

# **AGENDA - Planning Commission Meeting**

Planning Commissioner Kirk Wilkins, Chair

Planning Commissioner Bryan Chapman, Vice Chair

Planning Commissioner Bryce Anderson

Planning Commissioner Christopher Carn

Planning Commissioner Troy Cunningham

Planning Commissioner Ken Kilgore

Planning Commissioner Sandra Steele

### **CITY OF SARATOGA SPRINGS**

Thursday, June 27, 2019 @ 6:00 pm

City of Saratoga Springs Council Chambers 1307 North Commerce Drive, Suite 200, Saratoga Springs, UT 84045

- 1. Pledge of Allegiance.
- 2. Roll Call.
- 3. Public Input: Time has been set aside for any person to express ideas, concerns, comments, questions, or issues that are not listed as a public hearing on the agenda. Comments are limited to three minutes.
- 4. Public Hearing: Update to the Standard and Technical Specifications and Drawings Manual. City Initiated.
- 5. Business Item: Site Plan and Conditional Use Permit for Havoline Lube Xpress located at 1457 N. Exchange Dr. Brad Findlay, applicant.
- 6. Business Item: Major Site Plan Amendment and Conditional Use Permit for AT&T Cell Tower, located at 273 West Aspen Hills Blvd. Doug Kofford, applicant.
- 7. Business Item: Site Plan and Conditional Use Permit for Welby-Jacob Pond/Pumphouse located approximately 925 West Military Road, Nate Shipp, applicant.
- 8. Approval of Minutes:
  - a. June 6, 2019
- 9. Reports of Action.
- 10. Discussion of City Code: Title 19.08 Home Occupations & 19.09 Off-Street Parking. (10 min.)
- 11. Commissioner Comments.
- 12. Director's Report.
- 13. Possible motion to enter into closed session for the purchase, exchange, or lease of property; pending or reasonably imminent litigation; the character, professional competence, or the physical or mental health of an individual; or the deployment of security personnel, devices, or systems.
- 14. Adjourn.

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PLEASE NOTE: The order of items may be subject to change with the order of the planning commission chair. One or more members of the Commission may participate electronically via video or telephonic conferencing in this meeting.

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify the City Recorder at 801.766.9793 at least one day prior to the meeting.

# **Planning Commission Staff Report**

**Author: Gordon Miner, City Engineer** 

Subject: Revisions to the City's Std. Technical Specifications and Drawings

Date: June 27, 2019

Type of Item: Legislative Recommendation



- **A. Summary:** The Engineering Department keeps a running list of minor and major changes that are needed to provide additional clarity and effectiveness, to remove inconsistencies, to reflect new "best practices" in Engineering, and to address changes in the community's needs, with the goal of adopting revisions every so often to keep the Standard Technical Specifications and Drawings current.
- **B.** Funding Source: Not applicable.
- **C. Review:** The proposed revisions have been reviewed by staff and it have been found to be acceptable and in legal form.
- **D.** Recommendation and Alternatives: Staff recommends that the Planning Commission forward a positive recommendation to the City Council regarding the proposed revisions, with the following proposed motion:

### **Positive Recommendation**

"I move to forward a **positive** recommendation to the City Council regarding these proposed revisions to the City's Standard Technical Specifications and Drawings."

### **Alternative Recommendation with Modifications**

"I move to forward a **positive** recommendation to the City Council regarding these proposed revisions to the City's Standard Technical Specifications and Drawings with the following modifications:"

1.	
2.	
3.	

### **Negative Recommendation**

"I move to keep the City's Standard Technical Specifications and Drawings unchanged."

### E. Attachments:

1. Proposed revisions to the City's Standard Technical Specifications and Drawings.

- 11. In the locations where the sewer leaves the public right-of-way a twenty-foot wide sanitary sewer easement will be required. This easement shall be centered on the sewer line. Sewer easements shall extend ten feet beyond dead end manholes. Show easements on the development plat and on the City's Standard Easement forms, which grant the easements to the City. Easements must be executed and returned to the City Office prior to acceptance being granted.
- 12. No plugged ends of sewer main lines will be allowed. Manholes must be constructed at the ends of sewer lines.
- 13. The minimum size manhole shall be 4-foot diameter.
- 14. 5-foot diameter manholes shall be used in the following situations:
  - a. At all intersections of three or more 8-inch or larger pipe lines.
  - b. Where the deflection angle of the pipe line exceeds 90 degrees.
  - c. When both items "a" and "b" are designed in the same manhole, a six-foot manhole is required.
- 15. A 12 foot paved access road shall be constructed to all manholes and shall be capable of supporting H-20 loading.
- 16. Where new sewer lines are connected to existing sewer lines, a 5-foot diameter manhole shall be constructed over the existing sewer line.
- 17. Manhole Spacing:
  - The maximum manhole span shall be 400 feet, as measured from center to center of manholes.
  - b. When sewer line depth is between 20' and 29', decrease the manhole span to 350'. When depths of greater than 30' are encountered, decrease the span to 300'.
- 18. Unless otherwise approved by the City Engineer, the minimum drops through manholes shall be as follows:
  - i. Greater than 90° 0.3 foot drop
  - ii. 75° 90° manholes 0.2 foot drop
  - iii. 25° 74° manholes 0.1 foot drop
  - iv. 0° 24° manholes the grade through the manhole shall be no less than the grade of the downstream pipe. equal to the incoming pipe slopes with a maximum drop of 0.20 feet across the manhole.
- 19. Where pipes of different diameters melding laterals connect into a manhole, the inside top of the smaller pipe shall match the inside top of the larger pipe.
- 20. Where incoming slopes at manholes are greater than or equal to 5 percent and the deflection angle within the manhole is greater than or equal to 45 degrees but less than 90 degrees, a five-foot manhole with an extra deep trough is required.
  - Where incoming slopes at manholes are greater than or equal to 5 percent and the deflection angle within the manhole is greater than 90 degrees, a six-foot manhole with an extra deep trough is required.
  - a. The benching of the extra deep trough shall be located 25% higher than the diameter of the incoming pipe.
- 21. The minimum lateral size shall be 4-inch for residential connections; and 6-inch for commercial and industrial connections.
  - a. Sewer lateral shall have a minimum slope of 2%.
- 22. Sewer laterals shall tie directly into manholes in cul-de-sacs and at dead end manholes.

- 20. Each building and/or unit of separate ownership shall require a separate water service line.
- 21. PRESSURE REGULATING STATIONS shall be constructed, where required to provide water supply between pressure zones, as indicated on the City Standard drawings.
  - a. The station plumbing shall consist of a main line and a by-pass line. The combined capacity of the main line and by-pass plumbing shall equal the capacity of the incoming pipe line. The main line will normally be one pipe size smaller than the incoming line and the by-pass line will be sized as required.
  - b. Plumbing will include pressure regulating valves on each line, isolation valves on each side of each regulating valve, and all appurtenant plumbing items, as indicated on the standard drawings.
- 22. Drinking water main lines shall be extended to property lines to service future development and shall end with blow-off or hydrant.
- 23. Dead-end mains shall not exceed 600 feet in length.
- 23.24. The maximum allowable deflection of pipe joints shall be less than or equal to half of the manufacturer recommended maximum deflection.

### D. SECONDARY WATER SYSTEMS:

- 1. Secondary Water systems shall be sized as described in the City's Capital Facilities Plan and shall be a minimum of 6" in public right-of-way.
- 2. The normal minimum operating pressure in all parts of the system during peak day demand shall be 30 psi.
- 3. The maximum operating pressure is to be 90 psi. Higher pressures can be used with acceptance from the City Engineer, based on pipe strength, the presence and nature of service connections, and the potential for transient pressure surges in the subject area of the system.
- 4. The maximum pipe line flow velocities will be 6 feet per second.
- 5. The impact of any proposed water system on the existing water system will be reviewed by the City Engineer. The developer may be required to add additional off-site infrastructure in order to provide adequate water supply to his development.
- 6. Areas that will be supplied through the proposed development will be considered and the method of service to those areas will be determined by the City Engineer. Increased system size may be required for future development as outlined in the City's Secondary Water Master Plan and as dictated by the City's water modeling.
- 7. The City Engineer shall consider and accept the system storage requirements for each development.
- 8. The minimum cover over top of water lines is to be 36 72-inches.
- Secondary water lines shall be placed in the park strips as required by the City Standards.
  - a. Location shall be on the west side of north/south streets.
  - b. Location shall be on the south side of east/west streets.
  - c. Location shall be on the opposite side of the street from drinking water lines.
- 10. Water lines up to and including 24 inches in diameter shall be AWWA C900 DR 18 purple in color. Water lines larger than 24 in. shall be ductile iron Class 250. Pipeline pressure class and/or design ratio may need to be increased as directed by the City Engineer depending on hydraulic surge, depth of cover, or transient pressures.

### 11. Valve placement:

- a. Valves shall be placed at the projection of the end of curb and gutter radius sections at the point of curvature.
- b. Valves shall be placed at intervals not to exceed 800 feet.
- c. At intersections, valves shall be placed on at least three branches of the system.
- d. Valves shall be placed within 10 feet of the upstream and downstream ends of casing pipes.
- e. Valves shall be placed at connections to existing infrastructure.
- 12. Blow-offs shall be placed at the ends of water lines at the low points in the system, and at other locations as shown on the City's Standard drawings.
- 13. Water Service Connections shall be constructed as shown on the City Standard drawings.
- 14. In the locations where the water lines leave the public right-of way a ten-foot wide easement will be required. This easement shall be centered on the water line. Water easements shall extend ten feet beyond dead ends. Show easements on the development plat and on the City's Standard Easement forms, which grant the easements to the City. Easements must be executed and returned to the City Office prior to acceptance being granted.
- 15. Each building and/or unit of separate ownership shall require a separate water service line.
- 16. PRESSURE REGULATING STATIONS shall be constructed, where required to provide water supply between pressure zones, as indicated on the City Standard drawings.
  - a. The station plumbing shall consist of a main line and a by-pass line. The combined capacity of the main line and by-pass plumbing shall equal the capacity of the incoming pipe line. The main line will normally be one pipe size smaller than the incoming line and the by-pass line will be sized as required.
  - b. Plumbing will include pressure regulating valves on each line, isolation valves on each side of each regulating valve, and all appurtenant plumbing items, as indicated on the standard drawings.

### 17. Air-Vacuum Valve Stations:

- a. Air-vacuum valve station venting shall be located in a landscaped area near the edge of the right-of-way (ROW).
- b. Air-vacuum valve stations shall be placed at high points on transmission lines and at other locations as required for proper system operation.
- c. Air-vacuum valve stations shall be constructed as indicated on the drawings.
- 18. Drains shall be installed at all low points on pressure irrigation lines.
- 19. Secondary water main lines shall be extended to property lines to service future Development and end with blow-off.
- 20. Permanent dead-end mains shall not exceed 600 feet in length.
- 20.21. The maximum allowable deflection of pipe joints shall be less than or equal to half of the manufacturer recommended maximum deflection.

### E. STORM DRAIN SYSTEMS:

1. The impact of any proposed storm drain system on the existing drainage system will be reviewed by the City Engineer. The developer may be required to add additional off-site storm drain systems in order to provide adequate drainage control for his development.

- 8. Cleanout boxes shall be located at every change in alignment or slope and at junctions with other lines.
- 9. Inlet boxes shall be placed as follows:
  - Spaced at no more than 400 feet apart to collect sheet flow of storm water.
  - b. Located at the uphill end of curb returns, unless one is already needed on the downhill side due to slope constraints.
  - c. On lot lines, where practical.
- 10. Maximum spans between structures shall be 400 feet from center to center of structures.
- 11. All storm drains under pavement or curb shall be constructed with reinforced concrete pipe; with minimum size of 15-inch diameter.
- 12. Storm drain lines shall be designed such that the maximum velocity does not exceed 20 ft/sec and that the minimum velocity is at least 3 ft/sec.
- 13. The minimum pipe slopes shall be per Table 5:

Table 5. Minimum Pipe Slopes in Concrete Storm Drains					
Pipe Size (in)	Full Pipe Flow (cfs)	Minimum Slopes (ft/ft)			
8	1.1	0.0075			
10	1.6	0.0056			
12	2.4	0.0044			
15	3.7	0.0032			
18	5.3	0.0026			
21	7.2	0.0021			
24	9.4	0.0017			
27	11.9	0.0015			
30	14.7	0.0013			
33	17.8	0.0011			
36	21.2	0.0010			
42	28.9	0.0008			
48	37.7	0.0007			
54	47.7	0.0006			
60	58.9	0.0005			
66	71.3	0.0005			
72	84.8	0.0004			

- 14. Minimum cover shall be as per manufacturer's recommendation over all reinforced concrete drain lines.
- 15. Storm drains shall be located as indicated on the City's Standard drawings and shall be located in ROW or dedicated open spaces.
- 16. Where pipes of different diameters connect into a drainage structure, the inside top of the smaller pipe shall match the inside top of the larger pipe.

- h. All ponds, except for above-ground detention in private parking lots that spill to a street, shall have a minimum of 1' of free board above the 100 year high water elevation. However, above-ground detention ponds in private parking lots shall provide 1' of freeboard to the finished floor of habitable structures.
- i. Above-ground detention ponds in private parking lots shall have a maximum ponded depth of 8 inches in parking stalls.
- j. Maximum interior and exterior slopes shall be 3:1.
- k. Detention areas-ponds may not be located within residential lots except for residential a single-phase subdivision s with less than 11 building lots. Detention ponds on residential building lots shall be designed pursuant to City Standards. The property owner of the residential lot on which a detention pond is located shall be responsible to maintain all surface improvements. This responsibility shall be noted on the subject lot on the plat, and easements shall be granted to the City for all underground improvements. The City shall maintain underground improvements.
- A structural BMP must be placed upstream of the orifice plate to catch trash/debris.
- m. Orifice plates must be located such that they can be cleaned off when the pond is full. The minimum size of orifice opening shall be 3.14 square inches. Every effort shall be made by the engineer to minimize the head over the minimum size orifice.
- n. If allowed by the City, retention systems shall be privately-owned-and operated.
- o. Underground storage systems that are not designed to infiltrate water into the ground shall be lined with a durable impermeable barrier. Geomembrane systems shall include a PVC or HDPE liner that is at least 140 mils thick with a needle-punched non-woven geotextile protective layer.
- p. Retention systems are allowed if they retain no more than 0.50 inches of rain and are shown to be feasible using the City's outline for "Storm Water Retention and Infiltration Feasibility Study," which shall include the following content:
  - i. General
    - (a). Description of Location. The report must clearly identify the location of the development site by address. Latitude and Longitude coordinates are to be provided if an address is not available or applicable. The report must include an aerial image of the site showing property boundaries, adjacent developments or reference points including roads, and the locations of the infiltration site(s).
    - (b). Topography. The report must describe the pre and postdevelopment site topography including vegetative types and land surface contours at a minimum of 1-foot intervals.
    - (c). Maximum Allowable Retention Volume. The maximum allowable retention volume shall be 0.55 inches across the subject area, which is the 90th percentile storm depth for the Saratoga Springs vicinity.
  - ii. Control through Ground Water Infiltration
    - (a). Subsurface Testing and Analysis

- e. Table 10 shows the Geosynthetic Requirements for Type 1 and 2 geogrids if those options are utilized.
- 2. Street system designs shall be shown on the construction drawings and shall meet all City Design Standards and Specifications.
- 3. Streets shall be constructed with asphaltic concrete, untreated base course, and granular borrow material for sub-base and/or subgrade protection, and a geotextile as required.
  - a. Thickness of each course shall be determined based on the subgrade and pavement classification. Table 6 outlines the standard design standards. Table 8 outlines the required subgrade protection based on the design CBR of the subgrade. Table 9 outlines the required pavement section based on classification of the roadway.
  - b. Thickness may need to be increased beyond the City Standards if recommended by a geotechnical engineer, but must be accepted by the City Engineer.
- 4. No new street pavement will be cut into for three years after acceptance of pavement.
- 5. Street light locations shall be at intersections and every 300 feet, placed on alternating sides of streets, or 600 feet on the same side of the street:
  - a. At every intersection, corner, and any bends greater than 30 degrees in the road. The spacing requirements shall be met accordingly once these areas are developed.
  - b. Shall be installed at property lines where attainable.
  - c. Shall be a minimum of 5 feet from any tree. Branches may need to be pruned as determined by the engineering inspector in the field at the time of installation
  - d. Shall not be installed within 5 feet from the edge of any driveway.
  - e. Any structure such as block walls, fences, retaining walls, etc., shall leave a minimum of eighteen (18) inches to the face of the street light pole on all sides.
  - f. Wherever there is an overhead utility that may conflict with the installation of the street light circuits and/or street light poles, those conflicts must be resolved between the developer and the utilities involved before the street light bases are constructed at no expense of the City or Rocky Mountain Power. The resolution must be approved by the City and Rocky Mountain Power.
- 6. Type 2 slurry seal shall be placed on all streets upon completion of paving.
- 7. Vertical curves are required when grade change is 1% or greater.
- 8. Because preference is given to pedestrians, a driveway approach is required for all private accesses (APWA Plan 225 for commercial accesses and private streets, and City Standard DWG ST-4A for single-family residential accesses) unless recommended otherwise by the City Engineer, based on site-specific considerations, such as:
  - a. Speed, slope, and width of the adjacent street
  - b. Width of the proposed access
  - c. Volume across the proposed access
  - d. Drainage.
- 9. Lower streets shall match centerline crowns in an intersection. Higher streets shall tie in 10' off the centerline in an intersection.
- 9.10. Curb returns adjacent to ADA ramps shall have a maximum slope of 2% where possible. Where the base of the curb ramp or the edge of the flush landing must join an intersection of two streets with running grades greater than 2 percent, the base of the curb ramp or the edge of the flush landing may be warped to meet the street running grade. Every effort shall be made to minimize this grade by warping the street cross slope plus or minus 2% on both legs of the intersection.

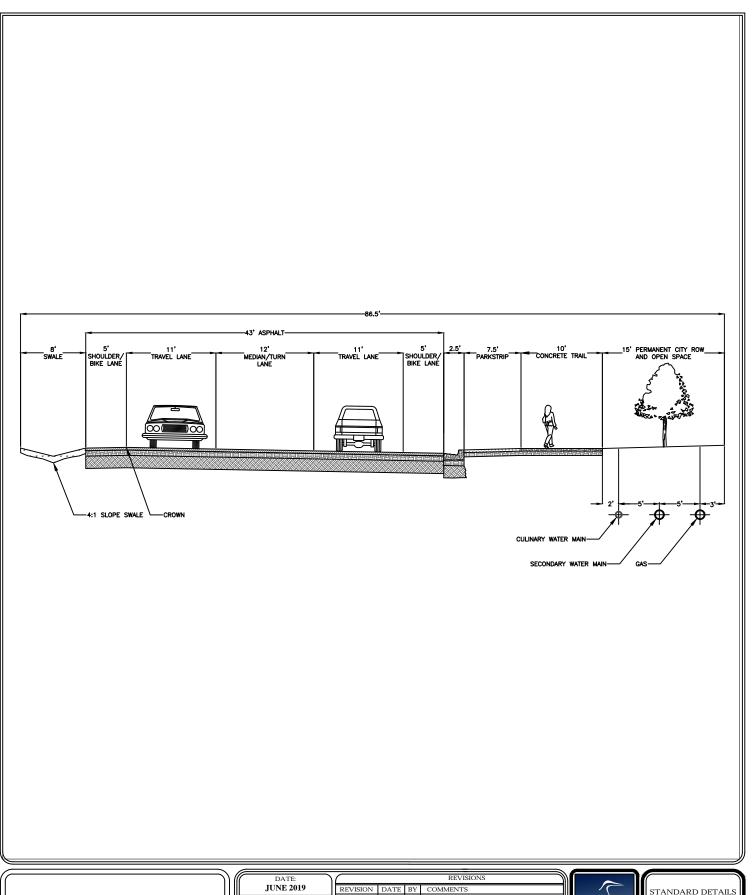
Minimum Mid-Block Centerline Curve Radius	100'	Varies with design speed and superelevation			
Maximum Superelevation Rate	2%	6%			
Intersections					
Intersection Sight Distance	Refer to AASHT		eometric Design of Hig est Edition	ghways and Streets,	
Minimum Signalized Intersection Spacing	N/A	1,320'	2640'	2,640'	
Corner Curb Radius	25	25	35	40	
Minimum Angle of Intersection	60°		80°		
Minimum Offset Between Intersections	150'	Study Required			
Maximum Centerline Offset	5'	2'			
Maximum Centerline Grade**	5%	4%			
Minimum Corner Radius at TBC	25'	30'			
Vertical Tie-In		wer streets shall match the centerline crowns in an intersection. Higher ets shall tie in 10' off the centerline of local streets and at the edge of the outside travel lane of other streets.			

<sup>\*</sup>A maximum running slope of 15% is allowed in purely-residential areas. It must be shown how bus service is provided to areas with streets greater than 10%.

<sup>\*\*</sup>Grade must extend at least 50 feetto the PC/PT beyond the edge of the outside lane of the intersecting street.

<sup>\*\*\*</sup>Maximum grade break of 2% along TBC with Minimum length of 25 feet between breaks.

- a. Street Names;
- b. Traffic Control Signage locations and types with references to MUTCD designations;
- c. Pavement Marking locations and types with references to MUTCD and FHWA designations;
- d. City Standard details for signage and striping;
- e. Stationing of all signage and start and stop locations for striping;
- f. Traffic calming locations and details; and
- g. Phase boundaries and identification of what will be completed with each phase.
- 7. Lighting/Electrical Plan with details shall include:
  - Lighting locations and types;
  - b. Photometric plan for parking areas and open spaces;
  - c. Lighting details;
  - d. Phase boundaries and identification of what will be completed with each phase;
  - e. Location of power sources, conduit, electrical master meters and utility boxes; and
  - f. City Standard Notes for Lighting Plans including:
    - i. Post-acceptance alterations to lighting plans or intended substitutions for accepted lighting equipment shall be submitted to the City for review.
    - ii. The City reserves the right to conduct post-installation inspections to verify compliance with the City's requirements and accepted Lighting Plan commitments, and if deemed appropriate by the City, to require remedial action at no expense to the City.
    - iii. All exterior lighting shall meet IESNA full-cutoff criteria.
- 8. Landscaping and Irrigation Plan Sheet shall include:
  - a. Detailed landscaping plans with designations for all areas and what surface treatments they shall receive;
  - b. Locations of all planting, designations for planning types and a comprehensive planting schedule;
  - c. Planting and landscaping details;
  - d. Detailed Irrigation design with the location of all valves, filters, and other appurtenances;
  - e. Metered Points of Connection;
  - f. Fencing locations, types and complete details for fences, posts, gates, and mow strips; and
  - Complete design of all open spaces including trails, pavilions, play areas, and other amenities including labels, dimensions, manufacture, model numbers, and all applicable details and typical sections.
- g.9. Revisions made to drawings during the plan review process shall be made using coded revision clouds. Where clouds overly complicate a drawing, a description of the changes shall be noted and the note shall be clouded. "If no such clouds are provided on the revised drawings, the revised drawing shall not be accepted and the original drawing shall stand.
- C. As-built drawings shall be provided electronically in pdf format containing construction drawings with all field changes and modifications, including but not limited to:
  - 1. Street light alignment, location of conduit, power sources, and street lights;



FOOTHILL INTERIM COLLECTOR ROADWAY

DATE:				REVISIONS	
JUNE 2019	REVISION	DATE	BY	COMMENTS	
DRAWING NAME: ST-9*					
DRAWN BY: JRP				F0.C.	1307 N. COMMERCE DR.
CHECKED: APPROVED:	SARATOGA SPRINGS CITY			#200, SARATOGA SPRINGS, UT 84045 PHONE: 801-766-9793 FAX: 8017669794	





# Planning Commission Staff Report

Site Plan/Conditional Use Permit Havoline xpress lube June 27, 2019 Public Meeting

Report Date: June 20, 2019 Applicant: Brad Findlay

Owner: Amsource Saratoga NWC, LLC

Location: 1457 North Exchange

Major Street Access: Exchange Drive

Parcel Number(s) & Size: 66:530:0002, 0.86 acres
Parcel Zoning: RC (Regional Commercial)
Parcel General Plan: Regional Commercial

Adjacent Zoning: RC

Current Use of Parcel: Undeveloped Adjacent Uses: Commercial

Previous Meetings: None

Previous Approvals: Walmart Subdivision plat approved in 2007

Type of Action: Administrative

Land Use Authority: Site plan – Planning Commission, CUP – City Council

Future Routing: CUP to City Council

Author: David Stroud, Planning Director

### A. Executive Summary:

This is a request for site plan and conditional use permit approval of a *Havoline xpress lube* at 1457 North Exchange Drive in the RC zone. The proposed business provides basic automotive services as an "*Automobile Repair, Minor*" business which is defined as:

an establishment that is located no closer than 300 feet (as measured from the property lines) to any residential zone, is primarily engaged in the minor repair or minor maintenance of motor vehicles, trailers, and similar mechanical equipment, including brake, muffler, tire repair and change, lubrication, oil changes, tune-ups, safety inspections and emissions testing, and detailing, is conducted entirely within a completely enclosed building, and does not include paint work, body and fender work, or major engine and engine part overhaul. "Minor repair" or "minor maintenance" is defined as a routine service that requires no more than 8 total hours of service.

This type of use requires site plan approval by the Planning Commission and a Conditional Use Permit approval by the City Council.

### **Recommendation:**

Staff recommends the Planning Commission conduct a public meeting on the site plan and conditional use permit applications, review and discuss the proposal, and select from the motions in Section H and I of this report. The site plan options include approval with conditions, continuation, or denial. The Conditional Use Permit options include forwarding a recommendation of approval to the City Council, continuation, or forwarding a recommendation of denial to the City Council.

### B. Background:

The subject lot was created when the Walmart Subdivision Plat was recorded in 2007. The proposed lot is 37,461 square feet. The minimum lot size in the RC zone is 30,000 square feet but was 20,000 square feet when the lot was approved and recorded.

### C. Specific Request:

The applicant is requesting review and approval of the proposed site plan and conditional use permit for an *Automobile Repair*, *Minor*, business to be constructed on an existing lot located at 1457 North Exchange Drive in the RC zone.

### D. Process:

Section 19.13 summarizes the process for site plans and conditional use permits. The Planning Commission is the Land Use Authority of new site plans. Conditional use permits for new construction require a recommendation from the Planning Commission and the City Council is the Land Use Authority. Public hearings are not required for either application.

### E. Community Review:

Public notices are not required for these applications. However, they are posted on the City website. As of the date of this report no public input has been received.

### F. General Plan:

The site is designated as Regional Commercial on the Land Use Map of the General Plan. The General Plan describes the general characteristics of the Regional Commercial land use designation as follows:

These areas generally should include variety of retail users including big box retail configured in developments that provide excellent vehicular access to and from major transportation facilities. They should include special urban improvements to make rich and enjoyable public spaces. To promote foot traffic, these areas should be compact and include a safe pedestrian environment and access to a multi-modal transportation network.

Staff conclusion: Consistent. The proposed use is Automobile Repair, Minor, which is a conditional use in the Regional Commercial zone. Nearby uses include big box, retail, dance studio, and a tire center. Sidewalks and pathways are provided for pedestrian access.

### G. Code Criteria:

For full analysis please see the attached Planning Review Checklist.

- 19.04, Land Use Zones: complies.
- 19.05, Supplemental Regulations: complies.
- 19.06, Landscaping and Fencing: complies.
- 19.09, Off Street Parking: complies.
- 19.11, Lighting: complies.
- 19.13, Process: **complies** scheduled for PC and CC.
- 19.14, Site Plans: complies.
- 19.15, Conditional Use Permit: complies.
  - o General Standards and Conditions
    - Siting of the structure
    - Traffic Circulation
    - Compatibility
- 19.16, Site and Architectural Design Standards: complies.
- 19.18, Signs: complies.
  - A separate permit is required to approve all signage.

### H. First Recommendation and Alternatives:

Staff recommends the Planning Commission conduct a public meeting, discuss the application, and choose from the options below.

### Staff Recommended Motion (Site Plan) – approval

"I move to **approve** the proposed site plan of Havoline xpress lube, an *Automobile Repair, Minor,* business located at 1457 North Exchange Drive, with the Findings and Conditions below:"

### **Findings**

- 1. The application is consistent with the General Plan, as articulated in Section "F" of the staff report, which section is incorporated by reference herein.
- 2. The application complies with the Land Development Code as articulated in Section "G" of the staff report, which section is incorporated by reference herein.

### **Conditions:**

- 1. All conditions of the City Engineer shall be met, including but not limited to those in the attached staff report.
- 2. All requirements of the Fire Chief shall be met.
- 3. All other Code requirements shall be met.
- 4. A separate sign permit and building permit is required for final approval of the signs.
- 5. Any other conditions or changes as articulated by the Planning Commission:

### Alternative 1 – Continuance

The Planning Commission may also choose to continue the item. "I move to **continue** the Havoline xpress lube site plan/CUP to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

1.				
2.				

### Alternative 2 - Denial

The Planning Commission may also choose to deny the Havoline xpress lube site plan. "I move to **deny** approval of the site plan of Havoline xpress lube at 1457 North Exchange Drive, based on the following findings:"

1. The proposed use is not consistent with Chapters 19.04, 19.05, 19.06, 19.09, 19.11, 19.13, 19.14, and/or 19.16, as articulated by the Planning Commission:

### I. Second Recommended Motion (CUP) – approval

"I move to recommend **approval** the proposed conditional use permit for Havoline xpress lube, at 1457 North Exchange Drive, with the Findings and Conditions below:"

### **Findings**

- 1. The application is consistent with the General Plan, as articulated in Section "F" of the staff report, which section is incorporated by reference herein.
- 2. The application complies with the Land Development Code as articulated in Section "G" of the staff report, which section is incorporated by reference herein.
- 3. The application is consistent with Chapter 19.15 of the Land Development Code.

### **Conditions:**

- 1. All conditions of the City Engineer shall be met, including but not limited to those in the attached staff report.
- 2. All requirements of the Fire Chief shall be met.
- 3. All other Code requirements shall be met.
- 4. A separate sign permit and building permit is required for final approval of the signs.
- 5. Any other conditions or changes as articulated by the Planning Commission:

### Alternative 1 – Continuance

The Planning Commission may also choose to continue the item. "I move to **continue** the Havoline xpress lube CUP to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

1.			
2.			

### Alternative 2 – Denial

The Planning Commission may also choose to recommend denial of the conditional use permit. "I move to recommend **denial** of the proposed conditional use permit application of Havoline xpress lube, located at 1457 North Exchange Drive, based on the following findings:"

1. The proposed use is not consistent with Section 19.15 of the Code, as articulated by the Planning Commission:

### I. Exhibits:

- 1. City Engineer's Report
- 2. Location Map
- 3. Planning Review Checklist
- 4. Site Plan
- 5. Landscape Plan
- 6. Elevations/Sign Plan
- 7. Photometric Plan
- 8. Light Fixture Details

# **Staff Report**

Author: Gordon Miner, City Engineer Subject: Havoline Xpress Lube – Site Plan

Date: 06/27/19

Type of Item: Site Plan Approval



### **Description:**

**A. Topic:** The Applicant has submitted a Site Plan Application. Staff has reviewed the submittal and provides the following recommendations.

### B. Background:

Applicant: Finlay Holding – Enter Company

Request: Site Plan Approval Location: 1457 N Exchange Dr Acreage: 0.85 Acres - 1 Lot

- **C. Recommendation:** Staff recommends approval of this site plan, subject to the following conditions:
  - 1. Comply with all review comments and redlines provided by the City Engineer.
  - 2. Provide a Storm Water Pollution Prevention Plan (SWPPP) following the State template, prior to the pre-construction meeting.
  - 3. Secure water rights, as required by the City Engineer, City Attorney, and Development Code.
  - 4. Provide easements for all public utilities not located in the public right-of-way.
  - 5. Ensure that there are no adverse effects to adjacent properties due to site grading.

Exhibit 2 – Location Map



# Exhibit 3 – Planning Review Checklist

# **Application Information**

**Date Received:** 4/26/2019

**Date of Review:** 5/8/2019 and 5/29/19, 6/13/19 **Project Name:** Havoline Xpress Lube

Project Request / Type:Site Plan/CUPMeeting Type:PublicApplicant:Brad Findley

Owner: Amsource Saratoga NWC, LLC

Subdivision/Lot: Saratoga Wal-Mart Second Amended, Lot 2A

**Location:** 1457 North Exchange Drive

Major Street Access:Crossroads Blvd.Parcel Number(s) and size:66:530:0002, 0.86 acresLand Use Designation:Regional CommercialParcel Zoning:Regional CommercialAdjacent Zoning:Regional Commercial

Current Use: Vacant

Adjacent Uses: Vacant, Discount Tire, IHC, Dollar Tree

**Previous Meetings:**Previous Approvals:
None

**Type of Action:** Administrative

**Land Use Authority:** Site – Planning Commission, CUP – City Council

**Future Routing:** Planning Commission and City Council Planner: David Stroud, Planning Director

## **Section 19.13 – Application Submittal**

- Application Complete: Yes.
- Rezone Required: No.
- General Plan Amendment required: No.
- Additional Related Application(s) required: No.

### Section 19.13.04 – Process

DRC: May 6, 2019

Neighborhood Meeting: N/A
PC: site plan June 27, 2019
CC: CUP July 16, 2019

### **General Review**

### **Building Department**

- Setback detail
- Lot numbering per phase (i.e. Phase 1: 100, 101, 102. Phase 2: 200, 201, 202, etc.)
- True buildable space on lots (provide footprint layout for odd shaped lots)
- Lot slope and need for cuts and fills

### **Fire Department**

- Residential:
  - o Fire flows shall be met for this development and future development in the area.
  - Hydrants shall not exceed 500' spacing in R3-6 and lower areas.
  - o Higher than R3-6, hydrants shall not exceed 300' spacing.
  - o All three story structures above grade shall be fire sprinkled and meet NFPA 13 requirements where required.
  - o All access roads shall support 26' of un-obstructed drive isle with parking on the streets.
  - The 59' road cross-section shall be used if applicable. If the streets are not able to support such movement, fire lane signage shall be posted by the developer.
  - All cul-de-sacs shall meet our current standard and shall have hydrants in them. All cul-de-sacs shall be a minimum of 96' in diameter from curb face to curb face and have a hydrant located within the cul-de-sac.
  - o Third party review required for sprinkler systems
  - o Dimension street and cul-de-sac widths on plat
  - o Turnarounds on cul-de-sacs and dead-ends more than 150' in length

### GIS / Addressing

comments

### **Additional Recommendations:**

•

### **Code Review**

19.04, Land Use Zones

Zone: RC

Use: Automobile Repair, Minor

19.04.01 Req	uirements	Regional Commercial		
Category To Be Reviewed	Regulation	Determination	How	
Development Size (Minimum)				
Lot Size (Minimum)	30,000 sq. ft.	Complies	37,397 square feet	
Front/Corner Side Setback (Minimum)	10'	Complies	43/51 feet	
Interior Side Setback (Minimum)	10'		71 feet	
Rear Setback (Minimum)	30'		79 feet	
Building Separation (Minimum)				
Lot Width (Minimum)				
Lot Frontage (Minimum)				
Building Height (Maximum)	50'		28 feet 8 inches	
Lot coverage (Maximum)	50%	Complies	11.7 percent	
Building Size (Minimum)	1,000 sq. ft.	Complies	4,376 square feet	
Building Size (Maximum)				

19.05 Supplemental Regulations					
Regulation	Compliance	Findings			
<b>Flood Plain</b> - Buildings intended for human occupancy shall be constructed at least one foot above the base flood elevation.	Complies.	Outside of flood plain			
Water & Sewage - Each lot shall be connected to City water and sewer.	Complies.	Will connect to City services			
<b>Transportation Master Plan</b> - Lots shall not interfere with the Transportation Master Plan.	Complies.	No interference; no new roads			
Property Access - All lots shall abut a dedicated public or private road.	Complies.	Frontage on two public streets			

19.06 Landscaping and Fencing					
Landscape Plans					
Regulation	Compliance	Findings			
Landscape Architect: Landscaped plans shall be prepared by a licensed landscape architect.	Complies.	Vincent Design Group Architects			
<b>Existing Conditions:</b> Show the location and dimension of all existing and proposed structures, property lines, easements, parking lots, power lines, rights-of-way, ground signs, refuse areas, and lighting.	Complies.	Building lighting cut sheets needed.  Down lighting only.			
<b>Planting Plan:</b> Show location and planting details for all proposed vegetation and materials. Indicate the size of the plant material at maturation. All existing vegetation that will be removed or remain must be identified.	Complies.	Information provided.			
<b>Plants:</b> The name (both botanical and common name), quantity, and size of all proposed plants.	Complies.	Provided			
<b>Topography:</b> Existing and proposed grading of the site indicating contours at two feet intervals.	Complies.	Provided			
Irrigation: Irrigation plans showing the system layout and details.	Complies.	Rain sensor indicated. Tie into existing parkstrip landscaping.			
<b>Fencing:</b> Location, style, and details for proposed and existing fences and identification of the fencing materials.	N/A.	No fencing proposed.			
<b>Data Table:</b> Table including the total number of each plant type, and total square footage and percentage of landscaped areas, domestic turf grasses, decorative rock, mulch, bark, and drought tolerant plant species.	Complies.	Provided.			
Planting Standar	ds				
Regulation	Compliance	Findings			
Deciduous Trees: 2" Caliper	Complies.	Provided.			
Evergreen Trees: 6' Height	Complies.	Provided.			
<b>Tree Base Clearance:</b> 3' diameter around every tree must be kept clear of turf and rock mulch	Complies.	Provided.			
<b>Shrubs:</b> 25% of required shrubs must be a minimum of 5 gallons in size.	Complies.	66 shrubs are 5-gallon.			
<b>Turf:</b> No landscaping shall be comprised of more than seventy percent turf, except within landscaped parks.	Complies.	31 percent proposed.			
Artificial Turf: Not allowed	Complies.	Not provided.			
<b>Drought Tolerant Plants:</b> 50% of all plants shall be drought tolerant.	Complies.	88 percent.			
Rock Mulch: Rock mulch must be of two separate colors and separate sizes and must be contrasting in color from the pavement and other hard surfaces. All colors used must be earth tones.	N/A.	Rock mulch not proposed.			
Design Requirements					
Regulation	Compliance	Findings			
<b>Evergreens:</b> Evergreens shall be incorporated into landscaped treatment of sites where screening and buffering are required.	Complies.	Evergreen trees in plan.			

<b>Softening of Walls and Fences:</b> Plants shall be placed intermittently against long expanses of building walls, fences, and barriers to create a softening effect.	Complies.	Landscaping along building provided where possible.
Planting and Shrub Beds: Planting and shrub beds are encouraged to be used in order to conserve water.	Complies.	Shrub beds provided.
<b>Water Conservation:</b> Water-conserving sprinkler heads and rain sensors are required. Drip lines should be used for shrubs and trees.	Complies.	Indicated.
<b>Energy Conservation:</b> Placement of plants shall be designed to reduce energy consumption. Deciduous trees are encouraged to be planted on the south and west sides of structures. Evergreens are encouraged to be planted on the north side of structures.	Complies.	Trees planted along perimeter of site.
<b>Placement:</b> Whenever possible, landscaping shall be placed immediately adjacent to structures, particularly where proposed structures have large empty walls.	Complies.	Where possible.
<ul> <li>Trees and Power Poles: No trees shall be planted directly under or within ten feet of power lines, poles, or utility structures unless:</li> <li>The City Council gives its approval.</li> <li>The Power Company or owner of the power line gives written consent.</li> <li>The maximum height or width at maturity of the tree species planted is less than 5 feet to any pole, line, or structure.</li> </ul>	Complies.	No power poles on site.
Preservation of Existing	Vegetation	
Where possible and appropriate, existing native vegetation must be incorporated into the landscape treatment of the proposed site.	N/A.	No existing vegetation to remain.
<b>Tree Preservation:</b> Existing mature evergreen trees of 16 feet in height or greater, and existing mature deciduous or decorative trees of more than four inches (4") in caliper, shall be identified on the landscape plan and preserved if possible. If a mature tree is preserved, an area around the roots as wide as the existing canopy shall not be disturbed.	N/A.	No existing trees on site.
If preservation is not possible, the required number of trees shall be increased by double the number of such trees removed.	N/A.	
The replacement trees for evergreen trees shall be evergreens, and for deciduous shall be deciduous.	N/A.	
Deciduous trees smaller than four inches in caliper, or mature ornamental trees, that are removed shall be replaced on a one to one ratio.	N/A.	
Replacement trees shall be in addition to the minimum tree requirements of this Chapter, and shall comply with minimum sizes as outlined in the Chapter.	N/A.	
Planter Beds		
Regulation	Compliance	Findings
Weed Barrier: A high quality weed barrier or pre-emergent shall be used.	Complies.	Noted on plan.
<b>Materials:</b> high quality materials such as wood chips, wood mulch, ground cover, decorative rock, landscaping rocks, or similar materials are used, and materials must be heavy enough to not blow away in the wind	Complies.	Bark mulch in planter bed areas. Size should be increased due to wind.
<b>Edging:</b> Edging must be used to separate planter and turf areas.	Complies.	Concrete edging shown.
<b>Drip Lines:</b> Drip lines must be used in plater beds.	Complies.	Shown on plan.
Fencing and Screen	ning	
Regulation	Compliance	Findings
Front Yards: Fences exceeding three feet in height shall not be erected in any front yard space of any residential lot.	N/A.	No fencing
Clear Sight Triangle: All landscaping and fencing shall be limited to a height	-	+

driveways, or sidewalks, for a distance of twenty feet back from the point of
curvature of curved ROWs and property lines or thirty feet back from the
intersection of straight ROWs and property lines, whichever is greater
landscaping shall not exceed 3' in height and the area shall not be bermed or
raised within clear sight triangles.
Required Residential Fencing: Fencing in residential development shall be
placed along property lines abutting open space, parks, canals, and trails. In N/A.
addition, fencing may also be required adjacent to undeveloped properties.
Fences along open space, parks, canals, and trails shall be semi-private.
Exception: privacy fencing is permitted for property lines abutting trail  N/A.
corridors that are not City maintained and are both adjacent to and visible from
an arterial.
Fencing along arterial roads shall be of a consistent material and color within N/A.
each development.
Fencing along open space, parks, and trails may be less than six feet in height
but shall not be less than three feet in height, at the discretion of the property N/A.
owner or HOA as applicable.
Screening at Boundaries of Residential Zones: For residential developments
abutting active agricultural property or operations, a solid fence or wall shall N/A.
be installed and maintained along the abutting property line.

