TINTIC SCHOOL DISTRICT

545 East Main Street
Eureka, UT 84628

Request for Proposals

Reconstruction of Asphalt Track & Natural Grass Sports Field

February 10, 2022

Request for Proposals for
Reconstruction of Asphalt Track & Natural Grass Sports Field

PURPOSE AND INTRODUCTION

The purpose of this Request for Proposals (RFP) is for Tintic School District, hereinafter referred to as "District", to receive proposals from qualified individuals, firms and organizations capable of reconstructing the asphalt track and natural grass sports field at Tintic High School, 525 E. Main Street, Eureka, Utah 84628.

GENERAL INFORMATION

Proposals will be received until **March 1, 2022 at 2:00 p.m. MST** at the Tintic School District Offices, 545 East Main, Eureka, UT 84628.

Before submitting a proposal, each contractor/proposer shall fully inform his/her self to all existing conditions and limitations, and shall include in the proposal the cost of all items included in the contract. Failure to do so will not relieve a successful proposer of the obligations to furnish all materials and labor necessary to carry out the provisions of the contract. Proposer will be responsible to verify all measurements, quantities and specifications prior to submitting proposal.

PROJECT DETAILS

Please direct all inquiries concerning this RFP, including drawings, specifications, and contract documents, as well as any other information, to:

Jeremy Snell, Business Administrator
Tintic School District
545 East Main Street
Eureka, Utah 84628
Office: 435-433-6300
Email: jsnell@tintic.org

Project design, specifications and detailed notes have been provided by:

Design West Architects
255 S 300 E
Logan, Utah 84321

Hereinafter referred to as "Consultant". Contract documents and final drawings are located in Appendix A of this document.

PROJECT DATES AND DEADLINES

February 10, 2022	Project Announcement/RFP Released
February 17, 2022	Optional Site Visit of Project at 11:00 a.m. (see below)
February 24, 2022	Last Day for Questions/Clarifications
March 1, 2022	RFP Proposal Deadline - 2:00 p.m.
March 2-3, 2022	Review of Proposals
March 7, 2022	Onsite Short List Interviews (if necessary)
March 7, 2022	Announcement of Contract Award
May 20, 2022	Estimated Project Start Date
August 29, 2022	Project Substantial Completion

OPTIONAL SITE VISIT

For potential and interested candidates, an optional site visit and a questions/answers session will be held:

DATE: Thursday, February 17, 2022 at 11:00 a.m.

PLACE: Tintic School District Offices
545 E. Main Street
Eureka, Utah 84628

ELIGIBILITY REQUIREMENTS

To be eligible to respond to this RFP, the proposer must meet all of the following qualifications:

1. **License:** The proposing firm shall comply with and require all its subcontractors to comply with all licensing laws as required by the State of Utah.

2. **Non-Discrimination:** The proposing firm must comply, at all times during the bidding and contracting period, with all applicable Federal, State, County, and City anti-discrimination laws, ordinances, rules, and regulations. Any violations of this provision shall be considered a violation of a material provision of the contract and shall be grounds for cancellation, termination, or suspension.

3. **Insurance:** To protect against liability, loss and/or expense arising in connection with the performance of services described in the Agreement, the Proposer shall obtain and maintain in force during the entire period of this Agreement, at its own expense, liability

insurance and maintain a per occurrence, annual aggregate policy limit based on the following chart:

Construction Budget	Minimum Liability Coverage
$100,000 and above, but under $1,000,000	$1,000,000

The District reserves the right to require additional coverage from that stated in the chart hereinabove, at the District's expense, for the additional coverage portion only.

BIDS

Before submitting a bid, each bidder shall carefully examine the Contract Documents; shall visit the site of the work (if deemed necessary); shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify Jeremy Snell, Business Administrator, and the necessary changes shall be accomplished by addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided (Pages 9-10) and submitted in accordance to the details specified in the Submittal Procedures section of this document.

CONTRACT AND BOND

The Contract Agreement will be in the form of the AIA Contract A105-2017 and shall be provided by the District to the successful bidder. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the AIA forms. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the Contract Sum and secured from a company that meets the requirements specified in the requisite forms.

SUBMITTAL PROCEDURES

Proposals may be delivered in person, sent electronically (.pdf) or mailed to the address shown below. Hard-copy proposals shall be sealed in a single envelope or box marked:

"Tintic High School Track & Field Reconstruction Project"

If submitting electronically via email, subject line shall reference the above project title and be emailed to jsnell@tintic.org. It shall be the bidder's responsibility to verify that the email containing the proposal has been received by the District.

Submit hard-copy proposals to:

Tintic School District
Attn: Jeremy Snell
545 E. Main Street
P.O. Box 210
Eureka, UT 84628

Proposals must be received by 2:00 p.m. on March 1, 2022, at the Tintic School District Offices, located at the address shown above. Proposals not received by the deadline will be returned unopened. Facsimile submissions will not be considered.

PROPOSALS

The responding individual, firm or organization shall present their proposal as outlined in the RESPONSE FORMAT/PROPOSAL REQUIREMENTS section included below. Proposers must have adequate organization, facilities, equipment and personnel to ensure prompt and efficient service to the District.

Proposals shall include the Bid Form (Pages 9-10) and all other necessary documents and information that will adequately demonstrate compliance by your firm to the selection criteria outlined below.

RESPONSE FORMAT/PROPOSAL REQUIREMENTS

The following criteria must be included in a complete proposal. Proposal must be organized in the following format and all information should be concise and specific to address each request:

1. **Letter of Interest:** Provide a brief letter explaining why your company is interested in assisting Tintic School District with this project. Letter may contain any information you feel is pertinent and not shown elsewhere in the proposal.

2. **Qualifications/Project Experience:** Provide a brief description of the history and capabilities of your company. List recent construction projects your company has completed in the region that are specifically relevant to the proposed scope of this project. Records from previous projects, quality of work, ability to meet schedules, cost control and contract administration may be included.

3. **Quality Control:** Provide a brief summary of your company's approach to quality control before, during and after the construction process.

4. **Project Costs:** Provide a detailed cost sheet with all associated project items as outlined in the project design, specifications and detailed notes. (Appendix A)

5. **Work History/References:** Provide applicable contact information from previous clients for projects similar in size/scope completed within the last twelve (24) months.

6. **Evidence of Contractor Credentials:** Contractor shall provide proof of credentials, including proof of bonding and insurance.

7. **Estimated Completion Date:** Provide an estimated project substantial completion date. Project substantial completion must be on or before Monday, August 29, 2022.

8. **Signed Bid Form:** The Bid Form (Pages 9-10) must be signed by an official authorized to bind the firm. Proposed terms apply for a period of ninety (90) days from the date of receipt.

COST OF RESPONDING

All costs incurred by the Proposer in preparation of responses to this RFP, including any presentations to the District and/or for participation in on-site tours/interviews shall be borne solely by the Proposer; the District shall not be liable for any of these costs. At no time will the District provide reimbursement for submission of a response.

RESERVATIONS

The District reserves the right to reject any or all submittals, or any part of any submittal, to waive any technicalities or informalities in any submittal, and to accept that submittal which is deemed to be in the best interest of the District. The District maintains no obligation to select any proposal. The District's decision to accept or reject the contract shall be final.

ADDENDUM TO RFP

If it becomes necessary to revise this RFP in whole or in part, any addendum issued during the time of bidding shall become part of the contract documents made available to the bidders for the preparation of the bid, shall be covered in the bid, and shall be made a part of the Contract Agreement.

SELECTION PROCESS

The Selection Committee, composed of the Tintic School District Superintendent, Business Administrator and Maintenance Director, will evaluate each of the proposals to determine if the proposal requirements have been met. Incomplete, or proposals deemed to not have met the proposal requirements, will be rejected and not given further consideration. The selection will be made after careful review of the proposals to determine which proposal will be in the best interest of the District. The contract will not necessarily be awarded based on the lowest cost

proposal. The highest scoring proposer(s) may be invited to participate in an on-site interview if deemed necessary. Following the proposal review process, the Selection Committee will select the firm it considers most qualified and the best value for Tintic School District.

SELECTION CRITERIA

The following criteria will be used in ranking each of the firms. The firm that is ranked the highest will represent the best value for Tintic School District. The Selection Committee will consider all criteria in performing a comprehensive evaluation of the proposal. Point values have been assigned to each criterion as follows:

Category Ratings:

1. **Overall Project Cost: (40 points)** The overall cost to complete the project specifications as outlined in Appendix A will be considered with all other criteria to determine the best value to the project.

2. **Availability/Familiarity: (30 points)** The ability to commit resources to the District's locale and to provide appropriate support to ensure all project specifications are completed within the applicable time constraints.

3. **References: (15 points)** Each construction firm will be evaluated on the applicability and past performance of similar projects.

4. **Responsiveness: (15 points)** The completeness and conformity of the proposal response to the RFP requirements.

AWARD OF CONTRACT

The District intends to enter into an agreement with the selected bidder to construct the project as outlined and will contract with only one legal entity.

DESIGNATED CONTACT

The awarded firm shall appoint a person to act as a primary contact with the District. This person, or his/her appointed designee, shall be readily available during normal working hours by phone or in person, and shall be knowledgeable of the terms of the Contract Agreement.

DEVIATIONS FROM SPECIFICATIONS

Proposers shall clearly indicate, as applicable, all areas in which the items/services he/she proposes do not fully comply with the requirements of this submittal. The decision as to whether an item fully complies with the stated requirements rests solely with the District.

INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to Jeremy Snell, Business Administrator, a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by an addendum duly issued and a copy of such addendum will be delivered to each person or entity receiving a set of documents. Neither the District nor the Consultant will be responsible for any other explanations or interpretations of the proposed documents.

NO COLLUSION

By offering a submission to this RFP, the Proposer certifies that no attempt has been made or will be made by the Proposer to induce any other person or firm to submit or not to submit a submission for the purpose of restricting competition. The only person(s) or principal(s) interested in this submission are named therein and that no person other than those therein mentioned has/have any interest in this submission or in agreement to be entered. Any prospective firm should make an affirmative statement in its proposals to the effect.

All inquiries relative to this RFP must be direct to: Jeremy Snell, Business Administrator. No other Tintic School District employee, Board Member, or evaluation committee member should be contacted concerning this RFP during the selection process. Failure to comply with this requirement may result in disqualification.

WITHDRAWAL OF BIDS

Bids may be withdrawn on written request received from bidders prior to the time established for bid selection or opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

TERMINATION RIGHTS

The contract shall provide that the District has the right to cancel without cause at any time by written notice within thirty (30) days of its intent to terminate the contract.

BID FORM

NAME OF BIDDER _____ DATE _____

To: Jeremy Snell, Business Administrator
Tintic School District
545 East Main Street
Eureka, Utah 84628

The undersigned, responsive to and in accordance with the Tintic School District Request for Proposal for

Reconstruction of Asphalt Track &
Natural Grass Sports Field

and having examined the Contract Documents, Final Drawings, and the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the work required under the Contract Documents of which this bid is a part:

For all work shown on the Final Drawings and described in the specifications of the Contract Documents, I/we agree to perform for the sum of:

WRITTEN AMOUNT IN DOLLARS AND CENTS: _____

_____

NUMERICAL AMOUNT: $_____

(In case of discrepancy, written amount shall govern)

I/We guarantee that the work will be substantially complete within _____ CALENDAR DAYS after receipt of the Notice to Proceed, should I/we be the successful bidder.

I/We further attest that have read the Tintic School District Request for Proposal and fully understand its intent. I/We certify what we have adequate personnel and resources to fulfill the proposal requirements and fully understand that our ability to meet the criteria and provide the required services shall be judged solely by Tintic School District.

I/We further certify that, since the receipt of this RFP, no contact, discussion, or negotiation has been made nor will be made regarding this proposal with any Tintic School District employee or Board Member other than the listed contact people in the RFP and understand that any such contact could disqualify this proposal.

I/We certify that all schedules and addenda contained herein shall be considered part of the entire RFP response and that the complete document submitted shall be considered a legally binding document.

This bid shall be good for _____ CALENDAR DAYS after bid opening.

Any request and information related to Utah Preference Laws:

_____

_____

Note: The undersigned agrees to execute the contract within ten (10) business days after receipt of notice of acceptance of this bid.

Respectfully submitted by:

_____
Proposing Firm Name

_____
Utah Contractor's License Number

_____
Authorized Signature

_____
Name and Title

_____
Telephone

_____
Email

_____
Date

DESIGN TEAM

OWNER

TINTIC SCHOOL DISTRICT
PO BOX 210, 545 EAST MAIN STREET
EUREKA, UTAH 84628
PHONE: 435-433-6363
jsnell@tintic.org
CONTACT: JEREMY SNELL

ARCHITECT

DESIGN WEST ARCHITECTS
255 SOUTH 300 WEST
LOGAN, UTAH 84321
PHONE: 435.752.7031
larryh@designwestarchitects.com
LARRY HEPWORTH, VP

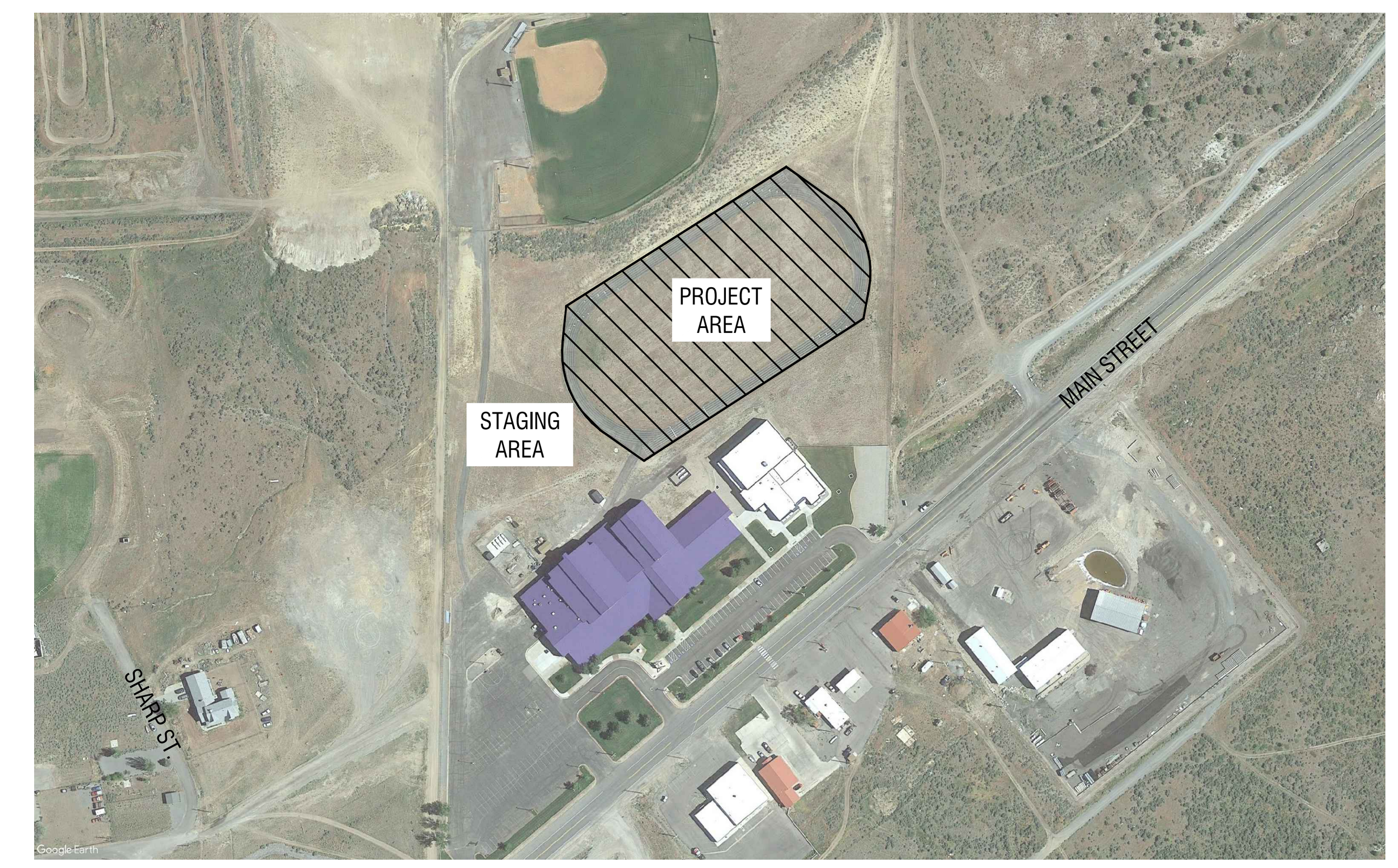
LANDSCAPE ARCHITECT

DESIGN WEST ARCHITECTS
255 SOUTH 300 WEST
LOGAN, UTAH 84321
PHONE: 435.752.7031
blakew@designwestarchitects.com
BLAKE WRIGHT, PRESIDENT

SURVEYOR

AS THE CROW FLIES
2425 W 1500 N
BENJAMIN, UTAH, 84660
PHONE: 385.539.0009
asthecrowflieslandsurveying@gmail.com
MATT STONES

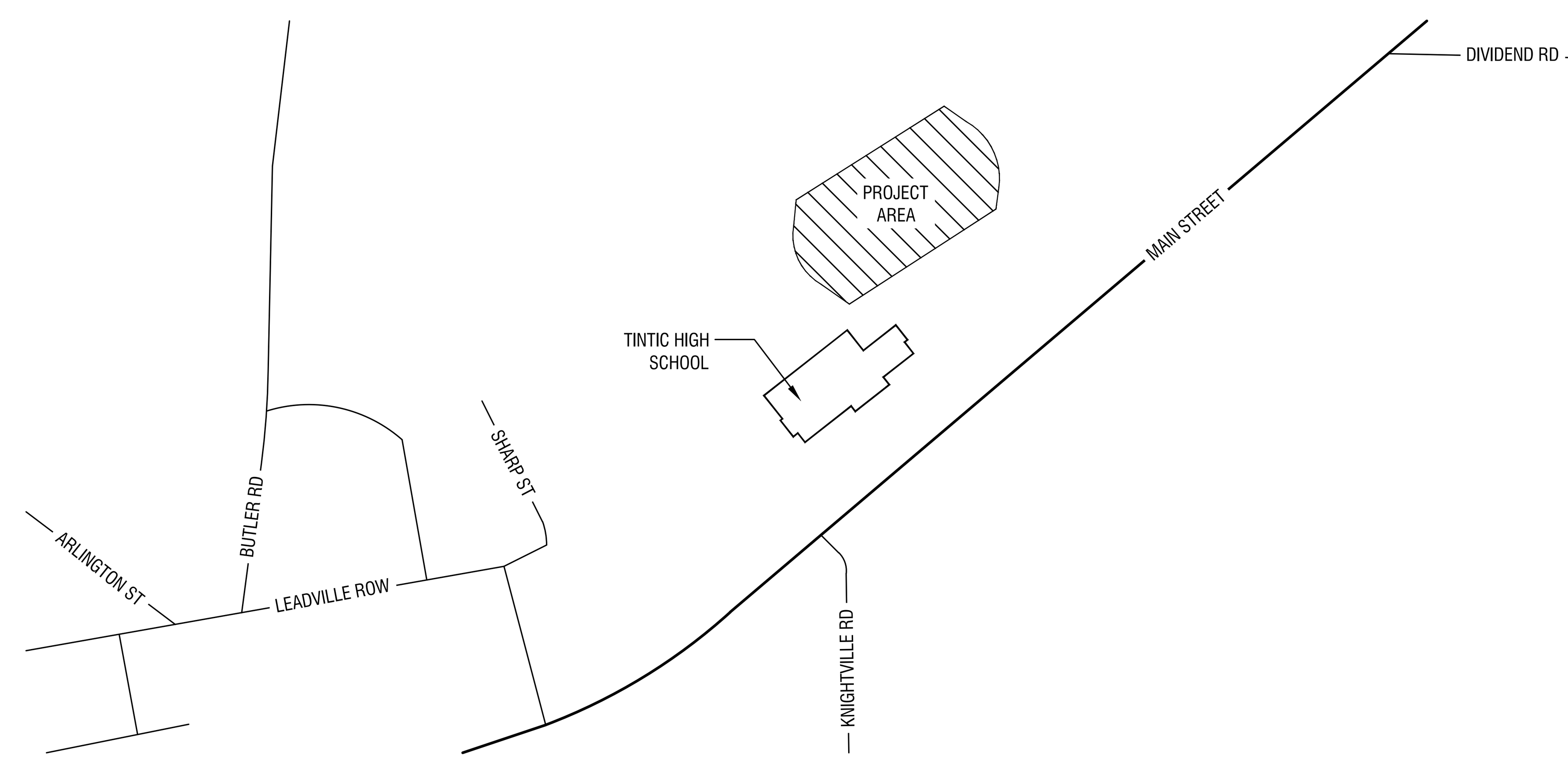
SITE MAP



SHEET INDEX

TOP SOIL LOCATION

VICINITY MAP



TINTIC HIGH SCHOOL - TRACK & FIELD ENHANCEMENTS

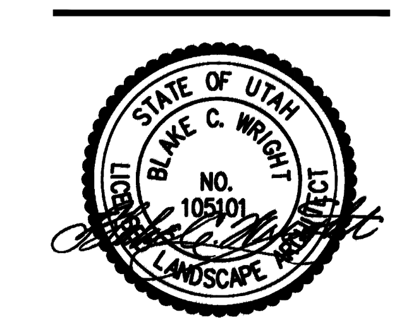
525 EAST MAIN STREET, EUREKA, UTAH 84628

design west | architects
255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS
525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

