Planning Commission Staff Report

File # 22C23

Public Hearing and Consideration of a Preliminary Nonadministrative Conditional Use Permit and Preliminary Site Plan for the Construction of a 58,000 sq ft Office/ Warehouse Building and Extended Hours of Operation at 4156 S. Riverboat Road, in Taylorsville, Utah.

CITY OF TAYLORSVILLE UTAH

Department of Community Development

Date:	August 15, 2023
Meeting Date:	August 22, 2023
Agenda Item:	Public Hearing and Consideration of a Preliminary Conditional Use Permit and Site Plan for the Construction of a 58,000 sq. ft. Office/ Warehouse Building and Extended Hours of Operation at 4156 S. Riverboat Rd, Taylorsville, Utah.
Subject Property Address:	4156 S. Riverboat Rd.
Applicant:	Reid Wintersteen, CIR Engineering
Applicant Agent:	n/a
Author:	Terryne Bergeson
Parcel #:	21022260070000
Applicable Ordinances:	Including, but not limited to Chapter 13.02; 13.08; 13.15; 13.16; 13.23; 13.24; 13.25; 13.27; 13.28; 13.32; 13.33; and 13.37
Agenda Item #:	2

Attachments:

Exhibit A: Zoning Map

Exhibit B: General Plan Map

Exhibit C: Subject Property Aerial Image

Exhibit D: Subject Property Vicinity Map

Exhibit E: Sensitive Area Overlay Zone Map

Exhibit F: Geotechnical Study

Exhibit G: Site Plan

Exhibit H: Building Elevations

Exhibit I: Photometric Study

Exhibit J: Tree Survey

Exhibit K: Landscape Plan

Exhibit L: Applicant Narrative

Summary:

Reid Wintersteen, CIR Engineering, is requesting Planning Commission review of a preliminary non administrative conditional use permit and site plan to allow the construction of an office/ warehouse space located at 4156 S. Riverboat Road, in Taylorsville, Utah. The proposal (Exhibit G) is to build a 58,045 square foot warehouse building with office space to be used as a distribution center for Kessimakis Produce on a vacant, 5-acre lot.

The proposed land use is categorized as "warehouse, wholesale," as defined in Section 13.36.240 of the Taylorsville Land Development Code (LDC).

> *"WAREHOUSE, WHOLESALE: A building in which goods, merchandise or equipment are stored for eventual distribution. No outside storage is permitted."*

The zoning map designation for the subject property is "Research (RD)". Per Section 13.08.020(E),"warehouse" is a permitted land use in the zone, with the approval of a non-administrative conditional use permit.

Southeast of the subject property, across Riverboat Road, is the Fairstone apartment complex, zoned "Residential Multiple-Family 12 (RM-12)". The narrative submitted by the applicant describes the operations and expected hours (Exhibit L . Permission to operate past regular operation hours (10 pm) must be granted by the Planning Commission due to proximity to a residential zone, per Section 13.23.200 of the LDC.

Portions of the subject property are in the 100-year floodplain zone, and other portions in the 500 year zone. The subject property is in "Floodplain Overlay Zone" and "Sensitive Area Overlay Zone," due to high liquefaction designation and is subject to the standards in Chapter 13.15: *Sensitive Area Overlay Zone*, and Chapter 13.16: *Floodplain Overlay Zone*, of the LDC. Compliance with these standards will be discussed later in this report.

Site Description

The subject property is lot 4 of the Sorenson Research Park Phase 2 subdivision, at the end of Riverboat Road, with an area of 5 acres (217,800 sq ft). The project area is currently vacant, with "non-engineered fill" surface and a variety of trees. To the east, it is separated from the Jordan River by a 630 ft wide lot. The lot has no direct access to the river or Jordan River Parkway Trail. Grading plans show the project area is relatively flat land with mixed vegetation.

Surrounding zoning designations are as follows:

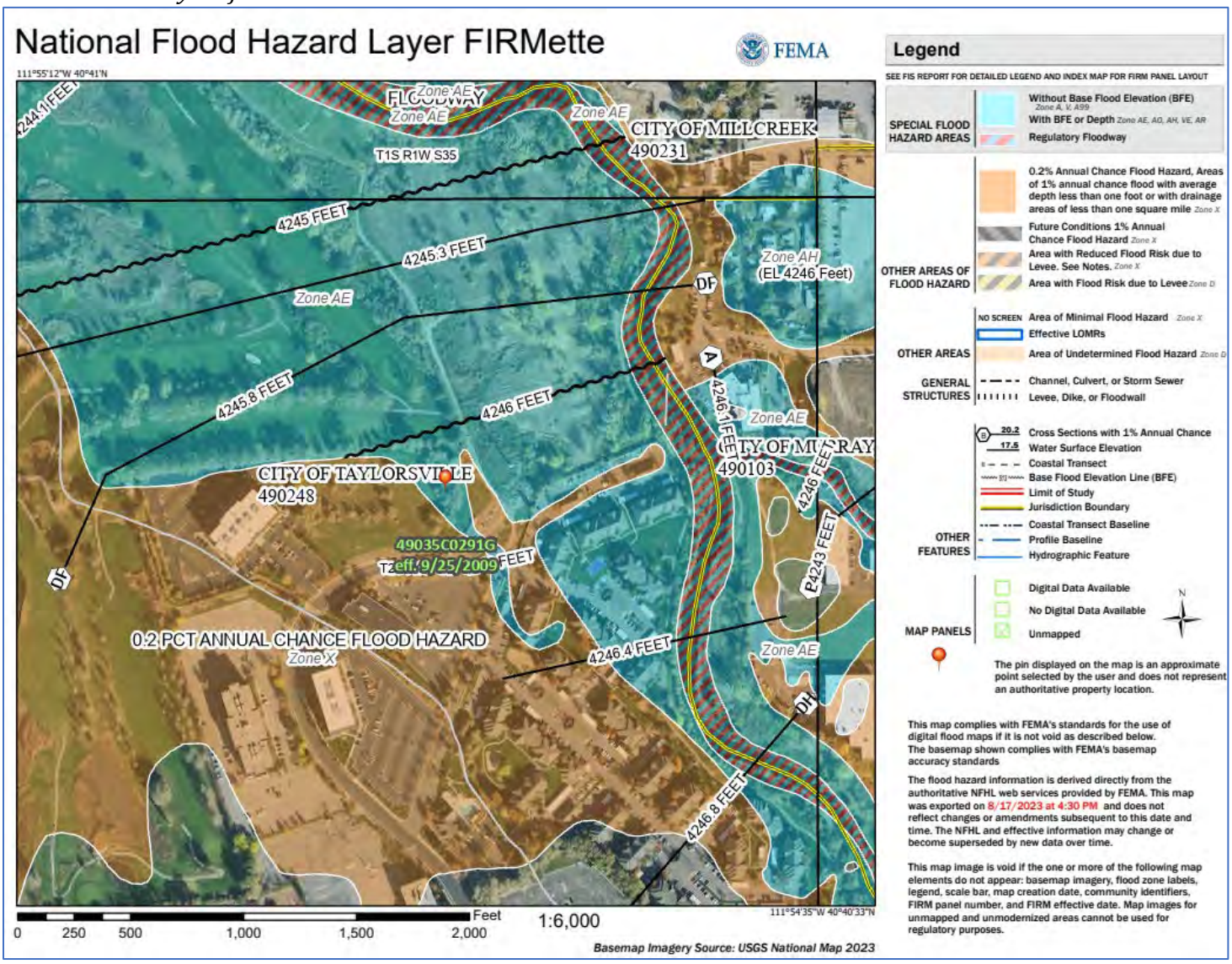
North	South	East	West
Open Space (OS) – Meadowbrook Golf Course	Research & Development (RD) Office Building, Residential (RM-12) Fairstone apartment complex	(Industrial) ID – Future Jordan River Innovation	Research and Development (RD) – Office Building

Staff has considered factors related to this site and conducted reviews and requested several studies in relation to these, including: FEMA designation; geological/geotechnical

hazards; site access and traffic impact; surrounding existing and future development; existing easements; and nearby recreation amenities. Each is briefly summarized below.

Flood Hazards

The development is proposed on a lot with the FEMA flood zone designation A (blue) defined as "*Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.*" And Zone X (orange) defined as "*Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods…"*



This site is not adjacent to the Jordan River, nor in the meander corridor, and is not located within a floodway. Therefore, it will not require additional studies at this time.

Geological/Geotechnical Hazards

The subject property is within a "High Liquefaction Area," meaning there is a 50 percent probability of having an earthquake within a 100-year period that will be strong enough to cause liquefaction. Liquefaction takes place when loosely packed, water-logged sediments

at or near the ground surface lose their strength in response to strong ground shaking, resulting in material that is ordinarily a solid behaving like a liquid.

The geotechnical report (Exhibit F) identifies groundwater as shallow as 4.4 feet and recommends that slabs be placed no closer than 4 feet above stabilized groundwater elevations. Two of the 11 boring samples also revealed liquefiable soils in locations directly under the proposed building footprint. The report states, *"To best mitigate the potentially liquefiable soil conditions, GSH recommends that the proposed structures be supported upon conventional spread and continuous wall foundations supported upon soil reinforcement methods such as a grid of rammed-aggregate piers"* and states that a site-specific response analysis is required. A more detailed technical review ensuring compliance with all applicable building codes would take place prior to issuance of any development permits on the site.

Additionally, the report describes an abundance of non-engineered fill and the mix of vegetation and trees across the site. Staff will continue to work with the applicant throughout the site plan review as well as building permit process to ensure all proper measures are taken to mitigate the liquefaction hazard. The vegetation and tree mix is addressed later in this report in Sensitive Overlay Zone analysis.

Access
Vehicle: The subject property has one means of ingress and egress via Riverboat Road and two existing curb cutouts that will be used for the drive entrances. The applicant submitted a traffic study that also took into account the proposed Jordan River Innovation development. The proposed use and noted that the peak use for the warehouse are not the same as the peak hours for surrounding uses or intersections. Therefore, the impact on traffic to Riverboat Road and nearby intersections is not anticipated to be significant.

Pedestrian: The site is the second closest lot to the Jordan River Parkway Trail. While no public amenities are required or recommended, staff have reviewed the application for pedestrian amenities, such as lighting and connections to public sidewalks from both building entrances.

Land Development Code Analysis

General Plan Proposed Land Use Map Designation
The subject property is designated as "Business Park" on the Proposed Land Use Map (Taylorsville General Plan, Map 3.1.1). The General Plan includes the following statement describing the intent of the Business Park designation (pg 3-4):

> *"The Business Park (BP) designation differs from Professional Office (PO) in that traditional industrial uses are permitted, often in "hybrid' space for companies and organizations that do not fall neatly into one category of use. Uses may include headquarters management, research laboratories, prototype development, assembly and fabrication, light-manufacturing, and warehouse distribution facilities."*

The applicant's proposal for "warehouse" is consistent with the Proposed Land Use Map.

As stated in the "summary" portion of this report, the proposed land use requires non administrative conditional An owner of the Kessimakis Produce submitted a narrative for staff and Planning Commission review. Hours of operation listed in the

narrative (Exhibit L) require the approval of the Planning Commission due to the proximity to residential.

Section 13.33.040 of the LDC establishes the general review criteria for all conditional use permit requests in Taylorsville:

> *"No conditional use may be approved unless the proposed use complies with the applicable provisions of this code, state, and federal law; and the following standards that apply to all conditional uses."*

Code Reference	Review Criteria
13.33.040(A)(1)	*The health, safety, and welfare of the city and its present and future inhabitants and businesses.*
13.33.040(A)(2)	*The prosperity of the city and its present and future inhabitants and businesses.*
13.33.040(A)(3)	*The morals, peace and good order, comfort, convenience, and aesthetics of the city and its present and future inhabitants and businesses.*
13.33.040(A)(4)	*The tax base.*
13.33.040(A)(5)	*Economy in governmental expenditures.*
13.33.040(A)(6)	*The state's agricultural and other industries.*
13.33.040(A)(7)	*The urban and nonurban development.*
13.33.040(A)(8)	*Access to sunlight for solar energy devices.*
13.33.040(A)(9)	*Property values.*

Section 13.33.050 of the LDC states the following related to the City's authority to impose conditions of approval on a conditional use permit application:

> *In order to achieve compliance with the standards set forth herein, the city may impose conditions that address:*
>
> *A. Size, configuration, and location of the site and the proposed site plan layout.*
>
> *B. Proposed site ingress and egress to existing and proposed roads and streets.*
>
> *C. The adequacy, provision, relocation, or protection of public facilities and amenities, including roads and streets, culinary water, secondary water, sanitary sewer, storm drainage, public safety and fire protections, and other utilities.*
>
> *D. Design, location, and amount of off street parking, loading areas and solid waste disposal, and refuse collection areas.*
>
> *E. Site circulation patterns for vehicular, pedestrian and other traffic.*
>
> *F. Massing, size, number, location, design, exterior features, materials, and colors of buildings, structures, and other facilities.*

G. *The location and design of all site features, including proposed signage, lighting, and site furnishings.*

H. *The provision of usable open space, public features, and recreational amenities.*

I. *Fencing, screening and landscape treatments, and other features designed to increase the attractiveness and safety of the site and protect adjoining property owners from noise, visual, and other impacts.*

J. *Measures directed at minimizing or eliminating possible nuisance factors including, but not limited to, noise, vibrations, smoke, dust, dirt, debris, plant materials, odors, gases, noxious matter, heat, glare, electromagnetic disturbances, and radiation.*

K. *Measures designed to protect the natural features of the site including wetlands and drainageways, groundwater protection, soils, wildlife, and plant life.*

L. *The regulation of operating hours for activities affecting normal schedules and functions.*

M. *Identifying a time for regular review and monitoring, as determined necessary, to ensure the use continues to operate in compliance with all conditions and requirements of approval.*

N. *Measures to ensure compliance with all conditions and requirements of approval, including, but not limited to, bonds, letters of credit, improvement agreements, agreements to conditions, road maintenance funds, and restrictive covenants.*

O. *Such other conditions determined reasonable and necessary by the city to allow the operation of the proposed conditional use, at the proposed location in compliance with the requirements of this code.*

Floodplain Overlay Zone

As stated in the "site description" portion of this report, the subject property is within the City's Floodplain Overlay Zone, and is thereby subject to the standards in Chapter 13.16 of the LDC. The applicant is working with the City's Community Development Department and Engineering Department to address the permitting requirements associated with development in a floodplain. At this point of the development review process, the applicant has demonstrated general compliance with the City's floodplain requirements. Development in the floodplain will require the applicant to continue to work with city staff to obtain a floodplain permit. Throughout the review process staff will review plans for appropriate fill and elevations to address flood risks. As the review continues, City staff will ensure compliance with all related standards prior to issuance of any development permits or approvals.

Sensitive Area Overlay Zone

As stated in the "site description" portion of this report, the subject property is within the City's Sensitive Area Overlay Zone, and is thereby subject to the standards in Chapter 13.15 of the LDC. The purpose of the Sensitive Area Overlay Zone is included in Section 13.15.010 of the LDC:

> *"This chapter shall provide standards, guidelines, and criteria having the effect of minimizing flooding, erosions, and other environmental hazards and protecting the natural scenic character of the sensitive areas and ensuring the efficient expenditure of public funds. The standards, guidelines, and criteria established by this chapter shall include, but shall not be limited to, the following:*

A. *The protection of the public from the natural hazards of stormwater runoff and erosion by requiring drainage facilities and the minimal removal of natural vegetation.*

B. *The minimization of the threat of consequential damages of fire by establishing fire protection measures.*

C. *The preservation of natural features, wildlife habitat, and open space.*

D. *The retention of natural features such as drainage channels, streams, hillside areas, ridgelines, rock outcroppings, vistas, trees, and other natural plan formations.*

E. *The preservation and enhancement of visual and environmental quality by use of natural vegetation and the minimization of grading in hillside areas.*

F. *The assurance of an adequate transportation system for the sensitive area to include consideration of the city's approved transportation plan. This system design will consider densities and topography with minimal cuts, fills, or other visible scars.*

G. *The establishment of on site and off site traffic facilities that ensure ingress and egress for vehicles including emergency vehicles into all developed areas at any time.*

H. *The encouragement of a variety of development designs and concepts that are compatible with the natural terrain of the sensitive areas and preserve open space and natural landscape.*

I. *The establishment of land use management criteria that will encourage protection of natural elements while allowing a harmonious and satisfying residential environment.*

J. *The encouragement of location, design, and development of building sites to provide maximum safety and human enjoyment while adapting the development to the best use of the natural terrain.*

K. *The encouragement of the use of creative design teams composed of professional landscape, architects, engineers, and others.*

L. *The encouragement of a regard for the view of the hillsides as well as a view from the hillsides."*

The full standards for development can be found read in Section 13.15.040(B) Development Standards for All Sensitive Areas. Applicant has submitted revised plans to address considerations listed in the section. The standard below requires planning commission review.

Code Reference	Review Criteria	Staff's Analysis
13.15.040(B)(1)(b)	*Maximum Impervious Coverage: Upon which multi-family dwellings, commercial, industrial, institutional, pad lots, clustered subdivisions, and accessory structures are proposed shall be determined during site plan review and approved by the planning commission. The planning commission will base their decision on information received from the developer in relation to mitigation measures which can be imposed to handle excess runoff.*	Grading and drainage plans have been submitted. City engineer has reviewed plans and approved drainage. Planning Commission may approve or make recommendations.

13.15.040(B)(3) addresses vegetation and revegetation. Exhibit J and K illustrate the tree survey of the site and proposed landscape plan. The survey does not identify the quantity of each tree species; however, the survey identifies and recommends the removal of all Russian olives on site. Cottonwoods in the center of the property will be removed due to location. All Siberian elms along the west perimeter of the property are to be preserved as well as one black hawthorn in the north. The applicant has added the replacement of 5 trees along the north property line abutting the golf course to replace those to be removed. Nine of the trees on site are to be preserved as seen on the existing landscape plan (Exhibit K pg 2).

Public Comment

A public notice was sent to all affected entities and residents within 300 feet of the property on August 10, 2023. Staff has received one comment from a neighboring property owner who wanted to know if the Architectural Compliance Committee had reviewed the plans and approved of the application. The applicant had submitted a letter from the Sorenson Research Park ACC, with two of the three members' signatures stating their approval.

Findings

1. Reid Wintersteen, CIR Engineering submitted an application for a conditional use permit on June 6, 2023.
2. The request is to construct a single 58,000 square foot building to be used for warehouse and associated office space.
3. Development is proposed on an undeveloped lot, lot 4 of the Sorenson Research Park Phase 2 subdivision.
4. The site is located at 4156 S. Riverboat Rd. in Taylorsville, Utah.
5. This property is zoned "Research and Development" per the Taylorsville Zoning Map.
6. According to the Taylorsville General Plan Map the property is designated as "Business Park".
7. The warehouse use is permitted with the approval of a nonadminstrative conditional use permit.
8. The site is in a high liquefaction zone, triggering additional studies and requirements for development on the site.
9. A geotechnical study was conducted at the site at the end of 2022 and submitted with the application.
10. The report provides findings and recommendations for construction and has been reviewed by staff.
11. Land on the site is designated as FEMA flood zone A and X.
12. Construction in a floodplain requires a floodplain permit, issued by the city engineer.
13. Floodplain and high liquefaction requires that the development comply with standards of Sections 13.15 Sensitive Overlay Zone and 13.16 Floodplain Overlay Zone of the Taylorsville Land Development Code.
14. The applicant has submitted a tree survey.
15. A traffic study was conducted and found no significant impact on traffic or queuing time at intersections.
16. The property is located within 250' of a residential zone and requires Planning Commission approval to operate past 10 pm.
17. Plans have been submitted and reviewed by applicable reviewing agencies.

Conditions of Approval

Staff recommends approval of the request, subject to the following conditions:

1. Final review and decision of approval is granted by the Director, unless otherwise directed by the Planning Commission.
2. Construction activity on the subject property is not permitted until final conditional use and site plan approval have been granted, and all applicable permits have been issued by the City.

Staff Recommendation

Staff recommends the Planning Commission approve File #22C23 – CUP-000347-2023, preliminary conditional use and site plan review for the construction of a 58,000 square for warehouse building and extended hours of operation at 4156 S. Riverboat Rd. in Taylorsville, Utah.

Recommended Motion

I move that we approve File #22C23 – CUP-000347-2023, preliminary conditional use and site plan review for the construction of a 58,000 square for warehouse building and extended hours of operation at 4156 S. Riverboat Rd. in Taylorsville, Utah, subject to the findings and conditions as outlined in this staff report.

Exhibit G

KESSIMAKIS PRODUCE 4156

4156 SOUTH RIVERBOAT ROAD
TAYLORSVILLE, UTAH 84123

JUNE 6, 2023
REVISED JULY 10, 2023
REVISED AUGUST 7, 2023

LEGEND

PROPERTY LINE		EXISTING FIRE HYDRANT	
EASEMENT LINE		PROPOSED FIRE HYDRANT	
4240.0 PROPOSED GRADE CONTOURS		EXISTING STREET LIGHT	
4240.0 EXISTING GRADE CONTOURS		PROPOSED STREET LIGHT	
EXISTING CURB		PROPOSED PARKING LOT LIGHT	
PROPOSED CURB AND GUTTER		EXISTING WATER METER	
PROPOSED CURB WALL		EXISTING WATER VALVE	
REVERSE PAN CURB & GUTTER		EXISTING GATE VALVE	
SS EXISTING SEWER		EXISTING OVERHEAD POWER POLE	
SS PROPOSED SEWER	TBC	TOP BACK CONCRETE	
W EXISTING WATER	FF	FINISHED FLOOR	
W PROPOSED WATER	HW	HIGH WATER	
F EXISTING FIRE LINE	TOG	TOP OF GRATE	
F PROPOSED FIRE LINE	TOL	TOP OF LID	
SD EXSITING STORM DRAIN	IE	INVERT ELEVATION	
SD PROPOSED STORM DRAIN	EX	EXISTING	
RD PROPOSED ROOF DRAIN	NG	NATURAL GROUND	
G EXISTING GAS	TA	TOP OF ASPHALT	
G PROPOSED GAS	TC	TOP OF CONCRETE	
OHP EXISTING OVERHEAD POWER	EC	EDGE OF CONCRETE	
UGP EXISTING UNDERGROUND POWER	EA	EDGE OF ASPHALT	
UGP PROPOSED UNDERGROUND POWER	TOW	TOP OF WALL	
T EXISTING TELEPHONE LINE	TG	TOP OF GRAVEL	
T PROPOSED TELEPHONE LINE	TL	TOP OF LANDSCAPING	
FO EXISTING FIBER OPTIC LINE	TS	TOP OF SIDEWALK	
FO PROPOSED FIBER OPTIC LINE	PROP	PROPOSED	
PROPOSED CONCRETE	39.0	TBC CALLOUT UNLESS OTHERWISE DESIGNATED	
PROPOSED ASPHALT			
PROPOSED LANDSCAPING			



VICINITY MAP
NOT TO SCALE

SHEET INDEX

CV	COVER SHEET
C1.0	SITE PLAN
C2.0	GRADING PLAN
C2.1	DRAINAGE PLAN
C3.0	UTILITY PLAN
C4.0	DETAIL SHEET
C4.1	SEWER DETAIL SHEET
C4.2	WATER DETAIL SHEET
C4.3	APWA DETAIL SHEET
C5.0	EROSION CONTROL PLAN (SWPPP)
C5.1	EROSION CONTROL DETAIL SHEET

PROJECT CONSTRUCTION NOTES:

1. CONTRACTOR TO NOTIFY BLUE STAKES PRIOR TO CONSTRUCTION, 1-800-662-4111.
2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. SEE SOILS REPORT FOR PAVEMENT SECTION DETAILS, INSTALLATION SPECIFICATIONS AND ALL SITE EARTHWORK REQUIRMENTS.
4. ALL ACCESSIBLE ROUTES AND ACCESSIBLE MEANS OF EGRESS ROUTES, THE MAXIMUM SLOPE SHALL NOT EXCEED 5% AND THE CROSS SLOPE SHALL NOT EXCEED 2%. ALL EXTERIOR LANDINGS AT DOORS SHALL NOT EXCEED 2% SLOPE.
5. ALL HANDICAP PARKING STALLS TO BE INSTALLED PER ADA STANDARDS. SLOPE ON ANY ADA STALL IS TO BE LESS THAN 2% IN ALL DIRECTIONS.
6. CONTRACTOR TO VERIFY PRIOR TO ANY CONSTRUCTION THAT THE BUILDING AND BUILDING LOCATION SHOWN ON CIVIL DRAWINGS MATCHES THE ARCHITECTURAL PLANS.
7. CONTRACTOR TO VERIFY, WITH ARCHITECT, THAT F.F. ELEVATION SHOWN ON CIVIL PLANS EQUALS THE ARCHITECTS 100.0' ELEVATION.
8. CONTRACTOR TO REPLACE IN KIND ANY AREAS THAT ARE DAMAGED DURING CONSTRUCTION.
9. INSTALL ALL SIDEWALKS PER APWA PLAN NO. 231.
10. INSTALL ALL CONCRETE PAVEMENT JOINTS PER APWA PLAN NO. 261.
11. ALL STORM DRAIN PIPES SHALL BE BACKFILLED WITH SELECT GRANULAR FILL PER APWA STANDARDS AND SPECIFICATIONS.
12. ALL CATCH BASINS AND STORM DRAIN MANHOLES TO BE INSTALLED PER APWA STANDARDS.
13. ALL STORM DRAIN PIPING TO BE CUT OFF FLUSH WITH INSIDE WALL OF DRAINAGE BOX. INSIDE WALL TO BE GROUTED SMOOTH WITH A NON-SHRINK GROUT.
14. FOR STORM DRAIN INLET BOXES AND MANHOLES THE I.E. IN AND I.E. OUT ELEVATIONS ARE THE SAME UNLESS OTHERWISE CALLED OUT ON THE PLANS
15. ALL WATER AND SEWER TO BE INSTALLED PER TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT STANDARDS.
16. ALL WATER LINES TO HAVE A MINIMUM 3.5' OF COVER WITH A MINIMUM VERTICAL CLEARANCE OF 1' OF COVER BETWEEN OTHER UTILITY LINES (1.5' VERTICAL SEPARATION WITH SEWER). IF THERE ARE CONFLICT, PRE-FAB STEEL LOOPS WILL BE REQUIRED.
17. THRUST BLOCKS TO BE INSTALLED PER TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT STANDARDS. SEE DETAIL SHEET C4.2.
18. CONTRACTOR SHALL COORDINATE CONSTRUCTION AND INSTALLATION OF ELECTRICAL, TELEPHONE, NATURAL GAS AND CABLE TV SERVICES WITH THE RESPECTIVE UTILITY COMPANY.
19. THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITY PIPES, LINES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED AND SHOWN FROM SURVEYED INFORMATION AND EXISTING UTILITY LOCATIONS PROVIDED BY OTHERS. THERE IS NO GUARANTEE THAT ALL EXISTING UTILITY INFORMATION IS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING BLUE STAKES AND FIELD VERIFYING THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY PIPES, LINES AND STRUCTURES, PRIOR TO CONSTRUCTION.
20. ANY OFF SITE DAMAGE TO EXISTING ASPHALT, CURB & GUTTER, LANDSCAPING AND ALL UTILITIES TO BE REPLACED IN KIND.