**Landscape Amount** 

		1		
Category To Be Reviewed	Regulation	Compliance	Findings	
Total Square Footage	37,397			
Required Landscaping	7,479	Complies	10,219 square feet	
Required Deciduous Trees	6	Complies	16	
Required Evergreen Trees	3	Complies	5	
Required Shrubs	17	Complies	267	
Drought Tolerant Plants	13	Complies	236	

19.09 Off-Street Parking Requirements				
Regulation	Compliance	Findings		
Materials: Concrete, asphalt, or other impervious material.	Complies.	Asphalt paving.		
Access: Stub for cross-access with adjacent property.	Complies.	Using shared access.		
<b>Lighting in Parking Areas:</b> Adequate lighting to ensure safety of pedestrians and vehicle circulation.	Complies. Provided.			
Property Access: All lots shall abut a dedicated public or private road.	Complies.	Frontage on two public streets		
<b>Dimensions:</b> 9 x 18 feet for perpendicular.	Complies. 9 x 18 provided.			
ADA: Meet standards.	Complies. One stall required; provided.			
<b>Lighting in Parking Areas:</b> Adequate lighting to ensure safety of pedestrians and vehicle circulation.	Complies.	Provided		
Parking Areas Adjacent to Public ROW: Ten feet in width, with berm or hedge to block light. Deciduous and evergreen trees planted 30 on center.	Complies.	No parking adjacent to public ROW.		
Number: 2 stalls per bay plus 1 stall per employee at highest shift	Complies.	16 stalls provided (8 for bays and 8 for employees)		

19.11 Lighting						
Regulation Compliance Findings						
Material: All Lighting Fixtures and assemblies shall be metal.	Complies.	Aluminum				
<b>Base:</b> All lighting poles shall have a 16" decorative base.	Complies.	Provided base and pole details.				

<b>Type:</b> All lighting fixtures shall be of the full cutoff variety. Shoebox fixtures are prohibited.	Complies.	Provided lighting details of building lights.
Angle: Shall be directed downward.	Complies.	Provided lighting details of building wall lighting.
Lamp: Bulbs may not exceed 4000K	Complies.	Provided building lighting details.
<b>Drawings:</b> Design and location of fixtures shall be specified on the plans	Complies.	Provided.
Flags: The Unites States flag and the state flag shall be permitted to be illuminated from dusk till dawn. All other flags shall not be illuminated past 11:00 p.m. Flag lighting sources shall not exceed 10,000 lumens per flagpole. The light source shall have a beam spread no greater than necessary to illuminate the flag.	N/A.	
<b>Prohibited Lighting:</b> Searchlights, strobe lights and any laser source light or any similar high intensity light.	N/A.	
<b>Descriptions:</b> Descriptions of the illuminating devices, fixtures, lamp supports, and other devices. This description may include, but is not limited to, manufacturers' specifications, drawings, and sections.	Complies.	Provided lighting details.

19.13 Process			
Regulation Findings			
Neighborhood Meeting.	N/A		
Notice / Land Use Authority.	Planning Commission – site plan, City Council – CUP		
Master Development Agreement.	N/A		
Phasing Improvements.	N/A		
Payment of Lieu of Open Space.	N/A		

19.16 Site and Architectural Design Standards				
Regulation	Compliance	Findings		
Pedestrian Connectivity: Connection from development to public street.	Complies.	Access provided and shown on site plan.		
Parking Areas: Located primarily to sides or rear of building	Complies.	Located to south side and rear of building.		
<b>Trash Enclosures:</b> Landscaping, fencing, berms, or other devices integral to overall site and building design shall screen trash enclosures, storage areas, and other external structures. Solid enclosure materials that are consistent with main building. Metal gates, bollards, and self-latching mechanism.	Complies.	Screened by deciduous and evergreen plantings. Masonry block painted to match main building. Metal panels and self-latching gate indicated. Bollards needed and width increased to accommodate truck.		
Outdoor Display: Under building roofline and shown on site plan.	Complies.	No outdoor display indicated.		
Access: No wider than 40 feet.	Complies.	Access points less than 40 feet wide.		
<b>Screening of Storage and Loading Areas:</b> Design and location of fixtures shall be specified on the plans	Complies.	No storage or loading areas on site plan.		
<b>Buffer:</b> A wall and landscaping, fencing, or landscaping of acceptable design shall effectively screen the borders of any commercial or industrial lot which abuts an existing agricultural or platted residential use.	Complies.	Surrounding property is zoned RC with commercial uses.		
<b>Parking Lot Buffers:</b> There shall be a minimum of 10 feet of landscaping between parking areas and side and rear property lines adjacent to agricultural and residential land uses.	Complies.	Parking areas are adjacent to commercial uses and the RC zone.		
<b>Building Buffer:</b> No building shall be closer than five feet from any private road, driveway, or parking space.	Complies.	Proposed building is greater than feet from private road, driveway, or parking space.		
<b>Building Articulation:</b> Building elevations exceeding 40 feet in length shall incorporate a minimum of one horizontal elevation shift or combination of vertical and horizontal elevation shifts, stepping portions of the elevation to create shadow lines and changes in volumetric spaces of at least five feet, and	Complies.	Building walls exceeding 40 incorporate horizontal and vertical elevation shifts, use of different		

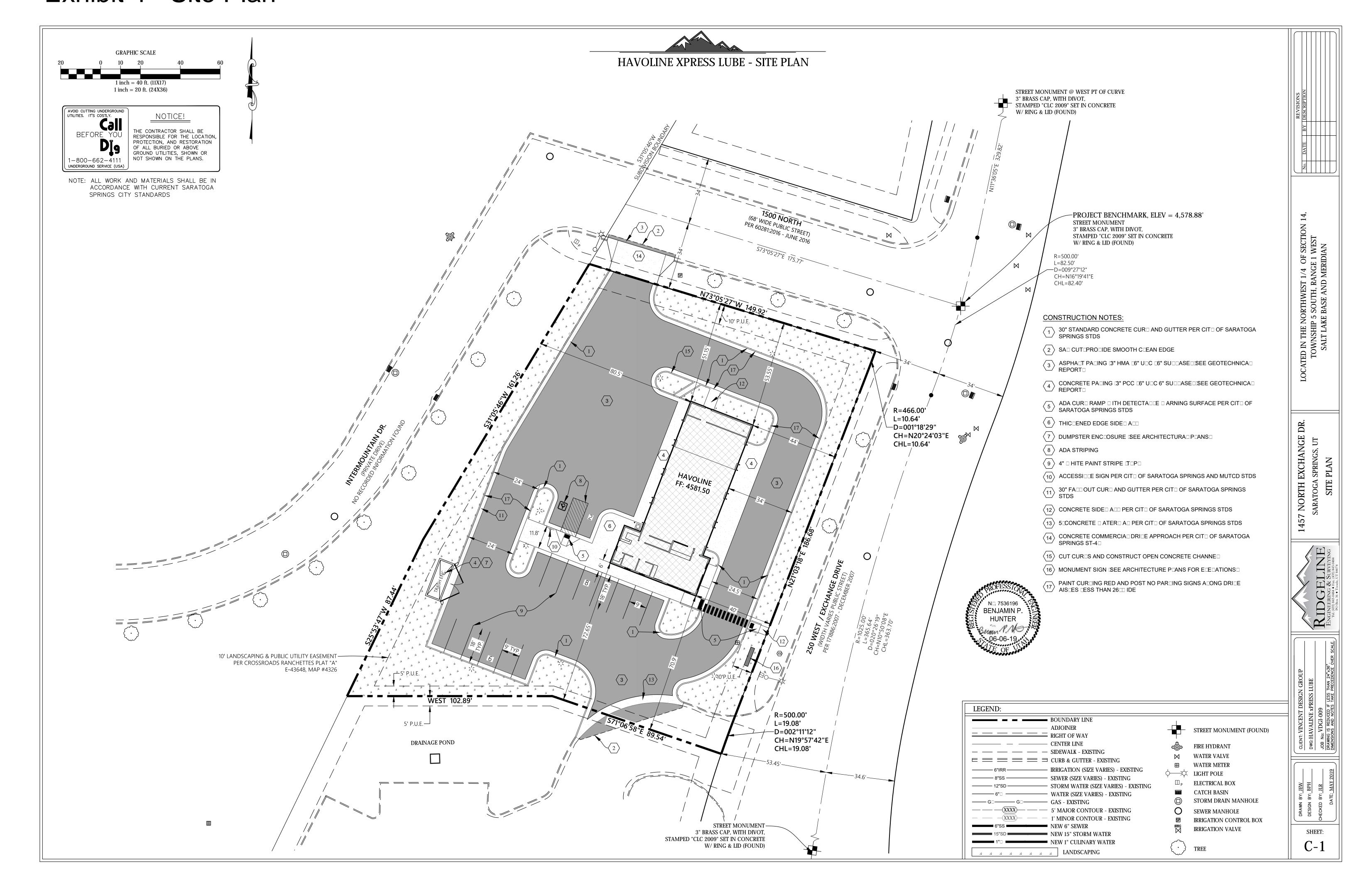
a minimum of two of the following, all spaced at intervals of 20 to 50 feet of		materials and textures, covered	
horizontal width:		entrances, roof line variation	
a. A combination of vertical and horizontal elevation shifts that together equal at least five feet.			
b. Addition of horizontal and vertical divisions by use of textures or materials.			
c. Primary material change.			
d. Addition of projections such as balconies, cornices, covered entrances,			
porte-cocheres, trellis', pergolas, arcades, and colonnades. Such trellis' and			
awnings extend outward from the underlying wall surface at least 36-inches.			
e. Variation in the rooflines by use of dormer windows, overhangs, arches,			
stepped roofs, gables or other similar devices.			
<b>Roof Treatment:</b> Flat roofs shall be screened with parapets on all sides of the			
building. If no roof top equipment exists or is proposed, the parapet shall be a			
minimum of 12 inches in height above the roof. Roof mounted equipment shall			
not be visible from adjacent public and private streets as well as from adjacent			
properties, unless grade differences make visibility unavoidable. Screening	Complies.	Provide details.	
shall be solid and shall be consistent with the material and color of exterior			
finishes of the building through the use of at least two out of three of the			
exterior finishes of the building			
Awnings: All such features shall project at least 4 feet from the building when			
located over a pedestrian traffic area and no less than 2 feet otherwise. All such			
features shall maintain a minimum clearance above sidewalk grade of 8 feet to	Complies.	Meets or exceeds standard.	
the bottom of the framework when located over a pedestrian traffic area			
Mechanical Equipment: All mechanical equipment shall be located or			
screened and other measures shall be taken so as to shield visibility of such			
equipment from any public or private streets. Rooftops of buildings shall be	Complies.	No roof-mounted mechanical	
free of any mechanical equipment unless completely screened from all	-	equipment.	
horizontal points of view. d. Screening materials shall conform to the color			
scheme and materials of the primary building.			
<b>Four Sided Architecture:</b> All sides of a building that are open to public view			
(including views from adjacent residential dwellings or probable location of	Complies.	See elevations.	
residential dwellings) shall receive equal architectural design consideration as	•		
the building front.			
Colors and Materials: Shall be limited to no more than four and no less than	G 11	Three materials: EIFS, CMU block,	
two types of materials/colors per building, window and door openings	Complies.	and metal. Four colors.	
excluded.			
<b>Percentage:</b> No more than 75% of any building elevation shall consist of any			
one material or color. No more than 50% of any front or street side building	Complies.	Provided.	
elevation shall consist of CMU, except in the Office Warehouse and Industrial	•		
zones.			
Roof Drains: All roof drains, conduit and piping, maintenance stairs and	<i>a</i> "	N. I. I. I.	
ladders, and other related services shall be located on the interior of the	Complies.	Noted on elevations plans.	
building.			
Street Orientation: All Retail or Commercial buildings shall have expansive	a	Applicable elevations meet	
windows, balconies, terraces, or other design features oriented to the street or	Complies.	requirements.	
adjacent public spaces.			

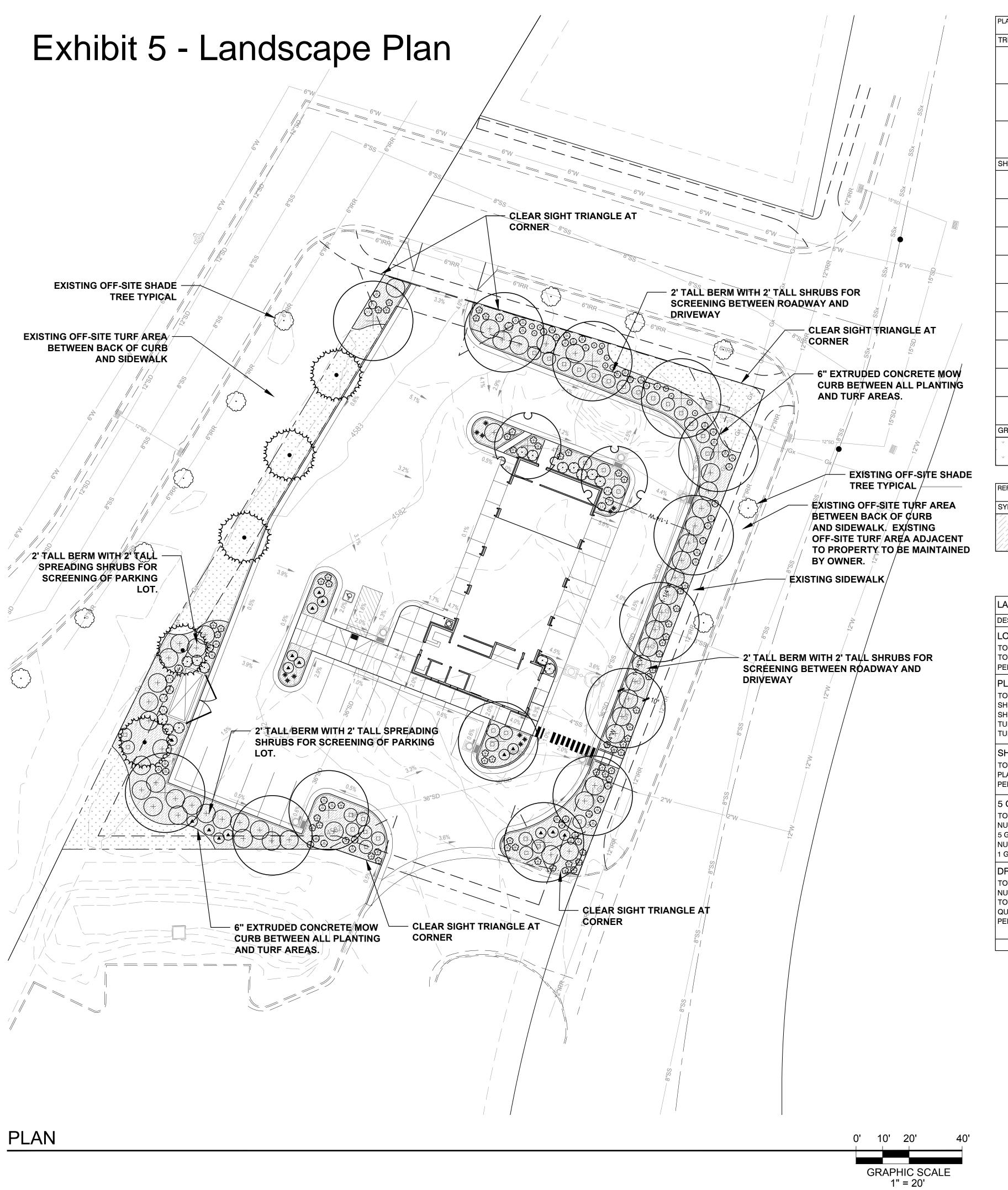
19.18 Signs Commercial Signs						
					Regulation Compliance Findings	
( <b>Building Sign</b> ) <b>Number</b> : Each tenant in a building is permitted one primary building sign, and two secondary signs	Complies.	One secondary sign must be removed.				
<b>Size:</b> The primary building signage shall not exceed a cumulative total size equal to eight percent of the façade on which the sign or signs are mounted, or 30 square feet, whichever is larger. Secondary signage shall not be	Complies.	Signs will require a separate permit for approval.				

mounted on the same façade as primary signage, and each secondary sign		
shall not exceed fifty percent of the size of the tenant's primary sign.		
(Monument Sign) Number: One monument sign shall be allowed for each	Complies	One manument sign proposed
frontage in excess of one hundred feet a building or use has on a public street	Complies.	One monument sign proposed.
<b>Size:</b> A monument sign for a single building or use shall not exceed forty-five		
square feet in size. A monument sign for multiple buildings or uses shall not	Complies.	Are of sign is 40 square feet.
exceed sixty-four square feet in size.		
<b>Height:</b> A monument sign for a single building or use shall not exceed 7.5		
feet in height. A monument sign for multiple buildings or uses shall not	Complies.	Overall height is 7 feet.
exceed ten feet in height.		

Fiscal Impact						
Regulation Findings						
Is there any City maintained open space?	None.					
What is the anticipated cost to the City?	None.					
When will City maintenance begin?	N/A					

# Exhibit 4 - Site Plan





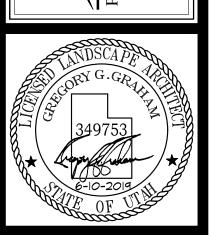
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
3333 WWW. V.	CED KAR	5	Cedrus deodara `Karl Fuchs`	Karl Fuchs Deodar Cedar	6` Ht.	B&B	35` x 15`, drought tolerant
(x × )	KOE COR	2	Koelreuteria paniculata `Coral Sun`	Golden Rain Tree	2" Cal.	B&B	35` x 25`, drought tolerant
$\begin{array}{c} \nearrow \\ \hline (\times) \end{array}$	ULM FRO	14	Ulmus carpinifolia x parvifolia `Frontier`	Frontier Elm	2" Cal.	B&B	35` x 25`, moderate drought tolerance
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
$\odot$	BUX GEM	15	Buxus microphylla `Winter Gem`	Globe Winter Gem Boxwood	1 gal		3.5`x 3.5`, 9.62 SF coverage, moderate water usage
$\bigcirc$	CAL OVR	56	Calamagrostis x acutiflora `Overdam`	Overdam Feather Reed Grass	1 gal		3`x 2`, 3.14 SF coverage, drought tolerant
$\bigcirc$	CAR CLA	12	Caryopteris x clandonensis `Blue Mist`	Blue Mist Shrub	1 gal		3` x 3`, 7 SF coverage, drought tolerant
$\odot$	HEM GRA	13	Hemerocallis x `Little Grapette`	Little Grapette Dayily	1 gal		12" x 18", 1.76 SF coverage, drought tolerant
	HEM ORO	62	Hemerocallis x `Stella de Oro`	Stella de Oro Daylily	1 gal		12" x 30", 4.90 SF coverage, drought tolerant
*	HES BRA	11	Hesperaloe parviflora `Brakelights` TM	Brakelights Red Yucca	1 gal		2` x 2`, 3.14 SF coverage, drought tolerant
$\bigcirc$	PRU PAW	32	Prunus besseyi `Pawnee Buttes`	Sand Cherry	2 gal		12" x 6`, 23.28 SF coverage, drought tolerant
$(\times)$	RHU GLO	50	Rhus trilobata `Gro-Low`	Gro-Low Sumac	5 gal.		2` x 7`, 38.5 SF coverage, drought tolerant
•	ROS RAD	16	Rosa x `Radrazz`	Knock Out Shrub Rose	5 gal.		3.5` x 3.5`, 9.62 SF coverage, moderate water usage
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
\(\psi\) \(\	POA IMP	3,177 sf	Poa pratensis `Imperial Blue`	Imperial Blue Kentucky Bluegrass	sod		

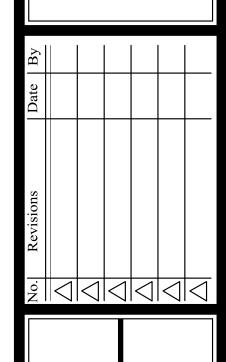
REFERENCE NO	TES SCHEDULE	
SYMBOL	DESCRIPTION	QTY
	Bark mulch 4" deep. Bark mulch shall be 1" -2.5" wide and 1" - 4" in length shredded bark from lodge pole pine and douglas fir. Install in all shrub and tree planting areas. Install pre-emergent herbicide before and after installation of mulch.	7,131 sf

DESCRIPTION	QTY
LOT: TOTAL LOT SIZE: TOTAL PLANTING AND TURF AREA OF LOT: PERCENTAGE OF LOT IN LANDSCAPE:	37,397 SF 10,219 SF 27.6%
PLANTING AND TURF AREAS:  TOTAL LANDSCAPE AREA:  SHRUB PLANTING AREA:  SHRUB PLANTING PERCENTAGE OF LANDSCAPE AREA:  TURF PLANTING AREA:  TURF PLANTING PERCENTAGE OF LANDSCAPE AREA:	10,219 SF 7,069 SF 69.2% 3,140 SF 30.8%
SHRUB PLANTING AREA COVERAGE AT MATURITY: TOTAL SHRUB PLANTING AREA: PLANT COVERAGE AT MATURITY: PERCENTAGE SHRUB PLANTING AREA OF COVERED AT MATURITY:	7,069 SF 3,750 SF 53.0%
5 GALLON VS. 1 GALLON PLANTS: TOTAL QUANTITY OF SHRUBS AND GROUND COVERS: NUMBER OF 5 GALLON PLANTS: 5 GALLON PERCENTAGE OF TOTAL PLANTS: NUMBER OF 1 GALLON PLANTS: 1 GALLON PERCENTAGE OF TOTAL PLANTS:	267 98 36.7% 169 63.3%
DROUGHT TOLERANT PLANTS  TOTAL NUMBER OF PLANT SPECIES  NUMBER AND PERCENTAGE OF SPECIES CONSIDERED DROUGHT TOLERANT  TOTAL QUANTITY OF PLANTS INCLUDING TREES  QUANTITY OF PLANTS CONSIDERED DROUGHT TOLERANT:  PERCENTAGE OF PLANTS CONSIDERED DROUGHT TOLERANT	12 8 OR 75% 267 236 88.4%



ANNING - LANDSCAPE ARCHITECTUR
- URBAN DESIGN
- URBAN PATCH WAY RIVERTON, UTAH 84096
PHONE: 801-599-8556





SARATOGA SPRINGS, UTA
PLANTING
DI AN & LEGENID

Scale:

1' = 20'

Date:

JUNE 10, 2019

Drawn By:

GGG

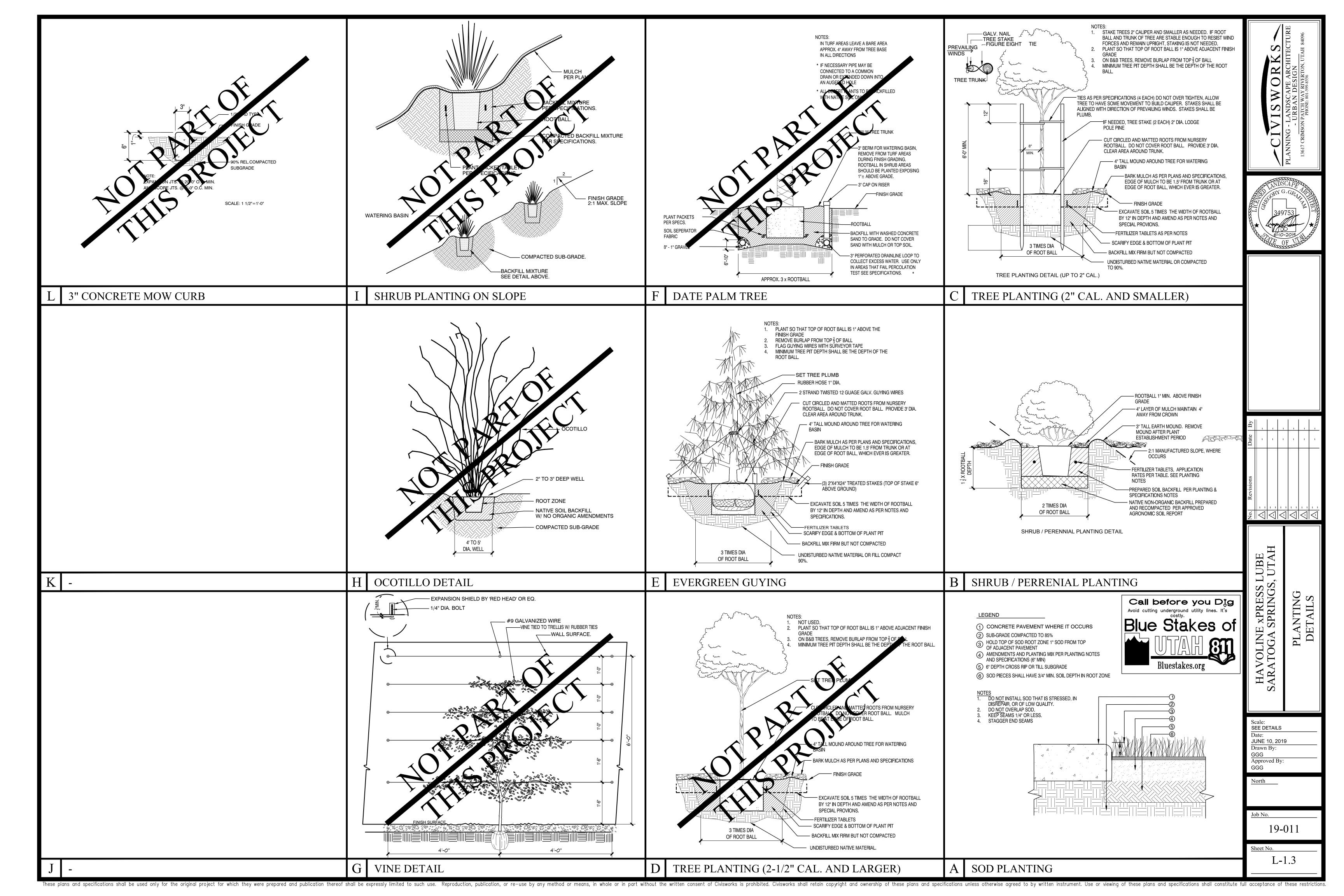
Approved By:

GGG

North

Job No. 19-011

Sheet No.



### PART 1 - GENERAL

# 1.01 SCOPE OF WORK

- A. Work as evident on drawings and specified herein or required to complete all landscaping and shall include, but not necessarily limited to the following work.
- 1. Furnish and place topsoil from outside sources where necessary. Excavate tree pits.
- Provide and plant all materials indicated on plan and plant list.
- 4. Stake and protect all trees and planted areas as needed. 5. Maintain all plant material until maintenance responsibility is transferred to the City upon
- Acceptance of the Work 6. Clean up all areas prior to Acceptance of the Work, including debris, stains, and dirt from walks
- and beds.
- These specifications are complimentary to the drawings.
- Related Sections: 02300 - Earthwork
- 02800 Irrigation System Improvements
- 02910 Landscape Topsoil 02913 - Turf Grass and Soil Preparation

### 02 APPROVALS

All materials are subject to the approval of the Owner's Representative who shall have the power to reject any material found to be defective or not in conformance with the plans and specifications or defective workmanship. Contractor shall provide a list of plant material sources for approval by project engineer prior to ordering plant material.

# STORAGE

Store chemical fertilizers in a weatherproof storage place.

### 04 GUARANTEE

- A. Guarantee plants for a period of one year after final acceptance, against: Disease and unsatisfactory growth
- 2. Problems resulting from neglect or from abuse except damage caused by others beyond the Contractor's control
- 3. Plants eaten by Rabbits or other Wildlife. If problem develops, install protective wire cages around plants as required.
- Remove and replace dead or unhealthy plants promptly during the growing season, or as otherwise directed by the Owner's Representative.

# .05 SUBMITTALS

- A. Test report for the site soil and any imported topsoil as tested by a qualified agency. Contractor
- B. Pre emergent herbicide manufacturer's data for approval.

# INSPECTION AND ACCEPTANCE OF PLANT MATERIALS:

shall bear all costs appertaining thereto.

Plants are subject to inspection and approval at the place of growth or upon delivery for conformity to specification requirements as to quality, size, and variety. Such approval shall not impair the right of inspection upon delivery at the site or during the progress of work or right of rejection due to damage suffered in handling or transportation. Rejected plants shall be removed immediately from the site by the Contractor.

# PART II PRODUCTS

# 2.01 PLANT MATERIALS

- A. The Contractor shall furnish all plants shown on the drawings, as specified. 1. Plants required: The quantity, size, and manner in which to be furnished and the species,
- scientific and common names, are shown on the planting plans. In case of any discrepancy between the planting legen and the actual planting plan, the planting plan shall govern. Requirements: Plants shall be in accordance with American Standard for Nursery Stock, latest
- Edition, Standardized Plant Name by the American Joint Committee of Horticultural Nomenclature, and American National Standards Institute (ANSI); Publication Z60.1. Species and variety shall conform to botanical names where given. All plants shall be nursery grown and/or transplants from on-site staging area approved by project engineer. All plants shall be hardy under climate conditions similar to those in the locality of the project.
- 2. All plants shall be typical of their species or variety and shall have a normal habit of growth. They shall be sound, healthy and vigorous, well\_branch and densely foliated when in leaf. They shall be free of disease and insect pests, eggs, or larvae. They shall have healthy,
- 3. Transplanted plant material shall be sound, healthy and well branched. Any plants damaged shall not be acceptable for replanting to final location.
- C. Substitutions: When plants of a specified kind or size are not available, substitutions may be made upon request by the Contractor, if approved by the project engineer.

well developed root systems but shall not be root bound.

- D. Container Grown Stock 1. Shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil together firm and whole. Root bound plants shall not be accepted. It shall be the responsibility of the Contractor to check all plants for root bounding prior to
- 2. Identification: Tag 10% minimum of the plants of each variety with botanical name conforming
- with the name of the American Joint Committee on horticultural nomenclature. 3. On-site mock nursery: A 10 percent representative of tagged plant material of each species shall be kept on site at all times, conforming to the plant schedule and specifications, in a well protected area. Any plant material delivered to the site shall meet or exceed the sample plant

# IMPORTED TOPSOIL:

or shall be rejected.

Natural, fertile, friable sandy loam soil, obtained from naturally well drained areas, not excessively acid or alkaline or containing toxic substances harmful to plant growth. Topsoil shall be clean and free of stones, lumps, roots, and other extraneous objects which hinder plant growth and plant operations. Contractor shall provide a soils report for import soil to project engineer for approval. See Section 02910 Landscape Topsoil.

# 2.03 BACKFILL MIX

- A. Backfill Mix: For organic amendment, use well decomposed compost free of stones, sticks, soils and toxic substances harmful to plants. Total soluble salts shall be less than 1,000 ppm. The
- following formula shall be used as a backfill mix soil for plant material:
- ount per cubic yard mix: 80% - Topsoil (amended as per soil's agronomy report less organic amendments)
- 2. 20% Bulk organic amendment B. If the Organic Amendment is not iron Fortified, then add Tri-C iron or equal with micros at rate of 3/4

# 2.04 BACKFILL MIX INSTALLATION

A. Apply amended soil mix per 2.03 at top 12 inches depth around plant rootballs.

pounds per tree planting. Thoroughly incorporate into the backfill mix.

- B. Trees 15 gallon and larger shall be backfilled with acceptable native soils to approximately one foot from top of rootball to bottom of rootball. Native soils shall not be toxic to plant growth. Native soil shall have Boron content shall be less than 1 PPM. The native soil shall be chemically treated as
- 1. 1/2 pound of superphosphate per cubic yard of native soil unless soils agronomy report shows sufficient phosphorus.
- 2. Two (2) pounds of iron sulfate per cubic yard of native soil. 3. Native soil shall be pulverized and chemical treatments thoroughly incorporated into the native
- C. Slow release fertilizer tablets shall be placed in backfill mix at rates listed in notes and details.

# .05 FERTILIZER TABLETS

- A. Fertilizer: Agriform slow release, 21 gram, 20-10-5 tablets for trees or approved equal. It shall be delivered to the site in containers, each fully labeled and bearing the name or trademark and
- B. All plants one gallon size and larger shall be fertilized with fertilizer tablets as per planting notes.

# 2.06 LANDSCAPE MATERIALS

- A. Chemical Treatment Material: EPA registered and approved seed pre-emergent herbicide. Use requires approval of the Owner's Representative.
- Stakes: Stakes supporting trees shall be minimum 2" diameter lodgepole pine and capable of standing in the ground at least two years.
- C. Tree ties: As noted on plans and details D. Anti-Desiccant: Anti-desiccant shall be "Wilt Pruf" or equal, delivered in manufacturer's containers

and used according to the manufacturer's instructions. This product shall be used by plant

- originator and by contractor on-site for trees shipped in hot weather and to be sprayed on plants sensitive to moisture evaporation in hot water.
- Rock Mulch: as per plans and details.
- Boulders: as per plans and details. G. Organic or Bark Mulch: as per plans and details.
- Note: Any or-equal rock source for 3-10-inch sized rock and boulders must produce the colors, hues and patterns depicted in the rock.

# PART 3 EXECUTION

# 3.01 SITE PREPARATION

- A. Finished grades of all planting areas shall be left 2" below all walks and curbs.
- B. Contractor shall verify areas to receive landscape work are ready for such work prior to proceeding. 3.09 CLEAN UP If problems exist which will adversely affect landscape work or completion in a timely manner, notify general contractor immediately for resolution.

# 3.02 PLANTING OPERATIONS TREES, SHRUBS AND GROUNDCOVERS

- A. Planting Season: Extreme care shall be exercised to assure plants are protected from extremes of weather which could cause damage to the plants.
- 1. Planting in Hot Weather: Fill each basin (pit) with water twice prior to planting. Do not allow basin to dry out. After planting, water as frequently as required to keep the plant adequately moist until well established and final acceptance by the owner. Contractor shall take extreme care to handle plant material in the coolest part of the
- 2. Planting in Cool Weather: Do not handle plant material when temperatures are 35 degrees or colder (below freezing). Damage to plant material may result. Provide mulching around plant to protect rootball.
- B. Obstruction Below Ground: Do not plant any plant with a large obstruction directly below the root ball. In the event that rock or obstructions are encountered in any plant pit excavation, alternate locations shall be selected by the Owner's Representative.
- C. Drainage: In the event that impervious caliche, rock or hardpan is encountered during digging operations, in tree pits or shrub pits, it shall be the responsibility of the Landscape Contractor to insure proper drainage in all pits. Minimum drainage requirements shall be the loss of water at the rate of 6" drop in water level per hour. All caliche, rock or hardpan encountered shall be disposed of off the site. Refer to Section 02910 "Landscape Topsoil and Subsurface Conditions".
- D. Planting Pits: Plant pits may be square or circular and shall have vertical sides and flat bottoms. Minimum hole sizes shall be as indicated as noted.
  - 1. Mark a circular area three to five times the diameter of the root ball. Till this area to a depth no deeper than the root ball. Walls of the undisturbed soil should be rough and sloping. Dig a hole in the center of the tilled area slightly wider and no deep than the root ball
- 2. Always handle the plant by the container or the root ball. Remove the plant from the container with minimal disturbance to the root ball. Score the root ball to cut any circling roots and to disturb the media-backfill interface. Make a vertical cut ¼ to ½ inch deep four times around the sides and twice across the bottom.
- 3. The top of the root ball should be level with or slightly above the finished grade. Backfill as per details and these specifications. Do not pack the soil.
- 4. Remove the nursery stake. Do not prune unnecessarily. Remove only broken or infected branches, and double leaders using clean, shape bypass pruners. Remove trunk sprouts gradually over several years on trees.
- 5. Form an irrigation well, if used, at the edge of the root ball to ensure that irrigation wets the container media. Irrigate the plant and the entire tilled area. Apply enough water to thoroughly wet the soil to the depth of the root ball. This will remove air pockets without compacting the soil.
- E. Watering: Water each plant thoroughly immediately after planting. Fill each basin twice for the initial watering. Water as frequently as required to keep the plant adequately moist until well established and final acceptance by the project engineer.

# 3.03 PRUNING AND MULCHING

- A. Each tree and shrub shall be pruned in accordance with the American Association of
- Nurserymen standards to preserve the natural character of the plant. B. All dead wood or suckers and all broken or badly bruised branches shall be removed. C. Pruning shall be done with clean, sharp tools.
- Cuts over 1" in diameter shall be painted with an approved tree paint. Paint shall cover all
- exposed cambium as well as other exposed living tissue. E. Mulch the entire area with three to four inches of organic material. Do not let mulch contact the tree trunk or shrub branch. If planting in a lawn, keep the tilled area free of

### 3.04 STAKING

- A. Do not stake trees unnecessarily. If staking is required, use two stakes only on tree standards, three stakes minimum on multi-trunk trees. Place them outside the root ball and irrigation well at right angles to the prevailing wind. Make sure stakes penetrate
- undisturbed soil at least six inches. B. To determine tie height, hold trunk with one hand and bend canopy to one side. If canopy does not return to an upright position, move up the trunk and try again. Find lowest point on trunk at which the canopy will return to an upright position. Place ties about six inches
- above this point. Use one set of ties only. C. Fasten ties to stake so the cut ends are between the stake and the tree, not exposed on the outside of the stake. Twist wires to tighten (for wire type ties). There should be
- enough slack to allow the trunk and tie to move as a unit. D. Cut the stakes off below the canopy to prevent wounds to branches.
- E. Inspect and loosen ties periodically as the tree grows. Remove stakes as soon as <u>possible.</u>

# 3.05 ROCK AND ORGANIC MULCH AREAS

- A. Areas to be covered with rock or organic mulch shall be treated with a seed pre-emergent prior to and after placement of mulch (see plan and details).
- B. Place mulch at a minimum depth as indicated on plans and details. C. Mulch shall be raked smooth and level. Rock mulch shall be compacted with a roller.
- Roller requirements are 100 lbs. minimum.
- D. Apply pre-emergent a second time following other operations.

# 3.06 MAINTENANCE

- A. The Contractor shall insure that all plant materials and lawn areas are in a sound, healthy, vigorous condition free of insects, bark abrasions, or other objectionable disfigurements and shall immediately replace any plant or areas of lawn which is unacceptable at any time up to and including final acceptance of the project or completion of the plant establishment/maintenance period, whichever occurs later.
- When the termination of the plant/lawn establishment extends beyond the final acceptance date for the project, this additional period of time for plant establishment may be considered as a special warranty period within the standard 1-year guarantee period. C. Unless otherwise authorized by the project engineer, the Contractor shall maintain all
- landscaped areas on a continuous basis as they are completed during the course of work and until final project acceptance or the termination of the plant establishment/maintenance period, whichever occurs later. Maintenance shall include keeping the landscape areas free of debris, weeding, cultivating plant/lawn replacement and pruning the planted areas at intervals acceptable to the project engineer. The Contractor shall provide adequate personnel to accomplish the required maintenance. Pruning and replacement of plants shall be as directed by the project engineer.

# 3.07 INSPECTION, ACCEPTANCE AND PLANT ESTABLISHMENT/MAINTENANCE PERIOD

A. The project engineer shall inspect the planting and related work upon written request by the General Contractor when all landscaping work is complete. The effective beginning date for plant establishment/maintenance period shall begin when the project is determined to be substantially complete. The plant establishment/maintenance period shall be for a period of 90 calendar days, but is subject to extension by the project engineer if the landscape areas are improperly maintained, appreciable plant replacement is required, or other corrective work becomes necessary.

- B. At final project acceptance or at the end of the plant establishment/maintenance period, a final acceptance inspection of the planted areas will be made by the project engineer. C. All requests for inspections shall be received at least five (5) days before anticipated date
- D. Responsibility of planted area: Until the project is finally accepted, the Contractor shall be

required to repair or replace any landscaping that is defective or becomes damaged. The 1.02 NOT USED cost of the necessary repairs or replacements shall be borne by the Contractor.

# 3.08 REPLACEMENT (See 1.04)

A. At the end of the 1-year guarantee period, the project engineer will make another inspection to determine the condition of plants. All plants not in a healthy growing condition, as determined by the project engineer, will be noted and as soon as seasonal conditions permit shall be removed from the site and replaced with plants, the same species and sizes as originally specified. Such replacements shall be made in the same manner as specified for the original plantings, and at no extra cost. The guarantee on plants shall be limited to one replacement.

A. The Contractor shall be responsible for general daily site clean up associated with his work including removal of debris and all trimmings, removal of soil from sidewalks, and removal of all materials which could present a hazard to the public.

# \*\*\*END OF SECTION\*\*\*

### SECTION 02910 LANDSCAPE TOPSOIL

# PART 1 - GENERAL

- A. Subsurface and soils investigations.
- 1.02 SOILS INFORMATION: A. A Geotechnical exploration report is on file with the Owner's Representative. Bidders shall make their own interpretations of the data contained in said report, and the Contractor shall not be relieved of liability or responsibility under the Contract as a result of any variance between conditions indicated by, or inferred from, said report and actual conditions encountered during the progress of work. The soils report shall take
- precedence over this Landscape Topsoil should discrepancies occur. B. No warranty is made as to the accuracy or completeness of any information on soils or subsurface conditions, and it is expressly understood that neither the Owner nor his agents or consultants will be responsible for interpretations or conclusions drawn from data on existing conditions.