PROJECT #:	121352
DRAWN BY:	D. HISLOP
CHECKED BY:	B. WRIGHT
ISSUED:	1.12.2022



CONSTRUCTION DRAWINGS

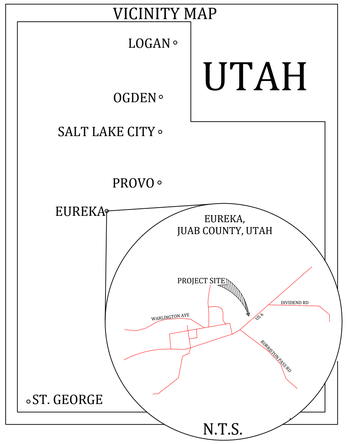
COVER SHEET & PROJECT INFORMATION

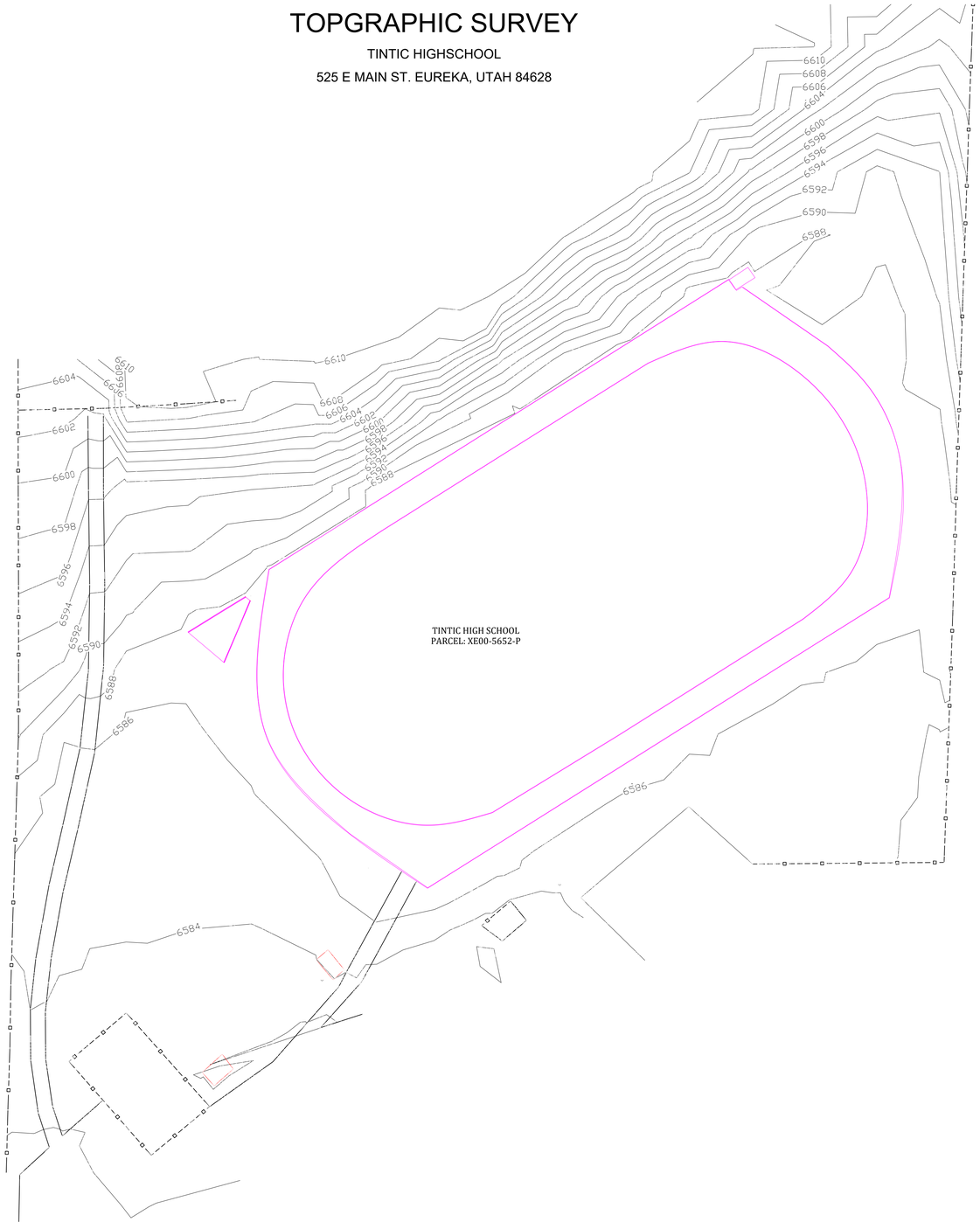
G-001

TOPGRAPHIC SURVEY

TINTIC HIGHSCHOOL

525 E MAIN ST. EUREKA, UTAH 84628





SURVEYOR'S CERTIFICATE

I, MATTHEW C. STONES, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD LICENSE NUMBER 7176711 AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH, AND THAT I HAVE MADE A SURVEY OF THE HEREON DESCRIBED PROPERTY.

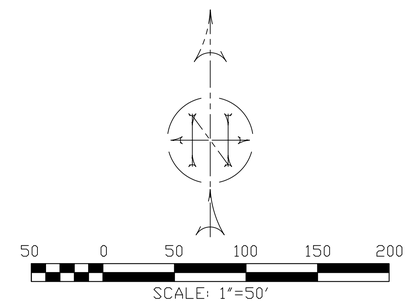
DATE: 10-14-2021

MATT STONES
UT PLS #7176711

PROFESSIONAL LAND SURVEYOR · STATE OF UTAH · MATTHEW C STONES · NUMBER 7176711

NARRATIVE

THIS SURVEY WAS DONE AT THE REQUEST OF TINTIC SCHOOL DISTRICT FOR THE PURPOSE OF OBTAINING TOPOGRAPHIC INFORMATION AROUND THE ATHLETIC TRACK OF TINTIC HIGH SCHOOL PRIOR TO MAKING IMPROVEMENTS TO THE PROPERTY. NO BOUNDARY WAS DETERMINED DURING THIS SURVEY AND NO PROPERTY CORNERS WERE SET. THE CONTOUR INTERVAL IS 2' AND ELEVATION DATA WAS OBTAINED USING GPS OBSERVATIONS.



NO.	REVISIONS	BY	DATE

DRAWN 10-14-2021

DESIGNED

APPROVED MCS

QA/QC MCS

NOTE:
THIS LINE IS 2" LONG
AT 24" X 36" PLOT

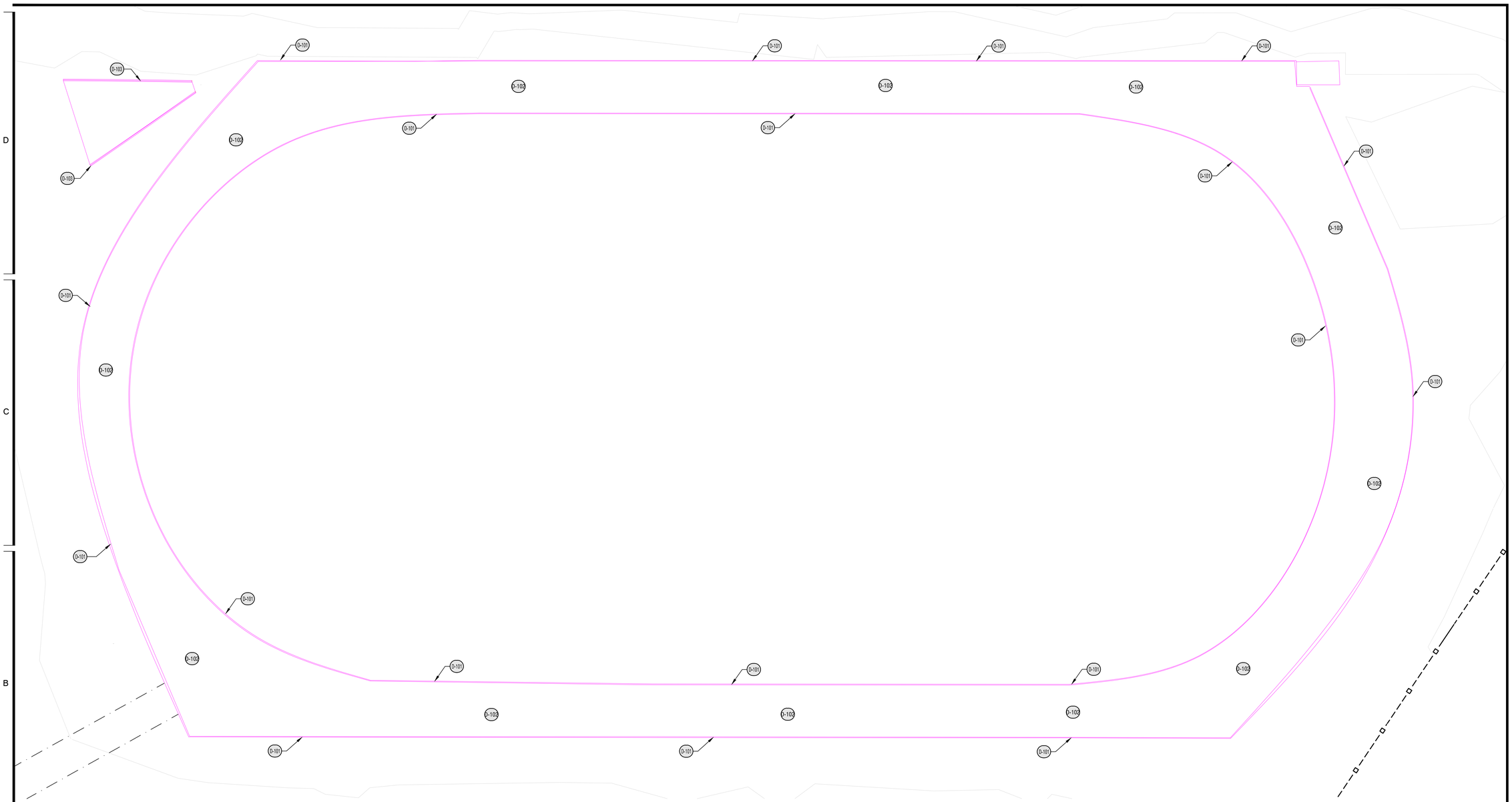
(IF LINE IS NOT 2" SCALE ACCORDINGLY)

MATT STONES, PLS.
842 SOUTH 1150 WEST
CLEARFIELD, UTAH 84015
801-201-5966

TINTIC SCHOOL DISTRICT
PO BOX 210
EUREKA, UT 84628-0210

SHEET 1 OF 1

RECORDER INFORMATION



DEMOLITION NOTES

1. GRUB AND REMOVE SHRUBS AND WEEDS IN ATHLETIC FIELD PRIOR GRADING WORK.
2. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 8-INCH LOOSE DEPTH, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT GROUND.
3. IMPORT NEW TOPSOIL FROM LOCATION SHOWN ON PLANS TO WHATEVER DEPTHS ARE REQUIRED PER GRADING PLAN.
4. REMOVE EXISTING ABOVE- AND BELOW-GRADE STRUCTURES AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
5. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN SMOOTH EDGE.
6. PROTECT EXISTING BUILDINGS, WALKS, DRIVES, CURBS, EXISTING VEGETATION, ETC. THAT ARE TO REMAIN. REPAIR ANY DAMAGES THAT MAY OCCUR TO EXISTING ITEMS TO BE PROTECTED.
7. ALL ITEMS TO BE REMOVED FROM THE PROJECT AND EXCESS MATERIALS SHALL BE LEGALLY DISPOSED OF OFFSITE BY THE CONTRACTOR
8. CONTINUOUSLY CLEAN-UP AND REMOVE WASTE MATERIALS FROM SITE. DO NOT ALLOW MATERIALS TO ACCUMULATE ON SITE.
9. DO NOT BURN OR BURY MATERIALS ON SITE. LEAVE SITE IN CLEAN CONDITION.

DEMOLITION REFERENCE SCHEDULE

SYMBOL	DEMOLITION DESCRIPTION
D-101	PRESERVE & PROTECT EXISTING TRACK CURB, BOTH SIDES
D-102	MILL EXISTING ASPHALT TRACK, MINIMUM OF 3". LEVEL AND RECOMPACT AS NEW TRACK BASE.
D-103	DEMOLISH & REMOVE EXISTING SHOT PUT EDGE

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

CONSTRUCTION DRAWINGS

design west | architects
255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

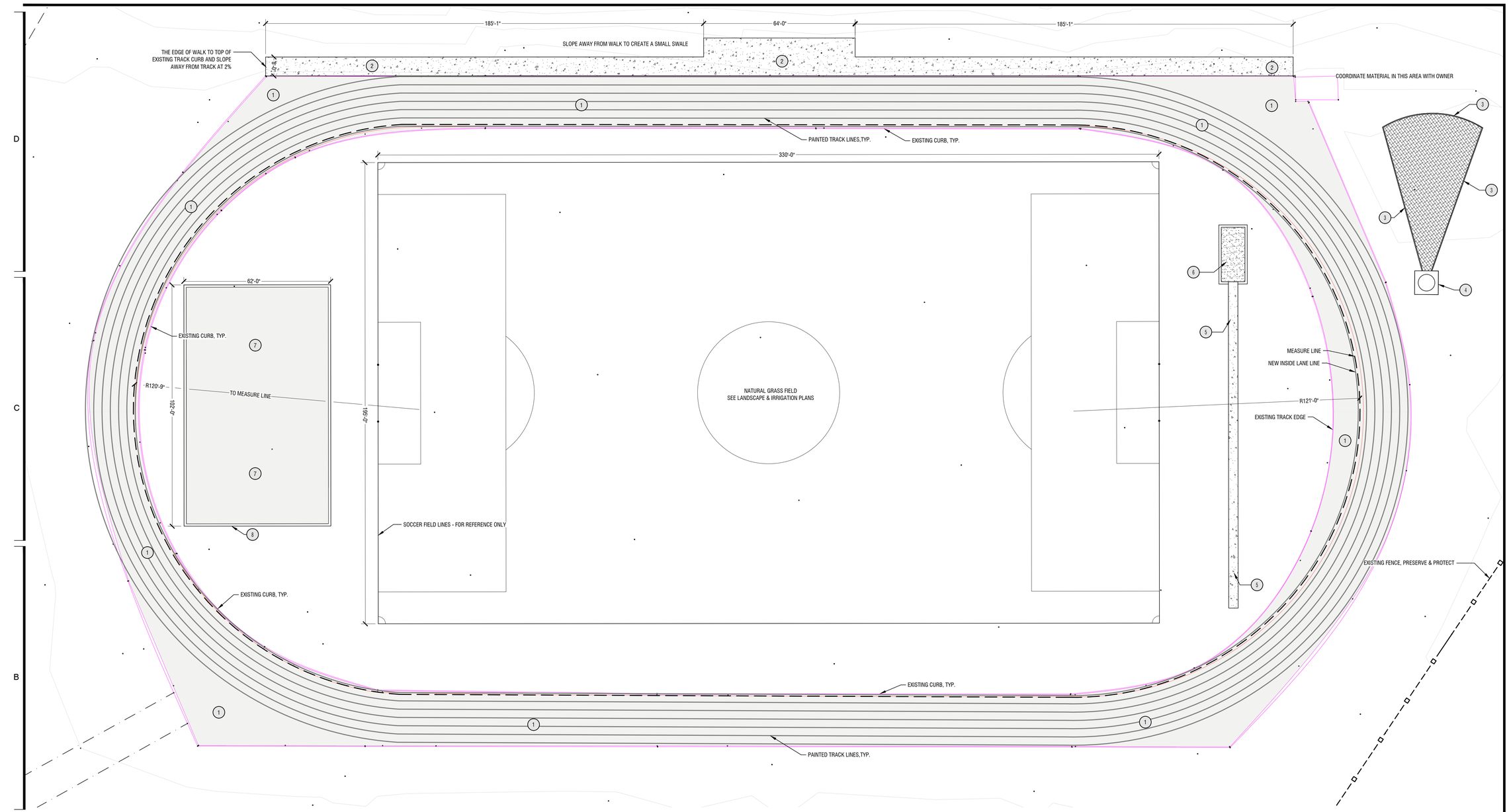
PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH — BLAKE C. WRIGHT — NO. 10501 — LANDSCAPE ARCHITECT

DEMOLITION PLAN

C-101

7/6/2019 3:38:36 PM



LAYOUT NOTES

1. NO WORK SHALL BEGIN UNTIL NECESSARY PERMITS HAVE BEEN OBTAINED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR ALL PERMITS.
2. CONTRACTOR SHALL COORDINATE WITH DISTRICT PERSONNEL AND ENSURE CURRENT PARKING REMAINS OPEN AT ALL TIMES TO HIGH SCHOOL STUDENTS AND DISTRICT EMPLOYEES.
3. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS, CORNERS, CURBS, AND ANGLES PERTAINING TO THIS PLAN AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL REPAIR ALL DAMAGES CAUSED BY OPERATIONS (WHICH OCCUR ON OR OFF SITE) TO THE LANDSCAPE ARCHITECT'S AND OWNER'S SATISFACTION.
5. CONTRACTOR SHALL PATCH AND REPAIR EXISTING ASPHALT, CONCRETE, LANDSCAPING, ETC. AS REQUIRED WHERE NEW CONSTRUCTION MEETS EXISTING AND PROVIDE A SMOOTH TRANSITION.
6. PRESERVE & PROTECT EXISTING TRACK CURB, BOTH INSIDE AND OUTSIDE. GENERAL SCOPE IS TO MILL EXISTING ASPHALT TRACK, LEVEL AND COMPACT AND INSTALL NEW ASPHALT TO MATCH TOP OF EXISTING TRACK CONCRETE CURBING.
7. ALL LAYOUT DIMENSIONS ARE FROM PLAN VIEW CALCULATIONS. ACTUAL FIELD DIMENSION MAY VARY FROM PLAN DUE TO ACTUAL LENGTHS ALONG A SLOPED SURFACE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONCURRENT WORK BY OTHER TRADES. PROVIDE SLEEVES AS REQUIRED FOR DRAINAGE, IRRIGATION, AND ELECTRICAL LINES, ETC. PRIOR TO PAVING AND LANDSCAPE WORK.
9. PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY WORK. THE CONTRACTOR SHALL PROTECT UTILITIES THAT ARE TO REMAIN AND BE RESPONSIBLE FOR THE REPAIR OF DAMAGES TO SUCH UTILITIES.
10. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES WHEN CONSTRUCTION WORK BEGINS NEAR ANY UTILITY LINES AND ARRANGE FOR A UTILITY REPRESENTATIVE TO BE PRESENT IF THE CONTRACTOR'S CLOSE OPERATIONS COULD CREATE A HAZARDOUS CONDITION.
11. STAGING AND STORAGE AREA FOR CONTRACTOR'S EQUIPMENT AND MATERIALS ON SITE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE OR AS SHOWN ON THE PLANS.
12. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION PERTAINING TO THE PROJECT MATERIALS. WORK INSTALLED NOT IN COMPLIANCE WITH SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT WITHOUT ADDITIONAL COST TO THE OWNER.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR YARD AND BUILDING CLEAN UP AT THE COMPLETION OF WORK.
14. PROVIDE TRACK SURFACE MATERIAL PER SPECIFICATIONS ON TRACK, LONG JUMP LANE & HIGH JUMP SURFACES.
15. **TRACK LANE LINES ARE BASED ON 400 METER TRACK DISTANCE. EXISTING CURBS WERE DESIGNED TO MEET THE 400 METER REQUIREMENTS. WEST END APPEARS TO NOT BE WIDE ENOUGH TO FIT ALL DESIGNED 6 LANES. FIELD VERIFY AND COORDINATE WITH OWNER PRIOR TO PAINTING TRACK LANES/LINES.**

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
1	NEW TRACK & ASPHALT SURFACE	3/C-501
2	CONCRETE WALK	1/C-501
3	SHOT PUT THROW AREA EDGE	5/C-501
4	SHOT PUT CIRCLE	/
5	LONG JUMP RUNWAY	6/C-501
6	LONG JUMP SAND PIT	7/C-501
7	HIGH JUMP ASPHALT	8/C-501
8	CONCRETE CURB	8/C-501

