPECIFICATION 02720.)
   - 5.1. INSTALL CLEANOUTS 5 FT MIN. FROM BUILDING, EVERY 100 FT AND CHANGES IN DIRECTION.
6. POWER SERVICE CONNECTIONS DESIGN BY OTHERS.

DRAFT

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

UTILITY PLAN OVERVIEW

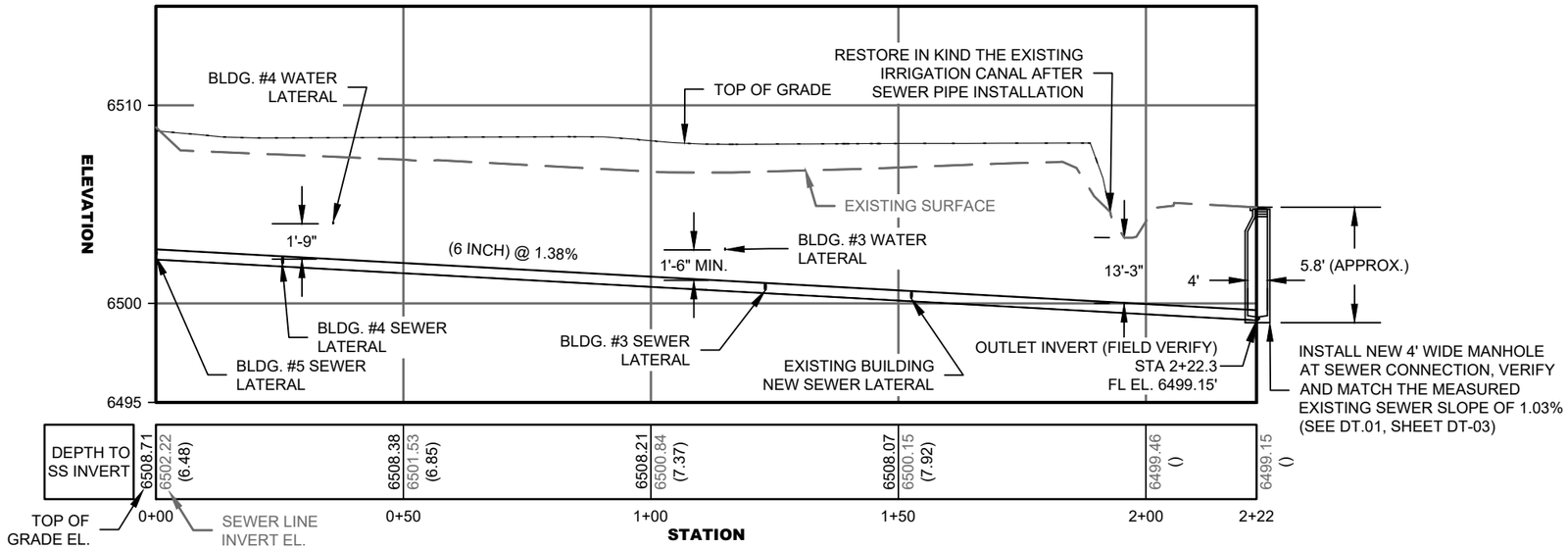
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project	270
Date	17-Oct-2024
Scale	1" = 30'
Sheet	CU-01

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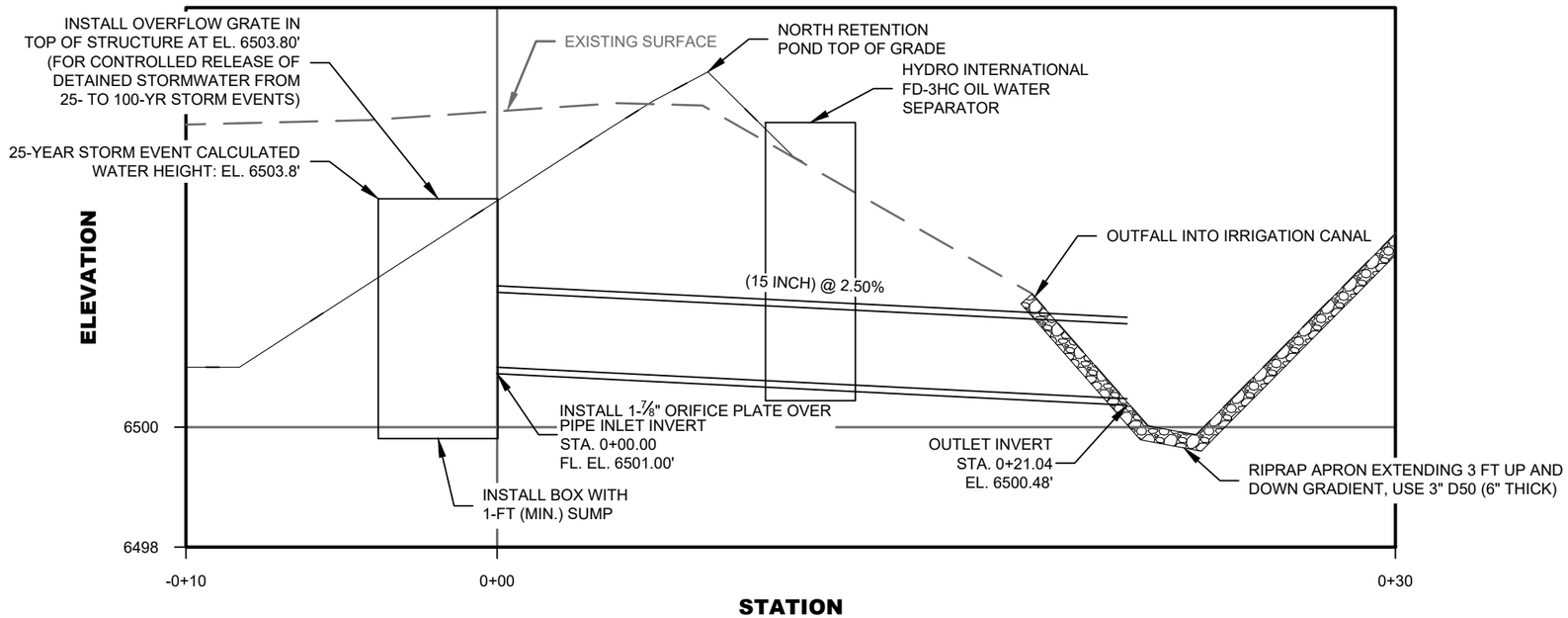
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PROFILE VIEW OF SS_MAIN_6INCH
0+00 TO 2+22.34
(VERTICAL EXAGGERATION = 4:1)

01 **MAIN SEWER LINE PROFILE**
SCALE - 1" = 30'

SCALE IN FEET
0 15 30



PROFILE VIEW OF SD_NORTH_BASIN
-0+10 TO 0+30.00
(VERTICAL EXAGGERATION = 2:1)

02 **BASIN STORM DRAIN PROFILE**
SCALE - 1" = 5'

SCALE IN FEET
0 2.5 5

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T:\270 - Michael Satuyo Site Plan\5.1 Site Plan\SITE PLAN.dwg

General Notes

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ANDERSON ENGINEERING COMPANY INC.

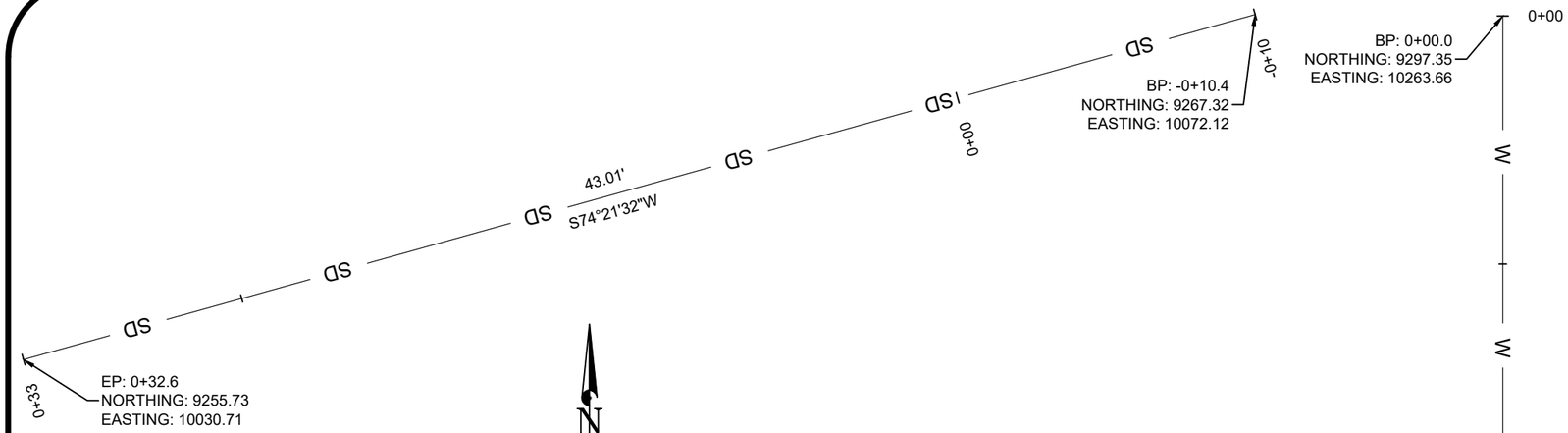
COMMERCIAL SITE DEVELOPMENT

SEWER & STORM DRAIN PROFILES

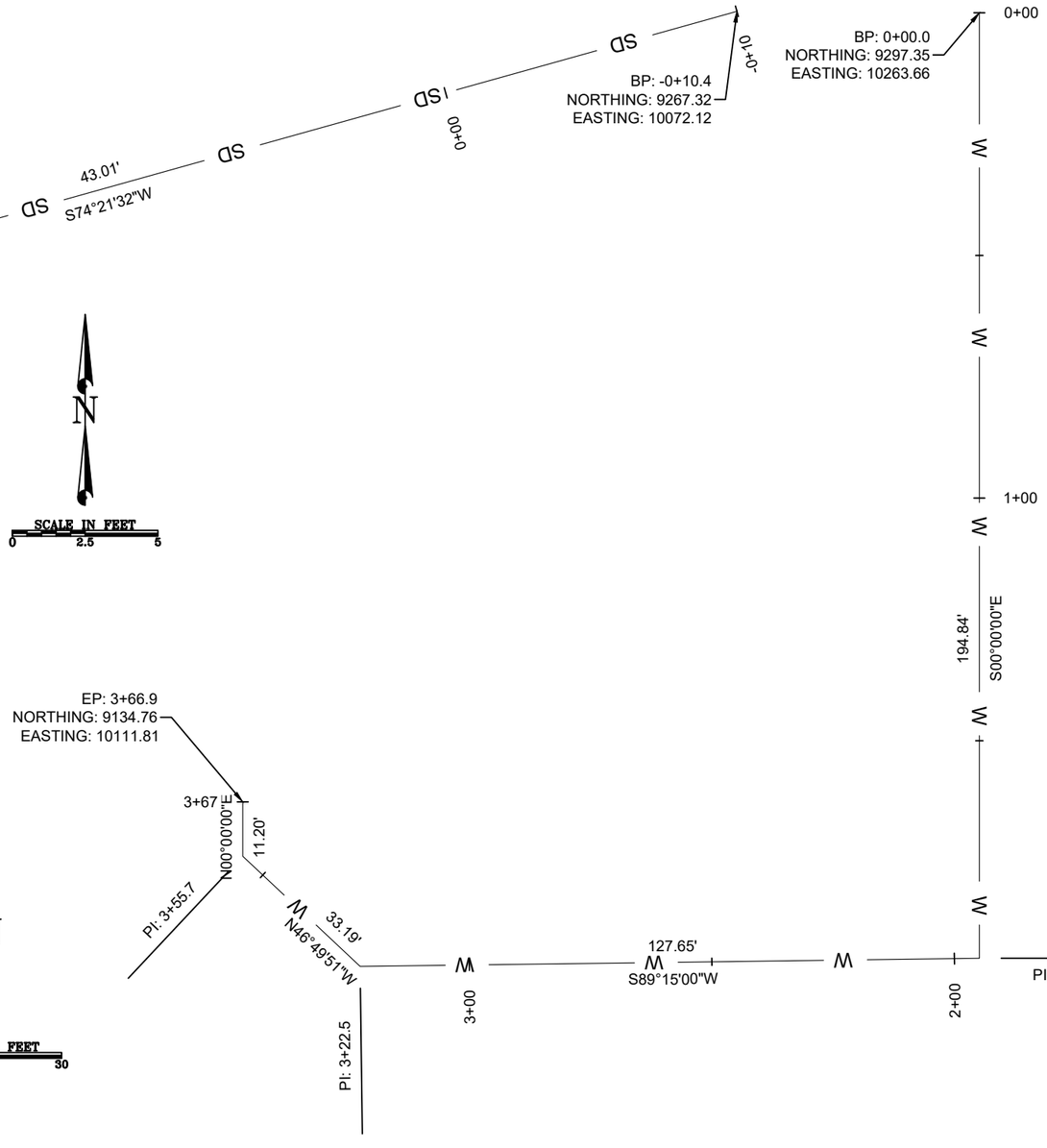
FRANCIS, UT

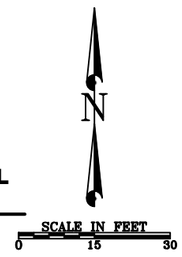
DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project 270	Sheet CU-02
Date 17-Oct-2024	
Scale AS SHOWN	

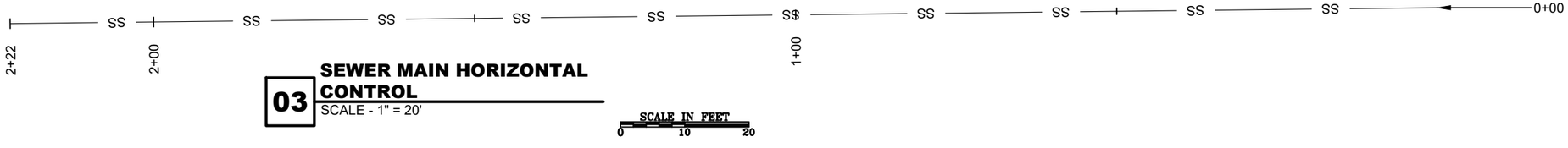


01 STORM DRAIN HORIZONTAL CONTROL
SCALE - 1" = 5'





02 WATER MAIN HORIZONTAL CONTROL
SCALE - 1" = 30'



03 SEWER MAIN HORIZONTAL CONTROL
SCALE - 1" = 20'



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T:\270 - Michael Sotuyo Site Plan\5.1 Site Plan\STR PLAN.dwg

General Notes

DRAFT

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

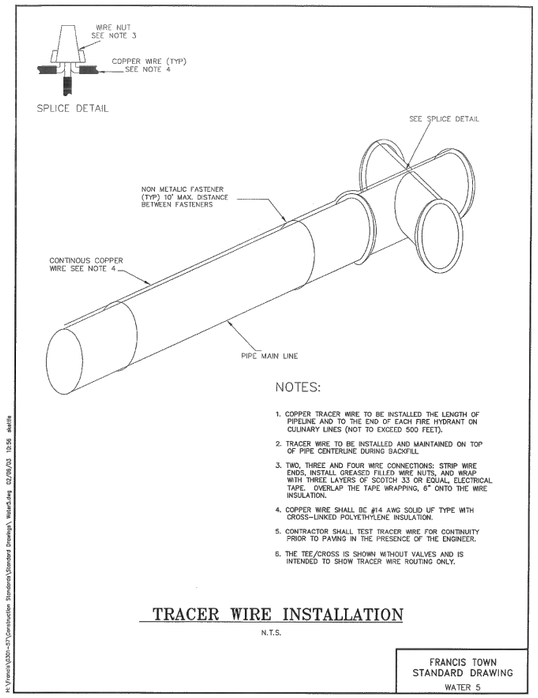
COMMERCIAL SITE DEVELOPMENT

HORIZONTAL CONTROL

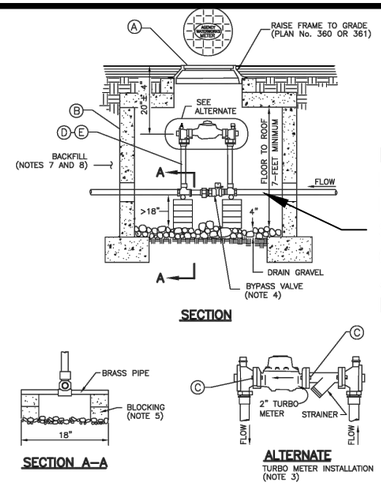
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project: 270	Sheet: HC-01
Date: 17-Oct-2024	
Scale: AS SHOWN	



01 TRACER WIRE INSTALLATION
N.T.S.



LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		27" FRAME AND COVER	PLAN No. 502
(B)		CONCRETE BOX	PLAN No. 505
(C)		METER BOLTS	5/8" x 2 3/4" BRASS
(D)		1 1/2" CUSTOM SETTER WITH BYPASS	
(E)		2" CUSTOM SETTER WITH BYPASS	

* FURNISHED BY UTILITY AGENCY

1 1/2" and 2" meter

1. **GENERAL**
   - A. Turbine meters are required on all systems used exclusively for irrigation or fire protection.
   - B. Where domestic use is applicable, use a standard meter.
   - C. Before backfilling, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
   - 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, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A48, coated with asphalt based paint or better.
3. **EXECUTION**
   - A. Meter Placement:
     1) All meters are to be installed in the park strip or within 7 feet of the property line (street side).
     2) Do not install meters under driveway approaches, sidewalks, or curb and gutter.
     3) In new construction, install meter at center of lot or per agency requirements.
   - B. Meter Box: Set box so grade of the frame and cover matches the grade of the surrounding surface.
   - C. Bypass Valve: Lock in off position.
   - D. Blocking: Use clay brick or concrete block.
   - E. Concrete Box:
     1) Center frame and cover over water meter.
     2) Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   - F. 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.
   - G. Base Course and Backfill Placement: Maximum lift thickness before compaction is 8-inches. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

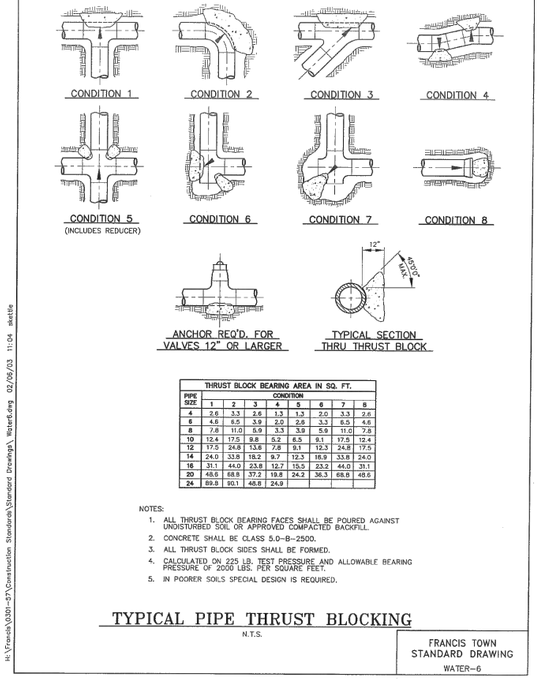
1 1/2" and 2" meter

August 2001

217

Plan No. 522 522

02 APWA 1.5-IN. WATER SERVICE CONNECTION DETAILS PLAN 522
N.T.S.

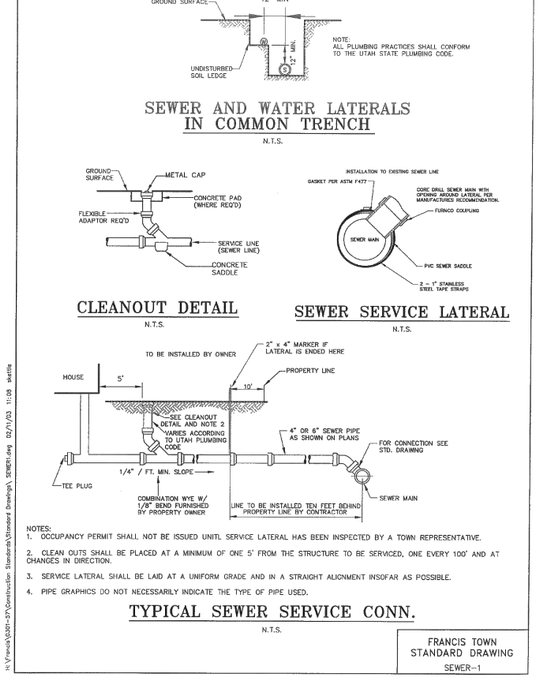


THRUST BLOCK BEARING AREA IN SQ. FT.								
PIPE SIZE	CONDITION							
	1	2	3	4	5	6	7	8
4	2.6	3.3	2.6	1.3	1.3	2.0	3.3	2.6
6	4.6	6.5	3.9	2.0	2.6	3.3	6.5	4.6
8	7.8	11.0	5.9	3.3	3.9	5.9	11.0	7.8
10	12.4	17.5	8.8	5.2	6.5	9.1	17.5	12.4
12	17.5	24.8	13.6	7.8	9.1	12.3	24.8	17.5
14	24.0	33.8	18.2	9.7	12.3	16.9	33.8	24.0
16	31.1	44.0	23.8	12.7	15.5	23.2	44.0	31.1
20	48.6	68.8	37.2	19.8	24.2	36.3	68.8	48.6
24	89.8	90.1	46.8	24.9				

NOTES:
1. ALL THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
2. CONCRETE SHALL BE CLASS 5.0-B-2500.
3. ALL THRUST BLOCK SIDES SHALL BE FORMED.
4. CALCULATED ON 225 LB. TEST PRESSURE AND ALLOWABLE BEARING PRESSURE OF 2000 LBS. PER SQUARE FEET.
5. IN POORER SOILS SPECIAL DESIGN IS REQUIRED.

