SOUTH JORDAN CITY
PLANNING COMMISSION REPORT

Meeting Date: 01/24/2023

Issue: **SILVERSTONE AUTOMATION SITE PLAN**
Address: 10096 South Jordan Gateway
File No: **PLSPR202200232**
Applicant: Joseph Milillo, MHTN Architects

Submitted by: Damir Drozdek, Planner III
Shane Greenwood, Supervising Senior Engineer

Staff Recommendation (Motion Ready): I move that the Planning Commission **approve** application PLSPR202200232 to allow for construction of a new commercial building on property located at 10096 South Jordan Gateway.

STANDARD OF REVIEW:

All proposed commercial, office, industrial, multi-family dwelling or institutional developments and alterations to existing developments shall meet the site plan review requirements outlined in chapter 16.24 and the requirements of the individual zone in which a development is proposed. All provisions of titles 16 & 17 of the City Code, and other city requirements, shall be met in preparing site plan applications and in designing and constructing the development. The Planning Commission shall receive public comment regarding the site plan and shall approve, approve with conditions or deny the site plan.

BACKGROUND:

The proposed project is located at 10096 South Jordan Gateway. The building will be used to design, test and build custom automation machines that will primarily cater to medical manufacturing companies.

The project was originally approved on August 25, 2020. As per City Code, the approval remains in effect for one year unless building construction has begun. An extension of the approval was granted on August 16th of 2021 allowing the applicant another year to start construction. Due to Covid and other related issues, construction on the building has not taken place for two years since the project approval.

Since the extension is now expired, the applicant must apply and obtain a site plan approval from the Planning Commission once again. Once approved, the applicant will be able to apply and obtain a building permit to begin construction.

STAFF FINDINGS, CONCLUSIONS & RECOMMENDATION:

Findings:
- The original application was approved August 25, 2020 and the approval has since expired.
- The only changes made to the plans pertain to building elevations and the landscape plans.

Conclusion:
- The original approval as well as the proposed changes meet or exceed the City Code requirements.

Recommendation:
- Based on the Findings and Conclusions listed above, Staff recommends that the Planning Commission take comments at the public hearing and **approve** the Application, unless, during the hearing, facts are presented that contradict these findings or new facts are presented, either of which would warrant further investigation by Staff.

ALTERNATIVES:
- Approve an amended Application.
- Deny the Application.
- Schedule the Application for a decision at some future date.

SUPPORT MATERIALS:
- Letter from the Applicant
- New Building Elevations
- City Engineer Approved Drawings - New
- Original Staff Report
- PC Meeting Minutes
- Extension Letter

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Damir Drozdek, AICP
Planner III, Planning Department

December 22, 2022

City of South Jordon Planning Commission

Dear Commissioners,

After a couple of tough COVID years, Holdings10 would like to revive the build of the Silverstone Building at 10096 South Jordan Gateway. You're aware that a number of factors made construction difficult during those years.

For Holdings10, the factors that stopped the process included:

- Scarcity of building materials which resulted in wildly increasing and unpredictable costs and unknown delivery times. For example, trusses were out a year which meant that the construction would be partially done and then the process idled.
- The appraisal did not align with the quickly escalating construction costs. Building sale prices prior to COVID were significantly less than the present-day costs to construct that same building. This negatively affect the loan process.
- Unknown construction labor pool during the pandemic. Possible labor interruptions seemed likely to delay the project completion.

Due to the risks associated with the above factors, Holdings10 chose to wait for the pandemic and construction climate to settle.

Silverstone's business has been steady and still needs the additional space provided by the new building. The original reasons to build the building are still clearly present for Silverstone.

Regards,
Leonard Di Sera and Corey Bodily
Holdings10

KEYNOTES

04-162	BRICK EXPANSION JOINT AT CORNERS
05-034	18 GA. GALVANIZED STEEL CANOPY, BLUE GIANT OR APPROVED EQUAL
07-100	EIFS REVEAL, SEE DETAILS FOR MORE INFORMATION
07-183	PEAKED COPING OVER BLOCK WALL
07-190	PRE-FINISHED ALUMINUM FASCIA/SOFFIT
08-013	HOLLOW METAL DOORS AND FRAMES
08-081	ALUMINUM STOREFRONT - SEE WINDOW & DOOR TYPES
08-082	ALUMINUM STOREFRONT DOOR - SEE DOOR TYPES
08-084	ALUMINUM STOREFRONT COLUMN COVER
08-330	KNOX BOX FOR FIRE KEY
10-027	BUILDING ADDRESS SIGN. NUMBERS AND LETTERS SHALL BE VISIBLE FROM THE STREET AND BE 6" MIN. HIGH AND HAVE A STROKE OF 1/2". THE NUMBERS AND LETTERS SHALL BE ARABIC.
22-078	EXTERIOR HOSE BIB IN SECURE BOX, PROVIDE FROST PROTECTION. SEE MECHANICAL
26-005	ELECTRICAL EQUIPMENT. COORDINATE SIZE OF ELECTRICAL ROOM W/ ELECTRICAL EQUIPMENT & REQUIRED CLEARANCES. SEE ELECTRICAL DRAWING FOR ADDITIONAL INFORMATION.
26-086	EXTERIOR LIGHTING
26-091	EXTERIOR WALL SCONCE LIGHTING
31-009	FINISH GRADE - SLOPE AWAY FROM BUILDING

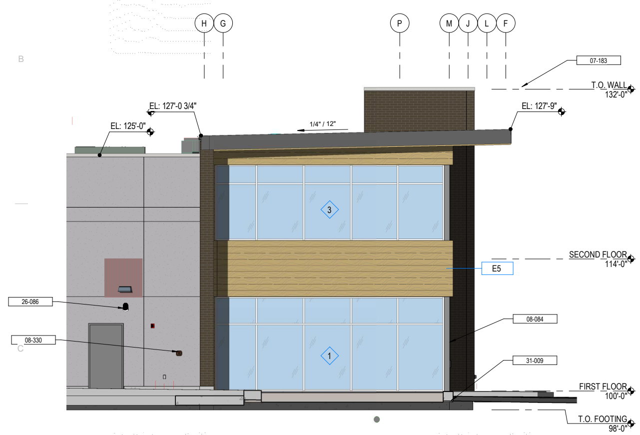
LEGEND - EXTERIOR ELEVATION

- EXTERIOR BRICK, COAL-KING SIZE
- ALUMINIUM COMPOSITE WOOD SIDING
- EIFS SIDING DARK
- EIFS SIDING LIGHT
- 1" INSULATED TINTED LOW E GLAZING

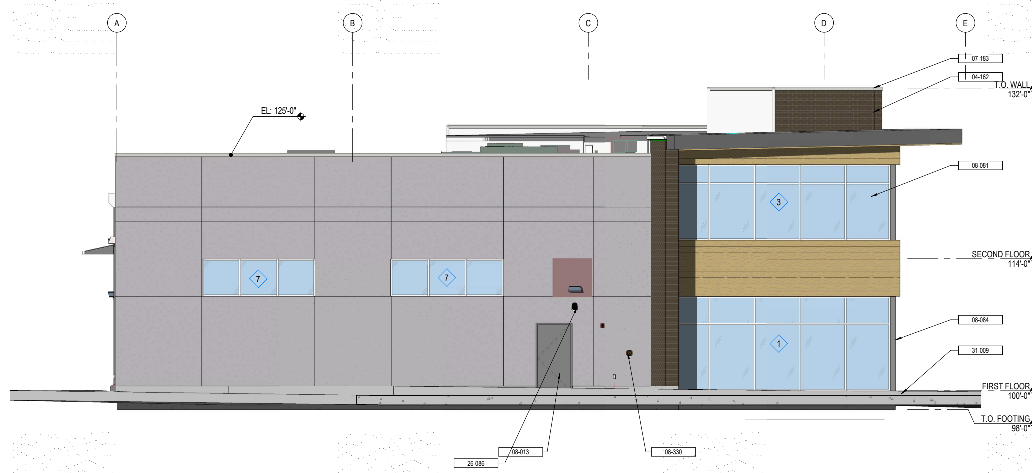
EXTERIOR ELEVATIONS GENERAL NOTES

Exterior Finishes: Provide exterior finishes, continuous until a transition is indicated. Provide on all similar elements, and on surfaces not shown in elevation such as back sides of piers, columns and other surfaces that may not be visible in the elevation view.

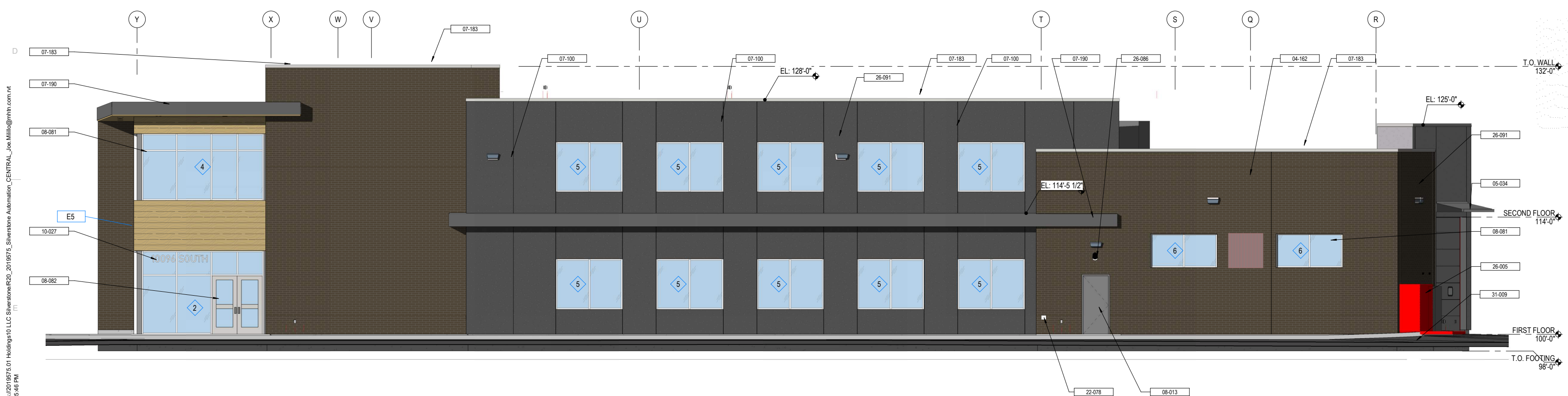
Lighting: Coordinate wall and soffit mounted lighting locations with Electrical drawings and with the Architect prior to rough-in.



C1 SOUTH ELEVATION ANGLED
SCALE: 3/16" = 1'-0"



C3 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



E1 EAST ELEVATION
SCALE: 3/16" = 1'-0"

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SILVERSTONE AUTOMATION

HOLDINGS10 LLC
10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84095

SEAL

LICENSED ARCHITECT PEGGY A. MCDONOUGH No. 6090083-0301 STATE OF UTAH

12/02/2022

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION
1		

ISSUE
CONSTRUCTION DOCUMENTS
12/02/2022

SHEET NAME
EXTERIOR ELEVATIONS

SHEET NUMBER
A200

KEYNOTES

04-162	BRICK EXPANSION JOINT AT CORNERS
05-034	18 GA. GALVANIZED STEEL CANOPY, BLUE GIANT OR APPROVED EQUAL
07-100	EIFS REVEAL, SEE DETAILS FOR MORE INFORMATION
07-183	PEAKED COPING OVER BLOCK WALL
07-222	DOWNSPOUT SQUARE DRAIN, COORDINATE WITH CIVIL
08-013	HOLLOW METAL DOORS AND FRAMES
08-079	INSULATED OVERHEAD DOOR - SEE DOOR SCHEDULE
08-324	ROOF ACCESS HATCH, 48 X 48 MINIMUM
26-005	ELECTRICAL EQUIPMENT. COORDINATE SIZE OF ELECTRICAL ROOM W/ ELECTRICAL EQUIPMENT & REQUIRED CLEARANCES. SEE ELECTRICAL DRAWING FOR ADDITIONAL INFORMATION.
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26-091	EXTERIOR WALL SCONCE LIGHTING
31-009	FINISH GRADE - SLOPE AWAY FROM BUILDING
33-017	GAS METERING - SEE CIVIL

LEGEND - EXTERIOR ELEVATION

- EXTERIOR BRICK, COAL-KING SIZE
- ALUMINIUM COMPOSITE WOOD SIDING
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- EIFS SIDING LIGHT
- 1" INSULATED TINTED LOW E GLAZING

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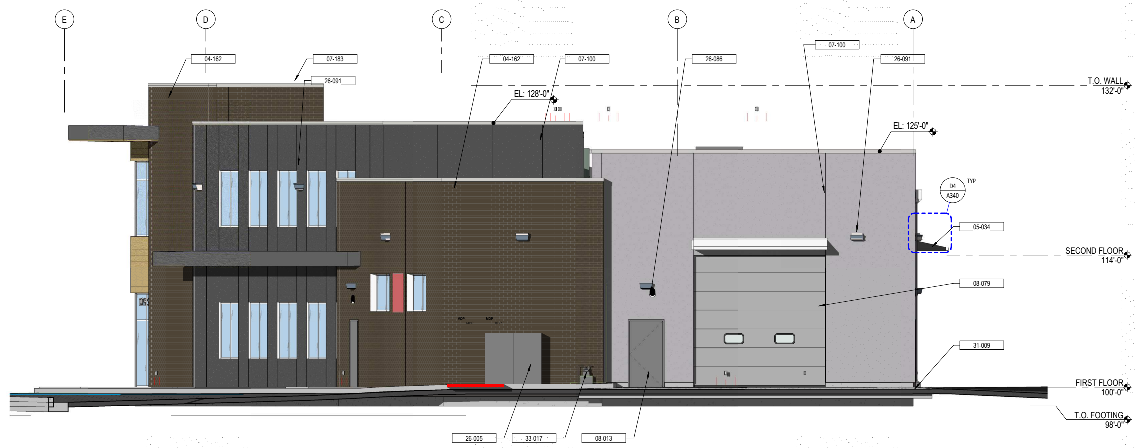
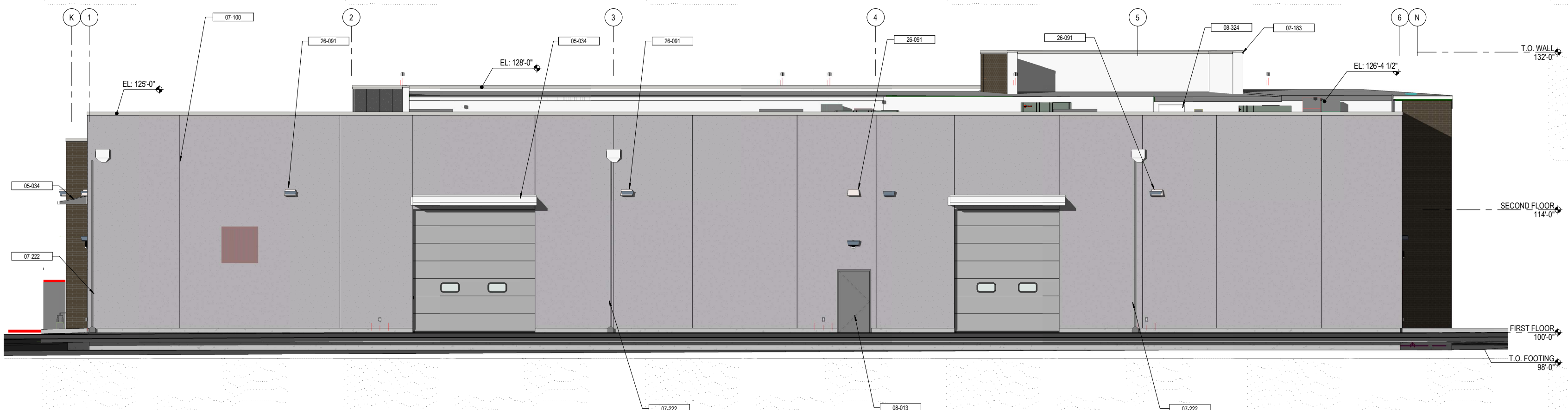


C2 NORTH ELEVATION

SCALE: 3/16" = 1'-0"



E1 WEST ELEVATION

SCALE: 3/16" = 1'-0"

SILVERSTONE AUTOMATION

HOLDINGS10 LLC

10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84095

SEAL

12/02/2022

MHTN PROJECT NO. 2019575

VIEW AND PRINT THIS DRAWING IN COLOR

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12/02/2022

SHEET NAME
EXTERIOR ELEVATIONS

SHEET NUMBER
A201

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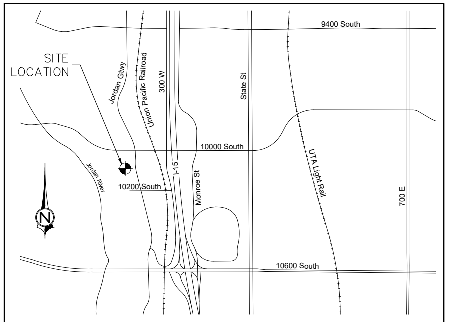
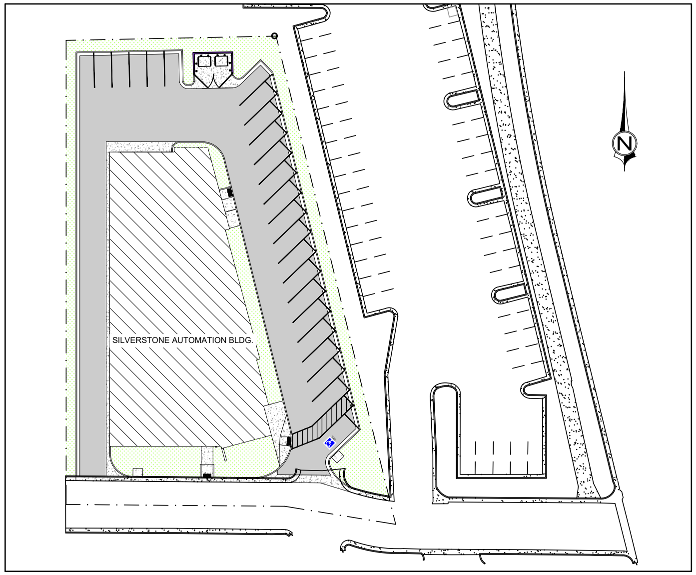
SILVERSTONE AUTOMATION BUILDING

LOCATED IN SW 1/4 OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST,
SALT LAKE BASE AND MERIDIAN
10096 S 460 W, SOUTH JORDAN, UTAH



VICINITY MAP
NTS



SHEET INDEX		
SHEET	#	TITLE
CV	1	COVER SHEET
GN	2	NOTES
SP1	3	SITE AND UTILITY PLAN
SP2	4	SITE AND UTILITY PLAN
GP	5	GRADING PLAN
DT1	6	DETAILS
DT2	7	DETAILS
DT3	8	DETAILS

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City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

811 Know what's below. Call before you dig.

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PROFESSIONAL ENGINEER
No. 11395943
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12.02.22
STATE OF UTAH

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REVISION

NO.	DESCRIPTION	BY	APPR	DATE

COVER SHEET

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET CV

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SOUTH JORDAN CITY GENERAL NOTES

1. ALL WORK DONE OR IMPROVEMENTS INSTALLED WITHIN SOUTH JORDAN CITY INCLUDING BUT NOT LIMITED TO EXCAVATION, CONSTRUCTION, ROADWORK AND UTILITIES SHALL CONFORM TO THE SOUTH JORDAN CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS, CITY MUNICIPAL CODE, THE LATEST EDITION OF THE APWA MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY STATE OR FEDERAL REGULATIONS AND PERMIT REQUIREMENTS OF VARIOUS GOVERNING BODIES. THE CONTRACTOR IS RESPONSIBLE TO HAVE A COPY OF THESE SPECIFICATIONS AND TO KNOW AND CONFORM TO THE APPROPRIATE CODES, REGULATIONS, DRAWINGS, STANDARDS AND SPECIFICATIONS.
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES, WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES, SURVEY MONUMENTS AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
6. CURB, GUTTER, AND SIDEWALK, FOUND TO BE UNACCEPTABLE PER CITY STANDARDS AND APWA SHALL BE REMOVED AND REPLACED.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.
8. ANY SURVEY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER SALT LAKE COUNTY SURVEYORS REQUIREMENTS.
9. ALL PRIVACY WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. ALL WALLS SHALL HAVE A MINIMUM 2 ft x 2 ft x 30 INCH DEEP SPOT FOOTINGS. BOTTOM OF ALL FOOTINGS ON ALL WALLS SHALL BE A MINIMUM OF 30 INCHES BELOW FINISHED GRADE. WALLS GREATER THAN 6 FEET REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
10. ALL CONSTRUCTION MATERIALS PER APWA MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
11. REQUEST FOR INSPECTION BY THE CITY OF SOUTH JORDAN ENGINEERING DEPT. SHALL BE MADE BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE THE INSPECTION SERVICES WILL BE REQUIRED, EXCEPT IN AN EMERGENCY AS DEFINED BY THE SOUTH JORDAN CITY MUNICIPAL CODE § 12.08.010.
12. WORK IN PUBLIC WAY, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
13. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH CONSTRUCTION.
14. POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO THE CITY OF SOUTH JORDAN. POWER LINES AND ALL OTHER AERIAL UTILITIES ARE TO BE BURIED AND POLES REMOVED AS DETERMINED BY THE CITY ENGINEER.
15. CURB AND GUTTER WITH A GRADE OF LESS THAN FOUR-TENTHS OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR A GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
16. CONTRACTOR TO FOLLOW SALT LAKE COUNTY NOISE ORDINANCE STANDARDS.
17. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.
18. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES AS PER STATE LAW AS WELL AS PROVIDING A STORM WATER POLLUTION PREVENTION PLAN TO THE CITY.
19. DEVELOPER IS RESPONSIBLE FOR LOCATING AND REPAIRING ALL UNDERGROUND STREETLIGHT WIRES, WATER LINES, STORM DRAIN LINES AND IRRIGATION LINES UNTIL 90% OF THE BOND HAS BEEN RELEASED.
20. ALL CITY MAINTAINED UTILITIES INCLUDING; WATERLINE, FIRE HYDRANTS, STREETLIGHT WIRING, AND STORM DRAIN MUST BE IN PUBLIC RIGHT OF WAY OR IN RECORDED EASEMENTS.
21. CONTRACTOR SHALL WORK SOUTH JORDAN CITY REGULAR WORKING HOURS OF MONDAY THROUGH FRIDAY. IF CONTRACTOR PERMITS OVERTIME WORK OR WORK ON A SATURDAY, SUNDAY OR ANY LEGAL HOLIDAY, CONTRACTOR SHALL RECEIVE PRIOR APPROVAL BY CITY ENGINEER. CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY OVERTIME INSPECTION FEE'S TO THE CITY OF SOUTH JORDAN ON THE THURSDAY PRIOR TO THE SATURDAY, SUNDAY OR LEGAL HOLIDAY REQUESTED.
22. PRIOR TO 90% BOND RELEASE, A LEGIBLE AS-BUILT DRAWING MUST BE SUBMITTED TO THE CITY OF SOUTH JORDAN STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER. AS-BUILTS MUST SHOW ALL CHANGES AND ACTUAL FIELD LOCATIONS OF STORM DRAINAGE, WATERLINES, IRRIGATION, STREET LIGHTING, AND POWER. AS-BUILTS WILL BE HELD TO THE SAME STANDARD AS APPROVED DESIGN DRAWINGS, NO "REDLINED PLANS" ALLOWED. IN THE ABSENCE OF CHANGES, COPIES OF THE APPROVED DRAWINGS WILL BE REQUIRED STATING "INSTALLED AS PER DRAWINGS". AS-BUILT DRAWINGS FOR NEW DEVELOPMENTS SHALL BE SUBMITTED TO THE CITY IN THE FOLLOWING FORMATS AND QUANTITIES PRIOR TO THE 90% BOND RELEASE: 1 .dxf COPY, 1 .pdf COPY.
23. FILTER FABRIC WRAPPED AROUND AN INLET GRATE IS NOT AN ACCEPTABLE INLET SEDIMENT BARRIER. SEE CHAPTER 9 OF SOUTH JORDAN CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR DETAILS OF APPROVED STORM WATER BMPs.
24. ASPHALT PAVING BETWEEN OCTOBER 15 AND MARCH 15 IS NOT ALLOWED WITHOUT A WRITTEN EXCEPTION FROM THE ENGINEERING DEPARTMENT.
25. NO MORE THAN 15 PERCENT RAP (RECLAIMED ASPHALT PAVEMENT) BY WEIGHT WILL BE ALLOWED IN THE ASPHALT MIX DESIGN FOR THE PAVING OF PUBLIC AND PRIVATE STREETS. UP TO THE 15 PERCENT WILL BE ALLOWED WITH NO CHANGE IN THE SPECIFIED BINDER GRADE.
26. TO ENSURE PROPER PLANTING, PROTECTION AND IRRIGATION OF TREES, MITIGATING RISK OF TREE FAILURE OR FUTURE DAMAGE TO INFRASTRUCTURE, CONTRACTORS ARE REQUIRED TO FOLLOW THE STANDARDS AND SPECIFICATIONS OF THE ISA – INTERNATIONAL SOCIETY OF ARBORICULTURE.
27. ALL SMALL CELL CONSTRUCTION MUST FOLLOW THE SOUTH JORDAN CITY SMALL CELL INFRASTRUCTURE DESIGN GUIDELINES.

CITY OF SOUTH JORDAN TRAFFIC NOTES

1. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE THE SAFE ROUTE SHALL BE MAINTAINED IN A MANNER ACCEPTABLE TO SOUTH JORDAN CITY AND THE JORDAN SCHOOL DISTRICT.
2. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR OR DESIGNEE.
3. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
5. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR PER APPROVED CONSTRUCTION DRAWINGS UNLESS APPROVED BY THE CITY ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTAH TRANSIT AUTHORITY (UTA) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
7. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING PUBLIC STREETS. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PER THE CURRENT EDITION ADOPTED BY UDOT AND BE APPROVED BY THE CITY OF SOUTH JORDAN BEFORE CONSTRUCTION BEGINS.
8. ALL SIGNS LARGER THAN 36" x 36" OR 1296 SQUARE INCHES PER SIGN POLE SHALL BE MOUNTED ON A SLIP BASE SYSTEM PER UDOT STANDARD DRAWING SN 10B (DETAIL DRAWING ATTACHED TO STANDARD DRAWINGS) WITH A "Z" BAR BACKING. SIGNS OF THIS SIZE ARE NOT ALLOWED TO BE MOUNTED ON A YIELDING POLE.
9. SIGN COMPONENTS SUCH AS SHEETING, EC FILM, INKS, LETTERS AND BORDERS ARE ALL REQUIRED TO BE FROM THE SAME MANUFACTURER. ONLY EC FILM MAY BE USED TO ACHIEVE COLOR. VINYL EC FILM IS NOT ACCEPTED.
10. ALL NEW ROUNDABOUTS, CROSSWALKS, STOP BARS AND LEGENDS SHALL BE INSTALLED WITH 90 MIL PREFORMED THERMO PLASTIC.
11. PAVING ASPHALT BINDER GRADE SHALL BE PG 64-22 UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
12. ASPHALT AGGREGATE SIZE SHALL BE ½ INCH FOR RESIDENTIAL ROADS AND ¾ INCH FOR COLLECTOR ROADS.
13. POTHOLING: ALL POTHOLES MUST BE SAW CUT SQUARE AND HAVE A MINIMUM SIZE OF 1 SQUARE FOOT. WHEN REPAIRING A POTHOLE, SAND OR PEA GRAVEL MEETING SOUTH JORDAN CITY STANDARDS SHALL BE PLACED OVER THE EXPOSED UTILITY TO A DEPTH OF 6 INCHES. FOLLOWING THE PEA GRAVEL WILL BE FLOWABLE FILL UP TO 1 INCH BELOW THE BOTTOM EDGE OF THE EXISTING ASPHALT. THE REMAINING PORTION OF THE HOLE SHALL BE FILLED WITH ASPHALT, WHICH WILL HAVE AN OVERALL THICKNESS OF THE EXISTING ASPHALT PLUS 1 INCH.
14. ALL FILL WITHIN THE PUBLIC RIGHT OF WAY SHALL BE A-1-A TO A-3, WITH THE EXCEPTION OF TOP SOIL IN THE PARK STRIP FOR LANDSCAPING AND TRENCH BACKFILL. TRENCH BACKFILL MATERIAL UNDER PAVEMENTS OR SURFACE IMPROVEMENTS SHALL BE CLEAN, NONCLUMPING, GRANULAR AND FLOWABLE, 2" MINUS, A-1-A TO A-2-7 SOILS ACCORDING TO AASHTO 145 SOIL CLASSIFICATION SYSTEM. LIME TREATED FLOWABLE FILLS, IF APPROVED, SHALL HAVE A 28-DAY STRENGTH OF 65 PSI.
15. ALL TRAFFIC ROAD CLOSURES INVOLVING 1 OR MORE LANES OF TRAFFIC MUST RECEIVE PRIOR APPROVAL FROM THE CITY ENGINEER OR HIS/HER REPRESENTATIVE. PCMS BOARDS MUST BE PLACED A MINIMUM OF 7 DAYS IN ADVANCE OF ANY LANE CLOSURE UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

CITY OF SOUTH JORDAN STREET LIGHT NOTES

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT SOUTH JORDAN CITY STANDARDS AND N.E.C. (NATIONAL ELECTRIC CODE). A STREET LIGHT PLAN SHOWING WIRING LOCATION, WIRING TYPE, VOLTAGE, POWER SOURCE LOCATION, CONDUIT SIZE AND LOCATION SHALL BE SUBMITTED TO THE CITY OF SOUTH JORDAN AND BE APPROVED PRIOR TO CONSTRUCTION. NO DEVIATION OF STREETLIGHT, PULL BOXES, CONDUITS, ETC. LOCATIONS SHALL BE PERMITTED WITHOUT PRIOR **WRITTEN APPROVAL** FROM THE CITY ENGINEER OR HIS/HER REPRESENTATIVE.

AN ELECTRONIC COPY OF THE STREET LIGHT REDLINES, SHOWING THE SAME ITEMS LISTED ABOVE FOR THE STREET LIGHT PLAN, SHALL BE SUBMITTED TO THE SOUTH JORDAN CITY ENGINEERING DEPARTMENT AFTER THE STREET LIGHTS HAVE BEEN INSTALLED BUT PRIOR TO THEM BEING CONNECTED BY ROCKY MOUNTAIN POWER.

1. LOCATION OF THE STREET LIGHT POLE.
   A. SHALL NOT BE INSTALLED WITHIN 5 FEET OF A FIRE HYDRANT. THE LOCATION SHALL BE SUCH THAT IT DOES NOT HINDER THE OPERATION OF THE FIRE HYDRANT AND WATER LINE OPERATION VALVES.
   B. SHALL BE A MINIMUM OF 5 FEET FROM ANY TREE, UNLESS WRITTEN APPROVAL IS RECEIVED FROM THE CITY ENGINEER. BRANCHES MAY NEED TO BE PRUNED AS DETERMINED BY THE ENGINEERING INSPECTOR IN THE FIELD AT THE TIME OF INSTALLATION.
   C. SHALL NOT BE INSTALLED WITHIN 5 FEET FROM THE EDGE OF ANY DRIVEWAY.
2. ANTI-SEIZE LUBRICANT SHALL BE USED ON ALL COVER BOLTS AND GROUND BOX BOLTS.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
4. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC. SHALL LEAVE A MINIMUM OF EIGHTEEN (18) INCHES TO THE FACE OF THE STREET LIGHT POLE ON ALL SIDES.
5. ALL SERVICE POINT(S) SHALL BE COORDINATED WITH ROCKY MOUNTAIN POWER AND WHENEVER POSSIBLE BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINT(S) SHALL BE SHOWN ON THE PLANS WITH A SCHEMATIC FROM ROCKY MOUNTAIN POWER. POLE LOCATIONS AS SHOWN ON THE APPROVED PLANS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEERING INSPECTOR AT TIME OF INSTALLATION AT NO ADDITIONAL COST TO THE CITY.
6. IT SHALL BE REQUIRED THAT IN THE ABSENCE OF AN EXISTING WORKABLE CIRCUIT TO ATTACH TO, THAT ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUITS IN THIS CASE DEVELOPER AND OR HIS ENGINEER SHALL CONTACT ROCKY MOUNTAIN POWER.
7. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF THE STREET LIGHT CIRCUITS AND/OR STREETLIGHT POLES, THOSE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE THE STREET LIGHT BASES ARE CONSTRUCTED AT NO EXPENSE TO THE CITY OF SOUTH JORDAN OR ROCKY MOUNTAIN POWER. THE RESOLUTION MUST BE APPROVED BY THE CITY OF SOUTH JORDAN AND ROCKY MOUNTAIN POWER.
8. THE CONTRACTOR SHALL FURNISH A COMPLETE SERVICE TO THE TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS AND/OR IS DEEMED NECESSARY BY ROCKY MOUNTAIN POWER AND/OR SOUTH JORDAN CITY.
9. A STREET LIGHT PLAN SHOWING WIRING LOCATION, WIRING TYPE, VOLTAGE, POWER SOURCE LOCATION, CONDUIT SIZE AND LOCATION SHALL BE SUBMITTED TO THE CITY OF SOUTH JORDAN AND BE APPROVED PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A 10 DAY BURN TEST OF THE STREET LIGHTS AFTER THEY ARE CONNECTED AND ENERGIZED BY ROCKY MOUNTAIN POWER. THIS TEST SHALL BE COORDINATED AND WITNESSED BY A SOUTH JORDAN ENGINEERING INSPECTOR.
11. EACH STREETLIGHT POLE SHALL HAVE ITS OWN PHOTO CELL INDEPENDENT OF A MASTER CONTROL. ON DOUBLE HEAD FIXTURES A SINGLE PHOTO CELL SHALL BE INSTALLED ON THE NORTH MOST FACING HEAD AND BE WIRED TO ENERGIZE BOTH HEADS.

CITY OF SOUTH JORDAN GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER AND CITY ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1'+	+0.0' TO –0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5'+	+0.1' TO –0.1'	SEE SOILS REPORT

COMPACTION TESTING WILL BE PERFORMED BY THE DEVELOPER OR HIS REPRESENTATIVE.

6. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
7. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM THE PUBLIC WORKS DEPARTMENT.
8. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OFWAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
9. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE DEVELOPER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.
10. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER AND APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

CITY OF SOUTH JORDAN FIRE DEPARTMENT NOTES

1. ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMBUSTIBLE CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY.
2. CONTRACTOR SHALL CALL THE PUBLIC WORKS DEPARTMENT AND ENGINEERING INSPECTOR FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE BACK FILLING.
3. PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE SHALL BE APPROVED BEFORE BEING CONSTRUCTED.
4. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
5. ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.
6. THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE, SHALL BE NOT LESS THAN FORTY-FIVE FEET (45') OUTSIDE RADIUS AND TWENTY-TWO FEET (22') INSIDE RADIUS AND SHALL BE PAVED.
7. A FIRE APPARATUS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN ONE-HUNDRED FIFTY FEET (150') FROM FIRE DEPARTMENT VEHICLE ACCESS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF ONE HUNDRED FIFTY FEET (150') IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND AREA.
8. ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WIDTH SIGNS AT INTERVALS OF ONE-HUNDRED FEET (100') ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS SHALL BE INSTALLED AT LEAST 5', MEASURED FROM THE BOTTOM EDGE OF THE
9. SIGN TO THE NEAR EDGE OF PAVEMENT. WHERE PARKING OR PEDESTRIAN MOVEMENTS OCCUR, THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7'. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.
10. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE SOUTH JORDAN CITY F.D. APPROVAL. GATES ARE ONLY ALLOWED WITH PRIOR APPROVAL.
11. ALL UNDERGROUND FIRE LINES THAT SERVICE AUTOMATIC FIRE SPRINKLER SYSTEMS SHALL BE NO SMALLER THAN SIX (6) INCHES IN DIAMETER. ALL FIRE LINES MATERIAL SHALL BE DUCTILE IRON. (DUCTILE IRON FROM THE PIV TO THE BUILDING SHALL BE PERMITTED OR DUCTILE IRON FROM THE MAIN WATER LINE TO THE WIV).
12. POST INDICATOR VALVES (PIV) SHALL BE BETWEEN 6 AND 40 FEET FROM BUILDINGS NOT EXCEEDING THREE STORIES OR EQUIVALENT IN HEIGHT AND BETWEEN 30 AND 40 FEET ON BUILDINGS IN EXCESS OF THREE OR MORE STORIES IN HEIGHT OR EQUIVALENT.
13. ROADS AND ACCESSES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS. SURFACE SHALL BE PAVED BEFORE THE APPLICATION OF COMBUSTIBLE MATERIAL.