CIVIL ENGINEER:

CIR | CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

ARCHITECT:

AE URBIA
909 W SOUTH JORDAN PARKWAY
SOUTH JORDAN, UTAH 84095
CONTACT PERSON: ANDREW BOLLSCHWEILER
PH: (801) 746-0456

NO	REVISIONS	BY	DATE
1	CITY COMMENTS	RGW	07/10/23
2	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIR | CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

COVER SHEET

LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO.
CV

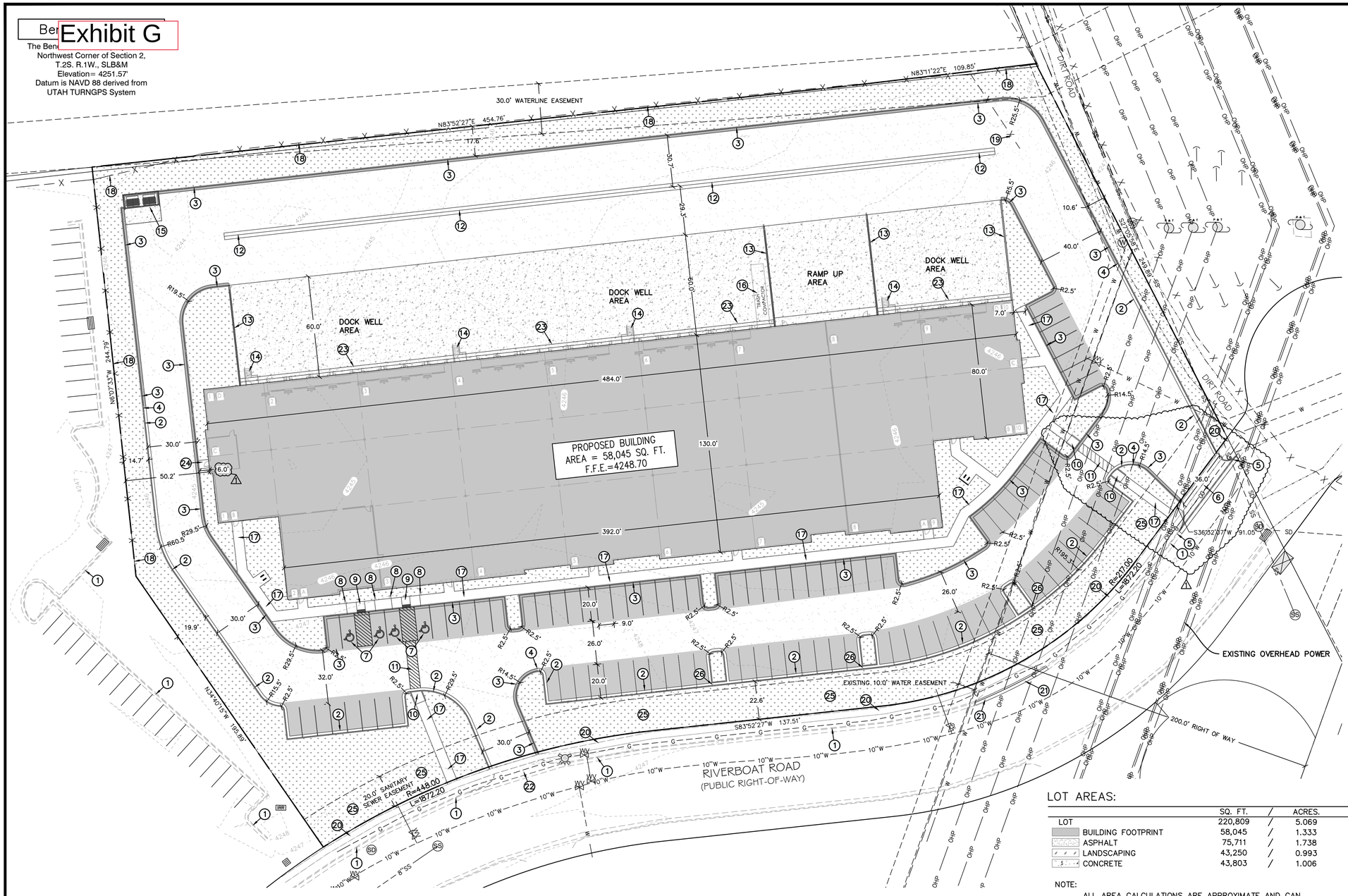
PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE:

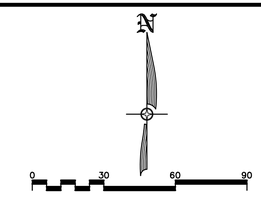
Blue Stakes of UTAH 811 Bluestakes.org

C:\

Exhibit G

The Bench
Northwest Corner of Section 2,
T.2S. R.1W., SLB&M
Elevation= 4251.57'
Datum is NAVD 88 derived from
UTAH TURNGPS System

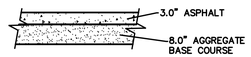




SEE COVER SHEET FOR PROJECT LEGEND

SHEET LEGEND

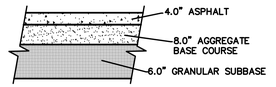
- PROPOSED LIGHT ASPHALT 16,873 SQ. FT.
- PROPOSED HEAVY ASPHALT 58,926 SQ. FT.
- PROPOSED HEAVY CONCRETE 27,658 SQ. FT.



OVER SUITABLE NATURAL SOILS, PROPERLY PREPARED EXISTING FILLS, AND/OR STRUCTURAL SITE GRADING FILL EXTENDING TO SUITABLE NATURAL SOILS.

LIGHT ASPHALT PAVEMENT

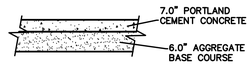
N.T.S.



OVER PROPERLY PREPARED NON-ENGINEERED FILLS, SUITABLE NATURAL SOILS AND/OR STRUCTURAL SITE GRADING FILL EXTENDING TO SUITABLE NATURAL SOILS.

HEAVY ASPHALT PAVEMENT

N.T.S.



OVER SUITABLE NATURAL SOILS, AND/OR STRUCTURAL SITE GRADING FILL EXTENDING TO SUITABLE NATURAL SOILS. (RIGID PAVEMENTS MUST NOT BE ESTABLISHED OVER NON-ENGINEERED FILLS.

HEAVY CONCRETE PAVEMENT

N.T.S.

PAVEMENT SECTIONS ARE PER THE JANUARY 6TH, 2023 GEOTECHNICAL STUDY BY GSH (JOB NO 0860-025-22). CONTRACTOR TO INSTALL ALL PAVEMENT PER THE GEOTECH REPORT.

LOT AREAS:

		SQ. FT.	/	ACRES.
LOT		220,809	/	5.069
	BUILDING FOOTPRINT	58,045	/	1.333
	ASPHALT	75,711	/	1.738
	LANDSCAPING	43,250	/	0.993
	CONCRETE	43,803	/	1.006

NOTE:
1. ALL AREA CALCULATIONS ARE APPROXIMATE AND CAN CHANGE DUE TO CONSTRUCTION TOLERANCES.

LOT LANDSCAPING AREAS:

	SQ. FT.		
TOTAL LANDSCAPING PROVIDED	43,250	19.59 % PROVIDED	

NOTES:
1. LANDSCAPED AREAS DO NOT INCLUDE HARD SURFACE AREAS(WALKWAYS, BIKE RACKS, CURB & GUTTERS).
2. ALL AREA CALCULATIONS ARE APPROXIMATE AND CAN CHANGE DUE TO CONSTRUCTION TOLERANCES.

LOT PARKING REQUIREMENTS:

	SQ. FT.		CITY REQ'T
OFFICE	7,500	38	(5/1000 SQ. FT.)
WAREHOUSE	50,545	51	(1/1000 SQ. FT.)
TOTAL REQUIRED	88		
TOTAL PROVIDED	94		
ACCESSIBLE SPACES	4	(4 REQ'D 76 TO 100)	

NOTE:
1. ALL AREA CALCULATIONS ARE APPROXIMATE AND CAN CHANGE DUE TO CONSTRUCTION TOLERANCES.

SITE PLAN KEYNOTES:

1. EXISTING CURB & GUTTER, TO REMAIN.
2. INSTALL 24" CATCH CURB & GUTTER, SEE DETAIL 1/C4.0.
3. INSTALL 24" REVERSE PAN CURB & GUTTER, SEE DETAIL 2/C4.0.
4. CONTRACTOR TO PROVIDE SMOOTH TRANSITION BETWEEN CURB & GUTTER AND REVERSE PAN CURB & GUTTER.
5. CONTRACTOR TO PROVIDE SMOOTH TRANSITION BETWEEN PROPOSED AND EXISTING CURB & GUTTER.
6. INSTALL DRIVE APPROACH PER APWA STD. PLAN NO. 225. CONCRETE PAVING TO POINT OF CURVATURE. SEE DETAIL ON SHEET C4.3.
7. INSTALL ADA PARKING STALLS PER ADA STANDARDS. SLOPES TO BE LESS THAN 2% IN ALL DIRECTIONS. SEE DETAIL 10/C4.0.
8. INSTALL ADA SIGN BEHIND SIDEWALK. SEE DETAIL 11/C4.0
9. INSTALL PEDESTRIAN ACCESS RAMP PER CITY AND ADA STANDARDS. SEE DETAIL 4/C4.0.
10. INSTALL PEDESTRIAN ACCESS RAMP PER CITY AND ADA STANDARDS. SEE DETAIL 5/C4.0.
11. INSTALL PAINTED PEDESTRIAN CROSSWALK.
12. PROPOSED 4' CONCRETE ROLL GUTTER. SEE DETAIL 3/C4.0
13. INSTALL DOCK WALL. SEE STRUCTURAL PLANS FOR DETAILS.
14. INSTALL STAIR SECTION. SEE ARCHITECTURAL PLANS FOR DETAILS.
15. INSTALL TRASH ENCLOSURE W/TWO DUMPSTERS. ONE DUMPSTER TO BE DESIGNATED FOR RECYCLING. SEE ARCHITECTURAL SHEET A100 FOR DETAILS.
16. PROPOSED TRASH COMPACTOR LOCATION.
17. INSTALL CONCRETE SIDEWALK PER APWA STD. PLAN NO. 231. SEE DETAIL ON SHEET C4.3.
18. EXISTING FENCE, TO REMAIN.
19. EXISTING FENCE, TO BE REMOVED.
20. EXISTING 4' PUBLIC SIDEWALK, TO REMAIN.
21. REMOVE EXISTING DRIVE APPROACH. INSTALL 30" CURB & GUTTER PER APWA STD. PLAN NO. 205. SEE DETAIL ON SHEET C4.3.
22. EXISTING DRIVE APPROACH, TO REMAIN.
23. INSTALL 4' WIDE CONCRETE WARPED ROLL GUTTER. SEE DETAIL 9/C4.0. SEE SHEET C2.0 FOR GRADING OF ROLL GUTTER.
24. INSTALL 5'X5' CONCRETE LANDING PAD. SLOPES TO BE UNDER 2% IN ALL DIRECTIONS.
25. PROPOSED BERM ALONG FRONTAGE. SEE SHEET C2.0 FOR GRADING OF BERM
26. INSTALL CONCRETE THROUGH GUTTER. SEE DETAIL 12/C4.0.

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS		RGW 07/10/23
2.	CITY COMMENTS		RGW 08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6298

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

SITE PLAN

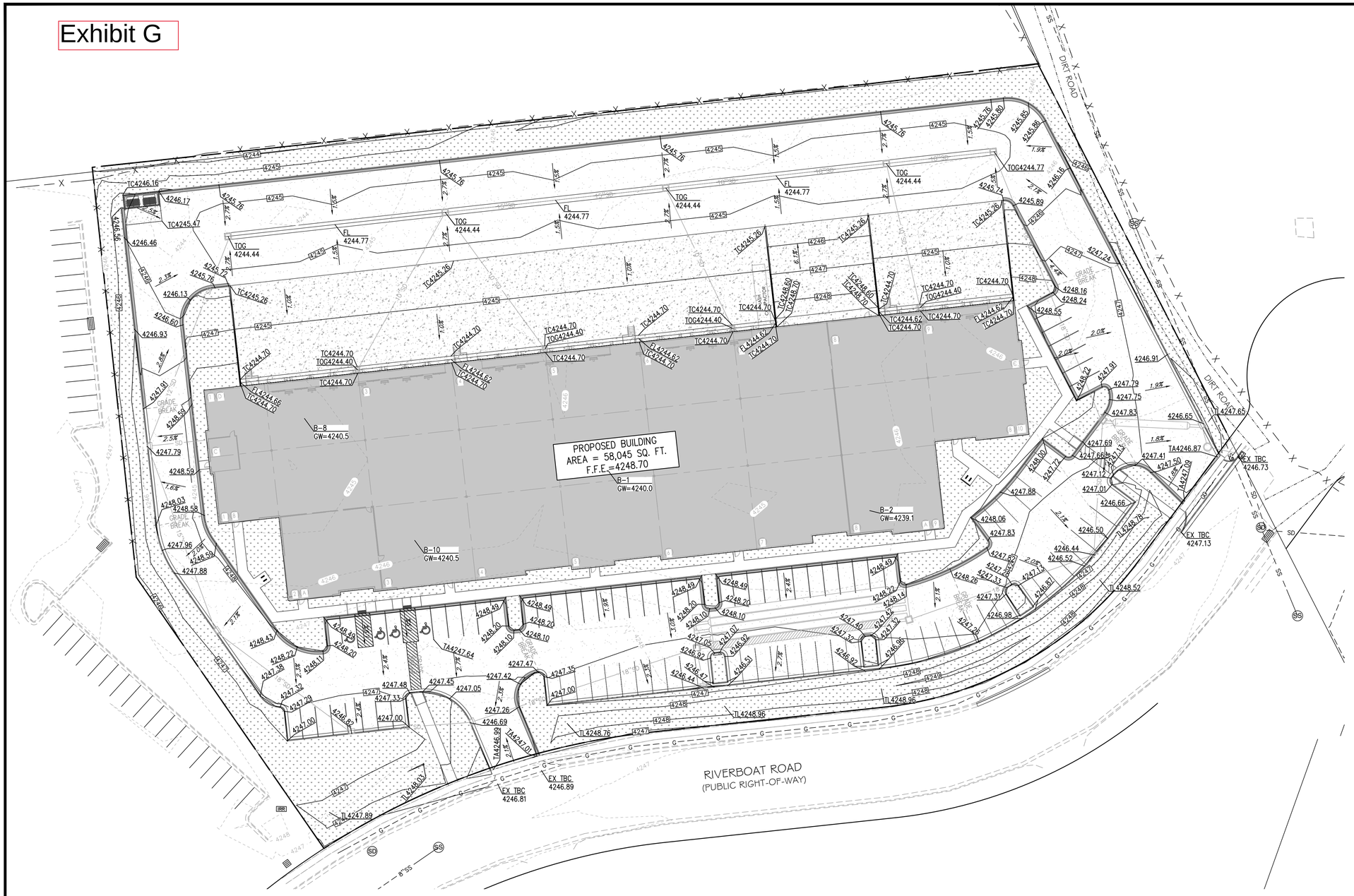
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

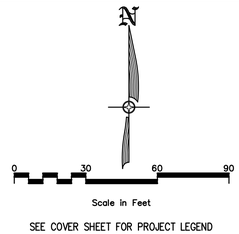
Blue Stakes of UTAH 811
Bluestakes.org

SHEET NO.
C1.0

PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE: 1"=30'

Exhibit G





SEE COVER SHEET FOR PROJECT LEGEND

NO.	REVISIONS	BY	DATE
1	CITY COMMENTS	RGW	07/10/23
2	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6298

KESSIMAKIS PRODUCE 4156

4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

GRADING PLAN

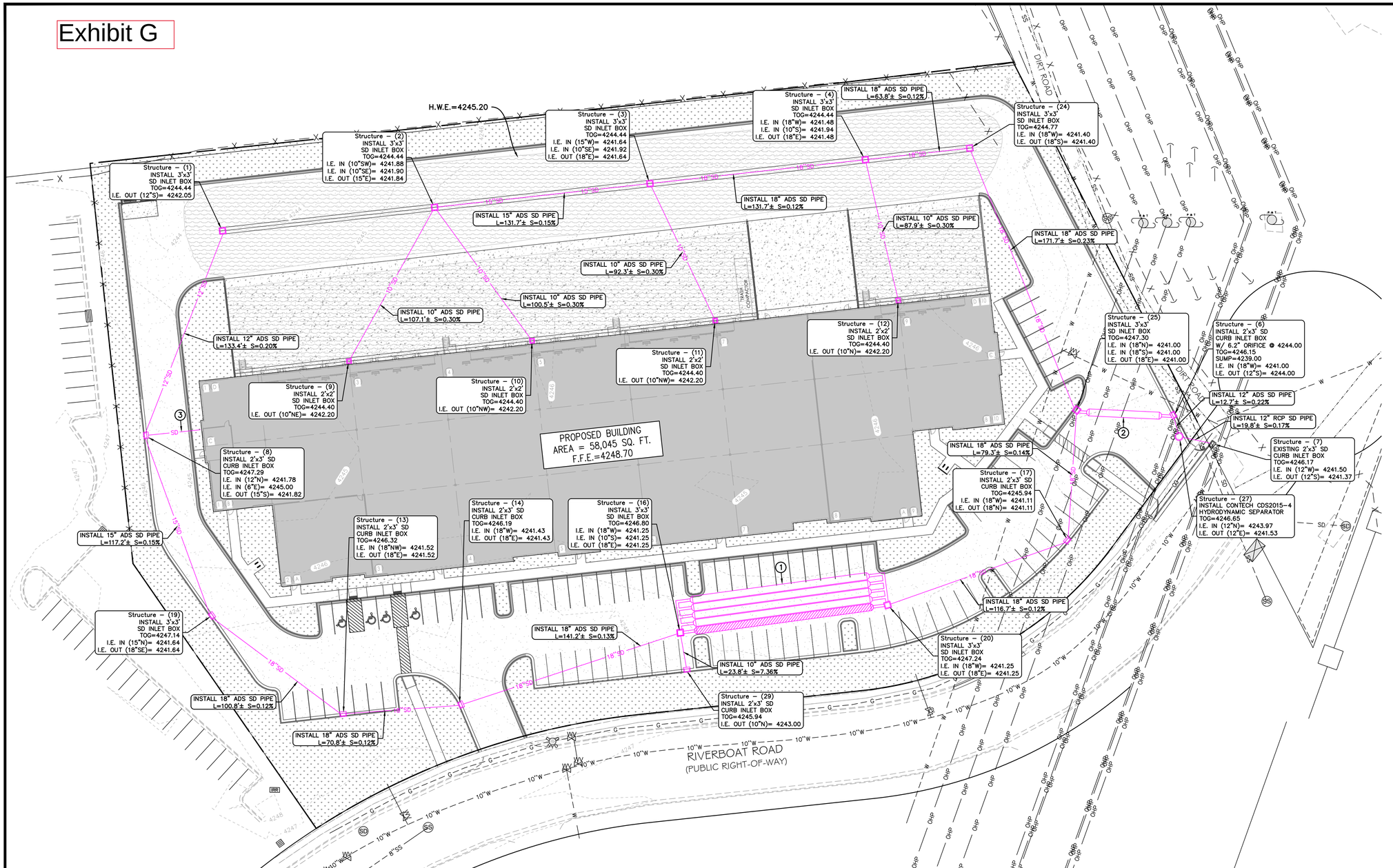
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

Blue Stakes of UTAH 811
Bluestakes.org

SHEET NO.
C2.0

PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE: 1"=30'

Exhibit G



0 30 60 90

Scale in Feet

SEE COVER SHEET FOR PROJECT LEGEND

SHEET LEGEND

DETENTION AREA

DRAINAGE PLAN NOTES:

① INSTALL FIVE ROWS OF 15 STORMTECH SC-740 UNDERGROUND CHAMBERS, 75 CHAMBERS TOTAL. RETENTION VOL PROVIDED = 5,970 CF. BOTTOM OF CHAMBERS TO BE SET AT 4241.25. CHAMBERS TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS. SEE SHEET C4.0 FOR DETAILS.

② INSTALL ONE ROW OF 6 STORMTECH SC-740 UNDERGROUND CHAMBERS. VOL PROVIDED = 570 CF. BOTTOM OF CHAMBERS TO BE SET AT 4241.00. CHAMBERS TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS. SEE SHEET C4.0 FOR DETAILS.

③ INSTALL 25' OF 6" ADS ROOF DRAIN PIPE. MIN SLOPE=2.0%. SEE MECHANICAL PLANS FOR CONTINUATION TO BUILDING.

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS		RGW 07/10/23
2.	CITY COMMENTS		RGW 08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156

4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

DRAINAGE PLAN

LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

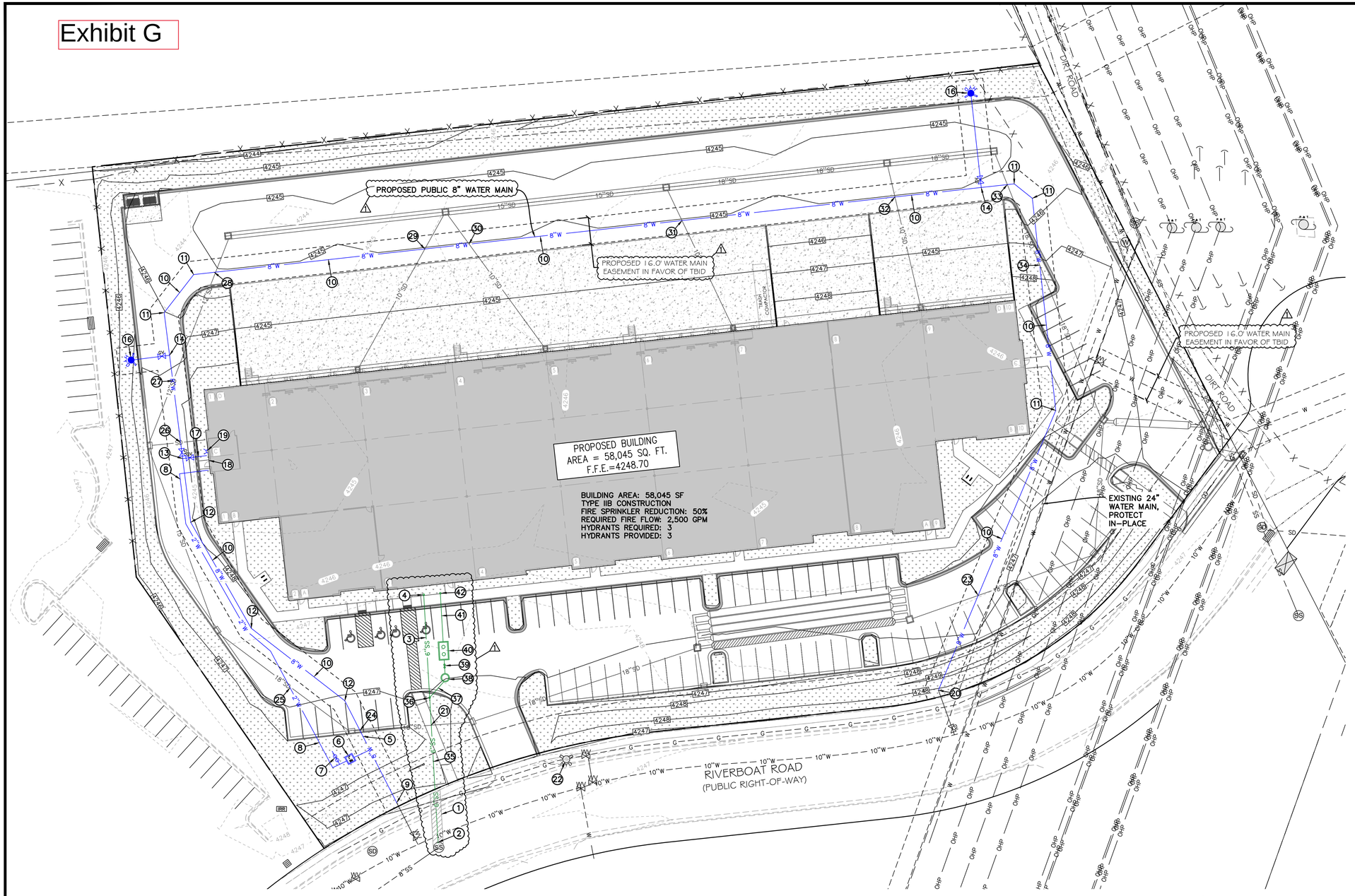
Blue Stakes of UTAH 811
Bluestakes.org

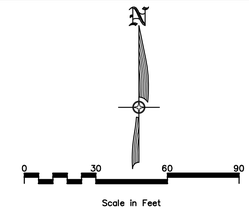
SHEET NO. C2.1

PROJECT ID	DATE
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE: 1"=30'

C2.1

Exhibit G





SEE COVER SHEET FOR PROJECT LEGEND

UTILITY NOTES:
ALL UTILITIES MUST MEET HORIZONTAL AND VERTICAL CLEARANCE REQUIREMENTS. WATER AND SEWER LINES REQUIRE 10 FEET MINIMUM HORIZONTAL SEPARATION AND 18 INCHES MINIMUM VERTICAL SEPARATION. SEWER MUST MAINTAIN 5 FEET MINIMUM HORIZONTAL SEPARATION AND 12 INCHES VERTICAL SEPARATION FROM ANY NON-WATER UTILITIES. WATER MUST MAINTAIN 3 FEET MINIMUM HORIZONTAL SEPARATION AND 12 INCHES VERTICAL SEPARATION FORM ANY NON-SEWER UTILITIES.

IRRIGATION SLEEVING NOTE:
CONTRACTOR TO REFER TO IRRIGATION PLANS FOR IRRIGATION SLEEVING LOCATIONS. ALL SLEEVING TO BE INSTALLED PRIOR TO PAVING.