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

CONSTRUCTION DRAWINGS

design west | architects
LOGAN UT 84321
255 SOUTH 300 WEST
SALT LAKE CITY UT 84103
795 NORTH 400 WEST

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

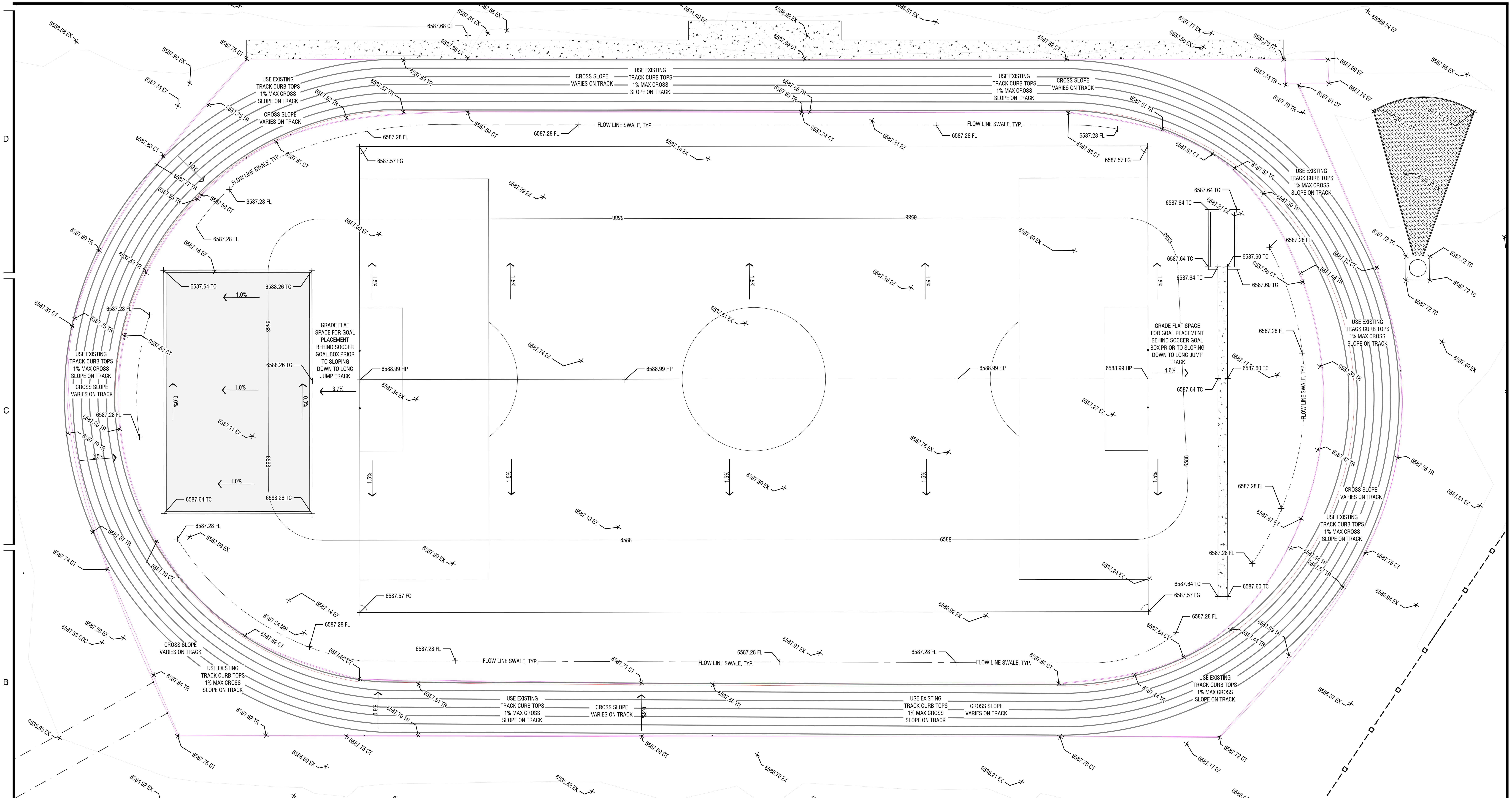
PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH · BLAKE C. WRIGHT · NO. 10501 · LICENSED LANDSCAPE ARCHITECT

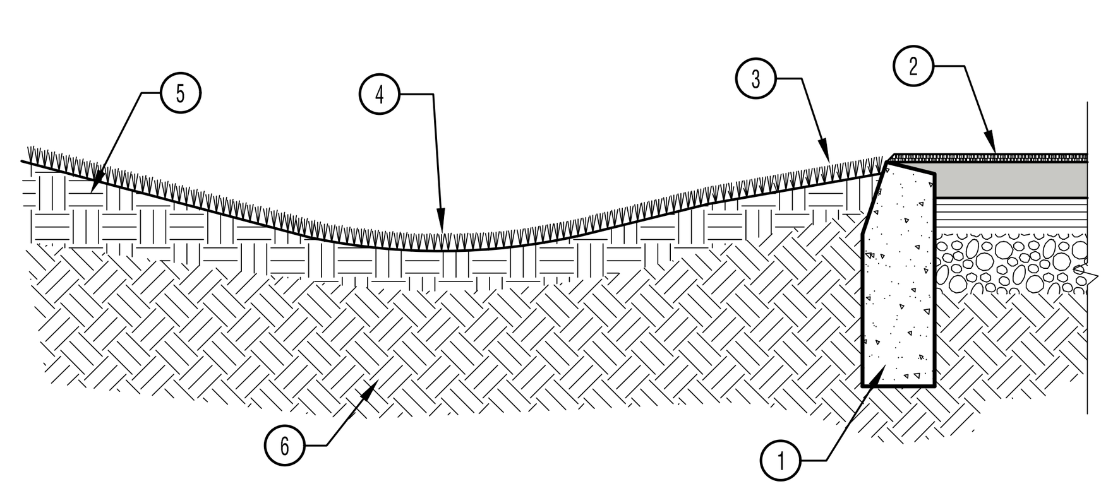
LAYOUT PLAN

C-201

7/8/2019 3:38:36 PM



1. EXISTING CURB
2. NEW ASPHALT & TRACK SURFACE
3. NATURAL GRASSFIELD
4. NATURAL SWALE, SEE GRADING PLAN FOR DEPTH. PROVID ESMOOTH SLOPE TRANSITION BOT SIDES
5. IMPORTED TOP SOIL
6. EXISTING SOIL



1 NATURAL GRASS SWALE

3/4" = 1'-0"

P-1-TSD-TIN-99

GRADING LEGEND

CALLOUT	DEFINITION
XX.XX FG	FINISH GRADE
XX.XX FL	FLOW LINE
XX.XX CT	CURB TOP
XX.XX EX	EXISTING
XX.XX FL	FLOW LINE
XX.XX TC	TOP OF CONCRETE
XX.XX TR	TRACK RESURFACE
XX.XX HP	HIGH POINT

GRADING NOTES

1. CUT AND CAP UTILITY LINES TO BE ABANDONED AS REQUIRED. REMOVE ALL UTILITIES NECESSARY FOR NEW CONSTRUCTION AND COORDINATE WITH OTHER DISCIPLINES AND UTILITY PURVEYORS.
2. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AND PRESERVE AND PROTECT THE LINES OR REROUTE THEM AS NECESSARY.
3. CONTRACTOR SHALL REPAIR ALL DAMAGES CAUSED BY OPERATIONS (WHICH OCCUR ON OR OFF SITE) TO THE LANDSCAPE ARCHITECT'S AND OWNER'S SATISFACTION. BRIDGE TRACK TO PROTECT EXISTING CURBS.
4. CONTRACTOR SHALL PATCH OR REPLACE EXISTING ASPHALT, CONCRETE, LANDSCAPING, ETC. AS REQUIRED WHERE NEW CONSTRUCTION MEETS EXISTING.
5. PROVIDE SMOOTH GRADE TRANSITION IN ALL LANDSCAPE AREAS AND BETWEEN NEW EARTH WORK AREA AND EXISTING.
6. ALL IRRIGATION SLEEVING SHALL BE COORDINATED WITH CONCRETE AND ASPHALT CONTRACTORS.
7. THE ELEVATION OF THE SUB-GRADE SHALL BE SET SO THE FINAL GRADE CAN BE MET BY THE PAVEMENT CROSS SECTION. NOTE SLEEVES ADDED UNDER TRACK TO BE BORED PRIOR TO TRACK RECONSTRUCTION. PROVIDE CONSISTENT DEPTH OF TOPSOIL OVER ENTIRE FIELD.
8. SLOPE AWAY FROM TRACK AT A MINIMUM OF 2%.
9. WALKS SHALL NOT EXCEED 5% SLOPE IN THE DIRECTION OF TRAVEL. THE CROSS SLOPE ON WALKS SHALL NOT EXCEED 2%.
10. SWALES SHALL BE CONSTRUCTED WITH SMOOTH TRANSITIONS.
11. SWALES AND FINAL GRADING TO BE REVIEWED ON-SITE BY OWNER BEFORE FINAL APPROVAL OF COMPLETION.
12. **IMPORT TOPSOIL FROM LOCATION SHOWN ON PLANS APPROXIMATELY 1.5 MILS TO THE EAST. COORDINATE ACCESS TO TOPSOIL STOCKPILE W/DISTRICT AND CITY OF EUREKA. CITY OF EUREKA IS DONATING ALL TOPSOIL FOR PROJECT.**

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

CONSTRUCTION DRAWINGS

design west | architects
255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH
BLAKE C. WRIGHT
NO. 105101
LICENSED LANDSCAPE ARCHITECT

GRADING PLAN

C-301

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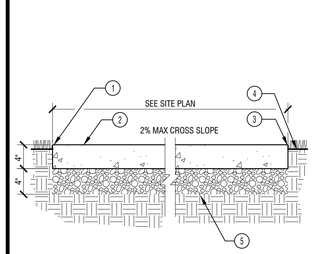
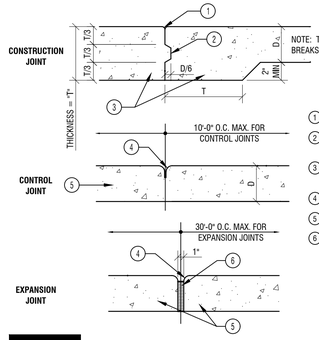


1. EXPANSION JOINT WHERE BUILDING OCCURS
2. 4" CONCRETE PAVEMENT, ROUGH BROOM FINISH
3. TOOL EDGES
4. FINISH GRADE 1" BELOW TOP OF WALK FOR SOD; 1-1/2" FOR SEEDED LAWN
5. 4" AGGREGATE BASE

1 CONCRETE WALK

1" = 1'-0"

P-1-TSD-TIN-34



NOTE: TO BE USED AT POUR BREAKS AND WHERE SPECIFIED.

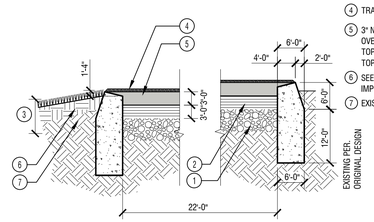
1. 1/4" RADIUS
2. METAL OR WOOD FORMED KEYWAY
3. THICKEN SLABS TO 6" MINIMUM AT CONSTRUCTION JOINTS
4. 1/2" RADIUS TROWELED JOINT
5. TYPICAL SLAB-ON-GRADE
6. EXPANSION JOINT FILLER

2 JOINT SECTIONS

1 1/2" = 1'-0"

P-1-TSD-TIN-35

NOTE:
CURB DIMENSIONS ARE TAKEN FROM ORIGINAL DESIGN DRAWINGS.

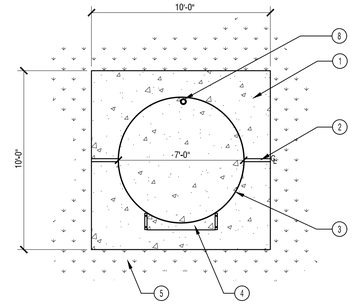


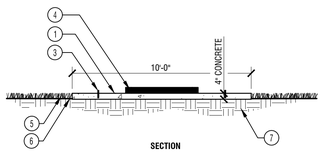
1. ASSUMED GRAVEL BASE
2. MILL & RE-COMPACT EXISTING ASPHALT SURFACE TO 3" DEPTH
3. SEE TURF DETAIL FOR PROFILE
4. TRACK SURFACE
5. 3" NEW ASPHALT OVERLAY TO MATCH TOP OF EXISTING CURB TOPS
6. SEE GRADING, IMPORTED TOPSOIL
7. EXISTING SOIL

3 CONCRETE CURB AT STRAIGHTAWAYS

3/4" = 1'-0"

P-1-TSD-TIN-04





1. 3500 PSI CONCRETE FIBER MESH
2. 50 MM PAINT SECTOR LINE
3. METAL RING
4. TOE BOARD
5. GRASS
6. TOP OF ROUGH GRADE
7. COMPACTED SUBGRADE
8. PROVIDE PVC OUTLET DRAIN AT BACK OF CIRCLE

NOTE:
INSTALL HAMMER/DISCUS SAFETY CAGE AROUND CIRCLE PER MANUFACTURER'S INSTRUCTIONS

4 SHOT PUT CIRCLE

1/4" = 1'-0"

P-1-TSD-TIN-17

1. 4" CRUSHED FINES OR APPROVED EQUAL
2. EDGE OF REQUIRED THROW SECTOR
3. GEOTECH FABRIC
4. 4x4x10 PRESSURE TREATED WOOD EDGING
5. GRASS
6. TOP OF ROUGH GRADE
7. #4 REBAR X 2'-6" LONG AT 3'-0" O.C. AND 12" FROM END
8. COMPACTED OR UNDISTURBED SOIL

5 SHOT PUT THROW AREA EDGE

1" = 1'-0"

P-1-TSD-TIN-24

1. 6" X 4'-0" CONCRETE RUNWAY
2. ADJACENT LANDSCAPE
3. AGGREGATE
4. (4) #4 REBAR

6 RUNWAY CROSS SECTION

3/4" = 1'-0"

P-1-TSD-TIN-26

1. PSI CONCRETE CURB
2. LONG JUMP TAKE-OFF BOARD WITH DRAIN HOLE
3. PAINTED STRIPES (TYP.)

7 SAND PIT THICKENED EDGE

3/16" = 1'-0"

P-1-TSD-TIN-27

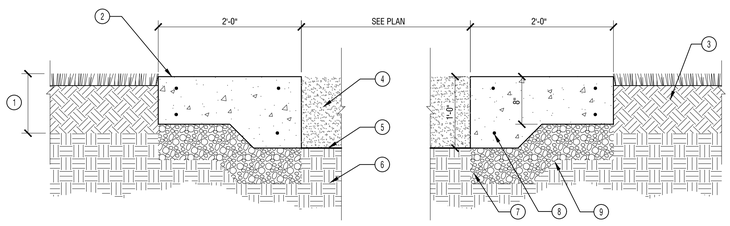
1. 6"x12" 3500 PSI CONCRETE FIBER MESH
2. (2) #3 REBAR
3. NATURAL GRASS FIELD
4. TRACK SURFACE
5. ASPHALT
6. 3/4" GRAVEL BASE
7. TOP OF GRADE
8. PIT RUN
9. COMPACTED SUBGRADE

NOTE:
IS SUBGRADE IS COMPACTED DURING CONSTRUCTION, RECONDITION SUBGRADE TO MIN. OF 8" DEPTH-SCARIFY & COMPACT TO 92% COMPACTION.

8 HIGH JUMP & CURB

3/4" = 1'-0"

P-1-TSD-TIN-100



1. SEE SOD DETAIL FOR PROFILE
2. CONCRETE CURB
3. SPECIFIED TOPSOIL MIX, SEE SPECS FOR DEPTH
4. MASONRY SAND
5. GEOTECH FABRIC
6. COMPACTED SUBGRADE
7. 6" MIN. CRUSHED GRAVEL BASE
8. #4 REBAR TOP AND BOTTOM
9. TOP OF ROUGH GRADE

9 SAND PIT THICKENED EDGE SECTION

1" = 1'-0"

P-1-TSD-TIN-28

design west | architects
LOGAN UT 84321
255 SOUTH 300 WEST
SALT LAKE CITY UT 84103
795 NORTH 400 WEST

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

DESCRIPTION:
DATE:
MARK:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH · BLAKE C. WRIGHT · NO. 10901 · LANDSCAPE ARCHITECT

CONSTRUCTION DRAWINGS

DETAILS

C-501

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SECTION 02751
CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes concrete paving for curbs, gutters, walkways and pavement.

1.2 SUBMITTALS

A. For each manufactured material and product indicated.

B. Design mixes for each concrete mix indicated.

C. Materials certificates.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

B. ACI Publications: Comply with ACI 301, "Specifications for Structural Concrete", unless modified by the requirements of the Contract Documents.

C. Comply with local governing regulations if more stringent than herein specified.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

B. Reinforcing Bars: ASTM A 615, Grade 60 (Grade 420), deformed.

C. Joint Dowel Bars: ASTM A 615, Grade 60, plain steel bars. Cut bars true to length with ends square and free of burrs.

D. Plain Steel Wire: ASTM A 82.

E. Bar Supports: Bolsters, chairs, spacers and other devices for spacing, supporting, and fastening steel reinforcement. Manufacture bar supports according to CRSI's "Manual of Standard Practice."

2.2 FORMS

A. Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

B. Use flexible spring steel forms or laminated boards to form radius bends as required.

C. Coat forms with a non-staining form release agent that will not discolor or deface surface of concrete.

2.3 CONCRETE MATERIALS

A. Concrete Materials: Comply with requirements of applicable Division-3 sections for concrete materials, admixtures, bonding materials, curing materials, and others as required.

2.4 RELATED MATERIALS

A. Expansion and Isolation Joint Materials: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

B. Detectable Warning Surface - In-line truncated dome pattern that meets ADA requirements height, spacing, size and durability. Provide a color that contrasts visually with the adjoining surfaces (either light-on-dark or dark-on-light). Acceptable products for installation are as follows:

1. Polymer Composite Panel - Polymer Composite, homogenous integral color (UV stable), skid resistant, non-glare finished panel. Use for new construction or retrofit construction.
2. Precast Concrete Panel - High strength concrete with high tensile stainless steel tendons, homogeneous integral color (UV stable), skid resistant panel. Use for new construction, or retrofit construction.

2.5 CONCRETE MIXES AND MIXING

A. Concrete Mixes: Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, with the following properties:
1. Compressive Strength (28 Days): 3000 psi
2. Maximum Water-Cementitious Materials Ratio: 0.45
3. Slump Limit: 4 inches
4. Air Content: 4.5 to 7.5 percent.

B. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd. (0.60 kg/cu. m).

C. Ready-Mixed Concrete: Comply with requirements and with ASTM C 94 and ASTM C 1116.

D. Project-Site Mixing: Comply with requirements and measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Surface Preparation: Proof-roll prepared sub base, and remove loose material from surface.

B. Forms: Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations.

C. Reinforcement: Accurately position and support reinforcement, and secure against displacement. Set wire ties with ends directed into concrete.

1. Install welded wire fabric in lengths as long as practicable; lap at least one full mesh, and lace splices with wire.

D. Joints: Locate and install construction, isolation, contraction, and expansion joints as indicated.

E. Concrete Placement: Comply with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete. Place concrete in a continuous operation within planned joints or sections.

1. Moisten sub base to provide a uniform dampened condition at time concrete is placed.
2. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping according to recommendations in ACI 309R.
3. Screed and initial-float concrete surfaces with darby or bull float before excess moisture or bleed water appears on the surface.
4. Protect concrete from cold or hot weather during mixing, placing, and curing.

F. Evaporation Retarder: Apply to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lbs./sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

G. Pavement Tolerances: Comply with tolerances in ACI 330.1, "Specification for Plain Concrete Parking Lots."

H. Detectable Warning Surface: Comply with either of the following

1. Polymer Composite Panel Installation:

a. Install cast-in-place detectable warning panel directly into the finished plastic concrete surface in accordance with manufacturer recommendations. Provide a smooth transition between the panel and the surrounding concrete surface.
b. Install surface applied detectable warning panel directly on existing concrete surface in accordance with manufacturer's recommendations and installation procedures. Use mechanical fasteners to secure the panel to the existing surface. Caulk a smooth transition bead along beveled panel edge and surrounding concrete surface.

2. Precast Concrete Panel Installation:

a. Install per manufacturer recommendations for cast-in-place or thin set method. Provide a smooth transition between the panel and the surrounding concrete surface.

3.2 FINISHES AND CURING

A. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Float surfaces to true planes with gaps below 10-foot-long, unleveled straightedge not to exceed 1/4 inch. Cut down high spots, and fill low spots. Refloat surface immediately to uniform granular texture.