- SITE FAMILIARIZATION: A. The Contractor must examine the site prior to bid and prior to the start of construction. B. Prior to the start of construction, the Contractor may perform additional borings or tests at
- no cost to the Owner. C. Caliche: Any caliche, rock, or hardpan encountered during construction shall be the responsibility of the contractor to remove at his expense. Any planting pits for trees and shrubs encountering caliche, rock, or hardpan shall have caliche, rock, or hardpan removed by the contractor and disposed of off-site.

# 1.04 PLANTING SOILS:

A. Imported or native soil may be used for landscape plantings. Onsite native topsoil may be used if agronomy soils report finds the native topsoil acceptable and amenable to landscape plantings. Amend native soil as per agronomy soils report. Imported topsoil will be provided as needed by the Contractor if existing native topsoil quantity is insufficient for a complete project. Contractor will be responsible for placement and amendment to topsoil and planting soils. Contractor shall have agronomy soils tests performed on any native topsoil and imported topsoil to be used in any landscape plantings and turf areas. Agronomy soils test results shall be submitted to Landscape Architect and Owner's Representative for approval. Soils tests shall provide narrative report describing soils being tested, it's acceptability for landscape plantings, and the

# Test Measurement:

20. Salinity

1.	Organic Matter	%
2.	Organic Nitrogen	lbs/A
3.	Nitrate - Nitrogen	ppm &lbs/A
4.	Available Nitrogen	ppm
5.	Available Phosphorus	
	a. Bray P1	ppm
	b. Bicarbonate P	ppm
6.	Exchangeable Potassium	ppm
7.	Sulfate-Sulfur	ppm
8.	Exchangeable Magnesium	ppm
9.	Exchangeable Calcium	ppm
10.	Exchangeable Sodium	ppm
11.	Available Zinc	ppm
12.	Available Copper	ppm
13.	Available Iron	ppm
14.	Available Manganese	ppm
15.	Available Boron	ppm
16.	Lime Requirement	lbs/1000 SF
17.	Gypsum Requirement	lbs/1000 SF
18.	Soil Texture	% sand, silt, clay
19.	Electrical conductivity	mmhos per cm

amendments needed for healthy and vigorous plant growth.

21. SAR ratio B. Contractor shall bid the project with the below topsoil requirements and amendment procedures outlined in these specifications. Should results of onsite soils tests after rough grading show any unanticipated results, the amendment specifications and procedures

mmhos

may need to be adjusted. C. Acceptable native topsoil and imported topsoil shall be used for all new turf areas, shrub areas, and as part of the backfill mix for all container planting. (See Section 02900

Top soil shall consist of friable soil of loam character. Topsoil shall be loam, sandy loam, silt loam, or sandy clay loam as per the Textural Triangle National Soils Handbook, Part 603-5. It shall be obtained from well-drained arable land and shall be free from sub-soil, refuse, roots, heavy or stiff clay, stones larger than 3/4 inch in largest dimension, coarse sand, sticks, brush, litter, and other deleterious substances.

# Requirements for imported top soil shall be as follows:

1. TOPSOIL Electrical conductivity Shall not exceed 3.0 ds/m @ 25 degrees C 6.0 - 8.0 (saturated paste) pH range Soluble Salts Less than 2.5 (saturated paste) Less than 2 (saturated paste) Boron Less than 1 ppm as per saturation extract Sand 20 -70% (hydrometer) Silt 20 -70% (hydrometer) Clay 10 - 30% (hydrometer)

# SECTION 02913

TURF GRASS AND SOIL PREPARATION

\*\*\*END OF SECTION\*\*\*

# PART 1 - GENERAL

1.01 SCOPE OF WORK A. Related Sections: 02300 - Earthwork

2900 - Landscaping

02800 - Irrigation System

02910 - Landscape Topsoi The Work under this Section shall consist of furnishing all labor, materials and incidentals needed to install new topsoil and turf grass in accordance with these Specifications.

# 1.03 QUALITY ASSURANCE

- A. Comply with federal, state and local laws requiring inspection for plant disease and infestations. Inspection certificates required by state law shall accompany each shipment
- and be delivered to the Construction Project Representative. B. Personnel: Employ only qualified personnel familiar with required work.

details as these documents may require greater depth of topsoil.

# 1.04 PREPARATION OF SOILS

- A. Existing Subsoil Preparation.
- 1. All areas to receive turf shall be graded to rough grades (-6") minus six inches from final topsoil finish grades (See also Civil Engineering Plans). Refer to plans and
- 2. Contractor shall mix (till or disk) in gypsum into the existing site subsoil at the rate of 150 pounds per 1000 square feet and cultivate to a six-inch (6") depth. Contractor shall remove all existing rock or Caliche greater than two inches in diameter from the surface of the subsoil due to the tilling operations and crush smaller for re-use onsite as subsurface fill mixed in.
- 3. The amended subsoil finish grade shall be raked, and leveled (not rolled) to a maximum compaction of 80-85% optimum moisture content prior to placement of topsoil layer.
- B. Topsoil Preparation (native onsite and imported topsoil)
- Amended topsoil shall be placed to a minimum six-inch (6") depth and compacted to 3.08 80% to 85% maximum optimum moisture content. Refer to plans and details as these documents may require greater depth of topsoil.
  - a. Native onsite and imported topsoil shall be amended as per the soils agronomy report for turf areas.
- C. Contractor shall provide agronomy tests of topsoil samples and shall amend topsoil in
- accordance with the labs recommendations for growing turf. D. Amendments shall be incorporated only into topsoil by rototilling or disking to form a homogeneously blended mix. Do not mix with the existing site subsoil layer.
- E. The amended topsoil shall then be placed, water settled, re-graded, and brought to finish grades at a compaction rate of 80% to 85% optimum moisture content. Add additional amended topsoil as needed to insure minimum depth requirement.

# SUBMITTALS

- A. Product Data: The Contractor shall submit as part of the project submittal package, six (6) complete sets of the supplier's guaranteed statement of composition, mixture, percentage of purity and germination for variety of sod, specified herein for approval by the construction project representative.
- B. Approval of the submittals shall be the Contractor's authorization to order the required material. There will be no deviation from the approved submittals without the written authorization of the construction project representative.
- A. The Contractor shall warrant that the turf grasses installed under the work of this section, shall be in a healthy and flourishing condition at Substantial Completion and specified maintenance period for sod (See Section 3.10 and 3.11).

B. Sodden turf areas shall exhibit a vibrant green color with no bare spots. Turf grass area(s)

shall be free of dead or dying patches associated with disease or insect infestation, and free of weeds, rock or other debris. C. The Contractor shall replace any dead or dying materials that are not in a vigorous, thriving condition, weather permitting, upon notification of the Construction Project Representative. The Contractor shall replace material with the same species, variety, color and size as originally installed at no cost to owner. Contractor will not be held responsible to replace any dead or dying turf grass associated with improper maintenance of irrigation

system by owner, vandalism or unusual weather phenomena after maintenance period.

# PART 2 - PRODUCTS

- A. Varieties

with sandy loam soil sources).

- B. Contractor shall remove plastic webbing during installation of Bermuda grass type sod only in soccer fields areas.
- C. A full and healthy stand of Grass shall be actively growing. D. Each grass type shall only come from one (1) farm location. If additional sources for each

WARRANTY/GUARANTY/MAINTENANCE PERIODS

grass type is needed due to availability from original source, contractor shall submit proof (soils analysis) that the farm has similar soil type for growing sod (item E). E. Sod shall be farm grown on a sand base soil type. (No Clay loam soil sources shall mix

F. If the sod for each grass type comes from more than one location, during the submittal

phase, the contractor shall submit a map or diagram of the project site to the Landscape

### Architect proposing where the sod sources will be installed on site; grouping the same sod sources together.

# PART 3 - EXECUTION

- 3.01 PREPARATION OF PLANTING AREAS FOR THE INSTALLATION OF TURF GRASS A. Sod planting areas shall be prepared as specified in Part 1 - General.
- B. If the planting area is not in an approved planting condition, the Contractor shall fine grade the planting area to a smooth, even surface with a loose, uniform fine texture. Roll, rake, and drag the planting areas to remove ridges and to fill depressions, as required to establish finish grades.
- allow surface moisture to dry before installing lawns, or grasses. Do not create muddy soil D. Planting areas shall be restored to specified condition, if eroded or otherwise disturbed,

C. Moisten prepared sod planting areas before planting, if soil is dry. Water thoroughly and

# after fine grading and prior to turf grass installation.

- 3.02 SOD INSTALLATION A. The Contractor shall provide and install the type and quantity of turf grass sod as shown on the drawings and specified herein. Contractor shall use grower's recommended turf installation proceedures. Contractor shall remove grower's plastic webbing in sod during
- B. Sod shall be laid within 24 hours from the time of stripping. Dormant sod shall not be used nor shall sod be laid if ground is frozen.

placement operations.

- C. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or lightly roll to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess material from sodden
- areas to prevent smothering. D. Thoroughly water sod with a fine spray immediately after planting to saturate the sodden
- area to a depth of four inches. E. After two days of thorough watering, the Contractor shall curtail watering to permit
- re-rolling of the sodden area to ensure proper contact with subgrade. F. After the second rolling of the sod, the Contractor shall routinely water, fertilize and maintain sodden area until the termination of the specified maintenance period and until acceptance by the Owner. An additional rolling may be needed as directed by the Construction Project Representative prior to substantial completion.

# 3.03 CARE AFTER SOD INSTALLATION

fescue and perennial rve.

- A. After application, the Contractor shall not operate equipment or walk over the sodded
- B. The Contractor shall determine routine watering schedules.
- C. Keep all areas moist. During the first 10 days, it may be necessary to irrigate multiple times per day to prevent dryout. Evenly water, but prevent runoff. D. Mow grass at regular intervals to maintain at maximum height of 2-1/2 inches. Do not cut

more than 1/3 of grass blade at any one mowing. Use of Rotary mower is acceptable for

- E. For Bermuda, mow grass at regular intervals to maintain a maximum height of 3/4" height. Do not cut more than 1/3 of grass blade at any one mowing. Only use horizontal reel type mowers for Bermuda, no exceptions.
- F. Neatly trim all edges and hand clip where necessary.

### G. Immediately remove clippings from sodden areas after mowing and trimming. Leave shor clippings on seeded areas to begin thatch build-up.

- H. Re-roll sod surface after one two weeks to remove minor depressions or irregularities.
- I. Application of herbicides for weed control in accordance with manufacturer's instructions.
- Remedy damage resulting from use of herbicides.
- J. Application of pesticides in accordance with manufacturer's instructions. Remedy
- damage from use of pesticides.
- K. Application of fungicides for disease control in accordance with manufacturer's
- instructions. Remedy damage from use of fungicides. Immediately replace sod in areas which show deterioration, brown or bare spots. M. Provide a copy of Warranty form on company letterhead, prior to Substantial Completion.

# 3.06 FERTILIZATION

A. For FESCUE or BERMUDA sodden areas, apply one (1) pound of nitrogen/1000 square feet every two (2) weeks for first month and after first mowing, then apply a commercial fertilizer (16-6-8) plus iron at a rate of five pounds/1000 square feet.

## B. Additional fertilization and type shall be as required and recommended by the hydroseed supplier or sod grower to maintain a deep green turf color for acceptance by the construction project representative.

# SODDING SCHEDULE

A. No sod shall be laid or ordered when a potential for freezing temperatures or turf supplier recommendations. The Contractor shall be responsible to produce a full established stand of grass within project schedule time frame should Contractor perform sodding operations around marginal weather conditions.

# INSPECTION

- A. Pre-Inspection Walk-Through 1. Notify construction project representative 48 hours in advance to schedule
- pre-inspection. 2. Work of this section shall be completely installed prior to scheduling of walk-through
- 3. Generate a "punch list" of items to be corrected, prior to Final Inspection for Substantial Completion. 4. Furnish all required material and equipment and perform all work required to correct

deficiencies.

- B. Inspection For Substantial Completion 1. Contact construction project representative 48 hours in advance to schedule
- inspection. 2. Items deemed not acceptable by construction project representative shall be

# re-worked to the complete satisfaction of the construction project representative.

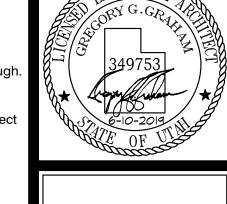
construction project representative

- 3.10 TURF GUARANTEE AND MAINTENANCE A. All turf shall be warranted for a period of one year, and shall be replaced within thirty (30)
- days if found to be dead or severely declining in health. B. Maintain all lawn areas within the project limits and through the duration of the establishment period ninety (90) days. This shall include watering, mowing (minimum one (1) per week or otherwise indicated), weeding and removal of debris. Any divots, holes, or ruts caused by walking or driving, and subgrade settlement, must be corrected immediately by repairing the subgrade and turf areas to the construction project representative's satisfaction at contractor's expense. The Contractor may want to erect temporary fencing to protect sodden areas from foot traffic or as required by the

# TURF ESTABLISHMENT PERIOD

A. The period for maintaining lawn areas shall last for 90 days after the initial inspection (when sod is 100% completed) and shall be subject to the construction project representative approval of work. The 90-day establishment period may be extended by the construction project representative if lawn areas are improperly maintained, or if establishment is insufficient, in the opinion of the construction project representative.

\*\*\*END OF SECTION\*\*\*



OR

VOLINE xPRESS ATOGA SPRINGS HA AR

NO SCALE JUNE 10, 2019 Drawn By:

GGG North

Approved By:

GGG

Call before you Dig

Avoid cutting underground utility lines. It's

Blue Stakes of

19-011

sheet No. L-1.4

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IRRIGATION S	MANUFACTURER/MODEL/DESCRIPTION	PSI	DETAIL
	Rain Bird 1804 8 Series MPR	30	B, SHEET
® ® ® ® Q T H F	Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet.  Rain Bird 1804 10 Series MPR	30	L-2.3
ф ф ф ф Q т н ғ	Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet.		B, SHEET L-2.3
E E E E	Rain Bird 1804 15 Series MPR Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet.	30	B, SHEET L-2.3
8 08HE-VAN 12 12HE-VAN 15 15HE-VAN	Rain Bird 1804 HE-VAN Series Turf Spray 4.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet.	30	B, SHEET L-2.3
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION		DETAIL
<b>©</b>	Drip Zone Flush Valve 3/4" PVC BALL VALVE IN 10" VALVE BOX		K, SHEET L-5.3
<b>(A)</b>	Drip Air Relief Valve 3/4" MALE PIPE THREAD AIR/VACUUM RELIEF VENT. INSTALL AT HIGH POINT IN DRIP IRRIGATION ZONES AND SLOPING TERRAIN TO PREVENT COLLAPSING OF PIPES. AIR RELIEF VALVE TO BE UV RESISTANT AND HAVE MAXIMUM PRESSURE RATING OF 150 PSI.		J, SHEET L-5.3
+ + + + + + + + + + + + + + + + + + +	Area to Receive Drip Emitters GPH Irrigation GPST-M Threaded pressure compensating drip emitter with 1/2" (1.27cm) FIPT inlet and Diffuser Cap Outlet and Mulch Camo color. Brown=0.5gph; Black=1.0gph; Green=2.0gph; Yellow=4.0gph; Tan=6.0gph; Gray=8.0gph; Orange=10gph. Emitter Notes:		N, SHEET L-5.3
	2.0 GPH emitters (1 assigned to each 1 gal plant)		
	4.0 GPH emitters (6 assigned to each 15 gal. plant)		
	2.0 GPH emitters (1 assigned to each 2 gal plant)		
	4.0 GPH emitters (6 assigned to each 2" Cal. plant)  2.0 GPH emitters (1 assigned to each 5 gal. plant)		
	4.0 GPH emitters (6 assigned to each 6` Ht. plant)		
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION		DETAIL
•	Drip Zone Valve - Rain Bird PESBR  1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, and Purple Flow Control Handle.		G, SHEET L-5.3
<b>◆</b>	Turf Zone Valve - Rain Bird PESBR-PRS-D  1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, Purple Flow Control Handle, and Pressure Regulator Module.		D, SHEET L-5.3
	Rain Bird 33-DNP 3/4" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Non-Potable Purple Rubber Cover, and 2-Piece Body.		E, SHEET L-5.3
×	ISOLATION Valve HAMMOND IB645 BRASS GATE VALVE, SIZE AS PER LINE		F, SHEET L-5.3
M	Rain Bird PESBR 1" 1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, and Purple Flow Control Handle.		C, SHEET L-5.3
$\triangle$	Drip Zone Pressure Reducing Valve SENNINGER PMR-MF40 OR PRL-40 PRESSURE REDUCING VALVE FOR DRIP IRRIGATION ZONE, FOR FLOWS 2-20 GPM, USE PMR-MF-40 WTIH 40 PSI OULTET PRESSURE AND 1" INLET/OUTLET SIZE, FOR FLOWS BELOW 2 GPM, USE PRL-40 WITH 40 PSI OULET PRESSURE AND 3/4" INLET/OUTLET SIDE		G, SHEET L-5.3
Α	HydroPoint WTLC-C-18-PL High-Impact Plastic NEMA 3R rated, key-lock entry, in stainless steel pedistal enclosure		H, SHEET L-5.3
(RS)	Rain Bird WR2-RFC Wireless Rain and Freeze Sensor Combo, includes 1 receiver and 1 rain/freeze sensor transmitter. Install as per manufacture`s details and specifications. Locate sensor out of reach with unblocked access to rainfall.		
FS	Creative Sensor Technology FSI-T10-001  1" (25mm) PVC tee type flow sensor w/socket ends, custom mounting tee and ultra-lightweight impeller enhances low flow measurement. 2 wire digital output compatible w/all irrigation controllers. Flow range: .86-52 GPM.		R, SHEET L-5.3
F	DRIP ZONE FILTER GPH IRRIGATION PRODUCTS MODEL GYFI150 DRIP ZONE FILTER, STAINLESS STEEL 150 MESH, USE 3/4" ON 3/4" PVC LINES AND 1" ON 1" PVC LINES. PROVIDE 1 MINIMUM PER VALVE. FILTERS ARE REQUIRED ON EACH VALVE EVEN IF NOT SHOWN ON PLAN, SEE DRIP CONTROL VALVE DETA		G, SHEET L-5.3
-(A)-	V.I.T. Products SB-16SS Stainless steel pedestal mount controller enclosure with top entry. 16"W, 38"H, 15.5"D (40.64cm W, 96.52cm H, 39.37cm D).		H, SHEET L-5.3
M1	Water Meter 1" New 1" water meter on pressure irrigation secondary water line.		
	Irrigation Lateral Line: PVC Schedule 40		M, SHEET L-5.3
	Irrigation Mainline: PVC Schedule 40		M, SHEET L-5.3

# Valve Callout

# # Valve Number

# **DRIP IRRIGATION NOTES:**

- 1. DRIP EMITTERS SHALL BE PLACED AROUND ROOTBALL SHRUBS AND ON ROOTBALL AND AROUND TREES AS PER DETAILS. CONTRACTOR SHALL ENSURE ROOTBALL OF PLANT MATERIALS RECEIVES WATER FROM THE EMITTERS AND WETS THE SURROUNDING SOIL FOR ROOT GROWTH.
- 2. EMITTERS SHALL BE ATTACHED TO GPH IRRIGATION PRODUCTS BRAND MALE ADAPTERS MODEL NO. G436-005 ON FLEXIBLE PVC HOSE MODEL NO. GPVCAR 050 IPS.
- CONTRACTOR MAY USE GPH IRRIGATION PRODUCTS BRAND PRE-ASSEMBLED IH OR G FLEX RISERS IN LIEU OF ABOVE REQUIREMENT FOR EMITTER ATTACHMENT AND FLEXIBLE PVC.
- 4. MAXIMUM OF 8 EMITTERS PER LENGTH OF FLEXIBLE PVC.
- 5. USE WELD-ON P-70 PRIMER W/ IPS-795 PVC SOLVENT CEMENT ON ALL FLEXIBLE PVC HOSE AND BLACK PVC ADAPTERS.
- AL DRIP ZONES SHALL HAVE MINIMUM OF ONE AIR RELIEF VALVE INSTALLED A TTHE HIGH POINT OF THE ZONE AS PER PLAN, SCHEDULE, AND DETAILS. SOME DRIP ZONES MAY HAVE MULTIPLE AIR RELIEF ZONES.

# CRITICAL ANALYSIS

Generated:	2019-05-20 11:40
P.O.C. NUMBER: 01	
Water Source Information: on pressure irrigation secondar	New 1" water meter ry water line.
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	20.23 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	75.00 psi
Elevation Change:	4.00 ft
Service Line Size:	1"
Length of Service Line:	6.00 ft
Pressure Available:	72.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	16.42 gpm
Flow Available at POC:	20.23 gpm
Residual Flow Available:	3.81 gpm
Critical Station:	7
Design Pressure:	30.00 psi
Friction Loss:	1.00 psi
Fittings Loss:	0.10 psi
Elevation Loss:	0.00 psi

Loss through Valve:

Loss for Fittings:

Loss for Main Line:

Loss for Backflow:

Loss for Master Valve:

Loss for Water Meter:

Pressure Available:

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Pressure Req. at Critical Station:

Loss for POC to Valve Elevation:

Critical Station Pressure at POC:

Residual Pressure Available:

	SLEEVES & CONDUIT
====	PVC SCH 40 SLEEVES. SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE TO BE SLEEVED OR 4", WHICH EVER IS GREATER. PROVIDE (2) SLEEVES, 1 FOR FOR ITEM TO BE SLEEVED AND 1 FOR FUTURE USE. CAP SLEEVE FOR FUTURE USE TO KEEP CLEAN.

2.71 psi

33.81 psi

0.77 psi

7.69 psi

0.00 psi

2.71 psi

1.48 psi

46.46 psi

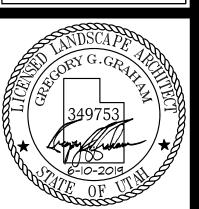
NEW 1" SECONDARY WATER METER
INSTALL NEW SERVICE LINE AND 1" WATER METER TO EXISTING 6" SECONDARY WATER MAINLINE IN THE RIGHT OF WAY OF 1500 NORTH. SERVICE LINE FROM EXISTING 6" MAINLINE TO THE METER SHALL BE $1\frac{1}{2}$ " CT5 SDR-9 POLY PIPE. SADDLE TO BE DOUBLE BRASS BAND. SEE CITY STANDARD DETAIL FOR METER INSTALLATION ON SHEET PI-5A AND ALL OTHER APPLICABLE CITY DETAILS AND STANDARDS.

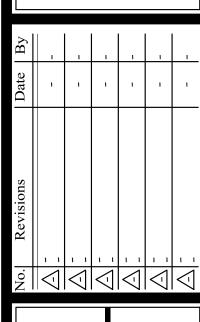
IRRIGATION SMART CONTROLLER
PLEASE NOTE THAT THE PROPOSED IRRIGATION CONTROLLER IS AN ADVANCED SMART IRRIGATION CONTROLLER THAT WATERS BASED ON ET, ACCOUNTS FOR NATURAL PRECIPITATION, AND ADJUSTS WATERING RUNTIMES ACCORDINGLY.

# **GENERAL IRRIGATION NOTES:**

- 1. THE IRRIGATION SYSTEM POINT OF CONNECTION IS AFTER THE EXISTING CULINARY WATER METER AND SHALL BE AS PER LEGEND AND PLAN.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM NEEDED OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE METER OR POINT OF CONNECT. THE CONTRACTOR SHALL TEST ONSITE WATER PRESSURE PRIOR TO CONSTRUCTION AND REPORT THE EXISTING PRESSURE. IN THE EVENT THE EXISTING PRESSURE IS LESS THAN THE PRESSURE NEEDED AS INDICATED ON THE PLANS, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE AND DESIGN PROFESSIONAL TO DETERMINE IF ADJUSTMENTS TO THE SYSTEM ARE NECESSARY. IF THE EXISTING PRESSURE IS NOT REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ASSUME ALL AND FULL RESPONSIBILITY FOR ANY CONSTRUCTION REVISIONS NECESSARY AT NO ADDITIONAL COST TO PROJECT.
- 3. 120 VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE INSTALLED AS PER ALL GOVERNING CODE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE THE FINAL CONNECTION FROM THE ELECTRICAL OUTLET TO THE AUTOMATIC CONTROLLER. ELECTRICAL WORK SHALL BE AS PER THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND GOVERNING CODE.
- THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS. AVOID ANY CONFLICT BETWEEN THE IRRIGATION SYSTEM, PLANTING, AND ENGINEERING FEATURES.
- 5. CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES, UTILITIES, ETC.
- 6. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSIONS EXISTING THAT MIGHT HOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND LIABILITY FOR ANY REVISIONS NECESSARY AT NOT ADDITIONAL COST TO PROJECT.
- CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER CONTRACTORS AND TRADES AND VERIFY THE LOCATION AND INSTALLATION OF SLEEVES THROUGH WALLS, UNDER ROADS, PAVING STRUCTURES, AND OTHER SITE ELEMENTS AS SHOWN ON THESE IRRIGATION DRAWINGS.
- 8. INSTALL ALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE ON ALL PVC MALE PIPE THREADS, ON ALL SWING JOINTS, AND ON ALL VALVE ASSEMBLIES.
- 9. CONTRACTOR SHALL PROVIDE GATE VALVES ON THE MAINLINE AS PER PLAN.
- 10. FOR TRADITIONAL WIRED SYSTEM, WIRE SHALL BE UF-UL AMERICAN WIRE GAUGE 12 OR 14 SOLID COPPER DIRECT BURIAL WIRE. GAUGE SIZED ACCORDINGLY FOR LENGTH AS PER MANUFACTURES DETAILS AND SPECIFICATIONS. USE WHITE WIRE FOR COMMON GROUND WIRE. USE EASILY DISTINGUISHED COLORS FOR CONTROL WIRE. COMMUNICATION WIRE BETWEEN CONTROLLER AND REMOTE VALVES MAY BE BURIED DIRECTLY IN SOIL.
- 11. FOR TWO-WIRE SYSTEM, CONTRACTOR SHALL USE RAIN BIRD MAXIWIRE OR EQUIVALENT. WIRE SHALL BE SIZED APPROPRIATELY FOR LENGTH AS PER MANUFACTURE'S DETAILS AND SPECIFICATIONS. WIRE SHALL BE RATED FOR DIRECT BURIAL.
- 12. COMMUNICATION CABLE FOR FLOW SENSOR TO CONTROLLER SHALL BE PAIGE ELECTRIC P7315D CONFORMING TO REA PE-39. COMMUNICATION WIRE BETWEEN FLOW SENSOR AND CONTROLLER SHALL BE IN A  $1\frac{1}{2}$ " PVC CONDUIT.
- 13. ALL WIRE SPLICES SHALL BE MADE WITH 3M DBR-Y AS PER MANUFACTURE'S DETAILS AND SPECIFICATIONS. ALL SPLICING SHALL OCCUR WITHIN THE VALVE BOX AT VALVE LOCATIONS.
- 14. CONTROLLER(S) SHALL BE PROGRAMMED TO WORK WITH CLIENTS COMPUTER SYSTEM AS NEEDED.
- 15. CONTRACTOR SHALL INSTALL PULL BOXES EVERY 200 FEET, AT ALL CHANGES IN DIRECTION OF 30° OR MORE, AND AT THE END OF RUNS WHERE EVER IRRIGATION COMMUNICATION WIRES ARE TO BE INSTALLED. SEE IRRIGATION DETAILS.
- 16. ON TWO-WIRE SYSTEMS, CONTRACTOR SHALL PLACE APPROPRIATE LINE SURGE PROTECTORS AT THE APPROPRIATE INTERVAL ON THE TWO-WIRE COMMUNICATION WIRE AS PER CONTROLLER MANUFACTURE'S DETAILS AND SPECIFICATIONS.
- 17. NO SUBSTITUTIONS SHALL BE MADE WITHOUT THE APPROVAL, PRIOR TO CONSTRUCTION, OF THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE.
- 18. CONTRACTOR SHALL REPAIR DISTURBED TURF AND PLANTING AREAS IN EXISTING LANDSCAPED AREAS TO PRE-CONSTRUCTION OR LIKE NEW CONDITIONS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

PLANNING - LANDSCAPE ARCHITECTUR
- URBAN DESIGN
13617 CRIMSON PATCH WAY RIVERTON, UTAH 84096
PHONE: 801-599-8556





HAVOLINE xPRESS LUB ARATOGA SPRINGS, UTA IRRIGATION NOTES AND LEGEND

Scale:
NO SCALE

Date:
JUNE 10, 2019

Drawn By:
GGG

Approved By:
GGG

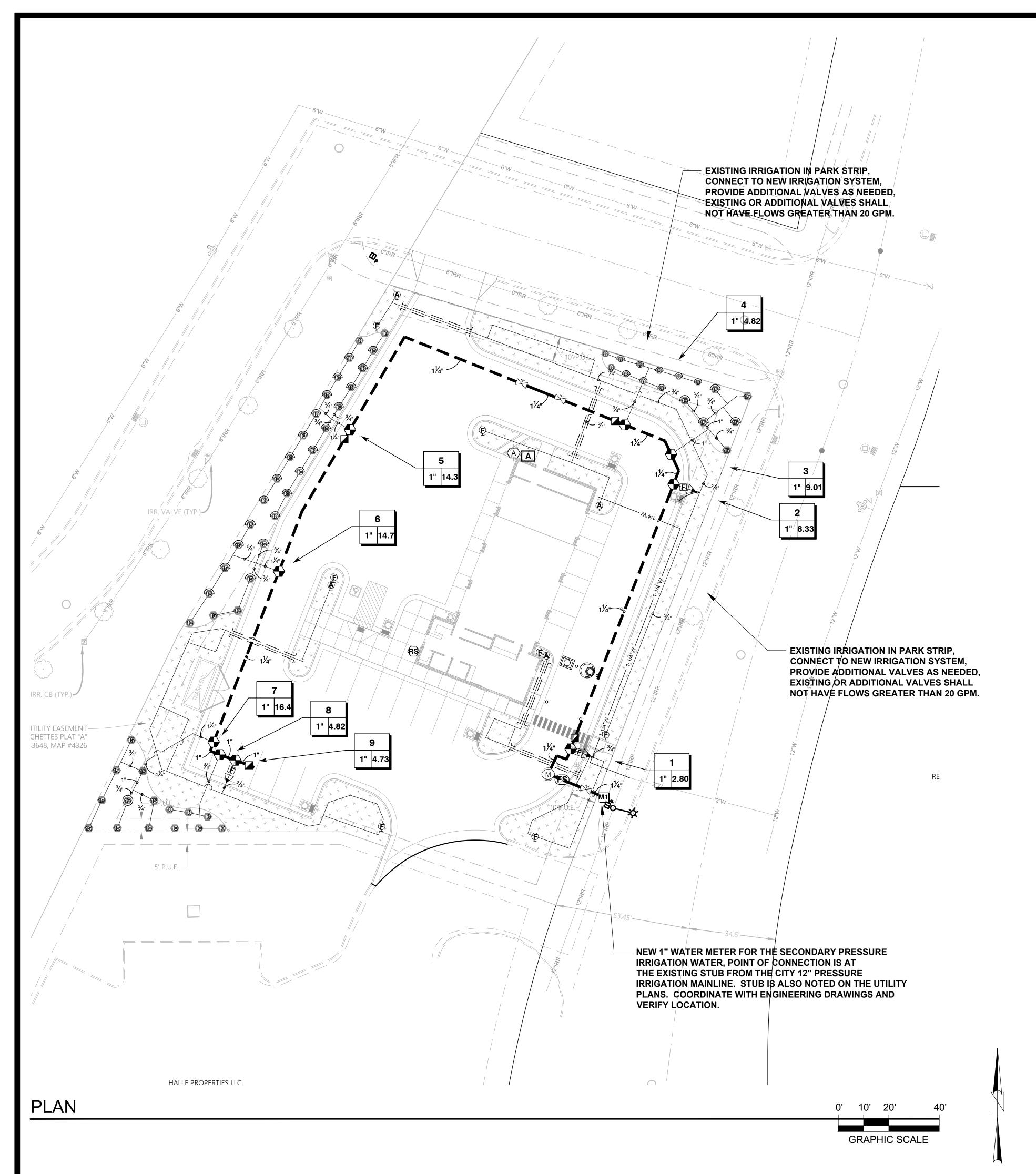
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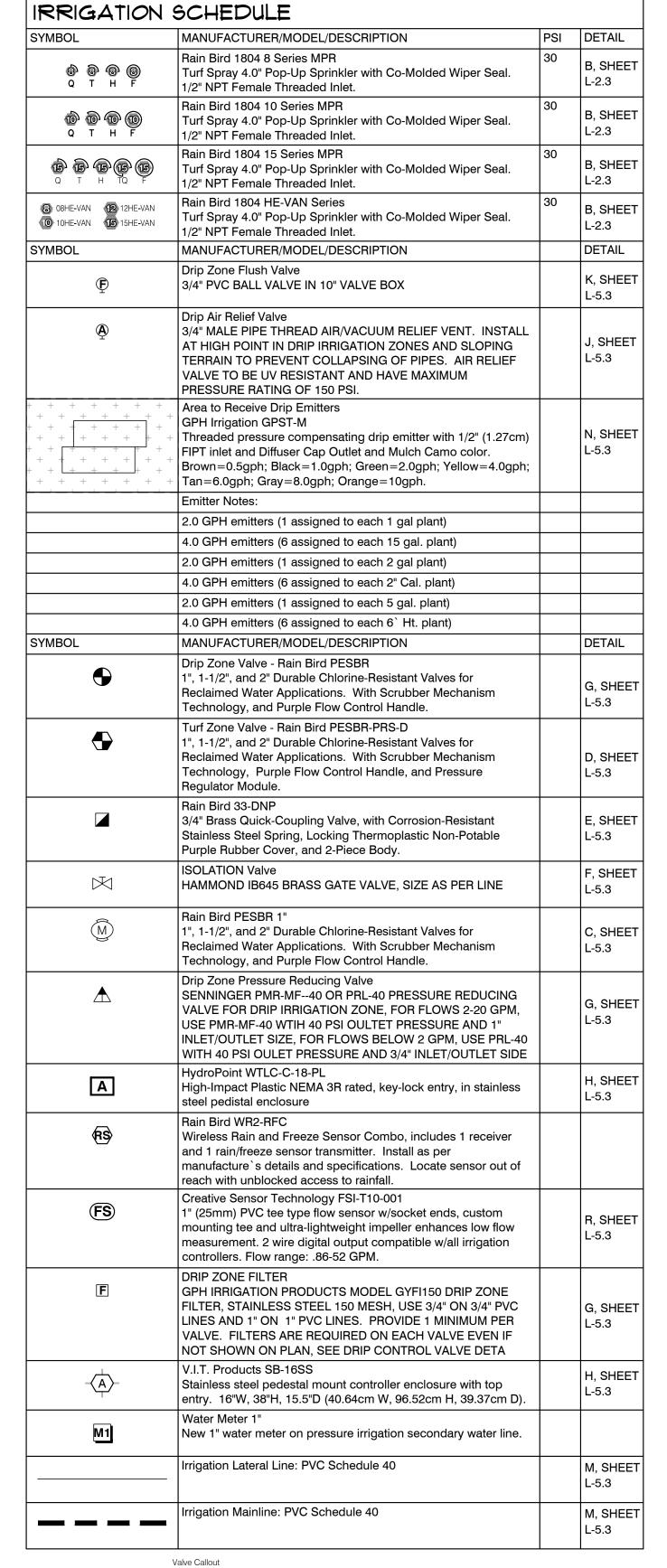


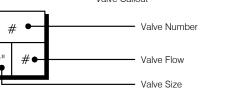
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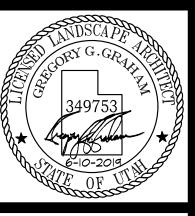








PLANNING - LANDSCAPE ARCHITECTURE
- URBAN DESIGN
13617 CRIMSON PATCH WAY RIVERTON, UTAH 84096
PHONE: 801-599-8556



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Revisions	1 1	1 1	1 1	1 1	1 1	-
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HAVOLINE xPRESS LUE SARATOGA SPRINGS, UT IRRIGATION PLAN

Scale:

1" = 20'

Date:

JUNE 10, 2019

Drawn By:

GGG

Approved By:

GGG

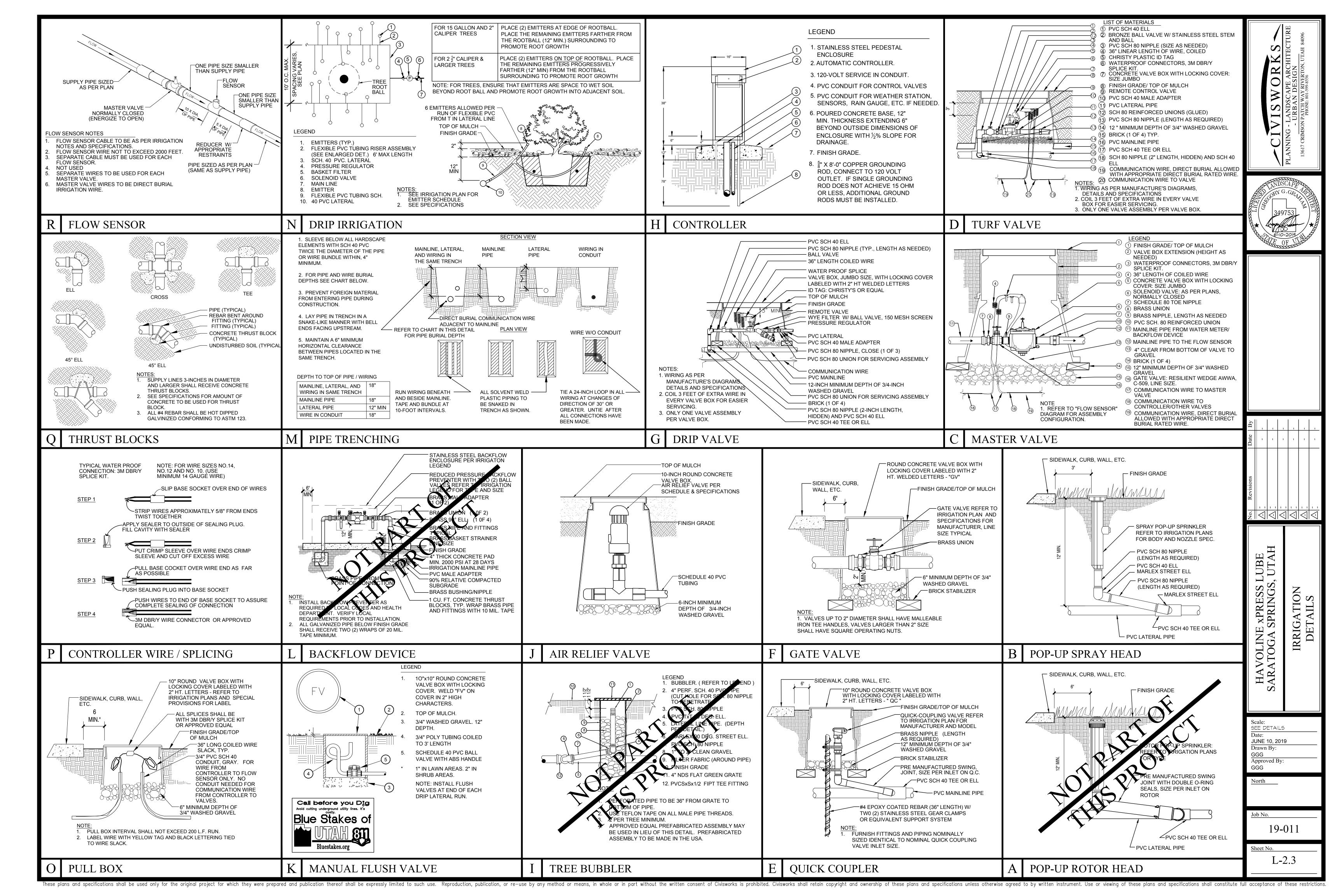
North

Job No. 19-011

Sheet No.

L-2.2

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### PART 1 - GENERAL

### .01 SCOPE OF WORK:

Furnish all labor, materials, supplies, equipment, tools, and transportation, and perform all operations in connection with and reasonably incidental to the complete installation of the irrigation system, and guarantee/warranty as shown on the drawings, the installation details, and as specified herein. Items of work specifically included are:

- A. Procurement of all applicable licenses, permits, and fees.
- B. Coordination of Utility Locates ("Call Before You Dig"). C. Coordination for, and connection to, electrical power supply and telephone services for the irrigation
- control system.
- E. Sleeving and conduit for irrigation pipe and wire.

# .02 WORK NOT INCLUDED:

D. Maintenance period.

Items of work specifically excluded or covered under other sections are:

- A. Excavation, installation, and backfill of tap into municipal water line.
- B. Excavation, installation, and backfill of water meter, vault, and backflow prevention assembly. C. Provision of electrical power supply and telephone services to the irrigation control system and

# 03 RELATED SECTIONS:

- A. General Conditions
- B. Division 1-General Requirements: C. Division 2-Site Work:
- Section 02300 Earthwork 2. Section 02900 - Landscaping.

# 04 SUBMITTALS:

- A. Deliver five (5) copies of all submittals to the Construction Project Representative within 15 days from the date of Notice to Proceed. Contractor will be limited to one re-submittal for approval of all
- Materials List: Include pipe, fittings, mainline components, water emission components, control system components. Quantities of materials need not be included.
- C. Manufacturers' Data: Submit manufacturers' catalog cuts, specifications, and operating instructions for equipment shown on the materials list.
- D. Shop Drawings: Submit shop drawings called for in the installation details. Show products required for proper installation, their relative locations, and critical dimensions. Note modifications to the installation detail.

# .05 RULES AND REGULATIONS:

- A. Work and materials shall be in accordance with the latest edition of the National Electric Code, the Uniform Plumbing Code as published by the Western Plumbing Officials Association, and applicable laws and regulations of the governing authorities.
- When the contract documents call for materials or construction of a better quality or larger size than required by the above-mentioned rules and regulations, provide the quality and size required by the contract documents.
- C. If quantities are provided either in these specifications or on the drawings, these quantities are provided for information only. It is the Contractor's responsibility to determine the actual quantities of all material, equipment, and supplies required by the project and to complete an independent estimate of quantities and wastage.