1. SAWCUT EXISTING ASPHALT FOR UTILITY TRENCH & REPAIR IN KIND PER APWA STD PLAN NO. 255. SEE DETAIL ON SHEET C4.3.
2. CONNECT TO EXISTING SEWER MANHOLE PER TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT (TBID) STANDARDS. SEE SHEET C4.1 FOR DETAILS I.E.(8" OUT)=4639.38, I.E.(6"IN)=4639.48
3. INSTALL 64'± OF 6" PVC SDR-35 SEWER PIPE. S=1.0%
4. INSTALL CLEANOUT 5' FROM BUILDING PER TBID STANDARDS. TOL=MATCH TOP OF PROPOSED LANDSCAPE (4248.60±). I.E.=4640.96 SEE MECHANICAL PLAN FOR CONTINUATION TO BUILDING.
5. CONNECT TO EXISTING 10" WATER MAIN (HOT TAP) AND INSTALL 2" CULINARY WATER LATERAL PER TBID STANDARDS. SEE DETAIL ON SHEET C4.2.
6. INSTALL 2" CULINARY WATER METER PER TBID STANDARDS. SEE DETAIL ON SHEET C4.2.
7. INSTALL 2" IRRIGATION STUB. SEE IRRIGATION PLANS FOR CONTINUATION TO BACKFLOW PREVENTER.
8. INSTALL 2" POLY CULINARY WATER LATERAL W/BENDS. END PIPE 5' FROM BUILDING AND SEE MECHANICAL PLANS FOR CONTINUATION TO BUILDING.
9. CONNECT TO EXISTING 8" FIRE STUB PER TBID STANDARDS. SEE DETAIL ON SHEET C4.2.
10. INSTALL 8" PVC C-900 FIRE LINE PER TBID STANDARDS. MINIMUM COVERAGE=3.5'.
11. INSTALL 8" 45° BEND W/ THRUST BLOCK.
12. INSTALL 8" 22.5° BEND W/ THRUST BLOCK.
13. INSTALL 8" TEE & TWO 8" GATE VALVE W/THRUST BLOCKS.
14. INSTALL 8"X6" TEE & 6" GATE VALVE W/THRUST BLOCKS.
16. INSTALL FIRE HYDRANT PER TBID STANDARDS. SEE DETAIL ON SHEET C4.2.
17. INSTALL 8" PVC C-900 FIRE LINE. END 5' FROM BUILDING AND SPRINKLER PLAN FOR CONTINUATION INTO FIRE RISER ROOM. PRIOR TO WATER LINE INSTALLATION, CONTRACTOR TO VERIFY THAT ENTRANCE LOCATION MATCHES FIRE SPRINKLER PLAN LOCATION.
18. INSTALL KNOX BOX 1650 OR 3200 SERIES FOR FIRE DEPARTMENT ACCESS
19. PROPOSED WALL MOUNTED FDC. SEE FIRE SPRINKLER PLANS FOR DETAILS.
20. CONNECT TO EXISTING 8" WATER STUB AND INSTALL 8" FIRE LINE LATERAL AND 45° BEND W/ THRUST BLOCK. SEE DETAIL ON SHEET C4.2.
21. I.E.(8"SS)=4239.76, I.E.(18"SD)=4241.46, SEPARATION=1.0'
22. EXISTING FIRE HYDRANT, TO REMAIN.
23. I.E.(18"SD)=4241.19, I.E.(8"W)=4243.20, SEPARATION=0.51'
24. I.E.(18"SD)=4241.52, I.E.(8"W)=4239.35, SEPARATION=1.00'. INSTALL WATER LOOP PER TBID STD PLAN TB-210. SEE SHEET C4.2 FOR DEATIL.
25. I.E.(18"SD)=4241.54, I.E.(2"W)=4243.50, SEPARATION=0.5'
26. I.E.(6"SD)=4245.95, I.E.(8"W)=4244.28, SEPARATION=1.0'
27. I.E.(12"SD)=4241.88, I.E.(8"W)=4243.20, SEPARATION=0.32'
28. I.E.(12"SD)=4242.01, I.E.(8"W)=4240.34, SEPARATION=1.0'
29. I.E.(10"SD)=4241.96, I.E.(8"W)=4240.25, SEPARATION=1.04'
30. I.E.(10"SD)=4241.92, I.E.(8"W)=4240.25, SEPARATION=1.00'
31. I.E.(10"SD)=4241.98, I.E.(8"W)=4240.25, SEPARATION=1.06'
32. I.E.(10"SD)=4242.00, I.E.(8"W)=4240.25, SEPARATION=1.08'
33. I.E.(18"SD)=4241.36, I.E.(8"W)=4240.20, SEPARATION=0.50'
34. I.E.(18"SD)=4241.23, I.E.(8"W)=4243.23, SEPARATION=0.5'
35. INSTALL 84'± OF 6" PVC SDR-35 SEWER PIPE. S=1.0%
36. INSTALL CLEANOUT & 45°WYE PER TBID STANDARDS. TOL=MATCH TOP OF PROPOSED LANDSCAPE (4247.32±). I.E.=4640.32
37. INSTALL 13'± OF 6" PVC SDR-35 SEWER PIPE. S=1.0%
38. INSTALL 4' SAMPLING MANHOLE PER TBID STANDARDS. SEE DETAIL TB-110 ON SHEET C4.1. TOL=MATCH TOP OF ASPHALT (4247.02±). I.E.(IN)=4240.55, I.E.(OUT)=4240.45.
39. INSTALL 8.5'± OF 6" PVC SDR-35 SEWER PIPE BETWEEN SAMPLING MANHOLE AND GREASE INTERCEPTOR W/ DOUBLE SWEEP CLEANOUTS. S=1.0%. SEE DETAIL TB-110 ON SHEET C4.1.
40. INSTALL 1500' GAL GREASE INTERCEPTOR PER TBID STANDARDS. SEE DETAIL TB-110 ON SHEET C4.1. TOL=MATCH TOP OF ASPHALT (4247.44±). I.E.(IN)=4240.54, I.E(OUT)=4241.04.
41. INSTALL 29'± OF 6" PVC SDR-35 SEWER PIPE. S=1.0%
42. INSTALL CLEANOUT 5' FROM BUILDING PER TBID STANDARDS. TOL=MATCH TOP OF PROPOSED LANDSCAPE (4248.60±). I.E.=4641.43 SEE MECHANICAL PLAN FOR CONTINUATION TO BUILDING.

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS		RGW 07/10/23
2.	CITY COMMENTS		RGW 08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIR | CIVIL ENGINEERING + SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123
UTILITY PLAN

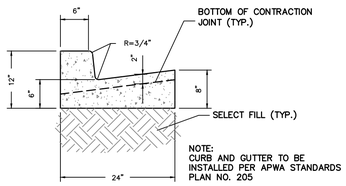
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO.
C3.0

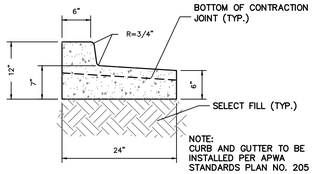
PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE: 1"=30'

Blue Stakes of UTAH 811 Bluestakes.org

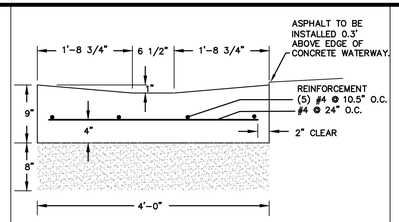
Exhibit G



1 | 24" CURB & GUTTER
N.T.S.

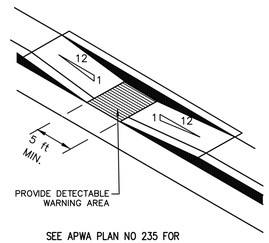


2 | 24" REVERSE PAN CURB & GUTTER
N.T.S.



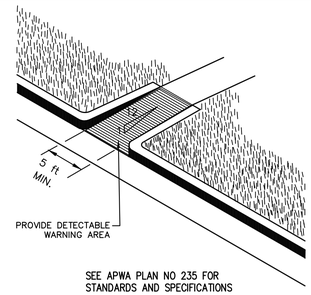
NOTE:
1. PER APWA PLAN NO. 211
2. ASPHALT PAVEMENT SECTION TO BE INSTALLED AT 0.03' HIGHER THAT THE TOP EDGE OF THE CONCRETE ROLL GUTTER, BOTH SIDES.

3 | 4'-0" ROLL GUTTER
N.T.S.



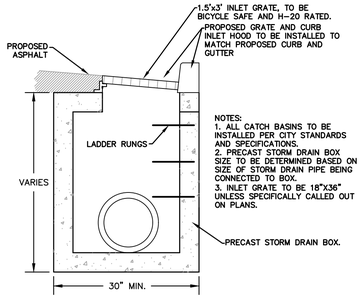
SEE APWA PLAN NO 235 FOR STANDARDS AND SPECIFICATIONS

4 | ADA RAMP
N.T.S.

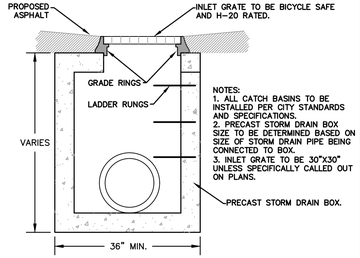


SEE APWA PLAN NO 235 FOR STANDARDS AND SPECIFICATIONS

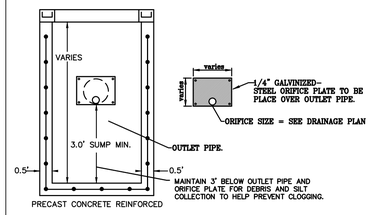
5 | ADA RAMP
N.T.S.



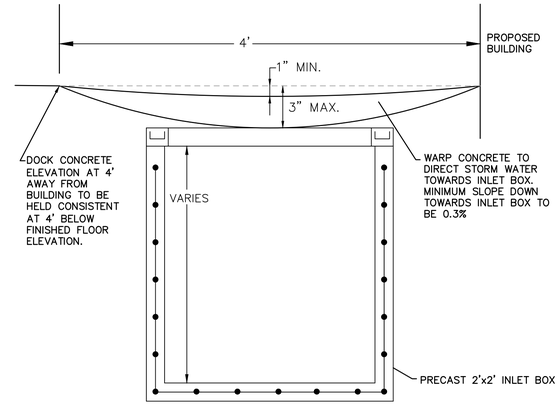
6 | STANDARD STORM DRAIN CURB INLET BOX
N.T.S.



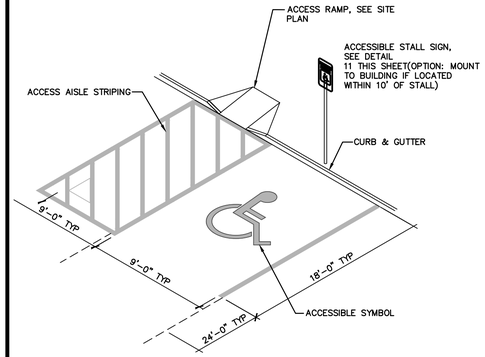
7 | STANDARD STORM DRAIN INLET BOX
N.T.S.



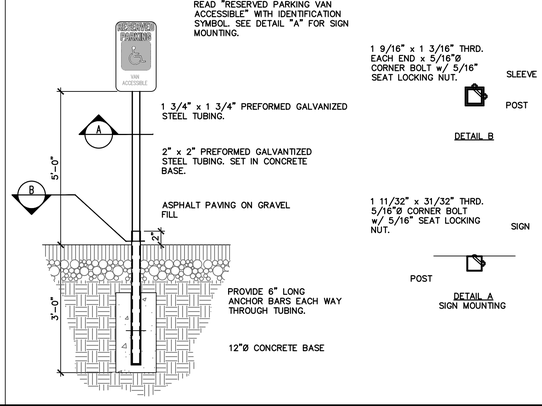
8 | ORIFICE PLATE
N.T.S.



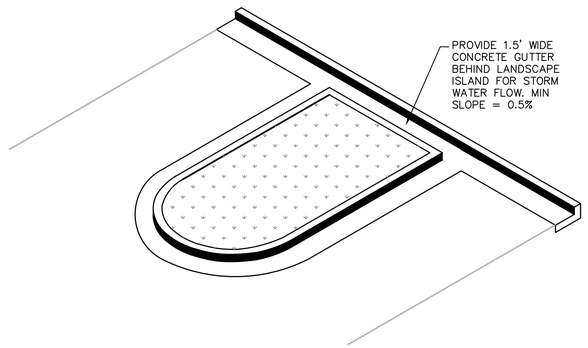
9 | DOCK WARPED ROLL GUTTER DETAIL
N.T.S.



10 | ACCESSIBLE PARKING STALL
N.T.S.



11 | HANDICAPPED PARKING SIGN
N.T.S.



12 | CONCRETE THROUGH GUTTER
N.T.S.



CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS		RDW 07/10/23
2.	CITY COMMENTS		RDW 08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

DETAIL SHEET

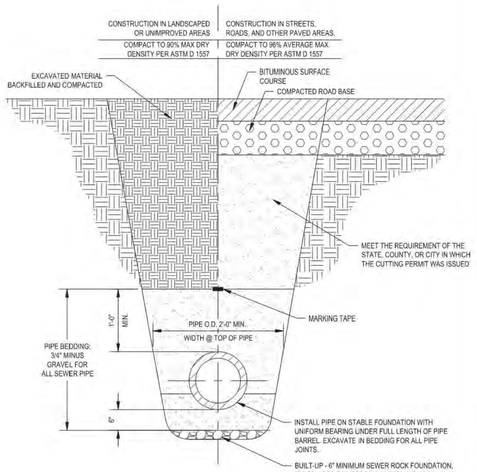
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO.
C4.0

PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE:

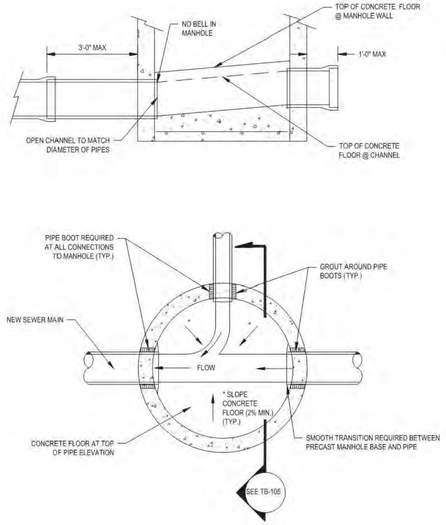
Blue Stakes of UTAH 811
Bluestakes.org

Exhibit G



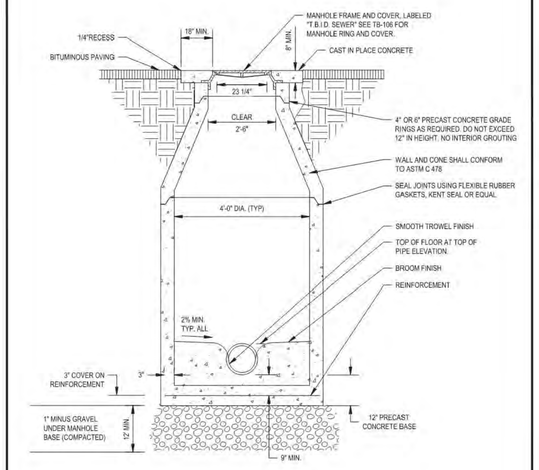
UPDATED DEC 2022

TYPICAL SEWER TRENCH — NOT TO SCALE — **TB-101** PAGE 2 OF 2



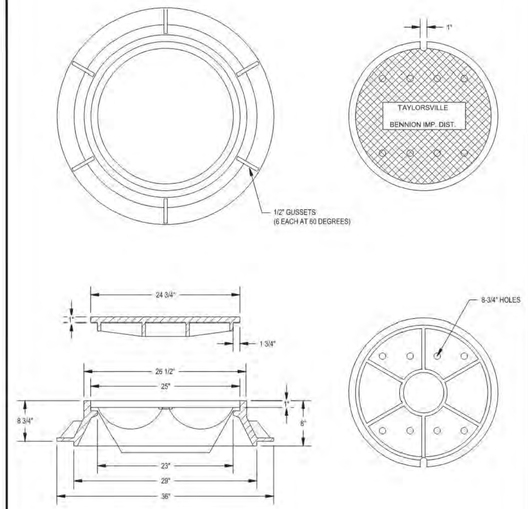
UPDATED DEC 2022

TYPICAL PRECAST MANHOLE — NOT TO SCALE — **TB-104** PAGE 2 OF 2



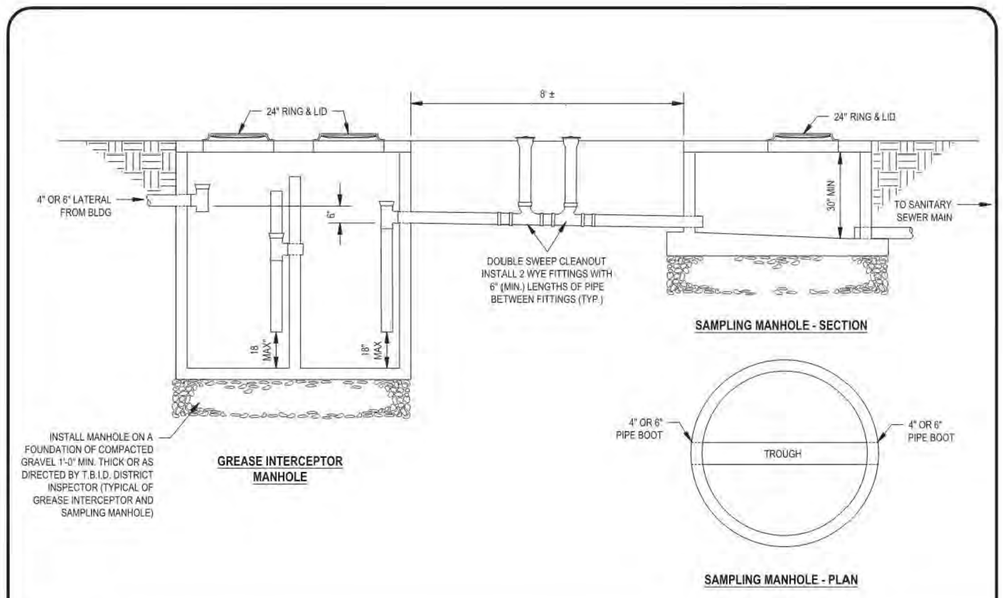
UPDATED DEC 2022

TYPICAL MANHOLE SECTION — NOT TO SCALE — **TB-105** PAGE 2 OF 2



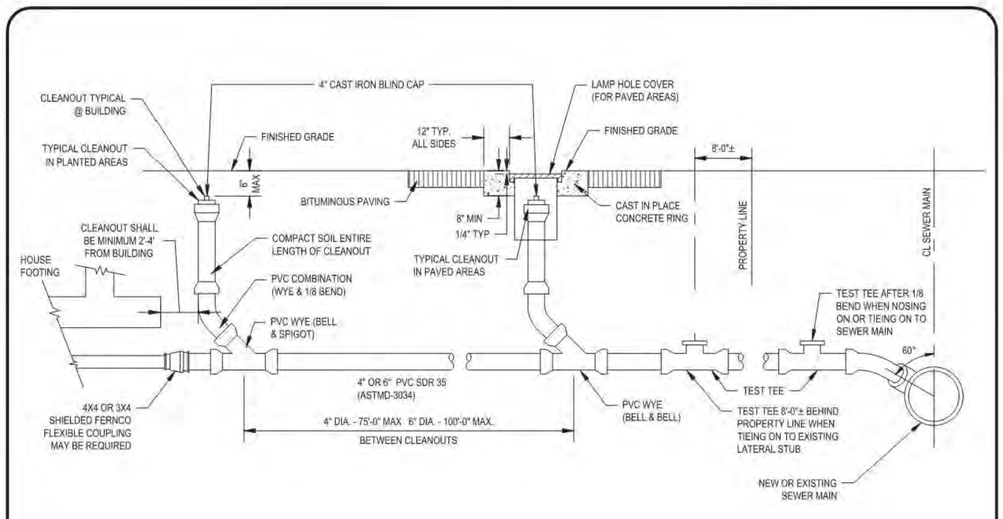
UPDATED DEC 2022

MANHOLE RING AND COVER — NOT TO SCALE — **TB-106** PAGE 2 OF 2



UPDATED DEC 2022

SAMPLING MANHOLE/GREASE INTERCEPTOR — NOT TO SCALE — **TB-110** PAGE 2 OF 2



UPDATED DEC 2022

TYPICAL SEWER LATERAL — NOT TO SCALE — **TB-102** PAGE 2 OF 2

NO	REVISIONS	BY	DATE
1	CITY COMMENTS	RGW	07/10/23
2	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123
SEWER DETAIL SHEET

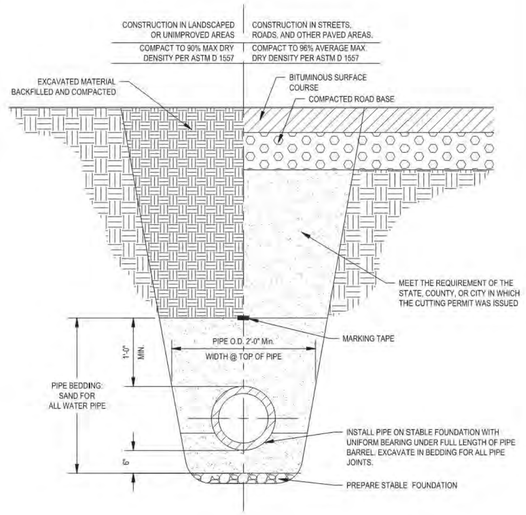
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO. C4.1

PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE:

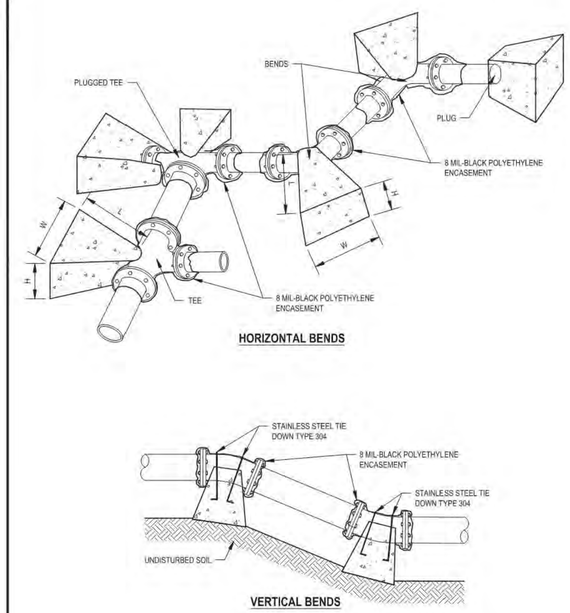
Blue Stakes of UTAH 811 — Bluestakes.org

Exhibit G



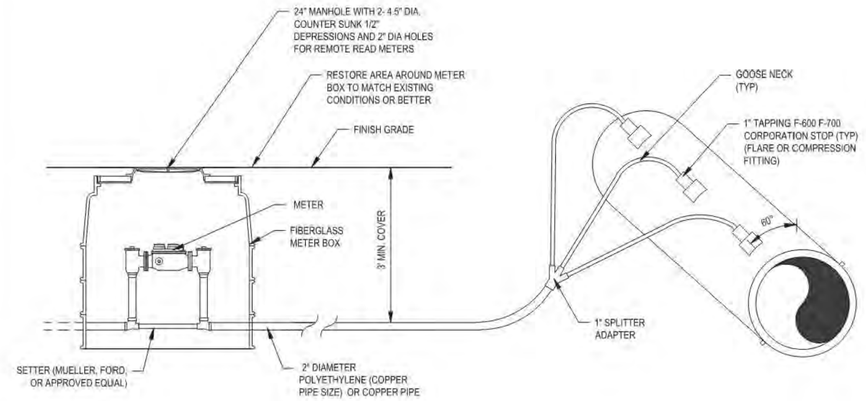
UPDATED DEC 2022

TYPICAL WATER TRENCH SECTION — NOT TO SCALE — **TB-201** PAGE 2 OF 2



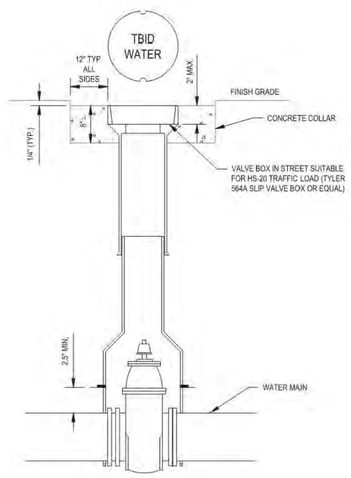
UPDATED DEC 2022

THRUST BLOCKING — NOT TO SCALE — **TB-202** PAGE 2 OF 2



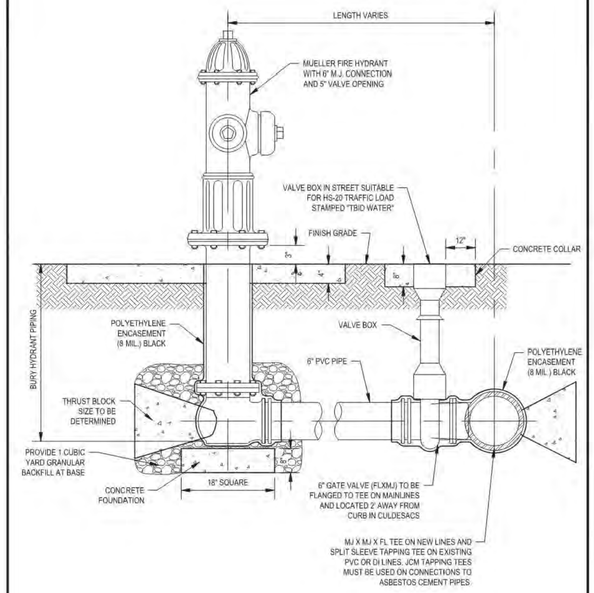
UPDATED DEC 2022

2" WATER LATERAL CONNECTION DETAIL — NOT TO SCALE — **TB-205** PAGE 2 OF 2



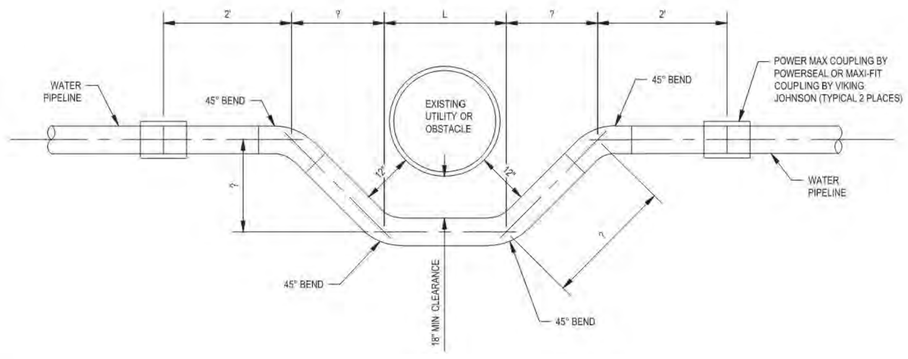
UPDATED DEC 2022

TYPICAL VALVE BOX — NOT TO SCALE — **TB-206** PAGE 2 OF 2



UPDATED DEC 2022

FIRE HYDRANT CONNECTION — NOT TO SCALE — **TB-209** PAGE 2 OF 2



UPDATED DEC 2022

PREFABRICATED STEEL LOOP — NOT TO SCALE — **TB-210** PAGE 2 OF 2

NO.	REVISIONS	BY	DATE
1	CITY COMMENTS		RGW 07/10/23
2	CITY COMMENTS		RGW 08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

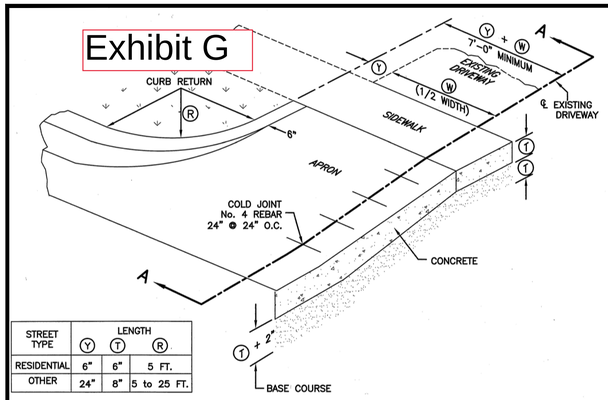
WATER DETAIL SHEET

LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO. C4.2

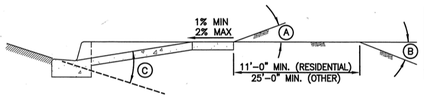
PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE:

Exhibit G



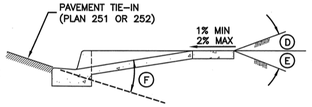
STREET TYPE	LENGTH Y	T	R
RESIDENTIAL	6"	6"	5 FT.
OTHER	24"	8"	5 to 25 FT.