1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
2. Medium-to-Fine- Textured Broom Finish: Draw a soft bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.
3. Medium-to-Coarse- Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

B. Curing: Begin curing after finishing concrete, but not before free water has disappeared from concrete surface. Cure concrete by one or a combination of the following methods:

1. Moisture cure concrete by water, continuous fog spray, continuously wet absorptive cover, or by moisture-retaining-cover curing. Keep surfaces continuously moist for not less than seven days.
2. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.3 REPAIRS AND PROTECTION

A. Remove and replace concrete pavement that is broken, damaged, or defective, or does not meet requirements in this Section.

B. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement.

C. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

SECTION 311000
SITE CLEARING

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 the following:
1. Removing trees and other vegetation.
2. Clearing and grubbing.
3. Topsoil stripping.
4. Removing above-grade site improvements.
5. Disconnecting, capping or sealing, and removing site utilities.
B. Related Sections include the following:
1. Division 1 Section "Temporary Facilities and Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
2. Division 31 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.

1.3 DEFINITIONS
A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of weeds, roots, and other deleterious materials.

1.4 MATERIALS OWNERSHIP
A. Materials indicated to be stockpiled or to remain are the Owner's property. Cleared materials shall become Contractor's property and shall be removed from the site.

1.5 SUBMITTALS
A. Photographs, DVD or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
B. Record drawings according to Division 1 Section "Closeout Procedures."
1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE
A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.7 PROJECT CONDITIONS
A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
B. Improvements on Adjoining Property: Authority for performing indicated removal and/or access on property adjoining Owner's property will be obtained by Owner before award of Contract.
C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
D. Notification: Notify utility locator service for area where Project is located before site clearing.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 PREPARATION
A. Protect and maintain benchmarks and survey control points from disturbance during construction.
B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
C. Locate and clearly flag trees and vegetation to remain or to be relocated.
D. Protect existing site improvements to remain from damage during construction.
1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TREE PROTECTION
A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.
B. Do not excavate within drip line of trees, unless otherwise indicated.
C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-line spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
1. Cover exposed roots with burlap and water regularly.
2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
4. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.
D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.
1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified arborist.

3.3 UTILITIES
A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
1. Arrange to shut off indicated utilities with utility companies.
B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.
C. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING
A. Remove obstructions, asphalt & concrete paving, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
4. Use only hand methods for grubbing within drip line of remaining trees.
B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding 8-inch (200-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING
A. Remove sod, grass, asphalt and concrete paving before stripping topsoil
B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
2. Do not stockpile topsoil within drip line of remaining trees.
3. Dispose of excess topsoil as specified for waste material disposal.
4. Stockpile surplus topsoil and allow for respreading deeper topsoil.

3.6 SITE IMPROVEMENTS
A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

3.7 DISPOSAL
A. Topsoil: All salvageable Topsoil is to be stockpiled as described above and is to remain the property of the Owner. Construction Manager will notify Contractor if excess Topsoil becomes available for disposal off site.
B. Disposal: Remove surplus non-topsoil soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000

SECTION 312200
SITE EXCAVATION AND ROUGH GRADING

PART 1 - GENERAL

1.1 DESCRIPTION
A. Definitions:
1. Unsuitable material: Debris and/or soil material judged unsuitable by Engineer for support of slabs or other site improvements.
2. Engineer: Soils Engineer employed by Owner, empowered to conduct inspections and make approvals.

1.2 QUALITY ASSURANCE
A. Compaction density test:
1. Modified Proctor, ASTM-D 1557.
B. Layout work by Surveyor or Civil Engineer registered in the State of Utah. Identify benchmark to be used in establishing grades.
C. Owner will hire an independent soils laboratory to conduct in place moisture and density tests.
D. Tolerances of sub-grade:
1. Unsurfaced areas: Plus/minus 0.20 FT from required elevations.
2. Paved areas: Plus/minus 0.10 FT from required elevations.

1.3 JOB CONDITIONS
A. Protect existing facilities, utilities (overhead and underground), sidewalks, pavement.
1. Repair damaged items.
2. Notify Owner and make emergency repair as directed.

B. Protect graded areas against erosion.
1. Re-establish grade where settlement or washing occurs at no extra cost.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Fill materials:
1. Reasonably free of roots, organic material, trash, frozen matter, and stones larger than 6 IN.
2. Add water to dry material, as required.
3. Allow wet material to dry, as required.
4. Fill can only be obtained on site where removed from excavating and grading.
5. Provide additional off-site borrow or fill as required.

B. Surplus material:
1. Remove from site.

PART 3 - EXECUTION

3.1 PREPARATION
A. Layout units, structures, piping, roads, parking areas and walks and establish their elevations.
B. Perform other layout work required.
C. Preparation for embankments and fills:
1. Remove topsoil over areas to be cut and filled that was not previously removed by stripping and grubbing.
2. Remove all unconsolidated fill as described in the Geotechnical Investigation report prepared by A Cache Corp, dated November 14, 2013.
3. Before fill is started, scarify to a minimum depth of 6 IN under new roads, parking lots, or streets.
4. Bring to optimum moisture content.
5. Compact to a minimum 95 percent.
6. In areas where existing ground surface is steeper than one vertical to four horizontal, bench surface in order to spread fill horizontally so that fill material will bond with existing surface.

3.2 GENERAL
A. Excavate and grade materials to design elevations.
B. Excavate and grade site to subgrades of paved and unpaved areas as indicated.
C. Excavate for miscellaneous footings, slabs, walks and other structures.
D. Cut and fill as required to bring existing grades to rough grades.
E. Furnish and place additional approved material required to bring subgrade to proper line and grade.
F. During construction, shape and drain embankments and excavation.
G. Maintain ditches and drains to provide drainage.
H. Provide pumping if required.
I. Remove unsuitable materials which cannot be compacted as specified and replace with suitable material.
1. Dispose material on site as directed.
2. Dispose material off site as directed.

J. Remove materials unsuitable to receive fill and replace with suitable material.

3.3 CONSTRUCTION OF EMBANKMENTS AND FILLS
A. Construct embankments and fills to lines and grades.
B. Make completed fill correspond to shape of typical cross section or contour indicated regardless of method used to indicate shape, size, and extent of line and grade of work.
C. Insure that cobbles larger than 4 IN, are not placed in upper 6 IN of fill or embankment.
D. Place material in lifts, maximum 8 IN loose thickness.
E. Place layers horizontally and compact each layer to specified density prior to placing additional fill.
F. Compact using suitable equipment.
1. Control moisture to meet requirements of compaction.
2. Place materials within 3 percent above to 3 percent below optimum moisture content.

G. Under roadways and parking areas and extending 1 FT beyond proposed curb line measured perpendicular from centerline, compact to 95 percent maximum dry density.
H. Under walk paving, compact to 95 percent maximum dry density.
I. For other embankments and fills not listed, compact to 90 percent of maximum dry density.
J. Under proposed building and structures, compact to density as specified in Section 312300.

END OF SECTION 312200

SECTION 312300
EARTHWORK

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 the following:
1. Preparing subgrades for slabs-on-grade, walks, pavements, lawns, and plantings.
2. Excavating and backfilling for buildings and structures.
3. Drainage course for slabs-on-grade.
4. Subbase course for concrete walks and pavements.
5. Base course for asphalt paving.
6. Subsurface drainage backfill for walls and trenches.
7. Excavating and backfilling trenches within building lines.
8. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.
B. Related Sections include the following:
1. Division 1 Section "Construction Facilities and Temporary Controls."
2. Division 31 Section "Site Clearing" for site stripping, grubbing, removing topsoil, and protecting trees to remain.

1.3 DEFINITIONS
A. Backfill: Soil materials used to fill an excavation.
1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.
B. Base Course: Layer placed between the subbase course and asphalt paving.
C. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.
D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
F. Excavation: Removal of material encountered above subgrade elevations.
1. Bulk Excavation: Excavations more than 10 feet (3 m) in width and pits more than 30 feet (9 m) in either length or width.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
G. Fill: Soil materials used to raise existing grades.
H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
I. Subbase Course: Layer placed between the subgrade and base course for asphalt paving, or layer placed between the subgrade and a concrete pavement or walk.
J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
K. Utilities: Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS
A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
1. Classification according to ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.
2. Laboratory compaction curve according to ASTM D 1557 for each on-site or borrow soil material proposed for fill and backfill.

1.5 PROJECT CONDITIONS
A. Site Information: A Geotechnical Investigation of this site has been prepared. Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that Owner will not be responsible for interpretations or conclusions drawn therefrom by Contractor. Data are made available for convenience of Contractor.
1. Additional test borings and other exploratory operations may be made by Contractor at no cost to Owner.
B. No additional monies for exporting or importing of soil.
1. As part of the Construction Documents, Owner may have provided Contractor with a Topographic Survey performed by manual or aerial means. Such Survey was prepared for project design purposes and is provided to the Contractor as a courtesy. It is expressly understood that such survey may not accurately reflect existing topographical conditions and typically will vary from actual conditions by a significant degree. It is the Contractor's responsibility to verify actual existing conditions by whatever means the Contractor deems appropriate. The Contractor shall be responsible for determining their own earthwork quantities and not rely on any estimate prepared by the Owner, its Agents or outside parties. The Contractor is responsible as part of its lump sum bid price for the project, for importing or exporting soils to achieve final sub-grades with suitable soils per the plans and specifications. No additional monies will be allowed beyond the Contractor's Lump Sum Bid Price for the project, for the exporting or importing of soils.
C. Existing Utilities: Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.
1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
2. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated:
3. Notify Architect not less than seven (7) days in advance of proposed utility interruptions.
4. Do not proceed with utility interruptions without Architect's written permission.
5. Contact utility-locator service for area where Project is located before excavating.
D. Utilities to be removed: Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.
E. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights.
1. Operate warning lights as recommended by authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS
A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
B. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 4 inches (100 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
C. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
D. Backfill and Fill: Satisfactory soil materials.
E. Subbase: Naturally or artificially well graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 70 percent passing a 3/4- inch (18-mm) sieve and not more than 25 percent passing a No. 200 (0.075-mm) sieve.
F. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; conforming to the 1 inch gradation requirements of Section 301 of the UDOT Standard Specification for Road and Bridge Construction.
G. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 70 percent passing a 3/4-inch (18-mm) sieve and not more than 25 percent passing a No. 200 (0.075-mm) sieve.
H. Bedding: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
I. Drainage Fill: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2- inch (38-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
J. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 ACCESSORIES
A. Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored as follows:
B. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches (750 mm) deep; colored as follows:
1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.
C. Trace Wire: Insulated 10 gage copper, suitable for direct bury.

PART 3 - EXECUTION

3.1 PREPARATION
A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2 DEWATERING
A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES
A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL
A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.5 EXCAVATION FOR STRUCTURES
A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.1 FT (25 mm). Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. If required to not disturb bottom of excavation, excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
2. Excavation for Underground Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 0.1 FT (25 mm). Do not disturb bottom of excavations intended for bearing surface.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS
A. Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades.

3.7 EXCAVATION FOR UTILITY TRENCHES
A. Trench Excavation: Excavate trenches to indicated gradients, lines, depths, and elevations.
1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
2. Trench Clearance: Excavate trenches to uniform widths to provide a working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
3. Clearance: 12 inches (300 mm) on each side of pipe or conduit.
C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
3. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.
D. Trench Bottoms: Excavate trenches 4 inches (100 mm) deeper than bottom of pipe elevation to allow for bedding course. Hand excavate for bell of pipe.
1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.8 TRENCH SUPPORT SYSTEMS
A. Trench support system shall be suitable for the soil structure, depth of cut, water content of soil, weather conditions, superimposed loads and vibration. Contractor may select one of the following methods of ensuring the safety of workers in the trench, as approved by the Utah State Industrial Commission or its safety inspectors:
1. Sloping the sides of the trench to the angle of repose at which the soil will remain safely at rest.
2. Shoring trench sides by placing sheeting, timber shores, trench jacks, bracing, piles, or other materials to resist pressures surrounding the excavation.
3. Using a movable trench box built-up of steel plates and heavy steel frame of sufficient strength to resist the pressures surrounding the excavation

3.9 APPROVAL OF SUBGRADE
A. Notify Architect when excavations have reached required subgrade.
B. If Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
C. Proof roll subgrade with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated subgrades.
D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect.

3.10 UNAUTHORIZED EXCAVATION
A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Architect.
1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.

3.11 STORAGE OF SOIL MATERIALS
A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.12 BACKFILL
A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for record documents.
3. Inspecting and testing underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

3.13 UTILITY TRENCH BACKFILL
A. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
B. Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings; fill with concrete to elevation of bottom of footings.
C. Provide 4-inch- (100-mm-) thick, concrete-base slab support for piping or conduit less than 30 inches (750 mm) below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches (100 mm) of concrete before backfilling or placing roadway subbase.
D. Place and compact initial backfill of subbase material, free of particles larger than 1 inch (25 mm), to a height of 12 inches (300 mm) over the utility pipe or conduit.
1. Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of utility system.
E. Coordinate backfilling with utilities testing.
F. Place and compact final backfill of satisfactory soil material to final subgrade.
G. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.14 FILL
A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.
B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
C. Place and compact fill material in layers to required elevations as follows:
1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

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LOGAN UT 84321
255 SOUTH 300 WEST
SALT LAKE CITY UT 84103
795 NORTH 400 WEST

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST.
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

DESCRIPTION:
DATE:
MARK:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH — BLAKE C. WRIGHT — NO. 10501 — LANDSCAPE

CONSTRUCTION DRAWINGS

SITE SPECIFICATIONS

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3.15 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
   2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.16 COMPACTION OF BACKFILLS AND FILLS

A. Place backfill and fill materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
   1. Under structures, building slabs, steps, and pavements, scarify and recompact top 6 inches (150 mm) of existing subgrade and each layer of backfill or fill material at 95 percent. Compact to 98 percent for fills thicker than 6 feet deep.
   2. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill material at 95 percent.
   3. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill material at 90 percent.

3.17 GRADING

A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
   1. Lawn or Unpaved Areas: Plus or minus 0.2 FT (25 mm).
   2. Walks: Plus or minus 0.1 FT (25 mm).
   3. Pavements: Plus or minus 0.1 FT (13 mm).

C. Grading inside Building Lines: Finish subgrade to a tolerance of 0.1 FT (13 mm) when tested with a 10-foot (3-m) straightedge.

3.18 SUBBASE AND BASE COURSES

A. Under pavements and walks, place subbase course on prepared subgrade and as follows:
   1. Place base course material over subbase.
   2. Compact subbase and base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
   3. Shape subbase and base to required crown elevations and cross-slope grades.
   4. When thickness of compacted subbase or base course is 6 inches (150 mm) or less, place materials in a single layer.
   5. When thickness of compacted subbase or base course exceeds 6 inches (150 mm), place materials in equal layers, with no layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick when compacted.

B. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches (300 mm) wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.19 DRAINAGE COURSE

A. Under slabs-on-grade, place drainage course on prepared subgrade and as follows:
   1. Compact drainage course to required cross sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.
   2. When compacted thickness of drainage course is 6 inches (150 mm) or less, place materials in a single layer.
   3. When compacted thickness of drainage course exceeds 6 inches (150 mm), place materials in equal layers, with no layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick when compacted.

3.20 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.

D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
   1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 1000 sq. ft. (186 sq. m) or less of paved area or building slab, but in no case fewer than three tests.
   2. Foundation Wall/Continuous Footing Backfill: At each compacted backfill layer, at least one test for each 15 linear feet or less of wall length, but no fewer than two tests.
   3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 40 feet or less of trench length, but no fewer than two tests.
   4. Spot Footings: Minimum of 1 compaction test for each lift for each spot footing.
   5. Sidewalks, Curbs, Gutters, Pads: Minimum of 1 test for each lift for each 40 lineal feet or 1 test for every 1000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.

E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.21 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
   1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.22 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 312300

SECTION 312500
EROSION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section covers the work required for erosion control during construction. Any local or State Agency requirements will be considered part of these specifications.

B. Obtain the National Pollution Discharge Elimination System (NPDES) Permit for storm water discharge associated with construction activity.

C. Obtain a UPDES Storm Water General Permit for Construction Activities (Permit #UTR100000) or an alternate individual permit. Applications are available online at www.waterquality.utah.gov/UPDES/stormwater.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Silt fence shall be a woven fabric that meets the following criteria:

Property	Unit	Test Method	Values
Grab Strength	lbs	ASTMD-4632	90 min
Grab Elongation	%	ASTMD-4632	40 max
Water Flow Rate	gal/min/ft2	ASTMD-4491	15 min
Ultraviolet Stability	%	ASTMD-4355	70% min

PART 3 - EXECUTION

3.1 EXECUTION

A. Silt fence shall be placed in accordance with plans and details. The placement of silt fence and/or bales shall consider drainage paths and intercept drainage prior to leaving the site or entering a storm sewer system. Removal of silt and replacement of silt fence and/or bales shall be on going through the duration of the project to maintain an effective silt removing barrier.

B. Sediment Basin and/or sinks shall be constructed to dimensions shown on the plans. The basins and/or sinks shall be cleaned as required to maintain specified size and depth.

C. All temporary grading of drainage channels, slopes or fills shall be in accordance with Division 31 Section "Earthwork".

END OF DOCUMENT 312500

SECTION 321822
HOT MIX ASPHALT PAVING

This Short Language Version (SLV) Section was condensed from the updated Basic Version Section of the same title and number. See Basic Section's Cover for changes from the previous edition of this Section.

Caution: Use SLV Sections for small, simple, private projects that are negotiated rather than bid; for projects limited to traditional materials and methods; and for projects where the Architect has reduced or no contract administration responsibilities.

See Basic Section's Text and Evaluations when editing this SLV Section. The Basic Section contains comprehensive notes and requirements plus a greater number of options.

This SLV Section includes chain-link fence fabric, framing, fittings, swing and slide gates, gate operators, and access control for residential, commercial, and industrial applications. Galvanized-coated, Zn-5-Al-MM alloy-coated (Zinc-5 percent aluminum-mischmetal alloy), aluminum-coated, and PVC-coated steel and aluminum-alloy steel and aluminum chain-link fencing are included.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Asphalt paving to be used in conjunction with the running track.

1.2 SUBMITTALS

A. Material Certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

1.3 QUALITY ASSURANCE

A. Comply with State highway or transportation department standard specifications, latest edition and with local governing regulations if more stringent than herein specified.

1.4 SITE CONDITIONS

A. Weather Limitations: Apply prime and tack coats when ambient temperature is above 50 deg F and when temperature has not been below 35 deg F for 12 hours immediately prior to application. Do not apply when base is wet or contains an excess amount of moisture.

B. Construct asphalt concrete surface course when atmospheric temperature is above 40 deg F and when base is dry. Base course may be placed when air temperature is above 40 deg F and rising.

C. Grade Control: Establish and maintain required lines and elevations.

PART 2 - PRODUCTS

2.1 ASPHALT MATERIAL

A. Asphalt shall have a maximum aggregate size of ½ inch or 5/8 inches and meet UDOT specifications.

2.2 MIXES

A. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction, designed according to procedures in specification for MOI-960 superpave, and complying with the following requirements:
   1. Provide mixes with a history of satisfactory performance in geographical area where project is located.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Proof-roll prepared sub base using heavy, pneumatic-tired rollers to locate areas that are unsuitable or that require further compaction.

B. Place geotextile fabric, GETOX 315ST by Propex, between subgrade and road base.

C. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
   1. Sweep loose granular particles from surface if unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

3.2 HOT-MIX ASPHALT PLACING

A. Machine place hot-mix asphalt on prepared surface, spread uniformly and strike-off. Place areas inaccessible to equipment by hand. Place each course to required grade, cross-section and compacted thickness.
   1. Spread mixture at minimum temperature of 250 deg F.
   2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.

B. Place paving in consecutive strips not less than 10 feet wide, unless infill edge strips of a lesser width are required. Complete base course for a section before placing surface course.

C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

D. Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density and smoothness as other sections of hot-mixed asphalt concrete course. Clean contact surfaces and apply tack coat.

3.3 COMPACTION

A. Begin compaction as soon as placed hot-mix asphalt paving will bear roller weight without excessive displacement. Compact mixture with hot, hand tampers or vibrating plate compactors in areas inaccessible to rollers.

B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Repair displaced areas by loosening and filling, if required, with hot material. Examine surface after breakdown rolling for indicated crown, grade and smoothness. Correct lay down and rolling operations to comply with requirements.

C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while mixture is hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
   1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent. Density shall be tested at Owner's expense.