SOUTH JORDAN CITY WATER NOTES

1. THE FOLLOWING SOUTH JORDAN CITY WATER NOTES ARE INTENDED FOR GENERAL WATER STANDARDS ONLY AND ARE NOT ALL INCLUSIVE. THE CITY HAS INCLUDED THE CULINARY WATER DESIGN AND CONSTRUCTION STANDARDS WITHIN THE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS.
2. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE ENGINEERING DEPARTMENT. FOLLOWING WATER PLAN APPROVAL, FORTY-EIGHT (48) HOUR NOTICE SHALL BE GIVEN TO THE ENGINEERING INSPECTOR AND THE PUBLIC WORKS DEPARTMENT (253- 5230) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO AN INSPECTION.
3. ALL WORK WITHIN SOUTH JORDAN CITY SHALL CONFORM TO SOUTH JORDAN CITY STANDARDS AND SPECIFICATIONS, AWWA AND APWA.
4. FOR RESIDENTIAL DEVELOPMENTS - THE DEVELOPER SHALL PURCHASE AND INSTALL METER BOXES AND SETTERS ACCORDING TO CITY STANDARDS ON NEWLY DEVELOPED LOTS AND REAL PROPERTY AT THE TIME OF WATER MAIN INSTALLATION. WATER METERS WILL BE SUPPLIED AND INSTALLED BY THE SOUTH JORDAN PUBLIC WORKS DEPARTMENT (AT DEVELOPER'S EXPENSE). THE DEVELOPER SHALL ALSO PROVIDE THE SITE ADDRESS, LOT NUMBER, METER SIZE AND PAY METER FEES PRIOR TO BUILDING PERMIT APPROVAL.
5. FOR COMMERCIAL AND CONDOMINIUM DEVELOPMENTS - THE DEVELOPER SHALL PURCHASE AND INSTALL METER BOXES AND SETTERS ACCORDING TO CITY STANDARDS. WATER METERS WILL BE SUPPLIED BY SOUTH JORDAN PUBLIC WORKS DEPARTMENT (AT DEVELOPER'S EXPENSE) AND INSTALLED BY DEVELOPER.
6. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED PRIOR TO COMMISSIONING THE NEW WATER LINE TO THE SOUTH JORDAN CITY CULINARY WATER DISTRIBUTION SYSTEM.
7. SOUTH JORDAN PUBLIC WORKS DEPARTMENT MUST APPROVE WATER SHUT DOWN WHICH MAY REQUIRE EVENING AND WEEKEND SHUT DOWN AS DEEMED NECESSARY, REQUIRING THE CONTRACTOR TO BE BILLED FOR OVERTIME. 48 HOUR NOTICE IS REQUIRED.
8. WATER STUB-OUT INSTALLATIONS WILL NOT BE CONSTRUED AS A COMMITMENT FOR WATER SERVICE.
9. CONDITIONAL APPROVAL OF VALVED OUTLET (6" AND LARGER):
   IN THE EVENT THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS, INSTALLATIONS OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE CITY STANDARDS AND AT THE DEVELOPER'S EXPENSE.
10. ALL LINES TO BE PRESSURE TESTED ACCORDING TO SOUTH JORDAN CITY AND AWWA STANDARDS AND CHLORINATED PRIOR TO USE AND FINAL ACCEPTANCE.
11. ALL FITTINGS TO BE COATED WITH POLY FM GREASE AND WRAPPED WITH 8-MIL THICK POLYETHYLENE.
12. NO OTHER UTILITY LINES MAY BE PLACED IN THE SAME TRENCH WITH WATER LINE UNLESS APPROVED BY THE CITY ENGINEER.
13. ANY CONFLICT WITH EXISTING UTILITIES SHALL BE IMMEDIATELY CALLED TO THE ATTENTION OF THE CITY ENGINEER OR DESIGNEE.
14. ALL WATER VAULTS WILL BE CONSTRUCTED PER CITY OF SOUTH JORDAN STANDARD DRAWINGS AND SPECIFICATIONS. NO VAULTS ARE ALLOWED IN TRAFFIC AREAS WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.
15. LANDSCAPING AND IRRIGATION ADJACENT TO VAULTS SHALL DRAIN AWAY FROM VAULTS.
16. ONCE THE WATERLINE HAS BEEN TESTED, APPROVED AND CITY WATER IS FLOWING THROUGH THE PIPE, ONLY CITY PERSONNEL ARE AUTHORIZED TO SHUT DOWN AND CHARGE THE WATERLINE.
17. MEGALUG FOLLOWING RING OR AN APPROVED EQUIVALENT SHALL BE USED ON ALL FITTINGS.
18. APWA PLAN 562, CITY REQUIRES STAINLESS STEEL TIE-DOWN RESTRAINTS WITH TURNBUCKLES ONLY. 5/8" REBAR IS NOT ACCEPTABLE. MEGALUG FOLLOWERS REQUIRED ON ALL FITTINGS AND ALL DIMENSIONS OF THRUST BLOCKING STILL APPLY. THRUST BLOCKS MAY BE ELIMINATED IF HORIZONTAL TIE DOWN RESTRAINTS HAVE BEEN PRE-ENGINEERED AND RECEIVE PRIOR CITY APPROVAL.
19. WATER MAINS WILL BE HOT TAPPED AS CALLED OUT ON THE APPROVED PLANS. UNDER SPECIAL CIRCUMSTANCES, WHEN A CONTRACTOR SUBMITS A REQUEST FOR A SHUTDOWN CONTRARY TO THE APPROVED PLANS AND THE REQUEST IS APPROVED AT THE DISCRETION OF THE CITY ENGINEER OR DESIGNEE, THE CONTRACTOR MUST PROVIDE 48-HOUR NOTICE TO NEIGHBORS AND THOSE AFFECTED. IF BUSINESSES ARE IMPACTED BY THE SHUTDOWN IT WILL BE DONE AFTER HOURS AND ALL OVERTIME FEES FOR CITY PERSONNEL, EQUIPMENT AND VEHICLES MUST BE PAID IN ADVANCE.
20. CONTRACTORS ARE REQUIRED TO WRITE THE LOT NUMBER WITH A BLACK PERMANENT MARKER ON THE INSIDE OF THE WATER METER BARRELS AS THEY ARE INSTALLED.

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PROFESSIONAL ENGINEER
No. 11395943
ROBERT BURKHILL III
12.02.22
STATE OF UTAH

REVISION

NO.	DESCRIPTION	BY	APR.	DATE

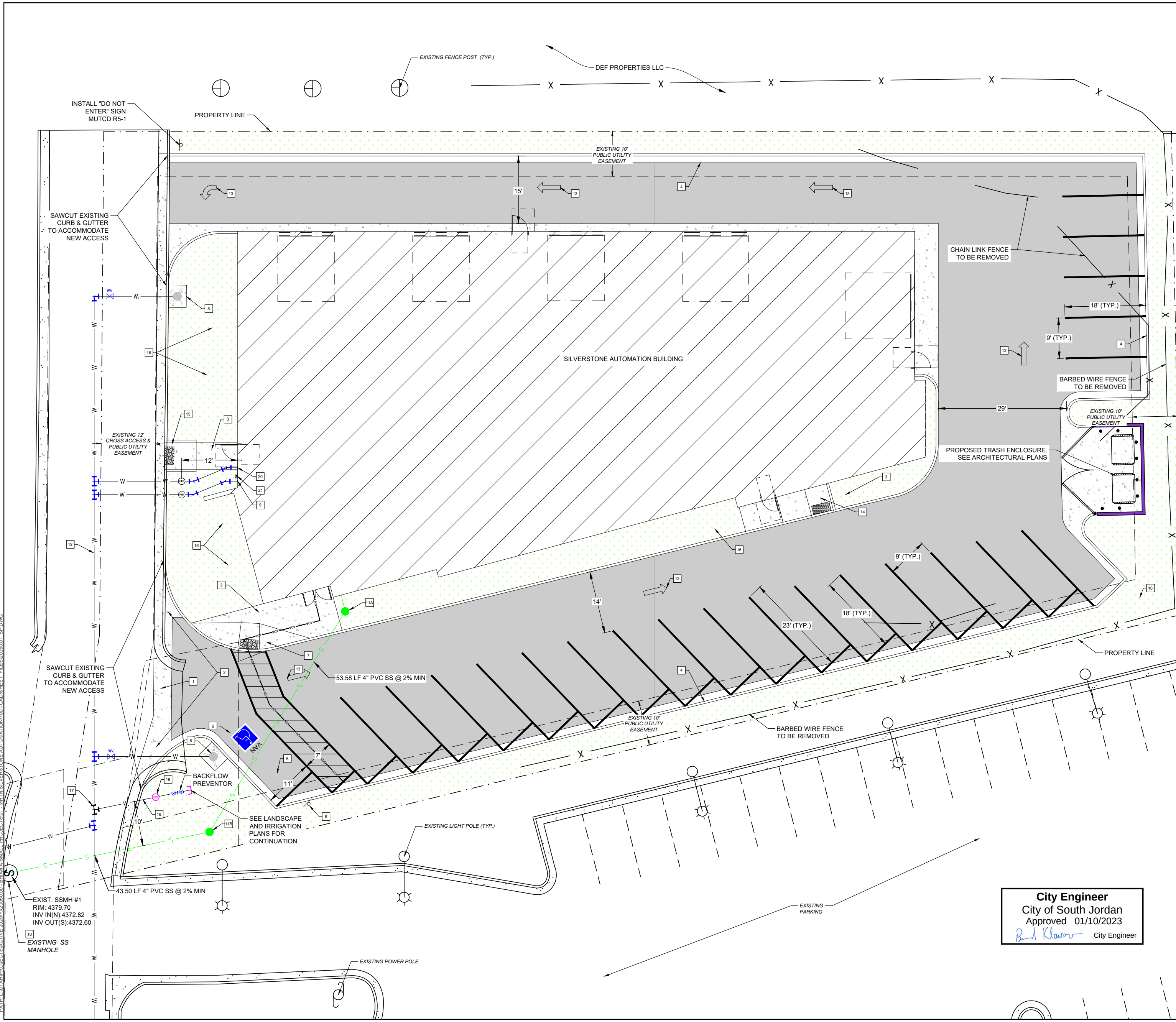
City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

NOTES

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET GN

PATH: L:\UTAH\PROJECTS\ACTIVE 2020\FX20050.00 - BRIAN A SMALL PROJECTS\01 - MHTN SILVERSTONE AUTOMATION\700 - CAD\SHEET FILES\20050.01 CV & NOTES.DWG



0 10 5 20

SCALE: 1" = 10'

(SCALE ONLY VALID FOR 24" x 36" PAPER)

LEGEND

- PROPOSED ASPHALT PAVEMENT PER SECTION ON SHEET DT1
- PROPOSED CONCRETE
- PROPOSED BUILDING
- LANDSCAPING
- ACCESSIBLE ROUTE

KEYNOTES:

1. CONSTRUCT 4' CONCRETE WATERWAY PER APWA PLAN 211. SEE SHEET DT1.
2. CONSTRUCT CONCRETE WATERWAY TRANSITION PER APWA PLAN 213. SEE SHEET DT1.
3. CONSTRUCT THICKENED EDGE SIDEWALK PER DETAIL ON SHEET DT2.
4. CONSTRUCT 24" CURB & GUTTER TYPE E PER APWA PLAN 205.2. SEE SHEET DT1.
5. CONSTRUCT ACCESSIBLE PARKING STALL PER DETAIL ON SHEET DT2.
6. CONSTRUCT ACCESSIBLE STALL SIGN AND STRIPING PER DETAIL ON SHEET DT2.
7. CONSTRUCT ACCESSIBLE RAMP PER APWA PLAN 236.1. SEE SHEET DT1.
8. INSTALL FIRE HYDRANT PER SOUTH JORDAN CITY STANDARDS. LOCATE AT LEAST 2 FT BEHIND THE CURB ON A 4' X 5', 6" THICK CONCRETE PAD. SEE SHEET DT3.
9. INSTALL 1 1/2" WATER SERVICE AND METER PER SOUTH JORDAN CITY STANDARDS.
10. CONNECT PROPOSED 4" SERVICE LATERAL TO EXISTING SANITARY SEWER MANHOLE PER SOUTH VALLEY SEWER DISTRICT STANDARDS. INV 4372.82
11A. INSTALL 4" CLEANOUT AT BUILDING CONNECTION WITH 4" PVC SEWER LATERAL AT 2% MINIMUM SLOPE. INV 4375.46
11B. INSTALL 4" CLEANOUT WITH PVC SEWER LATERAL AT 2% MINIMUM SLOPE. INV 4374.30
12. INSTALL 8" WATER MAIN WITH ALL CONNECTIONS AND FITTINGS AND CONNECT TO EXISTING WATER LINES CREATING A LOOP SEE SHEET SP2 FOR POINTS OF CONNECTION.
13. INSTALL PARKING LOT TRAFFIC DIRECTION MARKINGS.
14. CONSTRUCT ACCESSIBLE RAMP PER APWA PLAN 236.3. SEE SHEET DT3.
15. CONSTRUCT ACCESSIBLE RAMP PER. SEE SHEET GP.
16. LANDSCAPING. SEE LANDSCAPE SHEETS.
17. CONNECT WITH 8" X 1" TEE.
18. INSTALL 1" IRRIGATION WATER LINE.
19. INSTALL 1" WATER METER. SEE LANDSCAPE AND IRRIGATION SHEETS.
20. INSTALL 6" FIRE SERVICE WITH POST INDICATOR VALVE PER SOUTH JORDAN CITY STANDARDS.
21. INSTALL FDC PER SOUTH JORDAN CITY STANDARDS.

PARKING CALCULATIONS:

2,634 FT² / 300 ppl	= 9
10,123 FT² / 800 ppl	= 13
TOTAL STALLS	22 STALLS REQ'D
TOTAL PROVIDED	24 STALLS
(1) ADA STALL PROVIDED	

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

SEWER NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
3. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

811 Know what's below. Call before you dig.

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LEHI, UT 84043
801.768.7200

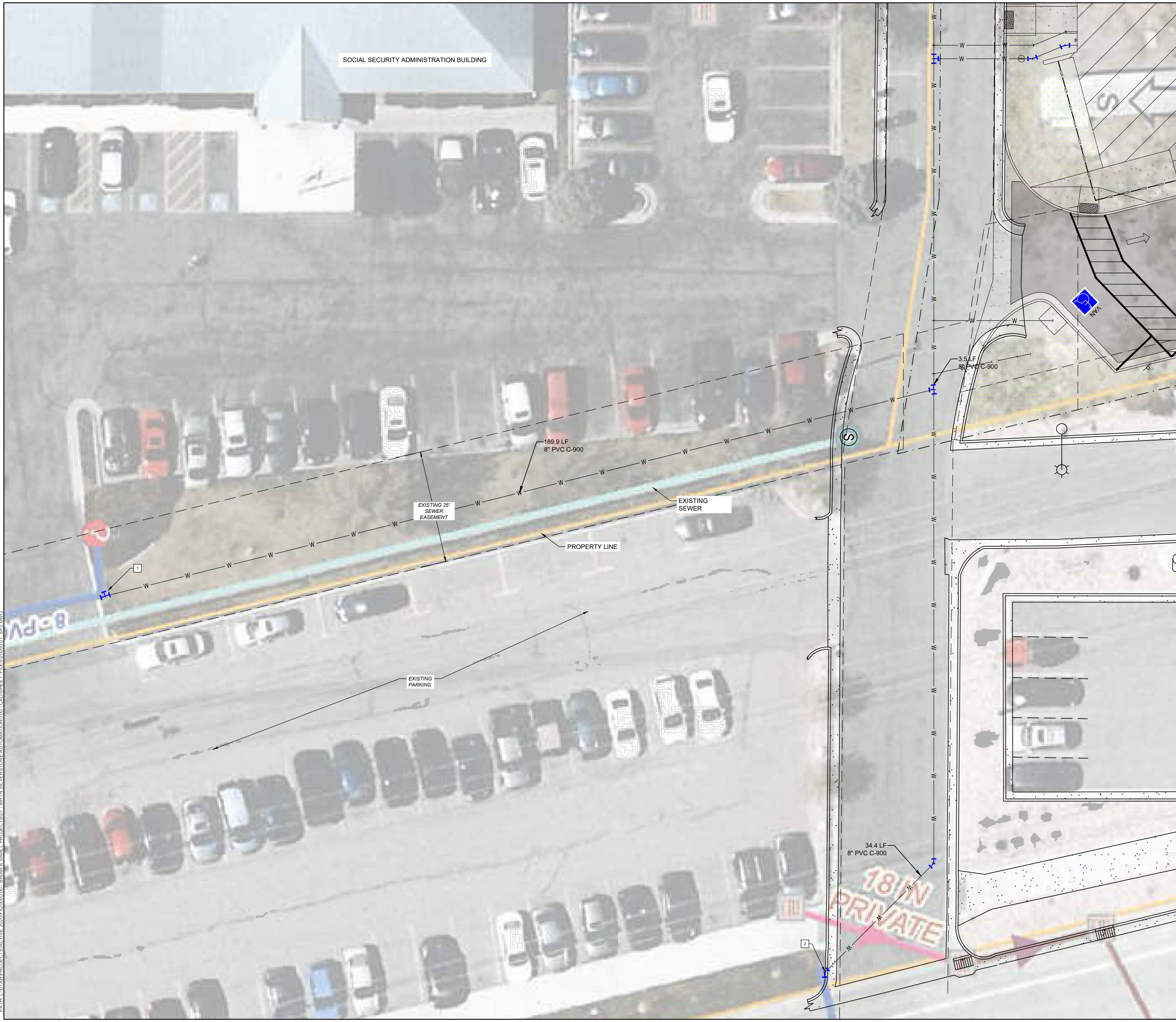
PROFESSIONAL ENGINEER No. 11395943 ROBERT BURKHILL III 12.02.22 STATE OF UTAH

NO.	DESCRIPTION	BY	APPR	DATE
	REVISION			

SITE AND UTILITY PLAN

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET SP1



SCALE: 1" = 10'

(SCALE ONLY VALID FOR 24" x 36" PAPER)

LEGEND

- PROPOSED ASPHALT PAVEMENT PER SECTION ON SHEET DT1
- PROPOSED CONCRETE
- PROPOSED BUILDING
- LANDSCAPING
- ACCESSIBLE ROUTE

KEYNOTES:

1. INSTALL 8" WATER MAIN WITH ALL CONNECTIONS AND FITTINGS AND CONNECT TO EXISTING 8" WATER MAIN PER SOUTH JORDAN CITY STANDARDS.
2. CONNECT TO EXISTING 6" WATER MAIN PER SOUTH JORDAN CITY STANDARDS.

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

SEWER NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
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12.02.22
STATE OF UTAH

REVISION

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SITE AND UTILITY PLAN

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
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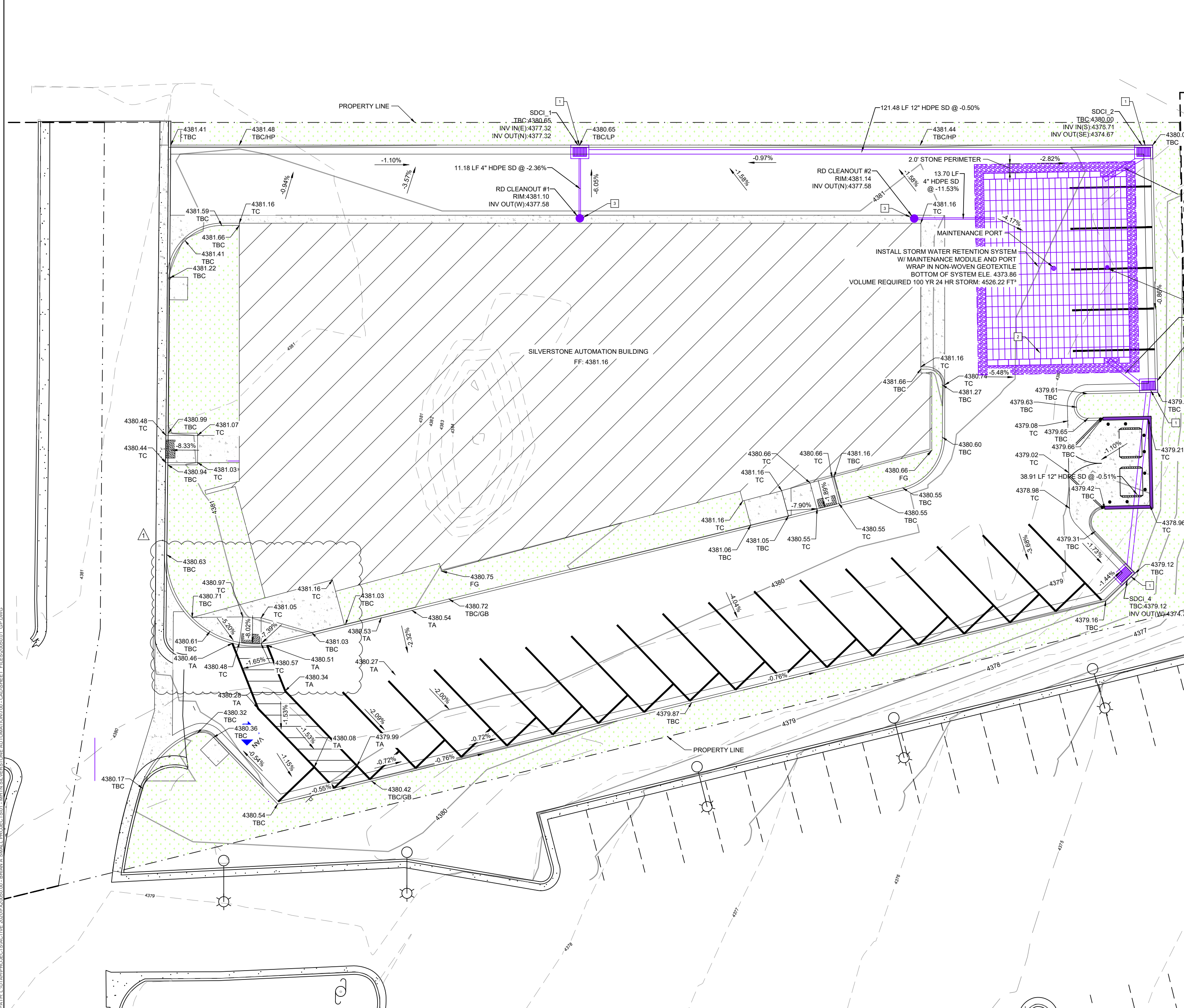
SHEET SP2



PROPERTY LINE
SDCI_1
TBC:4380.65
INV IN(E):4377.32
INV OUT(N):4377.32
4380.65 TBC/LP
121.48 LF 12" HDPE SD @ -0.50%
SDCI_2
TBC:4380.00
INV IN(S):4376.71
INV OUT(SE):4374.67
4380.00 TBC
4381.41 TBC
4381.48 TBC/HP
4381.44 TBC/HP
11.18 LF 4" HDPE SD @ -2.36%
RD CLEANOUT #1
RIM:4381.10
INV OUT(W):4377.58
RD CLEANOUT #2
RIM:4381.14
INV OUT(N):4377.58
13.70 LF 4" HDPE SD @ -11.53%
2.0' STONE PERIMETER
MAINTENANCE PORT
INSTALL STORM WATER RETENTION SYSTEM
W/ MAINTENANCE MODULE AND PORT
WRAP IN NON-WOVEN GEOTEXTILE
BOTTOM OF SYSTEM ELE. 4373.86
VOLUME REQUIRED 100 YR 24 HR STORM: 4526.22 FT³
10.08 LF 12" HDPE SD @ -7.22%
CONNECT TO UNDERGROUND
RETENTION SYSTEM
INSPECTION PORT
9.09 LF 12" HDPE SD @ -3.90%
CONNECT TO UNDERGROUND
RETENTION SYSTEM
SDCI_3
TBC:4379.54
INV IN(E):4374.50
INV OUT(SW):4374.30
SILVERSTONE AUTOMATION BUILDING
FF: 4381.16
38.91 LF 12" HDPE SD @ -0.51%
SDCI_4
TBC:4379.12
INV OUT(W):4374.70
4380.75 FG
4380.72 TBC/GB
4380.42 TBC/GB
VAN
PROPERTY LINE

SCALE: 1" = 10'

(SCALE ONLY VALID FOR 24" x 36" PAPER)

KEYNOTES:

1. INSTALL 2'x2' DROP INLET CATCH BASIN. SEE SHEET DT2.
2. INSTALL UNDERGROUND STORM WATER RETENTION SYSTEM.
3. INSTALL 6" ROOF DRAIN CLEANOUT.

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No. 11395943
ROBERT BURKHILL III
12.02.22
STATE OF UTAH

REVISION

NO.	DESCRIPTION	BY	APR.	DATE
1.	ADA RAMP NOW CONFORMS TO 405.2 AND 406.4	RBIII		02/09/21

GRADING PLAN

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ

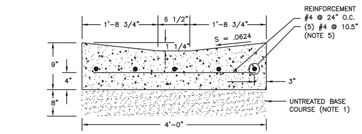
SHEET
GP

Waterway

1. **GENERAL**
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Unless indicated otherwise, width of waterway as follows.
      1) 4 feet for a residential street.
      2) 6 feet for a non-residential street.
      3) If wider than 6 feet, offset the flow line in the waterway to match (line up with) the curb and gutter flow line. Adjust cross slopes to match existing slopes.
   C. Additional requirements are specified in APWA Section 32 16 13.

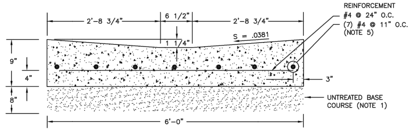
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Reinforcement: Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A615.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Thickness is 6-inches if flow-line grade is 0.5 percent (s=0.005) or greater. If slope is less, provide 8-inches. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Expansion joints are not required in concrete placement using slip-form construction.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   C. Protection and Repair: Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



CONCRETE AREA = 2.764 SQ. FT.

4'-0" WATERWAY



CONCRETE AREA = 4.16 SQ. FT.

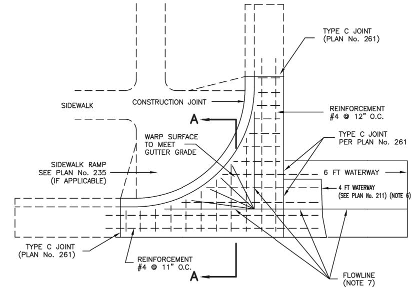
6'-0" WATERWAY

Waterway transition structure

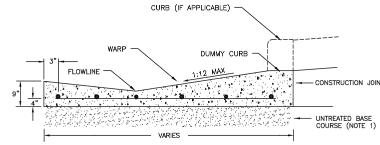
1. **GENERAL**
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Additional requirements are specified in APWA Section 32 16 13..

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73..
   C. Concrete. Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Reinforcement. Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A615.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install at the start or end of a street intersection curb return. Expansion joints are not required in concrete placement using slip-form construction.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   C. Protection and repair. Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



PLAN



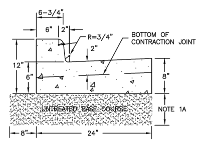
SECTION A–A

Curb and gutter

1. **GENERAL**
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Additional requirements are specified in APWA Section 32 16 13.

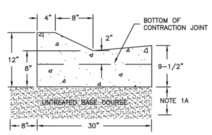
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Thickness is 6-inches if flow-line grade is 0.5 percent (s=0.005) or greater. If slope is less, provide 8-inches. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install at the start or end of a street intersection curb return. Expansion joints are not required in concrete placement using slip-form construction.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   C. Protection and Repair: Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.



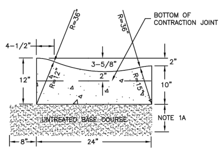
CONCRETE AREA = 1.347 SQ. FT.

TYPE E



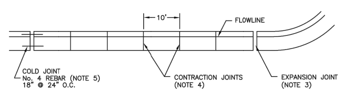
CONCRETE AREA = 1.539 SQ. FT.

TYPE F



CONCRETE AREA = 1.989 SQ. FT.

TYPE G



CURB AND GUTTER JOINT DETAIL

Midblock curb cut assembly

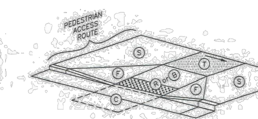
1. **GENERAL**
   A. Where existing elements or spaces are altered to receive an assembly; slopes and dimensions shall comply with slopes and dimensions shown on the drawing, or to the maximum extent feasible permitted by the ENGINEER. Final configuration of the assembly may be different than shown.
   B. Installation of flares or curb returns is ENGINEER's choice.
   C. Definitions and supplemental requirements are specified in APWA Section 32 16 14.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73..
   C. Detectable Warning Surface: Paver, ribbed composite panel, or tile. Provide a color that contrasts with adjacent walking surface, either light-on-dark or dark-on-light. ENGINEER to select type and color unless indicated elsewhere.
   D. Concrete: Class 4000, APWA Section 03 30 04.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

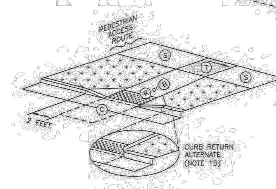
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Modifications:
      1) The sloped surface created to accommodate a flare area shall be perpendicular to the back of curb.
      2) No grade break shall exist between the flow-line and the foot of the curb ramp or blended transition. Length of the curb modification abutting the curb ramp or transition is 4 feet minimum.
   C. Curb Ramp: Length not required to exceed 15 feet. Grade breaks are perpendicular to the direction of ramp run and are not permitted on the ramp or turning space surface. Sides are parallel to each other and perpendicular to the ends.
   D. Concrete Placement: APWA Section 03 30 10.
      1) Maximum length to width ratio for rectangular panel joints is 1.5 to 1. Joint spacing measured in feet not to exceed twice slab thickness measured in inches or a maximum of 15 feet.
      2) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install contraction joints vertical, 1/8-inch wide, and 1/4 of the depth of the concrete flatwork.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   E. Clear Space: No trip hazards in the clear space.

TURNING SPACE AT SIDEWALK LEVEL

THE LOCATION OF THE PEDESTRIAN ACCESS ROUTE AFFECTS FLARE SLOPE CONSTRUCTION



EXAMPLE 1

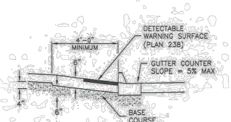


EXAMPLE 2

ELEMENT	DIMENSION
(R) (B)	4 FEET WIDE MINIMUM
(C) (T)	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS



MATERIALS

		RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	(T)	STREET GRADE	2
CURB RAMP	(R)	8.33	2 (c)
BLENDED TRANSITION	(B)	5	2 (c)
CLEAR SPACE	(C)	5	2 (c)
SIDEWALK	(S)	STREET GRADE	2
FLARE	(F)	10	--

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL

SLOPE TABLE

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

CivilScience
Engineers | Surveyors | Solutions
3160 WEST CLUBHOUSE DRIVE
LEHI, UT 84043
801.768.7200

PROFESSIONAL ENGINEER
No. 11395943
ROBERT
BURKHILL III
12.02.22
STATE OF UTAH

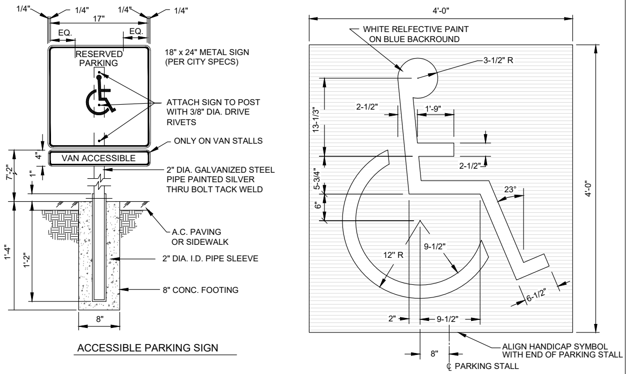
NO.	DESCRIPTION	BY	APR	DATE
	REVISION			

DETAILS

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

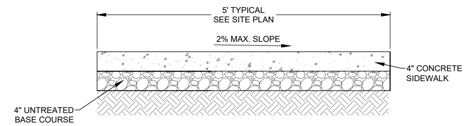
PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET
DT1
6 OF 8

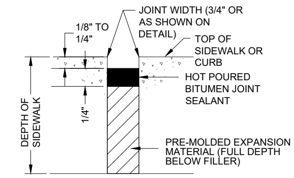
PATH: L:\UTAH\PROJECTS\ACTIVE 2020\FX20050.00 - BRIAN A SMALL PROJECTS\20050.01 - MHTN SILVERSTONE AUTOMATION\700 - CADSHEET FILES\20050.01 DETAILS.DWG



18" x 24" METAL SIGN (PER CITY SPECS)
RESERVED PARKING
ATTACH SIGN TO POST WITH 3/8" DIA. DRIVE RIVETS
ONLY ON VAN STALLS
VAN ACCESSIBLE
2" DIA. GALVANIZED STEEL PIPE PAINTED SILVER THRU BOLT TACK WELD
A.C. PAVING OR SIDEWALK
2" DIA. I.D. PIPE SLEEVE
8" CONC. FOOTING
ACCESSIBLE PARKING SIGN
WHITE REFLECTIVE PAINT ON BLUE BACKROUND
ALIGN HANDICAP SYMBOL WITH END OF PARKING STALL
℄ PARKING STALL

1 INTERNATIONAL SYMBOL OF ACCESSIBILITY
N.T.S.





TYPICAL ISOLATION JOINT SEAL
(LONGITUDINAL AND TRANSVERSE)

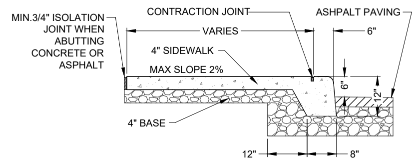
NOTES:

1. 4" UNTREATED BASE COURSE MATERIAL SHALL BE PLACED UNDER THE CONCRETE SIDEWALK.

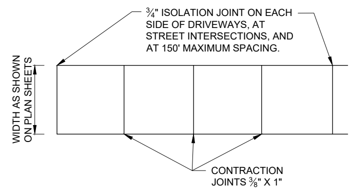
2. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER, A CURB SHALL BE CONSTRUCTED WHERE THE EXISTING SIDEWALK IS TO BE LOWERED, OR ABUTS A BUILDING OR ADJACENT PROPERTY.

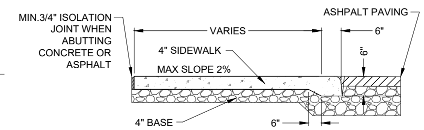
3. TRANSVERSE SIDEWALK JOINT SPACING SHALL VARY FROM 5' TO CREATE APPROXIMATE SQUARE PANELS. WHEN THE SIDEWALK IS ADJACENT TO THE CURB & GUTTER, THE SIDEWALK JOINT SPACING SHALL BE VARIED SO THAT THE SIDEWALK JOINTS MATCH UP WITH THE CURB & GUTTER JOINTS.