OBLIQUE



STREET TYPE	BREAK OVER ANGLE (MAXIMUM) A	B	C
RESIDENTIAL	16%	12%	16%
OTHER	6%	8%	10%

SECTION A–A – APPROACH REQUIRING SERVICE TRUCK ACCESS



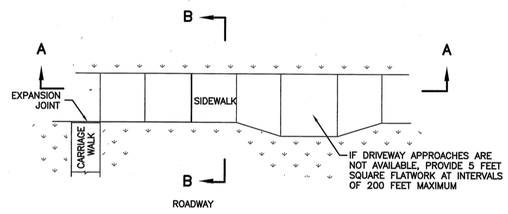
STREET TYPE	BREAK OVER ANGLE (MAXIMUM) D	E	F
RESIDENTIAL	16%	12%	16%
OTHER	6%	8%	10%

SECTION A–A – TYPICAL DRIVEWAY APPROACH

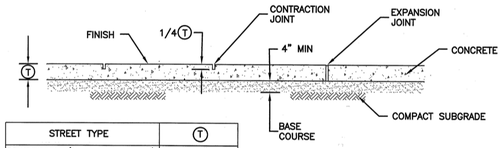
Open driveway approach

Plan **225**

December 2009 51



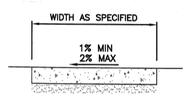
PLAN



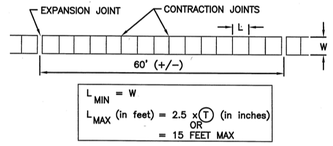
STREET TYPE	T
RESIDENTIAL (WITH PARK STRIP)	4"
RESIDENTIAL (NO PARK STRIP)	6"
OTHER	
REPLACING EXISTING SIDEWALK	MATCH EXISTING (4" MIN.)

SEE DRIVEWAY APPROACH PLANS FOR SIDEWALK THICKNESS AT DRIVEWAYS

SECTION A–A



SECTION B–B

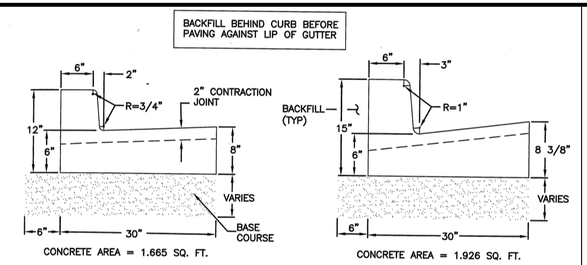


SIDEWALK JOINT DETAIL

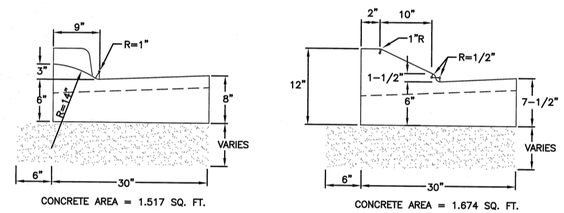
Sidewalk

Plan **231**

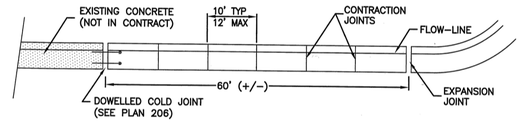
March 2009 57



Type A Type B



Type C Type D



JOINT DETAIL

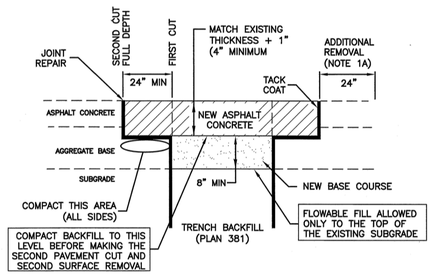
Curb and gutter

Plan **205** Sheet 1 of 3

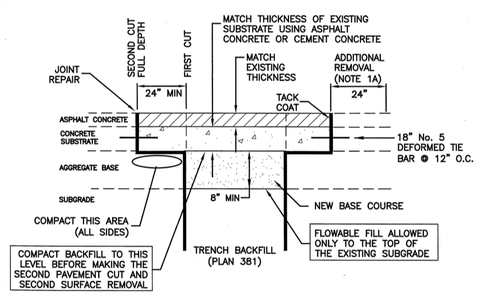
December 2008 27

SHALLOW EXCAVATION

(LESS THAN 48 INCHES FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)



ASPHALT RESTORATION



COMPOSITE RESTORATION

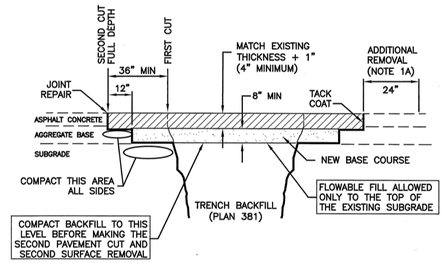
Asphalt concrete T-patch

Plan **255** Sheet 1 of 2

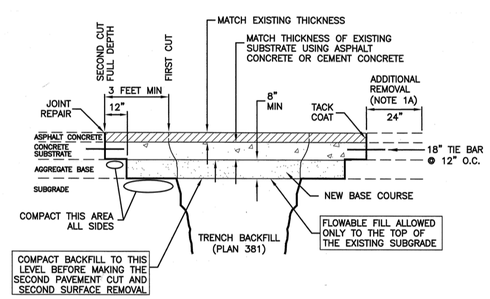
December 2010 97

DEEP EXCAVATION

(MORE THAN 48 INCHES FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)



ASPHALT RESTORATION



COMPOSITE RESTORATION

Asphalt concrete T-patch

Plan **255** Sheet 2 of 2

December 2010 99

NO.	REVISIONS	BY	DATE
1	CITY COMMENTS	RGW	07/10/23
2	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

APWA DETAIL SHEET

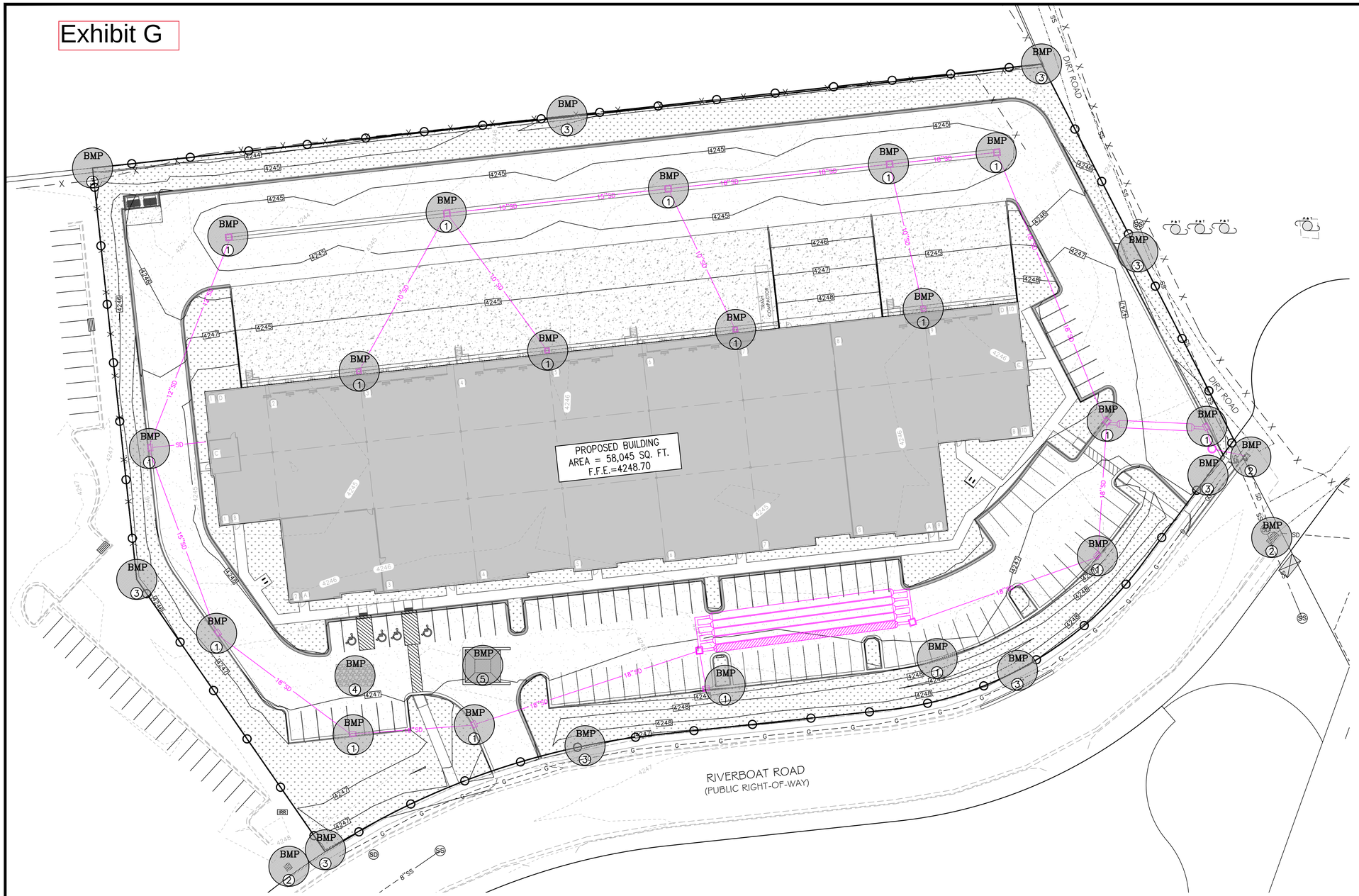
LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

SHEET NO. C4.3

PROJECT ID	DATE:
E23–066	06/06/23
FILE NAME: PRJ–TR4	SCALE:

Blue Stakes of UTAH 811 Bluestakes.org

Exhibit G



DURING CONSTRUCTION

1. ALL EROSION CONTROL BEST MANAGEMENT PRACTICES SHALL BE INSPECTED AND MAINTAINED REGULARLY (MINIMUM ONCE A WEEK) AND AFTER EVERY STORM EVENT
2. CONTRACTOR TO KEEP LAND DISTURBANCE TO MINIMUM TO CONTROL RUNOFF FROM THE SITE
3. LIMIT LAND CLEARING AND RESTORE ALL GRADING AS SOON AS POSSIBLE
4. STAGED SEEDING TO RE-VEGETATE CUT AND FILL SLOPES AS THE WORK IS IN PROGRESS
5. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND OTHER EROSION
6. MAINTENANCE OF STREET: STREETS TO BE KEPT CLEAN AND FREE FROM DEBRIS
7. CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION.
8. CONTRACTOR TO HAVE WATER TRUCK AVAILABLE AS WATER SOURCE FOR WHEEL WASH AREA, OR ALTERNATE WATER SOURCE MAY BE USED IF APPROVED BY CITY.
9. IF GROUND WATER IS ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES AND REQUIRES PUMPING OFF THE PROJECT, THE CONTRACTOR IS TO FILTER THE WATER THROUGH THE USE OF SAND BAGS AND/OR GEO FABRIC. THIS IS TO BE DONE PRIOR TO IT BEING INTRODUCED INTO THE PUBLIC STORM DRAIN SYSTEM.
10. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE KEPT ON THE SITE DURING ALL CONSTRUCTION ACTIVITY

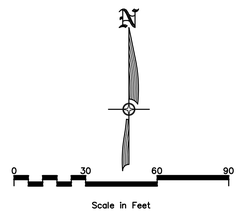
POST CONSTRUCTION

1. EROSION CONTROL STRUCTURES MAY BE REMOVED ONCE FINAL LANDSCAPING IS IN PLACE
2. EROSION CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS BEEN ESTABLISHED
3. EROSION CONTROL IN PROPOSED PAVEMENT AREAS SHALL REMAIN IN PLACE UNTIL PAVEMENT IS COMPLETE
4. THE FOLLOWING PRECAUTIONS SHALL BE PERFORMED:

A) PERIODIC INSPECTION OF CATCH BASIN SEDIMENT TRAPS AND CLEANING WHEN THE BASIN IS MORE THAN 1/4 FULL. INSPECTION SHALL BE DONE AFTER EVERY MAJOR RAINFALL AND EVERY 6 MONTHS AS A MINIMUM. DISPOSAL OF ANY GREASE OR OIL MUST BE DONE IN ACCORDANCE WITH CURRENT ENVIRONMENTAL REGULATIONS

B) LITTER, DEBRIS AND CHEMICALS MUST BE PICKED UP AND KEPT IN A CONTAINED LOCATION TO PREVENT POLLUTION OF STORM WATER DISCHARGE

C) PARKING AREAS SHALL BE KEPT FREE FROM AUTOMOBILE FLUIDS THAT COULD WASH INTO THE STORM DRAIN SYSTEM



SHEET LEGEND

SILT FENCE

WHEEL WASH AREA

BMP AREA

CONCRETE WASHOUT

BMP CALLOUTS

(1) PLACE A SILT FENCE AROUND THE PERIMETER OF THE INLET, ONCE PAVEMENT AND/OR CURB HAS BEEN INSTALLED PLACE GRAVEL BAGS AROUND THE INLET. GRAVEL BAGS TO BE USED ON PAVED OR CONCRETE SURFACES AND SILT FENCE TO BE USED ON UNIMPROVED SURFACES.
NOTE: IN HIGH TRAFFIC AREAS CONTRACTOR TO USE INSERT FILTER FABRIC. IF INLET HAS CURB OPENING, THE FILTER FABRIC IS TO BE EXTENDED UP TO COVER THE CURB OPENING AND GRAVEL BAGS PLACED IN GUTTER AT EACH SIDE OF OPENING TO KEEP FILTER FABRIC SNUG AGAINST CURB WALL.

(2) PLACE GRAVEL BAGS AS NECESSARY TO PREVENT SEDIMENT FROM DRAINING INTO EXISTING CATCH BASINS. ***SEE NOTE IN CALLOUT 1.***

(3) INSTALL TYPICAL SILT FENCE, SILT FENCE TO BE INSTALLED PERPENDICULAR TO STORM WATER FLOW. INSTALLATION TO BE DONE SO AS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
NOTE: CONTRACTOR TO USE VEGETATIVE BUFFER AND OR CUT BACK INSTEAD OF SILT FENCE WHERE POSSIBLE.

(4) CONTRACTOR TO INSTALL A MIMIMUM OF 6" DEEP GRAVEL (3" TO 6"") OF SUFFICIENT SIZE (MINIMUM OF 50' IN LENGTH AND 20' WIDE) AS TO PROVIDE A WHEEL WASH AREA TO PREVENT THE TRACKING OF MUD OFFISTE. THE LOCATION OF WHEEL WASH MAY VARY FROM LOCATION SHOWN ON PLANS SO AS TO PROVIDE THE BEST PROTECTION AGAINST TRACKING MUD OFFSITE. CONTRACTOR TO MAINTAIN AND CLEAN WHEEL WASH AREA AS NEEDED TO PREVENT THE TRACKING OF MUD OFFSITE.

(5) CONTRACTOR TO INSTALL CONCRETE WASHOUT AREA. THE LOCATION MAY VARY FROM LOCATION SHOWN ON PLANS.

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS	RGW	07/10/23
2.	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIVIL ENGINEERING +SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156

4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

EROSION CONTROL PLAN (SWPPP)

LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

Blue Stakes of UTAH 811
Bluestakes.org

SHEET NO.
C5.0

PROJECT ID	DATE:
E23-066	06/06/23
FILE NAME: PRJ-TR4	SCALE: 1"=30'

Exhibit G

ence

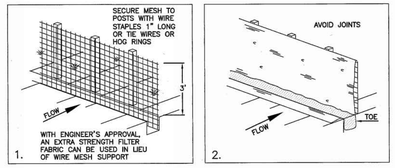
1. **GENERAL**
   A. Description. A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched.
   B. Application. To intercept sediment from disturbed areas of limited extent.
   C. Perimeter Control: Place barrier at down gradient limits of disturbance.
   D. Sediment Barrier: Place barrier at toe of slope or soil stockpile.
   E. Protection of Existing Waterways: Place barrier at top of stream bank.
   F. Inlet Protection.

2. **PRODUCTS**
   A. Fabric. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester, or polyethylene yarn. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 deg F to 120 deg F.
   B. Burlap. 10 ounces per square yard of fabric.
   C. Posts. Either 2" x 4" diameter wood, or 1.33 pounds per linear foot steel with a minimum length of 5 feet, or steel posts with projections for fastening wire to them.

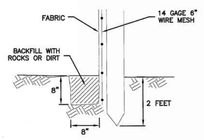
3. **EXECUTION**
   A. Cut the fabric on site to desired width, unroll, and drape over the barrier. Secure the fabric toe with rocks or dirt and secure the fabric to the mesh with twin, staples or similar devices.
   B. When attaching two silt fences together, place the end post of the second fence inside the end post of the first fence. Rotate both posts at least 180 degrees on a clockwise direction to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap.
   C. When used to control sediments from a steep slope, place silt fences away from the toe of the slope for increased holding capacity.
   D. Maintenance.
      1) Inspect immediately after each rainfall and at least daily during prolonged rainfall.
      2) Should the fabric on a silt fence or filter barrier decompose or become ineffective before the end of the expected usable life and the barrier still be necessary, replace the fabric promptly.
      3) Remove sediment deposits after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
      4) Re-anchor fence as necessary to prevent shortcutting.
      5) Inspect for runoff bypassing ends of barriers or undercutting barriers.

6

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



INSTALLATION SEQUENCE



TOE DETAIL

Silt fence

February 2006 — 7 — Plan 122

Inlet protection – fence or straw bale

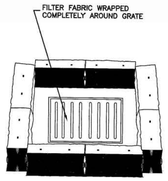
1. **GENERAL**
   A. Description. A temporary sediment barrier around storm drain inlet.
   B. Application. At inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.

2. **PRODUCT** (Not used)

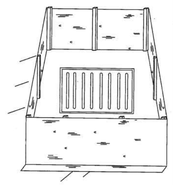
3. **EXECUTION**
   A. Installation and application criteria.
      1) Provide up gradient sediment controls, such as silt fence during construction of inlet.
      2) When construction of inlet is complete erect straw bale barrier, silt fence or other approved sediment barrier surrounding perimeter of inlet.
      3) Install filter fabric completely around grate.
   B. Maintenance.
      1) Inspect inlet protection after every large storm event and at a minimum of once monthly.
      2) Remove sediment accumulated when it reaches 4-inches in depth.
      3) Repair or re-align barrier or fence as needed.
      4) Look for bypassing or undercutting and re-compact soil around barrier or fence as required.

14

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



STRAW BALE BARRIER
(PLAN No. 121)



SILT FENCE
(PLAN No. 122)

Inlet protection - fence or straw bale

February 2006 — 15 — Plan 124 Sheet 3 of 3

Stabilized roadway entrance

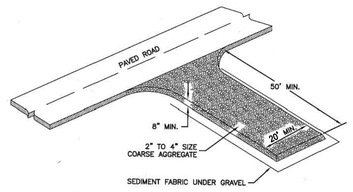
1. **GENERAL**
   A. Description. A temporary stabilized pad of gravel for controlling equipment and construction vehicle access to the site.
   B. Application. At any site where vehicles and equipment enter the public right of way.

2. **PRODUCT** (Not used)

3 **EXECUTION**
   A. Clear and grub area and grade to provide maximum slope of 1 percent away from paved roadway.
   B. Compact subgrade.
   C. Place filter fabric under stone if desired (recommended for entrance area that remains more than 3 months).
   D. Maintenance.
      1) Prevent tracking or flow of mud into the public right-of-way.
      2) Periodic top dressing with 2-inch stone may be required, as conditions demand, and repair any structures used to trap sediments.
      3) Inspect daily for loss of gravel or sediment buildup.
      4) Inspect adjacent area for sediment deposit and install additional controls as necessary.
      5) Expand stabilized area as required to accommodate activities.

18

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



Stabilized roadway entrance

February 2006 — 19 — Plan 126

NO.	REVISIONS	BY	DATE
1.	CITY COMMENTS	RGW	07/10/23
2.	CITY COMMENTS	RGW	08/07/23

DESIGNER: SDT PROJECT ENGINEER: SDT

CIR | CIVIL ENGINEERING + SURVEYING
10718 S BECKSTEAD LANE, SUITE 102
South Jordan, Utah - 801-949-6296

KESSIMAKIS PRODUCE 4156
4156 SOUTH RIVERBOAT ROAD, TAYLORSVILLE, UTAH 84123

EROSION CONTROL DETAIL SHEET

LICENSED PROFESSIONAL ENGINEER
SCOTT D. THORSEN
No. 354291
STATE OF UTAH

Blue Stakes of UTAH 811 Bluestakes.org

SHEET NO. C5.1
PROJECT ID: E23-066 DATE: 06/06/23
FILE NAME: PRJ-TR4 SCALE:

C5.1

Exhibit H

aeurbia
architects and engineers



aeurbia
architects and engineers

Exhibit H

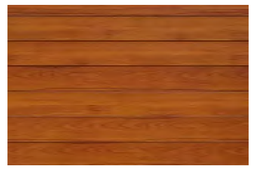


Exhibit H



PAINTED CONCRETE PANEL
SW 7674 - PEPPERCORN

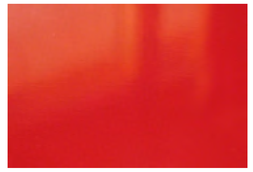
PAINTED CONCRETE PANEL
SW 7005 - PURE WHITE



UNEEKE MANUFACTURING-
TIMBER SERIES
CEDAR LOOK METAL PANEL



PAINTED CONCRETE PANEL -
SW 7016 - MINDFUL GRAY

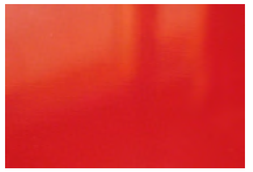


UNEEKE MANUFACTURING-
SUMMIT 40 METAL PANEL
Color match SW 6868 - REAL RED

PAINTED CONCRETE PANEL
SW 7005 - PURE WHITE



PAINTED CONCRETE PANEL -
SW 6990 - CAVIAR



UNEEKE MANUFACTURING-
SUMMIT 40 METAL PANEL
Color match SW 6868 - REAL RED



ae urbia
ARCHITECTS & ENGINEERS

RIVERBOAT ROAD - LOT 4 - TAYLORSVILLE

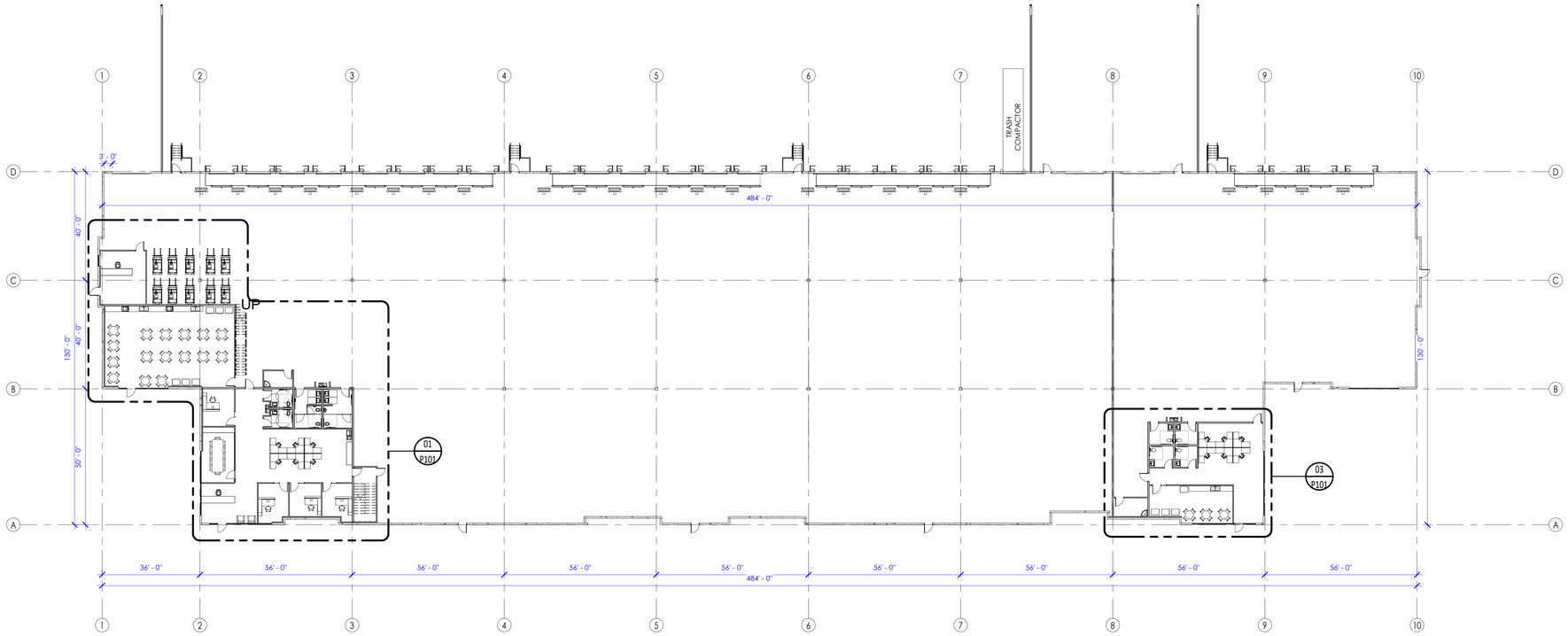
Presentation 3d Views

NOTES:

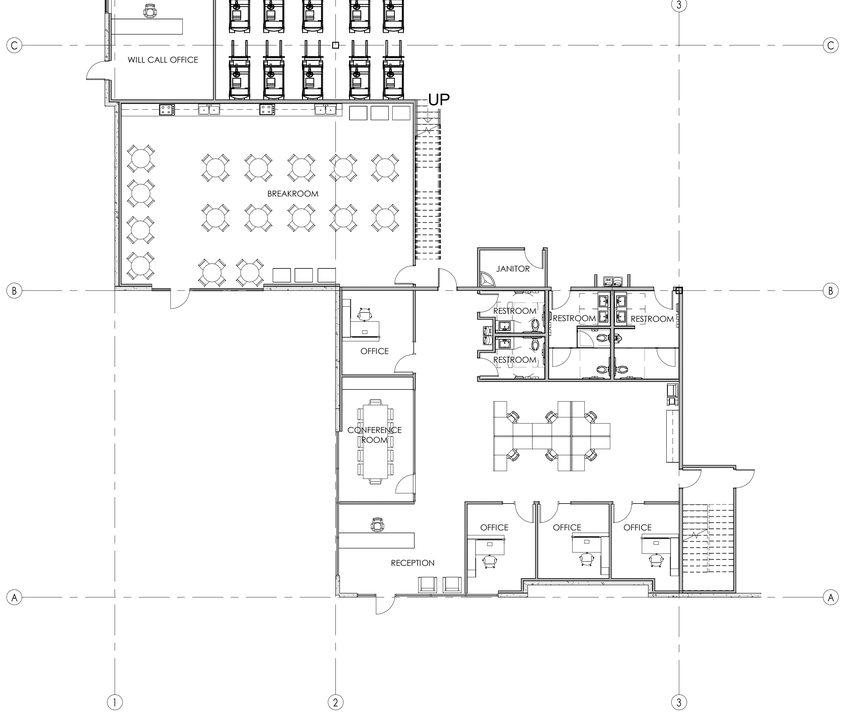
1. UTILITY BOXES SHALL BE GROUPED TOGETHER, WHERE POSSIBLE AND ATTACHED TO THE SIDE OF THE BUILDING AND SHALL BE PAINTED TO MATCH THE ADJACENT BUILDING WALL.