D. Finish Rolling: Finish roll while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated.

E. Protection: After final rolling, do not permit vehicular traffic on pavement.

3.4 INSTALLATION TOLERANCES

A. Thickness: Compact course to produce the thickness of 2 inches indicated within the surface smoothness tolerances.

B. Surface Smoothness: Compact course to produce a surface smoothness within the following tolerances the finished surface shall not deviate more than ¼ inch under a 10 foot straightedge in any direction applied parallel at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the tolerances for smoothness.

3.5 DISPOSAL

A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.

END OF SECTION 321822

SECTION 32 1823.33

TRACK SURFACE - SEALED BASE MAT/STRUCTURAL SPRAY

PART 1 - GENERAL

1.01WORK INCLUDED

A. This work shall consist of furnishing all required labor, materials, equipment, and supplies necessary for placing a synthetic running surface and track markings on the track oval and field events, as shown on the plans.

B. The surface shall be a black, impermeable, polyurethane-bound base mat track with a structural spray finish installed to a minimum thickness of 13mm.

1.02RELATED WORK SPECIFIED ELSEWHERE

1.03QUALITY ASSURANCE

A. The track surface shall be applied by a contractor approved by the material manufacturer(s) for installation of the product specified. The contractor shall have all appropriate licenses and be bondable for the amount of the synthetic running surface contract.

B. Contractor shall furnish references for five (5) projects that have been installed over the past 3 years using the specified surface.

C. The contractor shall be a member of the American Sports Builders Association (ASBA) and have a Certified Track Builder on staff.

D. Installation shall be done in accordance with the rules and guidelines established by the National Federation of State High School Associations and the ASBA.

1.04SITE CONDITIONS

A. Surfacing shall not be done when the threat of freezing exists for the following 24 hours, rain is imminent or strong winds are occurring.

B. While surfacing and striping are being done, sprinkler systems must be curtailed, shut off, or controlled so that no water falls on the track or event areas being surfaced. Other trades, the general public and School District personnel must stay off the areas being surfaced until they are cured.

C. Do not apply synthetic surfacing when the substrate surface temperature is less than 40 degrees F.

D. Provide temporary barriers as required to prevent public entry to the construction area and to protect adjacent properties from damage during construction.

E. Keep all personnel, other than employees of the track installer, a minimum of 100 feet from equipment and workers.

1.05WARRANTY

A. Contractor shall provide a five (5) year warranty for the surface and a one (1) year warranty for the line markings against faulty materials or workmanship.

PART 2 - PRODUCT

2.01 INSTALLERS (PRE-APPROVED)

A. Beynon

B. Hellas Construction

C. Or Approved equal

2.02 MATERIALS

A. Running Track Surface: Black base mat with a black sealer coat and a black structural spray finish.

Materials include:
   1. SBR Rubber - 1-3mm
   2. Single component polyurethane binder
   3. EPDM Rubber - fine mesh
   4. Two component, black full pour sealer
   5. Single component polyurethane structural spray
   6. EPDM Rubber - .5-1.5mm

Pre-approved polyurethane manufacturers:
   1. Advanced Polymer Technology
   2. Beynon Sports Surfaces
   3. Stockmeier Urethanes USA

B. Track Markings: Paint shall be approved by the track surface materials manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION - Asphalt/Concrete Base

A. Verify asphalt and/or concrete substrate for dimensional accuracy, strength, and surface condition. Notify owner of any deficiencies.

B. It is the responsibility of the paving contractor to water flood the surface with the use of a water truck. If, after 30 minutes on a 70-degree Fahrenheit day, water holding areas are evident to a depth of more than 1/4" the paving contractor, track surfacing contractor and the Owner's representative will determine the best method of correction.

C. It is the responsibility of the general contractor to keep the substrate as clean as possible and free of excess dirt, oil, grease or any other foreign matter. Major cleaning of the base shall be the responsibility of the general contractor.

D. It is the responsibility of the surfacing contractor to thoroughly wash and/or pressure wash, as needed, all areas of the substrate as necessary to ensure adhesion of the track surface.

E. Minimum curing time before the installation of the synthetic surfacing material is 14 days for new asphalt and 28 days for new concrete. No concrete curing compounds are allowed on substrates to receive the track surface.

F. Beginning installation stipulates track installer accepts existing conditions and accepts responsibility for adhesion to the existing substrate.

3.02 PRODUCT AND MATERIAL DESCRIPTION

A. Rubber (SBR): The base mat rubber shall be specifically graded, black Styrene Butadiene Rubber (SBR). Final gradation is to be 1-3mm granulated SBR. SBR is to be dried to no more than 2.5% moisture and sealed in bags.

B. Base Mat Filler: Base mat voids shall be filled with black, fine mesh EPDM rubber.

C. Surface Rubber (EPDM): The wearing course of rubber shall be synthetic black EPDM. Final graduation is to be .5mm-1.5mm.

SURFACE RUBBER
Base Material EPDM - 20%
Hardness - Shore A 64 +/- 1
Specific Gravity - 1.53 +/- .02

D. Base Mat Binder: The base mat shall be bound by moisture-cured liquid polyurethane, compatible with the base mat rubber. No asphaltic emulsions or epoxies are allowed in the base mat.

E. Full Pour Layer: The full pour polyurethane shall be a two-component polyurethane compounded from polypropylenglycol and isocyanates based on MDI with no solvents or fillers added.

F. Structural Spray layers: The surface EPDM rubber is to be bound by two coats of spray applied material. Polyurethane is to be moisture-cured, single component, elastomeric polyurethane.

3.03 APPLICATIONS PROCEDURES

A. Prime entire surface area with a compatible polyurethane primer.

B. The base mat is to be applied at a rate of 16.5 lbs. of SBR rubber per square yard to provide an 11-mm thick mat before application of structural spray layers. The SBR rubber base is to be bound together by polyurethane binder at a rate of 20% of SBR weight. The installation of the base mat is to be done with the use of a paving machine that is specifically designed for this type of application.

C. Prior to application of the seal coat, broom a minimum of 1 lb. of fine mesh EPDM rubber per square yard into the base mat.

D. The full pour, two component polyurethane seal coat is flow applied to the base mat at a rate of 2.2 lbs. per square yard, and spread with a rubber squeegee.

E. After curing of the full pour coat, apply two coats of polyurethane structural spray in opposite directions. The total amount of material to be applied is 3.8 lbs. per square yard. The polyurethane spray is to be single component spray material mixed with EPDM rubber. The mix ratio is 60% polyurethane with 40% EPDM rubber.

3.04 STRIPING AND RACE MONUMENTATION

A. The radius points and point of curves (4) shall be laid out and verified by a licensed civil engineer, land surveyor, or by a certified track builder.

B. A licensed civil engineer specializing in track markings shall prepare a set of computerized calculations and diagrams that shall verify the accurate distance around the track for each lane and each race. All calculations should conform to the rules of the National Federation for State High School Associations.

C. The contractor shall consult with the owner prior to the start of his calculations for determination of the finish line, events to be run, color of markings, location of lane numbers and additional paint markings.

D. An experienced track striping specialist shall perform the marking utilizing paint approved for the track surface. The striping specialist shall certify the track as specified by the ASBA Class 5 certification.

END OF SECTION

design west | architects
255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS
525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

CONSTRUCTION DRAWINGS

SITE SPECIFICATIONS

C-602

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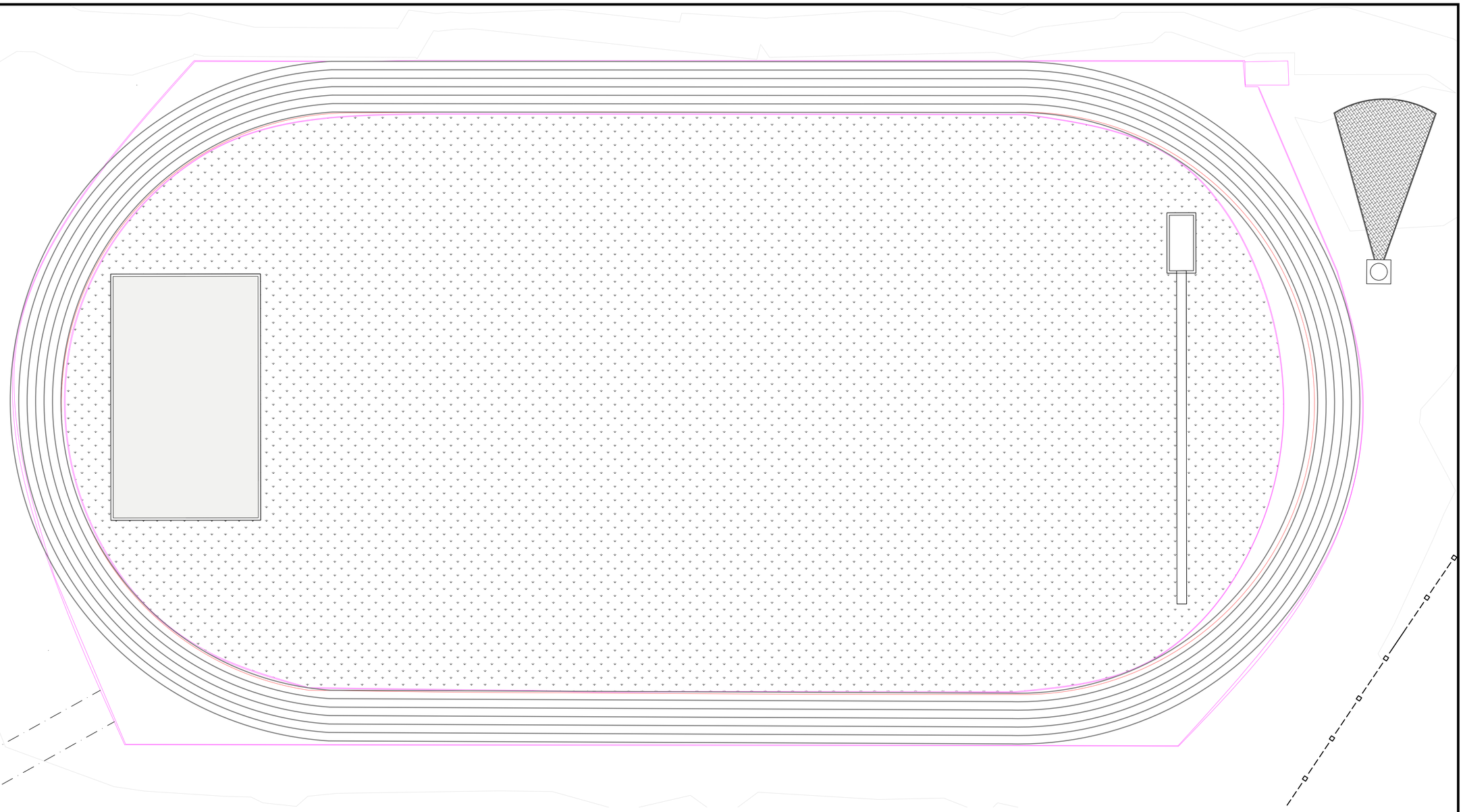

PLANTING NOTES

1. CONTRACTOR TO VERIFY ALL CONDITIONS PERTAINING TO THIS PLAN AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
2. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
3. CONTRACTOR SHALL REPAIR ALL DAMAGES CAUSED BY OPERATIONS (WHICH OCCUR ON OR OFF SITE) TO THE ARCHITECT'S AND OWNER'S SATISFACTION.
4. ALL QUANTITIES SHOWN ARE APPROXIMATE AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THEY DO NOT NECESSARILY CORRESPOND TO BID SCHEDULE ITEMS. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVER-RIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.
5. DO NOT MAKE UNAPPROVED SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.
6. REPAIR ALL LANDSCAPING WHERE NEW CONSTRUCTION MEETS EXISTING.
7. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
8. SEE COVER SHEET FOR IMPORTED TOP SOIL LOCATION.
9. SEE SHEET L-501 FOR IRRIGATION DETAILS.
10. **IMPORT TOPSOIL FROM CITY STOCKPILE APPROX. 1.5 MILES TO THE EAST OF PROJECT SITE. COORDINATE WITH OTHER TRADES TOPSOIL RESPONSIBILITY. TOP SOIL DONATED TO DISTRICT BY CITY OF EUREKA. CONTRACTOR TO LOAD & HAUL TO PROJECT SITE AS PARTY OF THIS PROJECT.**

SEEDING NOTES

SITE PREPARATION:

1. TO ENSURE SUCCESS IN ESTABLISHING SEEDS, PROPERLY PREPARE THE SITE. IF THE SITE HAS EXISTING VEGETATION IT MUST BE CONTROLLED BEFORE PLANTING. THIS MAY BE A LENGTHY PROCESS. BE SURE TO START EARLY ENOUGH TO ALLOW FOR PROPER PLANTING TIME.
2. THE MOST SUCCESSFUL METHOD TO REMOVE EXISTING VEGETATION IS WITH THE USE OF NON-SELECTIVE HERBICIDES SUCH AS ROUND-UP®. APPLY THE HERBICIDE FOLLOWING THE LABEL RECOMMENDATIONS WHEN THE VEGETATION IS ACTIVELY GROWING. AFTER TEN DAYS TO TWO WEEKS MOW AND RAKE UP THE DEAD MATERIAL. IF THE SITE IS HEAVILY COMPACTED, SHALLOW TILLAGE IS NEEDED. AVOID DEEPLY DISTURBING THE SOIL AS THIS WILL BRING UP MORE DORMANT WEED SEEDS. IF THE SOIL DOES NOT REQUIRE TILLAGE, RAKE THE SOIL TO LOOSEN THE TOP ONE TO TWO INCHES. WATER THE SITE FOR AN ADDITIONAL WEEK TO HELP GERMINATE THE NEW WEED SEEDS. WHEN THE NEW WEEDS HAVE REACHED TWO TO THREE INCHES OF GROWTH, REPEAT THE HERBICIDE APPLICATION. IF THE USE OF HERBICIDES IS NOT DESIRED, WEEDS MAY BE CONTROLLED BY TILLAGE. REPEATED TILLAGE THROUGHOUT THE GROWING SEASON WILL PROVIDE SOME WEED CONTROL. OTHER METHODS SUCH AS HAND PULLING OR CLOSE MOWING MAY HAVE SOME SUCCESS.

PLANTING THE SEEDS:

3. AFTER WEED CONTROL AND SITE PREPARATION, SEEDING MAY START. THE BED SHOULD BE FIRM ENOUGH THAT WALKING ON THE SITE WILL NOT ALLOW SINKING MORE THAN A HALF INCH. IF THE SOIL IS TOO LOOSE, WALKING OR LIGHTLY TAMPING THE SOIL WILL ACHIEVE THE REQUIRED DENSITY. APPLICATION OF THE SEED CAN BE ACCOMPLISHED BY HAND, OR WITH THE USE OF A HANDHELD OR PUSH TYPE SPREADER. MIXING SEED WITH AN INERT COMPOUND SUCH AS SAND, RICE HULLS (AVAILABLE FROM GRANITE SEED), OR SAWDUST WILL MAKE IT SIMPLER TO DISTRIBUTE THE SEEDS EVENLY, AND WILL ALLOW THE SMALL SEEDS TO FEED THROUGH THE SPREADER EASIER. AFTER APPLICATION, LIGHTLY RAKE THE SEED INTO THE SOIL. THE SEED MUST TOUCH THE SOIL, BUT DO NOT SEED DEEPER THAN ONE-EIGHTH INCH TO AN ABSOLUTE MAXIMUM OF ONE-HALF INCH.

WHEN TO PLANT:

4. THE OPTIMUM RAINFALL PERIOD, SEVERITY OF THE WINTER, AND DORMANCY OF THE SEED WILL DETERMINE THE MOST FAVORABLE TIME TO PLANT SEEDS IN THE AREA.
5. PERENNIALS CAN BE PLANTED IN THE SPRING, OR IN LATE FALL WHEN THE SEEDS WILL REMAIN DORMANT. DORMANT SEEDLINGS OFFER NATURAL STRATIFICATION OF SEEDS IN THE SOIL OVER WINTER MONTHS FOR BETTER GERMINATION IN THE SPRING, BUT THERE IS A RISK THAT EARLY SPRING WEEDS MAY DEVELOP BEFORE GERMINATION. A LATE SPRING PLANTING WITH PRE-SEEDING WEED CONTROL WILL GIVE BETTER RESULTS AND REQUIRE LESS LONG-TERM MANAGEMENT.
6. BIENNIALS CAN BE PLANTED IN SPRING, LATE SUMMER, OR LATE FALL, AS THEY NEED TO GROW, GO DORMANT, AND THEN WILL BLOOM THE FOLLOWING YEAR.

SEEDING RATE:

7. THERE IS NO SET AMOUNT FOR A SEEDING RATE. THE SPECIES IS A FACTOR TO BE CONSIDERED. IN GENERAL, FOR SMALL AREAS, THE AMOUNTS ARE ONE POUND PER TWO-THOUSAND SQUARE FEET.

AFTER PLANTING:

8. NEW SEEDS WILL NEED A MOIST SEEDBED TO ALLOW PROPER GERMINATION. IF RAINFALL IS NOT SUFFICIENT, WATER ENOUGH TO KEEP THE SITE MOIST BUT NOT WET. DO NOT APPLY WATER IN LARGE AMOUNTS AT FIRST, AS THIS MAY CREATE A CRUST THAT THE GERMINATING SEEDLINGS WILL FIND DIFFICULT TO BREAK THROUGH. AVOID FERTILIZER APPLICATIONS AS WELL. HIGH WATER AND FERTILIZER WILL BENEFIT THE COMPETING WEEDS MORE THAN THE SEEDS.
9. WHEN THE NEW GROWTH IS LARGE ENOUGH, HAND REMOVAL OF WEEDS IS BENEFICIAL. BE AWARE THAT NEW SEEDLINGS MAY RESEMBLE WEEDS THEMSELVES. A GOOD WAY TO IDENTIFY WEEDS IS TO PLANT THE SEEDS IN ROWS. ANYTHING GERMINATING OUTSIDE THE ROW SHOULD BE REMOVED. CARE SHOULD BE TAKEN WHEN REMOVING WEEDS CLOSE TO SEEDS TO NOT DAMAGE THE DESIRED PLANT.
10. IF THE MIX CONTAINS ONLY PERENNIALS, MOW AT A HEIGHT OF SIX INCHES OR HIGHER THROUGHOUT THE FIRST GROWING SEASON. CARE SHOULD BE TAKEN TO MOW BEFORE THE WEEDS SET SEED TO PREVENT FUTURE GERMINATION OF THESE SEEDS. KEEP IN MIND THAT SEEDS TAKE AT LEAST TWO YEARS TO BLOOM AND MANY TAKE AS LONG AS THREE YEARS TO REACH FULL POTENTIAL.