4. LONGITUDINAL JOINTS SHALL BE USED WHERE THE SIDEWALK WIDTH IS 8' OR GREATER, AND SHALL BE SPACED AT HALF THE SIDEWALK WIDTH.



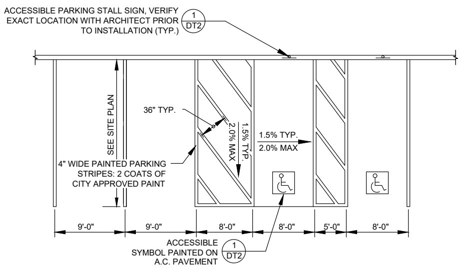
THICKENED EDGE SIDEWALK DETAIL
INSTALLED ADJACENT TO BARRIER CURB
(SIMILAR FOR CURB & GUTTER)





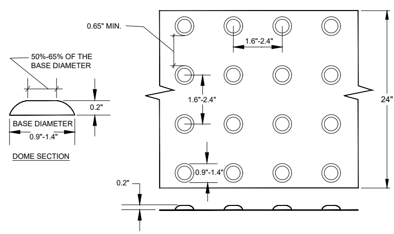
THICKENED EDGE SIDEWALK DETAIL
INSTALLED ADJACENT TO FLUSH BARRIER CURB

2 SIDEWALK DETAILS
N.T.S.



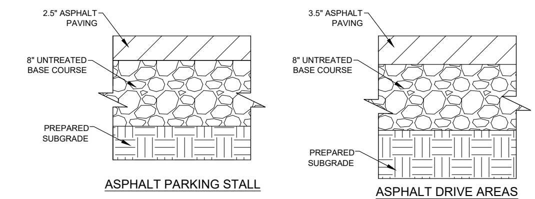
ACCESSIBLE PARKING STALL SIGN, VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION (TYP.) 1 DT2
SEE SITE PLAN
36" TYP.
1.5% TYP. 2.0% MAX
4" WIDE PAINTED PARKING STRIPES: 2 COATS OF CITY APPROVED PAINT
9'-0" 9'-0" 8'-0" 8'-0" 5'-0" 8'-0"
ACCESSIBLE SYMBOL PAINTED ON A.C. PAVEMENT 1 DT2

3 ACCESSIBLE PARKING STALL
N.T.S.



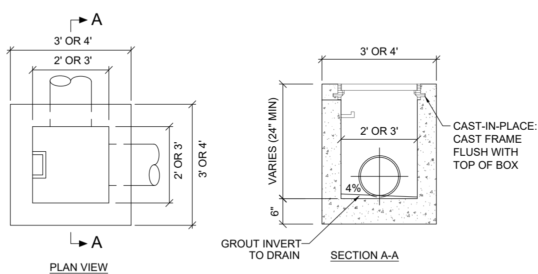
NOTES:
1. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING 4' MINIMUM WIDTH AND TO A MINIMUM DEPTH OF 24 INCHES PER CITY STANDARDS.

4 DETECTABLE WARNING (TRUNCATED DOMES) DETAIL
N.T.S.



* REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION

5 PAVEMENT SECTIONS
N.T.S.

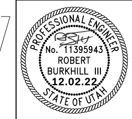


NOTES:
1. CONCRETE SHALL BE 4000 PSI @ 28 DAYS. INLET MAY BE CAST-IN-PLACE OR PRECAST AND SHALL CONFORM TO ASTM C-478. PRECAST INLETS SHALL CONFORM WITH ASTM C858 AND C913. (PRECAST BOX SHOWN)
2. CAST-IN-PLACE CONCRETE WALLS SHALL BE 6" MIN. THICKNESS WITH 3/4" CHAMFERED EDGES.
3. ALL WALLS AND BASE SHALL BE REINFORCED WITH #4'S @ 8" OC EACH WAY REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2" MINIMUM CLEARANCE.
4. ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS 20 LOADING. INLETS LOCATED WITHIN PAVED AREAS SHALL HAVE CONCRETE APRON PER DETAIL ON THIS SHEET.
5. SEE UTILITY PLAN FOR BOX SIZE, LOCATION AND SIZE OF PIPE.
6. WHEN BITUMINOUS MATERIAL IS TO EXTEND TO THE EDGE OF THE GRATING FRAME, CONCRETE MAY BE DEPRESSED.
7. PROVIDE EMBEDDED PLASTIC LADDER STEPS AT 18" SPACING FOR INLETS DEEPER THAN 4'.
8. FOR INLETS IN LANDSCAPE AREAS, NON-CONCRETE INLET OPTIONS MAY BE ACCEPTABLE. SUBMIT TO ENGINEER FOR REVIEW.

6 PRECAST DROP INLET DETAIL
N.T.S.

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

CivilScience
Engineers | Surveyors | Solutions
3160 WEST CLUBHOUSE DRIVE
LEHI, UT 84043
801.768.7200

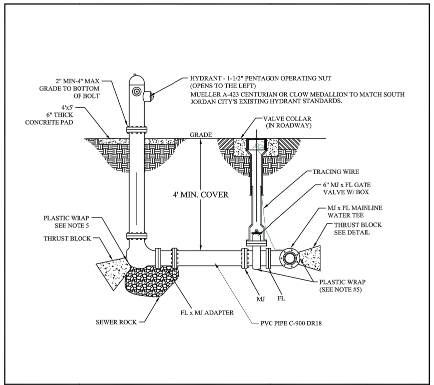


NO.	DESCRIPTION	BY	APPR	DATE
REVISION				

DETAILS

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET
DT2



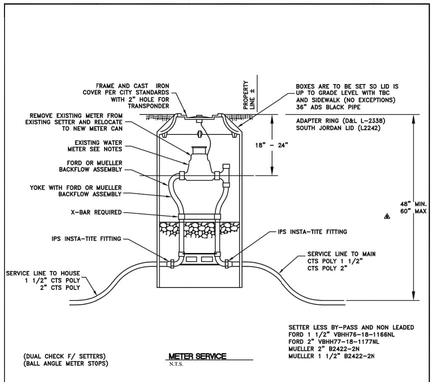
NOTES:
1. INSPECTION: PRIOR TO BACKFILLING, SECURE INSPECTION OF INSTALLATION BY ENGINEER.
2. BACKFILL: INSTALL AND COMPACT ALL BACKFILL MATERIAL PER SPECIFICATIONS.
3. HYDRANT: DRY BARREL PER AWWA C502.
   A. PROVIDE AT LEAST 1 CUBIC YARD OF SEWER ROCK AROUND DRAIN HOLE AT BASE OF HYDRANT. PLACE TAR PAPER OR PLASTIC OVER SEWER ROCK TO PREVENT SILTING.
   B. PAINT FIRE HYDRANT RED PER SOUTH JORDAN CITY'S REQUIREMENTS.
   C. APPLY POLY-FM GREASE TO ALL BURIED METAL SURFACES. WRAP WITH 8 mil THICK POLYETHYLENE SHEET AND TAPE WRAP.
   D. ALL HYDRANTS NOT IN SERVICE SHALL BE BAGGED UNTIL WATER IS AVAILABLE
4. THRUST BLOCKS: REQUIRED FOR ALL CONNECTIONS INCLUDING FLANGED OR WELDED PIPE SYSTEMS.
5. PLASTIC WRAP: PRIOR TO POURING CONCRETE, APPLY POLY-FM GREASE AND WRAP PIPE SYSTEM AND FITTINGS WITH 8 mil THICK PLASTIC SHEET TO PREVENT BONDING OF CONCRETE TO PIPE SYSTEM AND FITTINGS.
6. PLACE FOUR (4) PROTECTIVE BOLLARDS AROUND HYDRANT IF DIRECTED BY BY SOUTH JORDAN CITY.

PREPARED BY:__________

SOUTH JORDAN CITY

FIRE HYDRANT INSTALLATION WITH MAIN IN THE ROADWAY — STANDARD DRAWING 3055

DRAWN: | DATE | DATE | REVISIONS | BY



METER SERVICE
N.T.S.

NOTES:

1. INSPECTION: PRIOR TO BACKFILLING AROUND THE METER BOX, SECURE INSPECTION OF INSTALLATION BY ENGINEER.

2. BACKFILLING: INSTALL ALL BACKFILL MATERIAL PER APWA SECTION 02320 IN LIFTS NOT EXCEEDING 6 INCHES AFTER COMPACTION. COMPACT EACH LIFT TO A MINUMUM RELATIVE DENSITY OF 96 PERCENT.

3. PLACEMENT:
   A. DO NOT INSTALL METERS IN HARD SURFACE 2 FEET MINIMUM FROM LID.
   B. IN NEW CONSTRUCTION, INSTALL METER AT CENTER OF LOT OF PER SOUTH JORDAN CITY REQUIREMENTS.
   C. ALL METERS ARE TO BE INSTALLED IN THE PARK STRIP OR WITHIN 4 FEET OF THE PROPERTY LINE (STREET SIDE) AND OUTSIDE OF HARD SURFACE.

PREPARED BY:__________

SOUTH JORDAN CITY

1 1/2" AND 2" METER SERVICE — STANDARD DRAWING 3091

City Engineer
City of South Jordan
Approved 01/10/2023
[signature] City Engineer

Mid-block curb cut assembly

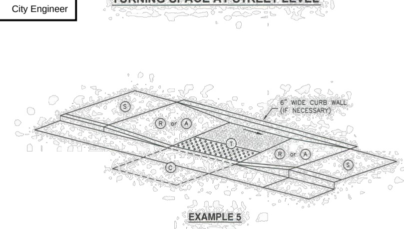
1. **GENERAL**
   A. Where existing elements or spaces are altered to receive an assembly; slopes and dimensions shall comply with slopes and dimensions shown on the drawing, or to the maximum extent feasible permitted by the ENGINEER. Final configuration of the assembly may be different than shown.
   B. Installation of a curb wall is ENGINEER's choice.
   C. Definitions and supplemental requirements are specified in APWA Section 32 16 14.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73..
   C. Detectable Warning Surface: Paver, ribbed composite panel, or tile. Provide a color that contrasts with adjacent walking surface, either light-on-dark or dark-on-light. ENGINEER to select type and color unless indicated elsewhere.
   D. Concrete: Class 4000, APWA Section 03 30 04.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Modifications:
      1) The sloped surface created to accommodate the ramp or approach areas shall be perpendicular to the back of curb.
      2) No grade break shall exist between the flow-line and the turning space. Length of the curb modification abutting the turning space is 4 feet minimum.
   C. Curb Ramp: Length not required to exceed 15 feet. Grade breaks are perpendicular to the direction of ramp run and are not permitted on the ramp or turning space surface. Sides are parallel to each other and perpendicular to the ends.
   D. Curb Wall: Set top of curb wall equal to elevation of extended lateral lines of sidewalk.
   E. Concrete Placement: APWA Section 03 30 10.
      1) Maximum length to width ratio for rectangular panel joints is 1.5 to 1. Joint spacing measured in feet not to exceed twice slab thickness measured in inches or a maximum of 15 feet.
      2) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install contraction joints vertical, 1/8-inch wide, and 1/4 of the depth of the concrete flatwork.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   F. Clear Space: No trip hazards in the clear space.

236.3

TURNING SPACE AT STREET LEVEL



EXAMPLE 5

ELEMENT	DIMENSION
(R) (A)	4 FEET WIDE MINIMUM
(C) (T)	4 FEET SQUARE MINIMUM

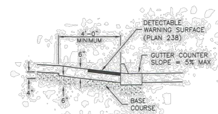
WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS

	RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE (T)	STREET GRADE	2
CURB RAMP (R)	8.33	2
CLEAR SPACE (C)	5	STREET GRADE
SIDEWALK (S)	STREET GRADE	2
APPROACHE (A)	8.33	2

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL

SLOPE TABLE

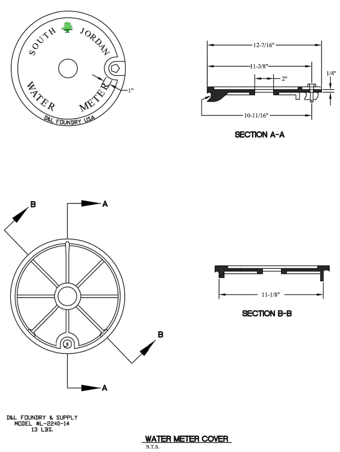


MATERIALS

APWA Utah Chapter

Mid-block curb cut assembly

Plan 236.3
September 2011

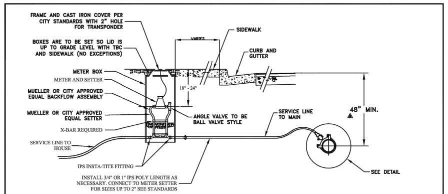


WATER METER COVER
N.T.S.

PREPARED BY:__________

SOUTH JORDAN CITY

METER SERVICE — STANDARD DRAWING 3092



WATER SERVICE ADJUSTMENTS

NOTES:
1. FITTINGS - PROVIDE BRASS FITTINGS AND NIPPLES ON ALL SERVICE LINE CONNECTIONS. DO NOT USE GALVANIZED MATERIALS

2. INSPECTION: PRIOR TO BACKFILLING AROUND THE METER BOX, SECURE INSPECTION OF INSTALLATION BY ENGINEER.

3. BACKFILLING: INSTALL ALL BACKFILL MATERIAL PER APWA SECTION 02320 IN LIFTS NOT EXCEEDING 6 INCHES AFTER COMPACTION. COMPACT EACH LIFT TO A MINIMUM RELATIVE DENSITY OF 96 PERCENT.

4. PLACEMENT:
   A. DO NOT INSTALL METERS IN HARD SURFACE 2 FEET MINIMUM FROM LID.
   B. IN NEW CONSTRUCTION, INSTALL METER AT CENTER OF LOT OF PER SOUTH JORDAN CITY REQUIREMENTS.
   C. ALL METERS ARE TO BE INSTALLED IN THE PARK STRIP OR WITHIN 4 FEET OF THE PROPERTY LINE (STREET SIDE) AND OUTSIDE OF HARD SURFACE.

TYPICAL CULINARY WATER SERVICE CONNECTION
N.T.S.

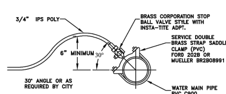
NOTES:

1. INSPECTION – PRIOR TO BACKFILLING AROUND TAPS, SECURE INSPECTION OF INSTALLATION BY SOUTH JORDAN WATER DEPARTMENT

2. BACKFILL – INSTALL AND COMPACT ALL BACKFILL MATERIAL PER CITY STANDARD

3. TAPPING – PLACE TAPS A MINIMUM OF 36" APART. USE A TAPPING TOOL WHICH IS SIZED CORRESPONDING TO THE SIZE OF THE SERVICE LINE TO BE INSTALLED. NO TAPS WITHIN 36" OF END OF ANY PIPE.

TAPE – TEFLON TAPE OR PIPE DOPE IS REQUIRED ON ALL TAPS

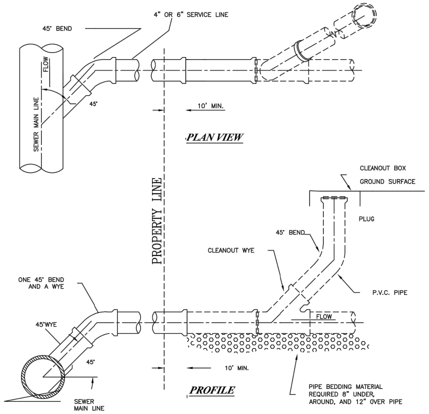


SERVICE TAPS
N.T.S.

PREPARED BY:__________

SOUTH JORDAN CITY

3/4" - 2" WATER METER PLAN SERVICE INSTALLATION — STANDARD DRAWING 3095



NOTES:

1. ALL SERVICES SHALL BE 4" DIAMETER MINIMUM, UNLESS DIRECTED OTHERWISE AND SHALL BE EXTENDED FROM MAIN LINES TO 10' INSIDE OF PROPERTY LINES.

2. MINIMUM GRADE SHALL BE 1% FOR 6" SERVICE LINES AND 2% FOR 4" SERVICE LINES. MINIMUM GRADE OF 1% CAN BE USED FOR 4" SERVICE LINES WHERE REQUIRED AND AS APPROVED BY THE DISTRICT

3. CLEAN-OUTS SHALL BE INSTALLED EVERY 100 FEET.

4. ALL 90° CONNECTIONS TO MAIN MUST BE CONSTRUCTED WITH ONE 45° BEND AND A WYE.

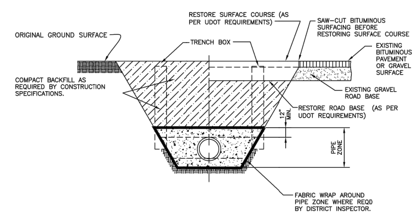
5. 90° FITTINGS ARE NOT ALLOWED. 90° SHALL BE MADE WITH TWO 45° BENDS OR A COMBO WYE AND 45° BEND.

6.. DIRECT NOSE-ON CONNECTIONS ARE USED WHEN CONNECTING TO EXISTING MAIN LINE. ALL NOSE-ON WORK IS TO BE DONE BY DISTRICT PERSONNEL.

SOUTH VALLEY SEWER DISTRICT

STANDARD SEWER SERVICE CONNECTION AND CLEAN-OUT

DATE: NOV 2019 — DRAWING NAME: SS-3A



CROSS-SECTION: TYPICAL TRENCH

NOTES:

1. ALL SEWER LINES TO BE INSTALLED IN PUBLIC RIGHT-OF-WAY OR RECORDED SEWER EASEMENT UNLESS OTHERWISE APPROVED BY SOUTH VALLEY SEWER DISTRICT.

2. THE DISTRICT RECOMMENDS CONTRACTOR MEET ALL OF THE REQUIREMENTS ESTABLISHED FOR SAFE TRENCHING. (SEE OSHA AND UOSH REQUIREMENTS, LATEST EDITIONS).

3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE LAYING PIPE WITHIN 50' OF SAID UTILITIES WHICH MAY BE EXPOSED, DAMAGED OR CROSSED AS SHOWN ON THE DRAWINGS OR AS "BLUE STAKED". THE CONTRACTOR WILL MAKE ARRANGEMENTS WITH THE UTILITY COMPANY TO MOVE THE UTILITY IF NECESSARY OR OBTAIN PERMISSION FROM THE DISTRICT ENGINEER TO MODIFY GRADE OF PIPELINE IN ORDER TO GO AROUND UTILITIES.

4. TESTING: ALL NEW SANITARY SEWERS TO BE "TELEVISED" AND NECESSARY REPAIRS MADE BEFORE ACCEPTANCE. ALL LINES SHALL BE PRESSURE TESTED TO 4.0 psi MIN. FOR 5 MINUTES. A MANDRAL OR BALL CAN BE USED TO VERIFY DEFORMATION OF A PIPE AS DETERMINED FROM THE VIDEO UNLESS SPECIFIED OTHERWISE.

5. ASPHALT RESTORATION SHALL MATCH EXISTING TO A MAXIMUM OF 6" AND SHALL INCLUDE A 6" UNTREATED BASE COURSE AND 12" GRANULAR BORROW COURSE AS PER UDOT STANDARDS.

NO SCALE

SOUTH VALLEY SEWER DISTRICT

STANDARD SEWER TRENCH DETAIL

DATE: NOV 2019 — DRAWING NAME: SS-1A

CivilScience
Engineers | Surveyors | Solutions
3160 WEST CLUBHOUSE DRIVE
LEHI, UT 84043
801.768.7200

PROFESSIONAL ENGINEER No. 11395943 ROBERT BURKHILL III 12.02.22 STATE OF UTAH

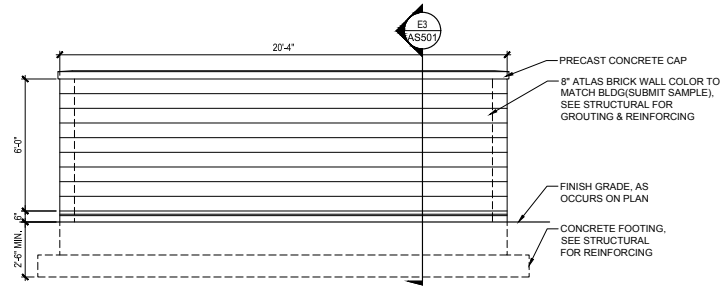
NO.	DESCRIPTION	BY	APPR	DATE

REVISION

DETAILS

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

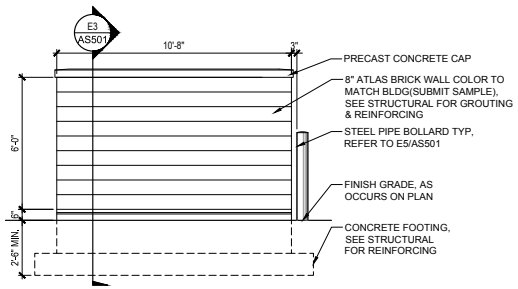
PROJ. #: FF 20050.01
DATE: DECEMBER 2, 2022
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET DT3



B2 DUMPSTER ENCLOSURE- NORTH ELEVATION

3/8" = 1'-0"

P-CO-SIL-042263-13



C1 DUMPSTER ENCLOSURE- WEST ELEVATION

3/8" = 1'-0"

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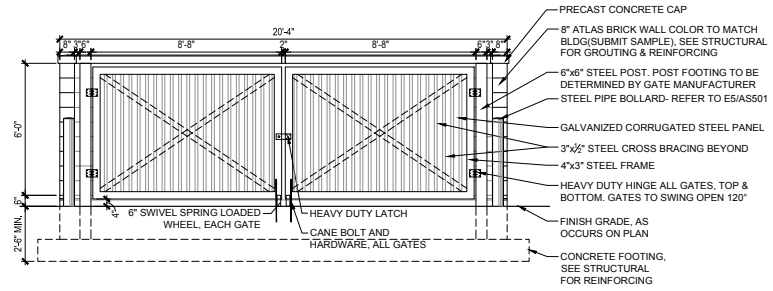

C2 DUMPSTER ENCLOSURE- SOUTH ELEVATION

3/8" = 1'-0"

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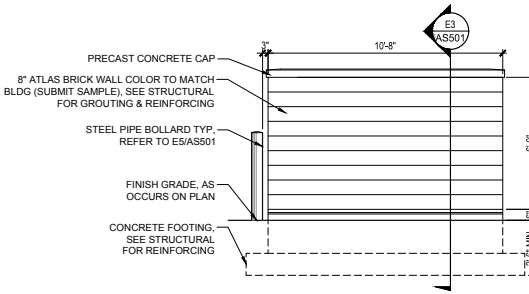
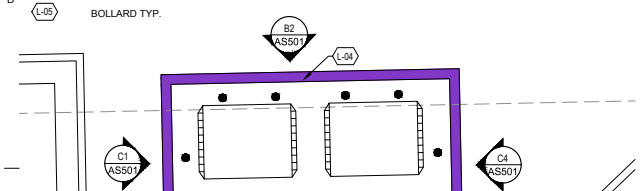


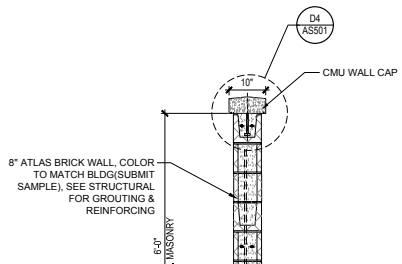
C4 DUMPSTER ENCLOSURE- EAST ELEVATION

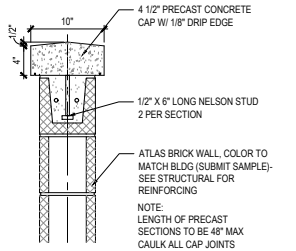
3/8" = 1'-0"

REFERENCE NOTES SCHEDULE

SYMBOL	LANDSCAPE DESCRIPTION
L-01	ASPHALT PAVING
L-02	CONCRETE PAVING
L-03	CONCRETE CURB & GUTTER
L-04	CMU SCREEN WALL
L-05	BOLLARD TYP.





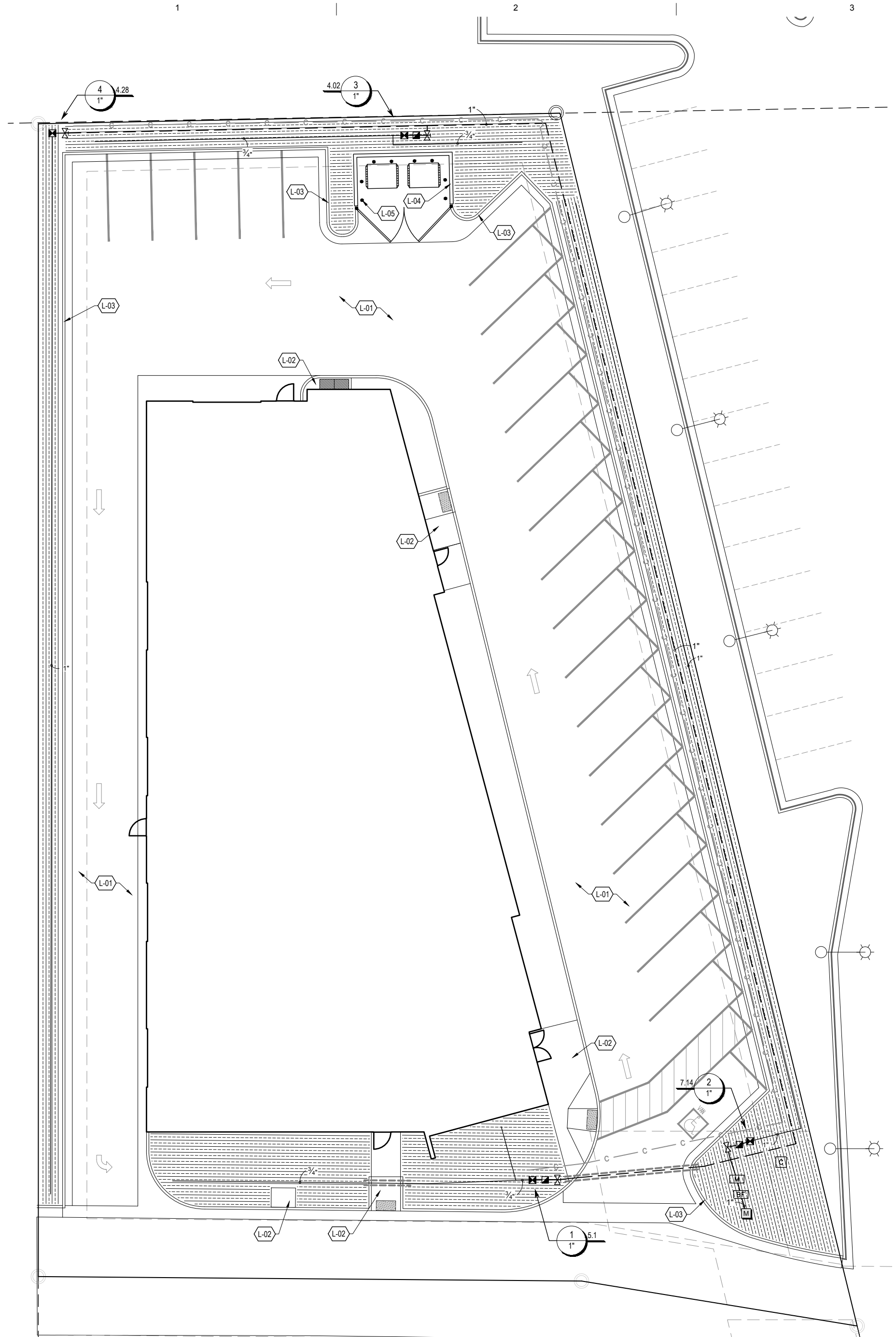


D4 10" PRECAST CONCRETE CAP

1 1/2" = 1'-0"

P-CO-SIL-042263-02

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer



E1 IRRIGATION PLAN

0 5' 10' 20'

SCALE: 1" = 10'-0"

DRIP IRRIGATION NOTES

1. LAYOUT DRIP LINE SO THAT AS A MINIMUM ALL SHRUBS LIE BETWEEN TWO ROWS OF DRIPPER LINE AND SO THAT ROWS ARE 18" TO 24" APART TYPICAL. FIELD VERIFY SOIL, SUBSOIL AND SLOPE CONDITIONS AND MODIFY AS REQUIRED.
2. COORDINATE LAYOUT OF DRIP LINE WITH THE LAYOUT OF THE PLANT MATERIAL THROUGHOUT.
3. INSTALL AUTOMATIC DRAINS AT ALL LOW POINTS IN THE PVC SUPPLY AND EXHAUST HEADERS TO ENSURE COMPLETE DRAINAGE.
4. FLUSH OUT THE SYSTEM COMPLETELY PRIOR TO INSTALLING THE FLUSH VALVES TO PREVENT CLOGGING.
5. INSTALL PVC SUPPLY AND EXHAUST HEADERS A MIN. OF 6" BELOW FINISH GRADE TYPICAL THROUGHOUT.
6. INSTALL DRIPPER LINE 2" BELOW FINISH GRADE DIRECTLY BELOW MULCH LAYER.
7. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AN ADEQUATE AMOUNT OF AIR RELIEF VALVES. EACH ZONE, SEPARATE AREA WITHIN ZONES, OR AREAS WITHIN ZONES SEPARATED BY GRADE VARIATIONS REQUIRE AIR RELIEF VALVES. INSTALL IN 2" PVC SLEEVES WITH MARKER CAP.
8. ALL PVC SUPPLY AND EXHAUST HEADERS SHALL BE A MINIMUM OF 1" IN SIZE.
9. ALL FILTERING AND VALVING FOR BOTH THE DRIPPER LINE AND EMITTERS SHALL BE ACCOMMODATED USING THE SAME VALVE/FILTER/ PRESSURE REGULATING ASSEMBLY.

IRRIGATION NOTES

1. ALL MAIN LINE PIPE SHALL BE NEW SCH 40 WITH SCH 80 FITTINGS ON ALL TEES, ELBOWS AND 90'S. ALL LATERAL LINE PIPE SHALL BE SCHEDULE 40 PVC PIPE WITH SCH 40 FITTINGS.
2. ALL GALVANIZED PIPE ON DETAILS SHALL BE NEW GALVANIZED STEEL PIPE.
3. LIVE SERVICE MAINS SHALL BE INSTALLED A MINIMUM OF 18" BELOW FINISH GRADE. BACKFILL TRENCH AROUND LIVE SERVICE MAIN WITH A MINIMUM OF 8" OF SAND. LATERAL LINES SHALL BE PLACED A MINIMUM OF 12" BELOW FINISH GRADE. INSTALL A QUICK COUPLER AND DRAIN DOWNSTREAM OF THE MASTER VALVE.
4. ALL MAIN LINES SHALL SLOPE TO DRAIN. IF FIELD CONDITIONS NECESSITATE ADDITIONAL DRAINS, THESE DRAINS SHALL BE INSTALLED FOR COMPLETE DRAINAGE OF THE ENTIRE MAINLINE. PROVIDE A 24" DIA. X 24" DEEP GRAVEL SUMP UNDER EACH DRAIN, WHICH DRAIN SHALL BE A MIN. OF 24" BELOW GRADE. ALL MANUAL DRAIN VALVES SHALL BE INSTALLED AS DETAILED ON THE DRAWINGS. INSTALL GEO-TEXTILE FABRIC AROUND EACH GRAVEL DRAIN.
5. THIS CONTRACTOR SHALL PROVIDE AND INSTALL AIR RELIEF VALVES ON THE MAINLINE AT ALL DEAD END RUNS AND AT ALL HIGH POINTS THROUGHOUT.
6. THE CONTRACTOR SHALL PRESSURE TEST THE MAINLINE AT 150 P.S.I. PRIOR TO INSTALLING ANY LATERAL LINES.
7. ALL PVC FITTINGS SHALL BE ASTM 2466 FITTINGS.
8. IRRIGATION SYSTEM IS DESIGNED SO THAT THE SYSTEM CAN BE WINTERIZED USING COMPRESSED AIR. DO NOT INSTALL AUTOMATIC DRAINS ANYWHERE ON THE SYSTEM.
9. THIS CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF THE IRRIGATION SPRINKLER SYSTEM IN CAD FORMAT SHOWING EXACT MEASURED AND DIMENSIONED LOCATIONS OF ALL VALVES, WIRE SPLICES NOT IN A VALVE BOX AND DRAIN VALVES. TIE DIMENSIONS TO PERMANENT FEATURES SUCH AS STRUCTURES
10. THIS DRAWING IS DIAGRAMMATIC ONLY AND IS INTENDED TO CONVEY THE IDEA OF FULL COVERAGE OF THE IRRIGATION SPRINKLER SYSTEM. PRINTS SHALL NOT BE SCALED. THE IRRIGATION SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION LAYOUT OF THE SYSTEM IN ACCORDANCE WITH THE DRAWINGS TO PROPORTIONALLY COVER A GIVEN AREA AS SHOWN. THE LAYOUT MAY BE MODIFIED IF NECESSARY TO OBTAIN COVERAGE TO SUIT THE MANUFACTURERS STANDARD HEADS INDICATED. DO NOT DECREASE THE NUMBER OF HEADS INDICATED UNLESS THIS IS ACCEPTABLE TO THE LANDSCAPE ARCHITECT. THE SYSTEM SHALL BE TESTED FOR COMPLETE COVERAGE AND ALL NECESSARY PROPER ADJUSTMENTS MADE TO GET FULL AND PROPER COVERAGE PRIOR TO ACCEPTANCE BY THE OWNER.
11. THE SYSTEM IS DESIGNED FOR 30 PSI OPERATING PRESSURE ON THE ENTIRE DRIP SYSTEM UNLESS OTHERWISE NOTED.
12. ALL VALVES TO BE WIRED TO CONTROLLERS USING #14 U.F. WIRE AND PEN-TITE WATER RESISTANT WIRE CONNECTORS. ALL VALVE WIRES UNDER PAVING SHALL BE INSTALLED IN A MINIMUM 2" SCHEDULE 40 PVC CONDUIT BURIED 24" DEEP. PROVIDE AND INSTALL A DIFFERENT COLOR VALVE WIRE FOR EACH CONTROLLER. RUN ONE EXTRA WIRE FROM THE ADJACENT CONTROLLER TO EACH GROUP OF VALVES FOR FUTURE USE AND STUB INTO THE VALVE BOX.
13. ALL VALVE BOXES SHALL BE JUMBO SIZED PLASTIC BOXES, AMETEC OR EQUAL UNLESS OTHERWISE DETAILED.
14. ALL VALVES WILL BE LOCATED IN GROUPS 3' AWAY FROM WALKS AND CURBS-COORDINATE WITH MAINLINE LAYOUT. A DRAIN VALVE WITH SUMP SHALL BE PROVIDED AND INSTALLED AT EACH GROUP OF VALVES. A QUICK COUPLER SHALL BE PROVIDED AT EVERY VALVE MANIFOLD LOCATION. VALVES SHALL BE LOCATED 3'-0" AWAY FROM THE CURBS, WALKS OR MOWSTRIP.
15. ALL ISOLATION VALVES AT VALVE MANIFOLDS SHALL BE APOLLO 70-100 SERIES BALL VALVES.
16. A MAXIMUM OF FOUR VALVES SHALL BE INSTALLED ON EACH VALVE MANIFOLD OR MAIN LINE TEE. ALL MAINLINE MANIFOLD TEES SHALL HAVE A 4" MINIMUM OUTLET.
17. ALL HEADS SHALL BE SET PERPENDICULAR TO THE EXISTING GRADE SO AS TO PROVIDE PROPER COVERAGE.
18. PROVIDE AND INSTALL ALL THE MANUFACTURER'S RECOMMENDED SURGE AND LIGHTNING PROTECTION EQUIPMENT ON ALL NECESSARY SYSTEM COMPONENTS.
19. CONNECT TO THE EXISTING 1-1/2" PVC MAINLINE STUB AT THE LOCATION SHOWN. INSTALL THE BACKFLOW PREVENTION ASSEMBLY AND MASTER VALVE. DRAIN VALVE AND QUICK COUPLER AS REQUIRED TO DRAIN THE SYSTEM.
20. INSTALL A FEBCO REDUCED PRESSURE VACUUM BREAKER BACKFLOW PREVENTION ASSEMBLY ABOVE GRADE AS DETAILED AND AS PER ALL APPLICABLE STATE CODES AND AS PER MANUFACTURES RECOMENDATIONS.
21. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY SITE ITEMS DAMAGED DURING THE COURSE OF CONSTRUCTION.
22. IRRIGATION PRODUCT SUBMITTALS SHALL INCLUDE PIPE SLEEVING AND CONDUIT.
23. COORDINATE WITH THE GENERAL CONTRACTOR AND OWNER IN THE INSTALLATION OF THE PEDESTAL MOUNTED IRRIGATION CONTROLLER. PROVIDE LIGHTNING PROTECTION PER MFGR'S RECOMMENDATIONS.