TYPICAL PIPE THRUST BLOCKING
N.T.S.
FRANCIS TOWN
STANDARD DRAWING
WATER-6

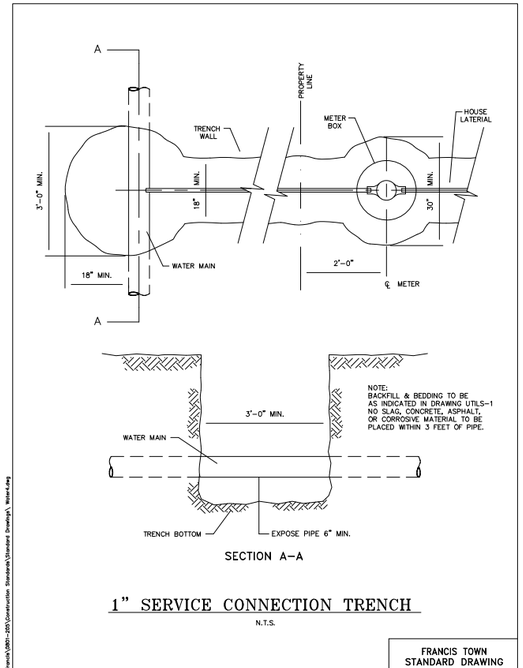
03 TYP. PIPE THRUST BLOCK
N.T.S.



NOTES:
1. OCCUPANCY PERMIT SHALL NOT BE ISSUED UNITL SERVICE LATERAL HAS BEEN INSPECTED BY A TOWN REPRESENTATIVE.
2. CLEAN OUTS SHALL BE PLACED AT A MINIMUM OF ONE 5' FROM THE STRUCTURE TO BE SERVICED, ONE EVERY 100' AND AT CHANGES IN DIRECTION.
3. SERVICE LATERAL SHALL BE LAID AT A UNIFORM GRADE AND IN A STRAIGHT ALIGNMENT INSOFAR AS POSSIBLE.
4. PIPE GRAPHICS DO NOT NECESSARILY INDICATE THE TYPE OF PIPE USED.

TYPICAL SEWER SERVICE CONN.
N.T.S.
FRANCIS TOWN
STANDARD DRAWING
SEWER-1

04 TYP. SEWER SERVICE CONN.
N.T.S.



05 SERVICE CONNECTION TRENCH
N.T.S.

DRAFT

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

DETAILS

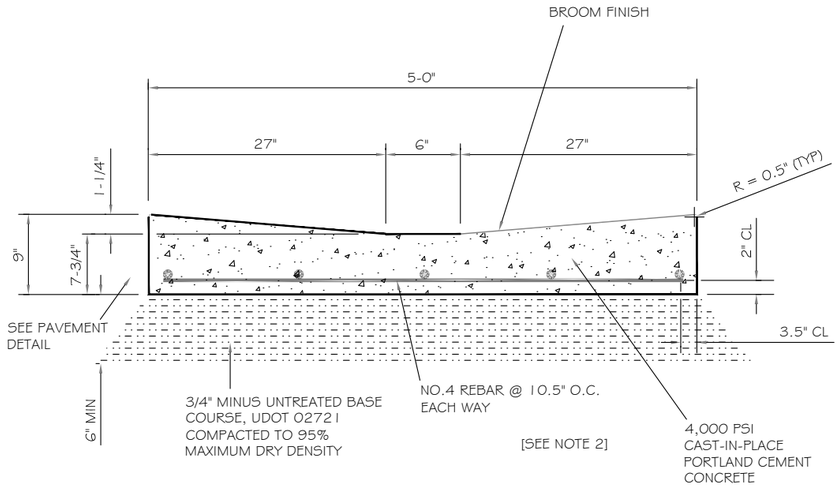
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project 270	Sheet DT-01
Date 16-Oct-2024	
Scale AS SHOWN	

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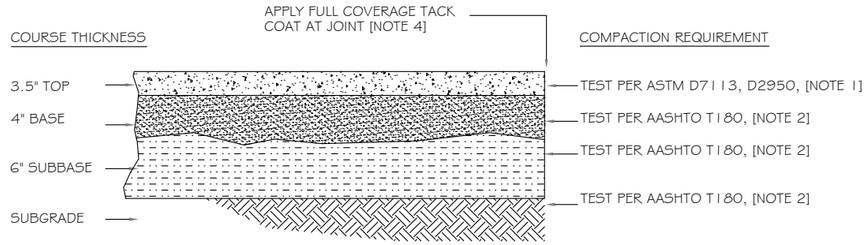


NOTES:
[1] TOOLED CONTROL JOINT EVERY 10 FEET; EXPANSION JOINT EVERY 50 FEET.
[2] UNDISTURBED NATURAL SOIL OR SUBGRADE COMPACTED TO 95% OF MAX DRY DENSITY

5-FT PCC WATERWAY

TYPICAL CROSS SECTION
NOT TO SCALE

01 5-FT PCC WATERWAY (SEE NOTE 1)
N.T.S.



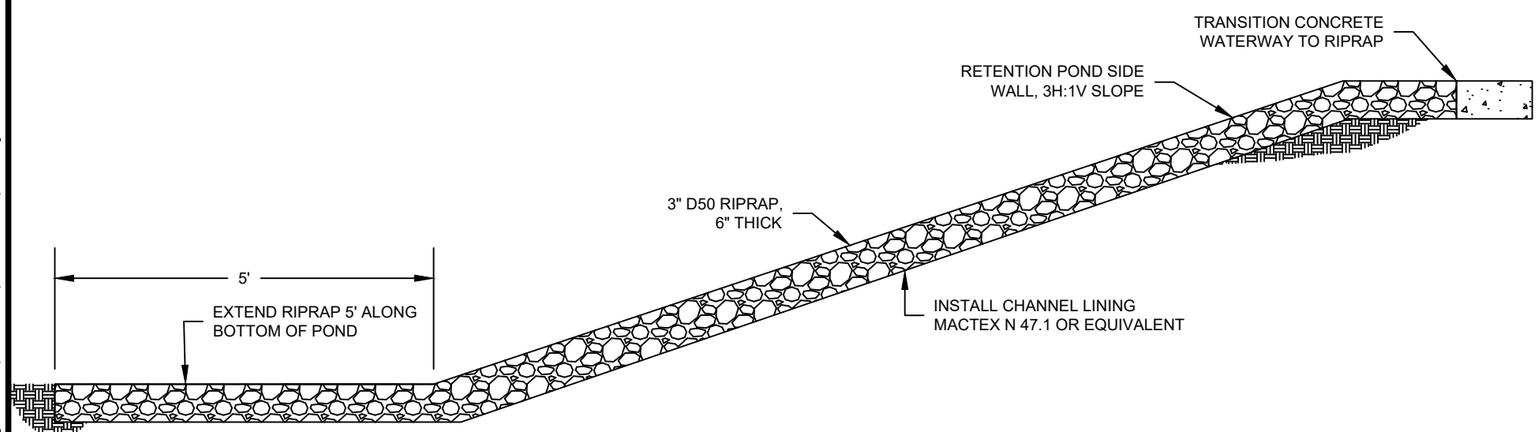
COURSE	MATERIAL	SPECIFICATION	MAX AGG SIZE (IN)
TOP	HOT-MIX ASPHALT	UDOT 02741	0.5 [NOTE 3]
BASE	UNTREATED BASE COURSE	UDOT 02721	0.75
SUBBASE	UNTREATED BASE COURSE	UDOT 02721	1.5
UNSUITABLE SUBGRADE	GRANULAR BORROW	UDOT 02056	6

NOTES:
[1] TARGET DENSITY 96%, NO TEST LESS THAN 93%.
[2] BASE AND SUBBASE: TARGET DENSITY 95%, NO TEST LESS THAN 92%; SUBGRADE: TARGET DENSITY 95%, NO TEST LESS THAN 92%
[3] GREATER THAN OR EQUAL TO 90% PASSING THIS AGGREGATE SIZE. 2% TO 10% PASSING NO. 200 SIEVE.
[4] SAW CUT EXISTING PAVEMENT VERTICALLY AT FINAL JOINT LOCATIONS.

HOT-MIX ASPHALT CONCRETE PAVEMENT

TYPICAL CROSS SECTION
NOT TO SCALE

02 HOT-MIX ASPHALT CONCRETE PAVEMENT (SEE NOTE 1)
N.T.S.



03 RIPRAP LINED BASIN INLET
SCALE - 1" = 2'

SCALE IN FEET
0 1 2

General Notes

1. DETAILS 01 AND 02, THIS SHEET, ARE FROM A PREVIOUSLY APPROVED SITE IMPROVEMENT PLAN SET FOR THE SITE TITLED: 'SITE IMPROVEMENTS - FALLING WATERS LANDSCAPING', SHEET 8 OF 9 - CONSTRUCTION DETAILS.
   1.1. PLAN SET WAS CREATED BY CANYON ENGINEERING - STAMPED BY A.F. SHARRY, III DATE: 1/2/2018)

DRAFT

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

DETAILS

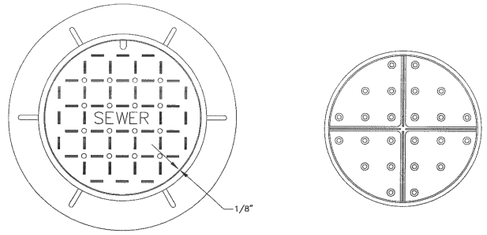
FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project	270
Date	16-Oct-2024
Scale	AS SHOWN
Sheet	DT-02

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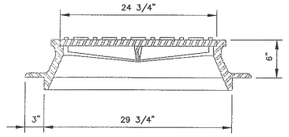


PLAN OF COVER AND RING

BOTTOM VIEW OF COVER



SECTIONS



D + L SUPPLY #A-1180
OR APPROVED EQUAL

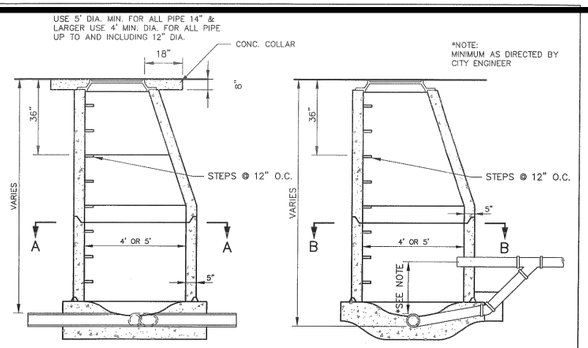
HEAVY DUTY, 400 LB. MINIMUM,
MANHOLE RING AND COVER

N.T.S.

01 **HEAVY DUTY, 400 LB MINIMUM MANHOLE RING AND COVER**
SCALE - N.T.S.

FRANCIS TOWN STANDARD DRAWING
SEWER-2

H:\Francis\0301-57\Construction Standards\Standard Drawings\ SEWER2.dwg 02/06/03 13:11 skellie



SECTION A–A

SECTION B–B

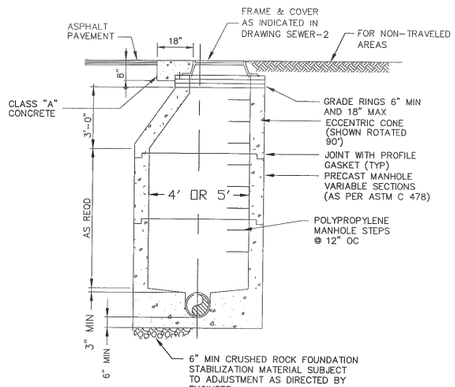
TYPICAL JUNCTION MANHOLE
N.T.S.

TYPICAL DROP MANHOLE
N.T.S.

02 **TYPICAL DROP MANHOLE AND JUNCTION MANHOLE**
SCALE - N.T.S.

FRANCIS TOWN STANDARD DRAWING
SEWER-3

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NOTES:

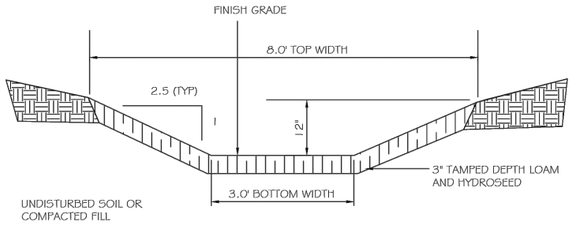
1. LOCATE MANHOLE COVER ON DOWNSTREAM SIDE OF MANHOLE. SET MANHOLE FRAME IN GROUT.
2. ALL JOINTS TO BE WATER TIGHT
3. MANHOLE BASE AND 1st SECTION OF MANHOLE TO BE FABRICATED AS AN INTEGRAL UNIT.
4. USE 5' DIAMETER MANHOLE FOR PIPE GREATER THAN 18" DIAMETER PIPE
   USE 4' DIAMETER MANHOLE FOR ALL PIPE UP TO AND INCLUDING 18" DIAMETER PIPE.

PRECAST CONCRETE SEWER MANHOLE
N.T.S.

03 **PRECAST CONCRETE SEWER MANHOLE**
SCALE - N.T.S.

FRANCIS TOWN STANDARD DRAWING
SEWER-5

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04 **DRAINAGE SWALE - SOUTH LOT LINE (01-02-2023 APPROVED SITE IMPROVEMENT DETAIL REFERENCE)**
SCALE - N.T.S.

DRAWING ISSUED FOR

- ☐ PLANNING
- ☐ CONSTRUCTION
- ■ PERMIT
- ☐ CONSTRUCTION RECORD

SEE DESIGN NOTES FOR INTENT. THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS AND AREAS OF CONTRACTOR JURISDICTION.

REGISTERED PROFESSIONAL ENGINEER — A.F. SHARRY, III — 186193 — 8.16.17 — STATE OF UTAH

NO.	DATE	BY	CHK.	REVISION DESCRIPTION

CANYON ENGINEERING
SOLUTIONS FOR LAND
CIVIL ENGINEERING
LAND PLANNING
PERMITTING
SM
PO BOX 982131
PARK CITY, UTAH 84098
VOICE: 435.640.7373 EMAIL: GUS@CANYONENG.COM
WWW.CANYONENG.COM

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SITE IMPROVEMENTS

CONSTRUCTION DETAILS

TAX ID NO. FT-14-B
STATE ROAD 32
FRANCIS, UTAH

PREPARED FOR:
E & J ENTERPRISES L.L.C.
PARK CITY, UTAH

PLS GRID LOCATION:
S28 T2S R6E
SLB&M

DES. BY: APS	DATE: AUGUST 2017	JOB 17005	5 OF 9
CHK. BY: APS			

General Notes

DRAFT

No.	Revision/Issue	Date

BLIND RABBIT, LLC.

ANDERSON ENGINEERING COMPANY INC.

COMMERCIAL SITE DEVELOPMENT

DETAILS

FRANCIS, UT

DRAWN BY:	BWP
ENGINEER:	RSH
APPROVED:	JMD

Project 270	Sheet DT-03
Date 16-Oct-2024	
Scale N.T.S.	

T:\270 - Michael Satuyo Site Plan\5.1 Site Plan\Sheet Production\details.dwg

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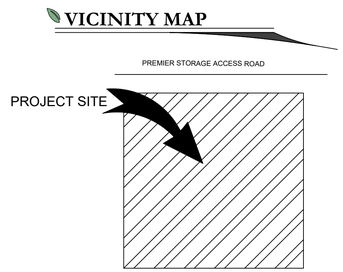


SITE MATERIALS LEGEND

(NOTE: SITE MATERIALS QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE)

SYMBOL	CODE	DESCRIPTION	QTY
1 LANDSCAPE			
	1-10	NON-IRRIGATED REVEGETATION SEED MIX HYDROSEED WITH PLS (PURE LIVE SEED) AT 35LBS/ACRE 1.75 LBS SANDBERG BLUEGRASS 5% 3.50 LBS ANNUAL RYEGRASS 10% 3.50 LBS SHEEP FESCUE10% 3.50 LBS STANDARD CRESTED WHEATGRASS 10% 3.50 LBS SLENDER WHEATGRASS 10% 3.50 LBS PERENNIAL RYEGRASS 10% 5.25 LBS CRESTED WHEATGRASS 15% 5.25 LBS SMOOTH BROME 15% 5.25 LBS INTERMEDIATE WHEATGRASS 15% SEE SUMMIT SEED. DARRELL@SUMMITSEEDING.COM 435-709-8003. REFER TO SEED LANDSCAPE NOTES FOR FURTHER INFORMATION. SHEET LP-101.	13,580 s
	1-16	1" MINUS BROWN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 3" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	9,481 sf
	1-24	4" BROWN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 6" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	7,175 sf
	1-31	5.5" DEEP STEEL EDGING - INSTALL PER MANUFACTURER SPECIFICATION.	782 lf
2 HARDSCAPE			
	2-01	BOULDERS- DECORATIVE 3 FOOT ROUND. SUBMIT COLOR SAMPLES FOR ARCHITECT AND OWNER APPROVAL. SEE PLACEMENT INSTRUCTIONS ON DETAIL SHEET LP-501..	22
	2-02	BOULDERS- DECORATIVE 5 FOOT ROUND. SUBMIT COLOR SAMPLES FOR ARCHITECT AND OWNER APPROVAL. SEE PLACEMENT INSTRUCTIONS ON DETAIL.SHEET LP-501.	22
	2-05	CUT EDGE	
3 WALLS AND COLUMNS			
	3-01	8' DURANGO PRECAST CONCRETE FENCE FROM UTAH FENCING COMPANY OR SIMILAR. PRESENT SAMPLES TO CLIENT AND LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. INSTALLE PER MANUFACTURER'S SPECIFICATIONS.	289 lf

VICINITY MAP



PLANT LEGEND

(NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE)

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CONIFERS						
	JC'S	8	Juniperus chinensis `Spartan` Spartan Juniper low, 15x6; sun; z4; Utah Lake water tolerant	B & B		6`
	JS'M	15	Juniperus scopulorum `Moonglow` Moonglow Juniper Te2, 18x8; AV 20; sun; z3; Utah Lake water tolerant	B & B		6`
DECIDUOUS TREES						
	GT'S	8	Gleditsia triacanthos `Skycole` Skyline Honey Locust moderate; 45x35; sun; z4; Utah Lake water tolerant	B & B	2"Cal	
	S'IS	13	Syringa reticulata 'Ivory Silk' Ivory Silk Japanese Tree Lilac Moderate; 20-25'x12-15'; sun; z3; Utah Lake water tolerant	B & B	2"Cal	
SYMBOL	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT**		
DECIDUOUS SHRUBS						
	AA'R	7	Amelanchier alnifolia 'Regent' Regent Serviceberry Sd2; 5x5; AV 50; sun to part shade; z2; Utah Lake water tolerant	5 gal		
	D'KR	12	Diervilla x 'G2X885411' Kodiak® Red Diervilla Moderate to low; 3-4'x4-5'; sun to shade; z4; Utah Lake water tolerant	5 gal		
	PA'L	28	Perovskia atriplicifolia 'Lisslitt' Lacey Blue Russian Sage Low; 18-24"x24"; sun; z4; Utah Lake water tolerant	2 gal		
EVERGREEN SHRUBS						
	EE'B	1	Ephedra equisetina Bluestem Joint Fir xeric to low; 4-6 x 3-8; sun; z4	5 gal		
	LA'H	32	Lavandula angustifolia `Hidcote Blue` Hidcote Blue Lavender P2; 1.5x3; AV 3; sun; z4; Utah Lake water tolerant	1 gal		
GRASSES						
	PV'N	22	Panicum virgatum `North Wind` Northwind Switch Grass Tw2; 5x3; AV 3; sun; z5; Utah Lake water tolerant	1 gal		
	SS'M	22	Schizachyrium scoparium `MinnblueA` Blue Heaven Little Bluestem Tw1; 3x2; AV 4.5; sun; z3; Utah Lake water tolerant	1 gal		
PERENNIALS						
	I'AV	43	Iris pallida `Aureo Variegata` Golden Variegated Sweet Iris P3; 2x2; AV 3; sun to part sun; z3; Utah Lake water tolerant	1 gal		
	PS'C	35	Phlox subulata 'Candy Stripe' Candy Stripe Creeping Phlox 6" X 36"	1 gal		
	RF'L	15	Rudbeckia fulgida `Little Goldstar` Little Goldstar Black-eyed Susan P3; 1.5 x 1.5; AV 1; sun; z4; Utah Lake water tolerant	1 gal		
	S'NE	32	Sedum x 'Night Embers' Night Embers Sedum 2-3'x2-3'; low water; sun z3	1 gal		
	S'NR	26	Salvia nemorosa 'New Dimension Rose' New Dimension Rose Sage Low; 8-12" x 12-18"; sun; z5; Utah Lake water tolerant	1 gal		
SYMBOL	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT**		
GROUND COVERS						
	D'MV	125	Delosperma x 'Kelaidis' TM Mesa Verde Ice Plant Plant 12" O.C. Low to moderate; 2" x 12-18"; sun; z5; Utah Lake water tolerant	4"pot		
	T'PC	235	Thymus serpyllum 'Pink Chintz' Pink Chintz Creeping Thyme Plant 12" O.C. low; 1"x8"; sun to part sun; z4; Utah Lake water tolerant	flat		

ISSUE DATE	PROJECT NUMBER
11/7/2024	UT24145

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

WOLF CREEK JUNCTION
1349 UT-32
FRANCIS, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

LAYTON DAVIS ARCHITECTS
ATT: JOHN DAVIS
801-487-0715
JOHN@LAYTONDAVISARCHITECTS.COM

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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