PLANT SCHEDULE

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	PP	109,056 sf	Poa sp. / Kentucky Bluegrass Blend	Drill Seed	

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

CONSTRUCTION DRAWINGS

design west | architects

255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS

525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH BLAKE C. WRIGHT NO. 10501 LANDSCAPE ARCHITECT

PLANTING PLAN

L-101

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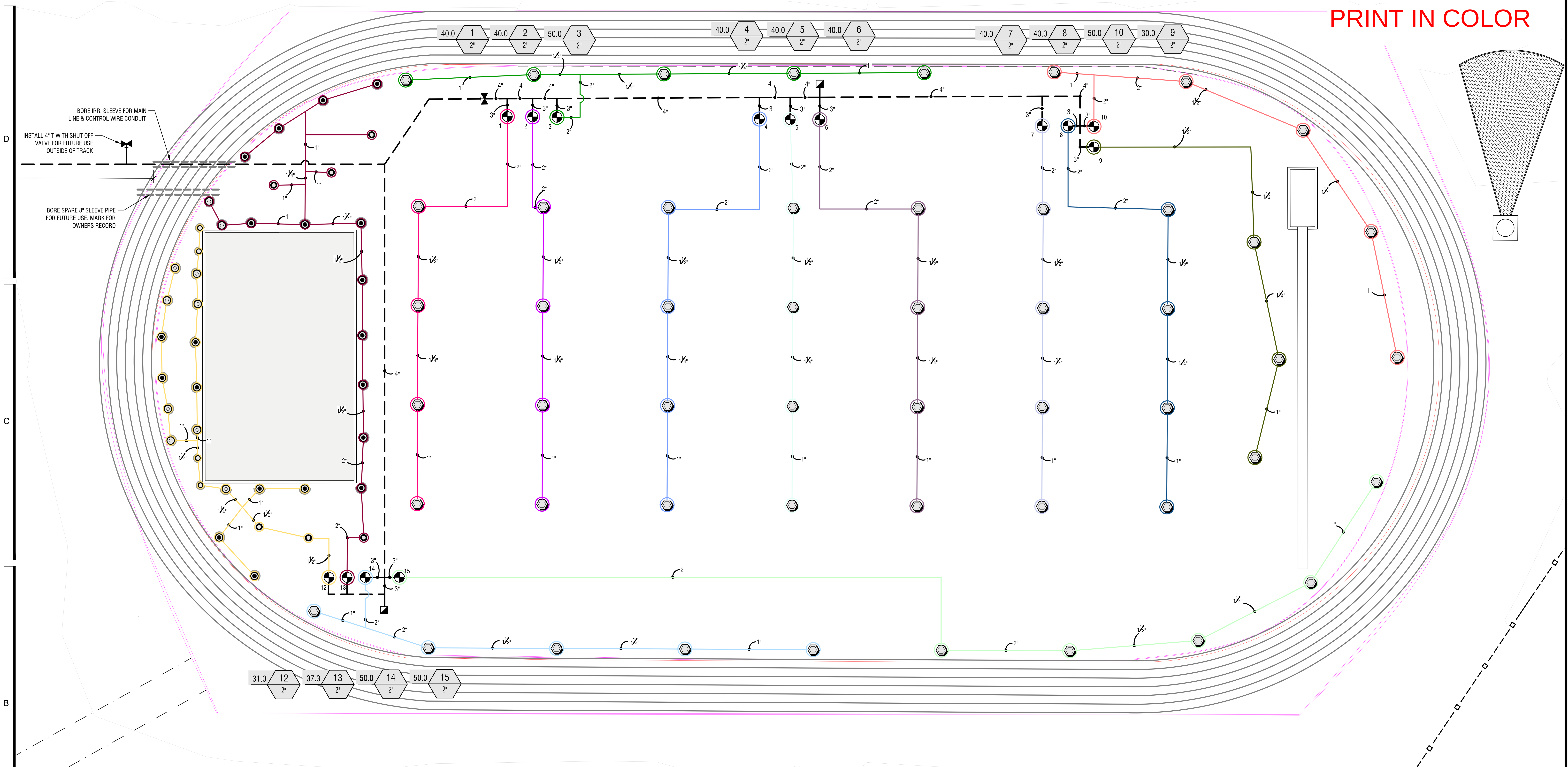
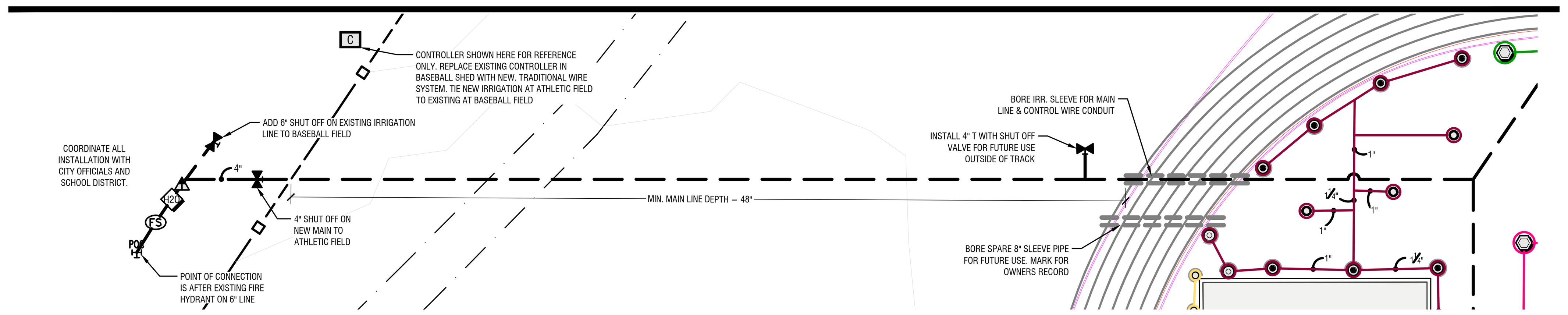
PRINT IN COLOR



IRRIGATION NOTES

1. CONTRACTOR TO VERIFY ALL CONDITIONS PERTAINING TO THIS PLAN AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
2. CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY REQUIRED FEES TO ANY GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THE WORK. INSPECTIONS REQUIRED BY LOCAL ORDINANCES DURING CONSTRUCTION SHALL BE ARRANGED AND CONDUCTED BY THE CONTRACTOR.
3. BEFORE ANY TRENCHING, EXCAVATION OR DIGGING BELOW THE SURFACE FOR ANY REASON IS BEGUN, THE CONTRACTOR SHALL HAVE THE AREA "BLUE STAKED" IN ORDER TO DETERMINE AS CLOSE AS POSSIBLE THE LOCATIONS OF ALL UNDERGROUND UTILITIES. SHOULD UTILITIES NOT SHOWN ON THE PLANS BE FOUND DURING EXCAVATIONS THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
4. THE DESIGN PRESSURE FOR THE IRRIGATION SYSTEM IS 60 PSI AT THE FARTHEST ROTOR HEAD. REPORTED AVAILABLE STATIC PRESSURE IS UNKNOWN BUT HIGH PSI. CONTRACTOR SHALL VERIFY THE AVAILABLE STATIC PRESSURE AND REPORT TO THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
5. IRRIGATION DESIGN IS DIAGRAMMATIC. PIPING, IRRIGATION VALVES AND OTHER IRRIGATION EQUIPMENT ARE OFTEN SHOWN FOR CLARITY IN AREAS ADJACENT TO LOCATIONS WHERE THEY WILL BE INSTALLED. IRRIGATION LINES AND EQUIPMENT MAY BE SHOWN ON PAVEMENT, INSIDE BUILDINGS OR ACROSS PROPERTY LINES. THE CONTRACTOR SHALL PLACE ALL IRRIGATION LINES, VALVES, ETC. IN PLANTING AREAS AND ON THE PROPERTY WHEN POSSIBLE.
6. INSTALL A PRESSURE REGULATOR AT THE SERVICE LINE P.O.C TO MAXIMIZE THE IRRIGATION SYSTEM OPERATING DESIGN PRESSURE. 6" PRESSURE REGULATOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER TO PROTECT ALL SITE CONDITIONS AND UTILITIES TO REMAIN FROM DAMAGE. WHEN OCCURS, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED WATERING OF ALL AREAS AFFECTED BY CONSTRUCTION. THIS CAN BE COMPLETED BY HAND WATERING, THE USE OF TEMPORARY IRRIGATION SYSTEMS, OR THE CONTINUED OPERATION OF EXISTING SYSTEMS NOT DISTURBED BY CONSTRUCTION.
9. ALL LINE SIZES SHOWN ARE FOR IRRIGATION PIPE. SEE SPECIFICATIONS AND DETAILS FOR SLEEVE SIZES.
10. SLEEVE CONTROL WIRES IN A 2 INCH CONDUIT NEXT TO, OR UNDER, IRRIGATION MAINLINE AS SHOWN IN DETAILS. CONTROL WIRES NOT SLEEVED SHALL FOLLOW MAINLINE AND BE BUNDLED EVERY 10 FEET.
11. INSTALL MANUAL DRAINS AT ALL LOW POINTS ON THE MAINLINE. MANUAL DRAINS NOT SHOWN ON PLAN.
12. ADJUST ALL RADII ON SPRINKLERS TO NOT SPRAY ONTO TRACK, WALLS, WALKS, SIGNS, OR FENCES.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER COVERAGE OF ALL IRRIGATED AREAS.
14. INSTALL WALL MOUNT CONTROLLER IN BASEBALL SHED, TO REPLACE EXISTING. SEE SHED ON COVER SHEET.
15. SEE SPECIFICATIONS FOR MORE INFORMATION.

IRRIGATION P.O.C. - 30 SCALE



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
14 ADJ / 14 F	Rain Bird R-VAN14 RD-06-SAM-P45-NP Turf Rotary, 8`-14` 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6" pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2" NPT Female Threaded Inlet. W/ Non-Potable Purple Cap.	4	45
18 ADJ / 18 F	Rain Bird R-VAN18 RD-06-SAM-P45-NP Turf Rotary, 13`-18` 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6" pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2" NPT Female Threaded Inlet. W/ Non-Potable Purple Cap.	10	45
24 ADJ / 24 F	Rain Bird R-VAN24 RD-06-SAM-P45-NP Turf Rotary, 17`-24` 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6" pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2" NPT Female Threaded Inlet. W/ Non-Potable Purple Cap.	26	45

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
(hexagon)	Rain Bird F4-PC, FC-SS-NP Turf Rotor, 4.0" Pop-Up, Stainless Steel Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet. With Non-Potable Purple Cover.	51	60	10.0	55'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird EFB-CP-PRS-D 1", 1-1/2", 2" Brass Remote Control Valve, that is Contamination Proof w/Self-Flushing Filter Screen. Globe Configuration, Reclaimed Water Compatible, and Purple Handle Cover Designates Non-Potable Water Use.	14
	Rain Bird 44-NP-ACME 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Non-Potable Purple Rubber Cover, 2-Piece Body and ACME thread on key interface.	2
	Harco Gasket x Male Swivel, 06 Riser Iron, Stainless Steel, Bronze Shut Off Valve. Lateral Isolation available in 2", 2.5", and 3". With 6" riser. Gasket x male swivel. EPDM seal.	4

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Netafim 61QR6IF-CXPS Netafim Quick Relief Valve, size 6", iron body with flanged connection, maximum flow 4200GPM	1
C	Hydro Point WTPRO3-C-48-CWM 18-gauge, powder-coated, cold-rolled steel, wall mount enclosure w/ key-lock entry.	1
FS	Hydro Point WTFLOWHD-I-600 Iron, high-definition flow sensor and sub-meter for 6" mainlines.	1
H2O	Maximum H2O 4" flange mount-base model	1
POC	Point of Connection 6"	1
	Irrigation Lateral Line: PVC Schedule 40	3,071 l.f.
	Irrigation Mainline: PVC Schedule 40	1,040 l.f.
	Pipe Sleeve: PVC Schedule 40	65.4 l.f.

Valve Callout: Valve Number, Valve Flow, Valve Size

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

CONSTRUCTION DRAWINGS

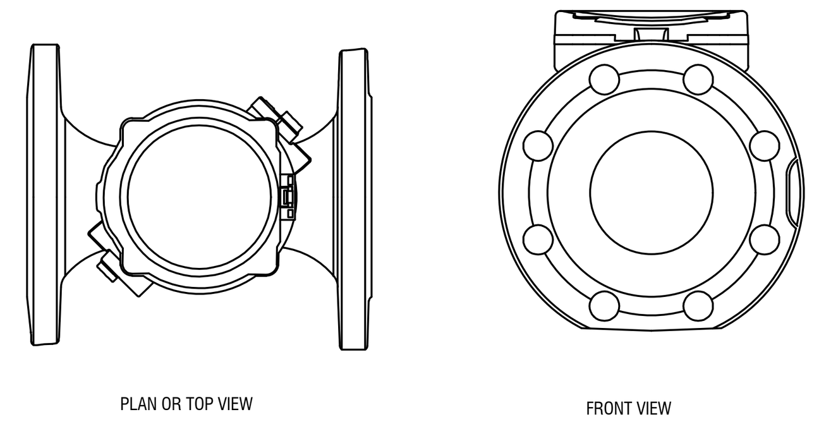
design west | architects
LOGAN UT 84321 — 255 SOUTH 300 WEST
SALT LAKE CITY UT 84103 — 795 NORTH 400 WEST

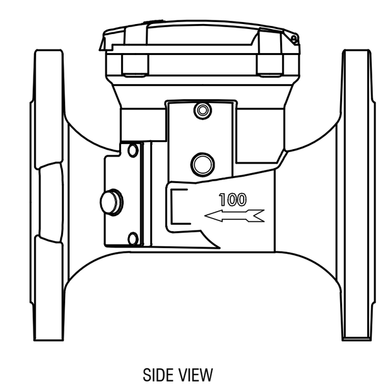
TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS
525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK: DATE: DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

IRRIGATION PLAN
L-201



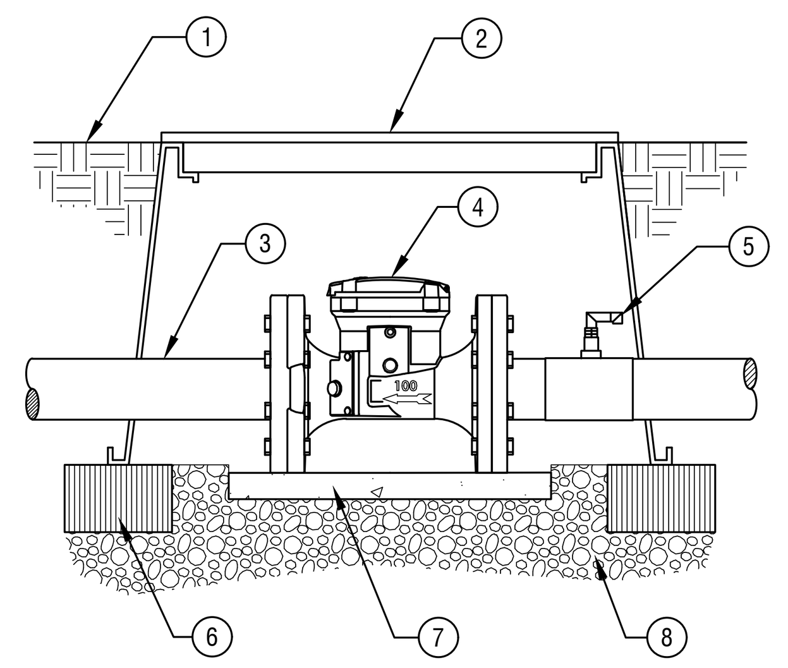


LIMITATIONS:
ALLOWING FOR A WIDE VARIETY OF APPLICATIONS AND CONDITIONS, HYDROPOINT DATA SYSTEMS, INC. IS NOT RESPONSIBLE FOR CORRECTNESS OR APPLICABILITY TO PURPOSE OR COMPATIBILITY TO ANY SITE OR JOB CONDITION. WARRANTY FOR SUITABILITY IS NOT GIVEN OR IMPLIED. MODIFICATIONS FOR SPECIFIC PURPOSES MAY BE NECESSARY AND ARE THE SPECIFIERS' RESPONSIBILITY. THE USE OF THESE DETAILS SHALL NOT BE RESTRICTED AND PUBLICATION THEREOF IS NOT LIMITED TO ANY PURPOSE. REPRODUCTION, PUBLICATION AND REUSE BY ANY METHOD IN WHOLE OR PART IS FULLY AUTHORIZED. OWNERSHIP IS RETAINED BY HYDROPOINT DATA SYSTEMS INC. VISUAL CONTACT WITH THESE DETAILS SHALL CONSTITUTE PRIMA FACIA EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

1 6" WEATHERTRAK FLOWHD

3/4" = 1'-0"

P-1-TSD-TIN-64



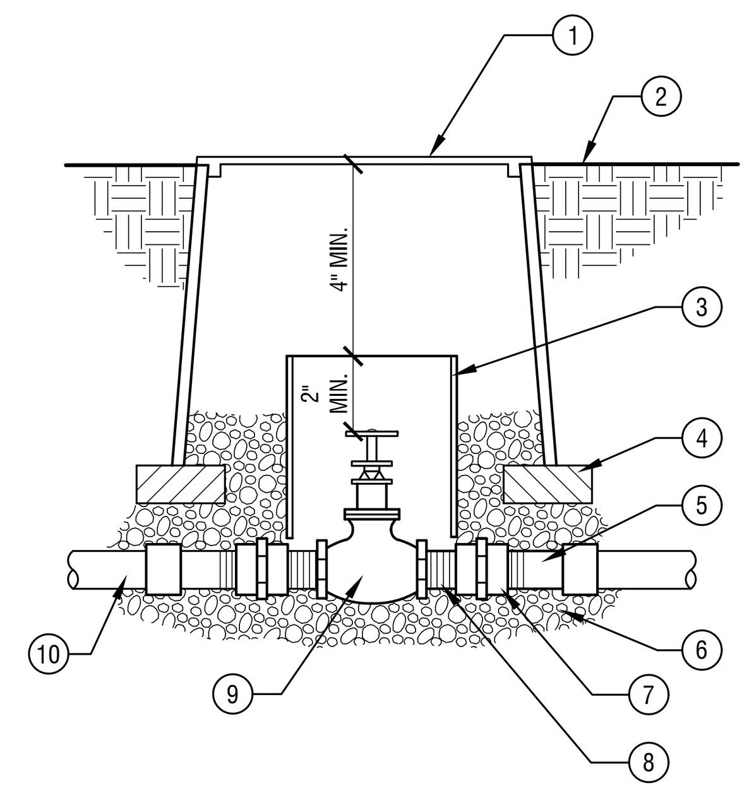
1. FINISH GRADE
2. 14" X 19" VALVE BOX
3. 6" IRRIGATION MAINLINE
4. 6" HYDROMETER
5. AIR/ VACUUM VENT
6. BRICK SUPPORT
7. CONCRETE PAVER
8. 1/2" CRUSHED GRAVEL

NOTES:
1. AT LEAST TWO (2) PIPE DIAMETERS ARE REQUIRED BOTH UP AND DOWN STREAM BETWEEN FLOWHD AND ANY FITTINGS.
2. AT LEAST FIVE (5) PIPE DIAMETERS BETWEEN A PUMP AND THE FLOWHD.
3. INSTALL A COMBINATION AIR/VACUUM OR CONTINUOUS ACTING AIR VENT RIGHT BEFORE THE FLOWHD (SEE INSTALLATION INSTRUCTIONS).

2 6" WEATHERTRAK FLOWHD INSTALLATION

1 1/2" = 1'-0"

P-1-TSD-TIN-63

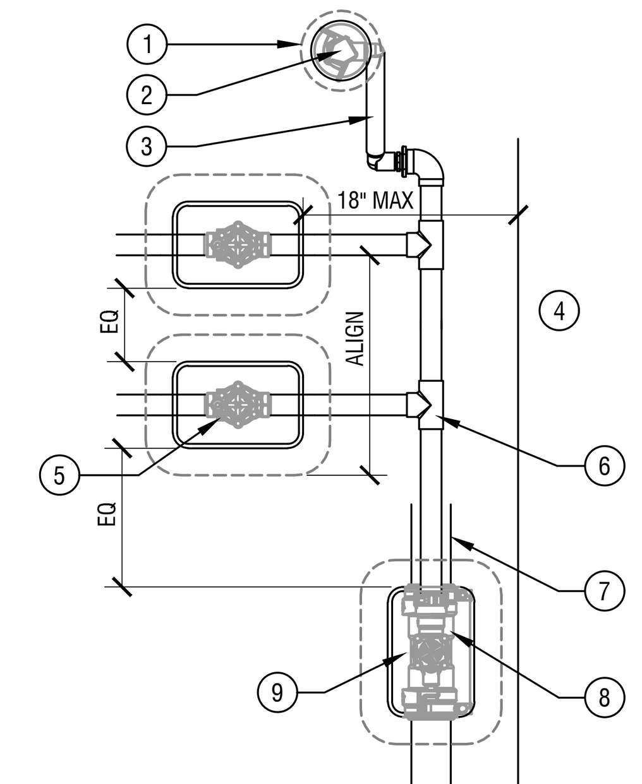


1. 10" DIA. ROUND VALVE BOX
2. FINISH GRADE
3. 6" PVC SLEEVE CL 160 LENGTH AS REQUIRED
4. BRICK PAVERS (TYP.)
5. TOE NIPPLE (TYP.)
6. 3/4" ROCK
7. PVC SCH. 80 UNION. SIZE AS REQUIRED (TYP.)
8. CLOSE NIPPLE (TYP.)
9. THREADED GATE VALVE
10. PVC MAINLINE

3 THREADED ISOLATION VALVE

3" = 1'-0"

P-1-TSD-TIN-06



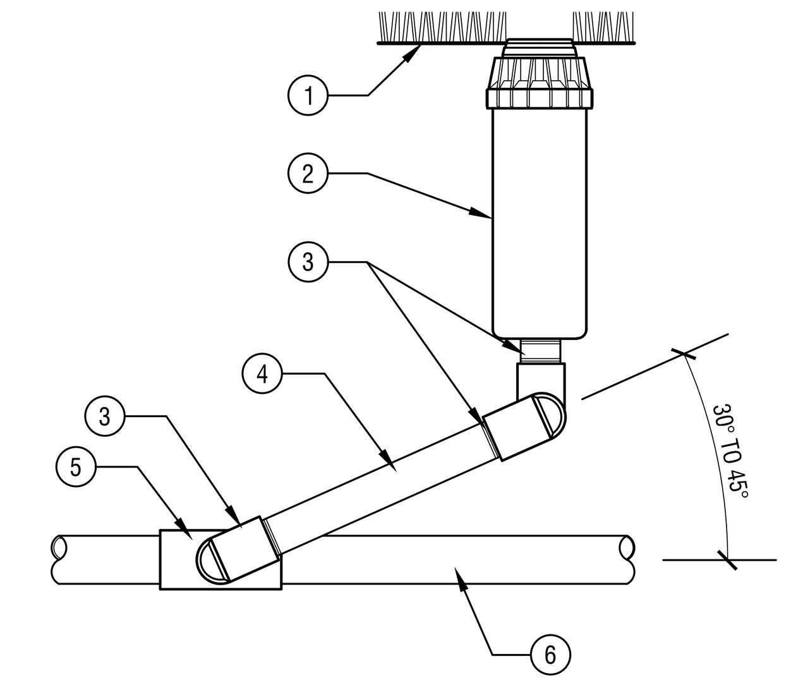
1. 10" ROUND VALVE BOX
2. 2" MANIFOLD QUICK COUPLER
3. SWING JOINT AND STABILIZER ELBOW
4. PAVED SURFACE CURBING OR FENCE LINE
5. AUTOMATIC CONTROL VALVE (TYP.)
6. PVC SCH. 80 TEE OR ELBOW
7. MAINLINE CONTINUES BELOW MANIFOLD LINE
8. 2"X6" GASKET X MALE SWIVEL LATERAL ISOLATION VALVE
9. MANIFOLD CONNECTION