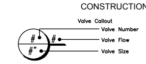
REFERENCE NOTES SCHEDULE

SYMBOL	LANDSCAPE DESCRIPTION
L-01	ASPHALT PAVING
L-02	CONCRETE PAVING
L-03	CONCRETE CURB & GUTTER
L-04	CMU SCREEN WALL
L-05	BOLLARD TYP.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD XCZLF-100-PRF
	AREA TO RECEIVE DRIPLINE NETAFIM TLDL-06-18

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD 44-NP 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING NON-POTABLE PURPLE RUBBER COVER, AND 2-PIECE BODY.
	APOLLO VALVES 70-100 BALL VALVE (LEAD FREE), LEAD FREE BRONZE BODY, BLOW-OUT PROOF STEM DESIGN, MULTI-FILL PTFE SEATS & SEALS
M	NETAFIM DIGITAL REGISTER 1-1/2" NETAFIM LHM15EM11AAFMEL, MASTER VALVE/FLOW SENSOR WITH WATER METER AND HYDRAULIC VALVE IN A SINGLE UNIT. CAST IRON WITH BAKED POWDER-COATED FINISH, MINIMUM WORKING PRESSURE 14 PSI. MALE PIPE THREAD CONNECTION, DIGITAL REGISTER.
BF	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER
C	HUNTER HCC-800-M/ICC-PED-SS 8 STATION OUTDOOR WI-FI ENABLED, FULL-FUNCTIONING CONTROLLER WITH TOUCHSCREEN, COMMERCIAL USE. STAINLESS STEEL PEDESTAL W/ CONCRETE PAD.
M	WATER METER 1"
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40
C	IRRIGATION MAINLINE: VALVE WIRE CONDUIT
	PIPE SLEEVE: PVC CLASS 200 SDR 21 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.



City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

MHTN ARCHITECTS

MHTN Architects, Inc.
420 East South Temple
Suite 100
Salt Lake City, Utah 84111
Telephone (801) 595-6700
Telefax (801) 595-6717
www.mhtn.com

SILVERSTONE AUTOMATION

HOLDINGS10 LLC

10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84117

SEAL

STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

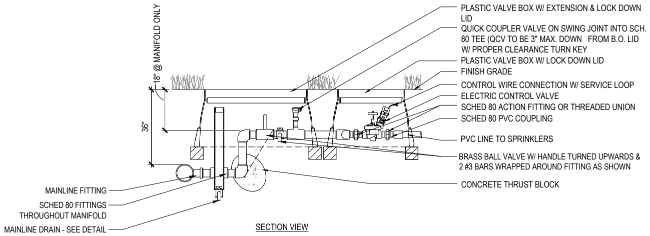
REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO.	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

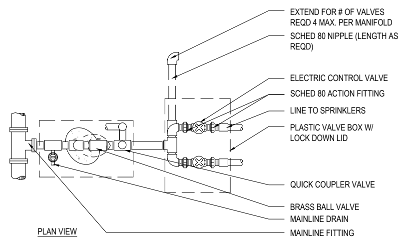
SHEET NAME
IRRIGATION PLAN

SHEET NUMBER
LI100



18" @ MANIFOLD ONLY
36"
PLASTIC VALVE BOX W/ EXTENSION & LOCK DOWN LID
QUICK COUPLER VALVE ON SWING JOINT INTO SCH. 80 TEE (QCV TO BE 3" MAX. DOWN FROM B.O. LID W/ PROPER CLEARANCE TURN KEY
PLASTIC VALVE BOX W/ LOCK DOWN LID
FINISH GRADE
CONTROL WIRE CONNECTION W/ SERVICE LOOP
ELECTRIC CONTROL VALVE
SCHED 80 ACTION FITTING OR THREADED UNION
SCHED 80 PVC COUPLING
PVC LINE TO SPRINKLERS
BRASS BALL VALVE W/ HANDLE TURNED UPWARDS & 2 #3 BARS WRAPPED AROUND FITTING AS SHOWN
CONCRETE THRUST BLOCK
MAINLINE FITTING
SCHED 80 FITTINGS THROUGHOUT MANIFOLD
MAINLINE DRAIN - SEE DETAIL
SECTION VIEW

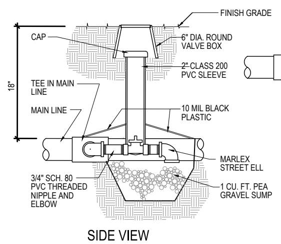
NOTES:
1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE CONTROL VALVE MANIFOLD SO THAT IT COMPLETELY DRAINS.
2. INSTALL SCHEDULE 80 FITTINGS THROUGHOUT THE MANIFOLD.
3. ALL VALVE BOXES SHALL SIT ON 12" MIN. GRAVEL LAYER.
4. CUT ALL VALVE BOXES AS REQD SO BOXES DO NOT SIT ON PIPING.



EXTEND FOR # OF VALVES REQD 4 MAX. PER MANIFOLD
SCHED 80 NIPPLE (LENGTH AS REQD)
ELECTRIC CONTROL VALVE
SCHED 80 ACTION FITTING
LINE TO SPRINKLERS
PLASTIC VALVE BOX W/ LOCK DOWN LID
QUICK COUPLER VALVE
BRASS BALL VALVE
MAINLINE DRAIN
MAINLINE FITTING
PLAN VIEW

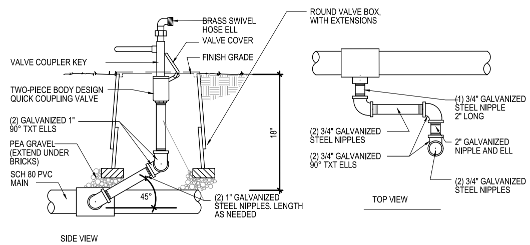
B1 CONTROL VALVE MANIFOLD
NOT TO SCALE
P-CO-SIL-328406-09

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer



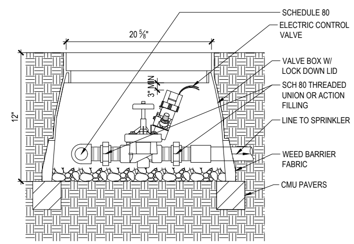
FINISH GRADE
CAP
6" DIA. ROUND VALVE BOX
2" CLASS 200 PVC SLEEVE
TEE IN MAIN LINE
18"
MAIN LINE
10 MIL BLACK PLASTIC
MARLEX STREET ELL
3/4" SCH. 80 PVC THREADED NIPPLE AND ELBOW
1 CU. FT. PEA GRAVEL SUMP
SIDE VIEW
3/4" SCH. 80 THREADED NIPPLE
MARLEX STREET ELL
2" CLASS 200 PVC SLEEVE
MANUAL DRAIN
3/4" SCH 80 THREADED NIPPLE
3/4" ELBOW
TOP VIEW

C1 MANUAL DRAIN VALVE
1 1/2" = 1'-0"
P-CO-SIL-328406-04

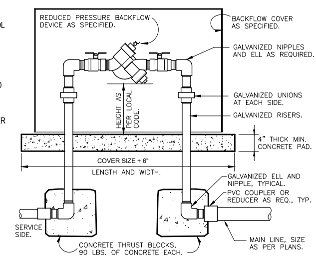


BRASS SWIVEL HOSE ELL
VALVE COVER
FINISH GRADE
ROUND VALVE BOX, WITH EXTENSIONS
VALVE COUPLER KEY
TWO-PIECE BODY DESIGN QUICK COUPLING VALVE
(2) GALVANIZED 1" 90° TXT ELLS
PEA GRAVEL (EXTEND UNDER BRICKS)
SCH 80 PVC MAIN
18"
45°
(2) 1" GALVANIZED STEEL NIPPLES. LENGTH AS NEEDED
SIDE VIEW
(1) 3/4" GALVANIZED STEEL NIPPLE 2" LONG
(2) 3/4" GALVANIZED STEEL NIPPLES
(2) 3/4" GALVANIZED 90° TXT ELLS
2" GALVANIZED NIPPLE AND ELL
(2) 3/4" GALVANIZED STEEL NIPPLES
TOP VIEW

C2 QUICK COUPLING VALVE
1 1/2" = 1'-0"
P-CO-SIL-328406-03

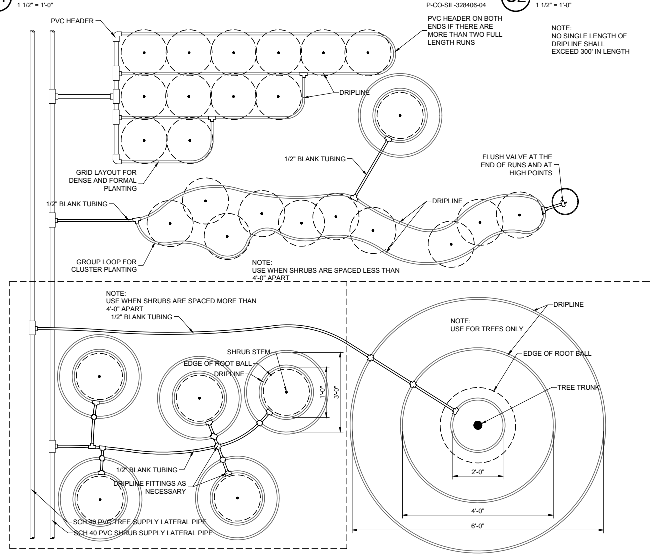


C4 VALVE BOX DETAIL
NOT TO SCALE
P-CO-SIL-328406-10



REDUCED PRESSURE BACKFLOW DEVICE AS SPECIFIED.
BACKFLOW COVER AS SPECIFIED.
GALVANIZED NIPPLES AND ELL AS REQUIRED.
HEIGHT AS PER LOCAL CODE.
GALVANIZED UNIONS AT EACH SIDE.
GALVANIZED RISERS.
4" THICK MIN. CONCRETE PAD.
COVER SIZE + 6" LENGTH AND WIDTH.
GALVANIZED ELL AND NIPPLE, TYPICAL.
PVC COUPLER OR REDUCER AS REQ., TYP.
SERVICE SIDE.
CONCRETE THRUST BLOCKS, 90 LBS. OF CONCRETE EACH.
MAIN LINE, SIZE AS PER PLANS.

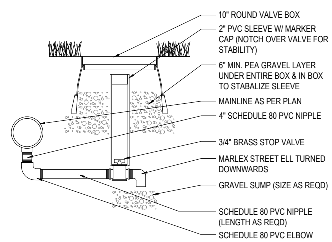
C5 RP BACKFLOW W/ ENCLOSURE
1" = 12"
P-CO-SIL-328409-01



PVC HEADER
PVC HEADER ON BOTH ENDS IF THERE ARE MORE THAN TWO FULL LENGTH RUNS
DRIPLINE
1/2" BLANK TUBING
GRID LAYOUT FOR DENSE AND FORMAL PLANTING
1/2" BLANK TUBING
DRIPLINE
FLUSH VALVE AT THE END OF RUNS AND AT HIGH POINTS
GROUP LOOP FOR CLUSTER PLANTING
NOTE: USE WHEN SHRUBS ARE SPACED LESS THAN 4'-0" APART
NOTE: USE WHEN SHRUBS ARE SPACED MORE THAN 4'-0" APART
1/2" BLANK TUBING
SHRUB STEM
EDGE OF ROOT BALL
DRIPLINE
1'-0"
3'-0"
1/2" BLANK TUBING
DRIPLINE FITTINGS AS NECESSARY
SCH 40 PVC TREE SUPPLY LATERAL PIPE
SCH 40 PVC SHRUB SUPPLY LATERAL PIPE
NOTE: USE FOR TREES ONLY
DRIPLINE
EDGE OF ROOT BALL
TREE TRUNK
2'-0"
4'-0"
6'-0"

NOTE:
NO SINGLE LENGTH OF DRIPLINE SHALL EXCEED 300' IN LENGTH

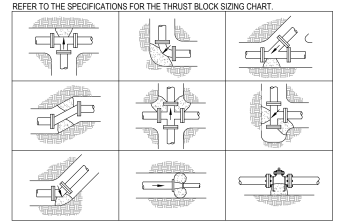
E1 DRIPLINE LAYOUT AT TREES AND SHRUBS
1" = 1'-0"
P-CO-SIL-328413-11



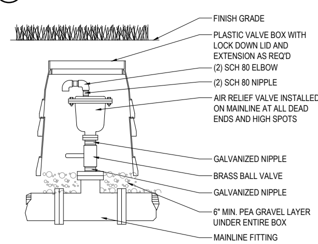
10" ROUND VALVE BOX
2" PVC SLEEVE W/ MARKER CAP (NOTCH OVER VALVE FOR STABILITY)
6" MIN. PEA GRAVEL LAYER UNDER ENTIRE BOX & IN BOX TO STABALIZE SLEEVE
MAINLINE AS PER PLAN
4" SCHEDULE 80 PVC NIPPLE
3/4" BRASS STOP VALVE
MARLEX STREET ELL TURNED DOWNWARDS
GRAVEL SUMP (SIZE AS REQD)
SCHEDULE 80 PVC NIPPLE (LENGTH AS REQD)
SCHEDULE 80 PVC ELBOW

D3 MAINLINE DRAIN
1" = 1"
P-CO-SIL-328409-08

NOTE:
REFER TO THE SPECIFICATIONS FOR THE THRUST BLOCK SIZING CHART.

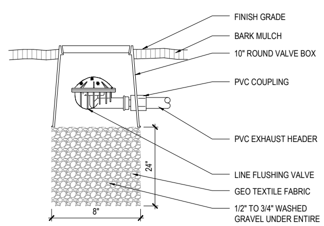


D4 THRUST BLOCKING
1" = 1"
P-CO-SIL-328409-10

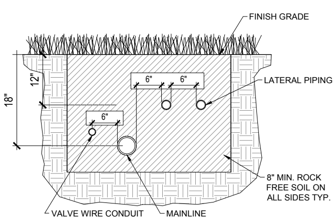


FINISH GRADE
PLASTIC VALVE BOX WITH LOCK DOWN LID AND EXTENSION AS REQ'D
(2) SCH 80 ELBOW
(2) SCH 80 NIPPLE
AIR RELIEF VALVE INSTALLED ON MAINLINE AT ALL DEAD ENDS AND HIGH SPOTS
GALVANIZED NIPPLE
BRASS BALL VALVE
GALVANIZED NIPPLE
6" MIN. PEA GRAVEL LAYER UINDER ENTIRE BOX
MAINLINE FITTING

D5 AIR RELIEF VALVE
1" = 1"
P-CO-SIL-328409-03

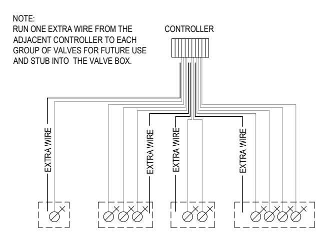


E3 DRIP FLUSH VALVE
1" = 1"
P-CO-SIL-328413-02



E4 TRENCH DETAIL TYP.
1" = 1'-0"
P-CO-SIL-328409-16

NOTE:
RUN ONE EXTRA WIRE FROM THE ADJACENT CONTROLLER TO EACH GROUP OF VALVES FOR FUTURE USE AND STUB INTO THE VALVE BOX.



E5 CONTROL VALVE WIRING DIAGRAM
1" = 1"
P-CO-SIL-328409-07

MHTN ARCHITECTS
MHTN Architects, Inc.
420 East South Temple
Suite 100
Salt Lake City, Utah 84111
Telephone (801) 595-6700
Telefax (801) 595-6717
www.mhtn.com

SILVERSTONE AUTOMATION
HOLDINGS10 LLC
10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84117

SEAL
STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO.	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
IRRIGATION DETAILS

SHEET NUMBER
LI501

IRRIGATION SYSTEMS

SECTION 328400 - IRRIGATION SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes valves, piping, sprinklers, specialties, accessories, controls, and wiring for irrigation systems.

B. Field verify capacity of the existing irrigation system complete including but not limited to flow, capacity, controller operation and etc.

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Section 011000 "Summary".
2. Specification Section - Soils Report for reference only.
3. Section 328401 "Drip Irrigation System".
4. Section 329301 "Landscape Planting".
5. Division 26 Sections for electrical power materials and installations.

1.3 DEFINITIONS

A. Piping sizes used in this Section are normal pipe size (NPS) in inches. Tube sizes are standard size in inches. Equivalent SI (metric) sizes are indicated in millimeters (mm) in parentheses.

B. Supply Piping: Piping from water source to connection to irrigation system pressure piping. Piping is under same pressure as water supply. Piping in this category is not included in this Section.

C. Pressure Piping: Piping downstream from supply piping to and including control valves. Piping is under irrigation system pressure. Piping in this category includes pressure regulators, water meters, and backflow preventers, when used.

D. Circuit Piping: Piping downstream from control valves to irrigation system sprinklers, emitters, devices, and drain valves. Piping is under pressure (less than pressure piping) during flow.

E. Control Valve: Manual or automatic (electrically operated) valve for control water flow to irrigation system zone, including isolation or zone valves.

F. Drain Piping: Downstream from circuit or pressure piping drain valves. Piping is not under pressure.

G. Drain Valve: Manual drain valve for draining of irrigation system circuit piping.

1.4 SYSTEM PERFORMANCE REQUIREMENTS

A. Location of Sprinkler and Devices: Design location is approximate. Make minor adjustments necessary to avoid planting and obstructions such as signs and light standards.

B. Minimum Water Coverage: Not less than:
1. Turf Areas: 100 percent.
2. Other Planting Areas: 100 percent.

C. Components and Installation: Capable of producing piping systems with the following minimum working pressure ratings except where indicated otherwise.
1. Pressure Piping: 150 psig (1035 kPa).
2. Circuit and Drain Piping: 100 psig (690 kPa).

1.5 CODES AND STANDARDS

A. Plumbing code compliance: Comply with any applicable portions of the Utah state plumbing code pertaining to the selection of materials and the installation of irrigation systems.

B. Water purveyor compliance: Comply with requirements of purveyor supplying water to the project.

C. Any permits that are needed for the installation of construction of any work included under this contract, which are required by the authorities of jurisdiction, shall be obtained and paid for by the contractor following whatever ordinances, regulations and codes requiring the permits. If the authorities of the jurisdiction require inspection at said points of the installation, the contractor shall arrange for, and be present at, any such inspections.

D. Additional work or furnishing of materials required due to inspection by the authorities of jurisdiction shall be furnished at no cost to the owner. If the specifications for this project and existing ordinances, regulations or codes are in conflict, the conflict shall be noted in writing by the contractor to the owner's authorized representative, and any necessary changes in work shall follow an established procedure for claims for extra compensation.

1.6 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product data including pressure rating, rated capacity, settings, and electrical data of selected models for the following:
1. Pressure regulators.
2. Valves, including general-duty, underground, manual and automatic control, and quick-coupler types, and valve boxes.
3. Sprinklers, including emitters, drip tubes, and devices.
4. Controls, including controller wiring diagrams.
5. Wiring and fittings.
6. Pipe, including sleeves, lateral, supply, conduit and drain.
7. Flow Sensor.
8. Plastic pipe cement.
9. Backflow Prevention Device
10. Master Valve

C. Wiring diagrams for electrical controllers, valves, and devices.

D. Maintenance data for inclusion in "Operating and Maintenance Manual" specified in Division 1 Section "Project Closeout" for the following:
1. Pressure regulators.
2. Automatic control valves.
3. Sprinklers.
4. Controllers.
5. Flow Sensor
6. Master Valve
7. Backflow Prevention Device

E. Irrigation Schedule: A monthly Irrigation Schedule shall be prepared that covers the initial 120-day plant establishment period and the typical long-term use period. This schedule shall consist of a table with the following information for each valve:

1. Plant type (for example, turf, trees, low water use plants);
2. Irrigation type (for example, sprinklers, drip, bubblers);
3. Flow rate in gallons per minute;
4. Precipitation rate in inches per hour (sprinklers only);
5. Run time in minutes per day;
6. Number of water days per week, and
7. Cycle time to avoid runoff.

The irrigation schedule shall rely on the estimated landscape water use calculations and shall be adjusted as necessary for irrigation efficiency, soil conditions, slope, and microclimate conditions.

F. Qualification Data: for Qualified Installer.

G. Mock ups: This contractor will provide a mockup of a three valve manifold.

1.7 QUALITY ASSURANCE

A. Comply with requirements of utility supplying water for prevention of backflow and backsiphonage.

B. Comply with requirements of authority with jurisdiction for irrigation systems.

C. Installer Qualifications: Engage an experienced installer who has completed minimum of 6 irrigation systems similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance. Contractor must be a Certified Irrigation Contractor.

D. Listing/Approval Stamp, Label, or Other Marking: On equipment, specialties, and accessories made to specified standards.

E. Listing and Labeling: Equipment, specialties, and accessories that are listed and labeled.
1. The Terms "Listed" and "Labeled": As defined in "National Electrical Code," Article 100.
2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

F. Product Options: Irrigation system piping, specialties, and accessories are based on specific types, manufacturers, and models indicated. Components with equal performance characteristics produced by other manufacturers may be considered, provided deviations in dimensions, operation, and other characteristics do not change design concept or intended performance as judged by the Architect, unless noted "No Substitute". The burden of proof of product equality is on the Contractor. Refer to Division 1 Section "Product Substitutions." No requests for substitutions will be reviewed after bids have been received by Owner.

1.8 PROJECT CONDITIONS

A. Perform site survey, research public utility records, and verify existing utility locations. Verify that irrigation system piping may be installed in compliance with original design and referenced standards. Report to the Landscape Architect in writing any contradictions between the site, the drawings and the specifications.

B. Site Information: Reports on subsurface condition investigations made during design of the Project are available for informational purposes only; data in reports are not intended as representations or warranties of accuracy or continuity of conditions (between soil borings). Owner assumes no responsibility for interpretations or conclusions drawn from this information.

1.9 SEQUENCING AND SCHEDULING

A. Maintain uninterrupted water service to building during normal working hours. Arrange for temporary water shutoff with Owner.

B. Coordinate irrigation systems work with landscape work specified in Division 2 Section 329000 - Landscape Planting.

1.10 EXTRA MATERIALS

A. Deliver extra materials to Owner. Furnish extra materials matching products installed as described below. Package them with protective covering for storage and label clearly describing contents.
1. Quick Couplers: Furnish quantity of units equal to 10% of amount of each size installed, but not less than 1.
2. Sprinklers: Furnish quantity of units equal to 10% of amount of each type installed, but not less than 10.
3. Dripper Tube: Furnish quantity of units equal to 10% of amount of each type installed.
4. Valve Keys: Furnish quantity of tee-handle units equal to 25% of amount of each type key-operated, control valve installed, but not less than 2 each.
5. Quick Coupler Hose Swivels: Furnish quantity of units equal to 25% of amount of each type quick coupler installed, but not less than 2.
6. Quick Coupler Operating Keys: Furnish quantity of units equal to 25% of amount of each type quick coupler installed, but not less than 3.

1.11 WARRANTY/GUARANTEE

A. During the period of one (1) year from and after the final acceptance of the completed irrigation system, the Contractor shall at his own expense, make all needed repairs or replacement due to defective workmanship or materials which in the judgement of the Owner or Owner's representative, shall become necessary during such period. If, within seven (7) calendar days after mailing of the written notice or verified communication by the Owner to the Contractor or his agent, requesting such repairs or replacement, the Contractor shall neglect to make repairs, Owner may make such repairs at the Contractor's expense. In the case of emergency where, in the judgement of the Owner, delay could cause serious loss, hazard or damage to persons or property, then repairs, replacement and security, both temporary and/or permanent, may be provided by such persons as the Owner may employ, after verbal communication with Contractor without notice being sent to the Contractor, and the Contractor shall pay all costs related thereto.

B. The guarantee shall be in the form of a letter from the Contractor addressed to the Owner. The letter shall incorporate the language stated above and be signed by an authorized officer/agent or Owner of the Contractor.

C. During the guarantee period, the Contractor will drain the system in the fall and put the system back into operation in the Spring. This work shall be done in the presence of the Owner's representative and maintenance personnel.

1.12 RECORD DRAWINGS:

A. Any deviation from plan layout should be indicated on the final "Record" Drawings. This Contractor shall make an exact measured and dimensioned drawing showing locations of all piping, wiring, control, valves and quick coupler valves.

B. Record Drawings shall be furnished to the Landscape Architect at the time of Substantial Completion Inspection before a letter of Substantial Completion for the irrigation sprinkler system will be issued.

C. The Contractor shall supply the Landscape Architect with record drawing information in AutoCadd format before final acceptance of the irrigation system. The following shall be included on Irrigation Record Drawings. In addition, provide a reduced color-coded drawing(s) showing all zones and assigned valves.

1. Note all points of connection (P.O.C.) include tap size, line size and static water pressure (P.S.I.) of service.

2. Provide name and phone number of the servicing water purveyor include the name and date the installer was completed and the date the as-built drawing was approved.

3. Accurately locate the following major components by dimension and their size as installed on the project. (But not limited to the following):

- Water Meters
- Backflow Preventers
- Pressure Reducing Valves (note pressure settings)
- Filters
- Stop and Waste
- Master Control Valves
- Control Wire Junction Boxes
- Pumps
- Flow Sensors
- Remote Control Valves (note station assignment, size flow rate, pressure setting. D.U. and actual flow rates. If available from water audit).
- Drip System Pressure Regulators and Filters
- Quick Couplers and Hose Bibs
- Pressure Main Lines and Future P.O.C.'s
- Manual Drain Valves and Sumps
- Remote Control Wire (label both ends in junction box)
- Controller Location(s) (Note manufacturer, model, size and number of station used)
- Note and identify location(s) of existing utility systems as encountered during installation, i.e.; gas, phone, sewer, etc.
- Air Release Valves

4. Indicate and show the following additional components installed on the project:

- All Sprinkler Heads
- Lateral Lines and Sizes
- Lateral Lines Sleeves and Sizes
- Manual or Automatic Flush Valves

1.13 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, both threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure, locked storage for valves, sprinkler heads, and similar components that cannot be immediately replaced, to prevent installation delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Pressure Regulators
   a. Bermad.
   b. Conbraco Industries, Inc.
   c. Honeywell Braukmann.
   d. Watts Regulator Co.
   e. Wilkins Regulator Div., Zurn Industries, Inc.
2. Gate Valves for Underground Installation:
   a. Leemco
   b. Clow Valve Co. Div., McWane, Inc.
   c. Kennedy Valve Div., McWane, Inc.
   d. Stockham Valves & Fittings, Inc.
   e. Waterous Co.
3. Corporation Stops for Underground Installation
   a. Ford Meter Box Co., Inc.
   b. Hays Div., Romac Industries.
   c. A.Y. McDonald Mfg. Co.
   d. Mueller Co., Grinnell Corp.
4. Valves for Aboveground and Pit Installation
   a. Grinnell Supply Sales Co., Grinnell Corp.
   b. Nibco, Inc.
   c. Stockham Valves & Fittings, Inc.
   d. Walworth Co.
   e. Watts Regulator Co.
5. Automatic Control Valves
   a. Rain Bird Sprinkler Mfg. Corp. (Design Standard)
   b. Hunter Industries
   c. Toro Irrigation
6. Control Valve Boxes
   a. Ametek by Plymouth Products Div., AMETEK
   b. Brooks Products, Inc., Polyplastics Div.
   c. Carson Industries, Inc.
   d. DFW/HPI by Hefco Plastics, Inc.
   e. National Diversified Sales, Inc.
7. Quick Couplers
   a. Rain Bird Sprinkler Mfg. Corp. (Design Standard)
   b. Hunter Industries
   c. Toro Irrigation
8. Sprinklers
   a. Rain Bird Sprinkler Mfg. Corp.
   b. Hunter Industries
   c. Toro Irrigation
9. Dripper Tubes, and Devices
   a. Netafim, Inc. (Design Standard)
   b. Hunter Industries
   c. Rain Bird Sprinkler Mfg. Corp.
10. Pipe
   a. Pacific Western Extruded Plastics Co.
   b. Eagle Pacific Industries, Inc.
   c. J-M Manufacturing Company, Inc.
11. Swing Joint Assembly
   a. Rainbird Sprinkler Mfg.
   b. Hunter Industries
   c. Toro Irrigation
12. Wire
   a. Paige Electric Co. (or approved equal)
13. Master Valve
   a. Netafim, Inc. (Design Standard)
   b. Bermad
14. Backflow Prevention Device
   a. Febco
   b. Watts Regulator Co.
   c. Conbraco Industries, Inc
15. Controller
   a. Rain Bird Sprinkler Mfg. Corp.
   b. Hunter Industries (Design Standard)
   c. Toro Irrigation

2.2 PIPES AND TUBES

A. Refer to Part 3 Article "Piping Applications" for identification of systems where pipe and tube materials specified below are used.

B. Polyvinyl Chloride (PVC) Plastic Pipe: ASTM D 1785, PVC 1120, Schedule 40, 160 psig (1100 kPa) minimum pressure rating for 3-inch (100-mm) and smaller sizes, with plain, threaded or bell ends.
1. PVC Socket Fittings: Schedule 40: ASTM D 2466.

C. Polyvinyl Chloride (PVC) Plastic Pipe: ASTM D 1785, PVC 1120 compound, Schedule 80.
1. PVC Socket Fittings: Schedule 80: ASTM D 2467.
2. PVC Threaded Fittings: Schedule 80: ASTM D 2464.

D. PVC, Pressure-Rated Pipe: ASTM D 2241, PVC 1120 compound, SDR 21 Bell and Ring for pipe 4" and larger.

E. Flexible Polyethelene Pipe: Rain Bird SPX-Flex-100. Nominal inside dia. 0437' pressure rated at 80 psi at 110°F.

2.3 PIPE AND TUBE FITTINGS

A. Refer to Part 3 Article "Piping Applications" for identification of systems where pipe and tube fitting materials specified below are used.

B. Cast-Bronze Flanges: ASME B16.24, Class 150, raised ground face, bolt holes spot faced.

C. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2467, Schedule 80, socket-type and ASTM D2464, Schedule 80, threaded fittings.

D. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2467, Schedule 40, socket-type and ASTM D2464, Schedule 40, threaded fittings.

E. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2241, PVC 1120 compound, SDR 21.

F. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2467, Schedule 40, socket-type.

G. Ductile Iron: Deep Socket Cast Iron Fittings: ASTM A536, on all main line pipe 2½" or larger.

H. Mechanical Joint: Mechanical Joint Steel Fittings: AWWA A21.10

I. Barb Fittings: Rain Bird SB Series Spiral Barb Fittings for ½" and ¾" inlet sprinklers. Max operating pressure 80 psi and 8 gpm.

2.4 JOINING MATERIALS

A. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for joining materials not included in this Section.

B. Solvent Cement: ASTM F656 primer and ASTM D2564 solvent cement in color other than orange. Weld-on IPS P-70 primer and weld-on IPS PVC 711, plastic pipe cement.

C. Gaskets for Plastic Flanged Joints: Materials recommended by plastic pipe and fittings manufacturer.

D. Gaskets for Plastic Joints: Trans gaskets as recommended the fittings manufacturer.

2.5 VALVES

A. General: Valves are for general-duty and underground applications. Refer to "Valve Applications" Article for locations of various valve types specified in this Article. Refer to "Control Valves" Article for control valves and accessories and "Backflow Preventers" Article for backflow preventer valves.

A. Nonrising Stem Gate Valves 3-inches (DN 80) and Larger: AWWA C500, cast-iron double disc, bronze disc and seat rings or AWWA C509, resilient seated; bronze stem, cast-iron, or ductile-iron body and bonnet, stem nut, 200 psig (1380 kPa) working pressure; and ends that fit NPS dimension, PVC pipe. Include elastomeric gaskets. All gate valves shall be domestic, resilient wedge gate valves.

B. Valve Boxes: Cast-iron box with top section and cover with lettering "WATER," bottom section with base to fit over valve and barrel approximately 5-inches (127 mm) in diameter, and adjustable cast-iron extension of length required for depth of bury of valve.
1. Provide steel tee-handle shutoff rod with each valve box. Include tee-handle, shutoff rod with one pointed end, stem of length to operate valve, and end fitting valve operating nut.

C. Curb Stops 2-inches (DN 50) and Smaller: Bronze body, ground key plug or ball, 150 psig (1035 kPa) minimum pressure rating, wide tee head, with inlet and outlet to match service piping material.

D. Service Boxes for Curb Stops: Cast-iron box with telescoping top section of length required for depth of bury of valve. Include cover with lettering "WATER" and bottom section with base of size to fit over curb stop and barrel approximately 3-inches (75 mm) in diameter.
1. Provide steel tee-handle shutoff rod with each service box. Include tee-handle, shutoff rod with one pointed end, stem of length to operate curb stop, and slotted end fitting curb stop head.

E. Bronze, Nonrising Stem Gate Valves, 2-inches (DN 50) and Smaller: MSS SP-80, Type 1, solid wedge; nonrising, copper-silicon-alloy stem; Class 125, body and screw bonnet of ASTM B 62 cast bronze, with threaded or solder-joint ends. Include polytetrafluoroethylene (PTFE) - impregnated packing, brass packing gland, and malleable-iron handwheel.

F. Plastic Valves: Polyvinyl Chloride (PVC) Plastic, with 150 psig (1035 kPa) minimum pressure rating, ends compatible to piping where valve is to be installed, and tee handle.

G. Ball Valves: Ball valves shall be solid bronze meeting Federal Specification WW-V-54, CLASS A, TYPE I. Size shall be the same size as the main line on which it is installed. Valves shall be installed on the up-stream side of the electric remote control valve manifold and in the same valve box. NOTE: Only one (1) ball valve required per manifold.

H. Stop and Waste Valves: Stop and waste valves shall be solid bronze meeting Federal Specification WW-V-54, CLASS A, TYPE I. Provide an 8" round valve box over the PVC stand pipe.

I. Drain Valves: All drain valves shall be ¾" brass full turn ball cocks and installed as per details on the Drawings. Valves shall be tested for 150 psi working pressure. This valve is to be installed on mainlines only.

J. Valve Bank Isolation: Provide a domestic brass ball valve with a minimum 200 psi rating. Valve shall be an Apollo model 70 series or approved equal.

2.6 BACKFLOW PREVENTERS

A. Description: ASSE Standard backflow preventers, of size indicated for maximum flow rate and maximum pressure loss indicated.