LICENSE STAMP

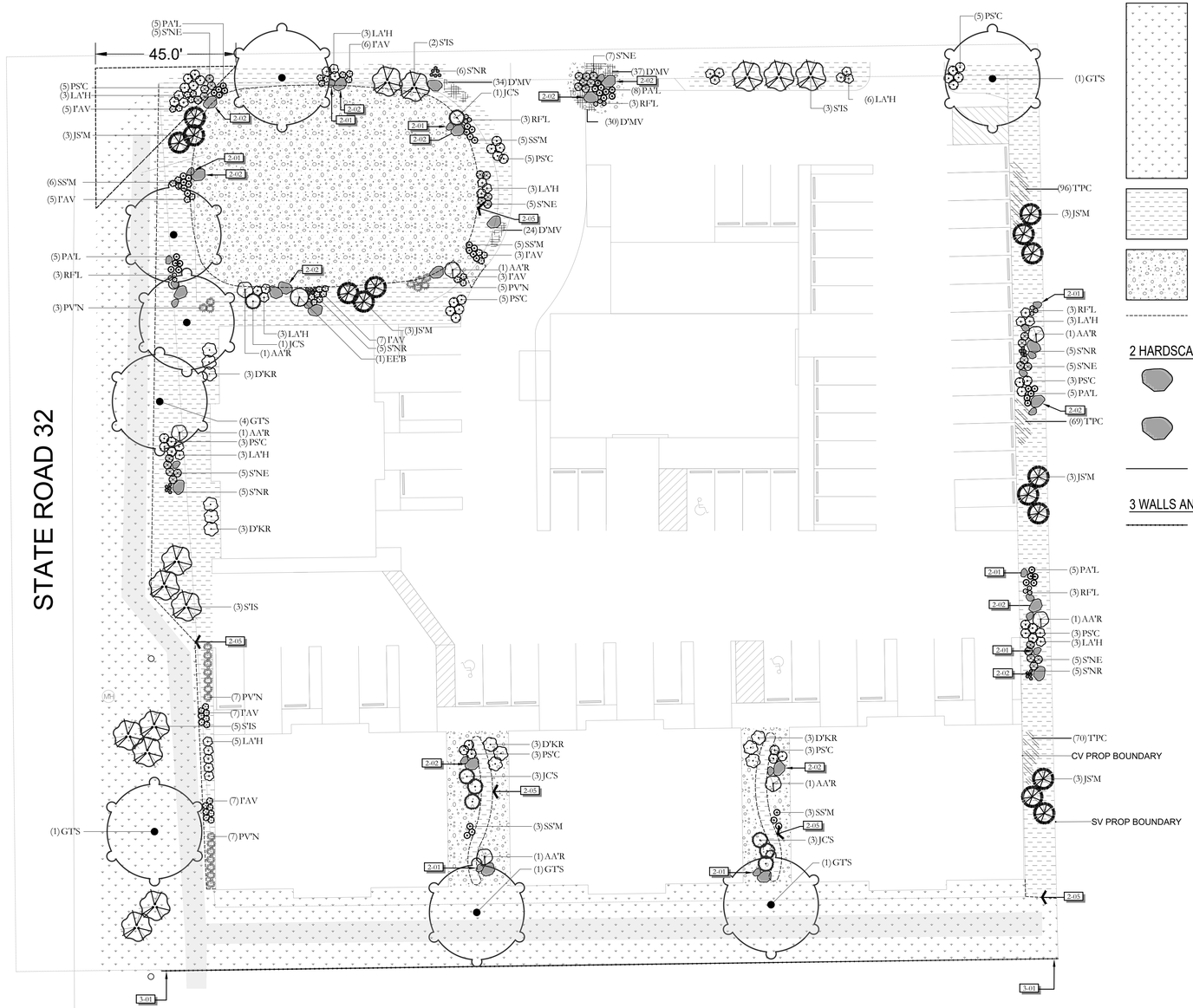
LICENSED LANDSCAPE ARCHITECT JEREMY AINSWORTH 8128127-5301 11/7/2024 STATE OF UTAH

DRAWING INFO

PM: JTA
DRAWN: ALR
CHECKED: JMA
PLOT DATE: 11/7/2024

COLOR ILLUSTRATION
CITY PERMIT SET

LP-COLOR

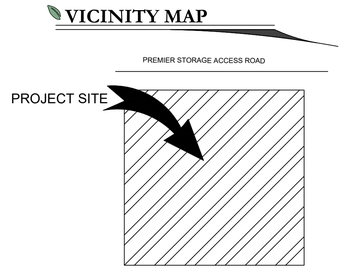


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ISSUE DATE	PROJECT NUMBER
10/28/2024	UT24145

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
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PLAN INFORMATION

811 BLUE STAKES OF UTAH
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0' 10' 20' 40' 80'
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LANDSCAPE ARCHITECT / PLANNER

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LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128127-5301
10/28/2024
BUSINESS
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	ALR
CHECKED:	JMA
PLOT DATE:	10/28/2024

LANDSCAPE OVERALL PLAN

CITY PERMIT SET

LP-100

LANDSCAPE PLAN SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES LANDSCAPE PROCEDURES FOR THE PROJECT INCLUDING ALL LABOR, MATERIALS, AND INSTALLATION NECESSARY, BUT NOT LIMITED TO, THE FOLLOWING:

1. SITE CONDITIONS
2. GUARANTEES
3. MAINTENANCE
4. SOIL AMENDMENTS
5. FINE GRADING
6. LANDSCAPE EDGING
7. FURNISH AND INSTALLING PLANT
8. TURF PLANTING
9. WEED BARRIER

1.2 SITE CONDITIONS

A. EXAMINATION: BEFORE SUBMITTING A BID, EACH CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS; SHALL VISIT THE SITE OF THE WORK; SHALL FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS; AND SHALL INCLUDE IN THE BID THE COST OF ALL ITEMS REQUIRED BY THE CONTRACT DOCUMENTS ARE AT A VARIANCE WITH THE APPLICABLE LAWS, BUILDING CODES, RULES, REGULATIONS, OR CONTAIN OBVIOUS ERRONEOUS OR UNCOORDINATED INFORMATION, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT REPRESENTATIVE AND THE NECESSARY CHANGES SHALL BE ACCOMPLISHED BY ADDENDUM.

B. PROTECTION: CONTRACTOR TO CONDUCT THE WORK IN SUCH A MANNER TO PROTECT ALL EXISTING UNDERGROUND UTILITIES OR STRUCTURES. CONTRACTOR TO REPAIR OR REPLACE ANY DAMAGED UTILITY OR STRUCTURE USING IDENTICAL MATERIALS TO MATCH EXISTING AT NO EXPENSE TO THE OWNER.

C. IRRIGATION SYSTEM: DO NOT BEGIN PLANTING UNTIL THE IRRIGATION SYSTEM IS COMPLETELY INSTALLED, IS ADJUSTED FOR FULL COVERAGE AND IS COMPLETELY OPERATIONAL.

1.3 PERMITS

A. BLUE STAKE/ DIG LINE: WHEN DIGGING IS REQUIRED, "BLUE STAKE" OR "DIG LINE" THE WORK SITE AND IDENTIFY THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES OR STRUCTURES.

1.4 PLANT DELIVERY, QUALITY, AND AVAILABILITY

A. UNAUTHORIZED SUBSTITUTIONS WILL NOT BE ACCEPTED. IF PROOF IS SUBMITTED THAT SPECIFIC PLANTS OR PLANT SIZES ARE UNOBTAINABLE, WRITTEN SUBSTITUTION REQUESTS WILL BE CONSIDERED FOR THE NEAREST EQUIVALENT PLANT OR SIZE. ALL SUBSTITUTION REQUESTS MUST BE MADE IN WRITING AND PREFERABLY BEFORE THE BID DUE DATE.

1.5 FINAL INSPECTION

A. ALL PLANTS WILL BE INSPECTED AT THE TIME OF FINAL INSPECTION PRIOR TO RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION FOR CONFORMANCE TO SPECIFIED PLANTING PROCEDURES, AND FOR GENERAL APPEARANCE AND VITALITY. ANY PLANT NOT APPROVED BY THE PROJECT REPRESENTATIVE WILL BE REJECTED AND REPLACED IMMEDIATELY.

1.6 LANDSCAPE SUBSTANTIAL COMPLETION

A. A SUBSTANTIAL COMPLETION CERTIFICATE WILL ONLY BE ISSUED BY THE PROJECT REPRESENTATIVE FOR "LANDSCAPE AND IRRIGATION" IN THEIR ENTIRETY. SUBSTANTIAL COMPLETION WILL NOT BE PROPORTIONED TO BE DESIGNATED AREAS OF A PROJECT.

1.7 MAINTENANCE

A. PLANT MATERIAL: THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL PLANTED MATERIALS IN A HEALTHY AND GROWING CONDITION FOR 30 DAYS AFTER RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION AT WHICH TIME THE GUARANTEE PERIOD COMMENCES. THIS MAINTENANCE IS TO INCLUDE MOWING, WEEDING, CULTIVATING, FERTILIZING, MONITORING WATER SCHEDULES, CONTROLLING INSECTS AND DISEASES, RE-GUYING AND STAKING, AND ALL OTHER OPERATIONS OF CARE NECESSARY FOR THE PROMOTION OF ROOT GROWTH AND PLANT LIFE SO THAT ALL PLANTS ARE IN A CONDITION SATISFACTORY AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR FAILURE TO MONITOR WATERING OPERATIONS AND SHALL REPLACE ANY AND ALL PLANT MATERIAL THAT IS LOST DUE TO IMPROPER APPLICATION OF WATER.

1.8 GUARANTEE

A. GUARANTEE: A GUARANTEE PERIOD OF ONE YEAR SHALL BEGIN FROM END OF MAINTENANCE PERIOD AND FINAL ACCEPTANCE FOR TREES, SHRUBS, AND GROUND COVERS. ALL PLANTS SHALL GROW AND BE HEALTHY FOR THE GUARANTEE PERIOD AND TREES SHALL LIVE AND GROW IN ACCEPTABLE UPRIGHT POSITION. ANY PLANT NOT ALIVE, IN POOR HEALTH, OR IN POOR CONDITION AT THE END OF THE GUARANTEE PERIOD WILL BE REPLACED IMMEDIATELY. ANY PLANT WILL ONLY NEED TO BE REPLACED ONCE DURING THE GUARANTEE PERIOD. CONTRACTOR TO PROVIDE DOCUMENTATION SHOWING WHERE EACH PLANT TO BE REPLACED IS LOCATED. ANY OUTSIDE FACTORS, SUCH AS VANDALISM OR LACK OF MAINTENANCE ON THE PART OF THE OWNER, SHALL NOT BE PART OF THE GUARANTEE

PART II - PRODUCTS

2.1 LANDSCAPE MATERIALS

A. TREE STAKING: ALL TREES SHALL BE STAKED FOR ONE YEAR WARRANTY PERIOD. ALL TREES NOT PLUMB SHALL BE REPLACED. STAKED TREES SHALL USE VINYL TREE TIES AND TREE STAKES TWO (2) INCH BY TWO (2) BY EIGHT (8) FOOT COMMON PINE STAKES USED AS SHOWN ON THE DETAILS.

B. TREE WRAP: TREE WRAP IS NOT TO BE USED.

C. MULCH/ROCK: SEE PLANS. ALL PLANTER BEDS TO RECEIVE A MINIMUM 3" LAYER FOR TREES, SHRUBS, AND PERENNIALS AND 1" FOR GROUNDCOVERS.

D. WEED BARRIER: DEWITT 5 OZ. WEED BARRIER FABRIC. MANUFACTURED BY DEWITT COMPANY, DEWITTCOMPANY.COM OR APPROVED EQUAL.

E. TREE, SHRUB, AND GRASS BACKFILL MIXTURE; BACKFILL MIXTURE TO BE 75% NATIVE SOIL AND 25% TOPSOIL, THOROUGHLY MIXED TOGETHER PRIOR TO PLACEMENT.

F. TOPSOIL: REQUIRED FOR TURF AREAS, PLANTER BEDS AND BACKFILL MIXTURE. ACCEPTABLE TOPSOIL SHALL MEET THE FOLLOWING STANDARDS:

a. PH: 5.5-7.5

b. EC (ELECTRICAL CONDUCTIVITY): < 2.0 MMHOS PER CENTIMETER

c. SAR (SODIUM ABSORPTION RATION): < 3.0

d. % OM (PERCENT ORGANIC MATTER): >1%

e. TEXTURE (PARTICLE SIZE PER USDA SOIL CLASSIFICATION): SAND <70%; CLAY < 30%; SILT < 70%, STONE FRAGMENTS (GRAVEL OR ANY SOIL PARTICLE GREATER THAN TWO (2) MM IN SIZE) < 5% BY VOLUME.

G. TURF SOD: ALL SOD SHALL BE 18 MONTH OLD AS SPECIFIED ON PLANS (OR APPROVED EQUAL) THAT HAS BEEN CUT FRESH THE MORNING OF INSTALLATION. ONLY SOD THAT HAS BEEN GROWN ON A COMMERCIAL SOD FARM SHALL BE USED. ONLY USE SOD FROM A SINGLE SOURCE.

H. LANDSCAPE CURB EDGING: SIX (6) INCHES BY FOUR (4) INCHES EXTRUDED CONCRETE CURB MADE UP OF THE FOLLOWING MATERIALS:

a. WASHED MORTAR SAND FREE OF ORGANIC MATERIAL.

b. PORTLAND CEMENT (SEE CONCRETE SPEC. BELOW FOR TYPE)

c. REINFORCED FIBER - SPECIFICALLY PRODUCED FOR COMPATIBILITY WITH AGGRESSIVE ALKALINE ENVIRONMENT OF PORTLAND CEMENT-BASED COMPOSITES.

d. ONLY POTABLE WATER FOR MIXING.

I. LANDSCAPE METAL EDGING: 5.5" STEEL EDGING WITH 15" DOWELS INTO THE GROUND FOR STABILIZATION.

PART III - EXECUTION

3.1 GRADING

A. TOPSOIL PREPARATION: GRADE PLANTING AREAS ACCORDING TO THE GRADING PLAN. ELIMINATE UNEVEN AREAS AND LOW SPOTS. PROVIDE FOR PROPER GRADING AND DRAINAGE.

B. TOPSOIL PLACEMENT: SLOPE SURFACED AWAY FROM BUILDING AT TWO (2) PERCENT SLOPE WITH NO POCKETS OF STANDING WATER. ESTABLISH FINISH GRADES OF ONE (1) INCHES FOR PLANTERS BELOW GRADE OF ADJACENT PAVED SURFACED. PROVIDE NEAT, SMOOTH, AND UNIFORM FINISH GRADES. REMOVE SURPLUS SUB-SOIL AND TOPSOIL FROM THE SITE.

C. COMPACTION: COMPACTION UNDER HARD SURFACE AREAS (ASPHALT PATHS AND CONCRETE SURFACES) SHALL BE NINETY-FIVE (95) PERCENT. COMPACTION UNDER PLANTING AREAS SHALL BE BETWEEN EIGHTY-FIVE (85) AND NINETY (90) PERCENT.

3.2 TURF GRADING

A. THE SURFACE ON WHICH THE SOD IS TO BE LAID SHALL BE FIRM AND FREE FROM FOOTPRINTS, DEPRESSIONS, OR UNDULATIONS OF ANY KIND. THE SURFACE SHALL BE FREE OF ALL MATERIALS LARGER THAN 1/2" IN DIAMETER.

B. THE FINISH GRADE OF THE TOPSOIL ADJACENT TO ALL SIDEWALKS, MOW-STRIPS, ETC. PRIOR TO THE LAYING OF SOD, SHALL BE SET SUCH THAT THE CROWN OF THE GRASS SHALL BE AT THE SAME LEVEL AS THE ADJACENT CONCRETE OR HARD SURFACE. NO EXCEPTIONS.

3.3 PLANTING OPERATIONS

A. REVIEW THE EXACT LOCATIONS OF ALL TREES AND SHRUBS WITH THE PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO THE DIGGING OF ANY HOLES. PREPARE ALL HOLES ACCORDING TO THE DETAILS ON THE DRAWINGS.

B. WATER PLANTS IMMEDIATELY UPON ARRIVAL AT THE SITE. MAINTAIN IN MOIST CONDITION UNTIL PLANTED.

C. BEFORE PLANTING, LOCATE ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. DO NOT PLACE PLANTS ON OR NEAR UTILITY LINES.

D. THE TREE PLANTING HOLE SHOULD BE THE SAME DEPTH AS THE ROOT BALL, AND TWO TIMES THE DIAMETER OF THE ROOT BALL.

E. TREES MUST BE PLACED ON UNDISTURBED SOIL AT THE BOTTOM OF THE PLANTING HOLE.

F. THE TREE HOLE DEPTH SHALL BE DETERMINED SO THAT THE TREE MAY BE SET SLIGHTLY HIGH OF FINISH GRADE, 1" TO 2" ABOVE THE BASE OF THE TRUNK FLARE, USING THE TOP OF THE ROOT BALL AS A GUIDE.

G. PLANT IMMEDIATELY AFTER REMOVAL OF CONTAINER FOR CONTAINER PLANTS.

H. SET TREE ON SOIL AND REMOVE ALL BURLAP, WIRE BASKETS, TWINE, WRAPPINGS, ETC. BEFORE BEGINNING AND BACKFILLING OPERATIONS. DO NOT USE PLANTING STOCK IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.

I. APPLY VITAMIN B-1 ROOT STIMULATOR AT THE RATE OF ONE (1) TABLESPOON PER GALLON.

J. UPON COMPLETION OF BACKFILLING OPERATION, THOROUGHLY WATER TREE TO COMPLETELY SETTLE THE SOIL AND FILL ANY VOIDS THAT MAY HAVE OCCURRED. USE A WATERING HOSE, NOT THE AREA IRRIGATION SYSTEM. IF ADDITIONAL PREPARED TOPSOIL MIXTURE NEEDS TO BE ADDED, IT SHOULD BE A COURSER MIX AS REQUIRED TO ESTABLISH FINISH GRADE AS INDICATED ON THE DRAWINGS.

K. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR INJURED TWIGS AND BRANCHES. ALL CUTS, SCARS, AND BRUISES SHALL BE PROPERLY TREATED ACCORDING TO THE DIRECTION OF THE PROJECT REPRESENTATIVE. PROPER PRUNING TECHNIQUES SHALL BE USED. DO NOT LEAVE STUBS AND DO NOT CUT THE LEADER BRANCH. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.

L. PREPARE A WATERING CIRCLE OF 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY. PLACE MULCH AROUND THE PLANTED TREES.

4. TURF - SOD LAYING

A. TOP SOIL AMENDMENTS: PRIOR TO LAYING SOD, COMMERCIAL FERTILIZER SHALL BE APPLIED AND INCORPORATED INTO THE UPPER FOUR (4) INCHES OF THE TOPSOIL AT A RATE OF FOUR POUNDS OF NITROGEN PER ONE THOUSAND (1,000) SQUARE FEET. ADJUST FERTILIZATION MIXTURE AND RATE OF APPLICATION AS NEEDED TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS. INCLUDE OTHER AMENDMENTS AS REQUIRED.

B. FERTILIZATION: THREE WEEKS AFTER SOD PLACEMENT FERTILIZE THE TURF AT A RATE OF ½ POUND OF NITROGEN PER 1000 SQUARE FEET. USE FERTILIZER SPECIFIED ABOVE. ADJUST FERTILIZATION MIXTURE AND RATES TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS.

C. SOD AVAILABILITY AND CONDITION: SOD IS TO BE DELIVERED TO THE SITE IN GOOD CONDITION. IT IS TO BE INSPECTED UPON ARRIVAL AND INSTALLED WITHIN 24 HOURS. SOD IS TO BE MOIST AND COOL TO ENSURE THAT DECOMPOSITION HAS NOT BEGUN AND IS TO BE FREE OF PESTS, DISEASES, OR BLEMISHES. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE EXISTING CONDITIONS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FURNISHING AND LAYING ALL SOD REQUIRED ON THE PLANS. HE SHALL FURNISH NEW SOD AS SPECIFIED ABOVE AND LAY IT SO AS TOO COMPLETELY SATISFY THE INTENT AND MEANING OF THE PLANS AND SPECIFICATION AT NO EXTRA COST TO THE OWNER. IN THE CASE OF ANY DISCREPANCY IN THE AMOUNT OF SOD TO BE REMOVED OR AMOUNT TO BE USED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT SUCH TO THE PROJECT REPRESENTATIVE PRIOR TO COMMENCING THE WORK.

D. SOD LAYING: THE SURFACE UPON WHICH THE NEW SOD TO BE LAID WILL BE PREPARED AS SPECIFIED IN THE DETAIL AND BE LIGHTLY WATERED BEFORE LAYING. AREAS WHERE SOD IS TO BE LAID SHALL BE CUT TRIMMED, OR SHAPED TO RECEIVE FULL WIDTH SOD (MINIMUM TWELVE (12) INCHES). NO PARTIAL STRIP OR PIECES WILL BE ACCEPTED.

E. SOD SHALL BE TAMPED LIGHTLY AS EACH PIECE IS SET TO ENSURE THAT GOOD CONTACT IS MADE BETWEEN EDGES AND ALSO THE GROUND. IF VOIDS OR HOLES ARE DISCOVERED, THE SOD PIECE(S) IS (ARE) TO BE RAISED AND TOPSOIL IS TO BE USED TO FILL IN THE AREAS UNTIL LEVEL. SOD LAID ON ANY SLOPED AREAS SHALL BE ANCHORED WITH WOODEN DOWELS OR OTHER MATERIALS WHICH ARE ACCEPTED BY THE GRASS SOD INDUSTRY.

F. SOD SHALL BE ROLLED WITH A ROLLER THAT IS AT LEAST 50% FULL IMMEDIATELY AFTER INSTALLATION TO ENSURE THE FULL CONTACT WITH SOIL IS MADE.