2. ALL ROOF DRAINS SHALL BE INTERIOR TO THE BUILDING.

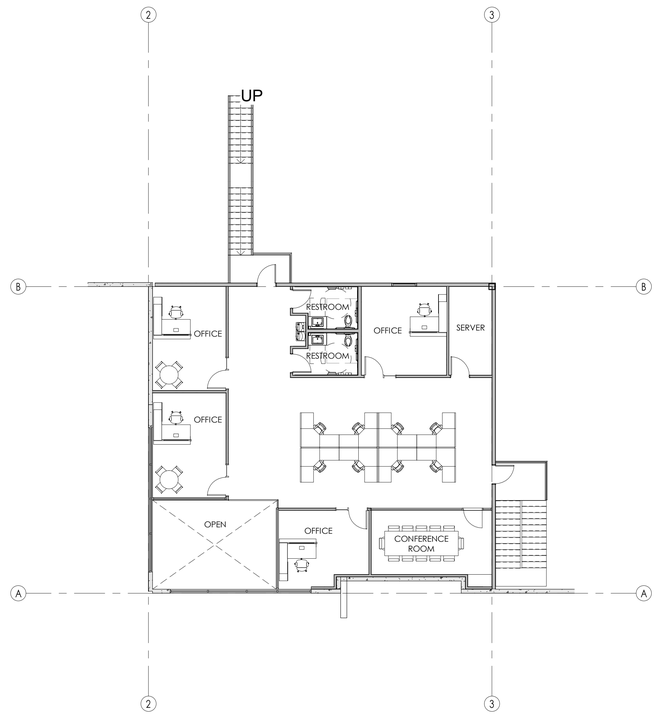
Exhibit H



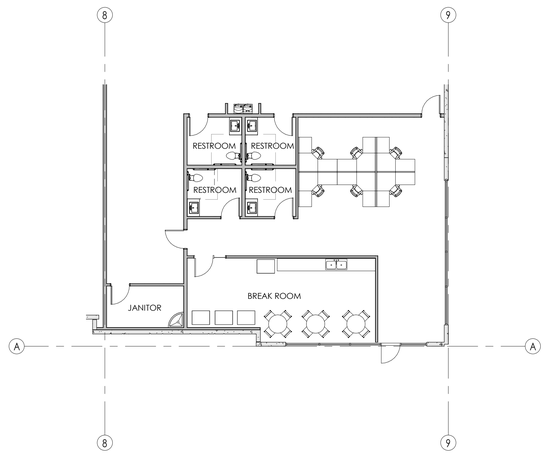
04 P101 **MAIN LEVEL FLOOR PLAN**
1" = 20'-0"



01 P101 **LEVEL 1 - TI SPACE** — **4,565 SF**
1" = 10'-0"



02 P101 **LEVEL 2 - TI SPACE** — **2,750 SF**
1" = 10'-0"



03 P101 **SMALL TI - LEVEL 1** — **1,430 SF**
1" = 10'-0"

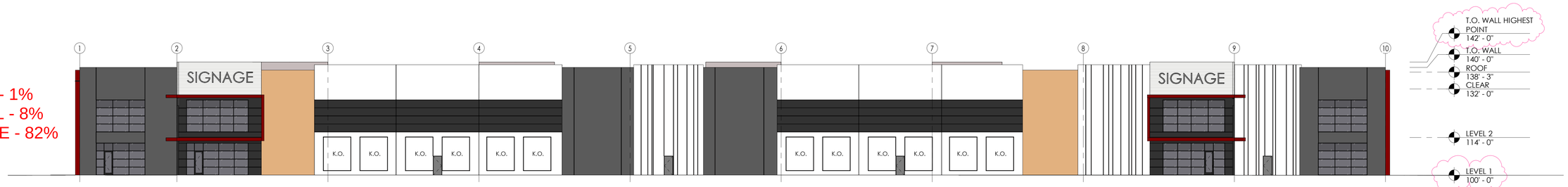
ae urbia
ARCHITECTS & ENGINEERS

RIVERBOAT ROAD - LOT 4 - TAYLORSVILLE

Presentation Floor Plan

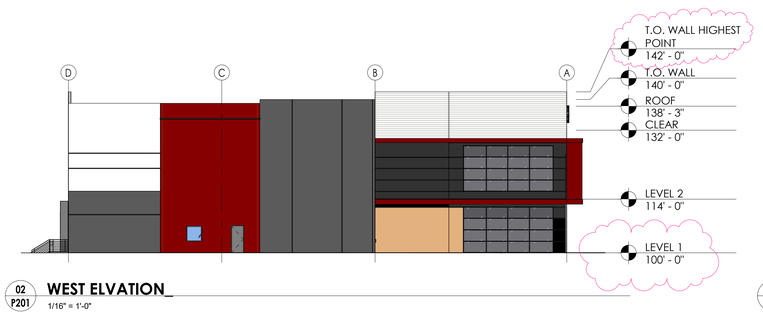
Exhibit H

GLAZING - 10%
RED METAL PANEL - 1%
WOOD LOOK METAL - 8%
PAINTED CONCRETE - 82%

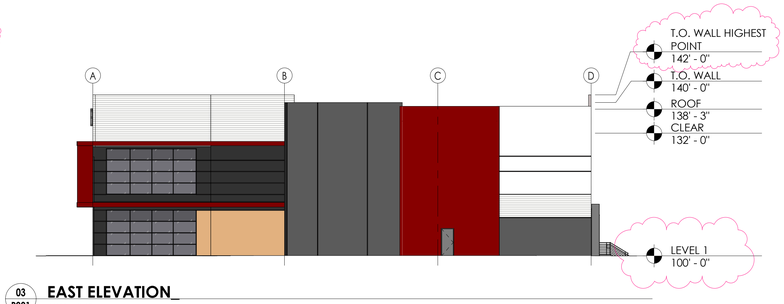


04 P201 **SOUTH ELEVATION_**
1/16" = 1'-0"

GLAZING - 11%
RED METAL PANEL - 11%
WOOD LOOK METAL - 5%
PAINTED CONCRETE - 73%



02 P201 **WEST ELVATION_**
1/16" = 1'-0"



03 P201 **EAST ELEVATION_**
1/16" = 1'-0"

GLAZING - 11%
RED METAL PANEL - 11%
WOOD LOOK METAL - 5%
PAINTED CONCRETE - 73%

GLAZING - 3%
PAINTED CONCRETE - 84%
OPENINGS - 13%



01 P201 **NORTH ELEVATION_**
1/16" = 1'-0"

ae urbia
ARCHITECTS & ENGINEERS

RIVERBOAT ROAD - LOT 4 - TAYLORSVILLE

Presentation Elevation

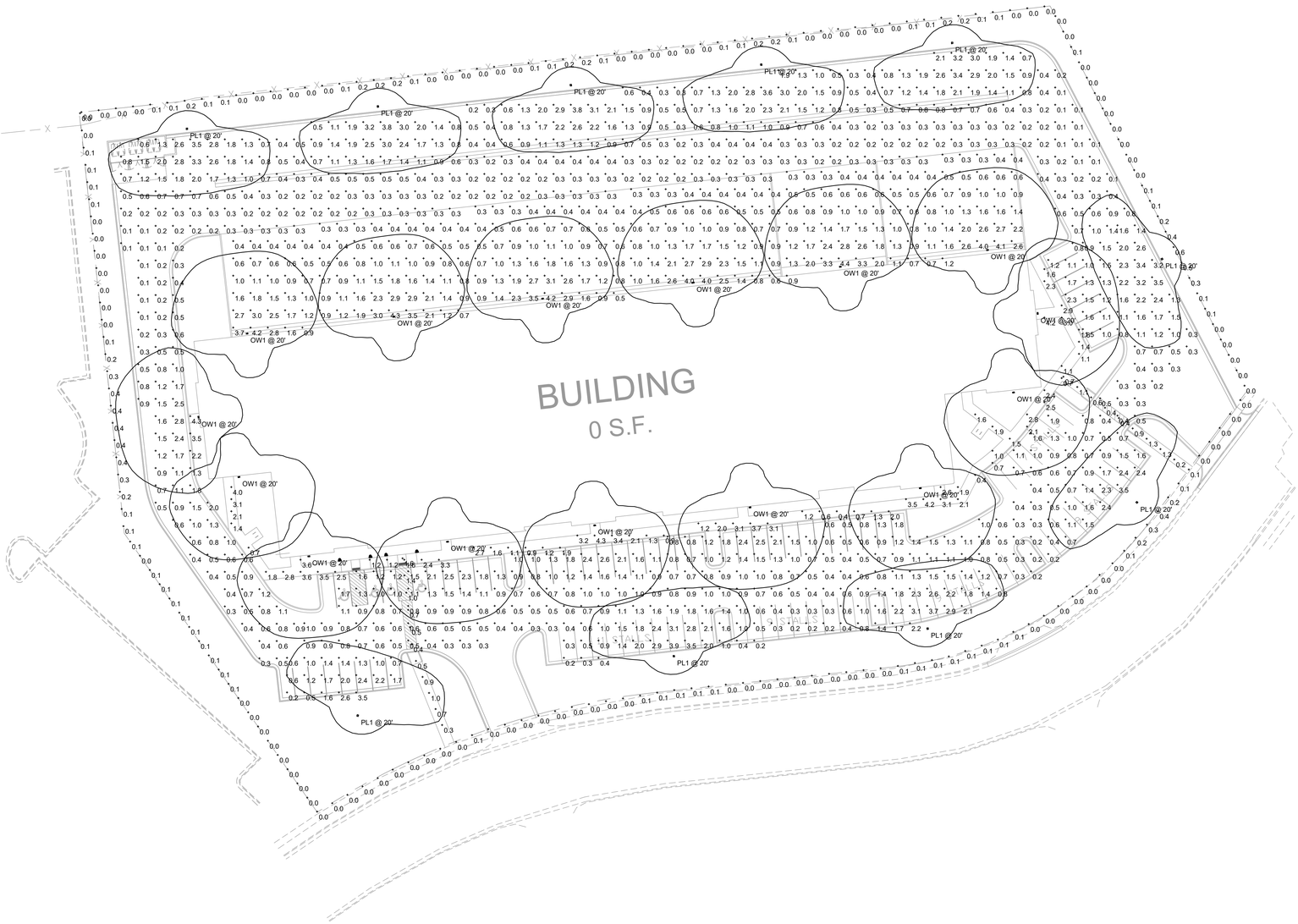
Exhibit I

Statistics

Description	Symbol	Avg	Max	Min	Avg/Min
DRIVE ROAD	+	0.8 fc	4.3 fc	0.1 fc	8.0:1
EAST ENTRANCE	+	0.8 fc	1.3 fc	0.2 fc	4.0:1
LOADING	+	1.2 fc	4.4 fc	0.3 fc	4.0:1
PARKING	+	1.1 fc	3.9 fc	0.2 fc	5.5:1
SIDEWALK	+	2.1 fc	4.3 fc	0.4 fc	5.3:1
WEST ENTRANCE	+	0.8 fc	1.6 fc	0.3 fc	2.7:1
BOUNDARY	+	0.1 fc	0.6 fc	0.0 fc	N/A

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
▭	OW1		15	Lithonia Lighting	WDGE3 LED P2 70CRI RFT 40K	WDGE3 LED WITH P2 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC	1	8596	0.9	59.2761	 Max: 4144cd
▯	PL1		10	Lithonia Lighting	RSX1 LED P2 40K R4 HS	RSX LED Area Luminaire Size 1 P2 Lumen Package 4000K CCT Type R4 Distribution with HS shield	1	6554	0.9	72.95	 Max: 5648cd



1 ES001 SITE PHOTOMETRIC PLAN

SCALE: 1" = 30'-0"

N



WDGE3 LED

Architectural Wall Sconce

DLC DLC PREMIUM DLC DLC LISTED fds BAA DLC 5.1 20

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 8"
Depth (D2): 1.5"
Height: 9"
Width: 18"
Weight: (without options) 19.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE3 LED	P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	70CRI 80CRI	R2 Type 2 Wide R3 Type 3 R4 Type 4 RFT Forward Throw	MVOLT 347[1] HVOLT 480[1] XVOLT (277V-480V)[1]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[2] **Shipped separately** AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options		Finish	
E15WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, 3°C min)	DDBXD	Dark bronze
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, -20°C min)	DBLBXD	Black
PE	Photocell, Button Type[3]	DNAXD	Natural aluminum
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[4]	DWHXD	White
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.	DSSXD	Sandstone
SPD10KV	10kV Surge pack[1]	DDBTXD	Textured dark bronze
BAA	Buy American Act Compliant	DBLBXD	Textured black
		DNATXD	Textured natural aluminum
		DWHGXD	Textured white
		DSSTXD	Textured sandstone

Standalone Sensors/Controls

PIR	Bi-level (100/35%) motion sensor for 8-10' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-10' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls

NLTAIRLT PIR	nLight AIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
NLTAIRLT PIRH	nLight AIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Accessories

Ordered and shipped separately.

WDGLAWS DDBXD	WDGL 3/8inch Architectural Wall Spacer (specify finish)
WDGLFBBW DDBXD U	WDGS surface-mounted back box (specify finish)

NOTES

1. 347V and 480V not available with E15WH and E20WC.
2. Not qualified for DLC. Not available with emergency battery backup or sensors/controls.
3. PE not available in 480V and with sensors/controls.
4. DMG option not available with sensors/controls.
5. Not available with E20WC option.

© 2019-2023 Acuity Brands Lighting, Inc. All rights reserved.



RSX1 LED

Area Luminaire

DLC DLC LISTED DLC DLC LISTED PREMIUM fds BAA cls

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA (ft²@0°): 0.57 ft² (0.05 m²)
Length: 21.8" (55.4 cm) (SPA mount)
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body 7.2" (18.4 cm) Arm
Weight (SPA mount): 22.0 lbs (10.0 kg)



Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

dls design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

dls Design Select options indicated by this color background.

Ordering Information

EXAMPLE: RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX1 LED	P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	R2 Type 2 Wide R3 Type 3 R3S Type 3 Short R4 Type 4 Wide R4S Type 4 Short R5 Type 5 Wide[1] R5S Type 5 Short[1] AFR Automotive Front Row AFRR90 Automotive Front Row Right Rotated AFRL90 Automotive Front Row Left Rotated	MVOLT (120V-277V)[1] HVOLT (347V-480V)[1] XVOLT (277V-480V)[1] **(use specific voltage for options as noted)** 120[1] 277[1] 208[1] 347[1] 240[1] 480[1]	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°) RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.5" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°)[2] MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon) IS Adjustable slipfitter (fits 2-3/8" OD tenon)[3] WBA Wall bracket[1] WBASC Wall bracket with surface conduit box AASP Adjustable tilt arm square pole mounting[4] AARP Adjustable tilt arm round pole mounting[4] AAWB Adjustable tilt arm with wall bracket[4] AAWSC Adjustable tilt arm wall bracket and surface conduit box[4]

Options		Finish	
Shipped Installed		DDBXD	Dark Bronze
HS	House-side Shield[1]	DBLXD	Black
PE	Photocontrol, button style[5,6]	DNAXD	Natural Aluminum
PER7	Seven-wire twist-lock receptacle only (no controls)[5,6,7]	DWHXD	White
SF	Single fuse (120, 277, 347)[1]	DDBTXD	Textured Dark Bronze
DF	Double fuse (208, 240, 480)[1]	DBLBXD	Textured Black
SPD20KV	20KV Surge pack (10KV standard)	DNATXD	Textured Natural Aluminum
FAO	Field adjustable output[8]	DWHGXD	Textured White
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)[9]		

Shipped Installed

***Standalone and Networked Sensors/Controls (factory default settings, see table page 9)**	
NLTAIR2 PIRHN	nLight AIR generation 2, with networked, Bi-Level motion/ambient sensor[5,6,10,11,12]
BAA	Buy American Act Compliant
CCE	Coastal Construction[13]

*Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.

Shipped Separately (requires some field assembly)

EGS	External glare shield[1]
EGFV	External glare full visor (360° around light aperture)[1]
BS	Bird spikes[14]

© 2018-2023 Acuity Brands Lighting, Inc. All rights reserved.

aeurbia architects and engineers
909 West South Jordan Parkway
south jordan, utah 84095
phone: 801.746.0456 fax: 801.575.6456
www.aeurbia.com

RIVERBOAT ROAD - LOT 4 - TAYLORSVILLE
GARDNER BATT BOYER
4000 S INDUSTRIAL PARK

MARK	DESCRIPTION	Revision Date

Revision Schedule

AE2019.224

SITE PHOTOMETRIC PLAN

DATE: AUGUST 8, 2023

SHEET #:

ES001

ROCKY MOUNTAIN CONSULTING ENGINEERS, INC.
2332 West 12600 South, Suite F | Riverton, UT 84065
(801) 566-0503 www.rmceut.com Project #23213

COPYRIGHT © AE URBIA, LLC.

Exhibit J

TREE INVENTORY AND RECOMMENDATIONS

Sorenson Research Park
4156 Riverboat Rd.
Taylorsville, UT
Project #23-076

Date of Site Visit: 5/22/2023 9:00am

Tree Species on Site: Russian Olive (*Elaeagnus angustifolia*), Siberian Elm (*Ulmus pumila*), Cottonwood (*Populus deltoides*) Black Hawthorn (*Crataegus douglasii*)

Findings: The site mostly consists of Russian Olive scattered throughout the property. They are established through deposited seed or emergence from roots of other Russian Olives. Olives are all multi-trunk and shrub like with low branching. Structure is poor, which is common in the species. Most trees are tightly clustered along the west property line, probably due to water from neighboring site. They have formed a thicket of intertwining trunks and branches, some growing through the fence.

Siberian Elms are found along the north and west property lines. The majority of the Elms on the north side exist on the golf course fence line and are not part of the named property. They have grown in these spots from deposited seed and flourished due to neighboring water. The elms on the northeast corner have had limbs removed or broken, most likely to stop encroachment into near by power lines. The removal of limbs has been poor and has caused stress and disfigurement of the trees. There is evidence of slime flux or wetwood, a bacterial disease in some of these elms. The west property line has several 50’ tall Siberian Elms which have grown tall due to restricted light. Their Distance at Breast Height (DBH) is 5-9” in diameter, very narrow for the height. These trees are growing tightly against the golf fence.

A few cottonwood trees are found among the Russian Olives in the center of the property. They have codominant leaders, included bark, and evidence of slime flux. If they were to continue to grow, the trunks would push away from each other causing split or complete failure

One Black Hawthorn exists on the north property line. It is a healthy and desirable tree. It does need a certified arborist to prune it, removing lower dead branches.

Recommendations: Russian Olives have been classified by the state of Utah as a Noxious Weed, they have allergen properties, thorns, and invasive tendencies. Their structure is poor and have codominant leaders or are multi-trunked. This poses a risk of breakage and injury to those who

may be nearby. It is recommended that all Russian Olives be removed from the site. They are undesirable trees.

Siberian Elms are weed trees and drop copious amounts of seeds each year. They grow quickly and are prone to disease and insect invasions. This being said, there are some on the property that are worth saving. Their trunk DBH is small ranging from 5” to 9” for salvageable trees. They have stretched for light weakening the overall tree. Those along the west property line are growing tightly against the fence and will grow in or through it. If the fence is removed, there is hope for better structure and strength. Those trees exhibiting symptoms of Wetwood or Slime Flux should be removed.

Cottonwood trees are in the center of the property and will be removed for construction. They are not desirable as their root systems are shallow and twice the size of the tree causing destruction of property. They have included bark, codominant leaders and some have evidence of Wetwood.

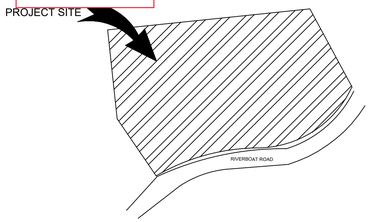
The Black Hawthorn should be saved but pruned by a certified arborist. It has nice, rounded structure with glossy green leaves that turn vibrant colors of red in fall, white flowers cover the tree in spring and fruit is produced in late summer to fall.

Respectfully Submitted

Sandra Vernon
ISA Certified Arborist
No-4710A

VICINITY MAP

Exhibit K



SHEET INDEX

SHEET LP 102
SHEET LP 103

LP-existing shows 9 trees preserved. Update to include accurate "existing tree" labels.

PROPOSED BUILDING
AREA = 58,045 SQ. FT.
F.F.E.=4248.70

RIVERBOAT ROAD
(PUBLIC RIGHT-OF-WAY)

DIRT ROAD

DIRT ROAD

9 STALLS

18 STALLS

12"-18" HIGH BERM

12"-18" HIGH BERM

ISSUE DATE	PROJECT NUMBER
8/5/2023	UT23076

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

0' 15' 30' 60' 120'
GRAPHIC SCALE: 1" = 30'

SORENSON RESEARCH PARK
PHASE 2 & 4
RIVERBOAT ROAD
TAYLORSVILLE, UTAH

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

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 TRIUMPH
8128727-5301
8/5/2023
ELECTRONIC SIGNATURE
STATE OF UTAH

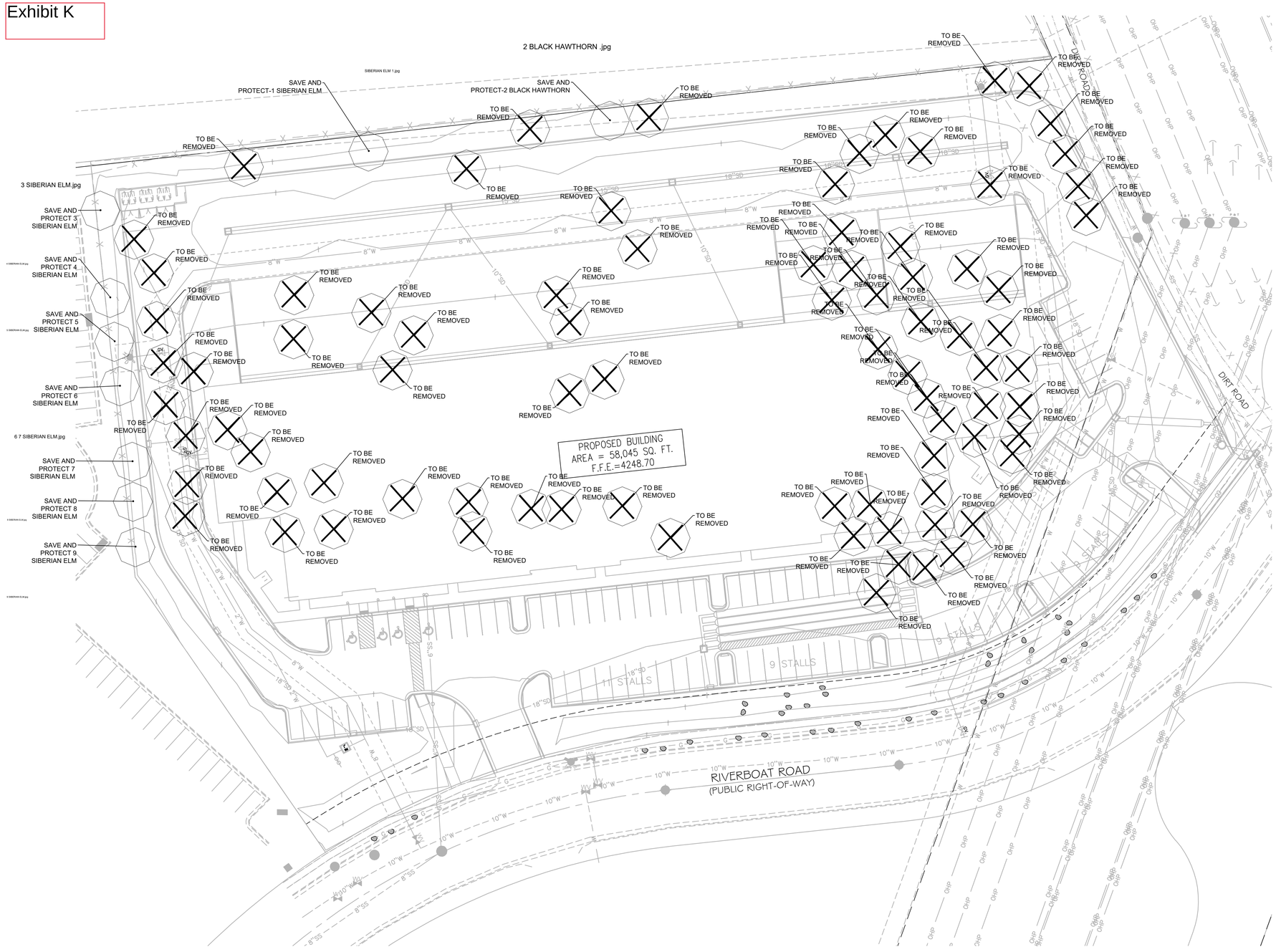
DRAWING INFO	
PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	8/5/2023

LANDSCAPE OVERALL PLAN

CITY PERMIT SET

LP-100

Exhibit K



EXISTING AND NEW LANDSCAPE AREA

SYMBOL SITE MATERIAL

EXISTING TREES TO REMAIN AND TO PROTECT

EXISTING TREES TO BE REMOVED

EXISTING TREE NOTES

TREE PROTECTION AND PRESERVATION

INTRODUCTION: THIS IS INTENDED TO GUIDE THE GENERAL CONTRACTOR AND SUB-CONTRACTORS CREWS AND OWNER IN THE PROTECTION OF TREES LOCATED ON PROJECT SITE, AND SHALL BE IN COMPLIANCE WITH FOLLOWING SPECIFICATIONS. ALL PEOPLE THAT WORK AROUND TREES ARE RESPONSIBLE TO PROTECT THE TREES FROM UNNECESSARY INJURY THAT WOULD DECREASE THEIR VALUE. TREE ROOTS OFTEN SPREAD 2-3 TIMES WIDER THAN THE DRIP-LINE OF THE CANOPY AND 90% OF A TREE'S ROOTS ARE FOUND IN THE TOP 2 FEET OF SOIL. THESE FACTS ILLUSTRATE WHY IT IS SO IMPORTANT TO USE CARE WHEN WORKING NEAR EXISTING TREES.