1. Working Pressure: 150 psig (1035 kPa) minimum except where otherwise indicated.
2. 2-inches (DN 50) and Smaller: Bronze body with threaded ends.
3. 2½-inches (DN 65) and Larger: Bronze, cast-iron, steel or stainless-steel body with flanged ends.
   a. Interior Protective Coating: AWWA C550, epoxy coating for backflow preventers with cast-iron or steel body.
4. Interior Components: Corrosion-resistant materials.
5. Strainer supplied with and compatible for size and capacity with unit, on inlet, where strainer is indicated.

B. Reduced-Pressure-Principle Backflow Preventer: ASSE 1013, with (OS&Y) gate valves on inlet and outlet and strainer on inlet. Include test cocks and pressure differential relief valve with ASME A112.1.2 air-gap fitting located between two positive-seating check valves for continuous pressure application.

1. Pressure Loss: 15 psig (103 kPa) maximum, through middle third of flow range.
2. Gate valves supplied with and compatible for size and testing of unit on inlet and outlet. Valves 2-inches (DN 50) and smaller may be ball valves if these are unit manufacturer's standard valve for this application.

2.7 CONTROL VALVES

A. Description: Manufacturer's standard control vales for circuits, of type and size indicated, and as follows:
1. Provide cast-bronze bodies, unless otherwise indicated.
2. Manual Control Valves: MSS SP-80, Class 125, globe valves.
3. Key-Operated, Manual Control Valves: MSS Sp-80, Class 125, globe valves, fitted for key operation.
4. Automatic Control Valves: Diaphragm-type, normally closed, with manual flow adjustment, and operated by 24-volt-a.c. solenoid.

B. Control Valve Boxes: Carson Brooks Polyethylene (PE), or approved equal, box and cover. Size as required for application.
1. Drainage Backfill: Cleaned ¾" x #8 gravel or crushed stone, 6" deep.
2. Foundation: Provide a pressure treated foundation of 4"x4" lumber.
3. Valve boxes shall be of sufficient size to house electric remote control valves with unions, and still allow room for maintenance without having to excavate or perform similar operations. Boxes shall have lock down lids and shall meet ASTM D638 for tensile strength of 4,300 pounds per square inch.

   Limit the number valves per valve box. Service Boxes for Key-Operated Control Valves: Cast-iron box with telescoping top section of length required for depth of bury of valve. Include cover with lettering "WATER," and bottom section with base of size to fit over curb stop and barrel approximately 3-inches (75 mm) in diameter.

4. Include valve key, 36-inches (915 mm) long with tee handle and key end to fit valve.

2.8 SPRINKLERS

A. Description: Manufacturer's standard sprinklers designed to provide uniform coverage over entire area of spray shown on Drawings at available water pressure, as follows:
1. Housings: plastic, except where material is specified.
2. Pop-up, Spray: Fixed pattern, with screw-type flow adjustment and stainless steel retraction spring.
3. Pop-up, Rotary Spray: Gear drive, full-circle and adjustable part-circle type.
4. Bubblers: Fixed pattern, with screw type flow adjustment.

2.9 AUTOMATIC CONTROL SYSTEM

A. Description: Low-voltage controller system made for control of irrigation system automatic control valves. Controller operates on 120 volts a.c. building power system, provides 24 volts a.c. power to control valves.

B. Connect all valves to existing base line controller.

C. Lightning Protection: Provide manufacturer's standard lightning protection on wiring and decoders.

D. Wiring: UL 493, solid copper conductor, insulated cable, suitable for direct burial.
1. Feeder Circuit Cables: Type UF, No. 14 AWG minimum, between valves and controllers.
2. Control Wiring: Rain Bird, MaxiCom approved signal communication wire, Type PE39.

E. Valve wire sizing chart: See Appendix A at end of section.

2.10 SLEEVES

A. Sleeve Tape: Provide "Deep~1" Sleeve Magnets for marking irrigation sleeves.

2.11 IDENTIFICATION

A. Refer to Division 2 Section "Earthwork" for plastic underground warning tapes.

2.12 THRUST BLOCKS

A. All fittings adjacent to thrust blocks shall be wrapped in plastic sheeting to guard against interfering with any future disassembly of fitting or piping.

B. All main lines shall have a thrust block of poured concrete installed at each change of direction. The thrust block shall be of sufficient size for the pipe involved and rest on undisturbed ground. Construct as follows:

STEP 1.

Multiply the working pressure by the appropriate value shown in the following table to obtain total thrust in N (lb.):

PIPELINE THRUST FACTORS * ^

Pipe size in.	mm	Dead end or tee	90° elbow	45° elbow	22° elbow
3"	89	9.80	13.90	7.51	3.82
3 ½"	102	12.80	18.10	9.81	4.99
4"	114	16.20	23.00	12.40	6.31
5"	141	24.70	35.00	18.90	9.63
6"	168	34.80	49.20	26.70	13.60
8"	219	59.00	83.50	45.20	23.00
10"	273	91.50	130.00	70.00	35.80
12"	324	129.00	182.00	98.50	50.30

* Based on thrust per kPa (PSI) pressure.

^ Blocking for cross may not be needed with long branch lines.

STEP 2.

Determine the bearing strength of the soil from the table below:

BEARING STRENGTH OF SOILS

Soils and safe bearing loads	lb/ft5	kPa
Sound shale	10,000	500
Cemented gravel and sand difficult to pick	4,000	200
Coarse and fine compact sand	3,000	150
Medium clay - can be spaded	2,000	100
Soft clay	1,000	50
Muck	0	0

See Soils Report for soil type

STEP 3.

Divide the total thrust obtained in Step 1 by the bearing strength of the soil to get the area needed, m5(ft5).

SIDE THRUST ALTERNATIVE PROCEDURE

Pipe size in.	mm	Side thrust per degree. lb	N
3"	89	17.10	76.10
3 1/2"	102	22.40	99.60
4"	114	28.30	125.90
5"	141	43.10	191.70
6"	168	60.80	270.50
8"	219	103.00	458.20
10"	273	160.00	711.70
12"	324	225.00	1,000.80

* Based on side thrust per 689 kPa (100 PSI) pressure per degree of deflection.

NOTE: Multiply side thrust from table by degree of deflection times kPa (PSI) divided by 100 to obtain total side thrust in N(lb).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Investigate and determine available water supply, water pressure and flow characteristics.

B. Prior to installation of irrigation system, the contractor must verify the supply pressure at the work site. If there is a failure to obtain the needed pressure or if an excess pressure situation exists for normal operation, the contractor must contact the owner for any adjustments to the supply or irrigation system design. Failure to report any discrepancies in pressure due to any reason, and any installation done prior to notification of owner shall be done at the expense of the contractor.

3.2 PREPARATION

A. Set stakes or flags to identify proposed sprinkler locations. Obtain Architect's approval before excavation.

3.3 PAVING WORK

A. Cutting and patching of asphalt paving is specified in Division 2 Section "Hot-Mixed Asphalt Paving."

B. Cutting and patching of concrete paving is specified in Division 2 Section "Portland Cement Concrete Paving."

C. Install piping in sleeves where crossing sidewalks, roadways, parking lots, and railroads.

3.4 PIPING APPLICATIONS

A. Refer to Part 2 of this Section for detailed specifications for pipe and fittings products listed below. Use pipe, tube, fittings, and joining methods according to the following applications. Piping in pits and aboveground may be joined with flanges instead of joints indicated.

B. Use pipe, tube, fittings, and joining methods according to the following applications.

C. Pressure Piping Underground: Use the following:
1. 3-inches (DN 80) and Smaller: ASTM D 1785, Schedule 40, polyvinyl chloride (PVC) plastic pipe; ASTM D 2466, Schedule 40, PVC plastic, socket-type pipe fittings; and solvent-cemented joints.
2. 3-inches (DN 80) and Larger: ASTM D 2241, Class 200, polyvinyl chloride (PVC) plastic pipe; with flanged or deep socket fittings.

D. Circuit Piping: Use the following:
1. All Sizes: ASTM D 1785, Schedule 40, polyvinyl chloride (PVC) plastic pipe; ASTM D 2466, Schedule 40, PVC plastic, socket-type fittings; and solvent-cemented joints.

E. Branches and Offsets at Sprinkler and Devices: ASTM D 1785, Schedule 80, polyvinyl chloride (PVC) plastic pipe with threaded ends; ASTM D 2464, Schedule 80, PVC plastic, threaded fittings; and threaded joints.

F. Drain Piping: ASTM D 1485, Schedule 40, polyvinyl chloride (PVC) plastic pipe; ASTSM D 2466, Schedule 40 PVC plastic, socket-type fittings; and solvent-cemented joints.

G. Sleeves: All sleeves shall be a minimum of 4" diameter.
1. ASTM D 1785, Schedule 40, polyvinyl chloride (PVC) plastic pipe; ASTM D 2466, Schedule 40, PVC plastic, socket-type fittings; and solvent-cemented joints.
2. All sleeves shall be marked by duct taping a "Deep~1" Sleeve Magnate on both ends of the sleeve at all locations.

3.5 JOINT CONSTRUCTION

A. Flanged Joints: Align flanges and install gaskets. Assemble joints by sequencing bolt tightening. Use lubricant on bolt threads.

B. Threaded Joints: Thread pipes with tapered pipe threads according to ASME B1.20.1, apply tape or joint compound, and apply wrench to valve ends into which pipes are being threaded.

C. Polyvinyl Chloride (PVC) Piping Gasketed Joints: Construct joints between underground AWWA-type, cast-iron valves and NPS PVC pipe; with elastomeric seals that fit pipe diameter and valve ends; and lubricant, according to ASTM D 3139.

D. Polyvinyl Chloride (PVC) Piping Solvent-Cemented Joints: Construction joints according to ASTM D 2672 and ASTM D 2855.
1. Handling of Solvent Cements, Primers, and Cleaners: Comply with procedures in ASTM F 402 for safe handling when joining plastic pipe and fittings with solvent cements.

3.6 PIPING SYSTEMS - COMMON REQUIREMENTS

A. General Locations and Arrangements: Drawings indicated general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, and in other design considerations. Install piping as indicated, except where deviations to layout are approved on coordination drawings.

B. Bedding material shall be placed a minimum of 6" in all directions around all main pressure line piping. Lateral line piping shall have a minimum of 3" of such bedding.

C. Install piping at a uniform slope of 6-inches per 100-feet (1:200) minimum, down to drain points.

D. Install components having pressure rating equal to or greater than system operating pressure.

E. Install piping free of sags and bends.

F. Locate groups of pipes parallel to each other, spaced to permit valve servicing.

G. Install fittings for changes in direction and branch connections.

H. Piping Connections: Except as otherwise indicated make piping connections as specified below.
1. Install unions, in piping 2-inches (DN 50) and smaller, adjacent to each valve and at final connection to each piece of equipment having 2-inch (DN 50) or smaller threaded pipe connection.
2. Install flanges, in piping 2½-inches (DN 65) and larger, adjacent to flanged valves and at final connection to each piece of equipment having flanged pipe connection.
3. Install dielectric fittings to connect piping of dissimilar metals.

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SEAL

STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO.	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
IRRIGATION SPECIFICATIONS

SHEET NUMBER
LI502

SECTION 328400 - IRRIGATION SYSTEMS

3.7 TRENCHES:

A. Trenches shall be dug as wide and deep as necessary to properly place the sprinkling system according to the requirements herein. Any rock uncovered in this excavation shall not be left in the backfill. All excess rock shall be removed from the site by this Contractor and legally disposed of off the property. All trenches shall be backfilled and compacted to insure no settling of the surface, after the lawn is planted.

B. If backfill soil is rocky or lumpy, protect the pipe and the pipe conduit with 8" of sand or loose, rock free, soil under, over and on sides of pipe. Avoid putting large rocks against pipe during backfilling operation. See detail.

C. All trenches must be compacted to 90% in 6" lifts and watered in. Lines from control valves shall be installed after topsoil is in place and properly graded.

D. This Contractor, in placing the sprinkling lines, etc., may uncover material not suitable for finished grading. This material shall be removed from the site by this Contractor. After the installation of the lines, the finished grading shall be smoothed over and restored to its original condition, using additional topsoil at this Contractor's expense, if this is necessary. The upper 6" of topsoil removed in the excavation of trenches for pipeline shall be conserved and kept separate from subsoil and reinstalled without mixing with other soil.

E. Trenches where more than one pipe is to be installed, a distance of 6" is to be maintained between each pipe. No exceptions.

F. All trenches are to be 12" away from all curbs, buildings and sidewalks. No exceptions.

3.8 PIPING INSTALLATION

A. Install underground polyvinyl chloride (PVC) plastic pipe according to ASTM D 2774.

B. Lay piping on solid sub-base, uniformly sloped without humps or depressions.
1. Slope circuit piping down toward drain valve minimum of ½-inch in 10-feet (1:240).
2. Install polyvinyl chloride (PVC) plastic pipe in dry weather when temperature is above 40 deg. F (4 deg. C). Allow joints to cure at least 24-hours at temperature above 40 deg. F (4 deg. C) before testing, unless otherwise recommended by manufacturer.

C. Drain Pockets: Excavate to sizes indicated. Backfill with cleaned gravel and crushed stone, graded from 3-inches (75 mm) to ¾-inch (19mm) minimum, drain material to 12-inches (300 mm) below grade. Cover drain material with sheet of ASTM D 226, Type II, asphalt-saturated felt and backfill remainder with excavated material. Drain pocket to be minimum 6 cubic feet.

D. Minimum Cover: Provide following minimum cover over top of buried piping:
1. Pressure Piping: Greater depth of minimum of 18-inches (600 mm) below finished grade.
2. Circuit Piping: 12-inches (380 mm).
3. Drain Piping: 12-inches (380 mm).
4. Sleeves: 18-inches (600 mm).

E. Install piping under sidewalks and paving in sleeves.

F. All pipe threads shall be sealed with Teflon tape and pipe thread compound.

G. All glue joints to be set 24 hours prior to pressurization..

3.9 FLUSHING AND PRELIMINARY TESTING

A. Flash and test each zone after installation of new piping, swing pipe and prefab swing joint, but before installation of heads and before backfilling is complete. Open control valve completely and flush with a full head of water. Each automatic valve shall then be disassembled, inspected for rocks, cleaned and re-assembled. Install heads and test each zone for coverage.

B. Testing will be performed after completion of each circuit and again after the completion of the entire system. All repair work will be made at the contractor's expense.

3.10 BACKFLOW PREVENTER INSTALLATION

A. Install backflow preventers of type, size, and capacity indicated. Include valves and test cocks. Install according to plumbing code and health department authorities with jurisdiction.

B. Install pressure-type vacuum breakers minimum of 12-inches (300 mm) above downstream piping system.

C. Do not install bypass around backflow preventer.

D. Do not install backflow preventers with drains or vents in pits or areas subject to flooding.

E. Support backflow preventers, valves, and piping on 3,000 psi (20.7 MPa) minimum, Portland-Cement-Mix concrete piers.

3.11 VALVE APPLICATIONS

A. Drawings indicate valve types to be used. Where specific valve types are not indicated, following requirements apply:
1. Buried Valves 3-inches (DN 80) and Larger: AWWA, gate valves, non-rising stem, with stem nut and valve box.
2. Buried Valves 2-inches (DN 50) and Smaller: Bronze-body, curb stop, with tee head, service box and shutoff rod.

3.12 VALVE INSTALLATION

A. Valves: Install underground valves in valve boxes or pits.
1. Install valves and SCH 80 polyvinyl chloride (PVC) pipe with restrained, gasketed joints.
2. Do not install at low spots.
3. Install all valves with SCH 80 PVC pipe running through the manifold. SCH 80 PVC to extend to the outside edge of the valve box on each side.

B. Curb Stops: Install underground curb stops in service boxes.

C. Control and Ball Valves: Install in valve control valve boxes, arranged for easy adjustment and removal. Install unions with one (1) on upstream side at each valve manifold.

D. Control valves shall be located as close as possible to where shown on drawings. Avoid locating valves in areas of high pedestrian or vehicular traffic.

E. Provide isolation valve at all valve bank locations.

3.13 VALVE WIRING

A. Connect all valves to the irrigation control system as per manufacturer's recommendations.
1. Valve wire installations wiring shall be enclosed in adequate size PVC electrical conduit.
2. All splices shall be enclosed in a plastic valve box and noted on "as built" drawings.
3. At Y in two wire paths "Paige Decoder cable fuse device" shall be installed or equivalent

B. All splices shall be enclosed in a plastic valve box and noted on "as built" drawings.

C. Wires run in same trench as main pressure line or any other pipe shall be set a minimum of 4"from pipe to allow for maintenance access. Wire shall run parallel to pipe and not wrap around or go under pipe unless care is taken to allow clearance for maintenance access.

D. Grounding shall be done according to manufactures specifications
1. Before the controller
2. Every five valves in field or 500ft.
3. Install line surge protector at termination of two wire path
4. Each installed grounding system shall maintain a maximum ground resistance of 10 ohms, or less
5. Refer to the decoder manufacturer recommendations and documentation for proper specifications on grounding systems installation and grounding system design
6. Grounding rods shall be installed in plastic valve box and noted on "as built" drawings.

A grounding test shall be performed on all grounding elements paid for by the Contractor.

3.14 SPRINKLER INSTALLATION

A. Sprinklers: Flush circuit piping with full head of water and install sprinklers after hydrostatic test is complete.
1. Install lawn sprinklers at manufacturer's recommended heights.
2. Install shrubbery sprinklers at heights indicated.
3. Locate part-circle sprinklers to maintain a minimum distance of 12-inches (400 mm) from walls and 2-inches (50 mm) from other boundaries, unless otherwise indicated.

B. All sprinkler heads and valve boxes shall be set flush with finish grade unless otherwise specified. Contractor shall insure tops of heads and boxes remain at finish grade, and adjust as required. If any settlement occurs within the 1 year warranty period, the contractor will be required to place such areas back in satisfactory condition, using additional topsoil and new sod if necessary.

3.15 AUTOMATIC CONTROL SYSTEM INSTALLATION

A. Install controllers according to manufacturer's written instructions and as indicated.

B. Pedestal mount irrigation controller in the location shown and as directed by the Owner as per manufacturer's requirements.

C. Run one extra wire from the adjacent controller to each group of valves for future use and stub into the valve box.

D. Install control wiring in same trench with piping.

3.16 CONNECTIONS

A. Connect piping to sprinklers, devices, valves, control valves, specialties, and accessories.

B. Connect water supplies to irrigation systems. Include backflow preventers on potable water supplies. Include automatic filters on secondary water supplies.

C. Electrical Connections: Connect to power source, controllers, and automatic control valves.

D. Minimum requirements for electrical installations are specified in Division 16.

E. Ground systems according to Division 16 Section "Grounding."

3.17 FIELD QUALITY CONTROL

A. Testing: Perform hydrostatic test of piping and valves before backfilling trenches. Piping may be tested in sections to expedite work.
1. Cap and subject the piping system to a static water pressure of 50 psig (345 kPa) above the operating pressure without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for 4-hours. Leaks and loss in test pressure constitute defects that must be repaired.
2. Repair leaks and defects with new materials and retest system or portion thereof until satisfactory results are obtained.
3. Notify Architect 24 hour in advance of pressure testing so test may be observed.

3.18 CLEANING AND ADJUSTING

A. Flush dirt and debris from piping before installing sprinklers and other devices.

A. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.

B. Carefully adjust lawn sprinklers so they will be flush with, or not more than ½-inch (13 mm) above, finish grade after completion of landscape work.

C. Adjust settings of controllers and automatic control valves.

3.19 COMMISSIONING

A. Starting Procedures: Follow manufacturer's written procedures. If no procedures are prescribed by manufacturers, proceed as follows:
1. Verify that specialty vales and their accessories have been installed correctly and operate correctly.
2. Verify that specified test of piping are complete.
3. Check that sprinklers and devices are correct type.
4. Check that damaged sprinklers and devices have been replaced with new materials.
5. Check that potable water supplies have correct type backflow preventers.
6. Energize circuits to electrical equipment and devices.
7. Adjust operating controls.

B. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place, and sprinklers are adjusted to final position.

C. Provide irrigation system layout and diagram in CADD format with water zones clearly identified. Layout to be color coded with a maximum of 5 colors for easy legibility. Record water budget for each irrigation control zone and current settings. Provide laminated copy and mount near controller. Verify location with Architect.

3.20 DEMONSTRATION

A. Demonstrate to Architect that system meets coverage requirements and that automatic controls function properly.

B. Demonstrate to Owner's maintenance personnel operation of equipment, sprinklers, specialties, and accessories. Review operating and maintenance information.

C. Provide 7-days' written notice in advance of demonstration.

D. System Operation Test / Substantial Completion Inspection:
1. During the Substantial Completion Inspection, the entire system, both electric and hydraulic, will be tested in the presence of the Landscape Architect and the Owner's Representative to insure COMPLETE coverage of all areas to be watered. Any deficiencies identified at this time will require revisions by the Contractor at the Contractor's expense.

3.21 WINTERIZATION

A. All irrigation systems are typically winterized October 15th. If the Substantial Completion Certificate has not been issued by this date, it will be the responsibility of the Contractor to work with the Owner to winterize the system. The Contractor to then be responsible to assist in the activation of the system in the Spring to insure there are no problems.

APPENDIX A
ALLOWABLE AVERAGE DISTANCES FROM CONTROLLER TO VALVES

Wire Sizes	Load	Common	8 WATT NO. 50 AND 150 22" - 3" NUMBER OF VALVES 1	2	3	4	7 WATT NO. 150 SERIES NUMBER OF VALVES 1	2	3	4	3.5 WATT NO. 50 / 150 NUMBER OF VALVES 1	2	3	4	3.1 WATT NO. 1825 / 1830 SERIES NUMBER OF VALVES 1	2	3	4
105V	16	16	1,440	720	480	360	1,630	810	540	400	4,950	2,470	1,650	1,230	3,050	1,520	1,010	760
	16	14	1,770	880	590	440	2,000	1,000	660	500	6,070	3,030	2,020	1,510	3,750	1,870	1,250	930
	16	12	2,070	1,030	690	510	2,340	1,170	780	580	7,090	3,540	2,360	1,770	4,370	2,180	1,450	1,090
	14	14	2,295	1,140	760	570	2,590	1,290	860	640	7,850	3,920	2,610	1,960	4,840	2,420	1,450	1,210
	14	12	2,820	1,410	930	700	3,190	1,590	1,060	790	9,640	4,820	3,210	2,410	5,950	2,970	1,980	1,480
	14	10	3,295	1,640	1,095	820	3,720	1,860	1,230	930	11,250	5,620	3,740	2,810	6,940	3,470	2,310	1,730
	12	12	3,660	1,830	1,215	910	4,130	2,060	1,370	1,030	12,500	6,250	4,160	3,120	7,710	3,850	2,560	1,920
	12	10	4,490	2,240	1,490	1,120	5,070	2,530	1,680	1,260	15,340	7,670	5,100	3,830	9,470	4,730	3,150	2,360
	10	10	5,810	2,900	1,930	1,450	6,560	3,280	2,160	1,640	19,860	9,930	6,610	4,960	12,600	6,130	4,080	3,060
	10	8	7,140	3,570	2,370	1,780	8,060	4,030	2,650	2,010	24,390	12,190	8,120	6,090	15,050	7,520	5,010	3,760
110V	16	16	1,670	830	550	410	1,910	950	630	470	5,400	2,700	1,800	1,350	2,360	1,180	780	590
	16	14	2,050	1,020	680	510	2,350	1,170	780	580	6,630	3,310	2,210	1,650	4,160	2,080	1,380	1,040
	16	12	2,400	1,200	800	600	2,740	1,370	910	680	7,740	3,870	2,580	1,930	4,860	2,430	1,620	1,210
	14	14	2,660	1,330	880	660	3,040	1,520	1,010	760	8,570	4,280	2,850	2,140	5,380	2,690	1,790	1,340
	14	12	3,260	1,630	1,080	810	3,730	1,860	1,240	930	10,500	5,250	3,500	2,620	6,610	3,300	2,200	1,650
	14	10	3,810	1,900	1,270	950	4,350	2,170	1,450	1,080	12,280	6,140	4,090	3,070	7,710	3,850	2,570	1,920
	12	12	4,230	2,110	1,410	1,050	4,830	2,410	1,610	1,200	13,640	6,820	4,540	3,400	8,570	4,280	2,850	2,140
	12	10	5,190	2,590	1,730	1,290	5,930	2,960	1,970	1,480	16,750	8,370	5,580	4,180	10,520	5,260	3,500	2,630
	10	10	6,720	3,360	2,240	1,680	7,660	3,830	2,550	1,910	21,680	10,800	7,220	5,420	13,620	6,810	4,540	3,400
	10	8	8,260	4,130	2,750	2,010	9,420	4,710	3,140	2,350	26,620	13,300	8,870	6,650	16,720	8,360	5,570	4,180
115V	16	16	1,960	980	650	490	2,260	1,130	750	560	5,980	2,990	1,990	1,490	3,900	1,950	1,300	970
	16	14	2,410	1,200	800	600	2,780	1,390	920	690	7,340	3,670	2,440	1,830	4,790	2,390	1,590	1,190
	16	12	2,810	1,400	930	700	3,240	1,620	1,080	810	8,570	4,280	2,850	2,140	5,590	2,790	1,860	1,390
	14	14	3,120	1,560	1,030	780	3,590	1,790	1,190	890	9,480	4,740	3,150	2,370	6,180	3,090	2,050	1,540
	14	12	3,830	1,910	1,270	950	4,410	2,200	1,470	1,100	11,650	5,820	3,880	2,910	7,800	3,800	2,530	1,900
	14	10	4,470	2,230	1,480	1,110	5,150	2,520	1,710	1,280	13,600	6,800	4,520	3,400	8,870	4,430	2,950	2,210
	12	12	4,960	2,480	1,650	1,240	5,720	2,860	1,900	1,430	15,100	7,550	5,020	3,770	9,860	4,930	3,280	2,460
	12	10	6,090	3,040	2,020	1,520	7,020	3,510	2,330	1,750	18,540	9,270	6,170	4,630	12,100	6,050	4,030	3,020
	10	10	7,890	3,940	2,620	1,970	9,090	4,540	3,020	2,270	24,000	12,000	7,990	6,000	15,660	7,830	5,210	3,910
	10	8	9,690	4,840	3,220	2,420	11,160	5,580	3,710	2,790	29,470	14,730	9,810	7,360	19,230	9,610	6,400	4,800
120V	16	16	2,170	1,080	720	540	2,510	1,250	830	620	6,394	3,190	2,130	1,590	4,240	2,120	1,410	1,060
	16	14	2,660	1,330	880	660	3,090	1,540	1,030	770	7,850	3,920	2,710	1,960	5,200	2,600	1,730	1,300
	16	12	3,110	1,550	1,030	770	3,600	1,800	1,200	900	9,170	4,580	3,050	2,290	6,070	3,030	2,020	1,510
	14	14	3,440	1,720	1,140	860	4,000	2,000	1,330	1,000	10,140	5,070	3,380	2,530	6,720	3,360	2,240	1,680
	14	12	4,230	2,110	1,410	1,050	4,900	2,450	1,630	1,220	12,450	6,220	4,150	3,110	8,260	4,130	2,750	2,060
	14	10	4,940	2,470	1,640	1,230	5,720	2,860	1,900	1,430	14,540	7,270	4,840	3,630	9,640	4,820	3,210	2,410
	12	12	5,490	2,740	1,830	1,370	6,360	3,180	2,120	1,590	16,140	8,070	5,380	4,030	10,720	5,360	3,570	2,680
	12	10	6,730	3,360	2,240	1,680	7,800	3,900	2,600	1,950	19,820	9,910	6,600	4,950	13,150	6,570	4,380	3,280
	10	10	8,720	4,360	2,900	2,180	10,100	5,050	3,360	2,520	25,660	12,830	8,550	6,410	17,020	8,510	5,670	4,250
	10	8	10,710	5,350	3,570	2,670	12,400	6,200	4,130	3,100	31,500	15,750	10,500	7,870	20,900	10,450	6,960	5,220
125V	16	16	2,380	1,190	790	590	2,770	1,380	920	690	5,980	2,990	1,990	1,490	4,750	2,370	1,580	1,180
	16	14	2,920	1,460	970	730	3,400	1,700	1,130	850	7,340	3,670	2,440	1,830	5,830	2,910	1,940	1,450
	16	12	3,410	1,700	1,130	850	3,970	1,980	1,320	990	8,570	4,280	2,850	2,140	6,800	3,400	2,260	1,700
	14	14	3,720	1,880	1,250	940	4,390	2,190	1,460	1,090	10,790	5,390	3,590	2,690	7,530	3,760	2,500	1,880
	14	12	4,640	2,320	1,540	1,160	5,400	2,700	1,790	1,350	13,260	6,630	4,410	3,310	9,250	4,620	3,080	2,310
	14	10	5,410	2,700	1,800	1,350	6,300	3,150	2,090	1,570	15,470	7,730	5,150	3,860	10,800	5,400	3,590	2,700
	12	12	6,010	3,000	2,000	1,500	6,990	3,490	2,320	1,740	17,180	8,590	5,720	4,290	12,000	6,000	3,990	3,000
	12	10	7,380	3,690	2,455	1,840	8,580	4,290	2,850	2,140	21,090	10,540	7,020	5,270	14,730	7,360	4,900	3,680
	10	10	9,550	4,770	3,180	2,380	11,110	5,550	3,690	2,770	27,310	13,650	9,090	6,820	19,070	9,530	6,350	4,760
	10	8	11,730	5,860	3,905	2,430	13,640	6,820	4,540	3,410	33,530	16,760	11,160	8,380	23,410	11,700	7,790	5,850

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City of South Jordan
Approved 01/10/2023
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SEAL

STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
IRRIGATION SPECIFICATIONS CONT.

SHEET NUMBER
LI503

DRIP IRRIGATION SYSTEMS

SECTION 328401 - DRIP IRRIGATION SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes valves, piping, drip tube, sprinklers, specialties and accessories for drip irrigation systems. This section does not override any of the requirements of section 0328400.

B. Field verify capacity of the existing irrigation system complete including but not limited to flow, capacity, controller operation and etc.

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Section 011000 "Summary".
2. Section 329301 "Landscape Planting".
3. Section 328400 "Irrigation System".
4. Specification Section - Soils Report for reference only.

1.3 DEFINITIONS

A. Piping sizes used in this Section are normal pipe size (NPS) in inches. Tube sizes are standard size in inches. Equivalent SI (metric) sizes are indicated in millimeters (mm) in parentheses.

B. Supply Piping: Piping from water source to connection to irrigation system pressure piping. Piping is under same pressure as water supply. Piping in this category is not included in this Section.

C. Pressure Piping: Piping downstream from supply piping to and including control valves. Piping is under irrigation system pressure. Piping in this category includes pressure regulators, water meters, and backflow preventers, when used.

D. Circuit Piping: Piping downstream from control valves to irrigation system sprinklers, emitters, devices, and drain valves. Piping is under pressure (less than pressure piping) during flow.

E. Control Valve: Manual or automatic (electrically operated) valve for control water flow to irrigation system zone, including isolation or zone valves.

1.4 SYSTEM PERFORMANCE REQUIREMENTS

A. Location of Drip line, Emitters and Devices: Design location is approximate. Make minor adjustments necessary to avoid planting and obstructions such as signs and light standards.

1.5 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product data including pressure rating, rated capacity, settings, and electrical data of selected models for the following:

1. Integral pressure-compensating, continuously self-cleaning, check valve and anti-drain dripper line.
2. Pressure regulators.
3. Valves, including general-duty, underground, manual and automatic control, and quick-coupler types, and valve boxes.
4. Sprinklers and devices.
5. Flush Valves.
6. Filters.
7. Air/Vacuum Relief Valves
8. Pipe, including sleeves, lateral, supply, conduit and drain.

C. Maintenance data for inclusion in "Operating and Maintenance Manual" specified in Division 1 Section "Project Closeout" for the following:

1. Dripper line.
2. Pressure regulators.
3. Valves, including general-duty, underground, manual and automatic control, and quick-coupler types, and valve boxes.
4. Sprinklers and devices.
5. Flush Valves.
6. Filters.
7. Air/Vacuum Relief Valves
8. Pipe, including sleeves, lateral, supply, conduit and drain.

1.6 QUALITY ASSURANCE

A. Comply with requirements of utility supplying water for prevention of backflow and backsiphonage.

B. Comply with requirements of authority with jurisdiction for irrigation systems.

C. Installer Qualifications: Engage an experienced installer who has completed minimum of 6 irrigation systems similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

The successful contractor shall, at the time of bid and award, have at least one registered CIC (Irrigation Association Certified Irrigation Contractor) with a current certification and who is a direct employee of the Irrigation Contractor. The CIC shall meet with the University Landscape Maintenance Department on site at least weekly to review the progress of the Work.

D. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E. Irrigation Components, Devices and Accessories: Listing, Label, or Other Marking: The manufacturer's markings and labels to be clearly stamped on all equipment, specialties, and accessories made to specified standards.

F. Product Options: Irrigation system piping, specialties, and accessories are based on specific types, manufacturers, and models indicated. Components with equal performance characteristics produced by other manufacturers may be considered, provided deviations in dimensions, operation, and other characteristics do not change design concept or intended performance as judged by the Architect, unless noted "No Substitute". The burden of proof of product equality is on the Contractor. Refer to Division 1 Section "Product Substitutions." No requests for substitutions will be reviewed after bids have been received by Owner.

1.7 PROJECT CONDITIONS

A. Perform site survey, research public utility records, and verify existing utility locations. Verify that irrigation system piping may be installed in compliance with original design and referenced standards.

B. Site Information: Reports on subsurface condition investigations made during design of the Project are available for informational purposes only; data in reports are not intended as representations or warranties of accuracy or continuity of conditions (between soil borings). Owner assumes no responsibility for interpretations or conclusions drawn from this information.

1.8 SEQUENCING AND SCHEDULING

A. Maintain uninterrupted water service to building during normal working hours. Arrange for temporary water shutoff with Owner.

B. Coordinate irrigation systems work with landscape work specified in Division 32 Section 328300 - Landscape Planting.

1.9 EXTRA MATERIALS

A. Deliver extra materials to Owner. Furnish extra materials matching products installed as described below. Package them with protective covering for storage and label clearly describing contents.

1. Dripper Tube: Furnish quantity of units equal to 10% of amount of each type installed.

1.10 WARRANTY/GUARANTEE

A. During the period of one (1) year from and after the final acceptance of the completed irrigation system, the Contractor shall at his own expense, make all needed repairs or replacement due to defective workmanship or materials which in the judgement of the Owner or Owner's representative, shall become necessary during such period. If, within seven (7) calendar days after mailing of the written notice or verified communication by the Owner to the Contractor or his agent, requesting such repairs or replacement, the Contractor shall neglect to make repairs, Owner may make such repairs at the Contractor's expense. In the case of emergency where, in the judgement of the Owner, delay could cause serious loss, hazard or damage to persons or property, then repairs, replacement and security, both temporary and/or permanent, may be provided by such persons as the Owner may employ, after verbal communication with Contractor without notice being sent to the Contractor, and the Contractor shall pay all costs related thereto.

B. The guarantee shall be in the form of a letter from the Contractor addressed to the Owner. The letter shall incorporate the language stated above and be signed by an authorized officer/agent or Owner of the Contractor.

C. During the guarantee period, the Contractor will drain the system in the fall and put the system back into operation in the spring. This work shall be done in the presence of the Owner's representative and maintenance personnel.

1.11 RECORD DRAWINGS:

A. Any deviation from plan layout should be indicated on the final "Record" Drawings. This Contractor shall make an exact measured and dimensioned drawing showing locations of all piping, wiring, control, valves and quick coupler valves.

B. Record Drawings shall be furnished to the Landscape Architect at the time of Substantial Completion Inspection before a letter of Substantial Completion for the irrigation sprinkler system will be issued.