G. APPLY WATER DIRECTLY AFTER LAYING SOD. RAINFALL IS NOT ACCEPTABLE.

H. WATERING OF THE SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR BY WHATEVER MEANS NECESSARY TO ESTABLISH THE SOD IN AN ACCEPTABLE MANNER TO THE END OF THE MAINTENANCE PERIOD. IF AN IRRIGATION SYSTEM IS IN PLACE ON THE SITE, BUT FOR WHATEVER REASON, WATER IS NOT AVAILABLE IN THE SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO WATER THE SOD BY WHATEVER MEANS, UNTIL THE SOD IS ACCEPTED BY THE PROJECT REPRESENTATIVE.

I. PROTECTION OF THE NEWLY LAID SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ACCEPTABLE VISUAL BARRIERS, TO INCLUDE BARRICADES SET APPROPRIATE DISTANCES WITH STRINGS OR TAPES BETWEEN BARRIERS, AS AN INDICATION OF NEW WORK. THE CONTRACTOR IS TO RESTORE ANY DAMAGED AREAS CAUSED BY OTHERS (INCLUDING VEHICULAR TRAFFIC), EROSION, ETC, UNTIL SUCH TIME AS THE LAWN IS ACCEPTED BY THE OWNER.

J. ALL SOD THAT HAS NOT BEEN LAID WITHIN 24 HOURS SHALL BE DEEMED UNACCEPTABLE AND WILL BE REMOVED FROM THE SITE.

3.5 WEED BARRIER

A. FOR THE HEALTH OF THE SOIL AND THE MICROORGANISMS, WEED BARRIER IS NOT RECOMMENDED. IF USE IS REQUIRED OR REQUESTED, DO NOT PLACE IN ANNUAL OR GRASS AREAS.

B. CUT WEED BARRIER BACK TO THE EDGE OF THE PLANT ROOTBALL.

C. OVERLAP ROWS OF FABRIC MIN. 6"

D. STABLE FABRIC EDGES AND OVERLAPS TO GROUND.

END OF SECTION

GENERAL LANDSCAPE NOTES

GRADING AND DRAINAGE REQUIREMENTS

- AS PER CODE, ALL GRADING IS TO SLOPE AWAY FROM ANY STRUCTURE. SURFACE OF THE GROUND WITHIN 10' FEET OF THE FOUNDATION SHOULD DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6"
- AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
- A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
- LANDSCAPE CONTRACTOR TO MAINTAIN OR IMPROVE FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY EXCAVATOR, INCLUDING BUT NOT LIMITED TO ANY MAINTENANCE, PRESERVATION, OR EXAGGERATION OF SLOPES, BERMS, AND SWALES.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
- DEVICES FOR CHANNELING ROOF RUN-OFF SHOULD BE INSTALLED FOR COLLECTION AND DISCHARGE OF RAINWATER AT A MINIMUM OF 10' FROM THE FOUNDATION, OR BEYOND THE LIMITS OF FOUNDATION WALL BACKFILL; WHICHEVER DISTANCE IS GREATER

GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
- DURING THE BIDDING AND INSTALLATION PROCESS, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS. IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
- ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO ANSI STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
- SELECTED PLANTS WILL BE ACCORDING TO THE PLANT LEGEND. IF SUBSTITUTIONS ARE NECESSARY, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO LAYING SOD.
- SHOULD THE SITE REQUIRE ADDITIONAL TOPSOIL, REFER TO SOIL TEST WHEN MATCHING EXISTING SOIL. IF A MATCHING SOIL IS NOT LOCATABLE, A 6" DEPTH OF SANDY LOAM TOPSOIL (MIXED PRIOR TO SPREADING WITH 1% ORGANIC MATTER) CAN BE INCORPORATED INTO THE EXISTING SOIL USING THE FOLLOWING DIRECTIONS: SCARIFY TOP 6" OF EXISTING SUBSOIL AND INCORPORATE 3" OF NEW COMPOST ENRICHED TOPSOIL. SPREAD REMAINING TOPSOIL TO REACH FINISHED GRADE.
- EDGING, AS INDICATED ON PLAN, IS TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS. ANY TREES LOCATED IN LAWN MUST HAVE A 4-6' TREE RING OF THE SAME EDGING.

LAWN/GRASS AREA

- SOD
  - O ALL LAWN AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED HYDROSEEDING. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD ALL LAWN AREAS SHALL BE IRRIGATED WITH 100% COVERAGE BY POP-UP SPRAY HEADS AND GEAR-DRIVEN ROTORS. ALL DECIDUOUS AND CONIFER TREES PLANTED WITHIN SOD AREAS SHALL HAVE A FOUR FOOT(4') DIAMETER TREE RING COVERED WITH CHOCOLATE BROWN BARK MULCH, NO SHREDDED FINES. SUBMIT SAMPLES TO BE APPROVED BY LANDSCAPE ARCHITECT AND OWNER BEFORE INSTALLATION.
- SEED
  - O **SOIL:** TEST SOIL FOR ADEQUATE FERTILITY. ANY WEEDS CURRENTLY ON THE SITE SHALL BE REMOVED BY EITHER MECHANICAL MEANS SUCH AS HAND PULLING OR SPRAYING WITH AN HERBICIDE SUCH AS GLYPHOSATE MIXED WITH A SURFACTANT. HERBICIDES SHOULD BE APPLIED BY A CERTIFIED PESTICIDE APPLICATOR . COMPACTED SOIL SHALL BE SCARIFIED TO A DEPTH OF 18 INCHES BEFORE ADDING 6" OF WEED FREE TOPSOIL WITH HIGH ORGANIC MATTER. FINE LEVEL ALL AREAS PRIOR TO HYDROSEEDING AND SET THE GRADE FOR POSITIVE DRAINAGE. TOPSOIL SHOULD BE SOFT AT TIME OF APPLICATION. FERTILIZER IS TO BE ADDED WHEN HYDROSEEDING. REFER TO SOIL TEST RESULTS AND HYDROSEEDING CONTRACTOR FOR APPLICATION RATES.
  - O **SEED**: USE SEED MIXES AS SPECIFIED BY LANDSCAPE ARCHITECT OF PURE LIVE SEED (PLS) ON A BASIS/ACRE. THE OPTIMUM TIME TO PANT IS IN NOVEMBER BEFORE THE FIRST SNOW. DO NOT SOW OVER HEAVY SNOWPACK. SEED WILL LAY DORMANT AND BE READY TO GERMINATE ONCE THE GROUND THAWS AND WARMS IN LATE WINTER. IF SEEDING IN LATE FALL IS NOT POSSIBLE, SEED BEFORE APRIL 1. CONTACT SUMMIT SEED. DARRELL@SUMMITSEEDING.COM 435-709-8003.
  - O **APPLICATION**: HYDROSEEDING SHALL CONSIST OF SEED, TACKIFIER, WOOD FIBER MULCH AND FERTILIZER IN A WATER BASED SLURRY. TANK MOUNTED TRUCK SHALL HAVE CONTINUOUS AGITATION. THE PUMP ON THE TRUCK WILL FORCE THE SLURRY THROUGH A TOP-MOUNTED DISCHARGE NOZZLE (TOWER). USE 2000 POUNDS WOOD FIBER MULCH AND 50-100 POUNDS OF TACKIFIER PER ACRE.
  - O **IRRIGATION**: ALL AREAS MUST BE KEPT MOIST WITHOUT PUDDLES OR RUNOFF USING FREQUENT DAYTIME WATER CYCLES. ADJUST AND MONITOR SPRINKLERS AND CLOCK TO ACHIEVE PROPER IRRIGATION.
- IF PERMANENT IRRIGATION IS NOT PLANNED, TEMPORARY IRRIGATION IS REQUIRED AT THE FOLLOWING SCHEDULE: FOR 8 WEEKS SOIL SHALL REMAIN DAMP DURING ESTABLISHMENT PERIOD WITHOUT PUDDLING ON SOIL SURFACE. APPLY WATER APPROXIMATELY THREE TIMES A DAY FOR 5-7 MINUTES FOR EACH IRRIGATION EVENT DEPENDING ON TEMPERATURE AND TIME OF YEAR. A SPARSE DENSITY IS EXPECTED. CONTINUE TEMPORARY IRRIGATION FOR ONE YEAR EVENTUALLY REDUCING WATER APPLICATION TO ONCE A WEEK, THEN ONCE EVERY TWO WEEKS TO FINALLY ONCE A MONTH. MONITOR PROGRESS OF ESTABLISHMENT AND ADJUST SPRINKLERS ACCORDINGLY. THE GOAL IS TO CREATE A HEALTHY STAND OF GRASSES WITH LITTLE TO NO IRRIGATION.
  - O **WEED CONTROL AND MAINTENANCE:** MANDATORY WEED CONTROL IS REQUIRED TO REDUCE COMPETITION AND WEED SEED PRODUCTION. WEEDS MUST BE KEPT UNDER CONTROL BY MECHANICALLY PULLING OR CHEMICALLY SPRAYING AS DIRECTED BY THE APPLICATOR. APPLY A BROADLEAF HERBICIDE BIANNUALLY AND ESTABLISH A CONSISTENT REGIMEN OF MOWING AND FERTILIZING TO PREVENT WEEDS FROM PRODUCING SEED. MOW ONCE IN THE SPRING AND ONCE IN THE FALL BEFORE FERTILIZATION. FERTILIZER OPTION IS SUSTAIN 4-6-4 DEPENDING ON SOIL FERTILITY. DO NOT MOW SHORTER THAN 4 INCHES. BAG ALL CUTTINGS TO REMOVE WEED SEED FROM PROPERTY. KEEP WEEDS CUT DOWN AND DO NOT LET THEM GO TO SEED. WEED SEED PRODUCTION IS THE GAUGE FOR WHEN TO MOW, WHICH GENERALLY OCCURS IN APRIL OR MAY AS WELL AS EARLY FALL DEPENDING ON TEMPERATURE AND MOISTURE. THIS PROCEDURE WILL BE REQUIRED UNTIL A HEALTHY STAND OF GRASSES IS EVIDENT AND COMPETING WELL WITH WEEDS. EXPECT FROM 1 TO 3 YEARS.
  - O **PROGANICS BIOTIC SOIL MEDIA**: WHERE CONDITIONS MAY PROHIBIT ADDING TOPSOIL, PROGANICS BIOTIC SOIL MEDIA SHOULD BE APPLIED BY HYDROSEEDER AT 3500LBS/ACRE WITH SEED AND FERTILIZER PRIOR TO THE APPLICATION OF WOOD MULCH(2000LBS/ACRE) COMBINED WITH TACKIFIER (50-100 LBS/ACRE.)
  - O **ADDING FORBS**: SHRUBS AND PERENNIALS, BY SEED OR CONTAINER, CAN BE ADDED ONCE WEEDS ARE UNDER CONTROL AND HERBICIDE IS NO LONGER NEEDED. USUALLY 1-2 YEARS AFTER HYDROSEEDING.

MULCH

- ORGANIC
  - O PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 3" DEPTH OF ORGANIC MULCH TOP DRESSING. KEEP MULCH AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL.
  - O IF REQUIRED BY CITY, INSTALL DEWITT 5OZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL MULCH AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN TO AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER.
  - O ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL (ORGANIC MULCH). NO MULCH SHALL BE PLACED WITHIN 12" OF TREE TRUNK AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
- INORGANIC
  - O ROCK MULCH PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. WHERE PLANTING IS SPARSE (GREATER THAN 4' DISTANCE BETWEEN PLANTS OR 20' BETWEEN GROUPINGS), ADDITIONAL TOPSOIL IS NOT NECESSARY EXCEPT FOR BACKFILLING PLANTING HOLE. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT, BACKFILL WITH A 4:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. KEEP ROCK 12" AWAY FROM TRUNK OF TREES AND 6" AWAY FROM BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
  - O IF REQUIRED BY CITY, INSTALL DEWITT 5OZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL ROCK AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN TO AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE.

GENERAL IRRIGATION NOTES

- A NEW UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED BY CONTRACTOR IN ALL LANDSCAPED AREAS. LAWN AREAS TO RECEIVE AT LEAST 100% HEAD TO HEAD COVERAGE AND PLANTER AREAS TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB. POINT SOURCE DRIP OR IN-LINE DRIP TUBING TO BE SECURED AT CENTER OF ROOT BALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.

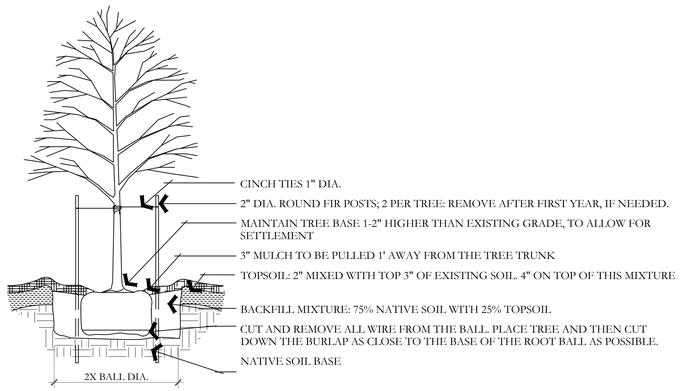
INSTALLER RESPONSIBILITIES AND LIABILITIES

- THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. LANDSCAPE CONTRACTOR IS REQUIRED TO USE TRADE KNOWLEDGE FOR IMPLEMENTATION. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS, MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.

SITE MATERIALS LEGEND

NOTE: SITE MATERIALS QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.)

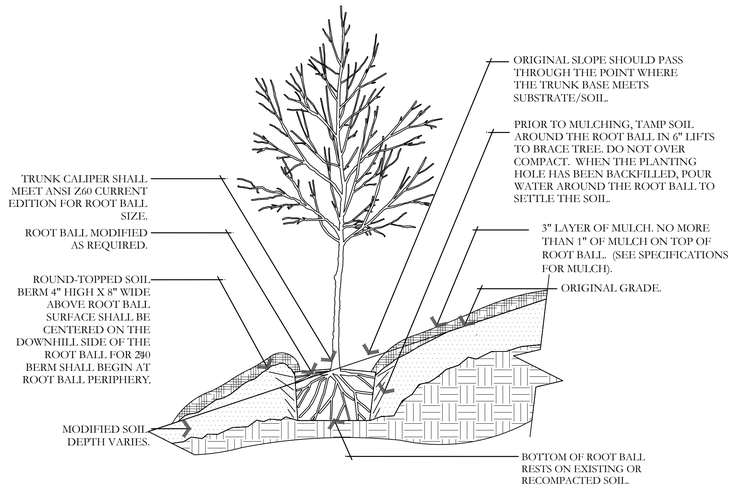
SYMBOL	CODE	DESCRIPTION	QTY
1 LANDSCAPE			
	L-10	NON-IRRIGATED REVEGETATION SEED MIX HYDROSEED WITH PLS (PURE LIVE SEED) AT 35LBS/ACRE 1.75 LBS SANDBERG BLUEGRASS 5% 3.50 LBS ANNUAL RYEGRASS 10% 3.50 LBS SHEEP FESCUE10% 3.50 LBS STANDARD CRESTED WHEATGRASS 10% 3.50 LBS SLENDER WHEATGRASS 10% 3.50 LBS PERENNIAL RYEGRASS 10% 5.25 LBS CRESTED WHEATGRASS 15% 5.25 LBS SMOOTH BROME 15% 5.25 LBS INTERMEDIATE WHEATGRASS 15% SEE SUMMIT SEED. DARRELL@SUMMITSEEDING.COM 435-709-8003. REFER TO SEED LANDSCAPE NOTES FOR FURTHER INFORMATION. SHEET LP-101.	13,580 sf
	L-16	1" MINUS BROWN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWN



A DECIDUOUS TREE PLANTING

NOT TO SCALE

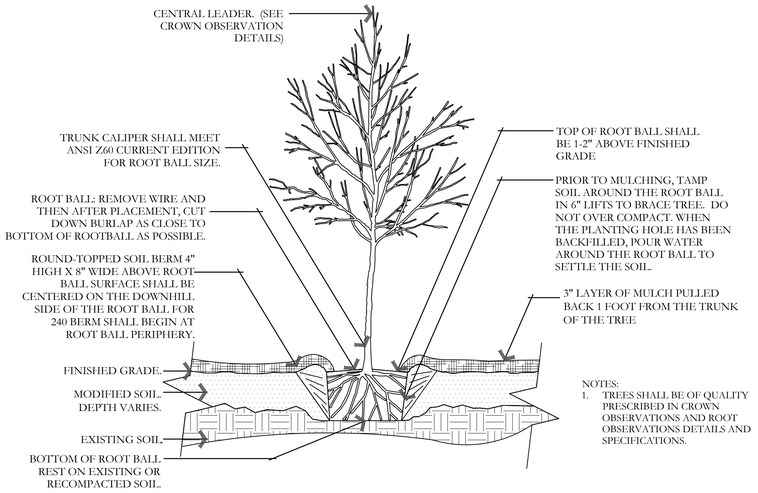
PKJ DESIGN GROUP



B TREE ON SLOPE 5% (20:1) TO 50% (2:1)

NOT TO SCALE

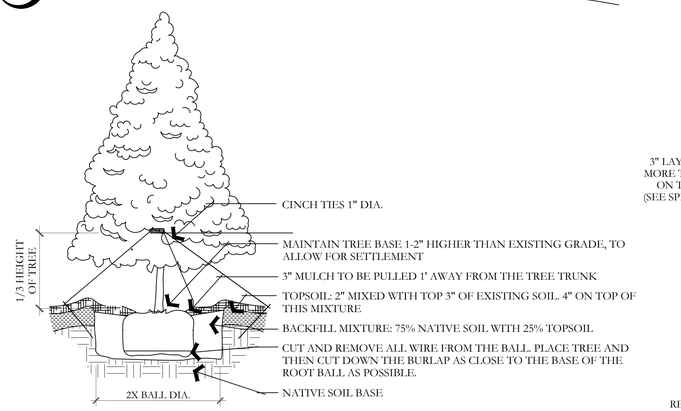
PKJ DESIGN GROUP



C TREE W/ BERM (EXISTING SOIL MODIFIED)

NOT TO SCALE

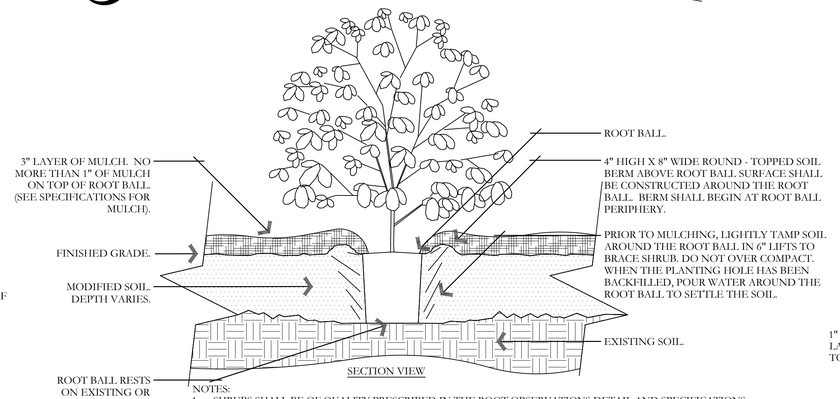
PKJ DESIGN GROUP



D EVERGREEN TREE PLANTING

NOT TO SCALE

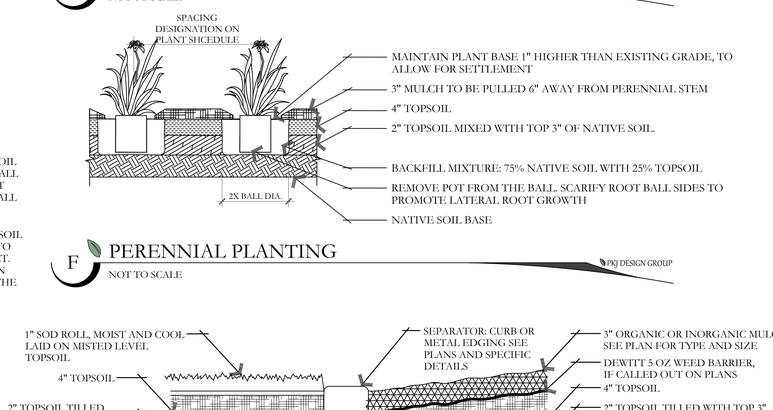
PKJ DESIGN GROUP



E SHRUB - MODIFIED SOIL

NOT TO SCALE

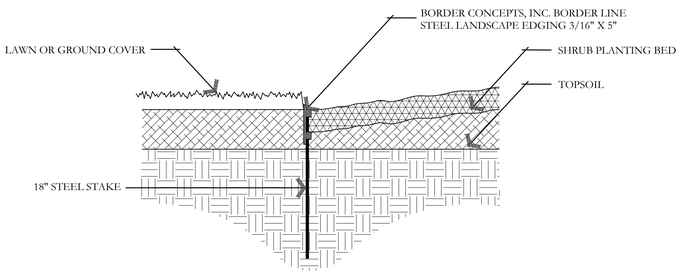
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F PERENNIAL PLANTING

NOT TO SCALE

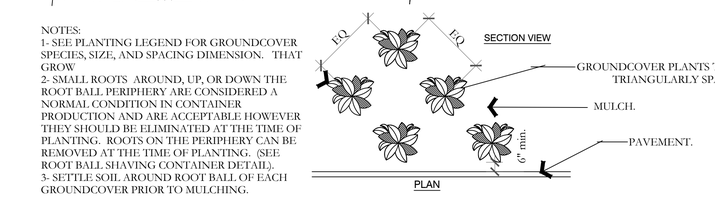
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G METAL EDGING DETAIL