A. TREE PROTECTION GUIDELINES FOR CONSTRUCTION SITES

PRIOR TO INITIATION OF DEMOLITION AND CONSTRUCTION WORK THAT WILL AFFECT TREES ON PROPERTY, THE FOLLOWING TREE PROTECTION PLAN SHOULD BE IMPLEMENTED, WHICH PROVIDES FOR THE FOLLOWING INFORMATION:

1. TREE PROTECTION PRACTICES MAY INCLUDE, BUT ARE NOT LIMITED TO: PRUNING BRANCHES AND ROOTS, TEMPORARILY FENCING OFF AREA AROUND THE ROOTING ZONE, WRAPPING TRUNKS TO PREVENT WOUNDS, SPREADING WOOD CHIPS OR GRAVEL TO REDUCE SOIL COMPACTION, ENSURING PROPER TREE IRRIGATION IS PROVIDED THROUGHOUT THE TERM OF THE PROJECT, AND ADDING WELL-COMPOSTED ORGANIC MATTER TO THE TREE'S GROWING LOCATION FOLLOWING CONSTRUCTION.
2. TREE PLANTING WORK SHALL BE DONE IN ACCORDANCE WITH LATEST LOCAL CODES, IE: BEST MANAGEMENT PRACTICES (BMP), ANSI Z133.1, AND ANSI A300. DIRECTIONS PROVIDED IN AUTHORIZING PERMITS SHALL BE FOLLOWED.
3. ANY TREE TO REMAIN THAT IS IRREPARABLY DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REMUNERATED AT COST TO CONTRACTOR RESPONSIBLE FOR DAMAGES. THE VALUE OF ALL TREES TO REMAIN SHALL BE ESTABLISHED IN WRITING AND AGREED UPON BY ALL PARTIES INVOLVED PRIOR TO CONSTRUCTION ACTIVITIES.
4. ANY TREES TO REMAIN ON-SITE AND ON ADJACENT PROPERTIES THAT ARE DAMAGED DUE TO CONSTRUCTION ACTIVITIES THAT ARE REPLACEABLE SHALL BE REPLACED WITH TREE OF SAME SPECIES, CALIPER SIZE AND SIMILAR SHAPE AT THE EXPENSE OF CONTRACTOR RESPONSIBLE FOR DAMAGE.
5. TREES BEING PRESERVED DURING ALL CONSTRUCTION ACTIVITIES SHALL HAVE A TREE PROTECTION ZONE (TPZ), WHICH IS NO LESS THAN THE WIDTH OF THE DRIP LINE OF THE TREES CANOPY, CLEARLY MARKED WITH A CONTINUOUS CHAIN LINK PROTECTIVE FENCE, OR OWNER APPROVED EQUAL, PRIOR TO ANY DEMOLITION, CLEARING, TRENCHING OR TUNNELING PROJECTS COMMENCEMENT.
6. HEAVY EQUIPMENT SHALL NOT BE ALLOWED INSIDE THE TREE PROTECTION ZONE. ALL HEAVY EXCAVATIONS SHALL BE MADE BY EQUIPMENT FROM OUTSIDE OF THIS ZONE.
7. BUILDING MATERIAL, TOPSOIL, CHEMICALS, OR FILL SHALL NOT BE STOCKPILED IN THE TREE PROTECTION ZONE OR IN THE DRIP-LINE OF ANY TREE THAT IS SCHEDULED FOR PRESERVATION.
8. PRIOR TO CONSTRUCTION, THE TREE PROTECTION ZONE WILL BE DESIGNATED BY PLAN AND IN COORDINATION WITH BLUE STAKES, OWNER, LANDSCAPE ARCHITECT AND/OR CITY URBAN FORESTER. THE SIZE AND SHAPE OF THE ZONE WILL DEPEND ON THE TREE SPECIES SENSITIVITY TO IMPACT, THE HEALTH AND AGE OF THE TREE, AND ROOT AND CROWN CONFORMATION AND DEVELOPMENT CONSTRAINTS.
9. TRENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH THE STANDARDS LISTED ABOVE. WHEN LARGE SCAFFOLD ROOTS ARE ENCOUNTERED WHILE TRENCHING, HAND DIGGING AND BRIDGING OF THE ROOTS SHALL BE DONE. IN SITUATIONS WHERE A ROOT HAS BEEN DAMAGED, A CLEAN CUT SHALL BE MADE ON THE ROOT AT THE EDGE OF THE TRENCH CLOSEST TO THE TREE TRUNK.
10. TUNNELING OR BORING SHOULD BE DONE WHENEVER WORK MUST BE DONE WITHIN THE TREE PROTECTION ZONE. TUNNELING OR BORING IN THE TREE PROTECTION ZONE MUST BE AT LEAST 2 FEET DEEP.
11. EXCAVATION INVOLVING ROOT CUTS SHOULD BE DONE RAPIDLY. CUTS ON TREE ROOTS SHALL BE SMOOTH AND CLEAN. THE TRENCH SHOULD BE BACKFILLED AS QUICKLY AS POSSIBLE TO PREVENT THE EXPOSED ROOTS FROM DRYING OUT AND THE TREE SHOULD BE WATERED IMMEDIATELY. IF TREES ARE TO REMAIN EXPOSED FOR MORE THAN FOUR TO SIX HOURS, THEY MUST BE COVERED WITH BURLAP AND KEPT MOIST AT ALL TIMES.
12. FOR TREES WITH A TRUNK DIAMETER IN EXCESS OF SIX INCHES, TUNNELING OR BORING SHOULD REPLACE TRENCHING ACCORDING TO THE FOLLOWING MINIMUM DISTANCES FROM THE FACE OF THE TREE TRUNK IN ANY DIRECTION.
13. THE BOOKLET "TRENCHING AND TUNNELING NEAR TREES" THAT IS PRODUCED BY THE NATIONAL ARBOR DAY FOUNDATION SHALL BE USED AS A GUIDE FOR ALL CONSTRUCTION AND EXCAVATION WORK AROUND TREES. THIS BOOKLET MAY BE OBTAINED BY CONTACTING THE NATIONAL ARBOR DAY FOUNDATION.
14. TREE CARE CONTRACTOR PROVIDING SERVICES SHOULD BE CURRENTLY LICENSED TO DO BUSINESS IN THE STATE OF THE PROJECT, INSURED AGAINST PERSONAL INJURY AND PROPERTY DAMAGE, AND CERTIFIED AS AN ARBORIST WITH THE INTERNATIONAL SOCIETY OF ARBORICULTURE. PRIOR TO BEGINNING WORK ON TREE(S) THE TREE CARE CONTRACTOR SHALL CONTACT THE CITY'S URBAN FORESTRY DIVISION TO RECEIVE AN AUTHORIZING PERMIT IF REQUIRED.
15. TREES SHALL NOT BE USED TO SUPPORT ANY SCAFFOLDING, SIGNS, TEMPORARY UTILITY, OR ANY OTHER DEVICE. SIDEWALKS AND PAVING LEVELS SHOULD BE CONFIGURED WHENEVER POSSIBLE TO AVOID ROOT CUTTING. IF DAMAGE OCCURS TO A PROTECTED TREE, IMMEDIATE CONTACT SHALL BE MADE WITH THE CITY FORESTER IN ORDER THAT WOUNDS CAN BE TREATED.
16. NO ELEVATION OR GRADE CHANGES CAN BE MADE AROUND THE DRIP ZONE OF THE TREES UNLESS WRITTEN APPROVAL IS GIVEN BY THE OWNER, LANDSCAPE ARCHITECT AND RECEPTION OF A ELEVATION/GRADE CHANGE PLAN.
17. EXCEPTIONS TO THE ABOVE GUIDELINES SHALL BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION.
18. TREES SHALL BE WATERED ACCORDING TO THE FOLLOWING GUIDELINES:
    a. ESTABLISHED TREES NEED DEEP WATERING ONCE A WEEK WITH LOW PRESSURE TO ENSURE THAT THE GROUND IS SOAKED TO A DEPTH OF AT LEAST 12 INCHES.
    b. YOUNG OR NEWLY PLANTED TREES NEED TO BE WATERED EVERY 3-4 DAYS.
    c. TO KEEP WATER FROM EVAPORATING FROM THE SOIL AROUND THE TREE, APPLY AT LEAST TWO OR MORE INCHES OF ORGANIC MULCH (WOOD CHIPS OR MULCH) AROUND THE BASE OF THE TREES UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.

B. UNDERGROUND UTILITY WORK

1. TRENCHING SHOULD BE PERFORMED IN A MANNER AND LOCATION LEAST DAMAGING TO TREE ROOTS.
2. TUNNELING OR BORING SHOULD BE DONE WHENEVER POSSIBLE WHERE LARGE SCAFFOLD ROOTS ARE ENCOUNTERED, HAND DIGGING AND BRIDGING OF ROOTS SHALL BE DONE.
3. ANY CUTTING OF TREE ROOTS, OTHER THAN WHEN IN THE PROCESS OF TREE REMOVAL, SHALL GIVE DUE CONSIDERATION TO FUTURE WELFARE OF THE TREE. PROPER ACTION SHALL BE TAKEN SO AS TO PROTECT, PRESERVE, OR CORRECT THE ROOT PROBLEM.
4. THE "TRENCHING AND TUNNELING NEAR TREES" BOOK BY THE NATIONAL ARBOR DAY FOUNDATION SHALL BE USED AS A GUIDE FOR ALL CONSTRUCTION AND EXCAVATION WORK AROUND PROTECTED TREES.
5. EXCAVATION INVOLVING ROOT CUTS SHOULD BE DONE RAPIDLY. CUTS ON TREE ROOTS SHALL BE SMOOTH, AND CLEAN. BACKFILL BEFORE THE ROOTS HAVE A CHANCE TO DRY OUT, AND WATER TREE IMMEDIATELY. IF TREE ROOTS ARE TO REMAIN EXPOSED FOR ANY EXTENDED PERIOD OF TIME, THEY MUST BE COVERED WITH BURLAP AND KEPT MOIST AT ALL TIMES.

PURPOSE: THESE NOTES ARE INTENDED TO GUIDE GENERAL CONTRACTOR AND SUB-CONTRACTORS CREWS IN THE PRUNING AND REMOVAL OF EXISTING TREES AND BE IN COMPLIANCE WITH LOCAL STANDARDS.

C. GENERAL STANDARDS FOR TREE PRUNING

1. ALL TREE MAINTENANCE WORK ON PROPERTY GROUNDS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISIONS OF ANSI A300 AND ANSI Z133.1 STANDARDS AND AS FURTHER DETAILED IN THE BEST MANAGEMENT PRACTICES TREE PRUNING BOOKLET.
2. ALL TREE PRUNING TO BE COMPLETED BY A LICENSED ARBORIST IN THE STATE OF THE PROJECT.
3. HANGING LIMBS AND BRANCH GROWTH SHALL BE MAINTAINED 13 FEET ABOVE STREETS AND 8 FEET ABOVE SIDEWALKS OR PER LOCAL CODE.
4. AUTHORITY TO PRUNE TREES DOES NOT INCLUDE THE CUTTING BACK OF SOUND, HEALTHY TREE BRANCHES IN EXCESS OF 6 INCHES OUTSIDE DIAMETER, UNLESS SPECIFICALLY DIRECTED BY THE OWNER OR CITY FORESTER.
5. TREE BRANCHES SHALL BE REMOVED AND CONTROLLED IN SUCH A MANNER AS NOT TO CAUSE DAMAGE TO OTHER PARTS OF THE TREE, OTHER PLANTS, AND PROPERTY.
6. CLEAN-UP BRANCHES, LOGS OR ANY OTHER DEBRIS RESULTING FROM A TREE PRUNING OR REMOVAL SHALL BE PROMPTLY AND PROPERLY ACCOMPLISHED. THE WORK AREA SHALL BE KEPT SAFE AT ALL TIMES UNTIL THE CLEAN-UP OPERATION IS COMPLETED. UNDER NO CONDITION SHALL THE ACCUMULATION OF BRUSH, BRANCHES, LOGS, OR OTHER DEBRIS BE ALLOWED UPON PROPERTY IN SUCH A MANNER AS TO CAUSE A PUBLIC HAZARD.
7. THE USE OF CLIMBING SPURS OR GAFFS SHALL BE PERMITTED ONLY IN THE CASE OF TREE REMOVAL OR IN AERIAL RESCUE EMERGENCIES.
8. UNDER NO CONDITIONS SHALL IT BE CONSIDERED PROPER TO LEAVE SEVERED OR PARTIALLY CUT LIMBS IN A TREE AFTER THE WORKERS LEAVE THE SCENE OF OPERATIONS.
9. ALL TREES TO BE REMOVED SHALL BE TAGGED FOR OWNERS APPROVAL PRIOR TO REMOVING.

D. TREES SHALL BE REMOVED IF:

1. THE TREE INTERFERES WITH OR CREATES A PUBLIC NUISANCE OR HAZARD TO PEDESTRIANS OR VEHICULAR TRAFFIC OR IS CONSIDERED A PUBLIC NUISANCE BY THE CITY FORESTER.
2. THE TREE IS SIGNIFICANTLY DAMAGED OR DISEASED.
3. THE TREE IS SPECIFIED TO BE REMOVED ON THIS PLAN.
4. THE OWNER REQUESTS REMOVAL OF TREE. IN THIS CASE THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED SO AS TO REVISE THE PROPOSED PLANTING PLAN TO MEET CITY/COUNTY REQUIREMENTS FOR TREE REPLACEMENT.

E. STUMP REMOVAL REQUIREMENTS AND STANDARDS

1. PERSONS PERFORMING STUMP REMOVAL DUTIES SHALL HAVE THE IMMEDIATE AREA INVESTIGATED FOR UTILITY LINES FROM BLUESTAKES/DIG-LINE AS NECESSARY AND WEAR ALL REQUIRED SAFETY EYE AND EAR PROTECTION.
2. ALL REMOVAL OF TAGGED TREES SHALL BE DONE IN A MANNER SO THAT THE REMAINING STUMP WILL BE AT LEAST 8 INCHES BELOW GROUND LEVEL UNLESS OTHERWISE DIRECTED BY OWNER.
3. EXCAVATIONS RESULTING FROM A TREE OR SHRUB REMOVAL MUST BE PROMPTLY FILLED IN TO NORMAL GROUND LEVEL WITH TOPSOIL APPROVED BY OWNER OR FILL MATERIAL DEPENDING ON LOCATION. THE TOPSOIL/FILL MATERIAL SHALL BE PROPERLY SETTLED AND BE FREE OF DEBRIS.

DEISGN INTENT

ALL RUSSIAN OLIVES ARE TO BE REMOVED.

ISSUE DATE	PROJECT NUMBER
8/5/2023	UT23076

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' 15' 30' 60' 90'
GRAPHIC SCALE: 1" = 30'

PROJECT INFORMATION

SORENSON RESEARCH PARK
PHASE 2 & 4
RIVERBOAT ROAD
TAYLORSVILLE, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

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 8/5/2023 STATE OF UTAH

DRAWING INFO

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 8/5/2023

EXISTING PLANTING PLAN

CITY PERMIT SET

LP-EXISTING

LANDSCAPE PLAN SPECIFICATIONS

Exhibit K

PART 1 - G

1.1 SUM

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 18" 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 erown 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

LANDSCAPE NOTES

INSTALLATION

1. LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. 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.
3. ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
4. 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.
5. 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.
6. SOD FOR NEW LAWN AREAS SHALL BE A DROUGHT TOLERANT VARIETY. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD.
7. 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.
8. IF REQUIRED BY CITY OR OWNER SPECIFIED, DeWitt 5 OZ WEED BARRIER FABRIC TO BE INSTALLED IN ALL PLANTER AREAS EXCEPT UNDER ANNUAL PLANTING AREAS AS SHOWN ON PLAN. WEED BARRIER SHALL BE CUT BACK FROM EACH PLANT TO THE DIAMETER OF THE ROOTBALL.
9. ROCK MULCH (INORGANIC MULCH) TO BE APPLIED AT THE FOLLOWING DEPTHS: 3" IN ALL TREE, SHRUB, AND PERENNIAL PLANTER AREAS; ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL (ORGANIC MULCH). NO MULCH SHALL BE PLACED WITHIN 12" OF BASE OF TREE AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS.
10. 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 EDGE OF ROOTBALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.
11. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE

INSTALLER RESPONSIBILITIES AND LIABILITIES

1. 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.
2. LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.

GRADING AND DRAINAGE REQUIREMENTS

1. 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"
2. AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
3. A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
4. 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.
5. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
6. 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

PLANT LEGEND

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

CONIFERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	JCS	10	Juniperus chinensis `Spartan` Spartan Juniper	B & B		6'



DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	MSS	4	Malus x `Spring Snow` Spring Snow Crab Apple	B & B	2"Cal	
	TCG	16	Tilia cordata 'Greenspire' Greenspire Littleleaf Linden	B & B	2"Cal	
	UXF	12	Ulmus x `Frontier` Frontier Elm	B & B	2"Cal	
	ZSM	18	Zelkova serrata `Musashino` Musashino Zelkova	B & B	2"Cal	

DECIDUOUS SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	CMF	27	Chamaebatiaria millefolium Fernbush	5 gal
	RHC	27	Rhamnus frangula 'Columnaris' Tall Hedge Buckthorn	5 gal
	RGL	25	Rhus aromatica `Gro-Low` Gro-Low Sumac	5 gal
	RTT	14	Rhus typhina `Tiger Eyes` Tiger Eyes Sumac	5 gal
	SBP	35	Syringa x `SMNJRPU` TM Bloomerang Dwarf Purple Lilac	5 gal

EVERGREEN SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	HPP	77	Hesperaloe parviflora `Perpa` TM Brakelights Red Yucca	5 gal
	JSD	56	Juniperus sabina `Monard` TM Moor-dense Juniper	5 gal

GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	CAK	161	Calamagrostis x acutiflora `Karl Foerster` Feather Reed Grass	1 gal

ROSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	RDK	109	Rosa x `Radtko` Double Knock Out Rose	5 gal

SITE MATERIALS LEGEND

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

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1-01	SODDED LAWN AREA LAWN AREAS SHALL BE SOD. NEW TURF AREAS TO BE SODDED WITH 18% "BLUESTAR KENTUCKY BLUEGRASS, 19% "MARQUIS" KENTUCKY BLUEGRASS, 17% "NEWPORT" KENTUCKY BLUEGRASS, 17% "TOUCHDOWN" KENTUCKY BLUEGRASS, 16% "APM PERENNIAL RYEGRASS, 13% "ACCENT PERENNIAL RYEGRASS OR APPROVED EQUAL AT A RATE OF 220 LBS. PER ACRE. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD. ALL LAWN AREAS TO RECEIVER MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED LAWN. 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.	8,596 sf
1-12	1" MINUS BROWN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. ROCK MULCH PLANTING AREAS TO RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL WHERE PLANTING IS SPARSE, ADDITIONAL TOPSOIL IS NOT NECESSARY. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT, BACKFILL WITH A 3:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 3" DEPTH OF ROCK MULCH TOP DRESSING. KEEP ROCK AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL. 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 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS AFTER PLANTING AND AFTER APPLYING MULCH. THIS AREA WILL ALSO NEED AN ANNUAL MAINTENANCE PROGRAM. SUBMIT PROGRAM TO OWNER.	39,690 sf
1-18	4-6" TAN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. ROCK MULCH PLANTING AREAS TO RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL WHERE PLANTING IS SPARSE, ADDITIONAL TOPSOIL IS NOT NECESSARY. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT, BACKFILL WITH A 3:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 6" DEPTH OF ROCK MULCH TOP DRESSING. KEEP ROCK AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL. 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 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS AFTER PLANTING AND AFTER APPLYING MULCH. THIS AREA WILL ALSO NEED AN ANNUAL MAINTENANCE PROGRAM. SUBMIT PROGRAM TO OWNER.	1,122 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1-26	BOULDERS - DECORATIVE	34
1-28	5" DEEP STEEL EDGING - INSTALL PER MANUFACTURER SPECIFICATION.	423 lf

SITE REQUIREMENT CALCULATIONS

STREET FRONTAGE	REQUIRED:	PROVIDED:
RIVERBOAT ROAD 1 TREE / 40 FT (494 LN FT)	12	10

A. FRONT YARD: FRONT YARD LANDSCAPING IS MEASURED FROM THE FRONT PROPERTY LINE(S) AFTER ANY REQUIRED STREET DEDICATION. THIS STANDARD SHALL APPLY TO ALL STREET FRONTAGES.

1. ALL COMMERCIAL, OFFICE, MULTI-FAMILY, AND INDUSTRIAL DISTRICTS: IN ALL COMMERCIAL AND INDUSTRIAL ZONES, A MINIMUM OF FIFTEEN FEET (15') OF FRONT YARD LANDSCAPING SHALL BE REQUIRED.

2. BERMING: THE USE OF BERMS (RANDOM SCULPTURED MOUNDS), TWELVE (12) TO EIGHTEEN INCHES (18") HIGH ABOVE THE CURB LEVEL, ARE REQUIRED IN ALL FRONT LANDSCAPE AREAS WHERE FOUND TO BE PRACTICAL BY THE DIRECTOR.

3. STREET TREES: TWO INCH (2") MINIMUM CALIPER STREET TREES SHALL BE PLANTED IN THE FRONT PARK STRIP AREA (CENTERED BETWEEN THE SIDEWALK AND THE CURB TO MINIMIZE TREE CONFLICTS AND TO MAXIMIZE TREE ROOT ZONE) WHERE THE PARK STRIP IS A MINIMUM OF FIVE FEET (5') IN WIDTH, ACCORDING TO THE VARIETIES AND SPACING SPECIFIED IN APPLICABLE STANDARDS. WHERE THE SIDEWALK HAS BEEN PLACED AGAINST THE CURB, STREET TREES SHALL BE PLANTED FOUR FEET (4') BEHIND THE SIDEWALK.

4. FRONT LANDSCAPE: FRONT LANDSCAPE AREAS SHALL INCLUDE A COMBINATION OF SOD AS WELL AS AREAS OF TREES, SHRUBS, GROUND COVERS, AND MULCH.

5. ELIMINATION OF PARK STRIP: THE PLANNING COMMISSION MAY APPROVE THE ELIMINATION OF THE PARK STRIP IN A COMMERCIAL DISTRICT ALLOWING THE SIDEWALK TO BE PLACED AGAINST THE CURB. IF THE ELIMINATION OF THE PARK STRIP IS APPROVED BY THE PLANNING COMMISSION, THE SIDEWALK AGAINST THE CURB SHALL BE INCREASED IN WIDTH TO SIX FEET (6') OR WIDER AS PER APPLICABLE STANDARDS. IN THESE INSTANCES, THE FRONT LANDSCAPE AREA SHALL NOT BE LESS THAN TWENTY FEET (20') IN DEPTH.

6. NONEXISTENT PARK STRIPS: WHERE A SIDEWALK EXISTS DIRECTLY ADJACENT TO A PUBLIC RIGHT OF WAY, THE FRONT LANDSCAPING SHALL BE A MINIMUM OF TWENTY FEET (20') IN DEPTH.

B. SIDE AND REAR YARDS:

1. THERE SHALL BE A MINIMUM OF FIVE FEET (5') OF LANDSCAPING BETWEEN PARKING AREAS AND SIDE OR REAR PROPERTY LINES (EXCEPT BETWEEN COMMERCIAL USES WHERE SAID LANDSCAPING IS NOT VISIBLE FROM AREAS OF PUBLIC ACCESS) AND A MINIMUM OF FIVE FEET (5') OF LANDSCAPING BETWEEN AN ACCESS DRIVEWAY AND A SIDE OR REAR PROPERTY LINE UNLESS SAID DRIVEWAY IS TO BE USED FOR COMMON ACCESS BY AN ADJACENT LOT.

2. AREAS NOT VISIBLE FROM THE STREET SHALL HAVE ONE LANDSCAPE AREA IN THE AMOUNT OF ONE HUNDRED (100) SQUARE FEET FOR EVERY SEVENTY FIVE (75) LINEAR FEET OF PROPERTY LINE NOT VISIBLE FROM THE PUBLIC RIGHT OF WAY.