C. The Contractor shall supply the Landscape Architect with record drawing information in AutoCAD format before final acceptance of the irrigation system.

1.12 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, both threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure, locked storage for valves, sprinkler heads, and similar components that cannot be immediately replaced, to prevent installation delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Pressure Regulators
   a. Rain Bird Sprinkler Mfg. Corp.
   b. Netafim USA
   c. Hunter Industries
2. Automatic Control Valves
   a. Rain Bird Sprinkler Mfg. Corp. (Design Standard)
3. Control Valve Boxes
   a. Ametek by Plymouth Products Div., AMETEK
   b. Brooks Products, Inc., Polyplastics Div.
   c. Carson - Oldcastle.
4. Sprinklers
   a. Hunter Industries
   b. Rain Bird Sprinkler Mfg. Corp.
   c. Hunter Industries
5. Filters
   a. Hunter Industries
   b. Rain Bird Sprinkler Mfg. Corp.
   c. Netafim USA.
6. Flush Valves
   a. Hunter Industries
   b. Rain Bird Sprinkler Mfg. Corp.
   c. Netafim USA.
7. Air/Vacuum Relief Valves
   a. Hunter Industries
   b. Rain Bird Sprinkler Mfg. Corp.
   c. Netafim USA.
8. Pipe
   a. Pacific Western Extruded Plastics Co.
   b. Eagle Pacific Industries, Inc.
   c. J-M Manufacturing Company, Inc.

2.2 PIPES AND TUBES

A. Refer to Part 3 Article "Piping Applications" for identification of systems where pipe and tube materials specified below are used.

B. Polyvinyl Chloride (PVC) Plastic Pipe: ASTM D 1785, PVC 1120, Schedule 40, 160 psig (1100 kPa) minimum pressure rating for 4-inch (100-mm) and smaller sizes, with plain, threaded or bell ends.

2.3 PIPE AND TUBE FITTINGS

A. Refer to Part 3 Article "Piping Applications" for identification of systems where pipe and tube fitting materials specified below are used.

B. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2467, Schedule 40, socket-type and ASTM D2464, Schedule 40, threaded fittings.

C. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D2467, Schedule 40, socket-type.

2.4 JOINING MATERIALS

A. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for joining materials not included in this Section.

B. Solvent Cement: ASTM F656 primer and ASTM D2564 solvent cement in color other than orange.

C. 17 mm Fittings: Connections shall be made with drip line manufacturer approved fittings.

2.5 VALVES

A. General: Valves are for general-duty and underground applications. Refer to "Valve Applications" Article for locations of various valve types specified in this Article. Refer to "Control Valves" Article for control valves and accessories and "Backflow Preventers" Article for backflow preventer valves.

B. Plastic Valves: Polyvinyl Chloride (PVC) Plastic, with 150 psig (1035 kPa) minimum pressure rating, ends compatible to piping where valve is to be installed, and tee handle.

C. Ball Valves: Ball valves shall be solid bronze meeting Federal Specification WW-V-35C, TYPE II, COMPOSITION: BZ, STYLE: 3. Size shall be the same size as the main line on which it is installed. Valves shall be installed on the up-stream side of the electric remote control valve manifold and in the same valve box. NOTE: Only one (1) ball valve required per manifold.

2.6 CONTROL VALVES

A. Description: Manufacturer's standard control vales for circuits, of type and size indicated, and as follows:

1. Provide cast-bronze bodies, unless otherwise indicated.
2. Manual Control Valves: MSS SP-80, Class 125, globe valves.
3. Key-Operated, Manual Control Valves: MSS Sp-80, Class 125, globe valves, fitted for key operation.
4. Automatic Control Valves: Diaphragm-type, normally closed, with manual flow adjustment, and operated by 24-volt-a.c. solenoid.
5. Hose Bibbs: Factory-fabricated assembly. Include coupler water-seal valve. Threads for garden hose on outlet; hose bibb to be in upright position.

B. Control Valve boxes: Polyethylene (PE), acrylonitrile-butadiene-styrene (ABS), fiberglass, polymer concrete, or precast concrete box and cover. Size as required for application.

1. Drainage Backfill: Cleaned gravel or crushed stone, graded form 3-inches (75 mm) maximum to ¾-inch (19 mm) minimum.
2. Valve boxes shall be of sufficient size to house two (2) electric remote control valves with unions, and still allow room for maintenance without having to excavate or perform similar operations. Boxes shall have lock down lids and shall meet ASTM D638 for tensile strength of 4,300 pounds per square inch.

2.7 SPRINKLERS

A. Description: Manufacturer's standard 12" pop up sprinklers used as a flag to indicate that the drip system is operating, as follows:

1. Pop-up, Spray: Fixed pattern, with screw-type flow adjustment and stainless steel retraction spring.

2.8 DRIP LINE AND INTEGRAL DRIPPER LINE COMPONENTS

A. The dripper line shall be CV pressure compensating dripper line 17mm, dripper line as manufactured by Netafim irrigation, Inc or approved equal. Dripper flow rate spacing shall be as indicated on drawings.

1. 17mm fittings: All connections shall be made with manufacturer approved 17mm insert fittings.
2. Soil Staples: All on-surface/under mulch dripline installations shall be held in place with Soil Staples spaced evenly every 3' to 5' on center, and with two staples on each change of location.
3. Pressure Regulator: A pressure regulator shall be installed at each zone valve or on the main line to ensure operating pressures do not exceed system requirements. The pressure regulator shall be a Netafim or Rainbird Pressure Regulator for low flow inline applications. For flows greater than 5 gpm on 1" zones or 11 gpm on 1-1/2" zones the PRV shall be Netafim. Model number as indicated on drawings.
4. Disc Filter: A disc filter shall be installed at each zone valve or on the main line to ensure proper filtration. The filter shall be a Netafim or Rainbird Disc Filter, Model number and mesh as indicated on drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Investigate and determine available water supply, water pressure and flow characteristics.

3.2 PIPING APPLICATIONS

A. Refer to Part 2 of this Section for detailed specifications for pipe and fittings products listed below. Use pipe, tube, fittings, and joining methods according to the following applications. Piping in pits and aboveground may be joined with flanges instead of joints indicated.

B. Use pipe, tube, fittings, and joining methods according to the manufacturer's specification and the following applications.

C. Circuit Piping: Use the following:

1. 3-inches (DN 80) and Smaller: ASTM D 2241, SDR 17, polyvinyl chloride (PVC) plastic pipe; ASTM D 2467, Schedule 40, PVC plastic, socket-type pipe fittings; and solvent-cemented joints.

D. Branches and Offsets at Sprinkler and Devices: ASTM D 1785, Schedule 80, polyvinyl chloride (PVC) plastic pipe with threaded ends; ASTM D 2464, Schedule 80, PVC plastic, threaded fittings; and threaded joints.

E. Sleeves: ASTM D 1785, Schedule 40, polyvinyl chloride (PVC) plastic pipe; ASTM D 2466, Schedule 40, PVC plastic, socket-type fittings; and solvent-cemented joints.

3.3 JOINT CONSTRUCTION

A. Polyvinyl Chloride (PVC) Piping Solvent-Cemented Joints: Construction joints according to ASTM D 2672 and ASTM D 2855.

1. Handling of Solvent Cements, Primers, and Cleaners: Comply with procedures in ASTM F 402 for safe handling when joining plastic pipe and fittings with solvent cements.

3.4 PIPING SYSTEMS - COMMON REQUIREMENTS

A. General Locations and Arrangements: Drawings indicated general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, and in other design considerations. Install piping as indicated, except where deviations to layout are approved on coordination drawings.

B. Install piping at a uniform slope of 6-inches per 100-feet (1:200) minimum, down to drain points.

C. Install components having pressure rating equal to or greater than system operating pressure.

D. Install piping free of sags and bends.

E. Locate groups of pipes parallel to each other, spaced to permit valve servicing.

F. Install fittings for changes in direction and branch connections.

G. Piping Connections: Except as otherwise indicated make piping connections as specified below.

1. Install unions, in piping 2-inches (DN 50) and smaller, adjacent to each valve and at final connection to each piece of equipment having 2-inch (DN 50) or smaller threaded pipe connection.

3.5 TRENCHES:

A. Trenches shall be dug as wide and deep as necessary to properly place the sprinkling system according to the requirements herein. Any rock uncovered in this excavation shall not be left in the backfill. All excess rock shall be removed from the site by this Contractor and legally disposed of off the property. All trenches shall be backfilled and compacted to insure no settling of the surface, after the lawn is planted.

B. If backfill soil is rocky or lumpy, protect the pipe and the pipe conduit with 8" of sand or loose, rock free, soil under, over and on sides of pipe. Avoid putting large rocks against pipe during backfilling operation.

C. All trenches must be compacted to 90% in 6" lifts and watered in. Lines from control valves shall be installed after topsoil is in place and properly graded.

D. This Contractor, in placing the sprinkling lines, etc., may uncover material not suitable for finished grading. This material shall be removed from the site by this Contractor. After the installation of the lines, the finished grading shall be smoothed over and restored to its original condition, using additional topsoil at this Contractor's expense, if this is necessary. The upper 6" of topsoil removed in the excavation of trenches for pipeline shall be conserved and kept separate from subsoil and reinstalled without mixing with other soil.

E. Trenches where more than one pipe is to be installed, a distance of 6" is to be maintained between each pipe.

F. All trenches are to be 12" away from all curbs, buildings and sidewalks. No exceptions.

3.6 PIPING INSTALLATION

A. Install underground polyvinyl chloride (PVC) plastic pipe according to ASTM D 2774.

B. Lay piping on solid sub-base, uniformly sloped without humps or depressions.

1. Slope circuit piping down toward drain valve minimum of ½-inch in 10-feet (1:240).
2. Install polyvinyl chloride (PVC) plastic pipe in dry weather when temperature is above 40 deg. F (4 deg. C). Allow joints to cure at least 24-hours at temperature above 40 deg. F (4 deg. C) before testing, unless otherwise recommended by manufacturer.

C. Minimum Cover: Provide following minimum cover over top of buried piping:

1. Lateral Line Piping: 16".
2. Main Line Pipe: 24"
3. Inline Emitter Tubing: 2"

D. Install piping under sidewalks and paving in sleeves.

3.7 DRIP LINE INSTALLATION

A. Install all drip line as indicated on drawings. Use only Teflon tape on all threaded connections.

B. When installing drip line on-surface, install soil staples as listed below:

1. Sand Soil: One staple every three (3') feet and two (2) staples on each change of direction (tee, elbow, or cross).
2. Loam Soil: One staple every four (4') and two (2') staples on each change of direction (tee, elbow or cross).
3. Clay Soil: One staple every five (5') feet and two (2') staples on each change of direction (tee, elbow or cross).

C. Cap or plug all openings as soon as lines have been installed to prevent the entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of installation.

D. Install two Netafim or approved equal operation flags, per each drip line valve. Netafim operation flags shall be used to notify and indicate operation of the drip system.

E. Thoroughly flush all water lines before installing valves, emitters and other hydrants.

F. Test in accordance with Manufacturers recommendations.

3.8 VALVE INSTALLATION

A. Valves: Install underground valves in valve boxes or pits.

1. Install valves and polyvinyl chloride (PVC) pipe with restrained, gasketed joints.

B. Control and Ball Valves: Install in valve control valve boxes. All of the devices in the manifold shall be space such that all of the devices are fully operational and accessible for maintenance purposes. Manifold shall include the following devices, in this order:

1. Brass Isolation Valve
2. Automatic valve of the appropriate size.
3. Manifold union.
4. Disc filter with 140 mesh disc filter rings, of appropriate size
5. Inline pressure regulator valve of appropriate size and flow.
6. Manifold union.

3.9 SPRINKLER INSTALLATION

A. Sprinklers: Flush circuit piping with full head of water and install sprinklers after hydrostatic test is complete.

1. Install shrubbery sprinklers at heights indicated.

3.10 DRAINS:

A. All lines shall be sloped to drain. A minimum of drains should be used. Extra drain valves necessitated by unforeseen field conditions to make the system drain shall be provided by the Contractor and approved by the Landscape Architect.

B. A suitable gravel sump shall be provided for each drain, minimum of 6" below the finished grade. A sump shall be a 24" diameter hole filled with gravel 2" above and 12" below the drain.

3.11 DRIP FILTERS:

A. Filters shall be installed immediately after the electric valve and before the pressure regulator. The main body of the filter shall be installed at a slight downward angle so the dirt and debris will collect in the removable cap. An appropriate valve box shall be used to insure easy access to the filter for cleaning purpose.

3.12 DRIP SYSTEM PRESSURE REGULATORS:

A. Due to the high flows involved with a Techline system compared to other drip systems it is important to only use the Netafim high flow (20 GPM) 45 PSI regulators. The regulators shall be installed after the filters and must not be buried, but shall be accessible for inspections and maintenance.

3.13 MANUAL FLUSH VALVES:

A. These valves serve to provide flushing during installation and in case of major breaks or contaminations in the system. They shall be installed one for at each dead end and low point in the system. Line flush valves shall be placed in a 10 round box, stabilized on brick and with a 12" gravel sump below each valve.

3.14 FIELD QUALITY CONTROL

A. Testing: Perform hydrostatic test of piping and valves before backfilling trenches. Piping may be tested in sections to expedite work.

1. Cap and subject the piping system to a static water pressure of 50 psig (345 kPa) above the operating pressure, but not less than 150 psig without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for 4-hours. Leaks and loss in test pressure constitute defects that must be repaired.
2. Repair leaks and defects with new materials and retest system or portion thereof until satisfactory results are obtained.
3. Notify Architect and University Landscape Maintenance Department Representative 24 hours in advance of pressure testing so test may be observed.

3.15 CLEANING AND ADJUSTING

A. Flush dirt and debris from piping before installing sprinklers and other devices.

B. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.

3.16 COMMISSIONING

A. Starting Procedures: Follow manufacturer's written procedures. If no procedures are prescribed by manufacturers, proceed as follows:

1. Verify that specialty vales and their accessories have been installed correctly and operate correctly.
2. Verify that specified test of piping are complete.
3. Check that sprinklers and devices are correct type.
4. Check that damaged drip tube, emitters and devices have been replaced with new materials.
5. Energize circuits to electrical equipment and devices.
6. Adjust operating controls.

B. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place, and sprinklers are adjusted to final position.

3.17 DEMONSTRATION

A. Demonstrate to Architect that system meets coverage requirements and that automatic controls function properly.

B. Demonstrate to Owner's maintenance personnel operation of equipment, sprinklers, specialties, and accessories. Review operating and maintenance information.

C. Provide 7-days' written notice in advance of demonstration.

END OF SECTION 328401

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

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SEAL

STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

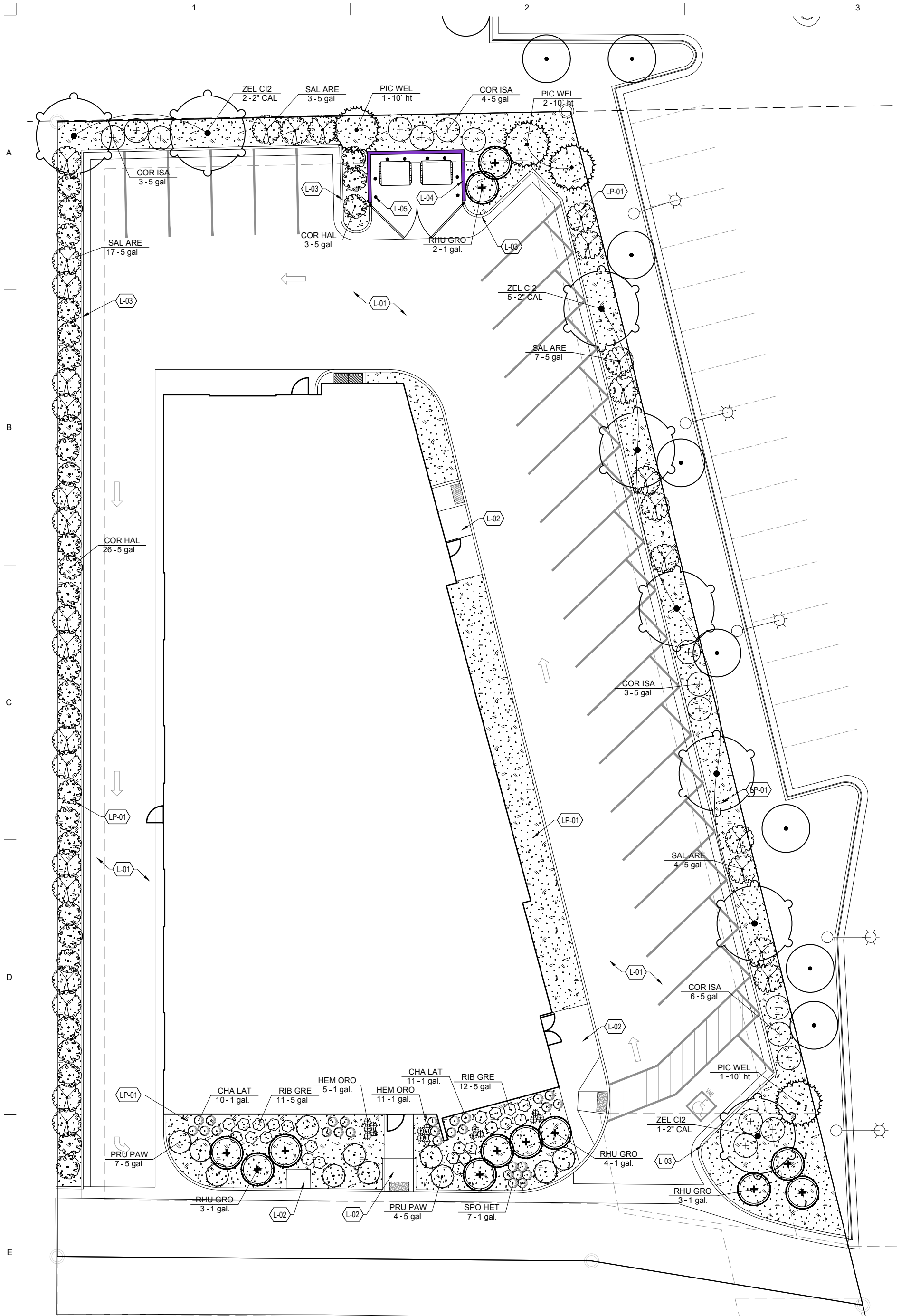
REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
DRIP IRRIGATION SPECIFICATIONS

SHEET NUMBER
LI504


ZEL CI2
2 - 2" CAL
SAL ARE
3 - 5 gal
PIC WEL
1 - 10` ht
COR ISA
4 - 5 gal
PIC WEL
2 - 10` ht
COR ISA
3 - 5 gal
L-03
L-05
L-04
LP-01
COR HAL
3 - 5 gal
RHU GRO
2 - 1 gal.
SAL ARE
17 - 5 gal
L-03
L-01
ZEL CI2
5 - 2" CAL
SAL ARE
7 - 5 gal
L-02
COR HAL
26 - 5 gal
COR ISA
3 - 5 gal
LP-01
LP-01
LP-01
L-01
SAL ARE
4 - 5 gal
L-01
COR ISA
6 - 5 gal
L-02
LP-01
CHA LAT
10 - 1 gal.
RIB GRE
11 - 5 gal
HEM ORO
5 - 1 gal.
HEM ORO
11 - 1 gal.
CHA LAT
11 - 1 gal.
RIB GRE
12 - 5 gal
PIC WEL
1 - 10` ht
ZEL CI2
1 - 2" CAL
PRU PAW
7 - 5 gal
RHU GRO
4 - 1 gal.
L-03
RHU GRO
3 - 1 gal.
RHU GRO
3 - 1 gal.
L-02
L-02
PRU PAW
4 - 5 gal
SPO HET
7 - 1 gal.

E1 LANDSCAPE PLAN

N

0 5' 10' 20'

SCALE: 1" = 10'-0"

LANDSCAPE CALCULATIONS

TOTAL LANDSCAPE AREA	5,955 SF		
		REQUIRED	PROVIDED
TOTAL TREES (1/500 SF REQ.)		12	12
EVERGREEN TREES (30% REQ.)		4	4
DECIDUOUS TREES		8	8
SHRUB COVERAGE (50% REQ.)		2,978 SF	3,005 SF

REFERENCE NOTES SCHEDULE

SYMBOL	LANDSCAPE DESCRIPTION
L-01	ASPHALT PAVING
L-02	CONCRETE PAVING
L-03	CONCRETE CURB & GUTTER
L-04	CMU SCREEN WALL
L-05	BOLLARD TYP.

SYMBOL	PLANTING NOTES DESCRIPTION
LP-01	STONE MULCH, 3/4"-1-1/2" CRUSHED AGGREGATE 3" DEEP

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

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SEAL

STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

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REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
LANDSCAPE PLAN

SHEET NUMBER
LP100

PLANTING NOTES

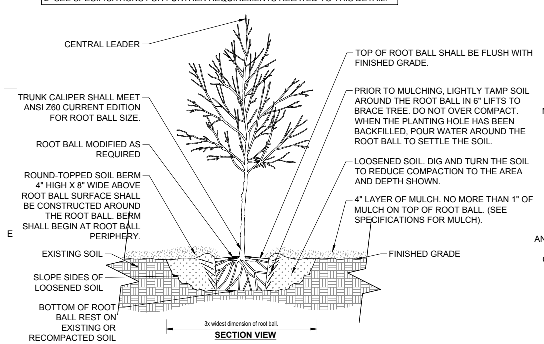
1. ALL PLANTS SHALL CONFORM TO THE MINIMUM STANDARDS OF HEIGHT, SIZE, CALIPER AND ETC. OF THE AMERICAN ASSOCIATIONS OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK".
2. THIS CONTRACTOR SHALL SPREAD TOPSOIL TO A DEPTH OF 6" IN ALL LAWN PLANTING AREAS AND 12" IN ALL SHRUB AND PERENNIAL BEDS.
3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING FROM THE SITE ALL SOIL EXCAVATED FROM TREE PITS.
4. ALL MOWSTRIPS ARE TO BE INSTALLED PRIOR TO THE INSTALLATION OF THE IRRIGATION SYSTEM SYSTEM AND THE LANDSCAPE PLANTING.
5. INSTALL MULCH IN ALL SHRUB PLANTING BEDS AFTER PLANT MATERIAL INSTALLATION.
6. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE REQUIRED AMOUNT OF TOPSOIL TO COMPLETE THE PROJECT. NEW TOPSOIL SHALL MATCH QUALITY AND TEXTURE OF THE EXISTING TOPSOIL ON SITE.

PLANT SCHEDULE

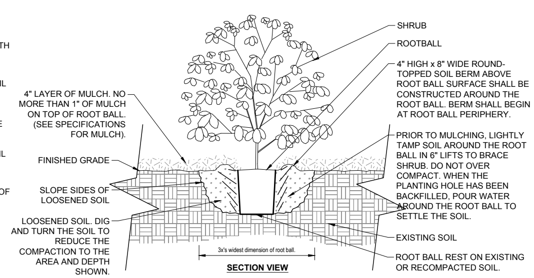
TREES	CODE	BOTANICAL NAME	COMMON NAME	CAL.	REMARKS
	EXI RSX	EXISTING TREE	EXISTING TREE	2" CAL	
	PIC WEL	PICEA OMORIKA `WELLS RIVERSIDE`	RIVERSIDE SERBIAN SPRUCE	10` HT	
	ZEL CI2	ZELKOVA SERRATA `JFS-KW1` TM	CITY SPRITE ZELKOVA	2" CAL	
SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**REMARKS**
	COR HAL	CORNUS ALBA `BAILHALO` TM	IVORY HALO DOGWOOD	5 GAL	
	COR ISA	CORNUS SERICEA `ISANTI`	ISANTI REDOSIER DOGWOOD	5 GAL	
	HEM ORO	HEMEROCALLIS X `STELLA DE ORO`	STELLA DE ORO DAYLILY	1 GAL.	
	PRU PAW	PRUNUS BESSEYI `PAWNEE BUTTES`	SAND CHERRY	5 GAL	
	RHU GRO	RHUS AROMATICA `GRO-LOW`	GRO-LOW FRAGRANT SUMAC	1 GAL.	
	RIB GRE	RIBES ALPINUM `GREEN MOUND`	GREEN MOUND ALPINE CURRANT	5 GAL	
	SAL ARE	SALIX ARENARIA	SILVER CREEPING WILLOW	5 GAL	
GRASSES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**REMARKS**
	CHA LAT	CHASMANTHIUM LATIFOLIUM	WOOD OATS	1 GAL.	
	SPO HET	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL.	

NOTES:
1- TREES SHALL BE OF QUALITY PRESCRIBED IN CROWN OBSERVATIONS AND ROOT OBSERVATIONS DETAILS AND SPECIFICATIONS.

2- SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.


CENTRAL LEADER
TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.
ROOT BALL MODIFIED AS REQUIRED
ROUND-TOPPED SOIL BERM 4" HIGH X 8" WIDE ABOVE ROOT BALL SURFACE SHALL BE CONSTRUCTED AROUND THE ROOT BALL. BERM SHALL BEGIN AT ROOT BALL PERIPHERY.
EXISTING SOIL
SLOPE SIDES OF LOOSENED SOIL
BOTTOM OF ROOT BALL REST ON EXISTING OR RECOMPACTED SOIL
TOP OF ROOT BALL SHALL BE FLUSH WITH FINISHED GRADE.
PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL.
LOOSENED SOIL. DIG AND TURN THE SOIL TO REDUCE COMPACTION TO THE AREA AND DEPTH SHOWN.
4" LAYER OF MULCH. NO MORE THAN 1" OF MULCH ON TOP OF ROOT BALL. (SEE SPECIFICATIONS FOR MULCH).
FINISHED GRADE
3x widest dimension of root ball.
SECTION VIEW

E1 TREE W/ BERM
1/2" = 1'-0"
P-CO-SIL-329346-01


SHRUB
ROOTBALL
4" HIGH x 8" WIDE ROUND-TOPPED SOIL BERM ABOVE ROOT BALL SURFACE SHALL BE CONSTRUCTED AROUND THE ROOT BALL. BERM SHALL BEGIN AT ROOT BALL PERIPHERY.
PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE SHRUB. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL.
EXISTING SOIL
ROOT BALL REST ON EXISTING OR RECOMPACTED SOIL.
4" LAYER OF MULCH. NO MORE THAN 1" OF MULCH ON TOP OF ROOT BALL. (SEE SPECIFICATIONS FOR MULCH).
FINISHED GRADE
SLOPE SIDES OF LOOSENED SOIL
LOOSENED SOIL. DIG AND TURN THE SOIL TO REDUCE THE COMPACTION TO THE AREA AND DEPTH SHOWN.
3x's widest dimension of root ball.
SECTION VIEW

NOTES:
1- SHRUBS SHALL BE OF QUALITY PRESCRIBED IN THE ROOT OBSERVATIONS DETAIL AND SPECIFICATIONS.

2- SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

E2 SHRUB PLANTING
3/4" = 1'-0"
P-CO-SIL-329333-05

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

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SEAL

STATE OF UTAH
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No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

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REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
LANDSCAPE DETAILS & NOTES

SHEET NUMBER
LP501

LANDSCAPE PLANTING
SECTION 329301 - LANDSCAPE PLANTING

PART 1 - GENERAL

1.1 SUMMARY

A. The extent of the landscape development work is shown on the drawings and in schedules. This work includes:

1. Obtaining and paying for permit fees, inspections and tests required for the installation of landscape planting.
2. Providing and placement of all plant material, topsoil, mulch, miscellaneous materials and maintenance of landscape planting and associated guarantees.
3. Repair the existing Landscape Planting as required to restore to "as-new" condition.
4. All plant material will be approved by the Architect and the Owners Representative on site prior to planting. Non-approved material to be removed from the site at no cost the District.
5. Attendance at Pre-Construction Conference

1.2 RELATED WORK

A. Section 011000 "Summary".
B. Section 328400 "Irrigation System".
C. Section 328401 "Drip Irrigation System".
D. Specification Section - Soils Report for reference only.

1.3 QUALITY ASSURANCE

A. Plants shall conform to names indicated on the drawings and plant list and to the nomenclature listed in the American Joint Committee on Horticultural Nomenclature's "Standardized Plant Names", latest edition.

B. Size, quality, handling, planting and maintenance of plant materials shall be in accordance with "American Standard for Nursery Stock", ANSI Z60-1996, American Association of Nurserymen, Inc. Minimum acceptable sizes of plants, measured before pruning with branches in normal position, shall conform to measurements specified in the Plant Materials Key.

C. Plants shall be subject to the Owner's Project Manager and Landscape Architect's inspection and approval at place of growth or upon delivery for conformity to specification requirements. Such approval shall neither preclude right of rejection upon delivery at the site or during progress of work, nor right of rejection at the site due to damage suffered in handling or transportation. Inspection of plants by the Landscape Architect before digging shall be at the option and expense of the Owner.

1. All plant material will be inspected again at time of final inspection and once again at the end of the warranty period.
2. Any plant material found to be unacceptable at any inspection shall be immediately removed and replaced.

D. Unauthorized substitutions of plant material will not be accepted. All substitution requests must be made in writing and preferably before the bid due date.

E. Contractor will provide and pay for materials testing. Testing agency shall be acceptable to the Landscape Architect.

1. Test representative samples of materials proposed for use. Materials used in the work shall be the same materials as tested. Do not use proposed material in the work until test reports have been reviewed by the Landscape Architect and approval obtained to proceed with plant excavations.

F. Test reports: Provide the following information:

1. Topsoil:
   a. Mechanical analysis.
   b. Percentage of organic content.
   c. Recommendations on the type and quantity of soil nutrient additives required to bring nutrients to a satisfactory level for specified plants.
   d. Recommendations on the type and quantity of soil additives required to bring the pH of soil to a value of 5.5-8.2 (unless otherwise noted).
   e. SAR
   f. Soluble Salts

G. Landscape work shall be done by a single firm specializing in landscape construction work with minimum 5 years experience completing projects of similar size and complexity.

1. Contractor to provide list of past projects completed during last 3 years at time of first bid proposal.

1.4 SUBMITTALS

A. General: Submit each item in this article and for each item listed in Part 2 - Materials for review and approval according to the General Conditions of the Contract and Specifications - Division 1.

B. Submit Certificate of Inspection of plant material by state or federal authorities.

C. Submit commercial soils test with material test reports and soil nutrient additive recommendations.

D. Submit a label from the manufacturer's container certifying fertilizer content.

E. Submit samples of proposed mulch for use in planting beds.

F. Submit complete written maintenance instruction at least 10 days prior to end of maintenance period. Include all requirements for proper care, development and maintenance of planting.

G. Submit within 20 days of award of the bid to general contractor a planting schedule stating sources from which said Contractor can provide the plant materials in the quantity and size indicated on the Drawings.

1. Substitutions for plant material that is not obtainable may be proposed in writing prior to bid. Submit written statement from plant materials supplier(s) with proposal for equivalent material for evaluation and acceptance prior to bid.

H. Submit photographs and other descriptions of all plant material that is located outside of a 90 mile radius of project location. Provide specific growing location address.

I. Submit contractor's Guarantee Form for Landscape Architect's review.

J. Project Data Form

1.5 VERIFICATION OF DIMENSIONS AND QUANTITIES

A. All scaled dimensions are approximate. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions and quantities; and shall immediately inform the Landscape Architect of any discrepancy between the information on the Drawings and actual conditions, refraining from doing any work on said areas until given approval to do so by the Landscape Architect.

B. Plant quantities listed on the Drawings are for the convenience of the Contractor only and are not guaranteed. All planting indicated on the Drawings will be required unless indicated otherwise.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Prepare, transport and handle plants to ensure protection against injury. Cover all plants while transporting to the site.

B. Deliver plants with legible waterproof identification labels.

C. Temporary storage of new material:

1. No new plants shall remain in temporary storage over the winter or summer. Plants that are not planted immediately shall be protected as follows:
   a. Plants shall remain on the site of the work no longer than three days prior to being planted or placed in storage.
   b. The earth balls shall be kept moist and their solidity carefully preserved. To prevent drying out or freezing, store plants in a compact group with suitable mulch material placed around and between the balls so they are completely covered. The method of storage of plants and mulch material shall be acceptable to the Landscape Architect.
   c. Provide irrigation to stored plants.

D. Do not deliver or use topsoil in frozen or muddy conditions.

E. Packaged materials shall be delivered in factory labeled containers showing weight, content and manufacturer. Protect all materials from damage and deterioration during delivery and storage at site.

1.7 GRADING

A. Examine the subgrade, verify the elevations of topsoil, planting mix or mulch. Observe the conditions under which work is to be performed and notify the Landscape Architect of unsatisfactory conditions. Do not begin landscape work until unsatisfactory conditions have been improved.

1.8 EXCAVATION

A. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify the Landscape Architect before planting.

1.9 EXISTING UTILITIES

A. Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required, to minimize possibility of damage to underground utilities. The Contractor shall have the area "Blue Staked" prior to digging. It is the responsibility of the Contractor to repair or replace any damage caused by its workers at no expense to the Owner.

B. Before planting, locate all underground utilities prior to digging. Do not place plants on or near utility lines. Obtain a digging permit first (see the General Conditions) and have the permit at the site.

1.10 PLANTING SCHEDULE

A. Before bidding each bidder shall investigate sources of supply and determine availability of all plants specified on the planting list in size, variety and quantity. Failure to take this precaution will not relieve the successful bidder from responsibility as a contractor to furnish and install all plant material in strict accordance with the contract without additional expense to the Owner.

B. Prepare a proposed planting schedule for approval by the Landscape Architect. Schedule the dates for each type of landscape work during the normal seasons for such work in the area of the site. Correlate with specified maintenance periods to provide maintenance throughout the specified time period. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.

C. Proceed with and complete the landscape work as rapidly as portions of the site become available, working within the seasonal limitations for each kind of landscape work required.

1.11 ESTABLISHMENT, MAINTENANCE, REPLACEMENT, AND GUARANTEE

A. The establishment period shall begin at the time that the planting phase of the work is completed, inspection and written notice is given and shall continue until substantial line. See Total Site Maintenance section 3.11.

B. Maintenance shall include but not be limited to watering, weeding, pruning, spraying, adjusting of guys, and lawn maintenance as described herein.

C. Remove and replace trees found to be unacceptable at the time of substantial completion and at any time during the guarantee period. Replacements shall be made during the guarantee period. Replacements shall be made during the growing season and shall comply with all requirements and specifications. Replacement shall also match specified trees in specie, size, and condition. Any delaying the completion of any item of work in the planting operation which extends the planting into more than one season shall extend the guarantee period accordingly.

D. Any plants that settle below or rise above the desired finished grades during establishment or guarantee period shall be reset at the proper grades.

E. Guarantee all planting for one year following signature of Owner on the final contract payment application.

F. The Contractor will not be responsible for plants destroyed or lost due to occupancy of the project, or vandalism on the parts of others or if the failure of any plant material can be proven to the Landscape Architect to be beyond the control of the Contractor.

G. At the end of the guarantee period a final inspection of all planting included in this contract will be made by the Landscape Architect. At that time any plant found not to be in a healthy growing condition, broken, damaged, or not exhibiting the desired characteristics of the plant shall be noted. These noted plants shall be removed as specified above.

PART 2 - MATERIALS

2.1 TOPSOIL

A. Topsoil for planting operations shall be imported onto the project site. It shall be friable, fertile, natural sandy loam containing at least 2 % organic matter. PH range shall be 5.5 to 8.2 inclusive, shall be capable of sustaining vigorous plant growth. It shall be free of admixture of subsoil and shall be reasonable free of stones, lumps, clods of hard earth, plants or their roots sticks, or other extraneous matter. It shall not be used for planting operations in a frozen or muddy condition.