# .06 TESTING:

- A. Notify the Construction Project Representative three days in advance of testing.
- B. Pipelines jointed with rubber gaskets or threaded connections may be subjected to a pressure test at any time after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints shall be allowed to cure at least 24 hours before testing.
- Subsections of mainline pipe may be tested independently, subject to the review of the Construction Project Representative.
- D. Furnish clean, clear water, pumps, labor, fittings, and equipment necessary to conduct tests or
- E. Hydrostatic Pressure Test:
- 1. Subject solvent-weld mainline pipe to a continuous hydrostatic pressure equal to 150 PSI for two hours. Test with mainline components installed
- Backfill to prevent pipe from moving under pressure. Expose couplings and fittings. Leakage will be detected by visual inspection. Heplace detective pipe, titting, joint, valve, or
- appurtenance. Repeat the test until the pipe passes test. 4. Cement or caulking to seal leaks is prohibited.

# Volumetric Leakage Test:

- Backfill to prevent pipe from moving under pressure. Expose couplings and fitting. Purge all air from the pipeline before test.
- 3. Subject gasketed mainline pipe to an operating pressure of 150 PSI for two hours. Maintain constant pressure. The amount of additional water pumped in during the test shall not exceed 1.52 gallons per 100 joints of 3-inch diameter pipe, 1.96 gallons per 100 joints of 4-inch diameter pipe, and 2.90 gallons per 100 joints of 6-inch diameter pipe. Replace defective pipe,
- fitting, joint, valve, or appurtenance. Repeat the test until the pipe passes test. 4. Cement or caulking to seal leaks is prohibited.

# G. Operational Test:

- 1. Activate each remote control valve in sequence from controller. The Construction Project Representative will visually observe operation, water application patterns, and leakage. 2. Replace defective remote control valve, solenoid, wiring, or appurtenance to correct
- operational deficiencies 3. Replace, adjust, or move water emission devices to correct operational or coverage
- deficiencies.
- 4. Replace defective pipe, fitting, joint, valve, sprinkler, or appurtenance to correct leakage problems. Cement or caulking to seal leaks is prohibited.
- Repeat test(s) until each lateral passes all tests. Repeat tests, replace components, and correct deficiencies at no additional cost to the Owner.
- H. Central Control System Acceptance Test:
- Upon completion of construction, a <u>System Acceptance Test</u> must be passed.
- 2. Following construction completion and a review by the Construction Project Representative, an evaluation period will begin. After 30 days of continuous service without major system problems, the system will be accepted and the guarantee/warranty period will begin. If at any time during the 30-day evaluation period, a major system problem occurs, the source of the problem will be determined and corrected and the 30-day evaluation period will start again.
- Equipment will not be accepted until such time as the <u>System Acceptance Test</u> is passed. 3. If successful completion of the System Acceptance Test is not attained within 90 days following commencement of the evaluation period, the Construction Project Representative has the option to request replacement of equipment, terminate the order, or portions thereof, or continue with the <u>System Acceptance Test</u>. These options will remain in effect until such time as a successful completion of the System Acceptance Test.
- 4. Final payment will be made after successful completion of the <u>System Acceptance Test</u>.

# Communication Cable and Flow Sensor Cable:

- 1. Test for continuity and leaks to ground per wire, flow sensor, and controller manufacture's recommendations. Test results must meet or exceed manufacturer's guidelines for
- 2. Replace defective wire, underground splices, or appurtenances. Repeat the test until the manufacturer's guidelines are met.

# J. Control System Grounding:

- 1. Test for proper grounding of control system per manufacture's recommendations. Test results
- must meet or exceed manufacturer's guidelines for resistance to ground prior to acceptance. 2. Replace defective wire, grounding rods or plates, or appurtenances. Repeat the test until the manufacturer's guidelines are met.

# 07 WATER AUDIT:

- A. Coordinate and provide a Landscape Irrigation Water Audit. Water audit to be performed by an independent Certified Landscape Irrigation Auditor, certified and in good standing with the Irrigation Association (IA), for all overhead-irrigated areas. The Auditor shall be independent of the property owner and of all contractors associated with the property. Conduct the audit in accordance with the current edition of the IA's Landscape Irrigation Auditor's Handbook. The system must meet the following minimum efficiency requirements: 60% distribution uniformity for all fixed nozzle spray systems, 70% distribution uniformity for all rotor head sprinkler systems.
- Provide the results of the audit to the Owner's Representative and if required, to the City in a report format acceptable to the City, with the report signed by the Auditor. Provide copies of the report to the Landscape Architect and Contractor. Include the following information in the report: Controller identification letter designation and location, station sequence numbers and valve locations, sprinkler head location description and sprinkler spacing, water pressure reading at each valve or lateral, catch device readings and locations, calculated distribution uniformity for each valve, calculated precipitation rates for each valve, and a 12-month irrigation schedule (run times per cycle,

# 1.08 CONSTRUCTION REVIEW:

- The purpose of on-site reviews by the Construction Project Representative is to periodically observe the work in progress, the Contractor's interpretation of the construction documents, and to address questions with regard to the installation.
- A. Scheduled reviews such as those for irrigation system layout or testing must be scheduled with the Construction Project Representative as required by these specifications. Impromptu reviews may occur at any time during the project.
- C. A review will occur at the completion of the irrigation system installation and Project Record (As-Built) Drawing submittal.

### 1.09 GUARANTEE/WARRANTY AND REPLACEMENT:

cycles per day, and days per week for each valve).

- The purpose of this guarantee/warranty is to insure that the Owner receives irrigation materials of prime quality, installed and maintained in a thorough and careful manner.
- A. For a period of one year from commencement of the formal maintenance period, guarantee/warranty irrigation materials, equipment, and workmanship against defects. Fill and repair depressions. Restore landscape or structural features damaged by the settlement of irrigation trenches or excavations. Repair damage to the premises caused by a defective item. Make repairs within seven days of notification from the Construction Project Representative.
- B. Contract documents govern replacements identically as with new work. Make replacements at no additional cost to the contract price.d
- C. Guarantee/warranty applies to originally installed materials and equipment and replacements made during the guarantee/warranty period.

### PART 2 - MATERIALS

# 2.01 QUALITY:

Use materials which are new and without flaws or defects of any type, and which are the best of their

### 2.02 SUBSTITUTIONS:

- A. Acceptable equipment manufacturers are specified on the drawings and details. Alternative equipment must be approved in writing as specified in the General Conditions. The Contractor is responsible for making any changes to the design to accommodate alternative equipment.
- B. Pipe sizes referenced in the construction documents are minimum sizes, and may be increased at the option of the Contractor.

- Install separate sleeve beneath paved areas to route each run of irrigation pipe or wiring bundle. B. Use PVC Schedule 40 pipe with solvent welded joints for sleeving material beneath pedestrian
- pavements, drives and streets C. Sleeving diameter is as indicated on the drawings and installation details or equal to twice that of the pipe or wiring bundle passing through the sleeve.

# 2.04 PIPE AND FITTINGS:

- A. Mainline Pipe and Fittings:
  - 1. Use rigid, unplasticized polyvinyl chloride (PVC) 1120, 1220 National Sanitation Foundation (NSF) approved pipe, extruded from material meeting the requirements of Cell Classification
  - 12454-A or 12454-B, ASTM Standard D1784, with an integral belled end. 2. Use Class 200, SDR-21, rated at 200 PSI, conforming to the dimensions and tolerances established by ASTM Standard D2241 for mainline pipe with a nominal diameter greater than
  - or equal to 3-inches. 3. Use Schedule 40 conforming to the dimensions and tolerances established by ASTM Standard
  - D1785 for mainline pipe with a nominal diameter less than 3-inches. 4. Use rubber-gasketed pipe equipped with factory installed reinforced gaskets for mainline pipe with a nominal diameter greater than or equal to 3-inches. Gasketed pipe joints must conform to the "Laboratory Qualifying Tests" section of ASTM D3139. Gasket material must conform to ASTM F477. Use rubber-gasketed deep bell ductile iron fittings conforming to ASTM A-536
- and ASTM F-477. Use lubricant approved by the pipe manufacturer. 5. Use solvent weld pipe for mainline pipe with a nominal diameter less than 3-inches or where a pipe connection occurs in a sleeve. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2466 and D1784. Use primer approved by the pipe manufacturer. Solvent cement to conform to ASTM Standard D2564.

- 1. Use rigid, unplasticized polyvinyl chloride (PVC) 1120, 1220 National Sanitation Foundation (NSF) approved pipe, extruded from material meeting the requirements of Cell Classification 12454-A or 12454-B, ASTM Standard D1784, with an integral belled end suitable for solvent
- 2. Use Schedule 40 conforming to the dimensions and tolerances established by ASTM Standard
- 3. Use solvent weld pipe for lateral pipe. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2466 and D1784 for PVC pipe. Use primer approved by the 3.01 INSPECTIONS AND REVIEWS: pipe manufacturer. Solvent cement to conform to ASTM Standard D2564, of a type approved by the pipe manufacturer.
- C. Specialized Pipe and Fittings:
- 1. Copper pipe: Use Type "K" rigid pipe conforming to ASTM Standard B88. Use wrought copper or cast bronze fittings, soldered or threaded per the installation details. Use a 95% tin
- 2. Ductile iron pipe: Use Class 50 conforming to ANSI A21.51 (AWWA C151). Use a minimum of Class 53 thickness pipe for flanged piping. Use mechanical joints conforming to ANSI A 21.10 (AWWA C110) and ANSI A21.11 (AWWA C111) or flanged fittings conforming to ANSI/AWWA C110 and ANSI B16.1 (125#).
- 3. Use a dielectric union wherever a copper-based metal (copper, brass, bronze) is joined to an iron-based metal (iron, galvanized steel, stainless steel).
- 4. Assemblies calling for threaded pipe connections shall utilize PVC Schedule 80 nipples and PVC Schedule 80 threaded fittings. 5. Joint sealant: Use only teflon-type tape on plastic threads as recommended by valve or fitting 3.02 LAYOUT OF WORK:
- D. Thrust Blocks:

manufacturer.

- 1. Use thrust blocks for fittings on pipe greater than or equal to 3-inch diameter or any diameter rubber gasketed pipe.
- 2. Use 3,000 PSI concrete. 3. Use 2 mil plastic. 4. Use No. 4 Rebar wrapped or painted with asphalt tar based mastic coating.

# E. Joint Restraint Harness:

- 1. Use a joint restraint harness wherever joints are not positively restrained by flanged fittings, threaded fittings, and/or thrust blocks.
- 2. Use a joint restraint harness with transition fittings between metal and PVC pipe, where weak trench banks do not allow the use of thrust blocks, or where extra support is required to retain
- a fitting or joint. 3. Use bolts, nuts, retaining clamps, all-thread, or other joint restraint harness materials which are
- zinc plated or galvanized. 4. Use on pipe greater than or equal to 3-inch diameter or any diameter rubber gasketed pipe.

# 2.05 MAINLINE COMPONENTS:

- A. Master Valve Assembly: as per plans and details.
- B. Flow Sensor Assembly: as per plans and details. C. Air/Vacuum Relief Valve Assembly: as per plans and details
- D. Isolation Gate Valve Assembly: as per plans and details E. Quick Coupling Valve Assembly: as per plans and details.

# 2.06 SPRINKLER IRRIGATION COMPONENTS:

- Remote Control Valve (RCV) Assembly for Sprinkler and Bubbler Laterals: as per plans and details. Use remote control valves with pressure regulating features for all pop-up spray sprinkler or bubbler laterals. Use wire connectors and waterproofing sealant to join control wires to solenoid valves. Use 3.04 SLEEVING AND BORING: standard Christy I.D. tags, or approved equal, with hot-stamped black letters on a yellow background. Install a separate valve box over a 3-inch depth of 3/4-inch gravel for each assembly.
- B. Sprinkler Assembly: as per plans and details. Use the sprinkler manufacturer's pressure compensating screens (Rain Bird PCS, or approved equal) to achieve 30 PSI operating conditions on each spray sprinkler and to control excessive operating pressures.

# 2.07 DRIP IRRIGATION COMPONENTS:

- A. Remote Control Valve (RCV) Assembly for Drip Laterals: as per plans and details. Use wire connectors and waterproofing sealant to join control wires to solenoid valves. Use standard Christy I.D. tags, or approved equal, with hot-stamped black letters on a yellow background. Install a separate valve box over a 3-inch depth of 3/4-inch gravel for each assembly.
- B. Drip Emitter Assembly: 1. Use pressure compensating emitters with female threaded connections as per plans and
- Install emitter types and quantities as per plans and details. 3. Use flexible PVC riser hose to direct water from lateral pipe to emitter location.
- B. Mainline Pipe and Fittings:

C. Flush Valve Assembly: as per plans and details. Locate at the end of each drip irrigation lateral pipe. Install a separate valve box over a 3-inch depth of 3/4-inch gravel for each assembly.

- 2.08 CONTROL SYSTEM COMPONENTS:
  - 1. Description: as per plans and details. 2. Primary surge protection arrestors: Intermatic Model A62401.
  - 3. Controller Enclosure: Constructed of stainless steel with free-flow ventilation. The key system is to be common to all enclosures made part of this project but unique to the Owner. Prepare shop drawings to show the exact placement of all enclosure components
  - 4. Electrical conduit: Use PVC Schedule 40 conforming to the dimensions and tolerances established by ASTM Standard D-1785. Fittings for PVC conduit shall be Schedule 40, Type 1, PVC solvent weld sweep fittings, ASTM Standards D2466 and D1784. 5. Lightning protection: Provide 8-foot copper-clad grounding rod(3) and grounding plate as

detailed for each group of controllers and in accordance with manufactures details and

- recommendations. 6. Wire markers: Prenumbered or labeled with indelible nonfading ink, made of permanent, nonfading material.
- B. Power Wire:

A. Controllers:

- 1. Electric wire from the power source to satellite control unit shall be solid or stranded copper, Type UF single conductor cable or multi-conductor with ground cable, UL approved for direct underground burial. Power wires shall be black, white, and green in color. Size to match service wires as presented in the electrical drawings. The Contractor is responsible for verifying that the power wire sizes shown on the drawings are compatible and adequate for the control system being used.
- 2. Splices: Use 3M DBY connectors.
- 3. Conduit: PVC Schedule 40. 4. Warning tape: Inert plastic film highly resistant to alkalis, acids, or other destructive chemical components likely to be encountered in soils. Three inches wide, colored yellow, and imprinted with "CAUTION: BURIED ELECTRIC LINE BELOW."
- C. Flow Sensor Cable:
- 1. Use shielded and jacketed, six (6) conductor cable, as recommended by the flow sensor and controller manufacturers, from the control system pulse decoder to the flow sensor.
- 2. Splices: do not splice flow sensor cable without prior written authorization from the Construction Project Representative. Use 3M-DBY direct-bury splice connectors as recommended by the flow sensor manufacturer

# D. Control Wire:

- 1. Use American Wire Gauge (AWG) No. 14-1 solid copper, Type UF or PE cable, UL approved for direct underground burial for individual control wires and spare control wires from the controller unit to each remote control valve or stub-out location. Use American Wire Gauge (AWG) No. 12-1 solid copper, Type UF or PE cable, UL approved for direct underground burial for common ground wire and spare common wires from the controller unit to each remote
- control valve or stub-out location. 2. Color: Wire color shall be continuous over its entire length. Install low voltage wires using the following color coding:
- Controller "A" common wire: White with red stripe Controller "B" control wires: Brown

Controller "A" control wires: Red

- Controller "B" common wire: White with brown stripe
- Controller "C" control wires: Blue Controller "C" common wire: White with blue stripe
- Controller "D" control wires: Green Controller "D" common wire: White with green stripe
- Spare control wires along wire routing from each controller: Yellow with stripe matching control wire color
- Spare common wires along wire routing from each controller: White with yellow stripe 3. Splices: Use wire connector with waterproof sealant. Wire connector to be of plastic construction consisting of two (2) pieces, one piece which snap locks into the other. A copper crimp sleeve to be provided with connector
- 4. Encase wiring not located near PVC irrigation pipe in PVC Schedule 40 electrical conduit. Warning tape: Inert plastic film highly resistant to alkalis, acids, or other destructive chemical components likely to be encountered in soils. Three inches wide, colored yellow, and imprinted with "CAUTION: BURIED ELECTRIC LINE BELOW."

# 2.09 OTHER COMPONENTS:

- A. Tools and Spare Parts: Provide operating keys, servicing tools, spare parts and other items
- indicated in the General Notes of the drawings. B. Other Materials: Provide other materials or equipment shown on the drawings or installation details which are part of the irrigation system, even though such items may not have been referenced in

- A. Site Inspections:
- Verify construction site conditions and note irregularities affecting work of this section. Report irregularities to the Construction Project Representative prior to beginning work. 2. Beginning work of this section implies acceptance of existing conditions.
- B. Utility Locates ("Call Before You Dig"):
  - 1. Arrange for and coordinate with local authorities the location of all underground utilities. 2. Repair any underground utilities damaged during construction. Make repairs at no additional

been completed. Notify the Construction Project Representative two weeks in advance of review.

C. Irrigation System Layout Review: Irrigation system layout review will occur after the staking has

# Modifications will be identified by the Construction Project Representative at this review.

- A. Stake out the irrigation system. Items staked include: sprinklers, pipe and wire routing, control valves, isolation valves, sleeving and conduit.

# B. Install all mainline pipe and mainline components inside of project property lines.

- 3.03 EXCAVATION, TRENCHING, AND BACKFILLING: A. Excavate to permit the pipes to be laid at the intended elevations and to permit work space for
- installing connections and fittings. B. Minimum cover (distance from top of pipe or control wire to finish grade) as per plans and details. C. Maintain at least 8-feet clearance from the centerline of mainline pipe to trees.
- Backfill only after lines have been reviewed and tested. E. Backfill with a 4-inch sand envelope of fine masonry sand completely surrounding all mainline pipe and sleeving.
- matter, frozen materials, and stones larger than 2-inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects which may G. Backfill unsleeved pipe in either of the following manners:

F. Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable

of the trench in 6-inch layers. Compact to density of surrounding soil. Backfill the trench by depositing the backfill material equally on both sides of the pipe in 6-inch layers and compacting to the density of surrounding soil.

1. Backfill and puddle the lower half of the trench. Allow to dry 24 hours. Backfill the remainder

backfill for sleeves shall be 95% Standard Proctor Density, ASTM D698-78. Use of water for compaction around sleeves, "puddling", will not be permitted. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades. Where utilities conflict with irrigation trenching and pipe work, contact the Construction Project

H. Enclose pipe and wiring beneath roadways, walks, curbs, etc., in sleeves. Minimum compaction of

3.05 ASSEMBLING PIPE AND FITTINGS:

- A. Install sleeving at a depth which permits the encased pipe or wiring to remain at the specified burial
- B. Extend sleeve ends six inches beyond the edge of the paved surface. Cover pipe ends and mark C. Bore for sleeves under obstructions which cannot be removed. Employ equipment and methods designed for horizontal boring.

Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends.

2. Keep ends of assembled pipe capped. Remove caps only when necessary to continue

- assembly.
- Use only strap-type friction wrenches for threaded plastic pipe. 2. PVC Rubber-Gasketed Pipe:

Representative for trench depth adjustments.

- a. Use pipe lubricant. Join pipe in the manner recommended by manufacturer and in
- accordance with accepted industry practices. b. Ductile iron fittings shall not be struck with a metallic tool. Cushion blows with a wood
- block or similar shock absorber. 3. PVC Solvent Weld Pipe:
- a. Use primer and solvent cement. Join pipe in a manner recommended by the manufacturer and in accordance with accepted industry practices.
  - b. Cure for 30 minutes before handling and 24 hours before allowing water in pipe. c. Snake pipe from side to side within the trench.
- 4. Fittings: The use of cross type fittings is not permitted.
- C. Lateral Pipe and Fittings: Use only strap-type friction wrenches for threaded plastic pipe.
  - PVC Solvent Weld Pipe: a. Use primer and solvent cement. Join pipe in the manner recommended by the manufacturer and in accordance with accepted industry practices.
  - Snake pipe from side to side within the trench.
  - b. Cure for 30 minutes before handling and 24 hours before allowing water in the pipe.
- 3. Fittings: The use of cross type fittings is not permitted

b. Use only Teflon-type tape.

applied to the male threads only.

- D. Specialized Pipe and Fittings: 1. Copper Pipe:
- a. Buff surfaces to be joined to a bright finish. Coat with solder flux. Solder so that a continuous bead shows around the joint circumference. Ductile Iron Pipe:
- a. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices. 3. Insert a dielectric union wherever a copper-based metal (copper, brass, bronze) and an
- iron-based metal (iron, galvanized steel, stainless steel) are joined.
- PVC Threaded Connections: a. Use only factory-formed threads. Field-cut threads are not permitted.
- When connection is plastic-to-metal, the plastic component shall have male threads and the metal component shall have female threads. 5. Make metal-to-metal, threaded connections with Teflon-type tape or pipe joint compound
- E. Thrust Blocks:
  - Use cast-in-place concrete bearing against undisturbed soil.
  - Size, orientation and placement shall be as shown on the installation details. Wrap fitting with plastic to protect bolts, joint, and fitting from concrete.

4. Install rebar with mastic coating as shown on the installation details.

F. Joint Restraint Harness:

# 1. Install harness in the manner recommended by the manufacturer and in accordance with accepted industry practices.

A. Isolation Gate Valve Assembly:

3.07 INSTALLATION OF SPRINKLER IRRIGATION COMPONENTS:

3.06 INSTALLATION OF MAINLINE COMPONENTS:

- 1. Install where indicated on the drawings. 2. Locate at least 12-inches from and align with adjacent walls or edges of paved areas
- B. Quick Coupling Valve Assembly: Install where indicated on the drawings. C. Air/Vacuum Relief Valve Assembly: Install where indicated on the drawings and at high points along
- the mainline routing.
- A. Remote Control Valve (RCV) Assembly for Sprinkler and Bubbler Laterals: Flush mainline before installation of RCV assembly. 2. Install where indicated on the drawings. Wire connectors and waterproof sealant shall be used
- to connect control wires to remote control valve wires. Install connectors and sealant per the manufacturer's recommendations. 3. Install only one RCV in a valve box. Locate valve box at least 12-inches from and align with nearby walls or edges of paved areas. Group RCV assemblies together where practical. Arrange grouped valve boxes in rectangular patterns. Allow at least 12-inches between valve
- 4. Adjust RCV to regulate the downstream operating pressure.
- 5. Attach ID tag with controller station number to control wiring.
- B. Sprinkler and Bubbler Assembly: Flush lateral pipe before installing sprinkler and bubbler assembly. Install per the installation details at locations shown on the drawings.
- 3. Locate rotary sprinklers 6-inches from adjacent walls, fences, or edges of paved areas. 4. Locate spray sprinklers 3-inches from adjacent walls, fences, or edges of paved areas. 5. Install sprinklers and bubblers perpendicular to the finish grade.

7. Adjust the radius of throw of each sprinkler for best performance and coverage uniformity.

2. Locate as shown on the drawings. Wire connectors and waterproof sealant shall be used to

Supply appropriate nozzle or adjust arc of coverage of each sprinkler for best performance and coverage uniformity.

# A. Remote Control Valve (RCV) Assembly for Drip Laterals: Flush mainline pipe before installing RCV assembly.

3.08 INSTALLATION OF DRIP IRRIGATION COMPONENTS:

- connect control wires to remote control valve wires. Connectors and sealant shall be installed as per the manufacturer's recommendations. 3. Install only one RCV to valve box. Locate at least 12-inches from and align with nearby walls or
- edges of paved areas. Group RCV assemblies together where practical. 4. Arrange grouped valve boxes in rectangular patterns
- B. Drip Emitter Assembly: Locate as shown on the drawings and installation details. Flush lateral pipe before installing emitter assembly.

4. Use tools and techniques recommended by the manufacturer.

C. Flush Valve Assembly: Install at the end of each drip irrigation lateral pipe as shown on the

# installation details

Cut PVC flexible hose square.

# 3.09 INSTALLATION OF CONTROL SYSTEM COMPONENTS:

- A. Controllers: 1. The locations of the controller assemblies as depicted on the drawings are approximate; the
- Construction Project Representative will determine their exact site locations upon commencement of contract 2. Assemble controllers, sensors, and appurtenance in enclosure per shop drawing. Shop fabricate and test prior to installation in the field. Installation and wire connections in the field are to be done by manufacture trained and certified personnel, trained and certified by the
- 3. Install electrical connections between components and controllers per manufacturer's recommendations. Wire connections in the field are to be done by manufacture trained and certified personnel, trained and certified by the manufacture of the controller to be installed 4. Install all lightning/surge protection for the control unit per manufacturer's recommendations. 5. Lightning protection: Drive 8-foot copper-clad grounding rods into the soil as recommended by manufacture. Quantity as needed to achieved recommend ohms. If rock prevents driving, bury at least one foot deep. Install grounding plate as recommended by controller

manufacturer. A single group of rods and plate may be used for grouped controller

assemblies. Connect controller to grounding rod with AWG No. 6 solid conductor copper wire.

Secure wire to grounding rod with Cadweld connections. Locate the connection in a separate valve box. Install two 1GPH emitters above each ground rod and ground plate from nearest shrub emitter lateral pipe.

8. Connect control wire to the corresponding control unit terminal.

Install primary surge protection arrestors on incoming power lines.

manufacture of the controller to be installed.

- 7. Attach wire markers to the ends of control wires inside the controller unit housing. Label wires with the identification number of the remote control valve to which the control wire is connected.
- 1. Install sensors per the installation details and manufacturer's recommendations. Install at locations shown on the drawings. 2. Electrical connections between controller components and sensors are to be installed by

manufacture trained and certified personnel, trained and certified by the manufacture of the

C. Power Wire: 1. Install with a minimum number of field splices. If a power wire must be spliced, make splice

controller to be installed.

with recommended connector, installed per manufacturer's recommendations. Locate all splices in a separate 10-inch round valve box. Coil 2 feet of wire in valve box 2. Green wire shall be used as the common ground wire from power source to all satellites.

3. Carefully backfill around flow sensor cable to avoid damage to wire insulation or wire

Route flow sensor cable as directed on plans. Install with a minimum number of field splices. 2. All flow sensor cable shall be laid in trenches and installed in conduit. The use of a vibratory plow is not permitted.

- 4. If a flow sensor cable must be spliced, make splice with recommended connector, installed pe manufacturer's recommendations. Locate all splices in a housing afforded by other control system components or a separate 10-inch round valve box. Coil 2 feet of cable in valve box.
- 5. Unless noted on plans, install wire parallel with and below mainline pipe.
- 6. Encase wire conduit.
- E. Control Wire: 1. Bundle control wires where two or more are in the same trench. Bundle with pipe wrapping
- tape spaced at 10-foot intervals. 2. Provide a 36-inch excess length of wire in an 8-inch diameter loop in a 10" round valve box at each change of direction of 30° or more, at both ends of sleeves, and at 200-foot intervals along continuous runs of wiring. Do not tie wiring loop. Coil 30-inch length of wire within each
- remote control valve box. 3. Install common ground wire and one control wire for each remote control valve. Multiple valves on a single control wire are not permitted.

installed per the manufacturer's instructions. Locate splice in a valve box which contains an

4. If a control wire must be spliced, make splice with wire connectors and waterproof sealant,

irrigation valve assembly, or in a separate 10-inch round valve box. Use same procedure for connection to valves as for in-line splices. 5. Unless noted on plans, install wire parallel with and below mainline pipe.

# 3.10 INSTALLATION OF OTHER COMPONENTS:

- A. Tools and Spare Parts: 1. Prior to the Review at completion of construction, supply to the Owner operating keys, servicing tools, spare parts, and any other items indicated in the General Notes on the
- B. Other Materials: Install other materials or equipment shown on the drawings or installation details which are part of the irrigation system, even though such items may not have been referenced in

3.11 PROJECT RECORD (AS-BUILT) DRAWINGS:

these specifications.

within a valve box.

application of water.

- A. The Contractor is responsible for documenting changes to the design. Maintain on-site and separate from documents used for construction, one complete set of contract documents as Project Documents. Keep documents current. Do not permanently cover
- work until as-built information is recorded. B. Record pipe and wiring network alterations. Record work which is installed differently that shown on the construction drawings. Record accurate reference dimensions, measured from at least two permanent reference points, of each irrigation system valve, each backflow prevention device, each controller or control unit, each sleeve end, each stub-out for future pipe or wiring connections, and other irrigation components enclosed
- \$25 per sheet and the cost of AutoCAD data files on diskette is \$100 for AutoCAD data file set. Using technical drafting pen or CAD, duplicate information contained on the project drawings maintained on site. Label each sheet "Record Drawing". D. Turn over the "Record Drawings" to the Construction Project Representative. Completion

reproducible mylar copy of the drawings. Mylars or CAD data files compatible with

of the Record Drawings will be a prerequisite for the Review at the completion of the

# irrigation system installation. 3.12 MAINTENANCE:

A. Upon completion of construction and Review by the Construction Project Representative maintain irrigation system for a duration of 90 calendar days. Make periodic examinations and adjustments to irrigation system components so as to achieve the most desirable

B. Following completion of the Contractor's maintenance period, the Owner will be

responsible for maintaining the system in working order during the remainder of the

guarantee/warranty period, for performing necessary minor maintenance, for trimming

around sprinklers, for protecting against vandalism, and for preventing damage after the landscape maintenance operation.

3.13 CLEANUP:

3.13 WARRANTY:

### from substantial completion. Any part of the work that is defective, broken, or inoperable shall be replaced and fully functioning at no additional expense to owner.

A. The contractor shall warranty all equipment, materials, and work for a period of 1 year

**END OF SECTION** 

Call before you Dig

Avoid cutting underground utility lines. It's

Blue Stakes of

Bluestakes.org

C. Prior to construction completion, obtain from the Construction Project Representative a AutoCAD software, can be purchased from the . Cost of mylar reproducible drawings is

 $\simeq$ 

A. Upon completion of work, remove from the site all machinery, tools, excess materials, and

LUB] VOLINE xPRESS ATOGA SPRINGS

HA AR

Job No.

Approved By:

GGG

North

GATION IRRIG/

NO SCALE JUNE 10, 2019 Drawn By: GGG

These plans and specifications and specifications shall be used only for these plans and specifications which they were prepared and publication, or re—use by any method or means, in whole or in part without the written consent of these plans and specifications unless otherwise agreed to by written instrument. Use or viewing of these plans and specifications whole or in part without the written instrument. Use or viewing of these plans and specifications whole or in part without the written instrument. Use or viewing of these plans and specifications whole or in part without the written consent of these plans and specifications whole or instrument. Use or viewing of these plans and specifications whole or instrument.

Sheet No. L-2.4

19-011



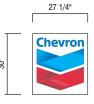
# PROPOSED Front Elevation

- $\bullet$  CUSTOM L.E.D. Illuminated Havoline xpress lube channel letters (35 13/16" x 167 1/8" , 23 1/2" x 214 13/16"). Yellow vinyl faces on Havoline. White faces on xpress lube. Black returns & trimcap.
- CUSTOM 30" Chevron "Hallmark"- Logo sign Digitally printed graphics (first surface) on white acrylic face.
- Add four (4) directional sign "exit only" 1'-3"x1'-7"



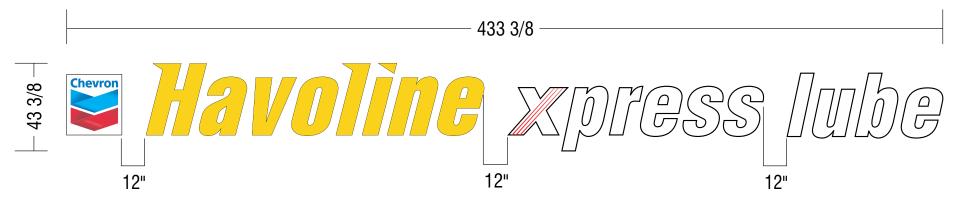












(130.54 SQ.FT.)



VISUAL COMMUNICATIONS www.FederalHeath.com

1500 North Bolton Jacksonville, Texas 75766 (903) 589-2100 Fax (903) 589-2101

Manufacturing Facilities: Oceanside - Euless - Jacksonville - Columbus Office Locations:

Oceanside - Las Vegas - Laughlin - Idaho Falls Euless - Jacksonville - Houston - San Antonio Corpus Christi - Grafton - Milwaukee Willowbrook - Louisville - Indianapolis - Columbus Cincinnati - Westerville - Knoxville - Tunica Atlanta - Tampa - Daytona Beach - Winter Park

### **Building Quality Signage Since 1901**

R1: Add Directional Signs. 05.07.19 R2: Move Hallmark to before HXL. 05.08.19 R3: Changed "Brown" to Red on images provided. 05.17.19 R4: Added Square Footage. 06.06.19

Project Manager: gayle MAULDIN

michael SANDERS

Project / Location:



Saratoga Springs, Utah



Client Approval/Date:

### Landlord Approval/Date

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Colors Depicted In This Rendering May Not Match Actual Material Finishes, Refer To Product Samples For Exact Color Match

Job Number: HV193141.E

05.07.19 Date:

Sheet Number:

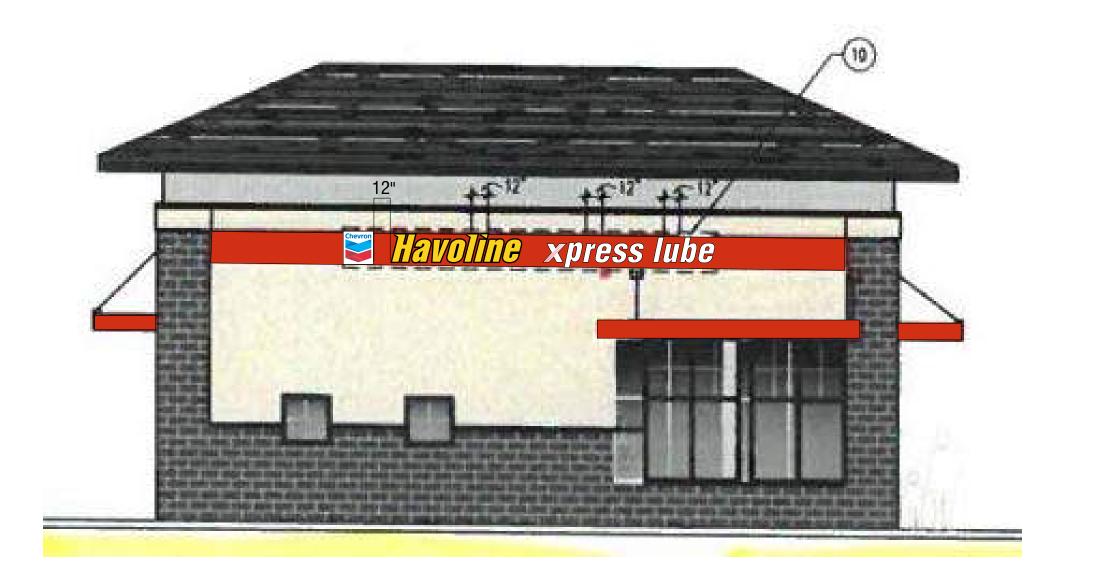
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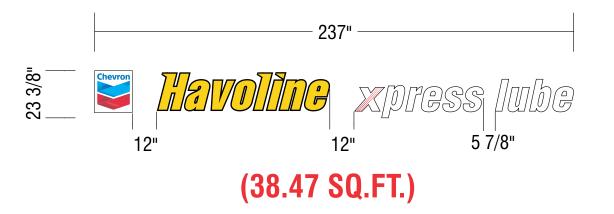
HV193141 SaratogaUt

# PROPOSED Left Elevation

- New L.E.D. Illuminated Havoline xpress lube channel letters (1'-6" x 6'-11", 1'-0" x 8'-9 3/4"). Yellow vinyl faces on Havoline. White faces on xpress lube. Black returns & trimcap.
- New 21" Chevron "Hallmark"- Logo sign Digitally printed graphics (first surface) on white acrylic face.









VISUAL COMMUNICATIONS

1500 North Bolton

Jacksonville, Texas 75766 (903) 589-2100 Fax (903) 589-2101

Manufacturing Facilities: Oceanside - Euless - Jacksonville - Columbus Office Locations:

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Account Rep:

Project Manager: gayle MAULDIN

Drawn By: michael SANDERS

Project / Location:



Saratoga Springs, Utah



Inc. PELECTRICAL TO USE U.L. COMPONENTS AND SHALL N.E.C. STAND

CTRICAL SIGNS ARE TO COMPLY WITH U.L. 48 AND
600 OF THE N.E.C. STANDARDS, INCLUDING
ROPER GROUNDING AND BONDING OF ALL SIGNS

WARRANTYNOTICE

Certain electrical components of signs will fail prematurely if no shut-off for a period of time, once, each day. For best performance we recommend that signs be connected to an automatic Energ Management system. Time Clock or Photo Cell to control the dail shut-off period. Failure to follow these recommendations can caus damage to the signs' electrical components and void the warrant Some dimming devices will adversely affect the electrical component of the sign to which it is attached, causing failure. Any dimmind devices used on the sign without prior consultation with Federal Heath Sign Co. will void the warrant.

Client Approval/Date:

#### Landlord Approval/Date:

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Job Number: HV193141.E

Date: 05.07.19

2 of 5

Design Number:

HV193141 SaratogaUt

# **PROPOSED Rear Elevation**

- New L.E.D. Illuminated Havoline xpress lube channel letters (1'-6" x 6'-11", 1'-0" x 8'-9 3/4"). Yellow vinyl faces on Havoline. White faces on xpress lube. Black returns & trimcap.
- New 21" Chevron "Hallmark"- Logo sign Digitally printed graphics (first surface) on white acrylic face.
- Add four (4) directional sign "enter" 1'-3"x1'-7"





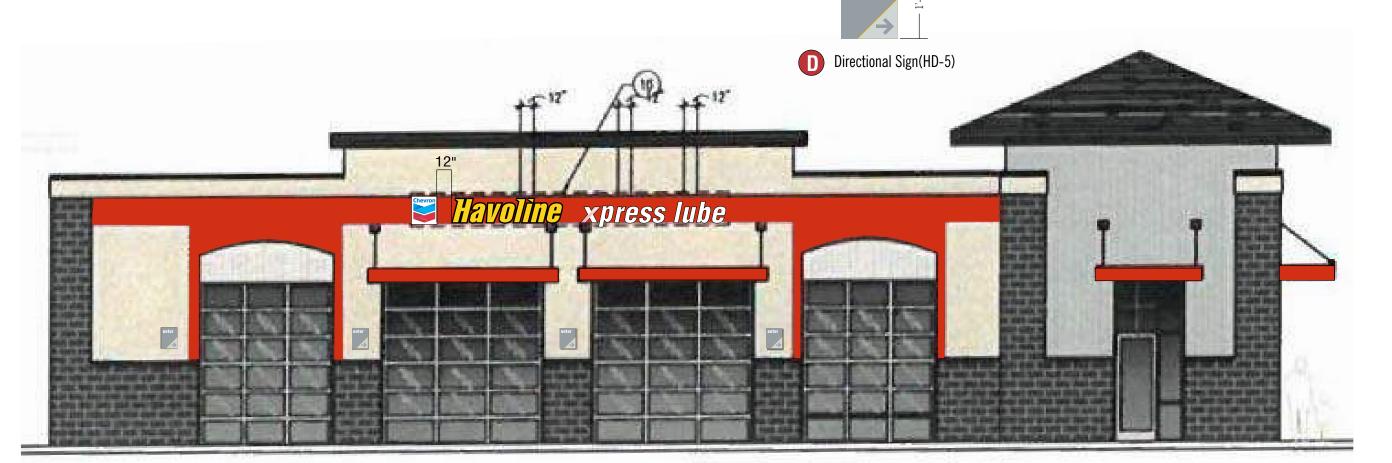


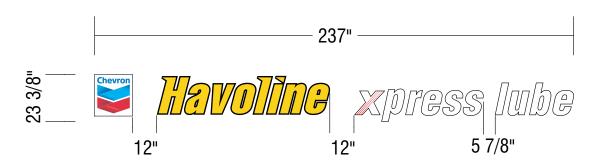
Individual Havoline Channel Letters
L.E.D. Lighted (10.4 S.F.)

Individual xpress lube Channel Letters L.E.D. Lighted (8.8 S.F.)

—1'-3" —

enter





(38.47 SQ.FT.)



VISUAL COMMUNICATIONS

1500 North Bolton Jacksonville, Texas 75766 (903) 589-2100 Fax (903) 589-2101

Manufacturing Facilities: Oceanside - Euless - Jacksonville - Columbus

Office Locations:
Oceanside - Las Vegas - Laughlin - Idaho Falls
Euless - Jacksonville - Houston - San Antonio
Corpus Christi - Grafton - Milwaulkee
Willowbrook - Louisville - Indianapolis - Columbus
Cincinnati - Westerville - Knoxville - Tunica
Atlanta - Tampa - Daytona Beach - Winter Park

#### **Building Quality Signage Since 1901**

Revisions:

R1: Add Directional Signs. 05.07.19 R2: Move Hallmark to before HXL. 05.08.19 R3: Changed "Brown" to Red on images provided. 05.17.19 R4: Added Square Footage. 06.06.19

Account Rep:

Project Manager: gayle MAULDIN

Drawn By: michael SANDERS

Project / Location:



Saratoga Springs, Utah



Inc. PELECTRICAL TO USE U.I

CTRICAL SIGNS ARE TO COMPLY WITH U.L. 48 AND
600 OF THE N.E.C. STANDARDS, INCLUDING
ROPER GROUNDING AND BONDING OF ALL SIGNS

#### WARRANTYNOTICE

Certain electrical components of signs will fail prematurely if no shut-off for a period of time, once, each day. For best performance we recommend that signs be connected to an automatic Energy Management system. Time Clock or Photo Cell to control the daily shut-off period. Failure to follow these recommendations can caus damage to the signs' electrical components and void the warranty Some dimming devices will adversely affect the electrical component of the sign to which it is attached, causing failure. Any dimming devices used on the sign without prior consultation with Enders Heart Ston Co. vall void the warranty.