NOT TO SCALE

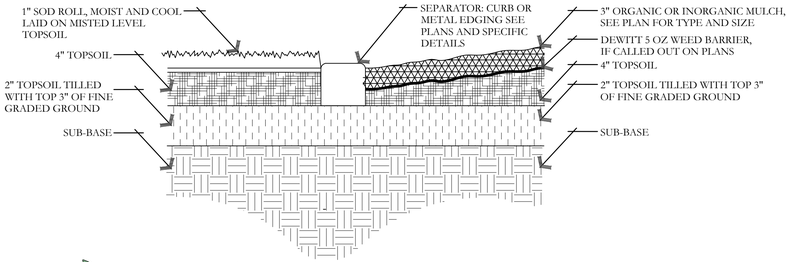
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H PERENNIAL/GROUNDCOVER PLANTING

NOT TO SCALE

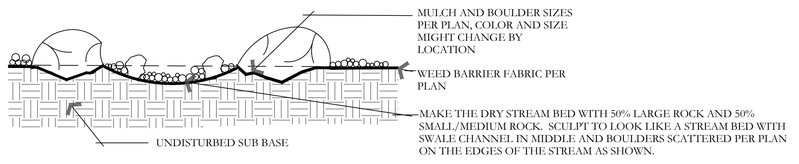
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I SOD LAYING/MULCH DETAIL

NOT TO SCALE

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J BOULDER AND DRY STREAM BED DETAIL

NOT TO SCALE

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ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

10/28/2024

UT24145

NO.	REVISION	DATE
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LICENSED LANDSCAPE ARCHITECT — JEFFREY AINSWORTH — 8128127-5301 — 10/28/2024 — ELECTRONIC SEAL — STATE OF UTAH

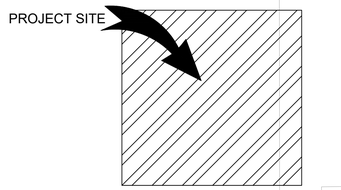
LANDSCAPE DETAILS

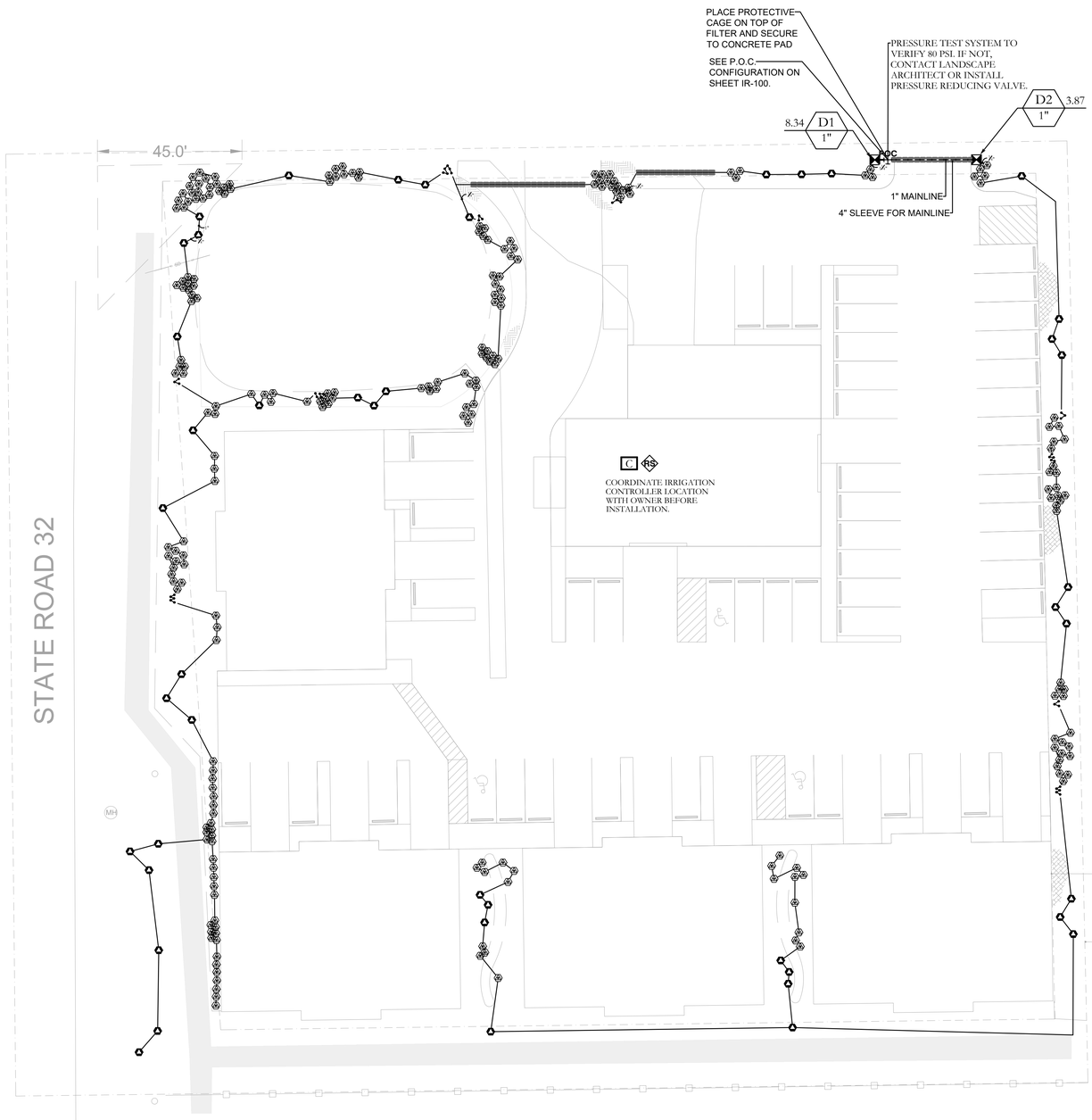
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DRAWING INFO	
PM:	JTA
DRAWN:	ALR
CHECKED:	JMA
PLOT DATE:	10/28/2024

LP-501

VICINITY MAP





P.O.C. CONFIGURATION

(NOTE: PRESSURE TEST SYSTEM TO VERIFY 80 PSI. IF NOT, CONTACT LANDSCAPE ARCHITECT OR INSTALL PRESSURE REDUCING VALVE.)

POC SOURCE DATA

SHUTOFF VALVE

F AMIAD SCREEN FILTER

M MASTER VALVE

FS 1" FLOW SENSOR

QUICK COUPLER

IRRIGATION LEGEND

(NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.) IF YOU NEED HELP WITH A WATER AUDIT CONSULTATION, OR A PLANT MAINTENANCE SCHEDULE, CONTACT PKJ@PKJDESIGNGROUP.COM

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-100-IVMQ (2) 1" Wide Flow IVM Drip Control Kit for Commercial Applications. 1in. Ball Valve with 1in. PESBIVM Smart Valve w/ factory installed IVM-SOL 0.3-20 gpm and 1in. Pressure Regulating 40psi Quick-Check Basket Filter 0.3-20 gpm	2
	Rain Bird XFS-09-18 Drip Ring(SHRUB)	275
	Rain Bird XFS-09-18 Drip Ring(TREE)	44

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird 44-RC 1" 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Thermoplastic Rubber Cover, and 2-Piece Body.	1
	Shut Off Valve	1
M	Rain Bird EFB-CP-PRS-D 1-1/2" 1in., 1-1/4", 1-1/2in., 2in. Brass Master Valve, that is Contamination Proof w/Self-Flushing Filter Screen. Globe Configuration, Reclaimed Water Compatible, and Purple Handle Cover Designates Non-Potable Water Use. With Pressure Regulator.	1
C	Rain Bird ESPLXIVM 60 Station, 2-Wire Controller w/ Smart Valve Technology. (1) ESPLXIVM 60-Station, Indoor/Outdoor, Plastic Wall-Mount Cabinet. System Requirements: Rain Bird LXIVM-XXX Integrated Valve Modules & 2-Wire Devices. Use Paige Electric Cable P7072D & Rain Bird WC20 Dry Splices ONLY. Ground System w/ (X) LXIVMSD Surge Device in Rain Bird Round Valve Boxes. Install Per Manufacturers Recommendations.	1
RS	Rain Bird WR2-RFS Wireless Rain/Freeze Sensor.	1
FS	Rain Bird FS-200-B 2in. Flow Sensor, Brass Model. Suggested Operating Range 10 GPM to 100 GPM. Size for Flow Not According to Pipe Size. Rain Bird Compatible Controllers: ESP-LXIVM(P) | LXD | LXME2(P) | ME3, or Controllers Accepting Custom K-Factor and Offset. Install in Rain Bird Valve Box.	1
XX	Point of Connection 2"	1
	Irrigation Lateral Line: PVC Schedule 40 3/4"	1,354 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1"	234.7 l.f.
	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	89.1 l.f.
	Irrigation Mainline: PVC Schedule 40	31.8 l.f.
	Pipe Sleeve: PVC Class 200 SDR 21 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	84.1 l.f.

Valve Callout
- # — Valve Number
- # • — Valve Flow
- #" • — Valve Size

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

11/7/2024

UT24145

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0' 10' 20' 40' 80'

GRAPHIC SCALE: 1" = 20'

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LICENSED LANDSCAPE ARCHITECT JEREMY AINSWORTH 8128127-5301 11/7/2024 STATE OF UTAH

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 11/7/2024

IRRIGATION OVERALL PLAN

CITY PERMIT SET

IR-100

IRRIGATION PLAN SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART I - GENERAL

1.1 SUMMARY

Work to be done includes all labor, materials, equipment and services required to complete the Project irrigation system as indicated on the Construction Drawings, and as specified herein. Includes but is not limited to: Furnishing and installing underground and above ground sprinkler system complete with any accessories necessary for proper function and operation of the system. All plant material on the Project shall be irrigated. Remove and dispose of any existing sprinkler system components which are disturbed during the construction process and are not to be saved. Restoration of any altered or damaged existing landscape to original state and condition.

1.2 SYSTEM DESCRIPTION

A. Design of irrigation components: Locations of irrigation components on Construction Drawings may be approximate. Piping, sleeving and/or other components shown on Construction drawings may be shown schematically for graphic clarity and demonstration of component groupings and separations. All irrigation components shall be placed in landscaped areas, with the exception of pope and wire in sleeving under hardscapes. Actual routing of pipe, wire or other components may be altered due to site conditions not accounted for in the design process.

B. Construction requirements: Actual placement may vary as required to achieve a minimum of 100% coverage without overspray onto hardscape, buildings or other features.

C. Layout of Irrigation Components: During layout and staking, consult with Owner Approved Representative (hereafter referred to as OAR) to verify proper placement of irrigation components, and to provide Contractor recommendations for changes where revisions may be advisable. Small or minor adjustments to system layout are permissible to avoid existing field obstructions such as utility boxes or street light poles. Contractor shall place remote control valves in groups as practical to economize on quantity of manifold isolation valves. Quick coupler valves shall be placed with manifold groups and protected by manifold isolation valves. Quick coupler valves are shown on Construction Documents in approximate locations.

1.3 DEFINITIONS

A. Water Supply: Secondary water piping and components, furnished and installed by others to provide irrigation water to this Project, including but not limited to filter, saddles, nipples, spools, shut off valves, corporation stop valves, water meters, pressure regulation valves, and piping upstream of (or prior to) the Point of Connection.

B. Point of Connection: Location where the Contractor shall tie into the water supply. May require filter, saddle, nipples, spools, isolation valves or Stop and Waste valve for landscape irrigation needs and use.

C. Main Line Piping: Pressurized piping downstream of the Point of Connection to provide water to remote control valves and quick couplers. Normally under constant pressure.

D. Lateral Line Piping: Cireait piping downstream of remote control valves to provide water to sprinkler heads, drip systems or bubblers.

1.4 REFERENCES

A. The following standards will apply to the work of this Section:

a. ASTM-American Society for Testing and Materials

b. IA - The Irrigation Association: Main BMP Document, Landscape Irrigation Scheduling and Water Management Document.

1.5 SUBMITTALS

A. At least thirty (30) days prior to ordering of any materials, the Contractor shall provide manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system. Submittals shall be in three ring binders or other similar bound form. Provide five copies of submittals to OAR for distribution. Place cover or index sheet indicating order in submittal document. No material shall be ordered, delivered or any work preceded in the field until the required submittals have need reviewed in its entirety and stamped approved. Delivered material shall match the approved samples.

B. Operation and Maintenance Manual:

a. At least thirty (30) days prior to final inspection, the Contractor shall provide Operation and Maintenance manual to OAR, containing:

i. Manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system.

ii. Parts list for each operating element of the system

iii. Manufacturer printed literature on operation and maintenance of operating elements of the system.

iv. Section listing instructions for overall system operation and maintenance. Include directions for Spring Start-up and Winterization.

b. Project Record Copy

i. Maintain at project site one copy of all project documents clearly marked "Project Record Copy". Mark any deviation in material installation on Construction drawings. Maintain and update drawing at least weekly. Project Record Copy to be available to OAR on demand.

ii. Completed Project As-Built Drawings

1. Prior to final inspection, prepare and submit to OAR accurate as-built drawings
2. Show detail and dimension changes made during installation. Show significant details and dimensions that were not shown in original Contract Documents.
3. Field dimension locations of sleeving, points of connection, main line piping, wiring runs not contained in main line pipe trenches, valves and valve boxes, quick coupler valves.
4. Dimensions are to be taken from permanent constructed surfaces, features, or finished edges located at or above finished grade.
5. Controller Map: upon completion of system, place in each controller a color coded copy of the area that controller services: indicating zone number, type of plant material and location on project that zone services. Laminate map with heat shrink clear plastic.

1.6 QUALITY ASSURANCE

A. Acceptance: Do not install work in this section prior to acceptance by OAR.

B. Regulatory Requirements: All work and materials shall be according to any and all rules, regulations or codes, whether they are State or Local laws and ordinances. Contract documents, drawings or specifications may not be construed or interpreted to permit work or materials not conforming to the above codes.

C. Adequate Water Supply: Water supply to this Project exists, installed by others. Connections to these supply lines shall be by this Contractor. Verify that proper connection is available to supply line and is of adequate size. Verify that secondary connection components may be installed if necessary. Perform static pressure test prior to commencement of work. Notify OAR in writing of problems encountered prior to proceeding.

D. Workmanship and Materials:

a. It is the intent of this specification that all material herein specified and shown on the construction documents shall be of the highest quality available and meeting the requirements specified.

b. All work shall be performed in accordance with the best standards of practice relating to the trade.

E. Contractor Qualifications:

a. Contractor shall provide document or resume including at least the following items:

i. That Contractor has been installing sprinklers on commercial projects for five previous consecutive years.

ii. Contractor is licensed to perform Landscape and Irrigation construction in the State of this Project.

iii. Contractor is bondable for the work to be performed.

iv. References of five projects of similar size and scope completed within the last five years. Three of the projects listed shall be local.

v. Listing of suppliers where materials will be obtained for use on this Project.

vi. Project site Foreman or Supervisor has at least five consecutive years of commercial irrigation installation experience. This person shall be a current Certified Irrigation Contractor in good standing as set forth by the Irrigation Association. This person shall be on Project site at least 75% of each working day.

vii. Evidence that Contractor currently employs workers in sufficient quantities to complete Project within time limits that are established by the Contract.

viii. All General laborers or workers on the Project shall be previously trained and familiar with sprinkler installation and have a minimum of one-year experience. Those workers performing tasks related to PVC pipe shall have certificates designated below.

1.7 DELIVERY-STORAGE-HANDLING

A. During delivery, installation and storage of materials for Project, all materials shall be protected from contamination, damage, vandalism, and prolonged exposure to sunlight. All material stored at Project site shall be neatly organized in a compact arrangement and storage shall not disrupt Project Owner or other trades on Project site. All material to be installed shall be handled by Contractor with care to avoid breakage or damage. Damaged materials attributed to Contractor shall be replaced with new at Contractor's expense.

1.8 SEQUENCING

A. Perform site survey, research utility records, contact utility location services. The Contractor shall familiarize himself with all hazards and utilities prior to work commencement. Install sleeving prior to installation of concrete, paving or other permanent site elements. Irrigation system Point of Connection components, backflow prevention and pressure regulation devices shall be installed and operational prior to all downstream components. All main lines shall be thoroughly flushed of all debris prior to installation of any sprinkler heads.

1.9 WARRANTY

A. Contractor shall provide one year Warranty. Warranty shall cover all materials, workmanship and labor. Warranty shall include filling and or repairing depressions or replacing turf or other plantings due to settlement of irrigation trenches or irrigation system elements. Valve boxes, sprinklers or other components settled from original finish grade shall be restored to proper grade. Irrigation system shall have been adjusted to provide proper, adequate coverage of irrigated areas.

1.10 OWNER'S INSTRUCTION

A. After system is installed, inspected, and approved, instruct Owner's Representatives in complete operation and maintenance procedures. Coordinate instruction with references to previously submitted Operation and Maintenance Manual.

1.11 MAINTENANCE

A. Furnish the following items to Owner's Representative:

a. Two quick coupler keys with hose swivels.

b. One of each type or size of quick coupler valve and remote control valve. Five percent of total quantities used of each sprinkler and sprinkler nozzle.

B. Provide the following services:

a. Winterize entire irrigation system installed under this contract. Winterize by 'blow-out' method using compressed air. Compressor shall be capable of minimum of 175 CFM. This operation shall occur at the end of first growing season after need for plant irrigation but prior to freezing. Compressor shall be capable of evacuating system of all water pressure regulation devices. Compressor shall be regulated to not more than 60 PSI. Start up system the following spring after danger of freezing has passed. Contractor shall train Owner's Representative in proper start-up and winterization procedure.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

A. Contractor shall provide materials to be used on this Project. Contractor shall not remove any material purchased for this Project from the Project Site, nor mix Project materials with other Contractor owned materials. Owner retains right to purchase and provide project material.

2.2 POINT OF CONNECTION

A. The Contractor shall connect onto existing irrigation or water main line as needed for Point(s) of Connection. Contractor shall install new main line as indicated.

2.3 CONNECTION ASSEMBLY

A. Secondary water shall be used on this Project. Install filter and RPZ as needed.

2.4 CONTROL SYSTEM

A. Power supply to the irrigation controller shall be provided for by this Contract.

B. Controller shall be as specified in the drawings. Controller shall be surge protected.

a. Installation of wall-mount/ground pedestal timer controllers: Irrigation contractor shall be responsible for this task. Power configuration for wall-mount/ground pedestal timer controllers shall be 120 VAC unless otherwise noted.

b. Locate Controller(s) in general location shown on Construction drawings. Coordinate power supply and breaker allocation with electrical contractor. Contractor shall be responsible for all power connections to Controllers, whether they are wall mount or pedestal mount. Contractor shall coordinate with electrical or other Project trades as needed to facilitate installation of power to controllers.

C. Wires connecting the remote control valves to the irrigation controller are single conductors, type PE. Wire construction shall incorporate a solid cooper conductor and polyethylene (PE) insulation with a minimum thickness of 0.045 inches. The wires shall be UL listed for direct burial in irrigation systems and be rated at a minimum of 30 VAC. Paige Electric Co., LP specification number P7079D.

a. A minimum of 24" of additional wire shall be left at each valve, each splice box and at each controller.

b. Common wire shall be white in color, 12 gauge. Control wire shall be red in color, 14 gauge. Spare/extra wire (3 ft.) shall be looped within each valve box of the grouping it is to service.

D. RCV wire splicing connectors shall be 3M brand DBY or DBR. Wire splicing between controller and valves shall be avoided if at all possible. Any wire splices shall be contained within a valve box. Splices within a valve box that contains no control valves shall be stamped 'WIRE SPLICE' or 'WS' on box lid.

2.5 SLEEVING

A. Contractor shall be responsible to protect existing underground utilities and components. Sleeving minimum size shall be 2". Sleeving 2" through 4" in size shall be S/40 PVC solvent weld. Sleeving 6" and larger shall be CL 200 PVC gasketed. Sleeve diameter shall be at least two times the diameter of the pipe within the sleeve. Sleeves shall be extended 6" minimum beyond walk or edge of pavement. Wire or cable shall not be installed in the same sleeve as piping, but shall be installed in separate sleeves. Sleeve ends on sleeve sizes 4" and larger shall be capped with integral corresponding sized irrigation of new plant material. Quick coupler valve at POC shall not be eliminated or relocated.

2.12 LATERAL LINE PIPE

A. All lateral piping shall be Schedule 40 PVC, solvent weld, and bell end. Lateral pipe shall be buried with 12-18" of cover typically. Lateral pipe shall be ¾", 1", 1 ¼", 1 ½" or 2" in size as indicated on Construction Drawings.

2.13 LATERAL LINE FITTINGS

A. All lateral line fittings shall be S/40 PVC

2.14 SPRAY SPRINKLERS

A. Spray head sprinklers shall be as specified on the drawings. Nozzles shall be as specified on the drawings.

2.15 VALVE BOXES

A. Rainbird valve boxes shall be used on this project. Sizes are as directed in these Specifications, detail sheets or plan sheets. Valve boxes shall be centered over the control valve or element they cover. Valve box shall be sized large enough to allow ample room for services access, removal or replacement of valve or element. Valve box shall be set to flush to finish grade of topsoil or barked areas. Contractor shall provide extensions or stack additional valve boxes as necessary to bring valve box pit to proper grade.

2.16 IMPORT BACKFILL

A. All main line pipe, lateral line pipe and other irrigation elements shall be bedded and backfilled with clean soil, free of rocks 1" and larger. Contractor shall furnish and install additional backfill material as necessary due to rocky conditions. Trenches and other elements shall be compacted and/or water settled to eliminate settling. Debris from trenching operations un-usable for fill shall be removed from project and disposed of properly by Contractor.

2.17 OTHER PRODUCTS

A. Substitution of equivalent products is subject to the OAR's approval and must be designated as accepted in writing.

a. The Contractor shall provide materials to make the system complete and operational.