B. Prior to delivery of topsoil to the site the Contractor shall furnish commercial soil tests for Landscape Architect's approval. If such tests indicate the topsoil to be other than the type specified it shall be replaced with a topsoil which shall conform to the specifications at no additional compensation to the Contractor.

C. Topsoil shall not be used for planting operations while in a frozen or muddy condition.

2.2 PEAT MOSS

A. Peat moss used in planting soil preparation: High quality pure Canadian sphagnum peat with a pH value not less than 3.5 nor greater than 6.0 at 25 degrees C. The ash content shall be not more than 10% and water holding capacity shall be not less than 800%.

B. All peat comply with Q-P-166e, class B coarseness.

2.3 ORGANIC SOIL AMENDMENTS

A. Compost: Well composted, stable and weed free organic matter, pH range of 5.5 to 8' moisture content 35 to 55 by weight; 100 percent passing through a ¼" sieve; soluble content of 5 to 10 decisiemens/m; not exceeding .5 percent inert contaminants and free of substances toxic to planting.

B. Compost to meet USU extension Compost Quality Guidelines for Landscaping.

C. Organic soil amendments (compost) shall be composted and nitrogen stabilized by one of the following manufacturers:

   a. Soil-pep by Mt. West Products, Rexburg, Idaho
   b. Bio-Rem True compost, Holden, Utah
   c. Replenish Products,
   d. Nutrimulch, Moroni, Utah

2.4 INORGANIC SOIL AMENDMENTS

A. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 6 (3.35-mm) sieve and a maximum of 10 percent passing through No. 40 (.425-mm) sieve.

2.5 ORGANIC SOIL CONDITIONER

A. Organic soil conditioner shall be composted and nitrogen stabilized Soil-pep by Mt. West Products, Rexburg, Idaho.

2.6 BACKFILL

A. Backfill soil mixture shall be the following materials well mixed in the specified proportions, which are by volume.

Product	Proportion
Peat moss or organic soil conditioner	1 part
Topsoil	4 parts

2.7 COMMERCIAL FERTILIZER - TREES AND SHRUBS

A. Fertilizer for trees, shrubs and ground cover planting areas shall be slow release type, Osmocote 18-6-12 used according to manufacturer's printed instructions.

2.8 MISCELLANEOUS PRODUCTS

A. Separation Fabric: Woven or nonwoven geotextile manufactured for separation applications and made of polypropylene fibers.

1. DeWitt Pro 5 Weed Barrier.

2.9 DRY SOIL AMENDMENT

A. Root-Maxx Plus by Bio-plex (1-800 444-3573) or approved equal. Add to manufactured planting soil at rate of 1 lb. per 50 cu. Yds.

2.10 PLANT MATERIAL

A. All plants are subject to approval regarding size, health, quantity, character, etc. by the Landscape Architect.

B. The Contractor shall furnish and plant all plants shown on the Drawings, as specified and in quantities as shown. Quantities if shown, are included for the convenience of the Contractor only and the Contractor shall be required to furnish all individual plants in quantities actually located on the Drawings. Each bidder shall investigate the sources of supply and satisfy himself that he can supply all of the plants mentioned in the planting lists in size, variety and quality noted and specified before submitting his bid. Failure to take this precaution will not relieve the successful bidder from his responsibility as Contractor for the furnishing and installing of all the plant material in strict accordance with the contract requirements without additional expense to the Owner.

C. All plants shall have been grown in nurseries which have been inspected or do not require inspection by the State Department of Agriculture and have complied with all the regulations thereof, in accordance with good horticulture practice.

D. Plant names used in the Plant Material Key conform to "Standardized Plant Names" by the American Joint Committee of Horticulture Nomenclature, except in cases not covered therein. In these instances, the custom of the nursery trade is followed.

E. Plant materials shall conform to the Plant Material Key shown on plans and to the requirements of the "Horticultural Standards" of the American Association of Nurserymen as to kind, size, age, etc. and shall be typical first-class representatives of their species or variety, and shall have a normal habit of growth, unless specified otherwise. They shall be sound, healthy and vigorous with a well-developed root system.

F. All plants shall have been grown under climatic condition similar to those in the locality of the project for at least two (2) years and shall have been transplanted or root pruned at least once in the last two (2) years.

G. All plants shall be number one quantity specimens and shall have a uniform matching caliper, size and canopy, be symmetrical with standard height, spread and branching patterns. No park grade plant material is acceptable.

1. Trees shall have straight single leaders with symmetrical primary branching and considerable well spaced secondary branching filling out the head with no gaps.

H. Plants shall be marked for identification. Each bundle of plants and at least 25% of each species and variety of separate plants in any one (1) shipment shall have legible labels securely attached before delivery to the site.

I. All trees shall be measured when their branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch or root tip to tip. No trees which have had their leaders cut, or so damaged that cutting is necessary, will be accepted. Measure caliper of all trees 4" and larger 12" above the surface of the ground. Measure all trees less than 4" in caliper 6" above finish grade.

J. All plants shall be symmetrical and shall conform to the size, age and condition as specified on the plant list shown on the Drawings. Exceptions are as follows:

1. Plants larger than specified in the plant list may be used if approved by the Architect; but use of such plant shall not increase the contract price. If the use of larger plants is approved, the spread of roots and ball earth shall be increased in proportion to the size of the plant. Bare root plants furnished in size greater than specified shall be balled and burlapped when required by the Landscape Architect.
2. Where caliper or other dimensions of any plant materials are omitted from the Plant Material Key, it shall be understood that these plant materials shall be normal stock for type listed and at a minimum, the average size of all the material listed.

K. Plants shall not be pruned prior to delivery except as authorized by the Landscape Architect. In no case shall trees be topped before delivery.

L. No plants shall be dug or delivered to the site until the required inspections have been made and the plants or samples approved.

M. Dig balled and burlapped (BB) plants with firm, natural balls of earth, of diameter not less than specified and of sufficient depth to include all fibrous and feeding roots. No plant moved with a ball will be accepted if the ball is cracked or broken before or during planting operations, except on special approval of the Architect.

N. Roots or balls or all plants shall be adequately protected at all times from sun and/or drying winds.

1. All balled and burlapped plants which cannot be planted immediately upon delivery shall be set on the ground and shall be well protected with soil, wet moss, or other acceptable material.
2. Bare rooted plants, which cannot be planted immediately, shall be planted or heeled-in in trenches immediately upon delivery. No materials heeled-in more than one week may be used. Bundles of plants shall be opened and the plants separated before the roots are covered. Care shall be taken to prevent air pockets among the roots. During planting operations, bare roots shall be covered with canvas, wet straw or other suitable materials.
3. No plant shall be bound with wire or rope at any time so as to damage the bark or break branches.

O. Plants marked "cans", "pots" or "other container" on the plant list shall have been grown in the containers for a minimum of six (6) months and a maximum of two years. Roots shall fill the containers but show no evidence of being or having been root bound. Plants shall not be picked up or moved by stem or branches, but shall be lifted and handled from the sides of the containers.

P. Trees shall have straight trunks and all old abrasions and cuts shall be completely callused over.

2.11 GUYING AND STAKING MATERIAL

A. Tree stakes: steel "T" post, 8'long.

B. Hose: High quality braided rubber or plastic hose, ¾" diameter and suitable length (Color Black).

C. Wire: 12 gauge galvanized steel.

D. Guying cable: galvanized steel, #9 gauge, Timbles and clips shall be used for connections and splices.

E. Turnbuckles: Galvanized or zinc dip painted with an 8" lengthwise opening fitted with eye bolts and spot welded or fitted with a locking device to prevent vandalism.

F. Guying stakes: 2" x 2" x 33", notched hardwood.

G. Duckbill tree support system by Foresight Industries (800-325-5360) shall be used for trees larger than 3" caliper.

2.12 STONE MULCH

A. Stone Mulch shall be clean washed crushed angular stone mulch. Provide three color samples for Owner Approval. Coordinate with Owner and Landscape Architect. The following size is are required per the drawings:

1. 3/4" to 1-1/2".

2.13 WEED BARRIER FABRIC

A. Fabric shall be UV resistant, woven spunbond needle punch, polyproplene, wt. 5 oz, per square yard, color black. Use Typar or Dewitt Pro 5 Weed Barrier or approved equal.

2.14 ANTI-TRANSPIRANT

A. Anti-TRANSPIRANT solution for horticultural spray application. Use Bio-Plex, by Bioplex Organics, Inc. (800-441-3573).

2.15 WATER

A. Potable water

2.16 HERBICIDE

A. Contact Herbicide; Round-up or approved equal.

B. Pre-emergent herbicide; Poast or approved equal

PART 3 - EXECUTION

3.1 COORDINATION

A. The contractor shall coordinate his work with other contractors on site, and shall cooperate to the fullest extent to see that the work is completed in a timely and workmanship like manner.

3.2 INSTALLATION OF TOPSOIL

A. Prior to the installation of any topsoil, Contractor shall inspect the existing subgrade for compliance to the specifications regarding elevation, slope, grade and cleanliness. Any deficiency shall be reported to the Landscape Architect. Work begun in any area will acknowledge acceptance of area for Landscape planting.

B. When contract operations have been completed to a point where planting areas will not be disturbed, subgrade shall be cleaned free of waste material of all kinds. In all planted areas dig out all to weeds by their roots and remove from site. Scarify and pulverize the subgrade to a depth of not less than 6" inches. Scarification shall be completed in all areas that are to be planted.

C. Spread the topsoil to a minimum depth of 12" in planting beds and ground cover areas allowing for 4" of stone mulch.

D. Spread the topsoil and till to a minimum depth of 12" in all shrub areas. Do not place topsoil over subgrade that is frozen or damp. Place topsoil just prior to planting so as to discourage weed growth.

E. Topsoil shall be rolled by a hand roller on small areas. After rolling at a weight of 150-200 pounds per linear foot of roller, the grade shall again be graded to the specified grade with a smooth surface. Large areas shall be graded by passing a land plane in three different directions over the entire area to be planted.

F. Surface drainage shall be insured, and if shown, shall be directed in the manner indicated on the Drawings by molding the surface to facilitate the run-off water. Fill low spots and pockets with topsoil and grade to drain properly.

G. The finish grade of the topsoil adjacent to all sidewalks, mow strips, etc., and prior to planting shall be 1 ½" below the top surface of adjacent pavement or hard surface of any kind.

H. The Landscape Architect shall approve the finish grading prior to installation of plant material. No exceptions. Make minor adjustments to finish grades at the direction of the Landscape Architect.

3.3 PREPARATION FOR PLANTING TREES AND SHRUBS

A. All sprinkler system work and finish grading shall be approved by the Landscape Architect prior to any planting. No planting will be done without direct supervision of the Landscape Architect. Tree planting shall precede lawn planting.

B. Locate the exact placement of all trees and shrubs and secure approval of the Landscape Architect prior to the digging of any holes. Refer to the Drawings for the sizes and preparation of holes. Prepare all holes according to the details on the Drawings.

C. To avoid a soil water interface problem, excavated soil material from planting holes are to be inspected by the Project Manager to determine if such soil should be used as backfill material. If it is determined that the excavated material is not of good quality then it should be modified to an acceptable texture, organic content and PH.

D. Prior to the installing of any plant material in the prepared hole, the Project Manger must approve the size, width and depth of the hole.

3.4 TREE AND SHRUB PLANTING

A. Prior to planting, fill excavated planting hole with water and allow to percolate out. If, after 24 hours, the water has not percolated out of the pit, notify the Landscape Architect. Do not plant until the problem has been corrected.

B. The planting holes from the bottom to the top of the opening should be the same depth as the root ball. Plants must be placed plumb and straight in the planting hole. The tree hole depth shall be determined so that the tree may be set at finish grade, using the top of the root ball as a guide.

C. The tree plant hole should be the same depth as the root ball, and three times the diameter of the root ball.

D. Trees must be placed on undisturbed soil at the bottom of the planting hole.

E. The tree hole depth shall be determined so that the tree may be set slightly high of finish grade, 1" to 2" above the base of the trunk flare, using the top of the root ball as a guide.

F. All tree holes shall be backfilled with specified backfill in 12" inch lifts and settled and tamped to minimize any settling of the tree.

G. When the root ball is partially backfilled and compacted ALL burlap, ropes, or wire baskets shall be removed from the sides of the root ball. No burlap shall be pulled from under the root balls of the plants. The plants shall then be watered with a hose to completely soak the roots and the backfilled soil mixture.

H. Fertilize with tree and shrub fertilizer according to manufacturer's printed instructions.

I. Containers shall be removed from the root balls by cutting with cutters. Do not damage root ball by using trunk or main stem as a handle.

J. Prepare a watering circle of 2' diameter around the trunk. For conifers, extend the watering well to the drip line of the tree canopy. Place 4"of mulch round the planted trees.

K. All plants shall be thoroughly watered immediately following planting. This shall mean full and thorough saturation of all backfill in the pits and beds during the same day of planting. Water shall only be applied by an open end hose at very low pressure to avoid air pockets, injury or washing. When planted, watered, and fully settled, trees shall be vertical.

L. The Contractor shall hand water newly planted trees twice a week for eight weeks. A minimum of five (5) gallons of water per tree is required.

M. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches. All cuts, scars and bruises shall be properly treated according to the direction of the Landscape Architect. Proper pruning techniques shall be used. Do NOT leave stubs and do NOT cut the leader branch. Improper pruning shall be cause for rejection of the plant material.

N. A 3" deep saucer shall be formed at the edge of plant pit. Water the same day as planted.

O. Saucer shall not be required when planted where edging is required around plant pits.

P. Within 48 hours of planting each plant remove all undesirable material from the surface of the planting beds, including all rocks over the size of ½" diameter. Install the specified mulch to a uniform depth of 3" in the entire planting beds and all tree basins.

Q. This Contractor shall dispose of, off the site, all soil excavated from tree and shrub pits.

R. All planting beds shall receive a 4" mulch layer.

3.5 TREE STAKING AND GUYING

A. Staking of trees shall be done immediately after they are planted. Plants shall stand plumb after staking. All stakes shall be removed by this Contractor after the guarantee period has concluded.

B. Trees 2 ½" caliper or less shall be supported by two steel "T" stakes placed diametrically opposite at perimeter line of ball and to sufficient depth to hold tree rigid. Stakes shall be driven vertically and not twisted or pulled. Tree shall be wired to each stake as indicated on staking details. Project tree with rubber hose over wires at points of contact.

3.6 TREE WRAPPING

A. All trees shall be wrapped with tree wrap. Wrap shall be applied to trunks immediately after planting to protect bark against winter injury caused by diurnal temperature fluctuations. Wrap shall be resistant to weather degradation and require no maintenance and must stretch as the girth of the trunk increases over time.

1. Starting as low as possible, wrap tree wrap in a smooth spiral to assure overlapping each previous wrap by about ¼".
2. Continue wrapping up the trunk to just below the second scaffold branches. Wrapping the crotches is optional.
3. Tie off tree wrap with a half hitch knot.
4. Cover the base of the tree and the first wrap of tree wrap with soil.

3.7 WATER SCHEDULE

A. Due to water conservation / water restrictions, watering of the landscape shall be accomplished after 6:00 pm and before 10:00am.

3.8 CLEAN UP AND PROTECTION

A. During landscape work store materials and equipment where directed. Keep pavement clean and work area in an orderly condition.

B. Protect landscape areas, work and materials from damage due to operations by other contractors and trades, trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed.

C. Keep the site free from accumulation of waste material. At the time of completion, all areas must be swept and washed clean and all rubbish removed to the satisfaction of the Landscape Architect.

D. Temporary occupancy of the project shall not relieve the contractor of any of the obligations enumerated in the Contract Documents.

3.9 TOTAL SITE MAINTENANCE

A. As part of this Contract, this Contractor shall be responsible for the continuous maintenance of all landscape areas, i.e., weeding, watering, mowing, fertilization, etc. from the time that each section of lawn or shrub area is planted until the Project Date of Substantial Completion (See Section 011000 - Summary). If any lawn or planting area is deemed not to be substantially complete by the Project Date of Substantial Completion, the contractor shall be required to maintain the entire site until final acceptance. The Owner may at his discretion, require the following remedies at no additional cost, in addition to the standard maintenance required for planted areas:

1. Additional fertilization operations
2. Additional mowing operations
3. Additional specific watering operations
4. Weed control measures

B. Maintain plants in a vigorous, thriving condition by watering, cultivating, weeding, pruning, spraying and other necessary operations. No trees or shrubs will be accepted unless they are healthy and show satisfactory foliage conditions. Plants shall be maintained through the length of the total site maintenance period.

1. All planted areas shall be cultivated at least every two (2) weeks and raked smooth, to present a neat appearance.
2. Spray as required to keep plant materials free of disease and insects.
3. Replace mulch to maintain specified depth.
4. All new tree and shrub plantings shall be hand watered thoroughly at least twice a week during the maintenance period.

C. The Contractor shall instruct the Owner as to the watering requirements and shall monitor such operations at all times. The Contractor shall be held responsible for failure to monitor the watering requirements and shall be held responsible to replace any or all plants that are lost due to improper application of water.

D. Maintenance shall include, in addition to the above, cleaning, edging and repair to erosion and all other necessary work of maintenance. Sidewalks and other paved areas shall be kept clean when planting and maintenance are in progress.

E. Any and all sprinkler lines broken or disrupted during the construction and maintenance period shall be replaced to proper working order and be acceptable to the Owner.

3.10 FINAL INSPECTION AND ACCEPTANCE

A. Inspection will be made of the entire site periodically and at the conclusion of the maintenance period required.

B. The landscape work may be inspected for acceptance in parts agreeable to the Landscape Architect, provided the work offered for inspection is complete, including maintenance and that the area comprises one unit or area of substantial size.

C. Written notice requesting final inspection shall be submitted to the Landscape Architect at least ten (10) days prior to the anticipated inspection date.

D. Where inspected landscape work does not comply with the requirement, replace rejected work and continue specified maintenance until re-inspected by the Landscape Architect and found to be acceptable. Remove rejected plants and materials promptly from the project site.

E. Final Acceptance: The work under this contract will be accepted upon written approval by the Landscape Architect and the Owner, on the satisfactory completion of all work, including maintenance.

F. All work done under this contract shall be left in good order to the satisfaction of the Owner and the Landscape Architect and the Contractor shall without additional expense, replace any trees, etc. which develop defects or die within one year of the substantial completion.

1. A written guarantee that covers the above provisions shall be signed by the Contractor and delivered to the Landscape Architect upon acceptance of the work.
2. The guarantee shall not be binding upon the Contractor if any failure should be proved to the satisfaction of the Landscape Architect to result from circumstances or negligence of parties over whom the Contractor has no control.

3.11 RECORD DRAWINGS

A. Record Drawings shall be furnished to the Landscape Architect at the time of the substantial completion inspection before a letter documenting Substantial Completion for the landscape planting will be issued. This information shall be provided in AutoCAD format and shall be given to the Landscape Architect before the project is accepted. The AutoCAD file shall be a copy of the original plans for the project and shall be corrected by the contractor at the Contractor's expense.

END OF SECTION

3.

City Engineer
City of South Jordan
Approved 01/10/2023
City Engineer

MHTN
ARCHITECTS
MHTN Architects, Inc.
420 East South Temple
Suite 100
Salt Lake City, Utah 84111
Telephone (801) 595-6700
Telefax (801) 595-6717
www.mhtn.com

SILVERSTONE AUTOMATION
HOLDINGS10 LLC
10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84117

SEAL
STATE OF UTAH
VINCENT RULON OLCOTT
No. 4812865
12-02-2022
LICENSED LANDSCAPE ARCHITECT

MHTN PROJECT NO. 2019575

Original drawing is 30 x 42. Do not scale contents of this drawing.

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO. △	DATE	DESCRIPTION

ISSUE
CONSTRUCTION DOCUMENTS
12.02.2022

SHEET NAME
LANDSCAPE SPECIFICATIONS

SHEET NUMBER
LP502

SOUTH JORDAN CITY
PLANNING COMMISSION REPORT

Meeting Date: 08/25/2020

Issue: **SILVERSTONE AUTOMATION SITE PLAN**
Address: 10096 South Jordan Gateway
File No: PLSPR202000181
Applicant: Ryan Berry, MHTN Architects

Submitted by: Damir Drozdek, Planner III
Shane Greenwood, Supervising Senior Engineer

Staff Recommendation (Motion Ready): I move that the Planning Commission **approve** application PLSPR202000181 to allow for construction of a new commercial building on property located at 10096 South Jordan Gateway.

ACREAGE:	Approximately 0.75 acres
CURRENT ZONE:	I-F (Industrial - Freeway) Zone
CURRENT USE:	Undeveloped and vacant
FUTURE LAND USE PLAN:	IND (Industrial)
NEIGHBORING ZONES/USES:	North – I-F / Parking Lot South – I-F / Social Security Offices West – I-F / Vacant land East – I-F / Parking Lot

STANDARD OF REVIEW:

All proposed commercial, office, industrial, multi-family dwelling or institutional developments and alterations to existing developments shall meet the site plan review requirements outlined in chapter 16.24 and the requirements of the individual zone in which a development is proposed. All provisions of titles 16 & 17 of the City Code, and other city requirements, shall be met in preparing site plan applications and in designing and constructing the development. The Planning Commission shall receive public comment regarding the site plan and shall approve, approve with conditions or deny the site plan.

BACKGROUND:

The applicant is seeking approval to construct a new commercial building on property located at 10096 S. Jordan Gateway. The building will consist of an office and shop space. The shop space will primarily be used to build machines that are delivered to medical manufacturing companies. The building will be two stories tall and 32 feet above grade at its highest point. The exterior finish materials will include brick, eifs siding system, aluminum/composite wood siding and metal cladding. Mechanical equipment will be located on the rooftop and screened from view by a parapet wall.

Access to the building from Jordan Gateway will be via a shared driveway with the Social Security Administration building immediately to the south. No improvements will be made to the existing private drive or along Jordan Gateway. Parking will be provided along the east and the north project boundary. Public improvements will be minimal and consisting of a new fire hydrant, water meters and a water line. Storm water will be collected and retained in an underground storage facility located at the northwest corner of the project. It will be privately maintained.

Landscaping will consist of various trees, shrubs, grasses and stone mulch around the building and the parking area. No sod will be installed with the project. A dumpster enclosure will be located at the northeast end of the project. No new fencing will be constructed with the project. The existing barbed wire fence which runs along the north boundary will be removed.

STAFF FINDINGS, CONCLUSIONS & RECOMMENDATION:

Findings:

- The business is classified as "assembly" and "research and development" per City Code. These two uses are listed as permitted uses in the I-F zone.
- Impact Control Measures of the City Code require an "operations plan" for the assembly-type use and "operations plan", "sound plan" and "additional notice" for the research and development use. The operations and sound plan are attached in the Support Materials as a letter from the applicant. The additional notice was completed as well. The notice was sent to all property owners within 600' of the project boundary.
- The Architectural Review Committee reviewed the proposed building on June 24, 2020 and unanimously recommended approval as long as service doors at the rear of the building are painted to match the building colors and mechanical equipment is screened from view. Those two items have been changed on the new elevation drawings showing new colors for service doors and a parapet wall around the building edge.
- The project meets the Planning and Zoning (Title 17) and the Subdivision and Development (Title 16) Code requirements.

Conclusion:

- The proposed project will meet the requirements of the Subdivision and Development (Title 16) and the Planning and Zoning (Title 17) Codes.

Recommendation:

- Based on the Findings and Conclusions listed above, Staff recommends that the Planning Commission take comments at the public hearing and **approve** the Application, unless, during the hearing, facts are presented that contradict these findings or new facts are presented, either of which would warrant further investigation by Staff.

ALTERNATIVES:

- Approve an amended Application.
- Deny the Application.
- Schedule the Application for a decision at some future date.

SUPPORT MATERIALS:

- Aerial Map
- Zoning Map
- Site Plan
- Landscape Plan
- Elevations
- Cabco Jordan Subdivision plat map
- Silverstone Business Description (applicant's letter)

Damir Drozdek, AICP
Planner III
Planning Department

Legend

STREETS

PARCELS

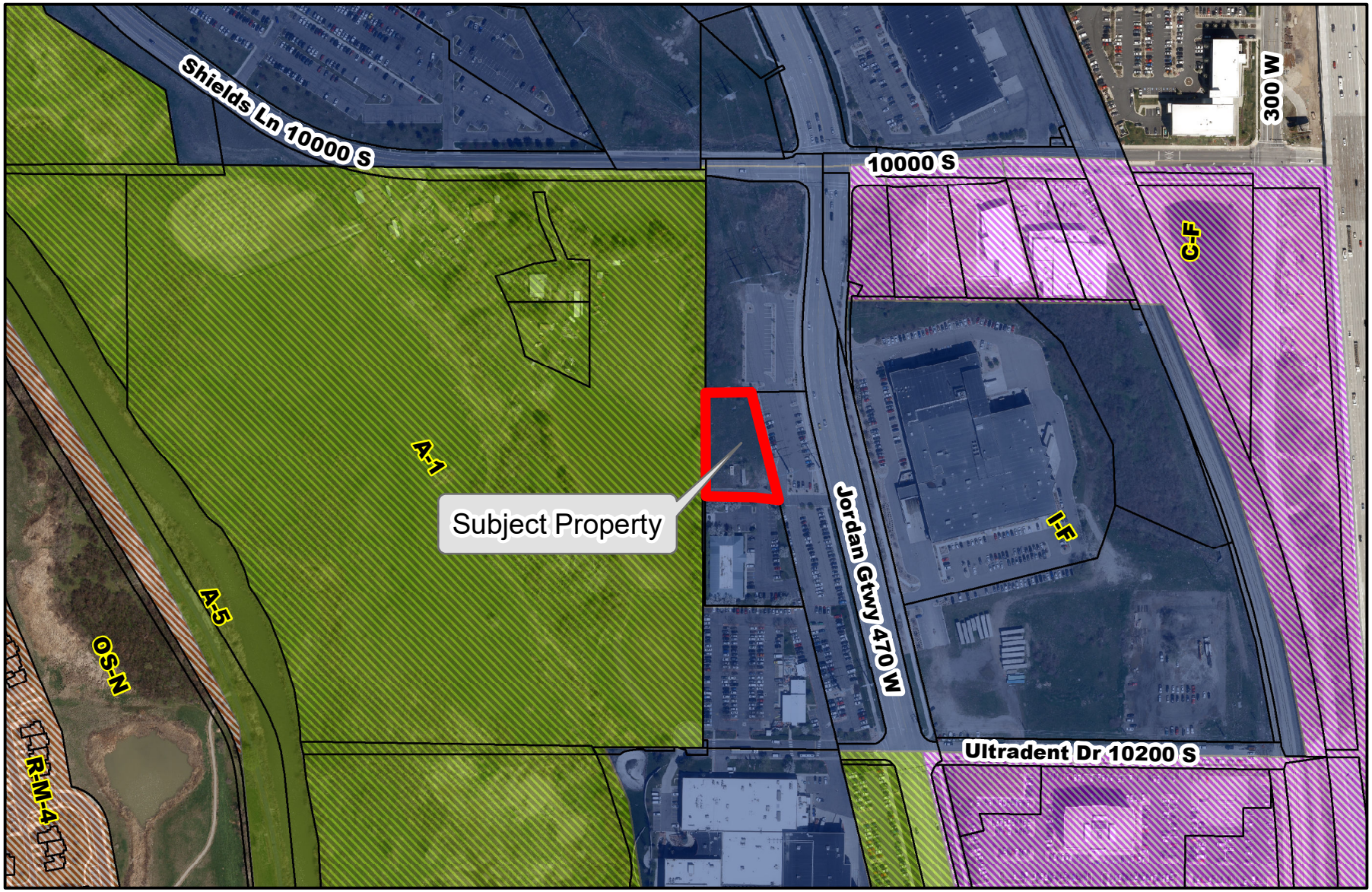
Aerial Map

City of South Jordan

0 105 210 420 630 840 Feet

Aerial Imagery
2019

ESRI



Legend

STREETS

PARCELS

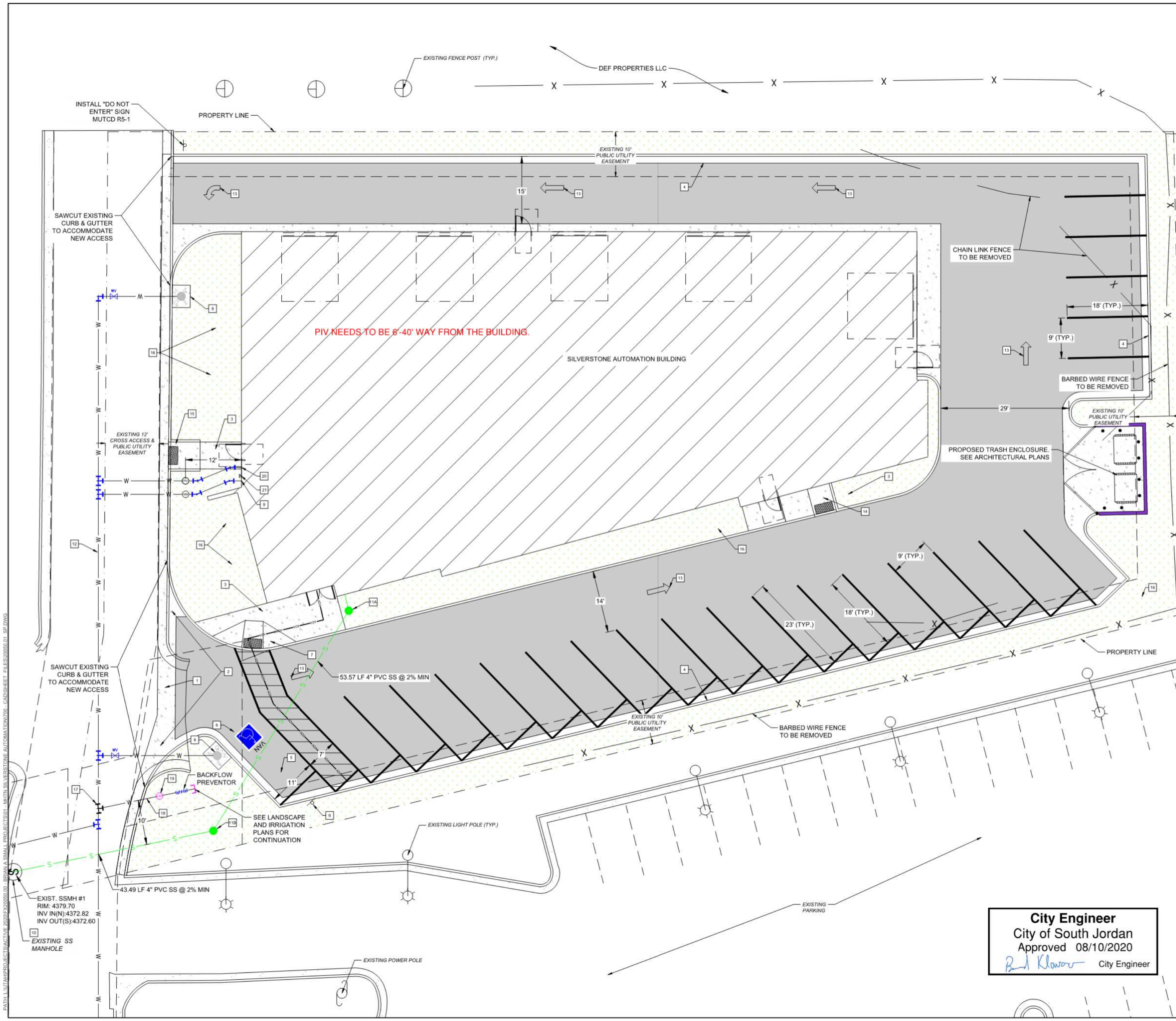
Zoning Map

City of South Jordan

0 105 210 420 630 840 Feet

Aerial Imagery
2019

ESRI



SCALE: 1" = 10'

(SCALE ONLY VALID FOR 24" x 36" PAPER)

LEGEND

- PROPOSED ASPHALT PAVEMENT PER SECTION ON SHEET DT1
- PROPOSED CONCRETE
- PROPOSED BUILDING
- LANDSCAPING
- ACCESSIBLE ROUTE

KEYNOTES:

1. CONSTRUCT 4' CONCRETE WATERWAY PER APWA PLAN 211. SEE SHEET DT1.
2. CONSTRUCT CONCRETE WATERWAY TRANSITION PER APWA PLAN 213. SEE SHEET DT1.
3. CONSTRUCT THICKENED EDGE SIDEWALK PER DETAIL ON SHEET DT2.
4. CONSTRUCT 24" CURB & GUTTER TYPE E PER APWA PLAN 205.2. SEE SHEET DT1.
5. CONSTRUCT ACCESSIBLE PARKING STALL PER DETAIL ON SHEET DT2.
6. CONSTRUCT ACCESSIBLE STALL SIGN AND STRIPING PER DETAIL ON SHEET DT2.
7. CONSTRUCT ACCESSIBLE RAMP PER APWA PLAN 236.1. SEE SHEET DT1.
8. INSTALL FIRE HYDRANT PER SOUTH JORDAN CITY STANDARDS. LOCATE AT LEAST 2 FT BEHIND THE CURB ON A 4' X 5', 6" THICK CONCRETE PAD. SEE SHEET DT3.
9. INSTALL 1 1/2" WATER SERVICE AND METER PER SOUTH JORDAN CITY STANDARDS.
10. CONNECT PROPOSED 4" SERVICE LATERAL TO EXISTING SANITARY SEWER MANHOLE PER SOUTH VALLEY SEWER DISTRICT STANDARDS. INV 4372.82

11A. INSTALL 4" CLEANOUT AT BUILDING CONNECTION WITH 4" PVC SEWER LATERAL AT 2% MINIMUM SLOPE. INV 4375.46

11B. INSTALL 4" CLEANOUT WITH PVC SEWER LATERAL AT 2% MINIMUM SLOPE. INV 4374.30

12. INSTALL 8" WATER MAIN WITH ALL CONNECTIONS AND FITTINGS AND CONNECT TO EXISTING WATER LINES CREATING A LOOP SEE SHEET SP2 FOR POINTS OF CONNECTION.
13. INSTALL PARKING LOT TRAFFIC DIRECTION MARKINGS.
14. CONSTRUCT ACCESSIBLE RAMP PER APWA PLAN 236.3. SEE SHEET DT3.
15. CONSTRUCT ACCESSIBLE RAMP PER. SEE SHEET GP.
16. LANDSCAPING. SEE LANDSCAPE SHEETS.
17. CONNECT WITH 8" X 1" TEE.
18. INSTALL 1" IRRIGATION WATER LINE.
19. INSTALL 1" WATER METER. SEE LANDSCAPE AND IRRIGATION SHEETS.
20. INSTALL 6" FIRE SERVICE WITH POST INDICATOR VALVE PER SOUTH JORDAN CITY STANDARDS.
21. INSTALL FDC PER SOUTH JORDAN CITY STANDARDS.