#### Client Approval/Date:

#### Landlord Approval/Date

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Colors Depicted In This Rendering May Not Match Actual Material Finishes. Refer To Product Samples For Exact Color Match.

Job Number: HV193141.E

Date: 05.07.19

er: 4 Of **5** 

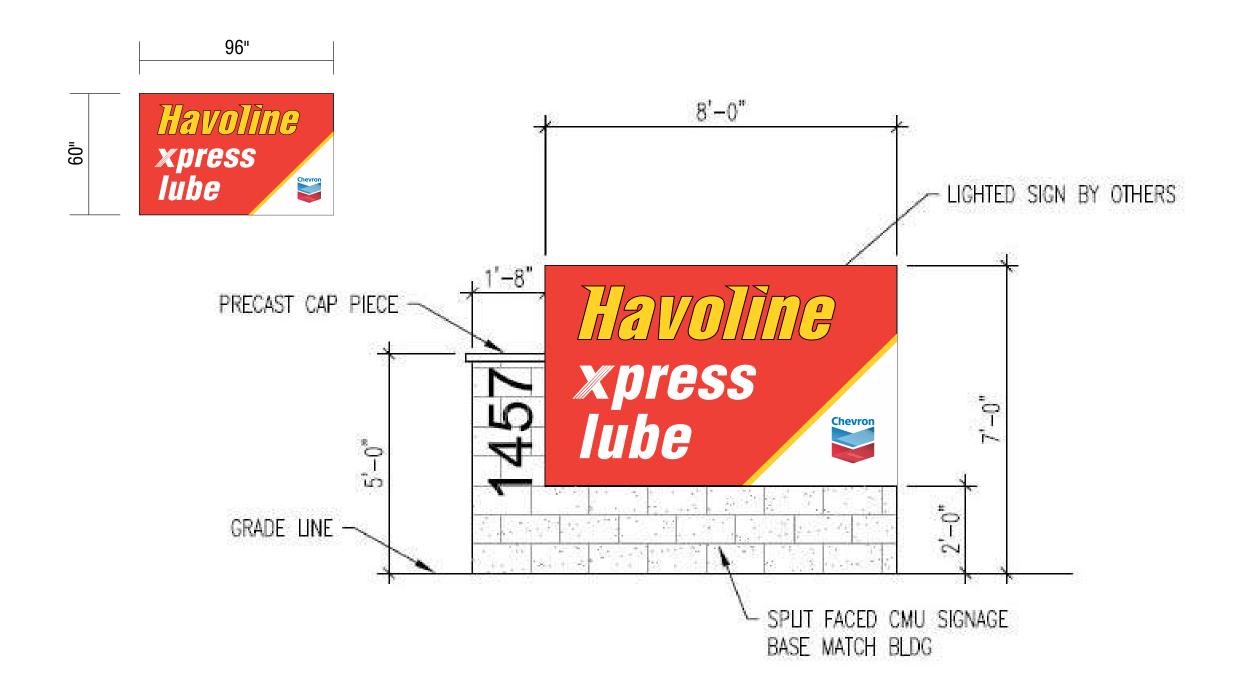
Sheet Number:

Design Number:

HV193141 SaratogaUt

# PROPOSED Monument

• New HXL 5' x 8' faces. Flat poly faces with Yellow Havoline copy. White xpress lube copy. Red background. Lower corner has translucent Chevron Hallmark, digitally printed (facing street). 47 13/16" X 96. Will be trimmed by installer to fit cabinet.





VISUAL COMMUNICATIONS

1500 North Bolton Jacksonville, Texas 75766 (903) 589-2100 Fax (903) 589-2101

Manufacturing Facilities: Oceanside - Euless - Jacksonville - Columbus Office Locations:

Oceanside - Las Vegas - Laughlin - Idaho Falls Euless - Jacksonville - Houston - San Antonio Corpus Christi - Grafton - Milwaukee Willowbrook - Louisville - Indianapolis - Columbus Cincinnati - Westerville - Knoxville - Tunica Atlanta - Tampa - Daytona Beach - Winter Park

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Account Re

Project Manager: gayle MAULDIN

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Project / Location:



Saratoga Springs, Utah



S Inc. ELECTRICAL TO USE COMPONENTS AND ALL N.E.C. ST.

ECTRICAL SIGNS ARE TO COMPLY WITH U.L. 48 AND
E 600 OF THE N.E.C. STANDARDS, INCLUDING
PROPER GROUNDING AND BONDING OF ALL SIGNS.

#### WARRANTYNOTICE Certain electrical components of signs will fall prematurely if no

Certain electrical components of signs will fail prematurely if not shut-off for a period of time, once, each day. For best performance, we recommend that signs be connected to an automatic Energy Management system. Time Clock or Photo Cell to control the daily shut-off period. Failure to follow these recommendations can cause damage to the signs' electrical components and void the warranty. Some dimming devices will adversely affect the electrical components of the sign to which it is attached, causing failure. Any dimming devices used on the sign without prior consultation with Federal Heath Sign Co. will void the warranty.

Client Approval/Date:

#### Landlord Approval/Date

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Colors Depicted In This Rendering May Not Match Actual Material Finishes, Refer To Product Samples For Exact Color Match.

Job Number: HV193141.E

Date: 05.07.19

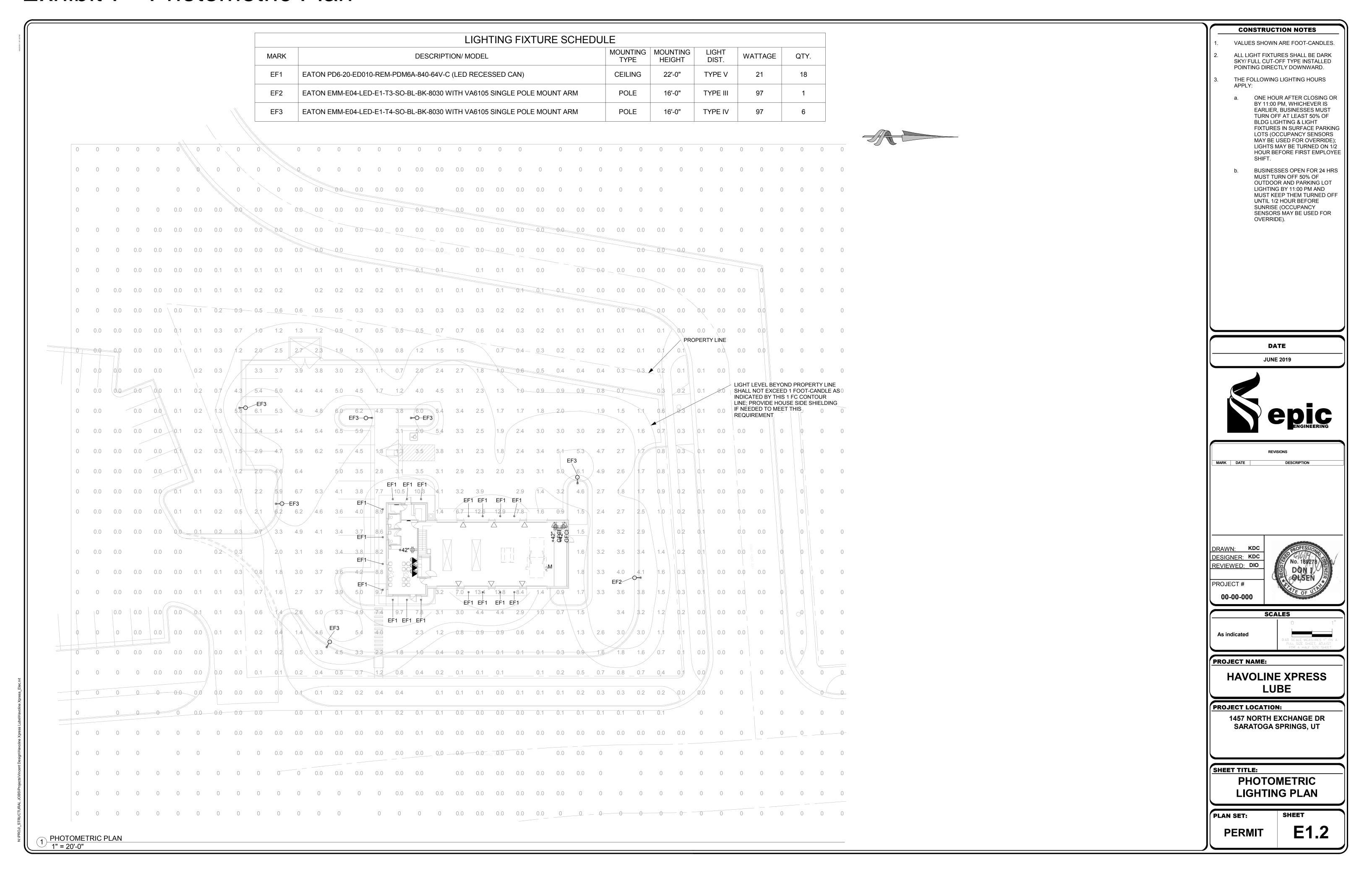
Sheet Number:

5 of 5

Design Number:

HV193141 SaratogaUt

# Exhibit 7 - Photometric Plan



# Exhibit 8 - Light Fixture Details

#### **Halo Commercial**

DESCRIPTION

Recessed 6-inch LED shallow lens downlight is available in various distributions, lumen and CRI/CCT options. Suitable for shallow commercial construction and can be used for both new or renovation work. Optional non-conductive polymer "Dead Front" trim available. Insulation must be kept 3" from top and sides of housing. Use for general area lighting where high efficiency and visual comfort are required.

Catalog #	Туре
Project	
Comments	Date
Prepared by	

#### SPECIFICATION FEATURES

#### **MECHANICAL**

#### Frame

Boat shaped galvanized steel frame with adjustable plaster lip accommodates ceilings up to 1/2" - 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

#### **Mounting Brackets**

Bar hanger receivers adjusts 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

#### No Fuss™ Bar Hangers

Captive preinstalled bar hanger locks to tee grid with a screwdriver or pliers. Centering mechanism allows consistent positioning of fixtures.

#### **OPTICAL** LED Module

Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation. Available in 80 or 90 CRI minimum, accuracy within 3 SDCM provides color uniformity. See ordering information for available CRI / CCT options. Passive thermal management achieves L70 at 50,000 hours in non IC applications, Integral diffuse lens provides visual shielding. Integral connector allows quick connection to housing flex.

#### **Beam Forming Optics**

Optional beam forming optics replace diffuse lens and provide narrow flood or flood distribution for long throws of light.

#### Reflector

Standard one piece parabolic aluminum reflector combines high optical efficiency with visual comfort. Non-conductive polymer "Dead Front" trim also available. Attaches to LED module with (3) speed clamps minimizing light leaks to lens. Self-flanged standard with an optional white painted flange.

#### **Trim Retention**

Reflectors are retained with two torsion springs holding the flange - Photometric testing in tightly to the finished ceiling surface.

#### **ELECTRICAL** Junction Box

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Integral UNV 120 - 277V 50/60 Hz constant current driver provides noise free operation. For 347V input use Halo transformer H347 or H347200. Continuous, flicker-free dimming from 100% to 10% with leading or trailing edge phase cut at 120V or 0 -10V analog control.

#### **Emergency Option**

Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting. Available with remote charge indicator and test switch.

#### Compliance

- cULus listed for wet location
- IP66 Ingress Protection Rated
- Certified for wet locations, insulation must be kept 3" from top and sides.
- Airtight per ASTM-E283.
- Optional City of Chicago environmental air (CCEA) marking for plenum applications.
- EMI/RFI emissions per FCC 47CFR Part 18 non-consumer limits.
- Contains no mercury or lead and RoHS compliant.
- accordance with IES LM-79-08.
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.
- Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.
- ENERGY STAR® listed for commercial applications, reference database for current listinas.



**PD610** PD615 **PD620 PD630** 

PDM6A

#### 64V 64VDFW

1000, 1500, 2000 & 3000 **Lumen Series** 

**LED** 6-Inch Aperture **Shallow Lens Downlight** 



THD: ≤ 20%
PF: ≥ 0.90
T Ambient -30 - +40°C
Sound Rating ≤ 22dba

Lumens	1000	Series
Input Voltage	120V	277V
Input Current	.103 A	.058 A
Input Power	12.1 W	13.2 W
Efficiency	88 LPW	88 LPW
Inrush Current	.037 A	.077 A

Lumens	1500	Series			
Input Voltage	120V	277V			
Input Current	.146 A	.072 A			
Input Power	17.1 W	17.9 W			
Efficiency	87 LPW	87 LPW			
Inrush Current	.047 A	1.04 A			

2000	Series		
120V	277V		
.175 A	.086 A		
20.78 W	21.06 W		
89 LPW	89 LPW		
.054 A	1.21 A		
	.175 A 20.78 W 89 LPW		

Lumens	3000 Series								
Input Voltage	120V	277V							
Input Current	.299 A	.145 A							
Input Power	35.72 W	36.4 W							
Efficiency	82 LPW	82 LPW							
Inrush Current	.085 A	2.0 A							

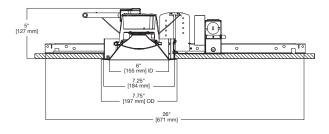
#### ORDERING INFORMATION

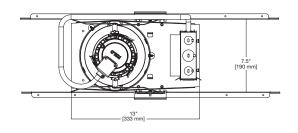
SAMPLE NUMBER: PD610ED010REM-PDM6A827-64VC
A complete luminaire consists of a housing, LED module and reflector, order separately.

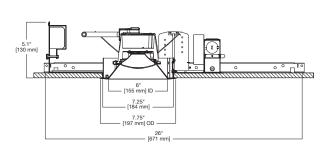
Housing	Lumens	Driver	Options	LED Module	CRI/CCT
PD6 = 6" aperture LED downlight PD6CP = 6" aperture LED downlight, CCEA listed for City of Chicago plenum requirements	10 = 1,000 lumens (nominal) 15 = 1,500 lumens (nominal) 20 = 2,000 lumens (nominal)		(REM) = Emergency operation with remote indicator and test switch (not available with	PDM6A = Downlight LED module for PD6 housing, provides 1,000, 1,500, 2,000, or 3,000	827 = 80 CRI, 2700K CCT 927 = 90 CRI, 2700K CCT 830 = 80 CRI, 3000K CCT 930 = 90 CRI, 3000K CCT 835 = 80 CRI, 3500K CCT
pienum requirements	<b>30</b> = 3,000 lumens (nominal)	<b>D010</b> = 120-277V 50/60Hz, 0-10V dimming (3,000 lumen only)	PD6CP housing)	lumens (nominal) depending on connected housing type	935 = 90 CRI, 3500K CCT 940 = 90 CRI, 4000K CCT 940 = 90 CRI, 4000K CCT

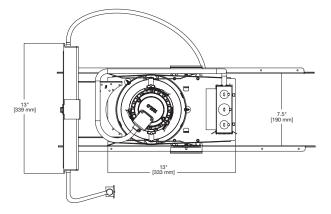
Reflector	Finish Option	Flange Option	Accessories
64V = 6" shallow parabolic reflector 64VDFW = 6" non-conductive polymer shallow parabolic reflector (white finish only)	C = Specular clear G = Specular gold H = Semi-specular clear W = White (white flange)	Blank = Polished flange standard with C, G, & H reflector finishes Blank = White flange standard with W WF = White flange option available with C, G, & H reflector finishes	HB128APK = L channel hanger bar, 26",

#### **DIMENSIONS**











64V

#### **Halo Commercial**

#### **COMPLIANCE TABLE**

#### **1000 LUMEN**

							80 C	RI								
Catalog #	PD610	ED010- PDM	6A827	7	PD610ED010- PDM6A830				PD610ED010- PDM6A835				PD610ED010- PDM6A840			
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	1111	83			1194	89			1267	95			1277	95		
64VCWF	1090	81			1172	87			1243	93			1254	94		
64VDFW	1039	86			1124	93			1189	98			1194	99		
64VG	1092	81			1173	88			1245	93			1256	94		
64VGWF	1079	80			1159	87			1230	92			1241	93		
64VH	1069	80			1149	86			1219	91			1229	92		
64VHWF	1063	79			1143	85			1213	90			1223	91		
64VW	1110	83			1193	89			1266	94			1277	95		

							90 C	RI								
Catalog #	PD610	,	PD610	ED010- PDM	6A930	)	PD610ED010- PDM6A935				PD610ED010- PDM6A940					
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	856	64			918	69			987	74			1094	82		
64VCWF	840	63			901	67			969	72			1074	80		
64VDFW	795	66			857	71			919	76			1028	85		
64VG	841	63			902	67			970	72			1075	80		
64VGWF	831	62			891	67			959	72			1063	79		
64VH	824	61			883	66			950	71			1053	79		
64VHWF	819	61			879	66			945	71			1048	78		
64VW	855	64			917	68			987	74			1094	82		

#### **1500 LUMEN**

							80 C	RI								
Catalog #	PD615	,	PD615	ED010- PDM	6A830	)	PD615	ED010- PDM	6A835	;	PD615	ED010- PDM	6A840	)		
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	Lumens	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	1525	82			1639	89			1739	94			1754	95		
64VCWF	1497	81			1609	87			1707	92			1721	93		
64VDFW	1376	80			1488	87			1573	92			1580	92		
64VG	1499	81			1611	87			1709	92			1724	93		
64VGWF	1481	80			1592	86			1689	91			1703	92		
64VH	1467	79			1577	85			1673	90			1688	91		
64VHWF	1460	79			1569	85			1665	90			1679	91		
64VW	1524	82			1638	89			1738	94			1753	95		

							90 C	RI								
Catalog #	PD615	,	PD615ED010- PDM6A930				PD615	ED010- PDM	6A935	;	PD615ED010- PDM6A940					
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	1175	64			1260	68			1356	73			1502	81		
64VCWF	1153	62			1237	67			1331	72			1475	80		
64VDFW	1051	61			1134	66			1216	71			1360	80		
64VG	1155	62			1239	67			1332	72			1477	80		
64VGWF	1141	62			1224	66			1317	71			1459	79		
64VH	1131	61			1213	66			1304	71			1446	78		
64VHWF	1125	61			1207	65			1298	70			1438	78		
64VW	1174	63			1259	68			1355	73			1501	81		

ES

**ES** = ENERGY STAR® Compliant

T24

**T24** = Can be used to comply with California Title 24 Non-Residential



#### **Halo Commercial**

#### **COMPLIANCE TABLE continued**

#### **2000 LUMEN**

	80 CRI															
Catalog #	PD6201	ED010- PDM	6A827	,	PD620	ED010- PDM	6A830	PD620ED010- PDM6A835 PD620ED010- PDM6A84				6A840				
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	1855	84			1994	91			2116	96			2134	97		
64VCWF	1821	83			1957	89			2076	94			2094	95		
64VDFW	1743	84			1885	91			1994	96			2003	96		
64VG	1823	83			1960	89			2079	95			2097	95		
64VGWF	1802	82			1936	88			2054	93			2072	94		
64VH	1785	81			1918	87			2036	93			2053	93		
64VHWF	1776	81			1909	87			2025	92			2043	93		
64VW	1854	84			1992	91			2114	96			2132	97		

	90 CRI															
Catalog #	PD620	ED010- PDM	6A927	,	PD620	ED010- PDM	6A930	)	PD620	ED010- PDM	6A935	;	PD620ED010- PDM6A940			,
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24
64VC	1430	65			1533	70			1649	75			1828	83		
64VCWF	1403	64			1505	68			1619	74			1794	82		
64VDFW	1333	64			1437	69			1542	74			1724	83		
64VG	1405	64			1507	68			1621	74			1796	82		
64VGWF	1388	63			1489	68			1602	73			1775	81		
64VH	1376	63			1475	67			1587	72			1759	80		
64VHWF	1369	62			1468	67			1579	72			1750	80		
64VW	1429	65			1532	70			1648	75			1827	83		

#### 3000 LUMEN

	80 CRI																
Catalog #	PD630	D010- PDM6	A827		PD630	D010- PDM6	A830		PD630	DO10- PDM6	A835		PD630	D010- PDM	PDM6A840		
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	
64VC	2772	78			2979	83			3161	89			3189	89			
64VCWF	2721	76			2924	82			3103	87			3129	88			
64VDFW	2573	72			2782	78			2944	82			2956	83			
64VG	2724	76			2928	82			3107	87			3134	88			
64VGWF	2692	75			2893	81			3070	86			3096	87			
64VH	2667	75			2867	80			3042	85			3068	86			
64VHWF	2654	74			2852	80			3027	85			3053	86			
64VW	2770	78			2977	83			3159	88			3186	89			

	90 CRI																
Catalog #	PD630	D010- PDM6	6A927		PD630	D010- PDM6	A930		PD630	D010- PDM6	A935		PD630	D010- PDM6	DM6A940		
	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	LUMENS	LPW	ES	T24	
64VC	2136	60			2291	64			2464	69			2731	77			
64VCWF	2097	59			2249	63			2419	68			2681	75			
64VDFW	1967	55			2121	59			2275	64			2545	71			
64VG	2100	59			2252	63			2422	68			2684	75			
64VGWF	2075	58			2225	62			2393	67			2652	74			
64VH	2056	58			2204	62			2371	66			2628	74			
64VHWF	2045	57			2193	61			2359	66			2615	73			
64VW	2135	60			2290	64			2463	69			2729	76			

ES

**ES** = ENERGY STAR® Compliant

T24

**T24** = Can be used to comply with California Title 24 Non-Residential



64 V

#### PHOTOMETRY - 2000 lumen / 80 CRI / 64VC TRIM

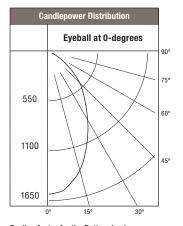
PD620ED010-PDM6A835-64VC

Spacing Criteria = 0.92

Lumens per Watt = 96.2 Lm/W

Test No. P137453

Test Model: PD620ED010-PDM6A835-64VC



Candela D	istribution
Degrees Vertical	Candela
0*	1582
5	1558
10	1476
20	1203
30	879
40	608
50	364
60	131
70	10
80	0
90	0
	*CBCP

Luminance						
(Average Candela/M²)						
Degree	Avg. 0° Luminance					
45	38469					
55	22527					
65	7355					
75	0					
85	0					

Cone of Light Footcandles								
Distance to	Initial Nadir	Beam (ft.)						
Illuminated Plane	Footcandles	<b>L</b> Length	<b>W</b> Width					
5.5	52.3	5	5					
7	32.3	6.4	6.4					
8	24.7	7.2	7.2					
9	19.5	8.2	8.2					
10	15.8	9	9					
12	11	10.8	10.8					

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary									
Zone	Lumens	% Fixture							
0-30	1003	47.4							
0-40	1461	69.1							
0-60	2053	97.1							
0-90	2116	100							

#### Scaling factor for the Battery back up:

- 1000 Lumen = 0.55
- 1500 Lumen = 0.40
- -2000 Lumen = 0.33
- 3000 Lumen = 0.22

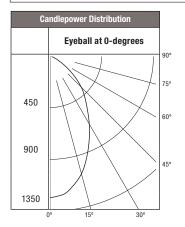
#### PHOTOMETRY - 2000 lumen / 90 CRI / 64VC TRIM

PD620ED010-PDM6A935-64VC

Spacing Criteria = 0.92

Lumens per Watt = 75 Lm/W

Test No. P137457
Test Model: PD620ED010-PDM6A935-64VC



Candela D	Candela Distribution							
Degrees Vertical	Candela							
0*	1233							
5	1215							
10	1150							
20	938							
30	685							
40	474							
50	284							
60	102							
70	8							
80	0							
90	0							

\*CBCP

Luminance							
(Average Candela/M²)							
Degree	Avg. 0° Luminance						
45	29988						
55	17567						
65	5733						
75	0						
85	0						

	Cone of Light Footcandles									
Distance to	Initial Nadir	Beam (ft.)								
Illuminated Plane	Footcandles	L Length	<b>W</b> Width							
5.5	40.8	5	5							
7	25.2	6.4	6.4							
8	19.3	7.2	7.2							
9	15.2	8.2	8.2							
10	12.3	9	9							
12	8.6	10.8	10.8							

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary									
Zone	Lumens	% Fixture							
0-30	782	47.4							
0-40	1139	69.1							
0-60	1601	97.1							
0-90	1649	100							

#### Scaling factor for the Battery back up:

- -1000 Lumen = 0.55
- 1500 Lumen = 0.40 - 2000 Lumen = 0.33
- 3000 Lumen = 0.22

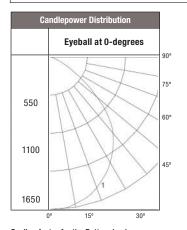


64 V

#### **Halo Commercial**

#### PHOTOMETRY - 2000 lumen / 80 CRI / 64VDFW TRIM

PD620ED010-PDM6A835-64VDFW Spacing Criteria = 1.20 Lumens per Watt = 96 Lm/W Test No. P189214 Test Model: PD620D010- PDM835-64VDFW



Candela Distribution				
Degrees Vertical	Candela			
0*	974.5			
5	972.5			
10	952.8			
20	888.5			
30	779.5			
40	635.2			
50	401.6			
60	171.3			
70	54.2			
80	24.4			
90	0			
	*CBCP			

Luminance			
(Average Candela/M²)			
Degree Avg. 0° Luminance			
45	41438		
55	26192		
65	12817		
75	7449		
85	8106		

Cone of Light Footcandles			
Distance to	Initial Nadir Footcandles	Beam (ft.)	
Illuminated Plane		L Length	<b>W</b> Width
5.5	24.9	6.4	56.4
7	15.4	8.2	8.2
8	11.8	9.4	9.4
9	9.3	10.6	10.6
10	7.5	11.8	11.8
12	5.2	14.2 14.2	

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.  $Footcandle\ values\ are\ initial,\ apply\ appropriate\ light\ loss\ factors\ where\ necessary.$ 

Zonal Lumen Summary				
Zone	Lumens	% Fixture		
0-30	739.65	37.10		
0-40	1183.69	59.40		
0-60	1838.93	92.20		
0-90	1993.89	100		

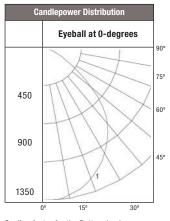
#### Scaling factor for the Battery back up:

- 1000 Lumen = 0.55
- 1500 Lumen = 0.40
- -2000 Lumen = 0.33
- 3000 Lumen = 0.22

#### PHOTOMETRY - 2000 lumen / 90 CRI / 64VDFW TRIM

#### PD620ED010- PDM6A935-64VDFW

Spacing Criteria = 1.20 Lumens per Watt = 74 Lm/W Test No. P189218 Test Model: PD620D010- PDM935-64VDFW



Candela Distribution				
Degrees Vertical	Candela			
0*	753.5			
5	752.0			
10	736.8			
20	687.0			
30	602.7			
40	491.2			
50	310.5			
60	132.5			
70	41.9			
80	18.9			
90	0			

\*CBCP

Luminance				
(Average Candela/M²)				
Degree Avg. 0° Luminance				
45	32043			
55	20253			
65	9914			
75	5756			
85	6221			

Distance to	Initial Nadir	Bean	n (ft.)
Illuminated Plane	Footcandles	L Length	<b>W</b> Width
5.5	32.2	6.4	6.4
7	19.9	8.2	8.2
8	15.2 9.4 9		9.4
9	12	10.6	10.6
10	9.7	11.8	11.8
12	6.8	14.2 14.2	

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot. Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary					
Zone	Zone Lumens				
0-30	571.94	37.10			
0-40	915.28	59.40			
0-60	1421.94	92.20			
0-90	1541.76	100			

#### Scaling factor for the Battery back up:

- 1000 Lumen = 0.55
- 1500 Lumen = 0.40 - 2000 Lumen = 0.33
- -3000 Lumen = 0.22

#### DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

Catalog #	Туре
Project	
	Date
Comments	Batc
Prepared by	

#### **SPECIFICATION FEATURES**

#### Construction

TOP: Cast aluminum top housing attaches to cast aluminum mounting arm hub with four stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. (See the mounting accessories section for a full selection of mounting arms. (Only these arms are compatible with the Epic luminaire). MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The mid section features cast aluminum construction and stainless steel assembly. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

#### Optics

**DIMENSIONS** 

Choice of twelve patented, highefficiency AccuLED Optic™ technology manufactured from

injection-molded acrylic. Optics are precisely designed to shape the optics, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 3000K CCT and 5000K CC. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

#### **Electrical**

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less that 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments.

with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

#### Finish

Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

#### Warranty

Five-year warranty.



Invue



# **ECM/EMM**EPIC MEDIUM LED

1 - 4 LightBARs Solid State LED

**DECORATIVE AREA LUMINAIRE** 

# ECM Classical Maximum Height 20" [508mm] Maximum Width 24-1/16" [611mm] 24-1/16" [611mm]

See configurations for more detailed information.

#### CERTIFICATION DATA

UL/cUL Listed IP66 LIghtBARs LM79 / LM80 Compliant 2G Vibration Tested ISO 9001

#### **ENERGY DATA**

Electronic LED Driver

>0.9 Power Factor <20% Total Harmonic Distortion 120-277V 50/60Hz, 347V/60Hz, 480V/60Hz -40°C Minimum Temperature

-40°C Minimum Temperature 40°C Ambient Temperature Rating

#### EPA

Effective Projected Area: (Sq. Ft.) 0.94

SHIPPING DATA Approximate Net Weight: 45 lbs. [20 kgs.]





#### CONFIGURATIONS

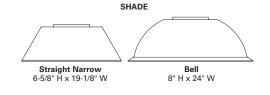
# Classical 8-5/8" H x 8-3/4" W

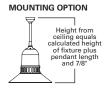
Modern 9-3/8" H

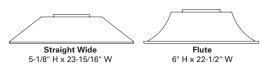
x 8-7/8" W











#### POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBARS)

Number of LightBARs		E01	E02	E03	E04
Drive Curre	nt		350mA Drive Current		
Power (Wat	tts)	25W 52W 75W 97V			
Current @ '	120V (A)	0.22	0.44	0.63	0.82
Current @ 2	277V (A)	0.10	0.20	0.28	0.36
Power (Wat	tts)	31W	58W	82W	99W
Current @ 3	<b>347V</b> (A)	0.11	0.19	0.28	0.29
Current @ 4	180V (A)	0.09	0.15	0.20	0.21
To	Lumens	2,948	5,896	8,844	11,792
T2	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
Т3	Lumens	2,936	5,873	8,809	11,745
13	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4	Lumens	2,876	5,752	8,627	11,503
14	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3
5MQ	Lumens	3,054	6,108	9,161	12,215
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5WQ	Lumens	2,987	5,975	8,962	11,949
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5XQ	Lumens	2,982	5,963	8,945	11,926
37.0	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3
SL2	Lumens	2,878	5,756	8,634	11,512
SLZ	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL3	Lumens	2,894	5,788	8,682	11,576
SLS	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL4	Lumens	2,823	5,647	8,470	11,294
3L4	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
RW	Lumens	2,957	5,915	8,872	11,829
1100	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,616	5,231	7,847	10,462
SLL/SLN	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3

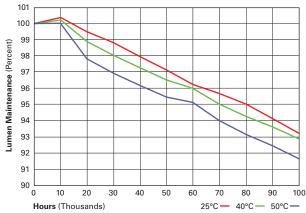
#### POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBARS)

Number of	LightBARs	F01 F02 F03 F04			F04
Drive Curre	nt	1A Drive Current			
Power (Wat	ts)	26W	55W	78W	102W
Current @ 1	120V (A)	0.22	0.46	0.66	0.86
Current @ 2	277V (A)	0.10	0.21	0.29	0.37
Power (Wat	ts)	32W	60W	85W	105W
Current @ 3	<b>347V</b> (A)	0.11	0.19	0.28	0.30
Current @ 4	1 <b>80V</b> (A)	0.09	0.15	0.21	0.22
T2	Lumens	2,434	4,867	7,301	9,735
12	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
Т3	Lumens	2,424	4,848	7,272	9,696
13	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
T4	Lumens	2,374	4,748	7,122	9,496
14	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
5MQ	Lumens	2,521	5,042	7,563	10,084
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
5WQ	Lumens	2,466	4,932	7,398	9,864
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5ΧΩ	Lumens	2,461	4,923	7,384	9,845
37.0	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3
SL2	Lumens	2,376	4,752	7,127	9,503
SLZ	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
SL3	Lumens	2,389	4,778	7,167	9,556
SLS	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
SL4	Lumens	2,331	4,662	6,993	9,323
JL4	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
RW	Lumens	2,441	4,883	7,324	9,765
NVV	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,159	4,318	6,478	8,637
JLL/JLN	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3

#### **LUMEN MAINTENANCE**

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

<sup>\*</sup> Per IESNA TM-21 data.



# Ambient Temperature Lumen Multiplier 10°C 1.02 15°C 1.01 25°C 1.00 40°C 0.99 50°C 0.96

**LUMEN MULTIPLIER** 



#### 0-10V (DIM)

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

#### Photocontrol (PC, PER and PER7)

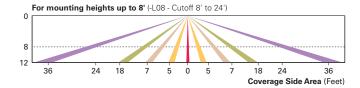
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

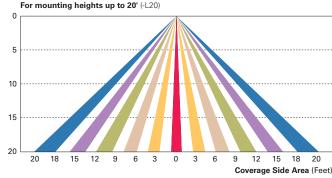
#### **Dimming Occupancy Sensor** (MS/DIM-LXX, MS/X-LXX and MS-LXX)

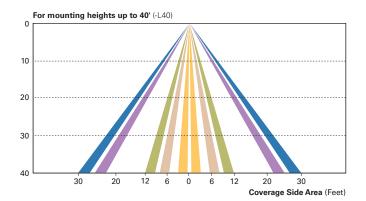
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

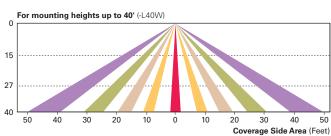
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.





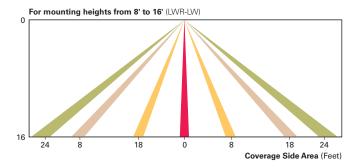


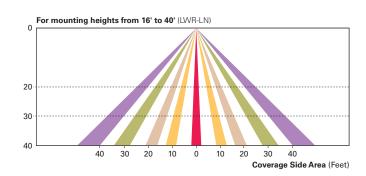


#### LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.





#### ORDERING INFORMATION

#### Sample Number: ECM-E04-LED-E1-T2-FL-GM

Product Family <sup>1</sup>	Number of LightBARs 2,3	Lamp Type	Voltage	Distribution	Mid Section Type	Shade Type	Color 5
ECM=Epic Classical Medium EMM=Epic Modern Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs F01=(1) 7 LED LightBARs F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs	(LED=Solid (State) (Light) (Emitting) (Diodes)	E1=Electronic (120-277V) 347=347V 480=480V <sup>4</sup>	T2=Type II  T3=Type III  T4=Type IV  SL2=Type II w/Spill Control  SL3=Type II w/Spill Control  SL4=Type IV w/Spill Control  SM0=Type V Square Medium  SM0=Type V Square Wide  SX0=Type V Square Extra Wide  RW=Rectangular Wide  SLL=90° Spill Light Eliminator Left  SLR=90° Spill Light Eliminator Right	<mark>(\$0=Solid</mark> \$ <b>R</b> =Solid Rings	SN=Straight Narrow SW=Straight Wide (BL=Bell) FL=Flute	AP=Grey BZ=Bronze (BK=Black) DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suff	ix)	Accessories (Or	der Separately) 14				
Finish MS-LXX=Motion Sen MS/X-LXX=Motion S Switchin PMXX=Pendant Mou Inches, 9.5" m HSS=Factory Installe DIM=0-10V Dimming LWR-LW=LumaWatt F Lens for 8' LWR-LN=LumaWatt F	CCT? CCT? Plate Matches Housing user for ON/OFF Operation * usersor for Bi-Level g * nt (XX=Pendant Length in nin - 48.0" max) 10 d House Side Shield 11	VA6151-XX—Bis VA6152-XX—Tr VA6152-XX—Tr VA6153-XX—Tr VA6155-XX—Bis VA6155-XX—Bis VA6155-XX—Bis VA6157-XX—Bis VA6159-XX—Tr VA6161-XX—Tr VA6161-XX—Tr VA6162-XX—Tr VA6162-XX—Tr VA6165-XX—Tr VA6165-XX—Tr VA6165-XX—Tr VA6166-XX—Tr VA6166-XX—Tr VA6166-XX—Tr VA6166-XX—Tr VA6166-XX—Tr VA6166-XX—Tr VA6169-XX—Tr VA6101-XX—Tr VA6101-XX—Tr VA6101-XX—Bis VA6102-XX—Bis VA6103-XX—Bis VA6103-XX—Bis VA6103-XX—Bis VA6103-XX—Tr VA6111-XX—Tr VA6111-XX—Tr VA6111-XX—Tr VA6111-XX—Tr VA6111-XX—Tr VA6111-XX—Tr VA6113-XX—Tr VA6111-XX—Tr	iditional Wall Mou ultional Wall Mou ultional Wall Mou ultion Single Pole M hop Single Pole M hop Single Pole M hop Single Pole M hop Twin Pole Mc ultional Single Po ultitional Twin Pole ultitional Wall Mou ultitional Single Pole ultitional Single Po ultitional Twin Pole ultitional Twi	urm with Cross Rod nt Arm nt Arm with 45° Strap lount Arm lount Arm with Cross Rod unt Arm with Cross Rod unt Arm unt Arm with Cross Rod le Mount Arm le Mount Arm with Rounded Upper Bar le Mount Arm with 45° Upper Bar le Mount Arm with 45° Upper Bar le Mount Arm with 45° Upper Strap le Mount Arm with 45° Upper Bars le Mount Arm with 45° Upper Bars le Mount Arm with 45° Upper Bars le Mount Arm with Rounded Upper Bars le Mount Arm with Rounded Upper Bars le Mount Arm with 45° Upper Bars le Mount Arm with 45° Upper Bars le Mount Arm with 45° Upper Straps lount Arm with 45° Upper Straps lount Arm with Cross Rod not Arm with Cross Rod lount Arm with Cross Rod lount Arm with Cross Rod lount Arm with Cross Rod le Mount Arm with Cross Rods le Mount Arm with Rounded Upper Bar le Mount Arm with Rounded Lower Bar le Mount Arm with Rounded Lower Bar le Mount Arm with 45° Upper Bar	OA/RA1027=N OA/RA1013=P OA/RA1013=P LB/HSS-21=Fit  EB/HSS-07=Fit  Accessory Opt V=Victorian Fit M=Modern Fit A=Architectur: N=Nostalgic F R=NEMA Twis	nial <sup>18</sup> nial <sup>18</sup> al Finial <sup>18</sup>	rol - 480V rol - 347V hield for hield for

- NOTES:

  1. Arm not included. Order separately. See accessories.

  2. Standard 4000K CCT and greater than 70 RI.

  3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.

  4. Only for use with 480W Wey systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).

  5. Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.

  6. Low-level output varies by bar count. Consult factory. Requires quantity of two or more LightBARs.

  7. Consult customer service for lead times and multiplier.

Specifications and

dimensions subject to

change without notice

- 7. Consult customer service for lead times and multiplier.
  8. Sensor mounted to the luminaire. Available in E01-E04 and F01-F04 configurations. Replace "XX" with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
  9. Sensor mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace "X" with number of LightBARs operating in low output mode and replace XX with mounting height in feet for proper lens selection, (e.g., MS3-L25). Maximum four bars in low output mode. Consult factory for additional information.
  10. Pendant mount option "PMXX" must be used with Invue Pendant mount kit only. Includes pendant pipe, swivel hangar and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9-1/2". For lengths above 48", consult your lighting representative at Eaton for more information.
  11. Only for use with SL2, SL3 and SL4 distributions.
  12. Dimming leads provide for external 0-10V control system (by others).
  13. LumaWatt wireless sensors are factory installed only, requiring network components LWPEM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
  14. Replace XX with color suffix.
  15. Only available with traditional arms.

- 16. One required for each LightBAR.
- 10. One required in Peach Edition.

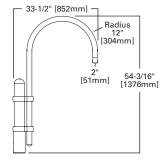
  17. Add as suffix to accessory. Example: VA6109-BK-R.

  18. Not available with finials, pendant mount "PM48" or bishop wall mounts.

  19. Requires use of 4" O.D. round straight pole.

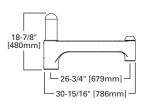


Pole mount arms are designed to fit both medium ECM/EMM housings. (Only these arms are compatible with the Epic luminaire). Arms feature a precision welded cast aluminum mounting hub for attachment of fixture head to arm with four stainless steel fasteners. Wall mount arms compliment pole mount luminaires and attractively transition fixture scale in lower mounting height pedestrian environments. Wall mount arms are designed to fit both medium ECM/EMM housings. Arms feature a precision welded cast aluminum mounting hub for attachment of fixture head to arm with four stainless steel fasteners.



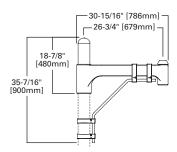
#### **BISHOP SINGLE POLE** MOUNT ARM

VA6105 (Modern), VA6154 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 24 lbs. E.P.A: 0.92



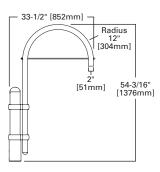
#### TRADITIONAL SINGLE POLE MOUNT ARM

VA6109 (Modern), VA6158 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 20 lbs. E.P.A: 0.86



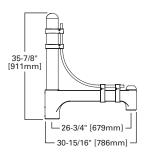
#### TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° LOWER BAR VA6113 (Modern), VA6162 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.