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076		SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 8139174-5301 8/5/2023 ELECTRONIC SIGNATURE STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023

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

COPYRIGHT:
PKJ DESIGN GROUP

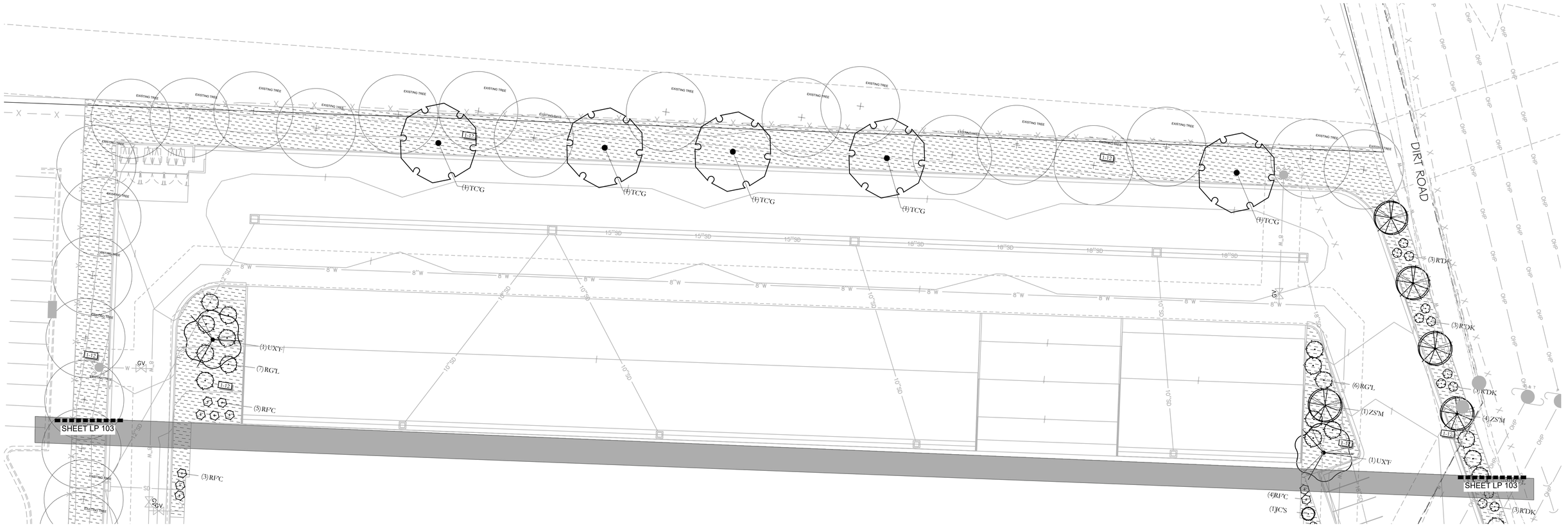
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

LANDSCAPE COVER

CITY PERMIT SET

LP-101

Exhibit K



ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076	811 BLUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC 1-800-662-4111 www.bluestakes.org	SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 8/5/2023 STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023

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

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

LP-102
LP-103

COPYRIGHT:
PKJ DESIGN GROUP

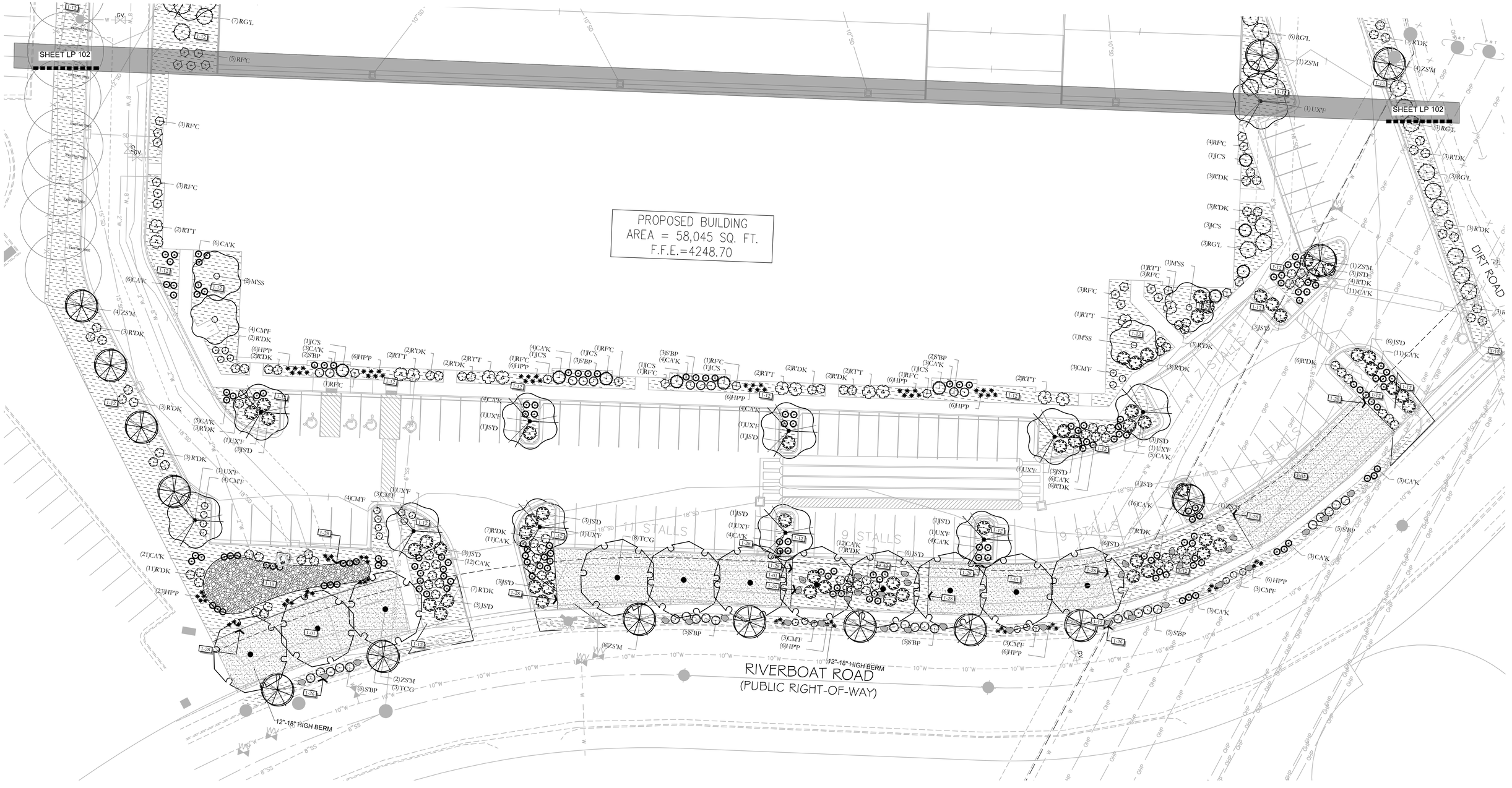
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

LANDSCAPE PLAN

CITY PERMIT SET

LP-102

Exhibit K



ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076	811 BLUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC 1-800-662-4111 www.bluestakes.org	SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 6/5/2023 STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023

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

GRAPHIC SCALE: 1" = 20'

LP-102
LP-103

COPYRIGHT:
PKJ DESIGN GROUP

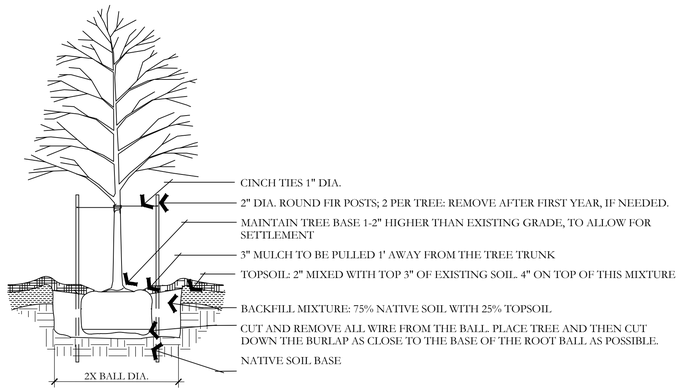
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

LANDSCAPE PLAN

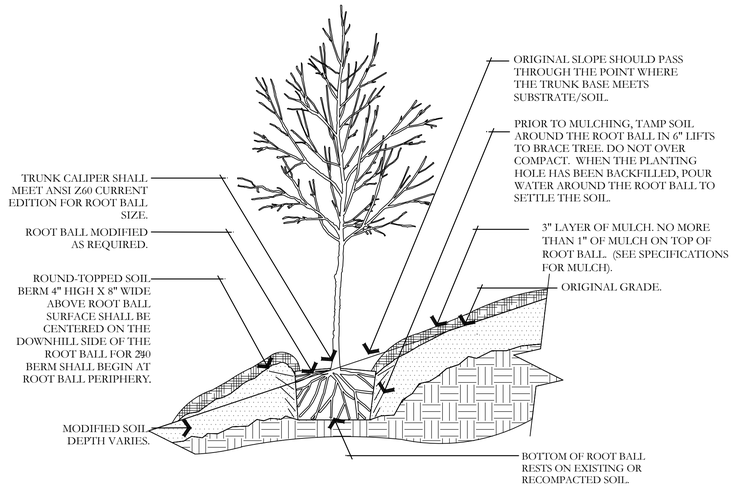
CITY PERMIT SET

LP-103

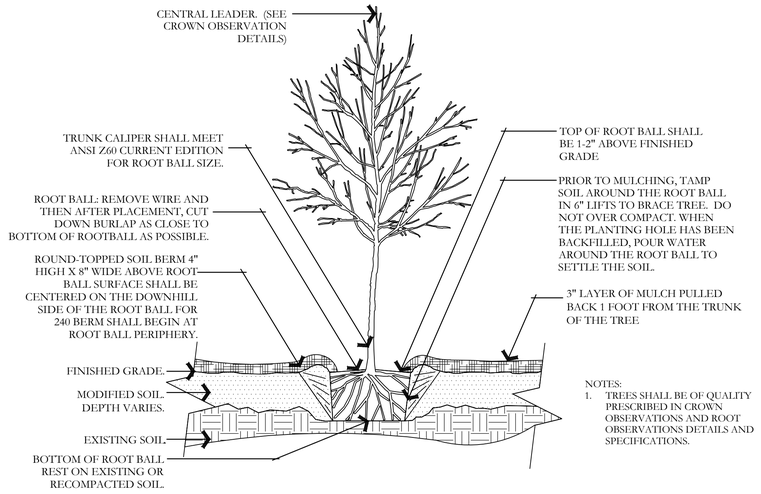
Exhibit K



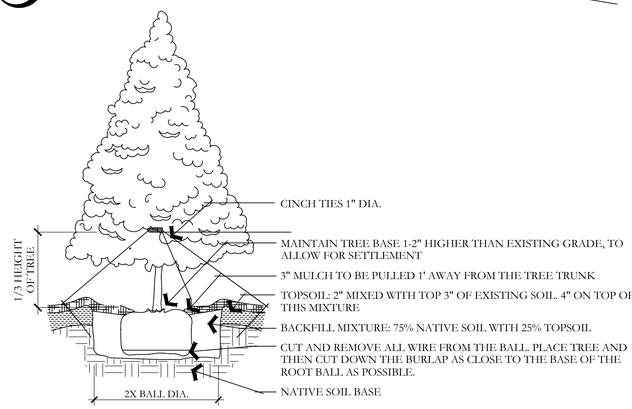
A DECIDUOUS TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



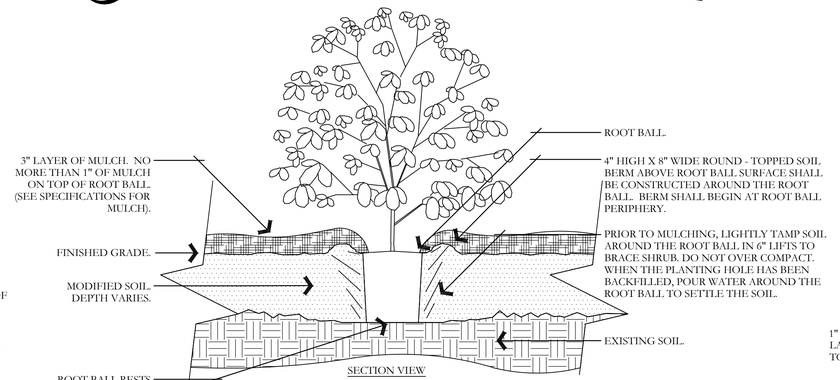
B TREE ON SLOPE 5% (20:1) TO 50% (2:1)
NOT TO SCALE
PKJ DESIGN GROUP



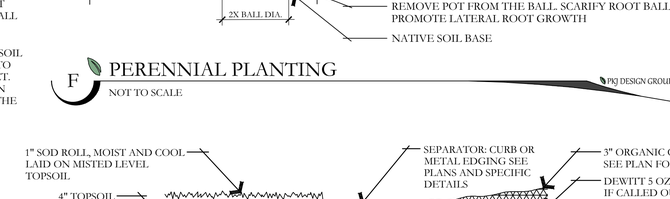
C TREE W/ BERM (EXISTING SOIL MODIFIED)
NOT TO SCALE
PKJ DESIGN GROUP



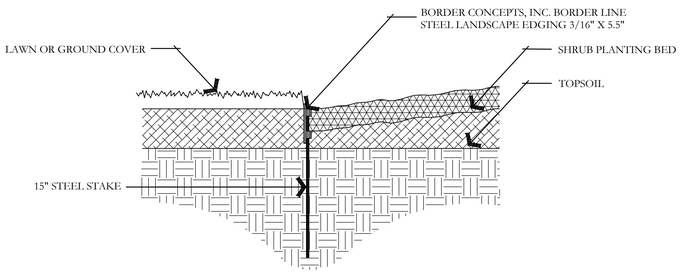
D EVERGREEN TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



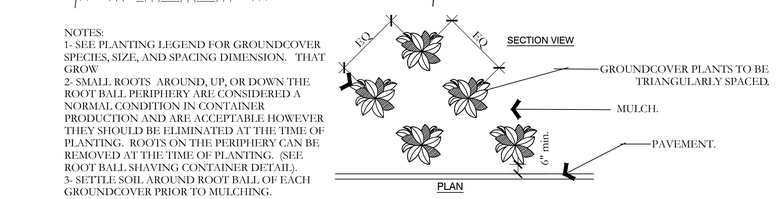
E SHRUB - MODIFIED SOIL
NOT TO SCALE
PKJ DESIGN GROUP



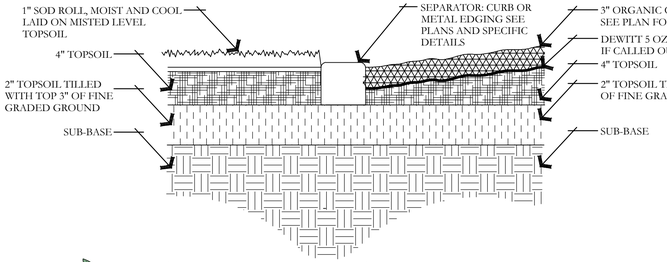
F PERENNIAL PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



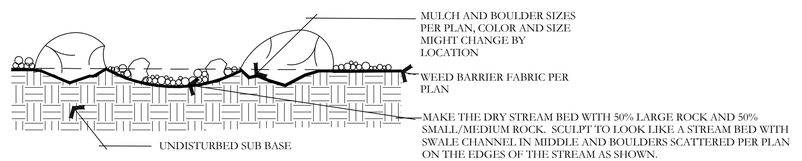
G METAL EDGING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



H PERENNIAL/GROUNDCOVER PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



I SOD LAYING/MULCH DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



J BOULDER AND DRY STREAM BED DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION
8/5/2023	UT23076	

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

SORENSON RESEARCH PARK
PHASE 2 & 4
RIVERBOAT ROAD
TAYLORSVILLE, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

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
8128121-5301
8/5/2023
STATE OF UTAH

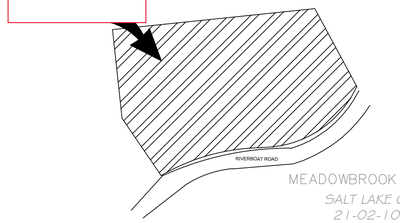
DRAWING INFO	
PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	8/5/2023

LANDSCAPE DETAILS
CITY PERMIT SET

LP-501

VICINITY MAP

Exhibit K



SHEET INDEX

SHEET IR 102
SHEET IR 103

FEMA Zone AE

MEADOWBROOK GOLF COURSE
SALT LAKE COUNTY
21-02-101-013

JORDAN RIVER CENTE
21-02-2

DIRT ROAD

PROPOSED BUILDING
AREA = 58,045 SQ. FT.
F.F.E.=4248.70

ISOLATION BALL VALVE

COORDINATE IRRIGATION CONTROLLER LOCATION WITH OWNER BEFORE INSTALLATION.

PLACE PROTECTIVE CAGE ON TOP OF FILTER AND SECURE TO CONCRETE PAD

LANDSCAPE POINT OF CONNECTION. TEST PSI. IF IT IS HIGHER THAN 85 PSI, USE A PRESSURE REDUCING VALVE.

1" FLOW SENSOR

2" MAINLINE

6" SLEEVE FOR MAINLINE

12"-18" HIGH BERM

RIVERBOAT ROAD
(PUBLIC RIGHT-OF-WAY)

SORENSON 9 EQUITIES
21-02-201-005

LOT 3
RESEARCH PARK PHASE 2
27986, B:97-8, P:268

IRRIGATION LEGEND

SYMBOL	MANUFACTURER-MODEL NUMBER
	RAINBIRD RD04-S-PRS POP UP SPRAY 5 SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 8 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 10 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 12 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 SST @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 EST @ 30 PSI
	RAINBIRD 5004+PCR SERIES W/ MPR NOZZLES @ 45 PSI
	RAINBIRD 8005 SERIES Q#8-6.6 GPM, H#14-12.6 GPM, F#26-24.3 GPM NOZZLES
S	POINT OF CONNECTION (SECONDARY WATER) SEE PLAN FOR SIZE TEST PSI PRESSURE. IF HIGHER THAN 85 PSI USE A PRESSURE REDUCING VALVE.
A	CONTROLLER:RAINBIRD ESP-LXIVM, WITH COMMUNICATION CARTRIDGE (4G/ETHERNET), CONTRACTOR TO ADJUST LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
R	RAINBIRD WR2-RC WIRELESS RAIN SHUT OFF DEVICE
	ISOLATION BALL VALVE - LINE SIZED INSTALL PER MANUFACTURER'S SPEC.
	2" T SUPER AMIAD PLASTIC FILTER W/ BRUSHAWAY ASSEMBLY - INSTALL PER MANUFACTURE'S. RECOMMENDATIONS (130 MICRON)
M	MASTER VALVE
F	UFS100-FLOW SENSOR-SIZE FLOW SENSOR ACCORDING TO MINIMUM GPM ZONE ON SYSTEM TO MAKE SURE THAT THE FLOW SENSOR IS CAPTURING FLOW. (USE SIZING CHARTS)
QL	QUICK COUPLER: RAINBIRD 44LRC INSTALL PER MANUFACTURER'S SPEC.
SOL	SMART VALVE IVMSOL. INSTALL PER MANUFACTURER'S SPEC.
L	LIGHTNING ARRESTER INSTALL PER MANUFACTURER'S SPEC. (EVERY 500 FT., OR 15 IVM DEVICES MAXIMUM.)
	REMOTE CONTROL VALVE: RAINBIRD IVMSOL AUTOMATIC CONTROL VALVE (USE TAN LID IN PLANTER AREAS & GREEN LID IN GRASS AREAS) PLACE YELLOW TAGS ON ALL VALVES AND LABEL.
	DRIP CONTROL ZONE KIT: RAINBIRD XCZ100IVM- FLOW INDICATING BASKET FILTER-(PER PLAN)-PRBR-COM MED FLOW (SIZE AS NOTED ON PLAN)
	MAINLINE: SCHEDULE 40 PVC WITH SCHEDULE 80 FITTINGS, 2" DIAMETER 24" MIN. COVER
	LATERAL LINE: SCHEDULE 40 PVC WITH SCH. 40 FITTINGS. PIPE SIZING: I=3/4", II=1", III=1 1/4". SEE PIPE SIZING CHART BELOW FOR LARGER SIZES.
	DRIP RWS-S-B-1401 (ROOT WATERING SYSTEM PROVIDE 2 TO EACH TREE.)
	DRIP LINE: RAINBIRD XFS-CV-09-18 OR EQUIVALENT
	CLASS 200 SLEEVE PER PLAN
NO SYMBOL	WIRE CHASE, SIZE TO BE TWICE THE DIAMETER OF THE WIRE BUNDLE WITHIN. 1.1/4" DIAMETER MINIMUM
	14 GAUGE SOLID COPPER SINGLE STRAND CONTROL WIRE. INSTALL PER MANUFACTURER'S SPEC. PROVIDE 2 WIRE LOOP SYSTEM. ONLY WIRE FROM POC TO CONTROLLER IS DEPICTED ON PLANS. CONTRACTOR TO INSTALL WIRE IN CONDUIT (BLACK 3/4" POLY PIPE) IN MAINLINE TRENCH FROM POC TO ALL VALVES. THE WIRE TO VALVES IS NOT SHOWN ON PLAN

DRIP ZONE

TYPE	PART NUMBER	EMITTER FLOW	
XFS DRIPLINE	XFS-CV-09-18	9 GPH	
SHRUBS-DRIP LINE: RAINBIRD XFS-CV-09-18 OR EQUIVALENT			*EACH ZONE NOT TO EXCEED 20 GPM
TREES-DRIP LINE: RAINBIRD XFS-CV-09-18 OR EQUIVALENT			*EACH ZONE NOT TO EXCEED 20 GPM
*ONLY WATER PLANT SPECIFICALLY. DO NOT WATER ROCK AREA WITH NO PLANTS			
*SEE DETAILS FOR SHRUB AND TREE DRIPLINE CONFIGURATION			

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 WATER.USE 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 PLACED 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 MANUFACTURER'S 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 MANUFACTURERS SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. 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

VALVE ID TAG

A1 — CONTROLLER NUMBER, VALVE NUMBER
VALVE SIZE — 1.0 | 18 — GALLONS PER MINUTE
PSI AT LAST HEAD IN ZONE — 55

NOTE:
1. VALVE ID TAGS ARE LOCATED NEAR VALVES IN THE ORDER THE VALVES APPEAR ON THE DRAWING

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

8/5/2023

UT23076

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

N

0' 15' 30' 60' 120'
GRAPHIC SCALE: 1" = 30'

SORENSON RESEARCH PARK PHASE 2 & 4

RIVERBOAT ROAD
TAYLORSVILLE, UTAH

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

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 — KEVIN AINSWORTH — 8728121-5301 — 8/5/2023 — ELECTRONIC SEAL — STATE OF UTAH

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 8/5/2023

IRRIGATION OVERALL PLAN

CITY PERMIT SET

IR-100

Exhibit K

IRRIGATION PLAN SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART 1 - 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 popc 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: Loceation 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: Circuit 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-Amercian 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 copper 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 PVC slip cap, pressure fit, until used, to prevent contamination. Sleeves shall be installed at appropriate depths for main line pipe or lateral pipe.

2.6 MAIN LINE PIPE

A. All main line pipe 4" and larger shall be Class 200 gasketed bell end. All main line pipe 3" in size and smaller shall be Schedule 40 PVC solvent weld bell end.

a. Maximum flows allowed through main line pipe shall be:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

b. Main line pipe shall be buried with 24" cover

2.7 MAIN LINE FITTINGS

A. All main line fittings 3" and larger shall be gasketed ductile iron material. All ductile iron fittings having change of direction shall have proper concrete thrust block installed. All main line fittings smaller than 3" in size shall be Schedule 80 PVC.

2.8 ISOLATION VALVES

A. Isolation valves 3" and larger shall be Waterous brand model 2500 east iron gate valve, resilient wedge, push on type, with 2" square operating nut. Place sleeve of 6" or larger pipe over top of valve vertically and then extend to grade. Place 10" round valve box over sleeve at grade.

B. Isolation valves 2-1/2" and smaller shall be Apollo brand 70 series brass ball valves, contained in a Carson Standard size valve box. Valves shall be installed with S/80 PVC TOE Nipples on both sides of the valve. Valve shall be placed so that the handle is vertical toward the top of the valve box in the 'off' position.

2.9 MANIFOLDS

A. Action Manifold fittings shall be used to create unions on both sides of each control valve, allowing the valve to be removed from the box without cutting piping. Valves shall be located in boxes with ample space surrounding them to allow access for maintenance and repair. Where practical, group remote control valves in close proximity, and protect each grouping with a manifold isolation valve as shown in details. Manifold Main Line (or Sub-Main Line) and all manifold components and isolation valves shall be at least as large as the largest diameter lateral served by the respective manifold.

2.10 REMOTE CONTROL VALVES

A. Remote control valves shall be as specified on the drawings. Remote control valves shall be located separately and individually in separate control boxes.

2.11 MANUAL CONTROL VALVES

A. Quick coupler valve shall be attached to the manifold sub-main line using a Lasco G17S212 swing joint assembly with snap-lock outlet and brass stabilizer elbow. Quick coupler valve shall be placed within a Carson 10" round valve box. Top of quick coupler valve cover shall allow for complete installation of valve box lid, but also allow for insertion and operation of key. Base of quick coupler valve and top of quick coupler swing joint shall be encased in ¾" gravel. Contractor shall not place quick coupler valves further than 200 feet apart, to allow for spot watering or supplemental 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 degress 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.

B. Locate controllers in protected, inconspicuous places, when possible. Coordinate location of pedestal controllers with Landscape Architect to minimize visibility.

C. Coordinate location of wall mount controllers with building or electrical Contractor to facilitate electrical service and future maintenance needs. Wall mount shall be securely fastened to surface. If exterior mounted, wall mount controllers shall have electrical service wire and field control wire in separate, appropriate sized weatherproof electrical conduit, PVC pipe shall not be used.

D. Wiring under hardscape surfaces shall be placed continuously in conduit. Contractor shall be responsible to coordinate sleeving needs for conduit or sweeps elbows from exterior to interior of building.

E. Pedestal controllers shall be placed upon VIT-Strong Box Quick Pad as per manufacturer's recommendations. Controllers shall be oriented such that Owner's Representative maintenance personnel may access easily and perform field system tests efficiently.

F. Place Standard valve box at base of controller or nearby to allow for three to five feet of slack field control wire to be placed at each controller. This Contractor shall provide conduit access if needed for Electrical Contractor. Electrical supply and installation, as well as hook-up to controller shall be by this Contractor.

G. Electrical contractor is in charge of providing 1.5" conduit from controller to outside landscape area. Provide power and room for controller. Provide ethernet to hardwire power into the controller.

3.7 VALVES

A. Isolation valves, remote control valves, and quick coupler valves shall be installed according to manufacturer recommendation and Contract Specifications and Details.

B. Valve boxes shall be set over valves so that all parts of the valve can be reached for service.

C. Valve box and lid shall be set to be flush with finished grade. Only one remote control valve may be installed in a valve box. Place a minimum of 4" of ¾" washed gravel beneath valve box for drainage. Bottom of remote control valve shall be a minimum of 2" above gravel.

3.8 SPRINKLER HEADS

A. No sprinkler shall be located closer than 6" to walls, fences, or buildings.

B. Heads adjacent to walks, curbs, or paths shall be located at grade and 2" away from hardscape.

C. Control valves shall be opened. Then fully flush lateral line pipe and swing joints prior to installation of sprinklers.

D. Spray heads shall be installed and flushed again prior to installation of nozzles.

E. Contractor shall be responsible for adjustment if necessary due to grade changes during landscape construction.

3.9 FIELD QUALITY CONTROL

A. Main line pipes shall not be backfilled or accepted until the system has been tested for 2 hours at 100 psi.

B. Main line pressure test shall include all pipe and components from the point of connection to the upstream side of remote control valves. Test shall include all manifold components under constant pressure. Piping may be tested in sections that can be isolated.

C. Contractor shall provide pressurized water pump to increase or boost pressure where existing static pressure is less than 100 psi.

D. Schedule testing with OAR 48 hours in advance for approval.

E. Leaks or defects shall promptly be repaired or rectified at the Contractors expense and retested until able to pass testing.