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall repair or replace work damaged by irrigation system installation. If damaged work is new, repair or replacement shall be performed by the original installer of that work. The existing landscape of this Project shall remain in place. Contractor shall protect and work around existing plant material. Coordination of trench and valve locations shall be laid out for the OAR prior to any excavation occurring. Plant material deemed damaged by the OAR shall be replaced with new plant material at Contractor's expense. Contractor shall not cut existing tree roots larger than 2" to install this Project. Route pipe, wire and irrigation elements around tree canopy drip line to minimize damage to tree roots. Contractor shall have no part of existing system used by other portions of site landscape without water for more than 24 hours at a time.

3.2 TRENCHING AND BACKFILLING

A. Pulling of pipe shall not be permitted on this project. Over excavate trenches both in width and depth. Ensure base of trench is rock or debris free to protect pipe and wire. Grade trench base to ensure flat, even support of piping. Backfill with clean soil or import material. Contractor shall backfill no less than 2" around entire pipe with clean, rock free fill. Main line piping and fittings shall not be backfilled until OAR has inspected and pipe has passed pressure testing. Perform balance of backfill operation to eliminate any settling.

3.3 SLEEVING

A. Sleeve all piping and wiring that pass under paving or hardscape features. Wiring shall be placed in separate sleeving from piping. Sleeves shall be positioned relative to structures or obstructions to allow for pipe or wire within to be removed if necessary.

3.4 GRADES AND DRAINAGE

A. Place irrigation pipe and other elements at uniform grades. Winterization shall be by evacuation with compressed air. Automatic drains shall not be installed on this Project. Manual drains shall only be installed at POC where designated on Construction Drawings.

3.5 PVC PIPE

A. Install pipe to allow for expansion and contraction as recommended by pipe manufacturer.

B. Install main line pipes with 18" of cover, lateral line pipes with 12" of cover.

C. Drawings show diagrammatic or conceptual location of piping - Contractor shall install piping to minimize change of direction, avoid placement under large trees or large shrubs, avoid placement under hardscape features.

D. Plastic pipe shall be cut squarely. Burrs shall be removed. Spigot ends of pipes 3" and larger shall be beveled.

E. Pipe shall not be glued unless ambient temperature is at least 50 degrees F. Pipe shall not be glued in rainy conditions unless properly tented. All solvent weld joints shall be assembled using IPS 711 glue and P70 primer according to manufacturer's specification, no exceptions. All workers performing glue operations shall provide evidence of certification. Glued main line pipe shall cure a minimum of 24 hours prior to being energized. Lateral lines shall cure a minimum of 2 hours prior to being energized and shall not remain under constant pressure unless cured for 24 hours.

F. Appropriate thrust blocking shall be performed on fittings 3" and larger. All threaded joints shall be wrapped with Teflon tape or paste unless directed by product manufacturer or sealing by o-ring.

3.6 CONTROLLERS

A. All grounding for pedestal controllers shall be as directed by controller manufacturer and ASIC guidelines, not to exceed a resistance reading of 5 OHMs.

A. Sprinkler heads shall be adjusted to proper height when installed. Changes in grade or adjustment of head height after installation shall be considered a part of the original contract and at Contractor's expense.

B. Adjust all sprinkler heads for arc, radius, proper trim and distribution to cover all landscaped areas that are to be irrigated.

C. Adjust sprinklers so they do not water buildings, structures, or other hardscape features.

D. Adjust run times of station to meet needs of plant material the station services.

3.11 CLEANING

A. Contractor shall be responsible for cleanliness of jobsite. Work areas shall be swept cleanly and picked up daily.

B. Open trenches or hazards shall be protected with yellow caution tape.

C. Contractor is responsible for removal and disposal of offsite trash and debris generated as a result of this Project.

D. OAR shall perform periodic as well as a final cleanliness inspection.

E. Contractor shall leave Project in at least a "broom clean' condition.

END OF SECTION

IRRIGATION NOTES

1. BEFORE WORK IS TO COMMENCE, BLUE STAKES/DIG LINE IS TO BE CALLED AND NOTIFIED. IF ANY DAMAGE TO UTILITIES HAPPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR IT AT THEIR EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS IN ACCORDANCE WITH CITY AND/OR COUNTY CODES AND COMPLY WITH SPECIFICATIONS AND DRAWINGS.
3. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A SECONDARY SYSTEM. IF IT IS NOT CONNECTED TO SECONDARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE A CULINARY SYSTEM AND REQUIRED COMPONENTS. A FUNCTIONING AMIAD FILTER IS TO BE USED AT THE POINT OF CONNECTION.
4. VERIFY THAT THE POINT OF CONNECTION IS IN THE CORRECT LOCATION BEFORE INSTALLATION. ALL CONNECTIONS ON THIS PROJECT ARE TO SECONDARY WATER AND SHOULD BE NOTED AS SUCH; THEREFORE, ALL PARTS MUST MEET WATER STANDARDS THAT PERTAIN TO SECONDARY WATERUSE PURPLE VALVE BOXES FOR SECONDARY WATER SYSTEMS.
5. ON OCCASION AND FOR GRAPHIC PURPOSES ONLY, THE IRRIGATION SYSTEM MIGHT BE SHOWN IN HARDSCAPE AREAS. THIS IRRIGATION IS TO BE PLACED IN LANDSCAPED AREAS ON THE PROPERTY SITE.
6. CONTRACTOR SHALL USE ONLY COMMERCIAL GRADE IRRIGATION PRODUCTS. THIS INCLUDES PIPE TO BE SCHEDULE 40 PVC OR BETTER. NO POLY PIPE IS TO BE USED. FITTINGS UP TO 1-1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1-1/2" SHALL BE SCHEDULE 80 OR BETTER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION.
7. MAIN LINES SHALL BE A MINIMUM OF 24" DEEP AND LATERAL LINES A MINIMUM OF 12" DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
8. NO IRRIGATION MAIN LINE MAY BE LOCATED WITHIN 5 FEET OF ANY STRUCTURE.
9. TO AVOID PIPE DAMAGE, ADJUST LOCATION OF PIPE TO NOT BE DIRECTLY UNDER PLANT MATERIALS. VALVE BOXES ARE PREFERRED TO BE IN PLANTER BEDS INSTEAD OF THE LAWN. SYSTEM IS TO BE WINTERIZED IN THE LATE FALL.
10. PLAN INDICATES 100% OR BETTER HEAD TO HEAD COVERAGE. SHOULD CONTRACTOR FIND DISCREPANCIES DUE TO NECESSARY FIELD ADJUSTMENTS, CONTACT LANDSCAPE ARCHITECT FOR IRRIGATION CORRECTION.
11. DRIP IRRIGATION TO BE INSTALLED PER DETAILS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS. TUBING SHOULD REST TOWARD OUTER EDGE OF ROOTBALL AND NOT AGAINST TRUNK OF PLANT.
12. A QUICK COUPLER SHALL BE INSTALLED AT POINT OF CONNECTION TO ALLOW BLOW OUT OF SYSTEM BY AIR COMPRESSOR AT END OF EACH SEASON.
13. INSTALL SLEEVES FOR ALL PIPES AND WIRE CONDUIT THAT ARE PLACED UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE BEING PLACED INTERNALLY. WIRE CONDUIT SHALL BE INSTALLED IN CLASS 200 PIPE. AT ANY DIRECTIONAL CHANGE THAT OCCURS, A JUNCTION BOX IS TO PLACED.
14. CONDUITS CAN NOT BE SHARED BY WATER AND ELECTRICAL LINES. ALL WIRE TO BE PUT IN PVC CONDUIT. ALL WIRE CONNECTIONS TO BE IN A VALVE BOX. ALL WIRE CONNECTIONS TO USE WATERPROOF WIRE CONNECTORS WITH AT LEAST 3' OF EXTRA WIRE. PROVIDE PLENTY OF EXTRA WIRE AT EVERY DIRECTIONAL CHANGE. INSULATED 14 GAUGE COPPER TO BE USED FOR ALL CONTROL WIRES AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
15. CONTRACTOR TO INSTALL LIGHTNING ARRESTOR AND GROUNDING RODS ON SITE PER MANUFACTURERS RECOMMENDATIONS, SEE DETAILS.
16. CONTRACTOR TO SEPARATE SYSTEM (CONTROLLER, VALVES, AND DIFFERENT COLORED WIRE) FROM CITY MAINTAINED PROPERTY AND HOA/OWNER MAINTAINED PROPERTY.
17. DUCT TAPE ALL SLEEVES TO PREVENT SOIL OR OTHER DEBRIS ENTERING PIPE. IDENTIFY ALL SLEEVES BY WOOD OR PVC STAKES AND SPRAY PAINT WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
18. TO PREVENT EROSION AND LOW POINT DRAINAGE CONTRACTOR SHALL INSTALL CHECK VALVES
19. LOCATE SPRAY HEADS NO CLOSER THAN 6" FROM WALLS, FENCES OR BUILDINGS AND 2" AWAY FROM WALKS, PATHS OR CURBS.
20. PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING. CONTACT LANDSCAPE ARCHITECT/OWNER AT THIS TIME FOR COMPLIANCE.
21. CONTRACTOR TO CONSULT WITH OWNER ON EXACT LOCATION OF CONTROLLER. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR AND OWNER FOR THE POWER SUPPLY. INSTALL ALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. WHEN PIPE SIZE IS LARGER THAN 3" MAKE SURE THAT THRUST BLOCKS ARE USED.
23. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

I	3/4"	8 GPM
II	1"	12 GPM
III	1-1/2"	30 GPM
IV	2"	53 GPM
V	2-1/2"	75 GPM
VI	3"	110 GPM
VII	4"	180 GPM

WATERING SCHEDULE

90 Day Establishment Period Irrigation Schedule

Hi/Low Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH	45 MIN.	45 MIN.		45 MIN.	45 MIN.	45 MIN.	45 MIN.	Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.		2 HOURS			2 HOURS			precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	2 GAL/HR.		2 HOURS						

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event. Shrubs to be watered so soil is moist 6" below root ball. Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress.

Regular Irrigation Schedule: Begin Spring Watering May 15 (Turf irrigation event once every 5-7 days; Shrubs 2-4 times/month)

Hi/Low Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.						Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	No Water								

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions

Regular Irrigation Schedule: Begin Summer Watering June 15 (Turf irrigation event once every 2-3 days; Shrubs 1 time/week)

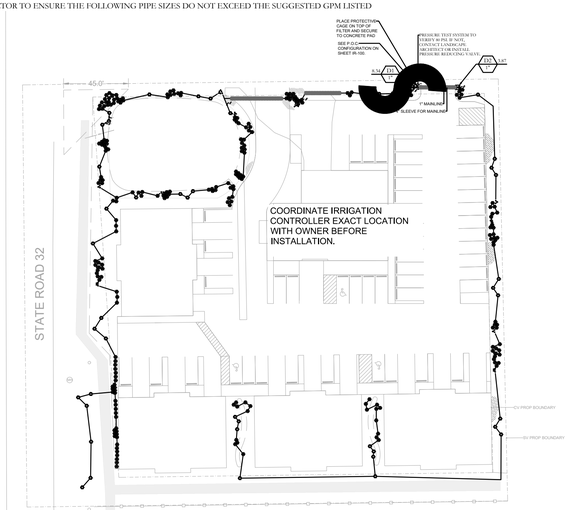
Hi/Low Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.		60 MIN.		60 MIN.		Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	2 GAL/HR.			1 HOUR					

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions
Reference Utah DNR weekly watering guide: https://conservewater.utah.gov/weekly-lawn-watering-guide/

Regular Irrigation Schedule: Begin Fall Watering September 1-End Fall Watering October 15 (Turf irrigation event once every 5-7 days; Shrubs 2-4 time/month)

Hi/Low Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.						Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	No Water								

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions



2" MAINLINE ROUTING ,CONTROLLER AND P.O.C. LOCATION OVERVIEW

ISSUE DATE	PROJECT NUMBER
11/7/2024	UT24145

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
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4		
5		
6		
7		

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 25' 50' 100' 200'
GRAPHIC SCALE: 1" = 50'

WOLF CREEK JUNCTION
FRANCIS, UTAH

LAYTON DAVIS ARCHITECTS
ATT: JOHN DAVIS
801-487-0715
JOHN@LAYTONDAVISARCHITECTS.COM

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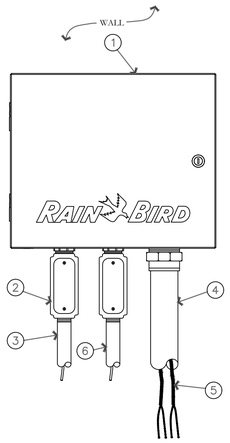
LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128127 - 5301
11/7/2024
ELECTRONIC SEAL
STATE OF UTAH

DRAWING INFO	
PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	11/7/2024

IRRIGATION COVER

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IR-101



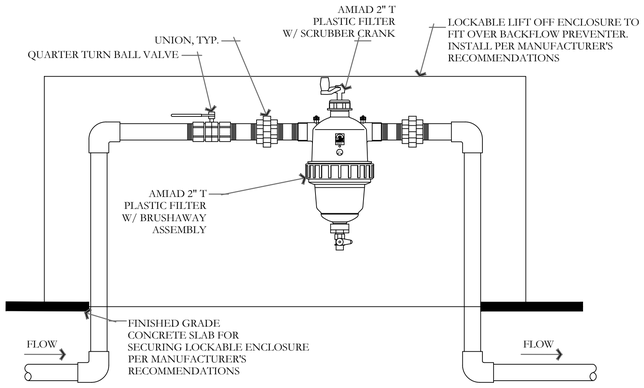
1. TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO IN LXMM METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
4. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
5. MAXICABLE TWO-WIRE PATH TO FIELD DEVICES, USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
6. 1-INCH CONDUIT AND FITTINGS FOR GROUND WIRE. ONLY FOR OUTDOOR INSTALLATIONS.

NOTES:
1. ESP-LXIVM CONTROLLER IS AVAILABLE IN TWO MODELS. THE LXIVM WITH 60 STATIONS AND THE LMIVM-PRO WITH 240 STATIONS. REFER TO THE CHART BELOW FOR DIFFERENCES BETWEEN THE TWO MODELS.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS. IF CONTROLLER IS MOUNTED INDOORS, USE POWER SUPPLY GROUND.

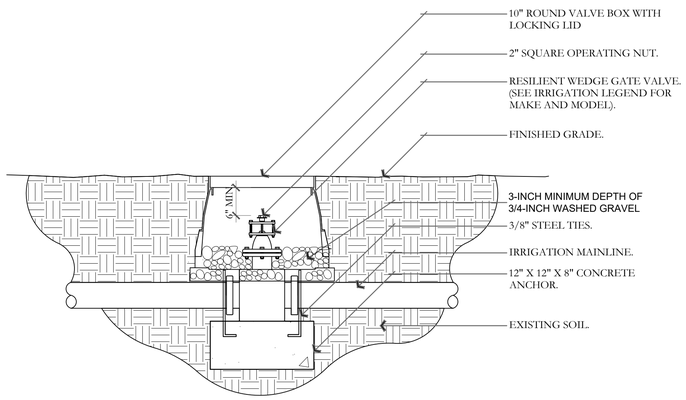
KEY SPECIFICATIONS

FEATURE / MODEL	MAX PROGRAMS	STATIONS	MAX SIMULSTATIONS	MASTER VALVES	FLOW SENSORS	WEATHER SENSORS
LX-IVM	10	60	8	5	5	4
LX-IVM PRO	40	240	16	10	10	8

A ESP-LXIVM/PRO TWO-WIRE CONTROLLER IN METAL CABINET
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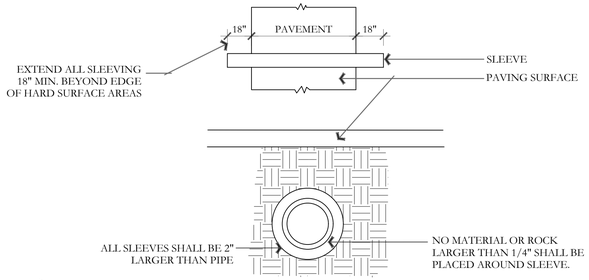


B 2" PLASTIC FILTER W/ BRUSHAWAY ASSEMBLY
NOT TO SCALE — PKJ DESIGN GROUP

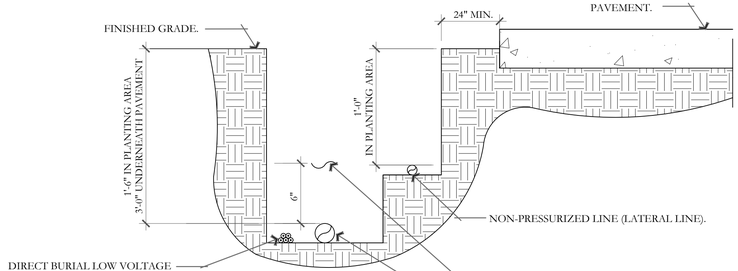


NOTES:
1. INSTALL GATE VALVE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. VALVE BOX SHALL BE WRAPPED WITH MINIMUM 3 MIL. THICK PLASTIC AND SECURE IT TO VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. VALVE BOX SHALL BE LOCATED IN PLANTING AREA.

C GATE VALVE AND ANCHOR DETAIL
NOT TO SCALE — PKJ DESIGN GROUP

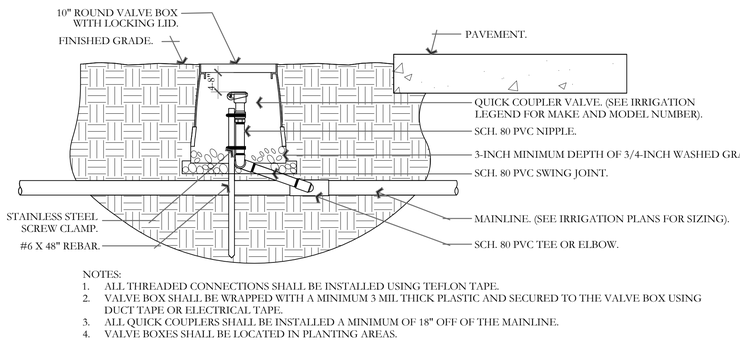


D TYPICAL SLEEVING DETAIL
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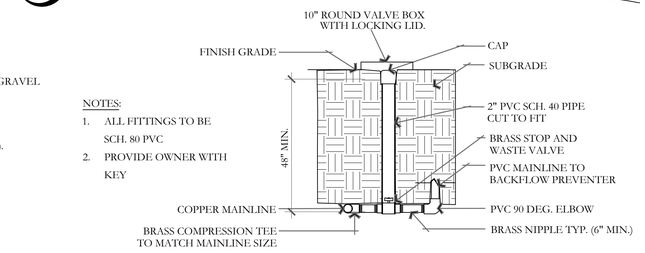
NOTES:
1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZE AND TYPE.
2. DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT IF REQUIRED.
3. 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT.
4. DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.

E IRRIGATION TRENCHING DETAIL
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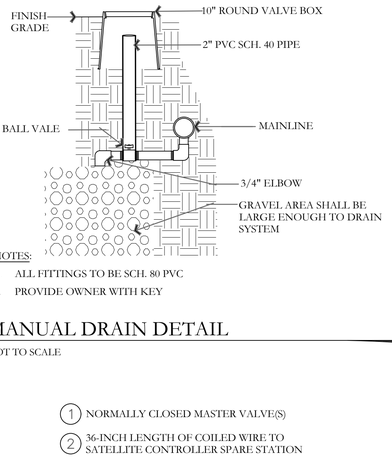
NOTES:
1. ALL THREADED CONNECTIONS SHALL BE INSTALLED USING TEFLON TAPE.
2. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. ALL QUICK COUPLERS SHALL BE INSTALLED A MINIMUM OF 18" OFF OF THE MAINLINE.
4. VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.