NOTES:
1. NOT ALL MANIFOLD & VALVE ASSEMBLIES REQUIRE A QUICK COUPLER CONNECT. REFER TO IRRIGATION PLAN FOR QUICK COUPLER LOCATIONS.
2. SINGLE DRIP VALVES DO NOT REQUIRE A MANIFOLD ASSEMBLY

4 MANIFOLD VALVE & ASSEMBLY

1/2" = 1'-0"

P-1-TSD-TIN-09

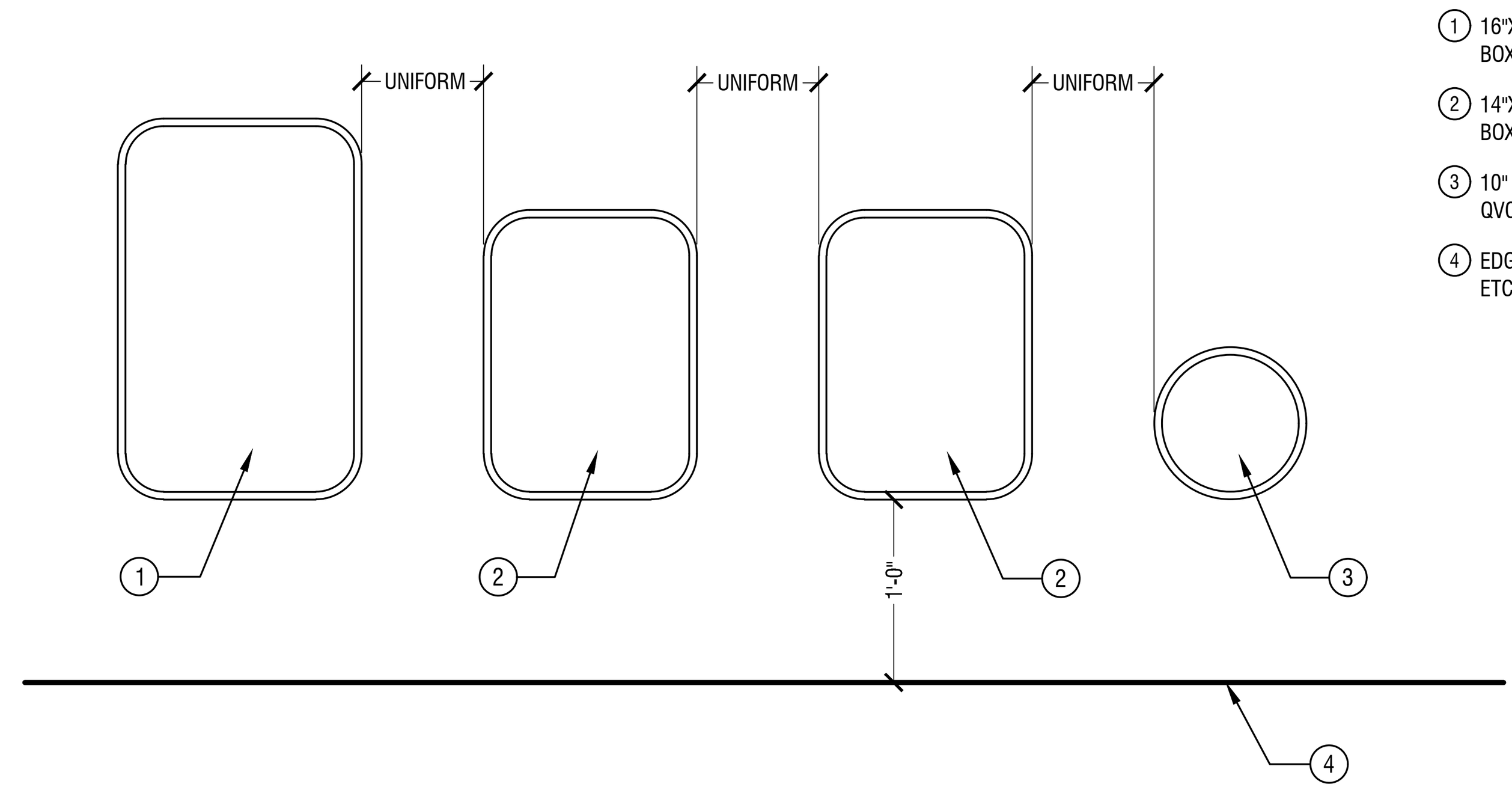


1. FINISH GRADE
2. POP-UP GEAR ROTOR
3. STREET ELL
4. SCH. 80 NIPPLE (8" MIN. LENGTH)
5. PVC TEE
6. PVC LATERAL LINE

5 GEAR ROTOR

3" = 1'-0"

P-1-TSD-TIN-11



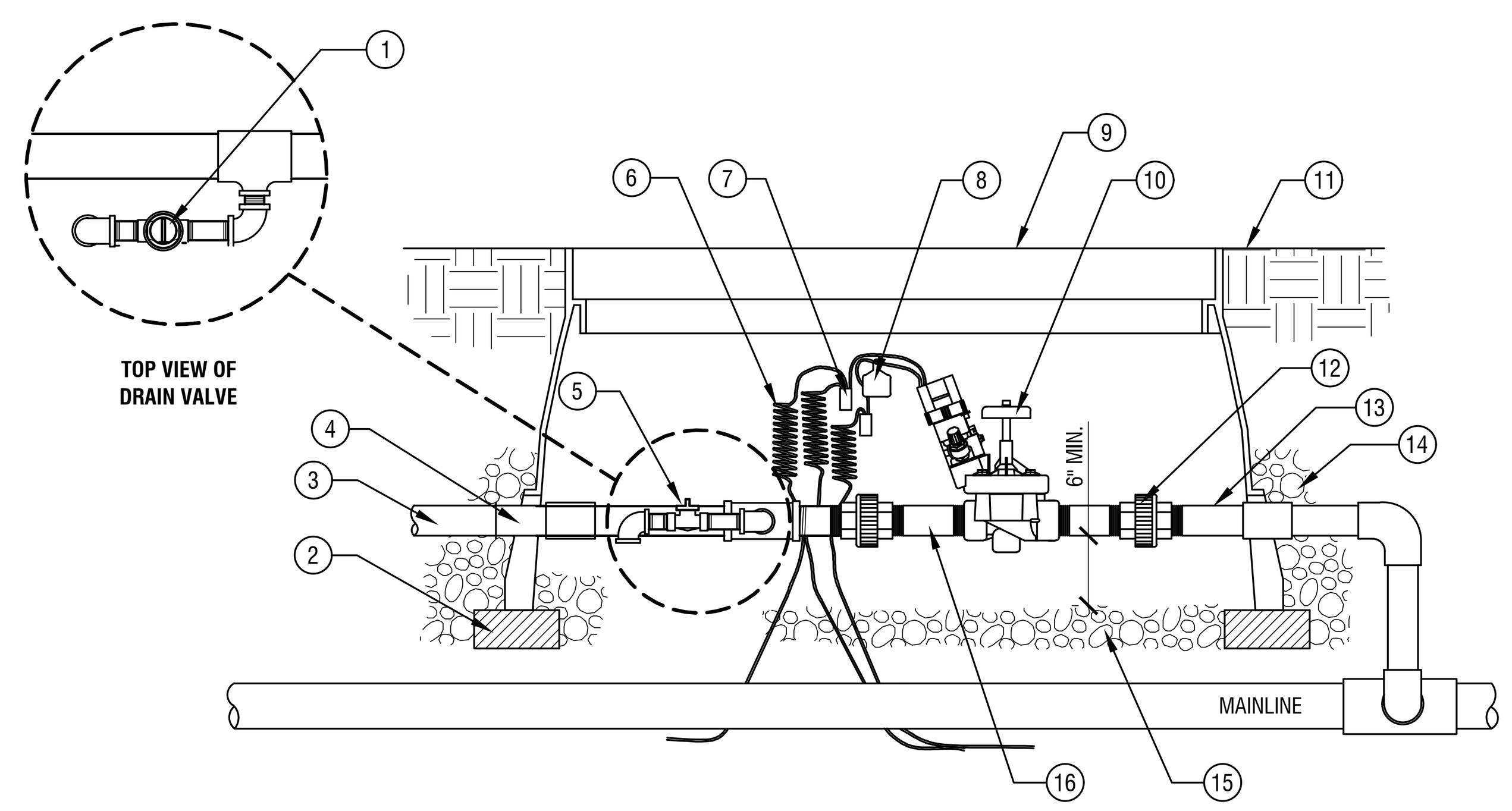
1. 16"X25" RECTANGULAR JUMBO BOX
2. 14"X19" RECTANGULAR VALVE BOX
3. 10" DIA, ROUND VALVE BOX FOR QVC AND SPLICE BOX
4. EDGE OF FENCE, LAWN, WALK, ETC.

NOTES:
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREAS
3. INSTALL BOXES IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS

6 VALVE BOX INSTALLATION

1" = 1'-0"

P-1-TSD-TIN-18



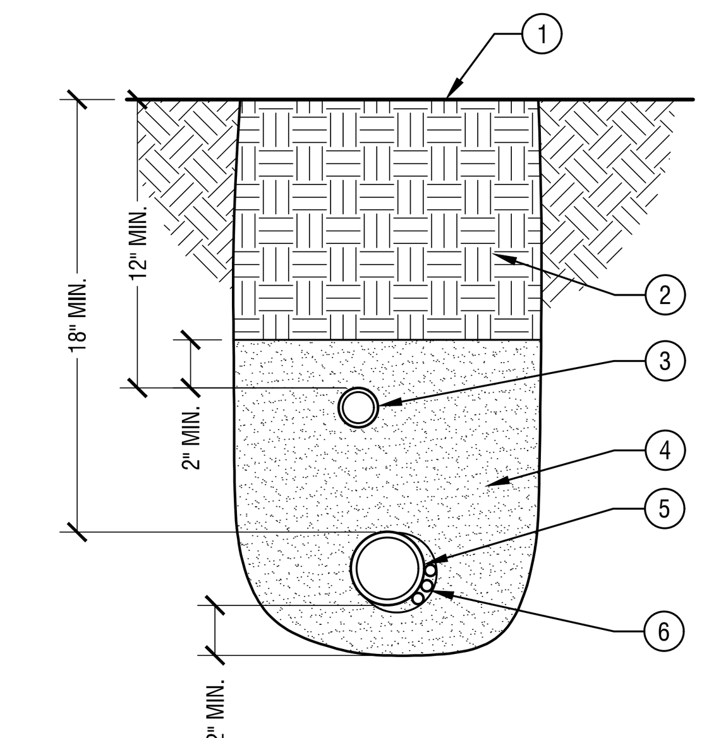
1. MANUAL DRAIN VALVE WHERE NEEDED
2. BRICK (4 REQ'D)
3. SCH. 40 LATERAL
4. COUPLER (2 REQ'D)
5. 3/4" BRASS BALL VALVE WITH 1" HANDLE
6. 30" LENGTH OF COILED WIRE (3 REQ'D)
7. WATER TIGHT CONNECTORS (2 REQ'D)
8. VALVE ID TAG
9. VALVE BOX
10. REMOTE CONTROL VALVE. SEE IRRIGATION SCHEDULE
11. FINISH GRADE
12. UNION (2 REQ'D)
13. TOE NIPPLE (2 REQ'D)
14. PLACE PEA GRAVEL AROUND PIPE ENTRANCE INTO BOX
15. PEA GRAVEL, 6" DEEP
16. 4" NIPPLE (2 REQ'D)

NOTE:
ALL FITTINGS AND PIPE INSIDE VALVE BOX SHALL BE SCH. 80 PVC.

7 RAIN BIRD REMOTE CONTROL VALVE

1 1/2" = 1'-0"

P-1-TSD-TIN-15

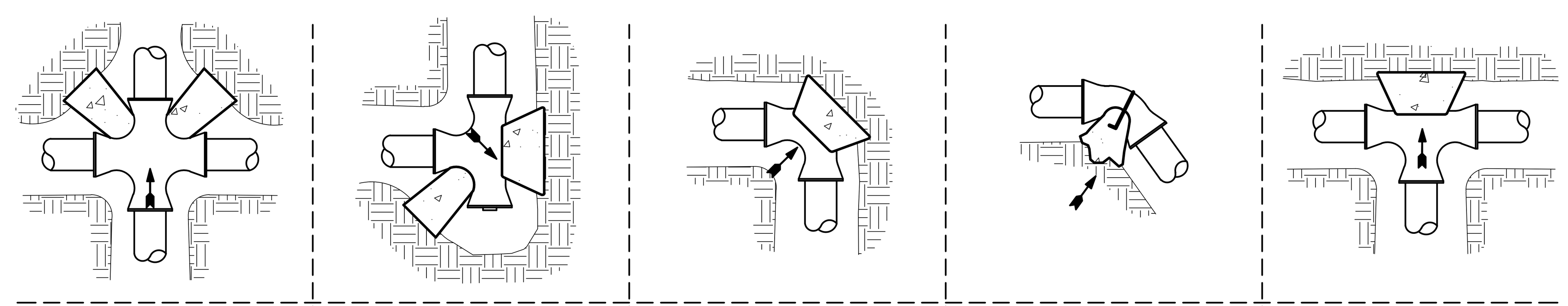


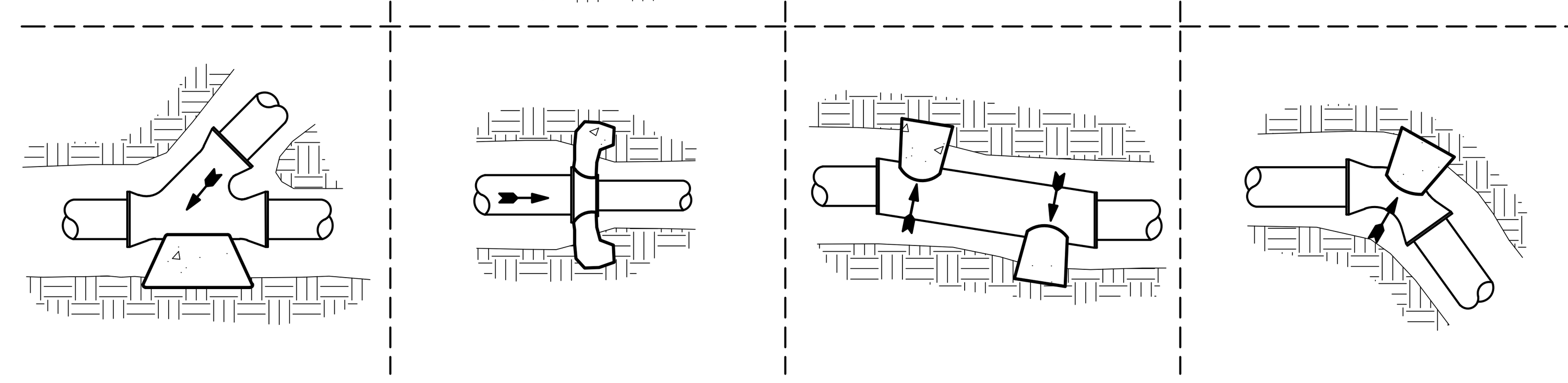
1. FINISH GRADE
2. COMPACTED BACKFILL
3. LATERAL PVC LINE (18" DEEP FOR ROTOR HEAD INSTALLATIONS)
4. 2" SAND OR ROCK-FREE SOIL AROUND ALL PIPE
5. PVC MAINLINE
6. TAPE WIRES TO SIDE OF MAINLINE AT 10'-0" O.C.

8 TRENCH SECTION

1 1/2" = 1'-0"

P-1-TSD-TIN-13





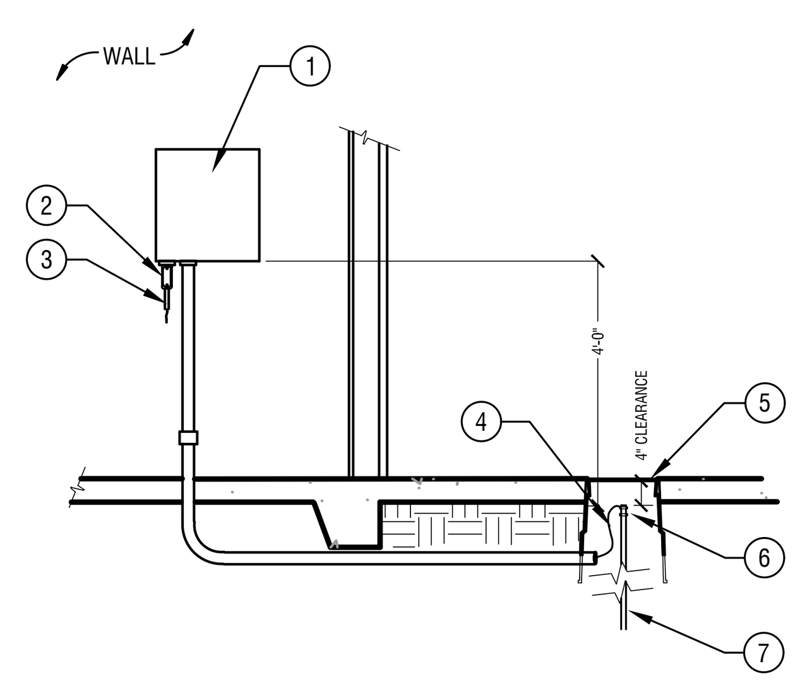
DIRECTION OF THRUST (TYP.)

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

9 THRUST BLOCKS

1" = 1'-0"

P-1-TSD-TIN-12



1. CONTROLLER: INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. 1-INCH CONDUIT AND FITTINGS TO POWER SUPPLY.
3. POWER SUPPLY WIRE
4. SOLID BARE COPPER WIRE (#10 AWG) FROM GROUNDING ROD TO SATELLITE OR LDI/SDI/TWI ASSEMBLY. MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE
5. COVER GROUNDING ROD WITH #10 ROUND VALVE BOX AS SHOWN
6. GROUND ROD CLAMP OR WELDS
7. 5/8" X 10' COPPER CLAD GROUNDING ROD OR GROUNDING PLATE. INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16' APART FROM EACH OTHER. GROUNDING GRID TO HAVE A RESISTANCE OF TEN (10) OHMS OR LESS

NOTES:
- USE STEEL CONDUIT FOR ABOVE GRADE AND SCH. 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
- PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.
- REFER TO MANUFACTURER'S INSTALLATION GUIDELINES.

10 WALL MOUNT CONTROLLER - TRADITIONAL

1/2" = 1'-0"

P-1-TSD-TIN-14

design west | architects
255 SOUTH 300 WEST LOGAN UT 84321
795 NORTH 400 WEST SALT LAKE CITY UT 84103

TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS
525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH — BLAKE C. WRIGHT — NO. 105101 — LICENSED LANDSCAPE ARCHITECT

CONSTRUCTION DRAWINGS

IRRIGATION DETAILS

L-501

SECTION 32 8423
UNDERGROUND SPRINKLERS

PART 1 GENERAL

1.01 SUMMARY

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

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

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

D. IT IS THE DESIRE OF THE OWNER TO HAVE A FULLY OPERATIONAL SYSTEM BY END OF APRIL 2021. OWNER RESERVES THE RIGHT TO DEDUCT TWO HUNDRED DOLLARS ($200) PER DAY FOR WORK COMPLETED AFTER THE TIME LIMIT EXPIRES.

1.02 SECTION INCLUDES

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

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

1.03 DEFINITION

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

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

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

1.04 PROJECT CONDITIONS

A. IRRIGATION WATER SHALL BE PROVIDED BY THE FOLLOWING:
1. WATER SYSTEM TO BE CONNECTED TO EXISTING MAINLINE.
2. DESIGN PRESSURE OF THE IRRIGATION DESIGN IS 95 PSI.