F. Grounding resistance at pedestal controller shall also be tested and shall not exceed 5 OHMs.

3.10 ADJUSTMENT

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

90 Day Establishment Period Irrigation Schedule (April, May, June)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min	15 min	15 min	15 min	15 min	15 min	30 psi
Shrubs	Shrubs	25 min	0	25 min	0	25 min	0	25 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

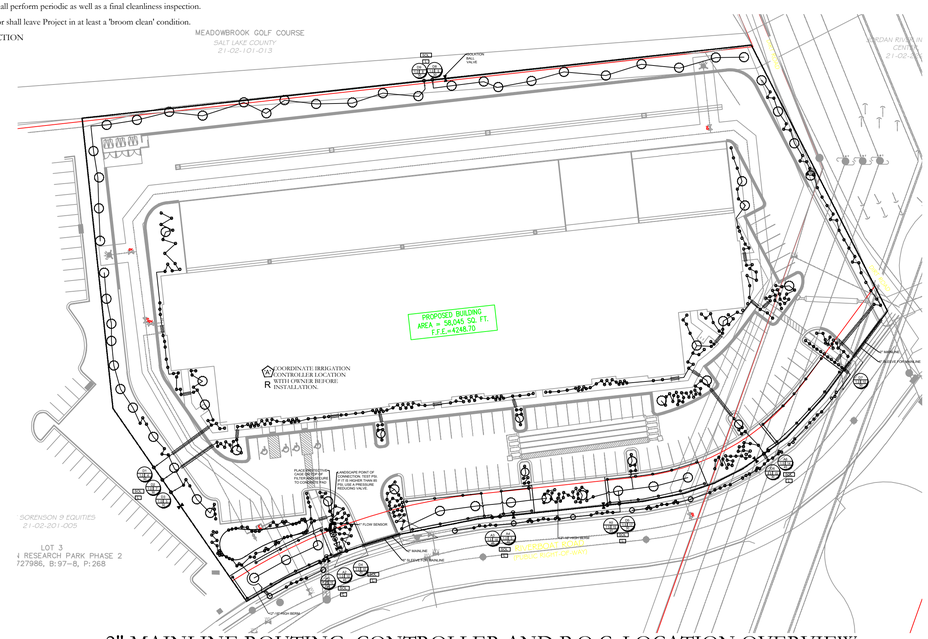
Regular Irrigation Schedule (see Seasonal Differential Chart)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min	15 min	15 min	15 min	15 min	15 min	30 psi
Shrubs	Shrubs	45 min		45 min		45 min		45 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

Seasonal Differential

	April	May	June	July	August	Sept	October
Turf	10 min	10 min	15 min	15 min	15 min	10 min	10 min
Shrubs	30 min	30 min	45 min	45 min	45 min	30 min	30 min



2" MAINLINE ROUTING ,CONTROLLER AND P.O.C. LOCATION OVERVIEW

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076		SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 KNOWLTON 8128121-5301 8/5/2023 ELECTRONIC SEAL STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023 IRRIGATION COVER CITY PERMIT SET IR-101

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

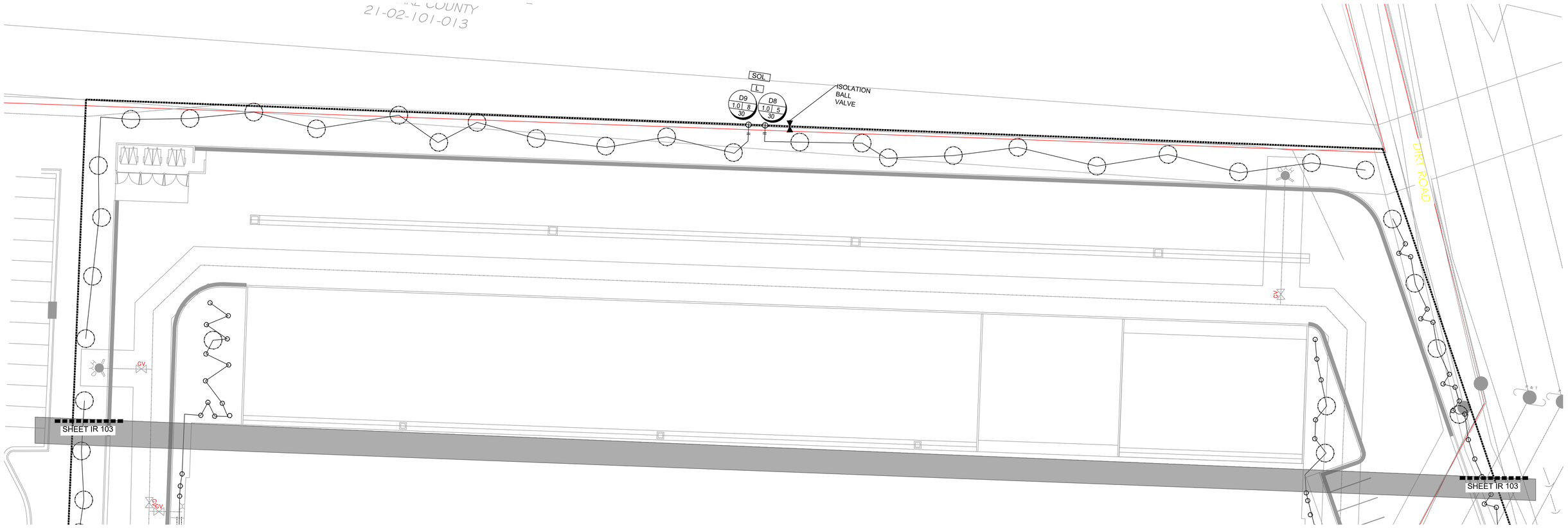
N

0' 30' 60' 120' 240'
GRAPHIC SCALE: 1" = 60'

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

Exhibit K



ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076	811 BLUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC 1-800-662-4111 www.bluestakes.org	SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 8128727-5301 8/5/2023 ELECTRONIC SEAL STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023

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

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

IR-102
IR-103

COPYRIGHT:
PKJ DESIGN GROUP

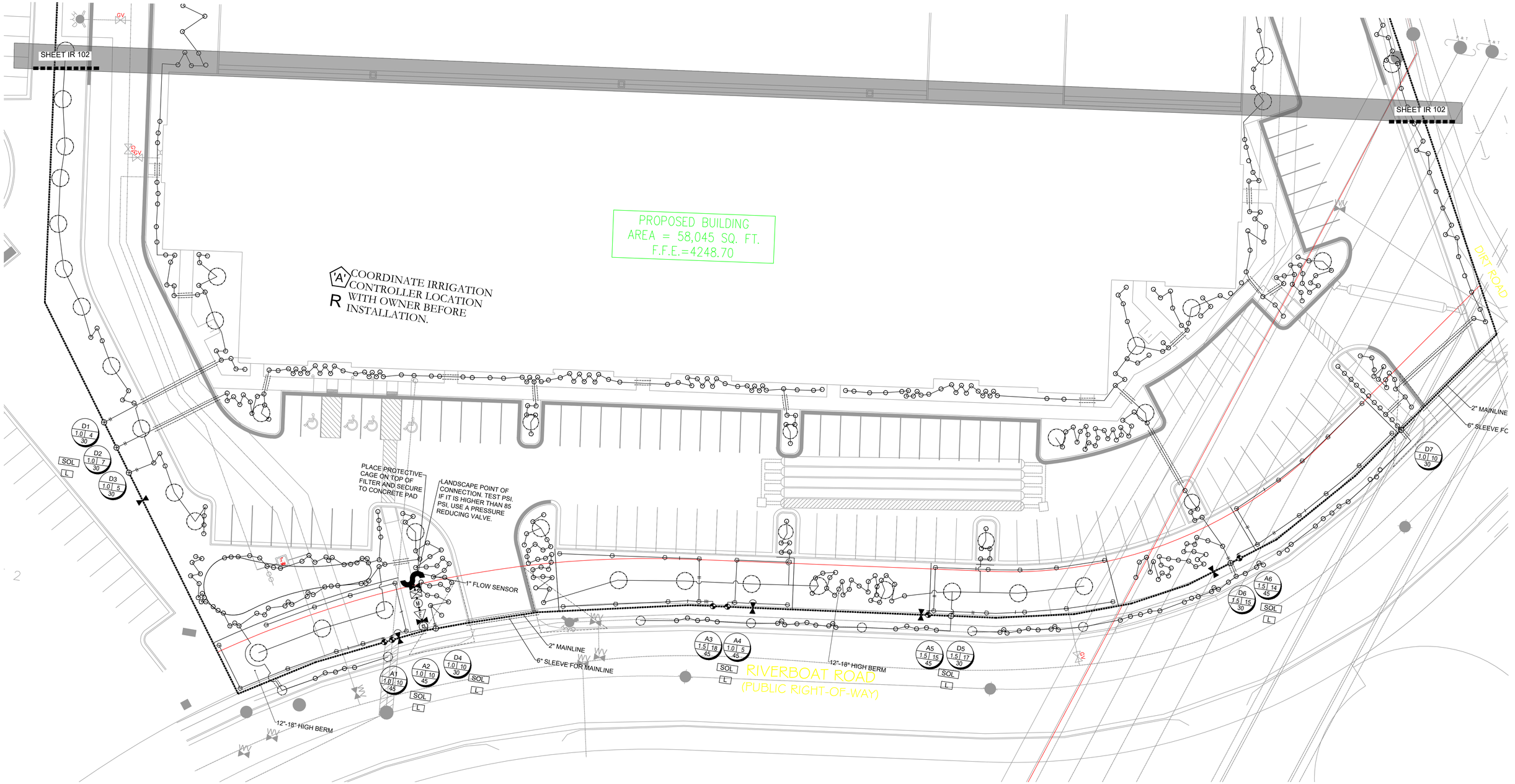
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

IRRIGATION PLAN

CITY PERMIT SET

IR-102

Exhibit K



ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076		SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 8128127-5301 8/5/2023 ELECTRONIC SIG STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023 IRRIGATION PLAN CITY PERMIT SET

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

N

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

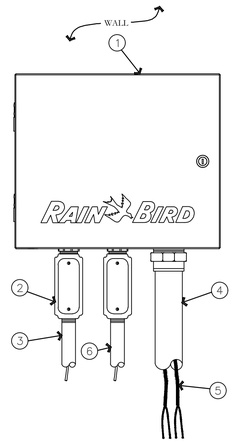
IR-102
IR-103

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

IR-103

Exhibit K



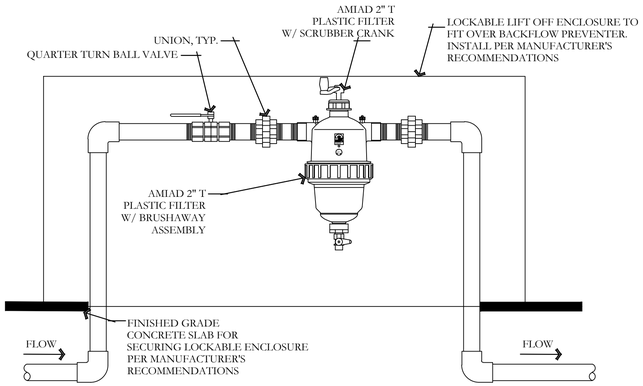
1. TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO IN LXMM METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
4. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
5. MAXICABLE 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.

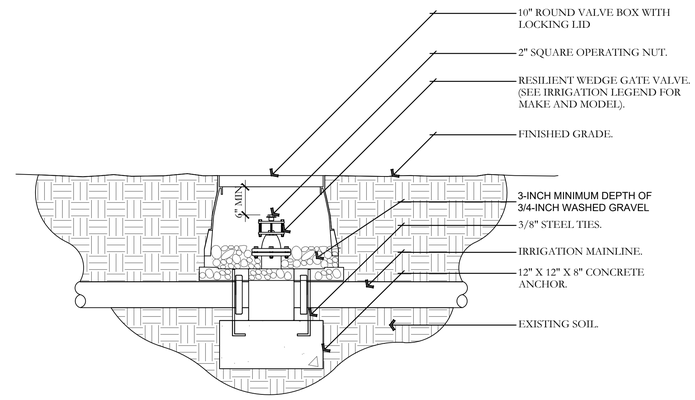
KEY SPECIFICATIONS

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
NOT TO SCALE — PKJ DESIGN GROUP

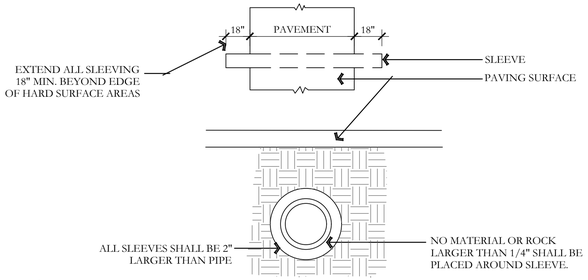


B 2" PLASTIC FILTER W/ BRUSHAWAY ASSEMBLY
NOT TO SCALE — PKJ DESIGN GROUP

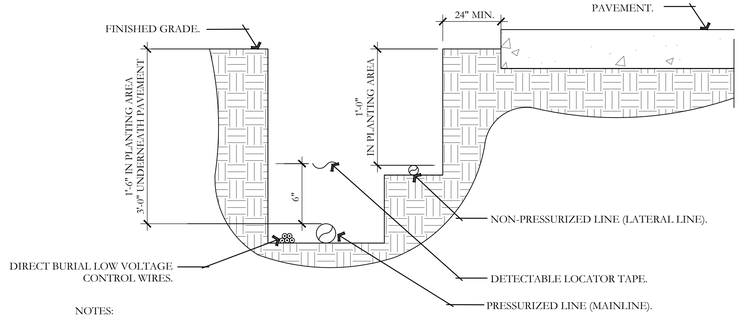


NOTES:
1. INSTALL GATE VALVE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. VALVE BOX SHALL BE WRAPPED WITH MINIMUM 3 MIL. THICK PLASTIC AND SECURE IT TO VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. VALVE BOX SHALL BE LOCATED IN PLANTING AREA.

C GATE VALVE AND ANCHOR DETAIL
NOT TO SCALE — PKJ DESIGN GROUP

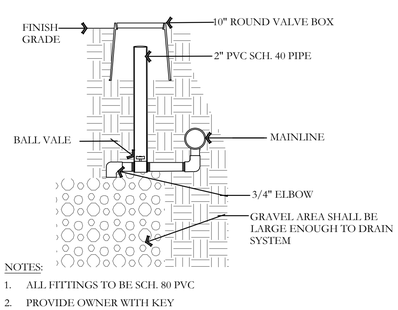


D TYPICAL SLEEVING DETAIL
NOT TO SCALE — PKJ DESIGN GROUP



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
NOT TO SCALE — PKJ DESIGN GROUP

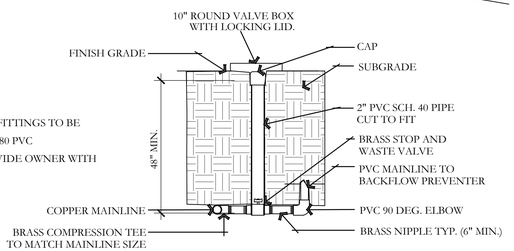


NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

F MANUAL DRAIN DETAIL
NOT TO SCALE — PKJ DESIGN GROUP

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.

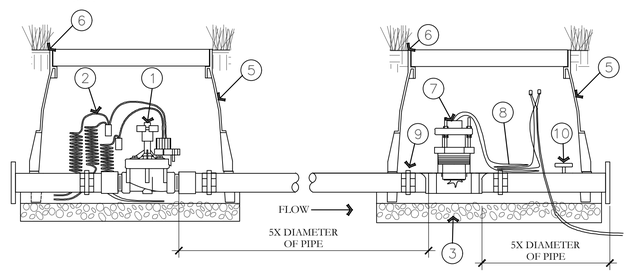
G QUICK COUPLER DETAIL
NOT TO SCALE — PKJ DESIGN GROUP



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

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
NOT TO SCALE — PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076						PM: JTA
							DRAWN: ACP
							CHECKED: JMA
							PLOT DATE: 8/5/2023

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

N

SORENSON RESEARCH PARK
PHASE 2 & 4
RIVERBOAT ROAD
TAYLORSVILLE, UTAH

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

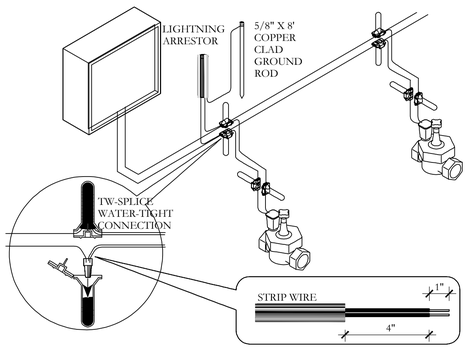
PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 753-5644
www.pkjdesigngroup.com

LICENSED LANDSCAPE ARCHITECT — JEREMY ANDREW TAYLOR — 812821-5301 — 8/5/2023 — ELECTRONIC SEAL — STATE OF UTAH

IRRIGATION DETAILS
CITY PERMIT SET

IR-501

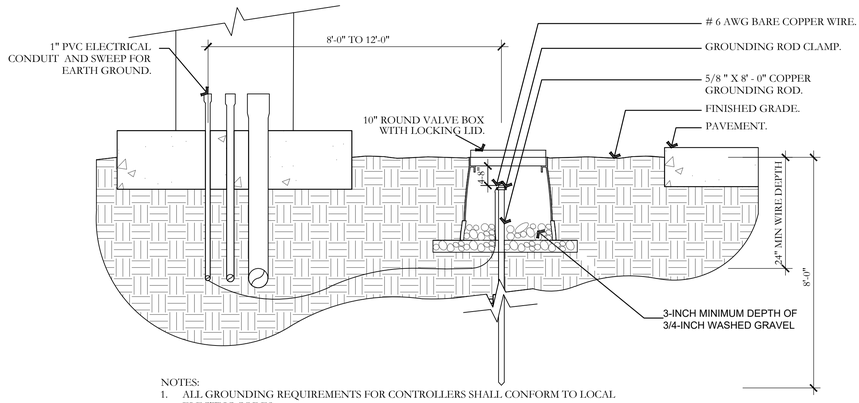
Exhibit K



J 2-WIRE CONNECTION DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



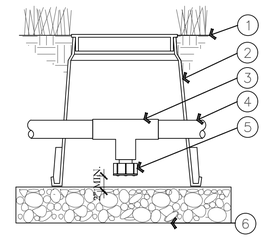
NOTES:

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

NOT TO SCALE

PKJ DESIGN GROUP

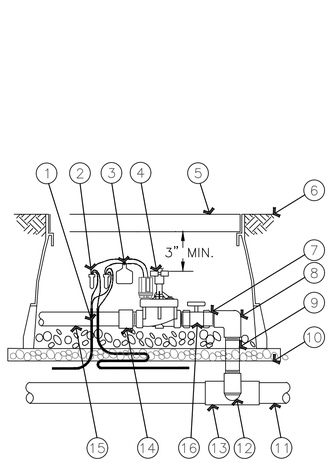


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-6RND
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE: RAIN BIRD 16A-FDV-075
6. 6-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL

L MANUAL LINE DRAIN VALVE DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

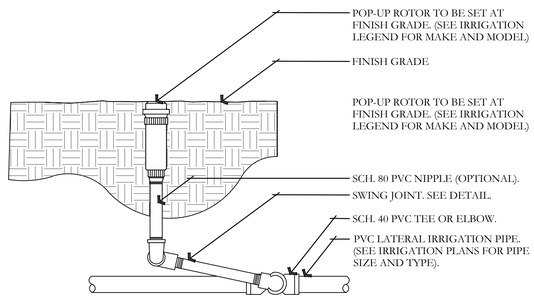


1. 36-INCH LENGTH OF 2-WIRE CABLE
2. WATERPROOF CONNECTION RAIN BIRD WC20 (TWO REQUIRED)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PEB/PESB/PESB-R WITH IVM-SOL
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL `
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

NOT TO SCALE

PKJ DESIGN GROUP



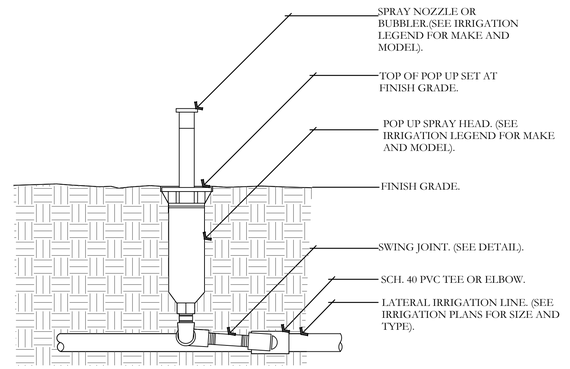
NOTES:

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

NOT TO SCALE

PKJ DESIGN GROUP



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

NOT TO SCALE

PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER
8/5/2023	UT23076

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

N

PROJECT INFORMATION

SORENSON RESEARCH PARK PHASE 2 & 4

RIVERBOAT ROAD
TAYLORSVILLE, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

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
8128121-5301
8/5/2023
ELECTRONIC SEAL
STATE OF UTAH

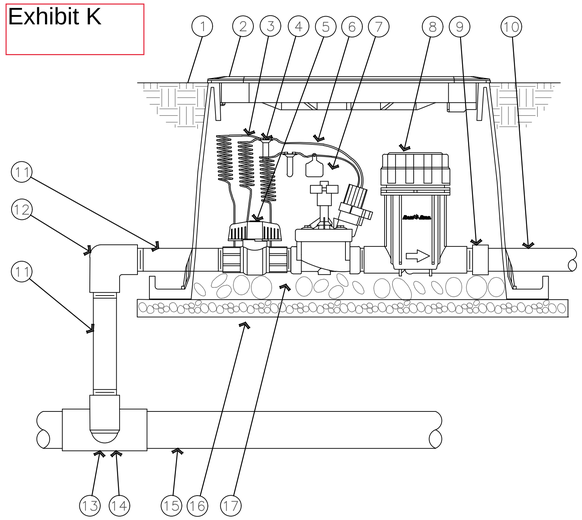
DRAWING INFO	
PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	8/5/2023

IRRIGATION DETAILS

CITY PERMIT SET

IR-502

Exhibit K

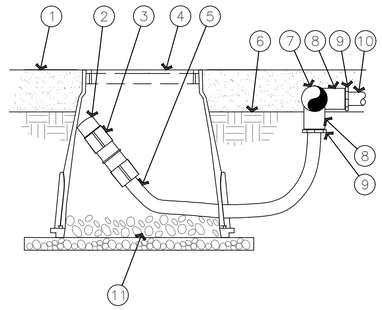


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-100-COM KIT)
8. PRESSURE 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



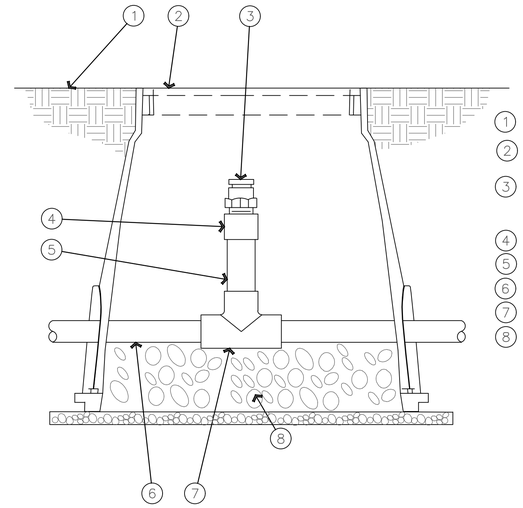
1. MULCH
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. ½" POLYETHYLENE TUBING: RAIN BIRD XF BLANK TUBING
6. FINISH GRADE
7. PVC EXHAUST HEADER
8. PVC SCH 40 TEE OR EL
9. BARB X MALE 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

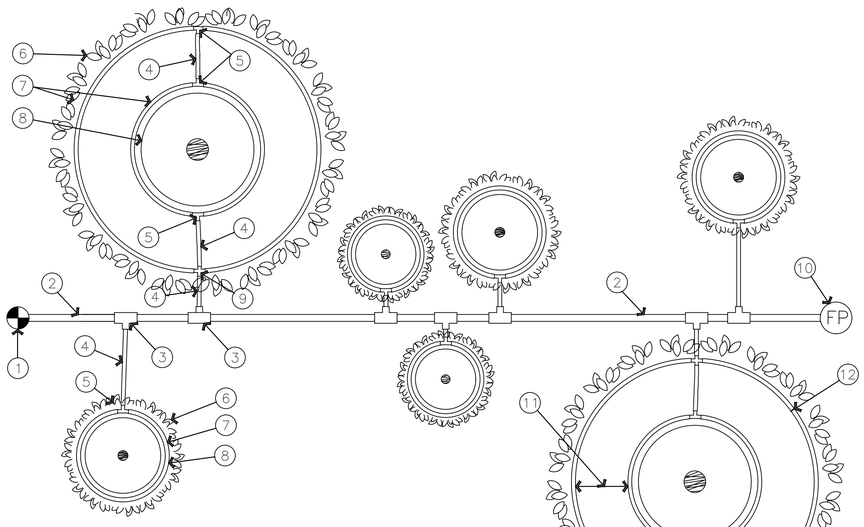


1. FINISH GRADE
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
4. PVC SCH 40 FEMALE ADAPTER
5. PVC SCH 80 RISER
6. PVC HEADER PIPE
7. PVC SCH 40 TEE
8. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

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)

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	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
8/5/2023	UT23076		SORENSON RESEARCH PARK PHASE 2 & 4 RIVERBOAT ROAD TAYLORSVILLE, UTAH	AE URBIA 909 W. SOUTH JORDAN PARKWAY SOUTH JORDAN, UT 84095 801-575-6455	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 8129171-5301 8/5/2023 RENEW 6/30 STATE OF UTAH	PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 8/5/2023

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

N

COPYRIGHT:
PKJ DESIGN GROUP

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.

IRRIGATION DETAILS

CITY PERMIT SET

IR-503

Exhibit L



To Whom it my concern

Our days of operations are Sunday night through Saturday. Our hours of operation are 7pm till 12pm the next day. We have 2 shifts 7pm till 3am is our night shift, 3am till 12pm is our day shift. We are closed Saturday from 12pm till Sunday and reopen at 7pm. We have 60 employees. 20 work the night shift 40 the day shift. There are 3-5 / 5-7 employees off each day.

We have 20 box trucks to cover 15 routes across the Wasatch front. Our 4-night shift trucks leave 9-10pm and return 1-2am. Are 11-day routes leave 6-7am and return 10-12am. We also 3-5 trucks that will go out later threw out the day depending on mistake on our part or our customers.

We receive our produce between the hours of 7am and 12pm. We receive 2-4 semi-trucks each day and 5 box truck.

Please let me know if I can answer or clarify anything.

Sincerely

James Kessimakis

james@kessimakispro.com