G QUICK COUPLER DETAIL
NOT TO SCALE — PKJ DESIGN GROUP



NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

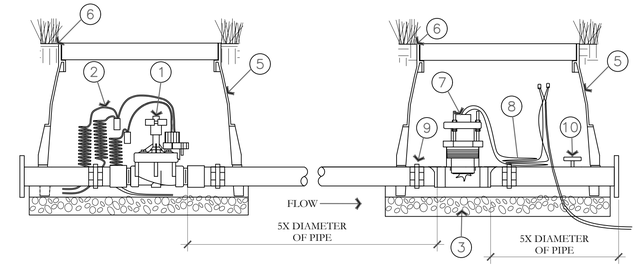
H STOP AND WASTE VALVE ASSEMBLY DETAIL
NOT TO SCALE — PKJ DESIGN GROUP



NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

F MANUAL DRAIN DETAIL
NOT TO SCALE — PKJ DESIGN GROUP

1. NORMALLY CLOSED MASTER VALVE(S)
2. 36-INCH LENGTH OF COILED WIRE TO SATELLITE CONTROLLER SPARE STATION
3. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
5. VALVE BOX WITH COVER - RAINBIRD JUMBO BOX
6. FINISH GRADE
7. RAIN BIRD FS SERIES FLOW SENSOR(S). SEE COVER SHEET FOR SIZE
8. 36-INCH LENGTH OF COILED MAXI-CABLE TO FLOW SENSING
9. PVC PIPE UNION
10. BRASS BALL VALVE



I MASTER VALVE AND FLOW SENSOR DETAIL
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11/7/2024	UT24145	811 BLUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC 1-800-662-4111 www.bluestakes.org	WOLF CREEK JUNCTION FRANCIS, UTAH	LAYTON DAVIS ARCHITECTS ATT: JOHN DAVIS 801-487-0715 JOHN@LAYTONDAVISARCHITECTS.COM	PKJ DESIGN GROUP Landscape Architecture / Planning & Visualization 3450 N. TRIUMPH BLVD. SUITE 102 LEHI, UTAH 84043 (801) 753-5644 www.pkjdesigngroup.com	LICENSED LANDSCAPE ARCHITECT JEREMY AINSWORTH 8128121-5301 11/7/2024 STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 11/7/2024

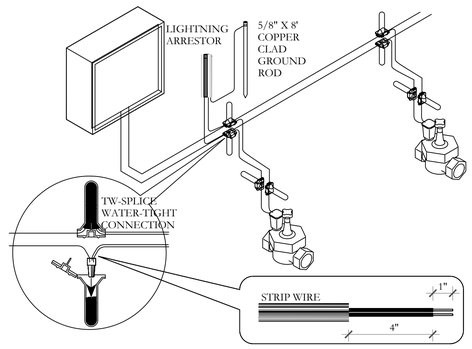
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IRRIGATION DETAILS

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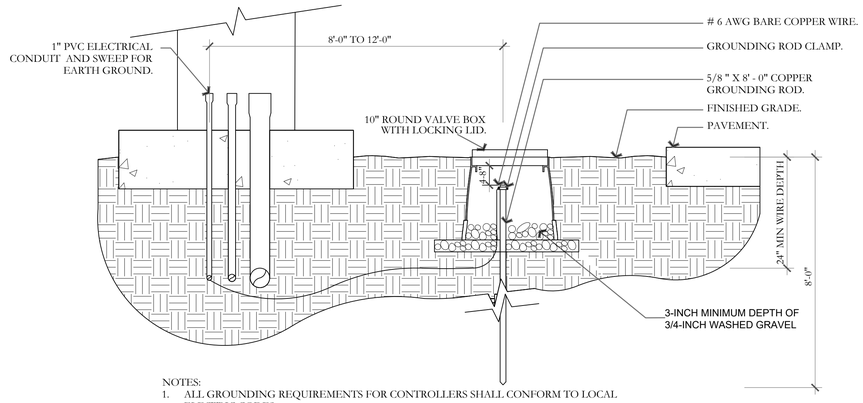
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J 2-WIRE CONNECTION DETAIL

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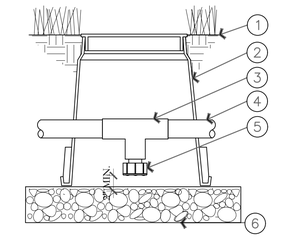


NOTES:
1. ALL GROUNDING REQUIREMENTS FOR CONTROLLERS SHALL CONFORM TO LOCAL ELECTRIC CODES.
2. GROUNDING ROD SHALL NOT BE LOCATED IN THE SAME TRENCH AS THE IRRIGATION MAINLINES OR LATERAL LINES.
3. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
4. INSTALL GROUNDING ROD PER THE CONTROLLER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

K GROUNDING ROD DETAIL

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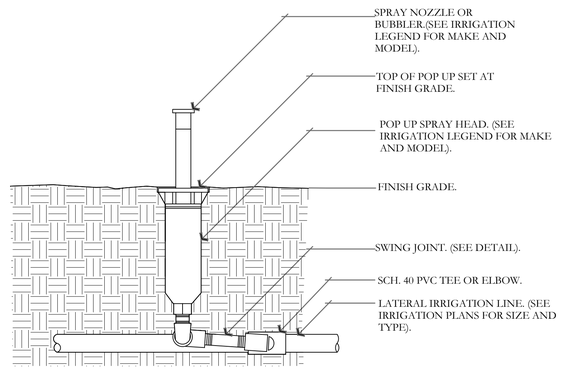


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-6RND
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE: RAIN BIRD 16A-FDV-075
6. 6-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL

L MANUAL LINE DRAIN VALVE DETAIL

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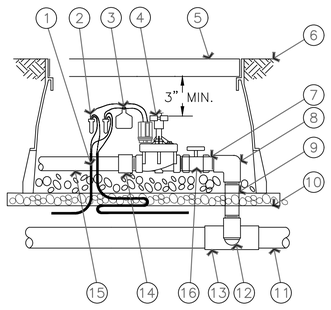


NOTE:
1. 4" POP UPS SHALL BE USED IN TURF AREAS.
2. CONTRACTOR SHALL SETTLE SOIL AROUND THE POP UP AFTER INSTALLATION.
3. ALL POP UP SPRAY HEADS SHALL HAVE CHECK VALVES.
4. ALL SCH. 40 PVC TO SCH. 80 PVC CONNECTIONS SHALL BE MADE USING TEFLON TAPE.

O POP UP-SPRAY HEAD DETAIL

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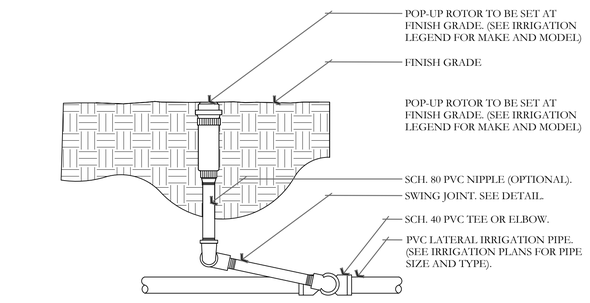


1. 36-INCH LENGTH OF 2-WIRE CABLE
2. WATERPROOF CONNECTION RAIN BIRD WC20 (TWO REQUIRED)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PEB/PESB/PESB-R WITH IVM-SOL
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL `
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
11. PVC MAINLINE PIPE SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
12. PVC SCH 40 TEE OR ELL
13. PVC SCH 40 MALE ADAPTER
14. PVC LATERAL PIPE
15. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
16. BRASS BALL VALVE

M ELECTRIC REMOTE-CONTROL VALVE PEB OR PESB SERIES WITH IVM-SOL

PKJ DESIGN GROUP

NOT TO SCALE



NOTES:
1. ALL THREADED CONNECTION POINTS BETWEEN SCH. 40 PVC AND SCH. 80 PVC FITTING SHALL BE INSTALLED USING TEFLON TAPE.
2. CONTRACTOR SHALL COMPACT SOIL AROUND ROTOR AND RISER PRIOR TO PLANTING, PLUGGING, SEEDING, OR LAYING OF SOD.

N ROTOR HEAD DETAIL

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ISSUE DATE	PROJECT NUMBER
11/7/2024	UT24145

NO.	REVISION	DATE
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PLAN INFORMATION

PROJECT INFORMATION

WOLF CREEK JUNCTION
FRANCIS, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

LAYTON DAVIS ARCHITECTS
ATT: JOHN DAVIS
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LANDSCAPE ARCHITECT / PLANNER

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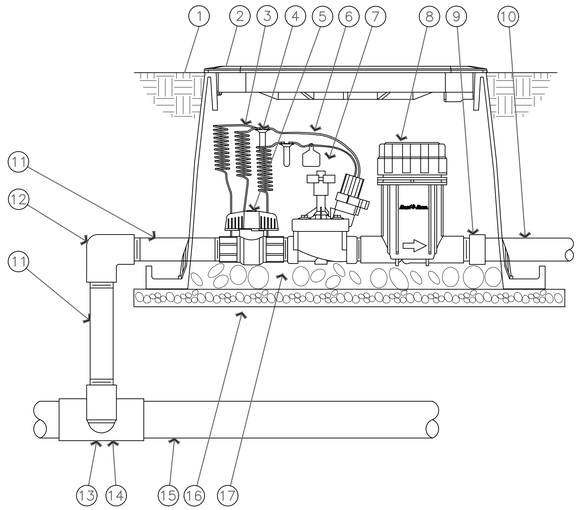
DRAWING INFO

PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	11/7/2024

IRRIGATION DETAILS

CITY PERMIT SET

IR-502

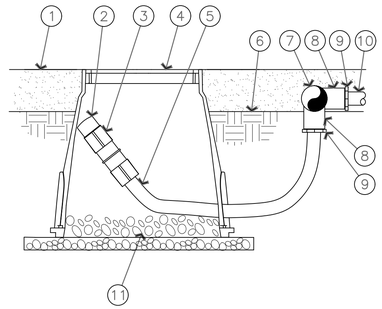


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING AND FLOW INDICATING BASKET FILTER: RAIN BIRD XCZ-100-FLOW
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

P DRIP CONTROL ZONE KIT DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



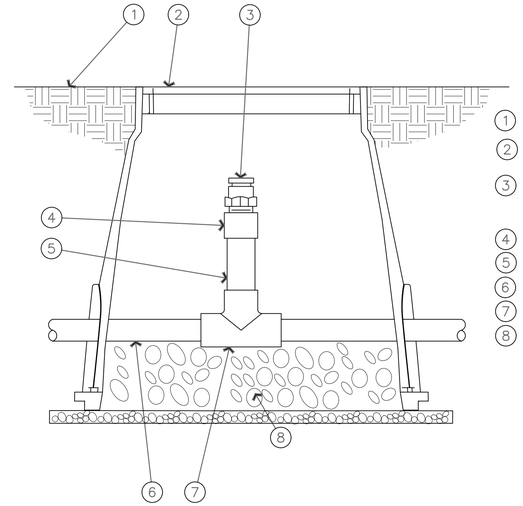
1. MULCH
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. ½" POLYETHYLENE TUBING: RAIN BIRD XF BLANK TUBING
6. FINISH GRADE
7. PVC EXHAUST HEADER
8. PVC SCH 40 TEE OR EL
9. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
10. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV DRIPLINE
11. 3-INCH MINIMUM DEPTH OF 3/4 " WASHED GRAVEL

NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

Q ON-SURFACE DRIPLINE FLUSH POINT DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

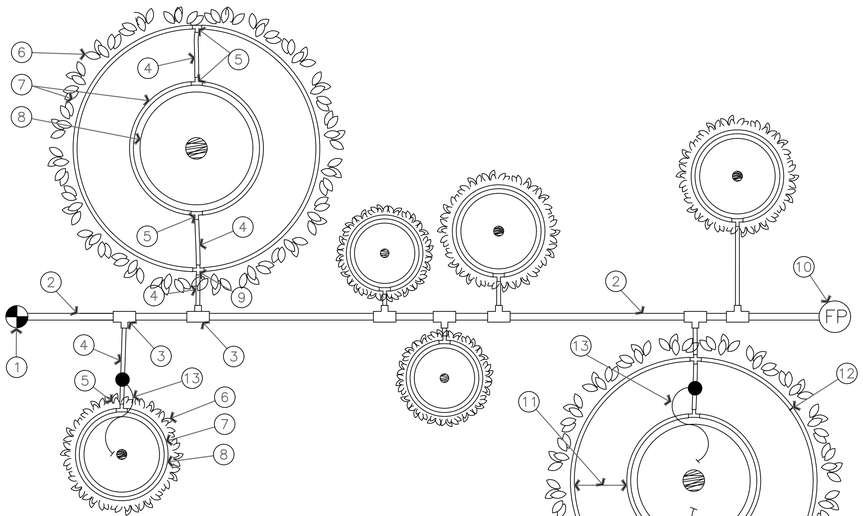


1. FINISH GRADE
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
4. PVC SCH 40 FEMALE ADAPTER
5. PVC SCH 80 RISER
6. PVC HEADER PIPE
7. PVC SCH 40 TEE
8. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

R AIR RELIEF VALVE DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



1. RAIN BIRD CONTROL ZONE KIT (SIZED TO ACCOMIDATE LATERAL FLOW DEMAND)
2. PVC DRIP LATERAL PIPE
3. PVC SCH 40 TEE OR EL (TYPICAL)
4. ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES- S FOR COPPER SHEILD (TYPICAL)
5. BARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
6. PROJECTED CANOPY LINE OF TREE OR SHRUB (TYPICAL)
7. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV SERIES PLACE AS SHOWN (LENGTH AS REQUIRED, TYPICAL)
8. ROOT BALL (TYPICAL)
9. BARB X BARB INSERT CROSS: RAIN BIRD XFD-CROSS (TYPICAL)
10. DRIPLINE FLUSH POINT (SEE RAIN BIRD DETAIL: "XFCV DRIPLINE FLUSH POINT WITH BALL VALVE")
11. SPACING PER SPECIFICATION
12. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3 BELOW)
13. POINT SOURCE EMITTERS FOR ESTABLISHMENT PERIOD. REMOVE AFTER ESTABLISHMENT PERIOD.

NOTES:
1. INSTALL MULTIPLE RINGS AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FROM ROOT BALL TO PROJECTED TREE CANOPY. REFER TO RAIN BIRD DESIGN GUIDELINES AND SPECIFICATIONS FOR RECOMMENDED SPACING BETWEEN RINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

S ON-SURFACE DRIPLINE TREE/SHRUB DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION
11/7/2024	UT24145	

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

PROJECT INFORMATION

WOLF CREEK JUNCTION
FRANCIS, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

LAYTON DAVIS ARCHITECTS
ATT: JOHN DAVIS
801-487-0715
JOHN@LAYTONDAVISARCHITECTS.COM

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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
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LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128121-5301
11/7/2024
ELECTRONIC SEAL
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	11/7/2024

IRRIGATION DETAILS

CITY PERMIT SET

IR-503







Wolf Creek Junction Architectural Materials

Stone



Mountain Blend

Siding



Canyon Red

Garage Door, Roofing, Trim



Matte Black

SRI: N/A • LRV: 5

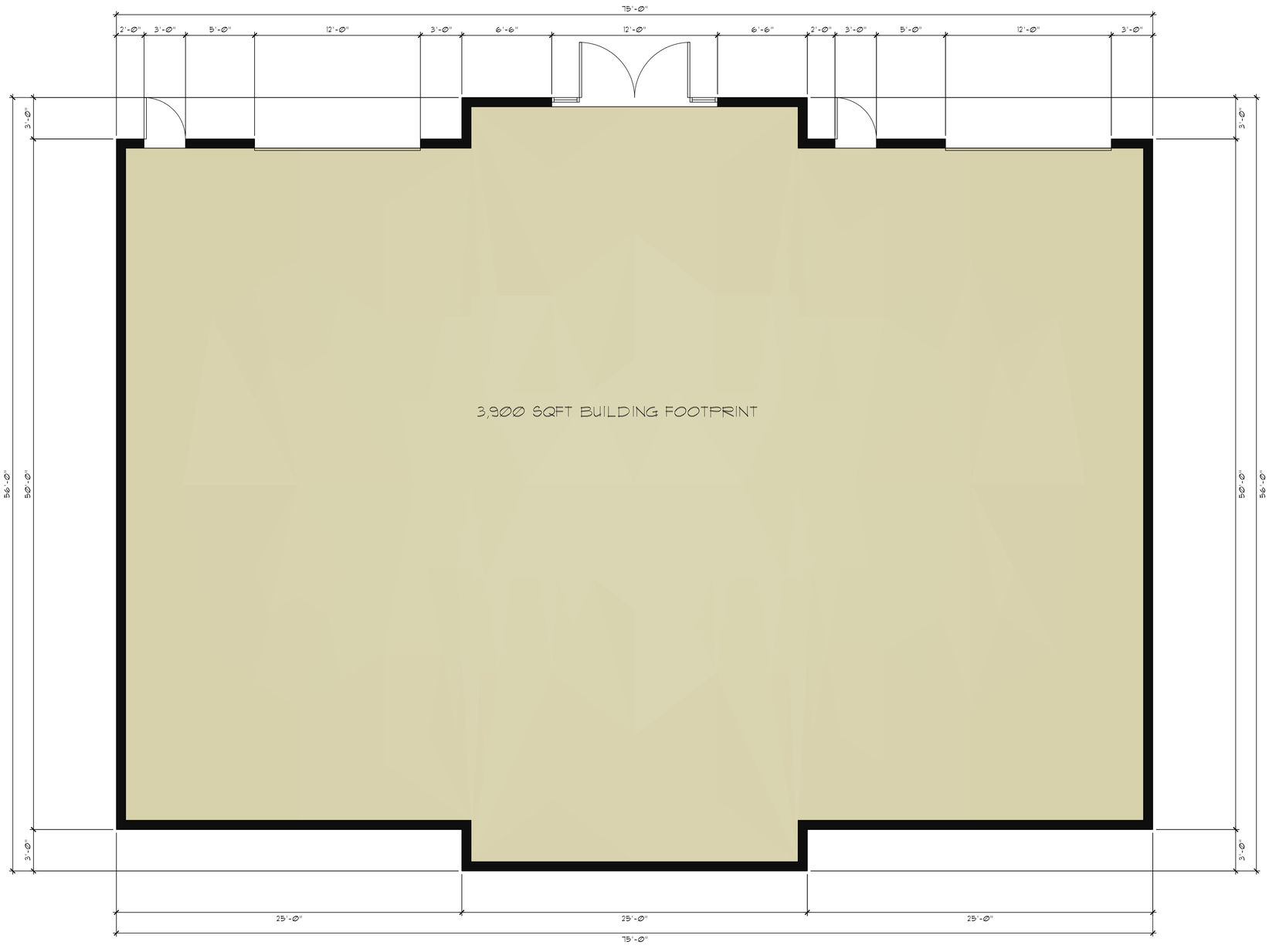
Storefront Frame



Glazing



Solargray® Glass



1 A002 LEVEL 1 - FLOOR PLAN

SCALE: 1/4"=1'-0"

PRINTED DATE
11.27.2024

LAYTON DAVIS ARCHITECTS
2005 EAST 2700 SOUTH | SUITE 200
SALT LAKE CITY, UTAH 84109
P:801.487.0715 | WWW.LAYTONDAVISARCHITECTS.COM

WOLF CREEK JUNCTION

FRANCIS, UTAH

CHRONOLOGY

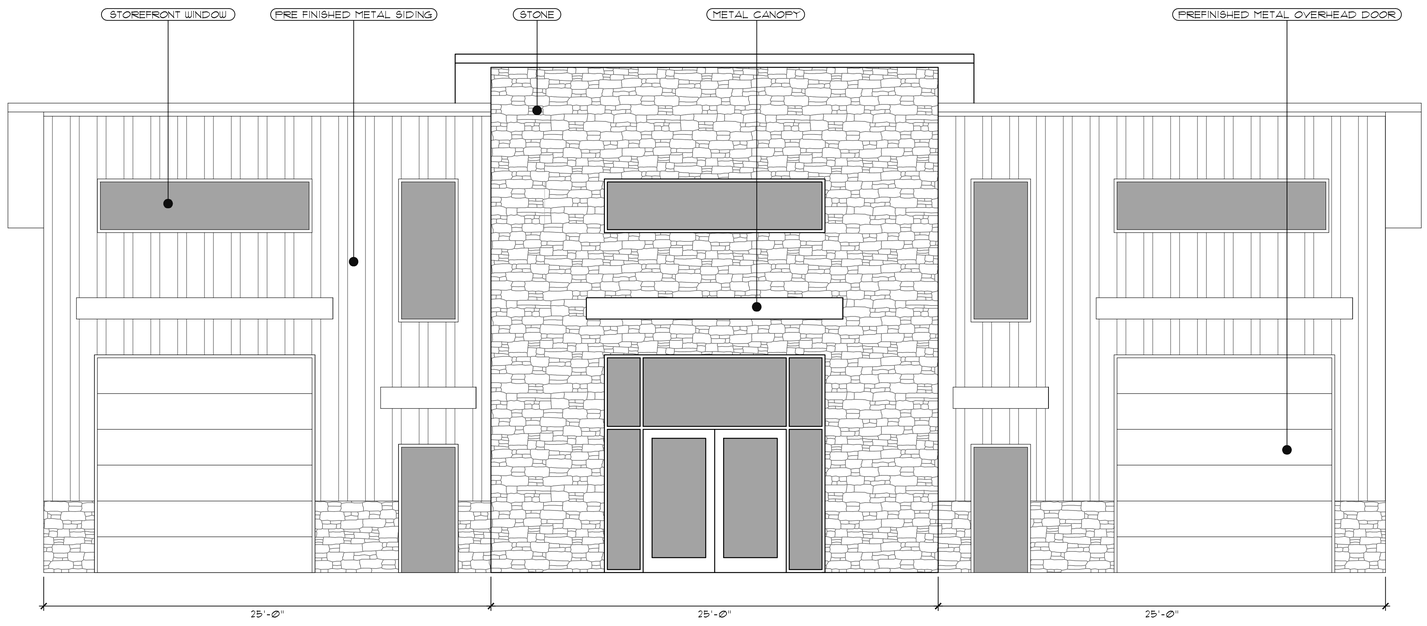
PROJECT NO
23.212

DWN BY/ CHK BY
___ / ___

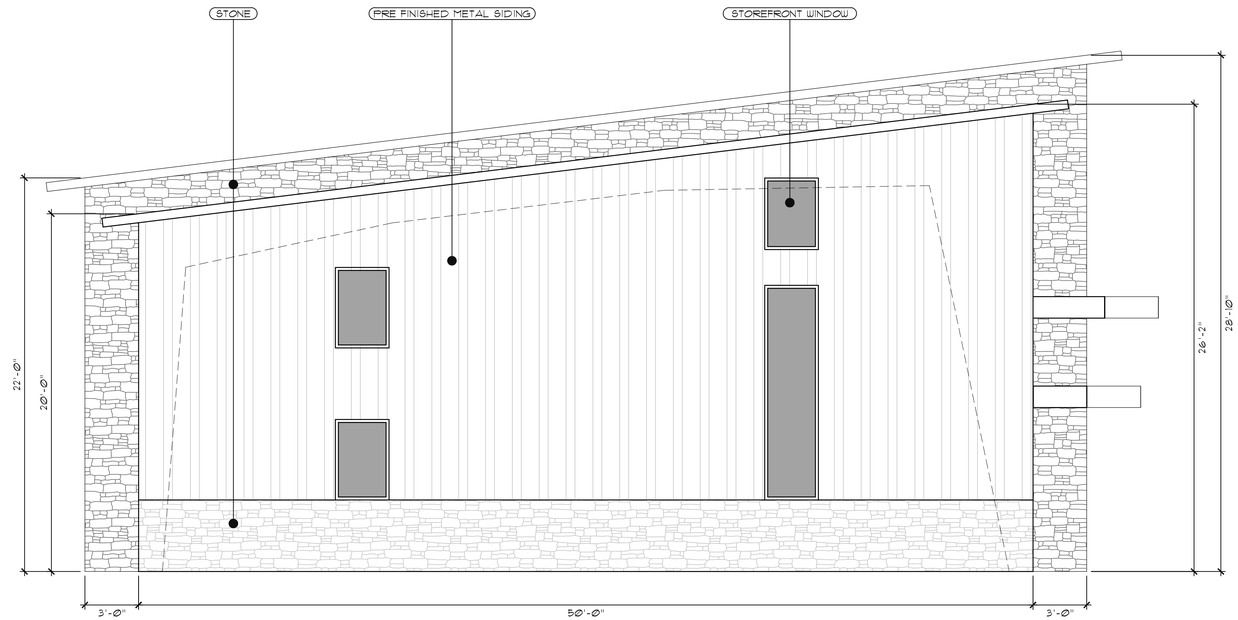
TITLE
ARCHITECTURAL SITE PLAN

24X36 SHEET #
A002

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1 A003 FRONT ELEVATION
SCALE: 1/4"=1'-0"