PARKING CALCULATIONS:

2,634 FT² / 300 ppl	= 9
10,123 FT² / 800 ppl	= 13
TOTAL STALLS	22 STALLS REQ'D
TOTAL PROVIDED	24 STALLS
(1) ADA STALL PROVIDED	

SEWER NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
3. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

811 Know what's below. Call before you dig.

CivilScience Engineers | Surveyors | Solutions
3160 WEST CLUBHOUSE DRIVE
LEHI, UT 84043
801.768.7200

PROFESSIONAL ENGINEER No. 11395943 ROBERT BURKHILL III 08.04.20 STATE OF UTAH

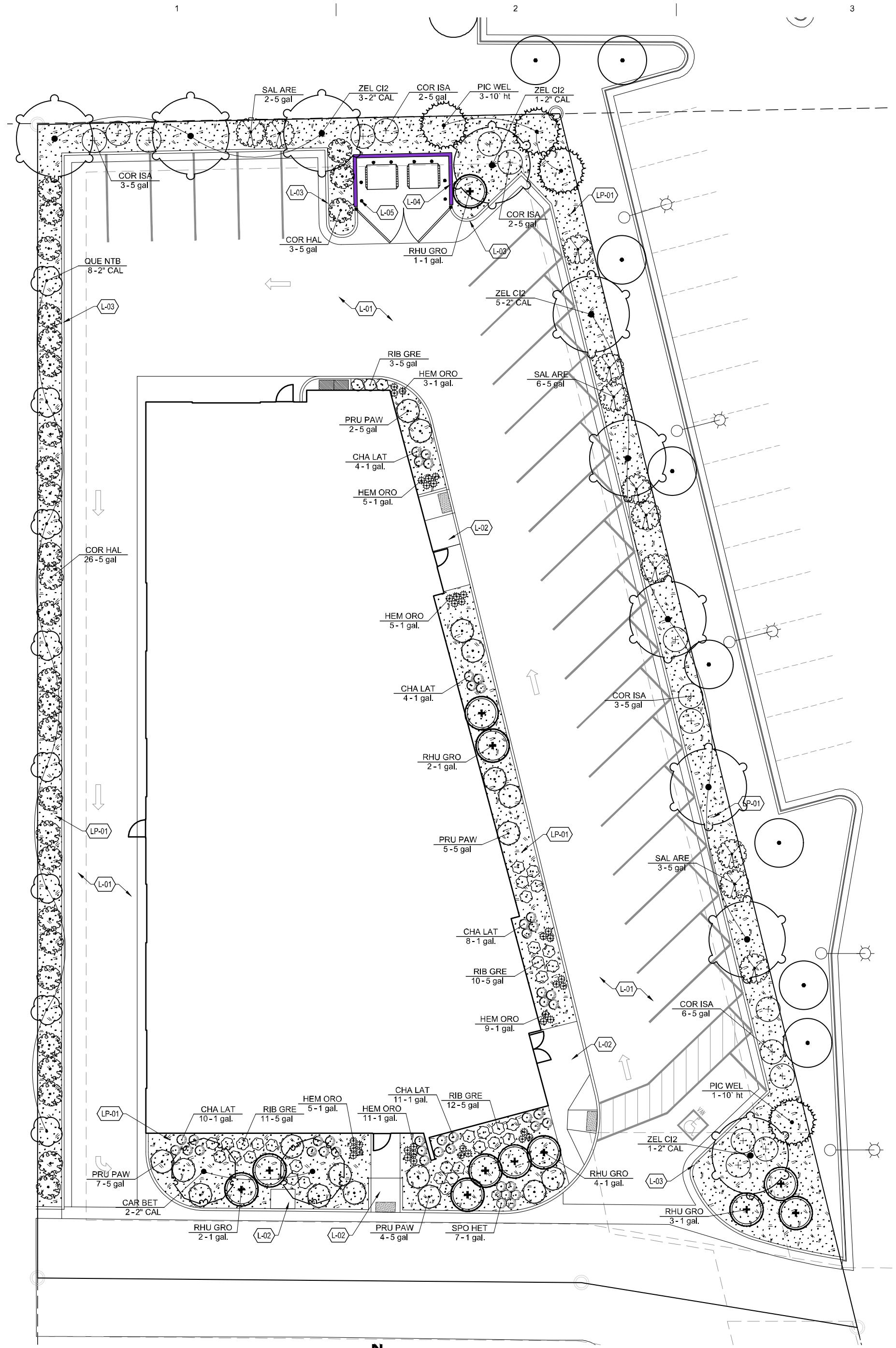
NO.	DESCRIPTION	BY	APR	DATE

REVISION

SITE AND UTILITY PLAN

SILVERSTONE AUTOMATION BUILDING
SOUTH JORDAN, UT

PROJ. #: FF 20050.01
DATE: AUGUST 4, 2020
DESIGN BY: RBIII
CHECKED BY: JGJ
SHEET SP1



SAL ARE 2-5 gal
ZEL CI2 3-2" CAL
COR ISA 2-5 gal
PIC WEL 3-10' ht
ZEL CI2 1-2" CAL
COR ISA 3-5 gal
COR HAL 3-5 gal
RHU GRO 1-1 gal.
COR ISA 2-5 gal
QUE NTB 8-2" CAL
ZEL CI2 5-2" CAL
RIB GRE 3-5 gal
HEM ORO 3-1 gal.
SAL ARE 6-5 gal
PRU PAW 2-5 gal
CHA LAT 4-1 gal.
HEM ORO 5-1 gal.
COR HAL 26-5 gal
HEM ORO 5-1 gal.
CHA LAT 4-1 gal.
COR ISA 3-5 gal
RHU GRO 2-1 gal.
PRU PAW 5-5 gal
SAL ARE 3-5 gal
CHA LAT 8-1 gal.
RIB GRE 10-5 gal
COR ISA 6-5 gal
HEM ORO 9-1 gal.
PIC WEL 1-10' ht
CHA LAT 10-1 gal.
RIB GRE 11-5 gal
HEM ORO 5-1 gal.
HEM ORO 11-1 gal.
CHA LAT 11-1 gal.
RIB GRE 12-5 gal
ZEL CI2 1-2" CAL
RHU GRO 4-1 gal.
PRU PAW 7-5 gal
CAR BET 2-2" CAL
RHU GRO 2-1 gal.
PRU PAW 4-5 gal
SPO HET 7-1 gal.
RHU GRO 3-1 gal.

E1 LANDSCAPE PLAN

SCALE: 1" = 10'-0"

LANDSCAPE CALCULATIONS

		REQUIRED	PROVIDED
TOTAL LANDSCAPE AREA	5,955 SF		
TOTAL TREES (1/500 SF REQ.)		12	24
EVERGREEN TREES (30% REQ.)		4	4
DECIDUOUS TREES		8	20

REFERENCE NOTES SCHEDULE

SYMBOL	LANDSCAPE DESCRIPTION
L-01	ASPHALT PAVING
L-02	CONCRETE PAVING
L-03	CONCRETE CURB & GUTTER
L-04	CMU SCREEN WALL
L-05	BOLLARD TYP.

SYMBOL	PLANTING NOTES DESCRIPTION
LP-01	STONE MULCH, 3/4"-1-1/2" CRUSHED AGGREGATE 3" DEEP

MHTN ARCHITECTS

MHTN Architects, Inc.
420 East South Temple
Suite 100
Salt Lake City, Utah 84111
Telephone (801) 595-6700
Telefax (801) 595-6717
www.mhtn.com

SILVERSTONE AUTOMATION

HOLDINGS10 LLC

10096 S. JORDAN GATEWAY
SOUTH JORDAN CITY, UT 84117

MHTN PROJECT NO. 2019575

CONSTRUCTION DOCUMENTS
07.10.2020

LANDSCAPE PLAN

City Engineer
City of South Jordan
Approved 08/10/2020
City Engineer

LP100

MATERIAL TYPES:

1

GeoLam or equal
Wood Hybrid system facade
Aluminium/composite wood siding
Teak finish

2

INTERSTATE BRICK
SIZE: KING SIZE
COLOR: COAL

3

EIFS SIDING SYSTEM
COLOR: LIGHT GREY
BUILD SPACE SIDE, PART NORTH/
SOUTH, AND ALL WEST

4

EIFS SIDING SYSTEM
COLOR: DARK GREY
FRONT OFFICE AREA

5

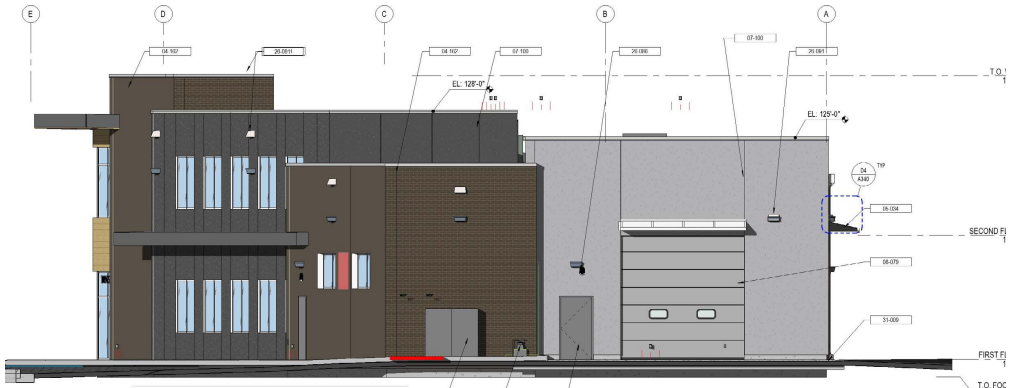
BLACK METAL
FASCIA CLADDING

6

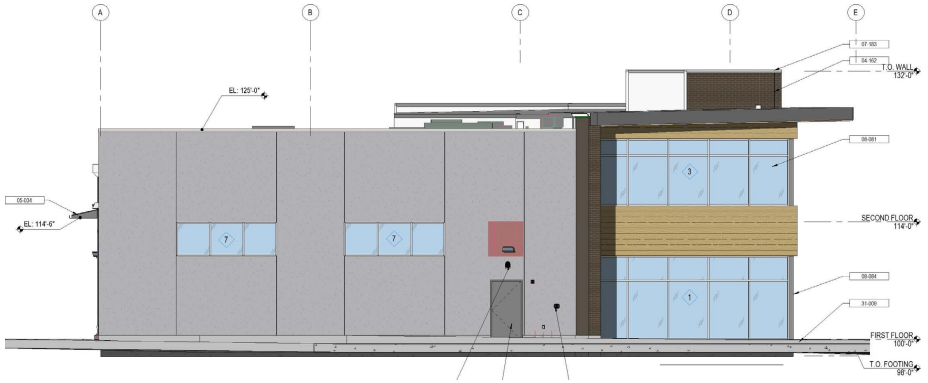
ANODIZED
ALUMINUM
STOREFRONTS/
AWNINGS

MATERIAL BOARD

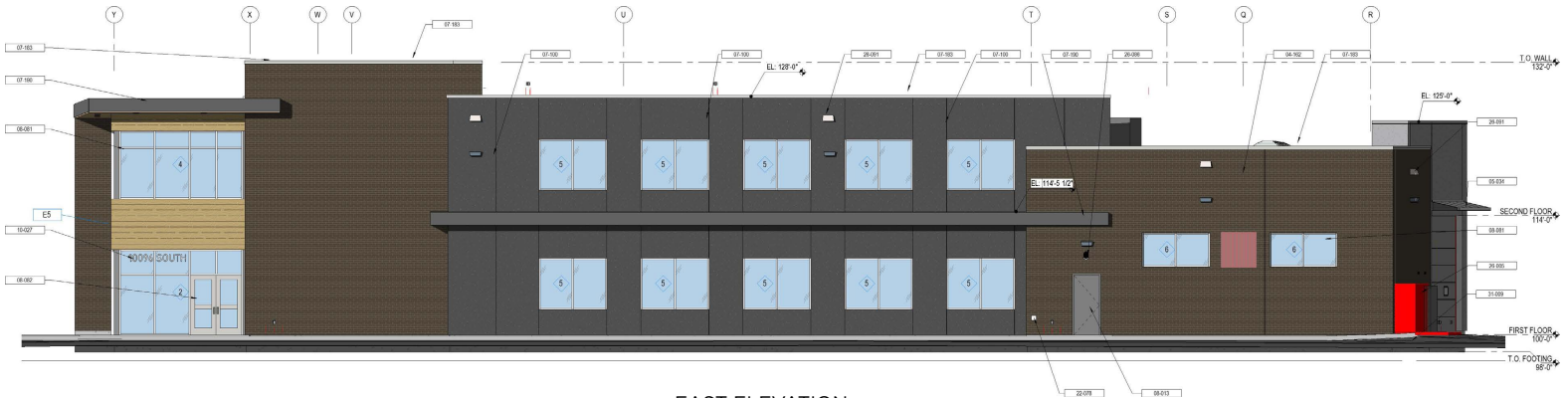
JULY 2020



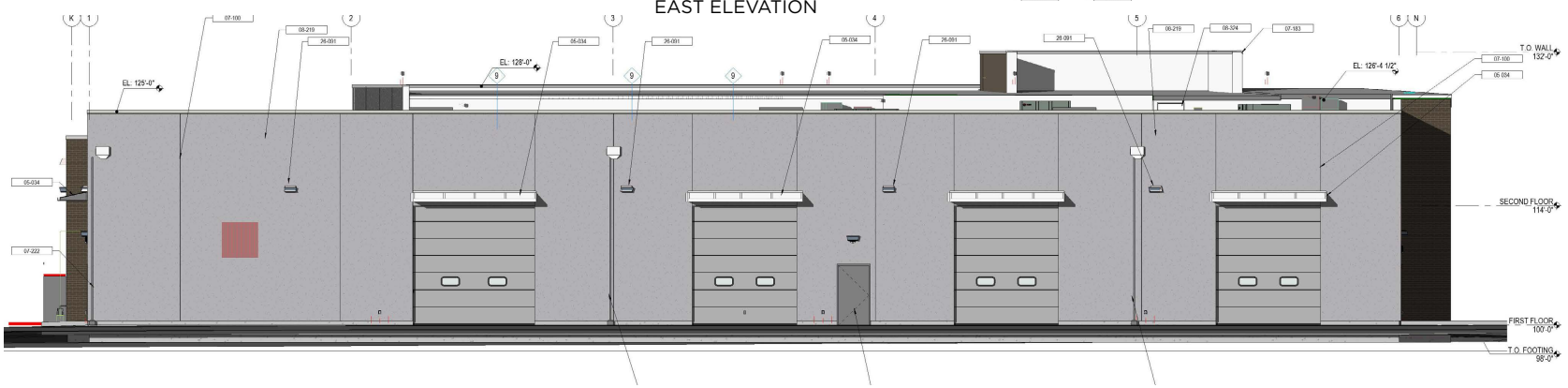
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

CABCO JORDAN SUBDIVISION

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN

SURVEYOR'S CERTIFICATE

I, TRAVIS J. DALEY, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR AND THAT I HOLD CERTIFICATE NO. 6387184 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT. I FURTHER CERTIFY THAT, BY THE AUTHORITY OF THE OWNER, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND THAT I HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS AND STREETS HEREAFTER TO BE KNOWN AS

CABCO JORDAN SUBDIVISION

AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT.

PROFESSIONAL LAND SURVEYOR TRAVIS J. DALEY No. 6387184 STATE OF UTAH

BOUNDARY DESCRIPTION

PARCEL 1:
BEGINNING AT A POINT ON THE WEST LINE OF THE UTAH POWER AND LIGHT COMPANY'S TRANSMISSION CORRIDOR, SAID POINT BEING NORTH 89 DEG. 27'04" WEST ALONG THE SECTION LINE 1019.54 FEET AND NORTH 13 DEG. 46'24" WEST ALONG SAID WEST LINE 335.62 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89 DEG. 27'04" WEST 227.95 FEET; THENCE NORTH 487.211 FEET TO THE SOUTH LINE OF THE UTAH POWER AND LIGHT COMPANY PROPERTY; THENCE NORTH 88 DEG. 50'00" EAST 107.462 FEET TO THE WEST LINE OF THE UTAH POWER AND LIGHT COMPANY TRANSMISSION CORRIDOR; THENCE SOUTH 13 DEG. 46'24" EAST ALONG SAID WEST LINE 506.14 FEET TO THE POINT OF BEGINNING.

PARCEL 1A: TOGETHER WITH THE FOLLOWING DESCRIBED RIGHT OF WAY AS GRANTED IN WARRANTY DEED RECORDED SEPTEMBER 20, 1979, AS ENTRY NO. 3339490 IN BOOK 4948 AT PAGE 130 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST RIGHT OF WAY LINE OF THE UTAH POWER AND LIGHT COMPANY TRANSMISSION CORRIDOR, SAID POINT BEING NORTH 89 DEG. 27'04" WEST ALONG THE SECTION LINE 1019.54 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89 DEG. 27'04" WEST 25.775 FEET; THENCE NORTH 13 DEG. 46'24" WEST 335.62 FEET; THENCE SOUTH 89 DEG. 27'04" EAST 25.775 FEET TO THE WEST LINE OF THE UTAH POWER AND LIGHT COMPANY TRANSMISSION CORRIDOR; THENCE SOUTH 13 DEG. 46'24" EAST ALONG SAID WEST LINE 335.62 FEET TO THE POINT OF BEGINNING.

PARCEL 1B:
TOGETHER WITH A RIGHT OF WAY AS GRANTED IN THAT CERTAIN EASEMENT, RECORDED NOVEMBER 15, 2007, AS ENTRY NO. 10276311 IN BOOK 9537 AT PAGE 6421 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS: A PARCEL OF LAND SITUATE IN THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, SALT LAKE COUNTY, UTAH, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF JORDAN GATEWAY (500 WEST) 1739.83 FEET SOUTH 89 DEG. 27'04" EAST ALONG THE SECTION LINE AND 572.62 FEET NORTH 13 DEG. 46'24' WEST FROM THE SOUTHWEST CORNER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE NORTH 89 DEG. 27'04' WEST 105.28 FEET TO THE WEST RIGHT OF WAY LINE OF THE UTAH POWER AND LIGHT COMPANY TRANSMISSION CORRIDOR; THENCE NORTH 13 DEG. 46'24" WEST ALONG SAID WEST LINE 24.77 FEET; THENCE SOUTH 89 DEG. 27'04" EAST 105.28 FEET TO THE WEST LINE OF JORDAN GATEWAY; THENCE SOUTH 13 DEG. 46'24' EAST ALONG SAID WEST LINE 24.77 FEET TO THE POINT OF BEGINNING.

CONTAINS 82,068 SQ. FT., OR 1.884 ACRES, AND 2 LOTS.

OWNER'S DEDICATION

KNOWN ALL BY THESE PRESENTS THAT I THE UNDERSIGNED OWNER OF THE DESCRIBED TRACT OF LAND ABOVE, HAVING CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS AND STREETS TO HEREAFTER BE KNOWN AS:

CABCO JORDAN SUBDIVISION

DO HEREBY DEDICATE FOR PERPETUAL USE OF THE PUBLIC ALL PARCELS OF LAND SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC USE, AND WARRANT, DEFEND, AND SAVE THE CITY HARMLESS AGAINST ANY EASEMENT OR OTHER ENCUMBRANCES ON THE DEDICATED STREETS WHICH WILL INTERFERE WITH THE CITY'S USE, OPERATION, AND MAINTENANCE OF THE STREETS AND TO FURTHER DEDICATE THE EASEMENTS AS SHOWN FOR THE USE BY ALL SUPPLIERS OF UTILITY OR OTHER NECESSARY SERVICES. IN WITNESS WHEREOF, I HAVE HEREUNTO SET ASIDE MY HAND THIS 11 DAY OF October A.D. 2013

CABCO PRIME, LLC
ADAM MAHER [signature] DATE 10/11/13
AGENT:

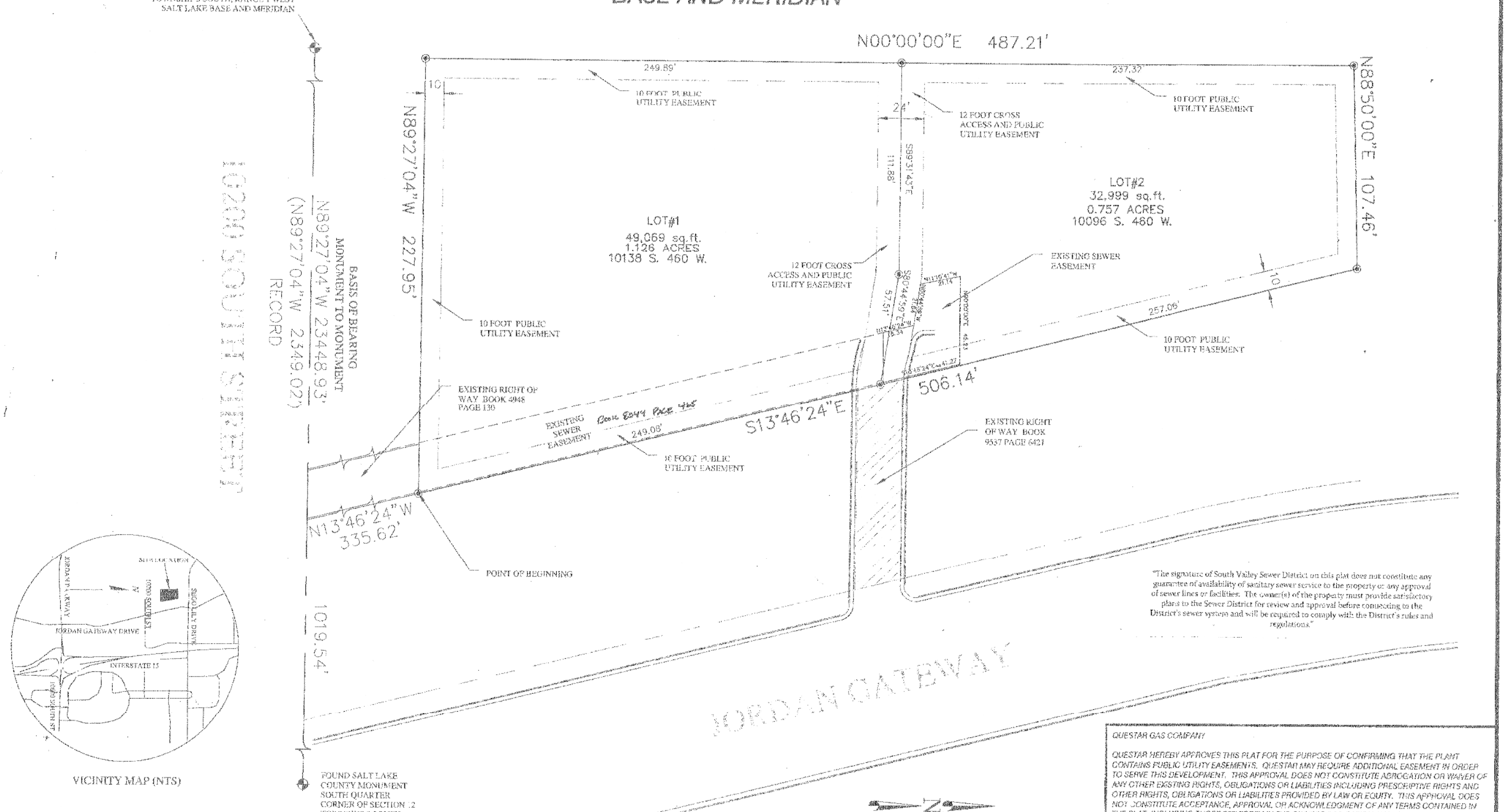
ACKNOWLEDGMENT

STATE OF UTAH)
) S.S.
COUNTY OF Salt Lake)

ON THE 11th DAY OF Oct A.D. 2013 ADAM MAHER PERSONALLY APPEARED BEFORE ME, WHO BEING DULY SWORN BY ME, DID SAY THAT HE IS THE AUTHORIZED AGENT OF CABCO PRIME LLC AND THAT HE EXECUTED THE FOREGOING OWNER'S DEDICATION ON BEHALF OF SAID LIMITED LIABILITY COMPANY, BEING DULY AUTHORIZED AND EMPOWERED TO DO SO BY THE OPERATING AGREEMENT OF SAID COMPANY, AND HE DID DULY ACKNOWLEDGE TO ME THAT SUCH LIMITED LIABILITY COMPANY EXECUTED THE SAME FOR THE USES AND PURPOSES STATED THEREIN.

[signature]
NOTARY PUBLIC

MY COMMISSION EXPIRES 4/29/17



"The signature of South Valley Sewer District on this plat does not constitute any guarantee of availability of sanitary sewer service to the property or any approval of sewer lines or facilities. The owner(s) of the property must provide satisfactory plans to the Sewer District for review and approval before connecting to the District's sewer system and will be required to comply with the District's rules and regulations."

GENERAL NOTES

1: WARNING: AT THE DATE OF RECORDING, THE ZONE IN WHICH THIS PLAT IS LOCATED ALLOWS FOR SINGLE-FAMILY DWELLING UNITS ONLY. RENTING OUT ROOMS, APARTMENTS, OR OTHER AREAS WITHIN THE MAIN BUILDING OR ACCESSORY BUILDINGS TO OTHER PERSONS IS UNLAWFUL. THIS DOES NOT PRECLUDE THE LEASING OF THE ENTIRE HOME TO ONE FAMILY (SEE THE CITY OF SOUTH JORDAN ZONING ORDINANCE FOR DEFINITION OF "FAMILY").

2: MANY AREAS IN SOUTH JORDAN CITY HAVE GROUND WATER PROBLEMS DUE TO HIGH FLUCTUATING WATER TABLE. APPROVAL OF THIS PLAT DOES NOT CONSTITUTE REPRESENTATION BY THE CITY THAT BUILDING AT ANY SPECIFIED ELEVATION WILL SOLVE GROUNDWATER PROBLEMS, IF ANY.

3. POTENTIAL PURCHASERS OF PROPERTY LEGALLY DESCRIBED BY THIS PLAT ARE ADVISED TO FAMILIARIZE THEMSELVES WITH ALL NOTES, LOT INFORMATION, EASEMENTS AND OTHER PERTINENT INFORMATION CONTAINED WITH THIS PLAT AND ALSO WITH ANY CONDITIONS, COVENANTS AND RESTRICTIONS (CC&R) DOCUMENTS RECORDED AGAINST LAND LEGALLY DESCRIBED BY THIS PLAT. FAILURE TO ADHERE TO THESE NOTES, EASEMENTS CC&R'S OR OTHER DOCUMENTS RECORDED AGAINST THE LAND COULD RESULT IN FINANCIAL LOSSES TO OR CHANGES IN EXPECTED PROPERTY USE OF THE PROPERTY OWNER. PROPERTY OWNERS AND PURCHASERS ARE RESPONSIBLE TO REVIEW AND TO BE IN COMPLIANCE WITH ALL NOTES, EASEMENTS, CC&R'S, AND OTHER RECORDED DOCUMENTS RELATED TO THIS PLAT, AS CURRENTLY EXISTING OR AS MAY FROM TIME TO TIME BE CHANGED AND/OR AMENDED.

"SURVEYOR AND OR ENGINEER, CERTIFIES THAT ALL KNOWN OR RECORDED EASEMENTS, CLAIMS OF EASEMENTS OR ENCUMBRANCES LISTED IN THE TITLE REPORT DATED ~~AUGUST 20~~ october 29, 2013 PREPARED BY METRO NATIONAL TITLE ARE SHOWN ON THIS PLAT. OWNER FURTHER CERTIFIES THAT THE LEGAL DESCRIPTION OF THE PROPERTY REFERENCED IN THE TITLE REPORT MATCHES THE DESCRIPTION SHOWN ON THIS PLAT."

QUESTAR GAS COMPANY

QUESTAR HEREBY APPROVES THIS PLAT FOR THE PURPOSE OF CONFIRMING THAT THE PLANT CONTAINS PUBLIC UTILITY EASEMENTS. QUESTAR MAY REQUIRE ADDITIONAL EASEMENT IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ABROGATION OR WAIVER OF ANY OTHER EXISTING RIGHTS, OBLIGATIONS OR LIABILITIES INCLUDING PRESCRIPTIVE RIGHTS AND OTHER RIGHTS, OBLIGATIONS OR LIABILITIES PROVIDED BY LAW OR EQUITY. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH IN THE OWNERS DEDICATION AND THE NOTES, AND DOES NOT CONSTITUTE A GUARANTEE OF PARTICULAR TERMS OR CONDITIONS OF SERVICE.

APPROVED THIS 30 DAY OF September 2013.
BY: [signature]
TITLE: Acct Rep

[signature] 9/30/2013
CENTURY LINK DATE
[signature] 9/30/2013
ROCKY MOUNTAIN POWER DATE
[signature] 9/30/13
COMCAST DATE

CITY MAYOR

APPROVED AS TO FORM THIS 14th DAY OF October A.D., 2013

[signature] MAYOR [signature] ATTEST: CITY RECORDER

SOUTH VALLEY SEWER DISTRICT

APPROVED AS TO FORM THIS 2 DAY OF [illegible] A.D., 2013

[signature] GENERAL MANAGER

OFFICE OF THE CITY ATTORNEY

APPROVED AS TO FORM THIS 7 DAY OF November A.D., 2013.

[signature] ATTORNEY FOR SOUTH JORDAN CITY

HEALTH DEPARTMENT

APPROVED AS TO FORM THIS 3 DAY OF October A.D., 2013

[signature] [illegible] APPROVED BY

CITY PLANNING

APPROVED AS TO FORM THIS 30th DAY OF October A.D., 2013.

[signature] SOUTH JORDAN CITY PLANNER

CITY ENGINEER

I HEREBY CERTIFY THAT THIS OFFICE HAS EXAMINED THIS PLAN AND IT IS IN ACCORDANCE WITH THE INFORMATION ON FILE IN THIS OFFICE.

[signature] 10/30/13
SOUTH JORDAN CITY ENGINEER DATE

SALT LAKE COUNTY RECORDER

STATE OF UTAH, COUNTY OF SALT LAKE, RECORDED AND FILED AT THE REQUEST OF [redacted]

DATE: [redacted] TIME: [redacted] BOOK [redacted] PAGE: [redacted]

[redacted]

DEPUTY [redacted]

Business description:
Design, build, program, test, and document custom automation machines that are delivered primarily to medical manufacturing companies. Silverstone also builds a handful of standard machines for medical manufactures.

Noise:
Standing outside our building, you might hear the faint sounds (~70db) of:

- Air compressor.
- Maybe a customer's machine running in debug mode.
- About one time per week, we use our forklift to access a delivery truck. The forklift sound is similar to a car.
- Band saw sometimes one time per day.
- Prototyping tools (mill, lathe) a few times a day.

Odor:
None

Dust:
None

Vibration:
None would be felt outside the building. On our build floor, when certain machines are in debug, you might feel faint floor vibrations. Some machines use vibratory feeder bowls which transmit small vibrations into the floor near the machine.

Visual impacts:
None. Our customers are medical companies which means cleanliness is an important selling point.

Hazardous materials used or stored on site:
1 gallon of lacquer thinner to wipe surfaces of the machine.

Hazardous activities:
None

Is there any heavy equipment or trucks coming or leaving the site and how often?
Tractor trailer pick up or drop off approximately 1 time per week.

Let us know what the hours and days of operation are:
7AM to 6:00PM M, T, W, TH, F
Occasionally Sat 7 to 12PM

Employees:
Eleven employees drives to and from work.

Customers:
Customers visit about 2 times per week.

Vendors:
Vendors visit about 2 times per week.

UPS/FedEX/DHL:
Usually 2 or 3 deliveries per day.

Commissioner Gedge said Hawthorn Academy is across the street and I can't think of any other areas where we have retail establishment like this with (4) drive thru isles that close to a school, are there any concerns about the kids walking to, and from school.

Planner Sanderson said there is pad (F) and a detention basin, and then there is the Hawthorn Academy, but there is a space between them. There is also a signalized light that will go in, and that is part of the agreement that the City worked out with the developer. That signal has been fronted and we are working with UDOT to get that in, so it is not a matter of if, but when. The traffic studies show that it should help, because we don't anticipate that a lot of kids from Hawthorn will be walking, but it will be safer once that signal is installed.

Reed Stallings, Sandy Utah (Applicant) – said for clarification, all the lanes are about 11 cars stack, and Starbucks is the coffee house going in there. The other (3) lanes are a little wider so they could stack about 12 cars, and there is extra parking in the parking lot. I don't know if you have any other questions, but we just appreciate being able to do this. We have been working on this for a long time and we are anxious to get going on this as soon as we can. Pending this working out we will be submitting building permit plans tomorrow and hopefully get the first 2 building going before the snow flies.

Chair Hollist opened the Public Hearing to comments. There was none. She closed the Public Hearing.

Chair Hollist said will you continue to manage all (4) properties so it works well for all (4) tenants.

Mr. Stalling said that is correct, we are the developer and the owners. This is the Stalling's farm that we have owned for a long time in South Jordan, and when we sold it to the Boyer Company we wanted to have a tie to our family farm, so our intent is to own it for a very long time.

Commissioner Catmull motioned to approve File No. PLSPR202000048 for the proposed Ridgeview Commercial Parcel F Site Plan and conditional use permit, located at `1553 West 11400 South, with the following requirements which need to be completed prior to construction:

- **Provide the original Storm Water Facilities Maintenance Agreement to the Engineering Department.**
- **Provide 15' wide water line easement for all main lines, hydrants and services up to and including water meters.**

Commissioner Hollist seconded the motion. Roll Call Vote was 5-0 unanimous in favor.

C. SILVERSTONE AUTOMATION, SITE PLAN

Location: 10096 South Jordan Gateway
File No: PLSPR202000181
Applicant: Ryan Berry, MHTN Architects

Planner Greg Schindler reviewed background information on this item from the staff report. There was (4) letters sent by email from the residents (Attachment A, B, C, D)

Commissioner Gedge said in one of the emails that Damir sent out there was a concern about property lines and what the City has that came from the Salt Lake County Assessor's Office, is that correct?

Planner Schindler said we received the email, but it has nothing to do with this development. This lot is on Lot 2 of the subdivision and it has been recorded with the County. We have a copy of the plat and it matches with what the site shows. The narrow strip on the other side does not pertain to this anyway, it is a different issue and I have no ideas of what the history is there. It has the same IF-Zoning, but it cannot be developed because it is not big enough.

Lenny Disera, Sandy Utah (Applicant) – said I would like to thank you for your time. The last 20 years I have been driving through South Jordan to Draper, and I am very excited to build this beautiful building in South Jordan and calling South Jordan our home.

Cory Bodily, Sandy Utah (Applicant) – said I am also a co-owner and I would like to thank you for the time you have spent on this project.

Chair Hollist opened the Public Hearing to comments. There was none. She closed the Public Hearing.

Commissioner Gedge motioned to approved application PLSPR202000181 to allow for construction of a new commercial building on property located at 10096 South Jordan Gateway. Commissioner Hollist seconded the motion. Roll Call Vote was 4-0 unanimous in favor; Commissioner Morrissey was absent from the vote.

IX. LEGISLATIVE PUBLIC HEARINGS –

A. OTTO JONES PROPERTY REZONE Rezone from R-1.8 (Single-Family Residential, 1.8 lots per acre) to R-2.5 (Single-Family Residential, 2.5 lots per acre) Zone

Location: 10431 South 3200 West
File No: PLZBA202000131
Applicant: Justin Jones

Planner Greg Schindler reviewed background information on this item from the staff report. There were (2) letters sent by email from the residents (Attachment E, and F)

Chair Hollist said I have the General Plan Land Use Map in front of me and there is an "L" shaped property just east of this that is marked an economic center, can you tell me what that is?

Planner Schindler said because it is on South Jordan Parkway and it is the only access there, and those are remnant UDOT Lots, and that is why it shows that there. It doesn't mean that they have

SOUTH JORDAN
UTAH

PH: 801.446-HELP @SouthJordanUT

August 16, 2021

Attn:
Ryan Berry
420 E. South Temple, Suite 100
Salt Lake City, UT 84111

RE: Decision Notification for Time Extension
(PLTE202100202)

Dear Applicant,

On August 16, 2021, the above referenced application was **Approved** with the following Conditions:

- The time extension expires on August 25, 2022.
- Additional time extensions will not be allowed.

If you have any questions or concerns regarding this application, please do not hesitate to contact me by phone (*801-254-3742*) or by email (*gschindler@sjc.utah.gov*).

Sincerely,

Greg S.

Greg Schindler
City Planner