Weight: 24 lbs. E.P.A: 1.17



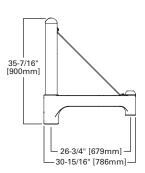
#### BISHOP SINGLE POLE MOUNT ARM WITH CROSS ROD

VA6106 (Modern), VA6155 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 25 lbs. E.P.A: 0.98



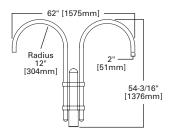
#### TRADITIONAL SINGLE POLE MOUNT ARM WITH ROUNDED UPPER BAR

VA6110 (Modern), VA6159 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 28 lbs. E.P.A: 1.4



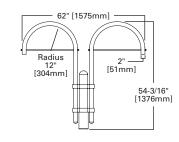
#### TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° UPPER STRAP VA6114 (Modern), VA6163 (Classical)

Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 24 lbs. E.P.A: 1.17



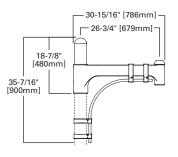
BISHOPTWIN POLE MOUNT ARM VA6107 (Modern), VA6156 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.

Weight: 37 lbs. E.P.A: 1.43



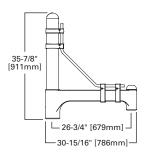
#### BISHOPTWIN POLE MOUNT ARM WITH CROSS RODS

VA6108 (Modern), VA6157 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 39 lbs. E.P.A: 1.55



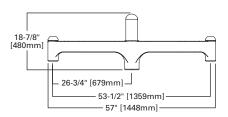
#### TRADITIONAL SINGLE POLE MOUNT ARM WITH ROUNDED LOWER BAR

VA6111 (Modern), VA6160 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 25 lbs. E.P.A: 1.16



#### TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° UPPER BAR

VA6112 (Modern), VA6161 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 28 lbs. E.P.A: 1.38

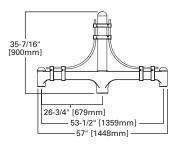


#### TRADITIONAL TWIN POLE MOUNT ARM

VA6116 (Modern), VA6165 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 30 lbs. E.P.A: 1.44

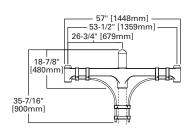


#### MOUNTING ACCESSORIES



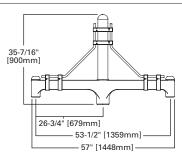
#### TRADITIONAL TWIN POLE MOUNT ARM WITH ROUNDED UPPER BARS

VA6117 (Modern), VA6166 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 43 lbs. E.P.A: 2.28



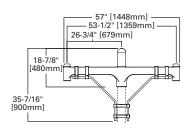
# TRADITIONAL TWIN POLE MOUNT ARM WITH ROUNDED LOWER BARS

VA6118 (Modern), VA6167 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 40 lbs. E.P.A: 2.04



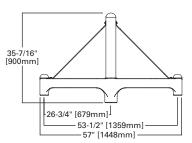
#### TRADITIONAL TWIN POLE MOUNT ARM WITH 45° UPPER BARS

VA6119 (Modern), VA6168 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 43 lbs. E.P.A: 2.24



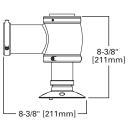
#### TRADITIONAL TWIN POLE MOUNT ARM WITH 45° LOWER BARS

VA6120 (Modern), VA6169 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 40 lbs. E.P.A: 2.0



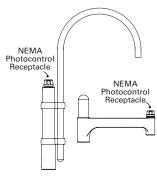
#### TRADITIONAL TWIN POLE MOUNT ARM WITH 45° UPPER STRAPS

VA6121 (Modern), VA6170 (Classical) Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon. Weight: 37 lbs. E.P.A: 1.81



#### MAST ARM ADAPTER

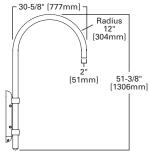
VA6122 (Modern), VA6171 (Classical) Secures fixture to nominal 2" pipe (2-3/8" horizontal O.D.) Weight: 4 lbs.



#### NEMATWISTLOCK PHOTOCONTROL (R)

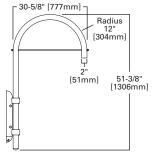
Order separately (Not compatible with finials or wall mount bishop arms)

#### Wall Mount Accessories



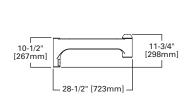
#### BISHOP WALL MOUNT ARM

VA6101 (Modern), VA6150 (Classical) Mounts to wall with four stainless steel lag bolts (provided by other). Weight: 16 lbs.



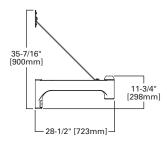
#### BISHOP WALL MOUNT ARM WITH CROSS ROD

VA6102 (Modern), VA6151 (Classical) Mounts to wall with four stainless steel lag bolts (provided by other). Weight: 17 lbs.



#### TRADITIONAL WALL MOUNT ARM

WA6103 (Modern), VA6152 (Classical) Mounts to wall with four stainless steel lag bolts (provided by other). Weight: 17 lbs.



#### TRADITIONAL WALL MOUNT ARM WITH 45° STRAP

VA6104 (Modern), VA6153 (Classical) Mounts to wall with four stainless steel lag bolts (provided by other). Weight: 18 lbs.



#### **WASHINGTON AC2** Cast Aluminum - Clamshell

DIMENSIONS OF BASE COVER

HEIGHT

(IN)

15.25

20.00

DIA

(IN)

12.25

17.00

NON-TAPERED

2.75 - 4.00

5.13 - 5.25

QT` OF

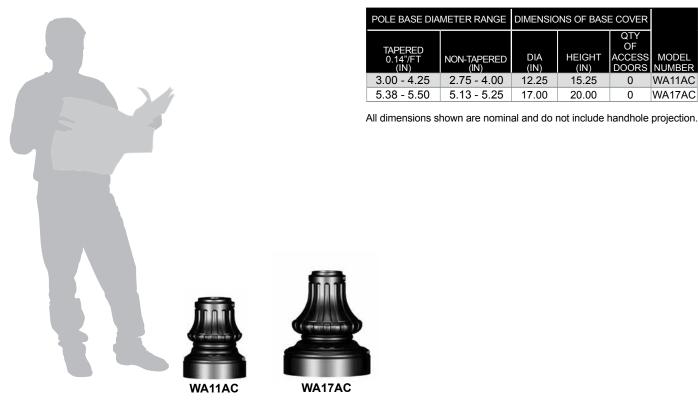
WA11AC

WA17AC

Job Name:		Client Name:		
Job Location - City:	State:	Created By:	Date:	
Product:	Quote:	Customer Approval:	Date:	

#### **FEATURES**

- · Aesthetically pleasing for lighting applications
- Clamshell design for quick, easy assembly
- Durable, high quality aluminum casting provides clean, crisp details
- Provided with stainless steel hardware
- Tamper proof hardware available as special order
- Long-lasting finish available in a variety of colors
- Install on existing poles to enhance streetscape



# PRODUCT ORDERING CODES

MODEL NUMBER		DLOR*	POLE BASE OD (IN)	BOLT	SQUARE (IN)			R BOLTS PROJECTION (IN)	SIZE W x H (IN)	HANDHOL CENTER LINE HEIGHT (IN)	
WA11AC WA17AC	WH = White ST = Sandstone BK = Black SM = Silver Metallic SL = Silver LG = Light Gray SG = Slate Gray DT = Dark Tan MB = Medium Bronze CB = Bronze DB = Dark Bronze BN = Brown HG = Hunter Green DG = Dark Green	ALUMINUM DWH= White DSS = Sandstone BR = Burgundy HG = Hunter Green DNA = Natural Aluminum DCG = Charcoal Gray DMB = Medium Bronze SBN = Sanded Brown DNB = New Dark Bronze DBB = Dark Bronze SBK = Sanded Black DBL = Black DSB = Steel Blue DTG = Dark Green DBR = Red SC = Special Color (Contact Factory)		2. Addition	nal informa	ation required	l when orderi	equired on all ng separate fi with the appro	rom pole		<del>•</del>

# WASHINGTON AC2 Cast Aluminum - Clamshell



Job Name:		Client Name:	
Job Location - City:	State:	Created By:	Date:
Product:	Quote:	Customer Approval:	Date:

#### **BASE COVER CLOSE-UP**



SPC7278 11/10 valmontstructures.com carries the most current spec information and supersedes these guidelines.



### Planning Commission Staff Report

Major Site Plan Amendment and Conditional Use Permit AT&T Wireless Tower Thursday, June 27, 2019 Public Meeting

Report Date: Thursday, June 20, 2019

Applicant: Doug Kofford

Owner: Alpine School District

Location: 273 West Aspen Hills Boulevard

Major Street Access: Aspen Hills Boulevard Parcel Number(s) & Size: 55:812:0010, 13.02 acres

Parcel Zoning: R1-10 Adjacent Zoning: R1-10

Current Use of Parcel: Riverview Elementary School Adjacent Uses: undeveloped, residential, church

Previous Meetings: None for this application

Previous Approvals: Concept plan reviewed by staff

Type of Action: Administrative

Land Use Authority: Planning Commission for the Site Plan and City Council for the

Conditional Use Permit (CUP)

Future Routing: City Council

Author: Sarah Carroll, Senior Planner

#### A. Executive Summary:

This is a request for approval of a Major Site Plan Amendment and Conditional Use Permit (CUP) for a cell tower for AT&T Wireless. The tower is proposed to be located on the Riverview Elementary School property and is 100 foot tall. There will be a mono-pole, a structure for equipment, and a wood fence around the perimeter.

#### **Recommendation:**

Staff recommends that the Planning Commission review the application, review and discuss the proposal, and choose from the options in Section "H" of this report. Options include approval of the major site plan amendment with conditions, continuation, or denial. Options also include a positive or negative recommendation for the conditional use permit, or continuation.

- **B. Background:** The City has received a request for a new cell tower on the Riverview Elementary site.
- **C. Specific Request:** This is a request for a Major Site Plan Amendment and CUP approval for the purpose of constructing a 100 foot tall cellular tower, an equipment structure and a fence on property located at 273 West Aspen Hills Boulevard.

#### D. Process:

Code Section 19.13.04 indicates that the Planning Commission is the approval authority for major site plan amendments. Conditional Use permits for new construction require a recommendation by the Planning Commission and the City Council is the approval authority.

Section 19.15.02 states that all new Conditional Use Permits are required to be accompanied by a Site Plan application.

Section 19.15.03 indicates that if a site plan is required, the Conditional Use permit shall follow the same process as the related site plan, and the Land Use Authority for the site plan shall become the Land Use Authority for the CUP. 19.13.04 has stricter requirements than 19.15.03; thus, the City Council will be the approval authority for the CUP.

- **E. Community Review:** Public notices are not required for these applications. As of the date of this report no public input has been received.
- **F. General Plan:** The subject property is designated as Institutional on the Land Use Map.

**Staff conclusion:** consistent. Per Section 19.05.03(3) wireless telecommunication mono-poles are a Conditional Use in all zones provided they comply with the lot size requirements.

#### G. Code Criteria:

A summary of the applicable sections is below. The attached Planning Review Checklist includes a detailed review.

- 19.04, Land Use Zones **Complies**
- 19.05, Supplemental Regulations Complies.
- 19.06, Landscaping and fencing Complies.
- 19.13, Process Complies.
- 19.14, Site Plan Complies.
- 19.15, Conditional Use Complies.

#### H. Recommendation and Alternatives:

Staff recommends the Planning Commission conduct a public meeting, discuss the application, and choose from the following options.

#### Option 1 – Approval and Positive Recommendation

"I move to **approve** a Major Site Plan Amendment for a cell tower located within the Riverview Elementary School site, and I also move to forward a **recommendation for approval** to the City Council for the associated Conditional Use Permit, subject to the Findings and Conditions in the Staff Report."

#### **Findings**

- 1. The application is consistent with the General Plan, as articulated in Section "F" of the staff report, which section is incorporated by reference herein.
- 2. The application complies with the requirements of the Land Development Code, as articulated in Section "G" of the staff report and the conditions listed below, which section is incorporated by reference herein.

#### **Conditions:**

- 1. All conditions of the City Engineer shall be met.
- 2. All other code requirements shall be met.
- 3. Any other conditions or changes as articulated by the Planning Commission:

#### **Option 2 - Continuance**

The Planning Commission may choose to continue the item. "I move to **continue** the applications to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

1. \_\_\_\_\_

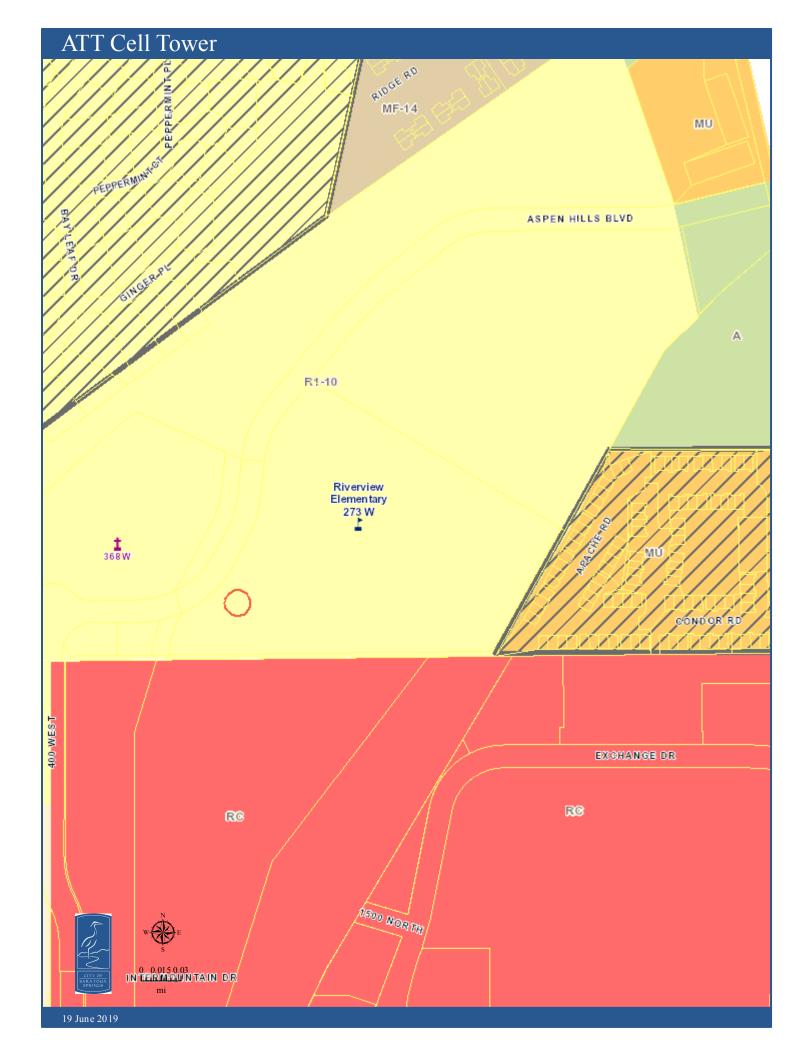
#### **Option 3 – Denial and Negative Recommendation**

The Planning Commission may also choose to deny the site plan and forward a negative recommendation to the City Council for the CUP. "I move to **deny** the proposed Major Site Plan Amendment and to forward a **negative** recommendation for the AT&T Wireless Cell Tower Conditional Use Permit based on the Findings below:

1. The Site Plan and/or CUP are not consistent with Section [XX.XX] of the land development code.

#### I. Exhibits:

- A. Location & Zone Map
- B. Planning Review Checklist
- C. Proposed plans





#### APPLICATION REVIEW CHECKLIST

(5/20/2018 Format)

#### **Application Information**

Date Received: 5/22/19
Date of Review: 6/11/19

**Project Name:** AT&T Cell Tower at Riverview Elementary

Project Request / Type: Site Plan and CUP Review

Meeting Type: PC and CC

Applicant: Doug Kofford for AT&T Owner: Alpine School District

Location: Riverview Elementary, 273 West Aspen Hills Blvd.

Major Street Access: Aspen Hills Blvd.

Parcel Number(s) & size: 55:812:0010, 13.02 acres

Land Use Designation: Institutional

Parcel Zoning: R1-10

Adjacent Zoning: R1-10, RC, MU
Current Use of Parcel: Elementary School

Adjacent Uses: residential, undeveloped property

Previous Meetings: None

Previous Approvals: concept plan review in 2018

Type of Action: administrative

Land Use Authority: PC for site plan, CC for CUP

Future Routing: none

Planner: Sarah Carroll, Senior Planner

#### **Section 19.13 – Application Submittal**

- Application Complete: yes
- Rezone Required: no
  - o Zone: R1-10
- General Plan Amendment required: no
  - o Designation: Institutional

#### Section 19.13.04 – Process

• DRC: no comments

• PC: TBD

• CC: TBD

#### **General Review**

#### **Building Department**

• No comments

#### **Fire Department**

• No comment

#### GIS / Addressing

• No comments

#### **Engineering**

• No comments

#### **Public Works**

• No comments

#### **Code Review**

• 19.04, Land Use Zones

Zone: R1-10 Use: Cell Tower Density: n/a

19.04.07 Requirements for R1-10 zone:							
Category to be reviewed	Rule	Compliance	Why				
Minimum lot size	10,000 sq ft	Complies	The lot is 13 acres				
Lot width (minimum)	70'	Complies	~800'				
Lot frontage (minimum)	35'	Complies	~830'				
Front yard setback (minimum)	25'	Complies	Exceeds 25'				
Side yard setback (minimum)	8'min/20'combined	Complies	Exceeds 8' and 12'				
Rear yard setback (minimum)	25'	Complies	48'6" is shown				

Corner side yard setback (minimum)	20'	n/a	n/a
Setback from residential uses (19.05)	200'	Complies	The nearest residential use is to the west. The antennae is ~207' from the western property line
Structure height (maximum) (19.05)	100' on 5+ acres	Complies	Plans indicate 100' to top of lightning rod
Square feet of living space (minimum)	n/a	n/a	n/a
Lot Coverage (maximum)	55%	Complies	~1.26 of the 13 acres is covered

#### • 19.05, Supplemental Regulations

Flood Plain: n/aWater & sewage: n/a

o Transportation Master Plan: complies

o Minimum height of dwellings: n/a

o Property access: complies

- o 19.05.03, Wireless telecommunication equipment
  - o (3) Freestanding antennae or towers.
    - No new mono-pole or other free-standing structure shall be approved unless the applicant demonstrates that the proposed antenna cannot be accommodated on an existing structure. **Complies.** *The nearest mono-pole is behind town storage and does not have room for more antenna.*
    - Mono-pole towers are required to obtain conditional use approval prior to construction.
    - Antenna in the ROW or on top of sport field lighting. n/a
    - Camouflage: where buildings trees or other large objects are present, all new mono-pole shall use stealth design. *n/a- there are no surrounding trees or objects*.
    - Location/ minimum lot size:
      - Residential zones: mono-poles may be located in residential zones on parcels in limited locations. School sites that are 5 acres in size or greater. **Complies.** *The proposed mono-pole is on a school site that is larger than 5 acres.*
    - Spacing: no mono-pole shall be within 1000 feet of another mono-pole, except those within 120 feet of or adjacent to existing transmission powerline corridors. Complies. The nearest mono-pole is behind the storage units at Town Storage and is just over 1000' from the proposed location.
    - Antenna extensions: The antenna shall not extend outward further than 4' from the monopole (8 foot diameter around the pole) or 6 feet (12 foot diameter around the pole) if a solid shield style design is used, rather than individual exposed antenna.
    - Climbing peg. After installation the climbing pegs within the first 20 feet to the ground shall be removed for safety purposes. **Complies.** *No climbing pegs are shown*.

- Site and architectural design:
  - Exempt from 19.16
  - Buildings housing cell tower equipment shall be constructed of masonry and include an anti-graffiti coating. **Complies.** *Brick paneling and anti-graffiti coating is called out.*
  - Buildings housing cell tower equipment shall include a minimum of a 4:12 gabled pitched roof. **Complies.** A *pitched roof is called out*.
  - Building colors shall be earth-tones. **Complies** *notes on plans call out earth tone*.
  - Lattice towers greater than 35 feet are prohibited. Complies.
  - Portable towers are prohibited unless approved through a special event permit.
     Complies.
- 19.06, Landscaping and Fencing
  - o Chain link fencing is prohibited. **Complies** a wooden fence is called out.
- 19.07, Planned Unit Development
  - o N/A
- 19.09, Off Street Parking
  - o N/A
- 19.10, Hillside Development
  - o N/A
- 19.11, Lighting
  - o N/A
- 19.12, Subdivisions
  - o N/A
- Section 19.13, Process
  - o PC is the approval authority for major site plan amendments
  - o PC makes a recommendation and CC is the approval authority for a conditional use associated with new construction.
- 19.14. Site Plans
  - o Development Standards: Complies
  - o Special Provisions: Complies
  - o Maps and Drawings Required: Complies
  - o Bond or DA: N/A
  - o Consideration in Review: N/A

- 19.15, Conditional Use Permit
  - o Required accompanying data: complies
    - Monopole towers require a CUP.
  - o General standards
    - Siting:
      - The siting of the structure or use, and in particular:
        - a. the adequacy of the site to accommodate the proposed use or building and all related activities;
        - b. the location and possible screening of all outdoor activities;
        - c. the relation of the proposed building or use to any adjoining building with particular attention to protection of light, air, and peace and quiet;
        - d. the location and character of any display of goods and services; and
        - e. the size, nature, and lighting of any signs.

#### Staff finding: complies

- a. The proposed site and building appear to be adequate for the proposed use.
- b. No outdoor activities are proposed
- c. The building is not very close to existing buildings and no lights are proposed.
- d. No displays are proposed
- e. No signs are proposed.

#### Traffic:

- Traffic circulation and parking, and in particular:
  - a. the type of street serving the proposed use in relation to the amount of traffic expected to be generated;
  - b. the adequacy, convenience, and safety of provisions for vehicular access and parking, including the location of driveway entrance and exits; and
  - c. the amount, timing, and nature of traffic generated by the proposed conditional use.

#### Staff finding: complies

- The project has access onto a public road and will have minimal traffic.
- The site will have minimal traffic. The 12' driveway access is adequate.
- *No issues are anticipated with very infrequent visits by the owner.*

#### Compatibility:

- The compatibility of the proposed conditional use with its environment, and in particular:
  - a. the number of customers or users and the suitability of the resulting activity level to the surrounding uses;
  - b. hours of operation;
  - c. adequacy of provisions for the control of any off-site effects such as noise, dust, odors, light, or glare, etc.;
  - d. adequacy of provisions for protection of the public against any special hazards arising from the intended use;
  - e. the expected duration of the proposed building, whether temporary or permanent, and the setting of time limits when appropriate; and the degree to

which the location of the particular use in the particular location can be considered a matter of public convenience and necessity.

#### • staff finding: **complies**

• The proposed use is a cell tower which falls under "monopole" in 19.05.03. There aren't any anticipated detrimental effects.

#### Standards:

- The Conditional Use shall meet the following standards:
  - a. the use will not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity, or injurious to property or improvements in the vicinity;
  - b. the use will be consistent with the intent of the land use ordinance and comply with the regulations and conditions specified in the land use ordinance for such use:
  - c. the use will be consistent with the character and purposes stated for the land use zone involved and with the adopted Land Use Element of the General Plan:
  - d. the use will not result in a situation which is cost ineffective, administratively infeasible, or unduly difficult to provide essential services by the City, including roads and access for emergency vehicles and residents, fire protection, police protection, schools and busing, water, sewer, storm drainage, and garbage removal; and
  - e. the proposed use will conform to the intent of the City of Saratoga Springs General Plan.

#### Staff finding: complies.

- a. no safety concerns are anticipated.
- b. A monopole is allowed by code on this site.
- c. Cell towers are needed throughout the City and are anticipated on larger sites.
- d. The location allows for the provision of services.
- *e.* The proposed use conforms to the intent of the general plan.

#### • Additional conditions:

- When necessary, the land use authority may attach conditions to ensure compatibility with the surrounding area and to mitigate harmful effects. Such conditions may include the following:
  - a. additional parking;
  - b. water, sewer, and garbage facilities;
  - c. landscape screening to protect neighboring properties;
  - d. requirements for the management and maintenance of the facilities;
  - e. changes in layout or location of uses on the lot; and
  - f. any other condition the land use authority finds necessary to reasonably ensure
  - g. the proposed Conditional Use will comply with the standards noted above
- staff finding: no additional conditions are recommended.
- o Special standards: n/a

- o Optional conditions
  - Safety: none recommended
  - Health & Sanitation: none recommended
  - Environmental Concerns: none recommended
  - Compliance with GP and Neighborhood: complies with GP and the characteristics of the vicinity.
- 19.16, Site and Architectural Design Standards: N/A
- 19.18, Signs
  - o N/A
- 19.25, Lake Shore Trail
  - o N/A
- 19.26, Planned Community Zone
  - o N/A
- 19.27, Addressing
  - $\circ \quad N\!/A$
- Fiscal Impact
  - o Any City owned open space? N/A

#### GENERAL CONTRACTOR NOTES

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITION ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

#### GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

#### PROJECT TEAM

#### CLIENT REPRESENTATIVE

SMARTLINK, LLC 8502 E VIA DE VENTURA, SUITE 220 SCOTTSDALE, AZ 85258 DOUG KOFFORD

COMPANY: ADDRESS: CITY, STATE, ZIP: CONTACT: PHONE: (425) 306-7885

ouglas.kofford@smartlinkllc.com

#### ZONING / REAL ESTATE SPECIALIST

COMPANY: SMARTLINK, LLC 8502 E VIA DE VENTURA. SUITE 220

ADDRESS CITY STATE 7IP-

SCOTTSDALE, AZ 85258 DOUG KOFFORD (425) 306-7885 CONTACT

PHONE: E-MAIL: douglas.kofford@smartlinkllc.com

#### INFINIGY PROJECT MANAGER

ADDRESS: CITY, STATE, ZIP: CONTACT: DENIS AZAROV DAZAROVØNFINIGY.COM

E-MAIL:

#### **ENGINEER**

COMPANY:

2500 W. HIGGINS RD, SUITE 500 HOFFMAN ESTATES, IL 60169 EDDIE RIOS (847) 648–4068

ADDRESS: CITY, STATE, ZIP:

PHONE:

#### RF ENGINEER

COMPANY:

ADDRESS: CITY, STATE, ZIP: CONTACT: 4393 S. RIVERBOAT ROAD TAYLORSVILLE, UT 84123 SIMI AJOSE

(214) 695-6965 PHONE:

MOBILE: EMAIL: (214) 695-6965 sa111v@att.com

SITE INFORMATION

AT&T ROCKY MOUNTAIN REGION

ADDRESS: 161 INVERNESS DRIVE W, 2ND FLOOR CITY, STATE, ZIP: ENGLEWOOD, CO 80112

COMPANY: RIVERVIEW ELEMENTARY
ADDRESS: S73 ASPEN HILLS BLVD
CITY, STATE, ZIP: SARATOGA SPRINGS, UT 84045

LATITUDE: 40.391389 | 40° DEG. 23' MIN. 29.0" SEC.S N

LONGITUDE -111.923889 | 111° DEG. 55' MIN. 26.0" SEC. W

LAT./LONG. TYPE: GROUND ELEVATION: 4608.2' AMSL

55: 812: 0010 AREA OF CONSTRUCTION: 2,500 SQ FEET

ZONING/JURISDICTION: CITY OF SARATOGA SPRINGS

CURRENT ZONING

EXISTING USE: UNMANNED TELECOMMUNICATIONS FACILITY

FACILITY IS UNMANNED AND NOT FOR HUMAN HANDICAP REQUIREMENTS: HABITATION. HANDICAPPED ACCESS NOT REQUIRED



# AT&T AT RIVERVIEW ELEMENTARY

(TOWNE STORAGE)

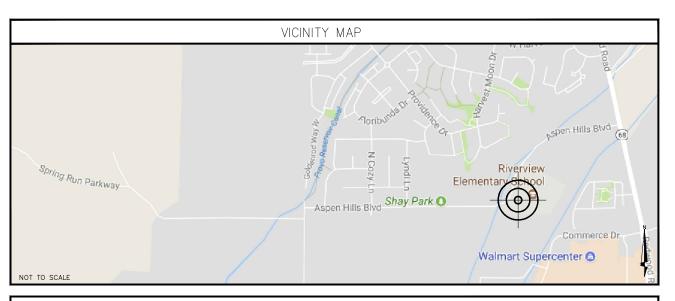
ID#: UTL04068

FA#: 13872155

273 ASPEN HILLS BLVD

SARATOGA SPRINGS, UT 84045

**UTAH COUNTY** 



#### DRIVING DIRECTIONS

#### FROM AT&T OFFICE: TAYLORSVILLE UTAH:

HEAD SOUTH ON RIVERBOAT RD TOWARD, TURN LEFT AT THE 1ST CROSS STREET ONTO W 4430 S. TURN RIGHT TO MERGE ONTO I-15 S, FOLLOW I-15 S TO EXIT 282 FOR US-89 S TOWARD LEHI. TURN RIGHT ONTO UT-85/W 2100 N. TAKE A SLIGHT LEFT ONTO UT-85. TAKE A SLIGHT LEFT ONTO UT-68 S/N REDWOOD RD. TURN RIGHT ONTO ASPEN HILLS BLVD. SITE WILL BE ON THE LEFT.

#### CODE COMPLIANCE

UBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE OCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

INTERNATIONAL BUILDING CODE 2015 BUILDING CODE:

ELECTRICAL CODE: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70

NATIONAL ELECTRICAL CODE 2014

LIGHTNING PROTECTION CODE: NFPA 780 - 2000, LIGHTNING PROTECTION CODE

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-6, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES: TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A

GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
TELCORDIA GR-1275, GENERAL INSTALLATION REQUIREMENTS
TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS
ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

	APPROVALS
AT&T (RF):	DATE:
AT&T (CONST.):	DATE:
AT&T (OPS):	DATE:
LANDLORD:	DATE:
LANDLORD:	DATE:

#### PROJECT DESCRIPTION

THIS PROJECT WILL BE COMPRISED OF:

- ADDITION OF A NEW 80' MONOPOLE:

  NEW ANTENNAS, (2) PER SECTOR, (3) SECTORS, (6) TOTAL

  (4) NEW AT&T RRH'S PER SECTOR, (3) SECTORS; TOTAL OF (12) RRH'S
- (3) NEW ANTENNA SECTOR MOUNT
- (3) NEW RAYCAP SURGE SUPPRESSORS
   (3) NEW FIBER LINE AND (6) NEW POWER LINE
- ADDITION OF 6' FENCED EQUIPMENT COMPOUND:

   (1) NEW AT&T PRE FABRICATED EQUIPMENT SHELTER WITH OUTDOOR DIESEL GENERATOR
- (1) NEW ICE BRIDGE
   (1) NEW AT&T GPS ANTENNA

HVAC UNITS:

• (1) NEW 1-TON WALL MOUNT UNIT

#### RFDS SHEET

DESIGN PACKAGE BASED ON RF DATA SHEE

RFDS NAME: UTL04068
REVISION: ISSUE 2 REVISION 2
ISSUED: 08/01/2018

#### PROJECT DESCRIPTION

LTE 4C

SHEET	DESCRIPTION
T-1	TITLE SHEET
SV-1	SITE SURVEY
A-1	OVERALL SITE PLAN
A-1.1	ENLARGED SITE PLAN
A-2	SHELTER PLAN & ANTENNA LAYOUT
A-3	WEST ELEVATION

#### REVIEWED

By douglas.kofford at 3:19 pm, Nov 12, 2018

4393 RIVERBOAT BOAD SHITE 400 TAYLORSVILLE LIT 84123

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS

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1	11-12-18	REVISED ZONING DRAWINGS
0	11-14-17	ZONING DRAWINGS
REV.	DATE	REVISION DESCRIPTION



ROJECT INFORMATION

AT&T CELL TOWER AT RIVERVIEW ELEMENTARY (TOWNE STORAGE) SITE ID#: UTL04068 FA#: 13872155 273 ASPEN HILLS BLVD SARATOGA SPRINGS, UT 84045 **UTAH COUNTY** 

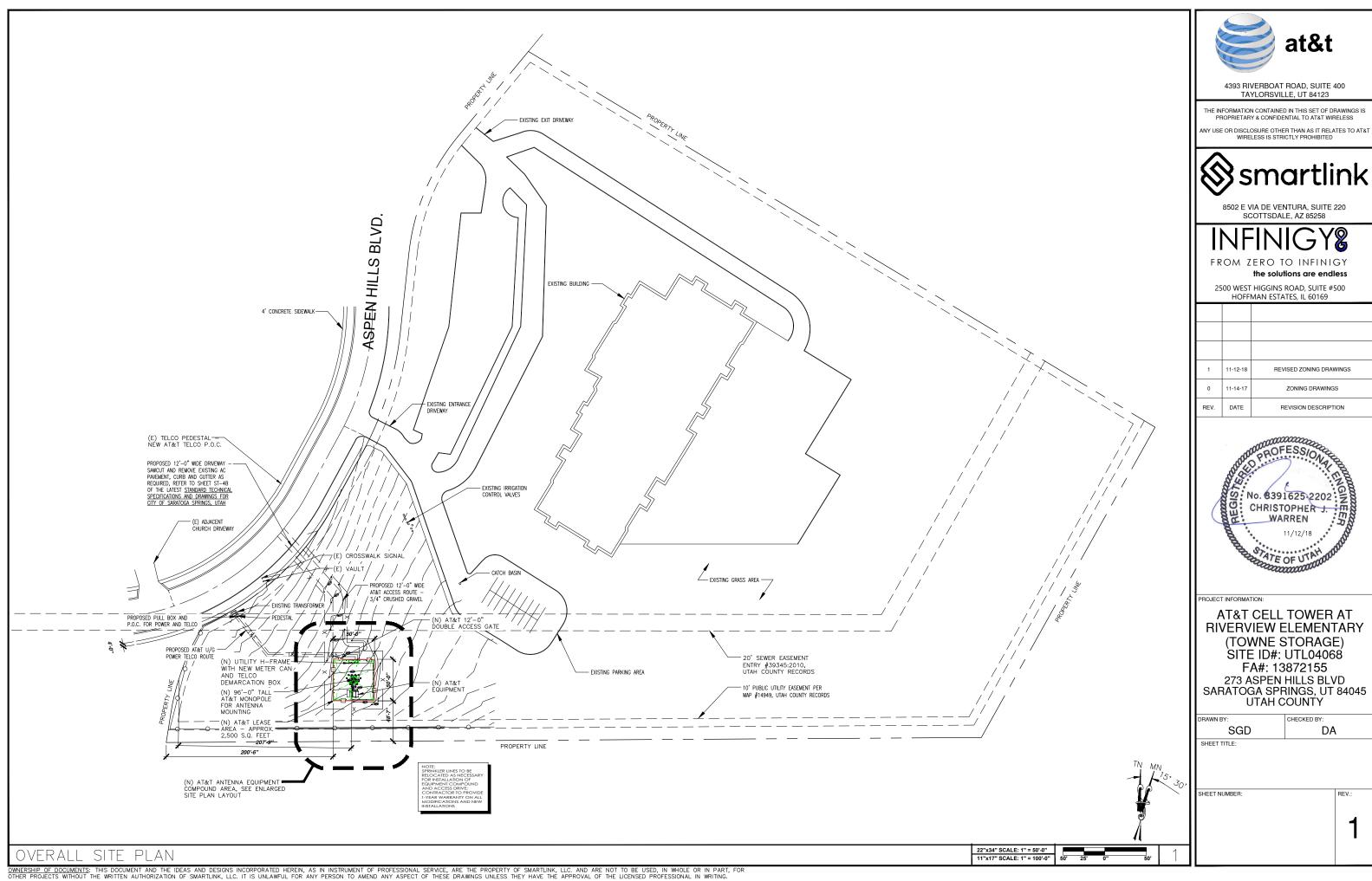
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SHEET TITLE:			

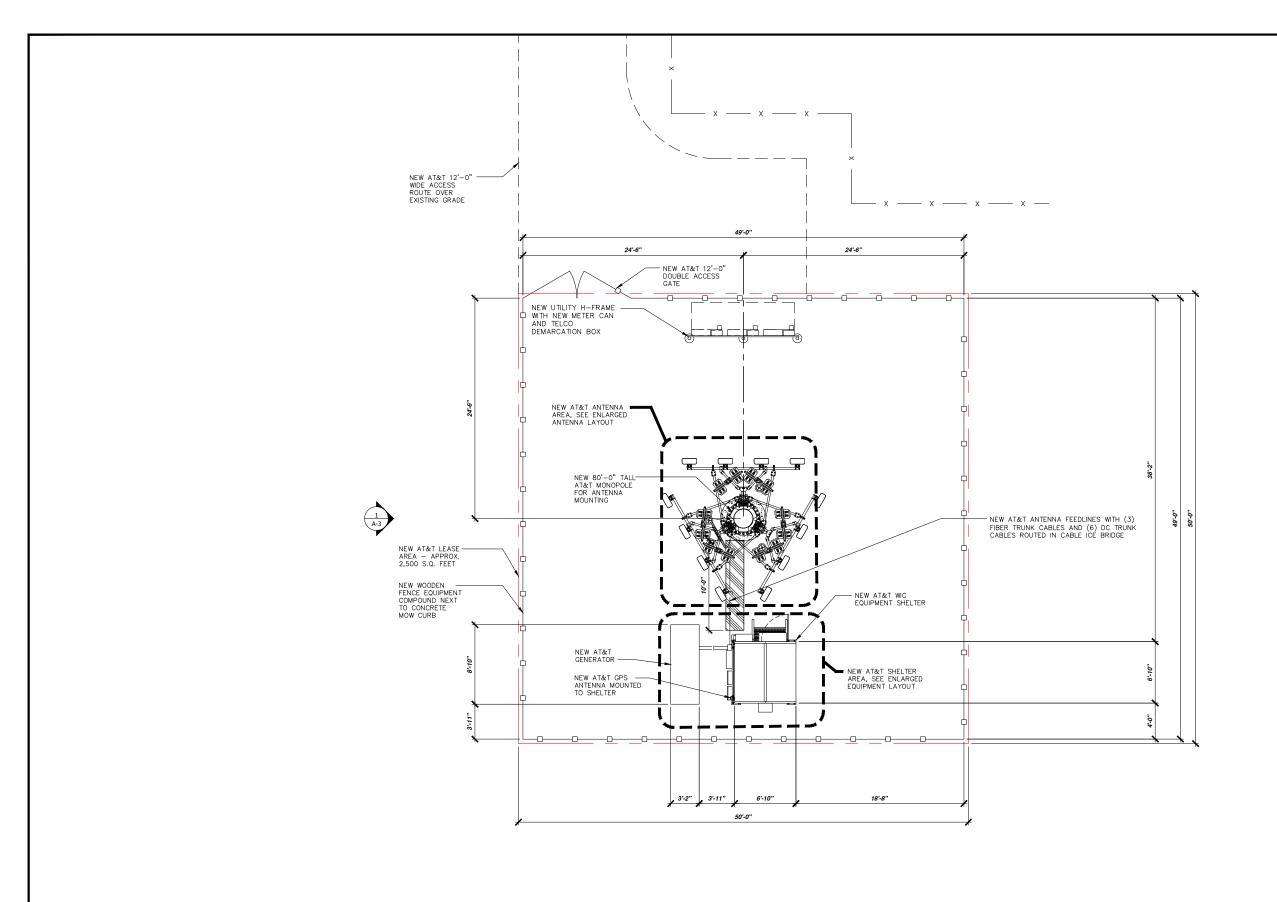
SHEET NUMBER:

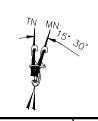
TITLE SHEET

T-1

REV.:









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REVISED ZONING DRAWINGS 11-12-18 11-14-17 ZONING DRAWINGS DATE REVISION DESCRIPTION REV.