1.05 SYSTEM PERFORMANCE REQUIREMENTS

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

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

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

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

E. MINIMUM WORKING PRESSURES: THE FOLLOWING ARE MINIMUM PRESSURE REQUIREMENTS FOR PIPING, VALVES, AND SPECIALTIES, UNLESS OTHERWISE INDICATED:
1. PRESSURE PIPING: 200 PSIG.
2. CIRCUIT PIPING: 150 PSIG.
3. DRAIN PIPING: 100 PSIG.

1.06 REFERENCE STANDARDS

A. ASTM D2241 - STANDARD SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PRESSURE-RATED PIPE (SDR SERIES); 2015.

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

1.07 SUBMITTALS

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

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

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

D. OPERATION AND MAINTENANCE DATA: INCLUDE IN MAINTANENCE MANUALS SPECIFIED IN DIVISION 1. INCLUDE DATA FOR THE FOLLOWING:
1. PROVIDE TYPEWRITTEN INSTRUCTIONS FOR OPERATION AND MAINTENANCE OF SYSTEM AND CONTROLS, SEASONAL ACTIVATION AND SHUTDOWN, AND MANUFACTURER'S PARTS CATALOG.
2. PROVIDE SCHEDULE INDICATING LENGTH OF TIME EACH VALVE IS REQUIRED TO BE OPEN TO PROVIDE A DETERMINED AMOUNT OF WATER.
3. SUBMIT MANUALS WITH RECORD DRAWINGS. THE MANUAL SHALL ALSO CONTAIN:
a. IDENTIFICATION READABLE FROM THE OUTSIDE OF THE COVER STATING BY WHOM THE INFORMATION WAS COMPILED.
b. NEATLY TYPE-WRITTEN INDEX NEAR THE FRONT OF THE MANUAL, FURNISHING IMMEDIATE INFORMATION AS TO THE LOCATION IN THE MANUAL OF ALL EMERGENCY DATA REGARDING THE INSTALLATION.
c. COMPLETE NOMENCLATURE OF ALL REPLACEABLE PARTS, THEIR PART NUMBERS, CURRENT COST, AND NAME AND ADDRESS OF THE NEAREST VENDOR OF REPLACEMENT PARTS.
d. COMPLETE OUTLINE OF FUTURE WATERING SCHEDULES AND WHEN THEY SHOULD BE CHANGED FROM THE INITIAL INSTALLATION SCHEDULE. THE INITIAL SCHEDULE IS CALCULATED FOR A WATERING RATE TO ESTABLISH LAWN.
e. COPY OF ALL GUARANTEES AND WARRANTIES ISSUED ON THE INSTALLATION SHOWING ALL DATES OF EXPIRATION.

E. RECORD DRAWINGS: AS INSTALLATION OCCURS, PREPARE ACCURATE RECORD DRAWINGS OF PIPING SYSTEM TO BE SUBMITTED PRIOR TO FINAL INSPECTION THAT ALSO INCLUDES:
1. DETAIL AND DIMENSION CHANGES MADE DURING CONSTRUCTION
2. SIGNIFICANT DETAILS AND DIMENSIONS NOT SHOWN IN THE APPROVED CONTRACT DOCUMENTS.
3. FIELD DIMENSIONED LOCATIONS OF VALVE BOXES, MANUAL DRAINS, CONTROL WIRE RUNS NOT IN MAINLINE DITCH, AND BOTH ENDS OF SLEEVES.
4. TAKE DIMENSIONS FROM PERMANENT CONSTRUCTED SURFACES OR EDGES LOCATED AT OR ABOVE FINISH GRADE.
5. TAKE AND RECORD DIMENSIONS AT TIME OF INSTALLATION.

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

G. MAINTENANCE MATERIALS: PROVIDE THE FOLLOWING FOR OWNER'S USE IN MAINTENANCE OF PROJECT.
1. EXTRA SPRINKLER HEADS: ONE OF EACH TYPE AND SIZE.
2. EXTRA VALVE BOX KEYS: ONE.
3. WRENCHES: ONE FOR EACH TYPE HEAD CORE AND FOR REMOVING AND INSTALLING EACH TYPE HEAD.

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

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

1.08 QUALITY ASSURANCE

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

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

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

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

1.09 CODES AND STANDARDS

A. PLUMBING CODE COMPLIANCE: COMPLY WITH ANY APPLICABLE PORTIONS OF THE UTAH STATE PLUMBING CODE PERTAINING TO THE SELECTION OF MATERIALS AND THE INSTALLATION OF IRRIGATION SYSTEMS.

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

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

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

1.10 CONTRACTORS USE OF PREMISES

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

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

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

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

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

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

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

1.11 PERFORMANCE BOND/BID BOND/INSURANCE

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

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

1.12 SUPERVISION

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

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

1.13 GUARANTEE

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

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

1.14 SEQUENCING AND SCHEDULING

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

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

C. COORDINATE LAWN IRRIGATION PIPING WITH UTILITY WORK.

PART 2 PRODUCTS

2.01 IRRIGATION SYSTEM

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

2.02 FILL MATERIAL

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

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

2.03 PIPE MATERIALS

A. PVC PIPE: ASTM D2241; 200 PSI (1.38 MPA) PRESSURE RATED UPSTREAM FROM CONTROLS, 160 PSI (1.10 MPA) DOWNSTREAM; SOLVENT WELDED SOCKETS.
1. ALL LATERAL PIPING SMALLER THAN 3", SHALL BE SCHEDULE 40 PRESSURE RATED PVC GLUE JOINT PIPE WITH RATINGS PRINTED ON OUTSIDE OF PIPE.
2. ALL MAIN LINE PIPE 3" AND LARGER SHALL BE CLASS 200 PRESSURE RATED PVC GASKET JOINT PIPE WITH RATINGS PRINTED ON OUTSIDE OF PIPE, UNLESS OTHERWISE NOTED ON DRAWINGS OR DETAILS.
3. ALL LATERAL PIPE AND FITTINGS SHALL BE SCHEDULE 40 PRESSURE RATED PVC UNLESS SPECIFICALLY NOTED ON DRAWINGS.
4. ALL MAIN PRESSURE SIDE VALVE MANIFOLD PIPING SHALL BE DOMESTIC GALVANIZED IRON PIPE AND FITTINGS. ALL GALVANIZED IRON PIPE AND FITTING CONFIGURATIONS SHALL MATCH DETAIL DRAWINGS EXACTLY.

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

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

D. SLEEVE MATERIAL:
1. SLEEVE DIAMETER SHALL BE TWO TIMES LARGER THAN PIPE THAT IS TO BE INSTALLED IN SLEEVE. SLEEVES 4" AND SMALLER DIAMETER SHALL BE PVC SCHEDULE 40. SLEEVES 4 INCH AND LARGER SHALL BE CLASS 200 PVC OR PVC SEWER PIPE.
2. PIPING AND CONTROL WIRES UNDER WALKS, ROADS, OR OTHER HARD SURFACES SHALL BE INSTALLED IN CLASS 200 PVC SLEEVES OF ADEQUATE SIZE OR AS NOTED ON DRAWINGS.
3. SLEEVES FOR ELECTRICAL CONDUIT SHALL BE ADEQUATE TO ACCOMMODATE MINIMUM CONDUIT SIZES AS REQUIRED BY UNIFORM ELECTRICAL CODE.
4. WIRE SLEEVES SHALL BE PVC PIPE OR ELECTRICAL TUBING. MAZIMUM NUMBER OF 14-GAUGE WIRE IN SLEEVE SHALL BE AS FOLLOWS:
a. 1-10 WIRES IN A 1 INCH SLEEVE
b. 11-18 WIRES IN A 1-1/4 INCH SLEEVE
c. 19-25 WIRES IN A 1-1/2" SLEEVE
d. 26-40 WIRES IN A 2" SLEEVE
e. 41-56 WIRES IN A 2-1/2" SLEEVE
f. 57-88 WIRES IN A 3" SLEEVE

E. PIPE CONNECTION MATERIAL
1. P-70 PRIMER
2. 711 SOLVENT/GLUE
3. TEFLON TAPE

2.04 OUTLETS

A. MANUFACTURERS:
1. RAIN BIRD.

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

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

D. ROTARY TYPE SPRINKLER HEAD: POP-UP TYPE WITH SCREENS; FULLY ADJUSTABLE FOR FLOW AND PRESSURE; SIZE AS INDICATED; WITH LETTER OR SYMBOL DESIGNATING DEGREE OF ARC AND ARROW INDICATING CENTER OF SPRAY PATTERN.
1. RAIN BIRD ROTARY HEADS: RVAN 1724, ROTARY NOZZLES, AND 5000 MPR.
2. RAIN BIRD ROTORS: 3500, 5000, 6504, AND 8005.

E. SPRAY TYPE SPRINKLER HEAD: POP-UP HEAD WITH FULL CIRCLE PATTERN OR HEAD PER PLAN.
1. RAIN BIRD SPRAY HEADS: 1800 SAM PRS, RD1800 SAM PRS, HE VAN SERIES SAM PRS, AND U-SERIES SAM PRS FOR ALL SPRAY SPRINKLER HEADS.

F. QUICK COUPLER & HOSE BIBS:
1. RAINBIRD 44NP ON SECONDARY WATER SYSTEMS OR 44LRC ON CULINARY WATER SYSTEMS OR APPROVED EQUAL WITH CORRESPONDING 2049 UNLOCK KEY AND 44K VALVE KEY.

G. RISERS: STATIONARY SPRAY POP-UP SPRINKLER HEADS, SHRUB SPRAY HEADS, STATIONARY SPRAY SPRINKLER HEADS AND ROTOR HEADS SHALL HAVE RISERS MADE UP OF ONE OF THE FOLLOWING WAYS:
1. RISERS FOR IRRIGATION HEADS WITH INLET SIZE OF 1/2 INCH SHALL BE SWING PIPE 14 INCHES LONG MINIMUM AND 24 INCHES MAXIMUM. SWING PIPE WITH SPIRAL BARB FITTINGS AND STREET "L" SHALL BE ASSEMBLED ACCORDING TO PLAN DETAILS. EQUAL AS APPROVED BY LANDSCAPE ARCHITECT BEFORE BIDDING.
2. RISER FOR IRRIGATION HEADS WITH 3/4 INCH TO 1 INCH INLETS SHALL HAVE A SWING JOINT ASSEMBLY ACCORDING TO DETAILS ON DRAWING.

2.05 VALVES

A. MANUFACTURERS:
1. RAIN BIRD
2. CARSON
3. HYRDOPOINT
4. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

B. ALL CONTROL/MASTER VALVE/QUICK COUPLER VALVES

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

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

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

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

G. STOP & WASTE VALVE:
1. 2" MUELLER MARK II ORISEAL.

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

I. COMBINATION AIR & VACUUM RELIEF VALVE:
1. CRISPIN UNIVERSAL AIR VALVE OR APPROVED EQUAL.
2. BERNAD MODEL 02-ARC-1 OR APPROVED EQUAL.

J. FLOW SENSOR & CONTROL:
1. HYDROPOINT WTFLOWHD-I-600

2.06 CONTROLS

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

B. CONTROLLER: HYDROPOINT WTOXR-C (SEE IRRIGATION PLAN)
1. REMOTE PHONE CONNECTION TO CONTROLLER.
2. PROVIDE ANY WIRING, COMMUNICATION, LINKS COMPUTER PROGRAMS TO MAKE WEATHER STATION AND CONTROLLER OPERATIONAL.

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

D. WIRE CONDUCTORS:
1. ELECTRICAL WIRE:
a. ALL WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE.
2. TRADITIONAL WIRING:
a. CONTROL WIRE SHALL BE UL LISTED DIRECT BURIAL CABLE NOT SMALLER THAN 14 GAUGE. IN SOME CASES 18-GAUGE MULTI-STRAND WIRE IS USED IN SPECIAL SITUATIONS AS SHOWN ON DRAWINGS AND APPROVED BY OWNER.
b. MAXICOM COMMUNICATION AND FLOW SENSOR WIRE TO SHALL BE A THREE PAIR SHIELDED CABLE SPECIFIED BY RAIN BIRD. WIRE MUST BE PE-39 CABLE AS SUPPLIED BY A RAIN BIRD DISTRIBUTOR.
c. ADD EXTRA WIRES AS SHOWN ON DRAWINGS FOR FUTURE USE. WIRE SHALL BE OF A DIFFERENT COLOR OR MARKED AS AN EXTRA WIRE.
d. COLORS OF WIRE SHALL BE AS FOLLOWS:
1) CONTROL WIRE FOR TURF AREAS: RED
2) CONTROL WIRE FOR SHRUB AREAS: YELLOW
3) CONTROL WIRE TO MASTER VALVE: BLUE
4) CONTROL WIRE TO FILTER BLOWOUT VALVE: BROWN
5) COMMON WIRE: WHITE
6) EXTRA WIRES ORANGE
3. EXPANSION CURLS: SHALL BE PROVIDED WITHIN THREE (3) FEET OF EACH WIRE CONNECTION TO SOLENOID AND AT LEAST EVERY THREE HUNDRED (300) FEET IN LENGTH. (EXPANSION CURLS ARE FORMED BY WRAPPING 36" OF WIRE AROUND A ROD OR PIPE 1" OR MORE IN DIAMETER, THEN WITHDRAWING THE ROD FOR SINGLE STRAND WIRE AND LOOSELY COILED FOR TWO WIRE CABLE).

2.07 OTHER COMPONENTS

A. WYE STRAINER: ZURN MODEL SXL WYE STRAINER.

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

C. MIXES: CONCRETE FOR THRUST BLOCKS ON IRRIGATION PIPE 3" OR LARGER.
1. ONE CU. FT. CEMENT, 2 CU. FT. SAND, 4 CU. FT. GRAVEL, AND 5 GALLONS MINIMUM TO 6 GALLONS MAXIMUM WATER.
2. MIX THOROUGHLY BEFORE PLACING.

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

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

F. FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS. DELIVER EXTRA MATERIALS TO OWNER.
1. TWO VALVE BOX COVER KEYS.
2. TWO QUICK COUPLER KEYS WITH BRASS HOSE SWIVEL.
3. TWO MANUAL DRAIN VALVE KEYS.
4. TWO SETS OF SPRINKLER WRENCHES FOR ADJUSTING, CLEANING OR DISASSEMBLY OF EACH TYPE OF SPRINKLER.
5. TWO EACH OF ANY OTHER TOOLS REQUIRED FOR ANY OTHER EQUIPMENT.

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TINTIC HIGH SCHOOL
TRACK & FIELD ENHANCEMENTS
525 EAST MAIN ST
EUREKA, UTAH 84628
TINTIC SCHOOL DISTRICT

MARK: DATE: DESCRIPTION:

PROJECT #: 121352
DRAWN BY: D. HISLOP
CHECKED BY: B. WRIGHT
ISSUED: 1.12.2022

STATE OF UTAH · BLAKE C. WRIGHT · NO. 105101 · LICENSED LANDSCAPE ARCHITECT

CONSTRUCTION DRAWINGS

IRRIGATION SPECIFICATIONS

L-601

7/8/2019 3:38:36 PM

PART 3 EXECUTION

3.01 OWNERS SALVAGE RIGHTS

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

3.02 EXAMINATION

A. VERIFY LOCATION OF EXISTING UTILITIES.

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

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

3.03 PREPARATION

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

B. WORK DAMAGED DURING COURSE OF WORK IN THIS SECTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST TO OWNER. IF DAMAGED WORK IS NEW, REPAIR OR REPLACEMENT SHALL BE PERFORMED BY INSTALLER OF ORIGINAL WORK.

C. LAYOUT AND STAKE LOCATIONS OF SYSTEM COMPONENTS.

D. REVIEW LAYOUT REQUIREMENTS WITH OTHER AFFECTED WORK. COORDINATE LOCATIONS OF SLEEVES UNDER PAVING TO ACCOMMODATE SYSTEM.

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

3.04 TRENCHING

A. TRENCH SIZE:

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

B. TRENCH TO ACCOMMODATE GRADE CHANGES.

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

D. PULLING OF PIPE IS NOT PERMITTED.

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

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

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

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

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

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

3.05 INSTALLATION

A. GENERAL:

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

B. PIPES:

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

a. 3/4 INCH MANUAL DRAIN

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

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

d. DO NOT USE AUTOMATIC DRAIN VALVES.

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

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

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

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

d. APPLY SOLVENT TO FITTING IN A SIMILAR MANNER.

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

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

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

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

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

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

10. THREADED CONNECTIONS SHALL BE MADE WITH TEFLON TAPE.

C. SLEEVING:

1. CONTRACTOR IS REPONSIBLE TO COORDINATE THE INSTALLATION OF SLEEVING WITH THE WORK OF OTHER TRADES (I.E. CONCRETE, ASPHALT PAVING, ETC.)
2. SLEEVE IRRIGATION WATER LINES AND CONTROL WIRES UNDER WALKS AND PAVING. EXTEND SLEEVES 6 INCHES MINIMUM BEYOND WALK OR PAVEMENT EDGE. CAP SLEEVES UNTIL PIPES AND WIRES ARE INSTALLED TO KEEP SLEEVE CLEAN AND FREE OF DIRT AND DEBRIS.
3. USE ONE WATER PIPE MAXIMUM PER SLEEVE. SLEEVE CONTROL WIRING IN SEPERATE SLEEVE.
4. POSITION SLEEVES WITH RESPECT TO BUILDINGS AND OTHER OBSTRUCTIONS SO PIPE CAN BE EASILY REMOVED.

D. OUTLETS:

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

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

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

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

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

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

E. CONTROLS:

1. INSTALL IRRIGATION CONTROLLER PER MANUFACTURER'S RECOMMENDATION AND WITH PROPER GROUNDING FOR SURGE AND LIGHTNING PROTECTION.
2. INSTALL IRRIGATION CONTROLLER IN MECHANICAL ROOM PER DRAWINGS.

F. VALVES & VALVE BOXES:

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

G. WIRING:

1. STANDARD WIRE:

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

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

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

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

H. EARTH GROUNDING:

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

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

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

3.06 FIELD QUALITY CONTROL

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

B. FIELD INSPECTION AND TESTING WILL BE PERFORMED UNDER PROVISIONS OF SECTION 01 4000 - QUALITY REQUIREMENTS.

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

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

3.07 BACKFILLING

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

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

C. DO NOT COVER PRESSURE MAIN, SPRINKLER PIPE, OR FITTINGS UNTIL PRESSURE TEST HAS BEEN COMPLETED AND ARCHITECT HAS INSPECTED AND APPROVED THE SYSTEM

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

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

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

3.08 SYSTEM STARTUP

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

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

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

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

3.09 CLOSEOUT ACTIVITIES

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

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

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

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

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

3.10 CLEAN-UP AND MAINTENANCE

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

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

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

3.11 WARRANTY

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

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

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

END OF SECTION

SECTION 32 9113

SOIL PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PERFORM SOIL PREPARATION WORK.

B. FURNISH AND APPLY SOIL AMENDMENTS.

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

1.02 REFERENCES

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

1.03 SUBMITTALS

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

B. INFORMATIONAL SUBMITTALS:

1. FIELD QUALITY CONTROL SUBMITTALS:

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

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

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

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

PART 2 PRODUCTS

2.01 MATERIALS

A. TOPSOIL:

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

a. CHEMICAL CHARACTERISTICS:

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

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

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

4) ORGANIC MATTER: GREATER THAN ONE PERCENT.

b. PHYSICAL CHARACTERISTICS:

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

(a) SAND: 15 TO 60 PERCENT

(b) SILT: 10 TO 60 PERCENT

(c) CLAY: 5 TO 30 PERCENT

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

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

c. FERTILITY REQUIREMENTS:

1) NITRATE-NITROGEN PPM > 20

2) PHOSPHOROUS PPM > 15

3) POTASSIUM PPM > 150

4) IRON PPM > 10

B. SOIL AMENDMENTS:

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

a. ACCEPTABLE SOIL AMENDMENTS AND APPLICATION RATES:

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

2) EQUAL AS APPROVED BY ARCHITECT BEFORE INSTALLATION.

b. ACCEPTABLE FERTILIZERS AND APPLICATION RATES:

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

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

3) EQUAL AS APPROVED BY ARCHITECT BEFORE INSTALLATION.

c. ACCEPTABLE SOIL CONDITIONERS AND APPLICATION RATES:

1) TYPE ONE ACCEPTABLE PRODUCTS.

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

PART 3 EXECUTION

3.01 PERFORMANCE

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

B. SOIL AMENDMENTS:

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

C. SURFACE PREPARATION:

1. LANDSCAPING AND PLANTING AREAS:

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

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

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

D. PERFORMANCE:

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

a. LANDSCAPING AND PLANTING TOLERANCES:

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

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

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

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

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

END OF SECTION

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STATE OF UTAH
BLAKE C. WRIGHT
NO. 105101
LICENSED LANDSCAPE ARCHITECT

CONSTRUCTION DRAWINGS

IRRIGATION & PLANTING SPECIFICATIONS

L-602