2 A003 LEFT ELEVATION
SCALE: 1/4"=1'-0"

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FRANCIS, UTAH

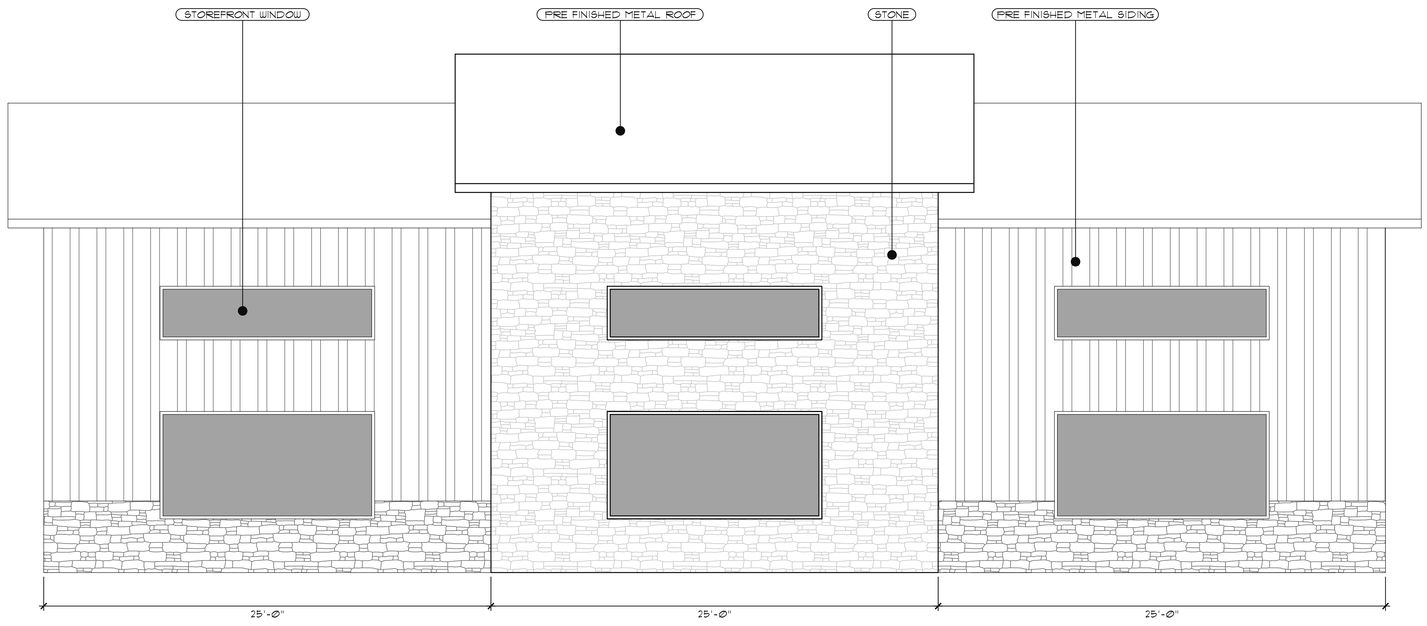
CHRONOLOGY

PROJECT NO
23.212

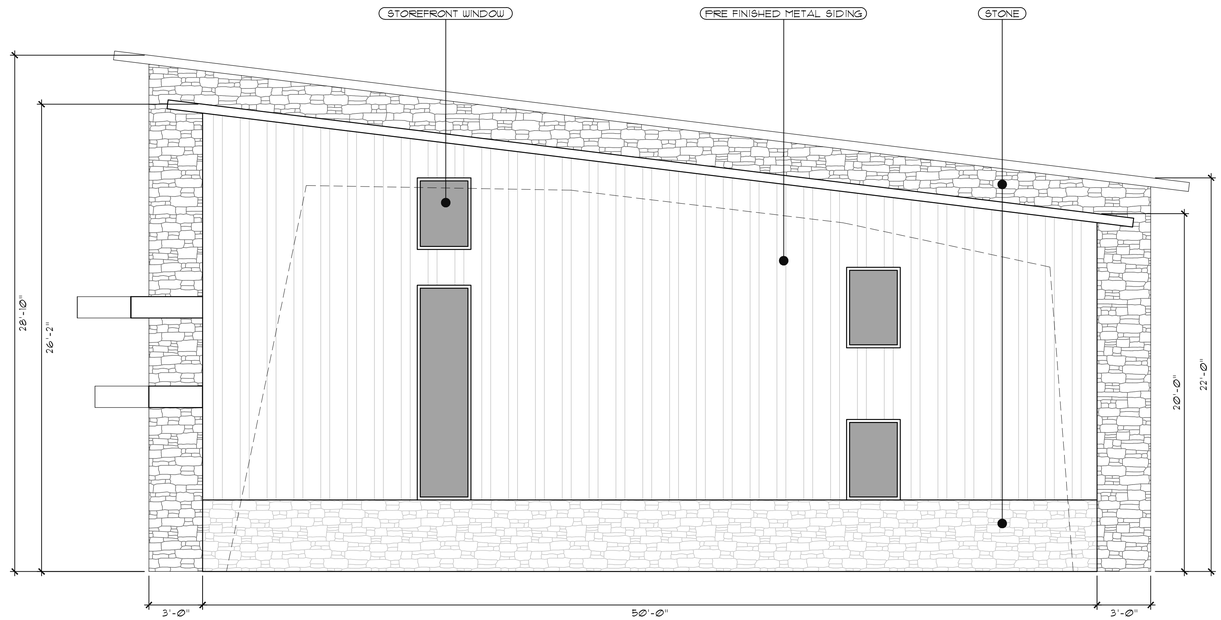
DWN BY/ CHK BY
___ / ___

TITLE
EXTERIOR ELEVATION

24X36 SHEET #
A003



1 A004 REAR ELEVATION
SCALE: 1/4"=1'-0"



2 A004 RIGHT ELEVATION
SCALE: 1/4"=1'-0"

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CHRONOLOGY

PROJECT NO
23.212

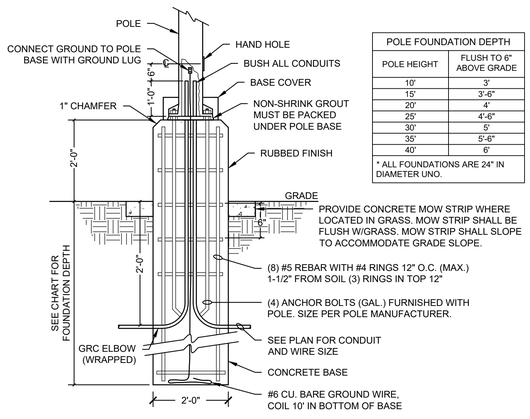
DWN BY/ CHK BY
___ / ___

TITLE
EXTERIOR ELEVATIONS

24X36 SHEET #
A004

Schedule								
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	Input Power
	OP1	2	Lithonia Lighting	DSX1 LED P2 50K 70CRI T2M HS	D-Series Size 1 Area Luminaire P2 Performance Package 5000K CCT 70 CRI Type 2 Medium Houseside Shield	1	8537	67.7927
	OP2	2	Lithonia Lighting	DSX1 LED P2 50K 70CRI T4M	D-Series Size 1 Area Luminaire P2 Performance Package 5000K CCT 70 CRI Type 4 Medium	1	10102	135.58
	OW1	12	Lithonia Lighting	WST LED P3 50K VW MVOLT	WST LED, Performance package 3, 5000 K, visual comfort wide, MVOLT	1	6689	50
	OW2	2	v2 Lighting Group, Inc. www.v2LightingGroup.com		AQUA 300, 40 degree reflector	1	2000	19

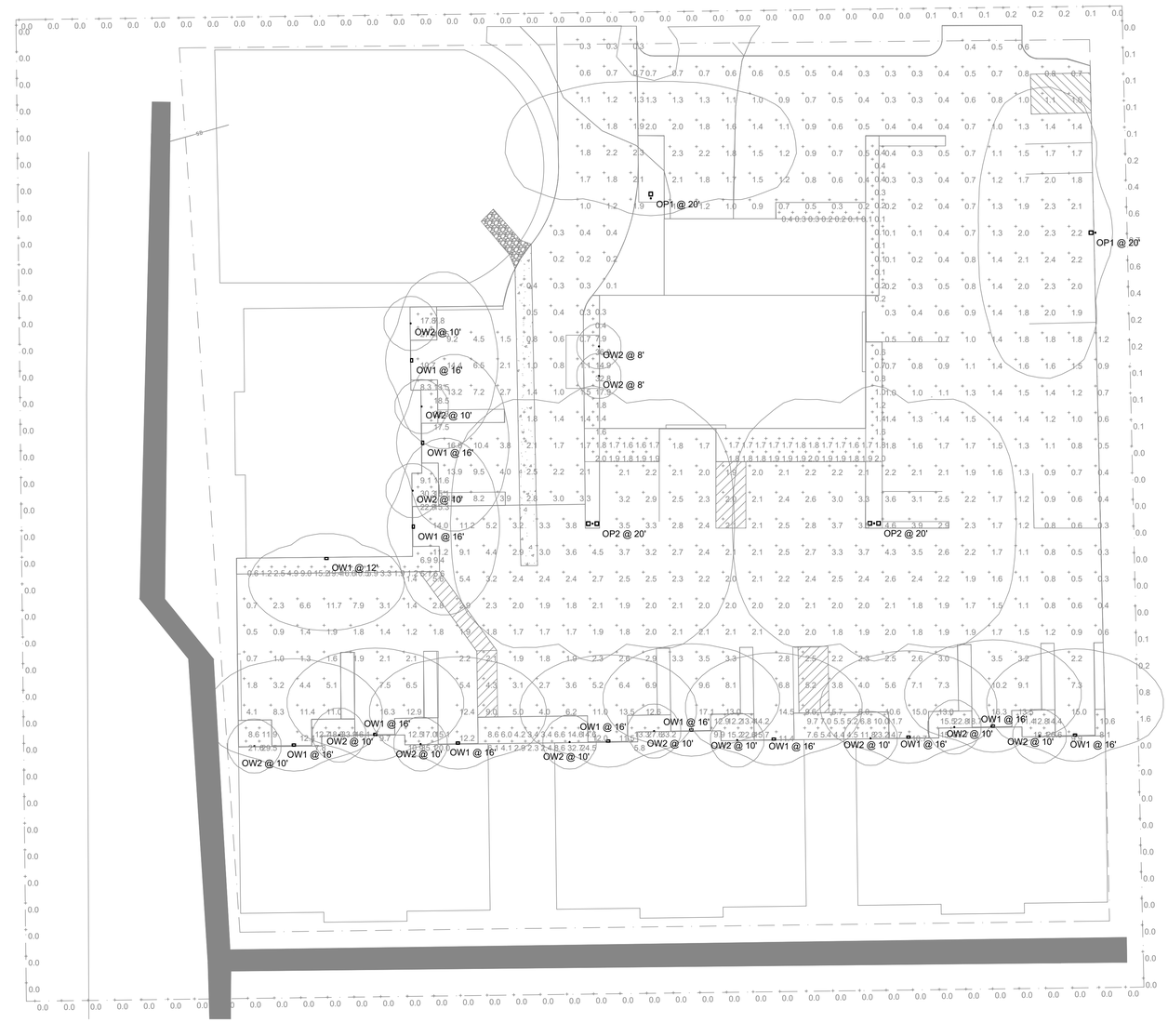
Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PARKING 2	+	3.2 fc	26.0 fc	0.0 fc	N/A	N/A
PROPERTY LINE	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A
WALKWAY 1	+	8.8 fc	19.4 fc	0.6 fc	32.3:1	14.7:1
WALKWAY 2	+	3.6 fc	36.8 fc	0.1 fc	368.0:1	36.0:1
WALKWAY 3	+	7.3 fc	18.8 fc	0.2 fc	94.0:1	36.5:1
PARKING 1	+	2.8 fc	24.6 fc	0.1 fc	246.0:1	28.0:1



POLE FOUNDATION DEPTH	
POLE HEIGHT	FLUSH TO 6" ABOVE GRADE
10'	3'
15'	3'-6"
20'	4'
25'	4'-6"
30'	5'
35'	5'-6"
40'	6'
* ALL FOUNDATIONS ARE 24" IN DIAMETER UNO.	

2 ES001 LIGHT POLE BASE DETAIL

NO SCALE



1 ES001 ELECTRICAL PHOTOMETRIC SITE PLAN

SCALE: 1" = 20'-0"

KEYED NOTES

(#)

GENERAL NOTES

A. ALL SITE ELECTRICAL SHALL BE BURIED IN ACCORDANCE WITH NEC TABLE 300.5 UNLESS OTHERWISE NOTED. ALL UTILITY POWER CONDUITS SHALL BE BURIED AT 48" BELOW GRADE. ALL UTILITY TELECOMMUNICATION CONDUITS SHALL BE BURIED AT 36" BELOW GRADE.
B. ALL ELBOWS TO BE GRC SWEEP ELBOWS UNLESS OTHERWISE NOTED.
C. ALL SITE ELECTRICAL SHALL BE #10 AWG CU CONDUCTORS UNLESS OTHERWISE NOTED. EC TO VERIFY VOLTAGE DROP ON ALL RUNS BASED ON ACTUAL CONDUIT LENGTHS. CONDUCTORS SHALL BE UP-SIZED ACCORDINGLY IN ACCORDANCE WITH NEC 210.19(A) INFORMATIONAL NOTE #3 AND NEC 215.1(A)(b) INFORMATIONAL NOTE #2.

elemental
ELECTRICAL ENGINEERS
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DRAPER, UT 84020
(801) 618-9656
eric@elementalelectricalengineers.com

REVISIONS

MARK	DATE	DESCRIPTION
-	09/12/24	PERMIT SET

BLIND RABBIT AT WOLF CREEK JUNCTION

STATE ROAD 32 & PREMIER SELF STORAGE RD
FRANCIS, UTAH

SHEET TITLE:

ELECTRICAL PHOTOMETRIC SITE PLAN

ES001

AQUA 300 ROUND LX SCONCE

ALW

PROJECT

Job
Type OW2
Part #

Notes

SPECIFICATIONS

Source Xicato XTM LED module - up to 3000 source lumens
CCT 2700K, 3000K, 3500K or 4000K
Color Consistency 1x2 SDCM (MacAdam) along BBL, CCT +/- 40K to 70K, Duv +/- .001
CRI (Ra) 83 or 98
Driver / Location Integral / premium drivers must be remote mounted
Dimming 0-10V or phase to 10% standard; Ecosystem, DALI, DMX and 1% available
Input Voltage 100 to 277VAC (347VAC consult factory), phase dimmable versions are 120VAC only
Power Up to 35 watts max, depending on LED module / driver
Reflector 10°, 20°, 40°, 60° & optical accesories
Materials Tamper resistant design, stainless steel hardware, metal reflectors
Finish Powder coat - Exterior grade TGIC polyester, optional marine-grade finish
Weight 7.0 lb. (3.2 kg)
Location Listed for Wet location, tested to IP66 per IEC 60529
Approvals ETL Listed to UL 1598, 2108, 8750 and CSA C22.2# 9 & #250.0
L70 Life > 55,000 hours at 70% lumen maintenance, LM80 / TM-21, see pg 2
Warranty Lifetime Limited Warranty - see warranty for details
IES Files LM-79-08 IES files available
Modifications Any modification or customization is possible - consult factory



LED · INDOOR OUTDOOR · WET LOCATION · IP66 · DIMMABLE · XICATO · TITLE 24 · Intertek

ORDERING LOGIC

Model	-	Driver Location	Dimming	-	Output Direction	Output	CRI	CCT	Reflector	Optical Accessory	-	Shell Color
K3RL	-			-							-	
K3RL		N=Integrated R=Remote	N=None P=Phase, 10% V=0-10V, 10%		D = Down U = Up * * includes reflector cover	07=700 lm 10=965 lm 13=1300 lm 20=2000 lm 30=3000 lm* *available in 83CRI only	83=83 98=98	27=2700K 30=3000K 35=3500K 40=4000K	10=10°* 20=20° 40=40° 60=60° *1300 lm max	NN=None DF=Diffuser Lens LS=Spread Lens WW=Wall Wash FT=Forward Throw HL=Hex Louver* *down direction only		XX=v2 color see pg 4 ZZ=Custom add +MF for Marine Finish

premium drivers (REMOTE location only):
Z1 =eldoLED 0-10V, 0%
Z2 =eldoLED DALI, 0%
Z3 =eldoLED DMX, 0%
Z4 =Lutron Hi-Lume™ LDE1, 0-10V, 0%
Z5 =Lutron Hi-Lume™ LTEA, Phase, 1%
Z6 =Lutron S-Series™ LDE3, 0-10V, 5%

Example Part Number: **K3RL-NVD-30832720NN-L1**
K AQUA **300** **R**ound **LX** Sconce - **IN**tegrated Driver, 0-10V Dim - **D**own, **30**00lm, **83**CRI, **27**00K, **20°**, **NN** No Accessory - **L1** Gloss White



WST LED
Architectural Wall Sconce

DLC · DLC PREMIUM · DARK SKY FRIENDLY

Catalog Number
Notes
Type OW1

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

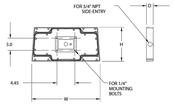
Luminaire

Height: 8-1/2" (21.59 cm)
Width: 17" (43.18 cm)
Depth: 10-3/16" (25.9 cm)
Weight: 20 lbs (9.1 kg)



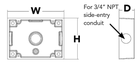
Optional Back Box (PBBW)

Height: 8.49" (21.56 cm)
Width: 17.01" (43.21 cm)
Depth: 1.70" (4.32 cm)



Optional Back Box (BBW)

Height: 4" (10.2 cm)
Width: 5-1/2" (14.0 cm)
Depth: 1-1/2" (3.8 cm)



Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background

To learn more about A+, visit www.acuitybrands.com/aplus.

See ordering tree for details.

A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL



D-Series Size 1
LED Area Luminaire

DLC PREMIUM · DLC · DARK SKY FRIENDLY · ada · BAA

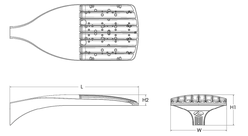
d-series

Catalog Number
Notes
Type OP1 & OP2

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA: 0.69 ft² (0.06 m²)
Length: 32.71" (83.1 cm)
Width: 14.26" (36.2 cm)
Height H1: 7.88" (20.0 cm)
Height H2: 2.73" (6.9 cm)
Weight: 34 lbs (15.4 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information **EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Color Rendering Index	Distribution		Voltage	Mounting
DSX1 LED	**Forward optics** P1 P6 P2 P7 P3 P8 P4 P9 P5 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare[3] T4M Type IV medium T4LG Type IV low glare[3] TFTM Forward throw medium T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control[3] BLC4 Type IV backlight control[3] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4] HVOLT (347V-480V)[5,6] XVOLT (277V - 480V)[5,6] 120[4,26] 208[4,26] 240[4,26] 277[4,26] 347[4,26] 480[4,26]	**Shipped included** SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling[9] RPA5 Round pole mounting #5 drilling[9] SPA8N Square narrow pole mounting #8 drilling WBA Wall bracket[10] MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark Bronze
NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[11,12,26,27]	SPD20KV	20KV surge protection	DBLXD	Black
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[11,26,27]	HS	Houseside shield (black finish standard)[22]	DNAXD	Natural Aluminum
PER	NEMA twist-lock receptacle only (controls ordered separately)[13]	L90	Left rotated optics[1]	DWHXD	White
PERS	Five-pin receptacle only (controls ordered separate)[14,27]	R90	Right rotated optics[1]	DDBTXD	Textured dark bronze
		CCE	Coastal Construction[23]	DBLBXD	Textured black
		HA	50°C ambient operation[24]	DNATXD	Textured natural aluminum
		BAA	Buy American(n) Act Compliant	DWHGXD	Textured white
		SF	Single fuse (120, 277, 347V)[28]		
		DF	Double fuse (208, 240, 480V)[28]		
		Shipped separately			
		EGSR	External Glare Shield (reversible, field install required, matches housing finish)		
		BSDB	Bird Spikes (field install required)		
	PER7	Seven-pin receptacle only (controls ordered separate)[14,27]			
	FAO	Field adjustable output[15,27]			
	BL30	Bi-level switched dimming, 30%[16,27]			
	BL50	Bi-level switched dimming, 50%[16,27]			
	DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]			
	DS	Dual switching[18,19,27]			

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DRAPER, UT 84020
(801) 618-9656
eric@elementalelectricalengineers.com

REVISIONS			
MARK	DATE	DESCRIPTION	
-	09/12/24	PERMIT SET	

BLIND RABBIT AT WOLF CREEK JUNCTION
STATE ROAD 32 & PREMIER SELF STORAGE RD
FRANCIS, UTAH

SHEET TITLE:
PHOTOMETRIC DETAILS

ES002