PROJECT INFORMATION:

AT&T CELL TOWER AT RIVERVIEW ELEMENTARY (TOWNE STORAGE) SITE ID#: UTL04068 FA#: 13872155 273 ASPEN HILLS BLVD SARATOGA SPRINGS, UT 84045 UTAH COUNTY

CHECKED BY: SGD DA SHEET TITLE:

ENLARGED SITE PLAN

SHEET NUMBER:

A-1.1

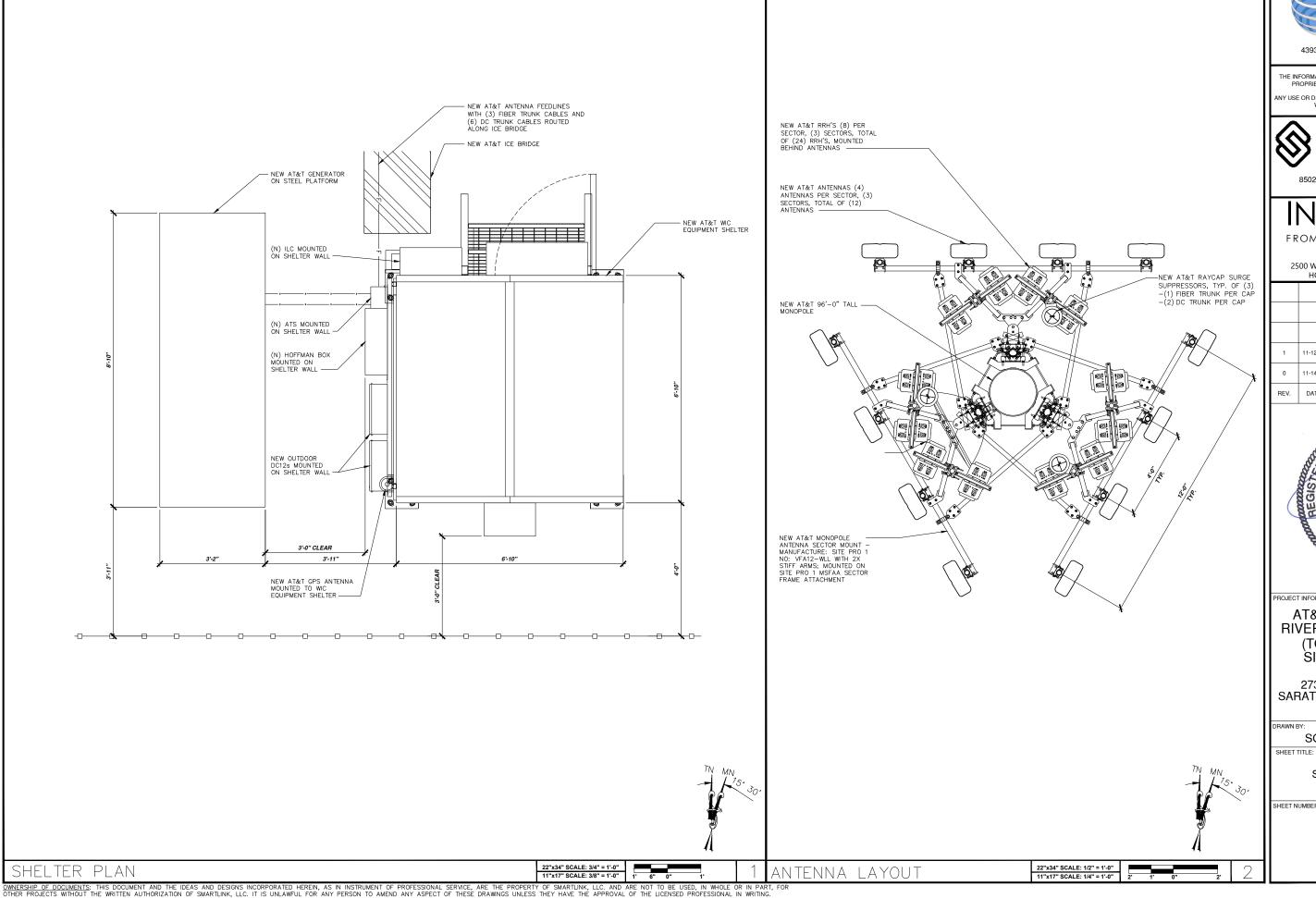
REV.:

22"x34" SCALE: 3/16" = 1'-0" 11"x17" SCALE: 3/32" = 1'-0" 4' 2' 0"

OWNERSHIP OF DOCUMENTS: THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS IN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF SMARTLINK, LLC. AND ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR OTHER PROJECTS WITHOUT THE WRITTEN AUTHORIZATION OF SMARTLINK, LLC. IT IS UNLAWFUL FOR ANY PERSON TO AMEND ANY ASPECT OF THESE DRAWINGS UNLESS THEY HAVE THE APPROVAL OF THE LICENSED PROFESSIONAL IN WRITING.

ENLARGED SITE

PLAN





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11-12-18 REVISED ZONING DRAWINGS 11-14-17 ZONING DRAWINGS DATE REVISION DESCRIPTION



PROJECT INFORMATION

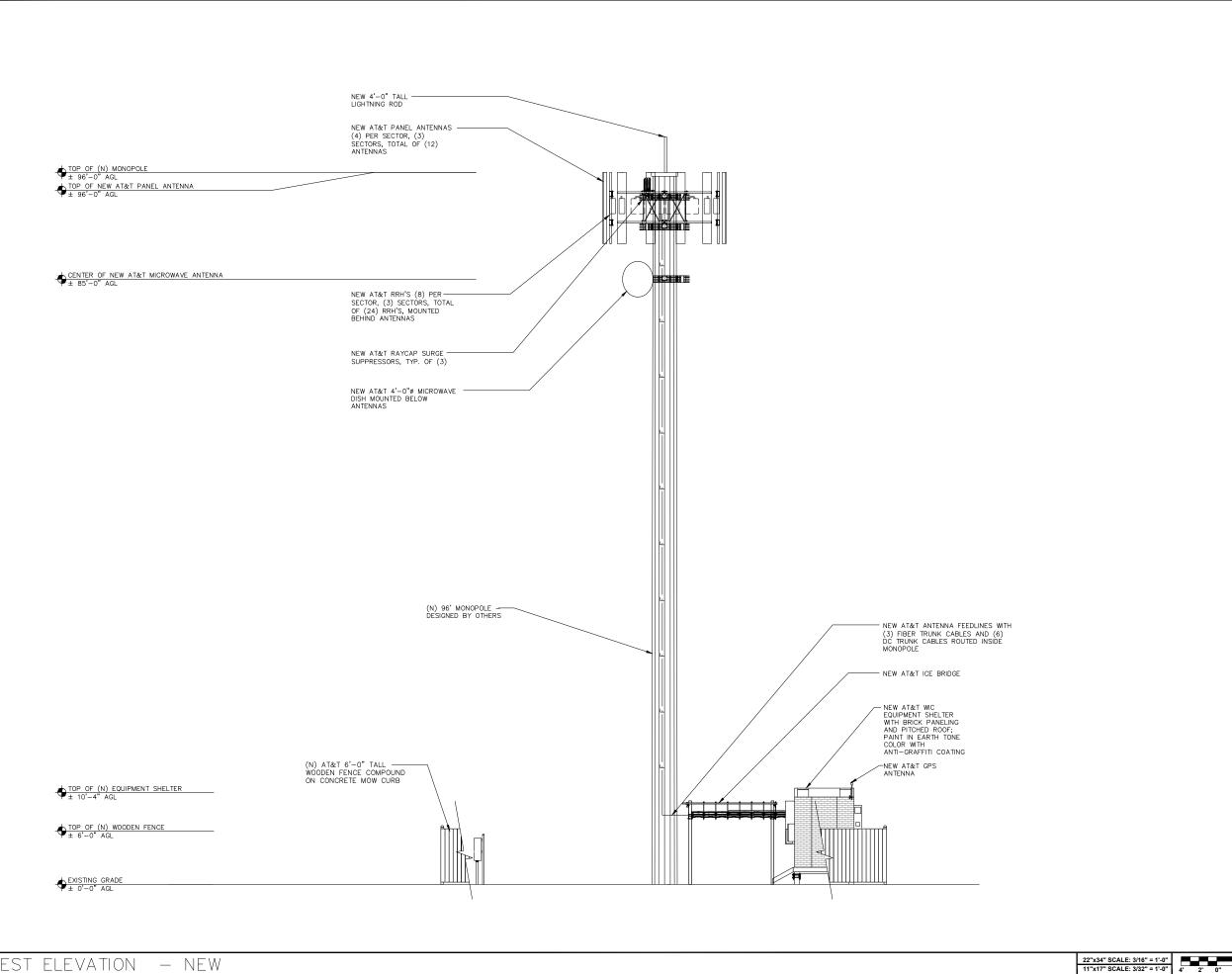
AT&T CELL TOWER AT RIVERVIEW ELEMENTARY (TOWNE STORAGE) SITE ID#: UTL04068 FA#: 13872155 273 ASPEN HILLS BLVD SARATOGA SPRINGS, UT 84045 UTAH COUNTY

DRAWN BY:	CHECKED BY:		
SGD	DA		

SHELTER PLAN AND ANTENNA LAYOUT

SHEET NUMBER:

A-2





4393 RIVERBOAT ROAD, SUITE 400 TAYLORSVILLE, UT 84123

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11-12-18 REVISED ZONING DRAWINGS 11-14-17 ZONING DRAWINGS DATE REVISION DESCRIPTION REV.



PROJECT INFORMATION:

AT&T CELL TOWER AT RIVERVIEW ELEMENTARY (TOWNE STORAGE) SITE ID#: UTL04068 FA#: 13872155 273 ASPEN HILLS BLVD SARATOGA SPRINGS, UT 84045 UTAH COUNTY

DRAWN BY:	CHECKED BY:	
SGD	DA	

SHEET TITLE:

REV.:

WEST ELEVATION

SHEET NUMBER:

A-3



## Planning Commission Staff Report

Site Plan/Conditional Use Permit Welby-Jacob Pond and Pumpstation June 27, 2019 Public Meeting

Report Date: June 20, 2019 Applicant: DAI, Nate Shipp

Owner: Collins Bros. Land Development, LLC

Location: ~925 West Military Road

Major Street Access: Foothill Blvd.

Parcel Number(s) & Size: Part of 53:033:0479, ~1.59 acres

Parcel Zoning: RC (Regional Commercial)

Parcel General Plan: Planned Community Mixed-Use

Adjacent Zoning: RC

Current Use of Parcel: Undeveloped Adjacent Uses: Undeveloped Type of Action: Administrative

Land Use Authority: Site plan – Planning Commission, CUP – City Council

Future Routing: CUP to City Council

Author: David Stroud, Planning Director

#### A. Executive Summary:

This is a request for site plan and conditional use permit approval of a pond and pumphouse at ~925 West Military Road in the RC zone. This location falls under the Wildflower Community Plan. This type of use requires site plan approval by the Planning Commission and a Conditional Use Permit approval by the City Council.

#### Recommendation:

Staff recommends the Planning Commission conduct a public meeting on the site plan and conditional use permit applications, review and discuss the proposal, and select from the motions in Section H and I of this report. The site plan options include approval with conditions, continuation, or denial. The Conditional Use Permit options include forwarding a recommendation of approval to the City Council, continuation, or forwarding a recommendation of denial to the City Council.

#### B. Background:

The subject parcel in in the review process to be crated via the subdivision exception ordinance. This creates a lot which will require future land use approvals. The proposed parcel is approximately 1.59 acres.

#### C. Specific Request:

The applicant is requesting review and approval of the proposed site plan and conditional use permit for a pond and pumphouse which will be owned and maintained by the City.

#### D. Process:

Section 19.13 summarizes the process for site plans and conditional use permits. The Planning Commission is the Land Use Authority of new site plans. Conditional use permits for new construction require a recommendation from the Planning Commission and the City Council is the Land Use Authority. Public hearings are not required for either application.

#### E. Community Review:

Public notices are not required for these applications. However, they are posted on the City website. As of the date of this report no public input has been received.

#### F. General Plan:

The site is designated as Planned Community Mixed-Use on the Land Use Map of the General Plan. The General Plan describes the general characteristics of the Regional Commercial land use designation as follows:

The Planned Community designation includes large-scale properties within the City which exceed 500 acres in size. This area is characterized by a mixture of land uses and housing types, and has a mixture of commercial uses. It is subject to an overall Community Plan that contains a set of regulations and guidelines that apply to a defined geographic area.

Staff conclusion: Consistent. The proposed use is public utility site, which is a conditional use in the Regional Commercial zone. The adjacent properties are vacant.

#### G. Code Criteria:

For full analysis please see the attached Planning Review Checklist.

- 19.04, Land Use Zones: complies.
- 19.05, Supplemental Regulations: complies.
- 19.06, Landscaping and Fencing: complies.
- 19.09, Off Street Parking: **complies**.
- 19.11, Lighting: complies.
- 19.13, Process: **complies** scheduled for PC and CC.
- 19.14, Site Plans: complies.
- 19.15, Conditional Use Permit: complies.
  - o General Standards and Conditions
    - Siting of the structure

- Traffic Circulation
- Compatibility
- 19.16, Site and Architectural Design Standards: complies.

#### H. First Recommendation and Alternatives:

Staff recommends the Planning Commission conduct a public meeting, discuss the application, and choose from the options below.

# Staff Recommended Motion (Site Plan) – approval

"I move to **approve** the proposed site plan of the Welby-Jacob pond and pumpstation at ~925 West Military Road, with the Findings and Conditions below:"

## **Findings**

- 1. The application is consistent with the General Plan, as articulated in Section "F" of the staff report, which section is incorporated by reference herein.
- 2. The application complies with the Land Development Code as articulated in Section "G" of the staff report, which section is incorporated by reference herein.

#### **Conditions:**

- 1. All conditions of the City Engineer shall be met, including but not limited to those in the attached staff report.
- 2. All requirements of the Fire Chief shall be met.
- 3. All other Code and Planning requirements shall be met.
- 4. A separate sign permit and building permit is required for final approval of the signs.
- 5. Any other conditions or changes as articulated by the Planning Commission:

# Alternative 1 – Continuance

The Planning Commission may also choose to continue the item. "I move to **continue** the Welby-Jacob pond and pumpstation site plan/CUP to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

1.			
2			

#### Alternative 2 – Denial

The Planning Commission may also choose to deny the Welby-Jacob pond and pumpstation site plan. "I move to **deny** approval of the site plan of Welby-Jacob pond and pumpstation at ~925 West Military Road, based on the following findings:"

1. The proposed use is not consistent with Chapters 19.04, 19.05, 19.06, 19.09, 19.11, 19.13, 19.14, and/or 19.16, as articulated by the Planning Commission:

## I. Second Recommended Motion (CUP) – approval

"I move to recommend **approval** the proposed conditional use permit for the Welby-Jacob pond and pumpstation at ~925 West Military Road, with the Findings and Conditions below:"

# **Findings**

- 1. The application is consistent with the General Plan, as articulated in Section "F" of the staff report, which section is incorporated by reference herein.
- 2. The application complies with the Land Development Code as articulated in Section "G" of the staff report, which section is incorporated by reference herein.
- 3. The application is consistent with Chapter 19.15 of the Land Development Code.

#### Conditions:

- 1. All conditions of the City Engineer shall be met, including but not limited to those in the attached staff report.
- 2. All requirements of the Fire Chief shall be met.
- 3. All other Code requirements shall be met.
- 4. A separate sign permit and building permit is required for final approval of the signs.
- 5. Any other conditions or changes as articulated by the Planning Commission:

.

#### Alternative 1 - Continuance

The Planning Commission may also choose to continue the item. "I move to **continue** the Welby-Jacob pond and pumpstation CUP to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

1.	 	 
2.		

#### Alternative 2 - Denial

The Planning Commission may also choose to recommend denial of the conditional use permit. "I move to recommend **denial** of the proposed conditional use permit application of Welby-Jacob pond and pumpstation at ~925 West Military Road, based on the following findings:"

1.	The proposed use is not consistent with Section 19.15 of the Code, as articulated by	У
	he Planning Commission:	

#### I. Exhibits:

- 1. City Engineer's Report
- 2. Location Map
- 3. Planning Review Checklist
- 4. Site Plan
- 5. Landscape Plan
- 6. Elevations
- 7. Light Fixture Details

# **Staff Report**

Author: Jeremy D. Lapin, Public Works Director

Subject: Wildflower Welby Jacob Pump Station-Site Plan

Date: June 27, 2019

Type of Item: Site Plan Approval



## **Description:**

**A. Topic:** The Applicant has submitted a Site Plan application. Staff has reviewed the submittal and provides the following recommendations.

## B. Background:

Applicant: DAI, Nate Shipp Request: Site Plan Approval

Location: Approx. 925 West Military Road

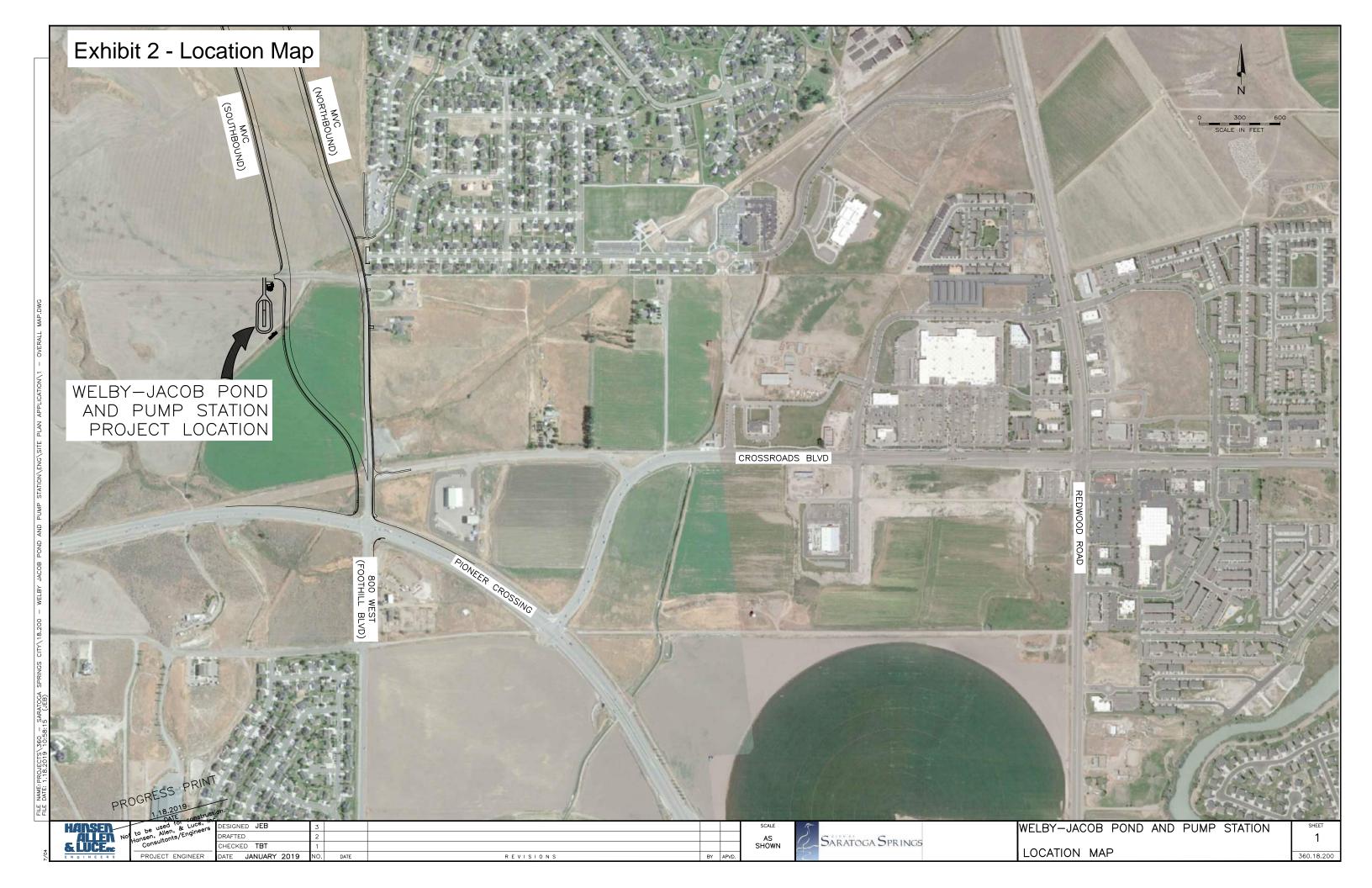
Acreage: 1.59 Acres

**C. Recommendation:** Staff recommends the approval of Site Plan subject to the following conditions:

- 1. All review comments and redlines provided by the City Engineer are to be complied with and implemented with the approved construction drawings.
- 2. Provide a Storm Water Pollution Prevention Plan (SWPPP) following the State template, prior to the pre-construction meeting.
- 3. Developer must secure water rights as required by the City Engineer, City Attorney, and development code.
- 4. Provide easements for all public utilities not located in the public right-of-way.
- 5. Developer is required to ensure that there are no adverse effects to adjacent properties due to the grading practices employed during construction of these plats.
- 6. Developer may be required by the Saratoga Springs Fire Chief to perform fire flow tests prior to the issuance of certificate of occupancy or prior to the commencement of the warranty period.
- **7.** Submittal of as-built drawings in pdf format to the City Engineer is required prior to acceptance of site improvements and the commencement of the warranty period.
- 8. Provide Easements for access to the property from existing, dedicated City Right-ofway. If UDOT is unwilling to provide the City an access easement, provide

documentation that they are granting the right of access through their property via 800 West and Military road until a permanent access is constructed from Mountain View Corridor.

- 9. The pump station property shall be dedicated to the city via plat prior to acceptance of the facility and prior to start of the warranty period.
- 10. Fending acceptable to the City shall be constructed on the perimeter of the site.
- 11. Frontage improvements where future roads abut the property shall be installed at the sole cost of the developer when those adjacent properties are developed.
- 12. Prior to construction it is the responsibility of the developer to obtain permits and approval from the welby-jacob canal company and any other regulatory agencies.



# Exhibit 3 – Planning Review Checklist

# **Application Information**

**Project Name:** Welby-Jacob Pond and Pump Station

**Project Request / Type:** Site Plan /CUP

Meeting Type: Site Plan Public Hearing, CUP Public Meeting

**Applicant:** Nate Shipp - DAI

Owner: Collins Brothers Land Development, LLC

**Location:** ~925 West Military Road

Major Street Access:Foothill Blvd.Parcel Number(s) and size:Part of 58:033:0479

Land Use Designation: Planned Community Mixed Use

Parcel Zoning:Regional CommercialAdjacent Zoning:Planned Community

Current Use:AgricultureAdjacent Uses:AgriculturePrevious Meetings:N/APrevious Approvals:N/A

**Type of Action:** Administrative

Land Use Authority: Site Plan – Planning Commission; CUP – City Council

**Future Routing:** City Council

Planner: David Stroud, Planning Director

# Section 19.13 – Application Submittal

Application Complete: Yes.

• Rezone Required: No.

• General Plan Amendment required: No.

• Additional Related Application(s) required: No.

#### Section 19.13.04 – Process

• DRC: 5/20/19

Neighborhood Meeting: N/A

PC: June 27, 2019CC: July 16, 2019

## **General Review**

#### **Building Department**

- Setback detail
- Lot numbering per phase (i.e. Phase 1: 100, 101, 102. Phase 2: 200, 201, 202, etc.)
- True buildable space on lots (provide footprint layout for odd shaped lots)
- Lot slope and need for cuts and fills

# **Fire Department**

- Commercial:
  - o Fire flows shall meet existing needs as well as future development in the area.
  - O Hydrant spacing shall not exceed 300'.
  - Buildings shall be fire sprinkled and meet NFPA 13 requirements and all applicable IFC 2015 edition requirements and appendices.

- O Alarm system and notification systems shall all be tied together with the fire sprinkler system and monitored 24/7, 365 by a third party monitoring company.
- O This same system and / or monitoring company shall also be able to notify UVSSD 911 dispatch center 24/7 365.
- o All sprinkler plans and alarm plans shall be third party reviewed by PCI in Centerville, Utah, Attn: Bob Goodloe.

## GIS / Addressing

comments

#### **Additional Recommendations:**

•

# **Code Review**

o 19.04, Land Use Zones o Zone: RC o Use: PC MU

19.04.01 Req	uirements	Reg	Regional Commercial			
Category To Be Reviewed	Regulation	Determination	How			
Development Size (Minimum)						
Lot Size (Minimum)	30,000 sq. ft.	Complies	Exempt as per 19.15.06.06			
Front/Corner Side Setback (Minimum)	≥ PUE dimension	Complies	22'			
Interior Side Setback (Minimum)	≥ PUE dimension	Complies	23' and 119'			
Rear Setback (Minimum)	≥ PUE dimension	Complies	294'			
Building Separation (Minimum)						
Lot Width (Minimum)						
Lot Frontage (Minimum)						
Building Height (Maximum)	50'	Complies	Exempt as per 19.15.06.06			
Lot coverage (Maximum)	50%	Complies	Exempt as per 19.15.06.06			
Building Size (Minimum)	1,000 sq. ft.	Complies	Exempt as per 19.15.06.06			
Building Size (Maximum)						

19.05 Supplemental Regulations		
Regulation	Compliance	Findings
<b>Flood Plain:</b> Buildings intended for human occupancy shall be constructed at least one foot above the base flood elevation.	Complies.	Outside floor plan
Water & Sewage: Each lot shall be connected to City water and sewer.	Complies.	Sewer connection not needed
<b>Transportation Master Plan:</b> Lots shall not interfere with the Transportation Master Plan.	Complies.	No interference

Property Acces	s - All lots	shall abut a	dedicated	public or private road.	
Troperty meets	<i>7</i> 111 10 to	man abat a	acarcaica	public of private roug.	

Complies.

To be dedicated when adjacent development occurs. Easement granting access to be recorded.

19.06 Landscaping and Fencing				
Landscape Plan				
Regulation	Compliance	Findings		
Landscape Architect: Landscaped plans shall be prepared by a licensed landscape architect.	Complies.	Landscaping not required, lack of water in area		
<b>Existing Conditions:</b> Show the location and dimension of all existing and proposed structures, property lines, easements, parking lots, power lines, rights-of-way, ground signs, refuse areas, and lighting.	Complies.	Indicated on plan		
<b>Planting Plan:</b> Show location and planting details for all proposed vegetation and materials. Indicate the size of the plant material at maturation. All existing vegetation that will be removed or remain must be identified.	Complies.	Not needed as water is unavailable		
<b>Plants:</b> The name (both botanical and common name), quantity, and size of all proposed plants.	Complies.	N/A		
<b>Topography:</b> Existing and proposed grading of the site indicating contours at two feet intervals.	Complies.	Indicated on plan		
<b>Irrigation:</b> Irrigation plans showing the system layout and details.	Complies.	N/A		
<b>Fencing:</b> Location, style, and details for proposed and existing fences and identification of the fencing materials.	Complies.	Black vinyl coated chain link (6')		
<b>Data Table:</b> Table including the total number of each plant type, and total square footage and percentage of landscaped areas, domestic turf grasses, decorative rock, mulch, bark, and drought tolerant plant species.	Complies.	N/A. Trees to be planted by the City when road improvements are installed in the future		
<b>Completion of Landscape Improvements:</b> All required landscaping improvements shall be completed in accordance with the approved landscape plans.	Complies.	N/A		
Planting Standar	ds			
Deciduous Trees: 2" in caliper.	Complies.	N/A		
Evergreen Trees: 6' in height.	Complies.	N/A		
<b>Tree Base Clearance:</b> 3' diameter around every tree must be kept clear of turf and rock mulch	Complies.	N/A		
<b>Shrubs:</b> 25% of required shrubs must be a minimum of 5 gallons in size.	Complies.	N/A		
<b>Turf:</b> No landscaping shall be comprised of more than seventy percent turf, except within landscaped parks.	Complies.	N/A		
Artificial Turf: Not allowed	Complies.	N/A		
<b>Drought Tolerant Plants:</b> 50% of all plants shall be drought tolerant.	Complies.	N/A		
<b>Rock Mulch:</b> Rock mulch shall be two separate colors and separate sizes and must be contrasting in color from the pavement and other hard surfaces. All colors used must be earth tones.	Can Comply.	Indicate two colors to be used.		
Design Requirements				
<b>Evergreens:</b> Evergreens shall be incorporated into landscaped treatment of sites where screening and buffering are required.	Complies.	N/A		
<b>Softening of Walls and Fences:</b> Plants shall be placed intermittently against long expanses of building walls, fences, and barriers to create a softening effect.	Complies.	N/A		
Planting and Shrub Beds: Planting and shrub beds are encouraged to be used in order to conserve water.	Complies.	N/A		
<b>Water Conservation:</b> Water-conserving sprinkler heads and rain sensors are required. Drip lines should be used for shrubs and trees.	Complies.	N/A		

placed along property lines abutting open space, parks, canals, and trails. In	Complies.	Not a residential development
raised within clear sight triangles.  Required Residential Fencing: Fencing in residential development shall be		
intersection of straight ROWs and property lines, whichever is greater landscaping shall not exceed 3' in height and the area shall not be bermed or		
driveways, or sidewalks, for a distance of twenty feet back from the point of curvature of curved ROWs and property lines or thirty feet back from the	Complies.	Landscaping not to be installed
of not more than three feet and the grade at such intersections shall not be bermed or raised. Clear sight is located at all intersections of streets,		
Clear Sight Triangle: All landscaping and fencing shall be limited to a height		
front yard space of any residential lot.	Compiles.	Commerciai ioi
Front Yards: Fences exceeding three feet in height shall not be erected in any	Complies.	Commercial lot
Fencing and Screen	ning	
<b>Drip Lines:</b> Drip lines must be used in plater beds.	Complies.	N/A
Edging: Edging must be used to separate planter and turf areas.	Complies.	N/A
cover, decorative rock, landscaping rocks, or similar materials shall be used, and materials must be heavy enough to not blow away in the wind	Complies.	N/A
Materials: High quality materials such as wood chips, wood mulch, ground	Complies	NI/A
Weed Barrier: A high quality weed barrier or pre-emergent shall be used.	Complies.	N/A
Planter Beds		
Chapter.		
this Chapter, and shall comply with minimum sizes as outlined in the	Complies.	N/A
Replacement trees shall be in addition to the minimum tree requirements of		
Deciduous trees smaller than four inches in caliper, or mature ornamental trees, that are removed shall be replaced on a one to one ratio.	Complies.	N/A
deciduous shall be deciduous.	Complies.	IVA
The replacement trees for evergreen trees shall be evergreens, and for	Complies	N/A
increased by double the number of such trees removed.	Complies.	N/A
If preservation is not possible, the required number of trees shall be		
preserved if possible. If a mature tree is preserved, an area around the roots as wide as the existing canopy shall not be disturbed.		
inches (4") in caliper, shall be identified on the landscape plan and	Complies.	N/A
greater, and existing mature deciduous or decorative trees of more than four	·	
<b>Tree Preservation:</b> Existing mature evergreen trees of 16 feet in height or		
incorporated into the landscape treatment of the proposed site.	Complies.	N/A
Preservation of Existing \( \) Where possible and appropriate, existing native vegetation must be		
	Vogetetien	
The maximum height or width at maturity of the tree species planted is less than 5 feet to any pole, line, or structure.		
consent.		
<ul> <li>The Power Company or owner of the power line gives written</li> </ul>	Complies.	N/A
The City Council gives its approval.		
ten feet of power lines, poles, or utility structures unless:		
Trees and Power Poles: No trees shall be planted directly under or within		
adjacent to structures, particularly where proposed structures have large empty walls.	Complies.	N/A
<b>Placement:</b> Whenever possible, landscaping shall be placed immediately	C 1	A7/A
side of structures.		
west sides of structures. Evergreens are encouraged to be planted on the north	Complies.	N/A
consumption. Deciduous trees are encouraged to be planted on the south and	G1'	NI/A
<b>Energy Conservation:</b> Placement of plants shall be designed to reduce energy		

Fences along open space, parks, canals, and trails shall be semi-private. Exception: privacy fencing is permitted for property lines abutting trail corridors that are not City maintained and are both adjacent to and visible from an arterial.	Complies.	Future trail to be located on other side of canal
Fencing along arterial roads shall be of a consistent material and color within each development.	Complies.	Not adjacent to an arterial road
Fencing along open space, parks, and trails may be less than six feet in height but shall not be less than three feet in height, at the discretion of the property owner or HOA as applicable.	Complies.	Not adjacent to open space
<b>Screening at Boundaries of Residential Zones:</b> For residential developments abutting active agricultural property or operations, a solid fence or wall shall be installed and maintained along the abutting property line.	Complies.	Not adjacent to residential
Amount of Required Land	dscaping	
Portions of the property that are not developed with structures, rights of ways, or parking areas shall be landscaped.	Complies.	Exempt as per 19.15.06.06
Multi-family, common space not including parks, and nonresidential development in all Zones shall be required to adhere to the minimum landscaped standards in 19.06.07 of the Land Development Code.	Complies.	Exempt as per 19.15.06.06
At least 50% of the landscaped area shall be covered with live vegetation at maturity. The percentage may be reduced to 40% in areas where bark mulch, wood or plant fiber mulch, or rubber mulch is used instead of rock mulch.	Complies.	Exempt as per 19.15.06.06

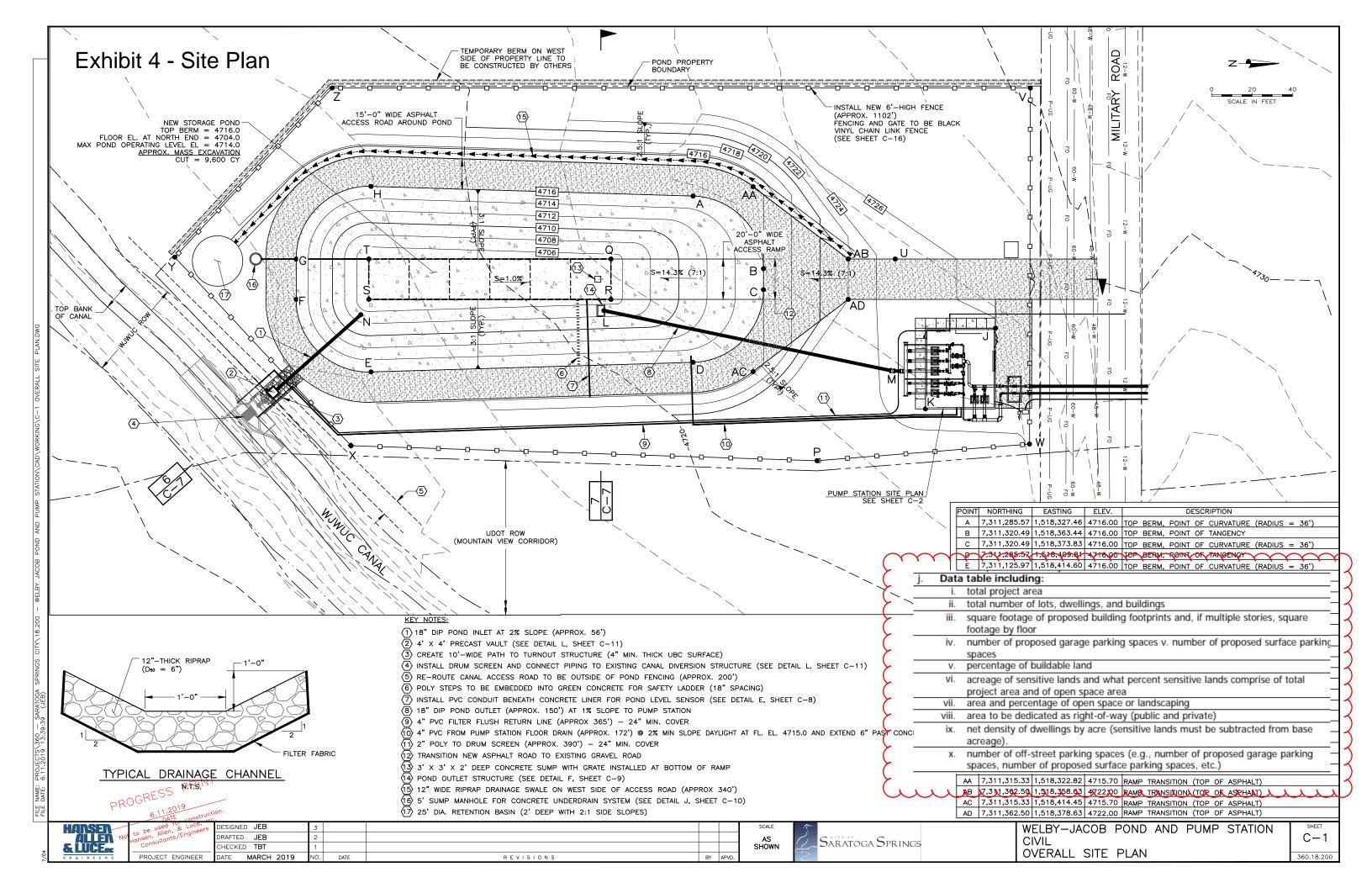
19.09 Off Street Parking				
General Provisions				
Regulation	Compliance	Findings		
<b>Materials:</b> Parking areas shall consist of concrete, asphalt, or other impervious materials approved in the City's adopted construction standards	Complies.	Concrete paving provided		
Parking Area Access: Common Access: Parking areas for one or more structures may have a common access so long as the requirements of all City ordinances, regulations, and standards are met. The determination of the locations for a common access shall be based upon the geometry, road alignment, and traffic volumes of the accessed road per the Standard Technical Specifications and Drawings.	Complies.	Single access		
Sidewalk Crossing: All non-residential structures are required to provide parking areas where automobiles will not back across a sidewalk to gain access onto a public or private street.	Complies.	Provided		
Cross Access: Adjacent non-residential development shall stub for cross-access. Developers must provide the City with documentation of cross-access easements with adjacent development.	Complies.	Cross-access not needed from/to a utility site		
<b>Lighting:</b> Parking areas shall have adequate lighting to ensure the safe circulation of automobiles and pedestrians. Lighting shall be shielded and directed downward.	Complies.	No parking lighting		
Location of Parking Areas: Required off-street parking areas for non-residential uses shall be placed within 600 feet of the main entrance to the building. Unenclosed parking for residential areas shall not be provided in rear yards, unless said yard abuts an alley-type access or is fenced with privacy fencing	Complies.	Provided		
Curb Cuts and Shared Parking: In most cases, shared parking areas shall share ingress and egress. This requirement may be waived when the City Engineer believes that shared accesses are not feasible. In reviewing the site plans for the shared parking areas, the City Engineer shall evaluate the need for limited access, appropriate number of curb cuts, shared driveways, or other facilities that will result in a safer, more efficient parking and circulation pattern.	Complies.	No shared access		

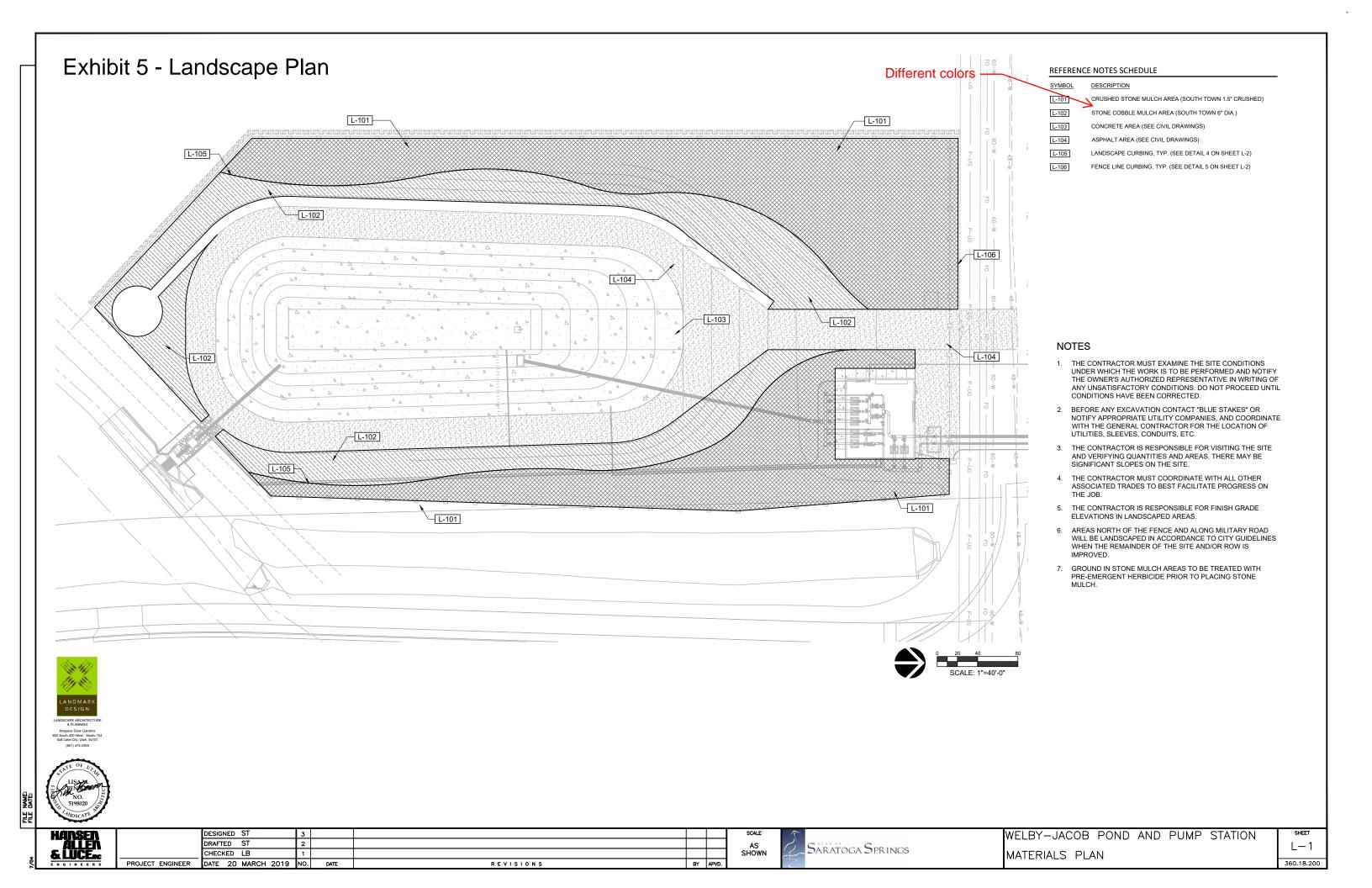
19.11 Lighting				
General Standar	ds			
Regulation	Compliance	Findings		
Material: All Lighting Fixtures and assemblies shall be metal.	Can Comply.	Provide information		
<b>Base:</b> All lighting poles shall have a 16" decorative base.	N/A.	V		
<b>Type:</b> All lighting fixtures shall be of the full cutoff variety. Shoebox fixtures	Can Comply.	Provide information		
are prohibited.		V		
Angle: Shall be directed downward.	Can Comply.	Provide information		
Lamp: Bulbs may not exceed 4000K	Can Comply.	Provide information		
<b>Drawings:</b> Design and location of fixtures shall be specified on the plans	Complies.	Two lights on building		
Flags: The Unites States flag and the state flag shall be permitted to be illuminated from dusk till dawn. All other flags shall not be illuminated past 11:00 p.m. Flag lighting sources shall not exceed 10,000 lumens per flagpole. The light source shall have a beam spread no greater than necessary to illuminate the flag.	N/A.			
<b>Prohibited Lighting:</b> Searchlights, strobe lights and any laser source light or any similar high intensity light.	Complies.			
<b>Descriptions:</b> Descriptions of the illuminating devices, fixtures, lamp supports, and other devices. This description may include, but is not limited to, manufacturers' specifications, drawings, and sections.	Can Comply.	Provide information		
Nonresidential Lighting				
All wall-mounted fixtures shall not be mounted above 16'. The exception shall				
be those instances where there is a second story access directly from the outdoors, and under-eave lighting. Wall-mounted lighting shall be only for the illumination of vertical surfaces such as building facades and signs, and shall not cast illumination beyond the surface being illuminated.	Complies.	Lights mounted at eight feet		
Intermittent lighting must be of the "motion sensor" type that stays on for a period of time not to exceed ten (10) minutes and has a sensitivity setting that allows the lighting fixture to be activated only when motion is detected on the site.	Can Comply.	Indicate motion lighting is to be used		
All trespass lighting shall not exceed one foot-candles measured at the property line, except that trespass lighting into residential development shall not exceed 0.1 foot-candles measured at the property line.	Can Comply.	Provide photometric plan		
Service station canopies must utilize canopy lights that are fully recessed into the canopy or are fully shielded by the canopy.	N/A.			
Lighting Plan				
Plans indicating the location and types of illuminating devices on the premises.	Can Comply.	Provide details		
Descriptions of the illuminating devices, fixtures, lamp supports, and other devices. This description may include, but is not limited to, manufacturers' specifications, drawings, and sections.	Can Comply.	Provide details		
Photometric sheet showing measurement of light intensity across the site and onto adjacent property in terms of candela, lumens, and foot-candles.	Can Comply.	Provide details		

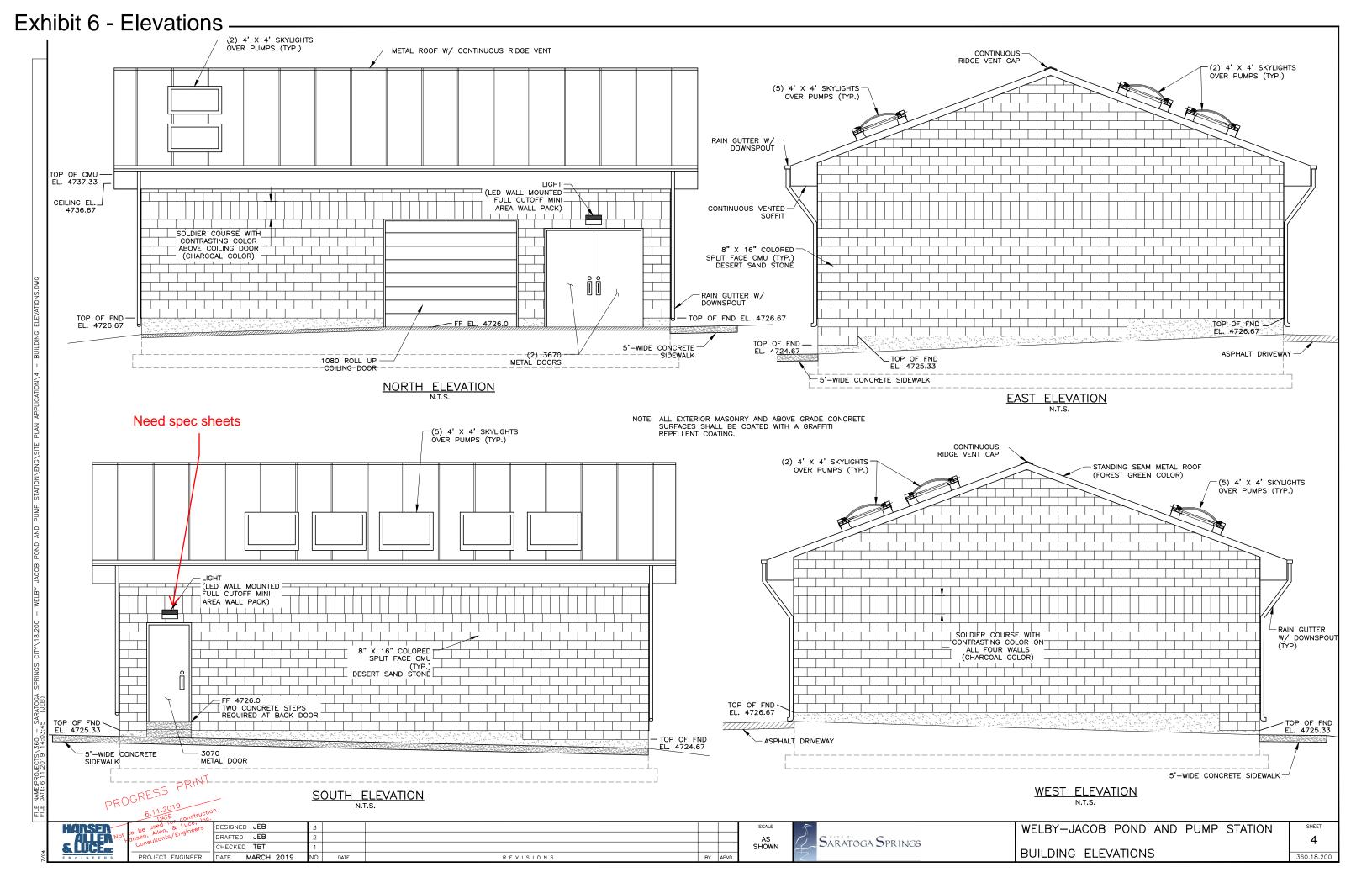
19.13 Process	
Regulation	Findings
Neighborhood Meeting.	N/A
Notice / Land Use Authority.	N/A Planning Commission site plan and CUP City Council
Master Development Agreement.	N/A
Phasing Improvements.	N/A
Payment of Lieu of Open Space.	/N/A

19.16 Site and Architectural Design Standards		
Regulation	Compliance	Findings
Architectural Standards	Complies.	Exempt from 19.16.  Must have: - standing seam roofing and masonry walls - 4:12 minimum pitch roof - earth tones

Fiscal Impact		
Regulation	Findings	
Is there any City maintained open space?	No	
What is the anticipated cost to the City?	Tree and rock installation in the future	
When will City maintenance begin?	Future, TBD	











# **MINUTES - Planning Commission**

Thursday, June 6, 2019 City of Saratoga Springs City Offices 1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Call to Order - 6:00 p.m. by Chairman Kirk Wilkins

**Present**: Commission Members: Kirk Wilkins, Bryan Chapman, Christopher Carn, Troy Cunningham Staff: Dave Stroud, Planning Director; Gordon Miner, City Engineer; Nicolette Fike, Deputy Recorder **Excused:** Sandra Steele, Bryce Anderson, Ken Kilgore

- 1. Pledge of Allegiance led by Commissioner Wilkins.
- 2. Roll Call A quorum was present
- **3. Public Input Opened** by Chairman Kirk Wilkins; receiving no public comments, the Public Hearing was **Closed** by Chairman Kirk Wilkins.

#### 4. Public Hearing: Update to the Transportation Master Plan.

City Engineer Gordon Miner presented the update. This update is to add a traffic signal on Redwood Road at 1140 North which is a planned intersection of Medical Drive from the west. It was noted that Dr. McCune of Utah Valley Pediatrics sent a letter to the Commissioners expressing his favor of a traffic signal near his business.

**Public Hearing Open** by Chairman Kirk Wilkins; receiving no public comments, the Public Hearing was **Closed** by Chairman Kirk Wilkins.

Commissioner Carn asked what UDOT's alternative plan might be. City Engineer Gordon Miner advised that he could not speak on behalf of UDOT. There are ongoing discussions with them.

Commissioner Wilkins noted that with hospitals in the area, emergency vehicles would need control of the light.

Motion made by Commissioner Cunningham to forward a positive recommendation to City Council to adopt the June 2019 Update to the Transportation Master Plan. Seconded by Bryan Chapman Aye: Bryan Chapman, Christopher Carn, Troy Cunningham, Kirk Wilkins. Motion passed 4 - 0.

## 5. Approval of Minutes:

a. May 23, 2019

Commissioner Wilkins asked to include in his comments his note of not being subject to title 19 and approval of the application.

Motion made by Commissioner Chapman to approve the minutes of May 23, 2019 as corrected. Seconded by Commissioner Carn. Aye: Bryan Chapman, Christopher Carn, Troy Cunningham, Kirk Wilkins. Motion passed 4 - 0.

- **6. Reports of Action.** No Reports were needed.
- 7. Discussion of City Code Title 19.07. Planned Unit Development. No discussion was made.
- **8.** Commission Comments. No comments were made.
- 9. Director's Report. Planning Director Dave Stroud gave a report of the planning department.
- 10. Possible motion to enter into closed session No closed session was held.
- 11. Meeting Adjourned Without Objection at 6:11 p.m. by Chairman Kirk Wilkins.

Date of Approval	Planning Commission Chair
	Kirk Wilkins
Deputy City Recorder	

# Chapter 19.08. Home Occupations.

#### **Sections:**

19.08.01.	Purpose.
19.08.02.	Categories
19.08.03.	Performance Standards
19.08.04.	Approval Process.
19.08.05.	Noncompliance.

#### 19.08.01. Purpose.

The City of Saratoga Springs encourages home-based enterprises as an appropriate form of local economic development. Home Occupations are permitted in dwellings only if the proposed use does not adversely impact surrounding residents or affect the residential characteristics of the neighborhood as described in this Chapter.

# **19.08.02.** Categories.

- 1. Class 1: A low impact Home Occupation that:
  - a. does not receive more than two patrons, customers, clients, deliveries, or students, on any given day and
  - b. does not increase odors or noise, and
  - c. does not have any on-premise employees that are not members of the resident family or household.
- 2. Class 2: A Home Occupation that:
  - a. receives between three and eight total patrons, customers, clients, deliveries, or students at any given time, up to a maximum of 16 total patrons, customers, clients, deliveries, or students in any given day, or
  - b. has up to two on-premise employees that are not members of the resident family or household, or
  - c. is the office for a construction, landscaping, delivery, installation, or similar business and one or more business vehicle are parked or dispatched from the home.
- 3. Class 3: All other Home Occupations.

#### 19.08.03. Performance Standards.

Proposed Home Occupations must be in compliance with the following performance standards to ensure that adverse impacts to others are minimized and that the residential characteristics are preserved. Home Occupations are to be clearly incidental and secondary to the residential use of the property. All Home Occupations may be allowed if approved and in compliance with the terms of this Chapter and may be revoked if these performance standards are not maintained. Performance standards include:

## 1. **Dwelling Type**.

- a. Class 1 Home Occupations are permitted in any single or multi-family dwelling, or an accessory building to such a dwelling.
- b. Class 2 and 3 Home Occupations are only permitted in single family dwellings, or an accessory building to such a dwelling.
- 2. **Floor Area.** A Home Occupation shall not occupy or use more than 40% of the finished square footage of the dwelling at any given time.
- 3. **Prohibited Uses.** Restaurants, or any uses in Section 19.04. that are permitted or conditional uses solely in the Office Warehouse and/or Industrial Zones, are prohibited as Home Occupations.
- 4. **Building and Fire Codes.** A Home Occupation, including Home Occupations located in accessory buildings, shall comply with all applicable building and fire codes. For example, if a Home Occupation is located in a garage, approval for occupancy must be given by the Building Official and Fire Marshall.
- 5. **Employees.** Home Occupations may have no more than two on-premise employees who are not members of the resident family or household.
- 6. **Parking.** Home Occupations shall provide adequate off-street parking as required by Chapter 19.09. Vehicles used in the occupation, other than passenger cars, may not be parked on site, unless parked in the home's garage or other solid structure to shield the vehicles from view. Further, Home Occupations may not be located in required parking spaces (whether covered or uncovered) under Chapter 19.09.
- 7. **Outdoor Storage.** Outdoor storage associated with a Home Occupation shall be subject to the same performance standards governing other outdoor storage on residential lots.
- 8. **Outdoor Activity.** Outdoor activity may occur for a Home Occupation so long as the activity takes place in a fenced area and does not create an unreasonable disturbance to neighboring properties.
- 9. **Signs.** A Home Occupation may display a sign not exceeding the size permitted for permanent signage in Section 19.18. The design and placement of a proposed sign must receive approval per Chapter 19.18. Signs that in any manner are electronic, electric, lighted, or back-lit are strictly prohibited.
- 10. **Hours of Operation.** Class 2 and 3 Home Occupations shall operate only between 7:00 A.M. and 10:00 P.M., except for pre-schools or day care which may operate from 6:00 a.m. to 10:00 p.m..

- 11. **Hazardous Materials.** No Home Occupation shall generate hazardous wastes or materials that increase the danger of fire, or cause fumes or odors that may be objectionable to neighboring residents.
- 12. **Exterior Appearance.** No Home Occupation shall alter the exterior of the home to differ from the colors, materials, construction, or lighting of the home before it was used as a Home Occupation.
- 13. **Retail Sales.** Service related Home Occupation may conduct incidental retail sales provided that the sales do not increase traffic or violate any other performance standard.

## 14. Capacity.

- a. Class 2 Home Occupations shall not exceed eight patrons, customers, clients, deliveries, or students at any one time, and shall not exceed 16 patrons, customers, clients, deliveries, or students in one day.
- b. Class 3 Home Occupations shall not exceed ten patrons, customers, clients, deliveries, or students at any one time, and shall not exceed 40 patrons, customers, clients, deliveries, or students in one day.

#### 15. Traffic and Utilities Use.

- a. Class 1 Home Occupations shall not generate traffic or increase the demand for utilities that exceeds those normally associated with residential uses.
- b. Class 2 and 3 Home Occupations shall provide parking and traffic plans to ensure traffic increases are minimal and appropriately mitigated. For example, a preschool may require parents to stagger pick-up and drop-off times to reduce the number of cars present at any one time.
- 16. **Business License.** A business license is required for all Home Occupations as allowable per State Code.
- 17. **Additional Home Occupations.** More than one Home Occupation is allowed for each lot or parcel if the combined Home Occupations meet all requirements of this Chapter as if all were one Home Occupation.

## 19.08.04. Approval Process.

- 1. Class 1 applicants are not required to obtain a Home Occupation Permit.
- 2. All Class 2 and 3 applicants are required to submit a Home Occupation application, sketch of the floor plan, signed affidavit of meeting and maintaining the requirements of this Section, and an application review fee. If applicable, the applicant shall be required to show required licenses and reviews of other governmental agencies or City departments to legitimize the proposed Home Occupation.
- 3. Decisions regarding Class 2 Home Occupations are made by the Planning Director.

- a. The Planning Director shall review the Home Occupation and determine whether it is in full compliance with performance standards of this Chapter. The Planning Director may approve the application, approve the application with conditions, or deny the application.
- 4. Decisions regarding Class 3 Home Occupations are made by the Planning Commission, per the Conditional Use permit process.
  - a. The Planning Commission shall review the Home Occupation and determine whether it is in full compliance with performance standards of this Chapter. The Planning Commission is required to hold a public hearing. After conducting a public hearing and reviewing the application, the Planning Commission may approve the application, approve the application with conditions, or deny the application.

# 19.08.05. Noncompliance.

A Home Occupation that violates the City Code, Title 19, this Chapter, or any condition imposed by City staff or the planning commission may have its business license revoked in accordance with Chapter 5.01 of the City Code. City staff may investigate non-compliance and forward any complaints to the License Officer, Code Enforcement Officer, or any other responsible City department or employee.

# Chapter 19.09. Off-Street Parking Requirements.

### **Sections:**

19.09.01.	Purpose.
19.09.02.	Required Parking.
19.09.03.	General Provisions.
19.09.04.	Submittal and Approval of Parking Areas.
19.09.05.	Parking Requirements and Shared Parking
19.09.06.	Dimensions for Parking Stalls.
19.09.07.	Accessible Parking.
19.09.08.	Landscaping in Parking Areas.
19.09.09.	Pedestrian Walkways and Accesses.
19.09.10.	Required Minimum Parking.

# 19.09.01. Purpose.

The purpose of this Chapter is to reduce congestion and traffic hazards on public rights-of-way by requiring adequate, functional, and effective use of off-street parking areas. This chapter also establishes minimum landscaping requirements in order to: reduce adverse impacts of headlight glare and lighting within the parking area; improve circulation within parking areas by channeling vehicles and pedestrians; provide climatic relief from broad expanses of pavement; and improve the appearance of the site and surrounding neighborhood.

# 19.09.02. Required Parking.

Off-street parking shall be provided according to standards noted in this Chapter for all newly constructed buildings, and additional parking shall be provided for any structure or use that is legally expanded.

#### 19.09.03. General Provisions.

- 1. **Materials for Parking Areas.** Parking areas shall consist of concrete, asphalt, or other impervious materials approved in the City's adopted construction standards.
- 2. **Maintenance of Parking Areas.** Pavement, striping, landscaping, and lighting are required to be maintained in all parking areas. During times of snowfall, parking areas shall be cleared of snow as soon as practical.

# 3. Parking Area Access.

a. Common access. Parking areas for one or more structures may have a common access so long as the requirements of all City ordinances, regulations, and standards are met. The determination of the locations for a common access shall be based upon the geometry, road alignment, and traffic volumes of the accessed road per the Standard Technical Specifications and Drawings.

- b. Sidewalk crossing. All non-residential structures are required to provide parking areas where automobiles will not back across a sidewalk to gain access onto a public or private street.
- c. Cross access. Adjacent non-residential development shall stub for cross-access. Developers must provide the City with documentation of cross-access easements with adjacent development.
- 4. **Lighting in Parking Areas.** Parking areas shall have adequate lighting to ensure the safe circulation of automobiles and pedestrians. Lighting shall be shielded and directed downward to prevent nuisances to adjacent properties or uses.
- 5. **Location of Parking Areas**. Required off-street parking areas for non-residential uses shall be placed within 600 feet of the main entrance to the building. Unenclosed parking for residential areas shall not be provided in rear yards, unless said yard abuts an alley-type access or is fenced with privacy fencing.
- 6. **Storm Water Runoff.** All parking areas other than single-family dwellings shall be reviewed and approved by the City Engineer for adequate drainage of storm water runoff.
- 7. **Curb Cuts and Shared Parking.** In most cases, shared parking areas shall share ingress and egress. This requirement may be waived when the City Engineer believes that shared accesses are not feasible. In reviewing the site plans for the shared parking areas, the City Engineer shall evaluate the need for limited access, appropriate number of curb cuts, shared driveways, or other facilities that will result in a safer, more efficient parking and circulation pattern.

(Ord. 17-14, Ord. 17-08, Ord. 14-13)

# 19.09.04. Submittal and Approval of Parking Areas.

- 1. Plans depicting the parking areas for newly constructed buildings and expanded structures or uses shall be submitted:
  - a. in conjunction with a Site Plan for all non-residential and multi-family residential developments; or
  - b. in conjunction with a preliminary plat application for residential and multi-family residential developments, or
  - c. in conjunction with a building permit application for all single-family homes.
- 2. Parking plans shall show the following: the required number of stalls and aisles scaled to the correct dimensions; the correct number of ADA accessible parking spaces; storm water drainage capabilities; lighting; landscaping and irrigation; and pedestrian walkways.

(Ord. 14-13)

# 19.09.05. Parking Requirements and Shared Parking

This Section describes criteria to be used in assessing required parking. The following criteria shall be used in conjunction with the table found in Section 19.09.10, Required Minimum Parking, when determining required parking for any project:

- 1. Available on-street parking shall not be counted towards meeting the required parking stalls.
- 2. When a parking requirement is based upon square footage, the assessed parking shall be based upon gross square footage of the building or use unless otherwise specified in the requirement.
- 3. When parking requirements are based upon the number of employees, parking calculations shall use the largest number of employees who work at any one shift. Where shift changes may cause substantial overcrowding of parking facilities, additional stalls may be required.
- 4. When a development contains multiple uses, more than one parking requirement may be applied.
- 5. Tandem parking spaces will not be counted as parking spaces for non-residential uses except for stacking spaces where identified.
- 6. Any fraction obtained when calculating the parking requirement shall be rounded up to the next whole number to determine the required number of parking stalls.
- 7. Where no comparative land use standard for parking is found in Section 19.09.10, Required Minimum Parking, the Land Use Authority for the related development shall determine an appropriate requirement using the following criteria:
  - a. the intensity of the proposed use;
  - b. times of operation and use;
  - c. whether the hours or days of operation are staggered thereby reducing the need for the full amount of required parking;
  - d. whether there is shared parking agreement in accordance with Section 19.09.05.10 below—if there is a shared parking agreement, a reduction may not be granted;
  - e. the number of employees;
  - f. the number of customers and patrons;
  - g. trip generation; and
  - h. peak demands.
- 8. Any information provided by the developer relative to trip generation, hours of operation, shared parking, peak demands, or other information relative to parking shall be considered when evaluating parking needs.
- 9. Parking Deviations. Parking requirements may deviate from the standards contained in Section 19.09.10, Required Minimum Parking, when the City Council determines that the deviation meets the intent of this Chapter. Reductions may not exceed 25% of the parking requirements and shall be based on the following criteria:
  - a. the intensity of the proposed use;
  - b. times of operation and use;

- c. whether the hours or days of operation are staggered thereby reducing the need for the full amount of required parking;
- d. whether there is shared parking agreement in accordance with Section 19.09.05.10 below;
- e. trip generation; and
- f. peak demands.
- 10. Shared Parking. Up to twenty-five percent of the required parking may be shared with an adjacent use upon approval by the City Council. The developer must provide:
  - a. an agreement granting shared parking or mutual access to the entire parking lot; and
  - b. peak demand data by a professional traffic engineer showing that shared parking will accommodate the uses.

(Ord. 17-14, Ord 17-08, Ord. 15-13)

## 19.09.06. Dimensions for Parking Stalls.

The standards in this Section shall apply to all parking areas unless otherwise noted. The dimensions of parking stalls and aisles contained within the parking areas shall be dependent upon the orientation of stalls.

## **Dimensions for Parking Stalls and Aisle**

Parking Angle	Stall Width	Stall Length	Aisle Width	Aisle Width
			(two-way	(one-way
			traffic)	traffic)
Parallel	9'	20'	N/A	12'
45	9'	18'	25'	14'
60	9'	18'	25'	18'
90	9'	18'	24'	24'

(Ord 16-17, Ord. 14-13)

# 19.09.07. Accessible Parking.

Accessible parking spaces shall be provided in off-street parking areas and shall count towards fulfilling the minimum requirements for automobile parking. The City of Saratoga Springs hereby adopts by this reference the American National Standards Institute ("ANSI") A117.1, as currently amended, and the International Building Code ("IBC"), as currently amended, as the City's regulations pertaining to accessible parking. Every development, use, permit, application, plan, and drawing shall comply with the ANSI A117.1 and IBC regulations with regard to location, number, size, dimension, type, marking, surface, clearance, identification, and all other particulars whatsoever. In the event of a conflict, the more restrictive provision shall apply and take precedence.

## 19.09.08. Landscaping in Parking Areas.

In addition to the planting standards in Chapter 19.06, the following requirements shall apply to all landscaping of off-street parking areas:

- 1. Parking Areas Adjacent to Public Streets. All parking areas (not including a driveway for an individual dwelling) for non-residential or multi-family residential uses that are adjacent to public streets shall have landscaped strips of not less than ten feet in width placed between the sidewalk and the parking areas, containing a berm, hedge, or screen wall with a minimum height of three feet to minimize intrusion of lighting from headlights and other lighting on surrounding property. Trees, both deciduous and evergreen, shall be placed in the strip with spacing of no more than thirty feet between trees except in the clear sight triangle, and except where located beneath powerlines. The standards of section 19.06.06, Planting Standards and Design Requirements, shall apply for the minimum size of vegetation. Within regional parks this requirement may be met through the use of intermittent planter beds rather than a berm, hedge, or screen wall; trees or shrubs may be clustered in the planter beds where necessary to shield light spillage.
- Curbs. All landscaped areas abutting any paved surface shall be curbed (not including a
  driveway for an individual dwelling). Boundary landscaping around the perimeter of the
  parking areas shall be separated by a concrete curb six inches higher than the parking
  surface.
- 3. Clear Sight. See 19.06.11, Clear Sight Triangles.
- 4. **Components of Landscaped Areas.** All landscaped parking areas shall consist of trees, shrubs, and groundcover. Areas not occupied by structures, hard surfaces, vehicular driveways, or pedestrian walkways shall be landscaped and maintained. All landscaped areas shall have an irrigation system.

## 5. Required Parking Islands.

- a. **Islands on Doubled Rows of Parking.** On doubled rows of parking stalls, there shall be one 36-foot by 9-foot landscaped island on each end of the parking rows, plus one 36-foot by 9-foot landscaped island to be placed at a minimum of every twenty parking stalls. Each island on doubled parking rows shall include a minimum of two trees per planter. See 19.06.06, Planting Standards and Design Requirements, for the minimum size of vegetation.
- b. **Islands on Single Rows of Parking.** On single rows of parking or where parking abuts a sidewalk, there shall be one 18-foot by 9-foot landscaped island a minimum of every ten stalls. Islands on a single parking row shall have a minimum of one tree per island. See 19.06.06, Planting Standards and Design Requirements, for the minimum size of vegetation.
  - i. Exception: landscaped islands are not required in single rows of parking that abut or are no farther than 6 feet from a landscaped area containing an equal or greater number of trees as would have been provided in islands, in addition to trees required for the landscaped area. Such trees shall be located within 9 feet of the edge of parking area, and shall have a canopy width that, at maturity, will extend into the parking area.

- c. Landscaped islands at the ends of parking rows shall be placed and shaped in such a manner as to help direct traffic through the parking area.
- 6. **Completion of Landscaping.** All landscaping improvements shall be completed in accordance with the approved Site Plan, landscape-planting plan, and irrigation plan and occur prior to the issuance of a Certificate of Occupancy for the building. Exceptions may be permitted and Certificates of Occupancy issued where weather conditions prohibit the completion of required landscaping improvements. In such cases an extension period of six months is permitted but a bond shall be posted for not less than 115% of the value of the landscaping and shall be held until the requirements of this Chapter are met.

(Ord. 17-26, Ord. 17-14, Ord. 17-08, Ord. 16-09, Ord. 16-01, Ord. 14-23, Ord. 14-13)

## 19.09.09. Pedestrian Walkways and Accesses.

Parking lots larger than 75,000 square feet shall provide raised or delineated pedestrian walkways. Walkways shall be a minimum of ten feet wide and shall be placed through the center of the parking area and extend to the entrance of the building. Landscaped islands along the center walkway shall be placed at a minimum interval of every thirty feet. Landscaped islands are encouraged to be offset from one another to create a feeling of greater coverage. Pedestrian covered walkways may be substituted for tree-lined walkways. Where the developer desires to have a driveway access at the center of the parking area, a pedestrian access shall be placed on either side of the driveway.

# 19.09.10. Required Minimum Parking.

The table below indicates the minimum requirement for each use; unless otherwise identified, in no case may the minimums be exceeded by more than 25%.

Use	Parking Requirement
Agriculture	To be determined by the Land Use Authority (See 19.09.05.7)
Alcoholic Beverage, Package Agency	1.5 stalls per person employed on highest employee shift.
Alcoholic Beverage, State Liquor Store	4 stalls per 1000 sq. ft.
Animal Hospital, Large/Large Veterinary Office	4 stalls per 1000 sq. ft.
Animal Hospital, small / Small Veterinary Office	4 stalls per 1000 sq. ft.
Arts and Crafts Sales	4 stalls per 1000 sq. ft.
Automobile Refueling Station	1 stall per 100 sq. ft.
Automobile Rental & Leasing Agency	4 stalls per 1000 sq. ft. of office space.

111 70 1 24 1	3 stalls for every bay plus 1 stall per person
Automobile Repair, Major	employed on highest employee shift.
Automobile Repair, Minor	2 stalls for every bay plus 1 stall per person employed on highest employee shift.
Automobile Sales	1 stall per person employed on highest employee shift plus 1 stall for every 15 items on display.
Automobile, Boat, All-Terrain Vehicle (ATV), Motorcycle, Recreation Vehicle, Sales & Service	1 stall per person employed on highest employee shift, plus 1 stall per bay, plus 1 stall for every 15 items on display.
Bakery, Commercial	1.5 stalls per person employed on highest employee shift.
Bakery, Retail	4 stalls per 1000 sq. ft.
Bed and Breakfast	2 stalls per bedroom
Bookstore	4 stalls per 1000 sq. ft.
Building Material Sales (with outdoor storage)	4 stalls per 1000 sq. ft.
Building Material Sales (without outdoor storage)	4 stalls per 1000 sq. ft.
Bus Lot	2 stalls per 1000 sq. ft. of any office, plus 1 stall per employee originating from that location.
Car Wash (full service)	3 stacking stalls per bay including stall inside bay, plus 1 parking stall per bay, plus 1 stall per person employed on highest employee shift.
Car Wash (self service)	2 parking stalls, plus 2 stacking stalls per bay including stall inside bay, plus 1 post-stacking space per bay.
Cemetery	To be determined by the Land Use Authority (See 19.09.05.7)
Child care center	1 stall per staff member / volunteer present on highest shift, plus 1 stall per 5 students present at one time.
Church	1 stall per 3 seats. **
Commercial and industrial laundries	1.5 stalls per person employed on highest employee shift.
Commercial Recreation	1 stall per 100 sq. ft.
Commuter/Light Rail Station	To be determined by the Land Use Authority (See 19.09.05.7)
Contract Construction Services Establishments	4 stalls per 1000 sq. ft.
Convenience Store	5 stalls per 1000 sq. ft.
Convenience Store/Fast Food Combination	Based on sq. ft. of each separate use.

Crematory/Embalming Facility  Dairy Farm  Dry Cleaners  To be determined by the Land Use Authority (See 19.09.05.7)  2 stalls per 1000 sq. ft., plus 1 stall per employee on highest employee shift.  1 stall per bedroom or 2 stalls per unit, one of which must be covered*, whichever is lower, plus 0.25 guest stalls per unit.  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit.  2 stalls per dwelling enclosed in garages. Driveways are to be 20' in length. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit.  2 stalls per dwelling enclosed in garages. Driveways are to be 20' in length. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, w	Copy Center	4 stalls per 1000 sq. ft.
Dairy Farm  To be determined by the Land Use Authority (See 19.09.05.7)  Dry Cleaners  1 stall per bedroom or 2 stalls per unit, one of which must be covered*, whichever is lower, plus 0.25 guest stalls per unit.  1 stall per bedroom or 2 stalls per unit, one of which must be covered*, whichever is lower, plus 0.25 guest stalls per unit.  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit.  2 stalls per dwelling enclosed in garages. Driveways are to be 20° in length. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  Educational Center  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per 1000 sq. ft.  Educational Center  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whic		1.5 stalls per person employed on highest employee
Darly Farm    Cise 19.09.05.7    Dry Cleaners   2 stalls per 1000 sq. ft., plus 1 stall per employee on highest employee shift.	Crematory/Emounting ruentty	
Dwelling, above commercial  Tatall per bedroom or 2 stalls per unit, one of which must be covered*, whichever is lower, plus 0.25 guest stalls per unit.  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit.  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  The stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  The stall per 1000 sq. ft.  The stalls per 1000 sq. ft.  To be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services  The determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services  The stalls per 1000 sq. ft.  The	Dairy Farm	ı
Dwelling, above commercial    Dwelling, Multi-Family*	Dry Cleaners	
Dwelling, Multi-Family*  Dwelling, Single Family  2 stalls per dwelling enclosed in garages. Driveways are to be 20' in length. **  Dwelling, Three-Family  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  Educational Center  4 stalls per 1000 sq. ft.  Electronic Media Rental and Sales  Electronic Sales and Repair  4 stalls per 1000 sq. ft.  To be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services  4 stalls per 1000 sq. ft.  Financial Institution  2 stalls per 1000 sq. ft.  Fitness Center (5,000 sq. ft. or larger)  Fitness Center (5001 sq. ft. or larger)  Foral Sales  4 stalls per 1000 sq. ft.  Stalls per 1000 sq. ft.  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Stalls at the pump will meet the requirement.  Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employee on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Dwelling, above commercial	must be covered*, whichever is lower, plus 0.25
Dwelling, Shigle Failiny  Dwelling, Three-Family  I stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  I stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **  Educational Center  Educational Center  Electronic Media Rental and Sales  Electronic Sales and Repair  Equestrian Center  Equipment Sales & Services  Financial Institution  Equipment Sales & Services  Financial Institution  2 stalls per 1000 sq. ft.  Fitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Floral Sales  4 stalls per 1000 sq. ft.  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift. Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Dwelling, Multi-Family*	lower, one of which must be enclosed, plus 0.25
Dwelling, Three-Family    lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **   1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25 guest stalls per unit. **   Educational Center	Dwelling, Single Family	
Dwelling, Two-Family  Educational Center  Educational Center  Electronic Media Rental and Sales  Electronic Sales and Repair  Equestrian Center  Equipment Sales & Services  Financial Institution  Fitness Center (5,000 sq. ft. or larger)  Floral Sales  Floral Sales  Fueling Station, Cardlock Facility  Funeral Home  I stall per 3 seats.  Sales  I ower, one of which must be enclosed, plus 0.25 guest stalls per 1000 sq. ft.  4 stalls per 1000 sq. ft.  To be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services  4 stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Dwelling, Three-Family	1 stall per bedroom or 2 stalls per unit, whichever is lower, one of which must be enclosed, plus 0.25
Educational Center 4 stalls per 1000 sq. ft.  Electronic Media Rental and Sales 4 stalls per 1000 sq. ft.  Electronic Sales and Repair 4 stalls per 1000 sq. ft.  Equestrian Center 70 be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services 4 stalls per 1000 sq. ft.  Financial Institution 2 stalls per 1000 sq. ft.  Fitness Center (5,000 sq. ft. or less) 5 stalls per 1000 sq. ft.  Fitness Center (5001 sq. ft. or larger) 5 stalls per 1000 sq. ft.  Fueling Station 5 stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility 5 stalls at the pump will meet the requirement.  Funeral Home 1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Dwelling, Two-Family	lower, one of which must be enclosed, plus 0.25
Electronic Sales and Repair  Equestrian Center  Equipment Sales & Services  Financial Institution  Fitness Center (5,000 sq. ft. or larger)  Floral Sales  Fueling Station  Fueling Station, Cardlock Facility  Funeral Home  A stalls per 1000 sq. ft.  4 stalls per 1000 sq. ft.  To be determined by the Land Use Authority (See 19.09.05.7)  A stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  5 stalls per 1000 sq. ft.  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Stalls at the pump will meet the requirement.  Funeral Home  A stalls per 1000 sq. ft.  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Fueling Station, Cardlock Facility  Stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Educational Center	
Electronic Sales and Repair  Equestrian Center  To be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services  Financial Institution  Fitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Floral Sales  Fueling Station  Fueling Station, Cardlock Facility  Funeral Home  A stalls per 1000 sq. ft.		4 stalls per 1000 sq. ft.
Equestrian Center  To be determined by the Land Use Authority (See 19.09.05.7)  Equipment Sales & Services 4 stalls per 1000 sq. ft.  Financial Institution 2 stalls per 1000 sq. ft. **  Fitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Fitness Center (5001 sq. ft. or larger)  Fitness Stalls per 1000 sq. ft.  Fueling Station  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Stalls at the pump will meet the requirement.  Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.		4 stalls per 1000 sq. ft.
Equipment Sales & Services  Financial Institution  2 stalls per 1000 sq. ft.  Fitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Fitness Center (5001 sq. ft. or larger)  Floral Sales  4 stalls per 1000 sq. ft.  Fueling Station  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	•	To be determined by the Land Use Authority
Financial Institution  Pitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Floral Sales  Fueling Station  Fueling Station, Cardlock Facility  Funeral Home  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Funeral Home  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Facility  Facility  Stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Equipment Sales & Services	` '
Fitness Center (5,000 sq. ft. or less)  Fitness Center (5001 sq. ft. or larger)  Floral Sales  Floral Sales  Fueling Station  Fueling Station, Cardlock Facility  Funeral Home  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Funeral Home  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Funeral Home  Stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	- <del></del>	
Fitness Center (5001 sq. ft. or larger)  Floral Sales  Fueling Station  Fueling Station, Cardlock Facility  Funeral Home  Stalls at the pump will meet the requirement.  Funeral Home  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  Stalls per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.		
Floral Sales  4 stalls per 1000 sq. ft.  Fueling Station  Stalls at the pump will meet the requirement.  Fueling Station, Cardlock Facility  Stalls at the pump will meet the requirement.  Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Fitness Center (5001 sq. ft. or	5 stalls per 1000 sq. ft.
Fueling Station, Cardlock Facility  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  Stalls at the pump will meet the requirement.  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.		4 stalls per 1000 sq. ft.
Funeral Home  1 stall per 3 seats.  3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Fueling Station	
3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Golf Course Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Fueling Station, Cardlock Facility	Stalls at the pump will meet the requirement.
3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift.  Golf Course Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the requirement for that use.	Funeral Home	1 stall per 3 seats.
Grocery Store 4 stalls per 1000 sq. ft.	Golf Course	3 stalls per hole, plus 1 stall per driving range station, plus 1 stall per employee employed on highest shift. Parking for any reception center, restaurant, or other ancillary use to be calculated separately based on the
	Grocery Store	4 stalls per 1000 sq. ft.

Hair Salon	4 stalls per 1000 sq. ft.
Hardware and Home Improvement Retail	4 stalls per 1000 sq. ft.
Home Occupations	Same as for the dwelling, plus 1 stall per each employee that lives outside the home.
Hospitals	To be determined by the Land Use Authority (See 19.09.05.7)
Hotels	1 stall per bedroom, plus 1 stall per employee at the highest staffing level. If hotel contains a restaurant, restaurant parking shall be calculated separately based on the restaurant square footage.
Ice Cream Parlor	4 stalls per 1000 sq. ft.
Impound Yard	1.5 stalls per person employed on highest employee shift. **
Kennel, Commercial	4 stalls per 1000 sq. ft.
Laundromat	5 stalls per 1000 sq. ft.
Library	To be determined by the Land Use Authority (See 19.09.05.7)
Light Manufacturing	1.5 stalls per person employed on highest employee shift.
Livestock Auction Yard	To be determined by the Land Use Authority (See 19.09.05.7)
Marina	To be determined by the Land Use Authority (See 19.09.05.7)
Mining	1.5 stalls per person employed on highest employee shift.
Mixed Use, Commercial, Office & Residential Use	Residential: see Dwelling requirements. Nonresidential: Based on the sq. ft. of each individual use.
Motels	2 stalls per motel room, plus 1 space per 3 seats of meeting space
Non-Depository Institutions	5 stalls per 1000 sq. ft.
Office, High-Intensity	6 stalls per 1000 sq. ft. **
Office, Medical and Health Care	5 stalls per 1000 sq. ft. **
Office, Professional	4 stalls per 1000 sq. ft.
Parks, playgrounds, or community recreation - Private	To be determined by the Land Use Authority (See 19.09.05.7)
Parks, playgrounds, Recreation areas, or Other Park Improvements - Public	To be determined by the Land Use Authority (See 19.09.05.7)
Pawn Shop	4 stalls per 1000 sq. ft.
Personal Service Establishment	4 stalls per 1000 sq. ft.

Plant & Tree Nursery	To be determined by the Land Use Authority (See 19.09.05.7)
Postal Center	5 stalls per 1000 sq. ft.
Preschool	1 stall per staff member / volunteer present on highest shift, plus 1 stall per 5 students present at one time.  ***
Printing, lithography, and publishing establishments	4 stalls per 1000 sq. ft.
Public and private utility buildings and facilities	To be determined by the Land Use Authority (See 19.09.05.7)
Public Building or Facilities (City Owned)	To be determined by the Land Use Authority (See 19.09.05.7)
Reception Centers	1 stall per 100 sq. ft.
Recreation Center	1 stall per 100 sq. ft.
Recreation Rentals	4 stalls per 1000 sq. ft.
Recreational Vehicle Sales	See Automobile, Boat, All-Terrain Vehicle (ATV), Motorcycle, Recreation Vehicle, Sales & Service.
Recycling Facilities	1.5 stalls per person employed on highest employee shift, plus 3 stacking stalls at drop-off.
Research and Development	1.5 stalls per person employed on highest employee shift.
Residential Facilities for Elderly Persons	To be determined by the Land Use Authority (See 19.09.05.7)
Residential Facility for Persons with a Disability	Same as for the dwelling, plus Home Occupation requirements for employees.
Restaurant, Casual	1 stall per 100 sq. ft.
Restaurant, Deli	5 stalls per 1000 sq. ft.
Restaurant, Sit Down	1 stall per 100 sq. ft.
Retail Sales	4 stalls per 1000 sq. ft.
Retail, Big Box	4 stalls per 1000 sq. ft.
Retail, Specialty	4 stalls per 1000 sq. ft.
Retail, Tobacco Specialty Store	4 stalls per 1000 sq. ft.
Riding Arena (Commercial)	To be determined by the Land Use Authority (See 19.09.05.7)
Riding Arena (Private)	To be determined by the Land Use Authority (See 19.09.05.7)
School, Private and Quasi-Public	To be determined by the Land Use Authority (See 19.09.05.7)
School, Trade or Vocational	To be determined by the Land Use Authority (See 19.09.05.7)
Self-storage or mini storage units	1 per bedroom in any caretaker unit, plus 1 stall for every 50 storage units.

Sexually Oriented Businesses	To be determined by the Land Use Authority (See 19.09.05.7)
Shooting Range, Indoor or Outdoor	1 stall per shooting lane, plus 4 stalls per 1000 sq. ft. of office/retail space.
Stables	To be determined by the Land Use Authority (See 19.09.05.7)
Tattoo Parlor	4 stalls per 1000 sq. ft.
Theater	To be determined by the Land Use Authority (See 19.09.05.7)
Transit-Oriented Development (TOD)	To be determined by the Land Use Authority (See 19.09.05.7)

<sup>\*</sup> Tandem parking spaces within a garage will only be counted as one parking space for residential uses.

(Ord. 18-30, Ord. 17-14, Ord. 16-17, Ord. 16-01, Ord. 14-23, Ord. 14-13, Ord. 14-1)

<sup>\*\*</sup> Exception – the minimum for these uses may be exceeded by more than 25%.